



Documentation of Virtual Public Meeting

Project Location

Travis County

MoPac South Environmental Study

CSJ: 3136-01-176

Project Limits

Loop 1/MoPac Expressway from Cesar Chavez Street to Slaughter Lane

Meeting Location

Virtual Public Meeting at voh.mopacsouth.com

Meeting Date and Time

Monday, November 22, 2021, beginning at 5 p.m.
through Friday, January 7, 2022, 11:59 p.m.

Translation Services

Translation services were offered on the virtual public meeting notice.
Spanish materials were available on the virtual public meeting site.
A telephone hotline for Spanish-speakers was offered.

Presenters

The meeting consisted of a virtual public meeting website and a pre-recorded presentation with audio and visual components. The pre-recorded welcome video was narrated by Mobility Authority Executive Director James Bass

Elected Officials in Attendance

None self-identified

Total Number of Attendees (approx.)

3,834 Website Unique Visitors between Nov. 22, 2021 and Jan. 7, 2022

Total Number of Commenters

540

Contents

- A. Comment/Response Matrix
- B. Virtual Public Meeting Metrics
- C. Notices
- D. Comments Received
- E. Figures

A. Comment/Response Matrix

Comments pertaining to the virtual public meeting must have been submitted or postmarked by January 7, 2022. 565 comments were received from 540 commentors. Comments received after this deadline are still being received and evaluated but are not reflected in the summary analysis. The Comment/Response Matrix is included below.

Comment Response Resource Category Legend

Code	Resource Category	Response
AE-1	Aesthetics	<p>Context Sensitive Solutions (CSS) is a collaborative approach to developing transportation facilities that fit within their surroundings. The goal of CSS is to preserve and enhance scenic, aesthetic, historic, community and environmental resources, while improving or maintaining safety, mobility and infrastructure conditions.</p> <p>A CSS process for the project was initiated at Open House #3 (held on February 26, 2015), and the team continues to receive input on this topic.</p> <p>The principles of CSS will continue to guide the design of the project during the environmental process.</p>
Alt-1	Alternatives	<p>A range of alternatives has been evaluated, and public comment was solicited and received at Open Houses #1, #2, and #3 in 2013, 2014, and 2015.</p> <p>The range of alternatives included General-Purpose Lanes, High Occupancy Vehicle Lane(s) (HOV), Transit Only Lane(s), Express Lane(s), Transportation Demand Management (TDM) and Transportation System Management (TSM) and the No-Build Alternative.</p> <p>The Express Lane(s) Alternative became the reasonable alternative at Open House #2 in 2014 because of the evaluation based on the CAMPO 2035 traffic model. This demonstrates that that it performs best at providing a reliable route for all roadway users, including emergency vehicles, public transit, and single occupancy vehicles, thereby best meeting the purpose and need of the project. The project team will complete the CAMPO 2045 model update and additional analysis of the six operational configurations for the Express Lane(s) Alternative in order to arrive at a Recommended Build Alternative.</p>
Alt-2	Alternatives	<p>After thorough analysis of the range of alternatives, general-purpose lanes were not recommended because they do not meet the purpose and need of the project. One aspect of the purpose and need calls for reliable travel times that can be managed and maintained in the future. There is high traffic demand between nearly all of the local interchanges along this segment of Mopac due to a lack of viable alternate routes, which is why we have proposed general-purpose lane improvements such as auxiliary lanes, collector-distributor roads, ramp reversals and braided ramps over limited distances as part of the Express Lane(s) Alternative. Demand for and use of additional general-purpose lanes throughout peak periods cannot be managed, thus they would not provide reliable travel times for all users.</p>
Alt-3	Alternatives	<p>After thorough analysis of the range of alternatives, the project team determined that HOV lane(s) are not moving forward for MoPac South because approximately 86 percent of Travis and Hays County commuters are single occupancy vehicles, 10.5 percent are HOV 2 (double occupancy vehicles) and only 3.5 percent are HOV 3+ (vehicles with three or more people), according to the American Community Survey, 2010-2012. Thus, 86 percent of travelers would be excluded from using the HOV lanes. If all HOVs used the lanes, 14 percent of demand would use 25 percent of corridor capacity on MoPac South, resulting in under-utilization of the lanes.</p>

Comment Response Resource Category Legend

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		A No Build Alternative will continue to be carried forward as a baseline for comparison against the Reasonable Build Alternative.
Alt-3.1	Alternatives	All alternatives analysis was conducted by adding one lane per direction for: transit-only, HOV, express lane, and general-purpose lane alternatives. Thus this comparison was apples to apples among alternatives. After selecting express lane(s), evaluation of express lane options includes concepts with either one or two lanes per direction.
Alt-4	Alternatives	<p>After thorough analysis of the range of alternatives, Transit Only Lane(s) are not recommended. During evaluation of alternatives, express lane(s) reduced corridor delays 11 to 16 times more than Transit Only lanes. This occurs because express lane(s) serve the full range of corridor users, including single occupancy and HOV trips, as well as transit trips. The Express Lane(s) will support express bus service in the corridor, and CapMetro plans to use the express lane(s) toll free.</p> <p>Regional commuter rail and urban rail are being implemented under a separate project by CapMetro called Project Connect, however, current plans do not show routes along MoPac. For more information about Capital Metro’s Project Connect, visit ProjectConnect.com</p>
Alt-5	Alternatives	<p>After thorough analysis of the range of alternatives, the Express Lane(s) Alternative is the Reasonable Build Alternative because it meets the purpose and need for the following reasons:</p> <ul style="list-style-type: none"> • It avoids unnecessary impacts to the natural and human environment and minimizes impacts to water quality. • Construction of express lane(s) can be funded and implemented in a timely manner, as opposed to the other Alternatives, which would require gas tax revenue-based funding that is not available. • Given the Mobility Authority’s flexibility to fund projects, the agency is able to be proactive and timely in implementing any needed improvements if and when issues arise later, including off- system. • It increases opportunities for transit and ridesharing and includes new bicycle and pedestrian facilities. • It is consistent with the CAMPO long range plan, Project Connect, Imagine Austin, the City of Austin Strategic Mobility Plan, and TxDOT’s Long Range Plan. • It offers reliable travel times for emergency vehicles, leading to better response times for EMS, Fire, and Police for the community. • It offers reliable travel times for public transit buses, vanpools, single occupancy vehicles, and high occupancy vehicles. • It provides the shortest peak period travel time for emergency vehicles, public transit, and all vehicles. • It provides the greatest annual travel time savings for all users compared to the No Build, HOV lanes and transit only lanes alternatives. • A technical memorandum will be published as part of the Environmental Assessment (EA), which describes the methodology used to evaluate HOV lane(s), transit-only lane(s), express lane(s) and general-purpose lanes and the TSM and TDM option.

Comment Response Resource Category Legend

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Alt-6	Alternatives	<p>A range of alternatives has been evaluated. Strategies such as carpooling, rideshare and work schedule modifications are known as travel demand management (TDM) improvements. Low-cost operational improvements such as ramp reconfigurations, added auxiliary lanes and intersection turn lanes are known as transportation system management (TSM) strategies.</p> <p>TSM/TDM strategies were eliminated as a standalone option, together with general-purpose lanes because they do not meet the purpose and need of providing reliable peak period travel times. Only express lane(s) can protect the operational integrity of the new lanes by managing traffic demand. Regional TDM agencies continue to implement TDM strategies throughout the metropolitan area, and TSM general-purpose lane operational improvements could be included in all express lane(s) operational configuration options if financially viable. These include:</p> <ul style="list-style-type: none"> • Potential new direct connection at US 290 • Potential new collector-distributor road from Barton Skyway to Loop 360 • Potential south to north Texas Turnaround at Barton Skyway • Potential to lengthen the turn lane leading to Texas Turnaround at Loop 360 • Potential to reconfigure Bee Cave Road/RM 2244 southbound exit ramp • Potential ramp improvements at William Cannon Drive • Third southbound general-purpose lane south of William Cannon Drive • Extension of the left turn lane at Lake Austin Boulevard • Additional bike/pedestrian facilities throughout the corridor <p>The use of carpooling and work schedule modification are on the rise in Austin, but it is incumbent upon the individual and/or employer to make use of commuter programs. The Metro Ride Share Program offered by Capital Metro is one of several options a commuter can use (http://www.capmetro.org/rideshare/).</p> <p>Separate from the MoPac South Project, the Mobility Authority collaborates with Movability, Central Texas' transportation management association solely dedicated to working with employers and individuals to improve the region through commuter options that save time and money (https://movabilitytx.org/). The Mobility Authority also supports regional TDM efforts to encourage more efficient travel behavior and contributes as a key stakeholder. Furthermore, there are a variety of private transportation providers that offer ridesharing options, such as Uber and Lyft. The agency will continue these collaborations to make improvements to mobility region wide.</p>
Alt-7	Alternatives	<p>The National Environmental Policy Act (NEPA) requires the consideration of taking no action (No-Build Alternative) in the development of an Environmental Assessment (EA). The No-Build Alternative assumes that the proposed MoPac South Project would not be built but does assume all other transportation improvements as programmed in the CAMPO 2045 Plan. The No-Build Alternative is considered the baseline alternative and will be compared to the Build Alternative in the</p>

Comment Response Resource Category Legend

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		EA. This includes scoring the No Build Alternative using a set of criteria that measures the impacts to the social, human, and natural environment.
AQ-1	Air Quality	A quantitative air quality analysis will be completed for the Recommended Build Alternative following the latest version of TxDOT's Environmental Handbook for Air Quality. The traffic data to be used in the analyses for this project will be sourced from the CAMPO 2045 travel demand model. The 2045 model assumes that all projects listed in the CAMPO 2045 Plan are built. As such, the evaluation of traffic noise and air quality impacts will rely on the cumulative traffic conditions resulting from the fully built-out 2045 transportation network. The results of that analysis will be made available at future public meetings and will be included as part of the Environmental Assessment document.
BP-1	Bike/Ped	<p>Enhanced bicycle and pedestrian connectivity is part of the purpose and need of the MoPac South Environmental Study. As such, the team is evaluating several possible enhancements to bicycle and pedestrian facilities in the project corridor, including a shared use path (SUP), improved sidewalks, and cross street connections. All operational configuration options under consideration include a continuous facility for non-motorized users (bicycles and pedestrians) from Lady Bird Lake to Slaughter Lane. The proposed SUP would be designed in accordance with the AASHTO Guide for the Development of Bicycle Facilities. The SUP will be separated from traffic lanes by a buffer where feasible. The project team will continue to coordinate with bicycle and pedestrian stakeholders for input, and specific details of proposed bicycle and pedestrian improvements and their feasibility will continue to be evaluated.</p> <ul style="list-style-type: none"> • Bicyclists and pedestrians would be able to cross Lady Bird Lake, under MoPac, on the Roberta Crenshaw Pedestrian Walkway as they do today. • The SUP adjacent to the Botanical Gardens would need to be reconstructed. • The inclusion of a SUP crossing on the northbound frontage road near Rollingwood Drive to allow for a designated crossing for those bicyclist and pedestrians accessing the SUP adjacent to the Botanical Gardens and MoPac. • Safe pedestrian and bicycle access to Zilker Park would be enhanced. This improvement is included in the proposed project design. • The proposed bicycle/pedestrian network between Lady Bird Lake and Barton Creek Mall includes facilities within the MoPac right-of-way on both the east and west sides. A SUP is proposed for the east side, and the west side would be served by a sidewalk. Safe crossings from one side to the other would be provided at numerous locations for pedestrians and cyclists. • An existing 8-foot-wide SUP is located at five locations between Barton Springs Road and Tuscan Terrace. The 8-foot sections range in length from 100 to 400 feet and have a retaining wall with a pedestrian rail that protects bicycles and pedestrians from any steep drop offs in the terrain. • The SUP along the northbound frontage road would be 10 feet wide and at times connect to the existing 8-foot-wide SUP. • A connection to the existing SUP at Tuscan Terrace would be constructed at Loop 360 and Barton Creek. The SUP would continue beginning at the Gaines Ranch Loop turnaround along the northbound frontage road. A new

Comment Response Resource Category Legend

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		<p>pedestrian bridge is proposed over the Williamson Creek Greenbelt. The proposed SUP would connect to the beginning point of the Y at Oak Hill to Barton Creek (YBC) Trail.</p> <ul style="list-style-type: none"> • From US 290 to William Cannon Drive, an 8-to-10-foot SUP would be provided with the SUP being 8 feet in locations where the ROW is a constraint. • From William Cannon Drive, a 10-foot-wide SUP is proposed that will run along the northbound frontage road to Latta Drive where the SUP would connect to the Violet Crown Trail. Between Convict Hill and Davis Lane, bike and pedestrian access would be along the Violet Crown Trail. The SUP would pick back up along the southbound main lanes north of Davis Lane and continue to Slaughter Lane. • The project team has held coordination meetings with the City of Austin to coordinate the location and status of their path improvements.
BP-2	Bike/Ped	<p>The request to extend the proposed new SUP southward to SH45, as well as the request to extend the 45SW Trail/SUP to the Meridian neighborhood, are outside project limits of the MoPac South project and will not be included as part of this project.</p>
C-1	Construction	<p>Construction is inherently a disruptive process. The Mobility Authority has a track record of making every effort to be a good neighbor to the community during construction of its projects, engaging regularly with those impacted by construction and addressing issues in a timely manner. If the MoPac South project is approved for construction, neighbors should anticipate increased noise, light, and dust. It is a Mobility Authority priority to work with contractors to minimize inconveniences whenever possible and to maintain access to businesses. Coordination during major area events like SXSW and ACL will take place to minimize disruption to travel and parking. Disruption of travel patterns and traffic during construction would be mitigated through a traffic control plan. The traffic control plan would include accommodations for maintaining access for motorized vehicles as well as for pedestrians and cyclists. The plan would be consistent with all local, state and federal traffic and safety regulations. Notification of detours or changes to travel patterns would be posted via signage and timely communication provided to affected residences, businesses, transit providers and emergency services providers. It should be noted that construction timelines are estimates and subject to change based on weather, materials availability, labor availability, and other circumstances.</p>
C-2	Construction	<p>A project's construction phasing occurs during final design, after an environmental decision has been made. If the Build Alternative is selected in the environmental decision for the MoPac South Project, and funding is identified, the project will go through the final design process, and construction phasing will be incorporated as part of the plans, specifications and estimates (PS&E) development process. It should be noted that construction phasing is subject to changes, should the contractor identify efficiencies.</p>
C-2.1	Construction	<p>Should the project be approved for construction, the Mobility Authority would continue to coordinate with area transportation partners such as TxDOT, CapMetro, and municipalities regarding construction schedules and potential impacts to adjacent projects.</p>

Comment Response Resource Category Legend

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C-3	Construction	<p>Proposed mobility improvements could require the removal of trees, primarily in the median of the existing main lanes. Minimizing impacts to trees will be considered during preliminary and final design. Measures will be taken to minimize impacts to vegetation. Disturbed areas would be restored, re-graded and reseeded in accordance with TxDOT's Vegetation Management Guidelines, the Executive Order 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping. Regionally native and non-invasive plants would be used in landscaping and revegetation. Best management practices would be implemented to provide temporary erosion control during construction and permanent erosion control after the project is complete. Likewise, measures taken to protect vegetation, water quality and parklands would also help protect urban wildlife.</p>
C-4	Construction	<p>The Mobility Authority implements best management practices (BMPs) into all of its projects to prioritize environmental stewardship, in line with the values of the agency. Should the MoPac South Environmental Study receive environmental clearance, and funding be identified, the project will be designed and constructed in accordance with Texas Commission on Environmental Quality (TCEQ) General Stormwater Permit and the TCEQ Edwards Aquifer Protection Program.</p>
C-5	Construction	<p>The No Build Alternative is carried forward as a baseline for comparison. The Environmental Assessment (EA) document will include comparative information to quantify the No Build vs. the Build Alternative.</p>
CR-1	Cultural Resources	<p>The Environmental Assessment (EA) includes identification of Cultural Resources Area of Potential Effects (APE) for Archeology and a larger APE for Historic Resources. The APE is a geographic area in which the character or use of historic properties may be directly or indirectly adversely affected by a project. As such, the EA will evaluate the effects of the proposed action on cultural resources within the APE including: any National Register of Historic Places (NRHP)-listed or NRHP-eligible structures, landscapes, districts, or archeological sites, including Section 4(f) properties.</p> <p>The Project team will complete separate Historic Resources and Archeological Surveys and Reports for the APE of the Preferred Build Alternative, rather than for all six operational configuration options for the Express Lane(s) Alternative. There is not enough variation within the six build alternatives and the six operational configuration options that would impact the size or shape of the APE.</p> <p>The minor difference in APE as shown at Open House #4 as compared with Open House #5 is due to minor changes in project limits and the different mapping tools used to illustrate the APE. At Open House #4, a zoomed-in version of a Historic Resources Map was shown, while Open House #5 provided a simplified "cartoon" style map. The description of the APE has remained unchanged.</p> <p>The APE is variable throughout the project area, and takes into consideration direct and indirect effects (including noise, vibration, and visual effects) to known and potential historic properties including, but not limited to, Zilker Park NRHP Historic District and Deep Eddy NRHP Historic District.</p> <p>TxDOT Environmental Affairs Division, in consultation with the Texas Historical Commission (THC), developed a</p>

Comment Response Resource Category Legend

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		customized Historic Resources APE for the project as follows: from Lake Austin Boulevard/Cesar Chavez Street to the Zilker Park Historic District, the APE is 150 feet from the proposed ROW in areas where grade-separated structures and/or new ROW is proposed, and the APE is the existing ROW where no grade-separated structures and/or new ROW is proposed. West of MoPac, within these same limits, the APE is extended to include the property boundaries of the Charles Johnson Home and the Deep Eddy Bathing Beach Historic District. Beginning at the Zilker Park Historic District, the APE is extended to include the district boundaries west of MoPac, and to 0.25 miles east of MoPac. South of the Zilker Park Historic District to Slaughter Lane the APE is 150 feet from the existing or proposed ROW.
CR-2	Cultural Resources	Any potential impacts will be considered in the operational configurations comparative analysis to identify a Recommended Build Alternative. Next, the Environmental Assessment will discuss all potential temporary and permanent impacts to parklands and trails, including 4(f) and 6(f) protected properties and resources for the preferred alternative and no build alternative.
D-1	Design Elements	The project team will identify and consider refinements and operational improvements that fall within the project scope and limits and align with the purpose and need of the project.
D-2	Design Elements	The Mobility Authority listened to the community and heard the opposition to elevated structures over Lady Bird Lake that was communicated at Open House #3 in February 2015. That input led to the project team developing additional operational configuration options for the public to comment on – options that do not include double deckers over Lady Bird Lake. These options are 1B, 2B, 2C, 3, which were presented for public comment at Open Houses #4 and #5, and will be carried forward for additional analysis based on CAMPO 2045.
D-3	Design Elements	Video renderings linked on the Virtual Open House #5 website for each operational configuration showing elevations, were added to the project website in 2015 and are currently available at http://www.mopacsouth.com/multimedia/videos.php .
D-4	Design Elements	<p>The Mobility Authority appreciates the opportunity for coordination with the City of Austin on this project element and looks forward to continuing our engagement as the proposed project design progresses.</p> <p>The left side exit to southbound Loop 360 is the proposed configuration. Previous traffic simulations confirm that the MoPac South project addresses congestion from the multiple entrance ramps, and that the left exit issue had more to do with the need for a two-lane ramp than a need to move the ramp to the right-hand side. The MoPac South project concept addresses cross weaving with a mainline braided ramp from nearby right-hand entrance ramps. Additional ramp configuration modifications are being evaluated to address the congestion issues in this section.</p>
D-5	Design Elements	In all six of the operational configurations under consideration, a third southbound general-purpose lane would be incorporated between William Cannon Drive and Davis Lane. Additionally, the project team will evaluate potential enhancements at the intersection of MoPac and William Cannon Drive to mitigate traffic from backing up on MoPac and causing congestion, including additional turn lanes from the southbound frontage road, increased turn capacity from William Cannon Drive, as well as bicycle and pedestrian connectivity.

Comment Response Resource Category Legend

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D-6	Design Elements	<p>The project team will continue to evaluate entrance and exit ramps along the corridor and identify design refinements that would improve operations.</p> <p>The Mobility Authority appreciates the opportunity for coordination with stakeholders on this project element and looks forward to continuing our engagement as project development work continues.</p>
D-6.1	Design Elements	The Mobility Authority appreciates the opportunity for coordination with stakeholders on this project element and looks forward to continuing our engagement as project development work continues.
D-6.2	Design Elements	The Mobility Authority appreciates the opportunity for coordination with stakeholders on this project element. We will consider this and look forward to continuing our engagement as project development work continues.
D-6.3	Design Elements	<p>The project team will evaluate entrance and exit ramps along the corridor and identify design refinements that would improve operations. This ramp is not being proposed for removal, however, as part of all operational configuration options, this on ramp would be connected to a collector-distributor (CD) road that addresses the existing freeway merge issue. The CD system would end with an on-ramp that adds an auxiliary lane, thus addressing the merge issues of the current ramp.</p> <p>The Mobility Authority appreciates the opportunity for coordination with stakeholders on this project element and looks forward to continuing our engagement as project development work continues.</p>
D-7	Design Elements	The Mobility Authority appreciates the opportunity for continued coordination with the City of Austin on this project element. The MoPac South project team will be re-evaluating the entire project under new traffic forecasts from the CAMPO 2045 model as soon as they are approved using a corridor wide simulation model.
D-8	Design Elements	<p>The Mobility Authority appreciates the opportunity for coordination with the City of Austin on this project element and looks forward to continuing our engagement as the proposed project design progresses.</p> <p>This issue will be addressed in the traffic simulation analysis under new forecasts from 2045 CAMPO-based model and we look forward to future coordination meetings on this topic.</p>
D-9	Design Elements	After exploring a range of alternatives, it was determined that the purpose and need of the MoPac South Project cannot be achieved within the existing footprint of the highway. A majority of the corridor has already been restriped such that full size shoulders no longer exist to restripe. See Alt-1 for an explanation of the alternatives evaluated.
D-9.1	Design Elements	All of the Mobility Authority's projects comply with Texas state law which requires that no existing lane will be converted to a toll lane. Existing capacity must be preserved or enhanced and any tolled addition to a roadway is added capacity on the roadway. The MoPac South Project proposal complies with this law.
D-10	Design Elements	The Mobility Authority shares the City's priority for enhanced bicycle and pedestrian connectivity. We appreciate the opportunity for coordination with the City of Austin on this project element and look forward to continuing this engagement as the proposed project design progresses.

Comment Response Resource Category Legend

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D-11	Design Elements	Slide #19 of the full set of exhibits shows the proposed corridor improvements south of Barton Skyway. The full set of exhibits is still available on the MoPac South website at http://www.mopacsouth.com/news/past-events.php
D-12	Design Elements	Full schematics were developed for each operational configuration option under consideration for the express lane(s) alternative for Open House #4 in 2015. These schematics are available on the MoPac South website at http://www.mopacsouth.com/news/past-events.php . To date, the project has not proposed any changes to church driveway access along the frontage roads, and access from southbound MoPac exit ramp would be improved, as the ramp would be moved farther north from the church's south driveway.
D-13	Design Elements	The existing schematics for each operational configuration option are available on the MoPac South website at http://www.mopacsouth.com/news/past-events.php . These were developed in 2015 for Open House #4, and shared again at Open House #5. They were not updated for Open House #5 because the purpose of Open House #5 was to re-engage the community after the project hold, prior to continuing project development work. An updated schematic of the Recommended Build Alternative will be presented at an open house, anticipated in 2023.
ECO-1	Ecological	All highway and shared use path illumination will be designed to conform to the latest edition of the TxDOT Highway Illumination Manual during the final design process. Analyses will be conducted to determine the need for and extent of continuous illumination and safety lighting along ramps and at intersections. The decision-making procedures that govern highway illumination in Texas do contain provisions for addressing sky glow and light trespass issues, including consideration for alternative luminaires (e.g. LED) and glare shields.
EJ-1	Environmental Justice	The draft and final Environmental Assessment will address potential effects on low-income and minority populations per Executive Order 12898 and in accordance with TxDOT's guidance on the evaluation of environmental justice aspects of tolling.
EL-1	Express Lanes Alternative	Express lane(s) would benefit traffic conditions in the general-purpose lanes in two ways. The express lane(s) would create a travel time reduction for transit vehicles, thereby making it a more attractive mode for commuters. More transit use would lead to reduced congestion in the general-purpose lanes with fewer vehicles on the roadway. In addition, express lane(s) would allow for any excess capacity to be offered to all other motorists. Since some motorists not using transit or vanpools would choose to pay to use the express lane(s), demand for the use of the general-purpose lanes would be reduced, providing a measurable amount of relief in congestion. For these reasons, express lane(s) offer better travel time benefits throughout the day for all users. Additional travel benefits are derived from proposed improvements to the general-purpose lanes. These include: <ul style="list-style-type: none"> • Potential new direct connection at US 290 • Potential new collector-distributor road from Barton Skyway to Loop 360 • Potential south to north Texas Turnaround at Barton Skyway • Potential to lengthen the turn lane leading to Texas Turnaround at Loop 360 • Potential to reconfigure Bee Cave Road/RM 2244 southbound exit ramp

Comment Response Resource Category Legend

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		<ul style="list-style-type: none"> • Potential ramp improvements at William Cannon Drive • Third southbound general-purpose lane south of William Cannon Drive • Extension of the left turn lane at Lake Austin Boulevard • Additional bike/pedestrian facilities throughout the corridor <p>A technical memorandum that will be shared at the public hearing will detail the modeled travel times, by lane type, for the alternatives and operational configurations considered for this project.</p>
EL-2	Express Lanes Alternative	<p>Vehicles exceeding the maximum weights allowed on State highways under the motor vehicles laws of the State of Texas, as well as vehicles with trailers or other vehicles in tow would not be allowed in the express lane(s) per Mobility Authority Toll Policy. For a full list of the prohibited modes of transportation, visit https://www.mobilityauthority.com/about/policy-disclaimers/code. While MoPac south of US 290 is designated a freight corridor, it carries 2 percent trucks, resulting in a minimal number of trucks to divert.</p>
EL-3	Express Lanes Alternative	<p>Express lane(s) are a congestion management tool that recognize the concept of latent demand and utilize variable toll pricing to manage the number of vehicles entering the lane(s). These special, barrier-separated lanes are designed to remain congestion-free. This is accomplished by increasing the toll when traffic is heavy and lowering it when traffic is light. Variable toll pricing is intended to keep traffic in the express lane(s) free-flowing at any given time, giving public transit buses, vanpools, emergency response vehicles and drivers who choose to use the express lane(s) on the occasions when they need a faster and more reliable trip. The primary goal of variable toll pricing is not to generate revenue, but to keep the express lane(s) free flowing as much as possible. This is done by using supply and demand principles to manage congestion. Electronic signs display the current rates, so drivers know the price before deciding whether to enter the express lane(s). Express lane(s) are toll-exempt for public transit buses, registered van pools, and emergency vehicles, providing them with a reliable, uncongested, non-stop route to their destination.</p>
EL-4	Express Lanes Alternative	<p>In an emergency, vehicles can exit the Express Lane in between the white plastic delineator sticks that are spaced 12 feet apart. While driving over the delineators at highway speeds would cause vehicle damage, at a low speed, vehicles should be able to get in between them.</p> <p>A two express lane(s) configuration would facilitate any need to exit the express lanes in an emergency better than a single express lane. These operational benefits are among the reasons why two express lane(s) options are being considered</p>
ENV-1	Environmental	<p>The Mobility Authority is conducting the MoPac South environmental study as an Environmental Assessment with the concurrence of TxDOT and FHWA. Congress granted NEPA assignment to TxDOT in 2014, meaning TxDOT reviews and approves environmental documents in lieu of FHWA.</p> <p>In 2013, TxDOT and the FHWA approved the MoPac South Environmental Study as an Environmental Assessment (EA). In accordance with federal regulations, an EA is prepared to assist in determining environmental impact when the</p>

Comment Response Resource Category Legend

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		<p>significance of impacts of a transportation project proposal is uncertain (40 CFR 1508.9). Proposed improvements considered in the MoPac South EA involve added capacity on an existing highway. Some (minimal) additional ROW and temporary construction easements may be required, however, no displacements are anticipated. The EA will compare potential effects of proposed improvements, both beneficial and adverse, to the No-Build Alternative.</p> <p>The study team is committed to assessing potential direct, indirect, and cumulative environmental impacts through the National Environmental Policy Act (NEPA) process. Potential social, economic, and environmental impacts to the following will be considered: endangered species and wildlife; Barton Creek Greenbelt and Barton Springs; Edwards Aquifer Recharge Zone and water quality; water resources, wetlands, floodplains; vegetation; cultural resources; traffic noise; air quality; socio economic issues, including community cohesion; land use; geology and soils; biological resources, visual and aesthetic qualities; parkland; hazardous/regulated materials. and bicycle and pedestrian facilities. The findings will be published in an EA document and made available to the community.</p> <p>Based on scoping and preliminary studies, this action is not anticipated to rise to the significance of an EIS. However, if during the EA, significant impacts are discovered, the analysis would be shifted to an Environmental Impact Statement (EIS), in accordance with the NEPA process. This approach also complies with the TxDOT environmental procedures.</p>
ENV-2	Environmental	<p>The Mobility Authority is implementing the MoPac South Environmental Study as an Environmental Assessment (EA) with the concurrence of TxDOT and FHWA to identify a solution to congestion that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner that promotes environmental stewardship and sustainability. The EA will be in compliance with NEPA requirements. The EA includes an analysis of a full range of alternatives (including a “no build” alternative) and an assessment of potential impacts to the human and natural environment. These include air quality, traffic noise, hazardous materials, cultural resources, biological resources, land use and parkland, ecological resources, water quality and water resources, indirect and cumulative impacts, social and community impacts, and environmental justice. The findings will be published in an EA document and made available to the community prior to the public hearing, thus allowing public comment on results. Any substantial impacts will be mitigated in accordance with federal rules and regulations for the respective agency.</p>
ICI-1	Indirect & Cumulative Impacts	<p>The MoPac South Project team will conduct Indirect and Cumulative Impacts analyses in accordance with TxDOT’s guidance. The Indirect Impacts Analysis will be conducted in collaboration with local agencies and organizations and will consider the effects of the project on land development activities in the region as well as the effects of this potential growth on the natural and human environment. In order to ensure a comprehensive evaluation of the potential for induced growth related to the project, input will be collected from land-use experts with demonstrated knowledge of local environmental conditions and current planning and development trends in the region. The detailed analysis of induced growth impacts will be presented in a technical memorandum and findings will be summarized in the EA.</p> <p>A Cumulative Impacts Analysis will focus on resources anticipated to be impacted by the proposed project (either directly</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>or indirectly), as well as resources that are considered at risk or in poor or declining health. In order to thoroughly assess the potential cumulative impacts to a resource, project impacts will be considered along with other past, present, and reasonably foreseeable future actions. Reasonably foreseeable future actions include all of the funded transportation projects identified in CAMPO's 2045 Plan as well as reasonably foreseeable future changes in land use resulting from current and projected population and employment changes. The detailed analysis will be presented in a technical memorandum and findings will be summarized in the EA.</p>
ICI-2	Indirect & Cumulative Impacts	<p>TxDOT prepared a Statewide On-Road Greenhouse Gas Analysis and Climate Change Assessment technical report in 2021. The report includes State Loop 1 (Mopac). The report discloses: 1) an analysis of available data regarding statewide greenhouse gas (GHG) emissions for on-road GHG emissions, 2) TxDOT actions and funding that support reducing GHG emissions, 3) projected climate change effects for the state of Texas and 4) TxDOT's current strategies and plans for addressing the changing climate. A summary of the key issues in the technical report will be included in the environmental study.</p> <p>Currently, the report is being updated with the newest modeling software and most recent traffic data. This analysis will also evaluate scenarios for increasing electric vehicles over time in Texas compared to a business-as-usual case (e.g., the current percent of electric vehicles in Texas). These updates are scheduled to be complete by Summer 2022. The 2021 version may be obtained by making a request to envdivision@txdot.gov.</p>
MA-1	Mobility Authority	<p>Drivers on Mobility Authority roadways may choose to pay their tolls with an electronic tag or via the Pay By Mail program. That is the customer's choice, as is electing to use the toll road in the first place. The Mobility Authority itself is not a tag provider, but accepts payment through a variety of tags. For more information on tag payment, visit: mobilityauthority.com/tags</p> <p>If a customer has a tag account in good standing, their bill is processed through their provider (TxTag, EZTAG, TollTag, etc.). If they do not have an electronic tag, or if there is an issue with their tag account, they are sent a Mobility Authority-issued Pay By Mail notice and may choose to pay online, by phone, mail or in person.</p> <p>The Mobility Authority outsources its Pay By Mail billing services in an effort to be more efficient. Agency staff works closely with our Pay By Mail vendor to ensure their operations match our customer service expectations. Together we strive to provide quality customer service and have put considerable effort into ensuring that we are transparent with customers about their bills and notices.</p> <p>Key information is summarized for customers at the top of every Mobility Authority Pay By Mail invoice. This includes the related license plate, the amount due, the due date and ways to pay. Customers are also alerted of the amount due if payment is remitted after the due date. The agency's non-payment fee schedule is outlined on every bill. Notices are color coded by billing stage for easy reference (current, 30 days past due, 60 days past due). A picture of the vehicle is featured</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>on every bill and customers are invited to contact our Call Center if they believe the vehicle does not belong to them. This can happen if a customer has recently sold or traded in a vehicle, but has not yet updated the registration information for that vehicle with the Texas Department of Motor Vehicles (TxDMV). We and other toll operators utilize TxDMV data to determine the owner of a vehicle by its license plate and the owner's mailing address. Customers have full access to current billing and historical invoice information online. Customers can sign up for electronic invoicing and have bills emailed each month to allow for quicker receipt and payment resolution.</p>
MA-2	Mobility Authority	<p>Toll revenue collected stays local and allows the Mobility Authority to reinvest in mobility improvements in Williamson and Travis counties, enhancing quality of life, economic vitality, and mobility for Central Texas residents and travelers through the region. When a project is complete, the toll revenue is used to pay down debt, cover routine maintenance/renewal/replacement needs of the new facility, as well as help fund future infrastructure improvements for Williamson and Travis Counties.</p>
MA-3	Mobility Authority	<p>The Central Texas Regional Mobility Authority operates under the Texas Transportation Code Chapter 370 and is authorized under state law to implement a wide range of transportation systems including roadways, airports, seaports and transit services. Development of the MoPac South Environmental Study falls within the authority of and is aligned with the mission of the agency - to implement innovative, multimodal transportation solutions that reduce congestion and enhance quality of life and economic vitality. For more information on regional mobility authorities, visit: https://ftp.txdot.gov/pub/txdot-info/tpp/rma/report.pdf</p>
MA-4	Mobility Authority	<p>Customers needing assistance with a Mobility Authority Pay By Mail toll bill should call our customer service center at (512) 410-0562. The existing MoPac Express Lane was designed to be wide enough to allow vehicles to get around any incident that occurs in the Lane. In these cases, tolls are waived.</p>
OCO-1	Operational Configuration Options	<p>A cost estimate for the Recommended Build Alternative will be developed as part of the project development process. Cost is not a consideration in the evaluation process under NEPA.</p>
OCO-2	Operational Configuration Options	<p>Several operational configuration options - including those with no new elevated lanes - are being studied for improvements near West Austin, Zilker Park, Lady Bird Lake and Austin High School.</p>
OCO-3	Operational Configuration Options	<p>The concept of a single express lane has been implemented with the MoPac Improvement Project (from Cesar Chavez Street to north of Parmer Lane) because there was not sufficient right-of-way to construct more than one additional lane in each direction. While the single express lane along that stretch of the corridor provides relief over previous congestion levels, performance measures indicate that operations would be further improved with two express lanes in each direction versus one.</p> <p>The study team is looking into operational configuration options with one express lane in each direction as well as operational configuration options with two express lanes in each direction. There is sufficient right-of-way to add two express lanes in each direction along MoPac from Cesar Chavez Street to Slaughter Lane. While adding one express lane</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>would significantly improve mobility, adding two express lanes would better meet the purpose and need of the project of providing reliable travel times for individual vehicles, transit and emergency first responders.</p> <ul style="list-style-type: none"> • More than double the number of vehicles would be able to move through the express lanes if two lanes in each direction are provided instead of one. (FHWA, 2003) • Building two express lanes in each direction would increase the cost of the project by less than 10 percent over building only one express lane. Costs would be significantly higher to construct a second express lane in the future. • A second express lane would require an additional 24 feet of pavement. This would not significantly change the environmental impacts of the project. • The corridor would be disturbed again if a second express lane were to be constructed in the future, impacting the environment, traffic flow and neighboring homes and businesses. • With two express lanes, toll rates would be lower because more vehicles would be able to use them. • Facilities with two express lanes in each direction allow for more efficient and safer incident management. <p>There is only a minor difference in cost between building two express lanes in each direction versus one because:</p> <ul style="list-style-type: none"> • For all operational configurations, there is very little cost difference between one versus two express lanes between Bee Cave Road and Cesar Chavez Street, and along the southern 4,000 feet of the project corridor. • Between US 290 and William Cannon, the median area is already paved so there is minimal difference in cost between one versus two lanes. • It is assumed that the cost of tolling equipment would be similar whether building one express lane or two. <p>For more information on the measurable benefits of the MoPac Express Lanes on energy-emissions, fuel consumption, transit ridership, and mode shifts from single occupancy vehicles to CapMetro Express Buses, review this research brief: https://www.mobilityauthority.com/upload/files/Innovation/Research%20Briefs/2019-09_CTRMA_MoPac_Express_Lanes_Energy-Emissions_Analysis.pdf.</p>
OCO-4	Operational Configuration Options	<p>The study team is evaluating six different operational configuration options for the Express Lane(s) Alternative, including options that do not require elevated lanes over Lady Bird Lake. The operational configuration options were developed based on input from stakeholders, including the City of Austin, the City of Rollingwood, Capital Metro, TxDOT, Austin High School, and others. All operational configuration options are still under consideration. Each are being refined and receiving the same level of analysis and will be measured against the same criteria.</p> <p>The following six operational configurations are under consideration:</p> <p>1A: One Express Lane + Downtown Direct Connection 1B: One Express Lane without Downtown Direct Connection 2A: Two Express Lanes + Downtown Direct Connection 2B: Two Express Lanes without Downtown Direct Connection</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>2C: Two Express Lanes + Elevated Ramps near Barton Skyway and Bee Cave Road 3: City of Austin Proposal</p> <p>Detailed information about these configurations was presented to the public at the Nov. 10, 2015 Open House (Open House #4) as well as Open House #5 held virtually from Nov. 22, 2021 - Jan. 7, 2022, and is available on http://www.mopacsouth.com/environmental/past-events.php.</p>
OCO-5	Operational Configuration Options	<p>The following evaluation criteria will be considered in the comparative analysis of the different operational configuration options. This set of criteria was developed collaboratively with the public and stakeholders. The public comment opportunity for this set of evaluation criteria occurred in 2013 and 2014, at Open Houses #1 and #2, respectively.</p> <ul style="list-style-type: none"> • Reduce congestion delays • Optimize corridor utilization (throughput) • Maximize travel time savings • Serve all roadway users • Provide opportunity for reliable travel time for all users • Facilitate reliable emergency response • Provide consistency with local and regional plans • Be constructible without unnecessary impacts to the human and natural environment • Avoid and minimize impacts to water quality • Deliver relief in a timely manner • Facilitate congestion management by increasing opportunities for pedestrians and bicycles • Create a dependable and consistent route for transit • Consider stakeholder input
OCO-6	Operational Configuration Options	<p>The City of Austin (COA) proposed Operational Configuration Option 3 for analysis by the project team. It is being analyzed alongside the other five operational configuration options. COA cited a variety of general concerns about Mopac Expressway access, congestion and operations. Technical information on the proposal is available on http://www.mopacsouth.com/news/past-events.php. For information on the City's intent in developing this proposal, contact the City.</p> <p>As will all public comments and agency coordination, the Mobility Authority considers and integrates feasible improvements. The agency has integrated several COA-recommended general purpose lane improvements to all six Express Lane(s) Operational Configurations.</p>
OOS-1	Out of Scope Improvements	This falls outside the scope of the MoPac South Project.

Comment Response Resource Category Legend

Code	Resource Category	Response
OOS-1.1	Out of Scope Improvements	The appropriate entity to share this input with would be the City of Austin PARD. The MoPac South Project does not preclude the City from implementing improvements to this bridge. https://www.austintexas.gov/department/parks-and-recreation
OOS-1.2	Out of Scope Improvements	The appropriate entity to share this input with would be TxDOT. https://www.txdot.gov/inside-tdot/contact-us/contact-us/askAGeneralQuestion.html?issueType=Customer-Service&id=aus-email
OOS-1.3	Out of Scope Improvements	The appropriate entity to share this input with would be CAMPO. https://www.campotexas.org/contact/
OOS-2	Out of Scope Improvements	<p>Improvements to Bee Cave Road are outside the scope of this project. The Mobility Authority charge is to improve congestion on south MoPac rather than addressing this localized intersection issues. The agency will continue coordinating with other entities that may seek to implement improvements at this intersection.</p> <p>To share your input with TxDOT, visit: https://www.txdot.gov/inside-tdot/contact-us/contact-us/askAGeneralQuestion.html?issueType=Customer-Service&id=aus-email.</p>
PI-1	Public Involvement	The public comment period for Open House #5 was 46 days, above and beyond the required 15 days, including a period of 24 consecutive non-holiday days between Thanksgiving and Christmas. The Mobility Authority utilized extensive methods to increase awareness of the opportunity to review and comment, in line with the objective of reintroducing this project to the public and raising awareness for those recently arrived residents prior to further project development. There will be additional public comment opportunities in the future.
PI-2	Public Involvement	<p>In keeping with the Mobility Authority's core values, implementation of the MoPac South Environmental Study focuses heavily on public participation. That means going above and beyond the requirements of NEPA, which assures that the decision-making process considers the input of many different stakeholders, technical professionals and the public. NEPA requires one open house with a 15-day comment period, one public hearing with a 15-day comment period, and elected official outreach. The CTRMA embraces TxDOT's Public Involvement Policy, in which, TxDOT commits to purposefully involve the public in planning and project implementation by providing for early, continuous, transparent and effective access to information and decision-making processes. TxDOT will regularly update public involvement methods to include best practices in public involvement and incorporate a range of strategies to encourage broad participation reflective of the needs of the state's population.</p> <p>Since launching the environmental study in 2013, the Mobility Authority has gone above and beyond the public involvement requirements of NEPA. To date, the following outreach has occurred:</p> <ul style="list-style-type: none"> • 1 Agency Scoping Meeting (October 29, 2013) • 4 In-person Open Houses (November 11, 2015, February 26, 2015, April 29, 2014 and November 7, 2013) • 5 Virtual Open Houses (start dates above, plus Nov. 22, 2021) • 2400+ official comments • 90 Stakeholder Meetings

Comment Response Resource Category Legend

Code	Resource Category	Response
		<ul style="list-style-type: none"> • 4 NEPA Technical Working Group Meetings • 1 Bicycle and Pedestrian Technical Working Group Meeting • Five 40+-day comment periods • Display advertisements • Digital advertisements • Website banners • Letters to adjacent property owners • Interested and consulting party notification letters • Email notifications and e-newsletters • Stakeholder meetings • Elected official outreach • Social media • Media outreach • Dynamic message boards on the roads <p>The Mobility Authority and TxDOT will continue to listen to and engage the community throughout the MoPac South Environmental Study.</p>
PI-3	Public Involvement	<p>Outreach for open house #5 included direct letters to more than 30 elected officials 30+ days in advance of virtual open house launch, printed display ads in three publications (Austin Chronicle, West Austin News, Community Impact), digital online ads, direct letters to interested and consulting parties, newsletters, media outreach, postcards to adjacent property owners, roadside message boards in four locations along the south MoPac corridor, and website notices on MobilityAuthority.com, MoPacSouth.com and TxDOT.gov. The project website (MoPacSouth.com) features accurate project information, and for the full duration of the comment period, displayed a prominent green button on the homepage directing users to the virtual open house website.</p>
PI-4	Public Involvement	<p>The Mobility Authority's planned next steps include updating our analyses to CAMPO 2045. The virtual Open House # 5 and concurrent public comment opportunity fulfilled the objective of re-engaging the public and fostering awareness that the project is resuming, prior to additional project advancement work. The majority of public comments received are applicable regardless of whether submitted based on 2035 or 2045 data.</p>
PI-5	Public Involvement	<p>The Mobility Authority values the health, well-being and safety of the community. Approach to public engagement has and will continue to consider the status of the COVID-19 pandemic. In an effort to balance safety with the communication preferences of the public, the virtual open house website invited members of the public to contact the project team to arrange a meeting, or request more information or other special accommodations. This offer remains, and anyone wishing to engage with the project team may contact us at http://www.mopacsouth.com/contact/</p> <p>There will be additional virtual and in-person public comment opportunities as the project advances.</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
PI-6	Public Involvement	<p>The National Environmental Policy Act (NEPA) process holds that public comments are not a vote but serve to help inform the decision-making process.</p> <p>When the Mobility Authority identifies the Recommended Build Alternative, the data and analysis will be presented to demonstrate why it meets the purpose and need of the project.</p> <p>The public will be asked to comment on the Recommended Build Alternative.</p>
PI-7	Public Involvement	<p>In response to the community's request for an additional public comment opportunity, the Mobility Authority will hold an additional public meeting with a concurrent public comment period prior to identification of the Recommended Build Alternative.</p> <p>The information shared will focus on the CAMPO 2045 model updates, and the timing will be determined at a later date and announced on MoPacSouth.com. The meeting could be held virtually to encourage greater participation by the community. For anyone preferring in-person engagement, our project team remains available for in-person meetings by request.</p>
PI-8	Public Involvement	<p>The Mobility Authority is considering all public comments received as the project moves forward. Open house summary reports - including all comments received - for all prior open houses is available at http://www.mopacsouth.com/news/past-events.php. A digest of all the comments received at Open House #4 has been available on http://www.mopacsouth.com/environmental/public-input.php since 2016. Open House #5 is an extension of Open House #4 because the same information has been repeated for public comment before making any project advancements.</p>
PI-9	Public Involvement	<p>The Mobility Authority has held dozens of issue-specific workshops with stakeholders and will continue to reach out to, and engage stakeholder groups and the wider community as the project advances. Meeting documentation is available online for past technical working group meetings and open houses at http://www.mopacsouth.com/news/past-events.php</p> <p>Individuals, groups, neighborhoods, and other stakeholders may request a meeting or presentation by emailing the project team via the project website: MoPacSouth.com/contact. The project team is also available by phone during business hours at (512) 342-3299.</p>
PI-10	Public Involvement	<p>To stay up-to-date on project developments, sign up for our newsletter at MoPacSouth.com/contact/, and follow us on Twitter @MoPacSouth.</p>
PI-11	Public Involvement	<p>The Mobility Authority is coordinating with the project team responsible for developing the Zilker Park Vision Plan.</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
PI-12	Public Involvement	The Mobility Authority values stakeholder input, and believes community input leads to better project outcomes. The agency has done a great deal of community engagement throughout the course of this project to date, and intends to continue outreach to stakeholders as project development continues.
PN-1	Purpose & Need	<p>The Purpose and Need statement for MoPac South was developed collaboratively with stakeholder input at Open Houses #1 and #2, in 2013 and 2014, respectively.</p> <p>The purpose of the project is to:</p> <ul style="list-style-type: none"> • Provide an opportunity for reliable travel times along MoPac between Cesar Chavez and Slaughter Lane • Improve operational efficiency (reduce delay, maximize utilization of available capacity) • Create a dependable and consistent route for transit • Facilitate reliable emergency response <p>The problems are we trying to address (project need):</p> <ul style="list-style-type: none"> • Current congestion levels are creating unreliable travel times • Forecasted population, traffic and employment growth, resulting in increased congestion and delay • Existing facilities do not meet current traffic demand • Emergency response times are impacted by traffic congestion <p>Other Goals and Objectives, identified through public and agency involvement and stakeholder engagement, are used to help clarify the purpose and need and aid in the evaluation of alternatives. The goals and objectives include, but are not limited to:</p> <ul style="list-style-type: none"> • Be constructible without unnecessary impacts to the natural and human environment • Avoid and minimize impacts to water quality • Deliver relief in a timely manner. <p>The Environmental Assessment will present an evaluation of potential direct, indirect and cumulative effects. This evaluation helps to determine how well the project would meet these goals and objectives.</p>
PN-2	Purpose & Need	Each operational configuration option will be analyzed against the CAMPO 2045 travel demand model and assigned an operational performance score. Travel times will be one of the evaluation criteria measured in scoring.
PP-1	Proven Performance	<p>When the MoPac Express Lane north of Cesar Chavez Street fully opened to traffic in 2017, drivers immediately began realizing the benefits of the new, reliable travel option. Travel times for express lane drivers were reduced by an average of 15 minutes during the afternoon rush hour. Analysis also shows that express lane drivers generally travel at speeds above 50 miles per hours, which was the intended goal when the project started.</p> <p>While the COVID-19 pandemic has impacted express lane usage, data shows that traffic levels are increasing to pre-</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>pandemic levels. For more information on the measurable benefits of the MoPac Express Lanes on energy-emissions, fuel consumption, transit ridership, and mode shifts from single occupancy vehicles to CapMetro Express Buses, review this research brief: https://www.mobilityauthority.com/upload/files/Innovation/Research%20Briefs/2019-09_CTRMA_MoPac_Express_Lanes_Energy-Emissions_Analysis.pdf</p>
ROW-1	Right of Way	<p>The project currently does not propose acquisition of additional right-of-way</p>
RP-1	Regional Planning	<p>Next steps by the MoPac South study team include updating analyses for consistency with CAMPO 2045.</p> <p>The Capital Area Metropolitan Planning Organization (CAMPO) adopts a metropolitan transportation plan (MTP) every five years. The MTP is a multimodal approach to addressing congestion and transportation needs over the next 25 years. The Plan includes roads, transit, active transportation options such as walking and biking, and also examines new technologies, travel strategies, and choices that maximize the use of current transportation infrastructure. A robust public engagement effort is part of the CAMPO adoption process.</p> <p>The currently approved Metropolitan Transportation Plan (MTP) is the CAMPO 2045 Plan, adopted in May 2020. The travel demand model used to generate travel forecasts relies upon CAMPO-approved population and employment forecasts, which are a part of the 2045 Plan. Short-term trends in travel behavior notwithstanding, the Environmental Assessment (EA) is required to be consistent with the CAMPO 2045 Plan.</p> <p>The operational traffic analysis used in the MoPac South EA will consider peak period traffic in both the northbound and southbound directions and will examine all ramp operations and express lane movements.</p> <p>The MoPac South project was also listed in previous MTPs. It is typical for the description of projects in a MTP to be revised as a project advances through the NEPA process and detailed alternatives analyses are conducted. More information can be found on CAMPO's website: https://www.campotexas.org/regional-transportation-plans/2045-plan/</p>
RP-2	Regional Planning	<p>The Environmental Assessment is required to be consistent with the CAMPO 2045 Plan. CAMPO has a public engagement process that provides the public ample opportunity to comment and participate in the development of Regional Transportation Plan (RTP). The Mobility Authority recognizes there are several planned, ongoing, or completed regional projects that are not reflected in the CAMPO 2035 model (listed below), and as such, the project team's planned next steps include updating analyses with the CAMPO 2045 plan prior to identifying a Recommended Build Alternative, and providing additional public comment opportunities.</p> <ul style="list-style-type: none"> • 183 Toll (US 290 - SH 71) • 45SW Toll • SH 71W safety improvements • MoPac Express Lane

Comment Response Resource Category Legend

Code	Resource Category	Response
		<ul style="list-style-type: none"> • 71 Toll Lane • SH 130 N expansion • Project Connect • I-35 Capitol Express • Loop 360 Interchanges • Oak Hill Parkway as a non-tolled project • Lone Star Rail removed from regional plan • Regional plan includes up to two express lanes for MoPac South <p>The agency also recognizes that population growth and development have increased since the CAMPO 2035 model, and that COVID has temporarily impacted traffic and commuting patterns. The intent in sharing the same information at Open House #5 that was shared at Open House #4 (when CAMPO 2035 was the current model), was to re-engage the community in the project before further advancing it because there has been such a long pause in the project and there are many new residents and stakeholders to engage with as we move the project forward.</p>
RP-3	Regional Planning	<p>The Capital Area Metropolitan Planning Organization (CAMPO) is responsible for determining project limits.</p> <p>While there is currently no funding in the CAMPO 2045 Plan to connect MoPac to I-35, extend the SH 45SW project east of FM 1626, or add more than two lanes in each direction to MoPac, the Mobility Authority is aware that in July 2021, the Hays County Commissioner Court authorized staff to evaluate potential to perform a feasibility study to extend SH 45SW from FM 1626 to I-35.</p>
RP-4	Regional Planning	<p>Congress has directed that federally-funded highway projects must flow from metropolitan and statewide transportation planning processes (pursuant to 23 United States Code (USC) 134-135 and 49 USC 5303-5306). Regulations require that the entire project described in the environmental decisional document shall be consistent with the Metropolitan Transportation Plan (MTP) and the fiscally-constrained Statewide Transportation Improvement Program (STIP). In order for a highway project to be considered fully developed for inclusion in the MTP and STIP it must have logical termini, have independent utility and not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.</p> <p>The MoPac Intersections project and the SH 45SW project are each listed in the MTP and STIP as stand-alone projects because they have logical termini and independent utility; and MoPac South is listed as a standalone project in the TIP. The SH 45SW project and MoPac Intersections project have both been constructed and are open to traffic.</p> <p>MoPac South is part of the CAMPO 2045 Long Range Transportation Plan and the TxDOT 2050 Statewide Transportation Plan. The logical termini for the MoPac South Project are Cesar Chavez and Slaughter Lane. These are rational end points for the transportation improvement because they A) sufficiently encompass the area needed to achieve the purpose of</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>the project; provide an opportunity for reliable travel times; improve operational efficiency (reduce delay, maximize utilization of available capacity); create a dependable and consistent route for transit; and facilitate reliable emergency response, and B) allow environmental issues to be analyzed on a sufficiently broad scope to ensure that the project would function properly without requiring additional improvements elsewhere. The MoPac South Project has independent utility because the proposed improvements would function as a usable roadway and would not require implementation of any other project to operate. In addition, the project would not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements.</p> <p>Direct, indirect and cumulative effects will be analyzed in the EA for MoPac South, including effects on the Edwards Aquifer.</p> <p>Both the previous and current Metropolitan Transportation Plans assume the MoPac South, Oak Hill Parkway, and SH 45SW projects have been implemented. Therefore, even though these projects were studied independently, the impact of each project on the other is considered in the various analyses including indirect and cumulative impacts, air quality, and noise impacts. In addition, each of these projects has independent utility, meaning each would benefit drivers and would be considered a reasonable expenditure, even if no additional transportation improvements in the area are made; therefore, they were studied independent of one another. These projects function as stand-alone improvements, even if other improvements in the area do not advance, or advance at a different schedule.</p>
RP-5	Regional Planning	<p>Traffic forecasts were developed using both a comprehensive corridor traffic count program and a detailed corridor travel demand forecasting model derived from the CAMPO regional travel demand model. These models are updated as CAMPO transitions between successive long range plans every five years. Thus the model forecast reflect both official demographic forecasts of population and employment for the region, as well as all transportation projects that are part of the approved long range transportation plan for the Austin metropolitan area.</p>
RP-6	Regional Planning	<p>The currently approved Metropolitan Transportation Plan (MTP) is the CAMPO 2045 Plan, adopted in May 2020. The travel demand model used to generate travel forecasts relies upon CAMPO-approved population and employment forecasts, which are a part of the 2045 Plan. Short-term trends in travel behavior notwithstanding, the Environmental Assessment (EA) is required to be consistent with the CAMPO 2045 Plan.</p> <p>Recent evidence also shows that pre-COVID traffic congestion issues have returned, showing that tele-commuting, flexible work schedules and other technological and societal changes have not made a measurable change in transportation system performance outcomes. Though some permanent changes in commute patterns may occur, the need for improvements is driven by Austin's strong economy resulting in high population and employment growth.</p> <p>Traffic demand on this section of Mopac Expressway has continued to grow at an average rate of 2 percent per year for the past 20 years, and based on congestion patterns documented by on-line mapping/routing providers, weekday peak</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>period congestion on Mopac South is as long as 8 hours (noon to 8 pm) on southbound Mopac from Enfield to Loop 360. This has occurred both before and after the COVID-19 pandemic effects.</p>
RP-7	Regional Planning	<p>The Mobility Authority does not decide which roads to build. The MoPac South Project comes to us at the direction of CAMPO, our region's metropolitan planning organization, and at the approval of the Texas Transportation Commission. The Mobility Authority's development of projects is directly outlined by their process and as such must be followed in the development of alternatives. If at any time CAMPO should change course on this project, or any others we are scheduled to develop, we would be obligated to respond and adapt accordingly.</p> <p>The CAMPO planning process accommodates suggested transportation improvements from individuals and organizations, not just political representatives or transportation agencies. CAMPO is thus the sounding board to collectively decide what to build via a democratic, technically informed planning process. Projects cannot advance unless they are part of the CAMPO long range plan, and thus have been vetted to all involved agencies, organizations and individuals. Federal funding is tied to complying with this planning process.</p>
RP-8	Regional Planning	<p>The traffic volume forecasts are determined using the official demographic forecast of future population and employment developed by CAMPO, the regional transportation planning authority, and forecasted using the official regional travel demand forecasting computer model. The traffic volume increases are not caused by expanding the roadway, they are caused by the undeniable explosive levels of population and employment growth in the region and effects of densification of central areas of the metropolitan area. Mopac Expressway growth is also affected by the lack of alternate routes in the corridor as rivers and creeks break the continuity of the major street system, thus causing a large number of trips to use the Mopac Expressway for shorter trips to make connections between areas between these breaks in the street network. Travel demand model forecasts under the "No Build" alternative drew nearly the same levels of traffic as the "Build" alternative, as there are few alternatives, and local roads are overloaded by those able to use other routes. The traffic forecasts for the Mopac Expressway also include the effects of planned transportation projects in the region such as the I-35 managed lanes, Loop 360 improvements and CapMetro's Project Connect long range transit program. The resulting projected percentage increase in traffic demonstrates the strategic importance of Mopac Expressway to the region, and why the need for improvements cannot be ignored.</p> <p>Thus decisions on where to accommodate population and employment growth in the region by local jurisdictions result in future regional travel patterns, and these jurisdictions and regional transportation agencies have contributed transportation projects of all types – like the Mopac South Project – to the CAMPO long range plan to accommodate the resulting travel growth. The Mopac South Project has been part of the CAMPO long range transportation plan for the region for 10 years, and CTRMA is conducting this corridor improvement study in collaboration with TxDOT and other stakeholders throughout this period of time. The express lane(s) alternative has been shown to be a prudent means of accommodating corridor traffic growth by providing reliable travel times that benefit both private travelers and transit users, and a fiscally-responsible mechanism for funding and maintaining corridor improvements, including operational</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		improvements to interchanges and ramps along the corridor. In addition, the project includes new connecting facilities for bicycles and pedestrians. Like other projects in the region, Mopac South Project contributes toward efforts to maintain viable access to the urban core area so that policy initiatives such as densification can be sustained.
RW-1	Rollingwood	Tree planting at Austin Memorial Park cemetery is an environmental commitment established for the MoPac North Project. This effort is unrelated to the MoPac South Project, and not a baseline for determining environmental mitigation measures for other projects.
S-1	Schedule	<p>The MoPac South Environmental Study was launched in 2013 and put on an indefinite hold in 2016, several months after Open House #4 which was held in Nov. 2015, and before the project team was able to finalize the Open House #4 summary report and comment response matrix.</p> <p>The project hold was primarily due to a lawsuit filed against the project attempting to prevent the Mobility Authority and TxDOT from advancing MoPac South, as well as two other key mobility projects that had already received environmental clearance through the National Environmental Policy Act (NEPA) process. The lawsuit has since been decided in favor of the Mobility Authority and TxDOT, confirming the credibility of the environmental study process, and clearing the project to continue moving forward from a legal standpoint.</p> <p>Another factor contributing to the project hold was an effort by the executive branch of state government to allow time for transportation agencies in the state to re-evaluate potential funding sources for priority projects, such as MoPac South.</p> <p>In early 2020, the Mobility Authority began resuming efforts to re-engage the public in preparation for further project advancements. However, the COVID-19 pandemic caused additional delays.</p> <p>In late 2021, the Mobility Authority held Open House #5 virtually, in consideration of the health and safety of the community. This open house was intended to re-engage the public and encourage participation in the process as the project now moves forward to the next phase of meaningful data analysis.</p> <p>Meanwhile, traffic congestion on south MoPac is worsening, and further impacting quality of life and mobility in Central Texas. From the beginning of the project the agency has remained accessible, and has welcomed stakeholders to provide input and credible alternatives. As such, the Mobility Authority is moving forward responsibly to advance the project in an effort to provide meaningful congestion relief.</p>
SM-1	Shared Mobility	Shared mobility services offer transportation devices for short-term rental from the public right of way. In Austin, there are different types of shared mobility services: shared micromobility and shared vehicles. for more information, visit https://www.austintexas.gov/sharedmobility

Comment Response Resource Category Legend

Code	Resource Category	Response
SF-1	Safety	<p>Safety is a primary factor and a key priority in all Mobility Authority projects, including MoPac South. Stakeholder input was solicited when establishing the purpose and need for the project. While the public did not expressly identify that as the focus of the purpose and need, safety is nonetheless integral to the Mobility Authority's goals of improving the corridor, and remains an ongoing priority for MoPac South and all projects.</p> <p>The existing facility is already a freeway facility, which is designed to the highest safety performance standards. Since the express lanes and other improvements would be designed to the same high standards, no degradation in safety performance is expected. Nevertheless, the current safety performance of the corridor will be re-assessed based on recent crash data and reported at the next public meeting.</p>
Soc-1	Social & Community Impacts	<p>A technical memorandum will be prepared for the project detailing the effects of the project on community resources such as neighborhoods, schools, community facilities and commercial area as well as the effect of the project on low-income and/or minority populations. The analysis will describe potential impacts to private property including displacements and effects to adjacent property values and will evaluate the effects of the project on community cohesion and access and mobility. The findings in the technical memorandum will be summarized in the Environmental Assessment (EA).</p>
Soc-2	Social & Community Impacts	<p>All operational configuration options being evaluated introduce new visual elements into the MoPac South corridor and all would accommodate more traffic passing along adjacent park land than exists today. Once an operational configuration option is selected as the Recommended Build Alternative, a visual impact assessment and detailed traffic noise analysis will be completed to determine what impacts the project may have.</p>
Soc-3	Social & Community Impacts	<p>TxDOT's right-of-way extends over Lady Bird Lake, Barton Creek Greenbelt, and other trails that extend under MoPac, which are used by pedestrians, bicyclists and watercraft enthusiasts. Any improvements would be designed and constructed in a manner that avoids and minimizes impacts, including disruption of recreational activities. It has not been determined whether temporary closures of recreation facilities during construction will be needed. This could include the pedestrian bridge over Lady Bird Lake under the southbound bridge. No permanent closures are anticipated.</p>
SOS-1	SOS Concurrence	<p>Thank you for your comment. Please refer to responses to comment 334 from SOS.</p>
T-1	Transit	<p>Because the Mobility Authority's policy would allow Capital Metro's public transit buses to drive on the express lane(s) without paying a toll, and the variable toll in the express lane(s) would be priced to maintain uncongested traffic flow, riding transit becomes a more viable alternative to driving alone. Bus riders will benefit from reliable travel times on MoPac South; and when on city streets they would benefit from transit-priority strategies developed by the City of Austin and Capital Metro, particularly in the downtown area.</p> <p>In CTRMA's recent study of Mopac North express lane benefits, we found that express buses traveling between downtown and Lakeline Mall area were able to make two additional round trips per day due in part to travel time savings associated with Mopac North express lanes. This translates into operational efficiency for the transit fleet, as well as travel time benefits for transit users.</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		For more information on the measurable benefits of the MoPac Express Lanes on energy-emissions, fuel consumption, transit ridership, and mode shifts from single occupancy vehicles to to CapMetro Express Buses, review this research brief: https://www.mobilityauthority.com/upload/files/Innovation/Research%20Briefs/2019-09_CTRMA_MoPac_Express_Lanes_Energy-Emissions_Analysis.pdf
T-2	Transit	The study team is working closely with Capital Metro to determine appropriate locations for Park and Rides in the near- and long-term near MoPac South, and to determine additional options for enhancing transit infrastructure in and near the corridor.
T-3	Transit	As Austin's regional public transportation provider, Capital Metro leads the development of new public transportation options or incentives in the region. Learn more at capmetro.org . CapMetro registered vanpools and Metro Express buses ride toll-free on all Mobility Authority facilities, including the proposed future MoPac South Express Lane(s), if constructed. As a regional transportation partner, the Mobility Authority would support the efforts of Capital Metro along Mobility Authority projects, as we have done in the past on other transit proposals.
T-4	Transit	<p>CapMetro is leading Project Connect, a comprehensive transit system expansion. Learn more at https://projectconnect.com/</p> <p>The effects of this more than \$7B investment in multimodal transportation alternatives are reflected in the travel demand modeling forecasts for MoPac South.</p>
TDM-1	Transportation Demand Management	<p>The Mobility Authority collaborates with Movability, Central Texas' transportation management association solely dedicated to working with employers and individuals to improve the region through commuter options that save time and money (https://movabilitytx.org/). The Mobility Authority also supports regional TDM efforts to encourage more efficient travel behavior and contributes as a key stakeholder.</p> <p>Furthermore, there are a variety of private transportation providers that offer ridesharing options, such as Uber and Lyft. Variable-priced express lanes could also generate demand for private shared ride providers to supplement public transportation services, thus sharing the higher cost of peak period express lane use among multiple commuters.</p>
TES-1	Threatened & Endangered Species	<p>The Mobility Authority has conducted and will continue to conduct studies of potential habitat and absence and presence surveys for protected species during the Environmental Assessment (EA) process. This effort will inform the design process and demonstrate compliance with TxDOT requirements. Studies will identify potential habitat, support the impact analysis, and aid designers in avoiding potential or critical habitat for listed species.</p> <p>No endangered species were encountered during the 2014/2015, field surveys and additional surveys are underway. Research and field investigations conducted in the summer of 2013 and spring of 2014 and 2015 indicate that potential habitat for four candidates for federal listing and four federally listed endangered species occur in the vicinity of the proposed project.</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>Candidate species include one plant, the bracted twistflower, and three mollusks (freshwater mussels). Federally listed endangered species include one karst invertebrate, the Bee Creek Cave harvestman and one bird, the Golden-cheeked Warbler.</p> <p>There is potential habitat for two federally listed endangered salamanders, the Austin blind salamander and the Barton Springs salamander. As such, the project team performed a survey in 2021 which did not detect any federally listed salamanders.</p> <p>Surveys conducted in 2014, 2015, 2016, 2018, 2019, 2020, 2021 of potential habitat for Golden-cheeked Warbler did not identify any populations within the proposed ROW. The Mobility Authority has elected to continue annual surveys for these species during the EA process.</p> <p>Additional studies will be finalized to confirm prior investigations of karst features and potential habitat for karst invertebrates and salamanders. That data will be incorporated into the EA, detailing the potential for impacts to protected species. Mitigation measures, such as water quality best management practices and clearing vegetation outside of nesting season, will be incorporated to avoid and minimize impacts to threatened and endangered species. The project team will consult with U.S. Fish & Wildlife Services (USFWS) on any impacts and potential mitigation measures for federally listed species, and Texas Parks & Wildlife Department (TPWD) for state-species. A technical memorandum will be prepared as part of the study and the findings will be summarized in the EA.</p>
TF-1	Transportation funding & Tolling	<p>Rapid regional growth has put pressure on the transportation network in Central Texas, resulting in demand for solutions to congestion challenges and improvements to serve the growing region. Toll funding allows transportation projects to be built more quickly than is possible under the traditional gas-tax-funded, pay-as-you-go approach, because toll projects receive full funding commitments prior to construction start. The Capital Area Metropolitan Planning Organization (CAMPO) is responsible for assigning projects to area transportation agencies and determining how transportation projects are funded through the Metropolitan Transportation Plans (MTP).</p> <p>Both previous and current MTP have included tolling as a funding source for MoPac South improvements. As additional transportation funding becomes available, CAMPO may elect to alter the funding plan for MoPac South. The Mobility Authority works closely with TxDOT to implement projects identified in the MTP and STIP and is developing the MoPac South Environmental Study cooperatively with regional partners.</p> <p>The Mobility Authority has two ways to finance capital projects: debt issuance and pay-as-you-go (including governmental grants) financing. Each of these capital financing methods has benefits and drawbacks. Debt financing allows infrastructure to be delivered when it's needed and spreads the cost over the useful life of the asset. This allows the</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>agency to advance multiple projects at the same time. Pay-As-you-go financing ensures future funds are not tied up in servicing debt payments. It allows for greater budget transparency and avoids risk of default. However, Pay-as-you-go financing means long wait times for new infrastructure and a single large project may exhaust an agency's entire budget for capital projects for multiple years. The Mobility Authority and its team of financial advisors study all financing methods when developing projects and choose the appropriate method to get the much-needed infrastructure on the ground.</p> <p>Per Texas state law, no existing lane will be converted to a toll lane. Existing capacity must be preserved or enhanced and any tolled addition to a roadway is added capacity on the roadway.</p>
TF-2	Transportation funding & Tolling	<p>Roads don't simply become free once construction debts are paid off. Costs for operations and maintenance continue throughout the entire lifecycle of a road. Use of roadways degrades them, and without regular maintenance, our roads would eventually need to be fully reconstructed, rather than simply repaired. Furthermore, the cost of maintenance over time is three-to-four times greater than the initial cost of building the road. By the time construction debts are paid off, a road is often near the end of its lifespan, when rehabilitation and possible expansion are needed. A continuous funding stream is needed to maintain the road, and this can only be paid through increased taxes or toll revenue.</p> <p>Because the state's transportation tax revenue barely covers existing highway maintenance, it is difficult for the system to absorb new road maintenance costs. Additionally, surplus revenue from toll transactions can be used to build and enhance future transportation infrastructure. As more roads are built, a greater share of available funding goes to maintenance.</p>
TM-1	Traffic Modeling	<p>Travel demand forecasts for the Mopac South Project show that it draws some traffic from parallel routes, but there are few parallel routes available. Residents of adjacent neighborhoods benefit from less congestion, more reliable operations and more economic opportunities generated by mitigating corridor congestion. Neighborhoods may also benefit from reduced cut-through traffic as more trips are able to use Mopac Expressway with improvements.</p> <p>The operational configuration options under consideration will be evaluated against the CAMPO 2045 travel demand model, which considers parallel routes and surrounding neighborhoods</p>
TN-1	Traffic Noise	<p>As part of the environmental study, the Mobility Authority is required by the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA) to prepare and document a Traffic Noise Analysis. The analysis will follow the latest version of TxDOT's Environmental Handbook for Traffic Noise. The analysis considers the current level of noise at many locations throughout the study area, calculates existing and projected future traffic noise levels, and considers noise abatement measures (such as sound walls) if the predicted future noise levels exceed acceptable noise levels for properties that surround the project, based on the FHWA Noise Abatement Criteria Table. The results of that analysis will be shared once available, and will be included as part of the Environmental Assessment (EA) document. The noise analysis is performed on the Recommended Build Alternative.</p>

Comment Response Resource Category Legend

Code	Resource Category	Response
		<p>If sound walls are deemed to be reasonable and feasible, a noise workshop and voting process would follow. For more information, visit fhwa.dot.gov/environment/noise/noise_barriers/</p> <p>The noise analysis will also be considered in the cultural resources and community impact assessment.</p>
TN-2	Traffic Noise	FHWA guidance states that modeled noise levels must represent the "worst noise hour," which is defined as the highest traffic volume at which the highest operating speed continues to occur.
TO-1	Traffic Operations	In response to public concerns about the direct connection to Cesar Chavez Street in operational configuration options 1A and 2A, and the potential for drivers to weave over multiple lanes of traffic to access the ramp that connects to Austin High School, the project team shifted the merge point of the direct connector ramps further east on Cesar Chavez Street. This prevents drivers from weaving over multiple lanes and exiting to Austin High School.
TO-2	Traffic Operations	<p>In 2015, the Mobility Authority and CAMPO funded an additional study of the downtown street grid using a dynamic traffic assignment (DTA) analysis developed by the University of Texas at Austin Center for Transportation Research (CTR). The purpose was to analyze traffic impacts on the downtown area as a result of adding express lane(s) in various configurations to MoPac between Cesar Chavez Street and Slaughter Lane.</p> <p>DTAs are traffic models that examine how drivers modify their travel patterns to take advantage of the least congested routes when changes are made in a transportation network. The DTA for MoPac South was conducted for the year 2020 because, at the time the study was conducted in 2015, it was the earliest possible date that the project could have opened to traffic, had the project development process not been paused.</p> <p>The DTA study showed that the addition of express lane(s) on MoPac would not adversely affect congestion on Austin's downtown grid as a whole for any of the operational configurations evaluated. All operational configurations either present an overall improvement or result in overall negligible changes in travel times within the downtown network including Lamar Boulevard, South 1st Street, 5th Street, 6th Street, and Cesar Chavez Street.</p> <p>Regardless of operational configuration, the study showed that the proposed project would have improved downtown travel time in 2020 when compared to the No Build Alternative.</p> <p>During the morning peak period (6am to 9am) travel times would have been:</p> <ul style="list-style-type: none"> • Approximately two minutes faster in the downtown area overall when compared to the No Build Alternative • Eastbound travel times on Cesar Chavez Street and 5th Street and northbound traffic on Lamar Boulevard and 1st Street/Lavaca Street would remain within one minute of the No Build Alternative <p>During the evening peak period (3:30pm to 6:30pm) travel times would have been:</p> <ul style="list-style-type: none"> • Approximately eight minutes faster in the downtown area overall when compared to the No Build Alternative

Comment Response Resource Category Legend

Code	Resource Category	Response
		<ul style="list-style-type: none"> Westbound travel times on Cesar Chavez Street and 6th Street and southbound traffic on Lamar Boulevard and 1st Street/Guadalupe Street would be 10 to 30 minutes faster than the No Build Alternative <p>The technical report explaining the DTA results can be found at www.mopacsouth.com/environmental/past-events.php.</p> <p>As the study team resumes efforts on the project, this particular study will not be performed again, as data showed a negligible impact to Austin's downtown street grid. Vehicles headed for downtown will travel there regardless of whether express lane(s) are added to MoPac, as it is not MoPac, but rather downtown development that generates the traffic. With the express lane(s), the same vehicles would be present on Austin streets, only they will save time getting there either by using the express lane(s), or by using the less congested general-purpose lanes.</p>
TO-3	Traffic Operations	The Mobility Authority appreciates the opportunity for coordination with stakeholders on this project element and looks forward to continuing our engagement as the proposed project design progresses.
TO-4	Traffic Operations	Regardless of the operational configuration option identified as the Recommended Build Alternative, the MoPac South express lane(s), if constructed, would be designed to transition seamlessly into the existing express lane north of Cesar Chavez Street. All exit locations from the express lane(s) will be designed to provide required transition lengths for safe merging into the general-purpose traffic and on/off MoPac.
TO-4.1	Traffic Operations	For information on the purpose and need of the MoPac Improvement Project (Cesar Chavez Street to Parmer Lane), visit: https://www.mobilityauthority.com/traveler-info/open-roads/MoPac-Express
TO-5	Traffic Operations	<p>If constructed, the MoPac South Project will improve overall corridor operations, including addressing weaving issues at the ramps near Lady Bird Lake.</p> <p>In the interim, the Mobility Authority is developing the Barton Skyway Ramp Relief Project. This project is separate from, but compatible with, the MoPac South Project. This non-tolled project includes adding pavement for auxiliary and merge lanes on southbound MoPac at the Bee Caves Road and Barton Skyway entrance ramps. This will alleviate congestion at Winsted Lane, Enfield Road, Bee Caves Road, and Barton Skyway, and improve travel time throughout the corridor. The Barton Skyway Ramp Relief Project has received environmental clearance through the NEPA process, and was classified as a Categorical Exclusion. Design is in progress and construction is anticipated to begin in late 2022.</p> <p>The Barton Skyway Ramp Relief project improvements will be reflected on the MoPac South project schematics when the schematics are updated and shared at a future public meeting.</p>
TxDOT-1	TxDOT Projects	The Mobility Authority and TxDOT are separate entities. The MoPac South Environmental Study is being carried out by the Mobility Authority with oversight by TxDOT.
TxDOT-2	TxDOT Projects	The project referenced by the commenter is a TxDOT-led project. For information on TxDOT projects, visit TxDOT.gov .

Comment Response Resource Category Legend

Code	Resource Category	Response
U-1	Ultimate configuration	All signage will be developed for the proposed project following the latest version of TxDOT's Manual on Uniform Traffic Control Devices
WQ-1	Water Quality & Water Resources	<p>The project team recognizes the sensitivity of the Edwards Aquifer Recharge Zone. The project will evaluate and implement water quality protections. In addition to complying with the Edwards Aquifer rules, the project will comply with the Clean Water Act. The Mobility Authority has a track record of implementing Best Management Practices (BMP) for Environmental Protection. On the 45SW Project, the BMPs implemented resulted in a 98% removal of the increase in total suspended solids (TSS) over the Recharge Zone – a water quality measurement used by the Texas Commission on Environmental Quality (TCEQ) to limit pollution of natural water flows by managing storm water runoff. This is well above the 80% required by the TCEQ.</p> <p>If environmentally cleared, because this segment of MoPac South is within the Edwards Aquifer Recharge Zone, the study will include the preparation of a Water Pollution Abatement Plan (WPAP) for approval by the TCEQ. Any new impervious cover over the recharge zone must meet the Edwards Aquifer Rules for the removal of TSS from storm water runoff. The project will consider upgrading and replacing existing water quality structures and implementing other permanent BMPs to the corridor.</p> <p>All construction sites greater than one acre that discharge storm water associated with construction activities to surface waters are required to obtain a General Permit to Discharge (General Permit TXR150000) from the TCEQ. A Stormwater Pollution Prevention Plan (SW3P) will be developed after the environmental decision and during the plan, specification and estimate (PS&E) process to describe the storm water management controls and various Best Management Practices (BMPs) necessary to reduce pollutants in stormwater runoff during construction. The SW3P will include emergency procedures in the event of a hazardous spill during construction and include the use of sediment curtains to contain any sediment disturbed and prevent displacement (cloudy and muddy water) when working within waterways. The SW3P will be developed in accordance with the guidelines set forth in the General Permit document.</p> <p>The hydraulic design for the proposed improvements will be in accordance with current TxDOT design policies (TxDOT's Hydraulic Design Manual and Roadway Design Manual). The facility would allow the conveyance of the 100-year flood, while minimizing impacts to the facility, Johnson Creek watershed, Lady Bird Lake watershed, Eanes Creek watershed, Barton Creek watershed, Williamson Creek watershed or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations or ordinances. Coordination with the local Floodplain Administrator is required.</p>
WQ-2	Water Quality & Water Resources	Purchasing land for mitigation purposes could be considered if required. Please also see WQ-1.

Comment Response Resource Category Legend

Code	Resource Category	Response
VMT-1	Traffic Modeling	<p>For each build alternative and operational configuration option we evaluate vehicle miles traveled (VMT) as a network performance measure, which means it is measured for the entire area surrounding the city to capture diversion and congestion reduction effects. For example, from the CAMPO 2035 model results, compared to No Build, modeling shows that the operational configuration options increase vehicle miles traveled (VMT) by a range of 0.2 to 0.5 percent, reduces vehicle hours traveled (VHT) by a range of 3.9 to 8.9 percent, and reduces network wide delay by a range of 7.7 to 17 percent. The range accounts for the small variation among operational configuration options, and is not significant enough to be useful as an evaluation criterion. Measures were developed using the corridor calibrated travel demand subarea model derived from the 2035 CAMPO model.</p>

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
11/15/2021	1.01	Phyllis Nelson	I plan to participate in the Virtual Open House re-engagement event on November 22 @ 5:00pm. However, I want to point out that my trust in any process that will impact my home and well-being involving the Texas Department of Transportation has been greatly decreased in recent months. There have been 3 large, hulking, illegally dumped piles of rock in the easement along the Mopac access road, partially blocking the emergency fire entrance to the back of the Liberty Park Condos, 1000 Liberty Park Drive, Austin, TX 78746. No one connected to the Department has taken any responsible action to deal with the situation.	TxDOT-1
11/15/2021	1.02	Phyllis Nelson	How can I or my neighbors feel good about major highway construction being carried out mere yards from our back doors?	C-1
11/22/2021	2.00	Joe Falkner	I must say, I'm very, very pleased with the way the MoPac-Slaughter and the MoPac-LaCrosse projects were carried out. When you started I feared we'd lose Slaughter for months. But we didn't. You put a lot of thought into the project, and I sincerely appreciate it.	TxDOT-2
11/22/2021	3.01	Bill Eisenhower	There must be connection to downtown like in 1A or 2A. It will be a mess of having express lane(s) traffic weave across to downtown.	Comment noted.
11/22/2021	3.02	Bill Eisenhower	It would be nice to evaluate about if any improvements down to SH45SW are needed given the new express lanes	OOS-1 OOS-1.3 RP-7
11/22/2021	4.01	Aidan Aannestad	It is well known that expanding highways does absolutely nothing to actually reduce traffic congestion - it simply leads to more people using the highway. San Francisco demonstrated this in the 1990s when they *removed* a highway entirely and traffic improved. Adding new lanes to a highway is a colossal waste of taxpayer money - better instead to spend the money on non-road transit options that remove cars from the road *entirely*.	ICI-1 T-1 RP-7 PP-1 Soc-1
11/22/2021	4.02	Aidan Aannestad	Besides, if Austin's goals for transit involve socioeconomic equity, tolled express lanes are the opposite of that - they provide convenience at a cost, leaving those who are unable to pay the cost condemned to a separated inconvenience. (That is, assuming the toll lanes aren't backed up worse than the main highway, in which case why did we build them at all?)	EJ-1 EL-1 TF-1
11/22/2021	4.03	Aidan Aannestad	I cannot see a world in which adding paid toll lanes is anything more than a waste of taxpayer money. Real solutions to traffic congestion, transit inequality, and global warming involve *removing* cars from the road and making it more and more feasible to not own a car at all. This toll lane project sounds like the kind of car-drunk solution 1960s city planners would come up with - not something appropriate to 2021 in the least.	ICI-2 EJ-1 T-1 RP-7 PP-1
11/22/2021	5.01	Derek Miller	Regarding noise abatement: Typically, the noise studies are based on traffic loads during peak traffic times. However, traffic is slower during peak traffic times, which in certain circumstances can be quieter than other times. Care should be taken to conduct noise studies during all hours to get an accurate reading.	TN-2
11/22/2021	5.02	Derek Miller	Additionally, there is no mention of reconfiguring exit lanes and ramps on southbound Mopac between 290 and William Cannon. The on ramp from the frontage road should be moved so that it is south of the off ramp. The off ramp should be moved so that it is north of the ramp from westbound 290 to southbound Mopac, to avoid the back up that you guys created when the ramp was built.	D-6
11/22/2021	5.03	Derek Miller	Additionally, shared use paths for bicycles are insufficient. There is considerable entry/exit traffic through driveways along the route, and making bicycles wait at 3 traffic lights to get across the mess at 290/southwest parkway is inadequate. The speeds on the frontage roads are such that it is unreasonable to expect vehicles to slow down to a safe speed before they cross a shared use path. There should be additional work on the bicycle infrastructure to further separate bicycle traffic from motor traffic, such as bridges or other infrastructure.	BP-1
11/22/2021	5.04	Derek Miller	Also, there's no mention in the material about why the City of Austin recommended option 3 over options 2B or 2C. The travel times are worse, and the material makes no mention of price, so it's impossible to evaluate which one of the three is preferable from a cost basis. Based on the material provided, option 3 is inferior to the other two in every possible way. Why was option 3 preferred? If it's cost, that should be discussed.	OCO-6
11/23/2021	6.00	Peter Stern	Additional lanes are needed on South and North MoPac. In addition, we need enforcement of speed limits to ensure the even and steady flow of traffic. For example, too many drivers in the left lanes do not use those lanes at maximum legal speed to pass the slower traffic in the right lanes. One option is to give summonses to those drivers who drive too slowly in the left lanes until more drivers drive responsibly and use left lanes for passing.	Comment noted

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
11/23/2021	6.01	Peter Stern	Another option to aid traffic is to prohibit heavy truck traffic during peak hours.	EL-2
11/23/2021	6.02	Peter Stern	Another option is for businesses to overlap starting and ending work times to ease traffic congestion. The above are some of the options I have considered.	TDM-1
11/23/2021	7.00	Mark Barber	Let's get the improvements south of Barton Skyway done ASAP! Start with just paving the rest of the mostly existing 3rd lane south of the William Cannon bridge, and making the exit at Davis an exit only lane. After that 2C all the way! It's the only one that really makes sense. If you don't expand bridges, you'll always have those bottlenecks. You can see by how y'all completely screwed up southbound Mopac at the river with your last express lane work. If y'all screw up this time, too, I'm moving out of Austin!	Comment noted
11/23/2021	8.00	James Oscar Felan	I would use the express lane as I already use the express lane from Ceaser Chavez to Parmer, it saves time such that I can get to work in less time and leave work later and still get on time to my destination. As a result I am more productive such that the money I spend on the managed lane is earned back and I produce high quality Engineering highway/Bridge plans. Therefore I am for adding managed lanes on the south end of Mopac.	Comment noted
11/23/2021	9.00	Julie Lewis	Please do something about the connection between Mopac South and 2244 West. You have to cross 3 lanes of traffic in a very short space and it's a blind merge since both cars on the frontage road and Mopac are coming up ramps at different elevations. Plus you have cars merging from right to left to get onto Mopac northbound. It's very dangerous.	OOS-2
11/23/2021	10.01	Sean Johnson	I think a lot of the issues with traffic on S. Mopac would be alleviated with some slight tweaks of the existing roadway. First, the entrance ramp south of 2244 either needs a longer acceleration lane or it just needs to be closed. There's already another entrance ramp a block south that has a very long acceleration lane. ense given the amount of residential area	TO-5
11/23/2021	10.02	Sean Johnson	Secondly, people seem to be surprised by the exit only lane heading south at the W 71/290 interchange. Maybe additional signage further north would help or maybe a reconfiguration of the lanes could do the same? There's not really a need for that flyover to be two lanes.	Comment noted
11/23/2021	10.03	Sean Johnson	Those are the main bottlenecks on my commute but there is obviously an issue with the 71/290 flyover south onto South Mopac and the traffic at the intersection of William Cannon. I usually just exit at Southwest Parkway and go through the all the lights on the access road if I'm planning on heading to William Cannon. Perhaps traffic would be lessened with separate exits/entrances for the traffic already on Mopac, the traffic entering the highway from the access road, and the flyover? Another solution that may lower the amount of traffic exiting at William Cannon would be to put in an exit south of William Cannon that can access Convict Hill? I know its just a U-turn now but it doesn't make sense for that access road not to go through to Convict Hill. That would alleviate traffic at the Davis exit as well. It just doesn't make sense given the amount of residential area	D-5
11/24/2021	11.01	Mark Ritter	I do not support any express (toll) lanes for this project.	Comment noted
11/24/2021	11.02	Mark Ritter	It is quite apparent from driving MOPAC north of the river that toll lanes are not "equitable" and offer small benefit for only the privileged who can afford it.	EJ-1 EL-1
11/24/2021	11.03	Mark Ritter	The remainder of the lanes (the "free lanes") are always crowded. Adding a lane (or lanes) for the general public to travel on is the best option. Any studies you have obtained related to this are pure BS. Drive it and see for yourself. By adding a lane or two for the general public to travel on you increase capacity for the masses by 30 - 40 %.	Alt-2 ICI-1 EL-1 RP-7 Soc-1
11/24/2021	11.04	Mark Ritter	I do not see many folks exiting MOPAC to go downtown except in the evening. I see very few if any Cap Metro buses doing this. You should focus on ferreting the east-west traffic to 290 help reduce downtown congestion. Thank you for the opportunity to comment. I just hope you take time to read ALL comments and take them seriously.	Comment noted
11/24/2021	12.00	Terry Herres	After reviewing the proposal (again) and having lived in austin long enough to remember a time before direct feeder bridges between mopac and 290, i strongly support option 3 as it seems to have the best compromise on build time/cost/and impact while still achieving the goal of reducing traffic congestion. It would be wise to put some sort of stiffer lane barriers in place to prevent toll violators from popping over and artificially slowing the lane.	Comment noted

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			Here's hoping to early approval!	
11/24/2021	13.00	Lily Wilkerson	<p>I think that any proposal moved forward must include direct connector ramps to Downtown. This is essentially the one shot we have as a city to rebuild and reconfigure the MoPac bridges over the river. Direct connectors will be significantly more challenging and expensive to add later, if the need is ever recognized. I strongly support moving forward with options 1A, 2A, and 3, and considering 2C. Option 3 seems more effective with its spacing of express lane capacity - having two lanes NB and SB in the busier stretch between Ben White and Downtown, but dropping down to one where it is less necessary south of 290. However, Option 3's Downtown Access to the SB Express Lane is lacking - the already snarled traffic crossing MoPac on Lake Austin Boulevard would be made far worse with another onramp in the mix.</p> <p>My "ideal world" scenario would be one express lane each direction from US 290 to Slaughter Lane and two express lanes from US 290 to Cesar Chavez Street, with the direct connectors of Options 2A, 2C, or 3.</p>	OCO-2
11/25/2021	14.00	Alan J Rivaldo	The proposals for a single express lane in each direction simply don't do enough to reduce the anticipated future travel times in either the tolled or non-tolled lanes. Please remove them from future consideration. If anything, building only a single lane will merely lead to the eventual need for an expansion project, which will only face increased costs and may also run into delays from unforeseen obstacles. This project needs to proceed as soon as possible, given that's it's already been delayed for years because of pointless and fruitless lawsuits.	Comment noted
11/25/2021	15.00	Alan J Rivaldo	Including direct connectors that provide access into and out of downtown are preferable to having to merge across three general purpose lanes. Merging across lanes causes huge slowdowns and runs the risk of minor fender benders, even when at slow speeds. At higher speeds, it's hazardous. Either way, safety is a concern, and any accidents that occur will result in tangled traffic and slowdowns for everyone, i.e., inconsistent travel times and congestion, both of which would defeat the whole objective of this project.	Comment noted
11/25/2021	16.00	Aidan Aannestad	Please read and understand this article and the science behind it before considering adding lanes to highways. https://arstechnica.com/cars/2021/08/please-stop-adding-more-lanes-to-busy-highways-it-doesnt-help/	Comment noted
11/26/2021	17.00	Joel Rubinstein	Build as many free lanes as you can fit, if you can do it without polluting Barton Springs and Barton Creek. Please, no more toll lanes. The north Mopac toll lane is bad for two main reasons. It discriminates against poor people, who can't afford its algorithm based pricing. It serves only people in the suburbs, not the people who had to suffer through the construction. You can't even exit before 183. I'm sorry but that is idiotic. What would the first south toll exit be if it was similar? 290/71, skipping 360? Thanks for allowing me to vent.	EL-1 EJ-1 RP-7 TF-1
11/26/2021	18.00	Luke Legate	<p>Yes please expand Mopac South. I have lived in Austin since 1992.</p> <p>It's better to keep traffic moving rather than idling.</p> <p>We are a large city, we need to increase capacity.</p> <p>It is a safety issue with population increasing.</p> <p>We can have increased lanes and build orrectly, we can reduce gridlock.</p> <p>It's time for forward thinking.</p> <p>We can no longer say "if we don't build it, they won't come. "</p> <p>Guess what. They are still coming.</p> <p>Thank you. Please expand access for people to live, go to school and work here.</p>	Comment noted

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
11/26/2021	19.00	Adam Hegemier	Express lanes solve nothing, the best way is to encourage mass transit, and increase mass transit, and decrease reliance on cars.	T-3 T-1 T-4
11/26/2021	20.01	Rusty Shakleford	Any plans to add direct connect ramps across town lake are not feasible. Zilker Park is already compromised from the existing bridge. Any plans to widen or add structures to that location will impair the park.	CR-2
11/26/2021	20.02	Rusty Shakleford	Also in the slides and information I saw no new study information. Are all of these plans relying on the outdated and insufficient environmental assessment?	RP-2
11/26/2021	20.03	Rusty Shakleford	For this project to carry forward a real environmental impact study needs to be conducted today. Do not build without the Full EIS.	ENV-1
11/27/2021	21.01	Steven Fleming	I drive on Mopac South frequently from Davis Lane. I recognize this is a very congested stretch and have seen it get worse since 2013. I am resigned to the addition of a variable toll lane along this stretch. I am not a fan of additional direct connect ramps in the area of the Colorado River/Zilker Park. However, U-turn lanes at Barton Skyway seem like they will be useful.	Comment noted
11/27/2021	21.02	Steven Fleming	I am worried about how construction and expansion will affect water quality in the Edwards Aquifer and Barton Creek.	WQ-1
11/27/2021	21.03	Steven Fleming	I would like the Southbound exit to William Cannon be adjusted so that it does not have to cut across the southbound traffic entering from 290.	Comment noted
11/27/2021	21.04	Steven Fleming	I do not want access lanes built in the area from Convict Hill to Davis Lane to protect Dick Nichols Park and the Violet Crown Trail.	Comment noted
11/27/2021	22.00	Kylie	Austin as a city proves itself on being inclusive and diverse. From the food to the environment, we know no bounds. These ideals should be kept in mind while in the business of transportation. Roads and highways are meant to take us to the diverse parts of Austin, not shamefully through them.	Comment noted
11/30/2021	23.00	joshua aaron blumenkopf	I am fully for adding two express lanes, as that will make travel times the fastest and reduce costs to non-users. I would support the solution with the fastest times, and 2c seems to be fastest (though unclear why it is faster than direct connector).	Comment noted
11/30/2021	23.00	joshua aaron blumenkopf	I would also like to see cost and revenue estimates, as well as estimates of effects on traffic on parallel routes, such as South Lamar and Loop 360.	OCO-1 TM-1
11/30/2021	24.00	Jackson Hurst	I highly approve and support CTRMA's MoPac South Project. Adding express lanes to the MoPac Expressway between downtown Austin and south of US 290 will help relieve congestion and improve travel times. Regarding the express lanes alternative the one that I support is Alternative 2A: Two Express Lanes with Downtown Direct Connection. The reason for my support of this alternative is Alternative 2A will provide direct connections to downtown Austin from the MoPac Express Lanes without impacting the northwest side of Lady Bird Lake like Alternative 3 proposes with access to the south MoPac Express Lanes through a direct connector ramp from Lake Austin Blvd that goes over the northwest side of Lady Bird Lake.	Comment noted
11/30/2021	25.00	tom goss	I am in favor of tolled express lanes in both directions. I have lived in North Texas where changeable lanes were used and they seemed to not be as useful. It is very hard to anticipate traffic volume and quickly change the direction of the lane	Comment noted
11/30/2021	26.00	David Wilson Jones	From William Cannon southbound, there is a majority of pavement and bridge already existing to handle a 3 lane all the way down to Davis Lane. Will the toll lanes use this existing infrastructure or will the toll lane be placed next to a new non tolled third lane on new pavement and a widened bridge? I have a big problem with adding a fee for use of a facility that was built with ultimate conditions in mind and paid for with public funds. I'm hoping that this isn't the case. Can you please clarify? Thank you	TF-1 D-5 D-9.1
11/30/2021	27.00	Katie Hallberg	I vote for 2C. I don't want an elevated lane above town lake. Adding 2 lanes now costs less than adding one now and one later. We can use them now!!! Well, yesterday. I think a direct downtown connect will back up. I do like getting onto S. bound Mopac not having to go thru a light at Lake Austin Blvd., but I think the extra lanes will disburse traffic and make the flow actually flow. I remember riding my bicycle on Mopac near Northland Dr. when it was built in the 70's. I have lived off 1826 for 20 years. I can use 290 or Mopac. I prefer Mopac. We will see once 290 at Oak Hill is built out. There is currently paved space south of William Cannon towards 45 that can be used now with a bit of re-striping / painting. Actually in both directions. Open up the road with what is already there is a no-brainer. I don't know why it has not already been done. Specifically the entrance from William Cannon south bound. There is space to make that wider all the way to Davis Ln. It's just paint.	Comment noted D-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
11/30/2021	28.00	Brandon Kraft	The options with direct connection ramps (1A, 2A) seem to provide the best access to downtown. Crossing 3x GP lanes into the exit lane will become more and more problematic in time. The existing SB onramp to LP 1 from RM 2244 is enough of a weave now. Adding in people who would be still merging from the express lane would be annoying.	Comment noted
11/30/2021	29.00	Razieh Nokhbeh Zaeem	I witnessed the similar project during mopac north extension. 1. The project took many more months than scheduled. 2. It was a SOURCE of traffic during that time. 3. Once it finally finished it made a faster route for those who PAY but not the general public.	C-1 EL-1 PP-1
12/1/2021	30.00	Annie O'Grady	This is a terrible plan! The existing toll lanes that took forever to build have had no impact. The LAST thing we need is another even bigger construction project that will make mopac completely unusable for 10 years! Especially when that project just funnels money into txdot. The impact this proposal would have on zilker and town lake are unacceptable. This entire thing is a horrible idea that has already wasted far too much time and money.	MA-1 CR-2
12/1/2021	31.01	Logan Daum	There is no pedestrian cross on the SB side of Mopac across 360. Going from Barton Creek Square to anywhere south towards Sunset Valley/greenbelt involves a 2+ mile detour up to Barton Skyway. Please add a safe pedestrian crossing for 360 on that side of MoPac. There is no safe way for pedestrians to cross the frontage roads/Barton springs road while on the Hike and Bike trail to the proposed multi-use trails down the Northbound frontage road (where the route 30 bus stop is). Currently pedestrians cross a multi-lane 45mph road around a corner, there are no other crossings nearby. Southbound frontage road to Bee Cave road westbound is very dangerous to pedestrians trying to get onto the porkchop island. Can a pedestrian light be added or the island be removed? Cars are typically coming out of a merge and are very distracted and the speed limit is also 45mph. Road speeds on the frontage road are way too fast (45-55mph) for the shared use paths to be directly against the road like the current sidewalks. Please provide a physical barrier or large buffer between the path and the frontage road where the proposed bypass lane is.	BP-1
12/1/2021	31.02	Logan Daum	The proposed design is adding 6 lanes of traffic in that area will be extremely unfriendly to the Zilker Park/Lady Bird Lake area and will negatively affect noise levels and views. And what measures are being taken to protect heritage trees near the botanical garden?	CR-2 C-3
12/1/2021	31.03	Logan Daum	This project does not significantly "[create] opportunities for transit." A better use of taxpayer money would be to extend the 803 route into southwest Austin; we should be encouraging people to not drive into the middle of Austin and give them alternative routes. The "No Build" option is the best solution.	T-1 Alt-7 RP-7
12/1/2021	32.01	Wolfgang Burst	I travel along south Mopac to Sunset valley and downtown on a daily basis and understand the need for improvement. But the problem really only stems from 2 distinct places, those are the Capital of Texas highway exit and the William cannon exit. At least when traveling south bound. The traffic is only ever backed up because of people slowing down to exit the highway and its only backed up because they have to sit at lights. Even on a busy 5 o'clock afternoon those two areas are always where the bottle neck is. The second thing is the idea of neighborhoods feel. We are Austin and with every year that goes by we seem to loose more and more of the "weird" vibe people once wanted.	Soc-1 RP-6
12/1/2021	32.02	Wolfgang Burst	The area around sunset valley and sendera/bowie high-school has the potential to become more beautiful if we only continue to increase biking and walking capability. Even along the highway areas there should be easier access to bike lanes. Why aren't we investing in building bike infrastructure on all of our roads,	BP-1 RP-7
12/1/2021	32.03	Wolfgang Burst	and why do we just leave all of our highway underpasses the boring white sand color. How hard would it be to hire local artists to paint under all major highway underpasses in South austin to help bring back some culture to the city.	AE-1
12/1/2021	33.01	Michael Whitney	Much has changed since since 2015. With the Covid pandemic, people left the office and worked from home. MoPac was nearly empty most days for the better part of a year. As people returned to work at offices downtown, the volume of traffic has increased but is likely less than it was pre-pandemic. Projections for future growth should be based on current data, not pre-Covid. (Any road-use data informing the plan that predates 2020 should be scrapped and re-collected.)	RP-2 RP-6
12/1/2021	33.02	Michael Whitney	But for argument, the claim "If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035" is not compelling to me. I do not think we have to undertake an expansion project, at considerable cost and with significant disruption, to save hypothetical commute time. We need to find better ways for people to move throughout the region.	Alt-1 PN-1 RP-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
				BP-1 T-4
12/1/2021	33.03	Michael Whitney	Fewer thru lanes and merging traffic from Cesar Chavez/5th north of the bridge across Town Lake/Colorado help create a bottleneck that exaggerates the view that MoPac South is overly congested. Any proposal should first address improving flow through that point.	Comment noted
12/1/2021	33.04	Michael Whitney	I am against further expansion of highways for expansion's sake. It doesn't alleviate congested, anywhere, ever. We should exhaust (i.e., fully explore and implement) all viable opportunities for multimodal transportation alternatives in the corridor first.	Alt-1 BP-1 T-4 RP-7
12/1/2021	34.00	Tom Martin	I like the existing express lanes, but the city cannot continue to add toll roads without reigning in the predatory practices of CTRMA. They intentionally hide bills and make it difficult to pay so that they can make extra money on late fees.	MA-1
12/1/2021	35.00	Tricia Boudreaux	I don't mind the toll component but the skyrocket prices at rush hour deter me and thousands of others from utilizing the Toll (Express Lanes) I have seen the prices on the current tolls up to \$10 to go only a few miles which is completely UN-affordable for many residents to due the skyrocketing home and rental prices and in many instances it is only saving about 5- 10 minutes. Please consider a cap of no more than \$4 during rush hour this would make it more affordable and incentive more to take the express lane and yet a high enough price to cover costs.	EL-3 TF-1
12/1/2021	36.00	Justin Willette	So the estimated travel times in your exhibits say that adding an express lane is the fastest, but it seems that is only the fastest solution for those that pay to use the express lane. What are the estimated travel times on Mopac for the express lane option for those that do not want to pay extra to travel in the express lane? What is the best option for someone who must be careful about their budget and can not afford to increase their cost of travel to and from work by taking a toll lane?	EL-1
12/2/2021	37.00	Michael Pinkston	A managed Express lane in not in the public's interest. These are for people with money to burn. Please do not include tolls. HOV lanes are a good option.	ALT-3 TF-1
12/3/2021	38.00	Bruce Ravenscraft	There was no option provided between doing nothing and adding tolled Express lanes. There are other options people want to consider. What is needed is a continuous four lane configuration. Currently, South Mopac changes back and forth from three lanes to four lanes depending on exits and entrances to Mopac. The exits and entrances cause the delay in traffic flow and need to be reworked.	ALT-1
12/3/2021	39.01	Emily Gatlin	Hello, thanks for the info in the open house. My comments are: First off, this is taking way too long and these problems should've already been addressed, especially prior to completing the 45 toll cut through to 1626 so that now thousands more cars are on Mopac. Construction is always way behind. For example, as soon as the overpass at William Cannon was complete, something should've been started about the Slaughter intersection.	S-1
12/3/2021	39.02	Emily Gatlin	Environmental impact of the construction zone must be weighed against the environmental impact of cars sitting in traffic and city sprawl.	C-5
12/3/2021	39.03	Emily Gatlin	However, all care should be taken to protect one of the city's greatest assets, the Barton Creek Greenbelt.	CR-2 Soc-3
12/3/2021	39.04	Emily Gatlin	If we're going to have to endure the pain of this construction to add lanes, we might as well add two instead of one. Also, I am neutral on direct downtown access.	Comment noted
12/3/2021	39.05	Emily Gatlin	I don't see that we would need to put up the soundproofing walls on the south end like they did on the north end since there's so little housing that butts right up to Mopac on the south side. I also feel that walls like that would very negatively impact the beauty of south Austin.	TN-1
12/3/2021	39.06	Emily Gatlin	Lastly, I would like to know how I can get information on what is being planned to address the bottle neck southbound at William Cannon down to Davis Lane. A 3rd merge lane was added on the northbound side but never on the southbound side. The almost continuous and very wide shoulders on both sides of the expressway would seem to easily allow a 3rd lane to be added to ease the bottleneck with very minimal construction and seemingly no environmental impact. Why has this not already been done	D-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/3/2021	40.00	Tara Barton	I object to the further expansion of Mopac. Traffic reduction would be better accomplished by making the resources already available more useful: connecting bike routes across major thoroughfares, extending bus and train hours, adding electric options to the MetroBike service, just for a few examples, will serve the cities growing public further into a future that purports it trying to be less wasteful and less reliant on fossil fuels.	Alt-1 BP-1 T-1 T-3 T-4 RP-7
12/3/2021	41.00	Toni Gatlin	I drive MoPac South several times a week during peak hours. Of the express lane plans presented, I am most in favor of the ones with dedicated lanes accessing downtown rather than the designs that would require drivers to cross multiple lanes of traffic to exit. Crossing lanes at rush hour is nerve-wracking and, I suspect, is also dangerous and would lead to further congestion in already-dense areas.	Comment noted
12/4/2021	42.00	bianca de leon	I am very much against installing "Lexus Lanes" on mopac. We already paid for the highway. This is a money making project on a highway we the people already paid for. This puts a burden on the lower income people and gives the wealthy their own freeway. It is undemocratic.	TF-1 EL-1 EL-3
12/6/2021	43.00	Spencer Christian Muncey	What is the traffic impact analysis on the removal of the frontage road entrance to southbound Mopac after the Bee Cave's intersection? Removal of that entrance would eliminate a merge point that today does not have an acceleration lane and many individuals have to merge over three lanes to get to 360 Southbound. Attached is a google maps image with the entrance in question circled.	D-6.3
12/7/2021	44.00	Ester Harrison	Bring the light rail to south Mopac all the way to Slaughter Ln.	T-3 T-4
12/7/2021	45.00	Dan Baker	I do not think the proposed alternatives 1B and 2B (without direct connection to downtown) will be very helpful, as this would require a lot of weaving to get from downtown into the express lanes. Traffic entering or leaving downtown would have to either skip using the express lanes entirely or cut across multiple lanes, causing additional congestion and defeating the purpose. I would recommend that one of the other alternatives be pursued. I have no strong preference as to which one, as long as there is an exit from the express lanes to downtown (northbound) or entrance from downtown (southbound) which does not require weaving.	Comment noted
12/7/2021	46.00	Don Gibson	Build something! MOPAC development is 20 years behind where it should be. Whatever you are considering, double it! Get ahead.	Comment noted
12/8/2021	47.00	Clinton Waggoner	1. I support option 2A with the addition of building 2 new bridges across Town Lake to allow extension of the current service road across the lake to and from Rollingwood Dr. This would allow local traffic that merely wants to transit to or from Bee Caves Road and Westlake to or from north of Town Lake to do so without disrupting flow of thru MoPac traffic. 2. Alternative 3 is also attractive if something could be done to lower the main lane transit times on the General Purpose Lanes. 3. Something must be done to make it safer to exit MoPac South and head to Bee Caves Road. Currently traffic must merge across multiple lanes with limited sight distance. An elevated direct connection would be best. Installation of an additional bridge across Town Lake to extend the service road could be part of the solution to this problem.	Comment noted
12/8/2021	48.00	Steven D Adrian	I believe we need to have something done to help the traffic. I like the express lane option. My concern would be the property that is adjacent to MOPAC such as the condos I live in located at 1000 Liberty Park Dr. It would be nice if there could be a sound wall constructed along the express way from Bee Cave Rd to Barton Skyway. This would protect property values of the condos and apartments that are next to MOPAC and deaden the sound of traffic. Please keep me informed of any ideas and the steps we need to take along the process. Thank you for giving me the opportunity to give you my feedback.	TN-1 PI-10
12/8/2021	49.00	Jeremy Marzani	My vote would be on the fastest plan which is 2A. Having been in Austin for 21 years, Mopac has become a total mess. I'm contemplating moving in the future just to avoid dealing with Mopac south. As a shorter term approach, it seems that there is enough room on some parts of Mopac south of 290 that can easily go to 3 lanes. The bridges are even built to accommodate 3 lanes. Pushing the 3 lane to 2 lane merge further south will help the worst bottleneck south of 290 which is the merge of 290/mopac south ramp traffic with the southbound william cannon exiting traffic.	Comment noted
12/8/2021	50.00	John Baker	I am very strongly against the idea of toll lanes. It unfairly penalizes the poor. Yes, the rich can afford to pay the \$7 tolls, but the poor can not. This is not the American way!	EJ-1 EL-1 TF-11

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/8/2021	51.00	John Baker	I am very strongly against the idea of toll lanes. It unfairly penalizes the poor. Yes, the rich can afford to pay the \$7 tolls, but the poor can not. This is not the American way!	EJ-1 EL-1 TF-11
12/8/2021	52.00	Laura Cragin	Thank you for restarting this study. I support having two new express lanes in both directions on MoPac south of the river. Please move forward.	Comment noted
12/8/2021	53.01	Carol L Pennington	I am not in favor of adding express lanes. I do not see enough people using them to make them worth the expense. I find them frustrating because if it was a regular lane the traffic would be spread out more. Fewer cars take the express (toll) lane than it can handle. The most frustrating thing is getting behind someone going 55 - 60 in the express lane. Then it is a slow lane instead of an express lane. It is a waste of a lane in my opinion. I drive MoPac south regularly. The bridges are already wide enough for another lane or two. All that needs to happen is to add the lanes between the bridges. That does not take much money at all. It is very easy and does not require elaborate plans or road adjustments.	EL-1 EL-3 D-9 PN-1
12/8/2021	53.02	Carol L Pennington	Austinites are tired of toll roads. 183 could have also been easily fixed with just a few overpasses and another lane, but NO, the CTRMA had to make it a HUGE project so they could make it a toll road. Why does CTRMA always get what they want. We don't want toll roads. Austin is the fastest growing city in the US so there should be plenty of tax money to pay for this instead of making toll roads. Please consider adding a regular lane to MoPac south, not a tolled express lane.	TF-1 Alt-2 RP-7
12/8/2021	54.01	Rachel Vallejo Carneglia	Please consider the following in the project area in and around Zilker Park: Please be sure to align and coordinate all work with the Zilker Park Vision Plan that is currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.	CR-2 PI-11
12/8/2021	54.02	Rachel Vallejo Carneglia	Include shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize better bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a safe pedestrian and bicycle experience across the river. Include enough space under the highway to accommodate the potential future expansion of the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.	BP-1 PI-11 Soc-3
12/8/2021	54.03	Rachel Vallejo Carneglia	Build a Park and Ride space near Zilker, potentially under the highway or at the old pistol range that could serve users traveling into downtown Austin during workday hours, and double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration.	T-2
12/8/2021	55.00	Clifford Priddy	I vote for the Two Express Lanes + Downtown Direct Connection operational configuration option. I would also like to see the two toll lanes extend all the way to and from Toll 45 SW.	RP-3 RP-7
12/8/2021	56.00	Bruce Byron	The south and southwest parts of the region are growing rapidly. Managed lanes are the best solution for motorists and transit. Build either 2A or 2C to maximize the benefit.	Comment noted
12/9/2021	57.01	Deana	Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Zilker Park is a treasure worth preserving and improving. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.	CR-2 PI-11 ICI-1 TN-1 SOC-1
12/9/2021	57.02	Deana	Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.	BP-1 PI-11 Soc-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/9/2021	57.03	Deana	Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration!	T-2
12/9/2021	58.01	Tracy Allen Bratton	The tolled lanes added to Mopac have had little to no noticeable positive improvement on the traffic. Why does TxDOT believe that construction of tolled lanes on Mopac South would have a dramatic impact on traffic?	PP-1 Alt-5 TF-1 PN-1
12/9/2021	58.02	Tracy Allen Bratton	No transportation dollars should be used for recreation. Bike lanes and hiking paths are for recreation. Virtually no one commutes to work on a bicycle in Texas - it is too damn hot! Hike and bike lanes should be funded solely by parks and recreation dollars from the City of Austin / Travis County or by fees levied on the users of those facilities. Taking money collected from gasoline taxes, inspection / registration fees and redirecting those \$'s from vehicular transportation to recreation projects should be forbidden.	Comment noted
12/9/2021	59.00	Dave	Leave Mopac the way it is. If anyone does not like it they can leave Austin now!	Comment noted
12/9/2021	60.01	Ted Siff	Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.	CR-2 PI-11 ICI-1 TN-1 SOC-1
12/9/2021	60.02	Ted Siff	Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.	BP-1 PI-11
12/9/2021	60.03	Ted Siff	Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community.	T-2
12/10/2021	61.00	Daniel McGauley	All the information on the https://voh.mopacsouth.com/ site is great. I had a few ideas. I travel to Londonderry in the UK a lot, and I'm amazed about how quickly and cheaply I can get around town via bus there. Austin should be one of the best cities in America for efficient bus use, but right now it's pretty pathetic. It's really only designed for those who can't afford a car. A lot of people who live near me in Circle C would love to ride a bus to work if we could get anywhere near their office. I used to work on Parmer Lane and traveled every day for 2 weeks from Circle C to see how it would go. It didn't go well! I work closer to home now, but I still can't get anywhere near work on a bus, which seems really sad to me. A few other inputs: Anyway to encourage use of motorcycles? Austin has a lot of them, and the more motorcycles the better the flow. Extend the 3rd lane near Target on South Mopac all the way to Slaughter lane. The merge of that third lane to two lines is pretty brutal at times. With Elon Musk moving to Austin, is there any chance we implement a pilot Boring tunnel for part of this expansion? Are there any options for discouraging use of Mopac for commuters coming down 360? If drivers on 360 would cut over more down to Oakhill, a lot of traffic would be spared. I like the idea of multiple express lanes; one lane that essentially bypasses all of mopac down to a slaughter exit from 290 (or 1st street) would be awesome. Any way to encourage electric scooters/segway/bikes?	T-3 D-5 SM-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/10/2021	62.01	Russ Hodes	Please move forward and FAST. I would prefer s tunnel but mire lanes,ASAP. Its been 40 years of neglect.	Comment noted
12/10/2021	62.02	Russ Hodes	We also need safer off-street "hike and bike trails" to paralell MOPAC. The new trails are appreciated, but useless and disconnected:-(-	BP-1
12/10/2021	63.00	Neil Pascoe	STOP the tolls	Comment noted
12/10/2021	64.00	Chris Riley	This project will generate more highway traffic and enable more sprawl in environmentally sensitive areas. All of the options presented are bad. The traffic projections are a joke, and so is CAMPO's model. I am glad to see bike facilities included, but this will never be a good corridor for biking with all this car traffic. Rather than a "no build" alternative, I'd like to see an alternative that converts existing lanes into transit lanes. Please make sure the environmental impact study acknowledges the increase in air pollution from traffic this highway expansion will generate.	ICI-1 AQ-1 Alt-4 RP-7 SOC-1
12/10/2021	65.01	Deana Dossey	Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.	CR-2 PI-11
12/10/2021	65.02	Deana Dossey	Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.	BP-1 PI-11 TN-1 ICI-1 SOC-1
12/10/2021	65.03	Deana Dossey	Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community.	T-2
12/11/2021	66.00	Lisa Glenn	When the tolled lanes were created N of Lady Bird Lake, the decrease in non-tolled lanes going south made traffic worse. Requires too much merging. This doesn't improve that problem.	TO-5
12/11/2021	67.00	Myron Lutz	It appears that the two additional express lanes will only benefit those that are willing to pay to use them, but no improvement for the general public. I did not see any projections showing improvement in travel times for those not using the express lanes. I strongly disagree with your approach.	EL-1 TF-1 RP-7
12/11/2021	68.00	Tyler Walker	Do not expand mopac! This is not an effective use of public funds. Build a train or be smarter than just trying to build a bigger road to solve a problem. What are you six?	RP-7 Alt-1 T-3 TF-1
12/12/2021	69.00	Art Salinas	Why would you not consider one Express lane and one extra non rolled lane instead of two express lanes. It is ridiculous to add two express lanes and not fiscally responsible as well	Alt-2
12/12/2021	70.01	Blake Ellingham	Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park.	CR-2 PI-11 ICI-1 TN-1 SOC-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.	
12/12/2021	70.02	Blake Ellingham	<p>Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north.</p> <p>Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.</p>	BP-1 PI-12 PI-11
12/12/2021	70.03	Blake Ellingham	Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community.	T-2
12/12/2021	71.00	Valerie Shown	Two express lanes going south elevated over Lady Bird Johnson Lake with direct access to downtown.	Comment noted
12/13/2021	72.00	Gemi Jose Gonzalez	<p>We are very grateful and support the project to expand the bike trail to our neighborhood.</p> <p>I believe it has to do with family inclusion and connectivity. My sons and I ride through the dirt trail inside the woods, but not my wife -Teresa Casas copied- neither my daughter. So this will help a lot, will be very useful and fun.</p>	BP-1 BP-2
12/13/2021	73.00	Horacio Gasquet	<p>The maps and information provided don't show enough detail.</p> <p>North MoPac improvements MADE THINGS WORSE. Don't do that again mistake again. Pay attention to the pinch points around both Endfield and Lake Austin Boulevard and Cesare Chaves. These areas can be challenging, as the North MoPac project shows.</p> <p>ALL EXISTING ENTRANCE and EXIT RAMPS between downtown and William Cannon need to be changed in a huge way. They are why things don't work today.</p> <p>No entrance ramp should be less than 300 meters long, with a dedicated lane until the next entrance ramp appears. In many cases a barricade needs to be erected so that traffic is FORCED to reach highway speed before changing lanes. Traffic coming from HWY 360 Northbound needs to be contained in its own lane until no longer climbing a hill. That traffic is too slow entering the freeway due to the hill, so don't let them change lanes until they go on flat or downslope long enough to reach at least 60 MPH.</p> <p>Entrance ramps that are too short cause people to change lanes before reaching highway speeds, thus slowing down main traffic. DON'T let that happen. Keep slow traffic separated from main flow until it is clear they can reach highway speeds.</p> <p>The exit ramp to HWY 360 needs to have a dedicated 1000 meter long exit lane for that left exit, and a sign needs to be erected stating to all drivers to MAINTAIN HIGHWAY SPEEDS on the exit. Post a 65MPH speed limit sign there. That exit ramp needs improvement where it merges with HWY 360 to make it safer, so that people don't feel the need to hit their brakes at that bridge.</p> <p>There should be no exit ramp anywhere that does not have a traffic light before the next entrance ramp. The exit ramp at Barton Skyway has an entrance ramp before the traffic light, which also doesn't exist long enough to merge with highway traffic. Just eliminate that entrance ramp prior to Barton Skyway.</p> <p>There should be no merge left lanes north of HWY360. All Entrance ramps need to be a lane that does not go away until south of HWY360, as all lanes bring traffic with no gaps between cars to allow for merging.</p> <p>There needs to be FOUR NON-TOLLED lanes southbound south of Enfield over Lady Bird Lake prior to merging traffic from 6th street and Cesar Chaves.</p> <p>North MoPac is a failure. Don't repeat the bad design practices. The WHOLE highway is only as good as its worst design point. The choke point rules the whole</p>	D-1 D-6 D-13 TO-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>dynamic.</p> <p>Today South Mopac has 5 choke points between Endfield and HWY 360. No one drives anywhere close to the speed limit, because of the design. Every entrance and exit ramp is a problem. There needs to be VERY LONG entrance and exit ramps all along this corridor.</p> <p>North Mopac is attractive but dysfunctional. In the South MoPac project, you not only need to fix downtown, which was not addressed previously, but you have to do a much better job of building a lasting solution.</p> <p>Most of the traffic will bypass downtown (its only so big) and the bypass traffic will continue to grow even if downtown traffic stays approximately the same.</p> <p>Renderings do not show enough detail to see and comment on the design flaws that will be implemented after public input. This process is not yet satisfactory.</p>	
12/13/2021	74.00	Lisa Hugman	I live in the Travis Country neighborhood and we don't have a way to access pedestrian/bike trails south of us without crossing Southwest Parkway. There is currently no safe way for pedestrians/cyclists to cross Southwest Parkway. Would it be possible to establish a pedestrian/bike crosswalk over Southwest Parkway at Mission Oaks? About 100 yards to the south from that proposed crosswalk is Industrial Oaks Blvd. If we could develop a trail that connects the north end of Industrial Oaks to the proposed crosswalk at Mission Oaks then the residents of Travis Country would have access to Slaughter Lane and the network of trails in South Austin. Thanks!	OOS-1 OOS-1.3
12/13/2021	75.00	Allison Ferris	The expansion of the 45 trail would help the future hwy project & allow for alternative means of traffic in an ever changing area of roadway that has safety concerns & increased usage. I think the expansion/connection would be a great improvement to the area.	BP-2
12/13/2021	76.00	Dave Mcelwain	Expansion of the walk/bike pathway from Escarpment to 1826 along 45 would allow paths to the public golf course and access to the bike trails and lanes to downtown and eastward. It is currently not a safe way to walk or bike with increased heavy traffic eastbound on 45.	BP-2
12/13/2021	77.00	Daniel Schmidt	I fully support the environmental study that has been refreshed. Just as importantly, I would like to highly recommend and support a bicycle/pedestrian path that extends beyond Slaughter Ln and parallels Mopac. Furthermore, I would like to recommend and support an extension of the bike/ped path that runs along Hwy 45, but currently ends at Escarpment Blvd. I would like to see that extend beyond Escarpment and connect to the Meridian development (at Meridian Park Blvd). This 1 mile stretch of path would allow safe access to many families (800 homes) to the 5 miles of path already there. Thank you for your consideration.	BP-2
12/13/2021	78.00	Joseph Kelble	Please continue the bike path all the way to the entrance of Meridian off 45. It would be so nice for my family to be able to access that without driving down the road. Hwy 45 is too unsafe to walk along side of so the path would be so helpful.	BP-2
12/13/2021	79.00	Rick Perkins	I support Options 2A, 2C, and 3. The new roadway must have a connection to downtown Austin. We need to plan for the future and not just catch up to the current problem. With 2 lanes of Express lane in each direction, I think we can accommodate the traffic that will occur. And, it might be necessary for one of the 2 lanes to be used for driverless vehicles.	Comment noted
12/14/2021	80.00	John Muller	The expanded paved bike/ped path from Slaughter Lane to downtown would help.	Comment noted
12/15/2021	81.00	Jennifer Barnoud	I do not support the construction of any of this. We need more public transit, not demolition of our natural spaces and threaten our water systems. We are already going to get sucked dry with this heat and massive population increase. Come on guys.	T-4 CR-2 WQ-1
12/15/2021	82.00	Will C. Hoermann	Option 1A makes the most sense, appears to be the most efficient, and would be the easiest to implement. As a resident of South Austin, the only concern I see is the need to extend the southbound express exit and the northbound express entrance to the existing exits/entrances beyond Davis Lane (Slaughter to the south and William Cannon to the north), as Davis Lane simply can't handle the volume of traffic you are projecting. Davis can't handle the current amount of traffic with the recent construction at the intersection of Brodie and the unnecessary traffic light at Latta Drive.	D-1 D-6
12/16/2021	83.00	Kathleen Sneed	We would like to extend the 45 trail from MOPAC, all the way west to 1826. Currently, there is no shoulder from Slaughter to 1826, making accessibility to the 45 trail extremely unsafe. It would be extremely beneficial to extend the trail for the safety of bikes and runners alike.	BP-2
12/18/2021	84.00	James Kitchen	<p>I really like the Express Lane options. It is clear a lot of thought has gone into them. I also firmly believe in the ability of dynamic tolled lanes to keep traffic flowing, which benefits drivers who value time over money as well as ensuring that buses and emergency vehicles can move quickly.</p> <p>While I understand the economic benefit of dynamic tolling, I want to understand who benefits monetarily from the surge pricing. I feel very strongly that the tolling authority should NOT benefit from the surge pricing. Instead, they should collect a flat toll (similar to other toll roads). Any excess collected due to the surge pricing</p>	EL-3 MA-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>should go to the city of Austin as a "tax" on those who value time over money. I would love to see that money go to CapMetro to fund public transit or to AISD to fund schools in a way that avoids the "Robin Hood" taxation which applies to money collected from property taxes.</p> <p>I did not see any mention of toll amounts and who benefits from the surge pricing in this presentation. I would like to have that addressed in future public discussions of the project.</p> <p>Thank you for this virtual open house. As a South Austin resident, I truly appreciate all the hard work that goes into this.</p>	
12/18/2021	85.00	Stephanie Erwin	With Austin becoming more and more unaffordable and inflation chipping away at our disposable income, the last thing we need is another way to spend money just to get on the other side of town in a timely manner. More express lanes are BAD for the public. General purpose lanes, usable by all, at all times of the day, without cost to the driver should be the solution. It seems as if gouging pockets of drivers is the only solution left on the table. The current express lane on Mopac is a joke. Please don't do it again. "Expensive express lanes coming, please provide input on MoPacSouth.com" should be on the lit marquee along the highway. You'll get the input you're asking for.	Alt-2 PP-1 EL-1 TF-1
12/20/2021	86.00	Tiffany Johnson	I am very much in favor of relieving the congestion along south Mopac. Looking at the options, I think #3 the City of Austin proposal may perhaps provide the most chance of alleviating congestion, however, of the other models, at least providing a direct connect ramp to Cesar Chavez would be imperative if option 3 is not chosen.	Comment noted
12/20/2021	86.00	Tiffany Johnson	I also am in favor of the bike/ped path all along south Mopac, and would favor the current paved 45 Trail to be completed to Hwy 1826 (near the Meridian neighborhood) to help provide mitigation and connectivity for the larger highway project.	BP-2
12/20/2021	87.00	Saad Altai	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project	BP-2
			Thousands of local population will benefit from this in many ways	
12/20/2021	88.00	Michael Colin Wilson	I support the bike/ped path that follows along MoPac starting at Slaughter and goes to central Austin. And I especially support the paved path along S Hwy 45 to be expanded to hwy 1826 to Meridian neighborhood where all of us in the neighborhood would love to have this for bike/hike/run activities for all of our families.	BP-2
12/20/2021	89.00	Shailaja Hayden	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. This would have such a great benefit for myself and my neighbors!	BP-2
12/20/2021	90.00	Julie Savasky	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/20/2021	91.00	Julie Gualandri	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/20/2021	92.00	Marshall Moore	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/20/2021	93.00	Kuldeep Johnson	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/20/2021	94.00	Lori Wolfe	Please consider extending the sidewalk . The Meridian neighborhood is surrounded by Highways and dangerous roads . This access would be amazing !!	BP-2
12/20/2021	95.00	BRETT DANIEL GARNER	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/20/2021	96.00	Ali Altai	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/21/2021	97.00	Joy Grosso	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/21/2021	98.00	Jessica Roop	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/21/2021	99.00	Larysa Mysyk	Please expand bike lane on I 45 to meridian neighborhood	BP-2
12/21/2021	100.00	Tammie Warren	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/21/2021	101.00	Jennifer Luongo	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. It would be so nice to have a safer, more environmentally friendly way to access that trail from Meridian.	BP-2
12/21/2021	102.00	Heather Vaz	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. This would give access to more residents to connect and would allow me to feel safer biking and running by myself and with my family.	BP-2
12/21/2021	103.00	Andrew Vaz	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. This would be a huge benefit and a large way to ensure safety for the community.	BP-2
12/21/2021	104.00	Deepika Srinivasan	I support the bike/ped path development in south austin into central Austin. I would love for neighborhoods including Meridian on 45 and others on 1826 connect on to escarpment. This would improve access, promote less usage of cars to access local parks and help improve outdoor activity.	BP-2
12/21/2021	105.00	Kathleen Fairchild	Please extend pathway to MoPac south and 45 past Meridian subdivision and 1826. Thank you!	BP-2
12/21/2021	106.00	Jessica Wu	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project."	BP-2
12/21/2021	107.00	Tony Ferrante	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project."	BP-2
12/21/2021	108.00	Melissa Hawthorne	To simply state I am NOT in favor of expanding lanes over the creek or parkland. The impact of the bicycle pedestrian bridge over the creek can still be seen today let alone the damage during construction. To gain support for that project it was sold as leaving the existing bridge motorway for vehicles. Truly a disappointment with lasting impact.	CR-2
12/21/2021	109.00	Christina Bosco	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/21/2021	110.00	Josh Williamson	NO FLYOVER! This isn't Houston, please don't make our city ugly!	Comment noted
12/21/2021	111.00	Alicia Albertos	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project	BP-2
12/21/2021	112.00	Deborah MacDonald	"I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/21/2021	113.00	Guru Ramagiri	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project	BP-2
12/21/2021	114.01	Kaiba White	Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.	CR-2 PI-11 TN-1 SOC-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/21/2021	114.02	Kaiba White	Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.	BP-1 PI-11
12/21/2021	114.03	Kaiba White	Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community.	T-2
12/22/2021	115.00	Jeff Grosso	Our kids and family would absolutely use a trail extension. Today it is unsafe for us to access the current trail without driving.	BP-2
12/22/2021	116.00	Kathryn Fischer	I urge you to consider extending the path on 45 to connect o the Meridian neighborhood. We as a community would greatly benefit from the safety and convenience of a pathway to leave our neighborhood and enjoy the amenities of the 45 trail, similar to the neighborhoods just north of us.	BP-2
12/22/2021	117.00	Nayeli cortina	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/22/2021	118.00	Euisoo Yoo	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/22/2021	119.00	Rami Altai	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded towards Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/22/2021	120.00	Mathew Sitta	I live in Meridian (45 and 1826) and ride my bicycle 6-7x per week. 45 is very dangerous with all the trucks and cars going 65mph. We desperately need a bike path from our neighborhood to Escarpment. Pls help us remain safe and healthy.	BP-2
12/22/2021	121.00	Rend Altai	I support the bike/pedestrian path that will start at Slaughter Lane and follow south Mopac to central Austin. However, I would also like to ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/22/2021	122.00	Sawyer Boyd	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/23/2021	123.01	Emma Schmidt	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/23/2021	123.02	Emma Schmidt	Furthermore, I strongly believe that environmental protection is necessary, especially with the state of our world. Please keep the environment and your destruction of it in mind when planning future projects.	ENV-2
12/24/2021	124.00	Chris Locke	I support the new toll lanes as I work in downtown but more importantly, the expansion of the bike trail on 45 from 1826 to Avana!	BP-2
12/24/2021	125.00	Melinda thompson	I am in support of expanding the 45 paved trail from Escarpment to Meridian.	BP-2
12/24/2021	126.00	Manuel Esparza III	We should pick the best option that addresses the problem of mobility and I support 2C. It may not be as clean as the other options but it is more functional and effective.	comment noted
12/24/2021	127.00	Manuel Esparza III	As part of this corridor there is one more problem that needs to be fixed. On Northbound Mopac, the William Cannon exit lane is being routinely used by many drivers as a shortcut to access the expanded lane North of the exit. Drivers cut across a solid line and compete with drivers on Northbound Mopac that are following the striping and attempting to change lanes to the right to access upcoming exits. This has created dangerous conditions, near misses and road rage. Please review that exit lane for solution such as just making it a continuous lane or putting up plastic pole barriers near the end before exit.	D-1
12/25/2021	128.01	Adrian Helen	Please try closing the on-ramps southbound between Bee Cave Rd and 360 to prevent drivers from crossing 4 lanes to get to the left exit for 360 (they would use the empty frontage road and go through the light at 360 instead).	D-6 D-6.3?
12/25/2021	128.20	Adrian Helen	Please no toll roads, express lanes, digging or additional elevation. Much better to find and address the bottlenecks with what we already have. Don't Dallas/Houston my Austin.	TF-1 EL-3 Alt-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/26/2021	129.01	Paul Curtis	My family supports option 2A because a direct connection to downtown is safest and has good travel times. We request you add a free lane from Slaughter to LaCrosse in both directions to reduce congestion of cars entering or exiting the toll lanes.	D-1
12/26/2021	129.02	Paul Curtis	Also, tell planners to prohibit any future stop light at South Bay Lane to prevent traffic from backing up going southbound.	OOS-1 OOS-1.3
12/26/2021	130.00	Walton Schmidt	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/27/2021	131.00	William Bartek	Hi I live in far south west austin and bike frequently . Unfortunately where I live I have to bike along a part of 45 that is getting busier and busier as the area expands . Many individuals bike this area - it is a set up for cyclists being killed . I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation, safety and connectivity for this larger highway project.	BP-2
12/27/2021	132.00	Alice Lin	I fully support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. Thank you.	BP-2
12/28/2021	133.00	Jean W	I live SW, between Austin and Dripping Springs, and commute to north Austin for work (Pickle Research Center). Option 2A seems the most tasteful of the options presented. In addition to the south-to-north u-turn at Barton Skyway, I think a north-to-south u-turn at Barton Skyway would be a big help, particularly for easing traffic at 360 to get to Barton Creek Mall. Anything else you can do to ease congestion southbound on Mopac where the current express lanes end, and the general lanes get all bunched up and dumped into the same lanes, would be welcome. I think my idea here is more of adding two general purpose lanes and one toll lane, rather than two toll and one general purpose, but I'll take whatever I can get.	D-1 TO-5
12/28/2021	133.00	Jean W	Last thought: the CAMPO 2035 and 2045 predictions seem really low. Given how much growth we've seen recently since 2015, and the move of big companies like Tesla to the area, we need updated growth projections that are more realistically exponential looking, not so linear looking. I think we're grossly underestimating how much traffic we're really going to have. Thank you for the opportunity to provide comment!	RP-1
12/29/2021	134.00	Rena Donus	I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.	BP-2
12/29/2021	135.00	Ester Harrison	Instead of adding express lanes to accommodate more cars (and more noise, more pollution, and negatively impacting the nature areas and wildlife corridors as well as residential areas), why not add a light rail system all the way from downtown Austin to Slaughter Lane, with Park&Ride lots? Why not stop the increase of car traffic and adjust to moving the increased population to downtown with light rail system (and connectors) that is faster, more efficient, and less stressful to all.	Alt-1 T-4 RP-7 T-2
12/30/2021	136.01	Mary	Has anyone looked at the available space to make MoPac 6 lanes? Just modify the painted lanes and you will produce 6 full lanes like you did north of the city MoPac Really folks this an easy fix and would shave off at least 30 minutes of drive time from Circle C Ranch to downtown Austin.	Alt-1 D-9 PN-1
12/30/2021	136.02	Mary	Have you ever heard of cedar fever? Did you really plant cedar trees along MoPac south? Have you also planted other harmful to humans types of plants alongside MoPac South such as poison ivy?	The Mobility Authority has not planted trees along south MoPac
12/30/2021	136.03	Mary	This by far is The most dysfunctional and mismanaged game plan in the USA.	Comment noted
12/31/2021	137.01	Eli Floyd	While I believe that improvements must be made to the Mopac South corridor, I do not believe that any of the current set of alternatives are the best solutions. I believe that the CTRMA should redesign according to the comments received in this VOH.	PI-12

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
12/31/2021	137.02	Eli Floyd	From the current slate of alternatives, the most acceptable is 2B (2 Express Lanes without Elevated Direct Connection). I am strongly opposed to any higher bridge over Lady Bird Lake, as well as any right of way expansion near Zilker Park/ Nature Center. I am also opposed to any elevated ramps travelling over Mopac near Barton Skyway; however, I would support them if it was deemed feasible to move them underground similar to the North Mopac express lane connections to Downtown.	D-2 CR-2 TO-1
12/31/2021	137.03	Eli Floyd	I also oppose any elevated direct connectors for William Cannon Drive and am disappointed to see that they are included in every alternative. I do not see a reason as to why they are necessary, and they could have the potential to create significant noise and view corridor detractions from the surrounding communities. I believe that the best Mopac South corridor would include no more than 6 lanes in each direction, (3 general use, 1 auxiliary, 2 express), an express lane direct connection with westbound 290, no additional elevated ramps, and proper landscaping throughout the whole route.	TN-1 SOC-3 Alt-1 D-2
12/31/2021	137.04	Eli Floyd	Other solutions should be put into place such as closing the gap on SH-45 and improving transit connections to SW Austin. Any roadway expansion also needs to be coupled with transit expansion due to induced demand.	ICI-1 SOC-1 T-3 T-4
1/2/2022	138.00	Shane Pfender	I would highly recommend AGAINST an expansion of Mopac lanes. It is proven that the addition of highway lanes leads to increased congestion (see: Induced Demand https://en.wikipedia.org/wiki/Induced_demand#Effect_in_transportation_systems). I support design that encourages pedestrian foot traffic, bike lanes, and transportation that encourages alternative forms of transportation (non-car drivers).	ICI-1 T-1 BP-1 RP-7 SOC-1
1/2/2022	139.00	Richard J Smith	Please be more transparent and explain exactly why the City of Austin prefers its own proposal. Many residents do not trust the City of Austin. That said, we definitely need an improvement to the traffic situation on Mopac South, and the various alternatives look very interesting!	OCO-6
1/3/2022	140.00	Alec	I've lived in Austin for over a year now and have utilized MoPac for 90% of that time. I'm from the Chicago metropolitan area where I-94 takes place. It is here and likely in other places around the country where a grass strip dividing north & south lanes were torn away to make room for a fourth [passing/fast] lane and still providing room for shoulders on both sides. I see places on MoPac where 4 lanes can exist, where grass can be torn away to loosen congestion. Obviously the 4th lane won't last long because everything is so tight, but it will make a difference in the long run. The same goes for I-35 and anywhere else there's pointless grass filler dividing highways. Strip it away, add a fourth (non-toll) lane, and you will have less congestion & happier, safer drivers. Just look at the stretch of highway between Chicago & Kenosha, & you'll see what I mean. Thank you.	Alt-1 RP-7
	140.01	Alec	The same goes for I-35 and anywhere else there's pointless grass filler dividing highways. Strip it away, add a fourth (non-toll) lane, and you will have less congestion & happier, safer drivers. Just look at the stretch of highway between Chicago & Kenosha, & you'll see what I mean. Thank you.	OOS-1.2
1/3/2022	141.00	Scott Marcus	Extending the 45 path to Meridian will increase access for that community and add bike/run access for many more. I support.	BP-2
1/3/2022	142.00	Kelly Spahn	I would like to extend my support in requesting the hike and bike trail that currently ends at Escarpment Blvd along Hwy 45 be extended to the entrance of the Meridian neighborhood just east of FM 1826 and Hwy 45. This would not only grant access to the trail for those living in Meridian, but also create a much safer passage for those who ride bikes between all the neighborhoods along Hwy 45, to include Avana and GreyRock Ridge residents riding eastbound. Thank you for your consideration.	BP-2
1/3/2022	143.00	Irma Guerra-Scott	Primary goal should be to keep traffic flowing and eliminating weaving/merging traffic while considering the environmental and noise impact.	PN-1 ENV-2
1/3/2022	143.00	Irma Guerra-Scott	Closing some On ramps might help especially the first one past Bee Cave Road.	D-6
1/3/2022	144.00	Jennifer Voss	Thank you for taking my input. I am an Austin High School Parent and have lived in Austin for 30 years. I am strongly opposed to direct connector ramps (highway off and on-ramps which would take vehicles directly to and from Mopac near AHS) near AHS.	TO-1
1/3/2022	144.00	Jennifer Voss	I also advocate for traffic being moved as close as possible to the bluff north of AHS and for the City of Austin's Lamar Beach Plan. An additional note - Unfortunately, Express Lanes have not resulted in improved commute times for me nor for any of my friends, coworkers, etc. With that in mind, I do not support more Express Lanes.	PP-1 EL-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	145.01	Anne Miller	Please consider the following comments: Extend the comment period since the initial comment period fell during the holidays.	PI-1
1/4/2022	145.01	Anne Miller	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	145.02	Anne Miller	Evaluate stormwater runoff, heat island and noise pollution effects from potentially adding substantially more impervious cover.	WQ-1 ICI-2 AQ-1
1/4/2022	145.03	Anne Miller	Please note that I support the following comments previously provided by SOS Alliance: Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/4/2022	145.04	Anne Miller	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	145.05	Anne Miller	Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/4/2022	145.06	Anne Miller	Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/4/2022	145.07	Anne Miller	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the “induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/4/2022	145.08	Anne Miller	Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6 RP-7
1/4/2022	145.09	Anne Miller	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	145.11	Anne Miller	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/4/2022	146.01	Bill Holt	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top “Latest News 08/08/2017”, which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	146.02	Bill Holt	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/4/2022	146.02	Bill Holt	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	146.03	Bill Holt	Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/4/2022	146.04	Bill Holt	Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/4/2022	146.05	Bill Holt	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the “induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	RP-6 ICI-1 SOC-1
1/4/2022	146.06	Bill Holt	Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/4/2022	146.07	Bill Holt	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	146.08	Bill Holt	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	146.09	Bill Holt	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/4/2022	147.01	Colleen Theriot	I am opposed to the proposed double-decker toll bridge over Lady Bird Lake and disappointed that this project has been resurrected after being roundly rejected years ago. I respectfully ask of CTRMA:	D-2 PI-6
1/4/2022	147.02	Colleen Theriot	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1
1/4/2022	147.03	Colleen Theriot	Ensure that the comment period be extended for at least 30 days following publication of current relevant traffic data and analysis.	PI-7
1/4/2022	147.04	Colleen Theriot	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	147.05	Colleen Theriot	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	147.06	Colleen Theriot	Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/4/2022	147.07	Colleen Theriot	Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	See RP-6 and PI-7
1/4/2022	147.08	Colleen Theriot	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model reflect this new world. Both also ignore the “induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/4/2022	147.09	Colleen Theriot	Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/4/2022	147.10	Colleen Theriot	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	147.11	Colleen Theriot	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	147.12	Colleen Theriot	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/4/2022	148.00	David Boikess	PLEASE: Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	149.00	Dian Jager	Do Not double deck Mopac! It would make an environmental nightmare.	D-2
1/4/2022	150.01	Jan Stevens	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top “Latest News 08/08/2017”, which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/4/2022	150.02	Jan Stevens	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/4/2022	150.03	Jan Stevens	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	150.04	Jan Stevens	Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/4/2022	150.05	Jan Stevens	Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/4/2022	150.06	Jan Stevens	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the “induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/4/2022	150.07	Jan Stevens	Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/4/2022	150.08	Jan Stevens	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	150.09	Jan Stevens	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	150.10	Jan Stevens	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/4/2022	151.00	John Lamaux	This is a horrible idea.	Comment noted
1/4/2022	151.01	John Lamaux	Extend the comment period at least 30 days. The comment period fell entirely over the holidays.	PI-1
1/4/2022	151.02	John Lamaux	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.	ENV-1 TES-1
1/4/2022	151.03	John Lamaux	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	151.04	John Lamaux	Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/4/2022	151.05	John Lamaux	Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/4/2022	151.06	John Lamaux	Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns.	Alt-1 RP-6

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	151.07	John Lamaux	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	151.08	John Lamaux	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	151.09	John Lamaux	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/4/2022	152.01	Karen Kreps	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School	D-2
1/4/2022	152.02	Karen Kreps	This resurrected really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old.	RP-1
1/4/2022	152.03	Karen Kreps	If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West). Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt. I live close by and drive over the lake often. I swim daily at Barton Springs, and I think this is the worst idea possible. Don't even consider it!	ENV-2 TO-1 RP-3
1/4/2022	153.01	Karole Fedrick	Hello. I need to spend more time looking through your options, but my immediate response is that adding northbound downtown-direct routes (while being the most logical) will not be much help. I live in Circle C and drive north often usually exiting at either Enfield or taking the toll lane. The two dedicated lanes at the river are almost always empty and do not give any congestion relief now. The back up always - always - continues past the river. I appreciate being able to use the toll lane whenever possible, but it doesn't help with the backup from the river to 45th Street.	Comment noted
1/4/2022	153.02	Karole Fedrick	As it is now, one section of northbound bottleneck could be easily eliminated between Slaughter and 290 by not making the off-lane at Wm. Cannon an "exit only" lane. All that would take is paint and a new sign. There is no reason for it to be exit only. Coming onto Mopac from Davis there are three lanes. They need to remain three lanes. Drivers who will exit at Sunset Valley or 71/290 are forced to merge into the middle lane only to be able to change into the right lane after they pass the Wm. Cannon exit. It makes no sense at all and causes a lot of needless and hazardous lane changes.	D-1
1/4/2022	153.03	Karole Fedrick	And while I'm here, it is ridiculous that the lanes turning east onto Slaughter from Mopac are "no right turn on red." If part of the purpose of the diamond intersections is to improve travel time, having us sit there for several minutes waiting for a green light while no one is coming through the intersection is annoying at best. I go to the Capitol a lot, and if the two right-turn lanes at Enfield Rd. are allowed to turn right on red with most of our view blocked by the Mopac overpass, then it makes no sense for our clear-view lanes at Slaughter to be treated differently. The right-on-red-after-stop lane westbound off of Mopac is much more vision impaired than the eastbound lanes. Please, please rework that signal. At least give us a blinking yellow when possible.	TxDOT-2
1/4/2022	154.00	Olivia Solari	While I understand how bad traffic is in Austin, DO NOT destroy the beauty of this city to build infrastructure solely for wealthy citizens. Don't LA my austin and turn our environment into a roadway.	EJ-1
1/4/2022	155.00	Sara Klopp	Please please don't build or expand highways in the heart of our city, zilker, the lake, greenbelt, Barton springs area. This jeopardizes everything we love about living here. People will start using it instead of 1-35. Please keep mopac a local commuter highway. Thank you.	CR-2 RP-3
1/4/2022	156.01	Susan Pascoe	NO, NO, NO and NO!! How many times do we need to say no!	Comment noted
1/4/2022	156.02	Susan Pascoe	Your traffic data and analysis that is more than 10 years old.	RP-1
1/4/2022	156.03	Susan Pascoe	If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West). Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt.	ENV-2 TO-1 RP-3
1/4/2022	156.04	Susan Pascoe	Don't do this! Be innovative - be smart - think of other ways to alleviate cogestion.Think of real alternatives. Surely engineers are smart enough for this.	Alt-1
1/4/2022	157.00	Ted Raab	I oppose the option you recommend, building more automobile travel lanes over the Colorado River / Lady Bird Lake. I've lived in Austin for over 35 years and have lived in other regions of the United States for almost as long. We've been told time and again that each proposal to add additional automobile travel lanes will solve our traffic congestion problems and each time the problems only grow larger. Any transportation plan or project for Austin that isn't primarily centered on mass transit is a waste of effort and resources. Rather than accommodating more cars at this choke point, we need to reduce the number of cars and get folks into buses, trains, and other shared transportation.	T-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	158.00	Beau Fannon	Extend the bike trail to Meridian	BP-2
1/4/2022	159.00	Girard Kinney	This project should not proceed until current data is fully incorporated.	RP-1
1/4/2022	160.00	Vinayak Pai	South MoPac near William Cannon Exit and the merge onto s MoPac from William Cannon(near Costco) gets backed up significantly due to 3 lanes becoming 2 lanes. I see a wide stretch of shoulder on both inside lane and outside lane. It would help to alleviate this problem if 3 lanes are extended all the way to slaughter exit.	D-5
1/4/2022	161.00	Chris McGee	I live "On the Park" which is a Circle C neighborhood that butts up against Mopac. Ever since the new underpass was built, and the noise barrier walls were erected, the noise in my area has been unbearable (as in waking us up in the middle of the night). In the version of the plans we saw, the noise barrier wall on our side of Mopac was to extend well beyond where it currently is. With the current build, the noise deflects off the long wall (on the Wildflower side) and there's no barrier on our side to block it. I emailed our Tx Dot representative and received zero response.	TxDOT-2
1/4/2022	162.00	Abby Rodgers	I am writing to against the construction of a new toll road along Mopac by CTRMA. This will cause disruption and ecological damage to Zilker Park and Lady Bird Lake.	ENV-2
1/4/2022	163.00	William Bitner	The solution is not more cars and an ugly double decker - put this effort toward mass transit instead of just creating another clogged expressway.	Alt-1
1/4/2022	164.01	Rodney Cummings	First and most important, you must extend the comment period at least one month. Soliciting comments exclusively over the holidays is a clear demonstration of an attempt to avoid public opinion.	P-1
1/4/2022	164.02	Rodney Cummings	Second, do not build a bridge over Austin's most important pubic venues (i.e., Zilker Park, AHS). This contradicts the goal of keeping Austin as a place where people want to live.	D-2 CR-2 TO-1
1/4/2022	164.03	Rodney Cummings	Third, prepare a full Environmental Impact Statement (EIS). You cannot rightfully claim that there is anything remotely "environmental" in your study without an EIS.	ENV-1
1/4/2022	164.04	Rodney Cummings	Fourth, update the data to communicate accurate information, and create more alternatives that do not include toll lanes.	RP-1 Alt-1
1/4/2022	164.05	Rodney Cummings	Fifth, avoid selecting a "preferred" alternative, since it is clear that preference serves only development interests, and not the public that lives in Austin. Let the public decide what is "preferred", not your bureaucrats.	PI-6
1/4/2022	165.00	g. guardian	as a long time visitor to the hill country, WE VOTE NO on this incredibly stupid idea.	Comment noted
1/4/2022	166.01	Robert Daniel	As proposed, this project will have a negative impact on local watersheds.	WQ-1
1/4/2022	166.02	Robert Daniel	As proposed, this project will do little to reduce congestion on MoPac. As proposed, this project is mainly a subsidy to homebuilders in Hays County. The proposed project may be "in Austin," but it is not "for Austin." I am opposed to its construction.	Comment noted
1/4/2022	167.01	Steven Ascherl	The past 5 or so years have taught me that the barrel runs deep, but running the comment period over the holidays when people have a million other things going on is pretty low.	PI-1
1/4/2022	167.02	Steven Ascherl	At least be of some quality and extend the commenting period another 30 days so we have a chance to fairly criticize this option that needlessly encroaches on Austin High. We need to discuss the effects Covid has had on traffic patterns as well. Please be of kind spirit and extend the discussion period for 30 days. Thank you.	TO-1 RP-6
1/4/2022	168.00	Linda Puckett	Austin needs to protect Zilker Park and Barton Springs from the noise pollution and air pollution that would come with the proposed toll road. I strongly oppose the construction of the proposed toll road.	TN-1 AQ-1
1/4/2022	169.01	Mark Weiler	The MOPAC south plan as it is currently planned or envisioned is out of date at best. Life has changed with COVID and so many more people have started working from home. As a long time Austin resident, since '78, I have watched MOPAC traffic go up and then back down with COVID, today it is a lot lighter than it was 2 yrs ago. In addition the plan with the added toll lanes in my opinion will not make a difference in traffic as traffic from I-35 will just start using MOPAC.	RP-6 RP-3
1/5/2022	169.02	Mark Weiler	There should be full EIS, updated traffic study to determine the best low impact option to carry us forward.	ENV-1
1/5/2022	169.03	Mark Weiler	Heck... I often wonder as I go across the town lake bridge if restripping some lanes wouldn't help, I have wondered why this wasn't done yrs ago.	D-9 PN-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	170.00	Susan M Pascoe	Do not do this!! There are enough challenges with climate change without adding more concrete. NO NO NO!!	ICI-2
1/4/2022	171.01	Mary Arnold	I strongly support the comments and suggestions submitted by Save Our Springs!!!	SOS-1
1/4/2022	171.02	Mary Arnold	I am noticing more large trucks on MoPac now, and originally, MoPac was to be WITHOUT those large trucks... And I just watched a TV program about Engineering Disasters - with one segment about a large bridge project, building a new bridge adjacent to an existing bridge - but guess what.... Portions of the bridge under construction over a large waterway had problems - because the foundations of portions of the new bridge began to sink too much into the subsurface below the water - which was NOT supposed to happen, per the bridge supports design -- But it DID! The proposed new upper deck to the existing Mo-Pac bridge over Lady Bird Lake near Barton Creek should NOT be approved unless the actions recommended by SOS have been thoroughly reviewed and reported on to the public, with further opportunities for public comment at that point. We must continue to protect Barton Springs and the Edwards Aquifer. Constructing a huge new very expensive large bridge is NOT the solution.	D-2 WQ-1 PI-12
1/4/2022	173.00	Matthew Caldwell	As a lifelong citizen of Austin, I cannot support this plan for another elevated roadway on Mopac (Loop 1) that crosses Lady Bird Lake. When you look at the eyesore that it would be for the current residents in the area, and when you consider the environmental impacts it will undoubtedly have, this project is a nonstarter. Please don't create a new problem while trying to fix another problem.	D-2
1/4/2022	174.01	Heather Hunziker	Extend the comment period at least 30 days. The comment period fell entirely over the holidays and CTRMA's MopacSouth.com website is confusing and includes false dates. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/4/2022	174.01	Heather Hunziker	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/4/2022	174.02	Heather Hunziker	Prepare a full Environmental Impact Statement (EIS). The project's proposed addition of 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer will have substantial significant adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	Env-1 TES-1
1/4/2022	174.03	Heather Hunziker	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	174.04	Heather Hunziker	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes the post-covid world of telecommuting, flexible work schedules and other technological and societal changes that have largely eliminated "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/4/2022	174.05	Heather Hunziker	Update the traffic modeling data and give the public another opportunity to give input before selecting a preferred alternative. The traffic data uses the outdated 2009 model--"to be updated to 2045 data at a later point" (presumably after the initial public comment period has ended). But CTRMA should update MoPac information with current data and a functional traffic model BEFORE choosing preferred alternatives and allow public comment on that analysis. The 2035 model being used, now more than 10 years old, was problematic in 2009 and is virtually useless now.	RP-1 PI-7
1/4/2022	174.06	Heather Hunziker	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. Neither the 2035 Model nor the 2045 model has any conception of the current world of telecommuting and flex schedules. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/4/2022	174.07	Heather Hunziker	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue these options in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	174.08	Heather Hunziker	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	174.09	Heather Hunziker	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	175.01	Michelle Widmer	I'm concerned that fellow citizens will not have the time to comment given the 30 period extended over the holidays.	PI-1
1/4/2022	175.02	Michelle Widmer	I'm very concerned about the environmental impact of the proposal and expect to see a full EIS report.	ENV-1
1/4/2022	175.03	Michelle Widmer	I'm concerned how parkland and area schools would be impacted. At this time I'm very concerned about the impacts of this project and must in be opposition.	CR-2 Soc-1
1/4/2022	176.00	Cheris Lifford	This is a terrible idea. We need to focus our resources on greener mass transit.	Comment noted
1/4/2022	177.00	Michelle Doty	Please consider all the points made by Save Our Springs. I agree with them. Thank you.	Comment noted
1/4/2022	178.01	Aaron W Barker	I am writing to comment on the proposed Mopac South project. I am opposed to any plan to build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, or Austin High School. This will have a negative environmental impact, increase traffic problems, and destroy the natural beauty of these places.	D-2 CR-2 TO-1
1/4/2022	178.02	Aaron W Barker	I request the following actions before any decisions are made: 1. Extend the comment period at least 30 days.	PI-1
1/4/2022	178.03	Aaron W Barker	2. Prepare a full Environmental Impact Statement (EIS)	ENV-1
1/4/2022	178.04	Aaron W Barker	3. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement.	Alt-6 D-9 PN-1
1/4/2022	178.05	Aaron W Barker	4. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."	RP-1 PI-7
1/4/2022	178.06	Aaron W Barker	5. Analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution. Please do not damage the environment and our city by approving this disastrous Mopac South project.	Alt-1 Alt-3 D-9 PN-1
1/4/2022	179.01	David King	Please extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/4/2022	179.02	David King	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/4/2022	179.03	David King	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	179.04	David King	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/4/2022	179.05	David King	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at	RP-1 PI-7

Comment Response Matrix

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			a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	
1/4/2022	179.06	David King	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/4/2022	179.07	David King	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/4/2022	179.08	David King	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	179.09	David King	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	179.10	David King	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/4/2022	180.00	Jessica Hirn	This is a terrible idea and it does not serve the community. Only those who will financially benefit from the toll road. Please do not move forward with this project, we need to protect the surrounding environment. The toll road that was constructed north of the lake is not useful and was such a waste of money and resources that could have been used more wisely.	Comment noted
1/4/2022	181.01	Katheryn Jager	Building more toll roads through downtown is not a traffic solution. It is a horrible trend of forcing lower income drivers into neighborhoods and giving the wealthier drivers preference at the cost of all residents.	EJ-1 EL-1
1/4/2022	181.02	Katheryn Jager	Building in a way that devalues and/or damages our natural spaces that make Austin so precious is not a solution. We must protect our lakes, creeks, rivers, and parks. No amount of new pavement in our green spaces is worth the damage to what makes Austin special and beautiful. It is also not worth the risk to the aquifer at a time when water is becoming more and more of a scarce resource.	ENV-2 WQ-1
1/4/2022	181.03	Katheryn Jager	Using outdated, pre-Covid and pre- work from home traffic data is not a solution. New data is needed to look at this planning process given societal shifts to remote work and the changing demographics of this growing area.	RP-2
1/4/2022	181.04	Katheryn Jager	Lastly, the decision to put this comment period in the middle of the holidays was seemingly calculated and in very poor taste. This should be recognized and corrected in the future.	PI-1
1/4/2022	182.01	Sara Parhizkar	I disagree with the purposed solution to expand MoPoc to included toll lanes, including a double decker toll bridge over Lady Bird Lake. As a resident of Austin and someone who frequents the lake, it's trails, and recreation spaces, I am extremely concerned about the environmental impact this will have on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. This is the primary reason I do not like the purposed solution as I believe it will have negative impacts to the these fragile environments, which in my opinion, are the crown jewel of Austin and need to be protected so that they are still around for future generations. Apart from the environmental impact this solution will have, I am also concerned that the construction of a double decker bridge will encroach on park land and or Austin High School property.	D-2 CR-2 TO-1 TES-1
1/4/2022	182.02	Sara Parhizkar	I personally would like to see "no build" or "very limited build" alternatives explored to improving traffic flow and ideas which do not leverage parkland or school property.	Alt-6
1/4/2022	182.03	Sara Parhizkar	Lastly, I'm concerned the purposed solution was based on old and out of date data. I would like to see CTRMA update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative".	RP-1 PI-7
1/4/2022	183.00	Sara Parhizkar	I disagree with the purposed solution to expand MoPoc to included toll lanes, including a double decker toll bridge over Lady Bird Lake. As a resident of Austin and someone who frequents the lake, it's trails, and recreation spaces, I am extremely concerned about the environmental impact this will have on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. This is the primary reason I do not like the purposed solution as I believe it will have negative impacts to the these fragile environments, which in my opinion, are the crown jewel of Austin and need to be protected so that they are still around for future generations. Apart from the environmental impact this solution will have, I am	See reposnes to comment 183

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			also concerned that the construction of a double decker bridge will encroach on park land and or Austin High School property. I personally would like to see "no build" or "very limited build" alternatives explored to improving traffic flow and ideas which do not leverage parkland or school property. Lastly, I'm concerned the purposed solution was based on old and out of date data. I would like to see CTRMA update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative".	
1/4/2022	184.01	D. Spradley	I strongly oppose building additional highway infrastructure in this area of Mopac south for both environmental and residential degradation factors.	Comment noted.
1/4/2022	184.02	D. Spradley	I would rather the authority look at buying the existing railroad ROW and provide alternate transportation to downtown and other areas. I also believe that the future of work will be less about commuting and therefore we are building something that will become obsolete. Why not let an improved I-35 and other corridors become the primary traffic conduit for South Austin? Why not let CapMetro finish building light rail to support additional capacity? Don't pave the world, come up with better transportation methods and keep Austin from becoming a concrete jungle!	T-3
1/4/2022	185.01	David Heymann	As an architect and planner, and professor of architecture (including lecturing on site design and planning), I've watched Austin fight off some pretty bad decisions over the past 30 years. The idea of double-decking the MoPac over Lady Bird Lake is one of the WORST ideas imagine-able, and I am writing to express my strong opposition to this change. It will only temporarily solve a problem that will just grow to be unworkable in a few years again. Take a look at the recently expanded Katy Freeway out of Houston, for example: it's again a traffic jam, because development increases along newly expanded corridors! Or: we double-decked 1-35 already! How has that worked out for traffic? The MoPac bridge is not going to solve anything. The MoPac was widened north of Lady Bird Lake over the past few years. Is THAT part of the highway any less congested? NO! There are enough slow-downs and bottle-necks along its entire length.	RP2
1/4/2022	185.02	David Heymann	The larger and intractable problem is that the topography of the west side of Austin is simply not conducive to a major highway. We all know it. That is the reason the toll road was correctly built EAST of Austin. The trick would really be to find ways to have people use THAT road, since WE ALREADY HAVE IT, by promoting development along that spine. One way is: no more widening of the MoPac. There is an old saying, about making sure to not cut off your nose to spite your face. Just so traffic - mostly cars with one passenger! -can move a little faster, that double decked MoPac bridge will add an egregious eyesore to one of Austin's true gems, Lady Bird Lake, which is really Austin's primary public space. And just wait until the sound walls have to be added!	Comment noted
1/4/2022	185.03	David Heymann	Really, this is just such backward thinking. Cities that keep prioritizing traffic over quality of public space all come to rue those decisions. Almost every city in the world that is ranked high in live-ability has actually reduced or buried highways in the past 25 years! We already have one East/West wall in Austin, along 1-35. It is problem enough! Let's not build another wall. And let's actually respect the underlying natural order of the landscape - including protecting the catchment area for Barton Springs - which is really what sets Austin apart as a city.	CR-2
1/4/2022	186.01	Joyce Basciano	Please extend the comment period at least 30 days since the entire comment period fell during the holidays. Also correct the misinformation on your MopacSouth.com website.	PI-1 PI-3
1/4/2022	186.02	Joyce Basciano	Please fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using existing pavement. Dedicating an existing inside lane to an HOV lane during rush hour should be considered. Make it a toll lane as you have done North of the river.	Alt-3 Alt-6 D-9 PN-1
1/4/2022	186.03	Joyce Basciano	Avoid building a double decker bridge over the existing MoPac, Lady Bird Lake and Austin High School. Please analyze the existing MoPac/Cesar Chavez ramps and how they will interact with proposed plans--this area is going to be a major challenge.	D-2 D-6
1/4/2022	186.04	Joyce Basciano	Please analyze the existing MoPac/Cesar Chavez ramps and how they will interact with proposed plans--this area is going to be a major challenge.	TO-2
1/4/2022	186.05	Joyce Basciano	Traffic modeling needs to be updated for the post Covid world which will see more tele-communicating and less driving. Give the public the another opportunity to give input before selecting a "preferred alternative".	RP-6 PI-7 RP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	186.06	Joyce Basciano	Prepare a full Environmental Impact Statement (EIS). Unlike MoPac North of the river, MoPac South is within the recharge zone for the Barton Springs segment of the Edwards Aquifer. Additional lane-miles of pavement within the recharge zones will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek Greenbelt and the endangered blind salamanders. Barton Springs and the surrounding natural areas are the iconic "crown jewels" of Austin. Once these natural features are destroyed, they will be gone forever.	ENV-1 TES-1
1/4/2022	187.00	Kendra Roloson	Please extend the comment period by 30 days as the majority of the comment period fell over the holidays.	PI-1
1/4/2022	188.01	John Rose	I think you should extend the deadline for community input, since the 30 days fell during the holidays. Most of us were spending time with our families and not recognizing potential damage to our community's environment.	PI-1
1/4/2022	188.02	John Rose	Indeed, this project will cause environmental damage to the Barton Creek area as currently proposed. You should work directly with the Save Our Springs Alliance and other environmental groups to revise the proposal and further to mitigate any environmental damage that any revised project may cause. This includes but is not limited to: - Preparing a full Environmental Impact Statement (EIS) that includes the adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders;	ENV-1 TES-1
1/4/2022	188.03	John Rose	- Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. First of all, gross. We don't need a double decker monstrosity spoiling that part of the city. Can we please have nice, pleasant things in that natural area? Second, it sounds like this will take park land or encroach on Austin High. Again, bad ideas;	D-2 CR-2 TO-1
1/4/2022	188.04	John Rose	- Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement. Surely, there are options. Let's hear them all!	Alt-3 Alt-6 D-9 PN-1
1/4/2022	188.05	John Rose	- Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." Not only should the public be given more (and more publicized) opportunities for input, but we should be able to vote on something this significant;	RP-1 PI-7 PI-3
1/4/2022	188.06	John Rose	- Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis;	Alt-1 Alt-3
1/4/2022	188.07	John Rose	- Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown;	TO-2
1/4/2022	188.08	John Rose	-Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete; and finally (for now),	ICI-2
1/4/2022	188.09	John Rose	- Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/4/2022	189.01	Brenda Ladd	I agree with Save Our Springs position regarding this proposed bridge. - Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	189.02	Brenda Ladd	- Extend the comment period at least 30 days	PI-1
1/4/2022	189.03	Brenda Ladd	- Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement	Alt-3 Alt-6 D-9 PN-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	189.04	Brenda Ladd	- Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."	RP-1 PI-7
1/4/2022	189.05	Brenda Ladd	- The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3
1/4/2022	189.06	Brenda Ladd	- Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	189.07	Brenda Ladd	- Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	189.08	Brenda Ladd	- Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/4/2022	190.01	Caroline Dunn	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/4/2022	190.02	Caroline Dunn	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/4/2022	190.03	Caroline Dunn	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	190.04	Caroline Dunn	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/4/2022	190.05	Caroline Dunn	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/4/2022	190.06	Caroline Dunn	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	RP-6 PI-7 RP-1 ICI-1 SOC-1
1/4/2022	190.07	Caroline Dunn	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3
1/4/2022	190.08	Caroline Dunn	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	190.09	Caroline Dunn	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/4/2022	190.10	Caroline Dunn	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/4/2022	191.01	Megan Meisenbach	SOS Comments on Mopac South Project – Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website is confusing. Ensure robust and full public input.	PI-1 PI-3
1/4/2022	191.02	Megan Meisenbach	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.	ENV-1 TES-1
1/4/2022	191.03	Megan Meisenbach	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/4/2022	191.04	Megan Meisenbach	Fully evaluate a "no build" or "very limited build" alternative.	Alt-3 Alt-6
1/4/2022	191.05	Megan Meisenbach	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."	RP-1 PI-7
1/4/2022	191.06	Megan Meisenbach	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives.	Alt-1
1/4/2022	191.07	Megan Meisenbach	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/4/2022	191.08	Megan Meisenbach	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/4/2022	191.09	Megan Meisenbach	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/4/2022	192.00	Kristy Attaway	Would really like to see the bike path connected along 45 between Meridian and Circle C!	BP-2
1/4/2022	193.00	Carol Stall	The passage of time has not improved this proposal one iota. It was a bad idea in 2015 and it's still a bad one. NO lane miles over the recharge zone! Protect our beautiful springs!	Comment noted
1/4/2022	194.00	Phillip Thomas	The Barton Creek watershed has barely survived the SH 45 lane miles that should not have been approved, so I see more lane miles as another stress on the ecosystem and hydrology of the watershed. It may indeed be the straw that breaks the camel's back. I don't support ANY proposal wherein that's a possibility.	Comment noted
1/5/2022	195.00	Dick Kallerman	The raised highway lanes south of Lady Bird Lake should be no higher than the current highway lanes. Highway heights built beyond limits indicates a failure of design and engineering to make full use of cutting-edge opportunities. Falling back on the old tried and true, costs money in the long run and provides a reduced level of service.	D-2
1/5/2022	196.01	Gerry Schwartz	Does Climate Change enter into any of the calculations? Central Austin is suffocating!!	ICI-2
1/5/2022	196.02	Gerry Schwartz	Austinites disapproved of this project years ago.... Why do you think our advice has changed? NO MORE ROADS please. Bad traffic is a plus when you want to encourage mass transit or alternative routes. Why don't the trucks take route 130?? Is that naïve? – go around AUSTIN WHERE ROADS ALREADY ARE AVAILABLE. Or make drivers suck it with because they make bad choices... pay the price with bad traffic to enjoy what remains of Austin's character. I live nearby MOPAC and since it's expanded to 8 lanes, the air is polluted, the filthy rubber dust and other particulates accumulate on my house, porch and gardens. It is MUCH MORE NOISY.... Please don't add to the mess with more expansion. If you build it they COME. There are many more semi-trucks on MOPAC now than ever before. It is dangerously narrow. THINK.	Comment noted

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/5/2022	196.03	Gerry Schwartz	This resurrected really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West).	RP-3 RP-1
1/5/2022	196.04	Gerry Schwartz	Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt. We fought it off once and with your help we can do it again.	ENV-2 CR-2 TO-1
1/5/2022	197.00	Ginger Hurst	Asking for the comment period be extended for at least 30 days following the publication of current relevant traffic data and analysis.	PI-1
1/5/2022	198.01	Robert Gilliland	Please extend the comment period for 30 additional day to get a better glimpse of public opinion. Putting the comment period in a Holiday has the appearance of trying to sneak something by the public.	PI-1
1/5/2022	198.02	Robert Gilliland	As it is now proposed I am very strongly opposed to the plan. A double decker bridge over Town Lake and Austin High is a terrible, barbaric idea. Work with what is already available and avoid taking any parkland or land from Austin High.	D-2 CR-2 TO-1
1/5/2022	199.01	Stephen Buchanan	The solution to increasing transit efficiency is not creating more lanes for more drivers to fill. The reality is that increasing a wider variety of transit options is a much better solution, and a solution that this proposal totally ignores. Furthermore, the construction and sunlight impact serves as a risk to the community and wildlife growth below it; nevermind the ugly aesthetic. Instead of trying to build more concrete roadway, an attempt to bolster alternative transit options along MoPac seems like a much more reasonable, cost effective and modern solution.	T-3
1/5/2022	199.02	Stephen Buchanan	And shame on whoever deciding placing the public comment period over the holidays was.	PI-1
1/5/2022	200.01	Susan Pantell	You should thoroughly evaluate all alternatives, including no build and limited build, which would use the existing roads to improve traffic flow. An existing lane should be dedicated to high occupancy vehicles and transit.	Alt-3 Alt-6 D-9 PN-1
1/5/2022	200.02	Susan Pantell	The traffic model used should be improved and updated. The data that it relies on, from 2009, is out of date; and a number of the assumptions from the old model do not reflect current conditions. You should model the additional traffic from induced demand that will result from each project alternative.	RP-1 ICI-1 SOC-1
1/5/2022	200.03	Susan Pantell	The climate change impacts from this project should be evaluated, including both the direct impacts from increased traffic and indirect impacts from future development.	ICI-2
1/5/2022	200.04	Susan Pantell	Equity impacts of this project should be considered up front, including the impact from adding toll lanes.	EJ-1
1/5/2022	200.05	Susan Pantell	I oppose building a double-decker bridge over Lady Bird Lake, Zilker Park and the high school. The project should not take any park land.	D-2
1/5/2022	201.00	William Gordon	While we had hoped to bask in the glow of the New Year for a while, our not-so-friendly toll road agency, the CTRMA, has forced us to ask for a few minutes of your time to comment on CTRMA's resurrection of the Mopac South "Billion Dollar Mistake on the Lake" proposal to add a double decker toll bridge over Zilker Park, Lady Bird Lake, and Austin High School and to add 4 toll lanes (2 each way) to South Mopac from Cesar Chavez to Slaughter Lane. The community killed this Mopac monster in 2015 but now its baaaack!!	S-1
1/5/2022	202.01	William Gordon	I am opposed to this proposal. This really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West).	RP-1 RP-3
1/5/2022	202.02	William Gordon	Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt. We fought it off once and with your help we can do it again.	CR-2
1/5/2022	203.01	Christy Seals	Please extend the comment period at least 30 days following the publication of current relevant traffic data and analysis.	RP-1 PI-7
1/5/2022	203.02	Christy Seals	Please do not increase paving and impervious cover over Lady Bird Lake and Zilker Park. Mopac was never intended to be the highway that it has become, and we don't need / want an I-35 West running through this important watershed.	WQ-1 RP-3
1/5/2022	203.03	Christy Seals	Please analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/5/2022	204.01	James Talbot	Why are we just hearing about this? Why is the comment period happening during Xmas and the property tax deadline?	PI-3 PI-1
1/5/2022	204.02	James Talbot	This project is a big, expensive, and ecologically unsound mistake that would further compromise Barton Springs and Zilker.	CR-2
1/5/2022	204.03	James Talbot	We need an updated traffic analysis and an environmental impact study for starters.	PI-4 ENV-1
1/5/2022	204.04	James Talbot	And rather than toll roads we need lanes for multi-passenger vehicles.	Alt-3
1/5/2022	204.05	James Talbot	Don't try to hide this one under the table--we need at least a month for public input if you really want to be fair about this.	See PI-1 and PI-3 PI-4
1/5/2022	205.00	Helen Huckaba	Since the completion of Mopac improvements on Slaughter/LaCrosse, the traffic noise in my neighborhood, On the Park, is unbearable. The original plans have the sound wall extending to Slaughter on the west side of the highway. Because the wall stops at the drainage area, my house is not only getting all the southbound traffic noise but the bounce back from the east side sound wall with north bound traffic. I am having to invest upwards of \$60,000 to improve my windows to include soundproofing so we don't hear the traffic noise inside. I would beg TXDOT to complete the sound wall on the west side to help dampen the sound of the highway. We can't enjoy our backyard as we used to nor can I get proper sleep. Please help us. You have vastly decreased the value of my home.	TxDOT-2
1/5/2022	206.01	Amber Deem-Mullikin	I do not agree with the proposal to use more of the Barton Springs green belt or Zilker Park area for the MoPac expansion.	CR-2
1/5/2022	206.02	Amber Deem-Mullikin	Explore alternative ideas with existing lanes (use of HOV for example)or get much more creative with the use of some money and leave the Park alone.	Alt-6 D-9 PN-1
1/5/2022	207.00	Lisa laird	We need some general purpose lanes instead of just express lanes. The express lanes on north mopac just cause a bottleneck going south at the bridge where all the lanes merge. This causes the people who aren't in the lane to experience a much longer backup than we previously had during rush hour time.	Alt-2
1/5/2022	208.01	Jacob Hendrickson	No expansion of Mopac please. Don't need more toll lanes or more lanes period.	comment noted
1/5/2022	208.02	Jacob Hendrickson	Please consider converting existing lanes to hov and public transit Lanes.	Alt-3 Alt-4
1/5/2022	209.01	Matt Whitman	First, I'd please ask that the comment period be extended at least by an additional 30 days given the proposed scope of this project.	PI-1
1/5/2022	209.02	Matt Whitman	Further, a full environmental impact study ought to be prepared for this project. There should be greater detail provided and investigated to determine enviromental impacts.	Env-1
1/5/2022	209.03	Matt Whitman	Based on the information so far regarding this proposal, I do not think it is in the best interest of the city to move forward with it. I am strongly opposed to this project and any additional construction in the area, especially if there is insufficient research to demonstrate it's necessity.	Comment noted
1/5/2022	210.01	Josie Rasberry	The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts.	ENV-2 CR-2 TO-1 TES-1
1/5/2022	210.02	Josie Rasberry	Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Not only will this negatively impact the environment, but it will also be detrimental to Austin's tourism. People who come to see attractions such as Lady Bird Lake or Zilker Park will not come once it's closed off from construction, destroyed by construction, and made into an eyesore thanks to a toll road. Many events and concerts are also hosted in the areas that will be negatively impacted by this project, thereby harming business to musicians, artists, and other businesses. Many of which are already struggling from the negative impacts COVID had.	ENV-1
1/5/2022	210.03	Josie Rasberry	Bottom line: do not build this project. The last thing Austin needs is more construction and tolls/highways.	Comment noted
1/5/2022	211.01	Joseph Fife	I oppose this project simply because of how much of a catastrophe the northbound Mopac toll lane project was. The southbound toll lane took TWO YEARS longer than proposed and was at least 20 million dollars over budget. I have no faith that the CTRMA can execute a similar project with better results.	C-1 MA-3
1/5/2022	211.02	Joseph Fife	In addition, the greater issue is that have seen no data that the current mopac toll lanes have had a material effect on the traffic that they were supposed to relive.	PP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/5/2022	211.03	Joseph Fife	Lastly, I simply do not believe that the addition of toll lanes is an acceptable solution to traffic problems in Austin. We pay absurd city, county, and state taxes which are meant to include PUBLIC services such as roadways. Roads should simply not be privatized at the inconvenience of their users.	TF-1
1/5/2022	212.01	Brittany Platt	While the city of Austin has recently been prided for growth, the adoption of a double decker bridge over Mopac does not fall in line with this idea. Alternative designs or concepts must be considered, especially within environmentally- sensitive zones that this part of Texas is so highly recognized for.	D-2
1/5/2022	212.02	Brittany Platt	I urge you to extend the comment period for this project for at least 30 days following the publication of current relevant traffic data and analysis.	PI-7
1/5/2022	212.03	Brittany Platt	Should the project continue and the skyline and natural systems of this city be permanently altered, let it at least be known that all appropriate, proper, and respectful measurements were taken.	ENV-2
1/5/2022	213.01	Kathleen Green	Please extend the decision on building a toll road over the Barton Springs/Edwards Aquifer for 30 more days	PI-1
1/5/2022	213.02	Kathleen Green	-please make public all future plans that involve this area.	PI-10
1/5/2022	213.03	Kathleen Green	Barton Springs is our Crown Jewel;without protecting it-Austin cannot brag about being environmentally conscious.	CR-2
1/5/2022	213.04	Kathleen Green	The general public deserves a chance to know what is happening integrity is foremost!!!	PI-2
1/5/2022	214.00	Aimee S	Do not build an unnecessary road over our lake. Do not build an unnecessary road near our high school. Do not build an unnecessary road over our park.	Comment noted
1/5/2022	215.01	John Joyner	This proposed Mopac expansion would be insanely harmful to the local environment,	Env-2
1/5/2022	215.02	John Joyner	and is driven by horribly out-dated studies and pathetically anachronistic thinking. In a world where telecommuting is becoming commonplace and	RP-6
1/5/2022	215.03	John Joyner	where climate change is already likely to cause widespread disruption and hardship on a global scale, this proposal id mind-bogglingly troglodytic.	ICI-2
1/5/2022	216.01	Jennifer Jones	I am opposed to any changes to Mopac South. The stretch of Mopac between downtown and 360 covers Lady Bird Lake, Zilker Park and Barton Springs, three natural resources in Austin that are already being negatively impacted by development in other parts of the city. The water quality in Barton Springs has declined just in the past 5 years, from being clear enough to see all the way down to the spring vents themselves, to being murky every time we go. Further construction in this area will make the water quality worse.	CR-2 WQ-1
1/5/2022	216.02	Jennifer Jones	In addition, enlarging and/or connecting Mopac South to I-35 will not improve or decrease traffic on Mopac, but rather increase it. Cars and trucks will use Mopac as an alternative to I-35, increasing the number of cars/trucks on the road and the pollution in the city.	RP-2 RP-3
1/5/2022	216.02	Jennifer Jones	More should be done to reroute traffic away from the Mopac highway altogether. This includes removing any tolls on State Hwy 130 so that trucks especially can use that route around Austin, and also using the train tracks between Mopac as a commuter route instead of only for freight. These two solutions would decrease traffic on Mopac, reduce the environmental impact in this area and also negate any need to make changes to Mopac South.	OOS-1 OOS-1.2
1/5/2022	217.01	Sean	This is not the right course of action to fix traffic flow through the Zilker/Barton area. There needs to be updated data and studies on traffic trends.	RP-1
1/5/2022	217.02	Sean	One solution would be to fix the bottle neck effect the recent toll road created!	TO-5
1/5/2022	218.01	Mary Ruth Holder	As a former resident of Austin and a frequent visitor I am writing to oppose the proposal for a toll bridge over Zilker Park and Lady Bird Lake and the accompanying construction required for access to the bridge. I served on the Austin Parks and Recreation Board for many years and know the Park and Lake are iconic areas of natural beauty and recreation for all Austinites.	Comment noted
1/5/2022	218.02	Mary Ruth Holder	A toll bridge would be completely inappropriate here and would ruin Austinites' experiences in the Park, the beautiful hike and bike trail, Barton Springs and Deep Eddy Pool. Do not treat this area as a commercial sacrifice zone.	CR-2
1/5/2022	218.03	Mary Ruth Holder	Please conduct a full EIS for this project.	ENV-1
1/5/2022	218.04	Mary Ruth Holder	I also fully incorporate the comments of Save our Springs Alliance by reference hereto.	SOS-1
1/5/2022	219.01	Jonathan Monjaras	Honestly we don't want more environmental degradation of our lake and surrounding springs.	CR-2
1/5/2022	219.02	Jonathan Monjaras	Have y'all not learned that building more lanes doesn't translate to less cars or improved traffic. Take a look at Houston (I-10) more lanes were added and traffic is still horrendous. Literally the same thing will happen if this project is approved.	ICI-1 SOC-1
1/5/2022	219.03	Jonathan Monjaras	Don't waste tax payer money on things we don't want.	TF-1
1/5/2022	219.04	Jonathan Monjaras	Use it to provide more ways to eliminate traffic by offering alternatives like more commuter buses,	T-3 T-1
1/5/2022	219.05	Jonathan Monjaras	add a safe and separate bike lane corridor.	BP-1
1/5/2022	219.06	Jonathan Monjaras	Literally anything else would be better than more lanes.	comment noted

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/5/2022	220.00	Kait Willis	Please consider another option. We love this city, and it breaks my heart to see how much of mother nature is being sacrificed because of the dollar.	Alt-1
1/5/2022	221.01	Michael Edward Reed	1. I do not support the expansion of this highway.	Comment noted
1/5/2022	221.02	Michael Edward Reed	Time and time again highway expansions increase travel times via induced demand and do not decrease travel times.	ICI-1 SOC-1
1/5/2022	221.03	Michael Edward Reed	2. We need to support mass transit, bicycle infrastructure, and walking paths. These are both cheaper and more effective.	T-1 BP-1 T-3
1/5/2022	221.04	Michael Edward Reed	3. If the highway is expanded, which I do not support doing, it should be expanded in the way that will best support public transit.	Alt-1 See T-1
1/5/2022	221.05	Michael Edward Reed	4. Absolutely no general purpose lanes should be added, at all costs. If we're going to expand the highway, it should be encouraging transit, carpooling, and/or people paying for the infrastructure they use.	Comment noted
1/5/2022	222.00	Catherine Boshart	We need traffic relief for South Austin. It is almost impossible to look for a job in North Austin due to traffic constraints, limiting a whole swath of the city. There is a real need for direct downtown access and lanes that extend beyond 290.	Comment noted
1/5/2022	223.00	Jeffery Sayers	Extend the comment for at least 30 days following the publication of current relevant traffic data and analysis - the 2009 models are out of date and do not reflect the current reality of how people will transport.	PI-7 RP-1
1/5/2022	224.01	Addie Walker	I do not think that this project should be moving forward. I have several concerns. This project was on pause for 6 years from 2015-2021 and is moving forward without any updated traffic or demographic data. Austin has changed a lot in 6 years, including how people use MoPac South. This project needs to start over using updated data, ESPECIALLY how land use will change when Project Connect is finished.	RP-1
1/5/2022	224.02	Addie Walker	Community feedback from 2015 has not been taken into account and there is an opportunity here to redesign this project in line with community feedback and updated demographics/land use/traffic data from the last 6 years, and that opportunity needs to be taken.	PI-8 PI-7
1/5/2022	224.03	Addie Walker	This project needs a full EIS, NOT an EA. An EA does not adequately cover all of the environmentally sensitive areas this project will impact including Edwards Aquifer and Barton Springs.	ENV-1
1/5/2022	224.04	Addie Walker	Finally, why is increasing safety not once considered in the project purpose and need? Minimizing traffic injuries and fatalities and improving safety in this corridor is not ONCE mentioned and it should be the PRIMARY project purpose.	SF-1
1/5/2022	224.05	Addie Walker	This project needs a serious overhaul, it cannot just be restarted out of the blue after a six year pause.	S-1
1/5/2022	224.06	Addie Walker	Also, any TxDOT project moving forward should have a minimum of 90 days for public comment and public comment periods should not be held over the holiday season. It is very difficult to adequately provide public comments on this project given the time constraints and additional time demands of the holidays.	PI-1
1/5/2022	224.07	Addie Walker	Thank you for your consideration and please redo this project in line with better community feedback practices, community requests from 2015, a full EIS, and prioritization of safety and environmental protection.	PI-12
1/5/2022	225.00	Williams Lauren	I am AGAINST the new proposed toll rode bridge that would be built over the lake and zilker. It would cause terrible Impact to these special places that people like to gather as a community.	Comment noted
1/5/2022	226.00	Melaina Newman	Theres no need for this project we have so many other problems to focus on. This would be unnecessary and annoying.	Comment noted
1/5/2022	227.01	Karla Cardenas	I disagree with the proposal to add a double decker toll bridge over Zilker Park, Lady Bird Lake and Austin HS.	D-2
1/5/2022	227.02	Karla Cardenas	Stop with the toll roads, stop adding traffic and posing a threat to our beautiful community and green areas. I don't want another Dallas. Dallas toll roads were built under the false premise that the fees would be charged only until the building of the toll roads was paid off and guess what? The fees never stopped and have only since increased and now you get to pay tolls to be stuck in traffic.	TF-1 TF-2
1/5/2022	228.01	Kerri Welch	I stand with SOS against the double decker toll bridge over Lady Bird Lake. There is enough traffic noise and pollution.	SOS-1
	228.02	Kerri Welch	Please focus your efforts of public transportation not more toll roads.	T-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/5/2022	229.00	Sarah Elizabeth Larocca	NO NO NOOOOOOOOOOOOOO!!!! This is a horrible "solution" to our traffic problems, and will have very negative impacts on the already pressured ecosystem in the surrounding areas. This idea was bad 10 years ago, and guess what, IT STILL IS!!!	Comment noted
1/5/2022	230.01	Jack Beadle	This monstrosity has no business running through the middle of the city. This will do nothing but further congest roadways in the area that it is connected to and will further damage the fragile ecosystem mopac already lies on top of.	Comment noted
1/5/2022	230.02	Jack Beadle	This is not Dallas and we do not need more overhead highways that will make our car congested city worse than it already is.	comment noted
1/5/2022	230.03	Jack Beadle	If you want more space large roadways build more out east of IH35.	RP-7
1/5/2022	230.04	Jack Beadle	No local wants that concrete monstrosity making more noise and ruining views of the hill country's natural landscapes.	Soc-2
1/5/2022	231.00	Adriana Nelson	I have lived in Austin for 6 years and counting, born and raised in Texas. I strongly oppose this project. Austin is an oasis and we value protecting our natural environment, springs, and trails. Please protect our parks and natural preserves because that is what makes Austin special. We don't need another highway. If this project moves forward, that would jeopardize one of the most beautiful things about our City - our natural springs and green spaces.	CR-2
1/5/2022	232.00	Tori	I do not support this proposal. Please stop this wasteful madness.	Comment noted
1/5/2022	233.00	David Huter	These improvements are needed to keep up with population and congestion in our region. Please build this project as quickly as possible. Please keep the 2 express lanes each direction.	Comment noted
1/5/2022	234.00	Josh Yates	I support any of these, but would prefer any option that extends improvements as far south as slaughter. This area is growing whether we like it or not and mobility is a major concern for my family and frankly will play a large role in dictating whether we continue living in this area. please bring these needed improvements to the capital area region.	Comment noted
1/6/2022	235.01	Casey Giles	mopac southbound should not narrow to 2 lanes at william cannon. you would only need to build 550LF of pavement and restripe in order to carry 3 lanes all the way to davis.	D-5
1/6/2022	235.02	Casey Giles	<p>the davis exit would then be exit only and it would continue as 2 lanes from there on, like it is today. The backup caused by the merge at william cannon greatly affect the willam cannon exit as well as the flyover from 71. The increase in traffic, compounded by those delays, has extended the effects back to the southwest parkway exit and beyond.</p> <p>however, if that isn't possible, then i would request that you change the merge from the left 2 lanes to the right 2 lanes. the unimpeded "through" lane should be the left lane, not the right lane?</p>	D-6 D-1
1/6/2022	236.01	City of Austin via Rob Spillar	<p>Thank you for the opportunity to respond to your presentation of the proposed MoPac/Loop 1 South Managed Express Lanes project championed by the Central Texas Regional Mobility Authority (CTRMA). I understand that the current public engagement and presentation of the project is a refresh of the project as it last stood prior to the pandemic. Further, I understand that the project has been on hold due to the financial impacts and technical difficulties created by the pandemic and that it is now possible to restart the project. As you know, the City of Austin has been working cooperatively with the CTRMA on this project for some time, dating back to our initial cooperation in 2015. As such, I request that all prior communications, comments, and requests made by the Austin Transportation Department (ATD) and other departments of the city be honored and incorporated as part of the current comment process. By this reference, I am requesting that the definition of alternatives and the environmental process address our prior communications.</p> <p>ATD has tried to aggregate comments and concerns shared by other city departments into this letter so that we are speaking with a single voice on behalf of Austin. Although we have not had the opportunity to seek endorsement of these comments from Council due to the timing of the public meeting and short comment period, I believe we are in alignment with prior direction and that we have their support on our response. You should anticipate that individual policy leaders from Council may choose to communicate individually on behalf of the constituents they represent.</p> <p>I have attempted to organize our comments into themes, relevant to the topic of the comments:</p> <ul style="list-style-type: none"> - Process - Traffic Operations, Lane Configurations and Design - Transit - Parks - Pedestrian and Bicycle Issues 	Comment noted.

Comment Response Matrix

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			<p>- Storm Water/Environmental</p> <p>ATD and other departments and utilities at the City of Austin remain ready to work with CTRMA on developing this project. As reflected in our adopted Austin Strategic Mobility Plan, our goals are to develop a project that is environmentally sound and protective of our fragile water quality and natural environment in South Austin; to prioritize transit, bicycle, and other modes of travel that increase our modal split away from the single occupancy vehicle and assist us in reaching our 50/50 modal split objective; and, increase the effectiveness and efficiency of existing infrasture (tolled and non-tolled) so that all residents benefit from the proposed project.</p> <p>Again thank you for the on-going opportunity to work with your staff and consultant team in improving the proposed project. ATD's comments related to the current request by CTRMA are provided in the following attachments.</p>	
1/6/2022	236.02	City of Austin via Rob Spillar	<p>City of Austin, Austin Transportation Department Technical Comments 1/6/2022 Process</p> <p>Public Outreach: ATD appreciates that CTRMA, with the current public engagement process, repeated the format and content of the prior public engagement process that preceded the shutdown of the project. However, Austin and the corridor served by the proposed project is growing at a hyper rapid rate. It is likely that a number of current residents affected/benefited by the project may have recently moved to the corridor during the project's hiatus from the public arena and that this latest public engagement may be the first introduction for many to the project. It is incumbent on the CTRMA that they assure that the public has been sufficiently engaged if general consent is to be achieved. ATD requests that CTRMA continue to reach out to the public and affected agencies to assure an on-going robust discussion is being supported. ATD requests that on-going opportunity for public input and comment be supported as additional environmental information is developed. We request that these on-going interactions maintain an ability to have sway over the eventual outcome of the project.</p>	PI-3 PI-12
1/6/2022	236.03	City of Austin via Rob Spillar	<p>Additionally, the current public outreach has been fully virtual due to the ongoing difficulties caused by the pandemic. TxDOT, for their I-35 project, has found ways to interact with the public in person as well as virtually. ATD requests that CTRMA look for additional ways to safely meet in person with the public to encourage more interactive communication and improve access to information. Such meetings might be held in an outdoor venue such as Berger Stadium, one of the affected City parks, Lady Bird Johnson Wildflower Center, or various commercial sites along the corridor. Again, ATD is mindful of the risks created by the pandemic, and requests that CTRMA strive to expand access in ways that are deemed to provide for safe interactions.</p>	PI-5
1/6/2022	236.04	City of Austin via Rob Spillar	<p>Naming Conventions: Alternative 3 is labeled as the "City of Austin Option" per the previous project coordination for MoPac/Loop 1 South from 2015. However, all other alternatives are named based on the attributes they provide. NEPA requires that the proponent of the project consider all viable alternatives equally. Labeling one alternative as the "City of Austin Option" implies that the alternative is on a different plane than are the other alternatives. ATD requests that the name of Alternative 3, moving into the Environmental Assessment, simply be titled "Alternative 3 - Direct connects to 5th/6th Street on Separate Outside Structures" or a similarly descriptive name. Furthermore, should this concept be taken forward, connections to the frontage roads south of Lady Bird Lake should be considered as part of this alternative, as this was the original intent of the proposed concept.</p>	OCO-1
1/6/2022	236.05	City of Austin via Rob Spillar	<p>Data Efficacy: ATD is concerned about the relevance and quality of data to be used in traffic and/or environmental analysis moving forward. CTRMA should confirm that data collected as part of the early study process dating back to 2015 remains valid and accurate for consideration as part of the current evaluation process. Since 2015, numerous transportation projects have come on-line that may not have yet had a full impact on current and relevant traffic conditions within the corridor (i.e., expansion of RM 1626, final concept determination and construction for the Oak Hill Y, Austin's adoption of Project Connect, improvements to the parallel US 183 conidor, full operations of the SH 45 South facility). Also, since 2015, suburban development in Hays County and south Travis County has rapidly expanded. Demand from these land development projects and the change in roadway networks and modal options should be factored into the traffic demand modeling for the MoPac/Loop 1 South Managed Lane project. Likewise, environmental data collected previously should be verified as valid for use on the current evaluation (e.g., water flow and quality, endangered species, air quality, noise, etc.).</p>	RP-1 RP-2 ENV-2
1/6/2022	236.06	City of Austin via Rob Spillar	<p>SH45 Operations & Connections: ATD is aware that Hays County is studying the extension of SH 45 from its current terminus to I-35. The City of Austin has not taken a position on this extension but has indicated our willingness to coordinate with Hays County on this possible connection. Is the possibility of this connection reflected in the current demand forecasts and travel modeling for the MoPac/Loop 1 South Managed Lane project? Please confirm that adequate scenario modeling has been completed to accommodate the possible extension and connection of SH 45 to I-35. Assure that updated forecasts and travel data are used to evaluate this scenario.</p>	RP-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	236.07	City of Austin via Rob Spillar	Construction Sequencing: Because of the unforeseen delay for the MoPac/Loop 1 South Managed Lane project due to the pandemic, it is now out of phase with other regional projects such as Project Connect; 1-35 Capital Express South, North and Central; US 183; and numerous Corridor Projects within the City of Austin. Identify how the MoPac/Loop 1 South Managed Lane project fits within the overall regional construction schedule and how moving forward with this project will be coordinated with other regional construction activities or how additional construction impacts might be mitigated. Demonstrate how the construction schedule of this project coordinates with those of other regional projects.	C-2 C-2.1
1/6/2022	236.08	City of Austin via Rob Spillar	Vehicle Operations, Lane Configurations and Design Ramp Queuing: Ramp locations, frontage road intersection design, and freeway design affect the City of Austin mobility network surrounding the proposed MoPac/Loop 1 South project. It is critical for ATD to understand how the loading and unloading of the proposed corridor functions. Congestion on the main lanes of MoPac/Loop 1 often backs up onto City Streets and reduce the effectiveness of the overall mobility system. For alternatives that impact ramp configuration or proposed gore points from general purpose lanes to frontage roads, please include consideration of impacts to the adjacent intersections in detailed operational analysis. In addition, please show the updated lane configurations on the frontage roads to assure appropriate lane balance and access spacing for mobility and safety impacts.	D-6 D-7 D-13
1/6/2022	236.09	City of Austin via Rob Spillar	Loop 360 Access: ATD has previously communicated concern related to the congestion and queuing caused by the proximity of multiple right-side southbound on-ramps (downtown/RM 2244/Barton Skyway) and the merge of traffic seeking to access the left-side southbound/eastbound off ramp to Loop 360. CTRMA is constructing an interim project to extend the general-purpose exit only departure lane from where it now leaves the main lanes at Barton Skyway. ATD has previously recommended a conversion of the left-side exit to a right-side exit with fly-over to the existing left side ramp cut to provide this same movement. The proposed concept would eliminate the weave that causes extensive backup in the main lanes. Please confirm that this is still the preferred approach to reducing southbound traffic, or if a right-side departure lane to Loop 360 will not be included in the final alternative, provide freeway simulation modeling that demonstrates that the CTRMA solution would provide similar or superior congestion relief on the main lanes. ATD requests detailed freeway simulation with updated data sources is necessary to determine this outcome.	D-4
1/6/2022	236.10	City of Austin via Rob Spillar	Northbound MoPac/Loop 1 Access from Loop 360: ATD has previously submitted a request to consider moving the northbound on-ramp from Loop 360 to the MoPac/Loop 1 main lanes, shifting the on-ramp to the north and using the terrain to braid it over a reconstructed off-ramp to Barton Skyway. The additional frontage road distance would allow large vehicles to reach freeway speeds more easily prior to entering the main lanes, reducing the weave/merge delay on the frontage road just north of Loop 360 that currently causes severe back-ups on Loop 360 and US 290 during peak travel periods. If access to the managed lanes is required near this point, ATD suggests that the new on-ramp could be split to provide direct access to both the managed lane and to the general-purpose lanes from the same recommended braided overpass. ATD requests freeway simulation modeling to demonstrate the value of this suggested ramp relocation or to support an alternate ramp configuration.	D-1 D-8
1/6/2022	236.11	City of Austin via Rob Spillar	Lane Balancing: ATD has previously communicated concern related to lane balancing through the US 290 at MoPac/Loop 1 interchange. If the managed lanes between US 290 and downtown are to consist of four lanes (two lanes in each direction), then ATD requests that one managed lane exit and enter from US 290 West and one managed lane north- and south-bound enter the interchange from MoPac/Loop 1 from south of the interchange. Previous concepts had extended four-lanes on MoPac/Loop 1 South all the way to at least Slaughter Lane. Access to/from US 290 West continues to be important to assure future transit access from the vicinity of Oak Hill. Access to/from US 290 eastward can be accomplished through the Loop 360/MoPac/Loop 1 interchange and connections.	D-1 D-8
1/6/2022	236.12	City of Austin via Rob Spillar	6th Street Connections: ATD has previously recommended a ramp from westbound 6th Street (Lake Austin Boulevard) to southbound MoPac/Loop 1 main lanes via a loop or partial cloverleaf design at Atlanta Street. This access is needed to unload the existing intersection of Lake Austin Boulevard with Atlanta Street. Options to connect this loop ramp to the elevated ramp from Atlanta Street or to the ramp from Cesar Chavez Street should be considered to determine the optimal design. In constructing the loop ramp, eastbound travel from Lake Austin Boulevard to southbound MoPac/Loop 1 as well as westbound transit only access to southbound MoPac/Loop 1 should be maintained via a reconfigured signal at Atlanta Street (see graphic below). Please confirm preferred configuration with traffic simulation analysis using current traffic data. In redesigning the 5th/6th Street interchange, consider providing an eastbound 5th Street to northbound Loop 1 access roadway by reversing the existing Patterson Avenue U-turn and adding a new signal at 6thStreet/Patterson Avenue intersection (preserving southbound pedestrian and bicycle access). This connection would allow vehicles traveling eastbound to enter the existing northbound on-ramp to the MoPac/Loop 1 main lanes via a new signal on 6th Street. A westbound to eastbound U-turn connection could be accommodated underneath the interchange superstructure if analysis indicates the need. Please confirm preferred configuration with traffic simulation analysis (see graphic below).	D-1 D-8

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	236.13	City of Austin via Rob Spillar	<p>Transit</p> <p>Inclusion of Transit as Part of Base Project: CTRMA has previously communicated that they are committed to assuring transit service is available to operate on the proposed express lanes. This has been stated at public meetings and is part of our understood purpose of the project. ATD believes it is important that transit facilities such as remote park and rides and all other necessary transit infrastructure be incorporated as part of the recommended project and constructed or procured at the same time the express lanes are constructed.</p>	T-2 T-1
1/6/2022	236.14	City of Austin via Rob Spillar	<p>Enhanced Transit Access: ATD believes transit access and egress should be prioritized to/from 5th and 6th Streets and the managed lanes. Connecting these two corridors to the managed lanes requires developing a transit-only connection from West 6th Street to the northbound MoPac/Loop 1 managed lanes. This need along with preliminary concepts were previously discussed between ATD and CTRMA and should be included for evaluation in defining a preferred alternative. The City does not desire a general-purpose connection from 6th Street to the northbound express lane, nor do we believe the system could sustain anything more than a direct transit access to the existing ramping system. Please document this request and analyze the ability to provide this direct access ramp as part of the interchange reconfiguration incorporated in the EA.</p> <p>Provide transit-only access from westbound 6th Street to southbound MoPac/Loop 1 via reconfigured Atlanta Street/Lake Austin Boulevard intersection as detailed in the previous subsection entitled 6th Street Connections.</p>	See D-1
1/6/2022	236.15	City of Austin via Rob Spillar	<p>Coordination with Transit Operators: Confirm and document coordination with Capital Metro, CARTS and other public/private transit providers that might have interest in serving the South and North MoPac/Loop 1 Express Lane corridors. Confirm the interest and ability to operate transit facilities and service within these future corridors and incorporate the necessary infrastructure as part of the project to facilitate these needs.</p>	T-3
1/6/2022	236.16	City of Austin via Rob Spillar	<p>Park Impacts/Benefits</p> <p>Attached with this comment letter, please find a more in-depth communication from the Austin Parks and Recreation Department (PARD).</p> <p>Opportunity for Improved Zilker Park Access: PARD is actively conducting a study with its Zilker Park Vision Plan to improve access to Zilker Park and to develop a long-range plan for this iconic Austin facility. This project was initiated with extensive work having been completed by PARD during the MoPac/Loop 1 South project hiatus. The MoPac/Loop 1 South corridor crosses over Zilker Park and Lady Bird Lake and will likely cause impacts directly to the park. We recognize that some impacts may be unavoidable due to the location of the corridor running through the various park and recreational facilities. We request that potential park impacts be avoided where possible, minimized where unavoidable, and mitigated per NEPA and City of Austin requirements. We ask that CTRMA conduct expanded coordination directly with PARD to see if there are opportunities to create benefits in terms of improved access to Zilker Park consistent with the evolving Zilker Park Vision Plan. These opportunities may present options to mitigate any impacts that may be otherwise unavoidable.</p>	PI-11
1/6/2022	236.17	City of Austin via Rob Spillar	<p>Barton Creek Greenbelt and Other Park Facilities: The Barton Creek Greenbelt, Violet Crown Trail, Lady Bird Johnson Wildflower Center, Austin Nature Center, Austin Botanical Gardens, Zilker Park, Lady Bird Lake and other trail and park facilities along the corridor are important natural and recreational resources for the City of Austin. We request that potential park impacts be avoided where possible, minimized where unavoidable, and mitigated per NEPA and City of Austin requirements.</p>	CR-2 Soc-3
1/6/2022	236.18	City of Austin via Rob Spillar	<p>Pedestrian/Bike Facilities and Shared Use Paths (SUP)</p> <p>Continuous Pedestrian & Bicycle Facilities: ATD is supportive of CTRMA's goal to provide connections to achieve a continuous pedestrian and bicycle system from downtown Austin to Slaughter Lane. Below are comments related to how that goal could be achieved most successfully to tie into the City's bicycle and pedestrian networks and provide safe access to destinations along the MoPac/Loop 1 corridor.</p> <ul style="list-style-type: none"> - For the more urban and central portion of the project from Lady Bird Lake to Convict Hill Road, ATD requests that SUP be provided on both sides of the highway. This would reflect the higher pedestrian and bicycle usage as well as provide access to all sites and side streets along both sides of MoPac/Loop 1. This would also better reflect the TxDOT Bikeway Guidance document, which recommends facilities "on each side of the roadway to provide needed origin and destination points." - When determining a cross section for the selected alternative, ATD requests that the AASHTO Guide for the Development of Bicycle Facilities, the FHWA Shared-Use Path Level of Service Calculator, and the TxDOT Bicycle Accommodation Design Guidance documents be referenced to select the width of the SUPs rather than using the minimum width allowed. - ATD requests that all local street crossings of MoPac/Loop 1 show SUP on each side of the roadway on the schematic to provide safe and comfortable multimodal crossings of the highway. <p>ATD recommends that the schematics show SUP and sidewalk in different colors on the plan view and legend, as is typical on TxDOT projects. This will more clearly convey to the public what is being proposed as well easier for ATD to understand the intent.</p>	BP-1 D-10 D-13

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>- In the proposed cross sections on each sheet of the schematics, currently only vehicular travel lanes are shown. SUP, sidewalk, and the buffers from the roadway should be shown, as is typical on TxDOT projects. This would be easier for the public to interpret.</p>	
1/6/2022	236.19	City of Austin via Rob Spillar	<p>Lady Bird Lake to Rollingwood Drive: This portion of the corridor is an important area for the City's ped/bike connectivity. The graphic below and the associated comments are relevant to this segment.</p> <ul style="list-style-type: none"> - As shown in dashed green, the existing trails to the Crenshaw pedestrian/bicycle bridge should be shown on schematics as existing to remain. As shown in solid green, the existing trail on the east side of MoPac/Loop 1 would be displaced by the proposed improvements. The schematics should show replacing this trail. - The existing trail crossing where the MoPac/Loop 1 frontage road becomes Barton Springs Road is currently a safety issue. It is an uncontrolled pedestrian crossing of a high speed and volume roadway as well as limited sight distance in each direction. As shown in the most recent schematics, there is a gap in the SUPs shown at this point, not providing the continuous facilities envisioned. ATD requests a grade-separated crossing at this location. Because of the embankment on the north side of Barton Springs Road, elevations could allow this grade separation. As shown in reel on the sketch above, the SUP should continue around the corner to connect to the existing protected bike lanes and sidewalk along Barton Springs Road. - It is unclear from the most recent schematics if the SUP next to the Austin Nature and Science Center would connect on the north end. As shown in pink above, the SUP should connect to the rest of the project paths as well as under the overpass. - Rollingwood Drive should show SUP connections across the highway. This should be the case at all east-west street crossing locations since these crossings will be connecting to SUP along the frontage road. ATD recommends that safety and comfort for pedestrians and cyclists crossing east-west should be a high priority of the project. - The Crenshaw pedestrian and bicycle bridge across Lady Bird Lake under MoPac/Loop 1 is very heavily used (4000 daily users, comprised of 10% cyclist and 90% pedestrian in 2021), both by Butler Trail users as well as for multimodal connectivity to the roadway network. On busy days, this bridge can be over capacity and crowded, creating conflicts between pedestrians, cyclists, and scooter users. These issues are with today's volumes and population, which are only expected to grow. ATD requests that as a part of the proposed major bridge improvements over the lake, this pedestrian bridge also be widened or duplicated to accommodate future volumes. <p>Loop 360 Connectivity: The two following graphics pertain to comments related to pedestrian/bicycle connectivity at Loop 360.</p> <ul style="list-style-type: none"> - Proposed 360 (Walsh Tarlton project) pedestrian and bicycle facilities as represented in dashed lines should be shown in schematics to illustrate how MoPac/Loop 1 will connect to these planned facilities. SUP should connect from these facilities east-west across MoPac/Loop 1 where there are existing pedestrian ramps and signals but no safe and accessible path. SUP should connect to the existing trail to the MoPac/Loop 1 Mobility Bridges as well as along the southbound frontage road to the Greenbelt trailhead parking. These improvements would represent substantial benefit to safety, accessibility, and connectivity to the City's multimodal networks and natural resources. 	BP-1 D-10 D-13
1/6/2022	236.20	City of Austin via Rob Spillar	<p>Greenbelt Bridge to South of US 290/William Cannon Drive: Comments related to this portion of the corridor are illustrated in the following graphic.</p> <ul style="list-style-type: none"> - SUPs proposed as part of the Oak Hill Parkway project currently under construction (shown in dashed lines) should be shown to illustrate how MoPac/Loop 1 project will tie in appropriately. SUP in solid lines should be added to tie into this work. Notably, there are currently no safe ped/bike crossings at Southwest Parkway or on any leg of the US 290 interchange. Safety deficiencies of that magnitude should be corrected with a project of this scale. On the north-south frontage road bridges, there is sufficient width to include SUPs without adding bridge width. - As part of Violet Crown Trail - North, the City of Austin Urban Trails Program is constructing a trail crossing under MoPac/Loop 1 at Williamson Creek and running south along MoPac/Loop 1 as a shared use path until William Cannon Drive. The schematics should reflect this upcoming project (to begin construction February 2022) and show how the SUP on MoPac/Loop 1 will tie in. - Schematics should show City of Austin William Cannon Corridor work as "work by others" to demonstrate how proposed improvements will tie in appropriately. - There is currently no pedestrian crossing on the north side of Davis Lane across MoPac / Loop 1. This should be in the schematics to tie into existing sidewalks. 	See B-1 See D-10 D-13
1/6/2022	236.21	City of Austin via Rob Spillar	<p>Storm Water/Environment</p> <ul style="list-style-type: none"> - Sensitive Corridor Environment: The South MoPac/Loop 1 project traverses some of the most environmentally sensitive areas of Austin. Concerns span a wide range of issues including pollution of the Edwards Aquifer, Barton Springs, Barton Creek, Williamson Creek, and many other sensitive environmental resources. Endangered species may be present within the corridor as well. The City of Austin has previously communicated these concerns to CTRMA related to the corridor. The current public engagement does not reduce our heightened concern related to the sensitive environmental resources within this corridor. We request that all prior City of Austin comments related to avoiding, minimizing and mitigating environmental issues, including storm water quality and quantity as well as those related to endangered species and other environmental concerns continue to be incorporated into the on-going evaluation efforts. 	WQ-1 PI-8

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	236.22	City of Austin via Rob Spillar	- Exemplary Project: As has been done by CTRMA on other regional projects such as SH 45 SW, we request that the agency in constructing and operating the proposed MoPac/Loop 1 South project seek to develop an exemplary project from the perspective of environmental stewardship. We request that CTRMA go above and beyond standard TxDOT design approaches to achieve a truly superior project environmentally. Our community has been very clear that a high level of environmental stewardship is a necessary element to win public opinion and political support.	See WQ-1
1/6/2022	237.01	Cynthia Wilcox	I concur with the Travis County Commissioners Court's position expressed in the attached letter: The current public engagement process could seem disingenuous and problematic. Asking the public to comment on outdated materials confuses the public and complicates the environmental study process.	PI-4
1/6/2022	237.02	Cynthia Wilcox	It is problematic since the CTRMA stated that the recommended preferred alternative will be selected based on public input and scores using new data. At this time, the public has no opportunity to provide input on the alternatives based on the new data. There is no benefit from collecting public input based on old data that creates faulty assumptions. The current virtual open house public input is largely irrelevant and should not be used to advance the environmental study process.	See PI-4
1/6/2022	237.03	Cynthia Wilcox	I strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with updated data and information for all alternatives when it is available, before a preferred alternative is recommended. This will ensure that the public has the best information available when providing input. It also will provide the CTRMA with useful, informed public input to consider when selecting the preferred alternative, rather than public input based on alternatives analyses done several years ago.	PI-7 RP-1
1/6/2022	237.04	Cynthia Wilcox	The timing of this process has blindsided the community, and could be considered disenfranchisement of community stakeholders. Instead, tap the brakes, and create a genuine public engagement process that does not fall over the winter holiday break and in the midst of a surge of Covid-related hospitalizations, incorporate a robust communication framework, a genuine review of alternatives, and easy access with ample time for the public to review updated, current materials. Thank you in advance for your cooperation.	PI-1 PI-3
1/6/2022	238.00	Kristian Harper	Please, for the love of God...do not build. Austin is one of the most uniquely beautiful cities in the world. Leave it alone...!	Comment noted
1/6/2022	239.01	Travis County via Charlie Watts	The Travis County Commissioners Court wishes to submit the following comments on the MoPac South Environmental Study virtual open house as official comments for consideration. We understand that the CTRMA is restarting the MoPac South Environmental Study and that this virtual open house is "intended to re-engage the public on where we left off in November 2015." The materials presented at this virtual open house are the same materials that were publicly available in 2015. They are based on data from the CAMPO 2035 model and have not been updated to reflect the CAMPO 2045 model. However, the CTRMA has announced that they intend to update the materials for the next public meeting where the recommended preferred express lane(s) alternative will be presented. We are concerned that all public comment received during the current comment period will be based on outdated information and should not be used to inform the selection of the preferred alternative. Major changes have occurred since 2015. - Changes that affect traffic patterns -- Major projects opened to traffic include: --- US 183 South Toll lanes --- SH 45 SW --- SH 71 W Safety Improvements --- Mopac North Managed Lanes --- SH 71 E Toll Lanes --- SH 130 N Toll Lane in each Direction -Regional and local long-range plans have been updated -- Major plan changes since the CAMPO 2035 Plan include: --- I-35 Capital Express project added --- Project Connect added --- Loop 360 Interchanges added --- "Y" at Oak Hill tolls removed	PI-4 PI-7 RP-6 RP-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>--- Lone Star Rail removed</p> <p>--- Managed Lanes on Loop 1 South increased from 1 to 2 lanes in each direction</p> <p>-- Local plan changes increased density and housing units in downtown Austin.</p> <p>- Development and population have increased significantly since the 2005 base year used to develop forecasts for the 2035 CAMPO Plan and model.</p> <p>- Current commuting patterns have been affected by the COVID pandemic and increased teleworking. These changes may continue into the future.</p>	
1/6/2022	239.02	Travis County via Charlie Watts	<p>Current public engagement process could seem disingenuous and problematic.</p> <p>Asking the public to comment on outdated materials confuses the public and complicates the environmental study process. It is problematic since the CTRMA stated that the recommended preferred alternative will be selected based on public input and scores using new data. At this time, the public has no opportunity to provide input on the alternatives based on the new data. There is no benefit from collecting public input based on old data that creates faulty assumptions. The current virtual open house public input is largely irrelevant and should not be used to advance the environmental study process.</p> <p>We strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with updated data and information for all alternatives when it is available, before a preferred alternative is recommended. This will ensure that the public has the best information available when providing input. It also will provide the CTRMA with useful, informed public input to consider when selecting the preferred alternative, rather than public input based on alternatives analyses done several years ago.</p>	PI-7 See PI-4
1/6/2022	239.03	Travis County via Charlie Watts	<p>Additional Items Needing Clarification</p> <p>Environmental Assessment (EA) versus Environmental Impact Statement (EIS)</p> <p>Since the project study area is located in a very environmentally sensitive area that includes Barton Creek, Barton Springs and the Edwards Aquifer Recharge Zone, locations of endangered species and Lady Bird Lake, many people believe that the environmental study already should be conducted as an EIS rather than an EA. A clearer explanation is needed so the public understands why you are doing an EA instead of an EIS, and how the CTRMA will ensure our environment is adequately protected when constructing and operating the project.</p>	ENV-1
1/6/2022	239.04	Travis County via Charlie Watts	<p>Visual Information Improvements</p> <p>The public information needs to include better visual material so that the public understands graphically the impacts on the study area and how the project will function. We suggest updating the materials with profile renderings, cross sections, updated videos and possibly traffic simulation models for the next update.</p>	Comment noted
1/6/2022	239.05	Travis County via Charlie Watts	<p>Operational Evaluation at RM 2244 Intersection and the Barton Skyway Relief Project</p> <p>Revise the project scope to include evaluation of operational improvements to the RM 2244 intersection at the MoPac frontage road and elements of the CTRMA Barton Skyway Ramp Relief Project. The public should be allowed to comment on these proposed improvements prior to selection of the recommended preferred alternative.</p>	OOS-2 TO-5
1/6/2022	239.06	Travis County via Charlie Watts	<p>Extension of Public Comment Period</p> <p>Please extend the current public comment period for an additional 30 days since this comment period occurred during the holiday season and the resurgence of COVID cases throughout the region.</p>	PI-1
1/6/2022	239.07	Travis County via Charlie Watts	<p>Additional Operational Alternative</p> <p>Evaluate an additional alternative that includes restriping existing lanes to accommodate peak hour High Occupancy Vehicle (HOV) lanes. The public should be allowed to comment on this proposed improvement prior to selection of the recommended preferred alternative.</p>	D-9 Alt-3 PN-1
1/6/2022	239.08	Travis County via Charlie Watts	<p>Thank you for the opportunity to comment. The Commissioners Court is confident that the CTRMA and the region working together, with public input on updated alternatives, can realize significant mobility and access improvements while also preserving our valuable environmental resources along the MoPac South corridor.</p>	PI-12
1/6/2022	240.00	Kelly Bach	<p>Please do not build this toll road. As a citizen here in Austin, I love having Mopac as a local highway that doesn't get back up like I-35. Also, adding another toll road will endanger the beautiful flora and fauna and the water ways here in Austin. Do not build the road!!</p>	Env-2
1/6/2022	241.00	Anna Gingrich	<p>How is it that there isn't a better idea that doesn't endanger the wild flora & fauna of the beautiful ATX?</p> <p>FIND A BETTER WAY. WE DO NOT WANT THIS.</p>	Alt-1 Env-2
1/6/2022	242.01	Nancy Lynch	<p>1. Please extend the time for making comments. Scheduling the comment period through the holidays is an obvious ploy to restrict the number of comments received.</p>	PI-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	242.02	Nancy Lynch	2. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/6/2022	242.03	Nancy Lynch	3. Evaluate an alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering,	Alt-3
1/6/2022	242.04	Nancy Lynch	4. Update traffic modeling with current data and a functional traffic model, recognizing that the future will hold much more tele-commuting, flexible work schedules and other changes that may have a significant impact on commuting patterns.	RP-1 RP-6
1/6/2022	242.05	Nancy Lynch	5. After Updating the traffic modeling give the public another opportunity to give input before selecting a "preferred alternative."	PI-7
1/6/2022	242.06	Nancy Lynch	6. Acknowledge the experience that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	ICI-1 SOC-1
1/6/2022	242.07	Nancy Lynch	Evaluate public transportation options.	Alt-1
1/6/2022	243.00	Laura Schulz	I stand against the proposed new toll road addition over lady bird lake. This will cause an excessive amount of traffic to Mopac and will in turn have negative effects on our beautiful natural environment. Said environment brings the local citizens so much joy and also brings the city of Austin economic profits from visitors. Please keep these things in mind when making your decision.	ENV-2
1/6/2022	244.00	Nicole Cavender	I am against the addition of toll lanes on Mopac	Comment noted
1/6/2022	245.00	Benjamin Harkrider	I am concerned about the water quality and environmental impacts to the Edwards Aquifer, Barton Springs, Lady Bird Lake, surrounding areas. I am against additional and extension of toll lanes on MoPac.	ENV-2 WQ-1
1/6/2022	246.01	Brian Eubanks	I'm dismayed that we are prioritizing cars, the least efficient mode of transportation. Building more highways is not sustainable.	
1/6/2022	246.02	Brian Eubanks	This work was done to North Mopac and it is just as congested as South Mopac.	PP-1
1/6/2022	246.03	Brian Eubanks	Roads and driving are carbon intensive activities. It's not good for the environment, and detrimental to an overall warming climate. Biking and trains are the most efficient modes of transportation. Bikes are near carbon zero, while even electric cars are carbon intensive to produce and run.	ICI-2
1/6/2022	246.04	Brian Eubanks	I think the best environmental decision would be to stop focusing on car dependency and explore more efficient means of transportation.	comment noted
1/6/2022	247.01	Lansing Pugh	Please extend the comment period at least 2 months.	PI-1
1/6/2022	247.02	Lansing Pugh	Do not add any additional impervious cover over the aquifer without a full environment assessment.	ENV-2
1/6/2022	248.01	Rebekah Henderson	The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.	CR-2 TES-1
1/6/2022	248.02	Rebekah Henderson	Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1
1/6/2022	248.03	Rebekah Henderson	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/6/2022	249.01	Elizabeth Funk	I teach at an outdoor preschool across from Zilker Park. Should this project go on, we would not be able to have classes, forcing our school to close during construction.	C-1 PI-9
1/6/2022	249.02	Elizabeth Funk	Do not build this proposed double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.	
1/6/2022	249.03	Elizabeth Funk	I have just heard about this very disruptive possibility and am very disappointed that the comment period is no longer (and not over the winter holidays) AND that other, less disruptive, options have not been fully explored.	PI-1 Alt-1
1/6/2022	249.04	Elizabeth Funk	What about traffic improvement alternatives like dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world? Going into this HUGE project without updated data is irresponsible and ineffective. Thank you for your time and I hope to see this project reevaluated and adapted to fit the Austin we live in now, not the one from 2009.	Alt-3 RP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	250.01	Darrell Hutchinson	I don't like the presentation of options. Lots of slides about how worthy CAMPO and the overall project are and only one slide per option. Omitted from the presentation is information explaining the merits and trade-offs of each option. (Yes, I see the table with travel times). You haven't compared the duration of construction, cost to taxpayers, nor impacts to current traffic flow between options.	OCO-5 OCO-4
1/6/2022	250.02	Darrell Hutchinson	The questions I still have after reviewing these materials are: 1. Why would you consider building an express lane without a flyover or access to downtown?	D-2
1/6/2022	250.03	Darrell Hutchinson	2. Why do you propose building two express lanes when there appears to be little difference in travel time between one and two express lanes?	OCO-3
1/6/2022	250.04	Darrell Hutchinson	3. Option 3 appears to be significantly different from options 1 and 2. Why are its merits not spelled out?	OCO-6
1/6/2022	250.05	Darrell Hutchinson	4. Have other options been considered, such as adding lanes to the bridge, restriping the existing lanes to add another general purpose lane, and reconfiguring the on/off ramps at Rollingwood?	Alt-1
1/6/2022	250.06	Darrell Hutchinson	If I had to choose, I'd select option 1A. I don't see the merit in building two express lanes in each direction. I despise option 2C - enough with the 100 ft. flyovers already, jeez. I don't understand option 3 because it's presented so poorly, so I can't compare. I agree with the Travis County Commissioners. The public process is opaque.	Comment noted
1/6/2022	251.00	Rebecca Bray	Please build the managed lanes as planned. Those of us in SW Austin need an alternative, more reliable way to get home when needed. We have almost zero transit service and, through the actions of our city council, have limited other transportation alternatives (roadways in particular). Please build these lanes as soon as possible. Thank you!	Comment noted
1/6/2022	252.00	Taylor Logan	DO NOT SO THIS TO OUR BEAUTIFUL CITY. This proposal was denied in 2015 for a reason!	S-1 PI-6
1/6/2022	253.00	JO Clifton	This is a bad idea, no matter which option you choose. I am opposed to adding lanes. I live near this highway and see its expansion as a threat to our neighborhood.	Comment noted
1/6/2022	254.00	Emerson	Please extend the comment period - it's a cheap move to do this on an unbroadcasted basis over the holidays. Also should require an environmental impact assessment. I do not support this plan.	PI-1 PI-3 ENV-1
1/6/2022	255.01	Dan McNamara	- I am strongly against building a "double-decker" bridge over Town Lake and the Nature Center.	D-2
1/6/2022	255.02	Dan McNamara	- As a property owner on the east side of Rollingwood, the scope of the project would increase traffic noise significantly and block views.	Soc-2 TN-1
1/6/2022	255.03	Dan McNamara	- "No build" alternatives are available to mitigate or address traffic issues on this section of MoPac.	Alt-6
1/6/2022	255.04	Dan McNamara	- The public comment period should be extended at least 30 days to provide adequate response to those impacted.	See PI-1
1/6/2022	256.00	Jennifer Granados	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.	D-2
1/6/2022	257.01	Marie Saba	- I am strongly against building a "double-decker" bridge over Town Lake and the Nature Center.	D-2
1/6/2022	257.02	Marie Saba	- As a property owner on the east side of Rollingwood, the scope of the project would increase traffic noise significantly and block views.	Soc-2 TN-1
1/6/2022	257.03	Marie Saba	- "No build" alternatives are available to mitigate or address traffic issues on this section of MoPac.	Alt-6
1/6/2022	257.04	Marie Saba	- The public comment period should be extended at least 30 days to provide adequate response to those impacted.	See PI-1
1/6/2022	258.01	Mehar Gangishetti	As a concerned resident of the Barton Hills and Zilker neighborhoods over the last 16 years I'm completely against this ill conceived idea.	Comment noted
1/6/2022	258.02	Mehar Gangishetti	This resurrected (after it was voted down in 2015) really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West).	PI-6 RP-1 RP-3
1/6/2022	258.03	Mehar Gangishetti	Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt.	CR-2
1/6/2022	258.04	Mehar Gangishetti	There is no need to add any more lanes to Mopac. The solution is not to build more highways. It is to focus on public transportation. I'm categorically against any further construction in the environmentally sensitive areas that this proposal aims to. Mopac should continue to be for local commuters only.	T-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	259.00	James Michael Smith	We don't need more Tolled Express Lanes, We just need more Lanes period. Austin is the Only City I know of the Reduces the number of lanes near downtown instead of increasing the number of Lanes. This is why the is major congestion on these Roads, Most Cities don't decrease the number of lanes miles from Downtown, but Not Austin. MoPac reduces from Three (Non Toll) lanes to Two at Lady Bird Lake, then has Four Lanes because of merging traffic, then goes back down to three at Barton Skyway. Creating Congestion at two different locations within a 2 mile span. Also, IH35 Southbound reduces from Four lanes to Three at the 8th-12th street Exit (again Downtown) that creates Congestion. Toll Roads don't help when only about 10-15% of the drivers use them. We need more No Tolled Lanes and no more combining Entrance and Exit Ramps that use the same lane, this is another cause of congestion with people trying to merge to get on and off at the same time.	Alt-2
1/6/2022	260.00	Isaac Montoya	I do not want mopac to change. I do not support this new toll project! STOP	Comment noted
1/6/2022	261.00	William Galbreath	I recognize need to improve this part of MOPAC, however a Double Decker Highway is NOT the solution! This is too close to the community of Rollingwood and would SEVERELY impact its residents with both noise and light pollution. Please do not consider this as an option - there are other less environmentally impactful solutions we can choose. Thank you!	D-2 TN-1 ECO-1
1/6/2022	262.00	Michael C	Adding a new toll road is a bad idea. This is not what the community wants or needs. Please invest in public transport instead of expensive highways! Where is Austin's train system?	T-3 T-4 TF-1
1/6/2022	263.00	Taylor	If we want to keep Austin's natural beauty, this cannot happen. Austin is home to me for many reasons, one of the biggest is that I can live/work in the city and immediately connect with nature on the greenbelt, lady bird lake, etc. This bridge/highway will crush that opportunity. Please do not do this.	SOC-3 Soc-1
1/6/2022	264.00	Christina Rodriguez	As an avid swimmer in Barton Springs and Greenbelt the past ten years I have noticed significant difference in the water from development all around the city. We cannot continue to "develop" and build without taking into account the damage being done to nature. We don't need more toll roads. We cannot keep destroying what brings people to the city. The nature present here is the SOUL OF THE CITY. Please reconsider this construction for it it NOT NECESSARY	ENV-2 WQ-1 SOC-3
1/6/2022	265.01	Emily Seiders	As Rollingwood residents and tax paying citizens, we are very much opposed to the double decker bridge over Town Lake and the Nature Center.	D-2
1/6/2022	265.02	Emily Seiders	We own two properties in the east side of Rollingwood and have serious concerns the project would increase traffic noise significantly and block views.	Soc-2 TN-1
1/6/2022	265.03	Emily Seiders	Furthermore, we believe there are many other ways to address this traffic issue rather than than to build this two story bridge.	Alt-1 D-2
1/6/2022	265.04	Emily Seiders	We only learned of the ability to post comments TODAY, 1/7, the day the comments were closing. The public comment period should be extended at least 30 days to provide adequate response to those impacted.	PI-3 PI-1 PI-10
1/6/2022	266.00	Ashley Withers	We are opposed to the double decker bridge.	D-2
1/6/2022	267.00	Laurie Mills	I'm opposed to a double-decker bridge over Mopac.	D-2
1/6/2022	268.00	Tricia Dopkins	Our entire family is highly OPPOSED to the idea and any further discussion regarding this project. Austin has become over developed, in our opinion, and we do NOT wish to see a double decker freeway adjacent to our neighborhood (nor any residential neighborhood).	D-2 RP-7
1/6/2022	269.00	Kathleen Shapiro	we are opposed to this. thank you!!	Comment noted
1/6/2022	270.01	Doug Kirsch	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/6/2022	270.02	Doug Kirsch	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	270.03	Doug Kirsch	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/6/2022	270.04	Doug Kirsch	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/6/2022	270.05	Doug Kirsch	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/6/2022	270.06	Doug Kirsch	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	RP-6 ICI-1 SOC-1
1/6/2022	270.07	Doug Kirsch	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept: adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/6/2022	270.08	Doug Kirsch	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/6/2022	270.09	Doug Kirsch	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/6/2022	270.10	Doug Kirsch	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/6/2022	271.01	Leah Alberti	I am opposed to the construction of a double decker bridge on Mopac above Las Bird Lake.	D-2
1/6/2022	271.02	Leah Alberti	I believe it will be a detriment to the beauty of this downtown landmark as well as the downtown skyline.	Soc-2
1/6/2022	272.01	Marnie Fitzgerald	I oppose the building of ANY ELEVATED access or roads over the Lake or in the span between Lake Austin Boulevard and Barton Skyway.	D-2
1/6/2022	272.02	Marnie Fitzgerald	This particular view/sightline and access to our beautiful lake is a TREASURE and should be coveted instead of destroyed with more concrete, signs, lights and car pollution. Please do not destroy our gorgeous city for the sake of transportation.	Soc-2 Env-2 ECO-1
1/6/2022	272.03	Marnie Fitzgerald	Instead, utilize and expand the existing toll-ways and freeways (35) that do NOT back up to residential neighborhoods and the treasure of our city - Town Lake.	D-9 PN-1
1/6/2022	273.00	Shelly Bain	The Bain household opposes a double decker bridge on Mopac spanning Lady Bird Lake. Please listen to public comment and do not construct a double decker bridge.	D-2
1/6/2022	274.00	Emily Thawley	Opposed - this will hurt our neighborhood!	Comment noted
1/6/2022	275.00	Heidi Marquez Smith	I am opposed to the MOPAC double decker bridge. This proposal would negatively impact the community, Lady Bird Lake, life in and around the area, and the aesthetic of our city.	D-2 CR-2 Soc-2
1/6/2022	276.00	Stephanie Trotter	I am opposed. We need a solution but not one that obstructs views and creates more noise pollution	Soc-2 TN-1

Comment Response Matrix

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1/6/2022	277.00	Cristina Feldott	I am opposed to the elevated expressway near Town Lake/Rollingwood. I live in Rollingwood, and most homes are uphill from Mopac. The elevated expressway would put cars at the same elevation as our homes, resulting in increased noise pollution, which is already bad enough. TXDOT is clearly unreliable when it comes to timely installation of soundwalls along Mopac, and there is probably no way to dampen increased sound pollution. Additionally the proposed exit situation would drastically increase the time it takes to get to our homes.	D-2 TN-1
1/6/2022	278.00	Lauren Hughes	Please do not let this happen. This will change our city in the worst of ways. I implore you, do not proceed with this project. Thank you.	Comment noted
1/6/2022	279.00	Brian Greene	Please do nothing. We have seen enough damage in the area from the disaster TXDOT has done with the Y-interchange at Oak Hill.	Comment noted
1/6/2022	280.00	JACOB PRIMEAUX	The proposed building of the mopac double decker bridge is no good. Its not what Austinites want, it poses too grave a threat to what we have left, particularly for our guaranteed preserved land and waters. This is a mistake, and as a born and raised Austinite, I could not be more against it.	D-2 ENV-2
1/6/2022	281.01	virginia bettis	I'm against having express lanes to go over Zilker park and adjacent to the Rollingwood neighborhood. The additional noise would negatively impact the park as well as the neighborhood.	TN-1
1/6/2022	281.02	virginia bettis	The added lanes to get on to a south austin mopac would bring more traffic to the park and the neighborhood.	TO-2
1/6/2022	281.03	virginia bettis	Alternative: Build an express lane in the direction over congress ave. This would have less impact on the park and neighborhoods. There is already too much noise and way too much traffic in those areas.	RP-7
1/6/2022	282.01	Jeffrey Primeaux	As a lifelong Austin resident, I am concerned about plans for development of MoPac South, especially it's impact on beloved and sensitive natural and recreation areas south of the river. Throwing more road expansions at Austin's development problems is questionable to begin with as a long term solutions, but please see the additional comments and requests below:	Soc-3
1/6/2022	282.02	Jeffrey Primeaux	Please Extend the comment period at least 30 days. Extending the comment period will help ensure robust and full public input.	PI-1
1/6/2022	282.03	Jeffrey Primeaux	Prepare a full Environmental Impact Statement (EIS). The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/6/2022	282.04	Jeffrey Primeaux	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/6/2022	282.05	Jeffrey Primeaux	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 P-1
1/6/2022	282.06	Jeffrey Primeaux	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."	RP-1 PI-7
1/6/2022	282.07	Jeffrey Primeaux	Analyze real alternatives to added toll lanes.	see Alt-1
1/6/2022	282.08	Jeffrey Primeaux	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/6/2022	282.09	Jeffrey Primeaux	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/6/2022	282.10	Jeffrey Primeaux	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/6/2022	283.01	Jennifer Johnson Poscic	I am very concerned about the MOPAC South construction options which involve elevated ramps or elevated express lanes.	D-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/6/2022	283.02	Jennifer Johnson Poscic	The concerns are related to increased noise, air pollution, and vibration which would negatively affect the surrounding neighborhoods. This sort of freeway development will also further damage the current aesthetics of the area and further obstruct city views.	TN-1 SOC-2 AQ-1
1/6/2022	283.03	Jennifer Johnson Poscic	The elevated ramps/express lanes would also add a great deal of expense to the project which could further increase (already egregious) local property taxes. My assumption is that these options are of a much greater cost than the proposed options to widen the current freeway and add express lanes.	TF-1 OCO-1
1/6/2022	283.04	Jennifer Johnson Poscic	For these reasons, I am strongly against Options: 1A, 2A, 2C, and 3.	Comment noted
1/6/2022	284.01	Jennifer Johnson Poscic	(sending again, because I am not sure that my original comment went through) I am very concerned about the MOPAC South construction options which involve elevated ramps or elevated express lanes.	D-2
1/6/2022	284.02	Jennifer Johnson Poscic	The concerns are related to increased noise, air pollution, and vibration which would negatively affect the surrounding neighborhoods. This sort of freeway development will also further damage the current aesthetics of the area and further obstruct city views.	TN-1 SOC-2 AQ-1
1/6/2022	284.03	Jennifer Johnson Poscic	The elevated ramps/express lanes would also add a great deal of expense to the project which could further increase (already egregious) local property taxes. My assumption is these options are of a much greater cost than the proposed options to only widen the current freeway and add express lanes.	TF-1 OCO-1
1/6/2022	284.04	Jennifer Johnson Poscic	For these reasons, I am strongly against Options: 1A, 2A, 2C, and 3.	Comment noted
1/6/2022	285.01	Amy Campney	My first choice would be none of the options in Exhibits as prepared by Mopac South Open House.	Comment noted
1/6/2022	285.02	Amy Campney	I would prefer a mass public transit infrastructure be added to the highway, and express lanes be used for buses using the path of CapMetro Route 111 and 171.	B-1 T-3 T-4
1/6/2022	285.03	Amy Campney	Of the options offered in the packet, I would chose 3: City of Austin Proposal.	Comment noted
1/6/2022	286.01	Catherine P Scott	I am NOT in favor of a MOPAC double decker bridge over Lady Bird Lake.	D-2
1/6/2022	286.02	Catherine P Scott	Our city council has made many suggestions to CTRMA and as voting tax payers in Travis County our voices and concerns should be taken into consideration.	PI-12 PI-6
1/6/2022	287.01	Marie Timmermann	I am opposed to building a "double-decker" bridge over Town Lake and the Nature center.	D-2
1/6/2022	287.02	Marie Timmermann	As a Rollingwood resident this proposal would significantly increase traffic noise and would block city views.	TN-1 SOC-2
1/6/2022	287.03	Marie Timmermann	There are alternatives to mitigating traffic that do not include building a double decker bridge.	D-2
1/7/2022	288.01	Aaron and Julia Cahoon	As residents of the City of Rollingwood for almost 40 years and Austin since 1965 we wish to comment on the current plans regarding the Mopac South Project. We agree with the positions taken and filed by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted
1/7/2022	288.02	Aaron and Julia Cahoon	We also want to emphasize our opposition to any elevated lanes or ramps over Bee Caves Road, Lady Bird Lake or the adjacent areas (Zilker Park, etc.).	D-2
1/7/2022	289.00	Alice Gordon	Austin is a city of a certain size. Its traffic is ruinous. BUT now is not the time for fossil-fuel-dominant travel to be encouraged by a government that has come close to destroying the natural beauty. What is Austin about, A WHOLE LOTTA TRAFFIC? Send the congesting hordes another way, a way that doesn't destroy the air, the water—which are Austin's most revered jewels—the recreation Nature herself promotes in Austin, and the quality of life. You are mistaken to think the hideous freeway you're trying to ressurect has anything at all to do with quality of life. Quality of life is NOT based on quality of TRAFFIC in Austin. Really, this proposal is profoundly unacceptable.	ENV-2 PN-1 RP-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			I agree with all prior official comments that place environmental and conservation issues first in this matter.	
1/7/2022	290.01	Amy Pattillo	Back in November 20, 2015, during Open House #4, many people in Travis County commented on the six express lane (EL) alternatives for Mopac South that are now re-presented (in a flattened form) in Open House #5. That was six years ago. The decision to re-present the same six EL alternatives in Open House #5 has been framed by CTRMA staff as a “restart” of the project. The CTRMA Board is set to receive comments from elected officials and members of the public pointing to multiple concerns with spending time and resources on a public comment period that presents the public with information that is six years old. Among these comments, in particular, I concur with the Travis County Commissioners Court’s positions regarding the deficiencies of the Open House #5 public comment period.	PI-4 PI-1
1/7/2022	290.02	Amy Pattillo	In addition, the primary issue that I see with the way the Mopac South project has been “restarted” is that many of us in Travis County already spent a significant amount of time six years ago studying the information provided about the plans to improve Mopac South, and commenting. We were under the impression that CTRMA was collecting public input in order to identify areas of the proposed EL designs that the community identifies as still needing improvement and to receive ideas for improvements. We were under the impression CTRMA’s self-proclaimed robust public comment process would include a good faith effort to collaborate with the community on improving the EL designs proposed. If we who live next to this project are going to bear the cost of construction-based traffic delays in our area for 4-5 years, at the end of that time we want an improved multi-modal infrastructure with the lowest footprint possible that does not have design flaws that will replace old bottlenecks with new ones. By restarting the Mopac South project with the same EL design alternatives presented six years ago, based on the same data that was already outdated when it was presented during Open House #4, CTRMA has not shown that the time and resources our community previously spent commenting on design issues during Open House #4 has mattered in any way.	PI-8 PI-2 D-2 RP-1
1/7/2022	290.03	Amy Pattillo	During the presentation by Executive Director James Bass to the Travis County Commissioners Court on January 4, 2022, ED Bass asserted that under the NEPA process, CTRMA could have moved forward to select a preferred alternative without providing Open House #5, but that so much time had passed since Open House #4 that the agency made the decision to restart the project with a presentation of the material from the previous open house. While I appreciate the sentiment behind Open House #5 as one of benevolence to the community, representing the same six EL design alternatives to the public six years after a public comment period in which the public actively engaged with detailed design comments, leaves me wondering what exactly the public could comment on at this point that would lead CTRMA to update the designs of the six EL alternatives in response to public comment before scoring the projects and selecting a preferred alternative.	See PI-8
1/7/2022	290.04	Amy Pattillo	In addition, I would like to comment on several relevant items missing from the timeline presented in the Project History and Next Steps in Open House #5, slide 7. The timeline states the project was “on hold” from March 2016-August 2021. While I recognize that CTRMA did not hold a public open house for 6 years, for those of us who remained engaged in, and spent time and resources working on, the Mopac South project between March 2016 and August 2021, it is clear CTRMA spent time and money studying ways to improve the Mopac South corridor during the last six years. I appreciate CTRMA staff continuing to meet with and study options for improvements to the six EL design alternatives for Mopac South during the “on hold” period. In my former roles of designated Technical Working Group representative and then also Council Member of the City of Rollingwood, I participated in multiple meetings with CTRMA staff regarding Mopac South between 2016 and 2021. The meetings included higher level meetings with the CTRMA Executive Director and Board Members, and more detailed meetings with CTRMA staff. Meeting discussions included an evaluation of modifications to the 2244/Bee Caves Road intersection as part of the Mopac South project and an evaluation of shifting toll lanes underground, rather than as elevated lanes. Letters attached to this public comment memorialize several of these collaborative discussions (see attachment F) and the recordings of City of Rollingwood Council Meetings during 2017 include multiple meetings where Mayor McKee, Council Member Hundley, and I reported on the discussions and received input. Of note, there was a pause in discussions between CTRMA and the City of Rollingwood for a brief period following the December 2017 letter from Executive Director Heiligenstein, after Governor Abbott’s declaration in late November 2017 that all toll road projects under study needed to be removed from the Texas Unified Transportation Program (UTP). Until the pause following the Governor’s announcement regarding toll roads, my impression from the meeting conversations and correspondence from ED Heiligenstein was that CTRMA staff intended to update the design alternatives in view of public comments and go out for another open house in 2018 before starting the process to select a preferred alternative.	S-1 PI-4
1/7/2022	290.05	Amy Pattillo	One of the projects that I was pleased to see spun out from the Mopac South conversations during the “on hold” period is the Barton Skyway Ramp Relief project. I appreciate Board Member Armbrust advocating for this project to be studied and moved forward. I appreciate CTRMA having taken time to meet with representatives from the City of Rollingwood to receive feedback about the Barton Skyway Relief project and make modifications to the design in response to this feedback. While I served on the Rollingwood City Council, I included a discussion of the Barton Skyway Ramp Relief project on multiple agendas for Rollingwood City Council meetings and requested input from the public on this project. The project had a positive reception from those who took the time to engage and the Rollingwood City Council	TO-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			was in support of CTRMA moving forward with it. I hope that CTRMA will continue to move forward with the Barton Skyway Ramp Relief project, whether as an independent project or part of the Mopac South Environmental Study. The Barton Skyway Ramp Relief project directly addresses the most congested portion of roadway in the Mopac South Project boundaries, with minimal additional infrastructure and no toll requirements. Ironically, the estimated cost of constructing the Barton Skyway Ramp Relief project is \$15 million – just under the \$16.5 million in funding allocated by the legislature under Rider 42 for CTRMA to study addressing the congestion on Mopac South with goals that align clearly with the solution offered by the Barton Skyway Ramp Relief project – congestion which is primarily caused by the bottleneck currently introduced by the Barton Skyway Ramp area.	
1/7/2022	290.06	Amy Pattillo	In addition, I note that the CTRMA board recently voted during the August 25, 2021 meeting to approve the spending on a project to add trees to the right-of-way next to Austin Memorial Park Cemetery (AMP), as part of the requirements to mitigate impacts caused by the Mopac Improvement Project (Mopac North) project. AMP is one of the historic properties in the National Register of Historic Places (NHRP) within the area of potential effects (APE) considered in the Mopac North project, with mitigation evaluated based on a FONSI under an EA level study. In the Mopac South project, known registered places in the APE include the Zilker Park Historic District and significant areas over portions of Barton Creek. Regardless of whether a FONSI finding in the Mopac North based on an EA level study was correct, the impact of soil changes to a cemetery are not equivalent to the likely pollution of a primary water source and one of the natural wonders of our area of Barton Springs Pool by any study process for a roadway over the Edwards Aquifer that is less rigorous than an EIS. There is no amount of tree planting or cleaning that is going to restore Barton Springs Pool if the water is contaminated by Mopac South construction. I hope that the CTRMA board will exercise prudent environmental stewardship for the natural water resources in our area by not voting to fund a preferred alternative until an EIS has been performed on the Mopac South project. I understand the CTRMA board has been advised in the past that it cannot vote on or comment on preferences regarding a particular project alternative, but I have heard no such guidance that would preclude the board from requiring a more rigorous, EIS level of study, before deciding to vote to fund the Mopac South project.	CR-2 RW-1 ENV-1
1/7/2022	290.07	Amy Pattillo	Further, the Mopac South study originated, and is based on assumptions about congestion that were understood more than six years ago, when telecommuting technologies were available, but not widely adopted. In the last few years, the pandemic forced companies that had previously foregone investments in telecommuting technologies and management structures, to do so, allowing large numbers of daily commuters to work from home. The congestion assumptions forecast in 2010, about what traffic conditions would be like in 2035, could not have envisioned the world we live in now in 2022 in which large companies and government entities have shifted to technology solutions to support remote work by such large numbers of employees. The financial forecasting models for bond-based financing of demand rate toll roads prior to 2020 are no longer supported by the choices employers are making to reduce the number of employees driving to work each day. It would be a missed opportunity for the CTRMA board not to take a moment to consider what technology solutions CTRMA may incentivize our region to invest in, in order to effectively solve transportation issues in our area with the lowest environmental and infrastructure footprint needed, with the highest return on investment not just for investors funding toll roads, but also for our region.	RP-1 RP-2 RP-6
1/7/2022	290.08	Amy Pattillo	In addition to the requests that have been made by the Travis County Commissioners Court regarding the Mopac South project, I would request that the CTRMA board move to include one or more meetings of the Technical Working Group for the Mopac South project to the schedule prior to a selection of a preferred alternative. The Technical Working Group has provided a single location for the volume of stakeholders involved in this project to send representatives to gather, ask questions, and share information.	comment noted
1/7/2022	290.09	Amy Pattillo	In conclusion, I've included multiple attachments to this letter that include more specific comments. Attachment A (starting at p. 4) details my comments to specific portions of the materials presented in Open House #5. Attachment B (starting at p. 7) includes the slides from Open House #5. Attachment C (starting at page 50) are the comments I submitted during Open House #4, which I have incorporated into my comments on Open House #5. Attachment D (starting at page 69) are the slides from Open House #4. Attachment E (starting at page 135) is a portion of the official correspondence between the City of Rollingwood and CTRMA in 2017. I appreciate each of you serving our community on the CTRMA board and your willingness to consider what residents are asking for as you make decisions to improve transportation in the Travis-Williamson County region.	Comment noted
1/7/2022	290.10	Amy Pattillo	Please consider the following notes on the slides provided from the Virtual Open House #5 Mopac South website (and incorporated in attachment B for reference). 1. Need for consistency with local and regional plans Slide 3 "Purpose & Need" includes a "Project Goals and Objectives" of "provide consistency with local and regional plans. Open House #5 includes six alternatives, including predicted delays and predicted travel times, based on the CAMPO 2035 plan. The alternatives presented at Open House #5 are inconsistent with the regional transportation plan in effect, which is the CAMPO 2045 plan.	See RP-1 See RP-2 OCO-4 OCO-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>In addition, the CAMPO 2035 plan only provided for study of one express lane in each direction, with the CAMPO 2040 plan directing the study of no, one, or two express lanes in each direction, and the CAMPO 2045 plan designating two express lanes in each direction. At Open House #4, CTRMA released six design alternatives, which studied no, one, and two express lanes in each direction, but applying the CAMPO 2035 traffic demand model, even though the CAMPO 2040 plan was already passed and in effect. The original presentation of the six alternatives applying the CAMPO 2035 model at Open House #4 was also inconsistent with the regional transportation plan in effect at that time, which was the CAMPO 2040 plan.</p> <p>The public has not had the opportunity to view or comment on the six alternatives with the CAMPO 2045 traffic demand model applied. Moreover, slide 12 “Long Range Transportation Planning” that states “we’re updating to CAMPO 2045” without actually updating the information provided to the public to the traffic demand model available for the CAMPO 2045 plan. A slide that says the plan will be updated to CAMPO 2045 is insufficient to have provided the public with the opportunity to comment on the predicted traffic data that will accompany a study based on the traffic demand model in the CAMPO 2045 plan.</p> <p>In addition, I would note that the CAMPO 2045 traffic demand model was available to CTRMA prior to CTRMA removing the project from being on hold in September 2021.</p> <p>Rollingwood City Administrator Lewis, Assistant City Administrator Wayman, and I met with ED Bass in July of 2021 and one of the requests we had was for CTRMA to assist the City of Rollingwood in receiving the CAMPO 2045 traffic demand model from CAMPO. ED Bass assured the three of us that he had spoken with CAMPO and the CAMPO 2045 traffic demand model was ready and available for access by the City of Rollingwood.</p>	
1/7/2022	290.11	Amy Pattillo	<p>2. Need for a comparison of 2 HOV lanes with 2 Express lanes</p> <p>Slide 14 “Alternatives Considered” lists build alternatives of “add general purpose-lane(s) in each direction”, “add high occupancy vehicle (HOV) lane(s) in each direction”, “add transit only lane(s) in each direction”, “add express lanes in each direction”, and use TDM management. As I previously noted in comments to Open House #3 and Open House #4, the previous comparisons at Open House #1 and Open House #2 put 1 HOV compared with 2 Express lanes and found that the 2 Express lanes were better. The first phase of alternatives considerations did not provide a lane-to-lane comparison of benefits.</p>	Alt-3 Alt-3.1
1/7/2022	290.12	Amy Pattillo	<p>3. Need for public opportunity to comment on the study impact of each of the six alternatives within the APE</p> <p>I note that the APE boundaries reflected in slide 33 “Archeological & Historical Resources” in Open House #5 are expanded to include additional area not shown in the APE boundaries in slides for Open House #4. In particular, the APE areas reflected in Open House #5 include more area directly over Barton Creek and the Edwards Aquifer recharge zone than previously incorporate and expand the footprint of the Zilker Park Historic District. The Zilker Park Historic District and Deep Eddy Historic District host pools which host almost a million visitors annually and require a rigorous level of oversight to protect and preserve so that they are available to generations to come.</p> <p>The APE evaluation should be rigorous given the sensitivity of areas presented. The importance of the archeological and historic areas in the APE to our region reflects the need for the project to be evaluated under an EIS, with mitigation efforts elevated to reduce both direct and indirect effects within the APE.</p> <p>As noted on Slide 16 “Express Lane(s) Operational Configuration Options”, “six variations of the express lane(s) alternative are under evaluation. The key differences are how the ramps are configured near Lady Bird Lake”. Clearly, the EL alternatives that include elevated ramp infrastructure will have a larger footprint and higher environmental impact than the EL alternative that does not have elevated ramp infrastructure. The public should be provided with the opportunity to comment on the APE studies for each of the 6 EL, not on an APE study conducted after a single preferred alternative is identified.</p>	CR-1 ICI-1 SOC-1
1/7/2022	290.13	Amy Pattillo	<p>4. Need for an EIS evaluation of the Mopac South Project</p> <p>Slide 34 “Water Quality Protections” states “due to the environmentally sensitive nature of the Edwards Aquifer Recharge Zone, the Mobility Authority exceeded the environmental protection requirements for construction of the 45 SW Toll Road, resulting in 98% removal of the increase in Total Suspended Solids.” I appreciate CTRMA setting a precedent with 45 SW Toll Road exceeding the environmental protection requirements in the Edwards Aquifer Recharge Zone – and note that the environmental protection requirements were sent under an EIS. The 45 SW Toll Road study sets the precedent road study of areas impacting the Edwards Aquifer Recharge Zone under an EIS, as well as going above and beyond what is required under an EIS.</p>	WQ-1
1/7/2022	290.14	Amy Pattillo	<p>5. Need to study the proposed shift of the southbound exit ramp with modeling available to the public</p> <p>Slide 41 “Non-tolled improvements” lists an improvement of “shift the southbound Bee Caves exit ramp further north to allow for safer weaving for westbound Bee Caves traffic.” I have continued to ask for modeling of the proposal to shift the exit ramp further north. Given the topography of the area, and the fact that vehicles</p>	D-6.1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			frequently accelerate up the hill on the frontage road, moving the exit ramp further north does not necessarily make the weaving safer – particularly if it intersects with cars as they are accelerating uphill.	
1/7/2022	290.15	Amy Pattillo	<p>6. Need to include a value of no increased elevations over the Bee Caves Road intersection, proximate to Zilker Park in what is learned from Public Input</p> <p>Slide 18 “Public Input is Shaping MoPac South” includes “no increased elevations over Lady Bird Lake”. In reviewing the public input from Open House #4 it is also clear that a significant amount of public input also does not want increased elevations over the Bee Caves Road intersection, proximate to Zilker Park. Proposed EL alternative 2C is named “Two Express Lanes with Elevated Ramps Near Barton Skyway”, however this label is misleading. In previous schematics, the ramps are shown starting next to the Zilker Park preserve and proximate to Zilker Park, expanding over Bee Caves Road. There is a significant amount of public comment that indicates a preference for no elevated lanes within the Bee Caves to Lady Bird Lake corridor.</p>	comment noted
1/7/2022	290.16	Amy Pattillo	<p>7. Need to include full schematics of each of the proposed alternatives for the public to understand how Mopac North and Mopac South are connected</p> <p>I note that slide 20 “1A”, slide 22 “1B”, slide 24 “2A”, slide 26 “2B”, slide 28 “2C” and slide 30 “C” provide top level diagrams of proposed alternatives that for the first time show connection to the toll roads now present in Mopac North, however the alternatives are segmented to stop at Barton Skyway. Since 2015, I’ve studied the full length schematics of each of the 6 alternatives in depth. Even with an extensive knowledge of the full length schematics of each of the proposed alternatives, I find the flattened diagrams confusing and the segment shown insufficient to understand how vehicles using the toll roads would access the Bee Caves Road intersection.</p> <p>A member of the public approaching a study of the proposed alternatives for the Mopac South project for the first time, or even for the 100th time since 2015, is not informed from the top level diagrams shown how toll lane users would access the Bee Caves Road intersection. For example, it is not clear from the segment of each alternative shown in slides 20, 22, 24, 26, 28, and 30 how a vehicle traveling southbound in the toll lane from Mopac North would exit the toll lane after crossing the river and access Bee Caves Road. In addition, it is not clear how a vehicle traveling east on Bee Caves, crossing under Mopac, and entering Mopac northbound would access the north bound toll lane.</p>	TO-4 D-11 D-13
1/7/2022	291.00	Bobby and Margaret McQuiston	This is to let you know that we agree with the comments submitted by the Travis County Commissioners Court and the City of Rollingwood regarding the Open House and MoPac South discussions.	Comment noted
1/7/2022	292.00	Carl Van Ryswyk	<p>I have been a member of Park Hills Baptist Church for the last 49 years and have been involved in access issues most of that time. I support the concerns listed below.</p> <p>I am submitting this input on behalf of the Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to our immediate physical proximity to Mopac, we have significant interest in how the expansion plan is developing in our area and the impact it may have to our immediate environment and to the use of our property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, our property is heavily used for the traffic and parking needs for the major events in our city park.</p> <p>We appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. We are also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. We have concerns with some of the options that are being considered at this time.</p> <p>As much as it is our desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, we believe we need the assistance of professional input from traffic and other experts on the impact these proposals would have on our property. At this early stage, we are aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:</p> <p>(1) We are concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. We support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in our location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.</p> <p>The option of adding noise-preventing walls would cause our intersection to be covered with concrete, instead of preserving the green environment the community</p>	See response to comment 489.

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>enjoys today. Every spring, we have lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of our property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. We would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.</p> <p>Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. We have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. We do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.</p> <p>(2) We are concerned for what impact the current plans will have on ingress-egress to our property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact our exit lane (currently it is on the north of the Mopac exit ramp to 2244). We want to ensure that moving the ramp to the north would not negatively affect our ability to use our property exit.</p> <p>(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. We are concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). We realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, we cannot support any options that might inhibit the future development of this intersection.</p>	
1/7/2022	293.01	Carol Goodwin	As an Austin resident and concerned citizen, I am writing to strongly oppose the proposed MoPac South Toll Road and to request that you address the following issues and recommendations:	Comment noted
1/7/2022	293.02	Carol Goodwin	- Please extend the public comment period by at least 30 days, as the original comment period fell entirely over the holidays. The information posted on CTRMA's MopacSouth.com project website was confusing regarding the current status of the project and opportunity for public comment. In order to ensure full public input, please extend the comment period and correct the misleading information on the site.	PI-1
1/7/2022	293.03	Carol Goodwin	- In a project of this magnitude and scope, a comprehensive study of the environmental impact is essential. Numerous environs and public spaces will be negatively impacted by the proposed project, including Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.	ENV-1 TES-1
1/7/2022	293.04	Carol Goodwin	- In addition to a thorough Environmental Impact Study, the climate change impacts of building more capacity for single-occupancy vehicles and of increased concrete in the area must be analyzed.	ENV-1 ICI-2
1/7/2022	293.05	Carol Goodwin	- Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/7/2022	293.06	Carol Goodwin	- Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	293.07	Carol Goodwin	- Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 Model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree and often just increases the number of cars.	See RP-6 ICI-1 SOC-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	293.08	Carol Goodwin	- Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/7/2022	293.09	Carol Goodwin	- Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown	TO-2
1/7/2022	293.10	Carol Goodwin	- Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/7/2022	293.11	Carol Goodwin	Once initiated, projects such as this cannot be undone and often have a lasting negative impact. All alternatives must be thoroughly explored before this project is undertaken.	Alt-1
1/7/2022	294.01	City of Rollingwood via Ashley Wayman	Thank you for the opportunity to comment on the documents provided at Virtual Public Meeting Number Five for the MoPac South Project. The following comments are based on our review of these documents and the CAMPO 2045 Transportation Plan (2045 Plan) and are made in addition to numerous comments, official city actions, official resolutions, and personal engagement by multiple elected officials to both CTRMA and CAMPO over the past six and a half years. Although little evidence exists as to the consideration or incorporation of any of our previous comments into your current plans, the City wishes to maintain its robust historic record on this issue and trusts that your full review of our previous communications will lead to a more collaborative approach going forward. While the City does not wish to restate each of its earlier comments at length, we enclose all correspondence since April of 2015 and incorporate the same by reference herein for inclusion in the record of comments for Open House Number Five (see Appendix A for all enclosures). Additionally, because CTRMA has not updated the project materials since they were released to the public in 2015, the City’s earlier comments are still apposite and have yet to be addressed.	PI-8 PI-2
1/7/2022	294.02	City of Rollingwood via Ashley Wayman	While the City of Rollingwood appreciates CTRMA’s efforts to restart the MoPac South Environmental Study, it shares the concerns, expressed by Travis County and others, that it is difficult to meaningfully comment on outdated information. Indeed, because CTRMA has not updated the MoPac South alternatives in over five years, and because some of the existing alternatives do not comply with the 2045 Plan, the City cannot comprehensively address the current alternatives, or their satisfaction of the criteria established by CTRMA.	PI-4 OCO-5
1/7/2022	294.03	City of Rollingwood via Ashley Wayman	Similarly, although CTRMA has indicated that it will select a preferred alternative based on new data, it has not publicly released that data such that the City has had no opportunity to review and incorporate any new data into its comments. Accordingly, to meet the current deadline, the City submits the following comments based on the information it has at this time. However, because the available information is inherently incomplete, the City requests more detailed information and additional time to comment so that we, as a community, can engage with CTRMA staff on the project. Without this additional time and information, the City, along with other public stakeholders, are placed at the distinct disadvantage of having to comment without knowing what, exactly, they are commenting on.	PI-7
1/7/2022	294.04	City of Rollingwood via Ashley Wayman	Compliance with CAMPO 2045 Plan First, the CAMPO 2045 Plan requires that the MoPac South Project have two express lanes in each direction on MoPac, from Cesar Chavez to Slaughter Lane. Only alternatives 2A, 2B, and 2C are consistent with the 2045 Plan because alternatives 1A, 1B, and 3 (the City of Austin proposal) only have one express lane in each direction. ¹ However, the Open House Number Five documents state that all six variations of the express lane alternatives are under evaluation and that “project data is required to be evaluated against the most recent Regional Transportation Plan, which is CAMPO 2045.” This raises the following questions: • Is it CTRMA’s intent to re-evaluate all six express lane alternatives, even though the 2045 Plan requires two express lanes in each direction? • Or are alternatives 2A, 2B, and 2C the only 2045 Plan-compliant alternatives (assuming the facts in the footnote below)? • To the extent any new analysis or data for any of the alternative plans exist, we respectfully request copies so that we may study them in greater detail.	OCO-4
1/7/2022	294.05	City of Rollingwood via Ashley Wayman	The 2045 Plan also requires the construction of an auxiliary lane on southbound MoPac from the RM 2244/Bee Caves Road entrance ramp to the southbound Loop 360 exit ramp, including an acceleration lane. This appears to require two additional lanes—an auxiliary lane and an acceleration lane. However, none of the proposed plans show these required lanes and how they will fit into the overall plan that is adopted. • Will additional right-of-way be required to construct the auxiliary and acceleration lanes and what will their configuration be? • Do all six alternatives include these additional lanes? • Are there any schematics that show these lanes?	TO-5 D-13

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	294.06	City of Rollingwood via Ashley Wayman	<p>Second, the Past Events information contained on the MoPac South website includes links to detailed schematics presented in Open House Number Four. It also includes the following statement: NOTE: Project materials, schematics, cost estimates, and other data linked below were developed in 2015 and have not been updated since. Updated materials will be provided virtually at Open House 5 beginning Nov. 22, 2021. However, we have been unable to locate any updated schematics for the six alternatives, and the existing schematics contain very little detail with respect to geometrics.</p> <ul style="list-style-type: none"> • Will the detailed schematics presented in Open House Number Four be utilized for the updated analysis based on the 2045 Plan travel demand model? • If not, we request copies of any new schematics. We also request that any updated schematics show the interconnection with the MoPac North Project, as it is currently constructed, as well as the proposed design and connection of Cesar Chavez to MoPac North when constructed. 	D-13 TO-4
1/7/2022	294.07	City of Rollingwood via Ashley Wayman	<p>Efficient Functioning of the Bee Cave (RM 2244) Intersection The City reiterates its comments from the enclosed letter that the design of the MoPac South Project should ensure that the RM 2244 intersection with MoPac functions efficiently, and that the design does not preclude making improvements to the existing operation in the future. Such improvements may include widening the RM 2244 and MoPac frontage road approaches to better accommodate projected demand for travel west on RM 2244. The City has been in discussions with TxDOT concerning improvements to RM 2244, and it would be beneficial to all entities involved that we work together towards a long-term vision. As we have previously stated, RM 2244 is a vital corridor for the City of Rollingwood and contains all of the City's commercial properties, which provide vital sales tax revenue. Additionally, the City is aware of and is sensitive to the needs and concerns of our faith-based community partner who owns property along the frontage road and adjacent to this key intersection. Any change to the RM 2244 intersection will have a direct and dramatic impact on the City and its residents. Therefore, we request that the MoPac South plan evaluation criteria include consideration of the need for upgraded intersections along MoPac South, such as RM 2244, Rollingwood Drive, and Barton Springs Road. Significantly, the Open House Number Five documents do not include any schematics showing the intersection of RM 2244/Bee Caves Road. At one time, there was a proposal to close the intersection of RM 2244 at MoPac so that all eastbound traffic from RM 2244 would be required to turn south along the MoPac frontage road and complete a U-turn at Barton Skyway in order to proceed north along MoPac and the frontage road (the "right-in, right-out" option). The Open House Number Five documents do not show that as a proposed option, but they also do not negate it.</p> <ul style="list-style-type: none"> • Is there a plan to change the intersection of RM 2244 at MoPac? If so, please provide any detailed plans that are under consideration. • Has there been any consideration to how changes to the RM 2244 intersection could impact traffic along Rollingwood Drive (for example, people may use Rollingwood Drive as a cut-through to avoid the RM 2244 intersection)? If so, we would appreciate copies of any such study. <p>The City of Rollingwood continues to oppose dramatic changes to the RM 2244 intersection, including the diverging diamond and continuous flow options that have been previously discussed. This intersection is the gateway to our City, how most of our citizens exit to go to work, and it is the center of our commercial tax base. Working together and establishing an efficient design for the RM 2244 intersection is vital to the City of Rollingwood.</p>	OOS-2 TO-3 D-13
1/7/2022	294.08	City of Rollingwood via Ashley Wayman	<p>The City of Rollingwood Opposes Elevated Lanes over MoPac and Elevated Ramps near Barton Skyway. The City supports improvements to MoPac South that serve to increase mobility and safety; however, we oppose roadway designs that place elevated lanes over MoPac (e.g., Alternatives 2A and 2C). As we stated in the November 2017 letter, elevated lanes increase noise, are unsightly, and are currently being removed throughout the State of Texas, with I-35 in downtown Austin being the most recent example. Elevated lanes would not only affect the quality of life in Rollingwood, they would also negatively impact Zilker Park, the Zilker Park Club House, and Barton Springs.</p> <p>Likewise, the City of Rollingwood opposes elevated ramps near Barton Skyway in a wishbone configuration (e.g., Alternative 2C). Although we have not had an opportunity to review CTRMA's updated plan, data, or traffic modeling, the City is unconvinced that the wishbone alternative with elevated ramps at Barton Skyway would improve traffic flow into or out of downtown. Instead, it appears from the preliminary sketches that the proposed configuration would conflict with general traffic using the northbound MoPac entrance ramp to the north of the Bee Cave intersection and the southbound MoPac exit ramp to the north of the Bee Cave intersection. We believe this could actually exacerbate traffic problems associated with these ramps rather than improving them.</p>	D-2 CR-2 OCO-5
1/7/2022	294.09	City of Rollingwood via Ashley Wayman	<p>The City of Rollingwood instead continues to support an alternative, such as 2B, that contains two express toll lanes in each direction without elevated lanes or a direct connection to downtown. As we have expressed before, and again without the benefit of updated traffic modeling, we are concerned the travel time</p>	Comment noted

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>comparisons between options 2B and 2C are not a fair comparison because the wishbone configuration has been optimized in several ways in which the two express toll lanes alternative has not. Thus, while CTRMA's current materials suggest an estimated travel time of 9 minutes—compared to 13 minutes for the non-elevated, two toll-lane alternative—the City believes that, properly optimized as set forth in the November 2017 letter, both options would produce comparable travel times.</p> <p>The City also continues to support the development of an alternative design for Mopac South incorporating an express lane underpass design between RM 2244 and Barton Springs Road, which would mirror the express lane underpasses that were constructed as part of the MoPac North Project. Underpass lanes are both less expensive to construct and reduce road noise pollution. The City also supports the cantilever design currently being considered for the I-35 project between Airport Boulevard and Martin Luther King Drive.</p>	
1/7/2022	294.10	City of Rollingwood via Ashley Wayman	Finally, the City reiterates the comments, as detailed in the enclosed letter, that CTRMA should (1) update all proposed alternatives for the MoPac South Project to show interconnection with the MoPac North Project and	TO-4
1/7/2022	294.11	City of Rollingwood via Ashley Wayman	(2) implement bicycle and pedestrian infrastructure to provide consistent, direct access to and from downtown Austin as part of the MoPac South improvements.	BP-1
1/7/2022	294.12	City of Rollingwood via Ashley Wayman	<p>Additional Open House and Opportunity to Comment</p> <p>The City of Rollingwood joins Travis County in its request that CTRMA repeat the virtual open house process once it has provided updated data, modeling, and information regarding all of the alternatives to the public. This will allow the City, and others, to offer complete and specific comments and will ensure that CTRMA is able to select a preferred alternative based on informed, data-based public input rather than assumptions and speculation on outdated information.</p>	see PI-7
1/7/2022	294.13	City of Rollingwood via Ashley Wayman	<p>Once again, the City of Rollingwood appreciates CTRMA's efforts in conducting this process and working toward improved mobility for all of the MoPac stakeholders. The City recognizes the need for improvements to MoPac, supports the goal of improving vehicle, bike, and pedestrian traffic in the area, and looks forward to continuing to work with CTRMA, CAMPO, and TxDOT to accomplish those goals.</p> <p>Should you have any questions, please do not hesitate to contact me.</p>	PI-12
1/7/2022	295.01	Daisy Clark	I am strongly opposed to the plan for expansion of south MoPac. As proposed, this project would have severe negative effects on the Edwards Aquifer, Barton Springs, the Barton Creek green belt, Ladybird Lake, the hike and bike trail, Austin High School, and more.	ENV-2
1/7/2022	295.02	Daisy Clark	Please do not move forward with this proposal without at least extending to comment period for at least 30 days to allow for further traffic data and analysis.	PI-1 PI-7
1/7/2022	296.00	Danny McCormack	DO NOT APPROVE THIS PROJECT. WOULD BE DETRIMENTAL TO BARTON SPRINGS AND THE GREENBELT.	ENV-2
1/7/2022	297.01	Darcy Bontempo	I implore you to not approve this I'll-conceived "easy way out" proposal to easy Austin traffic. Austin is blessed with the beauty of Barton springs and nature. If you care about quality of life for people and wildlife then find a better solution than same old same old solution that destroys the environment and never stops the congestion that is found in cities that do not invest in public transports and more walking, biking and car sharing. The noise pollution from raised tollways is detrimental to people's mental and physical health. Lastly, if you are a religious person then use your authority to be a steward of God's creation.	ENV-2
1/7/2022	297.02	Darcy Bontempo	<p>Times are changing. Remote work. Climate change. Gas guzzling single person drivers. In 5 years it will be very different than it is today. See the future when nature will be priceless and more vital than tollways.</p> <p>If you must have toll roads, find another route.</p>	RP-6 ICI-2
1/7/2022	298.00	Donna Ramsey	Leave Mopac South of the river alone. By expanding the road you risk environmental damage to Barton Creek and Barton Springs. Mopac already impacts the park with noise and air pollution. If you build this road it will only encourage more traffic and soon you'll be back asking for more road. Please don't do it. Instead, why not actually improve public transportation in the areas that feed into Mopac and by that means take traffic off the road instead of encouraging more. If this plan for the widening of Mopac goes forward, I can't help but wonder if the Zilker family might institute legal recovery of the parkland for their family as the land is no longer being used for the original designated purpose. What a loss that would be. In short, don't build more road. The costs to the environment, Barton Creek, Barton Springs and the park are far too high. Building more roads is your answer to all problems, but in this instance, your "road-building hammer" is not the right tool to fix the problem.	ENV-2
1/7/2022	299.01	Dorrine Fisher	The last thing Austin needs is building a four lane double decker roadway ruining the downtown/ zilker park area!	D-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	299.02	Dorrine Fisher	Nevermind the environmental impact regarding Ladybird lake , Zilker Park, the natural springs!!!	ENV-2 WQ-1 CR-2
1/7/2022	299.03	Dorrine Fisher	The flow of traffic has decreased considerably since Covid & people working from home now , so its not needed.	RP-6 PN-1
1/7/2022	299.04	Dorrine Fisher	Why not consider a rail way & public transportation instead , a high speed tram connection to downtown with a parking lot outside of the park area !!! To alleviate congestion downtown all together!	T-2 T-4
1/7/2022	300.01	Dottie Parr	I just went through the MoPac South Virtual Exhibit. I'm onboard with just about all of the alternative except more toll lanes, especially on MoPac.	Comment noted.
1/7/2022	300.02	Dottie Parr	In my opinion, toll lanes are expensive, infrequently used (at least on MoPac), and not worth the tax dollars spent on them. I certainly can't afford to use them twice a day and resent tax dollars used to help well off people get around town faster while the other 90% of us sit in traffic. Sour grapes?	TF-1 EL-1 EL-3 EJ-1
1/7/2022	300.03	Dottie Parr	Perhaps but I rarely see more than 1 car/truck take a MoPac toll road while I'm coming to work or headed home from work.	Comment noted
1/7/2022	300.04	Dottie Parr	My other concern would be that the added bike/pedestrian lanes be added to the access roads where possible & only to the main MoPac lanes when only totally necessary, such as bridges. They are too distracting to drivers when placed close to the driving lanes.	Comment noted
1/7/2022	301.01	Girard Kinney	1. The Purpose and Need and the environmental documents posted completely fail to address safety in any meaningful way. There is no mention of Vision Zero and no mention of ending traffic deaths and serious injuries. TxDOT has a Road to Zero policy and the City of Austin has robust Vision Zero policies, metrics, and strategies. Mopac South must meaningfully address traffic deaths and serious injuries.	SF-1
1/7/2022	301.02	Girard Kinney	2. CTRMA is currently doing an Environmental Assessment to determine whether they will proceed with a full Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). Given that these improvements will directly impact the recharge zone of the Edwards Aquifer, Zilker Park, and Lady Bird Lake, CTRMA should conduct a full EIS.	ENV-1
1/7/2022	302.01	Grant Sparks	Please accept this email as my strong endorsement of the positions taken in comments submitted by the Travis County Commissioners Court and the City of Rollingwood; including recent comments submitted by Amy Pattillo.	Comment noted; see responses to those comments within this matrix.
1/7/2022	302.02	Grant Sparks	I am concerned that the CTRMA is relying on six year old information and severely limiting the public comment period for this proposed project. The negative impact of the current proposal to the residents of the City of Rollingwood, Zilker Park and other adjacent areas will be irreversible and should not be implemented without further significant revisions and considerations.	RP-1 PI-7 ENV-2
1/7/2022	303.01	Greater Edwards Aquifer Alliance via Annalisa Peace	These comments are submitted on behalf of the fifty-two member organizations of the Greater Edwards Aquifer Alliance, whose allied mission is to preserve the Edwards and Trinity aquifers, springs, streams and rivers, contributing watersheds, flora and fauna, and the history and culture of the Texas Hill Country We first request that you extend the comment period for at least an additional thirty days. The comment period fell entirely over the holidays. Extending the comment period will ensure robust and full public input.	PI-1
1/7/2022	303.02	Greater Edwards Aquifer Alliance via Annalisa Peace	We further recommend that you: Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	303.03	Greater Edwards Aquifer Alliance via Annalisa Peace	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	303.04	Greater Edwards Aquifer Alliance via Annalisa Peace	Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-COVID world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single-occupancy vehicle peak hour demand” increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/7/2022	303.05	Greater Edwards Aquifer Alliance via Annalisa Peace	Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan (“2035 model”). The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	303.06	Greater Edwards Aquifer Alliance via Annalisa Peace	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the “induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/7/2022	303.07	Greater Edwards Aquifer Alliance via Annalisa Peace	Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3
1/7/2022	303.08	Greater Edwards Aquifer Alliance via Annalisa Peace	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	303.09	Greater Edwards Aquifer Alliance via Annalisa Peace	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2022	303.10	Greater Edwards Aquifer Alliance via Annalisa Peace	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1 WQ-2
1/7/2022	304.01	Heyden Black Walker	I appreciate the opportunity to comment on Mopac South. I heard Mr. Bass explain that CTRMA was not required by NEPA to hold this open house so I appreciate your strong commitment to transparent public engagement. I hope that in the coming months, and by the next public comment period, the concerns expressed below have been addressed.	PI-12
1/7/2022	304.02	Heyden Black Walker	First and foremost, the environmental documents completely fail to address traffic deaths and serious injuries. There is no mention of safety in the purpose and need, nor is safety meaningfully addressed within the public documents. Recently TxDOT made substantial edits to their purpose and need for I-35 Cap Ex Central to meaningfully address safety. I hope that you will use that P&N as a guide and modify the P&N for this project. Texas transportation policy has changed significantly since 2015. TxDOT now has a Road to Zero policy and the City of Austin has ROBUST vision zero policies, including those laid out in the Austin Strategic Mobility Plan. I would hope that at the very least Mopac South, which is within the City of Austin, would adhere to that adopted local policy. Any further work on this project should include meaningful analysis of traffic deaths and serious injuries and implement concrete strategies to end traffic deaths and serious injuries on this roadway.	SF-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	304.03	Heyden Black Walker	<p>Second, I am concerned about the timing of this open house. Starting the open house days before Thanksgiving and ending it this Friday 1/7/22, all in the middle the largest pandemic surge to date, means very few people are even aware this is happening. People have been out of work for holidays and due to illnesses. Intentionally or not, you could not have picked a better time to ensure no one would be able to respond to this open house. The City of Austin Mobility Committee and the full City Council have not had the opportunity to review this project in a public forum. In addition, the citizens of Austin have their interest in engaging and commenting on local highway projects, including this very project. While the traffic signs along Mopac announcing the open house are a positive step, only a handful of individuals have had sufficient time to review and comment.</p> <p>I would like to request that CTRMA extend this open house at least 30 days to allow our other elected leaders, as well as citizens, and community groups to provide feedback on the record. I would also like to request that future open houses be a minimum of 90 days to ensure robust public feedback.</p>	PI-1 PI-2 PI-3
1/7/2022	304.04	Heyden Black Walker	This project crosses multiple areas of environmentally sensitive land, including Lady Bird Lake, Zilker Park, and the Edwards Aquifer recharge zone. I do believe a full EIS is warranted and encourage you to undertake a full EIS.	ENV-1
1/7/2022	304.05	Heyden Black Walker	I support and reiterate the recommendations you have received from the Travis County Commissioners Court, unanimously approved at their meeting 1/4/22.	Comment noted; see response to that comment within this matrix.
1/7/2022	304.06	Heyden Black Walker	That support includes serious consideration of striping managed lanes with the existing highway footprint, rather than spending millions in taxpayer money to add lanes and flyovers. Managed lanes are critical for moving people efficiently into our employment centers, but creating those with paint should be seriously considered.	Alt-3 D-9 D-9.1 PN-1
1/7/2022	304.07	Heyden Black Walker	When you bring this project back to the public in the Spring it will be very important to show the highway in profile so that people can understand the locations and heights of elevated lanes.	D-3
1/7/2022	304.08	Heyden Black Walker	Finally, I think it is critically important that we consider the impacts of any expansion of highway capacity on greenhouse gas emissions and climate change. We cannot continue to ignore the fact that transportation is our single largest source of GHGs in the Austin region. The City of Austin has an adopted Climate Equity Plan that should be adhered to. We must take climate change seriously, for the sake of our children and future generations.	ICI-2
1/7/2022	305.00	Irene Pickhardt	Adding lanes to MoPAC South will result in degradation of the aquifer. The recharge zone need better protections than those offered in the environmental study. It is critical that rainwater percolate through the limestone to recharge the aquifer. Please make adjustment in your plans based on recommendations by hydrologists.	WQ-1
1/7/2022	306.01	Jay Blazek Crossley	<p>Thank you for this opportunity to comment on the MoPac South Environmental Study Virtual Public Meeting and for your public service to the people of the Austin region.</p> <p>Below I will explain three distinct comments that I hope will be useful to the process of considering what investments along MoPac South will be best for all the people of the region. These three topics that I will address are:</p> <p>The need for a better Purpose and Need for MoPac South focused on safe access The apparent lack of focus on traffic deaths, serious injuries, and crashes The flaws of the regional growth forecasting and travel demand modeling system</p>	PI-12
1/7/2022	306.02	Jay Blazek Crossley	<p>The need for a better Purpose and Need for MoPac South focused on safe access</p> <p>The proposed purpose and need for the MoPac South project seems insufficient for addressing the real problems and needs of the people of Travis and Williamson County. Most importantly, the high costs of our car-dependent, high-speed transportation system are ignored, even though traffic crashes are measurably a much bigger problem than congestion. Using National Safety Council estimation methodology for the economic impacts of crashes shows that traffic crashes cost the people of the Austin region about twice as much as the estimated costs of congestion from the Texas A&M Transportation Institute's Urban Mobility Study. Similarly, the MoPac roadway causes significant health and environmental damage to the people and nature of the Austin region. The purpose and need statement should include these issues.</p>	BP-1 T-3 PN-1 EJ-1 Alt-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>Further, the chosen metric in the purpose and need of “reliable travel times” is an insufficient purpose to address the complex transportation needs of the people of the region. Focusing on travel time and congestion biases our transportation decision making system toward addressing the needs of people who drive more than others and people who choose to live in car-dependent sub-urban and rural places that are forced to drive long distance commutes. On average the amount that we drive is directly proportional to income. Low income people in our region drive much less than higher income people and people living in poverty in the region overwhelmingly live in the dense parts of the urban core that are not well served by these proposed kinds of freeway expansions.</p> <p>Including “reliable travel time” in the purpose and need precludes the possibility of providing various transportation solutions that might better serve people. Instead, CTRMA should seek to improve safe multimodal access by all modes of travel, as outlined in the Smart Growth America report, The Why and How of Measuring Access to Opportunity: a Guide to Performance Management (https://smartgrowthamerica.org/resources/measuring-access-to-opportunity/). For every resident in Travis and Williamson County, CTRMA could measure each resident’s ability to access jobs and other opportunities within half an hour of travel by all modes. Then this analysis could be done to study implementation of various investment scenarios, and analyze who will benefit from these improvements and to what extent. CTRMA could then optimize a suite of investments to equitably provide the most benefit to the most people.</p> <p>I believe it is possible that the best investment CTRMA can make in this corridor is to add managed lanes, even though that is not my first guess. The purpose and need should be written to allow for this possibility, but it should not proscribe added automobile capacity as the only way to answer the question. Regional mobility authorities in Texas are authorized to invest in complex multimodal transportation solutions, including adding sidewalks in neighborhoods, safety and speed management interventions on existing streets, investing in public transit, along with capacity for cars.</p>	
1/7/2022	306.03	Jay Blazek Crossley	<p>The apparent lack of focus on ending traffic deaths, serious injuries, and crashes</p> <p>Traffic deaths and serious injuries do not seem to be addressed at all in the Environmental documents for the MoPac South project. The Texas transportation policy world has changed quite a lot since 2015 in this regard. CTRMA is overdue for adopting a Vision Zero goal to end traffic deaths in alignment with the Texas Transportation Commission’s Road to Zero goal and the City of Austin Vision Zero goal. Similarly, Travis and Williamson Counties and the Capital Area Metropolitan Planning Organization (CAMPO) should stand with the state and the families of our region in giving the highest priority to ending traffic deaths and serious injuries.</p> <p>Any further work on this project should include meaningful analysis of traffic deaths and serious injuries along this corridor and meaningful analysis of how future scenarios and investment proposals would impact traffic deaths and serious injuries. Such analysis should be smart enough to factor in circular feedback loops in travel demand models and the concept of induced demand. Often studies of freeway projects like this have focused on the metric of traffic deaths per vehicle miles traveled (VMT), which allows for hiding the fact that a project could increase VMT resulting in increased suffering, even if the rate of deaths per VMT were lower.</p> <p>If CTRMA is to be meaningfully aligned to the state goals, then no project should move forward that does not have a reasonable chance of reducing deaths and serious injuries in this corridor in half from 2018 numbers by 2035.</p>	SF-1 ICI-1 SOC-1
1/7/2022	306.04	Jay Blazek Crossley	<p>The flaws of the regional growth forecasting and travel demand modeling system</p> <p>The CAMPO regional growth forecasting system has consistently underestimated dense urban growth, while the travel demand models used in our region have consistently overestimated traffic and congestion. The region needs to reform this system by replacing the single forecast concept with equitable scenario planning to allow projects like the proposed MoPac South to include meaningful decision making that allows for stress testing the estimated outcomes of various proposals given meaningful reasonable alternative futures.</p> <p>The Federal Highway Administration has encouraged State DOTs and MPOs to use equitable scenario planning through publications such as Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning, August 2014, USDOT, FHWA (https://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/fhwahep14046.pdf) and Supporting Performance-Based Planning and Programming through Scenario Planning, June 2016, USDOT, FHWA (https://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/fhwahep16068.pdf).</p> <p>The Texas Department of Transportation (TxDOT) has used scenario planning to entertain multiple reasonable future alternatives in equitable planning processes such as the Texas Transportation Plan 2050, and TxDOT Houston has developed the Sustainable Ways to Integrate Future Transportation (SWIFT) tool that could be</p>	RP-2 RP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>adapted to the Austin region to facilitate equitable scenario planning processes here.</p> <p>The CAMPO 2035 Regional Transportation Plan included elements of scenario planning to entertain reasonable future growth scenarios, but these processes and planning techniques seem to have been abandoned. The CAMPO 2045 RTP envisions a future that will result in converting 350 square miles of currently rural or open space to sub-urban or urban, with 69% of the region's expected 4 million residents living in car-dependent sprawl or rural areas, a future that is distinctly different than the visions articulated through various regional planning processes, such as Envision Central Texas, the Imagine Austin plan, or various Travis County planning processes.</p> <p>Recently, there has been much discussion of the problem of CTRMA's public materials still using analysis based on CAMPO's 2035 RTP forecasts. While the 2035 forecasts underestimated Travis County's 2020 population by 78,688 people compared to the decennial census, the 2045 forecasts not only underestimated Travis County's 2020 census population by 8470 people, but overestimated Hays County population by 8085 people and Williamson County population by 13,373 people, only a year and a half after the forecasts were published.</p> <p>Consistently overestimating sub-urban growth is one of the reasons travel demand models have consistently been wrong about traffic in our region. But also, the travel demand models themselves have various flaws, as outlined by Norm Marshall of the transportation and modeling firm, Smart Mobility, in his comments on the I-35 central project, which I am included here for reference. CTRMA should have much better decision making information and systems available if it is to truly enhance quality of life and economic vitality for the people of the Austin region. Also attached is a Farm&City report on the flaws of the regional forecasting system which can be found here: https://drive.google.com/file/d/1qHeyF-ip_sUqkIN09usjyNwaH28xUrMy/view?usp=sharing</p> <p>I hope that these comments are helpful as CTRMA continues to study how to improve quality of life for the people who live, work, play, go to school, and travel along the MoPac corridor. Thank you for your service to all the people of the Austin region and for your consideration of these comments.</p>	
1/7/2022	307.01	Jean Hopkins and Hoppy Goddin	<p>We understand that today is the final day to comment on the proposed Mopac South project, and wish to have our comments included in the public record.</p> <p>We believe this project is a terrible idea, and has not received adequate (and required) environmental review.</p>	Comment noted.
1/7/2022	307.02	Jean Hopkins and Hoppy Goddin	<p>We live less than a block from Lady Bird Lake. Jean rows four or five times a week from the Texas Rowing Center, across from Austin High School. Hoppy swims at Barton Springs Pool regularly. We always take out of town visitors to the Pool because we consider it such a unique and special Austin asset. Both of us use the Ann Butler Hike and Bike Trail regularly to get around our neighborhood, and for recreation. Our two granddaughters, now in elementary school, will eventually be students at Austin High. We take them to Zilker Park almost every week. Our family and our friends enjoy the Barton Creek greenbelt.</p>	CR-2
1/7/2022	307.03	Jean Hopkins and Hoppy Goddin	<p>This project poses potentially severe impacts to our immediate neighborhood and the activities we most cherish as Austin residents.</p>	SOC-3 Soc-1
1/7/2022	307.04	Jean Hopkins and Hoppy Goddin	<p>It appears that the project as proposed would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. This will create substantial adverse impacts on Barton Springs (which feeds Barton Springs Pool and Lady Bird Lake), the Trail, the High School, Zilker Park and the Barton Creek greenbelt.</p>	WQ-1
1/7/2022	307.05	Jean Hopkins and Hoppy Goddin	<p>How can a project of this scope, in such an environmentally sensitive area, not have significant environmental impacts? - including on the two federally protected salamander species living in the area?</p>	TES-1
1/7/2022	307.06	Jean Hopkins and Hoppy Goddin	<p>Jean is a retired environmental professional and used to prepare environmental impact statements and assessments as an employee of the US Geological Survey, as a consultant for geothermal and pipeline development companies, and for regional Habitat Conservation Planning efforts. She is at a loss how you could justify pursuing a FONSI, as opposed to preparing a full environmental impact statement, for a project of this scope.</p>	ENV-1
1/7/2022	307.07	Jean Hopkins and Hoppy Goddin	<p>We do not believe adding another lane to MoPac will improve traffic problems. The traffic modeling data appears to be based on a 2009 model. It must be updated to use current data as part of the environmental review.</p>	RP-1
1/7/2022	307.08	Jean Hopkins and Hoppy Goddin	<p>The alternatives assessed in the review do not include a full evaluation of a "no build" alternative that improves traffic flow utilizing readily available methods included but not limited to dedicated HOV lanes, public transit, and ramp metering.</p>	Alt-1 Alt-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	307.09	Jean Hopkins and Hoppy Goddin	We believe that climate change is an urgent and immediate problem. The environmental review must analyze the impacts of building more capacity for single-occupancy vehicles, and seriously assess the cumulative impact of ignoring an opportunity to redirect Austin's transportation planning towards a more sustainable path.	ICI-2
1/7/2022	307.10	Jean Hopkins and Hoppy Goddin	Finally, we believe you have done a disservice to the public by releasing the document with a comment period over the winter holidays. Please provide the very sizeable interested public with a meaningful opportunity to review and comment, by extending the comment deadline for at least 30 days, following the publication of current, relevant traffic data and analysis. Thank you for the opportunity to comment on this massive, and massively mis-directed, project. We sincerely hope you will subject it to the thorough review it deserves.	PI-1 PI-2
1/7/2022	308.01	Joe Riddell	1. The comment period should be extended because it fell during a big holiday period.	PI-1
1/7/2022	308.01	Joe Riddell	2. This project is based on outdated assumptions about traffic.	RP-2 RP-1
1/7/2022	308.01	Joe Riddell	3. New projections should be made based on matters such as: a. making the existing inside lanes HOV and bus lanes during morning and evening rush hour, b. recognizing that more and more drivers will instead be able to work remotely, c. metering on ramps.	RP-6
1/7/2022	308.01	Joe Riddell	4. An EIS should be prepared when new projections and alternatives are being considered.	ENV-1
1/7/2022	308.01	Joe Riddell	5. I am opposed to double decking the bridge over Lady Bird Lake or Zilker Park or Barton Creek.	D-2
1/7/2022	308.01	Joe Riddell	6. I am opposed to any toll lanes.	Comment noted.
1/7/2022	309.00	Joel Hull	I prefer plan 3 with the addition of at least one non-tolled road between 290 and Slaughter. This additional non-tolled road really should have been built years ago. My secondary choice is 2C with the same additional non-tolled road between 290 and Slaughter The express lanes should not be tolled or the tolls should expire after 5 years.	EL-3 TF-2
1/7/2022	310.01	Jules Elkins	As an Austin resident and Professor of Environmental Health and Urban Planning, I wish to submit the following comments on the MoPac South Environmental Study virtual open house as official comments for consideration. .Extend the public comment period. The material provided to the public is based on outdated 2015 information. Without updated information, input made by the public is at best faulty. Additionally, the comment period fell over two major holidays, which tends to significantly reduce public engagement.	PI-1 RP-2 RP-1
1/7/2022	310.02	Jules Elkins	2.Health Assessment. Increasing Mopac South by up to 4 additional lanes will significantly increase the levels of pollution to which residents of Austin will be exposed. There is a robust body of scientific evidence that shows that traffic-related air pollution (TRAP) is one of the major sources of exposure in urban areas and has been associated with a wide range of adverse human health effects. These include higher rates of asthma onset and aggravation, cardiovascular disease, impaired lung development in children, preterm and low-birthweight infants, childhood leukemia, and premature death. Emerging evidence links TRAP with neurotoxicity and the alteration of neurobehavioral function. The human health effects of the expansion of Mopac have not been adequately assessed nor have they been communicated in any substantive or meaningful way to the public.Asking for public comment, and then basing decisions upon those comments, is misleading when the basic scientific information has not been presented.	ENV-2
1/7/2022	310.03	Jules Elkins	.Analyze real alternatives to added toll lanes. The proposed six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. I encourage the analysis of a range of alternatives that make better use of existing pavement and take into account changing traffic patterns.Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	ALT-1 ALT-3 RP-6

Comment Response Matrix

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1/7/2022	310.04	Jules Elkins	<p>.Include the climate implications as a primary concern in the Mopac South plans.</p> <p>The transportation sector is the greatest contributor to US carbon emissions—and just as important as vehicles are the roads and highways they travel on. The State Highway Induced Frequency of Travel(SHIFT) calculator, developed by the Rocky Mountain Institute, shows that the impact of 4 additional lanes for 8.8 miles will induce up to 116 million vehicle miles travelled per year, which is about 1.2 million metric tons of CO2 emissions by 2050.</p>	ICI-2 ICI-1 SOC-1
1/7/2022	310.05	Jules Elkins	<p>.Engage the public in a robust and meaningful conversation about what kind of Austin we as a community want for the future.</p> <p>The average citizen's understanding of the impacts of infrastructure is more nuanced than it was fifty years ago. There is a broad coalition of people in Austin—neighbors concerned with continued negative impacts from a highway or people who are interested in different forms of mobility—that are pushing innovative options for transit that do not include cars and expanded roadways. We need to continue and expand this community conversation and ask again and again: Who is the greater good that benefits from a “utilitarian infrastructure project”? If the answer doesn't prioritize the planet,public health and safety for everyone—including people who cannot or do not drive— or the vitality of our precious public spaces, then we must fight for an alternative that does.</p> <p>Moving transit away from highways and cars is happening all over America. If we look in our backyard to Houston and the proposed expansion of I-45, there is tremendous public outcry over this proposed project because the impacts on the community are intense and the benefits questionable. In a 2019Houston Chronicle editorial, urban planner and academic, Jeff Speck, wrote that the NHHIP “can be described as having significant costs and significant benefits. The costs are best understood as tremendous,and the benefits are best understood as false.”</p> <p>We live on a rapidly warming planet. We know what kind of infrastructure projects are going to help, and which are going to hurt our chances of survival. These are not just roads, but questions of collective action. Most people want access to safe places to walk and bike where they live. Most people say they would like to reduce greenhouse gas emissions. However, the infrastructure that will allow us to do this requires trade offs, such as losing a traffic lane to put in a bike lane, or muscling through a few months of construction near neighborhoods in order to build a new transit stop.</p>	PI-2 PN-3 PN-1 ICI-2
1/7/2022	310.06	Jules Elkins	<p>In Conclusion</p> <p>Breaking free of the status quo will require creativity and a commitment on the part of transportation officials. It will require a clear mandate from voting citizens that they want to see funding go towards green spaces, bus service, and fixing inadequate sidewalk facilities, with less towards asphalt and road widening. It will require elected officials to show political courage and boldness and implement the will of a representative democracy—not just the squeakiest wheels with the largest campaign donations.</p> <p>Let's slow down and have this vitally important community conversation about our future as Austinites and the future of Austin.</p>	PI-12 PI-6 RP-7 BP-1 T-3
1/7/2022	311.00	Karen Clary	<p>All of the proposed alternatives have pros and cons.</p> <p>I agree with the public values (p .17, Open House #5 -Nov. 2021 Document:</p> <ol style="list-style-type: none"> 1. No increased elevations over Lady Bird Lake. 2. No direct connector ramps near Austin High School. <p>As a result, I do not support Alternatives 1A, 2A, or 3.</p> <p>I recommend that Alternatives 2B and 2C be carried forward for further consideration.</p>	Comment noted
1/7/2022	312.00	Karole Fedrick	<p>Thank you for all of your hard work on this seemingly-impossible task.</p> <p>I have commented before but want to add on more point on the work that has already been done between 45 and Wm. Cannon.</p> <p>I would like to reiterate that there is already an available lane northbound from the Davis up to the Sunset Valley/290 East exit. From a safety standpoint, having three lanes at Davis that has to reduce to two lanes at the Wm. Cannon exit causes unnecessary and hazardous lane changes and merges only to have to change into the far-right lane again if they are going to exit at Sunset or 290.</p> <p>Much of the backup southbound from 290 to Slaughter would have been eliminated if a designated exit to Davis had been included in the previous construction. Annoying.</p> <p>But the latest construction between Slaughter and 45 southbound created one of the most dangerous traffic situations in the whole stretch of road at the “u-turn” crossover at Mopac and South Bay. I seriously have no idea what the engineers were thinking there. To get from Greyrock subdivision or the 45 SW Trailhead parking lot westbound on 45, drivers have to take a left on South Bay and take another left on Mopac southbound. It is nearly impossible to know for sure if traffic is coming</p>	TxDOT-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>around the curve. In the daytime, the curve obstructs vision bad enough, but the danger is multiplied at night. There are no road lights, no way to tell if headlights are in the near lane or far lane, or even how far away they are. People are flying down Mopac southbound at that point, and because of the curve, can't tell if someone is pulling out from South Bay. Shortly after South Bay, Mopac broadens out into 3 lanes. The whole dangerous situation could have been avoided is South Bay had been made a true u-turn into that new third lane offering protected as a merge lane. That intersection is a death trap.</p> <p>Regardless of what you decide to do with the next phase, the problems created with the first phase need to be fixed.</p>	
1/7/2022	313.01	Kathryn Jones	<p>I am writing in regards to the proposed Mopac South Project:</p> <p>The comment time should be extended since it occurred over the holidays. The information we are considering should be updated instead of "Latest News 8/08/2017".</p>	PI-1 PI-3
1/7/2022	313.02	Kathryn Jones	A full Environmental Impact Statement should be prepared since this is crossing a sensitive ecological area. Remember, Barton Springs is the 'Crown Jewel of Austin' and deserves protection.	ENV-1
1/7/2022	313.03	Kathryn Jones	A double decker bridge will be an eyesore and have an everlasting deleterious effect on Zilker Park, Lady Bird Lake and Austin High School. I live less than .1 mile from IH 35 and Riverside—I live with the noise and pollution of it 24hr/day and it is not even a double decker! I can't imagine how much worse it would be if it were.	D-2 SOC-2 CR-2 TO-1
1/7/2022	313.04	Kathryn Jones	Other alternatives should be considered, such as HOV lanes. Since COVID, traffic patterns may have changed with more people working remotely. Other solutions should be investigated and considered.	ALT-1 ALT-3
1/7/2022	313.05	Kathryn Jones	Update the traffic modeling data and give the public an opportunity to come up with an alternative.	RP-1 PI-7
1/7/2022	313.06	Kathryn Jones	As one who frequently travels from MOPAC south to Cesar Chavez to downtown, any increased traffic into that route should be considered carefully.	TO-2
1/7/2022	313.07	Kathryn Jones	Acquiring mitigation land to offset increases in impervious cover from the project should be a priority.	WQ-1
1/7/2022	313.08	Kathryn Jones	<p>Building more roads never solves the traffic problem!</p> <p>I've lived in Austin for 50 years, have been a swimmer at BSP for 40+years, and a runner/walker on the trail since its development. These are the things that make Austin special and unique. It is getting harder to see this uniqueness in all the development to make us "Any city USA". Please don't sell us out!</p>	RP-7
1/7/2022	314.01	Kathryn Turpin	<p>I am strongly opposed to the current proposal for the MoPac South expansion.</p> <p>I urge CTRMA to extend the comment period for at least another 30 days. The comment period occurred primarily over the holidays, when many people are out of town or busy with holiday stuff - or with COVID issues.</p>	PI-1
1/7/2022	314.02	Kathryn Turpin	A full environmental impact assessment should be made before any expansion is built. MoPac goes right over a highly sensitive area - the Edwards Aquifer, which feeds Barton Springs pool. Should we not know what the impact on this sensitive area would be before we build it?	ENV-2
1/7/2022	314.03	Kathryn Turpin	I am opposed to any kind of a "double decker" road over Town Lake or Zilker Park - or the City's nature preserve by the Botanical Gardens. No more park land or resources should be taken without serious and thorough deliberations - including all alternatives. Besides - isn't Austin considering destroying the double decker lanes on IH 35 because those double decker lanes have not been a long-term solution to traffic?	D-2 CR-2
1/7/2022	314.04	Kathryn Turpin	There are many other less extreme alternatives, that would have far less adverse consequences on the environment and the surrounding area. These other less extreme alternatives should be fully considered first.	ALT-1
1/7/2022	314.05	Kathryn Turpin	The traffic data should be updated, and the updated results should be provided to the public, so the public has the most current and accurate information.	RP-2 RP-1
1/7/2022	314.06	Kathryn Turpin	I urge CTRMA to give more consideration to other alternatives than simply adding toll lanes. Have toll lanes been that successful in Austin in relieving traffic flow?	ALT-5 TF-1 PN-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	314.07	Kathryn Turpin	Climate change must be one of the factors that is considered in this process. We have all become much more aware of the significant - and immediate - effects that climate change is having on each of us individually and as communities. Our community leaders should lead on this issue.	ICI-2
1/7/2022	315.00	Laura Fairbanks	My name is Laura Fairbanks and I've lived in Austin the last 45 years. What I love about Austin is Barton Springs and green space trails available in the heart of Austin -so important for well being of Austin residents. This project will have adverse environmental impacts on all of those those areas. Austinites in the past have worked very hard to keep the green space clean for future generations. I will continue their efforts because nature is so important for all of us. We must respect and appreciate what it contributes to our lives.	ENV-2 Soc-3
1/7/2022	316.00	Leigh Ziegler	Please look for alternative options to adding lanes to Mopac and resist adding impervious cover to the heart of Austin South which holds the most viable residential and greenspace near downtown. Help to preserve the lifeblood of Barton Springs, Zilker Park and the trails as well as the livelihood of nearby residences. At some point it may be necessary to add a single lane to each side but at this time please consider all alternatives coordinated with plans for I-35 and give attention to the value, character and ecology that draw so many to the area. Find another way!	ALT-1 ENV-2 Soc-3 RP-7
1/7/2022	317.01	Linda Scott	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2022	317.02	Linda Scott	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/7/2022	317.03	Linda Scott	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	317.04	Linda Scott	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/7/2022	317.05	Linda Scott	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	317.06	Linda Scott	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/7/2022	317.07	Linda Scott	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/7/2022	317.08	Linda Scott	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	317.09	Linda Scott	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2022	317.10	Linda Scott	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
				SOC-1 WQ-2
1/7/2022	318.00	Lindsay Castaneda	I am writing to comment on the MOPAC south expansion project. This is not the time to work on this action of town. We are dealing with construction all over south Austin and do not need any more. The infrastructure should have been in place before we allowed the city to grow in the manner it has. As a parent of Austin High students , a project this size would drastically impact traffic flow in and out of campus. We also have a lot of new high school drivers on that road as well , they don't have the skills to drive in the chaos of construction.	TO-1 RP-7 PN-1
1/7/2022	319.01	Lynn Boswell	I'm writing to you as someone who lives near MoPac in central Austin and also as the Austin ISD Trustee for District 5, a single-member district that includes Austin High and much of Central, West Central and near Southwest Austin. Virtually everyone in the area I represent will be impacted greatly by the decisions made about MoPac South. And most students in this area will eventually pass through Austin High before they graduate from Austin ISD. So while I am speaking for myself, rather than on behalf of the AISD board, I am also in a unique position to share what I am hearing about the MoPac South project from many people in this part of the Austin ISD community.	Comment noted.
1/7/2022	319.02	Lynn Boswell	I am hearing two broad categories of interest and concern. First, people remain deeply supportive of ensuring that there are no direct connector ramps near Austin High School,	OCO-2 TO-1
1/7/2022	319.03	Lynn Boswell	and that any changes made are designed to minimize congestion, air pollution, and noise near the campus,	AQ-1 TN-1
1/7/2022	319.04	Lynn Boswell	and to maximize safety for drivers, cyclists and pedestrians.	SF-1
1/7/2022	319.05	Lynn Boswell	Second, people feel the need for more time and information to ensure they are up to speed and fully informed. That includes an interest in more detail about the proposals people are being asked to choose among, an interest in up-to-date information that can be used to make up-to-date decisions, and the chance to engage more deeply and meaningfully as we are invited to re-engage after a hiatus of more than five years.	PI-1 PI-4
1/7/2022	319.06	Lynn Boswell	I know that the Austin High community and previous D5 Trustee Amber Elenz were deeply involved in the original phase of planning for MoPac South, with the goal of ensuring that impacts on Austin ISD schools, especially Austin High, were considered. As a parent, I followed this project during its early phase. As a trustee, I have discussed the initial phase of engagement, concerns and AISD-related priorities with Trustee Elenz and many of the parent advocates who were most involved until 2015. I have also encouraged current families to engage with the process as it begins to move forward again.	Comment noted.
1/7/2022	319.07	Lynn Boswell	Because Austin High is located at the intersection of MoPac and Cesar Chavez, this project has the potential to have especially large impacts on the campus and the people it serves. Students travel to Austin High from the north, the south, and the east. Traffic is congested at pickup and dropoff, which coincide with busy times for downtown, as well. There are safety issues for new drivers, for cyclists, for pedestrians, and for others who use the roads and trails near Austin High. Exhaust from cars impacts athletes who practice on fields adjacent to the busy highway. And high levels of noise from traffic have the potential to impact students' ability to learn. The campus serves more than 2300 students, and most children in West Central and near Southwest Austin will be students at Austin High at some point. Decisions made about South MoPac will impact the campus community long into the future, along with all who use the roads and parks in the area.	TO-1
1/7/2022	319.08	Lynn Boswell	I appreciate that the focus on designs that avoid direct connector ramps near Austin High is included in the Virtual Open House, and I have highlighted that fact when I have shared information with people. While that captures one of the most essential concerns that I am hearing, the details will matter greatly, and people are very interested in learning more about each proposal and having a more meaningful chance to share what matters to them currently. I am hearing from people new to this conversation that the Virtual Open House does not provide the opportunity to do that in a way that is clear enough or current enough. People want and need greater detail about what's being considered. They are interested in current data that can ensure decisions are made for the Austin of 2022 rather than the Austin of 2015. And many are asking for more time and opportunities to learn and to be heard before the next important decisions are made.	RP-2 RP-1 PI-1 PI-2
1/7/2022	319.09	Lynn Boswell	One wonderful and frustrating feature of campus communities is that populations are, in part, transient. Students are deeply connected to their communities while they are part of a specific school. Parents engage deeply with the schools their children currently attend. And while teachers and administrators often serve as a thread that unites one group of students and families with the next, they also move on. Most families who had students at Austin High in 2015 are no longer part of the AISD community, because their children have graduated. They care deeply about the school, but they are no longer encountering day-to-day traffic concerns near campus. Austin High also has a new principal, who does not yet have the detailed knowledge that the previous principal had amassed about MoPac South and its impacts in the area. Because of this, most people at Austin High and many people in AISD new to the conversation about MoPac South, especially as it relates to their current campuses.	Comment noted.

Comment Response Matrix

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1/7/2022	319.10	Lynn Boswell	As you move forward, I hope you will respond to the community's concerns by extending the January 7 deadline for this phase of the project, by offering more detail about what's being considered, and by bringing the data that's being shared and relied on up to date so it reflects current conditions.	PI-1 PI-7
1/7/2022	319.11	Lynn Boswell	As someone who drives in this area frequently and also spends a great deal of time in the parks near MoPac and Lady Bird Lake, I also want to share some comments about the plan itself. First, I strongly support the priority of keeping any direct access away from Austin High. Second, if access moves forward at Cesar Chavez, I hope it will be placed as far north as possible, near the bluff that faces Lady Bird Lake, leaving as much space as possible for parkland north of the lake and for safe access near Austin High.	OCO-5 TO-1
1/7/2022	319.12	Lynn Boswell	Third, I hope that any plan will prioritize protecting future development of the City of Austin's Lamar Beach Plan, in case that ever moves forward. That plan includes thoughtful planning about traffic patterns, greater safety for people who use the park and trail, and important enhancements to public land in a much-loved and heavily-used area.	CR-2
1/7/2022	319.13	Lynn Boswell	Finally, I ask that Austin ISD be included in MoPac South planning as an important stakeholder in this process, as a major landholder in an area that is deeply impacted by MoPac and its connectors, as a valued partner in seeking solutions, and as an essential part of the future and success of the community we all love and share.	PI-9 PI-12
1/7/2022	320.01	M.M. Holder Anderson	Comments: Please extend the comment period so Our Citizens can have time to send information, It is still too close to the holidays, and the latest Covid surge has crippled our populous from having our time and ability to study and give feedback ! Below are some examples of issues that still need to be addressed: Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2022	320.02	M.M. Holder Anderson	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/7/2022	320.03	M.M. Holder Anderson	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	320.04	M.M. Holder Anderson	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/7/2022	320.05	M.M. Holder Anderson	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	321.01	Marsha	This project is a grave mistake and will do more damage overtime to the environment, endangering so many things too many to list. There is a reason why people pay much higher prices on the west side they don't want another 1 35 In Austin. No one wants this - especially the neighborhoods that live on either side. I can see you all getting many class action law suits for devaluing neighborhoods and increase in pollution, crime, billboard trash, ruin of trees and natural trails will be polluted around the precious green belt. This is Not a green solution. You should have bought the railroad when you had the chance.	ENV-2 SOC-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	321.02	Marsha	Also extend feedback for another month- it is sneaky to do this short time- during the holidays and a raging pandemic - that is equivalent to suppression of citizens voices.	PI-1 PI-3
1/7/2022	322.01	Mary Lou Bell	Please reconsider the plan to build a double decker highway.	D-2
1/7/2022	322.02	Mary Lou Bell	I am a docent at Zilker Gardens which is beloved by families and school children (many busloads of school children visit the gardens annually). The noise now is deafening and more lanes would be disastrous not to mention that the land must be preserved for parkland, not highway.	CR-2 TN-1
1/7/2022	322.03	Mary Lou Bell	That is not the Austin way. There must be other solutions. MoPac is a local thruway that goes thru neighborhoods and shouldn't be used by trucks.	EL-2
1/7/2022	323.01	Mike Murphy	Extend the Comment period for 30 days. Calling for comments from the public over the holidays amounts to discouraging public comment as people are distracted by other obligations.	PI-1 PI-3
1/7/2022	323.02	Mike Murphy	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property	D-2 CR-2 TO-1
1/7/2022	323.03	Mike Murphy	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/7/2022	323.04	Mike Murphy	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	324.00	Monica Solomon	Please DO NOT build double decker bridge over Zilker Park. We said no to this before and we say no now!!!!	D-2
1/7/2022	325.00	Nelissa Conners	I am against the proposed tollway and any tollway in Texas. Tollways are a gift to the wealthier class. Living in Austin is getting too expensive and is unaffordable for many. Roadways should be fee to use.	TF-1 EL-1 EJ-1
1/7/2022	326.00	not provided	<p>Before you try to "fix" MoPac, connect 45 to 290 and 35. Also buy new ROW for new thoroughfares. You keep compounding traffic issues by using the same old roadways. You laughed at 130 when it was proposed and now look at its use. A major thoroughfare plan for the next 75 or 100 years is needed. Your plan is weak just like your Slaughter intersection design than wasn't needed based on your design projected traffic counts. It's cute but that's all. It's never used to capacity even at peak times. That's because 90% of the traffic flows thru on MoPac. The other waste is your concentration on bike lanes. Another complete waste of pavement and money not to mention poor, poor utilization. Taking up half of the travel lanes like on Escarpment is ridiculous and not financially feasible. To use vehicle pavement thicknesses for bikes is not engineering logic. Keeping your bike department justified is more logical. Now I see you're putting physical objects in roadways or streets. That concept went out when "islands" and speed bumps were determined to cause more harm than good. I base my comments on being a registered professional civil engineer in Texas since 1978.</p> <p>Connect 45 to 290 and 35. That makes so much sense.</p> <p>These environmental folks cry about the aquifer issue. Austin does not take any water from the aquifer to the best of my research. Also the Barton Creek screamers don't realize that the two city water intake facilities are upstream from the Barton Creek discharge point and take water from the Colorado River.</p>	RP-3 TxDOT-2 WQ-1
1/7/2022	327.00	not provided	Volta offers free electric vehicle charging stations who are there no electric Vehicle charging station in Barton Springs	OOS-1
1/7/2022	328.00	Owen Rug	I am opposed to a double decker bridge going over Lady Bird Lake and I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	D-2; see responses to Travis County and Rollingwood

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	329.01	Robin Bradford	I'm writing as a 30-year Austin resident and lover of Austin's natural paths and waterways for recreation and quality of life. A register voter (78756), I request that you: Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2022	329.02	Robin Bradford	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/7/2022	329.03	Robin Bradford	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	329.04	Robin Bradford	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 RP-6 PN-1
1/7/2022	329.05	Robin Bradford	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	329.06	Robin Bradford	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	See RP-6 ICI-1 SOC-1
1/7/2022	329.07	Robin Bradford	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/7/2022	329.08	Robin Bradford	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	329.09	Robin Bradford	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2022	329.10	Robin Bradford	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/7/2022	330.01	Rodolfo Carrera	Please, Extend the comment period at least 30 days.	PI-1
1/7/2022	330.02	Rodolfo Carrera	Prepare a full Environmental Impact Statement (EIS).	ENV-1
1/7/2022	330.03	Rodolfo Carrera	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.	D-2
1/7/2022	330.04	Rodolfo Carrera	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement.	ALT-3 Alt-6

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
				D-9 PN-1
1/7/2022	330.05	Rodolfo Carrera	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."	RP-1 PI-7
1/7/2022	330.06	Rodolfo Carrera	Analyze real alternatives to added toll lanes.	ALT-1
1/7/2022	330.07	Rodolfo Carrera	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	330.08	Rodolfo Carrera	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2022	330.09	Rodolfo Carrera	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 ICI-1 SOC-1
1/7/2022	331.01	Roy Waley	The Austin Regional Group of the Sierra Club wants to thank you for your service and submit the following comments. First. Please extend the current comment period by a minimum of 30 days to accommodate the spike in the Covid-Omicron virus and variant. This in addition to the Holiday Season most certainly has been a distraction. No more citizens will have an opportunity to more fully focus on the this very important issue.	PI-1
1/7/2022	331.02	Roy Waley	Second. Make certain the most updated information is available to the Public. Please wait for the updated modeling data from the upcoming 2045 studies so you and the Public and thoroughly vet all alternatives. We all deserve this info.	PI-7 RP-1
1/7/2022	331.03	Roy Waley	Also note this project will be built in the recharge zone of the Barton Springs section of the Edwards Aquifer. This is critical habitat per the U.S. Fish and Wildlife Federally protected Barton Springs Salamander and Austin Blind Salamanders.	WQ-1 TES-1
1/7/2022	331.04	Roy Waley	Therefore a complete and full Environmental Impact Study should be done as opposed to an Environmental Assessment. Again the EPA should expect this much. The oversight is changing and increasing from the previous administration. Also please note that in addition to protecting a Federally designated Endangered Species the Barton Springs/Edwards Aquifer provides clean drinking water to over 60,000 homes. This is covered by the Safe Drinking Water Act.	ENV-1 TES-1
1/7/2022	331.05	Roy Waley	The Barton Springs Historic District and Zilker Park District are listed on the National Register of Historic Places. Both will be adversely impacted by a project of this magnitude.	CR-2
1/7/2022	331.06	Roy Waley	The CTRMA estimated additional 35 minutes of congestion time is poorly substantiated. For one it doesn't consider alternative transportation proposals such as the voter approved Project Connect forthcoming projections.	RP-2 RP-1
1/7/2022	331.07	Roy Waley	These were primarily passed to help mitigate the impacts of Climate Change. CTRMA should be working to decrease the dependence on fossil fuels, Building expensive fossil fuel dependent oil based doesn't help reach those goals.	ICI-2
1/7/2022	331.08	Roy Waley	A key word in your title is MOBILITY. Please work to find ways to increase mobility without increasing car lanes that advancing technology will soon render obsolete. Indeed the Times Are a Changing. Have the foresight to change with them. Change your perspective and prepare for the real future.	ALT-1 MA-3 T-1 BP-1
1/7/2022	331.09	Roy Waley	We have other comments also. At the very minimum we ask for an extension of the comment period.	PI-1
1/7/2022	332.00	Samuel Clintoc	We are submitting this input on behalf of the Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to our immediate physical proximity to Mopac, we have significant interest in how the expansion plan is developing in our area and the impact it may have to our immediate environment and to the use of our property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, our property is heavily used for the traffic and parking needs for the major events in our city park. We appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. We are also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. We have concerns with some of the options that are being considered at this time. As much as it is our desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, we	See response to comment 489.

Comment Response Matrix

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			<p>believe we need the assistance of professional input from traffic and other experts on the impact these proposals would have on our property. At this early stage, we are aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:</p> <p>(1) We are concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. We support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in our location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.</p> <p>The option of adding noise-preventing walls would cause our intersection to be covered with concrete, instead of preserving the green environment the community enjoys today. Every spring, we have lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of our property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. We would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.</p> <p>Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. We have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. We do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.</p> <p>(2) We are concerned for what impact the current plans will have on ingress-egress to our property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact our exit lane (currently it is on the north of the Mopac exit ramp to 2244). We want to ensure that moving the ramp to the north would not negatively affect our ability to use our property exit.</p> <p>(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. We are concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). We realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, we cannot support any options that might inhibit the future development of this intersection.</p> <p>Thank you for the opportunity to submit our comments and concerns. We look forward to being able to discuss these matters further with your staff. Feel free to contact our Senior Pastor, Dr. V. Samuel Clintoc at sclintoc@parkhillsbaptist.church.</p>	
1/7/2022	333.01	Save Barton Creek Association via Sydney Garcia	<p>Please see the attached comments related to the MoPac South Toll Project.</p> <p>Save Barton Creek is dedicated to protecting Barton Springs, the Onion and Barton Creek watersheds, and the Barton Springs Edwards Aquifer. In addition, we support water quality protection in all Austin and Central Texas creeks.</p> <p>We would like to serve as a resource to you as you make decisions affecting the fragile Barton Creek watershed.</p> <p>Save Barton Creek Association would like to submit the following official comments for consideration to the MoPac South Environmental Study virtual open house.</p>	PI-12
1/7/2022	333.02	Save Barton Creek Association via Sydney Garcia	<p>The Central Texas Regional Mobility Authority (CTRMA) is resuming its efforts to add a double-deck toll bridge over Zilker Park, Lady Bird Lake, and Austin High School, and to add 4 toll lanes (2 each way) to South Mopac from Cesar Chavez to Slaughter Lane. This initiative was abandoned in 2015, but quietly resurfaced at the very end of 2021. The CTRMA is asking the public to review and comment on the materials, exhibits, and information in its MoPac South Environmental Study by January 7, 2022. The materials provided on the mopacsouth.com website appear to be the same materials from the original study in 2015 with limited updates. We respectfully ask the CTRMA to extend the comment period for at least 30 more days and to make ALL comments submitted before 2022 available for public record at this time. Providing such a limited comment window — and during the holiday season — has not allowed the public to learn about this issue and respond accordingly. There have been many important comments submitted on this issue since 2015 that continue to be relevant and need continued consideration. SBCE is monitoring the MoPac South proposal because of its inevitable impact on an environmentally sensitive area that includes Barton Creek, Barton Springs, and the Edwards Aquifer Recharge Zone.</p>	PI-1 PI-8

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	333.03	Save Barton Creek Association via Sydney Garcia	SBCA supports the Travis County Commissioners Court in their multiple concerns and suggested alternatives.	See response to Travis County
1/7/2022	333.04	Save Barton Creek Association via Sydney Garcia	We strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with updated data and information for all alternatives when it is available, before a preferred alternative is selected. This will ensure that the public has access to the best information available when providing feedback. It also will provide the CTRMA with useful, informed public input to consider when evaluating alternatives, rather than public input based on analyses done several years ago.	PI-7 RP-1
1/7/2022	334.00	Save Our Springs via Kelly Davis	<p>Save Our Springs Alliance ("SOS Alliance") submits the following comments on the proposed MoPac South project and the potential alternatives identified in Open House #5.</p> <p>SOS Alliance appreciates this opportunity to provide initial comments and requests that these comments and attachments be made part of the official public record. The CTRMA proposes to add tolled express lanes to MoPac South from Cesar Chavez to Slaughter Lane, a distance of approximately 8 miles. CTRMA's Open House #5 materials present six alternatives, all involving the addition of two to four toll lanes along the corridor. CTRMA is specifically seeking comment on: Project goals and objectives; mobility, connectivity, and safety concerns; express lane(s) operational configuration options; and environmental constraints.</p> <p>PROCESS COMMENTS</p> <p>1. Extend the Current Comment Period</p> <p>CTRMA should extend the comment period on this Open House #5 by at least 30 days. The comment period for this project fell entirely within the holiday season, during a surge in COVID cases due to the Omicron variant. People who otherwise have a great interest in this project have been distracted with travel, holidays, and sickness. CTRMA should show good faith that it takes robust public input seriously by extending the current comment period.</p> <p>2. Give the Public an Opportunity to Comment on the Most Up-to-Date Data Before Selecting a Preferred Alternative</p> <p>The public-commenting process is also plagued by CTRMA's decision not to use the most up-to-date data and modelling from the 2045 CAMPO model in this round of public comments. The Open House slides indicate that the proposed alternatives are based on the 2035 CAMPO model, which was developed in 2010. But the slides indicate that later (after the close of the comment period), CTRMA will update its modeling with the 2045 data. SOS Alliance acknowledges that, at the January 4, 2022 Travis County Commissioners' Court meeting, CTRMA Executive Director James Bass stated the reasoning behind the agency's decision, and that the CTRMA may give the public another opportunity to submit comments based on the 2045 data before the preferred alternative is selected. But as it currently stands, CTRMA has asked the public to comment on irrelevant, outdated information. SOS Alliance concurs with the comments submitted by the Travis County Commissioners Court and Amy Pattillo regarding the deficiencies of the Open House #5 public comment period, and urges CTRMA to present 2045 data to the public during the initial public scoping process.</p> <p>SUBSTANTIVE COMMENTS</p> <p>1. Prepare an Environmental Impact Statement, Rather than an Environmental Assessment</p> <p>CTRMA has indicated it will prepare an Environmental Assessment (EA) for the project. As you know, this portion of roadway overlies the recharge zone for the Edwards Aquifer, the most ecologically sensitive region in Texas.1 As such, any road improvements that substantially increase vehicle miles traveled over this area, given the concomitant direct and indirect impacts associated with road construction, operation, and the subsequent urbanization that surely follows, is likely to have a significant environmental impact. In that regard, it defies common sense for CTRMA to be focusing its efforts on developing an environmental assessment in lieu of a full environmental impact statement (EIS). It also defies federal and state regulations that require an EIS be prepared where it is "likely" that an action has "a significant impact on the environment."2</p> <p>In considering whether the effects of the proposed action are significant, current NEPA regulations explain that:</p> <p>[A] gencies shall analyze the potentially affected environment and degree of the effects of the action... In considering the potentially affected environment, agencies should consider, as appropriate to the specific action, the affected area (national, regional, or local) and its resources, such as listed species and designated critical habitat under the Endangered Species Act.</p>	<p>Process Item 1 : PI-1</p> <p>Process Item 2: PI-4, PI-7, RP-1 and RP-2</p> <p>Substantive Item 1: ENV-1</p> <p>Substantive Item 2: ICI-1, RP-4</p> <p>Substantive Item 3: ECO-1, D-2, Soc-2, TN-1, CR-2, TO-1</p> <p>Substantive Item 4: Alt-3, Alt-3.1, Alt-4, D-9, PN-1</p> <p>Substantive Item 5: RP-6, ICI-1, T-4, SOC-1</p> <p>Substantive Item 6: TO-2</p> <p>Substantive Item 7: ICI-2</p> <p>Substantive Item 8: WQ-1, WQ-2</p>

Comment Response Matrix

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			<p>Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend only upon the effects in the local area.</p> <p>40 C.F.R. § 1501.3(b)(1).</p> <p>The potentially affected environment here includes areas of significant ecological and cultural significance. The project will affect the Edwards Aquifer, Barton Springs, Zilker Park, the Hike and Bike Trail, Lady Bird Lake, Austin High School, Barton Creek Greenbelt, and federally listed endangered species. These impacts will be significant, in part, because:</p> <ul style="list-style-type: none"> - The project would lie entirely within the environmentally vulnerable recharge zone of the Barton Springs segment of the Edwards Aquifer, which provides habitat for the federally endangered Barton Springs and Austin blind salamanders. The U.S. Fish and Wildlife Service has designated Barton Springs as critical habitat for the endangered Austin blind salamander under the Endangered Species Act. - The Zilker Park Historic District and Barton Springs Historic District are listed on the National Register of Historic Places. In addition to these historic places, the Deep Eddy Historic District and the American Legion-Charles Johnson House would also be impacted. - The Barton Springs segment of the Edwards Aquifer is an EPA-designated sole-source aquifer under the Safe Drinking Water Act and provides drinking water to approximately 60,000 Central Texans. <p>If at any point in this process, it is determined that a significant environment impact is likely, a full environmental impact statement (“EIS”) must be prepared. 23 C.F.R. § 771.119(i) (“If, at any point in the EA process, the [Federal Highway] Administration determines that the action is likely to have a significant impact on the environment, the preparation of an EIS will be required.”);³ Sierra Club v. U.S. Army Corps of Eng’rs, 446 F.3d 808, 815 (8th Cir. 2006) (“If significant environmental impact is likely, an environmental impact statement is required.”); High Sierra Hikers Ass’n v. Blackwell, 390 F.3d 630, 640 (9th Cir. 2004) (“If the EA establishes that the agency’s action ‘may have a significant effect upon the environment’ then an EIS must be prepared.” (emphasis added)). After all, the purpose of this initial study is to simply help the CTRMA decide if an EIS is needed, not substitute for one. See Sierra Club v. Marsh, 769 F.2d 868, 875 (1st Cir. 1985).</p> <p>In the case of the proposed addition of lanes to MoPac South, an EIS is needed given that the project will have a significant impact on the human and natural environment. Any road project that substantially increases vehicle lane miles over this area, given the concomitant direct and indirect impacts associated with road construction, operation, and the subsequent urbanization that surely follows, are likely to have a significant environmental impact. Indeed, some alternatives under consideration—elevated toll lanes—will have dramatic impacts on the social and economic environment as well as to the natural environment. Such impacts are significant and warrant the type of analysis developed in preparing an EIS.⁴</p> <p>At the January 4, 2021 Travis County Commissioners Court Meeting, CTRMA Executive Director James Bass indicated that CTRMA would prepare an EA, and if the project was found to have significant environmental impacts, the agency would prepare an EIS. But for reasons discussed above and below, the bar for preparing an EIS—likely significant impacts—is more than cleared, and preparing an EA first will only add unnecessary costs and delays in finding an effective solution for congestion on MoPac. If the CTRMA makes a Finding of No Significant Impact (FONSI) based on the EA, the decision could be vulnerable to judicial challenges.</p> <p>In sum, due to the impacts on water, recreational, historic and cultural resources, as well as the effect to listed endangered species and their habitat, this project will have significant impacts on the local environment.⁵ An EIS is warranted. We ask only that CTRMA do what the law requires it to do, and what other transportation agencies have already recognized they must do in similar situations⁶- initiate a process whereby an EIS is developed. Only through the EIS process can a full and complete understanding of the impacts associated with roadway improvements along MoPac South be developed so that the public can make an informed choice about such improvements.</p> <p>2. The EIS Must Evaluate this Project in the Context of Other Nearby Road Projects.</p> <p>In 2015, SOS Alliance urged CTRMA and TxDOT to study the entire 18-mile proposed SH 45 SW/South Mopac expansion toll loop as the real project that was together</p>	

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>transforming southwest Austin. The three projects (SH 45 SW, MoPac Intersections, and MoPac South) have instead been pushed piecemeal onto the Austin community and current Mopac commuters. But it is not too late, and indeed it is incumbent upon the CTRMA, to examine the effects of MoPac South in the context of the recently completed road projects that also lie over the Barton Springs Recharge Zone. Analysis of the impacts of this project must take into account the effects of these and other road projects past and currently under construction, such as the Oak Hill Parkway. It is the cumulative impact of so many projects on the Recharge Zone that poses the greatest threat to the Edwards Aquifer and Barton Springs.</p> <p>3. The Preferred Alternative Should Not Include a Double-Decker Bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.</p> <p>Elevated lanes over MoPac—presented in the slides as “direct connections”—would have substantial impacts on the natural and human environment that are not justified by any presumed time-savings. The double-decker would forever change the look and feel of Zilker Park, Lady Bird Lake, the Butler Hike and Bike Trail, the Zilker Botanical Garden, the Austin Nature and Science Center, and Austin High School. In addition to the visual intrusion, there would be more noise and light pollution. The beauty and charm of this special area—part of what makes Austin Austin—would be transformed to a highly urbanized and industrial area.</p> <p>4. The EIS Should Evaluate Alternatives that Do Not Involve Adding Toll Lanes to MoPac.</p> <p>The six “alternatives” presented in the Open House are all a variation on adding toll lanes (two to four) to South MoPac, with and without direct connections to downtown. The EIS should fully and fairly evaluate alternatives that improve traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour high-occupancy vehicles (HOVs) and public transit, and utilizing ramp metering. These alternatives involve little to no additional pavement, cost relatively little, and could be pursued in the interim as a test solution before embarking on a financially and environmentally costly large-scale toll project.</p> <p>According to past materials and correspondence, the Environmental Study of Mopac South only evaluated one HOV lane in each direction against two toll/managed lanes in each direction. CTRMA should evaluate two HOV lanes in each direction against two toll/ managed lanes. An additional alternative has been seen in Seattle, Denver, and other cities, which have effectively managed congestion with lower cost projects by adding HOV lanes that change direction based on the time of day. CTRMA should also evaluate this alternative as part of the Mopac South study.</p> <p>Fairly evaluating these alternatives would be in accord with CTRMA's stated mission to “implement innovative, multimodal transportation solutions that reduce congestion and create transportation choices that enhance quality of life and economic vitality.”</p> <p>5. Analyze Alternatives in the Context of Changing Driving Habits and Induced Demand</p> <p>In conjunction with these evaluations, the EIS should use updated traffic modelling that takes into account changes in driving habits in a post-COVID world. Tele-commuting, flexible work schedules, and other technological and societal changes have largely eliminated the necessity of spending upwards of half a billion dollars trying to accommodate previously predicted “single-occupancy vehicle peak hour demand” increases. CTRMA should use the most updated traffic modeling that includes COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap in tele-commuting means a different world in the future. The CAMPO models—whether for 2035 or 2045—have no conception of this new world.</p> <p>A fair evaluation of alternatives and their relative costs and benefits must also acknowledge the issue of induced demand that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.⁷</p> <p>6. Do Not Ignore the Challenge of Getting Mopac Traffic from the Off and On Ramps at Cesar Chavez All the Way Into and Out of Downtown.</p> <p>Adding express lanes to South MoPac will mean more traffic downtown, especially via Cesar Chavez. The east-west ramifications of adding traffic to MoPac should not be ignored in the environmental study of this project.</p>	

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>SOS Alliance observes that is exactly what happened when the MoPac Improvement Project was being studied. Not long after the “MoPac Improvement Project” opened, there was noticeable increase in traffic on Cesar Chavez—about 25% increase in the first two months. 8 CTRMA’s then-Executive Director, Mike Heiligenstein, stated that CTRMA did not model traffic on Cesar Chavez because its traffic modelling was focused only on the MoPac Corridor.9</p> <p>Expanding MoPac will have repercussions to beyond just the MoPac corridor, and this time, CTRMA should pay attention and figure that into its calculus if the agency truly wants to alleviate congestion in the Austin area.</p> <p>7. Analyze the Climate Change Impacts of Building More Capacity for Single- Occupancy Vehicles</p> <p>There is no mention in the Open House #5 materials about climate. The extreme weather events of the past few years have shown with increasing alarm the effects climate change is already having on our planet. And transportation-related emissions are responsible for 30-40% of the region’s greenhouse gas emissions.</p> <p>The City of Austin has made a serious commitment to reducing our region’s contribution to climate change, via the Austin Community Climate Plan and the recently adopted Climate Equity Plan. CTRMA’s project should reflect those same community values.</p> <p>Moreover, the cement industry is one of the main producers of carbon dioxide. The EIS should calculate how much cement will be needed to build each alternative, and the carbon footprint of each.</p> <p>8. The CTRMA Should Buy Mitigation Land to Offset Increases in Impervious Cover.</p> <p>To offset the impacts to water quality from the increase in impervious cover from the MoPac South project, the CTRMA should acquire land in the Recharge Zone to be set aside for permanent protection. The land could be bought in fee simple or preserved through conservation easements. In addition to the impervious cover from the project itself, the induced development created by the project will lead to even more impervious cover on the Recharge Zone, making it even more important to have land to help mitigate the impacts of that increased impervious cover. In 2007, the U.S. Fish and Wildlife Service wrote a white paper explaining why mitigation land was needed to offset water-quality impacts that would adversely affect endangered species, see attached.</p>	
1/7/2022	335.01	Sue Carter	<p>> We understand that today is the final day to comment on the proposed Mopac South project, and wish to have our comments included in the public record.</p> <p>></p> <p>> We believe this project is a terrible idea, and has not received adequate (and required) environmental review.</p>	ENV-2
1/7/2022	335.02	Sue Carter	<p>> This project poses potentially severe impacts to our immediate neighborhood and the activities we most cherish as Austin residents.</p>	SOC-3 Soc-1
1/7/2022	335.03	Sue Carter	<p>> It appears that the project as proposed would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. This will create substantial adverse impacts on Barton Springs (which feeds Barton Springs Pool and Lady Bird Lake), the Trail, the High School, Zilker Park and the Barton Creek greenbelt.</p>	WQ-1 CR-2 TO-1
1/7/2022	335.04	Sue Carter	<p>> How can a project of this scope, in such an environmentally sensitive area, not have significant environmental impacts? - including on the two federally protected salamander species living in the area?</p>	TES-1
1/7/2022	335.05	Sue Carter	<p>We do not believe adding another lane to MoPac will improve traffic problems. The traffic modeling data appears to be based on a 2009 model. It must be updated to use current data as part of the environmental review.</p>	RP-2
1/7/2022	335.06	Sue Carter	<p>The alternatives assessed in the review do not include a full evaluation of a “no build” alternative that improves traffic flow utilizing readily available methods included but not limited to dedicated HOV lanes, public transit, and ramp metering.</p>	ALT-1 ALT-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	335.07	Sue Carter	We believe that climate change is an urgent and immediate problem. The environmental review must analyze the impacts of building more capacity for single-occupancy vehicles, and seriously assess the cumulative impact of ignoring an opportunity to redirect Austin's transportation planning towards a more sustainable path.	ICI-2 T-3 RP-7
1/7/2022	336.00	Thomas Serhus	This is a short-sighted, archaic way of providing access around Austin. It would cause irreparable damage to the lake and trail areas - AND it would be an awful aesthetic.	ENV-2
1/7/2022	337.00	Tom Cole	I strongly believe there are numerous reasons not to proceed with this project, so please at least allow a reasonable opportunity for the public to review the current data and then provide informed feedback.	PI-1
1/7/2022	338.00	Zenobia Joseph	<p>1. Austin's Black History: Time changes, but much remains the same. October 20, 1995 "The Clarksville Effect: Austin Tragedy or Neighborhood Victory?" appeared in The Austin Chronicle regarding Loop 1/Missouri Pacific ("MoPac") noting, in part: The gentrification of Clarksville, or at least the displacement of its black residents, dates back to about 1904, when speculators tried to have the settlement condemned as a health hazard. At that time, blacks owned substantial property between Lamar and West Lynn, as well as almost all of the area between West Lynn and today's MoPac, where the core of Mary Baylor's Clarksville remains. These holdings steadily shrank, sometimes under pressure from covetous white speculators, often because their owners found better land elsewhere, typically a combination of both. When the city enacted its fullest Jim Crow laws in 1928 - consigning 'all facilities and conveniences [for] the Negroes' to East Austin 'as an incentive to draw the Negro population to the area' - Clarksville seemed doomed. ... After five decades of trying, Clarksville neighborhood leaders, including Mary Baylor, had managed to procure from the city - as described back then by longtime (and current) Sweet Home *pastor Rev. W.B. Southerland - 'the neighborhood center, some playground equipment, and six stop signs.' Then came MoPac, which wiped out 64 out of 168 black-owned Clarksville homes, and displaced nearly 200 people far more efficiently than any transplanted yuppies from San Jose. When the Crosstown Expressway project - which also begat, indirectly, the recent Swede Hill brouhaha - threatened to wipe out the other half of the neighborhood, Clarksville residents took the city to court, got the neighborhood deleted from the freeway plans, and won state and federal historic designations for the neighborhood. The latter were opposed by the city's Historic Landmark Commission, whose opinions about Clarksville presaged *Eric Mitchell's recent remarks about similar areas of the Eastside - gasoline and matchbooks. 1 [Note: *Southerland passed away (May 27, 1934-August 14, 2004); Former Councilman Mitchell died in 2011.]</p> <p>2. Title VI of the Civil Rights Act of 1964 Disparate Impacts: In 2017, Capital Metropolitan Transportation Authority ("Capital Metro") Chief Counsel Kerri Butcher attempted to withhold information about \$4M North Lamar Transit Center ("NLTC") proposed redevelopment; 7 of 9 routes were due to be unilaterally eliminated. Loop 1/MoPac-North construction delay commuter notices were posted, but there were no notices for NLTC minorities—illustrating a lack of transparency that continued throughout Service Plan 2025, rebranded Connections 2025 then Cap Remap June 3, 2018 when 52 routes changed to serve South/West/Central Austin white choice riders and Southeast/Dove Springs Hispanics with 15-minute headway—three of 5 routes created below Service Guidelines and Standards—at the expense of Northeast Austin Blacks and minorities north of US 183/NLTC.</p> <p>• See April 5, 2017 Texas Attorney General Opinion/response to my open records request, in part, compelling disclosure: https://www2.texasattorneygeneral.gov/opinions/openrecords/51paxton/orl/2017/pdf/or201707166.pdf</p> <p>Pictured here is the transit system that undergirds \$7.1B Project Connect light rail approved by voters November 3, 2020 based on equity propaganda and false ballot language conflating ridership/high-capacity transit and coverage (lifeline access/local buses). Central Texas Regional Mobility Authority's proposed Loop 1 Express Lanes Project needs to transparently acknowledge the benefit to white commuters and continuation of racial segregation by Capital Metro which continues to date.</p>	EJ-1 RP-7 EL-1
1/7/2022	339.00	William Feldott	I am not in favor of this. We do not need to try to drive traffic patterns by augmenting entrances and exits as this would create unintended issues. Additionally, with work patterns changing and/or disrupted due to COVID this would be further over reacting to a problem that may correct or mitigate itself in other ways.	RP-6 RP-7
1/7/2022	340.00	Stacy Robinson	Mopac/Barton/zilker/downtown DOES NOT NEED THIS. There is a reason we have so many highways, to avoid toll roads! You will destroy so much tourism and the fun that is Austin	PN-3 TF-1
1/7/2022	341.00	Janine Reintjes	We are opposed to the expansion of Mopac and feel the study does not take into consideration the changes post the pandemic of flexible work weeks, schedules and fewer commutes to work.	RP-6
1/7/2022	342.01	Sara Marler	Please consider an in-person or, at the least a zoom open house. It is difficult to follow/ understand the options being by presented at a virtual open house fully without explanation and opportunity for questions. A live presentation even if it is zoom is needed to better understand the options since it has been years since the actual open house.	PI-7 PI-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	342.02	Sara Marler	<p>1) In prior open houses, there were visuals with heights perspectives of the overpass in relation to the current MoPac bridge, and specifically regarding Austin High -- I am particularly interested in the details of height over the PARD/AISD shared tennis courts and the sight from the AHS north side windows where the cafeteria and library are located.</p> <p>2) I would like the engineers to give details on the sound walls and noise deflection specific to Austin High; I do see the sound walls and measurements regarding houses, but not Austin High. With a newly multi-story western expansion of Austin High, we need further information and details taking consideration of student learning and testing, and the impact of future traffic noise.</p> <p>3) I don't follow the COA proposal - need more description of where the exits are regarding Zilker Park and Bee Caves entrances and exits.</p> <p>4) I need a detailed car and bus exit and entrance ramp route for our Austin High school population who a) travel south of the river on MoPac - coming and going from Travis Country, etc. and b) travel east to East Austin via Cesar Chavez</p>	D-13 D-3 TN-1 TO-1 OCO-6 OCO-4
1/7/2022	342.03	Sara Marler	5) I can't tell if the idea of expanding the MoPac pedestrian bridge under MoPac is included - I know that was considered to make it ADA compliant. Doesn't look like it from the trail expansion exhibit.	OOS-1 OOS-1.1
1/7/2022	343.00	Ann Bernard	I do not support the proposal of a double decker bridge on Mopac near or between the 5th and 1st street exit and RM2244. This will not only harm the aesthetic of the area but create undesired noise pollution for surrounding neighborhoods. I believe the proposed idea will funnel extra traffic onto 1st street and create even more bottlenecks downtown.	D-2 Soc-2 TN-1
1/7/2022	344.00	Eric Niedert	There is a great deal of concern along the neighborhoods of South MoPac Expy./Texas Loop 1 South about the transparency of an elevated lane project amongst those in our area. We certainly want to assuage those concerns here in our HOA.	D-2
1/7/2022	345.00	Neil Pascoe	PLEASE, do not toll any additional lanes -they don't help.	Alt-5 EL-1
1/7/2022	346.00	Jason	<p>I am in favor of</p> <p>2A: Two Express Lanes with Downtown Direct Connection</p> <p>ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECTOR</p>	Comment noted.
1/7/2022	347.01	David Bauman	I beg you to reconsider this proposal for the Mopac toll lanes. We should focus on I35 instead.	TxDOT-2 TxDOT-1
1/7/2022	347.02	David Bauman	With so many people moving to central Texas, there is an excess of negative environmental run off in our creeks and rivers within an a sensitive watershed. Please for the sake of our aquifer, the enjoyment of our parks a diminishing resource in Austin do not proceed with this project.	WQ-1
1/7/2022	347.03	David Bauman	This project is costly, the existing toll lane doesn't even work well because no enforcement action is taken against folks driving under the speed limit in our express lane. By the time this project is finished it will have destroyed the character of the area, threatened our water supply with more pollution, and its purpose will be moot for how many increased cars are on the road.	ALT-5 TF-1 PN-1 ENV-2 PP-1
1/7/2022	347.04	David Bauman	I would rather see my tax payer dollars go to an above ground rail system over or alongside mopac. I will trace which politicians advocated for this and do my utmost to ensure they don't receive a second term	TF-1 RP-7
1/7/2022	348.00	Andrew Brown	No more tolls.	TF-1
1/7/2022	349.00	Wallis	You have to be kidding that we would consider adding so many lanes . . . at a time when CLIMATE CHANGE is the single-most imperative that we face. Just ask any reputable scientist that you know! This is not "alarmism": we really do face an existential crisis. The best way to respond to said crisis SURELY isn't to build more roads and improve access for cars!	ICI-2
1/7/2022	350.01	Christopher Roesel	Of the build options presented, I would most support build option 1B, one lane without direct connections. If direct connections are something that have to happen, I would prefer build option 3, the City of Austin proposal.	Comment noted.

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	350.02	Christopher Roesel	However, I strongly oppose the construction of tolled express lanes on Mopac South. Toll roads are inherently inequitable, built with the tax money of people who can't afford to drive on them, and serving those who are most able to afford them.	TF-1 EJ-1 EL-1
1/7/2022	350.03	Christopher Roesel	The tolling and billing systems operated by CTRMA have also proven to be abject disasters, billing people incorrectly and piling late fees on people who aren't even sent a bill or who didn't even drive on their toll roads, and they have shown no sign of caring to improve it after years of demonstrated mismanagement. My vote is NO tolled lanes on Mopac South.	MA-1
1/7/2022	350.04	Christopher Roesel	I look forward to reviewing detailed renderings of each build option at some point in the future before any decisions are made on how to move forward.	OCO-4 D-13
1/7/2022	351.01	David Rosenblad	This whole idea needs to go away, it was a bad idea in 2015 and it's an even worse idea now! We do not need a "western I35", and the idea of a double decker freeway there is revolting.	D-2 RP-3
1/7/2022	351.02	David Rosenblad	Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt.	ENV-2 WQ-1 CR-2
1/7/2022	351.03	David Rosenblad	Please banish this whole project, I think of something else to do, like helping trying to put all of the toll systems in the area (and Texas even) under one umbrella, one management system to keep from driving all of us crazy!	RP-7
1/7/2022	352.00	Erin Nash	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see responses to Travis County and Rollingwood
1/7/2022	353.00	Jessy Napier	This would be an absolutely terrible idea! It would change the city not for the better. As a resident of Austin for over 20 years I am absolutely against this.	Comment noted.
1/7/2022	354.01	Robert Patterson	Asphalt is not the answer. By the time any road or highway is finished, it is obsolete because of explosive growth. This plan will destroy Zilker park and surrounding neighborhoods and, ultimately, will not solve the traffic problem.	RP-7
1/7/2022	354.02	Robert Patterson	Public transit is the answer. Buses with dedicated lanes which arrive more quickly than cars stuck in traffic are the short term solution.	T-3 T-1
1/7/2022	355.01	Sam Robertson	As a former Austinite and frequent user of Mopac believe that the expansion identified, with minor changes does not solve the problem of Environmental solution.	ENV-2
1/7/2022	355.02	Sam Robertson	Park & Ride North, w/bus transportation to and thru downtown, would reduce individual automobile trips and have a more effective environmental impact.	T-2 T-1
1/7/2022	355.03	Sam Robertson	Also, since the roadways have been paid for by existing tax structures, the resulting profit from restricted lanes should be transparent and disclosed, and not just rolled into the general budget.	TF-1 TF-2
1/7/2022	356.01	Janice Toreki	This is one of the worst "ideas" our city has ever thought of foisting on us, the taxpayers and citizens who live in Austin and drive our roads regularly. It is not environmentally sound and will increase the imperious cover in the whole downtown area which is already becoming very dense. Any change to I-35 should only include re-routing any and all truck and thru traffic onto Toll Road 130. The road is there; it is underused, and currently not collecting enough tolls to break even. Propose that trucks get a much discounted rate for using 130. Please save our city. We are not AMSTERDAM!	TxDOT-2
1/7/2022	357.01	Karen Kreps	Do not proceed with this awful plan for S Mopac. It will have a disastrous effect on Barton Springs Pool and the communities south of that, where I live.	ENV-2
1/7/2022	357.02	Karen Kreps	The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2022	357.03	Karen Kreps	Please avoid taking any park land or encroaching on Austin High School property.	CR-2 TO-1
1/7/2022	357.04	Karen Kreps	The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns.	ALT-1 RP-6
1/7/2022	358.00	Vincent Musat	Please build as many lanes now that are financially viable as the growth in Austin will continue. Additionally we need to have Toll and HoV Lanes to increase the options for travel. The only good solution is a Multimodal one. Thanks for your work and efforts.	Comment noted.

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	359.01	Omaira Brightman	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see responses to Travis County and Rollingwood
1/7/2022	359.02	Omaira Brightman	I believe more time is needed to properly evaluate the impact that such a project would have on all residents located to the structure.	ENV-2
1/7/2022	359.03	Omaira Brightman	Further, any project that impacts the look and feel of the zilker park area to the negative I think is short sighted.	CR-2
1/7/2022	360.00	Jeffrey Batchelor	<p>I am a member of Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to the church's immediate physical proximity to Mopac, I have significant interest in how the expansion plan is developing in the area and the impact it may have to member's and visitor's immediate environment and to the use of the property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, the church property is heavily used for the traffic and parking needs for the major events in our city park.</p> <p>I appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. I am also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. I have concerns with some of the options that are being considered at this time.</p> <p>As much as it is my desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, I believe the project needs the assistance of professional input from traffic and other experts on the impact these proposals would have on the church property. At this early stage, I am aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:</p> <p>(1) I am concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. I support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in the church's location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.</p> <p>The option of adding noise-preventing walls would cause the intersection near the church to be covered with concrete, instead of preserving the green environment the community enjoys today. Every spring, the church has lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of the church property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. I would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.</p> <p>Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. I have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. I do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.</p> <p>(2) I am concerned for what impact the current plans will have on ingress-egress to the church property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact the exit lane near the church (currently it is on the north of the Mopac exit ramp to 2244). I want to ensure that moving the ramp to the north would not negatively affect member's and visitor's ability to use our property exit.</p> <p>(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. I am concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). I realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, I cannot support any options that might inhibit the future development of this intersection.</p>	See response to comment 489.

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	361.00	Kevin Good	Good plan. Get it done.	Comment noted.
1/7/2022	362.00	Matthew Shepherd	I vehemently protest to adding any sort of toll lanes to Mopac. Toll lanes and roads represent the privatization of our public infrastructure and exacerbate class inequality by providing specialized service for people who can easily afford to pay the toll, leaving the rest of us to slog it out in the "working class lanes." We all breathe the same air, drink the same water and share the same space, it is unfair to provide enhanced infrastructure to rich people. Roads are a public necessity, not a private luxury.	TF-1 EL-1 EJ-1
1/7/2022	363.01	Nathan Jensen	Adding toll roads is not the way to go. That is just a partial fix and will only benefit a few.	Comment noted
1/7/2022	363.02	Nathan Jensen	Focus should instead be on the entrances and exits of the road. There are many places on MoPac that the flow of the road could be greatly increased by using proper traffic lane mathematics. For example, there are many on-ramps to MoPac where the lane must merge into the other lane in just a few hundred feet. For each entrance, add a lane. For each exit, remove a lane. With proper signs ahead of time that will allow the drivers to make better decisions on what lane they need to be in. Do not be afraid to make the road two lanes in some parts and 5 lanes in others. It is the merging and the flow that is more important than just having some extra lanes thrown in just for the sake of having more lanes. Entrances and exits are the key here.	D-6
1/7/2022	363.03	Nathan Jensen	Thank you for reading my comment. For your information, I am autistic and have recently become obsessed with road flow and have studied an awful lot about it recently. I am very interested to see how this project continues.	PI-12 PI-10
1/7/2022	364.00	Richard Denney	Living in NW Hills at Far West, this community lost more time in the construction of the MoPac extra toll lane than could ever possibly be recouped after completion. Adding insult to injury, getting on and off at Far West is impossible to dangerous. AND IT DOESN'T EVEN LET US OFF TO GO DOWNTOWN! We can't use the toll road to get downtown to the Capitol area? And all the PR hype about helping with traffic congestion, or emergencies .. it does nothing. Congestion remains. We can't get on it from our neighborhood, we can't use it to get out congestion. Emergencies? How about our need to say get to Seton ER? Again, we can't get on it and there is not EXIT for anything short of the river. It was in my opinion a waste of time for OUR neighborhood. So yes, I'm very skeptical of the current plans. VERY.	PP-1
1/7/2022	365.01	Joel Davis	Just repaint the excessively large shoulders in both sides of the freeway for most of that stretch. You'd only minimally need to create new lanes to eliminate bottlenecks created by taking down number of lanes.	D-9 PN-1
1/7/2022	365.02	Joel Davis	Our taxes pay for this so no more toll lanes please	TF-1
1/7/2022	366.00	Lisa Mansuri	I do not support any expansion of Mopac at this time. Public projects need to be focused on improving public transportation - that does not need to include expansions of Mopac or Mopac tolls.	RP-7 T-3
1/7/2022	367.00	Abigail Frederick	I am completely opposed to the double decker expansion over town lake. It will mar the gorgeous views down the lake and negatively impact the surrounding neighborhoods. Also - we are in the age of trying to minimize the number of cars on the road - not continue to expand as the only way to deal with traffic. Where is the public transportation proposal that will cut down on cars, emissions and be a better solution to the environment?	D-2 Soc-2 T-4
1/7/2022	368.00	Johannah Heywood	Please expand the 45 trail from Escarpment to the Meridian Neighborhood entrance	BP-2
1/7/2022	369.01	Jonas W Bailey	I think that constructing toll lanes on MoPac is a terrible idea. Of course, I don't work for a construction company that makes political contributions, so I have no financial gain as motive. And I don't drive a big truck that needs to go 90 mph at all times.	Comment noted
1/7/2022	369.02	Jonas W Bailey	And I'd rather walk on the Greenbelt than see it all torn up again for the convenience of those who are willing to pay more to go faster than everyone else.	CR-2
1/7/2022	369.03	Jonas W Bailey	Why don't you fix I35 instead?	TxDOT-2
1/7/2022	370.00	Chris Stoll	I am hopeful that our Texas Government has put the laws in place to allow TxDOT to do it's job and build the roads that are needed to safely and efficiently move We the People of Texas where we need to go. Please do everything you can to stand up to the special interest groups that want to stop TxDOT from making us happy. The Great roads you build are very appreciated. Thanks!	Comment noted.
1/7/2022	371.00	William Rodriguez	I vote for Option 1A.	Comment noted.
1/7/2022	372.01	Ryan	I'm opposed to a double decker structure on MoPac. I think it would create additional noise and be visually unattractive to the Austin community.	D-2 SOC-2 TN-1
1/7/2022	372.02	Ryan	Use of tolls/higher cost at peak times -- like many other cities -- may be a better course to manage traffic load. Plus, with the increase in hybrid working, there is more that can be done for people to modulate their traffic patterns.	RP-6 EL-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	373.00	Daniel Woodroffe	<p>I oppose the plan to increase lanes and widen the molar bridge over Ladybird Lake. Induced demand has been proven time and time again and this plan will not only increase congestion in the short term but it will not improve traffic congestion. Data has proven it will worsen.</p> <p>Austin is presently proceeding with a multi billion dollar mobility improvement plan that adds rail and other sustainable transit solutions that provide efficient and equitable (let alone state of the art and sustainable) solutions to help resolve our transit issues.</p> <p>Stop fueling urban sprawl with more highways.</p> <p>Stop the antiquated Engineering program of widening highways and acknowledge induced demand.</p> <p>Make actionable steps to reduce dependence on fossil fuels.</p> <p>Please do not proceed with these plans to widen Mopac.</p> <p>I urge you to consider the positive impact of self driving vehicles on lane efficiency and how that will change engineering standards.</p> <p>I urge you to consider the positive impacts of public transit.</p> <p>I urge you to consider the negative environmental impacts of your proposal.</p> <p>Do not proceed with this plan.</p>	ICI-2 ENV-2 EL-3 ICI-1 SOC-1
1/7/2022	374.00	Susan Miller	I agree with the position and comments previously submitted by Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see response to Travis County and Rollingwood
1/7/2022	375.01	S. A.	1. The only way to keep up with traffic growth is to reduce the number of vehicles on MoPac. The only way to reduce vehicles is to encourage carpooling. If only 10% of drivers carpool, you can eliminate 25,760 vehicles from the roadway.	ALT-1 T-1
1/7/2022	375.02	S. A.	2. No express lanes. Express lanes will not reduce traffic volumes. Express lanes will only distribute the traffic volumes to the new lanes.	ALT-5 TF-1 PN-1 EL-1 EL-3
1/7/2022	375.03	S. A.	3. A free HOV / carpool lanes for the general public is needed. Registration with CapMetro carpool should not be required.	ALT-1 ALT-3
1/7/2022	375.04	S. A.	4. Design HOV lanes with slopes to accommodate future rail use.	T-3 T-4
1/7/2022	376.00	Susanna Hancock Murray	At the very least, updated traffic and impact studies should be performed for relevant information. Booming population growth and development all over the Austin area, alongside changing schooling decisions and work habits in recent years, have greatly changed the face of traffic and traffic patterns in our city which was not predicted. Without such updated studies, this expansion is misdirected and a reckless waste of precious time, energy and resources.	RP-2 RP-6
1/7/2022	377.00	Horacio Gasquet	<p>I like the city plan best.</p> <p>We don't need two express lanes to downtown. Downtown roadways cannot handle too much extra traffic, so it would back up onto Mopac and still be a problem.</p>	TO-2
1/7/2022	378.00	Adele Ely	I am very much opposed to elevated Direct Connector ramps south of Bee Cave Rd. I very much like option 1A, possibly 2A. I am very much opposed to Options 2C and 3.	RP-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			With the continued growth of business centers out of the downtown area (ie Mueller, Domain, and even in Far East Austin), I wonder if there is really a need for the 2 lane Direct Connector option.	
1/7/2022	379.00	Arturo Salinas	When are the free Lanes going to be put in place on 183A between Avery Ranch Blvd and Whitestone Blvd. Have not seen any movement on that . From reading earlier information, that was supposed to be an option.	OOS-1 OOS-1.2 TxDOT-2
1/7/2022	380.00	James Talbot	Having the comment period over christmas really limits the number of folks who would otherwise weigh in on such a major project. Would you please extend it another 30 days so we all can participate. I just got this notice today, 3 hours before the deadline.	PI-1 PI-3
1/7/2022	381.01	Shanthy Jayakumar	As an entity charged with managing traffic flow along the MoPac South corridor, you have a singular goal to achieve. However, the impact of your decision(s) to "move traffic efficiently" will assuredly have the unintended consequence and the potential to destroy all that we hold dear about our open spaces and areas of recreation along Lady Bird Lake and Austin's Crown Jewel Zilker Park. In 2015, I attended your presentation at Rollingwood City Hall. Our city leaders, with the overwhelming support of our community, sent you letters objecting to elevated lanes of any kind over Lady Bird Lake and over Zilker Park. In 2022, our community's stance on the environmental impact remains a steadfast NO elevated lanes in this historic district.	D-2 CR-2 PN-1
1/7/2022	381.02	Shanthy Jayakumar	<p>Please take a moment and imagine the impact of your decisions on your grand and great grandchildren.</p> <p>Please take a moment to read about "The Seventh Generation Principle" based on the belief that decisions we make today should result in a sustainable world seven generations into the future. Zilker Park and our natural environment is already under "assault" from overuse. Let us stop and SAVE our PARK before it is too late.</p> <p>On the flip side, let me assure you that it is futile to argue that you are indeed planning for the traffic impact for seven generations to come!! By building the elevated lanes, you would have destroyed the very basis for why Austin is so popular. If Zilker park and our green spaces are destroyed in the process of building your roadways, you will not have any legacy to bequeath to your grand and great grand kids.</p>	ICI-2
1/7/2022	381.03	Shanthy Jayakumar	Please use your leadership to find alternate measures to solve the traffic goals you have set for yourselves. Get more inputs from all the affected communities. DO NOT RUSH. Thank you for listening and for doing the RIGHT thing for our fragile ecosystem and our cherished park.	PI-12 PI-2
1/7/2022	382.00	Ricardo Zamarripa	<p>I believe alternative 2A would be the best for mobility in the region and I am fully supportive of building Mopac South express lanes.</p> <p>Another recommendation is to consider an improvement to westbound 6th street / Lake Austin Blvd to southbound Mopac. There is several merge points between the southbound Mopac ramp and Campbell street with traffic backing up to Campbell or further. Once on the Southbound Mopac ramp/Atlanta Street, you almost immediately merge with the Cesar Chavez which is the biggest bottleneck in the area.</p> <p>If on W 6th or W 5th street, there is not a good way to access Cesar Chavez to get onto express lanes. You have to go east to Lamar which is also a severely congested intersection.</p> <p>Please look at this circulation issue and incorporate into final design, and call me if you'd like me to explain better.</p>	D-1
1/7/2022	383.00	William Kaufhold	I advocate for (prefer) Option 2A, the two express lanes from Barton Skyway to Slaughter Lane with a downtown connector. Barton Skyway is right where traffic builds now each afternoon and there are three bottlenecks just south of there: First, where the right lane is exit only at 2244 Bee Cave; Second where traffic merges onto MoPac south from 360; Third, where the left lane ends on MoPac south of William Cannon. All would be improved with the two additional southbound express lanes which would also serve a growing demand for buses to the south. This would also help the sharp increase in MoPac traffic from Hays County now coming north on the State Highway 45 extension from 1626. All good options but 2A is my favorite (I live off of Slaughter Lane and MoPac).	Comment noted.
1/7/2022	384.00	Christopher Ford	I am opposed to the proposed toll lanes on the southern portion of Loop 1 .	Comment noted.
1/7/2022	385.00	Rosario Carlos Krystof	I support this project and prefer option 2A, then 2C. Please don't let the opponents of progress stop what is a desperately needed solution for current and future traffic. Lock this down and then focus on building an expressway/tollway on 290 West from Circle to Sportsplex. This stretch of road is dangerous and flooded with industrial traffic, population has increased more than expected and the existing road will not handle the next 11k homes that are underway. We need an expressway/tollway as the only major route through dripping springs.....yesterday.	Comment noted.

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	386.00	alex durham	<p>As someone who commutes on this part of MOPAC daily, I am excited the COA is looking to improve the traffic flow. However, as a member of Park Hills Baptist Church, I have concerns about several of the options under consideration. In particular, Option 2C and COA Proposal would both negatively impact the natural beauty of our church site. The noise and aesthetic of those specific options is of concern, as I feel it would bring the interstate to our front door. Furthermore, I have concerns about how this would impact the ingress egress of the church.</p> <p>I hope you will consider pivoting to one of the other options under consideration, as they still solve the traffic problem without a negative impact to Park Hills.</p> <p>Thank you for your consideration and work on this.</p>	Soc-2 Soc-1
1/7/2022	387.01	Diana Dierks	<p>Why do the Build Alternatives lack any legitimately sustainable solutions with the long term in mind, i.e. rail? If additional lanes and HOV lanes were the solution, Houston (which has some of the widest highways in the nation) would not have bad traffic. As a lifetime resident and owner of multiple tax-paying properties, I am disappointed in Austin for not future proofing ourselves. We don't want to be Houston. We want multi-modal transportation that provides network of metro rail/trail options to alleviate demand for paved roads. While some expansion to roads will be needed, doing so without also doing rail is short-minded. Please take the opportunity to do rail projects along highway corridors. What better a highway to lead this than MO-PAC?</p>	T-3 T-4 RP-7
1/7/2022	387.02	Diana Dierks	<p>I also want to voice my concern with the environmental impact. The natural green spaces around Lady Bird Lake, Deep Eddy, Austin Nature Center, Zilker Clubhouse, Zilker, Barton Springs, Barton Creek Greenbelt, etc. are gems of this city. Early residents of Austin wanted to turn this area into developed amusement parks and pave most of it in doing so. Luckily folks like Beverly Sheffield and others led the way to show that Austin can be unique by NOT doing so. Massive highways all over is not wanted by anyone other than those who stand to short-term profit from the construction. Please incorporate long-term resilient and truly sustainable solutions. Keep in mind our net zero goals as well as health impact on residents. Thank you.</p>	ENV-2 CR-2
1/7/2022	388.00	Mary Griffith	<p>Please consider extending the paved trail along 45 from Escarpment Blvd to Meridian Park Blvd. I live in the Meridian subdivision and having that simple access to allow us to ride our bikes to shopping, eating, movie theaters, etc, would improve our quality of life tremendously. It would also help those in Meridian take advantage of public transportation. The paved trail would allow us to safely ride a bike or walk from Meridian to the bus stop at Escarpment and South Bay Lane.</p>	BP-2
1/7/2022	389.00	Alexis Webster	<p>As a resident of SW Austin, I very much support improved access to downtown with the addition of express lanes. At the moment, the city of Austin proposal seems a good alternative that addresses many resident concerns.</p>	Comment noted.
1/7/2022	390.00	Clarke Heidrick	<p>While I have served in the past as Chair of the Greater Austin Chamber of Commerce and Chair of the Transportation Committee of Austin Area Research Organization, the opinions expressed here are my own to our entire region in light of the continuing growth. of our region. From what i see of the various alternative approaches to the express lanes, I favor Option 3 (the City of Austin recommendation). But I feel most strongly that we need express lanes and that they should be tolled, and would support the alternative that promotes the most throughput. Thanks for the opportunity to comment.</p>	Comment noted.
1/7/2022	391.00	Clarke Heidrick	<p>While I have served in the past as Chair of the Greater Austin Chamber of Commerce and Chair of the Transportation Committee of Austin Area Research Organization, the opinions expressed here are my own to our entire region in light of the continuing growth. of our region. From what i see of the various alternative approaches to the express lanes, I favor Option 3 (the City of Austin recommendation). But I feel most strongly that we need express lanes and that they should be tolled, and would support the alternative that promotes the most throughput. Thanks for the opportunity to comment.</p>	*Duplicate comment submitted. See 390
1/7/2022	392.00	Penelope Graves Redington	<p>My home is right beside the southbound MoPac service road between RM 2244 (Bee Cave Rd.) and Liberty Park Drive. My balcony is about 20 ft. from the edge of the right-of-way. Noise and air pollution from MoPac is already a major problem for us and I would like to know how you plan to mitigate the current health impacts during and after construction. Do you plan to build a wall similar to the ones north of the river and if so, will it be tall enough to protect those of us whose homes are on the second floor? Exactly where will the elevated ramp begin and have you taken into consideration the noise and air pollution impact on those of us who live less than 100 feet from the ramp? Vehicles accelerating uphill will be especially loud and will generate noxious and dangerous emissions. Have you completed studies of the potential impact on nearby residents and if so will you provide those results to us? Thank you.</p>	AQ-1 TN-1 D-2 ENV-2
1/7/2022	393.00	Mary Griffith	<p>Ask: Exit lane from Northbound 45 onto Davis Lane. Entrance to 45 southbound from Davis Lane.</p> <p>Reason for ask: The congestion on Slaughter Lane during drop-off at Bowie High School has become increasingly problematic for those of us who live in the area. It especially prevents us from accessing and supporting businesses on Brodie Lane during these hours. Adding these two accessibility points would allow us to bypass Slaughter and take Davis Lane to Brodie without having to go up to William Cannon and back over to Brodie/Slaughter area. This could also help alleviate the Bowie congestion because drivers who live in Shady Hollow would be able to exit 45, take Davis to Brodie and then to Shady Hollow.</p>	*Think they mean to say MoPac and not 45. D-6 D-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			The problem with this corridor of 45 is that we don't have a lot of options for moving around this part of the city. It's all highways or major, highly traveled streets (Wm Cannon, Slaughter, etc). Having all access to Davis Lane from all directions of 45 would help disperse traffic creating less congestion overall.	
1/7/2022	394.00	Leigh Stein	I oppose the Mopac double decker bridge	D-2
1/7/2022	395.00	Robert Carter	Only build tolls built above the existing roads. We have too many tolls and are more expensive than they should be. Once a toll road has paid the entire package, the cost should go down so it will pay for the maintenance.	TF-1 TF-2
1/7/2022	396.00	Dottie Watkins	A direct connection to downtown is a requirement. Beyond that, it's hard to make a thoughtful recommendation on information that is all caveated that it's based on old data and will be updated later. Before an alternative is recommended, public comment should be pursued based on the updated data from the 2045 model.	PI-7 OCO-2
1/7/2022	397.00	William	If you build another toll road and not a train system with stops at every major road. You have poor judgment. All you have to do is look at major cities around the world with less traffic and more traffic. How they manage. Not to mention the jobs it will create and the revenue the government wants in the end anyway. Nobody uses the current rail system because it's trash. So get it right this time. Stop being greedy	T-3 T-4 RP-7
1/7/2022	398.00	Glenn Criswell	1) I really like the shared use path on the west side of Mopac all the way out to 360 as implied by page 40/43 slide. If this could be followed up with good crosswalk infrastructure at 360 and well identified pavement region all the way to the trailhead at the creek, that would be a very nice enhancement. 2) I would really like to see Barton Skyway have u-Turns in both directions, and there is plenty of footprint for the southern U-Turn on the existing bridge if the northbound U-Turn has a new bridge. Barton Skyway itself needs only 3 lanes: one each direction and a left turn in the center. The sidewalk moved inside (north) of the south U-Turn (separated with concrete barrier) would improve safety and function. At minimum, a revision of the U-Turn light timing and lane assignments would be greatly appreciated. 3) The COA proposal has merits and is an interesting idea, but I would have really liked to see a detailed visual of the various aspects. 4) A HUGE problem with all versions is the restriction down to two southbound main lanes approaching the lake. The continuing feeder merge lane is a big improvement, but an extra main lane (like northbound) would go a long way towards the project not affecting non-toll drivers negatively. 5) Many proposals will give toll drivers preferential access (inbound) to Cezar Chevez St compared to non-toll drivers. Extreme efforts should be invested to design merge/access elements so that the access is reasonable between the two groups and this doesn't effectively become the real advantage of the entire toll infrastructure. 6) The new southbound flyover from just south of Barton Skyway onto the main lanes on the left - it will have some nice functionality, particularly for those accessing 360, but it will be a complicated merge zone because of its short length and the unusual left side configuration. I wonder if that flyover could be made to access express lanes and 360 (far left lane) only and the main lane 360 off ramp moved north and and the Mopac main lane onramp be moved far enough south to work well as main lane access. 7) The southbound Bee Caves to Mopac access ramp has been a befuddlingly embarrassing and unnecessary choke point for decades - I presume that the 1950's style death merge has been removed from all designs. The problem there is not people merging over, it is the lack of appropriate merging distance (despite the pavement already being in place). I hope it turns out well - good design can make tremendous improvement to people's lives.	1) Comment noted 2) D-1 3) D-13 4) EL-1 5) D-6 6) D-1 7) TO-5
1/7/2022	399.01	Adam Greenfield	<p>Thank you for this opportunity to submit my comments on this project.</p> <p>I strongly oppose any proposal to expand Mopac and so should the general public. Time and time again, as the Katy Freeway expansion so notoriously demonstrated, the increasingly discredited approach of highway expansion has been shown to induce demand for driving, worsening congestion in the mid to long term and negatively impacting air quality, noise, water quality, climate change, suburban sprawl, countryside loss, safety, and property values, all while wasting enormous sums of taxpayer money. Texas' commitment to this incredibly harmful practice is severely behind the times and is increasingly making us a laughingstock nationally and internationally at a time of worsening climate change that is causing our state great harm.</p> <p>Instead, I call upon CTRMA/TxDOT to do the following with regard to the Mopac South project:</p> <p>- Commit to not widening Mopac</p>	ICI-1 SOC-1 ICI-2 WQ-1 TF-1 D-9
1/7/2022	399.02	Adam Greenfield	- Actually address congestion by instead dedicating existing right of way for congestion-free alternatives such as public transportation, bicycling, and walking and by using funds to expand ongoing public transportation services	Alt-1 T-1 RP-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	399.03	Adam Greenfield	- Explicitly address induced demand in traffic estimates and begin to educate local leaders and the public on this issue	RP-1 ICI-1 SOC-1
1/7/2022	399.04	Adam Greenfield	- Stop using CAMPO's unreliable regional growth forecasts that presume and plan for more sprawl and instead use equitable growth forecasts	RP-1
1/7/2022	399.05	Adam Greenfield	- Address safety, including Texas' Vision Zero / Road To Zero goals, in the purpose and need statement	SF-1
1/7/2022	399.06	Adam Greenfield	- Given that these improvements will directly impact the recharge zone of the Edwards Aquifer, Zilker Park, and Lady Bird Lake, conduct a full EIS for this project	ENV-1 WQ-1
1/7/2022	399.07	Adam Greenfield	- Extend the public comment period by 30 days and stop holding public comment periods during the holidays	PI-1
1/7/2022	399.08	Adam Greenfield	We are in a climate crisis, much of it caused by transportation. Please do not miss this opportunity to do the right thing now. Thank you for your time.	ICI-2
1/7/2022	400.01	Kelsey Huse	I live near Mopac & drive on it often. If I could instead take a high speed bus or there was a safe way to bicycle (particularly e-bike) I would definitely do that instead. However, that infrastructure does not exist.	BP-1 T-1 T-3 T-4
1/7/2022	400.02	Kelsey Huse	Please include induced demand in your estimates because people will continue to drive if that's the best option, and once there are more lanes there will be more drivers. This is going to be so expensive and there are better alternatives than adding lanes. We cannot keep adding lanes forever. Please think of the younger people and build something that will last rather than need expanding again in 20 years.	ALT-1 ICI-1 SOC-1 RP-1 EL-3
1/7/2022	400.03	Kelsey Huse	A girl recently died walking across Mopac and I was on the highway at the time and had to be rerouted around it. More crashes that result in death and injury will happen. Expanding highways will not help us reach our Zero Vision goals. I am strictly against the expansion of this highway and any highways in Austin and we will continue to organize against it. Thank you for the opportunity to comment!!	SF-1
1/7/2022	401.00	Jeff Thompson	Please do not expand MoPac without considering the impact on Total VMT. Please evaluate total VMT if the expansion is completed versus a No Build Option. Also please consider the impact of flyways on parks.	VMT-1 D-2 CR-2
1/7/2022	402.01	Edward Lee	I am HIGHLY opposed to the idea of the Downtown Direct Connections, the Barton Skyway elevated ramps, or any alterations to the Frontage Road that would cut off access Rollingwood drive access to Northbound MoPac. While I realize that we have many cars making lane changes to get onto 2244 Bee Caves Road, making drastic changes to that frontage road can also potentially cut off access for a whole municipality (Rollingwood) as well as the many people who live in Austin near Zilker who use Barton Spring Road and use the frontage road as an access point to northbound MoPac. I understand that growing traffic is an issue region wide, and I'm not opposed to widening the bridge over Lady Bird Lake. However, the idea of Downtown Direct Connection Lanes which would be elevated, and also the lighting for these lanes which would be even further elevated, would be a terrible eyesore, an environmental hazard, as well as worsen both noise and nighttime light pollution for everyone in the surrounding neighborhoods.	D-2 SOC-2 ECO-1 TM-1
1/7/2022	402.02	Edward Lee	I feel that too much resources and too many resources have been devoted to transportation interests that promote single user cars instead of mass transportation. Also considering the gradual and accelerating move towards working from home, I feel that these solutions may need to be significantly rethought before such dramatic construction occurs.	ALT-1 T-1 RP-6 RP-7
1/7/2022	403.00	Nathan Searcy	Widening the road appears to run be contrary to the city's plan for vision zero and to be a 15-minute city. Wider roads increase driving and increase the amount of land used for cars. We are currently experiencing a housing shortage and climate crisis. There needs to be focus on reducing total miles driven in total and per person. Please reconsider this plan.	Alt-1 ROW-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	404.00	Grant Sparks	<p>Please accept this email as my strong endorsement of the positions taken in comments submitted by the Travis County Commissioners Court and the City of Rollingwood; including recent comments submitted by Amy Pattillo.</p> <p>I am concerned that the CTRMA is relying on six year old information and severely limiting the public comment period for this proposed project. The negative impact of the current proposal to the residents of the City of Rollingwood, Zilker Park and other adjacent areas will be irreversible and should not be implemented without further significant revisions and considerations.</p> <p>Thank you.</p> <p>Grant and Andreas Sparks 2402 Rollingwood Drive Austin, Texas 78746</p>	RP-2; See response to Travis County, Rollingwood, and Amy Pattillo.
1/7/2022	405.01	Timothy McCool	<p>It's a bad idea to enlarge the highway. I-35 is slated to be enlarged too. When will the expansions end? Eventually MoPac and 35 will touch and there will be nothing left of central Austin.</p> <p>There's nothing environmental about expanding the highway, it should never be done.</p>	PN-3 ENV-2 RP-3 RP-7
1/7/2022	405.02	Timothy McCool	<p>Build transit only lanes, get people into buses and trains. Not everyone can drive their own personal vehicle everywhere they like, the environmental and social impact of doing that is killing us.</p>	Alt-4 T-1
1/7/2022	406.00	Brian Nunnery	<p>This is an effective way to induce demand for sprawl in the Hill Country - which, in combination with TxDOT's widening of US 290, seems to be one of few primary outcomes of this proposal.</p> <p>This proposal is a relic of the past - we know freeway widening makes traffic worse over time, and we know expanding freeway capacity creates urban sprawl and forces people to further rely on cars. The US Dept of Transportation is literally trying to mitigate these projects due to their negative impact on the environment, climate, and social equity.</p> <p>Don't do this at all. There's no logical reason to do so when considering what this means for our future in 50 years' time.</p>	PN-3 ICI-2 ICI-1 EJ-1
1/7/2022	407.01	Michael Edward Reed	<p>1. I firmly oppose expanding mopac in any place by any amount.</p>	Comment noted.
	407.02	Michael Edward Reed	<p>2. I want induced demand to be addressed in traffic estimates and for the public and local leaders to be educated on the issue of induced demand.</p>	RP-1 ICI-1 SOC-1
1/7/2022	407.03	Michael Edward Reed	<p>3. We need to address congestions with solutions that actually work: public transportation, bicycling, and walking. We need to support these transit methods and not further endorse people commuting alone in their automobiles.</p>	Alt-1 T-1 T-4 RP-7 BP-1
1/7/2022	407.04	Michael Edward Reed	<p>4. We need to address safety in the purpose and need statement, especially Texas' Vision Zero goals.</p>	SF-1
1/7/2022	407.05	Michael Edward Reed	<p>We need to stop building highways to solve our problems. It doesn't work. I don't hate highways or cars, it's just that I want solutions that work, and continue working in the long term. Highways simply don't work. Because they don't work, they are a waste of our tax dollars, and we need to better invest our funds into solutions that do work.</p>	PN-1 TF-1 Alt-1 RP-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	408.01	Marilyn Faulkner	I agree with the below statements. Please note my comments and opinion for the record of this project. Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2022	408.01	Marilyn Faulkner	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/7/2022	408.02	Marilyn Faulkner	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	408.03	Marilyn Faulkner	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 RP-6 D-9 PN-1
1/7/2022	408.04	Marilyn Faulkner	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2022	408.05	Marilyn Faulkner	Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	RP-6 ICI-1 SOC-1
1/7/2022	408.06	Marilyn Faulkner	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	ALT-3 RP-7 D-9
1/7/2022	408.07	Marilyn Faulkner	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	408.08	Marilyn Faulkner	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2022	408.09	Marilyn Faulkner	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 WQ-2 ICI-1 SOC-1
1/7/2022	409.00	Jeff Marx	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see response to Travis County and Rollingwood
1/7/2022	410.01	Cathy Ramsey	As a regular user of Barton Springs pool, I'm alarmed at the plans to add enormous amounts of traffic and noise to Mopac, turning it into a much more busily travelled road. New standards of work-from-home and rush hour balancing make new traffic studies a priority when planning something of this scale.	PN-1 RP-6 CR-2 TN-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	410.02	Cathy Ramsey	Please allow the public more time to respond by extending the comment deadline,	PI-1
1/7/2022	410.03	Cathy Ramsey	and take the time to do environmental and climate change studies, and find more workable solutions than the unworkable concept of more new toll lanes. Thank you.	ENV-2 ICI-2
1/7/2022	411.00	Gary Grossenbacher	No elevated lanes over Lady Bird lake which would ruin environment of Zilker Park and the Rollingwood neighborhood. More traffic and more noise if not needed near the park and neighborhood	D-2 CR-2 SOC-2
1/7/2022	412.01	Felicity Maxwell	As a South Austin resident, I am totally opposed to any expansion of Mopac and particularly a widening of Lady Bird Lake Bridge to five lanes in each direction. Furthermore, in reviewing the congestion data provided, it is clear that induced demand in traffic estimates has not been considered, nor has changes in transportation patterns in a post-COVID environment.	RP-6 ICI-1 SOC-1
1/7/2022	412.02	Felicity Maxwell	These estimate are 10+ years old and should not be used to inform such a critical project. Honestly, if congestion is the key concern of the Mopac South project, then we should be working to shifting existing right of way to congestion-free alternatives such as public transportation, bicycling, and walking.	Alt-1 RP-2 T-1
1/7/2022	412.03	Felicity Maxwell	Finally, City of Austin just recorded a record number of traffic related fatalities in 2021, but this project does not have the State of Texas Vision Zero goals fully incorporated into the in the purpose and need statement of the project. That is not acceptable. Please once again reconsider this ill timed, unnecessary, wasteful and damaging road widening project.	SF-1 PN-1
1/7/2022	413.01	Barry Stone	Building a double decker bridge toll or not over Ladybird Lake is terrible idea. Its bad for the environment, with harmful effects on endangered wildlife, Barton Springs, and folks that use the trail for exercise and escape.	D-2 SOC-3 WQ-1 TES-1
1/7/2022	413.02	Barry Stone	I would urge TXDOT to explore non-building solutions such as HOV lanes rather than creating yet another toll road that lines the pockets of foreign investors and ruins our quality of life. Building wider lanes only encourages more traffic, it never works, only building in more alternatives to car commuting will solve this problem. In the wake of the rise of telecommuting, in fact it might not be as big as a problem as projected	ALT-1 ALT-3 RP-6 TF-1 EL-3
1/7/2022	413.03	Barry Stone	and I would encourage TXDOT to extend the comment period for at least 30 days following the publication of current relevant traffic data and analysis. Thank you..	PI-1 PI-7 TxDOT-1
1/7/2022	414.00	Christy Lamb	I agree with the positions taken in the comments by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see response to Travis County and Rollingwood.
1/7/2022	415.01	Kevin Smith	The possible expansion of S. Mopac over Ladybird Lake, Zilker Park, and the greenbelt is a major issue that deserves open, public review. To that end, please: (a) Extend the comment period for 30 days, given that the prior period was over the holidays (and during the distraction that is Omicron);	PI-1
1/7/2022	415.02	Kevin Smith	(b) ensure a full Environmental Impact Statement is prepared;	ENV-1
1/7/2022	415.03	Kevin Smith	(c) consider alternative approaches to taking park land, building a double-decker bridge, and toll lanes;	D-2 ALT-1 CR-2
1/7/2022	415.04	Kevin Smith	(d) ensure the latest traffic and environmental data is used in any analysis. Thank you!	RP-1
1/7/2022	416.00	Alex Robinette	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood. I do not feel that sufficient analysis or updates have been performed to make this a valid process. The methods being used to determine solutions are out-dated and not forward-thinking. I am unequivocally opposed to elevated lanes.	RP-2; see response to Travis County and Rollingwood

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	417.00	Eric Sparks	I agree with the comments submitted on Jan 4, 2022 by the Travis County Commissioners Court.	Comment noted; see response to Travis County
1/7/2022	418.01	Heather MacLean	Do not build new highway lanes or decks over town lake.	D-2
1/7/2022	418.02	Heather MacLean	Traffic will always be a challenge; ruining all our parks isn't the solution.	CR-2 RP-7 PN-1
1/7/2022	418.03	Heather MacLean	More lanes will simply fill up with more traffic.	ALT-5 TF-1 PN-1 EL-3
1/7/2022	418.04	Heather MacLean	Toll lanes and highways are not an equitable solution for all travelers.	Comment noted
1/7/2022	419.01	Ann Nye	1. Extend the comment period at least 30 days.	PI-1
1/7/2022	419.02	Ann Nye	2. Prepare a full Environmental Impact Statement (EIS)- these are very sensitive areas	ENV-1
1/7/2022	419.03	Ann Nye	3. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.- Double decker roadways are not effective, are an eyesore, and don't address the issues.	D-2 CR-2 TO-1
1/7/2022	419.04	Ann Nye	4. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."-If anyone sits in traffic at 45th headed south, it is easy to see the issues approaching the bridge. With the changes made with the Caesar Chavez interchange, the toll road, etc, there are now 5 on ramps within about 1 mile. That many people changing lanes over that short of a distance is one of the major problems. They need to close some of the entrances and have people enter further back possibly on a two lane merge. Also the quick exit at Bee Caves requires those exiting mopac to cross multiple lanes to go west also causing a back up.	TM-1 PI-7 RP-2
1/7/2022	419.05	Ann Nye	5. Evaluate the noise impact to adjacent neighborhoods.- When the toll, Caesar Chavez interchange was added, the noise impact in Barton Hills is significant. 6. The raised deck on I35 is an example of why this doesn't work.	TN-1
1/7/2022	420.00	Maxwell Wethington	I do not support the construction of the new toll roads. Austin workers, especially those who previously commuted to the downtown area are adjusting to a work from home model. Adding lanes to existing highways has a horrible track record for improving commutes, with the megahighways constructed recently in Houston as a perfect example.	Alt-5
1/7/2022	421.01	Sarah Faust	Please accept the below comments on the MoPac South proposal: 1. Please extend the comment period for 30 days to allow the public to understand the plan and provide meaningful comment. The outreach on the comment period has not been significant enough to engage many affected persons.	PI-1 PI-3
1/7/2022	421.02	Sarah Faust	2. Prepare a full Environmental Impact Statement for the proposal which would significantly increase impervious cover and pollution from cars within the Barton Springs/Edwards Aquifer Recharge Zone.	ENV-1
1/7/2022	421.03	Sarah Faust	3. Do not build a double decker bridge over Zilker Park, Lady Bird Lake, or Austin High School. In Austin we have suffered from the impacts of double decked highways and seen how it can divide communities and hurt the environment. We have worked hard to upgrade our trail system near Lady Bird Lake and develop the lake for outdoor recreation. The Zilker Botanical Gardens, the Austin Nature and Science Center, and Zilker Park will all be degraded significantly by this proposal. Adding impervious cover and car traffic in this area will discourage healthy recreation and exposure to nature, two things all human beings need to thrive and survive. Building a double highway in this area would be contrary to all of these efforts. The increased noise, traffic, and pollution are not appropriate in this location.	D-2 CR-2 SOC-3 TN-1 AQ-1
1/7/2022	421.04	Sarah Faust	4. Fully evaluate a no build or limited build alternative that improves traffic flow usin the existing pavement.	ALT-3 Alt-6

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
				D-9 PN-1
1/7/2022	421.05	Sarah Faust	5. Update the traffic modeling before moving forwards. The traffic data from 2009 is no longer accurate. Commuting patterns have changed significantly since COVID, especially for people coming from the suburbs into downtown, a majority of the traffic driver on this portion of MoPac. This ten year old traffic data is not reflective at all of the future traffic patterns this road will need to serve.	RP-2 RP-6
1/7/2022	421.06	Sarah Faust	6. Provide an option that does not include a toll lane.	ALT-1
1/7/2022	421.07	Sarah Faust	7. Provide options that convert existing lanes to HOV lanes. HOV lanes would be much more effective and mitigate against climate change.	ALT-3
1/7/2022	421.08	Sarah Faust	8. Provide analysis of the amount of mitigation land that would be purchased to offset increases in impervious cover . Thank you for your consideration.	WQ-1 WQ-2
1/7/2022	422.00	Jules Elkins	Please see attached letter	Duplicate submission. See response to comment 310.
1/7/2022	423.00	Richard Pitcher	I am strongly opposed to this project and the ramifications it would have on some of Austin's most prized neighborhoods and parks. The proposal is based on out-dated data and will be a blight on the city. While everyone can agree that traffic congestion must be addressed, this is not the way to do it.	ENV-2 RP-2
1/7/2022	424.01	T Thomas	To whom it concerns: Please don't build a double decked highway, like IH35, on Mopac over Ladybird Lake! The massive road structures of IH35 have proven to be no answer to automotive congestion, and are currently under consideration for redesign.	D-2
1/7/2022	424.02	T Thomas	I would also like to advocate for the removal/repositioning of the giant green toll road signs that went up with the northbound toll lane. They are eyesores that obstruct the beautiful sunset views from the lake and park.	U-1
1/7/2022	424.03	T Thomas	Please listen to SOS and the voices representing conservation, beauty and ecology. Austin is an internationally desirable place to live in part as a result of their efforts. Please don't kill the goose that lays the golden egg. Thank you, Tracy Thomas	Comment noted; see response to SOS
1/7/2022	425.01	Haley Winn	To whom it may concern, this proposal would bring drastic change to the nature and wildlife surround the current bridge. Elements which I believe are one of the main draws the the city in the first place. Damaging and reducing the current parks and walkways under mopac would significantly harm the outdoor experience along the lake, not to mention hinder vital views while walking, paddle boarding and kayaking- the leading summer outdoor activities.	ENV-2 SOC-2 SOC-3
1/7/2022	425.02	Haley Winn	As a longtime resident I am surprised that the proposal would sweep in over the holidays without giving residents enough notice or time to give feedback. Please consider the opening the comments for a longer period of time now and prevent an outpouring of upset later when residents feel they were not allowed adequate time to research and give feedback on the proposal.	PI-1
1/7/2022	425.03	Haley Winn	I am vehemently against this idea, and I hope you will value residents and wildlife over money & convenience. We have plenty of roads that currently need repairs before a project like this is considered as a job-creator. And we have plenty of highway options to cross the river with great efficiency as it stands. Concerned citizen, Haley Winn	PN-1 ENV-2 RP-7
1/7/2022	426.01	Jason Perez	This Mopac South fix is a bad idea. It would make it awful for all the people recreating below the bridge. Please analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns.	ALT-1 SOC-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	426.02	Jason Perez	Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	D-9 PN-1 Alt-3
1/7/2022	426.03	Jason Perez	The comment period be extended for at least 30 days following the publication of current relevant traffic data and analysis.	PI-1
1/7/2022	427.01	Paul Sanchez-Navarro	First of all, Austin does not need more toll roads. Roads should be built from public funds. The existing toll roads in and around Austin are just elitist ways to offer people with money easier traffic. Remove tolls and you will see traffic flow better.	TF-1 EJ-1
1/7/2022	427.02	Paul Sanchez-Navarro	This proposed double-decker road is not the best solution to traffic problems. Several changes can be made before bringing more traffic through Zilker park.	D-2
1/7/2022	427.03	Paul Sanchez-Navarro	Remove toll on highway 45 and make all trucks not stopping in Austin take that, reduce I-35 traffic by at least 30%.	OOS-1 OOS-1.2
1/7/2022	427.04	Paul Sanchez-Navarro	Use MOPAC and Amtrak train rails for commuter trains between Austin and San Antonio, with stops in Buda, Kyle, San Marcos and New Braunfels between 7-10 a.m. and 4-6 pm. This would reduce traffic on I-35 (rails took land under "public domain" and "common carrier" so they can be used for the good of the public, not just private cargo rails.	T-3 T-4
1/7/2022	427.05	Paul Sanchez-Navarro	Be more innovative before creating double traffic lanes over one of Austin's best and most used parks. Thank you.	ALT-1
1/7/2022	428.00	Julie Valentine	I oppose all of the plans for Mopac South.	Comment noted.
1/7/2022	429.00	Susan Fernandes	We agree with the positions taken in comments submitted by Travis County Commissioners Court and the City of Rollingwood and ask that these positions be strongly considered as CTRMA restarts the design of the MoPac South project. Susan and Frank Fernandes	Comment noted; see response to Travis County and Rollingwood
1/7/2022	430.00	Christophe Amadi	I implore you to review and analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Clearly there has been dramatic changes in the past 2 years which require changing traffic models. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue it in the interim as a test solution for very little money. In other words, the project as proposed fundamentally doesnt solve any issues but certainly creates some.	ICI-2 ALT-1 ALT-3 RP-7 BP-1 T-1
1/7/2022	431.00	Rian Greisemer	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood regarding the Mopac study.	Comment noted; see response to Travis County and Rollingwood
1/7/2022	432.01	Brendan Wittstruck	In the strongest words possible, I do not support adding lanes of any kind to MoPac. If tolled direct access lanes are desired, existing lanes should be repurposed.	D-9 PN-1 D-9.1
1/7/2022	432.02	Brendan Wittstruck	It is unacceptable that a project in the Barton Springs recharge zone not receive a full Environmental Impact Statement (instead of an EA).	ENV-1
	432.03	Brendan Wittstruck	I do not support expansion, do not support expansion of right-of-way, and do not support the addition of elevated ramps or flyovers.	D-2
1/7/2022	432.04	Brendan Wittstruck	Further, this is a poor infrastructure investment, as added lanes will induce additional vehicle trips rendering the stated purpose of the expansion null.	EL-3 ICI-1 SOC-1
1/7/2022	433.00	Nancy Kameya	I support plan 2b or 2c. This project is needed now. I see aggressive driving and road rage on this route every day. There is so much more traffic due to the continued housing growth in Buda, Kyle and Dripping Springs.	Comment noted.
1/7/2022	434.01	Tamara Scott	Please reconsider the Mopac South Toll Road project. It will have substantial adverse environmental impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.	CR-2 WQ-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
				TES-1 TO-1
1/7/2022	434.02	Tamara Scott	Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1
1/7/2022	434.03	Tamara Scott	Also, this project needs to be given a more substantial amount of time for public comment and concern considering the breadth of such a proposal.	PI-1
1/7/2022	435.01	Matt Fehrenbacher	I think these options all fare poorly in all the environmental consideration areas. Adding any number of lanes will induce more car traffic. This automatically means worsened air quality, traffic noise, and pollution into our water supply. And the increased space required for still more lanes of car traffic will necessarily affect or destroy existing businesses, historical areas, and green spaces.	ENV-2 CR-1 AQ-1 TN-1
1/7/2022	435.02	Matt Fehrenbacher	I hope that the "No Build" alternative is considered in combination with greater investment in public transit, including low-construction improvements to Mopac like reserving lanes for buses. A shift to more public transit could actually improve on our current levels of pollution, congestion, noise, and motor vehicle caused injuries and deaths. Unlike the proposed "build" alternatives, which would further gouge our community with deadly, ugly car traffic.	Alt-1 T-1 T-3 Alt-7
1/7/2022	436.00	Hunter Warren	Please do not add these express lanes. Mopac has been expanded enough already. This will only serve to pollute the river more and become an eyesore to everyone using Zilker park, area residents and Austin High students.	Comment noted
1/7/2022	437.01	Erik Andersen	Please do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	437.02	Erik Andersen	Traffic patterns have changed due to Covid. Rail, bus, bike, run, walk access is much better for the environment than more roads, bridges and cars.	RP-6 Alt-1 T-1 BP-1
1/7/2022	438.00	Miles Payton	I strongly oppose the plan to widen Mopac and lock in decades of greenhouse gasses. This will only induce more traffic and commuting from the far southwest. Billions of dollars should be spent on cleaner transit options, not this climate arson.	ICI-2 ICI-1 SOC-1
1/7/2022	439.01	Zachary Elkins	I am deeply concerned about these plans, for the following reasons: 1. The public has just learned of these plans and there has been very little time for public comment and discussion. Please provide more time to understand the consequences.	PI-1
1/7/2022	439.02	Zachary Elkins	2. QUALITY OF LIFE. Large highways should go around cities, not through them. There is a reason that no residents or businesses choose to be anywhere near I35. Cities that built multilane highways through cities in the 1960s and 70s are moving away from such projects, for good reason. Austin should be doing so as well. The impact of increased pollution on the health and happiness who live around Mopac is enormous.	Comment noted
1/7/2022	439.03	Zachary Elkins	3. DOES NOT ADDRESS LATENT DEMAND. Building more lanes does not deal with the latent demand problem. We will be left with the environmental and quality of life costs of an expanded highway, and still have the same traffic problems. We should be providing alternatives to Mopac, not expanding it.	EL-3 ICI-1 SOC-1 ENV-2
1/7/2022	439.04	Zachary Elkins	4. NO ESTIMATE OF DEMAND IN THE POST-PANDEMIC ERA. It is likely that vastly fewer people will be commuting in the new era, now that remote work is established. Or at least not commuting at the same peak hours. Please reconsider these plans as they are not good for the community.	RP-6
1/7/2022	440.01	Sarah Simpson	This project is problematic for many reasons and should be abandoned. It does not align with Austin's transportation goals or Project Connect;	RP-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	440.02	Sarah Simpson	it is the manifestation of outdated engineering practices that disregard sustainable transportation principles and denies the phenomenon of induced demand;	EL-3 ICI-1 SOC-1
1/7/2022	440.03	Sarah Simpson	and will be both harmful to the regions ecology as well as multimodal connectivity;	ENV-2
1/7/2022	440.04	Sarah Simpson	and is fiscally irresponsible creating incredible costs that will only benefit road buildingd companies - not the people or environment of Austin. Please cancel the project as it will direly do years, decades of harm. Thank you.	TF-1
1/7/2022	441.00	Tami Esson	I am fervently opposed to this idea. The Rollingwood community and surrounding areas have paid higher amounts for their property and being near a highway that will be very loud and unattractive- destroying some scenic views- will devalue these houses. It also bring in more homeless people who will camp out under the highway causing this neighborhood to be unsafe and once again devaluing the properties even further. For all these reasons I strongly oppose.	SOC-1 SOC-2 TN-1
1/7/2022	442.01	J. Stephen Adams	As an ex-Austinite who loves and visits Austin (and Barton Springs) regularly, I'm very concerned about the MoPac South Toll Road Proposal and how quickly it is getting pushed through. I ask that you, at the very least:	PI-2
1/7/2022	442.02	J. Stephen Adams	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2022	442.03	J. Stephen Adams	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Sincerely, J. Stephen Adams	ENV-1 TES-1
1/7/2022	443.01	Emma Lindrose-Siegel	I am primarily concerned about the environmental impact of this project on the recharge zone of the Barton Springs segment of the Edwards Aquifer and do not feel this plan adequately addresses those concerns. Barton Springs is a crown jewel of Austin and any proposed construction on the recharge zone so close to the Springs should produce an environmental assessment showing little to no impact. We cannot build another Barton Springs.	WQ-1
1/7/2022	443.02	Emma Lindrose-Siegel	This plan is based on out of date traffic data and analysis. For a project of this size and cost, it would be in the community's best interest to work off of current traffic data and then extend the comment period following its publication so the plan can be viewed in the context of relevant, current data. The Open House materials use traffic data from the 2009 model that supported the long-range 2035 CAMPO regional plan, which is over a decade old. Is there really no recent traffic data that can be used in the creation of this plan?	RP-2
1/7/2022	443.03	Emma Lindrose-Siegel	What are the alternatives to additional toll lanes? All of the alternatives offered in this plan add toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money. This has been very effective in other major Texas cities, like Dallas and Houston, but isn't even explored here.	Alt-1 Alt-3 RP-6
1/7/2022	444.00	Guillermo Leal	The documentation dismisses HOV lanes off-hand without indicating potential impact whereas the toll lane may have a similar impact but only to those who can afford/choose to pay the toll. Everyone else suffers the same traffic issues now as they will in 2035 and does not really encourage drivers to shift to public transport or shared transport modes. This suggests that those who can afford to pay will have a better traffic experience than everyone else and does not resolve traffic issues at all.	Alt-3 EL-1 EJ-1
1/7/2022	445.00	Richard Grayum	Please widen the freeway enough to handle the future capacity and not just the current demand. We need five lanes in each direction.	RP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	446.00	Save Barton Creek Association	Please see the attached comment from Save Barton Creek Association.	No document attached. See response to comment 333.
1/7/2022	447.01	Mikaela Thomas	To whom it may concern, I'd like to first ask that the comment period be extended at least 30 days. The comment period fell entirely over the holidays while many people are busy and distracted with other matters. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1
1/7/2022	447.02	Mikaela Thomas	Before any further consideration is given to the proposal, there should be a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 CR-2 TES-1 WQ-1 TO-1
1/7/2022	447.03	Mikaela Thomas	DO NOT build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2022	447.04	Mikaela Thomas	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 PN-1 RP-6
1/7/2022	447.05	Mikaela Thomas	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.	RP-1 PI-7 RP-6 ICI-1 SOC-1
1/7/2022	447.06	Mikaela Thomas	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/7/2022	447.07	Mikaela Thomas	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	447.08	Mikaela Thomas	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Thank you,	ICI-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			Mikaela Thomas	
1/7/2022	448.00	Deborah E. Perkins	I strongly agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see response to Travis County and Rollingwood
1/7/2022	449.01	Megan Meisenbach	Dear CTRMA. Please extend the comment period after traffic and environmental studies are complete and published.	PI-1
1/7/2022	449.02	Megan Meisenbach	In addition Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2022	449.03	Megan Meisenbach	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2022	449.04	Megan Meisenbach	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development. Sincerely, Megan Meisenbach	WQ-1 WQ-2 ICI-1 SOC-1
1/7/2022	450.01	Elizabeth Badger	Extend the comment period time.	PI-1
1/7/2022	450.02	Elizabeth Badger	Perform an Environmental Impact Statement.	ENV-1
1/7/2022	450.03	Elizabeth Badger	Evaluate a limited build alternative.	Alt-6
1/7/2022	451.01	Kaleta Krull	This deadline is indicative of an entity that wants to limit comments. Furthermore, comments are solicited for ridiculously outdated traffic data and analysis. EXTEND THE COMMENT PERIOD for AT LEAST another 6 weeks.	PI-1 PI-2 RP-2
1/7/2022	451.02	Kaleta Krull	You are endangering gems of Austin we Austinites hold dear, as well as endangering water supplies, and inevitably causing increased flood risk with the onslaught of impervious cover and construction in such sensitive zones. We deserve updated data, analysis, and ample time to review it and comment.	WQ-1
1/7/2022	452.01	James talon	Please do not allow this "billion dollar mistake" It will turn MoPac from being a local commuter route into an i35 west take away our parkland, hurt sensitive areas like Barton creek/springs, Lady Bird Lake Park, the Butler Hike & Bike Trail (places where endangered species live), and it is using outdated traffic data instead of post covid where we have reduced commuting.	ENV-2 CR-2 TES-1 RP-2 RP-3
1/7/2022	452.02	James talon	Please give more time for the public to comment, and look for ways to use existing paved areas for road projects instead of carving into our limited and precious wild areas. Focus on ways to combat climate change by using mass transit options instead of continuing to provide even more single person commuting options (we already need to cut back on that). Thank you.	PI-1 ICI-2 T-1
1/7/2022	453.01	Lacy Seybold	- My preference is for two general purpose non-tolled lanes in each direction. My second choice (and it's a distant second) would be Express Lane Option 2A with its two express lanes in each direction with at least one direct connection lane into downtown. Option 3 is the third choice. You won't get meaningful relief (even if you could conjure up the completed roadways tomorrow) if you only do one lane in any of your configurations. And if you've ever driven south of William Cannon during any rush hour, you should recognize that one new lane is not going to solve that disaster. The reason for two lanes in each direction - whether toll lanes or non-tolled-- should be obvious. A single lane (particularly if it's as narrow as the ones are north of the river in most places) creates a bottleneck if there's a stalled car or an accident that is difficult to recover from. If only one lane can be provided, there needs to be a much more robust pull-off area throughout the entire length of the express lane. - Any time you add a situation with traffic exiting an express lane and needing to cross over existing lanes, you create a new or additional bottleneck, so please don't do that.	OCO-5 OCO-3 D-5 EL-4
1/7/2022	453.02	Lacy Seybold	- While HOV lanes sound lovely, I don't think they will actually do much to alleviate traffic congestion. They don't seem to do much in Houston during rush hour except provide an example of what empty lanes look like to the rest of the Houston public trying to get to work or home from work as they ride by themselves in their cars. If	ALT-3 ALT-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			it hasn't taken on there in the last 30 years, why would you assume that Austin (which has an abysmal public transit record south of the river) would fare any differently?	
1/7/2022	453.03	Lacy Seybold	- Don't kid yourselves and try to hoodwink the rest of us into thinking that there will be some massive conversion of the general populace into ride-sharers or mass transit aficionados in the next 20 years. You WILL get a few folks to buy in, especially those coming from the east or west coasts where they didn't have to have cars to get around. But it isn't a long-term viable or reasonable plan in a place with months of 100-degree weather to assume that our public transit system can be effectively combined with a multi-block walk to a job downtown in business attire on a daily basis. The same is true with assuming that any significant number people will bike from Circle C to a work location downtown, no matter how nice the route is. That's not a robust or realistic contribution to the solution.	comment noted
1/7/2022	453.04	Lacy Seybold	- Finally, I would really hate to see another multi-year fiasco like the one we had with building of the toll lanes between Lady Bird (then Town) Lake and Parmar Lane with its unending traffic nightmares and squeezed down lanes which we endured for the promise of improved traffic flow -- only to find that the Mobility Authority somehow decided once the lanes opened that the express lanes had never been intended to relieve traffic congestion in the minds of those at the Mobility Authority, but rather were for the use of buses and first responders and those in a hurry for an occasional need---NOT for the relief of the general public's traffic nightmares. I, and the people I know who drove MOPAC during construction, felt like we'd been lied to about the reason for the construction and the expense. I urge you not to make that mistake again.	C-1 EL-1 TO-4.1 PP-1
1/7/2022	454.01	Emily Blazer	This idea keeps being revived, and the planning process seems to be aimed at avoiding or ignoring environmental impact. As road builders, your information is highly slanted toward the effect this project may have on traffic and there's very little about what you consider to be acceptable environmental effects. Please publish more information about the environmental study: - What was the original request?	PI-2 ENV-2 PN-1 RP-7
1/7/2022	454.02	Emily Blazer	- Who is doing the study? Your FAQs indicate that "The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) are developing the MoPac South Environmental Study cooperatively with other local partners." This is not enough information and hardly reassuring.	TxDOT-1 MA-3
1/7/2022	454.03	Emily Blazer	- What criteria were important in that choice?	OCO-5
1/7/2022	454.04	Emily Blazer	- What objections have been made?	PI-8
1/7/2022	454.05	Emily Blazer	- Why is there so little information about the likely environmental impact?	ENV-2
1/7/2022	455.00	Kent Browning	This needs to be fixed but "double decking" and tolls are NOT the way to fix this. Restriping and adding lanes are a much better improvement.	D-2 D-9 PN-1
1/7/2022	456.00	Nelson Guda	Please, please do not approve this. Austin residents have long fought against the expansion of MOPAC because of the many environmental and neighborhood impacts. This expansion is not needed and will greatly diminish the quality of life in Austin. I implore you to reject this. Sincerely, Dr. Nelson Guda	PN-1 PI-3 ENV-2
1/7/2022	457.01	Rachel Zierzow	I oppose the building of more toll lanes on Mopac South including a double-decker bridge crossing Ladybird Lake near Austin High School.	D-2
1/7/2022	457.02	Rachel Zierzow	The project would create adverse environmental impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.	WQ-1 CR-2 TES-1 TO-1
1/7/2022	457.03	Rachel Zierzow	The highway should remain a local commuter road, not an alternative to I-35, which is what in effect it would become. I encourage the consideration of toll road alternatives as well as public transportation initiatives, as toll roads are not an acceptable solution for easing climate change, encouraging carpooling, or getting at the root cause of traffic problems.	Alt-1 RP-3 T-1 PP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	458.01	CHELSEY K KETCHER	Hello, I am personally opposed to the widening of South Mopac because it will bring too much noise and pollution so close to homes. The money should be used to improve I-35. We should in no way encourage I-35 traffic to move to Mopac which was never designed to have that many cars driving on it daily. Homeowners will suffer environmental pollutants and increased noise should Mopac be widened. The only thing that needs to be widened is the bridge over Lady Bird Lake. As a daily commuter from North to South Mopac, that is where the problem is.	ENV-2 TN-1
1/7/2022	458.02	CHELSEY K KETCHER	Also I am strongly opposed to the insane toll prices during peak hours. \$7 to drive less than 3 miles is an utterly embarrassment to the state, and ultimately sets the rich from the middle class even further a part. It's just a pathetic way to make more money on a project that never should have been done in the first place.	EL-1 EL-3 EJ-1
1/7/2022	459.01	Kris Meiske	I am concerned to hear TeXDot plans to add managed lanes on the south Mopac project. These manage lanes are a complete rip off and never deliver on the promise's TeXDot makes. I drive Mopac every weekday for work all the way from South Austin to Round Rock and I can give you firsthand account that these lanes are merely tools to increase the coffers of TeXDot and 3rd party interest and perpetuates inequalities in our city.	TxDOT-1 EL-3 EJ-1 MA-2
1/7/2022	459.02	Kris Meiske	Before Covid hit going south on Mopac was horrible and the manage lanes only made it worse. This lane would often clog up and move much slower than the free lanes during rush hour because people were dumb enough to take a ride on the pay lane thinking they might get to their destination faster however most of the time they didn't and the prices soared, what was stated in the past before the new Toll road opened was that prices would not see north of \$3 dollars I believe during rush hour, this was a complete lie or bad/fudged math. They would often soar to \$12 to \$15 dollars, and I bet if you pulled the data south and north direction for only rush hour and made that public prior to Covid everyone would be shocked to see the stifling cost of this atrocious Toll Road you call managed lanes.	EL-3 PP-1
1/7/2022	459.03	Kris Meiske	Once I listened to an interview on KUT with a spokesperson on the new managed lanes and in that interview the spokesperson stated if you had any issues with the new Mopac toll In you could call in and they would refund you depending on the nature of the issue. So, a few weeks later I had an issue where we were diverted on the toll lane due to a wreck, I called and explained what happened and they said they would look into it however they never called me back never refunded me and did nothing.	MA-4
1/7/2022	459.04	Kris Meiske	They also do not help any higher need transport vehicles such as ambulance etc. I've seen it they don't mess with these lanes during rush hour traffic because they will get locked in and doesn't allow for cars in front of them to move out of the way. and during non-rush hour there's no point getting on it either. Not only is the manage lane money a grab and they will not help anyone falsely charged, but they also don't care.	OCO-5 EL-4 EL-1
1/7/2022	459.05	Kris Meiske	I'm not opposed to a toll road for a limited amount of time to pay for the road construction if that's your only way for paying for new roads and the Texas Legislature doesn't have the guts to raise the gas tax or the ever-increasing electric vehicle usage, however they will never do that and its toll for life and the special interest or whoever is getting kickbacks on this deal won't let that happen.	TF-1 TF-2
1/7/2022	459.06	Kris Meiske	Here's the real kicker this comment will go no where Toll roads are a done deal, they only thing us riders have to look forward too is heavy traffic on Mopac no relief in sight. The current managed lanes proved that, so let's keep up the facade that TexDot or the city is actually doing something to alleviate traffic. All I ask is for someone to care who reads this, fight it don't let this happen figure out away to just add more lanes and fund it the hard way, manage lanes and toll lanes does nothing but increase the inequality in our city and they do not work period. Thanks for listening.	EL-1 EJ-1
1/7/2022	460.01	julie hill	Hello, I'd like to comment on the proposal for the Mopac South toll road. There are so many studies proving that adding more highway lanes doesn't really do much to alleviate traffic, and since this proposal also runs right through an ecologically fragile area, I think it's very important to explore other options.	EL-3 ENV-2 ALT-5 ICI-1
1/7/2022	460.02	julie hill	As an Austinite who uses the proposed route quite a lot, I would very much rather see the money for this project funneled into public transit, and I would think a train to downtown/Zilker/Barton Springs would be heavily used, particularly for events. Instead of trying to accommodate MORE cars, I would very much like to see solutions that encourage people to drive LESS, and thus the need for enormous double-decker bridges is alleviated.	T-3 T-1 D-2
1/7/2022	460.03	julie hill	Alternately, if there HAS to be a double deck bridge, put it on 35, which doesn't run through the recharge zone as car as I'm aware. Thank you for your time!	D-2
1/7/2022	461.00	Kevin P. Keim	A 30-year citizen of Austin, I am against everything in this proposal, particularly with the scheme to double deck the bridge over Lady Bird Lake. It would do irreparable harm to the park and trails and water sheds which many people labored long and hard to preserve, and many more, by the hundreds of thousands, enjoy every day.	D-2 CR-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	462.01	Thomas Schiefer	Please consider the long lasting effects of continuing development along mopac and west of the mopac corridor. Study after study show that bigger and more roads do not lead to a relief in traffic, quite the opposite actually. More roads and bigger roads lead to more growth and in turn more traffic, congestion, pollution, and problems.	ICI-1 SOC-1
1/7/2022	462.02	Thomas Schiefer	The Edwards Aquifer is a fragile ecosystem that cannot handle more growth.	WQ-1
1/7/2022	462.03	Thomas Schiefer	Please consider alternative options to the growth problem the city and the hill country are experiencing. I whole heartedly disagree with the expansion of Mopac. This is a bad idea for everyone except the people monetarily involved.	Alt-1 RP-7
1/7/2022	463.00	David Todd	I strongly object to the proposal to enlarge MoPac South, adding a toll bridge and 4 toll lanes. I think that this kind of highway project only feeds suburban sprawl, will add to the contamination of the Barton springs watershed, and is self-defeating - engendering additional construction in outlying areas that quickly consumes the added lane space.	ENV-2 ICI-1 SOC-1
1/7/2022	464.00	Linda Moore	A 50 year citizen of Austin, I am against everything in this proposal, particularly with the scheme to double deck the bridge over Lady Bird Lake. It would do irreparable harm to the park and trails and watersheds which many people labored long and hard to preserve, and many more, by the hundreds of thousands, enjoy every day.	D-2 ENV-2
1/7/2022	465.01	Alec Robinson	Thank you CTRMA and TxDOT for hosting the Virtual Open House and for providing an opportunity for public comments on the MoPac South project. I want to express my preference for no increased elevations over the Bee Cave Road and Lady Bird Lake areas.	D-2
1/7/2022	465.02	Alec Robinson	I also believe that more time should be provided to seek public feedback before selecting the preferred alternative.	PI-7
1/7/2022	465.03	Alec Robinson	In my view, the visuals and videos explaining the various alternatives should be updated to reflect changes that have occurred since 2015. I don't believe the public can provide you with the highest quality feedback unless the information on the various alternatives is accurate and up-to-date.	RP-2 D-13
1/7/2022	465.04	Alec Robinson	I would like to see the Virtual Open House extended until CTRMA and TxDot can update this information. Sincerely, Alec	PI-1
1/7/2022	466.01	Teresa Davidson	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rolling Wood.	Comment noted; see response to Travis County XXX and Rollingwood XXX
1/7/2022	466.02	Teresa Davidson	Please no double decking the bridge at Lady Bird Lake and turning Austin's prettiest areas near the park and lake into ugly Anywhere USA infrastructure.	D-2
1/7/2022	467.01	Garret Nick	please stop trying to build this project. there aren't enough traffic jams on earth to justify the continued destruction of our lakefront, parks, and schools that will be impacted by this.	ENV-2
1/7/2022	467.02	Garret Nick	put this money into mass transit and stop building more roads.	T-1 T-4
1/7/2022	468.01	guy leblanc	I drive on mopac at least twice a day, at least 5 days a week, and have done so for more than 25 years. So I can tell you that your claim that the addition of toll lanes to Mopac has significantly improved traffic conditions there is FALSE. So you are justifying this project under specious claims right off the bat. If I understand the material here correctly, an EIS has not been done yet, and may not be done if TXDOT gives a ruling of no significant impact to your EA.	ENV-1 PP-1
1/7/2022	468.02	guy leblanc	Given TXDOT's history, most recently with the horrendous Oak Hill Y project, in which they essentially raped the land, and totally misled the public as to what the extent of tree removal would have been, this seems like exactly the wrong way to go about this. An EIS should made BEFORE any decision is made. My preference would be that there not be any further expansion of the infrastructure over/ near Ladybird Lake.	TxDOT-1
1/7/2022	468.03	guy leblanc	Please expand the period for public comment and please do the MOST detailed EIS possible.	PI-1 ENV-1
1/7/2022	469.01	Holly Reed	I am opposed to this proposal, and the options illustrated in the exhibits. The expansion of the bridge over Lady Bird Lake and/ or addition of elevated lanes and connectors would do irreparable harm to the environment and parks, trails and water sheds which many people have labored long and hard to preserve, and many more (by the thousands!) enjoy every day.	D-2 CR-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	469.02	Holly Reed	In addition, these exhibits and studies therein are from 2015, not current, and it is deceptive to ask the public to comment on dated information. Sincerely, Holly Reed President, West Austin Neighborhood Group	RP-2
1/7/2022	470.01	Robert Lawrence Akers	(re-submitted because your website only thanked me for signing up for a newsletter, and not for submitting a comment -- why??) Toll roads are the least efficient and most costly means of handling high volume traffic. They induce extra construction cost, require extra right-of-way and construction, require greater impervious cover, induce merging conflicts, and fail to achieve maximum throughput by creating an imbalance of lane usage. They are the brain child of a misguided government business model that has been broadly discredited in the public eye and at the legislature. They fiscally punish urban areas to subsidize rural constituents, who get their roads "for free", relatively speaking. Toll roads are in almost every way BAD PUBLIC POLICY. So why persist in using this discredited approach?	ALT-5 TF-1 PN-1 RP-7
1/7/2022	470.02	Robert Lawrence Akers	Why add all this additional pavement over a super-sensitive environmental zone when the needs assessment pre-dates the gigantic changes in commuting dynamics introduced via the work-at-home model?	WQ-1 RP-6
1/7/2022	470.03	Robert Lawrence Akers	Why use obsolete data to justify what could possibly be over-building? And why place the design decisions ahead of getting modern data?	RP-2
1/7/2022	470.04	Robert Lawrence Akers	Why induce vast noise pollution over Central and Southwest Austin by elevating the roadway?	D-2 TN-1
1/7/2022	470.05	Robert Lawrence Akers	Why limit the public comment period to a COVID-plagued holiday season?	PI-1
1/7/2022	470.06	Robert Lawrence Akers	You need to put the brakes on this nonsense and re-assess your goals and your design assumptions and allow the tax-and-toll paying public to do the same. Sincerely, Robert L. Akers	PI-12
1/7/2022	471.00	Steffany Thees	It is my belief that this project is not beneficial to the environment or the community. This is not what Austin wants and our community should have a say in how our infrastructure is planned. We need to protect our water and surrounding environment.	ENV-2 PI-2
1/7/2022	472.00	Linda Moore	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood	Comment noted; see response to Travis County and Rollingwood
1/7/2022	473.01	John Mullikin	* Extend the comment period at least 30 days.	PI-1
1/7/2022	473.02	John Mullikin	* Prepare a full Environmental Impact Statement (EIS).	ENV-1
1/7/2022	473.03	John Mullikin	* Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement	Alt-6 Alt-7 D-9 PN-1
1/7/2022	473.04	John Mullikin	* Update the traffic modeling data	RP-1
1/7/2022	473.05	John Mullikin	* Analyze real alternatives to added toll lanes	Alt-1
1/7/2022	474.00	John Berry	I am entirely against this plan for reasons that are well-described in the Save Our Springs Alliance's comments, with the following additional remarks: 1. The outbreak of poison blue-green algae at Sculpture Fall this fall indicates that Barton Creek is already at the critical point of being converted to an urban sewer rather than a stream suitable for recreation. This plan will (a) take more land in the watershed and convert it to concrete, and (b) add to pressures to build more	Comment noted; see response to SOS 1. ENV-2 2. D-2, CR-2, SOC-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>"stuff" in the watershed, causing further deterioration in stream water quality.</p> <p>2. In addition to the impacts on Zilker Park, Austin High School, etc., that SOS notes, any two level bridge in this area will be a visual and aural nightmare for all the people of Austin who use the Ladybird Johnson Lake Trail, the Armstrong Bikeway, the Johnson Creek Trail, the Lake itself (whether boating, kayaking, rowing, etc.), Deep Eddy Pool, the Austin Science and Nature Center and the local streets such as Lake Austin Boulevard, Cesar Chavez, Veteran's Drive and Stratford Drive, etc.</p> <p>3. As SOS notes, it will increase congestion on Cesar Chavez through downtown immeasurably. This will in turn increase pressure to convert W.5th and W. 6th to high rise buildings like those east of Lamar Blvd. In this sense, this project is a hidden subsidy to the real estate industry in Austin: if they want it, let them help pay for it.</p> <p>4. Why not prioritize improvements to highway 360 instead.? Connecting an improved 360 to Southwest Pkwy via Lost Creek Blvd., Escala Drive and Mirador Dr. would not only remove some traffic from Mopac, but would have made the huge project at the Oak Hill Y unnecessary, and it would only have angered a few really rich people, but probably have improved access for their neighbors in "Estates above Lost Creek" enough that they would have been overruled by their own neighbors.</p>	<p>3. TO-2</p> <p>4. RP-7</p>
1/7/2022	475.01	Mlra Madhav	I am writing to strongly oppose the proposed toll road on Mopac over the Lady Bird Lake and near Zilker Park. We truly need to protect our Aquifer and Parklands in the heart of Austin.	CR-2 WQ-1
1/7/2022	475.02	Mlra Madhav	Existing lanes can always be utilized to be HOV lanes during peak traffic times at minimum extra work and very little in cost.	Alt-3
1/7/2022	475.03	Mlra Madhav	With working situations changing where more remote work is now possible as well as proposed transport systems, we truly should work with the lanes already present and re-evaluate the traffic needs.	RP-6
1/7/2022	475.04	Mlra Madhav	Please put the needs of the environment and our future generations before profits.	ENV-2
	475.05	Mlra Madhav	Tolls roads do not sever the majority of the commuters as it becomes costly to use on daily bases.	EL-3
	475.06	Mlra Madhav	We need to MAINTAIN PERVIOUS GROUND COVER to avoid floods and to ensure water reaches the aquifer --VERY IMPORTANT.	WQ-1
1/7/2022	476.00	Deborah Cobalis	I am seriously opposed to the proposed traffic project over MOPAC. A new traffic study needs to be done plus the danger to Lady Bird Lake and Barton Springs cannot be under estimated!! We must protect these important resources that make our city what it is!!	RP-1 WQ-1
1/7/2022	477.00	Donald Becker	I strongly support an expansion of South Mopac. Since the increased mobility is of value to the entire community, not even just to those who use the road, and certainly not just to those who might pay a toll to use express lanes, the improvements to the road should be supported by the entire community and not funded by a toll.	Alt-1 TF-1 EL-1
1/7/2022	478.00	Derek Eckert	I strongly oppose the idea of building another layer on MoPac. This would be an environmental hazard, increase noise and traffic thru South Austin, make our town look like Dallas (barf) and ruin the charm and character of surrounding neighborhoods.	D-2 ENV-2 SOC-2
1/7/2022	479.01	Kent Kostka	Please listen to the voters and the feedback you got the last time this was proposed, and do NOT build double-decker Mopac or encroach on Austin High School. The outdated idea that you can build your way out of permanent congestion has been proven wrong time and time again.	D-2 ICI-1 TO-1 SOC-1 ALT-5
1/7/2022	479.02	Kent Kostka	Build this, and it will be clogged up within a few years by the traffic you encourage by doing this. While Austin is already trying to find ways to reverse the immense damage done to the city by the bad 1970s I-35 double decking, you want to commit the same 20th-century mistake on Mopac? And you're using 2009 data from an outdated plan to justify this? Please, NO!	RP-2 EL-3
1/7/2022	479.03	Kent Kostka	Find a more well-thought-out, responsible solution that won't damage Austin High and the environment.	ENV-2 TO-1
1/7/2022	480.01	Jolene Kiobassa	It is clear you do not want your project scrutinized because your public "outreach" and comment period are during the holidays.	PI-1 PI-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2022	480.02	Jolene Kiolbassa	And of course you don't want the community to realize that you would add lanes where TownLake runners, bicyclists and paddle boarders and Austin HS students would breathe in the resulting fumes.	AQ-1 SOC-3
1/7/2022	481.01	Mark schuh	Please reconsider using outdated plans for the Mopac expansion. Our city has changed significantly 7 years and needs to be revisited to ensure the right thing is done.	RP-2
1/7/2022	481.02	Mark schuh	Having a double decker expressway will cause noise and light pollution and crowded exits and affect property values in the neighborhoods. Thanks	D-2 TN-1 ECO-1
1/7/2022	482.01	Mary O Beck	I am writing to request that you: 1. Add 30 days to the comment period, so that people who have been preoccupied by the holidays can have a chance to consider this issue, and	PI-1
1/7/2022	482.02	Mary O Beck	2. Use updated traffic modelling data that takes into account changes in traffic patterns and land usage over the previous decade.	RP-2
1/7/2022	482.03	Mary O Beck	I have used Mopac as a local commuting route for the last 20 years. In that time, it has gotten increasingly congested, but is still much better than IH35, because it is largely used by local commuters going into and out of the downtown area. Turning it into a longer-haul throughput route is a terrible idea.	PN-1
1/7/2022	482.04	Mary O Beck	The installation of toll lanes on the North part of Mopac caused years of traffic disruption without resulting in a significant reduction in traffic congestion on that portion of Mopac. Continuing toll lanes through the downtown area all the way to South Austin will likely make the problem worse by encouraging the use of Mopac as an alternative to IH35.	ALT-5 TF-1 PN-1 RP-3
1/7/2022	482.05	Mary O Beck	It will also result in irreparably negative changes to Zilker Park, Lady Bird Lake, Austin High School, and other nearby facilities. Thousands of Austinites who use and depend on these green spaces would have an opinion about this project if given a more timely chance to do so.	CR-2 PI-1 TO-1
1/7/2022	483.00	Amy Demas	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see response to Travis County and Rollingwood
1/7/2022	484.00	Yu Gu	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood	Comment noted; see response to Travis County and Rollingwood
1/7/2022	485.00	Ryan Clinton	I am very strongly against the City of Austin's proposal as it would cause traffic heading west of town to deadlock. It's hard for me to believe that anyone thought that would be a good idea. Overall, I endorse the comments of the City of Rollingwood and the Travis County Commissioners.	Comment noted; see response to Travis County and Rollingwood
1/7/2022	486.01	Mary Williams	We live very close to Rollingwood and already hear MoPac at every hour of the day, but particularly at night. MoPac is surprisingly loud given how far we are from it. We ask that the City of Austin discontinue further consideration of any proposal that would involve raising or altering this section of MoPac to create a double decker highway.	D-2
1/7/2022	486.02	Mary Williams	Raising the highway or adding a second level to the existing highway will only increase traffic noise pollution in our neighborhood which will negatively impact both our quality of life and potentially our property values.	TN-1 D-2
1/7/2022	486.03	Mary Williams	When several other alternatives exist that will improve traffic flow but not adversely impact Rollingwood and its surrounding areas, further consideration of a double decker MoPac must end.	D-2 Alt-1
1/7/2022	486.04	Mary Williams	We are please to see that the City is considering redesigning the exit from MoPac Highway south onto Bee Caves Rd. As currently designed, this exit is difficult to navigate at best and can be dangerous when making a right turn onto Bee Caves Road. We are aware of several neighbors whose newly licensed drivers have struggled with this exit and/or had accidents while attempting to turn right onto Bee Caves after traveling south on MoPac. Thank you for your consideration.	TO-5

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>Best regards,</p> <p>Mary Williams</p>	
1/7/2022	487.00	Michael Fitzgerald	<p>My family and I are against the double decker idea. We need to keep Austin beautiful. An ugly double deck freeway would destroy the beauty of our city. We are trying to get rid of double deck freeways on i35. San Francisco got rid of theirs in the early 80s and immediately improved the feel of their community. Let's not move backwards.</p>	D-2
1/7/2022	488.00	Jay van Bavel	<p>I am writing to support the position taken by the Travis County Commissioners Court and the City of Rollingwood on this issue. We are not in favor or any expansion of Mopac immediately adjacent to our neighborhood. Thank yoy</p>	Comment noted; see response to Travis County and Rollingwood
1/7/2022	489.01	Park Hills Baptist Church via V. Samuel Clintoc	<p>We are attaching a letter as our Public Comment</p> <p>We are submitting this input on behalf of the Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to our immediate physical proximity to Mopac, we have significant interest in how the expansion plan is developing in our area and the impact it may have to our immediate environment and to the use of our property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, our property is heavily used for the traffic and parking needs for the major events in our city park.</p> <p>We appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. We are also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. We have concerns with some of the options that are being considered at this time.</p>	PI-12
1/7/2022	489.02	Park Hills Baptist Church via V. Samuel Clintoc	<p>As much as it is our desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, we believe we need the assistance of professional input from traffic and other experts on the impact these proposals would have on our property. At this early stage, we are aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:</p>	ICI-1 SOC-1
1/7/2022	489.03	Park Hills Baptist Church via V. Samuel Clintoc	<p>(1) We are concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. We support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in our location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.</p>	Soc-2 SOC-1
1/7/2022	489.04	Park Hills Baptist Church via V. Samuel Clintoc	<p>The option of adding noise-preventing walls would cause our intersection to be covered with concrete, instead of preserving the green environment the community enjoys today. Every spring, we have lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of our property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. We would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.</p>	TN-1
1/7/2022	489.05	Park Hills Baptist Church via V. Samuel Clintoc	<p>Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. We have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. We do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.</p>	See Soc-2
1/7/2022	489.06	Park Hills Baptist Church via V. Samuel Clintoc	<p>(2) We are concerned for what impact the current plans will have on ingress-egress to our property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact our exit lane (currently it is on the north of the Mopac exit ramp to 2244). We want to ensure that moving the ramp to the north would not negatively affect our ability to use our property exit.</p>	D-12
1/7/2022	489.07	Park Hills Baptist Church via V. Samuel Clintoc	<p>(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. We are concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). We realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac</p>	OOS-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, we cannot support any options that might inhibit the future development of this intersection.	
1/7/2022	489.08	Park Hills Baptist Church via V. Samuel Clintoc	Thank you for the opportunity to submit our comments and concerns. We look forward to being able to discuss these matters further with your staff. Feel free to contact our Senior Pastor, Dr. V. Samuel Clintoc at sclintoc@parkhillsbaptist.church.	PI-12
1/7/2022	490.01	Sarah A.	No one who cares about Barton Springs, Zilker Park, Ladybird Lake, or our amazing trail system wants this!	Soc-3 CR-2
1/7/2022	490.02	Sarah A.	You need to find better ways to alleviate traffic. Use your imagination, for God's sake! You CAN come up with a better solution. This poor city and its inhabitants have suffered through enough development and watched as the very reasons we live here get demolished, changed, and watered down until this special city feels like a shell of its former self.	Alt-1 RP-7
1/7/2022	490.03	Sarah A.	We want smarter people, more transparent info, and better solutions in regard to this project. Do better, now!!!	PI-2
1/7/2022	491.00	Sarah A.	No one who cares about Barton Springs, Zilker Park, Ladybird Lake, or our amazing trail system wants this! You need to find better ways to alleviate traffic. Use your imagination, for God's sake! You CAN come up with a better solution. This poor city and its inhabitants have suffered through enough development and watched as the very reasons we live here get demolished, changed, and watered down until this special city feels like a shell of its former self. We want smarter people, more transparent info, and better solutions in regard to this project. Do better, now!!!	*Repeat comment submission as above.
1/7/2022	492.01	Annette Catherine Hudson	I agree that there is a serious congestion problem crossing Lady Bird Lake on both Mopac and South IH35, but I do not think the answer is to build elevated lanes over the lake because the problem is not with traffic heading to downtown. That ramp is usually less busy than traffic going farther. The improvements to Mopac north of the lake caused multiple problems during construction and did little to alleviate traffic congestion. It now just occurs in different areas. The toll lanes were presented as a win-win solution but in reality they benefit only the elites that can afford to use them and the corporation profiting from them. I think a better approach is to provide more alternatives for crossing the river instead of focusing on one psuedo solution	D-2 Alt-1 EL-1 PP-1 RP-7 PN-1
1/7/2021	493.01	Ste Kubenka	Dear CTRMA Boardmembers: This double-decked MoPac plan is a relic brought back to life with traffic data and environmental analysis that is more than 10 years old. If built, it would convert MoPac from a local commuter highway into I-35 West and further destroy more Austin neighborhoods. Its construction and operation pose an irreversible threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek Greenbelt..	D-2 CR-2 TO-1 RP-3
1/7/2021	493.02	Ste Kubenka	Before proceeding, CTRMA must update the traffic modeling data and give the public another opportunity to give input before selecting only among decade-old alternatives.	RP-1 PI-7
1/7/2021	493.03	Ste Kubenka	Provide "no build" or "very limited build" alternatives that improve traffic flow using the existing pavement, HOV lanes, public transit options, ramp metering, and other available technologies.	Alt-3 Alt-6 D-9 PN-1
1/7/2021	493.04	Ste Kubenka	Updated traffic modeling will capture our post-covid world where tele-commuting, flexible work schedules, and other technological and societal changes have largely eliminated the necessity of ill-advised spending to accommodate demands predicted over a decade ago. Like a good carpenter, CTRMA needs to measure twice and saw once. Especially if the "cut" is going to cost half a billion dollars. Sincerely, Ste Kubenka	RP-6

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			Austin, TX 78746	
1/7/2021	494.00	Victor Alcorta	I fully support the comments submitted by the City of Rollingwood.	Comment noted; see response to Rollingwood
1/7/2021	495.00	Patricia Slate	This will drastically change my commute. What's the hurry? Please expand the comment period to show that you are willing to listen to input from all who are severely affected by this project.	PI-1 PI-2
1/7/2021	496.01	Beki Halpin	This is a terrible design for this road that will cost the city more by destroying its natural beauty than it will add in value of questionable traffic enhancement.	ENV-2 SOC-1
1/7/2021	496.02	Beki Halpin	Please extend the comment period. Much of the allotted time has been consumed by the holidays.	PI-1
1/7/2021	496.03	Beki Halpin	Prepare a full environmental impact statement.	ENV-1
1/7/2021	496.04	Beki Halpin	Look at using the existing footprint of the current highway to shrink, rearrange and adapt utilization of current paved space to achieve traffic relief goals.	D-9 PN-1 Alt-1
1/7/2021	496.05	Beki Halpin	Update your traffic models. They are totally out of date and the models themselves are questionable because they have not accurately projected the current traffic.	RP-2
1/7/2021	496.06	Beki Halpin	Look at adding capacity by converting existing lanes into HOV lanes at rush hour.	ALT-3
1/7/2021	497.01	Linda Cox	Please do not build a double decker road over Zilker Park. This will damage our town irreparably.	D-2
1/7/2021	497.02	Linda Cox	The public comment period must be extended. It does not show integrity to push this through without sufficient community involvement in the decision by asking for comments over the holidays and by failing to alert the public sufficiently. Linda Cox Professor at ACC Resident over 23 years	PI-1 PI-3
1/7/2021	498.01	Elena Cox	Please don't build a double decker bridge in the Zilker area. It will harm our city and springs, and the community needs more time to discuss it.	D-2
1/7/2021	498.02	Elena Cox	There needs to be a public announcement and sufficient time after the holidays for community discussion.	PI-1
1/7/2021	498.02	Elena Cox	I am strongly opposed to this construction project.	Comment noted.
1/7/2021	499.00	Niccole M Maurici	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood	Comment noted; see response to Travis County and Rollingwood
1/7/2021	500.00	Karen Mouton	Do not build roads/ a bridge/ a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Let's keep Austin beautiful. Thanks y'all!	D-2 CR-2 TO-1
1/7/2021	501.00	Anne Barnstone	Please don't turn South Mopac into I 35. Please don't make us go though what we went though for the toll lanes on North Mopac. Put some buses on Mopac if you want to decrease auto traffic. The faster you build highways and lanes the faster they will fill up. We don't want 17 lane highways like Houston.	Alt-1 T-1 PP-1
1/7/2021	502.00	Kathryn Bryan	The theory of induced demand was proven by the MoPac/290 flyover completion that brought huge traffic jams onto southbound MoPac. More cars will futher degrade neighborhoods like mine that now hear the drone of highway traffic in our yards. Only mass transit is a sustainable option moving forward.	TM-1 T-3 ICI-1 SOC-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	503.00	Josy Johnson	Please open public comments longer so that the austin residents can respond to how our aquifer is treated I am in opposition of expanding roads and impervious cover on the land around our jewel park, Zilker and Barton's springs and lady bird lake.	PI-1 CR-2 WQ-1
1/7/2021	504.00	Ronald Hasso	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted; see response to Travis County and Rollingwood
1/7/2021	505.01	Walter G. Barfield	I support the previously submitted Save Our Springs comments in full.	Comment noted. See response to SOS comment
1/7/2021	505.02	Walter G. Barfield	It is increasingly obvious that increasing freeway lanes do not work.	ALT-5 EL-3 TF-1 PN-1
1/7/2021	505.03	Walter G. Barfield	The CTRMA should use its authority to explore a commuter rail system from the southern suburbs into Austin using UPRR ROW and by negotiations with the Railroad.	T-3 T-4
1/7/2021	506.00	Kimberly Kohlhaas	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and Rollingwood.	Comment noted; see response to Travis County and Rollingwood
1/7/2021	507.01	Cathleen M McGarity	I wish to express my firm opposition to the proposed MoPac South Toll Road proposal.	Comment noted.
1/7/2021	507.02	Cathleen M McGarity	In the first place, there should be at least an additional 30 day comment period to allow the citizenry adequate time to submit comments/concerns and alternatives.	PI-1
1/7/2021	507.03	Cathleen M McGarity	Second, there should be new analysis based on current (2022) data prior to the formulation of any proposal.	RP-1
1/7/2021	507.04	Cathleen M McGarity	Third, there should be greater weight given to the benefits of HOV/public transit lanes as an alternative to toll roads.	Alt-3
1/7/2021	507.05	Cathleen M McGarity	Fourth, there should be a thorough evaluation of the environmental impacts of any such project, including climate change impacts, and consideration of mitigation measures to compensate for the increased impervious cover due to the project. For all of these reasons, the current proposal should be shelved.	ENV-1 ICI-2
1/7/2021	508.01	Maria Abernathy	I urge CTRMA to take heed of all the issues raised in the Rollingwood mayor's latest letter regarding the Mopac South plans, especially to update data and plans to 2022 status. More concrete is not the only answer to traffic congestion, and it can be immensely destructive to the Zilker Park/ Lady Bird Lake area. (My own birthplace, San Francisco CA, learned this lesson belatedly and finally took down the offensive Embarcadero Freeway.)	See response to Rollingwood CR-2 RP-1
1/7/2021	508.02	Maria Abernathy	I also urge CTRMA to be creative - Consider rapid transit routes a level below the Mopac bridge.	T-3 RP-7
1/7/2021	508.03	Maria Abernathy	Incentivize businesses to locate offices farther north and south, away from Austin's very cramped city center and closer to growing housing developments. Thank you.	ICI-1 SOC-1
1/7/2021	509.00	Laura Johnson Travis	This is a horrible idea for Austin. We need to preserve the natural world and come up with solutions that are sustainable for the entire planet, not just the efficiency of human beings. Do not allow this project to happen!!	ENV-2 RP-7
1/7/2021	510.00	Aparna Katragadda	Oppose	Comment noted.
1/7/2021	511.01	Paula McDermott	Please: 1) extend the public comment period - I only just heard about this and many in our community who will be affected have not ...	PI-1
1/7/2021	511.02	Paula McDermott	we need to have solid current analysis of related traffic data and environmental assessments, as well	RP-1 PI-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	511.03	Paula McDermott	2) in particular, do not include the massive infrastructure (e.g., double decker highway through Zilker Park?!) proposed - avoid encroaching on Austin High School and Zilker or other parkland	D-2 CR-2 TO-1
1/7/2021	512.01	Raul Gonzalez	Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.	PI-1 PI-3
1/7/2021	512.02	Raul Gonzalez	Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer.	WQ-1
1/7/2021	512.03	Raul Gonzalez	The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.	ENV-1 TES-1
1/7/2021	512.04	Raul Gonzalez	Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.	D-2 CR-2 TO-1
1/7/2021	512.05	Raul Gonzalez	Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.	Alt-3 Alt-6 D-9 PN-1 RP-6
1/7/2021	512.06	Raul Gonzalez	Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.	RP-1 PI-7
1/7/2021	512.07	Raul Gonzalez	Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.	Alt-1 Alt-3 RP-6
1/7/2021	512.08	Raul Gonzalez	Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.	TO-2
1/7/2021	512.10	Raul Gonzalez	Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.	WQ-1 WQ-2 ICI-1 SOC-1
1/7/2021	512.90	Raul Gonzalez	Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.	ICI-2
1/7/2021	513.01	Joe Zakes	I am an Austin resident who lives near Slaughter and MOPAC. I drive on MOPAC almost every day. I'm opposed to building any new travel lanes or roadways through Zilker Park.	CR-2
1/7/2021	513.02	Joe Zakes	If new express lanes are built, I think they would create bottlenecks downtown and lead to pressure to expand Cesar Chavez into other existing parkland.	TO-2
1/7/2021	514.00	Jonathan Miller	I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	Comment noted. See response to Rollingwood comment
1/7/2021	515.01	Craig Nazor	Your proposal would put an enormous amount of impervious cover over an environmentally sensitive area of Austin.	WQ-1
1/7/2021	515.02	Craig Nazor	There are endangered species directly at risk.	TES-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	515.03	Craig Nazor	This project merits a complete EIS. Anything less is too risky.	ENV-1
1/7/2021	515.04	Craig Nazor	I am opposed to toll lanes. Austin is already rapidly approaching a real affordability crisis. More toll lanes will make this worse.	Comment noted
1/7/2021	515.05	Craig Nazor	You also need to examine effects of traffic noise on the elevated parts of the proposed road. These effects will seriously damage the experiences of visitors to Zilker Botanical Gardens, the Austin Nature Center, and the Lady Bird Johnson Wildflower Center.	Soc-2 TN-1 CR-2
1/7/2021	515.06	Craig Nazor	The effects of the increased traffic on automobile CO2 emissions should also be considered - climate change is one of the biggest threats to the future livability of Austin.	ICI-2
1/7/2021	515.07	Craig Nazor	Minimal public parkland should be used for this project. The maximum plans proposed will cause the loss of too much parkland. Austin already struggles to acquire new parkland as the City rapidly expands. Why would we take more away?	CR-2
1/7/2021	515.08	Craig Nazor	What is your goal for MoPac, anyway?	PN-1
1/7/2021	515.09	Craig Nazor	Is it being planned as a portion of a "loop" around Austin?	RP-3
1/7/2021	515.10	Craig Nazor	This will require even more massive projects through the Barton Springs recharge zone.	WQ-1
1/7/2021	515.11	Craig Nazor	Do the people of Austin really want that traffic through west Austin? Wouldn't 130 make a much better bypass than MoPac?	PN-1 RP-7
1/7/2021	515.12	Craig Nazor	In my opinion, the dollars spent on this project would be much better spent on the public transportation projects that MUST be built for a successful future for Austin. Our "car culture" will have to change very soon, or climate change could make Austin unlivable.	T-3
1/7/2021	515.13	Craig Nazor	The comment period for this project was poorly planned, and poorly executed. It gave the appearance that you were trying to avoid comments, not solicit comments. This leads to distrust between the community and CTRMA. Please do better in the future. Thank you for considering my comments..	PI-1 PI-3
1/7/2021	516.01	Ray Eve Michel	Mopac already creates way too much noise pollution and pollution over the lake.	Soc-2 TN-1
1/7/2021	516.02	Ray Eve Michel	Adding a double decker will magnify an already bad situation impacting the core of our city and what makes Austin beautiful.	D-2
1/7/2021	516.03	Ray Eve Michel	We need to explore alternate transportation options.	Alt-1
1/7/2021	517.00	Geoff Cox	Please don't build a double decker highway.	D-2
1/7/2021	518.01	Trudy Hasan	I'm a long-time resident of southwest Austin and frequent user of south Mopac. I'm opposed to the current expansion plans because of the environmental damage it will cause both in the short term and long term. More roads are not the answer to our grossly short-sighted way of life.	ENV-2
1/7/2021	518.02	Trudy Hasan	Austin traffic has changed significantly since March 2020 such that any proposed expansion plan should be re-evaluated in light of fewer commuters with more flexible schedules. My 5-day a week commute to north Austin on Mopac has been reduced (permanently) to twice a week. By now, I think we all realize it is not "business as usual" here and TXDOT must take that into account. Relying on plans from 2017 in a very different 2022 is a big mistake.	RP-1 RP-6
1/7/2021	519.01	Angela Richter	Thank you for the opportunity to submit a comment on the MoPac South Project. Austin Parks Foundation asks that you consider the following: -Please avoid taking or negatively impacting land in Zilker Park.	CR-2
1/7/2021	519.02	Angela Richter	-Please also reduce noise impacts to the park to the greatest extent possible. In particular, consider the visibility and noise impacts to the Zilker Botanical Garden and the Nature and Science Center's Nature's Way Preschool.	Soc-2 TN-1 CR-2
1/7/2021	519.03	Angela Richter	-Include enough space under the highway to accommodate the potential future route of an expansion of the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.	PI-11
1/7/2021	519.04	Angela Richter	-Explore building a "Park and Ride" garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours and could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community and in alignment with the Zilker Park Vision Plan.	T-3 T-2 PI-11

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	519.05	Angela Richter	-Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of MoPac and the east side at Stratford Drive.	BP-1
1/7/2021	519.06	Angela Richter	Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under MoPac to ensure a superior pedestrian and bicycle experience across the river to the north. Thank you very much for your consideration, Angela Richter, Advocacy Manager, Austin Parks Foundation	OOS-1 OOS-1.1
1/7/2021	520.01	Patricia Bobeck	Adding more highway lanes at this location is a truly BAD idea. We can better use the road surfaces we already have.	D-9 PN-1
1/7/2021	520.02	Patricia Bobeck	Construction would cause all kinds of congestion and environmental degradation. The resulting noise and traffic would add pollution of all types: noise, vehicle exhaust.	ENV-2
1/7/2021	520.03	Patricia Bobeck	Besides, I understand that the construction plan uses 10 year old data. This sounds like an all around bad idea.	RP-1
1/7/2021	520.04	Patricia Bobeck	How about you add another month to the comment period and generate some new ideas.	PI-1
1/7/2021	521.01	Michael Hall	I agree with the comments made by the Rollingwood Mayor in the document attached.	Comment noted. See response to Rollingwood comment
1/7/2021	521.02	Michael Hall	Further I am very concerned about any elevated options and the noise and unsightly potential of elevated options.	D-2
1/7/2021	521.03	Michael Hall	I am concerned that Bee Caves and the access to Rollingwood Drive via the underpass by Zilker park stay in a similar format/access ability to that existing today.	OOS-2
1/7/2021	522.01	Tom Wald	The comment period is at an awkward time and also too short. I recommend adding an additional 30 days in order to receive robust community input.	PI-1
1/7/2021	522.02	Tom Wald	Safety for all types of roadway users should play a central role in this project.	SF-1
1/7/2021	522.03	Tom Wald	It's not clear where the additional traffic would go once it reaches the greater downtown Austin area. The volume of traffic on local streets has already reached capacity (pre-pandemic) based on the existing capacity of South MoPac. Other than the connection to the existing North MoPac managed lanes, the project materials do not explain where the additional vehicle traffic would travel to/from.	TO-2
1/7/2021	522.04	Tom Wald	This project should include shared-use paths on both sides of the highway for the length of the project that are separated from the roadway by a crash barrier, such as a concrete jersey barrier, guardrail, or retaining wall. The shared-use paths should be 12' wide. The highway crossings should also include shared-use paths or a coupling of protected bike lanes and sidewalks (if that matches the City of Austin's proposed facilities on either side of the highway).	BP-1
1/7/2021	522.05	Tom Wald	This project is doubling down on fomenting the changes we see to our local climate and the climates across the planet. This project is it: this is why our climate is changing. This project should instead not add any motor vehicle lanes.	ICI-2
1/7/2021	522.06	Tom Wald	The project should include sound walls for the length of the project. For locations where the views are extraordinary, transparent walls should be used, as found along some German highways.	TN-1
1/7/2021	522.07	Tom Wald	The forecasted info on p. 6 of 43 of the exhibits is incorrect. These forecasts state that the traffic volumes will increase substantially (by the percentages listed). These forecasts are used to justify the project. However, without the project, these increases would not happen as forecasted. Therefore, it is not correct to forecast these traffic volume increases, since CTRMA does not yet have approval for the roadway expansion. There may be other ways to state what is here, e.g. "if we expand the roadway, then we will meet these projections". However, as stated, this is incorrect.	RP-8
1/7/2021	522.08	Tom Wald	Rather than adding pavement and lanes, it would be more suitable to convert existing lanes or existing pavement into managed lanes.	D-9 PN-1 D-9.1
1/7/2021	523.00	Rachael Bailey	This is our beautiful home, the more we destroy our green spaces the less Austin is Austin. What makes this city unique is our amazing trails. Our community deserves to keep our nature.	SOC-3
1/7/2021	524.00	Julie	Please don't steal our nature and stop trying to take money greedy people. Slow down go to a speed race if you want to go fast sheesh..	RP-7

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	525.00	Mary E. Bailey	I do not agree that a toll road is needed on MoPac. The Barton Green belt is sacred and needs to be protected for all Austinites. Do not do this project!	SOC-3
1/7/2021	526.00	E	By promoting more traffic .. more cars with this plan you are desecrating the environmental integrity of Austin, Aquifers , central Texas, with additional pollution. And eventually the planet. Please don't do this. You are a sham for developers.	ENV-2 ICI-1 SOC-1
1/7/2021	527.00	Brooke Hollon	As residents of Rollingwood, my husband and I strongly agree with the position taken by the Travis County Commissioners Court in their letter to the CRTMA dated January 4, 2022. We also agree with the position of the City of Rollingwood regarding re-starting this Mopac South project. Rather than presenting the same 6 design alternatives that were proposed back in 2015, we expect to see feedback from the City of Rollingwood provided in 2015 incorporated into the plans. At that point the public will be able to give meaningful feedback. Thank you for your time.	Comment noted; see response to Travis County and Rollingwood
1/7/2021	528.01	Karin Ascot	I am appalled at TxDOT's plans to resurrect the double-decker Mopac highway. It is a terrible mistake that would destroy the enjoyment of Zilker Park, the Botanical Garden, Barton Springs, and the lake, as well as adding unnecessary air and noise pollution to the area around Austin High School and the hike-and-bike trail. In fact, several of Austin's most beloved recreational areas would be terribly impacted by this horrific project.	D-2 AQ-1 TN-1 SOC-3 CR-2
1/7/2021	528.02	Karin Ascot	Studies made clear decades ago that widening highways / expanding capacity does not reduce congestion significantly. This project is not worth the destruction of public areas nor the very high financial cost.	ICI-1 SOC-1
1/7/2021	528.03	Karin Ascot	Please a) update the traffic modeling data used for this project;	RP-1
1/7/2021	528.04	Karin Ascot	b) complete a full Environmental Impact Statement;	ENV-1
1/7/2021	528.05	Karin Ascot	c) extend the comment period for 30 days - seriously, it is appalling, disingenuous, and underhanded to have your comment period over the biggest holiday period of the year!!!	PI-1
1/7/2021	528.06	Karin Ascot	d) honestly & fully evaluate a "no build" or "very limited build" alternative. Thank you. Karin Ascot 32-year Resident & Taxpayer of Austin	Alt-6 Alt-7
1/7/2021	529.00	Laura Mordecai	You've seen SOS's recommendations and I support them 100%. Single car mobility is unsustainable and we need to move away from that NOW. Our planet is in crisis. You know this. Do the right thing and start turning the ship. This cannot be about money, above or below the tables. Money does no good if there is no planet on which to spend it. Think about it.	Comment noted, see response to SOS comment
1/7/2021	530.00	leyla shams	NO WIDENING HIGHWAYS IN AUSTIN. Stop going backwards with transportation! We need more transportation options and more bike and pedestrian friendliness. This design is going in the WRONG DIRECTION.	Comment noted
1/7/2021	531.00	Gilbert Hernandez	Please see attachment with pictures for additional context to below. Reasons why we should reverse the ramps between Loop 360 and Barton Skyway on Mopac: 1. Traffic on 290/71 backs up all the way to Congress at SH 71 in the Morning. 2. The 2 SH 71 outside lanes that exit, Loop 360 Exit on SH 71, pile up with traffic all the way back to Congress, the other 2 are free flowing by the time you get here (to the exit) because if you have not gotten over yet, you are not taking the direct connector. The reason why it backs up to SH 71 and Congress is because people use the inside 2 lanes (of SH 71) to queue jump to exit Loop 360. 3. The 3 inside lanes (on Loop 360) are used to queue jump everyone to get in the right lane to turn right and enter MOPAC. 4. The right turn on the southeast corner of the Loop 360 and Mopac intersection is backed up all the way to congress on SH 71, many miles away. This right turn should have a 2 lane right turn instead of one. 5. The ENTRANCE RAMP north of Loop 360 / Mopac intersection should become an EXIT RAMP. This will allow everyone wanting to get on Mopac to line up on the frontage road instead of backing everyone up all the way back to SH 71.	D-6

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>6. Lots of space on the NB MOPAC frontage road to store traffic getting on Mopac instead of letting it back up all the way to Congress and SH 71.</p> <p>7. NB MOPAC frontage road has 3 lanes and a sidewalk.</p> <p>8. The EXIT RAMP right before Barton Skyway, on Mopac NB, should be reversed. From an EXIT to an ENTRANCE ramp.</p> <p>9. The ramp reversal is done before the Barton Skyway light so no one has to go through it.</p>	
1/7/2021	532.00	SARA HUTSON	I am opposed to any option for the Mopac South project which includes elevated lanes over the existing roadway. Elevated lanes were not included along the Mopac North project and should not be included on Mopac South. The area across Lady Bird Lake and Zilker Park and adjacent to Austin High and neighborhoods at higher elevations than the current roadway would bear significant adverse impacts (degraded views, excessive noise) from elevated lanes.	D-2 CR-2
1/7/2021	533.00	Steven Beck	I just read about this proposal this evening (Friday January 7, 2022). Please extend the public review period another 30 days so I and others that will be affected will have a chance to analyse the impact.	PI-1 PI-3
1/7/2021	534.00	Edgar Handal	I oppose the expansion of Mopac and would like to see an increased focus on public transit (bus and rail) and active transportation modes. I also would like to see more focus on public safety aligned with Vision Zero goals.	Alt-1 T-3 BP-1 SF-1 T-1
1/7/2021	534.00	Edgar Handal	I would echo the concerns from the Travis County commissioners that these materials are based on out-of-date data/analyses from 2015, and that this project should be reevaluated in light of the CAMPO 2045 model and plans such as Project Connect.	RP-1 RP-2
1/7/2021	535.00	GILBERT HERNANDEZ	<p>See attachment.</p> <p>Reasons why we should reverse the ramps between Loop 360 and Barton Skyway on Mopac:</p> <ol style="list-style-type: none"> Traffic on 290/71 backs up all the way to Congress in the Morning. The 2 SH 71 outside lanes that exit, Loop 360 Exit on SH 71, pile up with traffic all the way back to Congress, the other 2 are free flowing by the time you get here (to the exit) because if you have not gotten over yet, you are not taking the direct connector. The reason why it backs up to SH 71 and Congress is because people use the inside 2 lanes (of SH 71) to queue jump to exit Loop 360. The 3 inside lanes (on Loop 360) are used to queue jump everyone to get in the right lane to turn right and enter MOPAC. The right turn on the southeast corner of the Loop 360 and Mopac intersection is backed up all the way to congress on SH 71, many miles away. This right turn should have a 2 lane right turn instead of one. The ENTRANCE RAMP north of Loop 360 / Mopac intersection should become an EXIT RAMP. This will allow everyone wanting to get on Mopac to line up on the frontage road instead of backing everyone up all the way back to SH 71. Lots of space on the NB MOPAC frontage road to store traffic getting on Mopac instead of letting it back up all the way to Congress and SH 71. NB MOPAC frontage road has 3 lanes and a sidewalk. The EXIT RAMP right before Barton Skyway, on Mopac NB, should be reversed. From an EXIT to an ENTRANCE ramp. The ramp reversal is done before the Barton Skyway light so no one has to go through it. 	D-6
1/7/2021	536.00	Evan Rodriguez	Do not, under any circumstances expand MOPAC, it is the last thing the city of austin needs.	Comment noted
1/7/2021	537.00	Kevin Quist	Stop expanding highways Jesus Christ. We are in an environmental crisis and every lane you bozos add increases automobile emissions and induces more land to be gobbled up by sprawl. Change your priorities and focus on mass transit/cycling/pedestrian infrastructure, AKA low impact transportation. Goddamn.	Alt-1 Alt-5
1/7/2021	538.00	Patricio Perez	As a resident of Rollingwood whose house backs up to the zilker nature preserve, I am concerned with the additional noise, additional light, and disruption to the preserve and it's wildlife.	TN-1 ECO-1 C-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	539.01	Sandra Keller	After looking at the information presented here, it appears to be the same data and plans presented six years ago. These plans are predicated on outdated, incomplete information and disregard the dynamic changes that are occurring in our roadways, our communities, and our commuting patterns. Provide current information to better examine the options proposed.	RP-2
1/7/2021	539.02	Sandra Keller	Environmental impact information is another area that is lacking. The proposed options run through some of the most environmentally sensitive land in this region and include the crown jewels of the Austin park system - Zilker Park, Barton Springs Pool, the Butler Hike and Bike Trail, and Lady Bird Lake. An Environmental Impact Statement is an imperative for making good decisions.	ENV-1
1/7/2021	539.03	Sandra Keller	New thinking is also missing from this open house. In the intervening six years many cities have changed their relationship to the highways inside their limits. Dallas has capped over Woodall-Rogers Expressway, Pittsburgh is covering part of I-579 with green space, Austin is capping a section of I-35, and up to 30 additional cities are considering lowering or covering major roads in their urban centers. In opposition to these efforts to reduce the impact of highways, your proposals create increased noise, visual pollution, and separation of neighborhoods. Bring to the public accurate, thorough information on traffic patterns, travel times, and environmental impact.	ENV-1
1/7/2021	539.04	Sandra Keller	Factor in additional options beyond those already proposed and see what the public prefers. I believe we deserve better than what is offered currently. Sandra L. Keller	Alt-1
1/7/2021	540.01	Amy Rung	I am strongly against building a double-decker bridge over Lady Bird Lake and the Austin Nature Center. As a resident on the east side of Rollingwood for over 15 years the scope of the project would greatly impact us and all surrounding residents with a significant increase in traffic noise. It also seems to be an extremely outdated idea for a city with some of the brightest minds in technology. It's a lost opportunity for Austin to be cutting edge in solving traffic problems and building an aesthetically pleasing addition to our city .	D-2
1/7/2021	540.02	Amy Rung	Also, I thought the public comments five years ago would be taken into consideration but the same project is now being proposed. The traffic times study provided is from 2015. Has a new study been done since 2019? I don't think any current highway projects should be based on 2015 traffic data since many employees in Austin are now offering work from home options. Have the main employers downtown been polled to see if they plan to return to pre-pandemic schedules or continue with alternative work options?	RP-1 PI-8 RP-6
1/7/2021	540.03	Amy Rung	Lastly, I believe there are "no build" alternatives available to mitigate or address traffic issues on this section of MoPac and those should always be considered first. Amy & Peter Rung	Alt-1
1/7/2021	541.01	Tom Thayer	I am against any double decker design on South MoPac or any design that includes higher elevations than currently exist on the highway. Any improvements should come within the current footprint of the highway	D-2
1/7/2021	541.02	Tom Thayer	and not encroach on Zilker Park.	CR-2
1/7/2021	541.03	Tom Thayer	I am very concerned about the visual impact of the highway on the park.	Soc-2
1/7/2021	541.04	Tom Thayer	In addition, I oppose redesign of the 360/MoPac interchange. Currently, that interchange is a good example of building a highway into the existing landscape with wildflower meadows and scenic cliffs. Don't mess it up! I can see adding an HOV lane either way if it can be accommodated in the current footprint. But I oppose any project that will substantially change the highway, ruin the scenery, cost a lot of money, and tie up the highway in construction for years.	Comment noted
1/7/2021	542.00	RICHARD M NOSTER	Dear CTRMA Board Members and Staff, I am contacting you to say that I share the concerns voiced in the comments made by the Travis County Commissioners Court and the City of Rollingwood and support the positions taken by both bodies. Sincerely, Richard Noster	Comment noted. See responses to Travis County and Rollingwood.
1/7/2021	543.00	David Goss	Induced demand fills up any highway no matter how big you build it	ICI-1 SOC-1
1/7/2021	544.01	Denise marintzer	Nice open house information. This provided useful information and answered several of our questions.	TF-2

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			Option 2c seems to make the most logical sense. Will the express lane be a toll road? If so, will it be permanent or once the toll fees cover the building costs, will the lanes be open to the public?	
1/7/2021	544.02	Denise marintzer	What is the timeline to add additional SB lane from Wm Cannon to Davis? Is there a way to expedite this road improvement? There is plenty of paved road already with only a small section that would need work. This small addition would make a significant improvement to SB traffic immediately with minimal cost/construction. Thank you, Denise Marintzer	D-5
1/7/2021	545.01	Claudia Corum	There is not time to craft a "response" of my criticism of almost everything about this MoPac South project. I spoke at a hearing at Austin High School years ago, against the same project. Why is it being brought back now? Especially NOW in the middle of a health crisis, after the holidays during which so many people left the area to be with family, and many were not able to return.	S-1 PI-6
1/7/2021	545.02	Claudia Corum	So obviously, I am asking you - imploring you, to at the VERY least, give us another 30 days to write out our thoughts, or even hold an online "workshop". If you are serious about letting Austin's residents speak, you will postpone the deadline for comments until mid-February. Thank you for reading.	PI-1
1/7/2021	546.00	katy huff	The proposal or consideration to widen mopac is a waste of tax payer dollars. Countless studies show roadway expansion doesn't reduce traffic. More public transportation options do. Please add more public transportation. thank you.	Alt-1 T-1 T-3
1/7/2021	547.01	Drake Hampton	In general, I oppose any plan to expand automobile capacity on MoPac. The proven reality is that highway expansions induce more and longer trips, ultimately making congestion worse and increasing the green house gas emissions that are accelerating our climate crisis. The more effective way to mitigate congestion is to get people out of their cars reduce the number of trips and encourage using alternate modes. As such, I fully support this project's plans to provide reliable travel times for transit as well as bike/ped facilities along the whole corridor, but I would like to see it go further by making these alternate modes central pillars of the plan rather than sideline add-ons.	EL-3 ICI-2 ICI-1 T-1 SOC-1
1/7/2021	547.02	Drake Hampton	This project should include in its stated goals the reduction of total vehicle miles traveled (VMT) as well as mode shift away from single-occupancy vehicles toward transit, carpooling, biking, and walking. Finally, this project must address the alarming trend of increasing roadway death and injury. It should add to its purpose and need statement the elimination of roadway deaths and serious injury for all users, in accordance with Austin's Vision Zero program and TxDOT's Road to Zero initiative.	PN-1 RP-6 SF-1
1/7/2021	548.00	Mac Rung	I am opposed to a double decker bridge going over Lady Bird Lake and I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.	D-2; see response to Travis County and Rollingwood
1/7/2021	549.00	Chris Quaglino	I am AGAINST double decking the bridge at Ladybird lake and adding so many lanes.	D-2
1/7/2021	549.01	Chris Quaglino	There have to be better options that have not been explored or discovered yet. I have lived in Austin 39+ years and have seen many changes. Some good and some bad. This proposal is bad and will negatively affect downtown for many years to come. Particularly with the scheme to double-deck the bridge over Lady Bird Lake.	Alt-1 D-2
1/7/2021	549.02	Chris Quaglino	It would do unnecessary harm to the park and trails and watersheds which many people labored long and hard to preserve, and so many current and future generations will enjoy. Please do not move forward with this plan.	CR-2 WQ-1
1/7/2021	550.01	Alison Norman	The Mopac South project needs to be re-started from the beginning--not from an old version with revised numbers. In particular, work habits have changed drastically since 2018 (the year providing the revised numbers), and much of the tech sector is unlikely to ever return to a daily commute. This project needs to wait until we know more about traffic patterns post-pandemic.	RP-6
1/7/2021	550.02	Alison Norman	Further, the double decker options are horrifying. This is Austin, and we need to maintain its character. Those options are really an eyesore.	D-2
1/7/2021	550.03	Alison Norman	In general, building more roads leads to more development which leads to more traffic which leads to more roads. Please. please give us a train instead.	T-4
1/7/2021	550.04	Alison Norman	Additionally, the traffic on MoPac South was *much* better *before* you complete the so-called "MoPac Improvement Project". I would be interested to know how much of the congestion you cite was caused by the ill-conceived traffic pattern at the end of that toll road. The "improvement" of the 290W->MoPac South transition had a lot of impact on surface streets and caused many problems for MoPac South due to (once again) ill-conceived traffic patterns. Please include changing that interaction in your analysis.	RP-1 PP-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	550.05	Alison Norman	So here are my high-level points: *re-imagine this project with post-pandemic traffic information.	RP-6
1/7/2021	550.06	Alison Norman	Please include options that involve changing the traffic pattern around the Enfield road entrance to MoPac south.	TO-5
1/7/2021	550.07	Alison Norman	Also, please analyze the impact to entrances, exists, and surrounding surface streets, including places like William Cannon.	D-6 D-5
1/7/2021	550.08	Alison Norman	Note that the William Cannon exit is already a disaster due to the incoming traffic from 290W.	D-5
1/7/2021	550.09	Alison Norman	*do not build a double decker MoPac/"elevated lanes" over town lake---or really, anyway	D-2
1/7/2021	550.10	Alison Norman	*Roads are not the answer, please evaluate other options,	Alt-1 RP-7
1/7/2021	550.11	Alison Norman	and consider the full environmental impact of both adding these lanes and increasing the number of cars that are transported. I would like to see a full environmental impact statement.	ENV-1
1/7/2021	551.00	Eric Deal	I would like to request that CTRMA consider low-build options for the bridge over Lady Bird Lake. As we have seen in numerous circumstances, simply building capacity doesn't alleviate traffic issues, but simply encourages more drivers to take that route. Please focus on alleviating the bottlenecks along the entire Mopac corridor to eliminate the backups that start there and making smaller changes through downtown to smooth traffic flow across the existing bridge.	Alt-1 D-2
1/7/2021	552.00	Connor	I fundamentally oppose any highway expansion, a short-sighted non-solution, which will not only fail to solve problems like congestion due to the inherent inefficiency of low-occupancy automobiles , but also reinforces the reliance of Austin's residents on fossil fuels that exacerbate climate change.	RP-7 ICI-2
1/7/2021	553.00	Robbin Trusty	CTRMA: Respectfully, please cease the proposal of a double toll bridge over Zilker Park and Lady Bird Lake, and 4 toll lanes to South Mopac from Cesar Chavez to Slaughter Lane. Please do not encourage more driving of cars, more pollution and more development on/over cherished and vulnerable parkland. Please explore more forward thinking ways of dealing with Austin traffic, based on current data, including the post-covid "work from home" reality. Thank you! Robbin Trusty	D-2 CR-2 RP-2
1/7/2021	554.01	Michael Norman	Any updated mopac plan must include updated traffic pattern data. We've experienced a major change in commuting habits since 2018.	RP-1
1/7/2021	554.02	Michael Norman	Please learn from the IH-35 mistakes and DO NOT build a double-decker roadway. What an eye soar!	D-2
1/7/2021	554.03	Michael Norman	Options other than "more road" should be included here. As a SW Austin resident who works downtown and plans to commute 3-4 days a week, I would much rather have a good option for mass transit than have more roads that will be congested by the time the project is finished.	Alt-1 T-1 T-3
1/7/2021	555.00	Sean Haney	No additional lanes should be built in Mopac. Additional lanes will only further complicate traffic by encouraging more lane changes, merging, and weaving which are proven to cause slowdowns. Any improvements should replace at-grade intersections with overpasses, but that's it. If congestion gets worse, then funds should instead be used to invest in mass transit, not more lanes of pavement.	Alt-1 T-1 T-3
1/7/2021	556.01	Cynthia Lee	Thank you for the opportunity to comment on the proposed changes to Mopac South. In picking up on where the planning left off in 2015, it appears that a number of considerations that were raised at that time and still remain valid have not yet been incorporated. I look forward to having the opportunity to review updated/enhanced configurations during the Open House #6, in anticipation that those enhancements would include adjustments for the following: Amongst my concerns are proposed configurations that include elevated lanes and ramps. Even as Mopac is currently configured, my property at the border of Rollingwood is subject to constant and sometimes intrusive levels of road noise. Elevated lanes would exacerbate both the noise levels as well as contribute to light pollution - both of which could not reasonably be mitigated by construction of sound barriers. Configurations that take this into account for both the surrounding residential communities as well as Zilker Park should be favored.	D-2 PI-4 PI-8 TN-1 ECO-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
1/7/2021	556.02	Cynthia Lee	Additionally, I would request additional analysis and consideration be given to ensuring the safety and efficiency of the intersections around Bee Cave Rd and Mopac, inclusive of the frontage road and Rollingwood Drive. Existing plans do not appear to account sufficiently for the impact that the proposed configurations would have on the daily traffic patterns of residents in this area, as well as those that pass through to enter or exit Mopac using these intersections.	OOS-2
1/7/2021	556.03	Cynthia Lee	Thanks, once again, for the opportunity to engage and comment through the Open House forums. I remain hopeful that the next set of proposed configurations for Mopac South are adjusted to take into account the community feedback I and many others have provided.	PI-12
1/7/2021	557.00	Ann R. DeSanctis	This is absurd. How can y'all seriously still be proposing highway expansion when everyone knows that that will never solve "traffic"! Hello induced demand! I know TXDOT really only knows how to do the one thing (expand highways) but y'all all just need to straight up retire and let folks who understand what Texans need: alternatives to driving!	EL-3 T-3 ICI-1 SOC-1 TxDOT-1
1/7/2021	558.01	Mark Davis	Please see correspondence attached pdf. I have reviewed the Central Texas Regional Mobility Authority (CTRMA) Welcome Packet and Exhibits at its website, voh.mopacsouth.com , and the documents and correspondence of the City of Rollingwood, Texas at its website, https://bit.ly/CORW106 . In general, I support the City of Rollingwood, Texas, in its questions, issues and requests set forth in its Official Public Comment dated January 7, 2022 (Rollingwood Comment). That said, I have the following comments that I wish the CTRMA to take into consideration:	Comment noted; see response to Rollingwood
1/7/2021	558.02	Mark Davis	1. The schematic for the MoPac South Corridor (page 19 of the CTRMA exhibits) appears to assume that the decision for the alternatives for construction from Barton Skyway to downtown Austin will be Plan Alternative 2C or the City of Austin plan. This schematic raises the issues addressed in the Rollingwood Comment in the paragraphs under the heading "Compliance with CAMPO 2045 Plan" in the unanswered questions as well as the question of whether the decision has effectively been made.	OCO-4
1/7/2021	558.03	Mark Davis	2. There is no schematic or design plan for construction of the RM2244/Bee Cave Road intersection with MoPac. See Rollingwood Comment, supra., and its comment under the heading "Efficient Functioning of the Bee Cave (RM2244) Intersection." I would oppose any plan that requires EB RM2244 traffic to proceed south on MoPac before u-turning at Barton Skyway to proceed NB on MoPac. And, likewise, I oppose any plan that requires NB MoPac traffic to U-turn at Rollingwood Drive to proceed westbound on RM2244 (in the event that is an option under consideration).	OOS-2
1/7/2021	558.04	Mark Davis	3. I reside less than ½ mile from MoPac. The traffic noise is nearly continuous, day and night. In the evening and late night, with a reduction in the noise-generating events of the day, the traffic noise is generally intermittent but audible from my back porch. Accordingly, I am very much opposed to any plan to create elevated traffic lanes over or near MoPac and or Barton Skyway.	TN-1 D-2
1/7/2021	558.05	Mark Davis	In summary, having reviewed the CTRMA exhibits, particularly its exhibits at pages 19, 20, 22, 24, 26, 28 and 30, and the Rollingwood Comment, I echo and support the comments, questions, issues and requests in the Rollingwood Comment. Were I required to choose one plan at this time, Plan Alternative 2B appears the most reasonable resolution of the project, subject to the RM2244/MoPac intersection issues.	Comment noted.
1/7/2021	559.00	Patti Edelman	I do not agree with the plan to double deck the bridge over Lady Bird Lake at Loop 1 South. I do not want MoPac to become the west Austin version of I-35. As someone who has lived in Austin for most of the last 50 years and remember the day when the bridge was opened, I realize there has been growth in the area, but the environmental impact is too great to expand MoPac as planned.	D-2 ENV-2
1/7/2021	560.00	Heidi E. Gibbons	I am opposed to this proposal, particularly the plan to double deck the bridge over Lady Bird Lake, and expand the bridge to add elevated connectors - I am not in favor of this. Please reconsider.	D-2
1/7/2021	561.00	Linda Smith	I thought Austin was working for trains. Concentrate on the trains! Another disastrous double decker highway is a very bad idea. There are a limited amount of resources. Get something done right!	T-4 D-2
1/7/2021	562.00	Jeffrey Clemmons	Widening the highway will not improve traffic conditions, possibly increasing the chance for crashes due to overwhelming induced demand. The community will not significantly benefit from the use of public dollars in this way.	EL-3 ICI-1 SOC-1
1/7/2021	563.01	Becky Combs	MOPAC S restart comments Thank you for the opportunity to comment on the documents provided at Virtual Public Meeting Number Five for the Mopac South Project. After reviewing the	PI-1 PI-3

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>confusing and outdated documents, here are my comments:</p> <p>1. The comment period fell over the holidays and did not give enough time to ensure full public input. Please extend the comment period at least 30 days.</p>	
1/7/2021	563.02	Becky Combs	<p>2. The documents are confusing, VERY OLD, and do not provide current, accurate, relevant information. The document states, "In 2016, just before the MoPac South Environmental Study was put on hold, CAMPO 2035 was the most current Regional Transportation Plan, and therefore, the baseline against which most project data has been measured. Now that CAMPO 2045 is available, our data and analyses will need to be updated to reflect the updated information available. We look forward to gathering and sharing that information at the next open house in 2022."</p> <p>Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." CTRMA should update MoPac information with current data and a functional traffic model and allow public comment on that analysis. The comment period should be extended for at least 30 days following the publication of current relevant traffic data and analysis.</p>	RP-1 PI-7
1/7/2021	563.03	Becky Combs	<p>3. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.</p>	D-2 CR-2 TO-1
1/7/2021	563.04	Becky Combs	<p>4. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.</p>	Alt-3 Alt-6 D-9 PN-1 RP-6
1/7/2021	563.05	Becky Combs	<p>5. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model consider the real world now.</p>	RP-1 PI-7 RP-6
1/7/2021	563.06	Becky Combs	<p>6. Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept: adding toll lanes to MoPac South. an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze additional pavement as an option in the analysis and pursue in the interim as a test solution for very little money.</p>	Alt-1 Alt-3 RP-6
1/7/2021	563.07	Becky Combs	<p>7. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.</p>	TO-2
1/7/2021	564.00	zsj	<p>1. Austin's Black History: Time changes, but much remains the same. October 20, 1995 "The Clarksville Effect: Austin Tragedy or Neighborhood Victory?" appeared in The Austin Chronicle noting, in part:</p> <p>The gentrification of Clarksville, or at least the displacement of its black residents, dates back to about 1904, when speculators tried to have the settlement condemned as a health hazard. At that time, blacks owned substantial property between Lamar and West Lynn, as well as almost all of the area between West Lynn and today's MoPac, where the core of Mary Baylor's Clarksville remains. These holdings steadily shrank, sometimes under pressure from covetous white speculators, often because their owners found better land elsewhere, typically a combination of both. When the city enacted its fullest Jim Crow laws in 1928 - consigning all facilities and conveniences [for] the Negroes' to East Austin as an incentive to draw the Negro population to the area' - Clarksville seemed doomed.</p> <p>After five decades of trying, Clarksville neighborhood leaders, including Mary Baylor, had managed to procure from the city - as described back then by longtime (and current) Sweet Home pastor Rev. W.B. Southerland the neighborhood center, some playground equipment, and six stop signs.' Then came MoPac, which wiped out 64 out of 168 black-owned Clarksville homes, and displaced nearly 200 people far more efficiently than any transplanted yuppies from San Jose. When the Crosstown Expressway project - which also begat, indirectly, the recent Swede Hill brouhaha - threatened to wipe out the other half of the neighborhood, Clarksville residents took the city to court, got the neighborhood deleted from the freeway plans, and won state and federal historic designations for the neighborhood. The latter were opposed by the city's Historic Landmark Commission, whose opinions about Clarksville presaged Eric Mitchell's recent remarks about similar areas of the Eastside - gasoline and matchbooks. [Note: Southerland passed away: May 27, 1934-August 14, 2004]</p>	Don't separate out, keep all together. EJ-1

Comment Response Matrix

Date	Comment Number	Name	Comment	Code
			<p>2. Transit Agency's Disparate Impacts: In 2017, Capital Metropolitan Transportation Authority ("Capital Metro") General Counsel Kerri Butcher attempted to withhold information about \$4M North Lamar Transit Center ("NLTC") proposed redevelopment; 7 of 9 routes were due to be unilaterally eliminated. Loop 1/Missouri Pacific ("MoPac") construction delay commuter notices were posted, but there were no notices for NLTC minorities illustrating a lack of transparency that continued throughout Service Plan 2025, rebranded Connections 2025 then Cap Remap June 3, 2018 when 52 routes changed to serve South/West/Central Austin white choice riders and Southeast/Dove Springs Hispanics with 15-minute headway three of 5 routes created below Service Guidelines and Standards at the expense of Northeast Blacks and minorities north of US 183/NLTC. See April 5, 2017 Texas Attorney General Opinion to my open records request: https://www2.texasattorneygeneral.gov/opinions/openrecords/51paxton/orl/2017/pdf/or201707166.pdf</p> <p>November 3, 2017 "Cap Metro hangs hopes on Connections 2025" The Austin Chronicle shows sole partial north-south frequent Route 325. "Supporters of the plan, including Cap Metro itself, acknowledge that every policy has certain casualties." Project Manager Lawrence Deeter noted "once-an-hour" [Black] Route 233-Colony Park, but KAZI 88.7FM advertised: "More frequent, More reliable, Better connected." Before changes, #325 ran 15 min northeast-west. ~Jack Craver: https://www.austinchronicle.com/news/2017-11-03/cap-metro-hangs-hopes-on-connections-2025/</p> <p>Pictured here is the transit system that undergirds \$7.1B Project Connect light rail approved by voters November 3, 2020 based on equity propaganda and false ballot language conflating ridership/high-capacity transit and coverage (lifeline access local buses). Central Texas Regional Mobility Authority's proposed Loop 1 Express Lane project needs to transparently acknowledge the benefit to white commuters and continuation of racial segregation by Capital Metro which continues to date.</p> <p>~Thanks. Zenobia C. Joseph</p>	
1/7/2021	565.00	Miriam Schoenfield	I strongly oppose the expansion of Mopac! TX-Dot needs to stop trying to expand highways and start supporting alternative modes of transport in urban areas. It's well known that highway expansions don't solve congestion problems, nor do they support the city's climate goals, or safety goals.	ALT-5 TF-1 PN-1 TxDOT-1
12/14/2021	566	Casey Gilbert	<p>As a 25 year resident of South Austin, I wanted to quickly provide input on the South MoPac Environmental Study. My suggestion is straightforward based on thousands of trips on South Mopac over an extended period of time.</p> <p>The advice that I'm providing is simply this: as part of the redesign of South Mopac with dedicated toll lanes, etc., eliminate the south bound on-ramp south of Bee Caves Road; just north of Barton Skyway bridge.</p> <p>I call this area ""the soup bowl"" because the traffic patterns that develop around this portion of South Mopac never seems to improve. Rather it stagnates and is ultimately counter-productive.</p> <p>Traffic that flows from Bee Cave & Barton Springs Road can easily be re-routed and funnel to the south-bound on-ramp closer to 360 if you were to eliminate this on-ramp altogether. This particular merge lane (south of Barton Skyway: north of 360) is far more conducive to traffic patterns in this particular area.</p> <p>The on-ramp that I'm proposing to eliminate causes a continuous back-up on south Mopac because the volume of traffic makes this entry a stop & go nightmare.</p> <p>The entry ramp that I reference is too short and eliminates a flow lane altogether traveling south of the river.</p> <p>I appreciate your consideration.</p> <p>Best of luck moving forward on this project.</p>	D-6

B. Virtual Public Meeting Metrics

The following is documentation of attendance and activity during the virtual public meeting, including a list of participants who self-identified via an optional online sign-in sheet and the metrics of online visitors.

Virtual Public Meeting Sign-Ins

Virtual meeting attendees were encouraged to sign-in, but it was not a requirement to do so. A total of 295 individuals signed in.

Name
Aaron Boehm
Adam Hegemier
Adam Greenfield
Adam Pecina
Adele Ely
Aidan Aannestad
Alan Rivaldo
Alexander Shulyak
Alexsis Clark
Andrew Cronin
Andrew Smith
Ann Bernard
Anna Martin
Annette Hudson
Annie O'grady
Art Salinas
Arturo Salinas
Ashlee Jones
Ashley Wayman
Austin Anderson
Beth Bierman
Bianca De Leon
Bill Meacham
Bob Mckenna
Bob Moreno
Bobby Yanez
Brad Bressler
Brandon Kraft
Brendan Wittstruck
Brett Fox
Brian Mccamy
Briana Zamora
Bruce Byron
Adam Hegemier
Cameron Ford
Castillo Jose
Catherine Braun
Catherine Scott
Cathy Odom Staples

Name
Chadi Chazbek
Charles Farris
Chas Semple
Chelsey Ketcher
Chris Riley
Chris Stoll
Christie Finnigan
Christopher Laconte
Claire Hempel
Clarke Heidrick
Clifford Priddy
Cody Stone
Connor Shea
Cory Lemoine
Cristina Feldott
Curran Kelley
Cynthia Lee
Dan Goodin
Dan Moise
Daniel Mccauley
Daniel Woodroffe
Darrell Hutchinson
Dave Lubitz
Dave Mcelwain
David Carroll
David Christie
David Huter
David Jones
David Yeakey
Denise Marintzer
Dennis Worley
Derek Miller
Diane Williams
Dick Kallerman
Dottie Parr
Dottie Watkins
Drue Fitzgerald
Dylan Keefer-Bornsen

Name
Edgar Handal
Elizabeth Badger
Elizabeth Kalbacher
Emily Bell
Emily Gatlin
Emily Pugh
Emily Thawley
Eric Niedert
Eric Schauwecker
Ernesto Cedillo
Farya Phillips
Felicity Maxwell
Garret Nick
Geoffrey Powell
Gillian Jacob
Grace D
Griffin Davis
Hannah Cross
Hannah Kearney
Heather Chesney
Hector Elizondo
Heidi Smith
Holly Reed
Jackson Hurst
Jake Neubauer
James Felan
James Smith
James Talbot
Janell Moyes
Janine Reintjes
Jason Schneider
Jason Rondeau
Jay Crossley
Jay Keaveny
Jeanette A Lachman
Jeff Brantley
Jeff Linwood
Jefferson Nelson
Jeffrey Batchelor

Name
Jeffrey Thompson
Jennifer Allen
Jennifer Wright
Jeremy Barnes
Jessica Podnar
Jim Crook
Jim Williams
Joan Hauser
Joe Falkner
Joe Hendrix
Joe Hutchinson
Joel Hull
John Baker
John Hutchins
John Mciver
John Muller
John Rose
John Scott
John Tuley
Jon Hundley
Jon White
Jonathon Davis
Josh Miksch
Juan Garza
Julie Engler
Julie Kies
Julie Lewis
Justin Willette
Kaitlyn Kash
Karan Bedi
Karen Campbell
Karen Clary
Karole Fedrick
Kathleen Shapiro
Kathryn Bryan
Kathy Bryan
Kellen Cody
Kelli Culp
Kelly Davis
Ken Owen
Kevin Good
Kevin Tuerff
Kevin Wood

Name
Kim Mcknight
Kylie Baber
Lacy Seybold
Lansing Pugh
Laurie Mills
Lawrence Ho
Lee Austin
Leticia Estavillo
Leyla Shams
Lily Wilkerson
Linda Smith
Lindsay Castaneda
Lisa Glenn
Lisa Powell
Lloy Lizcano
Luke Legate
Luz Moreno-Lozano
Lynn Boswell
Manuel Esparza Iii
Marie Timmermann
Mark Barber
Mark Davis
Mark Ritter
Mark Vonbargen
Marnie Fitzgerald
Mary Derner
Mary Williams
Matt Fehrenbacher
Melaina Newman
Michael Hall
Michael Fitzgerald
Michael Norman
Michael Reed
Michael Sporer
Michael Woods
Michelle Manson
Michelle Romage-Chambers
Mike Cannatti
Mike Jones
Mike Mcinturff
Myron Lutz
N Bruce

Name
Nancy Kameya
Neil Pascoe
Nelissa Conners
None Yabusiness
Norman Hartwell
Pamela Neumann
Patricio Perez
Patrick Barry
Paul Horton
Paul Laird
Paul Meyer
Paul Murray
Penelope Redington
Peter Sprouse
Philip Arnold
Philip Cotham
Phillip Mcduffee
R Scott Harris
Ray Michel
Rebecca Bray
Rebecca Conner
Regina Buttross
Ricardo Zamarripa
Richard Denney
Richard Fant
Richard Smith
Rick Perkins
Robert Beard
Robert Carter
Robert Finn
Robert Fondren
Robert Levinski
Robert Patterson
Ron Binkley
Rosemary Valentino
Ruben Gaztambide Velez
Rudy Montoya
Ryan Frederick
Ryan Vedros
S. A.
Sam Swinbank
Samuel Clintoc

Name
Sanjay Negi
Sara Marler
Sarah Heidler
Scott Dukette
Scott Hiers
Scott Morrison
Shana Ravensborg
Shelly Bain
Sherry Umscheid
Stacey Gardner
Stan Reece
Stephanie Erwin
Stephanie Jarnigan
Stephanie Trotter
Stephen Vickers
Stephen Gregg
Steve Caddy
Steve Mcmillen

Name
Steven Fleming
Steven PE
Susan Prosperie
Susanna Hancock Murray
Swenda Collier
Tami Esson
Tanya Hunter
Taylor Dueker
Taylor Dueket
Terry Herres
Terry Hockens
Thomas Koitzsch
Tim Ickes
Tim Tuggey
Todd Bustard
Tom Lind
Tom Martin

Name
Tom Wald
Tracy Bratton
Tricia Boudreaux
Valerie Shown
Vanesaa Escobar
Vincent Musat
Virginia Bettis
Will Hoermann
William Bunch
William Harriss
William Kaufhold
William Mahrer
William Rodriguez
William Tyson
William Webb
Ya Ma

MoPac South Virtual Public Meeting - Metrics of Online Visitors



Dates of Analysis: November 22, 2021 – January 7, 2022



Unique Visitors: 3,834



Most Visited Pages:

1. Homepage
2. Submit a Comment
3. The Problem We're Trying to Solve
4. Sign In
5. Alternatives Considered
6. The Express Lane(s) Alternative



Top Downloads:

1. Full Set of Exhibits (741 downloads)
2. Homepage Welcome Packet (317 downloads)

C. Notices Provided

ELECTED OFFICIAL LETTER

On October 20, 2021, elected officials were mailed a letter inviting them to participate in the virtual public meeting. Along with a brief project update and virtual public meeting information, a fact sheet was enclosed with the letter. An example copy of the letter packet and the mailing list are included below. An email with duplicate information was sent October 22, 2021

Elected Officials Sent Meeting Notice

First Name	Last Name	Representing	Position
Alison	Alter	City of Austin	Council Member, District 10
Paige	Ellis	City of Austin	Council Member, District 8
Kathie	Tovo	City of Austin	Council Member, District 9
Leslie	Pool	City of Austin	Council Member, District 7
Mackenzie	Kelly	City of Austin	Council Member, District 6
Ann	Kitchen	City of Austin	Council Member, District 5
Gregorio	Casar	City of Austin	Council Member, District 4
Sabino	Renteria	City of Austin	Council Member, District 3
Vanessa	Fuentes	City of Austin	Council Member, District 2
Natasha	Harper-Madison	City of Austin	Council Member, District 1
Steve	Adler	City of Austin	Mayor
Mike	Dyson	City of Rollingwood	Mayor
Wendi	Hundley	City of Rollingwood	Council Member
Sara	Hutson	City of Rollingwood	Council Member
Gavin	Massingill	City of Rollingwood	Mayor Pro Tem
Amy	Pattillo	City of Rollingwood	Council Member
Buck	Shapiro	City of Rollingwood	Council Member
Amber	Lewis	City of Rollingwood	City Administrator
Marc	Bruner	City of Sunset Valley	Mayor
Alfonso	Carmona	City of Sunset Valley	Council Member
Robert	Johnson	City of Sunset Valley	Council Member
Karen	Medicus	City of Sunset Valley	Mayor Pro Tem
Wanda	Reetz	City of Sunset Valley	Council Member
Rudi	Rosengarten	City of Sunset Valley	Council Member
Brigid	Shea	Travis County	Commissioner
Ann	Howard	Travis County	Commissioner
Cynthia	Long	Williamson County	Commissioner
Andy	Brown	Travis County	Judge
Vikki	Goodwin	Texas House of Representatives	Representative
Donna	Howard	Texas House of Representatives	Representative
Gina	Hinojosa	Texas House of Representatives	Representative

First Name	Last Name	Representing	Position
Sarah	Eckhardt	Texas State Senate	Senator
Donna	Campbell	Texas State Senate	Senator
Chip	Roy	U.S. House of Representatives	Congressman
Roger	Williams	U.S. House of Representatives	Congressman
Ted	Cruz	U.S. Senate	Senator
John	Cornyn	U.S. Senate	Senator



October 20, 2021

The Honorable Alison Alter
City of Austin, Council Member, District 10
PO Box 1088
Austin, TX 78767

Re: Notice of Virtual Public Meeting
MoPac South Environmental Study – Loop 1 From Cesar Chavez Street to Slaughter Lane
Travis County, Texas
CSJ 3136-01-176

Dear Council Member Alter:

The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) will conduct a virtual public meeting to receive input on the MoPac South Environmental Study. The study involves identifying a mobility solution for an 8-mile stretch of MoPac (Loop 1) from Cesar Chavez Street to Slaughter Lane in Travis County, Texas. The meeting will be held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

About the Virtual Public Meeting

The virtual public meeting will begin at 5 p.m. Mon., Nov. 22, 2021, and be available for viewing until 11:59 p.m. Friday, Jan. 7, 2022. You will be able to log into the virtual public meeting by visiting **www.Voh.MoPacSouth.com**. Virtual participants will be able to view exhibits, watch an informational video, and submit official comments.

The official comment period for the Open House begins on Mon., Nov. 22, 2021 - and will extend beyond the required 15 days - to Friday, Jan 7, 2022. Comments may only be submitted through one of the following methods:

- Online at Voh.MoPacSouth.com
- Via e-mail at MoPacSouth@ctrma.org
- By mail to: Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N.I-H-35, Suite 625, Austin, TX 78705

The virtual public meeting will be conducted in English. Interpreters or document translators may be provided upon request. Special accommodations can also be requested by persons with disabilities. For interpretation or translation services or for other special accommodations, the public may contact the project team at (512) 342-3299 no later than 4 p.m. on Wed., Nov. 17, 2021.



About the Environmental Study

The Mobility Authority and TxDOT initiated the MoPac South Environmental Study in 2013 to assess potential mobility improvements on approximately 8 miles of south MoPac from Cesar Chavez Street to Slaughter Lane in a manner that promotes environmental stewardship and sustainability. This will be the fifth public meeting held for this project.

No advancements have been made on the project since the last Open House in November 2015, when we presented the public with six express lane(s) operational configuration options developed in collaboration with the community and in response to public feedback. As we are now resuming efforts several years since we last engaged the public, we will present information on the same six express lane(s) operational configuration options in order to re-engage the public on the project before we continue our analyses.

We value your input and look forward to your participation in this critical environmental study. Please share this information with your constituents to help us engage the greatest number of community members and stakeholders.

If you would like to meet with our project team for more information, please contact Katie Kenneally at Katie.Kenneally@atkinsglobal.com or (512) 372-1202.

Sincerely,

James M. Bass
Executive Director
Central Texas Regional Mobility Authority

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

Lacy, Hillary

From: Deborah Melba <dmelba@ctrma.org> on behalf of James Bass <JBass@ctrma.org>

Date: Friday, October 22, 2021 at 5:19 AM

To: Steve Adler <steve.adler@austintexas.gov>, "allison.alter@austintexas.gov" <allison.alter@austintexas.gov>, "paige.ellis@austintexas.gov" <paige.ellis@austintexas.gov>, Kathie Tovo <kathie.tovo@austintexas.gov>, Leslie Pool <leslie.pool@austintexas.gov>, "mackenzie.kelly@austintexas.gov" <mackenzie.kelly@austintexas.gov>, Ann Kitchen <ann.kitchen@austintexas.gov>, Greg Casar <greg.casar@austintexas.gov>, "Sabino.Renteria@austintexas.gov" <Sabino.Renteria@austintexas.gov>, "vanessa.fuentes@austintexas.gov" <vanessa.fuentes@austintexas.gov>, "Natasha.Madison@austintexas.gov" <Natasha.Madison@austintexas.gov>, Brigid Shea <Brigid.Shea@traviscountytexas.gov>, "Comm2@traviscountytexas.gov" <Comm2@traviscountytexas.gov>, "ann.howard@traviscountytexas.gov" <ann.howard@traviscountytexas.gov>, Cynthia Long <clong@wilco.org>, "andy.brown@traviscountytexas.gov" <andy.brown@traviscountytexas.gov>, Steve Adler <steve.adler@austintexas.gov>, "representative@vikkigoodwin.com" <representative@vikkigoodwin.com>, "donna.howard@house.texas.gov" <donna.howard@house.texas.gov>, "gina.hinojosa@house.texas.gov" <gina.hinojosa@house.texas.gov>, "sarah.eckhardt@senate.texas.gov" <sarah.eckhardt@senate.texas.gov>, "chip.roy@mail.house.gov" <chip.roy@mail.house.gov>, "John.etue@mail.house.gov" <John.etue@mail.house.gov>, "katy_vonrosenberg@cornyn.senate.gov" <katy_vonrosenberg@cornyn.senate.gov>, "donna.campbell@senate.texas.gov" <donna.campbell@senate.texas.gov>, "mdyson@rollingwoodtexas.gov" <mdyson@rollingwoodtexas.gov>, "whundley@rollingwoodtexas.gov" <whundley@rollingwoodtexas.gov>, "shutson@rollingwoodtexas.gov" <shutson@rollingwoodtexas.gov>, "gmassingill@rollingwoodtexas.gov" <gmassingill@rollingwoodtexas.gov>, "apattillo@rollingwoodtexas.gov" <apattillo@rollingwoodtexas.gov>, "bshapiro@rollingwoodtexas.gov" <bshapiro@rollingwoodtexas.gov>, "alewis@rollingwoodtexas.gov" <alewis@rollingwoodtexas.gov>, "mbruner@sunsetvalley.org" <mbruner@sunsetvalley.org>, "acarmona@sunsetvalley.org" <acarmona@sunsetvalley.org>, "rjohnson@sunsetvalley.org" <rjohnson@sunsetvalley.org>, "kmedicus@sunsetvalley.org" <kmedicus@sunsetvalley.org>, "wreetz@sunsetvalley.org" <wreetz@sunsetvalley.org>, "rosengarten@sunsetvalley.org" <rosengarten@sunsetvalley.org>, "tucker.ferguson@txdot.gov" <tucker.ferguson@txdot.gov>, "ashby.johnson@campotexas.org" <ashby.johnson@campotexas.org>, "kirk@kirkwatson.com" <kirk@kirkwatson.com>, "gina.fiandaca@austintexas.gov" <gina.fiandaca@austintexas.gov>, "spencer.cronk@austintexas.gov" <spencer.cronk@austintexas.gov>, "mike.kelly@austintexas.gov" <mike.kelly@austintexas.gov>, "robert.spillar@austintexas.gov" <robert.spillar@austintexas.gov>

Subject: Notice of Virtual Public Meeting: MoPac South Environmental Study (CSJ 3136-01-176)

Good Morning:

The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TXDOT) will conduct a virtual public meeting to receive input on the MoPac South Environmental Study. The study involves identifying a mobility solution for an 8-mile stretch of MoPac (Loop 1) from Cesar Chavez Street to Slaughter Lane in Travis County, Texas. The meeting will be held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

About the Virtual Public Meeting

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Virtual participants will be able to view exhibits, watch an informational video, and submit official comments.

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- Online at Voh.MoPacSouth.com
- Via e-mail at MoPacSouth@ctrma.org
- By mail to: Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N.I-H-35, Suite 625, Austin, TX 78705

The virtual public meeting will be conducted in English. Interpreters or document translators may be provided upon request. Special accommodations can also be requested by persons with disabilities. For interpretation or translation services or for other special accommodations, the public may contact the project team at (512) 342-3299 no later than 4 p.m. on Wed., Nov. 17, 2021.

About the Environmental Study

The Mobility Authority and TxDOT initiated the MoPac South Environmental Study in 2013 to assess potential mobility improvements on approximately 8 miles of south MoPac from Cesar Chavez Street to Slaughter Lane in a manner that promotes environmental stewardship and sustainability. This will be the fifth public meeting held for this project.

No advancements have been made on the project since the last Open House in November 2015, when we presented the public with six express lane(s) operational configuration options developed in collaboration with the community and in response to public feedback. As we are now resuming efforts several years since we last engaged the public, we will present information on the same six express lane(s) operational configuration options in order to re-engage the public on the project before we continue our analyses.

We value your input and look forward to your participation in this critical environmental study. Please share this information to help us engage the greatest number of community members and stakeholders.

If you would like to meet with our project team for more information, please contact Katie Kenneally at Katie.Kenneally@Atkinsglobal.com or (512) 372-1202.

Sincerely,

James M. Bass
The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

James M. Bass
Executive Director
Central Texas Regional Mobility Authority
3300 N IH-35, Ste 300
Austin, TX 78705
jbass@ctrma.org



INTERESTED PARTIES LETTER

On November 2, 2021, interested and consulting parties who registered their interest with TxDOT were mailed and/or emailed a letter inviting them to participate in the Virtual Public Meeting. There was a total of 35 parties who were contacted. An example copy of the letter and email with the mailing list are included below.

Interested Parties Sent Meeting Notice

Name	Organization
Alan DeAnda	
Amy Pattillo	Rollingwood
Bill Bunch	Save Our Springs Alliance
Vanessa Escobar	Barton Springs/Edwards Aquifer Conservation District
	Charles Moore Foundation
Daryl Ruybal	
Happy Harris	MONAC
Heidi Anderson	The Trail Foundation
Joanne Day	
Justin Kockritz	Texas Historical Commission
Kalan Contreras	City of Austin Historic Preservation Office
Kim McKnight	City of Austin Parks and Recreation Department
Leon Barrish	Friends of Deep Eddy
Lindsey Derrington	Preservation Austin
Mike Sullivan	Old West Austin Neighborhood Association
Molly M	
Margaret Russell	Austin Nature & Science Center
Melvin Bedford	Austin High School
Michael Cannatti	Barton Creek Conservancy
Mary Reed	Clarksville Community Development Corporation
Melissa Hawthorne	Barton Hills Neighborhood Association
Bill Bunch	Zilker Neighborhood Association
Robin Cravey	Barton Creek Conservancy
Rodney Ahart	Keep Austin Beautiful
Bill Bunch	Save Our Springs Alliance
Steve Sadowsky	City of Austin Historic Preservation Office
Bob Ward	Travis County Historical Commission
	Austin Neighborhood Council
Rosemary Merriam	Old West Austin Neighborhood Association
Michael Sledd	Zilker Botanical Gardens
Michael Strutt	Texas Parks and Wildlife Department, Cultural Resources Program
Colin Wallis	Austin Parks Foundation
Leslie David	Rollingwood Neighborhood Association

Name	Organization
Evan R. Thompson	Preservation Texas
August W. Harris, III	West Austin Neighborhood Group



Nov. 2, 2021

Vanessa Escobar
General Manager
Barton Springs/Edwards Aquifer Conservation District



Re: Notice of Virtual Public Meeting
MoPac South Environmental Study – Loop 1 From Cesar Chavez Street to Slaughter Lane
Travis County, Texas
CSJ 3136-01-176

Dear Vanessa Escobar:

This letter is to notify you that the Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) have scheduled an informational public meeting for the MoPac South Environmental Study as referenced above. The meeting will be held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

About the Virtual Public Meeting

The virtual public meeting will begin at 5 p.m. Monday, Nov. 22, 2021, and be available for viewing until 11:59 p.m. Friday, Jan. 7, 2022. You will be able to log into the virtual public meeting by visiting www.voh.MoPacSouth.com. Virtual participants will be able to view exhibits, watch an informational video, and submit official comments.

The official comment period for the Public Meeting begins on Monday, Nov. 22, 2021 - and will extend to Friday, Jan. 7, 2022. Comments may only be submitted through one of the following methods:

- Online at voh.MoPacSouth.com
- Via e-mail at MoPacSouth@ctrma.org
- By mail to: Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N. IH-35, Suite 625, Austin, TX 78705

At some point in the past, you requested to be notified of all public meetings and hearings for this project. If you no longer wish to be notified of these meetings, please contact Katie Kenneally at katie.kenneally@atkinsglobal.com or (512) 372-1202 to request removal from the mailing list.

Sincerely,

MoPac South Project Team

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

MoPac South Notice of Virtual Public Meeting

MoPac South <mopacsouth@ctrma.org>

Tue 11/2/2021 1:13 PM

Cc: MopacSouthproject <MopacSouthproject@ctrma.org>; Katie Kenneally <Katie.Kenneally@atkinsglobal.com>; Jori Liu <jhayter@ctrma.org>

Bcc:

Good afternoon,

This email is to notify you that the Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) have scheduled an informational public meeting for the MoPac South Environmental Study as referenced above. The meeting will be held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

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At some point in the past, you requested to be notified of all public meetings and hearings for this project. If you no longer wish to be notified of these meetings, please contact Katie Kenneally at katie.kenneally@atkinsglobal.com or (512) 372-1202 to request removal from the mailing list.

Sincerely,

MoPac South Project Team

MAILER TO PROPERTY OWNERS

On October 25, 2021, adjacent property owners were mailed a virtual public meeting postcard with the meeting details. Property owner information was obtained from Travis County Appraisal District. There was a total of 410 property owners who were mailed the notice. An example copy of the postcard and the mailing list are included in the next pages.

Property Owners and Interested Parties Sent Meeting Notice

Owner Name
1000 MOPAC CIRCLE LTD
1001-1012 MOPAC PARTNERS LLC
12016 ARCHELETA LLC
1801 S MOPAC LTD
2200 LAKE AUSTIN BLVD LLC
4330 GAINES RANCH LOOP LLC C/O MARABEELA INTRESTS LLC
A J & SUANN WAIGHT
AARON & ZIPPORAH BAR-ADON
AARON LEIGH & ASHLEY E CHRISTIAN
AARON S & DAWN S ODLAND
ABIDING LOVE LUTHERAN CHURCH
ABRAHAM ISLAS
ADRIENNE TOMANENG
AFFIRMATION HOLDINGS LLC
AGR APARTMENTS LLC C/O MATT ENZLER
ALBERT & KIMBERLY LOWDER
ALEJANDRO & ANA LILIA TORRES
ALFONSO GONZALES & NORMA ROMERO
ALIANA SAHAR & CEPEEDEH TABIBIAN
AMERICAN LEGION TRAVIS POST 76
AMY C CHIBIB
ANDREW & DANA WELLS
ANDREW MCDONALD
ANDREW ZINNI
ANNE HOMAN VINCENT
ANTHONY F & MARGARET ARGUIJO
ANTONIO L & MAYRA LOPEZ
ANZHI CHEN & TONY SHUYUN SHI
APPW PROPERTIES LLC
ARC WGAUSTX001 LLC
ARLO & NATALIE BURGOS
ARNOLD G & DAHLINDA ALANIZ
ASIM ZAIDI
ASSISTANCE PROGRAM WORKERS
ASTRUM LUX LUCIS & RICHARD B SMOLENSKI
ATX OFFICE OWNER 1 LP C/O ENDEAVOR REAL ESTATE GROUP
AUSTIN 290 PROPERTIES INC
AUSTIN BARTON OAKS

Owner Name
AUSTIN CANNON LLC
AUSTIN EVERTS
AVI LACROSSE LLC
BARBARA & MICHAEL SACKMARY
BARRY P & SUSAN B BROOKS
BARTON OAKS OFFICE CENTER LLC
BARTON OAKS PLAZA V
BASIL FRED & GWEN J BERGER
BEARLY HOLDINGS LLC
BEN W CAIRNS
BETH BIERMAN
BEVERLY D LAZAR
BINDI & ZHANYU ZHU
BKD GAINES RANCH LLC ATTN: FINANCE DEPT
BOARD OF REGENTS OF THE
BRADLEY J FREELS
BRADLEY O & ASHLEY L ROTHWELL
BRANDYWINE GARZA OFFICE I
BRE/ESA P PORTFOLIO TXNC PROP C/O EXTENDED STAY HOTELS
BRENDA HANNAN HUGHES
BRETT BRONSTEIN
BRETT D & AMY M SPENCER
BRIAN K & LINDA R GRAF
BRISTOL & WHITNEY MYERS
BRITT TURNER & SHANNON MAXWELL
BRITTANY ROACH
BROTHERS L C HORSESHOE
BRYAN D GREENBERG
CADENCE GODDAR CC LLC
CAMERON BAKER & ERIKA JENSEN
CARLOS S & ELIZABETH S SAN SEGUNDO
CATHY ODOM STAPLES TRUST
CHAD E & SHERYLL E COX
CHAD KEITH
CHAI Y & MARIA H DING
CHARLES & DIANNE RHYNE HUGHES
CHARLES D & KANDIE R HUDSON
CHARLES E & PATRICIA E CAUDILL
CHARLES W KLEUSER

Owner Name
CHARLES WAYNE & JENNIFER ANN CANILLAS FISHER
CHARLES WILLIAM MARTIN
CHARLESS & CONSUELO DAVIDSON
CHARLOTTE ANG TRUSTEE
CHASE BANK OF TEXAS NA
CHRISTI S NEVILLE
CHRISTINE & PHILLIP POMPA
CHRISTINE G KERIOTIS
CHRISTOPHER & HEATHER HARDY MORRISON
CHRISTOPHER & KELLI DENISE JAVAN
CHRISTOPHER & MARIAH WATKINS
CHRISTOPHER K MITCHELL
CIRCLE C HOMEOWNERS ASSOCIATION INC
CITY OF AUSTIN
CITY OF AUSTIN C/O VENTURINA BIGGS
CLINTON & CHRISTINA CURRIER
COLBY HARMON
COLIN P & JENNIFER K SMILEY
CONNIE & CARLOS ZULOAGA JR
CPLG TX PROPERTIES LLC C/O COREPOINT OPERATING PHIP LP
CREEK RIDGE ASSOCIATION INC
CROCKETT MOORE
CUMMINS CHARLES L TRUST
CWS 5501 MOPAC C/O MARQUIS RESIDENTIAL DEVELOPMENT LLC
CYNTHIA & EDWARD MENDOZA
CYNTHIA VELAZQUEZ
DAGOBERTO & MARIA L BALDERAS
DANIEL KING
DANIEL RALPH STEBLAY
DARLENE & PHILLIP D PLYLER
DAVID & CHELSEA WATSON
DAVID & MARGARET NOBLES
DAVID J & LISA K LAIRD
DAVID M & AIDA M LARA
DAVID STEPHENSON ETAL
DAVID WENDEL STREET
DEBORAH CLEMENS

Owner Name
DENISE HIROSE
DENNIS P & MATY L MCCABE
DILLARDS PROPERTIES INC
DONALD A BROWN
DONALD K & HOLLY L STOTZ C/O SHARI DENMAN
DOUGLAS & SARAH DRINKKA 202 LIVING TRUST
DOUGLAS KEITH
DUSTIN J & NATALIE M SCOTT
EDWARD & NICOLE B BENSON
EDWARD A CALVIN
EJM BELL FAMILY LTD
ELLEN ANDERSON LOGAN
ENDA QUINLIVAN & STEPHANIE L JONES
ERASTO FAMILY CANALES
ERIC MADEEN
ERIC R & LORRAINE E CHANDLER
EUGENE JAMES & KAY L HESTER
FANNIE SUAREZ
FAYCAL CHADLEY
FIRST EVANGELICAL FREE
FRANCISCO VELAZQUEZ MARTINEZ
FRANK M & CAROLYN AVILLAR
FRANKLIN LLOYD LOBB & JOY BALDWIN
FREDERICK M SCHMITZ
G & I VII BARTON SKYWAY C/O DON WEEKLY
GAMBLE TUCKER REAL ESTATE LLC
GARY A COBB
GEORGE L RANDLE
GEORGE M ANSELM I
GEORGIA HOOPER-PEEK
GIBSON D LEWIS
GINNY M LUXTON
GLENN A & LIESL CRISWELL
GRANT GOLD
GREG J & JENNIFER J WARMINK
HARDEMAN FAMILY JOINT VENTURE LTD
HEATHER & JOSHUA TURNER
HEB GROCERY COMPANY
HECTOR V VILLEGAS
HICKORY PASS

Owner Name
HUBERT LEE
HUDSON RICHARD A & M D TRUST REVOCABLE TRUST
HUGO EVANS & DENISE DAVILLA
HUIPING ZHU
IL Y & MI J AN
INDEPENDENCE WOODS LLC C/O CHRISTOPHER INVESTMENTS CO
INLAND WESTERN AUSTIN MOPAC LP
INTEL CORP
INTEL CORP
INTERNATIONAL LEGAL TECHNOLOGY ASSOC
IRA JON YATES
JAMES A & KATHLEEN S CHILDS
JAMES D & NICOLE GATSCHE
JAMES R DOERR
JAMES RODNEY GAINES
JAN L & CHARLES M DUNN
JANE D SMITH
JANE PIPER
JASON CURTIS STANSELL
JASON EDWARD COOK
JAY & KELLIE SCHNEIDER
JAY A & ANGELA S MARSHALL
JAYAPRABHU SIVARAJA
JEAN CAMERON JONES
JEFF A SNOWDEN & SHERRY L SPAR
JEFFERSON EDWARD & PHYLLIS BLANCHE NELSON
JEFFREY & ALLISON TOMPKINS
JEFFREY & LUZ HELENA WAYMAN
JEFFREY ASHPITZ
JEFFREY DWYER & ROBIN HENDERSON
JEFFREY L & SYLVIA A THOMAS
JENNIE COVERT STEWART
JENNIFER MORENO-WILLIAMS
JENNIFER R & JOHN T PELICANO
JOE D & TERESA S WALKER
JOEL CLAYTON STEARNS
JOEL P & KORI M GOUGH
JOHN & KRISTEN BRAZIL
JOHN & LORETTA THOMASON
JOHN ARCHAMBEAULT

Owner Name
JOHN B & PATRICE MCCULLAN SCHEXNAYDER
JOHN C HAYEK
JOHN J TREVINO
JOHN O & SABINE BELL
JOHN T MATSON
JOHNATHAN M LUDEN & SARAH K RICHARDSON
JOHNNY ORDONEZ
JORGE A & KATHY L REYES
JOSEPH H ROGER
JOYCELYN F POOL
JUAN CARLOS & GISELA B ANDREU
JUDITH A PERIGYI
JULIA CRINGLE & JASON TREVOR FREITAG
JULIE EKLAND & SCOTT M KAMPMEIER
JUSTIN & SHANNON MONTGOMERY
JUSTIN L RAND & VIVIENNE W GAO
JUSTIN WALLS
KARLA N TAYLOR & JOHN B WILLIAMS
KATHERINE ANN ROZIER & RYAN PRESTON FITE
KB ESSENTIAL HEALTHCARE 36 DST
KENNETH D HERRELL
KERRY P & LARRY C GUTHRIE
KEVIN A & BARBARA L CRAIG
KEVIN LENAHAN & MONICA HOFFMAN
KIZZIE JEWEL & JASON ALVAREZ
KOSTA RISTOVSKI & ERIKA GOMEZ HENAO
KRYSTEN M & SCOTT G ARBUCKLE
KURTIS G MILLER
LAMY SOUTH TOWNE LTD
LARRY COVERT
LARRY E SMITH
LARRY PEEL
LCRA TRANSMISSION SERVICES
LEE & REBEKAH MAAZ
LEE M MANFORD
LESLIE D SHEINER
LG TERRACES
LIBERTY PARK JOINT VENTURE
LINDA FAY
LINDA KAY EXEMPT DRYDEN

Owner Name
LISA M & SAMUAL P ALLEN
LIZETT TERNES
LORE ATX ROLLINGWOOD III LP
LORI BURTON
LTF REAL ESTATE CMBS II LLC
LUMBERMENS INVESTMENT
MARC & KATHERINE E LAMPERT
MARC A & DEANNA P RANKIN
MARCUS J ROPER
MARGARET ANN CINA
MARILYN P TAYLOR
MARQUIS BARTON TRAILS LLC
MARTIN & RENEE HOWLEY
MARY ELIZABETH THURSTON
MARY LAWRENCE HUGHES
MATHEW & LAUREN N ELIZONDO
MATTHEW & DEBRA BUSH
MATTHEW & KELLY CARVER
MATTHEW & KRISTIE RUDGE
MATTHEW & REBECCA ARBER
MATTHEW & SARAH R MARTIN
MAURICIO & GUADALUPE ZAVALETA
MAURINE P RIENSTRA
MCCARTY FAMILY REAL ESTATE
MCCLURE TRUST
MELISSA MATTHEWS & RI MERCADO
MELODY DREW BUCHANAN
META PROPERTY HOLDINGS LLC
MICHAEL A & MEGAN HINOJOSA
MICHAEL PATRICK KOMAREK
MICHAEL S RUSINKO
MICHAEL SHERIDAN
MICHELE CROSSE
MILO K PETERSON & LORI WEST
MINDFUL LLC
MMF II LEGACY AT WESTERN OAKS LLC
MONETTE S HANNAN & BRENDA HANNAN HUGHES
MS PALMS LTD
NAKS LLC
NATHAN ALLEN SCHWARTZ
NICHOLAS D & JADE E FITZSIMMONS
NICHOLS PARK TFP LTD

Owner Name
NICK & ALMA CHAPA MOORE
NICOLAS T YOUNES
NORTHLAND RIVER STONE RANCH LLC
NYAMF REALTY LLC
OLDENBURGH LIVING TRUST C/O KATHLEEN OLDENBURGH
OLIVER APONTE & LAURA P RAMIREZ RIVERA
OWEN JAY CORPENING
PARK HILL BAPTIST CHURCH
PATH HOTEL SIX LLC
PAUL & MELISSA J CALUSIO
PAUL ALBRIGHT
PAUL D & LISA NUNEZ
PAUL N & MARLA E FRANZ
PAUL PEREZ
PAULA O HARMON
PENELOPE GRAVES REDINGTON
PENNEY J C PROPERTIES INC
PETER A & STEPHANIE J BECKER
PETER M & AMPARO RIPLEY
PHYLLIS E DOAK
PONCHO V J & LORA L LOWDER
POST APARTMENT HOMES C/O TAX DEPT #247000
PRESSLER PARK LLC
QIANG WANG 7 LI SHUOFEI
R & K INVESTMENTS
RACHEL L & WILLIAM E CAREY
RAMI WILLIAM ZARROUK
RAMON AGUIRRE
RANDALL P MOSSER
RANDOLPH-BROOKS FEDERAL UNION ATTN: ACCOUNTING
RDD 45
REGIONS BANK
RENE DAILEY
RHETT JEFFREY BOWEN
RICH & BEESE ARMINGTON
RICHARD A METZGER
RICHARD W & MARGERY S PEARCE
RICKY JAY & CANDICE RUDOLPH
RNDL AUSTIN & RICHARD C DUNSAY

Owner Name
ROBERT & THERESA BUNCE REVOCABLE TRUST
ROBERT E & KRISTINA WOLTER
ROBERT F PRESTON
ROBERT J & KAREN L HILLARD
ROBERT L ROMANO
ROBERT M FARLEY
ROBERT R & SALLY W HUNT
ROBERT S & ELIZABETH B HARRIS
ROBIN GREENE
RODNEY D SCHMIDT
ROMY LAM
RONALD W BANUELOS
RORY O GRANT
RRSEKS TRUST
S ROY C BENTO
SAGE-MONTEREY OAKS LTD C/O BRECK BOSTWICK & ASSOC
SAMS REAL ESTATE BUSINESS TRUST
SANDRA CULHANE
SANDY LAMBRIGHT
SANII LIVING TRUST
SCOTT D & JEWELLYN G FORREST
SEAN A & AMANDA MONTAGE MARTIN
SETH LOUIS DESHOTEL & LAUREN NICOLE HUGGINS
SHAHRAM & MONICA E HADIVINCHEH
SHANE & MELISSA SAVOIE
SHARLENE N & PATRICK G COLLINS
SHI INTERNATIONAL CORP
SIMON PROPERTY GROUP TEXAS
SLAUGHTER CROSSING LLC
SOUHAIL F FRANCIS & ANASTASIA DAVYDOVSKAYA
SOUTH AUSTIN MEMORY CARE LLC C/O TRINITY PRIVATE EQUITY GROUP
SOUTHWEST 2000 LLC C/O D2K PROPERTIES INC BLD 2 STE 200
SOUTHWESTERN BELL TELEPHONE
STACY & JODIE HAILEY
STEINBERG FAMILY LIVING TRUST
STEPHANIE L WAGNER
STEPHEN J HINES
STEVE L DEIS

Owner Name
STEVEN B STANFORD
STEVEN D ADRIAN
STEVEN W & ROBERT L FARMER FAMILY TRUST
STUART F & ELISSA G SHAPIRO
SUSAN GOFF & MASA SCOOT ROBERTS
SUSAN MAUREEN SUAREZ
SUSAN S EBERSOLE
SYLLABUS PARTNERS LLC
TANYA WINCH
TARA MORROW
TARGET CORP T-1061 C/O PROPERTY TAX DEPT
TCB BBY LLC
TEACHERS INSURANCE & ANNUITY
TERRACE PUD OWNERS ASSOCIATION INC
TEXAS CAVE MANAGEMENT ASSOCIATION
TEXAS SOCIETY OF PROFESSIONAL
THEIN T & ELISA A NGUYEN
THOMAS E MAREK
TIMBERLINE BUILDING TEN JOINT
TL OFFICE LLC
TME OK LLC
TONY HAUNG
TR TERRACELP C/O COUSINS PROPERTIES IN
UDR BARTON CREEK LLC
UNITED HERITAGE CREDIT UNION
UNIVERSITY OF TEXAS SYSTEM BOARD OF REGENTS C/O REAL ESTATE
UNIVERSITY OF TEXAS SYSTEM BOARD OF REGENTS C/O REAL ESTATE
VANESSA AKMON
VANESSA R SPELLS
VERA CRUZ PROPERTIES LP
VICTOR HUGO & KIMBERLY JOY HERNANDEZ
VINCENT M HARRIS
VINOD D ANAND
WALDORF SCHOOLS ASSOCIATION
WALLINGWOOD INTRESTS LLC
WAL-MART REAL ESTATE BUSINESS TRUST

Owner Name
WELLTOWER OM GROUP LLC
WENDY K JANSKY
WESLEY L & VALERIE A SMITH
WEST AUSTIN BAPTIST CHURCH
WESTBANK HOLDING INC
WESTCREEK CROSSING
WESTERN OAKS POA INC
WHATABURGER INC
WHITESTONE PARKSIDE VILLAGE
WHITNEY STOCKDALE & DREWW BELL

Owner Name
WILLIAM & ARIEL BIGELOW
WILLIAM G WOOD
WILLIAM K & J DAVID THOMSON
WILLIAM K THOMSON
WILLIAM VINCENT NEWSOM
WILMINGTON TRUST COMPANY 2133
WIND ENERGY TRANSMISSION TEXAS
YOUNG ZAPP ARBOR TRAILS LTD
YURA KOCHARYAN
ZIENEDDIN MOHAMAD



MOPAC SOUTH ENVIRONMENTAL STUDY

VIRTUAL PUBLIC MEETING

WHEN: Begins Mon., Nov. 22, 2021 at 5 p.m.*

WHERE: voh.MoPacSouth.com



Join us

The Central Texas Regional Mobility Authority and Texas Department of Transportation invite you to participate in a Virtual Open House to re-engage the public on the mobility improvements under consideration for the MoPac corridor (Loop 1) from Cesar Chavez Street to Slaughter Lane.

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**The Virtual Public Meeting website will remain available until Jan. 7, 2022.*

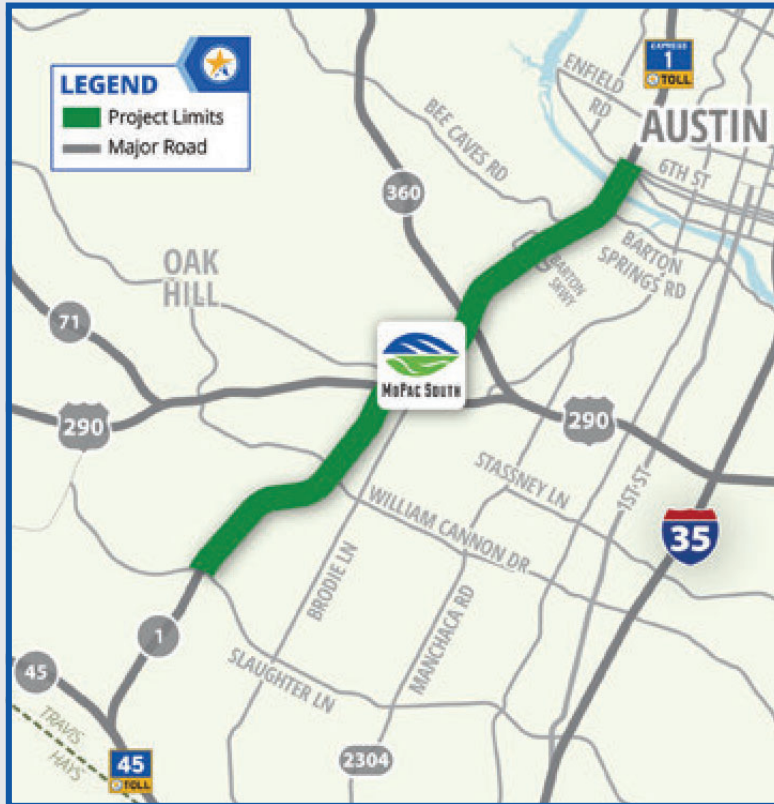
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VIRTUAL PUBLIC MEETING

Begins Mon., Nov. 22, 2021 at 5 p.m.*
voh.MoPacSouth.com

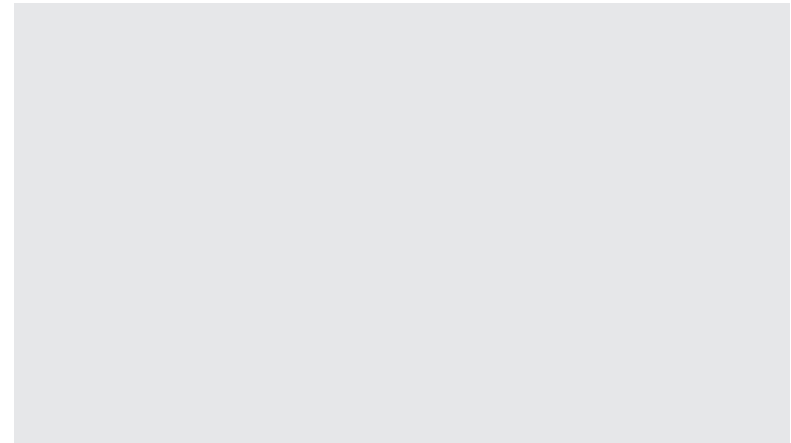
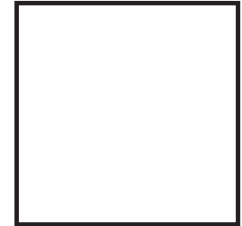


CSJ:3136-01-176



MoPac South

Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N. IH-35, Suite 625
Austin, TX 78705



DISPLAY AD

Display ads were published in the following editions of local newspapers:

- *West Austin News:*
 - November 18, 2021
 - December 16, 2021
- *The Austin Chronicle:*
 - November 19, 2021
 - December 10, 2021
- *Community Impact, Central Austin:*
 - November 22, 2021

Additionally, digital ads ran on the Community Impact website from November 10 to December 16, 2021.

Tearsheets and publisher's affidavits are included on the following pages.

Tarrytown Pharmacy celebrates 80th anniversary

Tarrytown Pharmacy's owners Mark and Leslie Newberry are hosting a party on Dec. 4 in the Casis Village Shopping Center to celebrate Tarrytown Pharmacy's 80th anniversary and the many customers who have supported the family-owned pharmacy over the years.

The party will feature nostalgic Holiday House Hamburgers, courtesy of Ralph Moreland's granddaughter and her food truck, Lono's. Amy's Ice Cream will be serving up sweets, and Tarrytown resident Brent Metschan, aka DJHearNoEvil, will bring the party for a fun night of music. Attendees can also enjoy a bar, hot chocolate station, and the opportunity to meet Santa. Other Casis Village businesses will be open late to celebrate Tarrytown Pharmacy's 80th anniversary and the holidays.

"There aren't many Austin small businesses who have thrived as long as Tarrytown Pharmacy. We definitely credit



Mark and Leslie, current owners

our community for that," said Mark Newberry, "our customers are very loyal to us, and we owe them so much. We hope they join us to celebrate on December 4th!"

Since first opening its

doors in 1941, Tarrytown Pharmacy has served as a central gathering place for Tarrytown residents. Mark and Leslie Newberry pride themselves in continuing the family-owned pharmacy's



The old Tarrytown Pharmacy storefront

tradition of service, community, and dependability.

Over the years, Tarrytown Pharmacy has regularly donated merchandise, time, and funds to local schools and charities, and in 2008 Tarrytown Pharmacy became the first Pharmacy in Texas to receive the "South Region Pharmacy of the Year" award for its commitment to patients and community service.

When the pandemic struck in 2020, Tarrytown Pharmacy continued its tradition of service, acting quickly to respond to the needs of customers and patients by providing safe and accurate COVID-19 testing. In addition to testing, once vaccines became available, Tarrytown Pharmacy worked with the Texas Department of Health to vaccinate 15,000 intellectually and developmentally disabled adults across the state.

Because Tarrytown Pharmacy is independent and can be highly flexible, it was



Neal Newberry former owner of Tarrytown Texaco, and Brian Newberry former owner of Tarrytown Pharmacy

the first store in town to make appointments for children 5-11 to receive the COVID-19 vaccine available online once the FDA approved the vaccine for children in that age range. Within 24 hours of FDA approval, Tarrytown Pharmacy had already booked 7000 appointments.

With its 80th anniversary on the horizon, Tarrytown

Pharmacy looks forward to taking care of the Austin community for many years to come.

The Newberry Family is collecting memories from customers and former employees in an online memory book at www.newlywords.com/trx



Tarrytown Delivery



MOPAC SOUTH ENVIRONMENTAL STUDY

VIRTUAL PUBLIC MEETING

WHEN: Begins Mon., Nov. 22, 2021 at 5 p.m.*

WHERE: voh.MoPacSouth.com

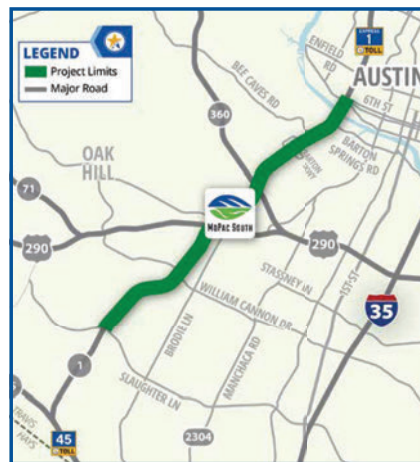
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AFFIDAVIT OF PUBLICATION

STATE OF TEXAS
COUNTY OF TRAVIS

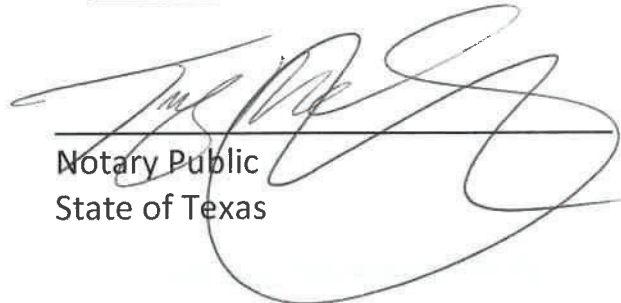
Before me, a Notary Public, personally came and appeared Bart Stephens, who being duly sworn, did depose and say that he is the Publisher of the West Austin News, a newspaper of general publication published within the County of Travis and that the:

MOPAC SOUTH ENVIRONMENTAL STUDY VIRTUAL PUBLIC MEETING NOTICE

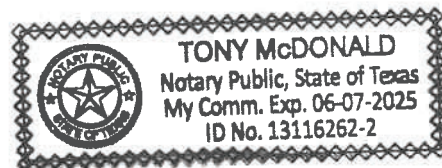
as per copy attached hereto, was published in said newspaper in the issue of November 18, 2021.



Subscribed and sworn to before me this 20th day of November, 2021.



Notary Public
State of Texas



St. Stephen's wins Six-Man Football State Championship, completes perfect season

The St. Stephen's Episcopal School six-man football team defeated Bastrop Tribe Consolidated, 31-22, on Saturday, Nov. 27, to win the Texas Association of Independent Athletic Organizations State Football Championship. The championship game, which took place at Allen Academy in Bryan, Texas, capped off the Spartans' undefeated 11-0 season in the school's first year of six-man football.

Twelfth grader Ben Jones,

who netted six receptions for 99 yards and three touchdowns, was named the Offensive Player of the Game. His classmate, Wilson McCann, completed nine passes on 14 attempts for three touchdowns and a total of 163 yards, earning a quarterback rating of 140.8. Tenth grader Christopher Tapia and 12th graders Carson McCann and Zach Mendelson rushed for a total of 188 yards on the ground, with Tapia and McCann notching touchdowns.

On the defensive side of the ball, 12th graders Solomon Starkes, Zach Mendelson and Cooper Nichols tallied 15, 12 and 10 tackles, respectively, with Mendelson also intercepting a pass. The Spartans earned the right to compete for the state championship by defeating the Lubbock Titans 75-28 on Saturday, Nov. 20. Head football coach is Jay Patterson, assistant coaches are Chris Breckwoldt '86 and Ben Hines '91.



Solomon Starkes, Anthony Watson, Cooper Nichols, Carson McCann, Ben Jones

St. Gabriel's students donate 519 coats to Junior League Coats for Kids

St. Gabriel's Catholic School recently participated in the annual Coats for Kids coat donation drive organized by the Junior League of Austin and donated 519 coats, reaching their goal of exceeding last year's total. "We work to develop global citizens who will be our next servant leaders," said Colleen Lynch, Head of School. "Service learning is a vital part of our school community and our Catholic identity."

Lynch said St. Gabriel's is inspired by St. Teresa of Calcutta, known for "Faith in action is love, and love in action is service."

"St. Gabriel's students were excited to support other children in need in our community and they truly understand how each coat has a direct impact," said Barb Creed, Director of Service Learning. "Students also enjoyed the fun activity of 'Coat Games' in PE classes throughout the day, which is a



Lucy T., Lauren S., Nixon S.

variation of the game musical chairs."

Throughout their time at St. Gabriel's, students engage in service learning that emphasizes reciprocity and deep respect for all people, Creed said. "Our students maintain lasting partnerships with local organizations and work collaboratively to solve

real-world problems. They are involved with direct and indirect service that includes research, advocacy, and hands-on projects."

St. Gabriel's welcomes children of all faiths as students in pre-K3 through eighth grade. See sgs-austin.org.



Annie C., Theodora L.



Trevor C., Ellis L.



William R.



MOPAC SOUTH ENVIRONMENTAL STUDY

VIRTUAL PUBLIC MEETING

WHEN: Now through Friday, January 7, 2022

WHERE: voh.MoPacSouth.com

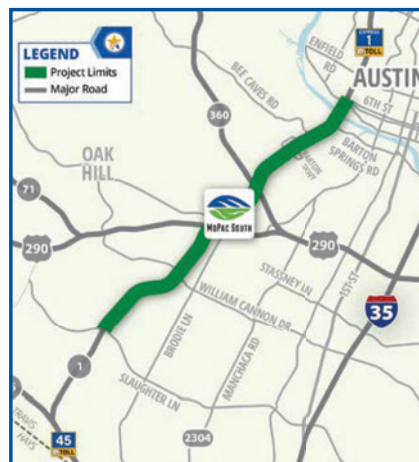
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AFFIDAVIT OF PUBLICATION

STATE OF TEXAS
COUNTY OF TRAVIS

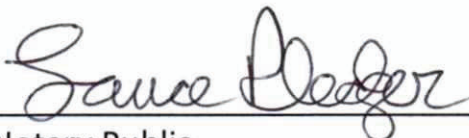
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MOPAC SOUTH ENVIRONMENTAL STUDY VIRTUAL PUBLIC MEETING NOTICE

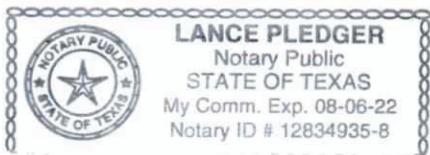
as per copy attached hereto, was published in said newspaper in the issue of December 16, 2021.



Subscribed and sworn to before me this 22nd day of December, 2021.



Notary Public
State of Texas





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My Vinyasa Practice
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Austin, TX 78752



MOPAC SOUTH ENVIRONMENTAL STUDY VIRTUAL PUBLIC MEETING

WHEN: Begins Mon., Nov. 22, 2021 at 5 p.m.*
WHERE: voh.MoPacSouth.com



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CSJ:3136-01-176

PUBLISHER'S AFFIDAVIT

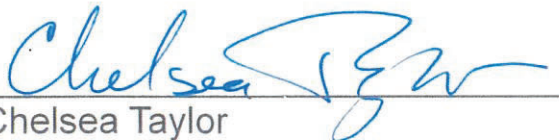
I solemnly swear that the attached ad was published on the following date(s):

November 18, 2021

In ***The Austin Chronicle***, a newspaper published in Austin, Travis County, Texas, and of general circulation in Travis County, Texas; Hays County, Texas and Williamson, County, Texas, for service of citation or notice publication, and the date(s) of said newspaper bore in which the notice was published correspond to the following issue numbers:

Vol. 41 No. 12, Page 25

A copy of the ad(s) as published, clipped from the newspaper, is (are) attached hereto.

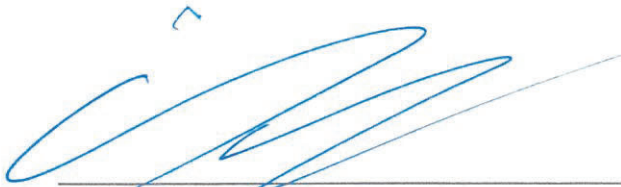


Chelsea Taylor

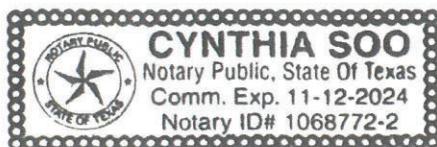
The Austin Chronicle

**STATE OF TEXAS
COUNTY OF TRAVIS**

Sworn to and subscribed before me this 22nd day
of December, 2021



Notary Public (signature)
State of Texas



es and walk on the lawn and see swastikas, Adolf Hitler memorials, and somebody tells you, 'It's okay, it's a part of history. Just accept it.' ... That's an excuse to spit in my face in 2020 ... that's all it is." Two months after the hearing, the commissioners voted 4-1 to move the monument to the Caldwell County Jail Museum. Citizens raised \$29,600 to finance the move. As of this writing, the monument is up on skids, ready to go.

Carter credited the members of the court, who are not radical progressives, for accepting the truth about the monument's meaning. "It was put there and portrayed as a memorial for soldiers, which, that's really not the case," Carter said, likening the monument to a wolf in sheep's clothing. "But that's what the Klan was too - by day, they were the sheriff, they were the drugstore owner. And by night, they wore the sheets. And a lot of people say that was long ago but that history is still happening today and we've got to educate ourselves."

THE MEDIA AND THE VIGIL

"My brother was killed on a Monday," Othmane Dghoughi said. "The whole week, nobody called me. Nobody contacted me. The hospital called to tell me my brother was in the hospital but besides that I never heard from one of them. They had my con-

tact information and I have the proof. They had it. Nobody contacted me."

Like Sarah Todd, Othmane Dghoughi has never felt comfortable with the response from the Caldwell County Sheriff's Office to his brother's killing. After a week of silence from the sheriff, Othmane called the office and set up a meeting. On his way to Lockhart from College Station, he called KXAN-TV in Austin; reporters from the station arrived after Dghoughi sat down with the detective.

"The interview was like an interrogation about my brother," Dghoughi said. "They were trying to justify [Turner's] shooting more than trying to give my brother his rights. They were asking me, 'Does he hate women?' Or asking, 'How is he when he drinks?' Then, while we're talking, the detective gets up and says, 'I'll be back.' And he went to the next room and I heard him, he said, 'Oh fuck. The media is here. This is going to get big.'"

Indeed, Todd and Dghoughi had been calling every media outlet they could. They had also contacted the Council on American-Islamic Relations, whose representatives connected them with Villalobos, who brought in Buckley and Mano Amiga. Villalobos began helping Othmane get possession of Adil's body so it could be transported back to Morocco.

CONTINUED ON P.22

Offer Expires 12/25/21

Use PROMO CODE **COMFY21**

FREE Comforter Clean!

A holiday gift from us to you.

Have any size regular comforter cleaned **FREE!** Twin-Full-Queen-King drop off or pickup.

A \$20 value. Minimum pickup/delivery charge \$30. Additional charges for down comforters.





MOPAC SOUTH ENVIRONMENTAL STUDY VIRTUAL PUBLIC MEETING

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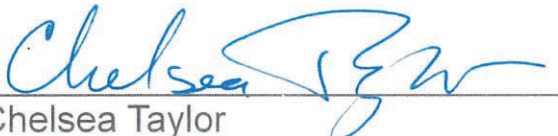
I solemnly swear that the attached ad was published on the following date(s):

December 10, 2021

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Vol. 41 No. 15, Page 21

A copy of the ad(s) as published, clipped from the newspaper, is (are) attached hereto.

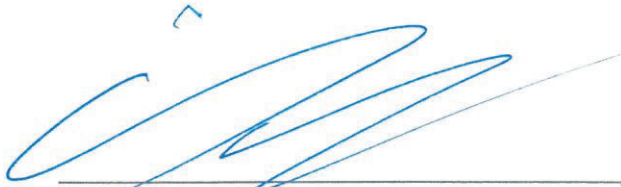


Chelsea Taylor

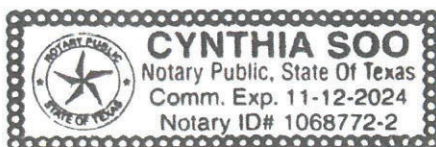
The Austin Chronicle

**STATE OF TEXAS
COUNTY OF TRAVIS**

Sworn to and subscribed before me this 22nd day
of December, 2021



Notary Public (signature)
State of Texas



NEWS BRIEFS

Abridged stories from online

Austin leaders addressing apparent hate crimes

BY DARCY SPRAGUE

Law enforcement, faith leaders, and city and state officials gathered Nov. 1 to address recent antisemitic acts across Austin. The Interfaith Action of Central Texas organized the event at the Dell Jewish Community Center. Attendees included Mayor Steve Adler, several state and local representatives, Austin ISD Superintendent Stephanie Elizalde and law enforcement leaders. "That hate [that exists at the fringes of society is not the danger]," Adler said. "The danger is that, that hate spreads."

The incidents include a fire at Congregation Beth Israel that investigators believe could be arson, a banner containing an antisemitic message hung over a bridge on MoPac, and antisemitic words and symbols that were found spray-painted at Anderson High School.

Austin Police Chief Joseph Chacon said each incident is being investigated separately, but police have not ruled out a possible connection.

"I am very concerned with the fact that we have seen so many [potential hate crimes] and so recently," Chacon said.

Chacon said given the relatively small number of hate crimes, compared to the more than

1 million 911 calls the department receives, even a small increase in the numbers can feel like a large percentage shift. "Just one is too many," Chacon said.

Elizalde told *Community Impact Newspaper* that the district is working to provide support for students and reviewing its safety measures in light of the recent incidents.

Police arrested a suspect in the arson case on Nov. 10.

HATE CRIMES OVER THE LAST FIVE YEARS

The Austin Police Department has a robust process for determining when to classify a crime as a hate crime, Chief Joseph Chacon said. Below is the number of hate crimes APD has identified each year.



SOURCE: AUSTIN POLICE DEPARTMENT/COMMUNITY IMPACT NEWSPAPER

STOPPING GUN VIOLENCE

Travis County is laying out a four-prong approach to respond to gun violence:

- utilizing new and traditional prosecution methods to pursue sentencing in gun crimes;
- partnering with community members to create and implement violence-prevention programs;
- preventing individuals from obtaining firearms, who are at high risk for committing gun-related violence against an intimate partner; and
- providing support for survivors of gun violence and the families of victims, including through the possible creation of a trauma recovery center.

SOURCE: TRAVIS COUNTY/COMMUNITY IMPACT NEWSPAPER

District attorney announces plan to curb gun violence

BY OLIVIA ALDRIDGE

Travis County District Attorney Jose Garza laid out a strategy Nov. 16 to address gun violence.

The approach includes preventing gun violence, responding to it and providing resources for victims. "We are also continuing to struggle with an alarming increase in gun violence and homicides across the country—and right here in our own community," Garza said.

CASE DEVELOPMENTS

Travis County indicted former Williamson County Sheriff Robert Chody after the death of Javier Ambler II.

MARCH 2019

Javier Ambler II dies after traffic stop with Williamson County Sheriff's Office

MARCH 2021

Chody indicted on evidence tampering

NOV. 2021

Chody indicted on conspiracy to tamper with evidence

Travis County officials add new charges against former Williamson County sheriff, DA

BY OLIVIA ALDRIDGE

The Travis County District Attorney's Office announced Nov. 9 it was adding conspiracy to tamper with evidence to the list of charges against former Williamson County Sheriff Robert Chody.

Chody was initially indicted in Travis County on March 31 with evidence-tampering charges in the case of Javier Ambler II, who died in 2019 after being tased by Williamson County Sheriff's Office deputies in Travis County. Chody was charged alongside Jason Nassour, former general counsel to the Williamson County Sheriff's Office, who has also been reindicted on conspiracy charges.

"These cases were reindicted to better clarify conduct that we believe violated the law," said Dexter Gifford, director of the Civil Rights Unit at

the Travis County DA's office, in a statement.

Chody and Nassour are alleged to have intentionally destroyed audio and video recordings of the events leading up to Ambler's death. The recordings in question were made in connection with "Live PD," a documentary series on the A&E network that shadows law enforcement officers during nighttime patrols. The reindictment on conspiracy charges further alleges that Chody and Nassour entered an agreement with Big Fish Entertainment LLC to destroy the unaired footage, knowing it related to an ongoing criminal investigation.

Ambler died in March 2019 following a car chase with Williamson County Sheriff's Office deputies, who pursued him after he failed to dim his lights to oncoming traffic, according to Williamson County documents. The chase ended in Travis County, where Ambler crashed his vehicle and was tased four times before becoming unresponsive. While his death was initially ruled a "justifiable homicide," his case received renewed attention in 2020 during local and national protests for Black Lives Matter.

We Are Blood warns of Austin-area shortage

BY LILA SAIDANE

Regional blood supply remains low, creating the highest demand in 10 years, according to We Are Blood, a Central Texas blood supplier. As a result, We Are Blood is asking for continued donations.

The scarcity has worsened due to a decline in donations and high demand, according to the organization. We Are Blood provides donations to more than 40 hospitals and facilities in 10 counties in the area.

"We aren't seeing that return for blood drives in our community or attendance to donations in our centers or mobile blood drives," said Nick Canedo, We Are Blood's vice president of community engagement.

The center emphasized the need for Type O-negative, Type O-positive and platelet donations.

According to the organization, at least 200 donations are required daily to meet regional needs. Blood drives can be scheduled and hosted by area companies or a donation center, according to We Are Blood. Residents can make an appointment at www.wearblood.org/donor.

MOPAC SOUTH ENVIRONMENTAL STUDY VIRTUAL PUBLIC MEETING

WHEN: Mon., Nov. 22, 2021 at 5 p.m.*
WHERE: voh.MoPacSouth.com

Join us **We need your input**

The Central Texas Regional Mobility Authority and Texas Department of Transportation invite you to participate in a Virtual Open House to re-engage the public on the mobility improvements under consideration for the MoPac corridor (Loop 3) from Cesar Chavez Street to Slaughter Lane.

Information about the six express lane(s) operational configuration options initially presented in 2015 will be available for public review and comment, as well as project history, status, and next steps.

Written comments from the public regarding the proposed project are requested and may be submitted by mail to: Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N. IH-35, Suite 628, Austin, TX 78706. Written comments may also be submitted by email to MoPacSouth@ctrma.org and/or online at the virtual open house website.

Comments must be received or postmarked by Fri., Jan. 7, 2022 to be included in the official record of this virtual open house.

*The Virtual Public Meeting website will remain available until Jan. 7, 2022.
 The virtual public meeting will be conducted in English. If you need an interpreter or documents translated because English is not your primary language or you have difficulty communicating effectively in English, we will be provided to you. If you have a disability and need assistance, special arrangements can be made to accommodate your needs. If you need interpretation or translation services or you are a parent with a child who has a disability, you may request an interpreter or translator at the virtual public meeting. Please contact us at 512.345.5279 no later than 4 p.m. C.T. Nov. 17. Please be aware that advance notice is required as some services and accommodations may require time to arrange.

Holiday Bazaar
 at CALITERRA LeMUSE coffee

DEC 10TH 1PM - 6:30PM ★ **DEC 11TH 9AM - 2PM**

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 LOTS OF LOCAL ARTISANS, LIVE MUSIC, TASTY TREATS AND MORE!!

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 Della Kelle, Mahab, Scanda Owen, Shera, John Robinson, Michael Azam, Neil Fragomeno, SSRI, Yves Delorme
www.featheryournesthome.com

CTRMA

BEFORE ME, the undersigned authority, on this day personally appeared Gail Watson who being dully sworn on her oath stated as follows:

My name is Gail Watson. I certify that I am an employee of the publishers of Community Impact Newspaper. I certify that the attached ad was published in the Community Impact Newspaper Central Austin edition on November 22, 2021 at the cost of \$2,165.00.

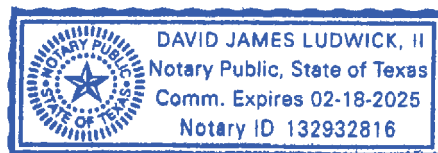
I certify that the attached tear sheet is a true and accurate copy of the publications as they appeared in the Community Impact Newspaper on the above-specified date.

SUBSCRIBED AND SWORN TO ME BEFORE on this 6th date of December, 2021, to certify which witness my hand and official seal.

Gail Watson

Employee, Community Impact Newspaper

Notary, State of Texas
(SEAL)



David James Ludwick II



future events

Austin Energy and Austin Water also released internal reports about their performance during the emergency and planned improvements.

BUSINESS



7:00 PM Nov 3, 2021 CDT

Mighty Fine, Burger King coming to Hutto; 4 updates from Cedar Park and more top

MOPAC SOUTH ENVIRONMENTAL STUDY

VIRTUAL PUBLIC MEETING

PLEASE JOIN US
 Nov. 22, 2021 – Jan. 7, 2022

 voh.MoPacSouth.com



Support our reporting, become a Patron.

Contribute Now



10:17 AM Nov 3, 2021 CDT

On-road enforcement for habitual violators now in effect on 290 Toll

Law enforcement will be able to issue warnings and fines up to \$500 for violators using 290 Toll.

MOPAC SOUTH ENVIRONMENTAL STUDY
VIRTUAL PUBLIC MEETING



PLEASE JOIN US
Nov. 22, 2021 – Jan. 7, 2022
voh.MoPacSouth.com

EMAILS TO SUBSCRIBERS

On October 26, 2021, November 22, 2021, December 8, 2021, and January 7, 2021 subscribers to both the MoPac South Project newsletter and the Mobility Authority's Expressway news were sent information regarding the virtual public meeting. At the time of notification, the MoPac South list had 2085 subscribers and the Expressway News list had 2545 subscribers.

Additionally, information about the public meeting was included in the November 1, 2021 and December 6, 2021 editions of the Mobility Authority's Expressway News.

Copies of all the emails sent to subscriber lists follow.

Lacy, Hillary

From: MoPac South Environmental Study <info@mobilityauthority.com>
Sent: Tuesday, October 26, 2021 1:40 PM
To: Lacy, Hillary
Subject: Mobility Authority Resumes MoPac South Environmental Study



October 26, 2021



In this newsletter:

[About the Virtual Public Meeting](#) | [About MoPac South](#) | [Public Engagement](#)
[Official Comment Period](#) | [Stay Involved](#) | [Special Accommodations](#)

MOPAC SOUTH ENVIRONMENTAL STUDY RESUMES

MOBILITY AUTHORITY TO HOLD VIRTUAL OPEN HOUSE

The Mobility Authority and TxDOT have resumed efforts on the MoPac South Environmental Study. We invite you to engage in the process as we continue working to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner

that promotes environmental stewardship and sustainability.



**Mark your calendar for the
MoPac South Environmental Study Virtual Open House**

Nov. 22, 2021 - Jan. 7, 2022

www.VOH.MoPacSouth.com*

**The Open House will be available by 5 p.m. on Nov. 22, 2021.
Until then, you may find more information about the project at MoPacSouth.com*

The Open House is being held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

ABOUT THE VIRTUAL PUBLIC MEETING

The virtual public meeting will begin at 5 p.m. Mon., Nov. 22, 2021, and be available for viewing until 11:59 p.m. Friday, January 7, 2022.

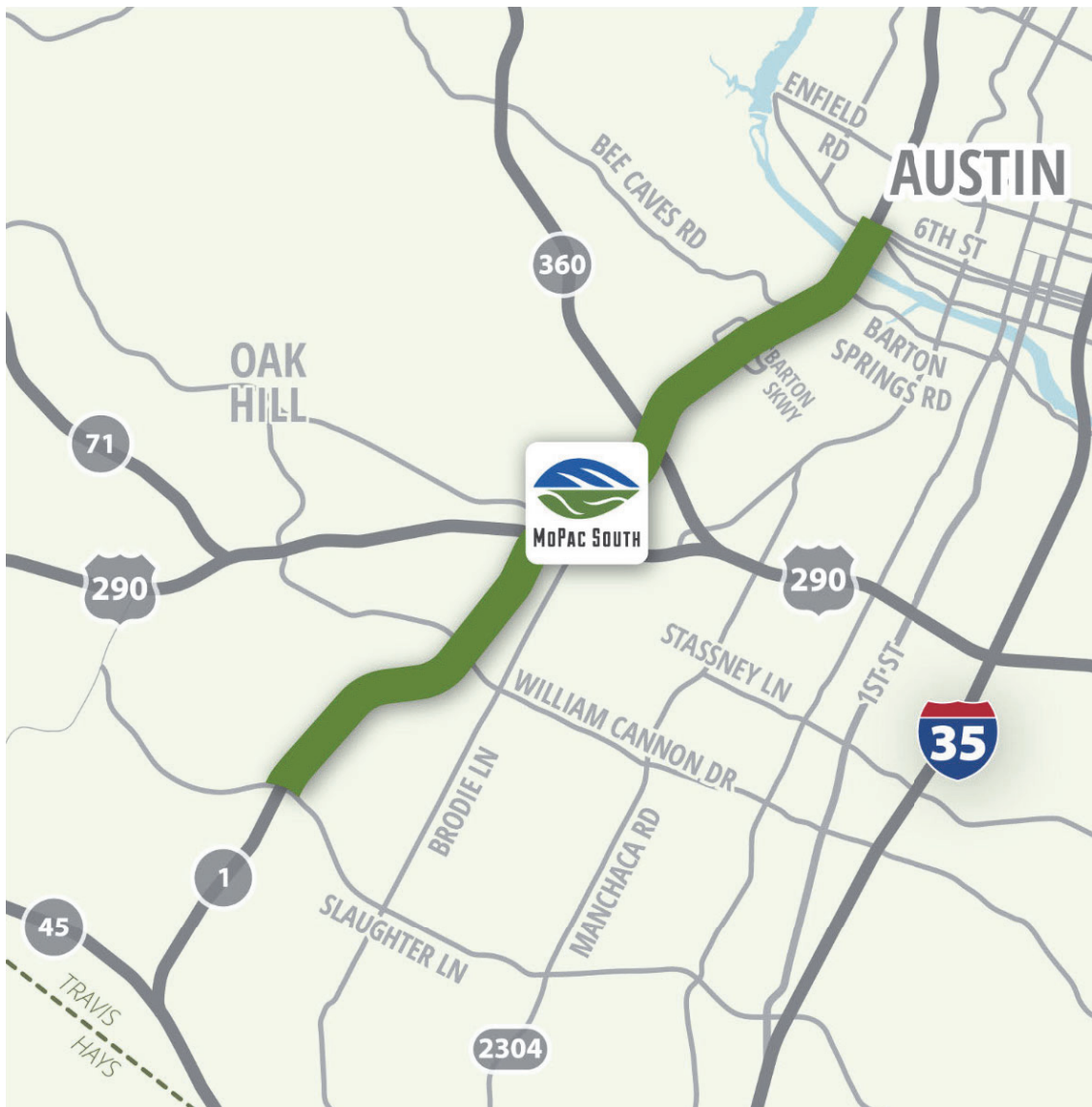
Virtual participants may...

1. View the [Virtual Open House](#)
2. View and/or download project materials
3. Share your input:

- Online: voh.MoPacSouth.com
- Email: mopacsouth@ctrma.org
- Mail: Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N.I-H-35, Suite 625, Austin, TX 78705

ABOUT THE MOPAC SOUTH ENVIRONMENTAL STUDY

The MoPac corridor south of Cesar Chavez Street is a critical link in our region, keeping South Austin and Hays County connected to major highways like Loop 360 and US 290, and providing access to downtown Austin. This 8-mile stretch of MoPac attracts up to 179,000 cars and trucks per day. Expanding population, as well as residential and commercial development have led to increased traffic congestion. **If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035.**



Launched in 2013, the MoPac South Environmental Study evaluated a full range of Alternatives and identified the [Express Lane\(s\) Alternative](#) as the Recommended Build Alternative because it best meets the project's Purpose and Need. Next, we need to determine the number of

express lane(s) (one vs. two), and how to design the connections to downtown.

PUBLIC ENGAGEMENT

At the last Open House in November 2015, we presented the public with six express lane(s) operational configuration options developed in collaboration with the community and in response to public feedback. We also extended the project schedule to allow for additional community input and engineering analysis on the proposed Express Lane(s) Alternative.

No project advancements have been made since that last open house in 2015. As we are now resuming efforts several years since we've last engaged the public, we will present information on the same six express lane(s) operational configuration options that were initially presented in 2015 in order to re-engage the public on the project before we continue our analyses. Those six express lane(s) options are:

- 1A: One express lane + downtown direct connection
- 1B: One express lane without downtown direct connection
- 2A: Two express lanes + downtown direct connection
- 2B: Two express lanes without downtown direct connection
- 2C: Two express lanes + elevated ramps near Barton Skyway
- 3: City of Austin proposal

As required by the environmental process, the No Build – or Do Nothing – Alternative is also still under consideration.

Since the last public meeting, the Mobility Authority opened and currently operates an express lane on MoPac from Cesar Chavez Street to Parmer Lane. Since 2017, this congestion management tool has reduced travel times, increased use of transit, and created an option for more reliable travel on the MoPac corridor north of Lady Bird Lake.

OFFICIAL COMMENT PERIOD

The official comment period for the Open House begins on Monday, Nov. 22, 2021 and lasts until Friday, January 7, 2022. Comments may be submitted through the virtual open house, e-mail, or mail as noted above. Please note that any comments submitted through other channels or outside the comment period will not be considered part of the record for this public meeting.

STAY INVOLVED

The Mobility Authority values public input and encourages you to follow the process and share your feedback. Following this Open House, additional future public engagement opportunities for the project are as follows:

- In 2022, we anticipate holding an open house.
- In 2024, we anticipate holding a public hearing.

SPECIAL ACCOMMODATIONS

The virtual public meeting will be conducted in English. If you need an interpreter or document translator because English is not your primary language or you have difficulty communicating effectively in English, one will be provided to you. If you have a disability and need assistance, special arrangements can be made to accommodate most needs. If you need interpretation or translation services or you are a person with a disability who requires an accommodation to attend and participate in the virtual public meeting, please contact the Mopac South Project team at 512-342-3299 no later than 4 p.m. CT, Wed., Nov. 17, 2021. Please be aware that advance notice is required as some services and accommodations may require time to arrange.

Se Habla Español: Para más detalles e información acerca del proyecto en español por favor comuníquese con uno de los miembros del equipo al 512.878.2246 y le atenderemos con gusto.

WE LOOK FORWARD TO RECEIVING YOUR FEEDBACK ON THE MOPAC SOUTH ENVIRONMENTAL STUDY.



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You are receiving this e-mail because you are an important part of the Mobility Authority community.

Our mailing address is:

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3300 N. IH-35
Suite 300
Austin, TX 78705

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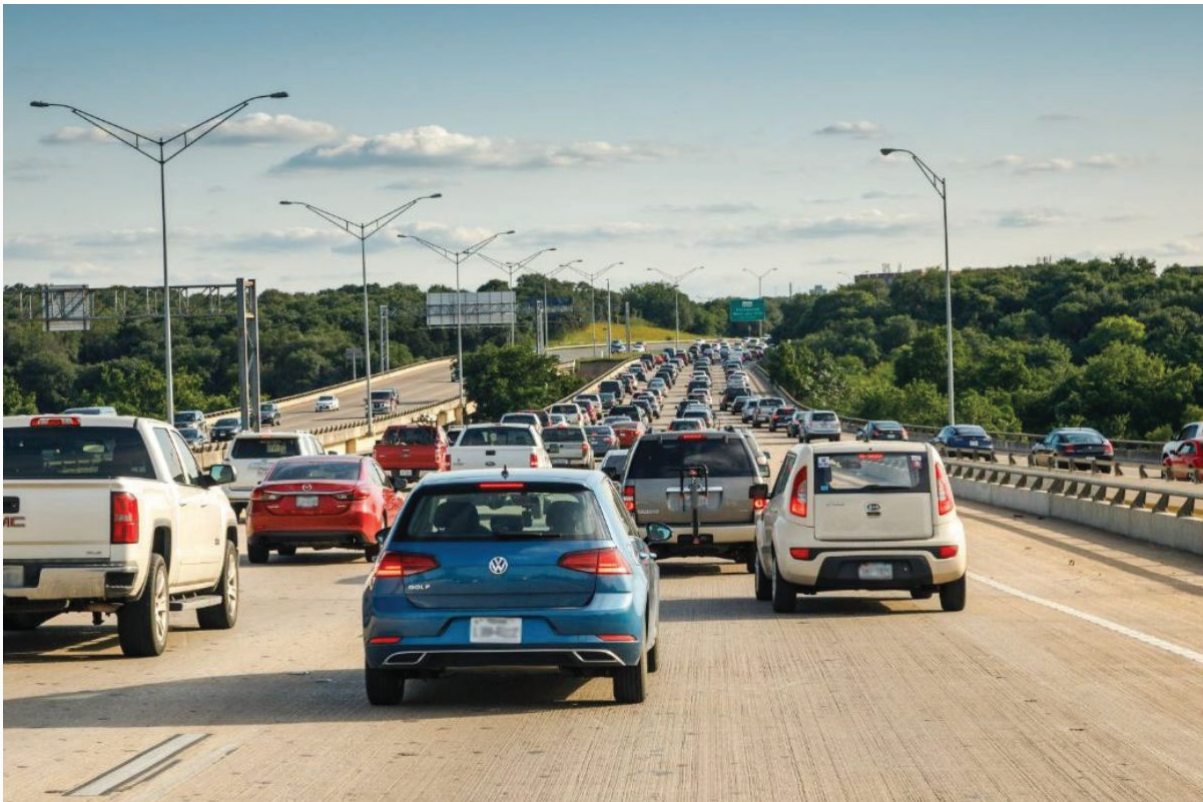
Lacy, Hillary

From: Central Texas Regional Mobility Authority <info@mobilityauthority.com>
Sent: Tuesday, October 26, 2021 3:15 PM
To: Lacy, Hillary
Subject: Expressway News from the Mobility Authority

[View this email in your browser](#)



Expressway News



October 26, 2021

[About the Virtual Open House](#) | [About MoPac South](#) | [Public Engagement](#)
[Official Comment Period](#) | [Stay Involved](#) | [Special Accommodations](#)

MoPac South Environmental Study Resumes

Mobility Authority to Hold Virtual Open House

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Nov. 22, 2021 - Jan. 7, 2022

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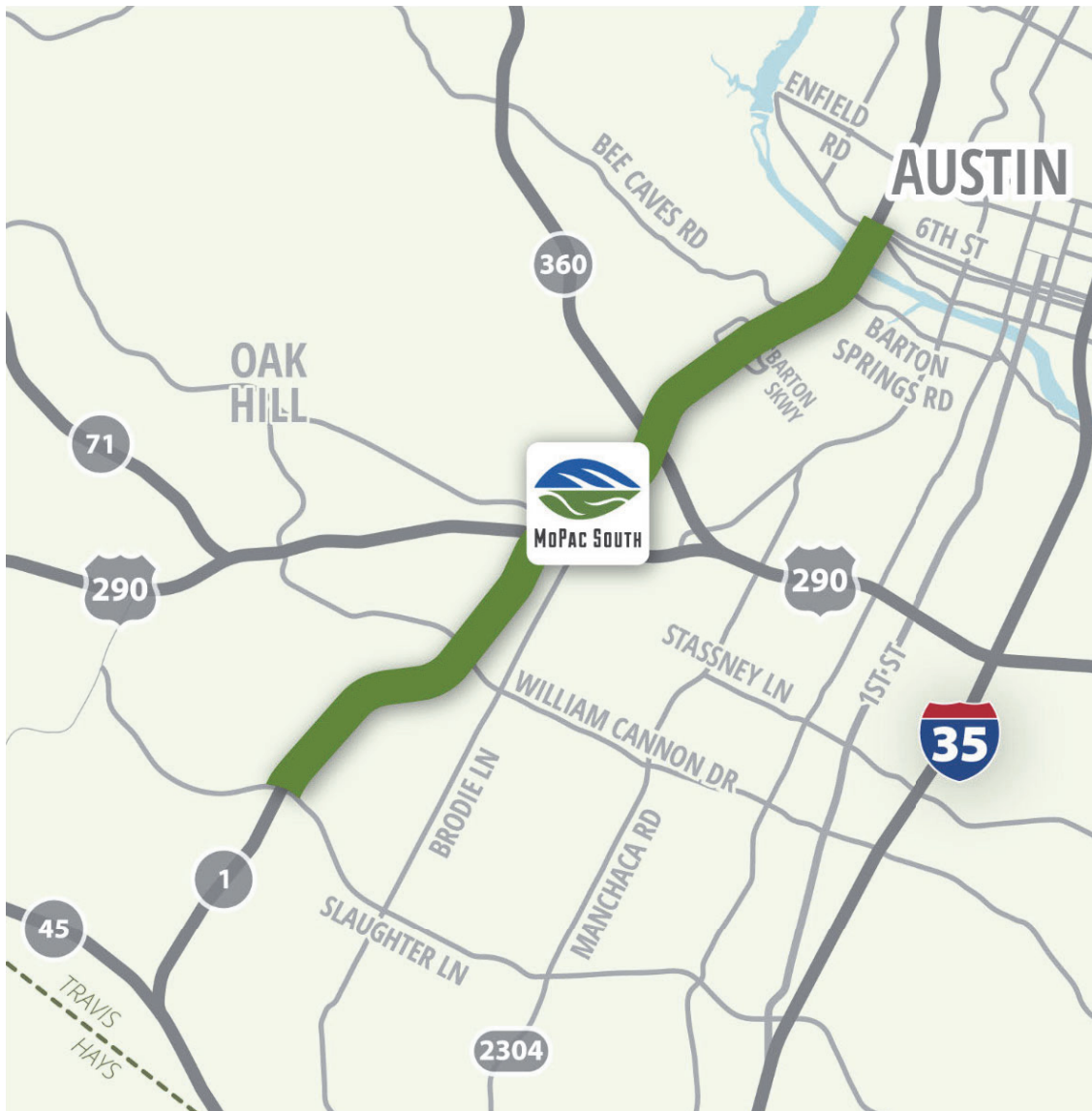
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***We look forward to receiving your feedback on the
MoPac South Environmental Study.***

Need more information?

[Visit our website](#)

Contact Us



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3300 N. IH-35
Suite 300
Austin, TX 78705

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You can [update your preferences](#) or [unsubscribe from this list](#).

Lacy, Hillary

From: Central Texas Regional Mobility Authority <info@mobilityauthority.com>
Sent: Monday, November 1, 2021 10:00 AM
To: Lacy, Hillary
Subject: Expressway News from the Mobility Authority

[View this email in your browser](#)



Expressway News



November 1, 2021

In this Issue:

[Mission-driven Series: Protect](#) | [MoPac South](#) | [183 North](#) | [Holiday Travel](#)

MISSION-DRIVEN

"We are responsible for implementing mobility solutions that preserve and enhance quality of life in Central Texas as we EVOLVE with the changing regional landscape, ENGAGE with the communities we serve, and PROTECT the environment we all share."

The Mobility Authority is committed to balancing the need for new infrastructure with the preservation of the environment. Specifically, this means expanding people's views on transportation to understand and embrace the role that our environment plays in achieving mobility solutions and overall regional health. And delivering on that commitment means incorporating sustainable design principles into the development and construction of our projects.

The month's Expressway News features the final segment of our three-part series outlining the ways in which the Mobility Authority upholds its mission to **evolve, engage, and protect**.

Questions or Concerns about your Toll Bill?

Contact us at 833-762-8655 or visit our [website](#). We're here to help!

PROTECT

As an agency charged with enhancing quality of life, we're committed to developing innovative transportation solutions that protect our region's natural resources. We do this by mindfully incorporating environmental stewardship from the conception of Mobility Authority projects through construction and beyond. And through these efforts, we're able to minimize our environmental footprint while reinvesting in our community.

The 45SW Toll Road, for example, is an industry-leading model for environmentally responsible roadway construction. From conception through design and construction of the roadway, the Mobility Authority used Best Management Practices (BMPs) meant to protect the sensitive Edwards Aquifer Recharge Zone and ensure water quality protection. Part of the project design included the development of a Water Pollution Abatement Plan (WPAP) which details both temporary and permanent stormwater runoff control measures.

In 2018, the Mobility Authority was awarded the Austin Chamber of Commerce's Environmental Champion Award for its investment in sustainability, innovation, and leadership in the transportation industry, most notably due to the SH 45SW Project.



Once again, the Mobility Authority practices this value by seeking opportunities outside of projects to protect and reinvest in our community's environmental health. Most recently, we partnered with [TreeFolks](#) to preserve and expand the urban tree canopy here in Central Texas and along our project corridors. It is through this partnership that we've provided more than a dozen educational classes and tree planting events, online video workshops, installation of two irrigation systems at local elementary schools, and have planted an estimated [10,000 trees throughout Central Texas](#).



MOPAC SOUTH ENVIRONMENTAL STUDY RESUMES

Mobility Authority to Hold Virtual Open House

The Mobility Authority and TxDOT have resumed efforts on the MoPac South Environmental Study. We invite you to engage in the process as we continue working to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner that promotes environmental stewardship and sustainability.



**Mark your calendar for the
MoPac South Environmental Study Virtual Open House**

Nov. 22, 2021 - Jan. 7, 2022

You may find more information about the project and the virtual open house at
MoPacSouth.com.



MEET THE 183 NORTH CONSTRUCTION PROJECT TEAM

**Please join us on Zoom
Thursday, November 4th | 6:30 p.m.**

We want to meet you (virtually) to update you in detail on the 183 North Mobility Project, answer any questions you have and share how the upcoming improvements will benefit the residents, commuters and businesses along the US 183 corridor in northwest Austin.

The Great Hills Constructors construction team will be able to give you more detail on the overall construction schedule, further explain the improvements to come and illustrate the latest technologies that will be used on the roadway.

Register to attend the virtual event: <http://bit.ly/183NorthProjectTeam>.

About the 183 North Mobility Project

The 183 North Mobility Project aims to improve mobility, reduce congestion and provide more reliable travel times for transit and emergency responders along the 9-mile section of US 183 between SH 45 North and Loop 1 (MoPac), a critical corridor in our regional transportation network.

The project includes the construction of two express lanes in each direction and the addition of a general-purpose lane to bring the number of non-tolled lanes to four in each direction. The project will construct an express lane direct connector between the new US 183 express lanes and the existing MoPac express lanes. The project also includes operational improvements to southbound MoPac, new shared use path connections, new sidewalks and cross-street connections for bicycles/pedestrians.

When completed, those looking to bypass traffic congestion will have a choice to use the 183 North Express Lanes. Drivers who prefer not to pay a toll will still have the option to use the improved non-tolled general-purpose lanes.

Construction is set to begin early 2022.

HOLIDAY TRAVEL

The holiday season is upon us – and with it comes traffic. As more people hit the road, it is important to take necessary precautions during the hectic holiday season. Whether you're driving across the country or across town, follow these tips to keep spirits high and everybody safe.

1. Perform a maintenance check on your vehicle. Checking your vehicle becomes increasingly important with the increase in cold weather and rain. Before you hit the road, perform a check of your vehicle's engine, fluids, headlights, windshield wipers, brakes, turn signal, and tires.

2. Be flexible in your travel plans. If you can, try to avoid leaving during peak traffic hours. Leave a bit earlier than you originally planned in order to beat some of the rush.

3. Be patient. It is important that you not let frustration affect your driving. Avoid the temptation to speed, tailgate, or make unsafe lane changes or passes in an effort to get ahead of traffic. These are very dangerous as other drivers can't predict those actions.

4. Designate a driver. If your get-together will involve alcohol, be sure to designate a sober driver. Drunk driving crashes tend to spike during the holidays – don't allow yourself or your family members to become part of the statistics.



Need more information?

[Visit our website](#)

[Contact Us](#)



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You are receiving this e-mail because you are an important part of the Mobility Authority community.

Our mailing address is:

Central Texas Regional Mobility Authority
3300 N. IH-35
Suite 300
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Subject: MoPac South Virtual Open House Now Available



November 22, 2021



In this newsletter:

[Virtual Open House Now Available](#) | [About the Virtual Public Meeting](#)
[About MoPac South](#) | [Official Comment Period](#) | [Special Accommodations](#)

MOPAC SOUTH VIRTUAL OPEN HOUSE NOW AVAILABLE

The Mobility Authority and TxDOT invite you to participate in the MoPac South Environmental Study as we continue evaluating this congested 8-mile stretch of MoPac (Loop 1) Expressway. The project team is working to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner that promotes environmental stewardship and sustainability.

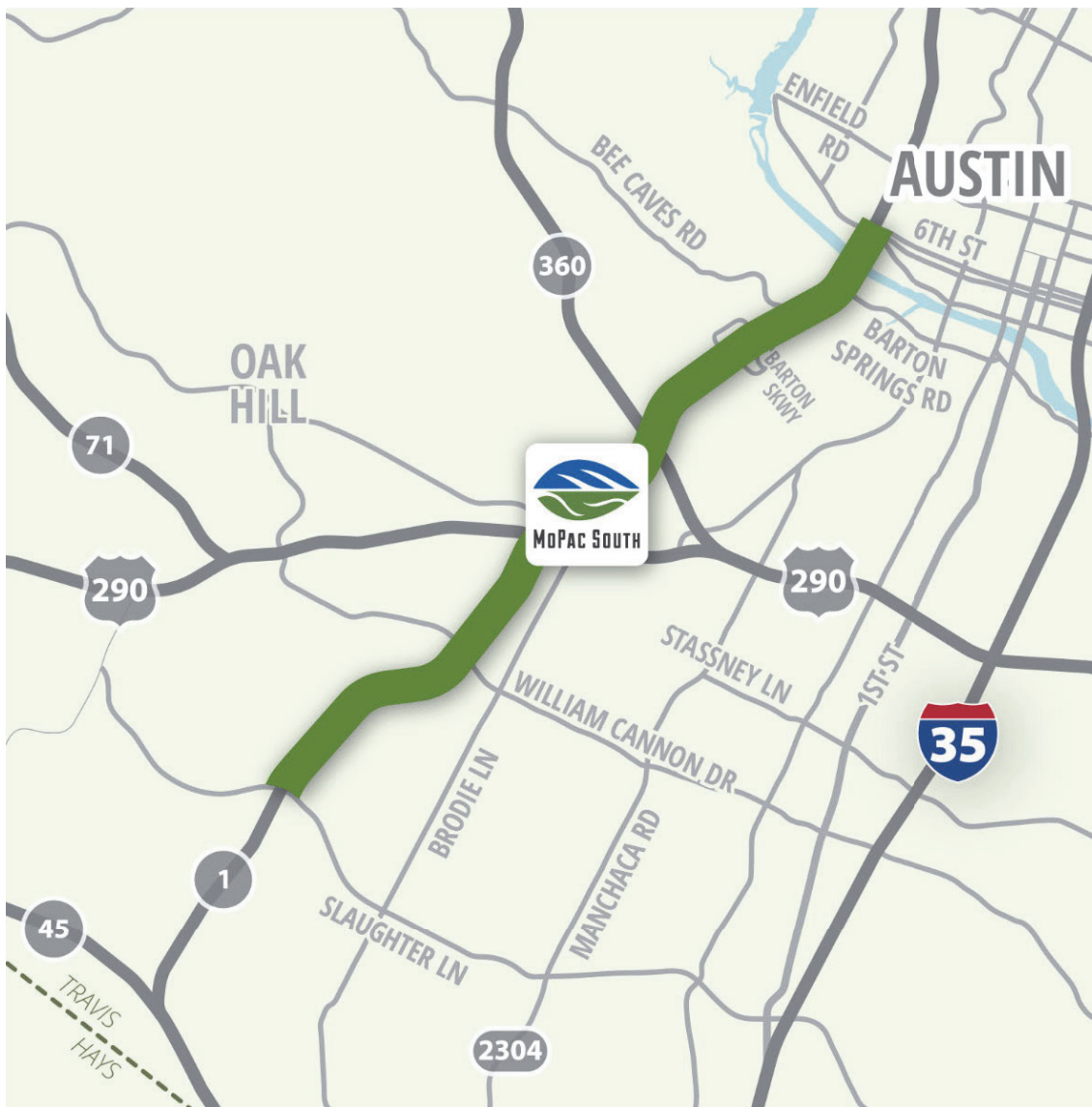
Our Virtual Open House is now available! Review project information online and submit your comment today.



MoPac South Environmental Study Virtual Open House

Nov. 22, 2021 - Jan. 7, 2022

[View the virtual open house](#)



The Open House is being held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

ABOUT THE VIRTUAL PUBLIC MEETING

The virtual public meeting will begin at 5 p.m. Mon., Nov. 22, 2021, and be available for viewing until 11:59 p.m. Friday, January 7, 2022.

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2. View and/or download project materials
3. Share your input:
 - Online: voh.MoPacSouth.com
 - Email: mopacsouth@ctrma.org
 - Mail: Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N.I-H-35, Suite 625, Austin, TX 78705

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Se Habla Español: Para más detalles e información acerca del proyecto en español por favor comuníquese con uno de los miembros del equipo al 512.878.2246 y le atenderemos con gusto.



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Lacy, Hillary

From: Central Texas Regional Mobility Authority <info@mobilityauthority.com>
Sent: Monday, November 22, 2021 5:14 PM
To: Lacy, Hillary
Subject: MoPac South Virtual Open House Now Available

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Expressway News



November 22, 2021

[Virtual Open House Now Available](#) | [About the Virtual Public Meeting](#)
[About MoPac South](#) | [Official Comment Period](#) | [Special Accommodations](#)

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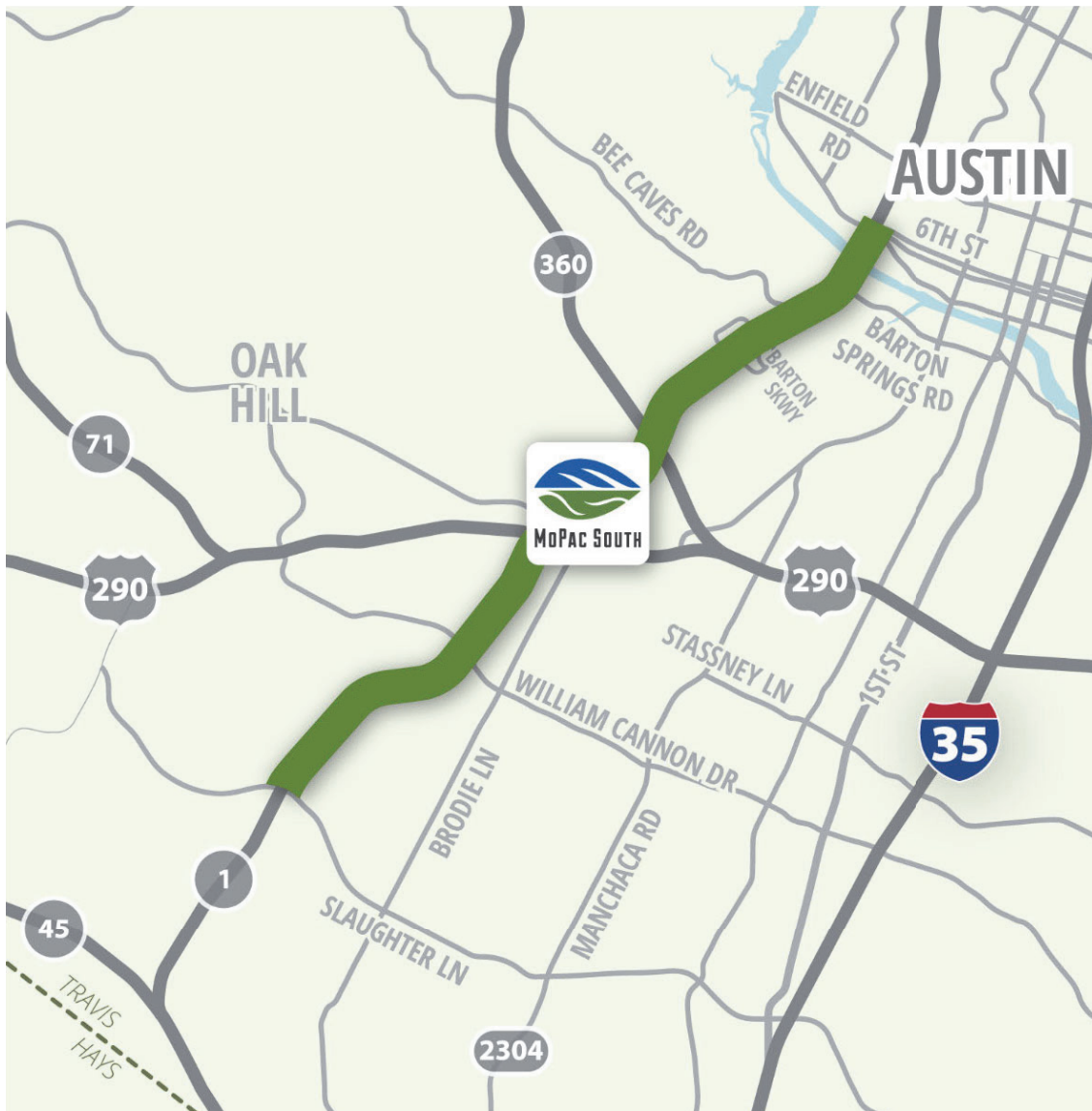


MoPac South

MoPac South Environmental Study Virtual Open House

Nov. 22, 2021 - Jan. 7, 2022

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Lacy, Hillary

From: Central Texas Regional Mobility Authority <info@mobilityauthority.com>
Sent: Monday, December 6, 2021 10:00 AM
To: Lacy, Hillary
Subject: Expressway News from the Mobility Authority

[View this email in your browser](#)



Expressway News



December 6, 2021

In this Issue:

[A Look Back at 2021](#) | [Life Cycle of a Mobility Authority Project](#)

WHAT A YEAR!

2021 was one for the books. The Mobility Authority started off on a high note with the opening of two regionally-significant projects, the [183 Toll Road](#) and the [290/130 Flyovers](#). We then successfully kicked off construction of the [183A Phase III Project](#) in Williamson County and soon after began pre-construction activities for the [183 North Mobility Project](#). And after several years on hold, efforts have resumed on the [MoPac South Environmental Study](#) with a Virtual Open House.

We gained new leadership this year, welcoming Heather Gaddes as a Williamson County representative to the Board of Directors and James Bass as Executive Director.

Thank you to our partners and community for your support as we continue our commitment to bring new and innovative mobility solutions to Central Texas.



Questions or Concerns about your Toll Bill?

Contact us at 833-762-8655 or visit our [website](#). We're here to help!

THE LIFE CYCLE OF A MOBILITY AUTHORITY PROJECT

Every project goes through a series of steps, wherein the tasks of initiating, planning, designing, executing, and monitoring take place. Mobility Authority projects are no different. Though it takes years of study and numerous stakeholders to deliver a project from conception to completion, there are identifiable phases which most of our projects are subject to.

Here is a (simplified*) guide of how Mobility Authority projects come to be.



Metropolitan Planning Organizations (MPOs) like the [Capital Area Metropolitan Planning Organization](#) (CAMPO), are responsible for developing both short- and long-range transportation plans for our region. These plans identify priority projects, forecasting for traffic growth 20-30 years into the future. They then determine funding plans based on available financing. If CAMPO has determined a project will be tolled, the Mobility Authority then has the opportunity to move the project to the next phase. Only when the Mobility Authority is asked by CAMPO to build a toll project do we take it on. In fact, no entity can build roads that are not a part of the regional MPO plan.



Once a project is identified for the Mobility Authority, our agency performs a study to gauge the proposed project's feasibility. This includes analyzing traffic data and projections, funding options and availability, and consideration of the effects of other potential projects in the area. In addition, the involvement of local officials and evaluation of different potential alternatives are critical to determining if the project is both financially and practically feasible.

The results are then presented to the Mobility Authority Board of Directors, who votes on whether to initiate an Environmental Study.



Before any dirt is turned, the Mobility Authority conducts robust environmental studies to evaluate the effects of the potential project on the human and natural environment.

For projects that receive federal funding or approval, our study effort is conducted in accordance with the National Environmental Policy Act (NEPA) of 1969. Although there are different levels of study, for proposed projects where environmental impact is uncertain, an Environmental Assessment (EA) is performed that includes an analysis of a full range of potential alternatives, including a “no build,” or do nothing, alternative.

The project and the process we follow is presented to the public at various stages through the environmental study including a formal public hearing. The Mobility Authority goes above and beyond the requirements of NEPA for public input, engaging the community in various meetings, workshops and open houses to engage the greatest number of participants possible.

The effort culminates in an EA document where a build alternative is recommended. The EA document is then submitted to the Texas Department of Transportation (TxDOT) which is responsible for reviewing and approving documents under NEPA as authorized by the Federal Highway Administration (FHWA). If the EA is approved, a “Finding of No Significant Impact” (FONSI) is issued and the project may proceed to the next phase.

The Mobility Authority and TxDOT have resumed efforts on the MoPac South Environmental Study. We invite you to engage in the process as we continue working to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner that promotes environmental stewardship and sustainability.

Visit the [MoPac South Open House](#) now through Friday, Jan. 7, 2022.

PHASE IV: FINAL DESIGN & PRE-CONSTRUCTION ACTIVITIES



After years of rigorous study and public input, the project is ready to proceed. The Mobility Authority must now undertake a number of processes to get everything prepared ahead of construction. This includes finalizing the project design, selecting a contractor, securing funding, executing legal agreements – all of which require a variety of public and private, local and national stakeholder involvement to achieve. During this effort, the Mobility Authority’s consultants and contractors may be given the green light to perform final design, surveying, right-of-way acquisitions, utility adjustments, etc.

Currently ranked the 69th most congested roadway in the state of Texas, the 183 North Mobility Project aims to improve mobility, reduce congestion and provide more reliable travel times for transit and emergency responders along US 183 between SH 45 North and MoPac. In early 2021, the Mobility Authority selected Great Hills Constructors as the design-build contractor for the project with construction set to begin early 2022.

Check out the newly updated [183 North Mobility Project website](#) for more information.

PHASE V: CONSTRUCTION



Construction begins! And we get it – construction can be tough. That’s why it’s inherent to our mission to remain good neighbors to the communities we serve throughout all phases of our projects, including construction. The Mobility Authority employs a multi-channel approach to keep the public informed of project progress and traffic impacts. Some of these methods include dedicated project websites, hotlines, social media, direct mailings, and more.

Interested in learning more about the 183A Phase III Project now under construction? Our [project website](#) has information, maps, and other resources readily available. For any other questions, [contact](#) our project team directly.



***Of course, one size doesn't fit all.** Not all projects will go through the same sequential process as roughly outlined above. And while finished construction marks the end of a project, continued operation and maintenance needs remain throughout the entire life of a roadway. Without regular maintenance, our roads would eventually need to be fully reconstructed, rather than repaired.

The Mobility Authority is available to answer your questions about both projects and open roadways. Contact us [online](#) or by phone at (512) 996-9778.

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Contact Us



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Lacy, Hillary

From: MoPac South Environmental Study <info@mobilityauthority.com>
Sent: Wednesday, December 8, 2021 10:00 AM
To: Lacy, Hillary
Subject: Your Input is Needed on MoPac South



December 8, 2021



In this newsletter:

[Virtual Open House Now Available](#) | [About the Virtual Public Meeting](#)
[About MoPac South](#) | [Official Comment Period](#) | [Special Accommodations](#)

YOUR INPUT IS NEEDED ON MOPAC SOUTH

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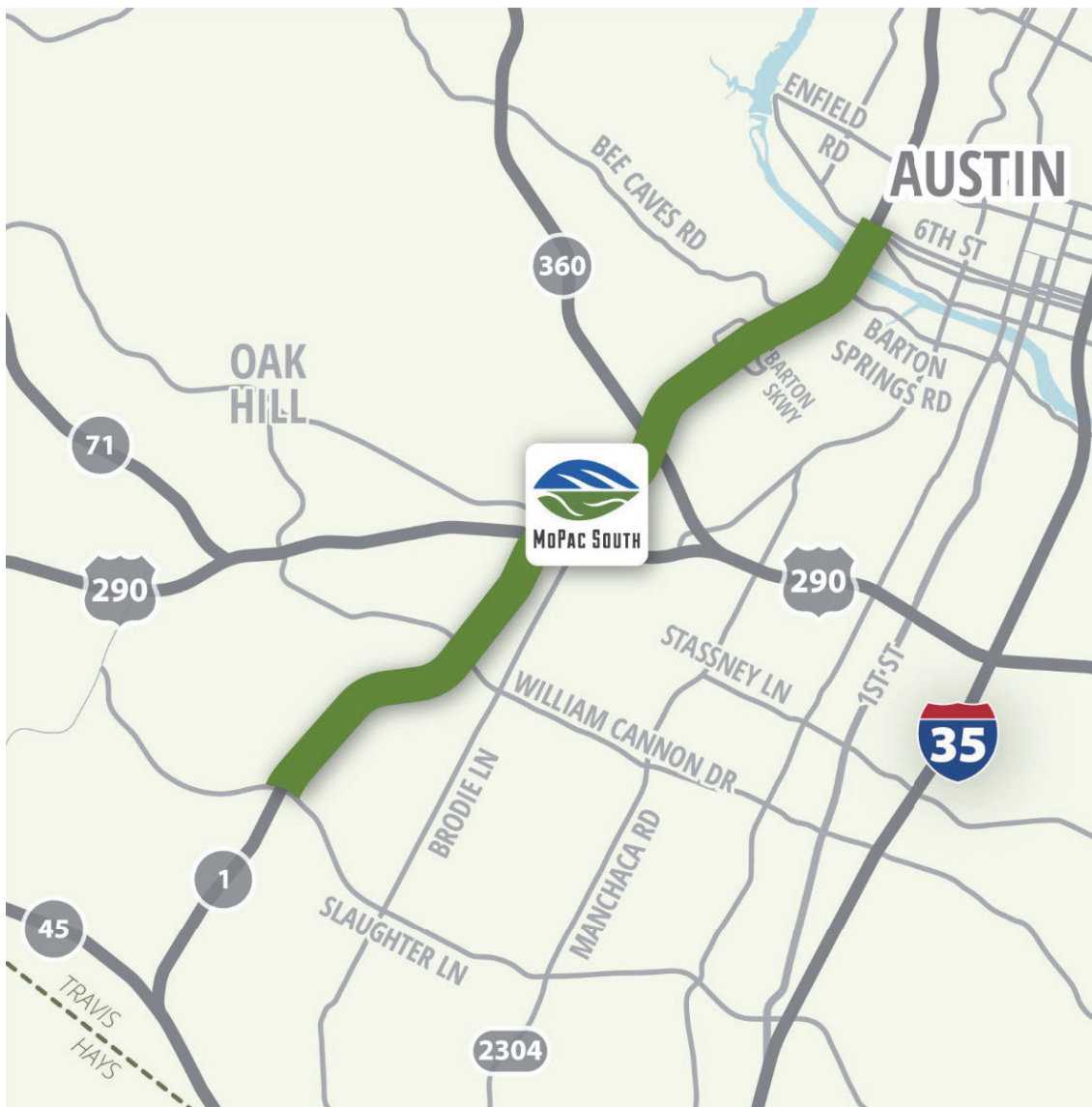
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Expressway News



December 8, 2021

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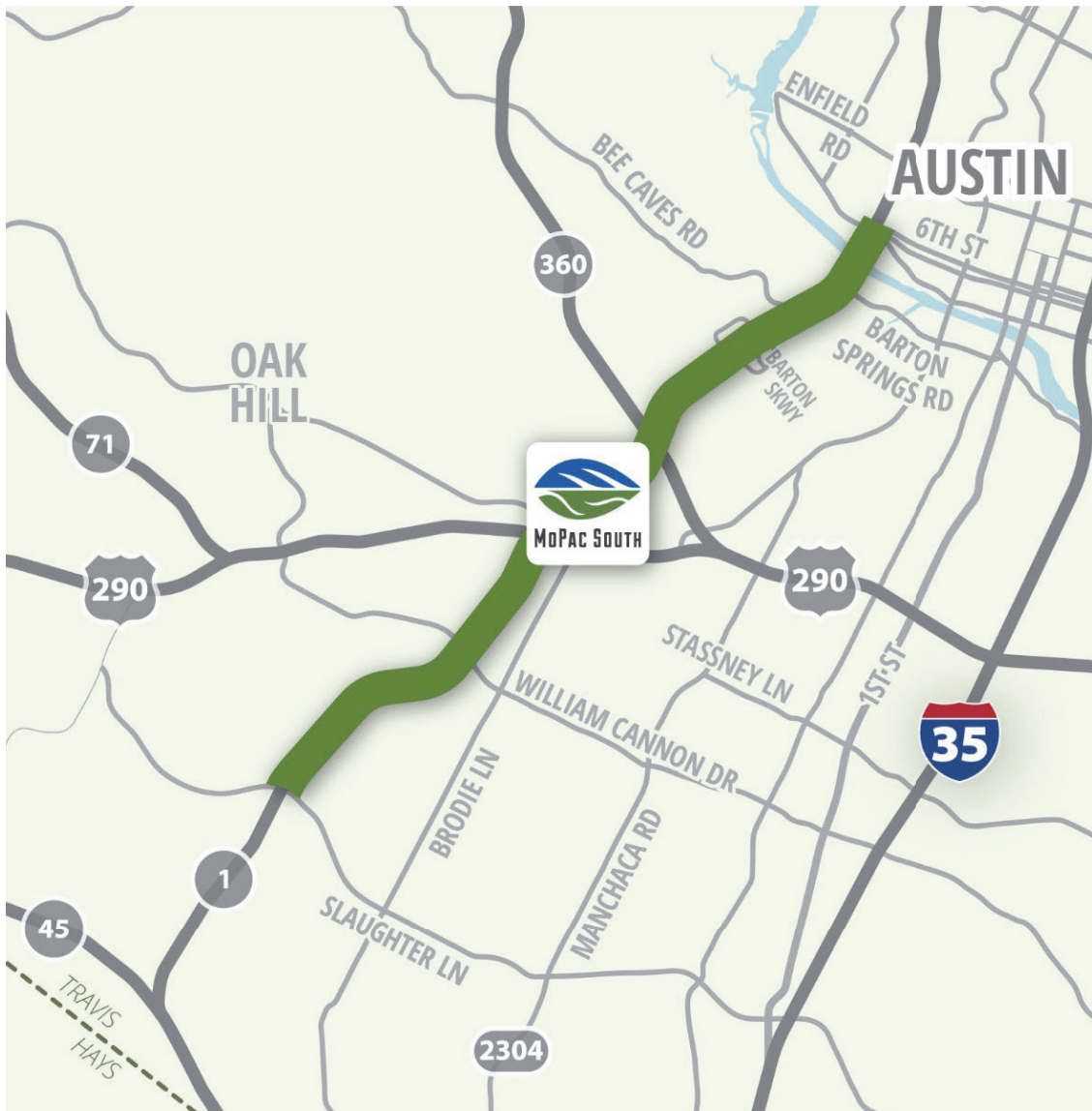
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From: MoPac South Environmental Study <info@mobilityauthority.com>
Sent: Friday, January 7, 2022 7:14 AM
To: Lacy, Hillary
Subject: Public Comment Period Closing 1/7



January 7, 2022

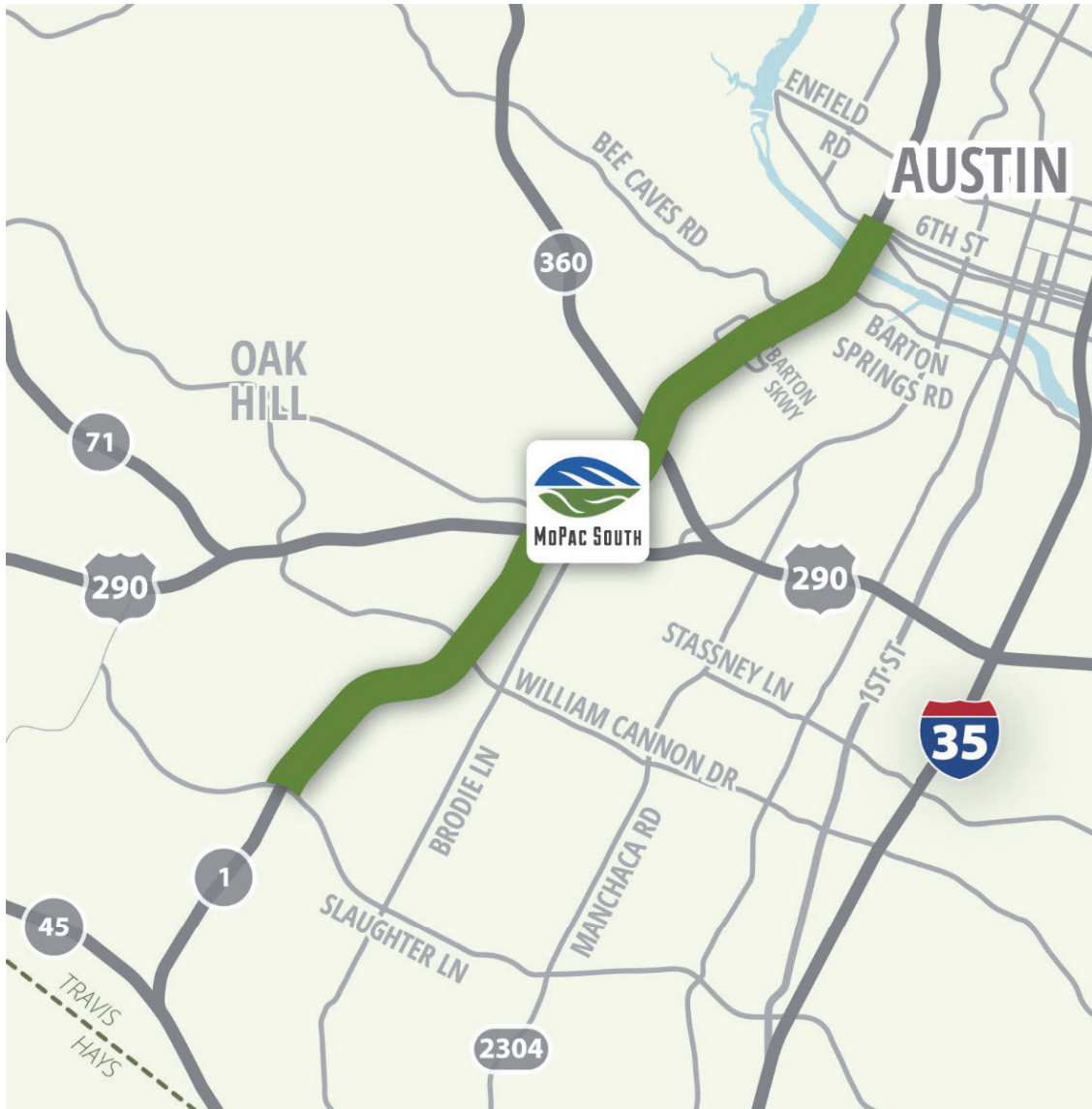


**PUBLIC COMMENT PERIOD
CLOSING JAN. 7 AT 11:59 P.M.**

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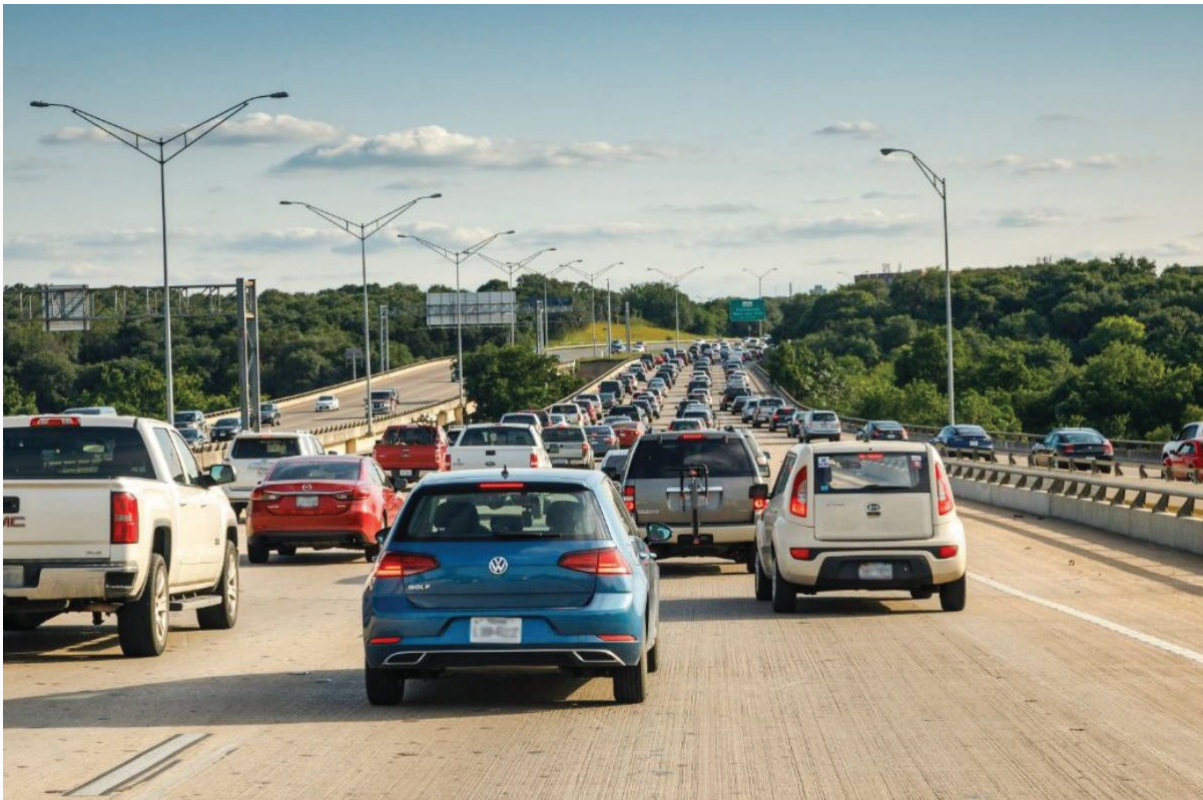
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Expressway News



January 7, 2022

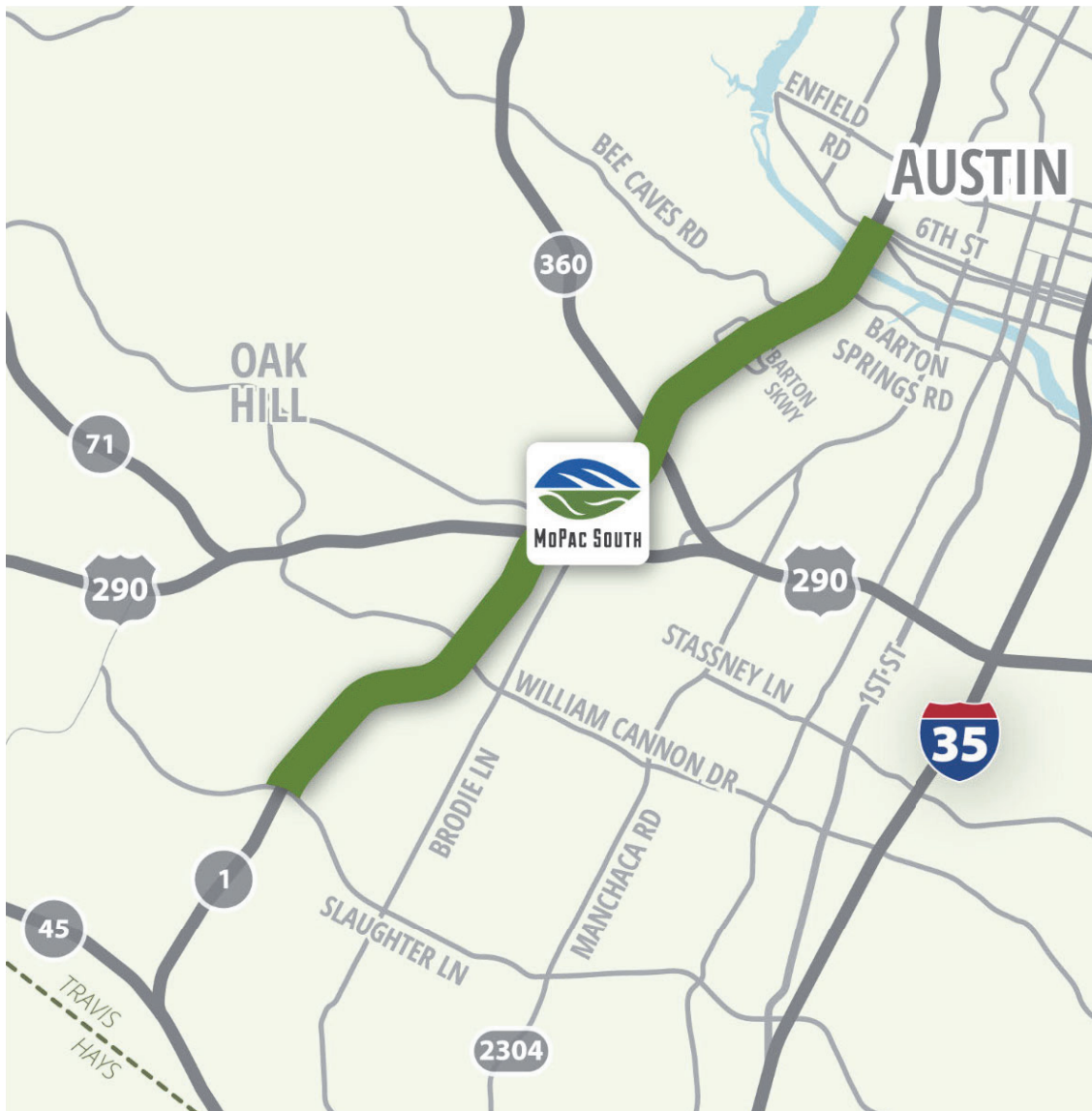
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MOBILITY AUTHORITY MEDIA ALERT AND PRESS RELEASES

Three alerts were emailed to the press advertising the Virtual Public Meeting. Prior to the start of the meeting, on November 10, 2021, a media alert was distributed. On the first day of the meeting, November 22, 2021, a press release was distributed. Then again, during the last week of the Virtual Public Meeting, a final press release was distributed on January 3, 2022. The initial Press Release was also posted on the Mobility Authority Press & Announcements webpage. Copies are included in the next pages.

MEDIA ALERT



For Immediate Release:

Nov. 10, 2021

Contact: Jori Liu

Central Texas Regional Mobility Authority

jhayter@ctrma.org

Office: 512-996-9778

Mobile: 512-751-6733

Mobility Authority to Resume MoPac South Environmental Study

What: The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT), will resume the MoPac South Environmental Study, beginning with a Virtual Open House to re-engage the public in the project.

The MoPac South Project Team will share information about the same six express lane(s) operational configuration options that were presented at the last Open House in 2015. All configuration options incorporate input received from the community, as well as extensive non-tolled mobility and safety improvements that will benefit all drivers along the corridor. A No Build, or “do nothing” Alternative is being carried forward as a baseline for comparison.

“Expanding population and development have made the south Mopac corridor one of the most congested in the state,” said James Bass, executive director for the Mobility Authority. “If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035. We are pleased to re-engage the public to collaboratively develop a mobility solution for this critical link in our region’s transportation network in a way that benefits residents and drivers alike.”

The Open House is being held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process. Virtual participants will be able to view and download meeting materials. Audio and visual components are also included, as well as the opportunity to submit formal comments before the Jan. 7, 2022 deadline.

When: The Virtual Open House will begin 5 p.m. Monday, Nov. 22, 2021, and remain available for viewing until 11:59 p.m. Friday, Jan. 7, 2022. The formal public comment period runs from Nov. 22, 2021 at 5 p.m. – Jan. 7, 2022 at 11:59 p.m. Comments must be postmarked or received during this period to be included in the official record for the open house.

Where: The Virtual Open House will be available at voh.MoPacSouth.com by 5 p.m. on Nov. 22, 2021. In advance of launch, the public may visit the project website at www.MoPacSouth.com.

Why: The MoPac Expressway south of Cesar Chavez Street provides a critical link to downtown Austin and other major highways such as US 290, Loop 360, and 45SW Toll. Consistently ranked as one of the most congested roadways in Texas (Texas A&M Transportation Institute, 2020), it attracts up to 179,000 cars and trucks per day. Expanding population, as well as residential, retail and commercial development has led to increased traffic congestion. If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035.

The Mobility Authority and TxDOT launched the environmental study in 2013 to identify a mobility solution to this stretch of congested highway that improves mobility for drivers, transit riders, bicyclists, and pedestrians in a manner that promotes environmental stewardship and sustainability.

For more information on the MoPac South Environmental Study, visit MoPacSouth.com.

#

About the Mobility Authority

The Central Texas Regional Mobility Authority is a local, independent government agency created in 2002 to improve the regional transportation system in Travis and Williamson counties. The Mobility Authority implements innovative and sustainable transportation options to enhance quality of life and economic vitality in Central Texas. The Mobility Authority operates 183A Toll, 290 Toll, the 71 Toll Lane, the MoPac Express Lane, the 45SW Toll Road, and the 183 Toll Road. The agency is also constructing the 183A Phase III Project in Williamson County, and the 183 North Mobility Project in north Austin. For more information about the Mobility Authority, visit www.MobilityAuthority.com.

About the Texas Department of Transportation

The Texas Department of Transportation is responsible for maintaining 80,000 miles of road and for supporting aviation, rail, and public transportation across the state. TxDOT and its 12,000 employees are committed to working with others to provide safe and reliable transportation solutions for Texas by maintaining a safe system, addressing congestion, connecting Texas communities, and being a Best in Class state agency. Find out more at www.TxDOT.gov.

NEWS RELEASE



For Immediate Release:

Nov. 22, 2021

Contact: Jori Liu

Central Texas Regional Mobility Authority

jhayter@ctrma.org

Office: 512-996-9778

Mobile: 512-751-6733

Mobility Authority Invites Public to Participate in MoPac South Virtual Open House

(Austin, Texas)—The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) will launch a Virtual Open House today to re-engage the public in the MoPac South Environmental Study. The Open House is being held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

The virtual open house will begin at 5 p.m. Monday, Nov. 22, 2021, and be available for viewing at voh.MoPacSouth.com until 11:59 p.m. Friday, Jan. 7, 2022. The formal public comment period runs from Nov. 22, 2021 at 5 p.m. – Jan. 7, 2022 at 11:59 p.m. Comments must be postmarked or received during this period to be included in the official record for the open house.

Virtual participants may view and download meeting materials. Audio and visual components are also included, as well as the opportunity to submit formal comments before the Jan. 7, 2022 deadline.

The Mobility Authority and TxDOT launched the environmental study in 2013 to identify a mobility solution for the congested MoPac corridor from Cesar Chavez Street southward to Slaughter Lane that improves mobility for drivers, transit riders, bicyclists, and pedestrians in a manner that promotes environmental stewardship and sustainability.

“Expanding population and development have made the south Mopac corridor one of the most congested in the state,” said James Bass, executive director for the Mobility Authority. “If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035. We are pleased to re-engage the public to collaboratively develop a mobility solution for this critical link in our region’s transportation network in a way that benefits residents and drivers alike.”

The Mobility Authority is resuming the environmental study after a temporary pause, and this Virtual Open House will help re-engage the public on where we left off after the November 2015 open house. The Virtual Open House provides information about the same six express lane(s) operational configuration options that were presented at the last open house in November 2015. All configuration options incorporate input received from the community, as well as extensive non-tolled mobility and safety improvements that will benefit all drivers along the corridor. A No Build, or “do nothing” Alternative is being carried forward as a baseline for comparison.

The public comments received at this Virtual Open House will be considered alongside technical analyses of each express lane(s) operational configuration option, to identify the Recommended Preferred Alternative at the next Open House in 2022.

For more information on the MoPac South Environmental Study, visit MoPacSouth.com.

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MEDIA ALERT

**For Immediate Release:**

Jan. 3, 2022

Contact: Jori Liu

Central Texas Regional Mobility Authority

jhayter@ctrma.org

Office: (512) 996-9778

Cell: (512) 751-6733

MoPac South Virtual Open House to Close Jan. 7

(Austin, Texas)—The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) are hosting a Virtual Open House to re-engage the public in the MoPac South Environmental Study. The Open House is being held virtually in accordance with the public health goal of limiting face-to-face contact and providing a safe opportunity for all members of the public to participate in the process.

The virtual open house will remain available for viewing at voh.MoPacSouth.com until 11:59 p.m. Friday, Jan. 7, 2022. The formal public comment period also ends Jan. 7, 2022 at 11:59 p.m. Comments must be postmarked or received during this period to be included in the official record for the open house.

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VIRTUAL OUTREACH

Between November 8, 2021 and January 7, 2022, information about the MoPac South Virtual Public Meeting was posted 10 times to @MoPacSouth Twitter, 10 times to @CTXMobility Twitter, and six times to the Mobility Authority Facebook, once to NextDoor, once to Reddit, and once to Instagram. This included a promoted (paid advertising) post on both Twitter and Facebook, gaining over 50,000 impressions between the two. The two promoted posts can be seen below.

Twitter



Facebook



DIGITAL MESSAGE SIGNS ALONG MOPAC

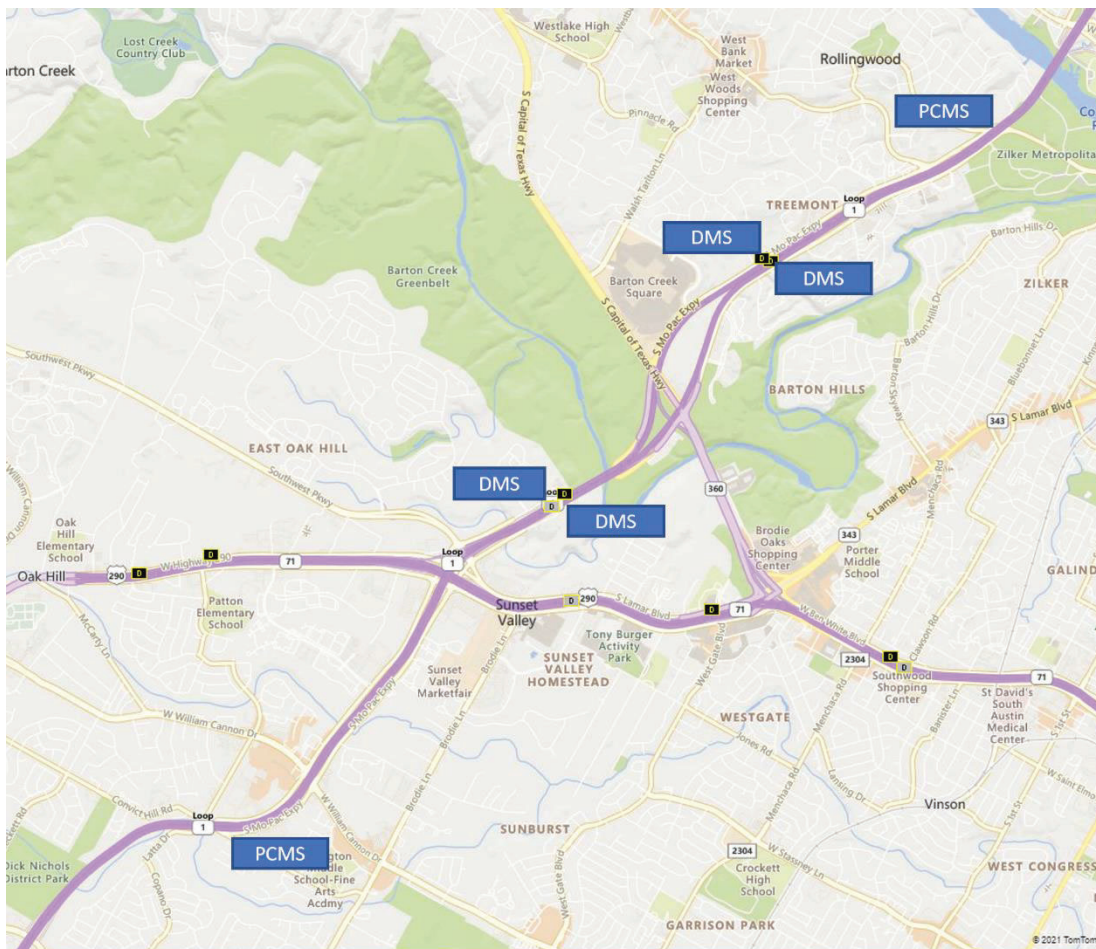
Between November 22, 2021 and January 7, 2022, both permanent TxDOT dynamic message signs (DMS) and portable changeable message signs (PCMS) advertised the virtual public meeting. Locations are listed below:

Existing TxDOT DMS Locations:

- Southbound MoPac before the S. Capital of Texas Highway exit
- Southbound MoPac north of Gaines Ranch Loop
- Northbound MoPac north of Barton Bluff Lane
- Northbound MoPac south of Gaines Ranch Loop

PCMS Locations:

- Southbound MoPac before the Rollingwood/RM 2244 exit
- Northbound MoPac north of the William Cannon Drive exit



D. Comments Received

540 individuals provided 565 comments within the comment period (November 22, 2021 through January 7, 2022).

Comments and attachments are included in the next pages. Personal information has been redacted.

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 3, 2021 11:21:29 AM

Name: Toni Gatlin



Comment: I drive MoPac South several times a week during peak hours. Of the express lane plans presented, I am most in favor of the ones with dedicated lanes accessing downtown rather than the designs that would require drivers to cross multiple lanes of traffic to exit. Crossing lanes at rush hour is nerve-wracking and, I suspect, is also dangerous and would lead to further congestion in already-dense areas.

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Current page: <https://voh.mopacsouth.com/submit-comment>

File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 7, 2021 7:03:25 AM

Name: Ester Harrison

[REDACTED]

the light rail to south Mopac all the way to Slaughter Ln.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, December 26, 2021 9:26:17 AM

Name: Paul Curtis



family supports option 2A because a direct connection to downtown is safest and has good travel times. We request you add a free lane from Slaughter to LaCrosse in both directions to reduce congestion of cars entering or exiting the toll lanes. Also, tell planners to prohibit any future stop light at South Bay Lane to prevent traffic from backing up going southbound.

Trans Code Option:

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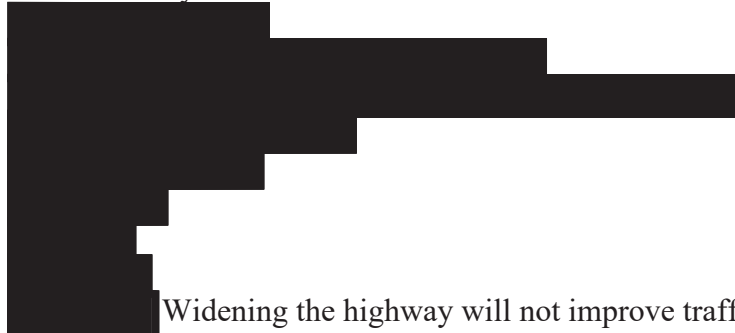
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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:59:10 PM

Name: Jeffrey Clemmons



Widening the highway will not improve traffic conditions, possibly increasing the chance for crashes due to overwhelming induced demand. The community will not significantly benefit from the use of public dollars in this way.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, December 18, 2021 2:35:15 PM

Name: James Kitchen



Comment: I really like the Express Lane options. It is clear a lot of thought has gone into them. I also firmly believe in the ability of dynamic tolled lanes to keep traffic flowing, which benefits drivers who value time over money as well as ensuring that buses and emergency vehicles can move quickly. While I understand the economic benefit of dynamic tolling, I want to understand who benefits monetarily from the surge pricing. I feel very strongly that the tolling authority should NOT benefit from the surge pricing. Instead, they should collect a flat toll (similar to other toll roads). Any excess collected due to the surge pricing should go to the city of Austin as a "tax" on those who value time over money. I would love to see that money go to CapMetro to fund public transit or to AISD to fund schools in a way that avoids the "Robin Hood" taxation which applies to money collected from property taxes. I did not see any mention of toll amounts and who benefits from the surge pricing in this presentation. I would like to have that addressed in future public discussions of the project. Thank you for this virtual open house. As a South Austin resident, I truly appreciate all the hard work that goes into this.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 11:15:52 PM

Name: Brian Eubanks



Comment: I'm dismayed that we are prioritizing cars, the least efficient mode of transportation. Building more highways is not sustainable. This work was done to North Mopac and it is just as congested as South Mopac. Roads and driving are carbon intensive activities. It's not good for the environment, and detrimental to an overall warming climate. Biking and trains are the most efficient modes of transportation. Bikes are near carbon zero, while even electric cars are carbon intensive to produce and run. I think the best environmental decision would be to stop focusing on car dependency and explore more efficient means of transportation.

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, November 27, 2021 10:25:30 AM

Name: Steven Fleming



Comment: I drive on Mopac South frequently from Davis Lane. I recognize this is a very congested stretch and have seen it get worse since 2013. I am resigned to the addition of a variable toll lane along this stretch. I am not a fan of additional direct connect ramps in the area of the Colorado River/Zilker Park. However, U-turn lanes at Barton Skyway seem like they will be useful. I am worried about how construction and expansion will affect water quality in the Edwards Aquifer and Barton Creek. I would like the Southbound exit to William Cannon be adjusted so that it does not have to cut across the southbound traffic entering from 290. I do not want access lanes built in the area from Convict Hill to Davis Lane to protect Dick Nichols Park and the Violet Crown Trail.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, January 8, 2022 12:03:59 AM

Name: Miriam Schoenfield



Comment: I strongly oppose the expansion of Mopac! TX-Dot needs to stop trying to expand highways and start supporting alternative modes of transport in urban areas. It's well known that highway expansions don't solve congestion problems, nor do they support the city's climate goals, or safety goals.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, January 1, 2022 8:47:49 PM

Name: Shane Pfender

Phone:



Comment: I would highly recommend AGAINST an expansion of Mopac lanes. It is proven that the addition of highway lanes leads to increased congestion (see: Induced Demand https://en.wikipedia.org/wiki/Induced_demand#Effect_in_transportation_systems). I support design that encourages pedestrian foot traffic, bike lanes, and transportation that encourages alternative forms of transportation (non-car drivers).

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 7, 2021 11:25:41 AM

Name: Dan Baker



Comment: I do not think the proposed alternatives 1B and 2B (without direct connection to downtown) will be very helpful, as this would require a lot of weaving to get from downtown into the express lanes. Traffic entering or leaving downtown would have to either skip using the express lanes entirely or cut across multiple lanes, causing additional congestion and defeating the purpose. I would recommend that one of the other alternatives be pursued. I have no strong preference as to which one, as long as there is an exit from the express lanes to downtown (northbound) or entrance from downtown (southbound) which does not require weaving.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, November 26, 2021 1:15:20 PM

Name: Rusty Shakleford



Comment: Any plans to add direct connect ramps across town lake are not feasible. Zilker Park is already compromised from the existing bridge. Any plans to widen or add structures to that location will impair the park. Also in the slides and information I saw no new study information. Are all of these plans relying on the outdated and insufficient environmental assessment? For this project to carry forward a real environmental impact study needs to be conducted today. Do not build without the Full EIS.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:51:02 PM

Name: Linda Smith



Comment: I thought Austin was working for trains. Concentrate on the trains! Another disastrous double decker highway is a very bad idea. There are a limited amount of resources. Get something done right!

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 3, 2021 3:49:58 AM

Name: Tara Barton



Comment: I object to the further expansion of Mopac. Traffic reduction would be better accomplished by making the resources already available more useful: connecting bike routes across major thoroughfares, extending bus and train hours, adding electric options to the MetroBike service, just for a few examples, will serve the cities growing public further into a future that purports it trying to be less wasteful and less reliant on fossil fuels.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 10:23:19 PM

Name: Benjamin Harkrider



Comment: I am concerned about the water quality and environmental impacts to the Edwards Aquifer, Barton Springs, Lady Bird Lake, surrounding areas. I am against additional and extension of toll lanes on MoPac.

Trans Code Option:

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Current page: [https://voh.mopacsouth.com/submit-comment?
eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 16, 2021 12:01:46 PM

Name: Kathleen Sneed



Comment: We would like to extend the 45 trail from MOPAC, all the way west to 1826. Currently, there is no shoulder from Slaughter to 1826, making accessibility to the 45 trail extremely unsafe. It would be extremely beneficial to extend the trail for the safety of bikes and runners alike.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 24, 2021 8:49:14 PM

Name: Adrian Helen



Comment: Please try closing the on-ramps southbound between Bee Cave Rd and 360 to prevent drivers from crossing 4 lanes to get to the left exit for 360 (they would use the empty frontage road and go through the light at 360 instead). Please no toll roads, express lanes, digging or additional elevation. Much better to find and address the bottlenecks with what we already have. Don't Dallas/Houston my Austin.

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Current page: <https://voh.mopacsouth.com/express-lane-alternative>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 31, 2021 4:29:22 PM

Name: Eli Floyd



Comment: While I believe that improvements must be made to the Mopac South corridor, I do not believe that any of the current set of alternatives are the best solutions. I believe that the CTRMA should redesign according to the comments received in this VOH. From the current slate of alternatives, the most acceptable is 2B (2 Express Lanes without Elevated Direct Connection). I am strongly opposed to any higher bridge over Lady Bird Lake, as well as any right of way expansion near Zilker Park/ Nature Center. I am also opposed to any elevated ramps travelling over Mopac near Barton Skyway; however, I would support them if it was deemed feasible to move them underground similar to the North Mopac express lane connections to Downtown. I also oppose any elevated direct connectors for William Cannon Drive and am disappointed to see that they are included in every alternative. I do not see a reason as to why they are necessary, and they could have the potential to create significant noise and view corridor detractions from the surrounding communities. I believe that the best Mopac South corridor would include no more than 6 lanes in each direction, (3 general use, 1 auxiliary, 2 express), an express lane direct connection with westbound 290, no additional elevated ramps, and proper landscaping throughout the whole route. Other solutions should be put into place such as closing the gap on SH-45 and improving transit connections to SW Austin. Any roadway expansion also needs to be coupled with transit expansion due to induced demand.

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- 2

Current page: <https://voh.mopacsouth.com/>

File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, November 26, 2021 11:57:15 AM

Name: Adam Hegemier



Comment: Express lanes solve nothing, the best way is to encourage mass transit, and increase mass transit, and decrease reliance on cars.

Trans Code Option:

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File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 2, 2021 7:43:11 AM

Name: Michael Pinkston



Comment: A managed Express lane is not in the public's interest. These are for people with money to burn. Please do not include tolls. HOV lanes are a good option.

Trans Code Option:

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File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 7, 2021 12:43:26 PM

Name: Don Gibson



Comment: Build something! MOPAC development is 20 years behind where it should be. Whatever you are considering, double it! Get ahead.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/alternatives>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:48:22 PM

Name: Heidi E. Gibbons



Comment: I am opposed to this proposal, particularly the plan to double deck the bridge over Lady Bird Lake, and expand the bridge to add elevated connectors - I am not in favor of this. Please reconsider.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 10:20:46 PM

Name: Nicole Cavender



Comment: I am against the addition of toll lanes on Mopac

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 24, 2021 11:36:48 AM

Name: Manuel Esparza III



Comment: As part of this corridor there is one more problem that needs to be fixed. On Northbound Mopac, the William Cannon exit lane is being routinely used by many drivers as a shortcut to access the expanded lane North of the exit. Drivers cut across a solid line and compete with drivers on Northbound Mopac that are following the striping and attempting to change lanes to the right to access upcoming exits. This has created dangerous conditions, near misses and road rage. Please review that exit lane for solution such as just making it a continuous lane or putting up plastic pole barriers near the end before exit.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 15, 2021 2:51:30 PM

Name: Will C. Hoermann



Comment: Option 1A makes the most sense, appears to be the most efficient, and would be the easiest to implement. As a resident of South Austin, the only concern I see is the need to extend the southbound express exit and the northbound express entrance to the existing exits/entrances beyond Davis Lane (Slaughter to the south and William Cannon to the north), as Davis Lane simply can't handle the volume of traffic you are projecting. Davis can't handle the current amount of traffic with the recent construction at the intersection of Brodie and the unnecessary traffic light at Latta Drive.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 29, 2021 9:23:58 PM

Name: Mary



Comment: Has anyone looked at the available space to make MoPac 6 lanes? Just modify the painted lanes and you will produce 6 full lanes like you did north of the city MoPac Really folks this an easy fix and would shave off at least 30 minutes of drive time from Circle C Ranch to downtown Austin. Have you ever heard of cedar fever? Did you really plant cedar trees along MoPac south? Have you also planted other harmful to humans types of plants alongside MoPac South such as poison ivy? This by far is The most dysfunctional and mismanaged game plan in the USA.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 24, 2021 11:31:35 AM

Name: Manuel Esparza III



Comment: We should pick the best option that addresses the problem of mobility and I support 2C. It may not be as clean as the other options but it is more functional and effective.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:43:07 PM

Name: Patti Edelman



Comment: I do not agree with the plan to double deck the bridge over Lady Bird Lake at Loop 1 South. I do not want MoPac to become the west Austin version of I-35. As someone who has lived in Austin for most of the last 50 years and remember the day when the bridge was opened, I realize there has been growth in the area, but the environmental impact is too great to expand MoPac as planned.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 7, 2021 6:19:23 PM

Name: Steven D Adrian



Comment: I believe we need to have something done to help the traffic. I like the express lane option. My concern would be the property that is adjacent to MOPAC such as the condos I live in located at [REDACTED] It would be nice if there could be a sound wall constructed along the express way from Bee Cave Rd to Barton Skyway. This would protect property values of the condos and apartments that are next to MOPAC and deaden the sound of traffic. Please keep me informed of any ideas and the steps we need to take along the process. Thank you for giving me the opportunity to give you my feedback.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 15, 2021 10:38:50 AM

Name: Jennifer Barnoud



Comment: I do not support the construction of any of this. We need more public transit, not demolition of our natural spaces and threaten our water systems. We are already going to get sucked dry with this heat and massive population increase. Come on guys.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, November 25, 2021 8:52:51 AM

Name: Aidan Aannestad



Comment: Please read and understand this article and the science behind it before considering adding lanes to highways. <https://arstechnica.com/cars/2021/08/please-stop-adding-more-lanes-to-busy-highways-it-doesnt-help/>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 10:14:31 PM

Name: Laura Schulz



Comment: I stand against the proposed new toll road addition over lady bird lake. This will cause an excessive amount of traffic to Mopac and will in turn have negative effects on our beautiful natural environment. Said environment brings the local citizens so much joy and also brings the city of Austin economic profits from visitors. Please keep these things in mind when making your decision.

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 1, 2021 4:53:54 PM

Name: Justin Willette



Comment: So the estimated travel times in your exhibits say that adding an express lane is the fastest, but it seems that is only the fastest solution for those that pay to use the express lane. What are the estimated travel times on Mopac for the express lane option for those that do not want to pay extra to travel in the express lane? What is the best option for someone who must be careful about their budget and can not afford to increase their cost of travel to and from work by taking a toll lane?

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 29, 2021 11:16:20 AM

Name: Ester Harrison



Comment: Instead of adding express lanes to accommodate more cars (and more noise, more pollution, and negatively impacting the nature areas and wildlife corridors as well as residential areas), why not add a light rail system all the way from downtown Austin to Slaughter Lane, with Park&Ride lots? Why not stop the increase of car traffic and adjust to moving the increased population to downtown with light rail system (and connectors) that is faster, more efficient, and less stressful to all.

Trans Code Option:

- I am employed by TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 8:57:31 PM

Name: Nancy Lynch



Comment: 1. Please extend the time for making comments. Scheduling the comment period through the holidays is an obvious ploy to restrict the number of comments received. 2. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. 3. Evaluate an alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, 4. Update traffic modeling with current data and a functional traffic model, recognizing that the future will hold much more tele-commuting, flexible work schedules and other changes that may have a significant impact on commuting patterns. 5. After Updating the traffic modeling give the public another opportunity to give input before selecting a “preferred alternative.” 6. Acknowledge the experience that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Evaluate public transportation options.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 28, 2021 8:36:31 PM

Name: Renae Donus



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:41:24 PM

Name: Mark Davis



Comment: Please see correspondence attached pdf.

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Current page: <https://voh.mopacsouth.com/>

File Upload: [MoPac_20220107.pdf](#)

J. Mark Davis

January 7, 2022

Mr. James Bass
Executive Director
Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N IH-35, Suite 625
Austin, Texas 78705

Via <https://voh.mopacsouth.com/>

Re: Public Comment on the MoPac South Environmental Study Virtual Public Meeting
Number Five

Dear Mr. Bass:

I have reviewed the Central Texas Regional Mobility Authority (CTRMA) Welcome Packet and Exhibits at its website, voh.mopacsouth.com, and the documents and correspondence of the City of Rollingwood, Texas at its website, <https://bit.ly/CORW106>. In general, I support the City of Rollingwood, Texas, in its questions, issues and requests set forth in its Official Public Comment dated January 7, 2022 (Rollingwood Comment). That said, I have the following comments that I wish the CTRMA to take into consideration:

1. The schematic for the MoPac South Corridor (page 19 of the CTRMA exhibits) appears to assume that the decision for the alternatives for construction from Barton Skyway to downtown Austin will be Plan Alternative 2C or the City of Austin plan. This schematic raises the issues addressed in the Rollingwood Comment in the paragraphs under the heading "Compliance with CAMPO 2045 Plan" in the unanswered questions as well as the question of whether the decision has effectively been made.
2. There is no schematic or design plan for construction of the RM2244/Bee Cave Road intersection with MoPac. See Rollingwood Comment, supra., and its comment under the heading "Efficient Functioning of the Bee Cave (RM2244) Intersection." I would oppose any plan that requires EB RM2244 traffic to proceed south on MoPac before u-turning at Barton Skyway to proceed NB on MoPac. And, likewise, I oppose any plan that requires NB MoPac traffic to U-turn at Rollingwood Drive to proceed westbound on RM2244 (in the event that is an option under consideration).
3. I reside less than ½ mile from MoPac. The traffic noise is nearly continuous, day and night. In the evening and late night, with a reduction in the noise-generating events of the day, the traffic noise is generally intermittent but audible from my back porch. Accordingly, I am very much opposed to any plan to create elevated traffic lanes over or near MoPac and or Barton Skyway.

Ltr. to CTRMA
Re: MoPac Virtual Meeting Number Five
January 7, 2022
Page 2

In summary, having reviewed the CTRMA exhibits, particularly its exhibits at pages 19, 20, 22, 24, 26, 28 and 30, and the Rollingwood Comment, I echo and support the comments, questions, issues and requests in the Rollingwood Comment. Were I required to choose one plan at this time, Plan Alternative 2B appears the most reasonable resolution of the project, subject to the RM2244/MoPac intersection issues.

Cordially,

/s/ jmd
J. Mark Davis

JMD:

cc: City of Rollingwood, Texas

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, November 24, 2021 11:33:19 PM

Name: Alan J Rivaldo



Comment: Including direct connectors that provide access into and out of downtown are preferable to having to merge across three general purpose lanes. Merging across lanes causes huge slowdowns and runs the risk of minor fender benders, even when at slow speeds. At higher speeds, it's hazardous. Either way, safety is a concern, and any accidents that occur will result in tangled traffic and slowdowns for everyone, i.e., inconsistent travel times and congestion, both of which would defeat the whole objective of this project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 7:07:16 PM

Name: John Muller



Comment: The expanded paved bike/ped path from Slaughter Lane to downtown would help.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 24, 2021 9:11:41 AM

Name: Melinda thompson



Comment: I am in support of expanding the 45 paved trail from Escarpment to Meridian.

Trans Code Option:

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Current page: [https://voh.mopacsouth.com/submit-comment?](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR3jgOn2oug9Lv7nXHAw7i8MEoqMJW4ZApulyjDuhKyqg2QWjISDIMg-KWM)

[fbclid=IwAR3jgOn2oug9Lv7nXHAw7i8MEoqMJW4ZApulyjDuhKyqg2QWjISDIMg-KWM](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR3jgOn2oug9Lv7nXHAw7i8MEoqMJW4ZApulyjDuhKyqg2QWjISDIMg-KWM)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 1, 2021 1:36:53 PM

Name: Tricia Boudreaux



Comment: I don't mind the toll component but the skyrocket prices at rush hour deter me and thousands of others from utilizing the Toll (Express Lanes) I have seen the prices on the current tolls up to \$10 to go only a few miles which is completely UN-affordable for many residents to due the skyrocketing home and rental prices and in many instances it is only saving about 5- 10 minutes. Please consider a cap of no more than \$4 during rush hour this would make it more affordable and incentive more to take the express lane and yet a high enough price to cover costs.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 23, 2021 9:58:47 PM

Name: Chris Locke



Comment: I support the new toll lanes as I work in downtown but more importantly, the expansion of the bike trail on 45 from 1826 to Avana!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 4:00:01 PM

Name: Rick Perkins



Comment: I support Options 2A, 2C, and 3. The new roadway must have a connection to downtown Austin. We need to plan for the future and not just catch up to the current problem. With 2 lanes of Express lane in each direction, I think we can accommodate the traffic that will occur. And, it might be necessary for one of the 2 lanes to be used for driverless vehicles.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 27, 2021 10:40:13 PM

Name: Jean W



Comment: I live SW, between Austin and Dripping Springs, and commute to north Austin for work (Pickle Research Center). Option 2A seems the most tasteful of the options presented. In addition to the south-to-north u-turn at Barton Skyway, I think a north-to-south u-turn at Barton Skyway would be a big help, particularly for easing traffic at 360 to get to Barton Creek Mall. Anything else you can do to ease congestion southbound on Mopac where the current express lanes end, and the general lanes get all bunched up and dumped into the same lanes, would be welcome. I think my idea here is more of adding two general purpose lanes and one toll lane, rather than two toll and one general purpose, but I'll take whatever I can get. Last thought: the CAMPO 2035 and 2045 predictions seem really low. Given how much growth we've seen recently since 2015, and the move of big companies like Tesla to the area, we need updated growth projections that are more realistically exponential looking, not so linear looking. I think we're grossly underestimating how much traffic we're really going to have. Thank you for the opportunity to provide comment!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 1, 2021 10:03:48 AM

Name: Tom Martin



Comment: I like the existing express lanes, but the city cannot continue to add toll roads without reigning in the predatory practices of CTRMA. They intentionally hide bills and make it difficult to pay so that they can make extra money on late fees.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, November 24, 2021 11:16:10 PM

Name: Alan J Rivaldo



Comment: The proposals for a single express lane in each direction simply don't do enough to reduce the anticipated future travel times in either the tolled or non-tolled lanes. Please remove them from future consideration. If anything, building only a single lane will merely lead to the eventual need for an expansion project, which will only face increased costs and may also run into delays from unforeseen obstacles. This project needs to proceed as soon as possible, given that's it's already been delayed for years because of pointless and fruitless lawsuits.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 6:59:48 PM

Name: Anna Gingrich



Comment: How is it that there isn't a better idea that doesn't endanger the wild flora & fauna of the beautiful ATX? FIND A BETTER WAY. WE DO NOT WANT THIS.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:36:25 PM

Name: Ann R. DeSanctis



Comment: This is absurd. How can y'all seriously still be proposing highway expansion when everyone knows that that will never solve "traffic"!? Hello induced demand! I know TXDOT really only knows how to do the one thing (expand highways) but y'all all just need to straight up retire and let folks who understand what Texans need: alternatives to driving!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 3:43:38 PM

Name: Joseph Kelble



Comment: Please continue the bike path all the way to the entrance of Meridian off 45. It would be so nice for my family to be able to access that without driving down the road. Hwy 45 is too unsafe to walk along side of so the path would be so helpful.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 23, 2021 1:23:59 PM

Name: Emma Schmidt



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. Furthermore, I strongly believe that environmental protection is necessary, especially with the state of our world. Please keep the environment and your destruction of it in mind when planning future projects.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:26:52 PM

Name: Cynthia Lee



Comment: Thank you for the opportunity to comment on the proposed changes to Mopac South. In picking up on where the planning left off in 2015, it appears that a number of considerations that were raised at that time and still remain valid have not yet been incorporated. I look forward to having the opportunity to review updated/enhanced configurations during the Open House #6, in anticipation that those enhancements would include adjustments for the following: Amongst my concerns are proposed configurations that include elevated lanes and ramps. Even as Mopac is currently configured, my property at the border of Rollingwood is subject to constant and sometimes intrusive levels of road noise. Elevated lanes would exacerbate both the noise levels as well as contribute to light pollution – both of which could not reasonably be mitigated by construction of sound barriers. Configurations that take this into account for both the surrounding residential communities as well as Zilker Park should be favored. Additionally, I would request additional analysis and consideration be given to ensuring the safety and efficiency of the intersections around Bee Cave Rd and Mopac, inclusive of the frontage road and Rollingwood Drive. Existing plans do not appear to account sufficiently for the impact that the proposed configurations would have on the daily traffic patterns of residents in this area – as well as those that pass through to enter or exit Mopac using these intersections. Thanks, once again, for the opportunity to engage and comment through the Open House forums. I remain hopeful that the next set of proposed configurations for Mopac South are adjusted to take into account the community feedback I and many others have provided.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 10:27:32 AM

Name: Jeremy Marzani



Comment: My vote would be on the fastest plan which is 2A. Having been in Austin for 21 years, Mopac has become a total mess. I'm contemplating moving in the future just to avoid dealing with Mopac south. As a shorter term approach, it seems that there is enough room on some parts of Mopac south of 290 that can easily go to 3 lanes. The bridges are even built to accommodate 3 lanes. Pushing the 3 lane to 2 lane merge further south will help the worst bottleneck south of 290 which is the merge of 290/mopac south ramp traffic with the southbound william cannon exiting traffic.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 1, 2021 8:31:38 AM

Name: Michael Whitney



Comment: Much has changed since since 2015. With the Covid pandemic, people left the office and worked from home. MoPac was nearly empty most days for the better part of a year. As people returned to work at offices downtown, the volume of traffic has increased but is likely less than it was pre-pandemic. Projections for future growth should be based on current data, not pre-Covid. (Any road-use data informing the plan that predates 2020 should be scrapped and re-collected.) But for argument, the claim "If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035" is not compelling to me. I do not think we have to undertake an expansion project—at considerable cost and with significant disruption—to save hypothetical commute time. We need to find better ways for people to move throughout the region. Fewer thru lanes and merging traffic from Cesar Chavez/5th north of the bridge across Town Lake/Colorado help create a bottleneck that exaggerates the view that MoPac South is overly congested. Any proposal should first address improving flow through that point. I am against further expansion of highways for expansion's sake. It doesn't alleviate congested—anywhere, ever. We should exhaust (i.e., fully explore and implement) all viable opportunities for multimodal transportation alternatives in the corridor first.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 27, 2021 11:43:57 AM

Name: Alice Lin

Comment: I fully support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. Thank you.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, November 24, 2021 11:21:50 AM

Name: Lily Wilkerson



Comment: I think that any proposal moved forward must include direct connector ramps to Downtown. This is essentially the one shot we have as a city to rebuild and reconfigure the MoPac bridges over the river. Direct connectors will be significantly more challenging and expensive to add later, if the need is ever recognized. I strongly support moving forward with options 1A, 2A, and 3, and considering 2C. Option 3 seems more effective with its spacing of express lane capacity - having two lanes NB and SB in the busier stretch between Ben White and Downtown, but dropping down to one where it is less necessary south of 290. However, Option 3's Downtown Access to the SB Express Lane is lacking - the already snarled traffic crossing MoPac on Lake Austin Boulevard would be made far worse with another onramp in the mix. My "ideal world" scenario would be one express lane each direction from US 290 to Slaughter Lane and two express lanes from US 290 to Cesar Chavez Street, with the direct connectors of Options 2A, 2C, or 3.

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- 2

Current page: <https://voh.mopacsouth.com/express-lane-alternative>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 6:30:24 PM

Name: Kelly Bach



Comment: Please do not build this toll road. As a citizen here in Austin, I love having Mopac as a local highway that doesn't get back up like I-35. Also, adding another toll road will endanger the beautiful flora and fauna and the water ways here in Austin. Do not build the road!!

Trans Code Option:

- I do business with TxDOT

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:24:18 PM

Name: Sean Haney



Comment: No additional lanes should be built in Mopac. Additional lanes will only further complicate traffic by encouraging more lane changes, merging, and weaving which are proven to cause slowdowns. Any improvements should replace at-grade intersections with overpasses, but that's it. If congestion gets worse, then funds should instead be used to invest in mass transit, not more lanes of pavement.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 22, 2021 5:44:52 PM

Name: Sawyer Boyd



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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[fbclid=IwAR23iLZdWcywEJ4wuuFMNXXZ5mS3CDDE_pCuJAnD5hMQ5So7bhQ_DdXhQAE](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR23iLZdWcywEJ4wuuFMNXXZ5mS3CDDE_pCuJAnD5hMQ5So7bhQ_DdXhQAE)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 1, 2021 12:31:47 AM

Name: Wolfgang Burst



Comment: I travel along south Mopac to Sunset valley and downtown on a daily basis and understand the need for improvement. But the problem really only stems from 2 distinct places, those are the Capital of Texas highway exit and the William cannon exit. At least when traveling south bound. The traffic is only ever backed up because of people slowing down to exit the highway and its only backed up because they have to sit at lights. Even on a busy 5 o'clock afternoon those two areas are always where the bottle neck is. The second thing is the idea of neighborhoods feel. We are Austin and with every year that goes by we seem to loose more and more of the "weird" vibe people once wanted. The area around sunset valley and sendera/bowie high-school has the potential to become more beautiful if we only continue to increase biking and walking capability. Even along the highway areas there should be easier access to bike lanes. Why aren't we investing in building bike infrastructure on all of our roads, and why do we just leave all of our highway underpasses the boring white sand color. How hard would it be to hire local artists to paint under all major highway underpasses in South austin to help bring back some culture to the city.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 10:28:42 AM

Name: John Baker



Comment: I am very strongly against the idea of toll lanes. It unfairly penalizes the poor. Yes, the rich can afford to pay the \$7 tolls, but the poor can not. This is not the American way!

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, November 24, 2021 10:45:25 AM

Name: Terry Herres



Comment: After reviewing the proposal (again) and having lived in austin long enough to remember a time before direct feeder bridges between mopac and 290, i strongly support option 3 as it seems to have the best compromise on build time/cost/and impact while still achieving the goal of reducing traffic congestion. It would be wise to put some sort of stiffer lane barriers in place to prevent toll violators from popping over and artificially slowing the lane. Here's hoping to early approval!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 3:12:24 PM

Name: Daniel Schmidt



Comment: I fully support the environmental study that has been refreshed. Just as importantly, I would like to highly recommend and support a bicycle/pedestrian path that extends beyond Slaughter Ln and parallels Mopac. Furthermore, I would like to recommend and support an extension of the bike/ped path that runs along Hwy 45, but currently ends at Escarpment Blvd. I would like to see that extend beyond Escarpment and connect to the Meridian development (at Meridian Park Blvd). This 1 mile stretch of path would allow safe access to many families (800 homes) to the 5 miles of path already there. Thank you for your consideration.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 5:42:04 PM

Name: Josh Yates



Comment: I support any of these, but would prefer any option that extends improvements as far south as slaughter. This area is growing whether we like it or not and mobility is a major concern for my family and frankly will play a large role in dictating whether we continue living in this area. please bring these needed improvements to the capital area region.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, November 24, 2021 7:47:40 AM

Name: Mark Ritter



Comment: I do not support any express (toll) lanes for this project. It is quite apparent from driving MOPAC north of the river that toll lanes are not "equitable" and offer small benefit for only the privileged who can afford it. The remainder of the lanes (the "free lanes") are always crowded. Adding a lane (or lanes) for the general public to travel on is the best option. Any studies you have obtained related to this are pure BS. Drive it and see for yourself. By adding a lane or two for the general public to travel on you increase capacity for the masses by 30 - 40 %. I do not see many folks exiting MOPAC to go downtown except in the evening. I see very few if any Cap Metro buses doing this. You should focus on ferreting the east-west traffic to 290 help reduce downtown congestion. Thank you for the opportunity to comment. I just hope you take time to read ALL comments and take them seriously.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 3:09:43 PM

Name: Dave Mcelwain



Comment: Expansion of the walk/bike pathway from Escarpment to 1826 along 45 would allow paths to the public golf course and access to the bike trails and lanes to downtown and eastward. It is currently not a safe way to walk or bike with increased heavy traffic eastbound on 45.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 22, 2021 12:11:28 PM

Name: Rend Altai



Comment: I support the bike/pedestrian path that will start at Slaughter Lane and follow south Mopac to central Austin. However, I would also like to ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 10:28:47 AM

Name: John Baker



Comment: I am very strongly against the idea of toll lanes. It unfairly penalizes the poor. Yes, the rich can afford to pay the \$7 tolls, but the poor can not. This is not the American way!

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 4:18:47 PM

Name: David Huter



Comment: These improvements are needed to keep up with population and congestion in our region. Please build this project as quickly as possible. Please keep the 2 express lanes each direction.

Trans Code Option:

- I do business with TxDOT
- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 10:33:46 PM

Name: Logan Daum



Comment: There is no pedestrian cross on the SB side of Mopac across 360. Going from Barton Creek Square to anywhere south towards Sunset Valley/greenbelt involves a 2+ mile detour up to Barton Skyway. Please add a safe pedestrian crossing for 360 on that side of MoPac. There is no safe way for pedestrians to cross the frontage roads/Barton springs road while on the Hike and Bike trail to the proposed multi-use trails down the Northbound frontage road (where the route 30 bus stop is). Currently pedestrians cross a multi-lane 45mph road around a corner, there are no other crossings nearby. Southbound frontage road to Bee Cave road westbound is very dangerous to pedestrians trying to get onto the porkchop island. Can a pedestrian light be added or the island be removed? Cars are typically coming out of a merge and are very distracted and the speed limit is also 45mph. Road speeds on the frontage road are way too fast (45-55mph) for the shared use paths to be directly against the road like the current sidewalks. Please provide a physical barrier or large buffer between the path and the frontage road where the proposed bypass lane is. The proposed design is adding 6 lanes of traffic in that area will be extremely unfriendly to the Zilker Park/Lady Bird Lake area and will negatively affect noise levels and views. And what measures are being taken to protect heritage trees near the botanical garden? This project does not significantly "[create] opportunities for transit." A better use of taxpayer money would be to extend the 803 route into southwest Austin; we should be encouraging people to not drive into the middle of Austin and give them alternative routes. The "No Build" option is the best solution.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:14:39 PM

Name: Michael Norman



Comment: Any updated mopac plan must include updated traffic pattern data. We've experienced a major change in commuting habits since 2018. Please learn from the IH-35 mistakes and DO NOT build a double-decker roadway. What an eye soar! Options other than "more road" should be included here. As a SW Austin resident who works downtown and plans to commute 3-4 days a week, I would much rather have a good option for mass transit than have more roads that will be congested by the time the project is finished.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:07:02 PM

Name: Robbin Trusty



Comment: CTRMA: Respectfully, please cease the proposal of a double toll bridge over Zilker Park and Lady Bird Lake, and 4 toll lanes to South Mopac from Cesar Chavez to Slaughter Lane. Please do not encourage more driving of cars, more pollution and more development on/over cherished and vulnerable parkland. Please explore more forward thinking ways of dealing with Austin traffic, based on current data, including the post-covid "work from home" reality. Thank you! Robbin Trusty

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 4:05:25 PM

Name: Tori



Comment: I do not support this proposal. Please stop this wasteful madness.

Trans Code Option:

- I am employed by TxDOT

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 23, 2021 12:23:56 PM

Name: Sean Johnson



Comment: I think a lot of the issues with traffic on S. Mopac would be alleviated with some slight tweaks of the existing roadway. First, the entrance ramp south of 2244 either needs a longer acceleration lane or it just needs to be closed. There's already another entrance ramp a block south that has a very long acceleration lane. Secondly, people seem to be surprised by the exit only lane heading south at the W 71/290 interchange. Maybe additional signage further north would help or maybe a reconfiguration of the lanes could do the same? There's not really a need for that flyover to be two lanes. Those are the main bottlenecks on my commute but there is obviously an issue with the 71/290 flyover south onto South Mopac and the traffic at the intersection of William Cannon. I usually just exit at Southwest Parkway and go through the all the lights on the access road if I'm planning on heading to William Cannon. Perhaps traffic would be lessened with separate exits/entrances for the traffic already on Mopac, the traffic entering the highway from the access road, and the flyover? Another solution that may lower the amount of traffic exiting at William Cannon would be to put in an exit south of William Cannon that can access Convict Hill? I know its just a U-turn now but it doesn't make sense for that access road not to go through to Convict Hill. That would alleviate traffic at the Davis exit as well. It just doesn't make sense given the amount of residential area

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 9:14:08 PM

Name: Annie O'Grady



Comment: This is a terrible plan! The existing toll lanes that took forever to build have had no impact. The LAST thing we need is another even bigger construction project that will make mopac completely unusable for 10 years! Especially when that project just funnels money into txdot. The impact this proposal would have on zilker and town lake are unacceptable. This entire thing is a horrible idea that has already wasted far too much time and money.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 22, 2021 7:17:42 AM

Name: Mathew Sitta



Comment: I live in Meridian (45 and 1826) and ride my bicycle 6-7x per week. 45 is very dangerous with all the trucks and cars going 65mph. We desperately need a bike path from our neighborhood to Escarpment. Pls help us remain safe and healthy.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 3:05:53 PM

Name: Allison Ferris



Comment: The expansion of the 45 trail would help the future hwy project & allow for alternative means of traffic in an ever changing area of roadway that has safety concerns & increased usage. I think the expansion/connection would be a great improvement to the area.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 4:03:22 PM

Name: Adriana Nelson



Comment: I have lived in Austin for 6 years and counting, born and raised in Texas. I strongly oppose this project. Austin is an oasis and we value protecting our natural environment, springs, and trails. Please protect our parks and natural preserves because that is what makes Austin special. We don't need another highway. If this project moves forward, that would jeopardize one of the most beautiful things about our City - our natural springs and green spaces.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 11:09:06 AM

Name: Laura Cragin



Comment: Thank you for restarting this study. I support having two new express lanes in both directions on MoPac south of the river. Please move forward.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/submit-comment>

File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 13, 2021 10:08:35 AM

Name: Lisa Hugman



Comment: I live in the Travis Country neighborhood and we don't have a way to access pedestrian/bike trails south of us without crossing Southwest Parkway. There is currently no safe way for pedestrians/cyclists to cross Southwest Parkway. Would it be possible to establish a pedestrian/bike crosswalk over Southwest Parkway at Mission Oaks? About 100 yards to the south from that proposed crosswalk is Industrial Oaks Blvd. If we could develop a trail that connects the north end of Industrial Oaks to the proposed crosswalk at Mission Oaks then the residents of Travis Country would have access to Slaughter Lane and the network of trails in South Austin. Thanks!

Trans Code Option:

- I am employed by TxDOT

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 5:49:05 PM

Name: Razieh Nokhbeh Zaeem



Comment: I witnessed the similar project during mopac north extension. 1. The project took many more months than scheduled. 2. It was a SOURCE of traffic during that time. 3. Once it finally finished it made a faster route for those who PAY but not the general public.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 23, 2021 9:11:03 AM

Name: Julie Lewis



Comment: Please do something about the connection between Mopac South and 2244 West. You have to cross 3 lanes of traffic in a very short space and it's a blind merge since both cars on the frontage road and Mopac are coming up ramps at different elevations. Plus you have cars merging from right to left to get onto Mopac northbound. It's very dangerous.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 22, 2021 2:08:55 AM

Name: Rami Altai



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded towards Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:06:58 PM

Name: Connor



Comment: I fundamentally oppose any highway expansion, a short-sighted non-solution, which will not only fail to solve problems like congestion due to the inherent inefficiency of low-occupancy automobiles , but also reinforces the reliance of Austin’s residents on fossil fuels that exacerbate climate change.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 22, 2021 1:00:59 AM

Name: Euisoo Yoo



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 3:28:37 PM

Name: Jack Beadle



Comment: This monstrosity has no business running through the middle of the city. This will do nothing but further congest roadways in the area that it is connected to and will further damage the fragile ecosystem mopac already lies on top of. This is not Dallas and we do not need more overhead highways that will make our car congested city worse than it already is. If you want more space large roadways build more out east of IH35. No local wants that concrete monstrosity making more noise and ruining views of the hill country's natural landscapes.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:04:26 PM

Name: Eric Deal



Comment: I would like to request that CTRMA consider low-build options for the bridge over Lady Bird Lake. As we have seen in numerous circumstances, simply building capacity doesn't alleviate traffic issues, but simply encourages more drivers to take that route. Please focus on alleviating the bottlenecks along the entire Mopac corridor to eliminate the backups that start there and making smaller changes through downtown to smooth traffic flow across the existing bridge.

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 12:28:07 PM

Name: Carol L Pennington



Comment: I am not in favor of adding express lanes. I do not see enough people using them to make them worth the expense. I find them frustrating because if it was a regular lane the traffic would be spread out more. Fewer cars take the express (tolled) lane than it can handle. The most frustrating thing is getting behind someone going 55 - 60 in the express lane. Then it is a slow lane instead of an express lane. It is a waste of a lane in my opinion. I drive MoPac south regularly. The bridges are already wide enough for another lane or two. All that needs to happen is to add the lanes between the bridges. That does not take much money at all. It is very easy and does not require elaborate plans or road adjustments. Austinites are tired of toll roads. 183 could have also been easily fixed with just a few overpasses and another lane, but NO, the CTRMA had to make it a HUGE project so they could make it a toll road. Why does CTRMA always get what they want. We don't want toll roads. Austin is the fastest growing city in the US so there should be plenty of tax money to pay for this instead of making toll roads. Please consider adding a regular lane to MoPac south, not a tolled express lane.

Trans Code Option:

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- 1

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 3:12:07 PM

Name: Brandon Kraft



Comment: The options with direct connection ramps (1A, 2A) seem to provide the best access to downtown. Crossing 3x GP lanes into the exit lane will become more and more problematic in time. The existing SB onramp to LP 1 from RM 2244 is enough of a weave now. Adding in people who would be still merging from the express lane would be annoying.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 23, 2021 8:09:26 AM

Name: James Oscar Felan



Comment: I would use the express lane as I already use the express lane from Ceaser Chavez to Parmer, it saves time such that I can get to work in less time and leave work later and still get on time to my destination. As a result I am more productive such that the money I spend on the managed lane is earned back and I produce high quality Engineering highway/Bridge plans. Therefore I am for adding managed lanes on the south end of Mopac.

Trans Code Option:

- I do business with TxDOT
- I could benefit monetarily from the project or other item about which I am commenting

Signup For Newsletter:

- 1
- 2

Current page: <https://voh.mopacsouth.com/express-lane-alternative>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 10:01:28 PM

Name: Nayeli cortina



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 23, 2021 7:00:17 AM

Name: Mark Barber



Comment: Let's get the improvements south of Barton Skyway done ASAP! Start with just paving the rest of the mostly existing 3rd lane south of the William Cannon bridge, and making the exit at Davis an exit only lane. After that 2C all the way! It's the only one that really makes sense. If you don't expand bridges, you'll always have those bottlenecks. You can see by how y'all completely screwed up southbound Mopac at the river with your last express lane work. If y'all screw up this time, too, I'm moving out of Austin!

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 3:27:25 PM

Name: Sarah Elizabeth Larocca



Comment: NO NO NOOOOOOOOOOOOOOOO!!!! This is a horrible "solution" to our traffic problems, and will have very negative impacts on the already pressured ecosystem in the surrounding areas. This idea was bad 10 years ago, and guess what, IT STILL IS!!!

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 12:41:13 PM

Name: Rachel Vallejo Carneglia



Comment: Please consider the following in the project area in and around Zilker Park: Please be sure to align and coordinate all work with the Zilker Park Vision Plan that is currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur. Include shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize better bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a safe pedestrian and bicycle experience across the river. Include enough space under the highway to accommodate the potential future expansion of the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan. Build a Park and Ride space near Zilker, potentially under the highway or at the old pistol range that could serve users traveling into downtown Austin during workday hours, and double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 2:19:37 PM

Name: Katie Hallberg



Comment: I vote for 2C. I don't want an elevated lane above town lake. Adding 2 lanes now costs less than adding one now and one later. We can use them now!!! Well, yesterday. I think a direct downtown connect will back up. I do like getting onto S. bound Mopac not having to go thru a light at Lake Austin Blvd., but I think the extra lanes will disburse traffic and make the flow actually flow. I remember riding my bicycle on Mopac near Northland Dr. when it was built in the 70's. I have lived off 1826 for 20 years. I can use 290 or Mopac. I prefer Mopac. We will see once 290 at Oak Hill is built out. There is currently paved space south of William Cannon towards 45 that can be used now with a bit of re-stripping / painting. Actually in both directions. Open up the road with what is already there is a nobrainer. I don't know why it has not already been done. Specifically the entrance from William Cannon south bound. There is space to make that wider all the way to Davis Ln. It's just paint.

Trans Code Option:

Signup For Newsletter:

Current page: <https://voh.mopacsouth.com/environmental-considerations>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:01:11 PM

Name: Alison Norman



Comment: The Mopac South project needs to be re-started from the beginning---not from an old version with revised numbers. In particular, work habits have changed drastically since 2018 (the year providing the revised numbers), and much of the tech sector is unlikely to ever return to a daily commute. This project needs to wait until we know more about traffic patterns post-pandemic. Further, the double decker options are horrifying. This is Austin, and we need to maintain its character. Those options are really an eyesore. In general, building more roads leads to more development which leads to more traffic which leads to more roads. Please. please give us a train instead. Additionally, the traffic on MoPac South was **much* better *before** you complete the so-called "MoPac Improvement Project". I would be interested to know how much of the congestion you cite was caused by the ill-conceived traffic pattern at the end of that toll road. The "improvement" of the 290W->MoPac South transition had a lot of impact on surface streets and caused many problems for MoPac South due to (once again) ill-conceived traffic patterns. Please include changing that interaction in your analysis. So here are my high-level points: **re-imagine this project with post-pandemic traffic information. Please include options that involve changing the traffic pattern around the Enfield road entrance to MoPac south. Also, please analyze the impact to entrances, exists, and surrounding surface streets, including places like William Cannon. Note that the William Cannon exit is already a disaster due to the incoming traffic from 290W. *do not build a double decker MoPac/"elevated lanes" over town lake---or really, anyway *Roads are not the answer, please evaluate other options, and consider the full environmental impact of both adding these lanes and increasing the number of cars that are transported. I would like to see a full environmental impact statement.*

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:57:07 PM

Name: Chris Quaglino



Comment: I am AGAINST double decking the bridge at Ladybird lake and adding so many lanes. There have to be better options that have not been explored or discovered yet. I have lived in Austin 39+ years and have seen many changes. Some good and some bad. This proposal is bad and will negatively affect downtown for many years to come. Particularly with the scheme to double-deck the bridge over Lady Bird Lake. It would do unnecessary harm to the park and trails and watersheds which many people labored long and hard to preserve, and so many current and future generations will enjoy. Please do not move forward with this plan.

Trans Code Option:

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, November 22, 2021 11:10:14 PM

Name: Peter Stern



Comment: Additional lanes are needed on South and North MoPac. In addition, we need enforcement of speed limits to ensure the even and steady flow of traffic. For example, too many drivers in the left lanes do not use those lanes at maximum legal speed to pass the slower traffic in the right lanes. One option is to give summonses to those drivers who drive too slowly in the left lanes until more drivers drive responsibly and use left lanes for passing. Another option to aid traffic is to prohibit heavy truck traffic during peak hours. Another option is for businesses to overlap starting and ending work times to ease traffic congestion. The above are some of the options I have considered.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 3:25:48 PM

Name: Kerri Welch



Comment: I stand with SOS against the double decker toll bridge over Lady Bird Lake. There is enough traffic noise and pollution. Please focus your efforts of public transportation not more toll roads.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 9:51:35 PM

Name: Kathryn Fischer



Comment: I urge you to consider extending the path on 45 to connect o the Meridian neighborhood. We as a community would greatly benefit from the safety and convenience of a pathway to leave our neighborhood and enjoy the amenities of the 45 trail, similar to the neighborhoods just north of us.

Trans Code Option:

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Current page: https://voh.mopacsouth.com/submit-comment?fbclid=IwAR2G7rpSHCTIg9rZoctdvsQX2xX1P0rl0_C4SgtV5Qo1OhFXB5sTmt1BWpI

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 2:47:31 PM

Name: Clifford Priddy



Comment: I vote for the Two Express Lanes + Downtown Direct Connection operational configuration option. I would also like to see the two toll lanes extend all the way to and from Toll 45 SW.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 1:39:22 PM

Name: David Wilson Jones



Comment: From William Cannon southbound, there is a majority of pavement and bridge already existing to handle a 3 lane all the way down to Davis Lane. Will the toll lanes use this existing infrastructure or will the toll lane be place next to a new non tolled third lane on new pavement and a widen bridge? I have a big problem with adding a fee for use of a facility that was built with ultimate conditions in mind and paid for with public funds. I'm hoping that this isn't the case. Can you please clarify? Thank you

Trans Code Option:

- I do business with TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 6:50:06 PM

Name: Jeff Grosso



Comment: Our kids and family would absolutely use a trail extension. Today it is unsafe for us to access the current trail without driving.

Trans Code Option:

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Current page: [https://voh.mopacsouth.com/submit-comment?](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR3kg0xCO7yL0wWXVKvym_JPfZyCzr-1e7Dj3mZfJkQf6J5RJVZsili_mD8)

[fbclid=IwAR3kg0xCO7yL0wWXVKvym_JPfZyCzr-1e7Dj3mZfJkQf6J5RJVZsili_mD8](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR3kg0xCO7yL0wWXVKvym_JPfZyCzr-1e7Dj3mZfJkQf6J5RJVZsili_mD8)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:56:33 PM

Name: Mac Rung

Comment: I am opposed to a double decker bridge going over Lady Bird Lake and I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/submit-comment>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 12:29:23 PM

Name: tom goss



Comment: I am in favor of tolled express lanes in both directions. I have lived in North Texas where changable lines were used and they seemed to not be as useful. It is very hard to anticipate traffic volume and quickly change the direction of the lane

Trans Code Option:

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- 1

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 2:28:44 PM

Name: Karla Cardenas



Comment: I disagree with the proposal to add a double decker toll bridge over Zilker Park, Lady Bird Lake and Austin HS. Stop with the toll roads, stop adding traffic and posing a threat to our beautiful community and green areas. I don't want another Dallas. Dallas toll roads were built under the false premise that the fees would be charged only until the building of the toll roads was paid off and guess what? The fees never stopped and have only since increased and now you get to pay tolls to be stuck in traffic.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, November 22, 2021 5:50:16 PM

Name: Derek Miller



Comment: Regarding noise abatement: Typically, the noise studies are based on traffic loads during peak traffic times. However, traffic is slower during peak traffic times, which in certain circumstances can be quieter than other times. Care should be taken to conduct noise studies during all hours to get an accurate reading. Additionally, there is no mention of reconfiguring exit lanes and ramps on southbound Mopac between 290 and William Cannon. The on ramp from the frontage road should be moved so that it is south of the off ramp. The off ramp should be moved so that it is north of the ramp from westbound 290 to southbound Mopac, to avoid the back up that you guys created when the ramp was built. Additionally, shared use paths for bicycles are insufficient. There is considerable entry/exit traffic through driveways along the route, and making bicycles wait at 3 traffic lights to get across the mess at 290/southwest parkway is inadequate. The speeds on the frontage roads are such that it is unreasonable to expect vehicles to slow down to a safe speed before they cross a shared use path. There should be additional work on the bicycle infrastructure to further separate bicycle traffic from motor traffic, such as bridges or other infrastructure. Also, there's no mention in the material about why the City of Austin recommended option 3 over options 2B or 2C. The travel times are worse, and the material makes no mention of price, so it's impossible to evaluate which one of the three is preferable from a cost basis. Based on the material provided, option 3 is inferior to the other two in every possible way. Why was option 3 preferred? If it's cost, that should be discussed.

Trans Code Option:

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, December 8, 2021 3:35:10 PM

Name: Bruce Byron



Comment: The south and southwest parts of the region are growing rapidly. Managed lanes are the best solution for motorists and transit. Build either 2A or 2C to maximize the benefit.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:52:44 PM

Name: Drake Hampton



Comment: In general, I oppose any plan to expand automobile capacity on MoPac. The proven reality is that highway expansions induce more and longer trips, ultimately making congestion worse and increasing the green house gas emissions that are accelerating our climate crisis. The more effective way to mitigate congestion is to get people out of their cars—reduce the number of trips and encourage using alternate modes. As such, I fully support this project’s plans to provide reliable travel times for transit as well as bike/ped facilities along the whole corridor, but I would like to see it go further by making these alternate modes central pillars of the plan rather than sideline add-ons. This project should include in its stated goals the reduction of total vehicle miles traveled (VMT) as well as mode shift away from single-occupancy vehicles toward transit, carpooling, biking, and walking. Finally, this project must address the alarming trend of increasing roadway death and injury. It should add to its purpose and need statement the elimination of roadway deaths and serious injury for all users, in accordance with Austin’s Vision Zero program and TxDOT’s Road to Zero initiative.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 1:04:22 PM

Name: Kaiba White

Comment: Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur. Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan. Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:52:50 PM

Name: Melaina Newman



Comment: There's no need for this project we have so many other problems to focus on. This would be unnecessary and annoying.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, November 30, 2021 12:25:54 PM

Name: Jackson Hurst



Comment: I highly approve and support CTRMA's MoPac South Project. Adding express lanes to the MoPac Expressway between downtown Austin and south of US 290 will help relieve congestion and improve travel times. Regarding the express lanes alternative the one that I support is Alternative 2A: Two Express Lanes with Downtown Direct Connection. The reason for my support of this alternative is Alternative 2A will provide direct connections to downtown Austin from the MoPac Express Lanes without impacting the northwest side of Lady Bird Lake like Alternative 3 proposes with access to the south MoPac Express Lanes through a direct connector ramp from Lake Austin Blvd that goes over the northwest side of Lady Bird Lake.

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, November 22, 2021 5:09:00 PM

Name: Aidan Aannestad



Comment: It is well known that expanding highways does absolutely nothing to actually reduce traffic congestion - it simply leads to more people using the highway. San Francisco demonstrated this in the 1990s when they *removed* a highway entirely and traffic improved. Adding new lanes to a highway is a colossal waste of taxpayer money - better instead to spend the money on non-road transit options that remove cars from the road *entirely*. Besides, if Austin's goals for transit involve socioeconomic equity, tolled express lanes are the opposite of that - they provide convenience at a cost, leaving those who are unable to pay the cost condemned to a separated inconvenience. (That is, assuming the toll lanes aren't backed up worse than the main highway, in which case why did we build them at all?) I cannot see a world in which adding paid toll lanes is anything more than a waste of taxpayer money. Real solutions to traffic congestion, transit inequality, and global warming involve *removing* cars from the road and making it more and more feasible to not own a car at all. This toll lane project sounds like the kind of car-drunk solution 1960s city planners would come up with - not something appropriate to 2021 in the least.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 9, 2021 8:55:26 AM

Name: Tracy Allen Bratton



Comment: The tolled lanes added to Mopac have had little to no noticeable positive improvement on the traffic. Why does TxDOT believe that construction of tolled lanes on Mopac South would have a dramatic impact on traffic? No transportation dollars should be used for recreation. Bike lanes and hiking paths are for recreation. Virtually no one commutes to work on a bicycle in Texas - it is too damn hot! Hike and bike lanes should be funded solely by parks and recreation dollars from the City of Austin / Travis County or by fees levied on the users of those facilities. Taking money collected from gasoline taxes, inspection / registration fees and redirecting those \$'s from vehicular transportation to recreation projects should be forbidden.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, November 22, 2021 3:40:31 PM

Name: Bill Eisenhower



Comment: There must be connection to downtown like in 1A or 2A. It will be a mess of having express lane(s) traffic weave across to downtown. It would be nice to evaluate about if any improvements down to SH45SW are needed given the new expresslans

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:51:30 PM

Name: katy huff



Comment: The proposal or consideration to widen mopac is a waste of tax payer dollars. Countless studies show roadway expansion doesn't reduce traffic. More public transportation options do. Please add more public transportation. thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 12:40:52 PM

Name: Guru Ramagiri



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:47:57 PM

Name: Williams Lauren

Comment: I am AGAINST the new proposed toll rode bridge that would be built over the lake and zilker. It would cause terrible Impact to these special places that people like to gather as a community.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, November 29, 2021 6:34:21 PM

Name: joshua aaron blumenkopf

Comment: I am fully for adding two express lanes, as that will make travel times the fastest and reduce costs to non-users. I would support the solution with the fastest times, and 2c seems to be fastest (though unclear why it is faster than direct connector). I would also like to see cost and revenue estimates, as well as estimates of effects on traffic on parallel routes, such as South Lamar and Loop 360.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 9, 2021 12:38:00 PM

Name: Dave



Comment: Leave Mopac the way it is. If anyone does not like it they can leave Austin now!

Trans Code Option:

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 10:29:27 AM

Name: Deborah MacDonald



Comment: “I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:42:12 PM

Name: Claudia Corum



Comment: There is not time to craft a "response" of my criticism of almost everything about this MoPac South project. I spoke at a hearing at Austin High School years ago, against the same project. Why is it being brought back now? Especially NOW in the middle of a health crisis, after the holidays during which so many people left the area to be with family, and many were not able to return. So obviously, I am asking you - imploring you, to at the VERY least, give us another 30 days to write out our thoughts, or even hold an online "workshop". If you are serious about letting Austin's residents speak, you will postpone the deadline for comments until mid-February. Thank you for reading.

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Current page: <https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:45:35 PM

Name: Addie Walker



Comment: I do not think that this project should be moving forward. I have several concerns. This project was on pause for 6 years from 2015-2021 and is moving forward without any updated traffic or demographic data. Austin has changed a lot in 6 years, including how people use MoPac South. This project needs to start over using updated data, ESPECIALLY how land use will change when Project Connect is finished. Community feedback from 2015 has not been taken into account and there is an opportunity here to redesign this project in line with community feedback and updated demographics/land use/traffic data from the last 6 years, and that opportunity needs to be taken. This project needs a full EIS, NOT an EA. An EA does not adequately cover all of the environmentally sensitive areas this project will impact including Edwards Aquifer and Barton Springs. Finally, why is increasing safety not once considered in the project purpose and need? Minimizing traffic injuries and fatalities and improving safety in this corridor is not ONCE mentioned and it should be the PRIMARY project purpose. This project needs a serious overhaul, it cannot just be restarted out of the blue after a six year pause. Also, any TxDOT project moving forward should have a minimum of 90 days for public comment and public comment periods should not be held over the holiday season. It is very difficult to adequately provide public comments on this project given the time constraints and additional time demands of the holidays. Thank you for your consideration and please redo this project in line with better community feedback practices, community requests from 2015, a full EIS, and prioritization of safety and environmental protection.

Trans Code Option:

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- 1
- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 9, 2021 5:24:53 PM

Name: Ted Siff

Comment: Dear CTRMA board and staff, Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur. Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan. Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration!"
Ted Siff

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 9, 2021 10:25:00 PM

Name: Neil Pascoe



Comment: STOP the tolls

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 8:30:37 AM

Name: Alicia Albertos



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:39:48 PM

Name: Jeffery Sayers



Comment: Extend the comment for at least 30 days following the publication of current relevant traffic data and analysis - the 2009 models are out of date and do not reflect the current reality of how people will transpot.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:37:28 PM

Name: Denise marintzer



Comment: Nice open house information. This provided useful information and answered several of our questions. Option 2c seems to make the most logical sense. Will the express lane be a toll road? If so, will it be permanent or once the toll fees cover the building costs, will the lanes be open to the public? What is the timeline to add additional SB lane from Wm Cannon to Davis? Is there a way to expedite this road improvement? There is plenty of paved road already with only a small section that would need work. This small addition would make a significant improvement to SB traffic immediately with minimal cost/construction. Thank you, Denise Marintzer

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, December 21, 2021 7:58:38 AM

Name: Josh Williamson



Comment: NO FLYOVER! This isn't Houston, please don't make our city ugly!

Trans Code Option:

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:33:06 PM

Name: David Goss



Comment: Induced demand fills up any highway no matter how big you build it

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 9, 2021 11:14:25 PM

Name: Chris Riley



Comment: This project will generate more highway traffic and enable more sprawl in environmentally sensitive areas. All of the options presented are bad. The traffic projections are a joke, and so is CAMPO's model. I am glad to see bike facilities included, but this will never be a good corridor for biking with all this car traffic. Rather than a "no build" alternative, I'd like to see an alternative that converts existing lanes into transit lanes. Please make sure the environmental impact study acknowledges the increase in air pollution from traffic this highway expansion will generate.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:38:46 PM

Name: Catherine Boshart

Comment: We need traffic relief for South Austin. It is almost impossible to look for a job in North Austin due to traffic constraints, limiting a whole swath of the city. There is a real need for direct downtown access and lanes that extend beyond 290.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 10:53:44 PM

Name: Christina Bosco



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:30:21 PM

Name: RICHARD M NOSTER

Comment: Dear CTRMA Board Members and Staff, I am contacting you to say that I share the concerns voiced in the comments made by the Travis County Commissioners Court and the City of Rollingwood and support the positions taken by both bodies. Sincerely, Richard Noster

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:36:24 PM

Name: Michael Edward Reed



Comment: 1. I do not support the expansion of this highway. Time and time again highway expansions increase travel times via induced demand and do not decrease travel times. 2. We need to support mass transit, bicycle infrastructure, and walking paths. These are both cheaper and more effective. 3. If the highway is expanded, which I do not support doing, it should be expanded in the way that will best support public transit. 4. Absolutely no general purpose lanes should be added, at all costs. If we're going to expand the highway, it should be encouraging transit, carpooling, and/or people paying for the infrastructure they use.

Trans Code Option:

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- 2

Current page: <https://voh.mopacsouth.com/>

File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, December 9, 2021 11:34:11 PM

Name: Deana Dossey



Comment: Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur. Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan. Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration!"

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 10:47:49 PM

Name: Melissa Hawthorne



Comment: To simply state I am NOT in favor of expanding lanes over the creek or parkland. The impact of the bicycle pedestrian bridge over the creek can still be seen today let alone the damage during construction. To gain support for that project it was sold as leaving the existing bridge motorway for vehicles. Truly a disappointment with lasting impact. Melissa

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:23:49 PM

Name: Tom Thayer



Comment: I am against any double decker design on South MoPac or any design that includes higher elevations than currently exist on the highway. Any improvements should come within the current footprint of the highway and not encroach on Zilker Park. I am very concerned about the visual impact of the highway on the park. In addition, I oppose redesign of the 360/MoPac interchange. Currently, that interchange is a good example of building a highway into the existing landscape with wildflower meadows and scenic cliffs. Don't mess it up! I can see adding an HOV lane either way if it can be accommodated in the current footprint. But I oppose any project that will substantially change the highway, ruin the scenery, cost a lot of money, and tie up the highway in construction for years.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:15:55 PM

Name: Kait Willis

Comment: Please consider another option. We love this city, and it breaks my heart to see how much of mother nature is being sacrificed because of the dollar. All my love.

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, December 10, 2021 10:21:34 PM

Name: Lisa Glenn



Comment: When the tolled lanes were created N of Lady Bird Lake, the decrease in non-tolled lanes going south made traffic worse. Requires too much merging. This doesn't improve that problem.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 8:59:45 PM

Name: Tony Ferrante



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.”

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:11:09 PM

Name: Jonathan Monjaras



Comment: Honestly we don't want more environmental degradation of our lake and surrounding springs. Have y'all not learned that building more lanes doesn't translate to less cars or improved traffic. Take a look at Houston (I-10) more lanes were added and traffic is still horrendous. Literally the same thing will happen if this project is approved. Don't waste tax payer money on things we don't want. Use it to provide more ways to eliminate traffic by offering alternatives like more commuter buses, add a safe and separate bike lane corridor. Literally anything else would be better than more lanes.

Trans Code Option:

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, December 11, 2021 9:26:04 AM

Name: Myron Lutz



Comment: It appears that the two additional express lanes will only benefit those that are willing to pay to use them, but no improvement for the general public. I did not see any projections showing improvement in travel times for those not using the express lanes. I strongly disagree with your approach.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:21:20 PM

Name: Amy Rung



Comment: I am strongly against building a double-decker bridge over Lady Bird Lake and the Austin Nature Center. As a resident on the east side of Rollingwood for over 15 years the scope of the project would greatly impact us and all surrounding residents with a significant increase in traffic noise. It also seems to be an extremely out-dated idea for a city with some of the brightest minds in technology. It's a lost opportunity for Austin to be cutting edge in solving traffic problems and building an aesthetically pleasing addition to our city . Also, I thought the public comments five years ago would be taken into consideration but the same project is now being proposed. The traffic times study provided is from 2015. Has a new study been done since 2019? I don't think any current highway projects should be based on 2015 traffic data since many employees in Austin are now offering work from home options. Have the main employers downtown been polled to see if they plan to return to pre-pandemic schedules or continue with alternative work options? Lastly, I believe there are "no build" alternatives available to mitigate or address traffic issues on this section of MoPac and those should always be considered first. Amy & Peter Rung

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:07:39 PM

Name: Sandra Keller

Comment: After looking at the information presented here, it appears to be the same data and plans presented six years ago. These plans are predicated on outdated, incomplete information and disregard the dynamic changes that are occurring in our roadways, our communities, and our commuting patterns. Provide current information to better examine the options proposed. Environmental impact information is another area that is lacking. The proposed options run through some of the most environmentally sensitive land in this region and include the crown jewels of the Austin park system - Zilker Park, Barton Springs Pool, the Butler Hike and Bike Trail, and Lady Bird Lake. An Environmental Impact Statement is an imperative for making good decisions. New thinking is also missing from this open house. In the intervening six years many cities have changed their relationship to the highways inside their limits. Dallas has capped over Woodall-Rogers Expressway, Pittsburgh is covering part of I-579 with green space, Austin is capping a section of I-35, and up to 30 additional cities are considering lowering or covering major roads in their urban centers. In opposition to these efforts to reduce the impact of highways, your proposals create increased noise, visual pollution, and separation of neighborhoods. Bring to the public accurate, thorough information on traffic patterns, travel times, and environmental impact. Factor in additional options beyond those already proposed and see what the public prefers. I believe we deserve better than what is offered currently. Sandra L. Keller

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, December 11, 2021 5:15:42 PM

Name: Tyler Walker



Comment: Do not expand mopac! This is not an effective use of public funds. Build a train or be smarter than just trying to build a bigger road to solve a problem. What are you six?

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 1:00:27 PM

Name: Mary Ruth Holder



Comment: As a former resident of Austin and a frequent visitor I am writing to oppose the proposal for a toll bridge over Zilker Park and Lady Bird Lake and the accompanying construction required for access to the bridge. I served on the Austin Parks and Recreation Board for many years and know the Park and Lake are iconic areas of natural beauty and recreation for all Austinites. A toll bridge would be completely inappropriate here and would ruin Austinites' experiences in the Park, the beautiful hike and bike trail, Barton Springs and Deep Eddy Pool. Do not treat this area as a commercial sacrifice zone. Please conduct a full EIS for this project. I also fully incorporate the comments of Save our Springs Alliance by reference hereto.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 8:33:21 PM

Name: Jessica Wu



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.”

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 12:50:01 PM

Name: Sean



Comment: This is not the right course of action to fix traffic flow through the Zilker/Barton area. There needs to be updated data and studies on traffic trends. One solution would be to fix the bottle neck effect the recent toll road created!

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:56:38 PM

Name: Patricio Perez



Comment: As a resident of Rollingwood whose house backs up to the zilker nature preserve, I am concerned with the additional noise, additional light, and disruption to the preserve and it's wildlife.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, December 12, 2021 8:50:34 AM

Name: Art Salinas



Comment: Why would you not consider one Express lane and one extra non rolled lane instead of two express lanes. It is ridiculous to add two express lanes and not fiscally responsible as well

Trans Code Option:

- I am employed by TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 8:20:40 PM

Name: Kathleen Fairchild



Comment: Please extend pathway to MoPac south and 45 past Meridian subdivision and 1826. Thank you!

Trans Code Option:

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Current page: [https://voh.mopacsouth.com/submit-comment?](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR2USMbR7vpF390VDeWkapMn9zLS7ky4xNCJzuKAGg8pkFZbcxyjS20eHUU)

[fbclid=IwAR2USMbR7vpF390VDeWkapMn9zLS7ky4xNCJzuKAGg8pkFZbcxyjS20eHUU](https://voh.mopacsouth.com/submit-comment?fbclid=IwAR2USMbR7vpF390VDeWkapMn9zLS7ky4xNCJzuKAGg8pkFZbcxyjS20eHUU)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:55:45 PM

Name: Kevin Quist



Comment: Stop expanding highways Jesus Christ. We are in an environmental crisis and every lane you bozos add increases automobile emissions and induces more land to be gobbled up by sprawl. Change your priorities and focus on mass transit/cycling/pedestrian infrastructure, AKA low impact transportation. Goddamn.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 12:16:29 PM

Name: Jennifer Jones



Comment: I am opposed to any changes to Mopac South. The stretch of Mopac between downtown and 360 covers Lady Bird Lake, Zilker Park and Barton Springs, three natural resources in Austin that are already being negatively impacted by development in other parts of the city. The water quality in Barton Springs has declined just in the past 5 years, from being clear enough to see all the way down to the spring vents themselves, to being murky every time we go. Further construction in this area will make the water quality worse. In addition, enlarging and/or connecting Mopac South to I-35 will not improve or decrease traffic on Mopac, but rather increase it. Cars and trucks will use Mopac as an alternative to I-35, increasing the number of cars/trucks on the road and the pollution in the city. More should be done to reroute traffic away from the Mopac highway altogether. This includes removing any tolls on State Hwy 130 so that trucks especially can use that route around Austin, and also using the train tracks between Mopac as a commuter route instead of only for freight. These two solutions would decrease traffic on Mopac, reduce the environmental impact in this area and also negate any need to make changes to Mopac South.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 8:11:58 PM

Name: Deepika Srinivasan



Comment: I support the bike/ped path development in south austin into central Austin. I would love for neighborhoods including Meridian on 45 and others on 1826 connect on to escarpment. This would improve access, promote less usage of cars to Access local parks and help improve outdoor activity

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, December 12, 2021 12:33:39 PM

Name: Blake Ellingham



Comment: Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park. Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur. Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north. Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan. Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community. Thank you very much for your consideration!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 12:06:48 PM

Name: John Joyner



Comment: This proposed Mopac expansion would be insanely harmful to the local environment, and is driven by horribly out-dated studies and pathetically anachronistic thinking. In a world where telecommuting is becoming commonplace and where climate change is already likely to cause widespread disruption and hardship on a global scale, this proposal id mind-bogglingly troglodytic.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:53:24 PM

Name: Evan Rodriguez



Comment: Do not, under any circumstances expand MOPAC. it is the last thing the city of austin needs.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 8:10:24 PM

Name: Andrew Vaz



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. This would be a huge benefit and a large way to ensure safety for the community.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, December 12, 2021 4:41:26 PM

Name: Valerie Shown



Comment: Two express lanes going south elevated over Lady Bird Johnson Lake with direct access to downtown.

Trans Code Option:

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File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 12:02:02 PM

Name: Aimee S



Comment: Do not build an unnecessary road over our lake. Do not build an unnecessary road near our high school. Do not build an unnecessary road over our park.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:44:14 PM

Name: GILBERT HERNANDEZ



Comment: See attachment.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/>

File Upload: [Ramp_Reversal_Proposal.pdf](#)

Reasons why we should reverse the ramps between Loop 360 and Barton Skyway on Mopac:



1. Traffic on 290/71 backs up all the way to Congress in the Morning.



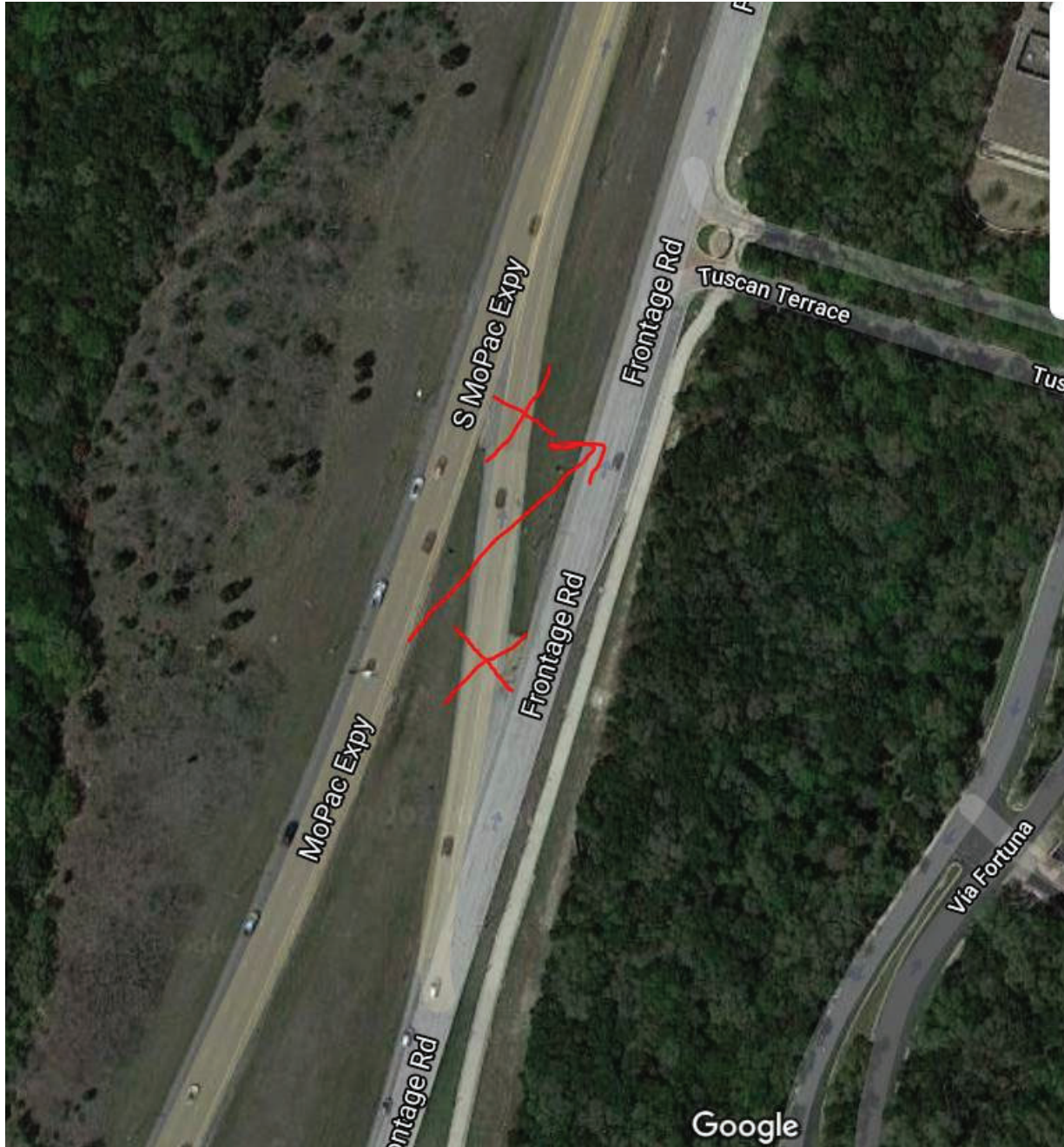
2. The 2 SH 71 outside lanes that exit, Loop 360 Exit on SH 71, pile up with traffic all the way back to Congress, the other 2 are free flowing by the time you get here (to the exit) because if you have not gotten over yet, you are not taking the direct connector. The reason why it backs up to SH 71 and Congress is because people use the inside 2 lanes (of SH 71) to queue jump to exit Loop 360.



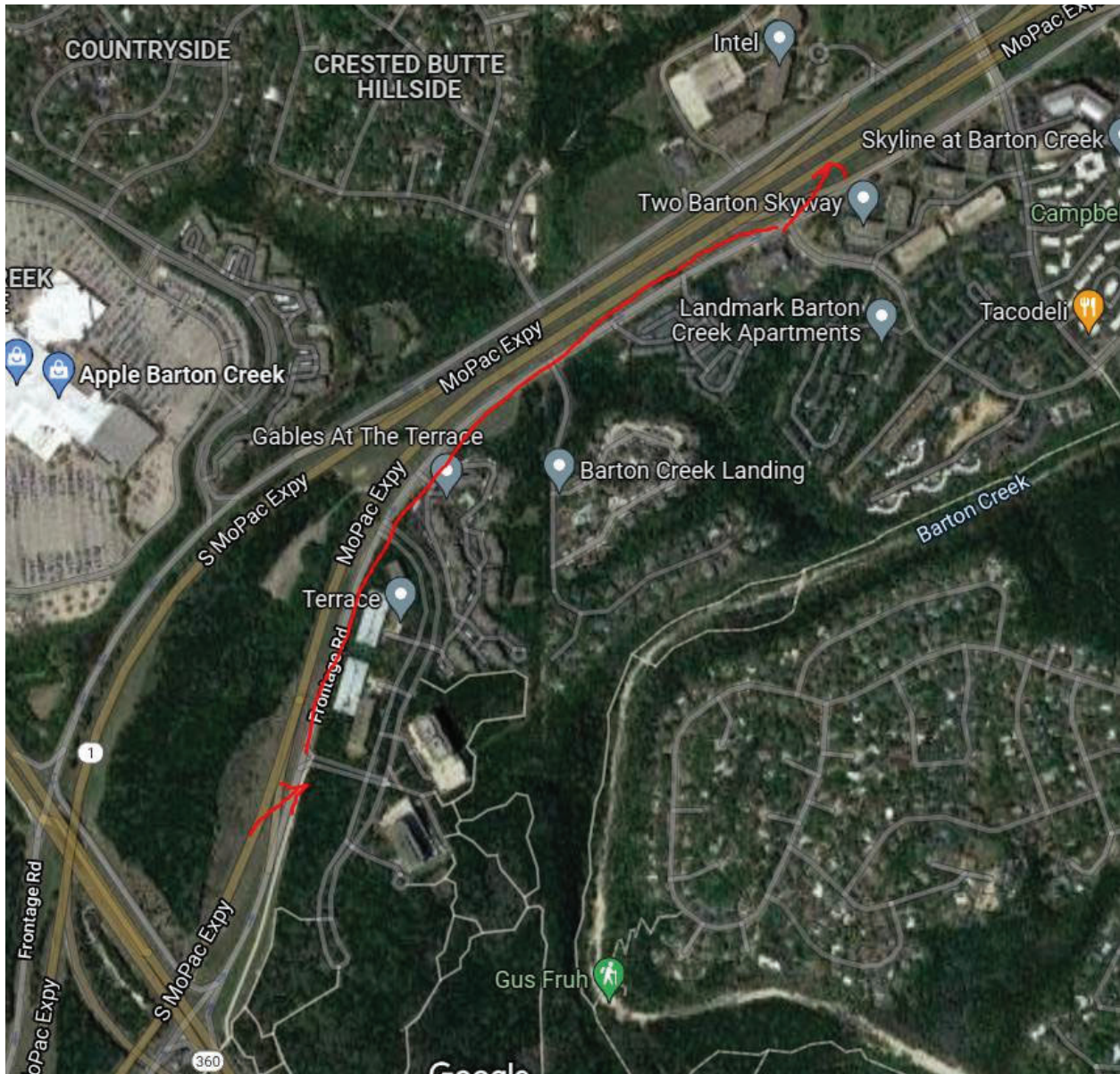
3. The 3 inside lanes (on Loop 360) are used to queue jump everyone to get in the right lane to turn right and enter MOPAC.



4. The right turn on the southeast corner of the Loop 360 and Mopac intersection is backed up all the way to congress on SH 71, many miles away. **This right turn should have a 2 lane right turn instead of one.**



5. **The ENTRANCE RAMP north of Loop 360 / Mopac intersection should become an EXIT RAMP.** This will allow everyone wanting to get on Mopac to line up on the frontage road instead of backing everyone up all the way back to SH 71.



6. Lots of space on the NB MOPAC frontage road to store traffic getting on Mopac instead of letting it back up all the way to Congress and SH 71.



7. NB MOPAC frontage road has 3 lanes and a sidewalk.



8. **The EXIT RAMP right before Barton Skyway, on Mopac NB, should be reversed.** From an EXIT to an ENTRANCE ramp.



9. The ramp reversal is done before the Barton Skyway light so no one has to go through it.

Thank you,
Gilbert Hernandez

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, December 12, 2021 10:30:05 PM

Name: Horacio Gasquet

Comment: The maps and information provided don't show enough detail. North MoPac improvements MADE THINGS WORSE. Don't do that again mistake again. Pay attention to the pinch points around both Endfield and Lake Austin Boulevard and Cesare Chaves. These areas can be challenging, as the North MoPac project shows. ALL EXISTING ENTRANCE and EXIT RAMPS between downtown and William Cannon need to be changed in a huge way. They are why things don't work today. No entrance ramp should be less than 300 meters long, with a dedicated lane until the next entrance ramp appears. In many cases a barricade needs to be erected so that traffic is FORCED to reach highway speed before changing lanes. Traffic coming from HWY 360 Northbound needs to be contained in its own lane until no longer climbing a hill. That traffic is too slow entering the freeway due to the hill, so don't let them change lanes until they go on flat or downslope long enough to reach at least 60 MPH. Entrance ramps that are too short cause people to change lanes before reaching highway speeds, thus slowing down main traffic. DON'T let that happen. Keep slow traffic separated from main flow until it is clear they can reach highway speeds. The exit ramp to HWY 360 needs to have a dedicated 1000 meter long exit lane for that left exit, and a sign needs to be erected stating to all drivers to MAINTAIN HIGHWAY SPEEDS on the exit. Post a 65MPH speed limit sight there. That exit ramp needs improvement where it merges with HWY 360 to make it safer, so that people don't feel the need to hit their brakes at that bridge. There should be no exit ramp anywhere that does not have a traffic light before the next entrance ramp. The exit ramp at Barton Skyway has an entrance ramp before the traffic light, which also doesn't exist long enough to merge with highway traffic. Just eliminate that entrance ramp prior to Barton Skyway. There should be no merge left lanes north of HWY360. All Entrance ramps need to be a lane that does not go away until south of HWY360, as all lanes bring traffic with no gaps between cars to allow for merging. There needs to be FOUR NON-TOLLED lanes southbound south of Enfield over Lady Bird Lake prior to merging traffic from 6th street and Cesar Chaves. North MoPac is a failure. Don't repeat the bad design practices. The WHOLE highway is only as good as its worst design point. The choke point rules the whole dynamic. Today South Mopac has 5 choke points between Endfield and HWY 360. No one drives anywhere close to the speed limit, because of the design. Every entrance and exit ramp is a problem. There needs to be VERY LONG entrance and exit ramps all along this corridor. North Mopac is attractive but dysfunctional. In the South MoPac project, you not only need to fix downtown, which was not addressed previously, but you have to do a much better job of building a lasting solution. Most of the traffic will bypass downtown (its only so big) and the bypass traffic will continue to grow even if downtown traffic stays approximately the same. Renderings do not show enough detail to see and comment on the design flaws that will be implemented after public input. This process is not yet satisfactory.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 8:06:52 PM

Name: Heather Vaz



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. This would give access to more residents to connect and would allow me to feel safer biking and running by myself and with my family.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 11:32:05 AM

Name: Kathleen Green



Comment: Please extend the decision on building a toll road over the Barton Springs/Edwards Aquifer for 30 more days-please make public all future plans that involve this area.Barton Springs is our Crown Jewel;without protecting it-Austin cannot brag about being environmentally conscious.The general public deserves a chance to know what is happening—integrity is foremost!!!

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 7:32:31 PM

Name: Jennifer Luongo



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. It would be so nice to have a safer, more environmentally friendly way to access that trail from Meridian.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:34:33 PM

Name: Edgar Handal



Comment: I oppose the expansion of Mopac and would like to see an increased focus on public transit (bus and rail) and active transportation modes. I also would like to see more focus on public safety aligned with Vision Zero goals. I would echo the concerns from the Travis County commissioners that these materials are based on out-of-date data/analyses from 2015, and that this project should be reevaluated in light of the CAMPO 2045 model and plans such as Project Connect.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:29:06 PM

Name: Steven Beck



Comment: I just read about this proposal this evening (Friday January 7, 2022). Please extend the public review period another 30 days so I and others that will be affected will have a chance to analyse the impact.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 11:26:13 AM

Name: Brittany Platt



Comment: While the city of Austin has recently been prided for growth, the adoption of a double decker bridge over Mopac does not fall in line with this idea. Alternative designs or concepts must be considered, especially within environmentally- sensitive zones that this part of Texas is so highly recognized for. I urge you to extend the comment period for this project for at least 30 days following the publication of current relevant traffic data and analysis. Should the project continue and the skyline and natural systems of this city be permanently altered, let it at least be known that all appropriate, proper, and respectful measurements were taken.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 7:22:27 PM

Name: Tammie Warren



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 7:03:58 PM

Name: Larysa Mysyk



Comment: Please expand bike lane on I 45 to meridian neighborhood

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 11:16:01 AM

Name: Joseph Fife



Comment: I oppose this project simply because of how much of a catastrophe the northbound Mopac toll lane project was. The southbound toll lane took TWO YEARS longer than proposed and was at least 20 million dollars over budget. I have no faith that the CTRMA can execute a similar project with better results. In addition, the greater issue is that have seen no data that the current mopac toll lanes have had a material effect on the traffic that they were supposed to relive. Lastly, I simply do not believe that the addition of toll lanes is an acceptable solution to traffic problems in Austin. We pay absurd city, county, and state taxes which are meant to include PUBLIC services such as roadways. Roads should simply not be privatized at the inconvenience of their users.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:22:06 PM

Name: SARA HUTSON



Comment: I am opposed to any option for the Mopac South project which includes elevated lanes over the existing roadway. Elevated lanes were not included along the Mopac North project and should not be included on Mopac South. The area across Lady Bird Lake and Zilker Park and adjacent to Austin High and neighborhoods at higher elevations than the current roadway would bear significant adverse impacts (degraded views, excessive noise) from elevated lanes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 11:11:49 AM

Name: Josie Rasberry



Comment: The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process. Not only will this negatively impact the environment, but it will also be detrimental to Austin’s tourism. People who come to see attractions such as Lady Bird Lake or Zilker Park will not come once it’s closed off from construction, destroyed by construction, and made into an eyesore thanks to a toll road. Many events and concerts are also hosted in the areas that will be negatively impacted by this project, thereby harming business to musicians, artists, and other businesses. Many of which are already struggling from the negative impacts COVID had. Bottom line: do not build this project. The last thing Austin needs is more construction and tolls/highways.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:20:24 PM

Name: Gilbert Hernandez

Comment: Please see attachment with pictures for additional context to below. Reasons why we should reverse the ramps between Loop 360 and Barton Skyway on Mopac: 1. Traffic on 290/71 backs up all the way to Congress at SH 71 in the Morning. 2. The 2 SH 71 outside lanes that exit, Loop 360 Exit on SH 71, pile up with traffic all the way back to Congress, the other 2 are free flowing by the time you get here (to the exit) because if you have not gotten over yet, you are not taking the direct connector. The reason why it backs up to SH 71 and Congress is because people use the inside 2 lanes (of SH 71) to queue jump to exit Loop 360. 3. The 3 inside lanes (on Loop 360) are used to queue jump everyone to get in the right lane to turn right and enter MOPAC. 4. The right turn on the southeast corner of the Loop 360 and Mopac intersection is backed up all the way to congress on SH 71, many miles away. This right turn should have a 2 lane right turn instead of one. 5. The ENTRANCE RAMP north of Loop 360 / Mopac intersection should become an EXIT RAMP. This will allow everyone wanting to get on Mopac to line up on the frontage road instead of backing everyone up all the way back to SH 71. 6. Lots of space on the NB MOPAC frontage road to store traffic getting on Mopac instead of letting it back up all the way to Congress and SH 71. 7. NB MOPAC frontage road has 3 lanes and a sidewalk. 8. The EXIT RAMP right before Barton Skyway, on Mopac NB, should be reversed. From an EXIT to an ENTRANCE ramp. 9. The ramp reversal is done before the Barton Skyway light so no one has to go through it.

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File Upload: [Ramp_Reversal_Proposal.pdf](#)

Reasons why we should reverse the ramps between Loop 360 and Barton Skyway on Mopac:



1. Traffic on 290/71 backs up all the way to Congress in the Morning.



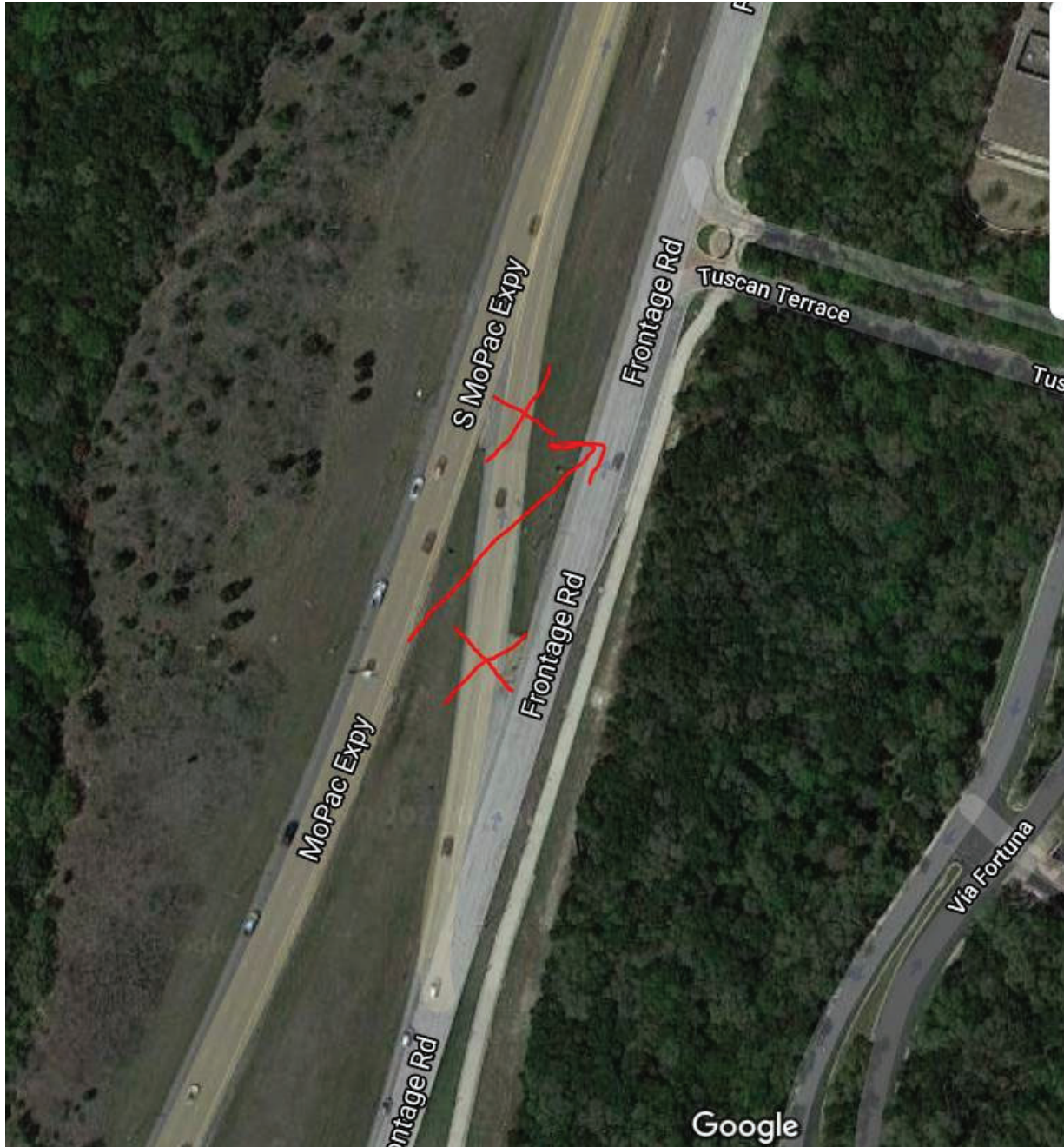
2. The 2 SH 71 outside lanes that exit, Loop 360 Exit on SH 71, pile up with traffic all the way back to Congress, the other 2 are free flowing by the time you get here (to the exit) because if you have not gotten over yet, you are not taking the direct connector. The reason why it backs up to SH 71 and Congress is because people use the inside 2 lanes (of SH 71) to queue jump to exit Loop 360.



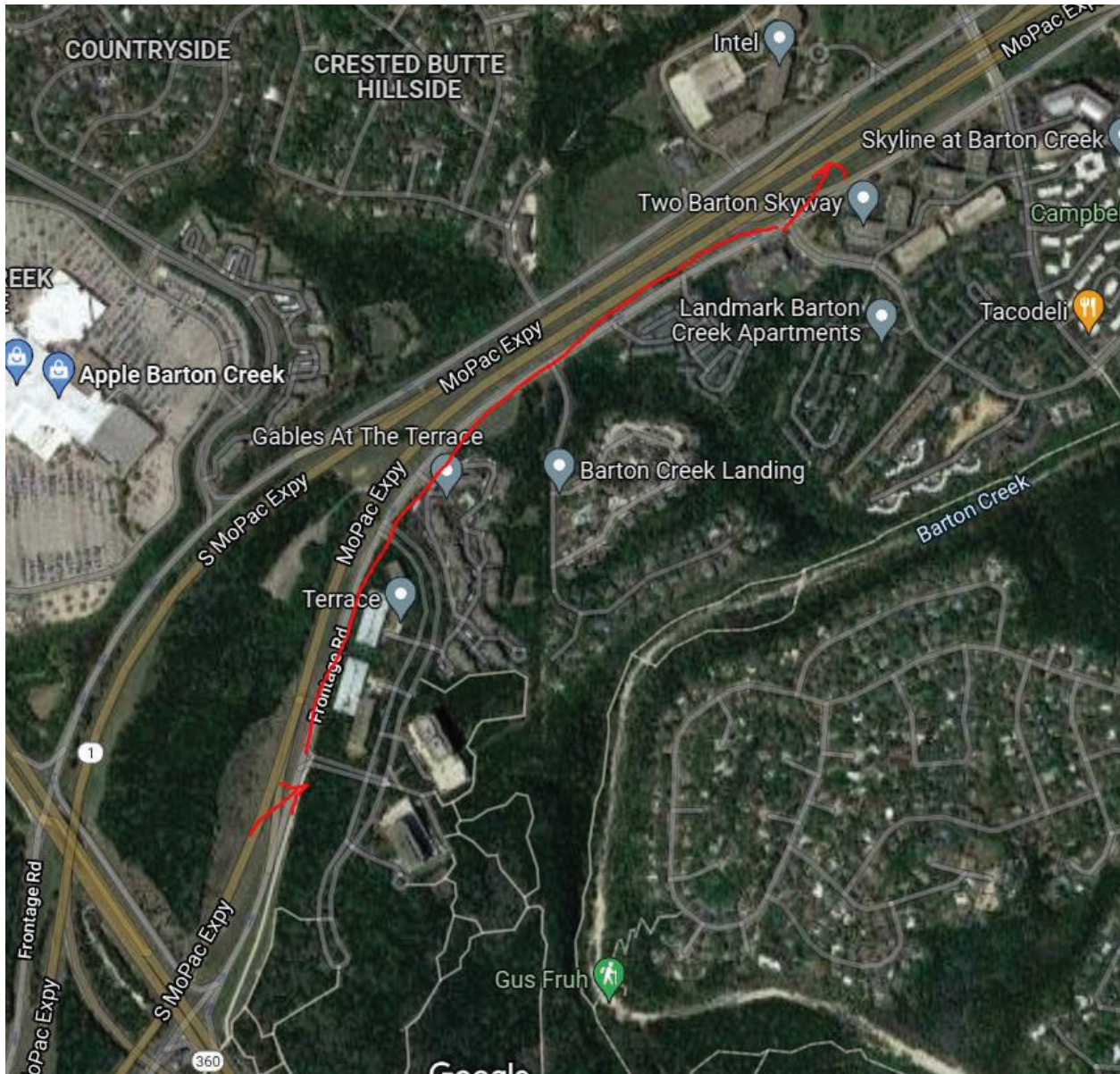
3. The 3 inside lanes (on Loop 360) are used to queue jump everyone to get in the right lane to turn right and enter MOPAC.



4. The right turn on the southeast corner of the Loop 360 and Mopac intersection is backed up all the way to congress on SH 71, many miles away. **This right turn should have a 2 lane right turn instead of one.**



5. **The ENTRANCE RAMP north of Loop 360 / Mopac intersection should become an EXIT RAMP.** This will allow everyone wanting to get on Mopac to line up on the frontage road instead of backing everyone up all the way back to SH 71.



6. Lots of space on the NB MOPAC frontage road to store traffic getting on Mopac instead of letting it back up all the way to Congress and SH 71.



7. NB MOPAC frontage road has 3 lanes and a sidewalk.



8. **The EXIT RAMP right before Barton Skyway, on Mopac NB, should be reversed.** From an EXIT to an ENTRANCE ramp.



9. The ramp reversal is done before the Barton Skyway light so no one has to go through it.

Thank you,
Gilbert Hernandez

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 7:00:01 PM

Name: Jessica Roop



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:17:38 PM

Name: leyla shams



Comment: NO WIDENING HIGHWAYS IN AUSTIN. Stop going backwards with transportation! We need more transportation options and more bike and pedestrian friendliness. This design is going in the WRONG DIRECTION.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 10:45:14 AM

Name: Matt Whitman



Comment: Hello, First, I'd please ask that the comment period be extended at least by an additional 30 days given the proposed scope of this project. Further, a full environmental impact study ought to be prepared for this project. There should be greater detail provided and investigated to determine enviromental impacts. Based on the information so far regarding this proposal, I do not think it is in the best interest of the city to move forward with it. I am strongly opposed to this project and any additional construction in the area, especially if there is insufficient research to demonstrate it's necessity. Thank you for your time, Matt

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 6:15:52 PM

Name: Joy Grosso

Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:17:25 PM

Name: Laura Mordecai



Comment: You've seen SOS's recommendations and I support them 100%. Single car mobility is unsustainable and we need to move away from that NOW. Our planet is in crisis. You know this. Do the right thing and start turning the ship. This cannot be about money, above or below the tables. Money does no good if there is no planet on which to spend it. Think about it.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85&formerr=1](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85&formerr=1)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 9:00:43 AM

Name: Jacob Hendrickson



Comment: No expansion of Mopac please. Don't need more toll lanes or more lanes period. Please consider converting existing lanes to hov and public transit Lanes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 5:59:38 PM

Name: Ali Altai



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 8:06:57 AM

Name: Lisa laird



Comment: We need some general purpose lanes instead of just express lanes. The express lanes on north mopac just cause a bottleneck going south at the bridge where all the lanes merge. This causes the people who aren't in the lane to experience a much longer backup than we previously had during rush hour time.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:13:26 PM

Name: Karin Ascot



Comment: I am appalled at TxDOT's plans to resurrect the double-decker Mopac highway. It is a terrible mistake that would destroy the enjoyment of Zilker Park, the Botanical Garden, Barton Springs, and the lake, as well as adding unnecessary air and noise pollution to the area around Austin High School and the hike-and-bike trail. In fact, several of Austin's most beloved recreational areas would be terribly impacted by this horrific project. Studies made clear decades ago that widening highways / expanding capacity does not reduce congestion significantly. This project is not worth the destruction of public areas nor the very high financial cost. Please a) update the traffic modeling data used for this project; b) complete a full Environmental Impact Statement; c) extend the comment period for 30 days - seriously, it is appalling, disingenuous, and underhanded to have your comment period over the biggest holiday period of the year!!! d) honestly & fully evaluate a "no build" or "very limited build" alternative. Thank you. Karin Ascot 32-year Resident & Taxpayer of Austin

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 5:26:45 PM

Name: BRETT DANIEL GARNER



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 7:43:33 AM

Name: Amber Deem-Mullikin



Comment: To whom it may concern, I do not agree with the proposal to use more of the Barton Springs green belt or Zilker Park area for the MoPac expansion. Explore alternative ideas with existing lanes (use of HOV for example) or get much more creative with the use of some money and leave the Park alone. Respectfully, Amber Deem-Mullikin

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 5:16:05 PM

Name: Lori Wolfe



Comment: Please consider extending the sidewalk . The Meridian neighborhood is surrounded by Highways and dangerous roads . This access would be amazing !!

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:07:47 PM

Name: Brooke Hollon



Comment: As residents of Rollingwood, my husband and I strongly agree with the position taken by the Travis County Commissioners Court in their letter to the CRTMA dated January 4, 2022. We also agree with the position of the City of Rollingwood regarding re-starting this Mopac South project. Rather than presenting the same 6 design alternatives that were proposed back in 2015, we expect to see feedback from the City of Rollingwood provided in 2015 incorporated into the plans. At that point the public will be able to give meaningful feedback. Thank you for your time.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 10:54:59 PM

Name: Helen Huckaba



Comment: Since the completion of Mopac improvements on Slaughter/LaCrosse, the traffic noise in my neighborhood, On the Park, is unbearable. The original plans have the sound wall extending to Slaughter on the west side of the highway. Because the wall stops at the drainage area, my house is not only getting all the southbound traffic noise but the bounce back from the east side sound wall with north bound traffic. I am having to invest upwards of \$60,000 to improve my windows to include soundproofing so we don't hear the traffic noise inside. I would beg TXDOT to complete the sound wall on the west side to help dampen the sound of the highway. We can't enjoy our backyard as we used to nor can I get proper sleep. Please help us. You have vastly decreased the value of my home.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:59:55 PM

Name: E



Comment: By promoting more traffic .. more cars with this plan you are desecrating the environmental integrity of Austin, Aquifers , central Texas, with additional pollution. And eventually the planet. Please don't do this. You are a sham for developers.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 5:04:45 PM

Name: Kuldeep Johnson



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 9:21:16 PM

Name: James Talbot



Comment: Why are we just hearing about this? Why is the comment period happening during Xmas and the property tax deadline? This project is a big, expensive, and ecologically unsound mistake that would further compromise Barton Springs and Zilker. We need an updated traffic analysis and an environmental impact study for starters. And rather than toll roads we need lanes for multi-passenger vehicles. Don't try to hide this one under the table-- we need at least a month for public input if you really want to be fair about this.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 4:54:34 PM

Name: Marshall Moore



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:55:41 PM

Name: Mary E. Bailey



Comment: I do not agree that a toll road is needed on MoPac. The Barton Green belt is sacred and needs to be protected for all Austinites. Do not do this project!

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:54:54 PM

Name: Julie



Comment: Please don't steal our nature and stop trying to take money greedy people. Slow down go to a speed race if you want to go fast sheesh..

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 9:19:31 PM

Name: Christy Seals



Comment: Please extend the comment period at least 30 days following the publication of current relevant traffic data and analysis. Please do not increase paving and impervious cover over Lady Bird Lake and Zilker Park. Mopac was never intended to be the highway that it has become, and we don't need / want an I-35 West running through this important watershed. Please analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 4:50:30 PM

Name: Julie Gualandri



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:48:32 PM

Name: Rachael Bailey



Comment: This is our beautiful home, the more we destroy our green spaces the less Austin is Austin. What makes this city unique is our amazing trails. Our community deserves to keep our nature.

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 5:48:02 PM

Name: Phillip Thomas



Comment: The Barton Creek watershed has barely survived the SH 45 lane miles that should not have been approved, so I see more lane miles as another stress on the ecosystem and hydrology of the watershed. It may indeed be the straw that breaks the camel's back. I don't support ANY proposal wherein that's a possibility.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 4:29:58 PM

Name: Julie Savasky



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:48:01 PM

Name: Tom Wald

Comment: The comment period is at an awkward time and also too short. I recommend adding an additional 30 days in order to receive robust community input. Safety for all types of roadway users should play a central role in this project. It's not clear where the additional traffic would go once it reaches the greater downtown Austin area. The volume of traffic on local streets has already reached capacity (pre-pandemic) based on the existing capacity of South MoPac. Other than the connection to the existing North MoPac managed lanes, the project materials do not explain where the additional vehicle traffic would travel to/from. This project should include shared-use paths on both sides of the highway for the length of the project that are separated from the roadway by a crash barrier, such as a concrete jersey barrier, guardrail, or retaining wall. The shared-use paths should be 12' wide. The highway crossings should also include shared-use paths or a coupling of protected bike lanes and sidewalks (if that matches the City of Austin's proposed facilities on either side of the highway). This project is doubling down on fomenting the changes we see to our local climate and the climates across the planet. This project is it—this is why our climate is changing. This project should instead not add any motor vehicle lanes. The project should include sound walls for the length of the project. For locations where the views are extraordinary, transparent walls should be used, as found along some German highways. The forecasted info on p. 6 of 43 of the exhibits is incorrect. These forecasts state that the traffic volumes will increase substantially (by the percentages listed). These forecasts are used to justify the project. However, without the project, these increases would not happen as forecasted. Therefore, it is not correct to forecast these traffic volume increases, since CTRMA does not yet have approval for the roadway expansion. There may be other ways to state what is here, e.g. "if we expand the roadway, then we will meet these projections". However, as stated, this is incorrect. Rather than adding pavement and lanes, it would be more suitable to convert existing lanes or existing pavement into managed lanes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 4:28:54 PM

Name: Shailaja Hayden



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project. This would have such a great benefit for myself and my neighbors!

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 5:39:12 PM

Name: Carol Stall



Comment: The passage of time has not improved this proposal one iota. It was a bad idea in 2015 and it's still a bad one. NO lane miles over the recharge zone! Protect our beautiful springs!

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 4:04:51 PM

Name: Michael Colin Wilson



Comment: I support the bike/ped path that follows along MoPac starting at Slaughter and goes to central Austin. And I especially support the paved path along S Hwy 45 to be expanded to hwy 1826 to Meridian neighborhood where all of us in the neighborhood would love to have this for bike/hike/run activities for all of our families.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:44:11 PM

Name: Michael Hall



Comment: I agree with the comments made by the Rollingwood Mayor in the document attached. Further I am very concerned about any elevated options and the noise and unsightly potential of elevated options. I am concerned that Bee Caves and the access to Rollingwood Drive via the underpass by Zilker park stay in a similar format/access ability to that existing today.

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File Upload: [RW_Comments_Mopac_South.pdf](#)



January 7, 2022

Mr. James Bass
Executive Director
Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N IH-35, Suite 625
Austin, TX 78705

RE: Official Public Comment on the MoPac South Environmental Study Virtual Public Meeting Number Five

Dear Mr. Bass:

Thank you for the opportunity to comment on the documents provided at Virtual Public Meeting Number Five for the MoPac South Project. The following comments are based on our review of these documents and the CAMPO 2045 Transportation Plan (2045 Plan) and are made in addition to numerous comments, official city actions, official resolutions, and personal engagement by multiple elected officials to both CTRMA and CAMPO over the past six and a half years.

Although little evidence exists as to the consideration or incorporation of any of our previous comments into your current plans, the City wishes to maintain its robust historic record on this issue and trusts that your full review of our previous communications will lead to a more collaborative approach going forward. While the City does not wish to restate each of its earlier comments at length, we enclose all correspondence since April of 2015 and incorporate the same by reference herein for inclusion in the record of comments for Open House Number Five (see Appendix A for all enclosures). Additionally, because CTRMA has not updated the project materials since they were released to the public in 2015, the City's earlier comments are still apposite and have yet to be addressed.

While the City of Rollingwood appreciates CTRMA's efforts to restart the MoPac South Environmental Study, it shares the concerns, expressed by Travis County and others, that it is difficult to meaningfully comment on outdated information. Indeed, because CTRMA has not updated the MoPac South alternatives in over five years, and because some of the existing alternatives do not comply with the 2045 Plan, the City cannot comprehensively address the current alternatives, or their satisfaction of the criteria established by CTRMA. Similarly, although CTRMA has indicated that it will select a preferred alternative based on new data, it has not

THE CITY OF ROLLINGWOOD



publicly released that data such that the City has had no opportunity to review and incorporate any new data into its comments.

Accordingly, to meet the current deadline, the City submits the following comments based on the information it has at this time. However, because the available information is inherently incomplete, the City requests more detailed information and additional time to comment so that we, as a community, can engage with CTRMA staff on the project. Without this additional time and information, the City, along with other public stakeholders, are placed at the distinct disadvantage of having to comment without knowing what, exactly, they are commenting on.

Compliance with CAMPO 2045 Plan

First, the CAMPO 2045 Plan requires that the MoPac South Project have two express lanes in each direction on MoPac, from Cesar Chavez to Slaughter Lane. Only alternatives 2A, 2B, and 2C are consistent with the 2045 Plan because alternatives 1A, 1B, and 3 (the City of Austin proposal) only have one express lane in each direction.¹ However, the Open House Number Five documents state that all six variations of the express lane alternatives are under evaluation and that “project data is required to be evaluated against the most recent Regional Transportation Plan, which is CAMPO 2045.” This raises the following questions:

- Is it CTRMA’s intent to re-evaluate all six express lane alternatives, even though the 2045 Plan requires two express lanes in each direction?
- Or are alternatives 2A, 2B, and 2C the only 2045 Plan-compliant alternatives (assuming the facts in the footnote below)?
- To the extent any new analysis or data for any of the alternative plans exist, we respectfully request copies so that we may study them in greater detail.

The 2045 Plan also requires the construction of an auxiliary lane on southbound MoPac from the RM 2244/Bee Caves Road entrance ramp to the southbound Loop 360 exit ramp, including an acceleration lane. This appears to require two additional lanes—an auxiliary lane and an acceleration lane.² However, none of the proposed plans show these required lanes and how they will fit into the overall plan that is adopted.

- Will additional right-of-way be required to construct the auxiliary and acceleration lanes and what will their configuration be?
- Do all six alternatives include these additional lanes?
- Are there any schematics that show these lanes?

¹ Even alternatives 2A, 2B, and 2C do not technically comply with the 2045 Plan because the proposed two express lanes only extend from Slaughter Lane to Barton Skyway, not to Cesar Chavez. But, based on the information we have before us, we are presupposing this is either an error in the presentation materials or will be corrected at some future date.

² These terms are often used interchangeably, and it is unclear what exactly is required by the 2045 Plan in this regard.

Second, the Past Events information contained on the MoPac South website includes links to detailed schematics presented in Open House Number Four. It also includes the following statement:

NOTE: Project materials, schematics, cost estimates, and other data linked below were developed in 2015 and have not been updated since. Updated materials will be provided virtually at Open House 5 beginning Nov. 22, 2021.

However, we have been unable to locate any updated schematics for the six alternatives, and the existing schematics contain very little detail with respect to geometrics.

- Will the detailed schematics presented in Open House Number Four be utilized for the updated analysis based on the 2045 Plan travel demand model?
- If not, we request copies of any new schematics. We also request that any updated schematics show the interconnection with the MoPac North Project, as it is currently constructed, as well as the proposed design and connection of Cesar Chavez to MoPac North when constructed.

Efficient Functioning of the Bee Cave (RM 2244) Intersection

The City reiterates its comments from the enclosed letter that the design of the MoPac South Project should ensure that the RM 2244 intersection with MoPac functions efficiently, and that the design does not preclude making improvements to the existing operation in the future. Such improvements may include widening the RM 2244 and MoPac frontage road approaches to better accommodate projected demand for travel west on RM 2244. The City has been in discussions with TxDOT concerning improvements to RM 2244, and it would be beneficial to all entities involved that we work together towards a long-term vision.

As we have previously stated, RM 2244 is a vital corridor for the City of Rollingwood and contains all of the City's commercial properties, which provide vital sales tax revenue. Additionally, the City is aware of and is sensitive to the needs and concerns of our faith-based community partner who owns property along the frontage road and adjacent to this key intersection. Any change to the RM 2244 intersection will have a direct and dramatic impact on the City and its residents. Therefore, we request that the MoPac South plan evaluation criteria include consideration of the need for upgraded intersections along MoPac South, such as RM 2244, Rollingwood Drive, and Barton Springs Road.

Significantly, the Open House Number Five documents do not include any schematics showing the intersection of RM 2244/Bee Caves Road. At one time, there was a proposal to close the intersection of RM 2244 at MoPac so that all eastbound traffic from RM 2244 would be required to turn south along the MoPac frontage road and complete a U-turn at Barton Skyway in order to proceed north along MoPac and the frontage road (the "right-in, right-out" option). The Open House Number Five documents do not show that as a proposed option, but they also do not negate it.

- Is there a plan to change the intersection of RM 2244 at MoPac? If so, please provide any detailed plans that are under consideration.
- Has there been any consideration to how changes to the RM 2244 intersection could impact traffic along Rollingwood Drive (for example, people may use Rollingwood Drive as a cut-through to avoid the RM 2244 intersection)? If so, we would appreciate copies of any such study.

The City of Rollingwood continues to oppose dramatic changes to the RM 2244 intersection, including the diverging diamond and continuous flow options that have been previously discussed. This intersection is the gateway to our City, how most of our citizens exit to go to work, and it is the center of our commercial tax base. Working together and establishing an efficient design for the RM 2244 intersection is vital to the City of Rollingwood.

The City of Rollingwood Opposes Elevated Lanes over MoPac and Elevated Ramps near Barton Skyway.

The City supports improvements to MoPac South that serve to increase mobility and safety; however, we oppose roadway designs that place elevated lanes over MoPac (e.g., Alternatives 2A and 2C). As we stated in the November 2017 letter, elevated lanes increase noise, are unsightly, and are currently being removed throughout the State of Texas, with I-35 in downtown Austin being the most recent example. Elevated lanes would not only affect the quality of life in Rollingwood, they would also negatively impact Zilker Park, the Zilker Park Club House, and Barton Springs.

Likewise, the City of Rollingwood opposes elevated ramps near Barton Skyway in a wishbone configuration (e.g., Alternative 2C). Although we have not had an opportunity to review CTRMA's updated plan, data, or traffic modeling, the City is unconvinced that the wishbone alternative with elevated ramps at Barton Skyway would improve traffic flow into or out of downtown. Instead, it appears from the preliminary sketches that the proposed configuration would conflict with general traffic using the northbound MoPac entrance ramp to the north of the Bee Cave intersection and the southbound MoPac exit ramp to the north of the Bee Cave intersection. We believe this could actually exacerbate traffic problems associated with these ramps rather than improving them.

The City of Rollingwood instead continues to support an alternative, such as 2B, that contains two express toll lanes in each direction without elevated lanes or a direct connection to downtown. As we have expressed before, and again without the benefit of updated traffic modeling, we are concerned the travel time comparisons between options 2B and 2C are not a fair comparison because the wishbone configuration has been optimized in several ways in which the two express toll lanes alternative has not. Thus, while CTRMA's current materials suggest an estimated travel time of 9 minutes—compared to 13 minutes for the non-elevated, two toll-lane alternative—the City believes that, properly optimized as set forth in the November 2017 letter, both options would produce comparable travel times.

The City also continues to support the development of an alternative design for Mopac South incorporating an express lane underpass design between RM 2244 and Barton Springs Road, which would mirror the express lane underpasses that were constructed as part of the MoPac North Project. Underpass lanes are both less expensive to construct and reduce road noise pollution. The City also supports the cantilever design currently being considered for the I-35 project between Airport Boulevard and Martin Luther King Drive.

Finally, the City reiterates the comments, as detailed in the enclosed letter, that CTRMA should (1) update all proposed alternatives for the MoPac South Project to show interconnection with the MoPac North Project and (2) implement bicycle and pedestrian infrastructure to provide consistent, direct access to and from downtown Austin as part of the MoPac South improvements.

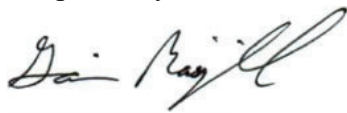
Additional Open House and Opportunity to Comment

The City of Rollingwood joins Travis County in its request that CTRMA repeat the virtual open house process once it has provided updated data, modeling, and information regarding all of the alternatives to the public. This will allow the City, and others, to offer complete and specific comments and will ensure that CTRMA is able to select a preferred alternative based on informed, data-based public input rather than assumptions and speculation on outdated information.

Once again, the City of Rollingwood appreciates CTRMA's efforts in conducting this process and working toward improved mobility for all of the MoPac stakeholders. The City recognizes the need for improvements to MoPac, supports the goal of improving vehicle, bike, and pedestrian traffic in the area, and looks forward to continuing to work with CTRMA, CAMPO, and TxDOT to accomplish those goals.

Should you have any questions, please do not hesitate to contact me.

Respectfully,



Gavin Massingill
Mayor
City of Rollingwood

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 5:25:42 PM

Name: Kristy Attaway



Comment: Would really like to see the bike path connected along 45 between Meridian and Circle C!

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 5:18:23 PM

Name: Megan Meisenbach

Comment: SOS Comments on Mopac South Project ~ Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website is confusing. Ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development. Sincerely, Megan Meisenbach

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:37:17 PM

Name: Patricia Bobeck



Comment: Adding more highway lanes at this location is a truly BAD idea. We can better use the road surfaces we already have. Construction would cause all kinds of congestion and environmental degradation. The resulting noise and traffic would add pollution of all types: noise, vehicle exhaust. Besides, I understand that the construction plan uses 10 year old data. This sounds like an all around bad idea. How about you add another month to the comment period and generate some new ideas.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 4:03:39 PM

Name: Saad Altai



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project Thousands of local population will benefit from this in many ways

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 5:13:35 PM

Name: Caroline Dunn

Comment: Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's [MopacSouth.com](#) website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Analyze real alternatives to added toll lanes. The six "alternatives" offered are all

variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 20, 2021 3:44:16 PM

Name: Tiffany Johnson



Comment: I am very much in favor of relieving the congestion along south Mopac. Looking at the options, I think #3 the City of Austin proposal may perhaps provide the most chance of alleviating congestion, however, of the other models, at least providing a direct connect ramp to Cesar Chavez would be imperative if option 3 is not chosen. I also am in favor of the bike/ped path all along south Mopac, and would favor the current paved 45 Trail to be completed to Hwy 1826 (near the Meridian neighborhood) to help provide mitigation and connectivity for the larger highway project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:36:29 PM

Name: Angela Richter



Comment: Thank you for the opportunity to submit a comment on the MoPac South Project. Austin Parks Foundation asks that you consider the following: -Please avoid taking or negatively impacting land in Zilker Park. -Please also reduce noise impacts to the park to the greatest extent possible. In particular, consider the visibility and noise impacts to the Zilker Botanical Garden and the Nature and Science Center's Nature's Way Preschool. -Include enough space under the highway to accommodate the potential future route of an expansion of the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan. -Explore building a "Park and Ride" garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours and could double as event and weekend parking for Zilker Park. This parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community and in alignment with the Zilker Park Vision Plan. -Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of MoPac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under MoPac to ensure a superior pedestrian and bicycle experience across the river to the north. Thank you very much for your consideration, Angela Richter, Advocacy Manager, Austin Parks Foundation

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 5:09:12 PM

Name: Brenda Ladd



Comment: I agree with Save Our Springs position regarding this proposed bridge. • Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. • Extend the comment period at least 30 days • Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement • Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” • The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. • Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. • Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. • Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:32:48 PM

Name: Trudy Hasan



Comment: I'm a long-time resident of southwest Austin and frequent user of south Mopac. I'm opposed to the current expansion plans because of the environmental damage it will cause both in the short term and long term. More roads are not the answer to our grossly short-sighted way of life. Austin traffic has changed significantly since March 2020 such that any proposed expansion plan should be re-evaluated in light of fewer commuters with more flexible schedules. My 5-day a week commute to north Austin on Mopac has been reduced (permanently) to twice a week. By now, I think we all realize it is not "business as usual" here and TXDOT must take that into account. Relying on plans from 2017 in a very different 2022 is a big mistake.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:55:14 PM

Name: John Rose

Comment: Hi, I think you should extend the deadline for community input, since the 30 days fell during the holidays. Most of us were spending time with our families and not recognizing potential damage to our community's environment. Indeed, this project will cause environmental damage to the Barton Creek area as currently proposed. You should work directly with the Save Our Springs Alliance and other environmental groups to revise the proposal and further to mitigate any environmental damage that any revised project may cause. This includes but is not limited to: —Preparing a full Environmental Impact Statement (EIS) that includes the adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders; — Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. First of all, gross. We don't need a double decker monstrosity spoiling that part of the city. Can we please have nice, pleasant things in that natural area? Second, it sounds like this will take park land or encroach on Austin High. Again, bad ideas; — Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement. Surely, there are options. Let's hear them all! — Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” Not only should the public be given more (and more publicized) opportunities for input, but we should be able to vote on something this significant; — Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis; — Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown; — Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete; and finally (for now), — Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:32:40 PM

Name: Geoff Cox



Comment: Please don't build a double decker highway.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:51:45 PM

Name: Kendra Roloson



Comment: Please extend the comment period by 30 days as the majority of the comment period fell over the holidays.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:17:30 PM

Name: Ray Eve Michel



Comment: Mopac already creates way too much noise pollution and pollution over the lake. Adding a double decker will magnify an already bad situation impacting the core of our city and what makes Austin beautiful. We need to explore alternate transportation options.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:33:44 PM

Name: Joyce Basciano



Comment: Please extend the comment period at least 30 days since the entire comment period fell during the holidays. Also correct the misinformation on your [MopacSouth.com](#) website. Please fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using existing pavement. Dedicating an existing inside lane to an HOV lane during rush hour should be considered. Make it a toll lane as you have done North of the river. Avoid building a double decker bridge over the existing MoPac, Lady Bird Lake and Austin High School. Please analyze the existing MoPac/Cesar Chavez ramps and how they will interact with proposed plans--this area is going to be a major challenge. Traffic modeling needs to be updated for the post Covid world which will see more tele-communicating and less driving. Give the public the another opportunity to give input before selecting a "preferred alternative". Prepare a full Environmental Impact Statement (EIS). Unlike MoPac North of the river, MoPac South is within the recharge zone for the Barton Springs segment of the Edwards Aquifer. Additional lane-miles of pavement within the recharge zones will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek Greenbelt and the endangered blind salamanders. Barton Springs and the surrounding natural areas are the iconic "crown jewels" of Austin. Once these natural features are destroyed, they will be gone forever.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:09:46 PM

Name: Craig Nazor

Comment: Your proposal would put an enormous amount of impervious cover over an environmentally sensitive area of Austin. There are endangered species directly at risk. This project merits a complete EIS. Anything less is too risky. I am opposed to toll lanes. Austin is already rapidly approaching a real affordability crisis. More toll lanes will make this worse. You also need to examine effects of traffic noise on the elevated parts of the proposed road. These effects will seriously damage the experiences of visitors to Zilker Botanical Gardens, the Austin Nature Center, and the Lady Bird Johnson Wildflower Center. The effects of the increased traffic on automobile CO2 emissions should also be considered - climate change is one of the biggest threats to the future livability of Austin. Minimal public parkland should be used for this project. The maximum plans proposed will cause the loss of too much parkland. Austin already struggles to acquire new parkland as the City rapidly expands. Why would we take more away? What is your goal for MoPac, anyway? Is it being planned as a portion of a "loop" around Austin? This will require even more massive projects through the Barton Springs recharge zone. Do the people of Austin really want that traffic through west Austin? Wouldn't 130 make a much better bypass than MoPac? In my opinion, the dollars spent on this project would be much better spent on the public transportation projects that MUST be built for a successful future for Austin. Our "car culture" will have to change very soon, or climate change could make Austin unlivable. The comment period for this project was poorly planned, and poorly executed. It gave the appearance that you were trying to avoid comments, not solicit comments. This leads to distrust between the community and CTRMA. Please do better in the future. Thank you for considering my comments..

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:20:48 PM

Name: David Heymann



Comment: See attached pdf.

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File Upload: [MoPac_commentary.pdf](#)

As an architect and planner, and professor of architecture (including lecturing on site design and planning), I've watched Austin fight off some pretty bad decisions over the past 30 years. The idea of double-decking the MoPac over Lady Bird Lake is one of the WORST ideas imaginable, and I am writing to express my strong opposition to this change.

It will only temporarily solve a problem that will just grow to be unworkable in a few years again. Take a look at the recently expanded Katy Freeway out of Houston, for example: it's again a traffic jam, because development increases along newly expanded corridors! Or: we double-decked I-35 already! How has that worked out for traffic?

The MoPac bridge is not going to solve anything. The MoPac was widened north of Lady Bird Lake over the past few years. Is THAT part of the highway any less congested? NO! There are enough slow-downs and bottle-necks along its entire length.

The larger and intractable problem is that the topography of the west side of Austin is simply not conducive to a major highway. We all know it. That is the reason the toll road was correctly built EAST of Austin. The trick would really be to find ways to have people use THAT road, since WE ALREADY HAVE IT, by promoting development along that spine. One way is: no more widening of the MoPac.

There is an old saying, about making sure to not cut off your nose to spite your face. Just so traffic – mostly cars with one passenger! – can move a little faster, that double-decked MoPac bridge will add an egregious eyesore to one of Austin's true gems, Lady Bird Lake, which is really Austin's primary public space. And just wait until the sound walls have to be added!

Really, this is just such backward thinking. Cities that keep prioritizing traffic over quality of public space all come to rue those decisions. Almost every city in the world that is ranked high in live-ability has actually reduced or buried highways in the past 25 years!

We already have one East/West wall in Austin, along I-35. It is problem enough! Let's not build another wall. And let's actually respect the underlying natural order of the landscape – including protecting the catchment area for Barton Springs – which is really what sets Austin apart as a city.

Sincerely,

David Heymann, FAIA

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:05:41 PM

Name: Jonathan Miller



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:16:04 PM

Name: D. Spradley



Comment: I strongly oppose building additional highway infrastructure in this area of Mopac south for both environmental and residential degradation factors. I would rather the authority look at buying the existing railroad ROW and provide alternate transportation to downtown and other areas. I also believe that the future of work will be less about commuting and therefore we are building something that will become obsolete. Why not let an improved I-35 and other corridors become the primary traffic conduit for South Austin? Why not let CapMetro finish building light rail to support additional capacity? Don't pave the world, come up with better transportation methods and keep Austin from becoming a concrete jungle!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:58:35 PM

Name: Joe Zakes



Comment: I am an Austin resident who lives near Slaughter and MOPAC. I drive on MOPAC almost every day. I'm opposed to building any new travel lanes or roadways through Zilker Park. If new express lanes are built, I think they would create bottlenecks downtown and lead to pressure to expand Cesar Chavez into other existing parkland.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:15:57 PM

Name: Sara Parhizkar

Comment: I disagree with the purposed solution to expand MoPoc to included toll lanes, including a double decker toll bridge over Lady Bird Lake. As a resident of Austin and someone who frequents the lake, it's trails, and recreation spaces, I am extremely concerned about the environmental impact this will have on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. This is the primary reason I do not like the purposed solution as I believe it will have negative impacts to the these fragile environments, which in my opinion, are the crown jewel of Austin and need to be protected so that they are still around for future generations. Apart from the environmental impact this solution will have, I am also concerned that the construction of a double decker bridge will encroach on park land and or Austin High School property. I personally would like to see “no build” or “very limited build” alternatives explored to improving traffic flow and ideas which do not leverage parkland or school property. Lastly, I'm concerned the purposed solution was based on old and out of date data. I would like to see CTRMA update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative”.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:57:51 PM

Name: Raul Gonzalez

Comment: Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's [MopacSouth.com](#) website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Analyze real alternatives to added toll lanes. The six "alternatives" offered are all

variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:56:45 PM

Name: Paula McDermott



Comment: Please: 1) extend the public comment period - I only just heard about this and many in our community who will be affected have not ... we need to have solid current analysis of related traffic data and environmental assessments, as well 2) in particular, do not include the massive infrastructure (e.g., double decker highway through Zilker Park?!) proposed - avoid encroaching on Austin High School and Zilker or other parkland

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:15:53 PM

Name: Sara Parhizkar

Comment: I disagree with the purposed solution to expand MoPoc to included toll lanes, including a double decker toll bridge over Lady Bird Lake. As a resident of Austin and someone who frequents the lake, it's trails, and recreation spaces, I am extremely concerned about the environmental impact this will have on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. This is the primary reason I do not like the purposed solution as I believe it will have negative impacts to the these fragile environments, which in my opinion, are the crown jewel of Austin and need to be protected so that they are still around for future generations. Apart from the environmental impact this solution will have, I am also concerned that the construction of a double decker bridge will encroach on park land and or Austin High School property. I personally would like to see “no build” or “very limited build” alternatives explored to improving traffic flow and ideas which do not leverage parkland or school property. Lastly, I'm concerned the purposed solution was based on old and out of date data. I would like to see CTRMA update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative”.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:15:06 PM

Name: Katheryn Jager



Comment: Building more toll roads through downtown is not a traffic solution. It is a horrible trend of forcing lower income drivers into neighborhoods and giving the wealthier drivers preference at the cost of all residents. Building in a way that devalues and/or damages our natural spaces that make Austin so precious is not a solution. We must protect our lakes, creeks, rivers, and parks. No amount of new pavement in our green spaces is worth the damage to what makes Austin special and beautiful. It is also not worth the risk to the aquifer at a time when water is becoming more and more of a scarce resource. Using outdated, pre-Covid and pre- work from home traffic data is not a solution. New data is needed to look at this planning process given societal shifts to remote work and the changing demographics of this growing area. Lastly, the decision to put this comment period in the middle of the holidays was seemingly calculated and in very poor taste. This should be recognized and corrected in the future.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:56:21 PM

Name: Aparna Katragadda



Comment: Oppose

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:12:59 PM

Name: Jessica Hirn



Comment: This is a terrible idea and it does not serve the community. Only those who will financially benefit from the toll road. Please do not move forward with this project, we need to protect the surrounding environment. The toll road that was constructed north of the lake is not useful and was such a waste of money and resources that could have been used more wisely.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:45:56 PM

Name: Laura Johnson Travis



Comment: This is a horrible idea for Austin. We need to preserve the natural world and come up with solutions that are sustainable for the entire planet, not just the efficiency of human beings. Do not allow this project to happen!!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:43:50 PM

Name: Maria Abernathy



Comment: I urge CTRMA to take heed of all the issues raised in the Rollingwood mayor's latest letter regarding the Mopac South plans, especially to update data and plans to 2022 status. More concrete is not the only answer to traffic congestion, and it can be immensely destructive to the Zilker Park/ Lady Bird Lake area. (My own birthplace, San Francisco CA, learned this lesson belatedly and finally took down the offensive Embarcadero Freeway.) I also urge CTRMA to be creative - Consider rapid transit routes a level below the Mopac bridge. Incentivize businesses to locate offices farther north and south, away from Austin's very cramped city center and closer to growing housing developments. Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:09:39 PM

Name: David King

Comment: Please extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's [MopacSouth.com](#) website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Analyze real alternatives to added toll lanes. The six

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:05:19 PM

Name: Aaron W Barker



Comment: Hello, I am writing to comment on the proposed Mopac South project. I am opposed to any plan to build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, or Austin High School. This will have a negative environmental impact, increase traffic problems, and destroy the natural beauty of these places. I request the following actions before any decisions are made: 1. Extend the comment period at least 30 days. 2. Prepare a full Environmental Impact Statement (EIS). 3. Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement. 4. Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” 5. Analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution. Please do not damage the environment and our city by approving this disastrous Mopac South project. Thanks, Aaron Barker

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:31:54 PM

Name: Cathleen M McGarity



Comment: I wish to express my firm opposition to the proposed MoPac South Toll Road proposal. In the first place, there should be at least an additional 30 day comment period to allow the citizenry adequate time to submit comments/concerns and alternatives. Second, there should be new analysis based on current (2022) data prior to the formulation of any proposal. Third, there should be greater weight given to the benefits of HOV/public transit lanes as an alternative to toll roads. Fourth, there should be a thorough evaluation of the environmental impacts of any such project, including climate change impacts, and consideration of mitigation measures to compensate for the increased impervious cover due to the project. For all of these reasons, the current proposal should be shelved.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 4:00:17 PM

Name: Michelle Doty



Comment: Please consider all the points made by Save Our Springs. I agree with them. Thank you.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:31:12 PM

Name: Kimberly Kohlhaas



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and Rollingwood.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:23:22 PM

Name: Walter G. Barfield



Comment: I support the previously submitted Save Our Springs commnets in full. It is increasingly obvious that increasing freeway lanes do not work. The CTRMA should use its authority to explore a commuter rail system from the southern suburbs into Austin using UPRR ROW and by negotiations with the Railroad.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:58:43 PM

Name: Cheris Lifford



Comment: This is a terrible idea. We need to focus our resources on greener mass transit.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:56:49 PM

Name: Michelle Widmer



Comment: I'm concerned that fellow citizens will not have the time to comment given the 30 period extended over the holidays. I'm very concerned about the environmental impact of the proposal and expect to see a full EIS report. I'm concerned how parkland and area schools would be impacted. At this time I'm very concerned about the impacts of this project and must in be opposition.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:19:49 PM

Name: Ronald Hasso



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:10:01 PM

Name: Josy Johnson



Comment: Please open public comments longer so that the austin residents can respond to how our aquifer is treated I am in opposition of expanding roads and impervious cover on the land around our jewel park, Zilker and Barton's springs and lady bird lake.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:53:20 PM

Name: Heather Hunziker

Comment: Extend the comment period at least 30 days. The comment period fell entirely over the holidays and CTRMA's [MopacSouth.com](#) website is confusing and includes false dates. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). The project's proposed addition of 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer will have substantial significant adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes the post-covid world of tele-commuting, flexible work schedules and other technological and societal changes that have largely eliminated "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a preferred alternative. The traffic data uses the outdated 2009 model--"to be updated to 2045 data at a later point" (presumably after the initial public comment period has ended). But CTRMA should update MoPac information with current data and a functional traffic model BEFORE choosing preferred alternatives—and allow public comment on that analysis. The 2035 model being used, now more than 10 years old, was problematic in 2009 and is virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. Neither the 2035 Model nor the 2045 model has any conception of the current world of telecommuting and flex schedules. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue these options in the interim as a test solution for very little money. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar

Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:49:32 PM

Name: Matthew Caldwell



Comment: As a lifelong citizen of Austin, I cannot support this plan for another elevated roadway on Mopac (Loop 1) that crosses Lady Bird Lake. When you look at the eyesore that it would be for the current residents in the area, and when you consider the environmental impacts it will undoubtedly have, this project is a nonstarter. Please don't create a new problem while trying to fix another problem.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:57:55 PM

Name: Kathryn Bryan



Comment: The theory of induced demand was proven by the MoPac/290 flyover completion that brought huge traffic jams onto southbound MoPac. More cars will futher degrade neighborhoods like mine that now hear the drone of highway traffic in our yards. Only mass transit is a sustainable option moving forward.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:46:59 PM

Name: Mary Arnold



Comment: I strongly support the comments and suggestions submitted by Save Our Springs!!! I am noticing more large trucks on MoPac now, and originally, MoPac was to be WITHOUT those large trucks... And I just watched a TV program about Engineering Disasters - with one segment about a large bridge project, building a new bridge adjacent to an existing bridge - but guess what.... Portions of the bridge under construction over a large waterway had problems - because the foundations of portions of the new bridge began to sink too much into the subsurface below the water - which was NOT supposed to happen, per the bridge supports design -- But it DID! The proposed new upper deck to the existing Mo-Pac bridge over Lady Bird Lake near Barton Creek should NOT be approved unless the actions recommended by SOS have been thoroughly reviewed and reported on to the public, with further opportunities for public comment at that point. We must continue to protect Barton Springs and the Edwards Aquifer. Constructing a huge new very expensive large bridge is NOT the solution.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:46:23 PM

Name: Anne Barnstone



Comment: Please don't turn South Mopac into I 35. Please don't make us go through what we went through for the toll lanes on North Mopac. Put some buses on Mopac if you want to decrease auto traffic. The faster you build highways and lanes the faster they will fill up. We don't want 17 lane highways like Houston.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:46:49 PM

Name: Mary Arnold



Comment: I strongly support the comments and suggestions submitted by Save Our Springs!!! I am noticing more large trucks on MoPac now, and originally, MoPac was to be WITHOUT those large trucks... And I just watched a TV program about Engineering Disasters - with one segment about a large bridge project, building a new bridge adjacent to an existing bridge - but guess what.... Portions of the bridge under construction over a large waterway had problems - because the foundations of portions of the new bridge began to sink too much into the subsurface below the water - which was NOT supposed to happen, per the bridge supports design -- But it DID! The proposed new upper deck to the existing Mo-Pac bridge over Lady Bird Lake near Barton Creek should NOT be approved unless the actions recommended by SOS have been thoroughly reviewed and reported on to the public, with further opportunities for public comment at that point. We must continue to protect Barton Springs and the Edwards Aquifer. Constructing a huge new very expensive large bridge is NOT the solution.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:43:42 PM

Name: Karen Mouton



Comment: Do not build roads/ a bridge/ a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Let's keep Austin beautiful. Thanks y'all!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:44:34 PM

Name: Susan M Pascoe



Comment: Do not do this!! There are enough challenges with climate change without adding more concrete. NO NO NO!!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:35:10 PM

Name: Niccole M Maurici



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:23:27 PM

Name: Elena Cox



Comment: Please don't build a double decker bridge in the Zilker area. It will harm our city and springs, and the community needs more time to discuss it. There needs to be a public announcement and sufficient time after the holidays for community discussion. I am strongly opposed to this construction project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:44:26 PM

Name: Mark Weiler



Comment: The MOPAC south plan as it is currently planned or envisioned is out of date at best. Life has changed with COVID and so many more people have started working from home. As a long time Austin resident, since '78, I have watched MOPAC traffic go up and then back down with COVID, today it is a lot lighter than it was 2 yrs ago. In addition the plan with the added toll lanes in my opinion will not make a difference in traffic as traffic from I-35 will just start using MOPAC. There should be full EIS, updated traffic study to determine the best low impact option to carry us forward. Heck... I often wonder as I go across the town lake bridge if restripping some lanes wouldn't help, I have wondered why this wasn't done yrs ago.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:12:54 PM

Name: Linda Cox



Comment: Please do not build a double decker road over Zilker Park. This will damage our town irreparably. The public comment period must be extended. It does not show integrity to push this through without sufficient community involvement in the decision by asking for comments over the holidays and by failing to alert the public sufficiently. Linda Cox Professor at ACC Resident over 23 years

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:40:49 PM

Name: Linda Puckett



Comment: Austin needs to protect Zilker Park and Barton Springs from the noise pollution and air pollution that would come with the proposed toll road. I strongly oppose the construction of the proposed toll road.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:30:58 PM

Name: Steven Ascherl



Comment: The past 5 or so years have taught me that the barrel runs deep, but running the comment period over the holidays when people have a million other things going on is pretty low. At least be of some quality and extend the commenting period another 30 days so we have a chance to fairly criticize this option that needlessly encroaches on Austin High. We need to discuss the effects Covid has had on traffic patterns as well. Please be of kind spirit and extend the discussion period for 30 days. Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:10:05 PM

Name: Beki Halpin



Comment: This is a terrible design for this road that will cost the city more by destroying its natural beauty than it will add in value of questionable traffic enhancement. Please extend the comment period. Much of the allotted time has been consumed by the holidays. Prepare a full environmental impact statement. Look at using the existing footprint of the current highway to shrink, rearrange and adapt utilization of current paved space to achieve traffic relief goals. Update your traffic models. They are totally out of date and the models themselves are questionable because they have not accurately projected the current traffic. Look at adding capacity by converting existing lanes into HOV lanes at rush hour.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:27:48 PM

Name: Robert Daniel

Comment: As proposed, this project will have a negative impact on local watersheds. As proposed, this project will do little to reduce congestion on MoPac. As proposed, this project is mainly a subsidy to homebuilders in Hays County. The proposed project may be "in Austin," but it is not "for Austin." I am opposed to its construction.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:08:29 PM

Name: Patricia Slate



Comment: This will drastically change my commute. What's the hurry? Please expand the comment period to show that you are willing to listen to input from all who are severely affected by this project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:26:18 PM

Name: g. guardian



Comment: as a long time visitor to the hill country, WE VOTE NO on this incredibly stupid idea.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:07:39 PM

Name: Victor Alcorta



Comment: I fully support the comments submitted by the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:07:11 PM

Name: Rodney Cummings



Comment: First and most important, you must extend the comment period at least one month. Soliciting comments exclusively over the holidays is a clear demonstration of an attempt to avoid public opinion. Second, do not build a bridge over Austin's most important public venues (i.e., Zilker Park, AHS). This contradicts the goal of keeping Austin as a place where people want to live. Third, prepare a full Environmental Impact Statement (EIS). You cannot rightfully claim that there is anything remotely "environmental" in your study without an EIS. Fourth, update the data to communicate accurate information, and create more alternatives that do not include toll lanes. Fifth, avoid selecting a "preferred" alternative, since it is clear that preference serves only development interests, and not the public that lives in Austin. Let the public decide what is "preferred", not your bureaucrats.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:59:27 PM

Name: Ste Kubenka

Comment: Dear CTRMA Boardmembers: This double-decked MoPac plan is a relic brought back to life with traffic data and environmental analysis that is more than 10 years old. If built, it would convert MoPac from a local commuter highway into I-35 West and further destroy more Austin neighborhoods. Its construction and operation pose an irreversible threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek Greenbelt. Before proceeding, CTRMA must update the traffic modeling data and give the public another opportunity to give input before selecting only among decade-old alternatives. Provide "no build" or "very limited build" alternatives that improve traffic flow using the existing pavement, HOV lanes, public transit options, ramp metering, and other available technologies. Updated traffic modeling will capture our post-covid world where tele-commuting, flexible work schedules, and other technological and societal changes have largely eliminated the necessity of ill-advised spending to accommodate demands predicted over a decade ago. Like a good carpenter, CTRMA needs to measure twice and saw once. Especially if the "cut" is going to cost half a billion dollars. Sincerely, Ste Kubenka Austin, TX 78746

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 3:03:21 PM

Name: William Bitner



Comment: The solution is not more cars and an ugly double decker - put this effort toward mass transit instead of just creating another clogged expressway.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:58:44 PM

Name: Annette Catherine Hudson



Comment: I agree that there is a serious congestion problem crossing Lady Bird Lake on both Mopac and South IH35, but I do not think the answer is to build elevated lanes over the lake because the problem is not with traffic heading to downtown. That ramp is usually less busy than traffic going farther. The improvements to Mopac north of the lake caused multiple problems during construction and did little to alleviate traffic congestion. It now just occurs in different areas. The toll lanes were presented as a win-win solution but in reality they benefit only the elites that can afford to use them and the corporation profiting from them. I think a better approach is to provide more alternatives for crossing the river instead of focusing on one psuedo solution

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 2:54:10 PM

Name: Abby Rodgers



Comment: I am writing to against the construction of a new toll road along Mopac by CTRMA. This will cause disruption and ecological damage to Zilker Park and Lady Bird Lake.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:53:15 PM

Name: Sarah A.



Comment: No one who cares about Barton Springs, Zilker Park, Ladybird Lake, or our amazing trail system wants this! You need to find better ways to alleviate traffic. Use your imagination, for God's sake! You CAN come up with a better solution. This poor city and its inhabitants have suffered through enough development and watched as the very reasons we live here get demolished, changed, and watered down until this special city feels like a shell of its former self. We want smarter people, more transparent info, and better solutions in regard to this project. Do better, now!!!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 2:13:04 PM

Name: Chris McGee



Comment: I live “On the Park” which is a Circle C neighborhood that butts up against Mopac. Ever since the new underpass was built, and the noise barrier walls were erected, the noise in my area has been unbearable (as in waking us up in the middle of the night). In the version of the plans we saw, the noise barrier wall on our side of Mopac was to extend well beyond where it currently is. With the current build, the noise deflects off the long wall (on the Wildflower side) and there’s no barrier on our side to block it. I emailed our Tx Dot representative and received zero response.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:53:06 PM

Name: Sarah A.



Comment: No one who cares about Barton Springs, Zilker Park, Ladybird Lake, or our amazing trail system wants this! You need to find better ways to alleviate traffic. Use your imagination, for God's sake! You CAN come up with a better solution. This poor city and its inhabitants have suffered through enough development and watched as the very reasons we live here get demolished, changed, and watered down until this special city feels like a shell of its former self. We want smarter people, more transparent info, and better solutions in regard to this project. Do better, now!!!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:52:57 PM

Name: Park Hills Baptist Church



Comment: We are attaching a letter as our Public Comment

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File Upload: [Letter_Park_Hills_to_CTRMA_2022-01-07.pdf](#)

January 7, 2022

CTRMA
c/o MoPac South Environmental Study
3300 N. I-35, Suite 625,
Austin, TX 78705

Public Comment on the Mopac South Project
Virtual Open House Meeting #5

Dear Mr. Bass,

We are submitting this input on behalf of the Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to our immediate physical proximity to Mopac, we have significant interest in how the expansion plan is developing in our area and the impact it may have to our immediate environment and to the use of our property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, our property is heavily used for the traffic and parking needs for the major events in our city park.

We appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. We are also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. We have concerns with some of the options that are being considered at this time.

As much as it is our desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, we believe we need the assistance of professional input from traffic and other experts on the impact these proposals would have on our property. At this early stage, we are aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:

(1) We are concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. We support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in our location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.

The option of adding noise-preventing walls would cause our intersection to be covered with concrete, instead of preserving the green environment the community enjoys today. Every

 **PARK HILLS BAPTIST CHURCH**
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spring, we have lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of our property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. We would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.

Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. We have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. We do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.

(2) We are concerned for what impact the current plans will have on ingress-egress to our property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact our exit lane (currently it is on the north of the Mopac exit ramp to 2244). We want to ensure that moving the ramp to the north would not negatively affect our ability to use our property exit.

(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. We are concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). We realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, we cannot support any options that might inhibit the future development of this intersection.

Thank you for the opportunity to submit our comments and concerns. We look forward to being able to discuss these matters further with your staff. Feel free to contact our Senior Pastor, Dr. V. Samuel Clintoc at sclintoc@parkhillsbaptist.church.

The Pastors of Park Hills Baptist Church
V. Samuel Clintoc, Ph. D.
Russ Bennett
Taylor Dueker

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 1:55:36 PM

Name: Vinayak Pai



Comment: South MoPac near William Cannon Exit and the merge onto s MoPac from William Cannon(near Costco) gets backed up significantly due to 3 lanes becoming 2 lanes. I see a wide stretch of shoulder on both inside lane and outside lane. It would help to alleviate this problem if 3 lanes are extended all the way to slaughter exit.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 1:25:36 PM

Name: Girard Kinney



Comment: This project should not proceed until current data is fully incorporated. Girard

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:51:58 PM

Name: Jay van Bavel



Comment: I am writing to support the position taken by the Travis County Commissioners Court and the City of Rollingwood on this issue. We are not in favor or any expansion of Mopac immediately adjacent to our neighborhood. Thank yoy

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Tuesday, January 4, 2022 10:30:57 AM

Name: Beau Fannon



Comment: Extend the bike trail to Meridian

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:51:28 PM

Name: Michael Fitzgerald



Comment: My family and I are against the double decker idea. We need to keep Austin beautiful. An ugly double deck freeway would destroy the beauty of our city. We are trying to get rid of double deck freeways on i35. San Francisco got rid of theirs in the early 80s and immediately improved the feel of their community. Let's not move backwards.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:49:26 PM

Name: Mary Williams



Comment: We live very close to Rollingwood and already hear MoPac at every hour of the day, but particularly at night. MoPac is surprisingly loud given how far we are from it. We ask that the City of Austin discontinue further consideration of any proposal that would involve raising or altering this section of MoPac to create a double decker highway. Raising the highway or adding a second level to the existing highway will only increase traffic noise pollution in our neighborhood which will negatively impact both our quality of life and potentially our property values. When several other alternatives exist that will improve traffic flow but not adversely impact Rollingwood and its surrounding areas, further consideration of a double decker MoPac must end. We are pleased to see that the City is considering redesigning the exit from MoPac Highway south onto Bee Caves Rd. As currently designed, this exit is difficult to navigate at best and can be dangerous when making a right turn onto Bee Caves Road. We are aware of several neighbors whose newly licensed drivers have struggled with this exit and/or had accidents while attempting to turn right onto Bee Caves after traveling south on MoPac. Thank you for your consideration. Best regards, Mary Williams

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, January 3, 2022 6:10:10 PM

Name: Ted Raab



Comment: I oppose the option you recommend — building more automobile travel lanes over the Colorado River / Lady Bird Lake. I've lived in Austin for over 35 years and have lived in other regions of the United States for almost as long. We've been told time and again that each proposal to add additional automobile travel lanes will solve our traffic congestion problems and each time the problems only grow larger. Any transportation plan or project for Austin that isn't primarily centered on mass transit is a waste of effort and resources. Rather than accommodating more cars at this choke point, we need to reduce the number of cars and get folks into buses, trains, and other shared transportation.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:43:05 PM

Name: Ryan Clinton



Comment: I am very strongly against the City of Austin's proposal as it would cause traffic heading west of town to deadlock. It's hard for me to believe that anyone thought that would be a good idea. Overall, I endorse the comments of the City of Rollingwood and the Travis County Commissioners.

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Current page: <https://voh.mopacsouth.com/express-lane-alternative>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, January 3, 2022 5:29:08 PM

Name: Jennifer Voss



Comment: Thank you for taking my input. I am an Austin High School Parent and have lived in Austin for 30 years. I am strongly opposed to direct connector ramps (highway off and on-ramps which would take vehicles directly to and from Mopac near AHS) near AHS. I also advocate for traffic being moved as close as possible to the bluff north of AHS and for the City of Austin's Lamar Beach Plan. An additional note - Unfortunately, Express Lanes have not resulted in improved commute times for me nor for any of my friends, coworkers, etc. With that in mind, I do not support more Express Lanes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, January 3, 2022 4:23:06 PM

Name: Irma Guerra-Scott



Comment: Primary goal should be to keep traffic flowing and eliminating weaving/merging traffic while considering the environmental and noise impact. Closing some On ramps might help especially the first one past Bee Cave Road.

Trans Code Option:

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:38:37 PM

Name: Yu Gu



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:32:58 PM

Name: Amy Demas



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, January 3, 2022 1:31:02 PM

Name: Kelly Spahn



Comment: I would like to extend my support in requesting the hike and bike trail that currently ends at Escarpment Blvd along Hwy 45 be extended to the entrance of the Meridian neighborhood just east of FM 1826 and Hwy 45. This would not only grant access to the trail for those living in Meridian, but also create a much safer passage for those who ride bikes between all the neighborhoods along Hwy 45, to include Avana and GreyRock Ridge residents riding eastbound. Thank you for your consideration.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:32:23 PM

Name: Mary O Beck



Comment: I am writing to request that you: 1. Add 30 days to the comment period, so that people who have been preoccupied by the holidays can have a chance to consider this issue, and 2. Use updated traffic modelling data that takes into account changes in traffic patterns and land usage over the previous decade. I have used Mopac as a local commuting route for the last 20 years. In that time, it has gotten increasingly congested, but is still much better than IH35, because it is largely used by local commuters going into and out of the downtown area. Turning it into a longer-haul throughput route is a terrible idea. The installation of toll lanes on the North part of Mopac caused years of traffic disruption without resulting in a significant reduction in traffic congestion on that portion of Mopac. Continuing toll lanes through the downtown area all the way to South Austin will likely make the problem worse by encouraging the use of Mopac as an alternative to IH35. It will also result in irreparably negative changes to Zilker Park, Lady Bird Lake, Austin High School, and other nearby facilities. Thousands of Austinites who use and depend on these green spaces would have an opinion about this project if given a more timely chance to do so.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, January 3, 2022 12:53:06 PM

Name: Scott Marcus



Comment: Extending the 45 path to Meridian will increase access for that community and add bike/run access for many more. I support.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, January 3, 2022 12:46:27 AM

Name: Alec



Comment: I've lived in Austin for over a year now and have utilized MoPac for 90% of that time. I'm from the Chicago metropolitan area where I-94 takes place. It is here and likely in other places around the country where a grass strip dividing north & south lanes were torn away to make room for a fourth [passing/fast] lane and still providing room for shoulders on both sides. I see places on MoPac where 4 lanes can exist, where grass can be torn away to loosen congestion. Obviously the 4th lane won't last long because everything is so tight, but it will make a difference in the long run. The same goes for I-35 and anywhere else there's pointless grass filler dividing highways. Strip it away, add a fourth (non-toll) lane, and you will have less congestion & happier, safer drivers. Just look at the stretch of highway between Chicago & Kenosha, & you'll see what I mean. Thank you.

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:28:41 PM

Name: Mark schuh



Comment: Please reconsider using outdated plans for the Mopac expansion. Our city has changed significantly 7 years and needs to be revisited to ensure the right thing is done. Having a double decker expressway will cause noise and light pollution and crowded exits and affect property values in the neighborhoods. Thanks

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:21:38 PM

Name: Jolene Kiolbassa



Comment: It is clear you do not want your project scrutinized because your public "outreach" and comment period are during the holidays. And of course you don't want the community to realize that you would add lanes where TownLake runners, bicyclists and paddle boarders and Austin HS students would breathe in the resulting fumes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:12:27 PM

Name: Kent Kostka



Comment: Please listen to the voters and the feedback you got the last time this was proposed, and do NOT build double-decker Mopac or encroach on Austin High School. The outdated idea that you can build your way out of permanent congestion has been proven wrong time and time again. Build this, and it will be clogged up within a few years by the traffic you encourage by doing this. While Austin is already trying to find ways to reverse the immense damage done to the city by the bad 1970s I-35 double decking, you want to commit the same 20th-century mistake on Mopac? And you're using 2009 data from an outdated plan to justify this? Please, NO! Find a more well-thought-out, responsible solution that won't damage Austin High and the environment.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:10:55 PM

Name: Derek Eckert

Comment: I strongly oppose the idea of building another layer on MoPac. This would be an environmental hazard, increase noise and traffic thru South Austin, make our town look like Dallas (barf) and ruin the charm and character of surrounding neighborhoods.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:54:27 PM

Name: Donald Becker



Comment: I strongly support an expansion of South Mopac. Since the increased mobility is of value to the entire community, not even just to those who use the road, and certainly not just to those who might pay a toll to use express lanes, the improvements to the road should be supported by the entire community and not funded by a toll.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:47:28 PM

Name: Deborah Cobalis



Comment: I am seriously opposed to the proposed traffic project over MOPAC. A new traffic study needs to be done plus the danger to Lady Bird Lake and Barton Springs cannot be under estimated!! We must protect these important resources that make our city what it is!!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:42:16 PM

Name: Mira Madhav



Comment: I am writing to strongly oppose the proposed toll road on Mopac over the Lady Bird Lake and near Zilker Park. We truly need to protect our Aquifer and Parklands in the heart of Austin. Existing lanes can always be utilized to be HOV lanes during peak traffic times at minimum extra work and very little in cost. With working situations changing where more remote work is now possible as well as proposed transport systems, we truly should work with the lanes already present and re-evaluate the traffic needs. Please put the needs of the environment and our future generations before profits. Tolls roads do not sever the majority of the commuters as it becomes costly to use on daily bases. We need to MAINTAIN PERVIOUS GROUND COVER to avoid floods and to ensure water reaches the aquifer -- VERY IMPORTANT.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:36:40 PM

Name: John Berry

Comment: I am entirely against this plan for reasons that are well-described in the Save Our Springs Alliance's comments, with the following additional remarks: 1. The outbreak of poison blue-green algae at Sculpture Fall this fall indicates that Barton Creek is already at the critical point of being converted to an urban sewer rather than a stream suitable for recreation. This plan will (a) take more land in the watershed and convert it to concrete, and (b) add to pressures to build more "stuff" in the watershed, causing further deterioration in stream water quality. 2. In addition to the impacts on Zilker Park, Austin High School, etc., that SOS notes, any two level bridge in this area will be a visual and aural nightmare for all the people of Austin who use the Ladybird Johnson Lake Trail, the Armstrong Bikeway, the Johnson Creek Trail, the Lake itself (whether boating, kayaking, rowing, etc.), Deep Eddy Pool, the Austin Science and Nature Center and the local streets such as Lake Austin Boulevard, Cesar Chavez, Veteran's Drive and Stratford Drive, etc. 3. As SOS notes, it will increase congestion on Cesar Chavez through downtown immeasurably. This will in turn increase pressure to convert W.5th and W. 6th to high rise buildings like those east of Lamar Blvd. In this sense, this project is a hidden subsidy to the real estate industry in Austin: if they want it, let them help pay for it. 4. Why not prioritize improvements to highway 360 instead.? Connecting an improved 360 to Southwest Pkwy via Lost Creek Blvd., Escala Drive and Mirador Dr. would not only remove some traffic from Mopac, but would have made the huge project at the Oak Hill Y unnecessary, and it would only have angered a few really rich people, but probably have improved access for their neighbors in "Estates above Lost Creek" enough that they would have been overruled by their own neighbors.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:34:26 PM

Name: John Mullikin



Comment: * Extend the comment period at least 30 days. * Prepare a full Environmental Impact Statement (EIS). * Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement * Update the traffic modeling data * Analyze real alternatives to added toll lanes

Trans Code Option:

- I am employed by TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:28:19 PM

Name: Linda Moore



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:28:00 PM

Name: Steffany Thees



Comment: It is my belief that this project is not beneficial to the environment or the community. This is not what Austin wants and our community should have a say in how our infrastructure is planned. We need to protect our water and surrounding environment.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:21:13 PM

Name: Robert Lawrence Akers



Comment: (re-submitted because your website only thanked me for signing up for a newsletter, and not for submitting a comment -- why??) Toll roads are the least efficient and most costly means of handling high volume traffic. They induce extra construction cost, require extra right-of-way and construction, require greater impervious cover, induce merging conflicts, and fail to achieve maximum throughput by creating an imbalance of lane usage. They are the brain child of a misguided government business model that has been broadly discredited in the public eye and at the legislature. They fiscally punish urban areas to subsidize rural constituents, who get their roads "for free", relatively speaking. Toll roads are in almost every way BAD PUBLIC POLICY. So why persist in using this discredited approach? Why add all this additional pavement over a super-sensitive environmental zone when the needs assessment pre-dates the gigantic changes in commuting dynamics introduced via the work-at-home model? Why use obsolete data to justify what could possibly be over-building? And why place the design decisions ahead of getting modern data? Why induce vast noise pollution over Central and Southwest Austin by elevating the roadway? Why limit the public comment period to a COVID-plagued holiday season? You need to put the brakes on this nonsense and re-assess your goals and your design assumptions and allow the tax-and-toll paying public to do the same. Sincerely, Robert L. Akers

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:19:16 PM

Name: Holly Reed



Comment: I am opposed to this proposal, and the options illustrated in the exhibits. The expansion of the bridge over Lady Bird Lake and/ or addition of elevated lanes and connectors would do irreparable harm to the environment and parks, trails and water sheds which many people have labored long and hard to preserve, and many more (by the thousands!) enjoy every day. In addition, these exhibits and studies therein are from 2015, not current, and it is deceptive to ask the public to comment on dated information. Sincerely, Holly Reed President, West Austin Neighborhood Group

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 4:08:47 PM

Name: guy leblanc



Comment: I drive on mopac at least twice a day, at least 5 days a week, and have done so for more than 25 years. So I can tell you that your claim that the addition of toll lanes to Mopac has significantly improved traffic conditions there is FALSE. So you are justifying this project under specious claims right off the bat. If I understand the material here correctly, an EIS has not been done yet, and may not be done if TXDOT gives a ruling of no significant impact to your EA. Given TXDOT's history, most recently with the horrendous Oak Hill Y project, in which they essentially raped the land, and totally misled the public as to what the extent of tree removal would have been, this seems like exactly the wrong way to go about this. An EIS should made BEFORE any decision is made. My preference would be that there not be any further expansion of the infrastructure over/ near Ladybird Lake. Please expand the period for public comment and please do the MOST detailed EIS possible.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:54:27 PM

Name: Garret Nick



Comment: please stop trying to build this project. there aren't enough traffic jams on earth to justify the continued destruction of our lakefront, parks, and schools that will be impacted by this. put this money into mass transit and stop building more roads.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:36:41 PM

Name: Teresa Davidson



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rolling Wood. Please no double decking the bridge at Lady Bird Lake and turning Austin's prettiest areas near the park and lake into ugly Anywhere USA infrastructure.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:34:20 PM

Name: Alec Robinson



Comment: Thank you CTRMA and TxDOT for hosting the Virtual Open House and for providing an opportunity for public comments on the MoPac South project. I want to express my preference for no increased elevations over the Bee Cave Road and Lady Bird Lake areas. I also believe that more time should be provided to seek public feedback before selecting the preferred alternative. In my view, the visuals and videos explaining the various alternatives should be updated to reflect changes that have occurred since 2015. I don't believe the public can provide you with the highest quality feedback unless the information on the various alternatives is accurate and up-to-date. I would like to see the Virtual Open House extended until CTRMA and TxDot can update this information. Sincerely, Alec

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:27:55 PM

Name: Linda Moore



Comment: A 50 year citizen of Austin, I am against everything in this proposal, particularly with the scheme to double deck the bridge over Lady Bird Lake. It would do irreparable harm to the park and trails and watersheds which many people labored long and hard to preserve, and many more, by the hundreds of thousands, enjoy every day.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:17:31 PM

Name: David Todd



Comment: I strongly object to the proposal to enlarge MoPac South, adding a toll bridge and 4 toll lanes. I think that this kind of highway project only feeds suburban sprawl, will add to the contamination of the Barton springs watershed, and is self-defeating - engendering additional construction in outlying areas that quickly consumes the added lane space.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:14:24 PM

Name: Thomas Schiefer



Comment: Please consider the long lasting effects of continuing development along mopac and west of the mopac corridor. Study after study show that bigger and more roads do not lead to a relief in traffic, quite the opposite actually. More roads and bigger roads lead to more growth and in turn more traffic, congestion, pollution, and problems. The Edwards Aquifer is a fragile ecosystem that cannot handle more growth. Please consider alternative options to the growth problem the city and the hill country are experiencing. I whole heartedly disagree with the expansion of Mopac. This is a bad idea for everyone except the people monetarily involved.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:14:11 PM

Name: Kevin P. Keim



Comment: A 30-year citizen of Austin, I am against everything in this proposal, particularly with the scheme to double deck the bridge over Lady Bird Lake. It would do irreparable harm to the park and trails and water sheds which many people labored long and hard to preserve, and many more, by the hundreds of thousands, enjoy every day.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:09:36 PM

Name: julie hill



Comment: Hello, I'd like to comment on the proposal for the Mopac South toll road. There are so many studies proving that adding more highway lanes doesn't really do much to alleviate traffic, and since this proposal also runs right through an ecologically fragile area, I think it's very important to explore other options. As an Austinite who uses the proposed route quite a lot, I would very much rather see the money for this project funneled into public transit, and I would think a train to downtown/Zilker/Barton Springs would be heavily used, particularly for events. Instead of trying to accommodate MORE cars, I would very much like to see solutions that encourage people to drive LESS, and thus the need for enormous double-decker bridges is alleviated. Alternately, if there HAS to be a double deck bridge, put it on 35, which doesn't run through the recharge zone as far as I'm aware. Thank you for your time!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:06:54 PM

Name: Kris Meiske

Comment: I am concerned to hear TeXDot plans to add managed lanes on the south Mopac project. These managed lanes are a complete rip off and never deliver on the promise's TeXDot makes. I drive Mopac every weekday for work all the way from South Austin to Round Rock and I can give you firsthand account that these lanes are merely tools to increase the coffers of TeXDot and 3rd party interest and perpetuates inequalities in our city. Before Covid hitting going south on Mopac was horrible and the managed lanes only made it worse. This lane would often clog up and move much slower than the free lanes during rush hour because people were dumb enough to take a ride on the pay lane thinking they might get to their destination faster however most of the time they didn't and the prices soared, what was stated in the past before the new Toll road opened was that prices would not see north of \$3 dollars I believe during rush hour, this was a complete lie or bad/fudged math. They would often soar to \$12 to \$15 dollars, and I bet if you pulled the data south and north direction for only rush hour and made that public prior to Covid everyone would be shocked to see the stifling cost of this atrocious Toll Road you call managed lanes. Once I listened to an interview on KUT with a spokesperson on the new managed lanes and in that interview the spokesperson stated if you had any issues with the new Mopac toll you could call in and they would refund you depending on the nature of the issue. So, a few weeks later I had an issue where we were diverted on the toll lane due to a wreck, I called and explained what happened and they said they would look into it however they never called me back never refunded me and did nothing. They also do not help any higher need transport vehicles such as ambulance etc. I've seen it they don't mess with these lanes during rush hour traffic because they will get locked in and doesn't allow for cars in front of them to move out of the way. and during non-rush hour there's no point getting on it either. Not only is the managed lane money a grab and they will not help anyone falsely charged, but they also don't care. I'm not opposed to a toll road for a limited amount of time to pay for the road construction if that's your only way for paying for new roads and the Texas Legislature doesn't have the guts to raise the gas tax or the ever-increasing electric vehicle usage, however they will never do that and its toll for life and the special interest or whoever is getting kickbacks on this deal won't let that happen. Here's the real kicker this comment will go nowhere Toll roads are a done deal, the only thing us riders have to look forward to is heavy traffic on Mopac no relief in sight. The current managed lanes proved that, so let's keep up the façade that TeXDot or the city is actually doing something to alleviate traffic. All I ask is for someone to care who reads this, fight it don't let this happen figure out away to just add more lanes and fund it the hard way, managed lanes and toll lanes do nothing but increase the inequality in our city and they do not work period.

Thanks for listening.
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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:03:56 PM

Name: CHELSEY K KETCHER



Comment: Hello, I am personally opposed to the widening of South Mopac because it will bring too much noise and pollution so close to homes. The money should be used to improve I-35. We should in no way encourage I-35 traffic to move to Mopac which was never designed to have that many cars driving on it daily. Homeowners will suffer environmental pollutants and increased noise should Mopac be widened. The only thing that needs to be widened is the bridge over Lady Bird Lake. As a daily commuter from North to South Mopac, that is where the problem is. Also I am strongly opposed to the insane toll prices during peak hours. \$7 to drive less than 3 miles is an utterly embarrassment to the state, and ultimately sets the rich from the middle class even further a part. It's just a pathetic way to make more money on a project that never should have been done in the first place.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:02:06 PM

Name: Rachel Zierzow



Comment: I oppose the building of more toll lanes on Mopac South including a double-decker bridge crossing Ladybird Lake near Austin High School. The project would create adverse environmental impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. The highway should remain a local commuter road, not an alternative to I-35, which is what in effect it would become. I encourage the consideration of toll road alternatives as well as public transportation initiatives, as toll roads are not an acceptable solution for easing climate change, encouraging carpooling, or getting at the root cause of traffic problems.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 3:00:28 PM

Name: Nelson Guda



Comment: Please, please do not approve this. Austin residents have long fought against the expansion of MOPAC because of the many environmental and neighborhood impacts. This expansion is not needed and will greatly diminish the quality of life in Austin. I implore you to reject this. Sincerely, Dr. Nelson Guda

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:58:03 PM

Name: Kent Browning



Comment: This needs to be fixed but "double decking" and tolls are NOT the way to fix this. Restriping and adding lanes are a much better improvement.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:56:06 PM

Name: Emily Blazer



Comment: This idea keeps being revived, and the planning process seems to be aimed at avoiding or ignoring environmental impact. As road builders, your information is highly slanted toward the effect this project may have on traffic and there's very little about what you consider to be acceptable environmental effects. Please publish more information about the environmental study: - What was the original request? - Who is doing the study? Your FAQs indicate that "The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) are developing the MoPac South Environmental Study cooperatively with other local partners." This is not enough information and hardly reassuring. - What criteria were important in that choice? - What objections have been made? - Why is there so little information about the likely environmental impact?

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:50:39 PM

Name: Lacy Seybold

Comment: • My preference is for two general purpose non-tolled lanes in each direction. My second choice (and it's a distant second) would be Express Lane Option 2A with its two express lanes in each direction with at least one direct connection lane into downtown. Option 3 is the third choice. You won't get meaningful relief (even if you could conjure up the completed roadways tomorrow) if you only do one lane in any of your configurations. And if you've ever driven south of William Cannon during any rush hour, you should recognize that one new lane is not going to solve that disaster. The reason for two lanes in each direction – whether toll lanes or non-tolled-- should be obvious. A single lane (particularly if it's as narrow as the ones are north of the river in most places) creates a bottleneck if there's a stalled car or an accident that is difficult to recover from. If only one lane can be provided, there needs to be a much more robust pull-off area throughout the entire length of the express lane. • Any time you add a situation with traffic exiting an express lane and needing to cross over existing lanes, you create a new or additional bottleneck, so please don't do that. • While HOV lanes sound lovely, I don't think they will actually do much to alleviate traffic congestion. They don't seem to do much in Houston during rush hour except provide an example of what empty lanes look like to the rest of the Houston public trying to get to work or home from work as they ride by themselves in their cars. If it hasn't taken on there in the last 30 years, why would you assume that Austin (which has an abysmal public transit record south of the river) would fare any differently? • Don't kid yourselves and try to hoodwink the rest of us into thinking that there will be some massive conversion of the general populace into ride-sharers or mass transit aficionados in the next 20 years. You WILL get a few folks to buy in, especially those coming from the east or west coasts where they didn't have to have cars to get around. But it isn't a long-term viable or reasonable plan in a place with months of 100-degree weather to assume that our public transit system can be effectively combined with a multi-block walk to a job downtown in business attire on a daily basis. The same is true with assuming that any significant number people will bike from Circle C to a work location downtown, no matter how nice the route is. That's not a robust or realistic contribution to the solution. • Finally, I would really hate to see another multi-year fiasco like the one we had with building of the toll lanes between Lady Bird (then Town) Lake and Parmer Lane – with its unending traffic nightmares and squeezed down lanes which we endured for the promise of improved traffic flow -- only to find that the Mobility Authority somehow decided once the lanes opened that the express lanes had never been intended to relieve traffic congestion in the minds of those at the Mobility Authority, but rather were for the use of buses and first responders and those in a hurry for an occasional need---NOT for the relief of the general public's traffic nightmares. I, and the people I know who drove MOPAC during construction, felt like we'd been lied to about the reason for the construction and the expense. I urge you not

to make that mistake again.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:50:08 PM

Name: James talon



Comment: Please do not allow this "billion dollar mistake" It will turn MoPac from being a local commuter route into an i35 west take away our parkland, hurt sensitive areas like Barton creek/springs, Lady Bird Lake Park, the Butler Hike & Bike Trail (places where endangered species live), and it is using outdated traffic data instead of post covid where we have reduced commuting. Please give more time for the public to comment, and look for ways to use existing paved areas for road projects instead of carving into our limited and precious wild areas. Focus on ways to combat climate change by using mass transit options instead of continuing to provide even more single person commuting options (we already need to cut back on that). Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:49:53 PM

Name: Kaleta Krull



Comment: This deadline is indicative of an entity that wants to limit comments. Furthermore, comments are solicited for ridiculously outdated traffic data and analysis. EXTEND THE COMMENT PERIOD for AT LEAST another 6 weeks. You are endangering gems of Austin we Austinites hold dear, as well as endangering water supplies, and inevitably causing increased flood risk with the onslaught of impervious cover and construction in such sensitive zones. We deserve updated data, analysis, and ample time to review it and comment.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:49:08 PM

Name: Elizabeth Badger



Comment: Extend the comment period time. Perform an Environmental Impact Statement. Evaluate a limited build alternative.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:48:49 PM

Name: Megan Meisenbach



Comment: Dear CTRMA. Please extend the comment period after traffic and environmental studies are complete and published. In addition Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development. Sincerely, Megan Meisenbach

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:46:01 PM

Name: Deborah E. Perkins



Comment: I strongly agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:43:16 PM

Name: Mikaela Thomas

Comment: To whom it may concern, I'd like to first ask that the comment period be extended at least 30 days. The comment period fell entirely over the holidays while many people are busy and distracted with other matters. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Before any further consideration is given to the proposal, there should be a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. DO NOT build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding

toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Thank you, Mikaela Thomas

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:42:15 PM

Name: Save Barton Creek Association



Comment: Please see the attached comment from Save Barton Creek Association.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:36:52 PM

Name: Richard Grayum



Comment: Please widen the freeway enough to handle the future capacity and not just the current demand. We need five lanes in each direction.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:35:44 PM

Name: Guillermo Leal



Comment: The documentation dismisses HOV lanes off-hand without indicating potential impact whereas the toll lane may have a similar impact but only to those who can afford/choose to pay the toll. Everyone else suffers the same traffic issues now as they will in 2035 and does not really encourage drivers to shift to public transport or shared transport modes. This suggests that those who can afford to pay will have a better traffic experience than everyone else and does not resolve traffic issues at all.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:33:37 PM

Name: Emma Lindrose-Siegel



Comment: I am primarily concerned about the environmental impact of this project on the recharge zone of the Barton Springs segment of the Edwards Aquifer and do not feel this plan adequately addresses those concerns. Barton Springs is a crown jewel of Austin and any proposed construction on the recharge zone so close to the Springs should produce an environmental assessment showing little to no impact. We cannot build another Barton Springs. This plan is based on out of date traffic data and analysis. For a project of this size and cost, it would be in the community's best interest to work off of current traffic data and then extend the comment period following its publication so the plan can be viewed in the context of relevant, current data. The Open House materials use traffic data from the 2009 model that supported the long-range 2035 CAMPO regional plan, which is over a decade old. Is there really no recent traffic data that can be used in the creation of this plan? What are the alternatives to additional toll lanes? All of the alternatives offered in this plan add toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. This has been very effective in other major Texas cities, like Dallas and Houston, but isn't even explored here.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:33:14 PM

Name: J. Stephen Adams



Comment: As an ex-Austinite who loves and visits Austin (and Barton Springs) regularly, I'm very concerned about the MoPac South Toll Road Proposal and how quickly it is getting pushed through. I ask that you, at the very least: Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.

Sincerely, J. Stephen Adams

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:22:34 PM

Name: Tami Esson



Comment: I am fervently opposed to this idea. The Rollingwood community and surrounding areas have paid higher amounts for their property and being near a highway that will be very loud and unattractive- destroying some scenic views- will devalue these houses. It also bring in more homeless people who will camp out under the highway causing this neighborhood to be unsafe and once again devaluing the properties even further. For all these reasons I strongly oppose.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:21:26 PM

Name: Sarah Simpson



Comment: This project is problematic for many reasons and should be abandoned. It does not align with Austin's transportation goals or Project Connect; it is the manifestation of outdated engineering practices that disregard sustainable transportation principles and denies the phenomenon of induced demand; and will be both harmful to the regions ecology as well as multimodal connectivity; and is fiscally irresponsible creating incredible costs that will only benefit road buildingd companies - not the people or environment of Austin. Please cancel the project as it will direly do years, decades of harm. Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:16:25 PM

Name: Zachary Elkins



Comment: I am deeply concerned about these plans, for the following reasons: 1. The public has just learned of these plans and there has been very little time for public comment and discussion. Please provide more time to understand the consequences. 2. QUALITY OF LIFE. Large highways should go around cities, not through them. There is a reason that no residents or businesses choose to be anywhere near I35. Cities that built multilane highways through cities in the 1960s and 70s are moving away from such projects, for good reason. Austin should be doing so as well. The impact of increased pollution on the health and happiness who live around Mopac is enormous. 3. DOES NOT ADDRESS LATENT DEMAND. Building more lanes does not deal with the latent demand problem. We will be left with the environmental and quality of life costs of an expanded highway, and still have the same traffic problems. We should be providing alternatives to Mopac, not expanding it. 4. NO ESTIMATE OF DEMAND IN THE POST-PANDEMIC ERA. It is likely that vastly fewer people will be commuting in the new era, now that remote work is established. Or at least not commuting at the same peak hours. Please reconsider these plans as they are not good for the community.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:09:10 PM

Name: Miles Payton



Comment: I strongly oppose the plan to widen Mopac and lock in decades of greenhouse gasses. This will only induce more traffic and commuting from the far southwest. Billions of dollars should be spent on cleaner transit options, not this climate arson.

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:08:20 PM

Name: Erik Andersen



Comment: Please do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Traffic patterns have changed due to Covid. Rail, bus, bike, run, walk access is much better for the environment than more roads, bridges and cars.

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:07:50 PM

Name: Hunter Warren



Comment: Please do not add these express lanes. Mopac has been expanded enough already. This will only serve to pollute the river more and become an eyesore to everyone using Zilker park, area residents and Austin High students.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:07:09 PM

Name: Matt Fehrenbacher



Comment: I think these options all fare poorly in all the environmental consideration areas. Adding any number of lanes will induce more car traffic. This automatically means worsened air quality, traffic noise, and pollution into our water supply. And the increased space required for still more lanes of car traffic will necessarily affect or destroy existing businesses, historical areas, and green spaces. I hope that the "No Build" alternative is considered in combination with greater investment in public transit, including low-construction improvements to Mopac like reserving lanes for buses. A shift to more public transit could actually improve on our current levels of pollution, congestion, noise, and motor vehicle caused injuries and deaths. Unlike the proposed "build" alternatives, which would further gouge our community with deadly, ugly car traffic.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:03:54 PM

Name: Tamara Scott



Comment: Please reconsider the Mopac South Toll Road project. It will have substantial adverse environmental impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process. Also, this project needs to be given a more substantial amount of time for public comment and concern considering the breadth of such a proposal.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:03:50 PM

Name: Nancy Kameya



Comment: I support plan 2b or 2c. This project is needed now. I see aggressive driving and road rage on this route every day. There is so much more traffic due to the continued housing growth in Buda, Kyle and Dripping Springs.

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[utm_source=Mobility+Authority+Expressway+News&utm_campaign=97b36356d6-EMAIL_CAMPAIGN_2019_08_20_03_09_COPY_01&utm_medium=email&utm_term=0_29163dd927-97b36356d6-335332385](https://voh.mopacsouth.com/?utm_source=Mobility+Authority+Expressway+News&utm_campaign=97b36356d6-EMAIL_CAMPAIGN_2019_08_20_03_09_COPY_01&utm_medium=email&utm_term=0_29163dd927-97b36356d6-335332385)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 2:00:51 PM

Name: Brendan Wittstruck



Comment: In the strongest words possible, I do not support adding lanes of any kind to MoPac. If tolled direct access lanes are desired, existing lanes should be repurposed. It is unacceptable that a project in the Barton Springs recharge zone not receive a full Environmental Impact Statement (instead of an EA). I do not support expansion, do not support expansion of right-of-way, and do not support the addition of elevated ramps or flyovers. Further, this is a poor infrastructure investment, as added lanes will induce additional vehicle trips rendering the stated purpose of the expansion null.

Trans Code Option:

- I do business with TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:59:19 PM

Name: Rian Greisemer



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood regarding the Mopac study.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:58:29 PM

Name: Christophe Amadi



Comment: I implore you to review and analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Clearly there has been dramatic changes in the past 2 years which require changing traffic models. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue it in the interim as a test solution for very little money. In other words, the project as proposed fundamentally doesn't solve any issues but certainly creates some.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:54:45 PM

Name: Susan Fernandes



Comment: We agree with the positions taken in comments submitted by Travis County Commissioners Court and the City of Rollingwood and ask that these positions be strongly considered as CTRMA restarts the design of the MoPac South project. Susan and Frank Fernandes

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Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:53:24 PM

Name: Julie Valentine



Comment: I oppose all of the plans for Mopac South.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:50:08 PM

Name: Paul Sanchez-Navarro



Comment: First of all, Austin does not need more toll roads. Roads should be built from public funds. The existing toll roads in and around Austin are just elitist ways to offer people with money easier traffic. Remove tolls and you will see traffic flow better. This proposed double-decker road is not the best solution to traffic problems. Several changes can be made before bringing more traffic through Zilker park. Remove toll on highway 45 and make all trucks not stopping in Austin take that, reduce I-35 traffic by at least 30%. Use MOPAC and Amtrak train rails for commuter trains between Austin and San Antonio, with stops in Buda, Kyle, San Marcos and New Braunfels between 7-10 a.m. and 4-6 pm. This would reduce traffic on I-35 (rails took land under "public domain" and "common carrier" so they can be used for the good of the public, not just private cargo rails. Be more innovative before creating double traffic lanes over one of Austin's best and most used parks. Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:49:05 PM

Name: Jason Perez



Comment: This Mopac South fix is a bad idea. It would make it awful for all the people recreating below the bridge. Please analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. The comment period be extended for at least 30 days following the publication of current relevant traffic data and analysis.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:48:39 PM

Name: Haley Winn



Comment: To whom it may concern, this proposal would bring drastic change to the nature and wildlife surround the current bridge. Elements which I believe are one of the main draws the the city in the first place. Damaging and reducing the current parks and walkways under mopac would significantly harm the outdoor experience along the lake, not to mention hinder vital views while walking, paddle boarding and kayaking- the leading summer outdoor activities. As a longtime resident I am surprised that the proposal would sweep in over the holidays without giving residents enough notice or time to give feedback. Please consider the opening the comments for a longer period of time now and prevent an outpouring of upset later when residents feel they were not allowed adequate time to research and give feedback on the proposal. I am vehemently against this idea, and I hope you will value residents and wildlife over money & convenience. We have plenty of roads that currently need repairs before a project like this is considered as a job-creator. And we have plenty of highway options to cross the river with great efficiency as it stands. Concerned citizen, Haley Winn

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:48:25 PM

Name: T Thomas



Comment: To whom it concerns: Please don't build a double decked highway, like IH35, on Mopac over Ladybird Lake! The massive road structures of IH35 have proven to be no answer to automotive congestion, and are currently under consideration for redesign. I would also like to advocate for the removal/repositioning of the giant green toll road signs that went up with the northbound toll lane. They are eyesores that obstruct the beautiful sunset views from the lake and park. Please listen to SOS and the voices representing conservation, beauty and ecology. Austin is an internationally desirable place to live in part as a result of their efforts. Please don't kill the goose that lays the golden egg. Thank you, Tracy Thomas

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:47:42 PM

Name: Maxwell Wethington



Comment: I do not support the construction of the new toll roads. Austin workers, especially those who previously commuted to the downtown area are adjusting to a work from home model. Adding lanes to existing highways has a horrible track record for improving commutes, with the megahighways constructed recently in Houston as a perfect example.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:47:41 PM

Name: Richard Pitcher



Comment: I am strongly opposed to this project and the ramifications it would have on some of Austin's most prized neighborhoods and parks. The proposal is based on out-dated data and will be a blight on the city. While everyone can agree that traffic congestion must be addressed, this is not the way to do it.

Trans Code Option:

- I could benefit monetarily from the project or other item about which I am commenting

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:47:35 PM

Name: Jules Elkins



Comment: Please see attached letter

Trans Code Option:

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File Upload: [Mopac_South_Public_Comment.pdf](#)

January 6, 2022

CTRMA

c/o Mopac South Environmental Study
3300 N. I-35, Suite 625 Austin, TX 78705
MoPacSouth@ctrma.org

To the CTRMA:

As an Austin resident and Professor of Environmental Health and Urban Planning, I wish to submit the following comments on the MoPac South Environmental Study virtual open house as official comments for consideration.

1. Extend the public comment period.

The material provided to the public is based on outdated 2015 information. Without updated information, input made by the public is at best faulty. Additionally, the comment period fell over two major holidays, which tends to significantly reduce public engagement.

2. Health Assessment.

Increasing Mopac South by up to 4 additional lanes will significantly increase the levels of pollution to which residents of Austin will be exposed. There is a robust body of scientific evidence that shows that traffic-related air pollution (TRAP) is one of the major sources of exposure in urban areas and has been associated with a wide range of adverse human health effects. These include higher rates of asthma onset and aggravation, cardiovascular disease, impaired lung development in children, preterm and low-birthweight infants, childhood leukemia, and premature death. Emerging evidence links TRAP with neurotoxicity and the alteration of neurobehavioral function.

The human health effects of the expansion of Mopac have not been adequately assessed nor have they been communicated in any substantive or meaningful way to the public. Asking for public comment, and then basing decisions upon those comments, is misleading when the basic scientific information has not been presented.

3. Analyze real alternatives to added toll lanes.

The proposed six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. I encourage the analysis of a range of alternatives that make

better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

4. Include the climate implications as a primary concern in the Mopac South plans.

The transportation sector is the greatest contributor to US carbon emissions—and just as important as vehicles are the roads and highways they travel on. The [State Highway Induced Frequency of Travel](#) (SHIFT) calculator, developed by the Rocky Mountain Institute, shows that the impact of 4 additional lanes for 8.8 miles will induce up to 116 million vehicle miles travelled per year, which is about 1.2 million metric tons of CO₂ emissions by 2050.

5. Engage the public in a robust and meaningful conversation about what kind of

Austin we as a community want for the future.

The average citizen’s understanding of the impacts of infrastructure is more nuanced than it was fifty years ago. There is a broad coalition of people in Austin — neighbors concerned with continued negative impacts from a highway or people who are interested in different forms of mobility — that are pushing innovative options for transit that do not include cars and expanded roadways. We need to continue and expand this community conversation and ask again and again: Who is the greater good that benefits from a “utilitarian infrastructure project”? If the answer doesn’t prioritize the planet, public health and safety for everyone — including people who cannot or do not drive — or the vitality of our precious public spaces, then we must fight for an alternative that does.

Moving transit away from highways and cars is happening all over America. If we look in our backyard to Houston and the proposed expansion of I-45, there is tremendous public outcry over this proposed project because the impacts on the community are intense and the benefits questionable. In a 2019 [Houston Chronicle editorial](#), urban planner and academic, Jeff Speck, wrote that the NHHIP “can be described as having significant costs and significant benefits. The costs are best understood as tremendous, and the benefits are best understood as false.”

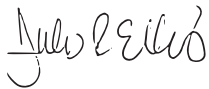
We live on a rapidly warming planet. We know what kind of infrastructure projects are going to help, and which are going to hurt our chances of survival. These are not just roads, but questions of collective action. Most people want access to safe places to walk and bike where they live. Most people say they would like to reduce greenhouse gas emissions. However, the infrastructure that will allow us to do this requires trade offs, such as losing a traffic lane to put in a bike lane, or muscling through a few months of construction near neighborhoods in order to build a new transit stop.

In Conclusion

Breaking free of the status quo will require creativity and a commitment on the part of transportation officials. It will require a clear mandate from voting citizens that they want to see funding go towards green spaces, bus service, and fixing inadequate sidewalk facilities, with less towards asphalt and road widening. It will require elected officials to show political courage and boldness and implement the will of a representative democracy — not just the squeakiest wheels with the largest campaign donations.

Let's slow down and have this vitally important community conversation about our future as Austinites and the future of Austin.

Sincerely,



Jules R. Elkins

Assistant Professor of Instruction
Department of Geography and the Environment
The University of Texas at Austin



From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:47:02 PM

Name: Sarah Faust

Comment: Please accept the below comments on the MoPac South proposal: 1. Please extend the comment period for 30 days to allow the public to understand the plan and provide meaningful comment. The outreach on the comment period has not been significant enough to engage many affected persons. 2. Prepare a full Environmental Impact Statement for the proposal which would significantly increase impervious cover and pollution from cars within the Barton Springs/Edwards Aquifer Recharge Zone. 3. Do not build a double decker bridge over Zilker Park, Lady Bird Lake, or Austin High School. In Austin we have suffered from the impacts of double decked highways and seen how it can divide communities and hurt the environment. We have worked hard to upgrade our trail system near Lady Bird Lake and develop the lake for outdoor recreation. The Zilker Botanical Gardens, the Austin Nature and Science Center, and Zilker Park will all be degraded significantly by this proposal. Adding impervious cover and car traffic in this area will discourage healthy recreation and exposure to nature, two things all human beings need to thrive and survive. Building a double highway in this area would be contrary to all of these efforts. The increased noise, traffic, and pollution are not appropriate in this location. 4. Fully evaluate a no build or limited build alternative that improves traffic flow using the existing pavement. 5. Update the traffic modeling before moving forwards. The traffic data from 2009 is no longer accurate. Commuting patterns have changed significantly since COVID, especially for people coming from the suburbs into downtown, a majority of the traffic driver on this portion of MoPac. This ten year old traffic data is not reflective at all of the future traffic patterns this road will need to serve. 6. Provide an option that does not include a toll lane. 7. Provide options that convert existing lanes to HOV lanes. HOV lanes would be much more effective and mitigate against climate change. 8. Provide analysis of the amount of mitigation land that would be purchased to offset increases in impervious cover. Thank you for your consideration.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:46:35 PM

Name: Ann Nye

Comment: 1. Extend the comment period at least 30 days. 2. Prepare a full Environmental Impact Statement (EIS)- these are very sensitive areas 3. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.- Double decker roadways are not effective, are an eyesore, and don't address the issues. 4. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative."-If anyone sits in traffic at 45th headed south, it is easy to see the issues approaching the bridge. With the changes made with the Caesar Chavez interchange, the toll road, etc, there are now 5 on ramps within about 1 mile. That many people changing lanes over that short of a distance is one of the major problems. They need to close some of the entrances and have people enter further back possibly on a two lane merge. Also the quick exit at Bee Caves requires those exiting mopac to cross multiple lanes to go west also causing a back up. 5. Evaluate the noise impact to adjacent neighborhoods.- When the toll, Caesar Chavez interchange was added, the noise impact in Barton Hills is significant. 6. The raised deck on I35 is an example of why this doesn't work.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:45:31 PM

Name: Heather MacLean



Comment: Do not build new highway lanes or decks over town lake. Traffic will always be a challenge; ruining all our parks isn't the solution. More lanes will simply fill up with more traffic. Toll lanes and highways are not an equitable solution for all travelers.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:44:36 PM

Name: Alex Robinette



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood. I do not feel that sufficient analysis or updates have been performed to make this a valid process. The methods being used to determine solutions are out-dated and not forward-thinking. I am unequivocally opposed to elevated lanes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:44:33 PM

Name: Eric Sparks



Comment: I agree with the comments submitted on Jan 4, 2022 by the Travis County Commissioners Court.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:41:12 PM

Name: Kevin Smith



Comment: The possible expansion of S. Mopac over Ladybird Lake, Zilker Park, and the greenbelt is a major issue that deserves open, public review. To that end, please: (a) Extend the comment period for 30 days, given that the prior period was over the holidays (and during the distraction that is Omicron); (b) ensure a full Environmental Impact Statement is prepared; (c) consider alternative approaches to taking park land, building a double-decker bridge, and toll lanes; (d) ensure the latest traffic and environmental data is used in any analysis. Thank you!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:40:23 PM

Name: Christy Lamb



Comment: I agree with the positions taken in the comments by the Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:39:26 PM

Name: Barry Stone



Comment: Building a double decker bridge toll or not over Ladybird Lake is terrible idea. Its bad for the environment, with harmful effects on endangered wildlife, Barton Springs, and folks that use the trail for exerciser and escape. I would urge TXDOT to explore non-building solutions such as HOV lanes rather than creating yet another toll road that lines the pockets of foreign investors and ruins our quality of life. Building wider lanes only encourages more traffic, it never works, only building in more alternatives to car commuting will solve this problem. In the wake of the rise of telecommuting, in fact it might not be as big as a problem as projected and I would encourage TXDOT to extend the comment period for at least 30 days following the publication of current relevant traffic data and analysis. Thank you..

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:38:48 PM

Name: Felicity Maxwell



Comment: As a South Austin resident, I am totally opposed to any expansion of Mopac and particularly a widening of Lady Bird Lake Bridge to five lanes in each direction. Furthermore, in reviewing the congestion data provided, it is clear that induced demand in traffic estimates has not been considered, nor has changes in transportation patterns in a post-COVID environment. These estimate are 10+ years old and should not be used to inform such a critical project. Honestly, if congestion is the key concern of the Mopac South project, then we should be working to shifting existing right of way to congestion-free alternatives such as public transportation, bicycling, and walking. Finally, City of Austin just recorded a record number of traffic related fatalities in 2021, but this project does not have the State of Texas Vision Zero goals fully incorporated into the in the purpose and need statement of the project. That is not acceptable. Please once again reconsider this ill timed, unnecessary, wasteful and damaging road widening project.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:38:40 PM

Name: Gary Grossenbacher



Comment: No elevated lanes over Lady Bird lake which would ruin environment of Zilker Park and the Rollingwood neighborhood. More traffic and more noise if not needed near the park and neighborhood

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:38:38 PM

Name: Cathy Ramsey



Comment: As a regular user of Barton Springs pool, I'm alarmed at the plans to add enormous amounts of traffic and noise to Mopac, turning it into a much more busily travelled road. New standards of work-from-home and rush hour balancing make new traffic studies a priority when planning something of this scale. Please allow the public more time to respond by extending the comment deadline, and take the time to do environmental and climate change studies, and find more workable solutions than the unworkable concept of more new toll lanes. Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:36:51 PM

Name: Jeff Marx



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:36:21 PM

Name: Marilyn Faulkner



Comment: I agree with the below statements. Please note my comments and opinion for the record of this project. Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's [MopacSouth.com](#) website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce

congestion to any significant degree. Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:33:24 PM

Name: Michael Edward Reed



Comment: 1. I firmly oppose expanding mopac in any place by any amount. 2. I want induced demand to be addressed in traffic estimates and for the public and local leaders to be educated on the issue of induced demand. 3. We need to address congestions with solutions that actually work: public transportation, bicycling, and walking. We need to support these transit methods and not further endorse people commuting alone in their automobiles. 4. We need to address safety in the purpose and need statement, especially Texas' Vision Zero goals. We need to stop building highways to solve our problems. It doesn't work. I don't hate highways or cars, it's just that I want solutions that work, and continue working in the long term. Highways simply don't work. Because they don't work, they are a waste of our tax dollars, and we need to better invest our funds into solutions that do work.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:32:41 PM

Name: Brian Nunnery



Comment: This is an effective way to induce demand for sprawl in the Hill Country - which, in combination with TxDOT's widening of US 290, seems to be one of few primary outcomes of this proposal. This proposal is a relic of the past - we know freeway widening makes traffic worse over time, and we know expanding freeway capacity creates urban sprawl and forces people to further rely on cars. The US Dept of Transportation is literally trying to mitigate these projects due to their negative impact on the environment, climate, and social equity. Don't do this at all. There's no logical reason to do so when considering what this means for our future in 50 years' time.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:30:31 PM

Name: Timothy McCool



Comment: It's a bad idea to enlarge the highway. I-35 is slated to be enlarged too. When will the expansions end? Eventually MoPac and 35 will touch and there will be nothing left of central Austin. There's nothing environmental about expanding the highway, it should never be done. Build transit only lanes, get people into buses and trains. Not everyone can drive their own personal vehicle everywhere they like, the environmental and social impact of doing that is killing us.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:23:58 PM

Name: Grant Sparks



Comment: Please accept this email as my strong endorsement of the positions taken in comments submitted by the Travis County Commissioners Court and the City of Rollingwood; including recent comments submitted by Amy Pattillo. I am concerned that the CTRMA is relying on six year old information and severely limiting the public comment period for this proposed project. The negative impact of the current proposal to the residents of the City of Rollingwood, Zilker Park and other adjacent areas will be irreversible and should not be implemented without further significant revisions and considerations. Thank you. Grant and Andreas Sparks 2402 Rollingwood Drive Austin, Texas 78746

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:20:55 PM

Name: Nathan Searcy



Comment: Widening the road appears to run be contrary to the city's plan for vision zero and to be a 15-minute city. Wider rods increase driving and increase the amount of land used for cars. We are currently experiencing a housing shortage and colimit crisis. There needs to be focus on reducing total miles driven in total and per person. Please reconsider this plan.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:17:01 PM

Name: Jeff Thompson



Comment: Please do not expand MoPac without considering the impact on Total VMT. Please evaluate total VMT if the expansion is completed versus a No Build Option. Also please consider the impact of flyways on parks.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:16:19 PM

Name: Edward Lee



Comment: I am HIGHLY opposed to the idea of the Downtown Direct Connections, the Barton Skyway elevated ramps, or any alterations to the Frontage Road that would cut off access Rollingwood drive access to Northbound MoPac. While I realize that we have many cars making lane changes to get onto 2244 Bee Caves Road, making drastic changes to that frontage road can also potentially cut off access for a whole municipality (Rollingwood) as well as the many people who live in Austin near Zilker who use Barton Spring Road and use the frontage road as an access point to northbound MoPac. I understand that growing traffic is an issue region wide, and I'm not opposed to widening the bridge over Lady Bird Lake. However, the idea of Downtown Direct Connection Lanes which would be elevated, and also the lighting for these lanes which would be even further elevated, would be a terrible eyesore, an environmental hazard, as well as worsen both noise and nighttime light pollution for everyone in the surrounding neighborhoods. I feel that too much resources and too many resources have been devoted to transportation interests that promote single user cars instead of mass transportation. Also considering the gradual and accelerating move towards working from home, I feel that these solutions may need to be significantly rethought before such dramatic construction occurs.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:13:32 PM

Name: Kelsey Huse



Comment: I live near Mopac & drive on it often. If I could instead take a high speed bus or there was a safe way to bicycle (particularly e-bike) I would definitely do that instead. However, that infrastructure does not exist. Please include induced demand in your estimates because people will continue to drive if that's the best option, and once there are more lanes there will be more drivers. This is going to be so expensive and there are better alternatives than adding lanes. We cannot keep adding lanes forever. Please think of the younger people and build something that will last rather than need expanding again in 20 years. A girl recently died walking across Mopac and I was on the highway at the time and had to be rerouted around it. More crashes that result in death and injury will happen. Expanding highways will not help us reach our Zero Vision goals. I am strictly against the expansion of this highway and any highways in Austin and we will continue to organize against it. Thank you for the opportunity to comment!!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 12:43:55 PM

Name: Adam Greenfield

Comment: Thank you for this opportunity to submit my comments on this project. I strongly oppose any proposal to expand Mopac and so should the general public. Time and time again, as the Katy Freeway expansion so notoriously demonstrated, the increasingly discredited approach of highway expansion has been shown to induce demand for driving, worsening congestion in the mid to long term and negatively impacting air quality, noise, water quality, climate change, suburban sprawl, countryside loss, safety, and property values, all while wasting enormous sums of taxpayer money. Texas' commitment to this incredibly harmful practice is severely behind the times and is increasingly making us a laughingstock nationally and internationally at a time of worsening climate change that is causing our state great harm. Instead, I call upon CTRMA/TxDOT to do the following with regard to the Mopac South project: - Commit to not widening Mopac - Actually address congestion by instead dedicating existing right of way for congestion-free alternatives such as public transportation, bicycling, and walking and by using funds to expand ongoing public transportation services - Explicitly address induced demand in traffic estimates and begin to educate local leaders and the public on this issue - Stop using CAMPO's unreliable regional growth forecasts that presume and plan for more sprawl and instead use equitable growth forecasts - Address safety, including Texas' Vision Zero / Road To Zero goals, in the purpose and need statement - Given that these improvements will directly impact the recharge zone of the Edwards Aquifer, Zilker Park, and Lady Bird Lake, conduct a full EIS for this project - Extend the public comment period by 30 days and stop holding public comment periods during the holidays We are in a climate crisis, much of it caused by transportation. Please do not miss this opportunity to do the right thing now. Thank you for your time.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 12:24:56 PM

Name: Glenn Criswell

Comment: 1) I really like the shared use path on the west side of Mopac all the way out to 360 as implied by page 40/43 slide. If this could be followed up with good crosswalk infrastructure at 360 and well identified pavement region all the way to the trailhead at the creek, that would be a very nice enhancement. 2) I would really like to see Barton Skyway have u-Turns in both directions, and there is plenty of footprint for the southern U-Turn on the existing bridge if the northbound U-Turn has a new bridge. Barton Skyway itself needs only 3 lanes: one each direction and a left turn in the center. The sidewalk moved inside (north) of the south U-Turn (separated with concrete barrier) would improve safety and function. At minimum, a revision of the U-Turn light timing and lane assignments would be greatly appreciated. 3) The COA proposal has merits and is an interesting idea, but I would have really liked to see a detailed visual of the various aspects. 4) A HUGE problem with all versions is the restriction down to two southbound main lanes approaching the lake. The continuing feeder merge lane is a big improvement, but an extra main lane (like northbound) would go a long way towards the project not affecting non-toll drivers negatively. 5) Many proposals will give toll drivers preferential access (inbound) to Cezar Chevez St compared to non-toll drivers. Extreme efforts should be invested to design merge/access elements so that the access is reasonable between the two groups and this doesn't effectively become the real advantage of the entire toll infrastructure. 6) The new southbound flyover from just south of Barton Skyway onto the main lanes on the left - it will have some nice functionality, particularly for those accessing 360, but it will be a complicated merge zone because of its short length and the unusual left side configuration. I wonder if that flyover could be made to access express lanes and 360 (far left lane) only and the main lane 360 off ramp moved north and and the Mopac main lane onramp be moved far enough south to work well as main lane access. 7) The southbound Bee Caves to Mopac access ramp has been a befuddlingly embarrassing and unnecessary choke point for decades - I presume that the 1950's style death merge has been removed from all designs. The problem there is not people merging over, it is the lack of appropriate merging distance (despite the pavement already being in place). I hope it turns out well - good design can make tremendous improvement to people's lives.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 12:21:33 PM

Name: William



Comment: If you build another toll road and not a train system with stops at every major road. You have poor judgment. All you have to do is look at major cities around the world with less traffic and more traffic. How they manage. Not to mention the jobs it will create and the revenue the government wants in the end anyway. Nobody uses the current rail system because it's trash. So get it right this time. Stop being greedy

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:55:07 AM

Name: Dottie Watkins



Comment: A direct connection to downtown is a requirement. Beyond that, it's hard to make a thoughtful recommendation on information that is all caveated that it's based on old data and will be updated later. Before an alternative is recommended, public comment should be pursued based on the updated data from the 2045 model.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:51:36 AM

Name: Robert Carter



Comment: Only build tolls built above the existing roads. We have too many tolls and are more expensive than they should be. Once a toll road has paid the entire package, the cost should go down so it will pay for the maintenance.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:40:34 AM

Name: Leigh Stein



Comment: I oppose the Mopac double decker bridge

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:04:54 AM

Name: Mary Griffith



Comment: Ask: Exit lane from Northbound 45 onto Davis Lane. Entrance to 45 southbound from Davis Lane. Reason for ask: The congestion on Slaughter Lane during drop-off at Bowie High School has become increasingly problematic for those of us who live in the area. It especially prevents us from accessing and supporting businesses on Brodie Lane during these hours. Adding these two accessibility points would allow us to bypass Slaughter and take Davis Lane to Brodie without having to go up to William Cannon and back over to Brodie/Slaughter area. This could also help alleviate the Bowie congestion because drivers who live in Shady Hollow would be able to exit 45, take Davis to Brodie and then to Shady Hollow. The problem with this corridor of 45 is that we don't have a lot of options for moving around this part of the city. It's all highways or major, highly traveled streets (Wm Cannon, Slaughter, etc). Having all access to Davis Lane from all directions of 45 would help disperse traffic creating less congestion overall.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:04:39 AM

Name: Penelope Graves Redington



Comment: My home is right beside the southbound MoPac service road between RM 2244 (Bee Cave Rd.) and Liberty Park Drive. My balcony is about 20 ft. from the edge of the right-of-way. Noise and air pollution from MoPac is already a major problem for us and I would like to know how you plan to mitigate the current health impacts during and after construction. Do you plan to build a wall similar to the ones north of the river and if so, will it be tall enough to protect those of us whose homes are on the second floor? Exactly where will the elevated ramp begin and have you taken into consideration the noise and air pollution impact on those of us who live less than 100 feet from the ramp? Vehicles accelerating uphill will be especially loud and will generate noxious and dangerous emissions. Have you completed studies of the potential impact on nearby residents and if so will you provide those results to us? Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:02:08 AM

Name: Clarke Heidrick



Comment: While I have served in the past as Chair of the Greater Austin Chamber of Commerce and Chair of the Transportation Committee of Austin Area Research Organization, the opinions expressed here are my own to our entire region in light of the continuing growth of our region. From what i see of the various alternative approaches to the express lanes, I favor Option 3 (the City of Austin recommendation). But I feel most strongly that we need express lanes and that they should be tolled, and would support the alternative that promotes the most throughput. Thanks for the opportunity to comment.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:51:13 AM

Name: Alexis Webster



Comment: As a resident of SW Austin, I very much support improved access to downtown with the addition of express lanes. At the moment, the city of Austin proposal seems a good alternative that addresses many resident concerns.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:44:15 AM

Name: Mary Griffith



Comment: Please consider extending the paved trail along 45 from Escarpment Blvd to Meridian Park Blvd. I live in the Meridian subdivision and having that simple access to allow us to ride our bikes to shopping, eating, movie theaters, etc, would improve our quality of life tremendously. It would also help those in Meridian take advantage of public transportation. The paved trail would allow us to safely ride a bike or walk from Meridian to the bus stop at Escarpment and South Bay Lane.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:42:37 AM

Name: Diana Dierks



Comment: Why do the Build Alternatives lack any legitimately sustainable solutions with the long term in mind, i.e. rail? If additional lanes and HOV lanes were the solution, Houston (which has some of the widest highways in the nation) would not have bad traffic. As a lifetime resident and owner of multiple tax-paying properties, I am disappointed in Austin for not future proofing ourselves. We don't want to be Houston. We want multi-modal transportation that provides network of metro rail/trail options to alleviate demand for paved roads. While some expansion to roads will be needed, doing so without also doing rail is short-minded. Please take the opportunity to do rail projects along highway corridors. What better a highway to lead this than MO-PAC? I also want to voice my concern with the environmental impact. The natural green spaces around Lady Bird Lake, Deep Eddy, Austin Nature Center, Zilker Clubhouse, Zilker, Barton Springs, Barton Creek Greenbelt, etc. are gems of this city. Early residents of Austin wanted to turn this area into developed amusement parks and pave most of it in doing so. Luckily folks like Beverly Sheffield and others led the way to show that Austin can be unique by NOT doing so. Massive highways all over is not wanted by anyone other than those who stand to short-term profit from the construction. Please incorporate long-term resilient and truly sustainable solutions. Keep in mind our net zero goals as well as health impact on residents. Thank you.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:39:55 AM

Name: alex durham



Comment: As someone who commutes on this part of MOPAC daily, I am excited the COA is looking to improve the traffic flow. However, as a member of Park Hills Baptist Church, I have concerns about several of the options under consideration. In particular, Option 2C and COA Proposal would both negatively impact the natural beauty of our church site. The noise and aesthetic of those specific options is of concern, as I feel it would bring the interstate to our front door. Furthermore, I have concerns about how this would impact the ingress egress of the church. I hope you will consider pivoting to one of the other options under consideration, as they still solve the traffic problem without a negative impact to Park Hills. Thank you for your consideration and work on this.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:39:12 AM

Name: Rosario Carlos Krystof



Comment: I support this project and prefer option 2A, then 2C. Please don't let the opponents of progress stop what is a desperately needed solution for current and future traffic. Lock this down and then focus on building an expressway\tollway on 290 West from Circle to Sportsplex. This stretch of road is dangerous and flooded with industrial traffic, population has increased more than expected and the existing road will not handle the next 11k homes that are underway. We need an expressway\tollway as the only major route through dripping springs.....yesterday.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:30:39 AM

Name: Christopher Ford



Comment: I am opposed to the proposed toll lanes on the southern portion of Loop 1 .

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 10:24:19 AM

Name: William Kaufhold



Comment: I advocate for (prefer) Option 2A, the two express lanes from Barton Skyway to Slaughter Lane with a downtown connector. Barton Skyway is right where traffic builds now each afternoon and there are three bottlenecks just south of there: First, where the right lane is exit only at 2244 Bee Cave; Second where traffic merges onto MoPac south from 360; Third, where the left lane ends on MoPac south of William Cannon. All would be improved with the two additional southbound express lanes which would also serve a growing demand for buses to the south. This would also help the sharp increase in MoPac traffic from Hays County now coming north on the State Highway 45 extension from 1626. All good options but 2A is my favorite (I live off of Slaughter Lane and MoPac).

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:56:23 AM

Name: Ricardo Zamarripa



Comment: I believe alternative 2A would be the best for mobility in the region and I am fully supportive of building Mopac South express lanes. Another recommendation is to consider an improvement to westbound 6th street / Lake Austin Blvd to southbound Mopac. There is several merge points between the southbound Mopac ramp and Campbell street with traffic backing up to Campbell or further. Once on the Southbound Mopac ramp/Atlanta Street, you almost immediately merge with the Cesar Chavez which is the biggest bottleneck in the area. If on W 6th or W 5th street, there is not a good way to access Cesar Chavez to get onto express lanes. You have to go east to Lamar which is also a severely congested intersection. Please look at this circulation issue and incorporate into final design, and call me if you'd like me to explain better.

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- I do business with TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:47:23 AM

Name: Shanthi Jayakumar



Comment: As an entity charged with managing traffic flow along the MoPac South corridor, you have a singular goal to achieve. However, the impact of your decision(s) to "move traffic efficiently" will assuredly have the unintended consequence and the potential to destroy all that we hold dear about our open spaces and areas of recreation along Lady Bird Lake and Austin's Crown Jewel Zilker Park. In 2015, I attended your presentation at Rollingwood City Hall. Our city leaders, with the overwhelming support of our community, sent you letters objecting to elevated lanes of any kind over Lady Bird Lake and over Zilker Park. In 2022, our community's stance on the environmental impact remains a steadfast NO elevated lanes in this historic district. Please take a moment and imagine the impact of your decisions on your grand and great grandchildren. Please take a moment to read about "The Seventh Generation Principle" based on the belief that decisions we make today should result in a sustainable world seven generations into the future. Zilker Park and our natural environment is already under "assault" from overuse. Let us stop and SAVE our PARK before it is too late. On the flip side, let me assure you that it is futile to argue that you are indeed planning for the traffic impact for seven generations to come!! By building the elevated lanes, you would have destroyed the very basis for why Austin is so popular. If Zilker park and our green spaces are destroyed in the process of building your roadways, you will not have any legacy to bequeath to your grand and great grand kids. Please use your leadership to find alternate measures to solve the traffic goals you have set for yourselves. Get more inputs from all the affected communities. DO NOT RUSH. Thank you for listening and for doing the RIGHT thing for our fragile ecosystem and our cherished park.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:37:08 AM

Name: Arturo Salinas

Comment: When are the free Lanes going to be put in place on 183A between Avery Ranch Blvd and Whitestone Blvd. Have not seen any movement on that . From reading earlier information, that was supposed to be an option.

Trans Code Option:

- I am employed by TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:37:00 AM

Name: James Talbot



Comment: Having the comment period over christmas really limits the number of folks who would otherwise weigh in on such a major project. Would you please extend it another 30 days so we all can participate. I just got this notice today, 3 hours before the deadline.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:26:01 AM

Name: Adele Ely



Comment: I am very much opposed to elevated Direct Connector ramps south of Bee Cave Rd. I very much like option 1A, possibly 2A. I am very much opposed to Options 2C and 3. With the continued growth of business centers out of the downtown area (ie Mueller, Domain, and even in Far East Austin), I wonder if there is really a need for the 2 lane Direct Connector option.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:18:15 AM

Name: Horacio Gasquet



Comment: I like the city plan best. We don't need two express lanes to downtown. Downtown roadways cannot handle too much extra traffic, so it would back up onto Mopac and still be a problem.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:16:19 AM

Name: Susanna Hancock Murray



Comment: At the very least, updated traffic and impact studies should be performed for relevant information. Booming population growth and development all over the Austin area, alongside changing schooling decisions and work habits in recent years, have greatly changed the face of traffic and traffic patterns in our city which was not predicted. Without such updated studies, this expansion is misdirected and a reckless waste of precious time, energy and resources.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:11:23 AM

Name: S. A.



Comment: 1. The only way to keep up with traffic growth is to reduce the number of vehicles on MoPac. The only way to reduce vehicles is to encourage carpooling. If only 10% of drivers carpool, you can eliminate 25,760 vehicles from the roadway. 2. No express lanes. Express lanes will not reduce traffic volumes. Express lanes will only distribute the traffic volumes to the new lanes. 3. A free HOV / carpool lanes for the general public is needed. Registration with CapMetro carpool should not be required. 4. Design HOV lanes with slopes to accommodate future rail use.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:03:28 AM

Name: Susan Miller



Comment: I agree with the position and comments previously submitted by Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:01:51 AM

Name: Daniel Woodroffe



Comment: I oppose the plan to increase lanes and widen the molar bridge over Ladybird Lake. Induced demand has been proven time and time again and this plan will not only increase congestion in the short term but it will not improve traffic congestion. Data has proven it will worsen. Austin is presently proceeding with a multi billion dollar mobility improvement plan that adds rail and other sustainable transit solutions that provide efficient and equitable (let alone state of the art and sustainable) solutions to help resolve our transit issues. Stop fueling urban sprawl with more highways. Stop the antiquated Engineering program of widening highways and acknowledge induced demand. Make actionable steps to reduce dependence on fossil fuels. Please do not proceed with these plans to widen Mopac. I urge you to consider the positive impact of self driving vehicles on lane efficiency and how that will change engineering standards. I urge you to consider the positive impacts of public transit. I urge you to consider the negative environmental impacts of your proposal. Do not proceed with this plan.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 9:01:21 AM

Name: Ryan



Comment: I'm opposed to a double decker structure on MoPac. I think it would create additional noise and be visually unattractive to the Austin community. Use of tolls/higher cost at peak times -- like many other cities -- may be a better course to manage traffic load. Plus, with the increase in hybrid working, there is more that can be done for people to modulate their traffic patterns.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:59:27 AM

Name: William Rodriguez



Comment: I vote for Option 1A.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:59:12 AM

Name: Chris Stoll



Comment: I am hopeful that our Texas Government has put the laws in place to allow TxDOT to do it's job and build the roads that are needed to safely and efficiently move We the People of Texas where we need to go. Please do everything you can to stand up to the special interest groups that want to stop TxDOT from making us happy. The Great roads you build are very appreciated. Thanks!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:57:36 AM

Name: Jonas W Bailey

Comment: I think that constructing toll lanes on MoPac is a terrible idea. Of course, I don't work for a construction company that makes political contributions, so I have no financial gain as motive. And I don't drive a big truck that needs to go 90 mph at all times. And I'd rather walk on the Greenbelt than see it all torn up again for the convenience of those who are willing to pay more to go faster than everyone else. Why don't you fix I35 instead?

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:52:34 AM

Name: Johannah Heywood



Comment: Please expand the 45 trail from Escarpment to the Meridian Neighborhood entrance

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:50:22 AM

Name: Abigail Frederick



Comment: I am completely opposed to the double decker expansion over town lake. It will mar the gorgeous views down the lake and negatively impact the surrounding neighborhoods. Also - we are in the age of trying to minimize the number of cars on the road - not continue to expand as the only way to deal with traffic. Where is the public transportation proposal that will cut down on cars, emissions and be a better solution to the environment?

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:36:33 AM

Name: Lisa Mansuri



Comment: I do not support any expansion of Mopac at this time. Public projects need to be focused on improving public transportation - that does not need to include expansions of Mopac or Mopac tolls.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:29:13 AM

Name: Joel Davis



Comment: Just repaint the excessively large shoulders in both sides of the freeway for most of that stretch. You'd only minimally need to create new lanes to eliminate bottlenecks created by taking down number of lanes. Our taxes pay for this so no more toll lanes please

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:18:41 AM

Name: Richard Denney



Comment: Living in NW Hills at Far West, this community lost more time in the construction of the MoPac extra toll lane than could ever possibly be recouped after completion. Adding insult to injury, getting on and off at Far West is impossible to dangerous. AND IT DOESN'T EVEN LET US OFF TO GO DOWNTOWN! We can't use the toll road to get downtown to the Capitol area? And all the PR hype about helping with traffic congestion, or emergencies .. it does nothing. Congestion remains. We can't get on it from our neighborhood, we can't use it to get out congestion. Emergencies? How about our need to say get to Seton ER? Again, we can't get on it and there is not EXIT for anything short of the river. It was in my opinion a waste of time for OUR neighborhood. So yes, I'm very skeptical of the current plans. VERY.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:15:08 AM

Name: Nathan Jensen

Comment: Adding toll roads is not the way to go. That is just a partial fix and will only benefit a few. Focus should instead be on the entrances and exits of the road. There are many places on MoPac that the flow of the road could be greatly increased by using proper traffic lane mathematics. For example, there are many on-ramps to MoPac where the lane must merge into the other lane in just a few hundred feet. For each entrance, add a lane. For each exit, remove a lane. With proper signs ahead of time that will allow the drivers to make better decisions on what lane they need to be in. Do not be afraid to make the road two lanes in some parts and 5 lanes in others. It is the merging and the flow that is more important than just having some extra lanes thrown in just for the sake of having more lanes. Entrances and exits are the key here. Thank you for reading my comment. For your information, I am autistic and have recently become obsessed with road flow and have studied an awful lot about it recently. I am very interested to see how this project continues.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:14:49 AM

Name: Matthew Shepherd



Comment: I vehemently protest to adding any sort of toll lanes to Mopac. Toll lanes and roads represent the privatization of our public infrastructure and exacerbate class inequality by providing specialized service for people who can easily afford to pay the toll, leaving the rest of us to slog it out in the "working class lanes." We all breathe the same air, drink the same water and share the same space, it is unfair to provide enhanced infrastructure to rich people. Roads are a public necessity, not a private luxury.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:14:17 AM

Name: Kevin Good



Comment: Good plan. Get it done.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 8:11:44 AM

Name: Jeffrey Batchelor

Comment: Letter to CTRMA January 7, 2022 Dear Mr. Bass and others to whom it may concern, I am a member of Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to the church's immediate physical proximity to Mopac, I have significant interest in how the expansion plan is developing in the area and the impact it may have to member's and visitor's immediate environment and to the use of the property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, the church property is heavily used for the traffic and parking needs for the major events in our city park. I appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. I am also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. I have concerns with some of the options that are being considered at this time. As much as it is my desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, I believe the project needs the assistance of professional input from traffic and other experts on the impact these proposals would have on the church property. At this early stage, I am aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example: (1) I am concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. I support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in the church's location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway. The option of adding noise-preventing walls would cause the intersection near the church to be covered with concrete, instead of preserving the green environment the community enjoys today. Every spring, the church has lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of the church property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. I would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans. Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. I have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. I do not support a plan that could potentially turn our beautiful location and

intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston. (2) I am concerned for what impact the current plans will have on ingress-egress to the church property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact the exit lane near the church (currently it is on the north of the Mopac exit ramp to 2244). I want to ensure that moving the ramp to the north would not negatively affect member's and visitor's ability to use our property exit. (3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. I am concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). I realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, I cannot support any options that might inhibit the future development of this intersection. Regards, Jeffrey Batchelor

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:58:50 AM

Name: Omaira Brightman



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood. I believe more time is needed to properly evaluate the impact that such a project would have on all residents located to the structure. Further, any project that impacts the look and feel of the zilker park area to the negative I think is short sighted.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:49:51 AM

Name: Vincent Musat



Comment: Please build as many lanes now that are financially viable as the growth in Austin will continue. Additionally we need to have Toll and HoV Lanes to increase the options for travel. The only good solution is a Multimodal one. Thanks for your work and efforts. Best Regards, Vincent D. Musat, PE, LEED AP

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:13:14 AM

Name: Janice Toreki



Comment: This is one of the worst "ideas" our city has ever thought of foisting on us, the taxpayers and citizens who live in Austin and drive our roads regularly. It is not environmentally sound and will increase the imperious cover in the whole downtown area which is already becoming very dense. Any change to I-35 should only include re-routing any and all truck and thru traffic onto Toll Road 130. The road is there; it is underused, and currently not collecting enough tolls to break even. Propose that trucks get a much discounted rate for using 130. Please save our city. We are not AMSTERDAM!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 7:08:12 AM

Name: Sam Robertson



Comment: As a former Austinite and frequent user of Mopac believe that the expansion identified, with minor changes does not solve the problem of Environmental solution. Park & Ride North, w/bus transportation to and thru downtown, would reduce individual automobile trips and have a more effective environmental impact. Also, since the roadways have been paid for by existing tax structures, the resulting profit from restricted lanes should be transparent and disclosed, and not just rolled into the general budget.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:30:27 AM

Name: Robert Patterson



Comment: Asphalt is not the answer. By the time any road or highway is finished, it is obsolete because of explosive growth. This plan will destroy Zilker park and surrounding neighborhoods and, ultimately, will not solve the traffic problem. Public transit is the answer. Buses with dedicated lanes which arrive more quickly than cars stuck in traffic are the short term solution.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 6:29:12 AM

Name: Jessy Napier



Comment: This would be an absolutely terrible idea! It would change the city not for the better. As a resident of Austin for over 20 years I am absolutely against this.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 5:43:38 AM

Name: Erin Nash



Comment: I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 1:23:20 AM

Name: David Rosenblad



Comment: This whole idea needs to go away, it was a bad idea in 2015 and it's an even worse idea now! We do not need a "western I35", and the idea of a double decker freeway there is revolting. Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt. Please banish this whole project, I think of something else to do, like helping trying to put all of the toll systems in the area (and Texas even) under one umbrella, one management system to keep from driving all of us crazy!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 12:37:47 AM

Name: Christopher Roesel

Comment: Of the build options presented, I would most support build option 1B, one lane without direct connections. If direct connections are something that have to happen, I would prefer build option 3, the City of Austin proposal. However, I strongly oppose the construction of tolled express lanes on Mopac South. Toll roads are inherently inequitable, built with the tax money of people who can't afford to drive on them, and serving those who are most able to afford them. The tolling and billing systems operated by CTRMA have also proven to be abject disasters, billing people incorrectly and piling late fees on people who aren't even sent a bill or who didn't even drive on their toll roads, and they have shown no sign of caring to improve it after years of demonstrated mismanagement. My vote is NO tolled lanes on Mopac South. I look forward to reviewing detailed renderings of each build option at some point in the future before any decisions are made on how to move forward.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 12:04:32 AM

Name: Wallis



Comment: You have to be kidding that we would consider adding so many lanes . . . at a time when CLIMATE CHANGE is the single-most imperative that we face. Just ask any reputable scientist that you know! This is not "alarmism": we really do face an existential crisis. The best way to respond to said crisis SURELY isn't to build more roads and improve access for cars!

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 11:53:47 PM

Name: Andrew Brown



Comment: No more tolls.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 10:57:04 PM

Name: David Bauman



Comment: I beg you to reconsider this proposal for the Mopac toll lanes. We should focus on I35 instead. With so many people moving to central Texas, there is an excess of negative environmental run off in our creeks and rivers within an a sensitive watershed. Please for the sake of our aquifer, the enjoyment of our parks—a diminishing resource in Austin—do not proceed with this project. This project is costly, the existing toll lane doesn't even work well because no enforcement action is taken against folks driving under the speed limit in our express lane. By the time this project is finished it will have destroyed the character of the area, threatened our water supply with more pollution, and its purpose will be moot for how many increased cars are on the road. I would rather see my tax payer dollars go to an above ground rail system over or alongside mopac. I will trace which politicians advocated for this and do my utmost to ensure they don't receive a second term

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 9:56:45 PM

Name: Jason



Comment: I am in favor of 2A: Two Express Lanes with Downtown Direct Connection
ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT
CONNECTOR

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 9:44:01 PM

Name: Neil Pascoe



Comment: PLEASE, do not toll any additional lanes -they don't help.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 8:30:47 PM

Name: Eric Niedert



Comment: There is a great deal of concern along the neighborhoods of South MoPac Expy./Texas Loop 1 South about the transparency of an elevated lane project amongst those in our area. We certainly want to assuage those concerns here in our HOA.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 8:01:44 PM

Name: Ann Bernard



Comment: I do not support the proposal of a double decker bridge on Mopac near or between the 5th and 1st street exit and RM2244. This will not only harm the aesthetic of the area but create undesired noise pollution for surrounding neighborhoods. I believe the proposed idea will funnel extra traffic onto 1st street and create even more bottlenecks downtown.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 7:45:53 PM

Name: Sara Marler



Comment: Please see attached document. I look forward to an in-person open house. Thank you, Sara Marler

Trans Code Option:

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- 1
- 2

Current page: https://voh.mopacsouth.com/?fbclid=IwAR2HIWZGUXvF3DTqauIXwhI_ZRbf-BFO81uxsHb_oh2Spz6sSznQDiFdzo

File Upload: [South_MoPac_expansion_Comments_Sara_Marler_2022-01-06.pdf](#)

South MoPac expansion – comments by Sara Marler
Jan 6, 2022

Please consider an in-person or, at the least a zoom open house. It is difficult to follow/ understand the options being by presented at a virtual open house fully without explanation and opportunity for questions. A live presentation even if it is zoom is needed to better understand the options since it has been years since the actual open house.

1) In prior open houses, there were visuals with heights perspectives of the overpass in relation to the current MoPac bridge, and specifically regarding Austin High -- I am particularly interested in the details of height over the PARD/AISD shared tennis courts and the sight from the AHS north side windows where the cafeteria and library are located.

2) I would like the engineers to give details on the sound walls and noise deflection specific to Austin High; I do see the sound walls and measurements regarding houses, but not Austin High. With a newly multi-story western expansion of Austin High, we need further information and details taking consideration of student learning and testing, and the impact of future traffic noise.

3) I don't follow the COA proposal - need more description of where the exits are regarding Zilker Park and Bee Caves entrances and exits.

4) I need a detailed car and bus exit and entrance ramp route for our Austin High school population who a) travel south of the river on MoPac – coming and going from Travis Country, etc. and b) travel east to East Austin via Cesar Chavez

5) I can't tell if the idea of expanding the MoPac pedestrian bridge under MoPac is included - I know that was considered to make it ADA compliant. Doesn't look like it from the trail expansion exhibit.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 7:44:07 PM

Name: Janine Reintjes



Comment: We are opposed to the expansion of Mopac and feel the study does not take into consideration the changes post the pandemic of flexible work weeks, schedules and fewer commutes to work.

Trans Code Option:

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- 1
- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 7:24:31 PM

Name: Stacy Robinson



Comment: Mopac/Barton/zilker/downtown DOES NOT NEED THIS. There is a reason we have so many highways, to avoid toll roads! You will destroy so much tourism and the fun that is Austin

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85>

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 6:27:05 PM

Name: William Feldott



Comment: I am not in favor of this. We do not need to try to drive traffic patterns by augmenting entrances and exits as this would create unintended issues. Additionally, with work patterns changing and/or disrupted due to COVID this would be further over reacting to a problem that may correct or mitigate itself in other ways.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:58:36 PM

Name: Marie Timmermann



Comment: I am opposed to building a "double-decker" bridge over Town Lake and the Nature center. As a Rollingwood resident this proposal would significantly increase traffic noise and would block city views. There are alternatives to mitigating traffic that do not include building a double decker bridge.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:57:34 PM

Name: Catherine P Scott

Comment: I am NOT in favor of a MOPAC double decker bridge over Lady Bird Lake. Our city council has made many suggestions to CTRMA and as voting tax payers in Travis County our voices and concerns should be taken into consideration.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:47:50 PM

Name: Amy Campney



Comment: My first choice would be none of the options in Exhibits as prepared by Mopac South Open House. I would prefer a mass public transit infrastructure be added to the highway, and express lanes be used for buses using the path of CapMetro Route 111 and 171. Of the options offered in the packet, I would chose 3: City of Austin Proposal.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:43:10 PM

Name: Jennifer Johnson Poscic



Comment: (sending again, because I am not sure that my original comment went through) I am very concerned about the MOPAC South construction options which involve elevated ramps or elevated express lanes. The concerns are related to increased noise, air pollution, and vibration which would negatively affect the surrounding neighborhoods. This sort of freeway development will also further damage the current aesthetics of the area and further obstruct city views. The elevated ramps/express lanes would also add a great deal of expense to the project which could further increase (already egregious) local property taxes. My assumption is these options are of a much greater cost than the proposed options to only widen the current freeway and add express lanes. For these reasons, I am strongly against Options: 1A, 2A, 2C, and 3. Sincerely, Jennifer Poscic

Trans Code Option:

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- 1
- 2

Current page: <https://voh.mopacsouth.com/submit-comment>

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:41:21 PM

Name: Jennifer Johnson Poscic

Comment: I am very concerned about the MOPAC South construction options which involve elevated ramps or elevated express lanes. The concerns are related to increased noise, air pollution, and vibration which would negatively affect the surrounding neighborhoods. This sort of freeway development will also further damage the current aesthetics of the area and further obstruct city views. The elevated ramps/express lanes would also add a great deal of expense to the project which could further increase (already egregious) local property taxes. My assumption is that these options are of a much greater cost than the proposed options to widen the current freeway and add express lanes. For these reasons, I am strongly against Options: 1A, 2A, 2C, and 3. Sincerely, Jennifer Poscic

Trans Code Option:

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- 1

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:26:11 PM

Name: Jeffrey Primeaux

Comment: As a lifelong Austin resident, I am concerned about plans for development of MoPac South, especially it's impact on beloved and sensitive natural and recreation areas south of the river. Throwing more road expansions at Austin's development problems is questionable to begin with as a long term solutions, but please see the additional comments and requests below: Please Extend the comment period at least 30 days. Extending the comment period will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." Analyze real alternatives to added toll lanes. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development. Thank you, Jeffrey Primeaux

Trans Code Option:

- I am employed by TxDOT

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:24:31 PM

Name: virginia bettis



Comment: Hello, I'm against having express lanes to go over Zilker park and adjacent to the Rollingwood neighborhood. The additional noise would negatively impact the park as well as the neighborhood. The added lanes to get on to a south austin mopac would bring more traffic to the park and the neighborhood. Alternative: Build an express lane in the direction over congress ave. This would have less impact on the park and neighborhoods. There is already too much noise and way too much traffic in those areas.

Trans Code Option:


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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:12:30 PM

Name: JACOB PRIMEAUX



Comment: The proposed building of the mopac double decker bridge is no good. Its not what Austinites want, it poses too grave a threat to what we have left, particularly for our guaranteed preserved land and waters. This is a mistake, and as a born and raised Austinite, I could not be more against it.

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85&formerr=1](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85&formerr=1)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 5:10:46 PM

Name: Brian Greene



Comment: Please do nothing. We have seen enough damage in the area from the disaster TXDOT has done with the Y-interchange at Oak Hill.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 4:56:33 PM

Name: Lauren Hughes



Comment: Please do not let this happen. This will change our city in the worst of ways. I implore you, do not proceed with this project. Thank you.

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 4:21:36 PM

Name: Cristina Feldott



Comment: I am opposed to the elevated expressway near Town Lake/Rollingwood. I live in Rollingwood, and most homes are uphill from Mopac. The elevated expressway would put cars at the same elevation as our homes, resulting in increased noise pollution, which is already bad enough. TXDOT is clearly unreliable when it comes to timely installation of soundwalls along Mopac, and there is probably no way to dampen increased sound pollution. Additionally the proposed exit situation would drastically increase the time it takes to get to our homes.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:53:49 PM

Name: Stephanie Trotter



Comment: I am opposed. We need a solution but not one that obstructs views and creates more noise pollution

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:53:06 PM

Name: Heidi Marquez Smith



Comment: I am opposed to the MOPAC double decker bridge. This proposal would negatively impact the community, Lady Bird Lake, life in and around the area, and the aesthetic of our city.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:51:21 PM

Name: Emily Thawley



Comment: Opposed - this will hurt our neighborhood!

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:33:00 PM

Name: Shelly Bain



Comment: The Bain household opposes a double decker bridge on Mopac spanning Lady Bird Lake. Please listen to public comment and do not construct a double decker bridge.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:23:00 PM

Name: Marnie Fitzgerald



Comment: I oppose the building of ANY ELEVATED access or roads over the Lake or in the span between Lake Austin Boulevard and Barton Skyway. This particular view/sightline and access to our beautiful lake is a TREASURE and should be coveted instead of destroyed with more concrete, signs, lights and car pollution. Please do not destroy our gorgeous city for the sake of transportation. Instead, utilize and expand the existing toll-ways and freeways (35) that do NOT back up to residential neighborhoods and the treasure of our city - Town Lake.

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- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:22:24 PM

Name: Leah Alberti



Comment: I am opposed to the construction of a double decker bridge on Mopac above Las Bird Lake. I believe it will be a detriment to the beauty of this downtown landmark as well as the downtown skyline.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:21:06 PM

Name: Doug Kirsch

Comment: Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's [MopacSouth.com](#) website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input. Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases. Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree. Analyze real alternatives to added toll lanes. The six "alternatives" offered are all

variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown. Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete. Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Trans Code Option:

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- 1
- 2

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:20:40 PM

Name: Kathleen Shapiro



Comment: we are opposed to this. thank you!!

Trans Code Option:


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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:19:25 PM

Name: Tricia Dopkins



Comment: Our entire family is highly OPPOSED to the idea and any further discussion regarding this project. Austin has become over developed, in our opinion, and we do NOT wish to see a double decker freeway adjacent to our neighborhood (nor any residential neighborhood).

Trans Code Option:

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:10:18 PM

Name: Laurie Mills



Comment: I'm opposed to a double-decker bridge over Mopac.

Trans Code Option:

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Current page: <https://voh.mopacsouth.com/problem>

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 3:01:18 PM

Name: Ashley Withers



Comment: We are opposed to the double decker bridge.

Trans Code Option:

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 2:54:10 PM

Name: Emily Seiders



Comment: As Rollingwood residents and tax paying citizens, we are very much opposed to the double decker bridge over Town Lake and the Nature Center. We own two properties in the east side of Rollingwood and have serious concerns the project would increase traffic noise significantly and block views. Furthermore, we believe there are many other ways to address this traffic issue rather than than to build this two story bridge. We only learned of the ability to post comments TODAY, 1/7, the day the comments were closing. The public comment period should be extended at least 30 days to provide adequate response to those impacted.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 1:46:45 PM

Name: Christina Rodriguez



Comment: As an avid swimmer in Barton Springs and Greenbelt the past ten years I have noticed significant difference in the water from development all around the city. We cannot continue to “develop” and build without taking into account the damage being done to nature. We don’t need more toll roads. We cannot keep destroying what brings people to the city. The nature present here is the SOUL OF THE CITY. Please reconsider this construction for it it NOT NECESSARY

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 1:42:39 PM

Name: Taylor

Comment: If we want to keep Austin's natural beauty, this cannot happen. Austin is home to me for many reasons, one of the biggest is that I can live/work in the city and immediately connect with nature on the greenbelt, lady bird lake, etc. This bridge/highway will crush that opportunity. Please do not do this.

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 12:17:45 PM

Name: Michael C



Comment: Adding a new toll road is a bad idea. This is not what the community wants or needs. Please invest in public transport instead of expensive highways! Where is Austin's train system?

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 12:00:14 PM

Name: William Galbreath



Comment: I recognize need to improve this part of MOPAC, however a Double Decker Highway is NOT the solution! This is too close to the community of Rollingwood and would SEVERELY impact its residents with both noise and light pollution. Please do not consider this as an option - there are other less environmentally impactful solutions we can choose. Thank you!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 11:57:58 AM

Name: Isaac Montoya



Comment: I do not want mopac to change. I do not support this new toll project! STOP

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[eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 11:39:56 AM

Name: James Michael Smith



Comment: We don't need more Tolled Express Lanes, We just need more Lanes period. Austin is the Only City I know of the Reduces the number of lanes near downtown instead of increasing the number of Lanes. This is why the is major congestion on these Roads, Most Cities don't decrease the number of lanes miles from Downtown, but Not Austin. MoPac reduces from Three (Non Toll) lanes to Two at Lady Bird Lake, then has Four Lanes because of merging traffic, then goes back down to three at Barton Skyway. Creating Congestion at two different locations within a 2 mile span. Also, IH35 Southbound reduces from Four lanes to Three at the 8th-12th street Exit (again Downtown) that creates Congestion. Toll Roads don't help when only about 10-15% of the drivers use them. We need more No Tolled Lanes and no more combining Entrance and Exit Ramps that use the same lane, this is another cause of congestion with people trying to merge to get on and off at the same time.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 11:15:54 AM

Name: Mehar Gangishetti



Comment: As a concerned resident of the Barton Hills and Zilker neighborhoods over the last 16 years I'm completely against this ill conceived idea. This resurrected (after it was voted down in 2015) really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West). Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt. There is no need to add any more lanes to Mopac. The solution is not to build more highways. It is to focus on public transportation. I'm categorically against any further construction in the environmentally sensitive areas that this proposal aims to. Mopac should continue to be for local commuters only.

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 10:47:29 AM

Name: Marie Saba



Comment: comments: - I am strongly against building a "double-decker" bridge over Town Lake and the Nature Center. - As a property owner on the east side of Rollingwood, the scope of the project would increase traffic noise significantly and block views. - "No build" alternatives are available to mitigate or address traffic issues on this section of MoPac. - The public comment period should be extended at least 30 days to provide adequate response to those impacted.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 10:45:29 AM

Name: Jennifer Granados



Comment: Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.

Trans Code Option:

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eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85](https://voh.mopacsouth.com/submit-comment?eType=EmailBlastContent&eId=73302b5e-adb1-4e35-b6ed-2a4a60b23a85)

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 10:30:40 AM

Name: Dan McNamara



Comment: MoPac South Project - I am strongly against building a "double-decker" bridge over Town Lake and the Nature Center. - As a property owner on the east side of Rollingwood, the scope of the project would increase traffic noise significantly and block views. - "No build" alternatives are available to mitigate or address traffic issues on this section of MoPac. - The public comment period should be extended at least 30 days to provide adequate response to those impacted.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 10:11:16 AM

Name: Emerson



Comment: Please extend the comment period - it's a cheap move to do this on an unbroadcasted basis over the holidays. Also should require an environmental impact assessment. I do not support this plan.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 9:57:28 AM

Name: JO Clifton



Comment: This is a bad idea, no matter which option you choose. I am opposed to adding lanes. I live near this highway and see its expansion as a threat to our neighborhood.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 8:50:40 AM

Name: Taylor Logan



Comment: DO NOT SO THIS TO OUR BEAUTIFUL CITY. This proposal was denied in 2015 for a reason!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 8:43:00 AM

Name: Rebecca Bray



Comment: Please build the managed lanes as planned. Those of us in SW Austin need an alternative, more reliable way to get home when needed. We have almost zero transit service and, through the actions of our city council, have limited other transportation alternatives (roadways in particular). Please build these lanes as soon as possible. Thank you!

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 7:38:21 AM

Name: Darrell Hutchinson

Comment: I don't like the presentation of options. Lots of slides about how worthy CAMPO and the overall project are and only one slide per option. Omitted from the presentation is information explaining the merits and trade-offs of each option. (Yes, I see the table with travel times). You haven't compared the duration of construction, cost to taxpayers, nor impacts to current traffic flow between options. The questions I still have after reviewing these materials are: 1. Why would you consider building an express lane without a flyover or access to downtown? 2. Why do you propose building two express lanes when there appears to be little difference in travel time between one and two express lanes? 3. Option 3 appears to be significantly different from options 1 and 2. Why are its merits not spelled out? 4. Have other options been considered, such as adding lanes to the bridge, restriping the existing lanes to add another general purpose lane, and reconfiguring the on/off ramps at Rollingwood? If I had to choose, I'd select option 1A. I don't see the merit in building two express lanes in each direction. I despise option 2C - enough with the 100 ft. flyovers already, jeez. I don't understand option 3 because it's presented so poorly, so I can't compare. I agree with the Travis County Commissioners. The public process is opaque. Thanks for the opportunity to contribute. Darrell Hutchinson

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 7:13:24 AM

Name: Elizabeth Funk



Comment: I teach at an outdoor preschool across from Zilker Park. Should this project go on, we would not be able to have classes, forcing our school to close during construction. Do not build this proposed double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. I have just heard about this very disruptive possibility and am very disappointed that the comment period is no longer (and not over the winter holidays) AND that other, less disruptive, options have not been fully explored. What about traffic improvement alternatives like dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world? Going into this HUGE project without updated data is irresponsible and ineffective. Thank you for your time and I hope to see this project reevaluated and adapted to fit the Austin we live in now, not the one from 2009.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Thursday, January 6, 2022 6:34:52 AM

Name: Rebekah Henderson



Comment: The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, December 4, 2021 10:07:33 AM

Name: bianca de leon



Comment: I am very much against installing "Lexus Lanes" on mopac. We already paid for the highway. This is a money making project on a highway we the people already paid for. This puts a burden on the lower income people and gives the wealthy their own freeway. It is undemocratic.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Wednesday, January 5, 2022 11:36:35 PM

Name: Lansing Pugh



Comment: Please extend the comment period at least 2 months. Do not add any additional impervious cover over the aquifer without a full environment assessment.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, November 27, 2021 3:58:32 PM

Name: Kylie



Comment: Austin as a city proves itself on being inclusive and diverse. From the food to the environment, we know no bounds. These ideals should be kept in mind while in the business of transportation. Roads and highways are meant to take us to the diverse parts of Austin, not shamefully through them.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:59:45 PM

Name: zcj

Comment: 1. Austin's Black History: Time changes, but much remains the same. October 20, 1995 "The Clarksville Effect: Austin Tragedy or Neighborhood Victory?" appeared in The Austin Chronicle noting, in part: The gentrification of Clarksville, or at least the displacement of its black residents, dates back to about 1904, when speculators tried to have the settlement condemned as a health hazard. At that time, blacks owned substantial property between Lamar and West Lynn, as well as almost all of the area between West Lynn and today's MoPac, where the core of Mary Baylor's Clarksville remains. These holdings steadily shrank, sometimes under pressure from covetous white speculators, often because their owners found better land elsewhere, typically a combination of both. When the city enacted its fullest Jim Crow laws in 1928 - consigning 'all facilities and conveniences [for] the Negroes' to East Austin 'as an incentive to draw the Negro population to the area' - Clarksville seemed doomed. After five decades of trying, Clarksville neighborhood leaders, including Mary Baylor, had managed to procure from the city - as described back then by longtime (and current) Sweet Home pastor Rev. W.B. Southerland - 'the neighborhood center, some playground equipment, and six stop signs.' Then came MoPac, which wiped out 64 out of 168 black-owned Clarksville homes, and displaced nearly 200 people far more efficiently than any transplanted yuppies from San Jose. When the Crosstown Expressway project - which also begat, indirectly, the recent Swede Hill brouhaha - threatened to wipe out the other half of the neighborhood, Clarksville residents took the city to court, got the neighborhood deleted from the freeway plans, and won state and federal historic designations for the neighborhood. The latter were opposed by the city's Historic Landmark Commission, whose opinions about Clarksville presaged Eric Mitchell's recent remarks about similar areas of the Eastside - gasoline and matchbook s. [Note: Southerland passed away: May 27, 1934-August 14, 2004]

2. Transit Agency's Disparate Impacts: In 2017, Capital Metropolitan Transportation Authority ("Capital Metro") General Counsel Kerri Butcher attempted to withhold information about \$4M North Lamar Transit Center ("NLTC") proposed redevelopment; 7 of 9 routes were due to be unilaterally eliminated. Loop 1/Missouri Pacific ("MoPac") construction delay commuter notices were posted, but there were no notices for NLTC minorities—illustrating a lack of transparency that continued throughout Service Plan 2025, rebranded Connections 2025 then Cap Remap June 3, 2018 when 52 routes changed to serve South/West/Central Austin white choice riders and Southeast/Dove Springs Hispanics with 15-minute headway—three of 5 routes created below Service Guidelines and Standards—at the expense of Northeast Blacks and minorities north of US 183/NLTC. See April 5, 2017 Texas Attorney General Opinion to my open records request: <https://www2.texasattorneygeneral.gov/opinions/openrecords/51paxton/orl/2017/pdf/or201707166.pdf> November 3, 2017 "Cap Metro hangs hopes on Connections 2025" The

Austin Chronicle shows sole partial north-south frequent Route 325. “Supporters of the plan, including Cap Metro itself, acknowledge that every policy has certain casualties.” Project Manager Lawrence Deeter noted “once-an-hour” [Black] Route 233-Colony Park, but KAZI 88.7FM advertised: “More frequent, More reliable, Better connected.” Before changes, #325 ran 15 min northeast-west. ~Jack Craver: <https://www.austinchronicle.com/news/2017-11-03/cap-metro-hangs-hopes-on-connections-2025/> Pictured here is the transit system that undergirds \$7.1B Project Connect light rail approved by voters November 3, 2020 based on equity propaganda and false ballot language conflating ridership/high-capacity transit and coverage (lifeline access local buses). Central Texas Regional Mobility Authority’s proposed Loop 1 Express Lane project needs to transparently acknowledge the benefit to white commuters and continuation of racial segregation by Capital Metro which continues to date. ~Thanks. Zenobia C. Joseph

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Friday, January 7, 2022 11:59:26 PM

Name: Becky Combs

Comment: MOPAC S restart comments Thank you for the opportunity to comment on the documents provided at Virtual Public Meeting Number Five for the Mopac South Project. After reviewing the confusing and outdated documents, here are my comments: 1. The comment period fell over the holidays and did not give enough time to ensure full public input. Please extend the comment period at least 30 days. 2. The documents are confusing, VERY OLD, and do not provide current, accurate, relevant information. The document states, “In 2016, just before the MoPac South Environmental Study was put on hold, CAMPO 2035 was the most current Regional Transportation Plan, and therefore, the baseline against which most project data has been measured. Now that CAMPO 2045 is available, our data and analyses will need to be updated to reflect the updated information available. We look forward to gathering and sharing that information at the next open house in 2022.” Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The comment period should be extended for at least 30 days following the publication of current relevant traffic data and analysis. 3. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property. 4. Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases. 5. Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model consider the real world now. 6. Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money. 7. Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

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To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Monday, December 6, 2021 2:30:06 PM

Name: Spencer Christian Muncey



Comment: What is the traffic impact analysis on the removal of the frontage road entrance to southbound Mopac after the Bee Cave's intersection? Removal of that entrance would eliminate a merge point that today does not have an acceleration lane and many individuals have to merge over three lanes to get to 360 Southbound. Attached is a google maps image with the entrance in question circled. Thanks! Spencer Muncey

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File Upload: [Remove_Barton_Skyway_Entrance.PNG](#)



Groceries

Restaurants

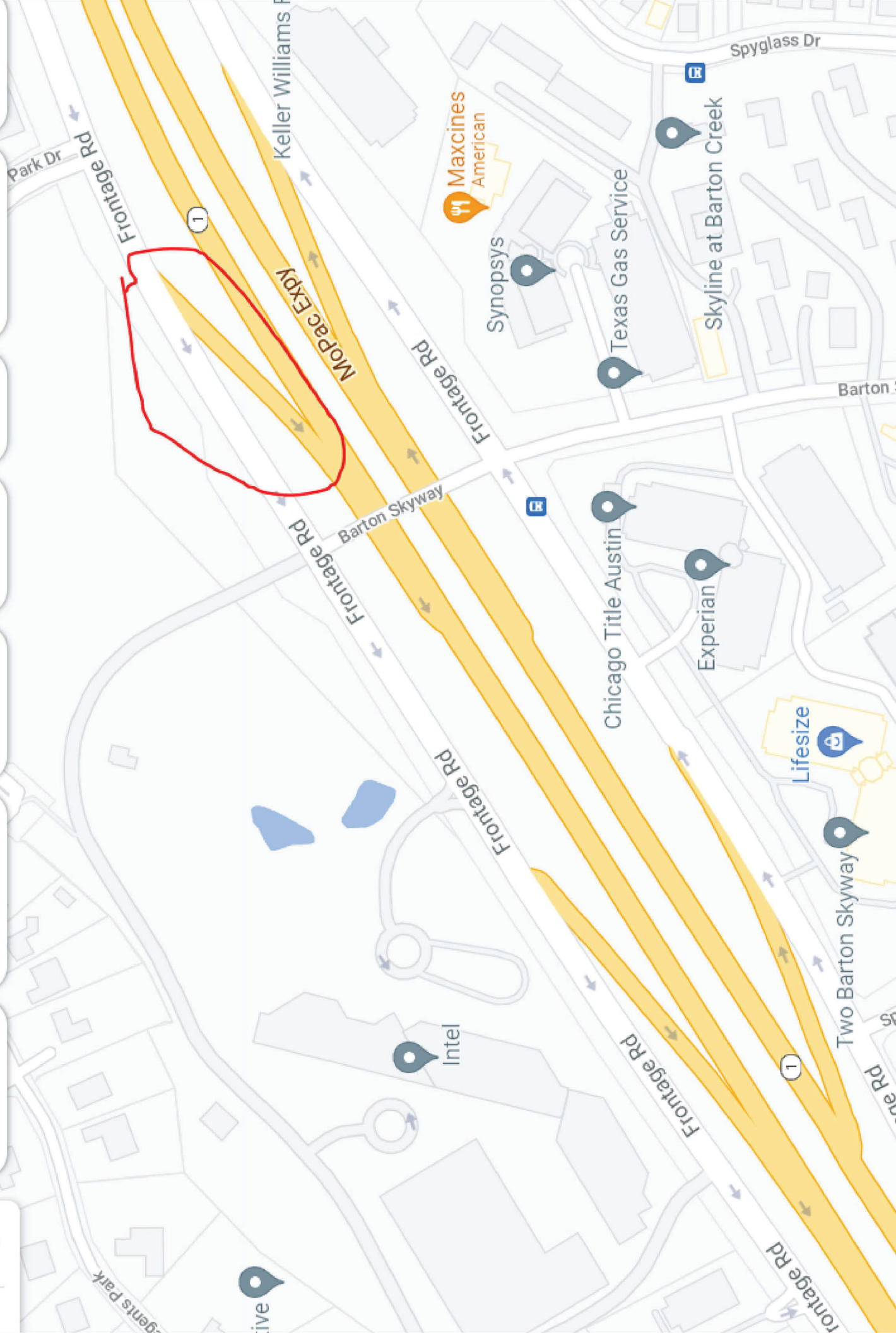
Takeout

Hotels

Gas

Pharmacies

Coffee



Frontage Rd

Mopac Expy

Barton Skyway

Frontage Rd

Frontage Rd

Frontage Rd

Frontage Rd

Two Barton Skyway

Spyglass Dr

Keller Williams

Maxcines American

Synopsys

Texas Gas Service

Skyline at Barton Creek

Chicago Title Austin

Experian

Lifesize

Intel

ive

gents Park

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, December 26, 2021 11:07:22 AM

Name: Walton Schmidt



Comment: I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation and connectivity for this larger highway project.

Trans Code Option:

Signup For Newsletter:

Current page: <https://voh.mopacsouth.com/submit-comment>

File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meredith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Saturday, December 18, 2021 4:32:45 PM

Name: Stephanie Erwin



Comment: With Austin becoming more and more unaffordable and inflation chipping away at our disposable income, the last thing we need is another way to spend money just to get on the other side of town in a timely manner. More express lanes are BAD for the public. General purpose lanes, usable by all, at all times of the day, without cost to the driver should be the solution. It seems as if gouging pockets of drivers is the only solution left on the table. The current express lane on Mopac is a joke. Please don't do it again. "Expensive express lanes coming, please provide input on [MoPacSouth.com](https://mopacsouth.com)" should be on the lit marquees along the highway. You'll get the input you're asking for.

Trans Code Option:

Signup For Newsletter:

- 2

Current page: <https://voh.mopacsouth.com/>

File Upload:

From: mopacsouthvoh=ctrma.org@mg.mobilityauthority.com on behalf of [MoPac South Virtual Public Meeting](#)
To: [Kenneally, Katie M](#); [Lacy, Hillary](#); [Prescott, Meridith](#)
Subject: MoPac South Virtual Public Meeting Comment
Date: Sunday, January 2, 2022 12:03:39 PM

Name: Richard J Smith



Comment: Please be more transparent and explain exactly why the City of Austin prefers its own proposal. Many residents do not trust the City of Austin. That said, we definitely need an improvement to the traffic situation on Mopac South, and the various alternatives look very interesting!

Trans Code Option:

Signup For Newsletter:

- 1
- 2

Current page: <https://voh.mopacsouth.com/submit-comment>

File Upload:

Input and Question

Kay Fedrick [REDACTED]

Tue 1/4/2022 12:13 PM

To: MoPac South <mopacsouth@ctrma.org>

Hello. I need to spend more time looking through your options, but my immediate response is that adding northbound downtown-direct routes (while being the most logical) will not be much help. I live in Circle C and drive north often usually exiting at either Enfield or taking the toll lane. The two dedicated lanes at the river are almost always empty and do not give any congestion relief now. The back up always - always - continues past the river. I appreciate being able to use the toll lane whenever possible, but it doesn't help with the backup from the river to 45th Street.

As it is now, one section of northbound bottleneck could be easily eliminated between Slaughter and 290 by not making the off-lane at Wm. Cannon an "exit only" lane. All that would take is paint and a new sign. There is no reason for it to be exit only. Coming onto Mopac from Davis there are three lanes. They need to remain three lanes. Drivers who will exit at Sunset Valley or 71/290 are forced to merge into the middle lane only to be able to change into the right lane after they pass the Wm. Cannon exit. It makes no sense at all and causes a lot of needless and hazardous lane changes.

And while I'm here, it is ridiculous that the lanes turning east onto Slaughter from Mopac are "no right turn on red." If part of the purpose of the diamond intersections is to improve travel time, having us sit there for several minutes waiting for a green light while no one is coming through the intersection is annoying at best. I go to the Capitol a lot, and if the two right-turn lanes at Enfield Rd. are allowed to turn right on red with most of our view blocked by the Mopac overpass, then it makes no sense for our clear-view lanes at Slaughter to be treated differently. The right-on-red-after-stop lane westbound off of Mopac is much more vision impaired than the eastbound lanes. Please, please rework that signal. At least give us a blinking yellow when possible.

Thank you.

Karole Fedrick
[REDACTED]

Mopac traffic

Jan Stevens <[REDACTED]>

Tue 1/4/2022 3:03 PM

To: MoPac South <mopacsouth@ctrma.org>

Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.

Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Sent from [Mail](#) for Windows

Double decking

Dan and Diane Jager [REDACTED]

Tue 1/4/2022 4:18 PM

To: MoPac South <mopacsouth@ctrma.org>

Do Not double deck Mopac! It would make an environmental nightmare.

Diane Jager
[REDACTED]

[Sent from Yahoo Mail on Android](#)

Comments on the proposed MOPAC South project

Bill Holt [REDACTED]

Tue 1/4/2022 4:48 PM

To: MoPac South <mopacsouth@ctrma.org>

Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.

Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of

existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

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New Bridge Proposal--NO!

David Boikess [REDACTED]

Tue 1/4/2022 5:22 PM

To: MoPac South <mopacsouth@ctrma.org>

PLEASE: Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

David Boikess

[REDACTED]
[REDACTED]

Reject the double-decker toll bridge over Lady Bird Lake

Colleen Theriot [REDACTED]

Tue 1/4/2022 5:50 PM

To: MoPac South <mopacsouth@ctrma.org>

Dear CTRMA,

I am opposed to the proposed double-decker toll bridge over Lady Bird Lake and disappointed that this project has been resurrected after being roundly rejected years ago. I respectfully ask of CTRMA:

Extend the comment period at least 30 days. The comment period fell entirely over the holidays. Extending the comment period and correcting the misinformation will help ensure robust and full public input.

Ensure that the comment period be extended for at least 30 days following publication of current relevant traffic data and analysis.

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. **The 2035 model, now more than 10 years old, was problematic then and virtually useless now.**

Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. **Neither the 2035 Model nor the 2045 model reflect this new world.** Both also ignore the

“induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.

Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Thank you for your consideration,
Colleen Theriot - [REDACTED]

Mopac South Project

John Lemaux [REDACTED]

Tue 1/4/2022 7:10 PM

To: MoPac South <mopacsouth@ctrma.org>

This is a horrible idea.

Extend the comment period at least 30 days. The comment period fell entirely over the holidays.

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.

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Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Thanks.

John Lemaux
[REDACTED]



MoPac South Expansion - Comments

Anne Miller [REDACTED]

Tue 1/4/2022 7:33 PM

To: MoPac South <mopacsouth@ctrma.org>

Please consider the following comments:

Extend the comment period since the initial comment period fell during the holidays.

Evaluate stormwater runoff, heat island and noise pollution effects from potentially adding substantially more impervious cover.

Please note that I support the following comments previously provided by SOS Alliance:

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

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Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

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Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Thank you for considering this input.



Please don't destroy our community

Sara Klopp [REDACTED]

Tue 1/4/2022 9:08 PM

To: MoPac South <mopacsouth@ctrma.org>

Please please don't build or expand highways in the heart of our city, zilker, the lake, greenbelt, Barton springs area. This jeopardizes everything we love about living here. People will start using it instead of 1-35. Please keep mopac a local commuter highway. Thank you.

Sent from my iPhone

Don't Make the Mistake on the Lake

KAREN KREPS [REDACTED]

Tue 1/4/2022 10:08 PM

To: MoPac South <mopacsouth@ctrma.org>

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School

This resurrected really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West). Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt.

I live close by and drive over the lake often. I swim daily at Barton Springs, and I think this is the worst idea possible. Don't even consider it!

KK

Karen Kreps
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

MoPac South proposed project

Robert Gilliland [REDACTED]

Wed 1/5/2022 6:34 AM

To: MoPac South <mopacsouth@ctrma.org>

Dear Central Texas Mobility Agency,

Please extend the comment period for 30 additional day to get a better glimpse of public opinion. Putting the comment period in a Holiday has the appearance of trying to sneak something by the public.

As it is now proposed I am very strongly opposed to the plan. A double decker bridge over Town Lake and Austin High is a terrible, barbaric idea.

Work with what is already available and avoid taking any parkland or land from Austin High.

Sincerely,

Robert Gilliland

FW: MoPac South Contact Us Form [#531]

Prescott, Meridith <Meridith.Prescott@atkinglobal.com>

Wed 1/5/2022 8:23 AM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Lacy, Hillary <Hillary.Lacy@atkinglobal.com>; Katie Kenneally <Katie.Kenneally@atkinglobal.com>

FYI: Forwarding to the outlook email for tracking purposes.

From: Mopac South Contact Form <no-reply@wufoo.com>

Sent: Tuesday, January 4, 2022 8:04 PM

To: Sylvia Shelton <sshelton@ctrma.org>; jhayter@ctrma.org; Kenneally, Katie M <Katie.Kenneally@atkinglobal.com>; Gilpin, Charlotte (K-Friese) <Cgilpin@kfriese.com>; Reid, Zane S <Zane.Reid@atkinglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinglobal.com>; Prescott, Meridith <Meridith.Prescott@atkinglobal.com>; Story, Elizabeth A <Elizabeth.Story@atkinglobal.com>

Subject: MoPac South Contact Us Form [#531]

Name *	Olivia Solari
Email *	[REDACTED]
Address	<input type="checkbox"/> [REDACTED] [REDACTED]
Message *	While I understand how bad traffic is in Austin, DO NOT destroy the beauty of this city to build infrastructure solely for wealthy citizens. Don't LA my austin and turn our environment into a roadway.

At Atkins - member of the SNC-Lavalin Group, we work flexible hours around the world. Although I have sent this email at a time convenient for me, I don't expect you to respond until it works for you.

NOTICE – This email message and any attachments may contain information or material that is confidential, privileged, and/or subject to copyright or other rights. Any unauthorized viewing, disclosure, retransmission, dissemination, or other use of or reliance on this message or anything contained therein is strictly prohibited and may be unlawful. If you believe you may have received this message in error, kindly inform the sender by return email and delete this message from your system. Thank you.

MoPac South double-decker from Cesar Chavez to Slaughter Lane

WILLIAM GORDON [REDACTED]

Wed 1/5/2022 11:27 AM

To: MoPac South <mopacsouth@ctrma.org>

While we had hoped to bask in the glow of the New Year for a while, our not-so-friendly toll road agency, the CTRMA, has forced us to ask for a few minutes of your time to comment on CTRMA's resurrection of the Mopac South "Billion Dollar Mistake on the Lake" proposal to add a double decker toll bridge over Zilker Park, Lady Bird Lake, and Austin High School and to add 4 toll lanes (2 each way) to South Mopac from Cesar Chavez to Slaughter Lane. The community killed this Mopac monster in 2015 but now its baaaack!!

MoPac South Double-decker from Cesar Chavez to Slaughter Lane with toll-lanes

WILLIAM GORDON [REDACTED]

Wed 1/5/2022 11:53 AM

To: MoPac South <mopacsouth@ctrma.org>

I am opposed to this proposal.

This really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West). Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek Greenbelt.

William S. Gordon
[REDACTED]

MoPac South Comment

Stephen Buchanan [REDACTED]

Wed 1/5/2022 2:46 PM

To: MoPac South <mopacsouth@ctrma.org>

The solution to increasing transit efficiency is not creating more lanes for more drivers to fill. The reality is that increasing a wider variety of transit options is a much better solution, and a solution that this proposal totally ignores. Furthermore, the construction and sunlight impact serves as a risk to the community and wildlife growth below it; nevermind the ugly aesthetic.

Instead of trying to build more concrete roadway, an attempt to bolster alternative transit options along MoPac seems like a much more reasonable, cost effective and modern solution. And shame on whoever deciding placing the public comment period over the holidays was.

--

Best,

Stephen Buchanan
[REDACTED]

Comments on MoPac South Project

Susan Pantell [REDACTED]

Wed 1/5/2022 2:50 PM

To: MoPac South <mopacsouth@ctrma.org>

CTRMA,

You should thoroughly evaluate all alternatives, including no build and limited build, which would use the existing roads to improve traffic flow. An existing lane should be dedicated to high occupancy vehicles and transit.

The traffic model used should be improved and updated. The data that it relies on, from 2009, is out of date; and a number of the assumptions from the old model do not reflect current conditions. You should model the additional traffic from induced demand that will result from each project alternative.

The climate change impacts from this project should be evaluated, including both the direct impacts from increased traffic and indirect impacts from future development.

Equity impacts of this project should be considered up front, including the impact from adding toll lanes.

I oppose building a double-decker bridge over Lady Bird Lake, Zilker Park and the high school. The project should not take any park land.

Sincerely,
Susan Pantell

double decker toll road over Zilker Park and Lady Bird Lake.... please, NO! NO! NO! too noisy & dirty from rubber dust

gschwartz@austin.rr.com [REDACTED]

Wed 1/5/2022 3:03 PM

To: MoPac South <mopacsouth@ctrma.org>

To Whom It May Concern;

Does Climate Change enter into any of the calculations? Central Austin is suffocating!!

Austinites disapproved of this project years ago.... Why do you think our advice has changed? NO MORE ROADS please. Bad traffic is a plus when you want to encourage mass transit or alternative routes. Why don't the trucks take route 130?? Is that naïve? – go around AUSTIN WHERE ROADS ALREADY ARE AVAILABLE. Or make drivers suck it with because they make bad choices... pay the price with bad traffic to enjoy what remains of Austin's character.

I live nearby MOPAC and since it's expanded to 8 lanes, the air is polluted, the filthy rubber dust and other particulates accumulate on my house, porch and gardens. It is MUCH MORE NOISY.... Please don't add to the mess with more expansion. If you build it they COME. There are many more semi-trucks on MOPAC now than ever before. It is dangerously narrow. THINK.

This resurrected really-bad-idea is being pushed forward with traffic data and analysis that is more than 10 years old. If built, it would convert Mopac from a local commuter highway into a western alternative for I-35 (think I-35 West). Its construction and operation pose a major threat to Barton Springs, Zilker Park, Lady Bird Lake Park, the Butler Hike & Bike Trail, Austin High School, and the Barton Creek greenbelt. We fought it off once and with your help we can do it again.

Ms. Gerry Schwartz
[REDACTED]

Expansion

Ginger Hurst [REDACTED]

Wed 1/5/2022 8:14 PM

To: MoPac South <mopacsouth@ctrma.org>

Asking for the comment period be extended for at least 30 days following the publication of current relevant traffic data and analysis.

Ginger Hurst

Highway Height

PHOEBE ALLEN [REDACTED]

Wed 1/5/2022 8:51 PM

To: MoPac South <mopacsouth@ctrma.org>

The raised highway lanes south of Lady Bird Lake should be no higher than the current highway lanes. Highway heights built beyond limits indicates a failure of design and engineering to make full use of cutting-edge opportunities. Falling back on the old tried and true, costs money in the long run and provides a reduced level of service.

Dick Kallerman

Austin Transportation Department/Combined City of Austin Departmental Comments - MoPac South Express Lane Project

Spillar, Rob [REDACTED]

Thu 1/6/2022 12:49 PM

To: MoPac South <mopacsouth@ctrma.org>; James Bass <JBass@ctrma.org>

Cc: Cronk, Spencer [REDACTED]; Fiandaca, Gina <[REDACTED]>; Morales, Jorge [WPD] [REDACTED]; McNeeley, Kimberly <[REDACTED]>; Mendoza, Richard [PWD] <[REDACTED]>

James,

Please find attached comments related to the MoPac South Managed Lane Project. I have aggregated departmental comments from various City of Austin departments as part of our communication. Please confirm receipt of these comments. I look forward to on-going coordination on this project and hope that our comments are useful in guiding the process towards a successful outcome for all involved.

I have copied our City Manager, Assistant City Manager and city departments that provided input to this letter.

We will also send this same communication in hard copy to the project post box and to you via US mail.

Robert Spillar



Austin Transportation Department

January 6, 2022

Mr. James Bass
Executive Director
Central Texas Regional Mobility Authority
3300 N. IH 35 Frontage Road #300
Austin, Texas 78705

**RE: City of Austin staff comments for MoPac/Loop 1 South Environmental Study
Virtual Public Meeting**

Dear Mr. Bass:

Thank you for the opportunity to respond to your presentation of the proposed MoPac/Loop 1 South Managed Express Lanes project championed by the Central Texas Regional Mobility Authority (CTRMA). I understand that the current public engagement and presentation of the project is a refresh of the project as it last stood prior to the pandemic. Further, I understand that the project has been on hold due to the financial impacts and technical difficulties created by the pandemic and that it is now possible to restart the project. As you know, the City of Austin has been working cooperatively with the CTRMA on this project for some time, dating back to our initial cooperation in 2015. As such, I request that all prior communications, comments, and requests made by the Austin Transportation Department (ATD) and other departments of the city be honored and incorporated as part of the current comment process. By this reference, I am requesting that the definition of alternatives and the environmental process address our prior communications.

ATD has tried to aggregate comments and concerns shared by other city departments into this letter so that we are speaking with a single voice on behalf of Austin. Although we have not had the opportunity to seek endorsement of these comments from Council due to the timing of the public meeting and short comment period, I believe we are in alignment with prior direction and that we have their support on our response. You should anticipate that individual policy leaders from Council may choose to communicate individually on behalf of the constituents they represent.

I have attempted to organize our comments into themes, relevant to the topic of the comments:

- Process
- Traffic Operations, Lane Configurations and Design
- Transit
- Parks
- Pedestrian and Bicycle Issues
- Storm Water/Environmental

ATD and other departments and utilities at the City of Austin remain ready to work with CTRMA on developing this project. As reflected in our adopted Austin Strategic Mobility Plan, our goals are to develop a project that is environmentally sound and protective of our fragile water quality and natural

environment in South Austin; to prioritize transit, bicycle, and other modes of travel that increase our modal split away from the single occupancy vehicle and assist us in reaching our 50/50 modal split objective; and, increase the effectiveness and efficiency of existing infrastructure (tolled and non-tolled) so that all residents benefit from the proposed project.

Again, thank you for the on-going opportunity to work with your staff and consultant team in improving the proposed project. ATD's comments related to the current request by CTRMA are provided in the following attachments.

Sincerely,



Robert Spillar, P.E.
Director, Austin Transportation Department
City of Austin

Cc: Spencer Cronk, City Manager
Gina Fiandaca, Assistant City Manager, Mobility
Jorge Morales, Director, Watershed Protection Department
Kimberly McNeely, Director, Parks and Recreation Department
Richard Mendoza, Director, Public Works Department

Attachments:

1. Jan. 6, 2022 COA - ATD Technical Comments
2. Jan. 6, 2022 Memo from PARD re MoPac South Alternatives
3. Nov. 17, 2015 Letter to CTRMA re South MoPac

City of Austin, Austin Transportation Department Technical Comments 1/6/2022

Process

Public Outreach: ATD appreciates that CTRMA, with the current public engagement process, repeated the format and content of the prior public engagement process that preceded the shutdown of the project. However, Austin and the corridor served by the proposed project is growing at a hyper rapid rate. It is likely that a number of current residents affected/benefited by the project may have recently moved to the corridor during the project's hiatus from the public arena and that this latest public engagement may be the first introduction for many to the project. It is incumbent on the CTRMA that they assure that the public has been sufficiently engaged if general consent is to be achieved. ATD requests that CTRMA continue to reach out to the public and affected agencies to assure an on-going robust discussion is being supported. ATD requests that on-going opportunity for public input and comment be supported as additional environmental information is developed. We request that these on-going interactions maintain an ability to have sway over the eventual outcome of the project.

Additionally, the current public outreach has been fully virtual due to the ongoing difficulties caused by the pandemic. TxDOT, for their I-35 project, has found ways to interact with the public in person as well as virtually. ATD requests that CTRMA look for additional ways to safely meet in person with the public to encourage more interactive communication and improve access to information. Such meetings might be held in an outdoor venue such as Berger Stadium, one of the affected City parks, Lady Bird Johnson Wildflower Center, or various commercial sites along the corridor. Again, ATD is mindful of the risks created by the pandemic, and requests that CTRMA strive to expand access in ways that are deemed to provide for safe interactions.

Naming Conventions: Alternative 3 is labeled as the "City of Austin Option" per the previous project coordination for MoPac/Loop 1 South from 2015. However, all other alternatives are named based on the attributes they provide. NEPA requires that the proponent of the project consider all viable alternatives equally. Labeling one alternative as the "City of Austin Option" implies that the alternative is on a different plane than are the other alternatives. ATD requests that the name of Alternative 3, moving into the Environmental Assessment, simply be titled "Alternative 3 – Direct connects to 5th/6th Street on Separate Outside Structures" or a similarly descriptive name. Furthermore, should this concept be taken forward, connections to the frontage roads south of Lady Bird Lake should be considered as part of this alternative, as this was the original intent of the proposed concept.

Data Efficacy: ATD is concerned about the relevance and quality of data to be used in traffic and/or environmental analysis moving forward. CTRMA should confirm that data collected as part of the early study process dating back to 2015 remains valid and accurate for consideration as part of the current evaluation process. Since 2015, numerous transportation projects have come on-line that

may not have yet had a full impact on current and relevant traffic conditions within the corridor (i.e., expansion of RM 1626, final concept determination and construction for the Oak Hill Y, Austin's adoption of Project Connect, improvements to the parallel US 183 corridor, full operations of the SH 45 South facility). Also, since 2015, suburban development in Hays County and south Travis County has rapidly expanded. Demand from these land development projects and the change in roadway networks and modal options should be factored into the traffic demand modeling for the MoPac/Loop 1 South Managed Lane project. Likewise, environmental data collected previously should be verified as valid for use on the current evaluation (e.g., water flow and quality, endangered species, air quality, noise, etc.).

SH45 Operations & Connections: ATD is aware that Hays County is studying the extension of SH 45 from its current terminus to I-35. The City of Austin has not taken a position on this extension but has indicated our willingness to coordinate with Hays County on this possible connection. Is the possibility of this connection reflected in the current demand forecasts and travel modeling for the MoPac/Loop 1 South Managed Lane project? Please confirm that adequate scenario modeling has been completed to accommodate the possible extension and connection of SH 45 to I-35. Assure that updated forecasts and travel data are used to evaluate this scenario.

Construction Sequencing: Because of the unforeseen delay for the MoPac/Loop 1 South Managed Lane project due to the pandemic, it is now out of phase with other regional projects such as Project Connect; I-35 Capital Express South, North and Central; US 183; and numerous Corridor Projects within the City of Austin. Identify how the MoPac/Loop 1 South Managed Lane project fits within the overall regional construction schedule and how moving forward with this project will be coordinated with other regional construction activities or how additional construction impacts might be mitigated. Demonstrate how the construction schedule of this project coordinates with those of other regional projects.

Vehicle Operations, Lane Configurations and Design

Ramp Queuing: Ramp locations, frontage road intersection design, and freeway design affect the City of Austin mobility network surrounding the proposed MoPac/Loop 1 South project. It is critical for ATD to understand how the loading and unloading of the proposed corridor functions. Congestion on the main lanes of MoPac/Loop 1 often backs up onto City Streets and reduce the effectiveness of the overall mobility system. For alternatives that impact ramp configuration or proposed gore points from general purpose lanes to frontage roads, please include consideration of impacts to the adjacent intersections in detailed operational analysis. In addition, please show the updated lane configurations on the frontage roads to assure appropriate lane balance and access spacing for mobility and safety impacts.

Loop 360 Access: ATD has previously communicated concern related to the congestion and queuing caused by the proximity of multiple right-side southbound on-ramps (downtown/RM 2244/Barton Skyway) and the merge of traffic seeking to access the left-side southbound/eastbound off ramp to Loop 360. CTRMA is constructing an interim project to extend the general-purpose exit-only departure lane from where it now leaves the main lanes at Barton Skyway. ATD has previously recommended a conversion of the left-side exit to a right-side exit with fly-over to the existing left-side ramp cut to provide this same movement. The proposed concept would eliminate the weave that causes extensive backup in the main lanes. Please confirm that this is still the preferred approach to reducing southbound traffic, or if a right-side departure lane to Loop 360 will not be included in the

final alternative, provide freeway simulation modeling that demonstrates that the CTRMA solution would provide similar or superior congestion relief on the main lanes. ATD requests detailed freeway simulation with updated data sources is necessary to determine this outcome.

Northbound MoPac/Loop 1 Access from Loop 360: ATD has previously submitted a request to consider moving the northbound on-ramp from Loop 360 to the MoPac/Loop 1 main lanes, shifting the on-ramp to the north and using the terrain to braid it over a reconstructed off-ramp to Barton Skyway. The additional frontage road distance would allow large vehicles to reach freeway speeds more easily prior to entering the main lanes, reducing the weave/merge delay on the frontage road just north of Loop 360 that currently causes severe back-ups on Loop 360 and US 290 during peak travel periods. If access to the managed lanes is required near this point, ATD suggests that the new on-ramp could be split to provide direct access to both the managed lane and to the general-purpose lanes from the same recommended braided overpass. ATD requests freeway simulation modeling to demonstrate the value of this suggested ramp relocation or to support an alternate ramp configuration.

Lane Balancing: ATD has previously communicated concern related to lane balancing through the US 290 at MoPac/Loop 1 interchange. If the managed lanes between US 290 and downtown are to consist of four lanes (two lanes in each direction), then ATD requests that one managed lane exit and enter from US 290 West and one managed lane north- and south-bound enter the interchange from MoPac/Loop 1 from south of the interchange. Previous concepts had extended four-lanes on MoPac/Loop 1 South all the way to at least Slaughter Lane. Access to/from US 290 West continues to be important to assure future transit access from the vicinity of Oak Hill. Access to/from US 290 eastward can be accomplished through the Loop 360/MoPac/Loop 1 interchange and connections. Please confirm with freeway simulation modeling that the merge of traffic streams from US 290 West and Loop 1 South works efficiently compared to existing operations or alternate design concepts.

6th Street Connections: ATD has previously recommended a ramp from westbound 6th Street (Lake Austin Boulevard) to southbound MoPac/Loop 1 main lanes via a loop or partial cloverleaf design at Atlanta Street. This access is needed to unload the existing intersection of Lake Austin Boulevard with Atlanta Street. Options to connect this loop ramp to the elevated ramp from Atlanta Street or to the ramp from Cesar Chavez Street should be considered to determine the optimal design. In constructing the loop ramp, eastbound travel from Lake Austin Boulevard to southbound MoPac/Loop 1 as well as westbound transit only access to southbound MoPac/Loop 1 should be maintained via a reconfigured signal at Atlanta Street (see graphic below). Please confirm preferred configuration with traffic simulation analysis using current traffic data.

In redesigning the 5th/6th Street interchange, consider providing an eastbound 5th Street to northbound Loop 1 access roadway by reversing the existing Patterson Avenue U-turn and adding a new signal at 6th Street/Patterson Avenue intersection (preserving southbound pedestrian and bicycle access). This connection would allow vehicles traveling eastbound to enter the existing northbound on-ramp to the MoPac/Loop 1 main lanes via a new signal on 6th Street. A westbound to eastbound U-turn connection could be accommodated underneath the interchange superstructure if analysis indicates the need. Please confirm preferred configuration with traffic simulation analysis (see graphic below).



Transit

Inclusion of Transit as Part of Base Project: CTRMA has previously communicated that they are committed to assuring transit service is available to operate on the proposed express lanes. This has been stated at public meetings and is part of our understood purpose of the project. ATD believes it is important that transit facilities such as remote park and rides and all other necessary transit infrastructure be incorporated as part of the recommended project and constructed or procured at the same time the express lanes are constructed.

Enhanced Transit Access: ATD believes transit access and egress should be prioritized to/from 5th and 6th Streets and the managed lanes. Connecting these two corridors to the managed lanes requires developing a transit-only connection from West 6th Street to the northbound MoPac/Loop 1 managed lanes. This need along with preliminary concepts were previously discussed between ATD and CTRMA and should be included for evaluation in defining a preferred alternative. The City does not desire a general-purpose connection from 6th Street to the northbound express lane, nor do we believe the system could sustain anything more than a direct transit access to the existing ramping system. Please document this request and analyze the ability to provide this direct access ramp as part of the interchange reconfiguration incorporated in the EA.

Provide transit-only access from westbound 6th Street to southbound MoPac/Loop 1 via reconfigured Atlanta Street/Lake Austin Boulevard intersection as detailed in the previous subsection entitled 6th Street Connections.

Coordination with Transit Operators: Confirm and document coordination with Capital Metro, CARTS and other public/private transit providers that might have interest in serving the South and North MoPac/Loop 1 Express Lane corridors. Confirm the interest and ability to operate transit facilities and service within these future corridors and incorporate the necessary infrastructure as part of the project to facilitate these needs.

Park Impacts/Benefits

Attached with this comment letter, please find a more in-depth communication from the Austin Parks and Recreation Department (PARC).

Opportunity for Improved Zilker Park Access: PARC is actively conducting a study with its Zilker Park Vision Plan to improve access to Zilker Park and to develop a long-range plan for this iconic Austin facility. This project was initiated with extensive work having been completed by PARC during the MoPac/Loop 1 South project hiatus. The MoPac/Loop 1 South corridor crosses over Zilker Park and Lady Bird Lake and will likely cause impacts directly to the park. We recognize that some impacts may be unavoidable due to the location of the corridor running through the various park and recreational facilities. We request that potential park impacts be avoided where possible, minimized where unavoidable, and mitigated per NEPA and City of Austin requirements. We ask that CTRMA conduct expanded coordination directly with PARC to see if there are opportunities to create benefits in terms of improved access to Zilker Park consistent with the evolving Zilker Park Vision Plan. These opportunities may present options to mitigate any impacts that may be otherwise unavoidable.

Barton Creek Greenbelt and Other Park Facilities: The Barton Creek Greenbelt, Violet Crown Trail, Lady Bird Johnson Wildflower Center, Austin Nature Center, Austin Botanical Gardens, Zilker Park, Lady Bird Lake and other trail and park facilities along the corridor are important natural and recreational resources for the City of Austin. We request that potential park impacts be avoided where possible, minimized where unavoidable, and mitigated per NEPA and City of Austin requirements.

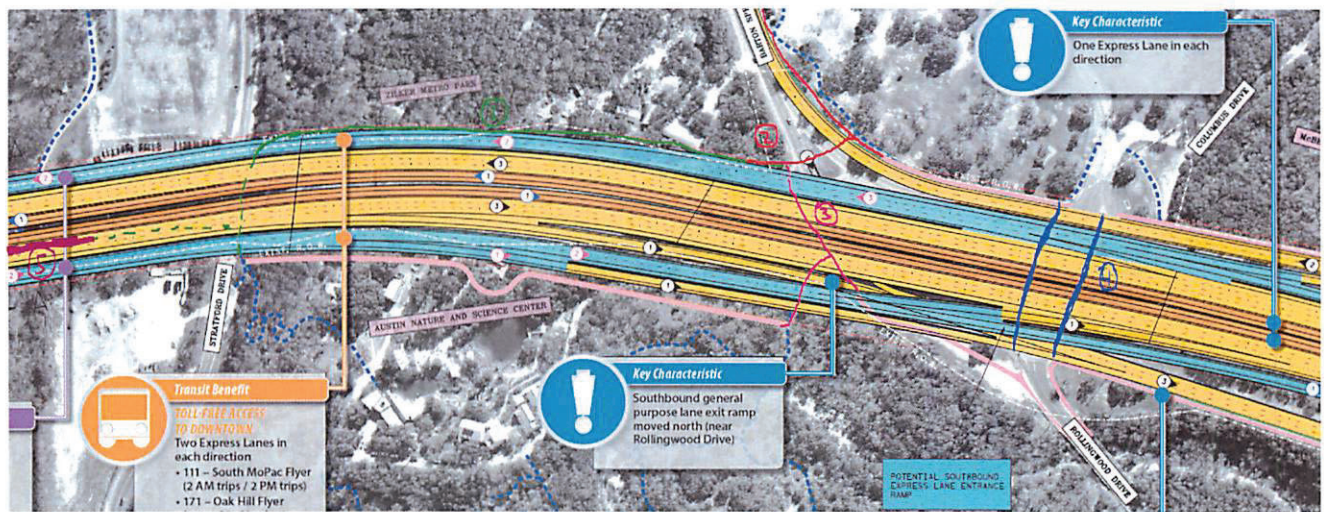
Pedestrian/Bike Facilities and Shared Use Paths (SUP)

Continuous Pedestrian & Bicycle Facilities: ATD is supportive of CTRMA's goal to provide connections to achieve a continuous pedestrian and bicycle system from downtown Austin to Slaughter Lane. Below are comments related to how that goal could be achieved most successfully to tie into the City's bicycle and pedestrian networks and provide safe access to destinations along the MoPac/Loop 1 corridor.

- For the more urban and central portion of the project from Lady Bird Lake to Convict Hill Road, ATD requests that SUP be provided on both sides of the highway. This would reflect the higher pedestrian and bicycle usage as well as provide access to all sites and side streets along both sides of MoPac/Loop 1. This would also better reflect the TxDOT Bikeway Guidance document, which recommends facilities "on each side of the roadway to provide needed origin and destination points."
- When determining a cross section for the selected alternative, ATD requests that the AASHTO Guide for the Development of Bicycle Facilities, the FHWA Shared-Use Path Level of Service Calculator, and the TxDOT Bicycle Accommodation Design Guidance documents be referenced to select the width of the SUPs rather than using the minimum width allowed.

- ATD requests that all local street crossings of MoPac/Loop 1 show SUP on each side of the roadway on the schematic to provide safe and comfortable multimodal crossings of the highway.
- ATD recommends that the schematics show SUP and sidewalk in different colors on the plan view and legend, as is typical on TxDOT projects. This will more clearly convey to the public what is being proposed as well easier for ATD to understand the intent.
- In the proposed cross sections on each sheet of the schematics, currently only vehicular travel lanes are shown. SUP, sidewalk, and the buffers from the roadway should be shown, as is typical on TxDOT projects. This would be easier for the public to interpret.

Lady Bird Lake to Rollingwood Drive: This portion of the corridor is an important area for the City’s ped/bike connectivity. The graphic below and the associated comments are relevant to this segment.



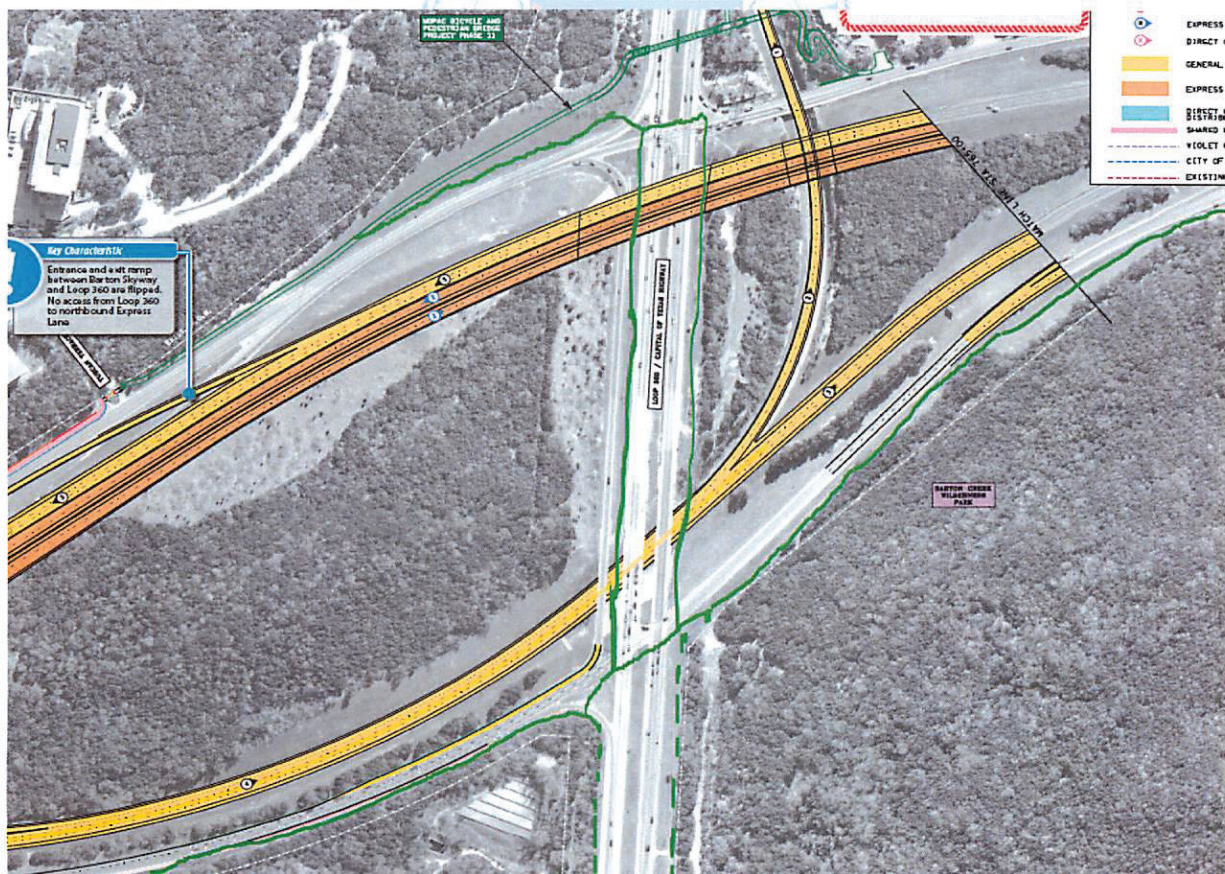
- As shown in dashed green, the existing trails to the Crenshaw pedestrian/bicycle bridge should be shown on schematics as existing to remain. As shown in solid green, the existing trail on the east side of MoPac/Loop 1 would be displaced by the proposed improvements. The schematics should show replacing this trail.
- The existing trail crossing where the MoPac/Loop 1 frontage road becomes Barton Springs Road is currently a safety issue. It is an uncontrolled pedestrian crossing of a high speed and volume roadway as well as limited sight distance in each direction. As shown in the most recent schematics, there is a gap in the SUPs shown at this point, not providing the continuous facilities envisioned. ATD requests a grade-separated crossing at this location. Because of the embankment on the north side of Barton Springs Road, elevations could allow this grade separation. As shown in red on the sketch above, the SUP should continue around the corner to connect to the existing protected bike lanes and sidewalk along Barton Springs Road.
- It is unclear from the most recent schematics if the SUP next to the Austin Nature and Science Center would connect on the north end. As shown in pink above, the SUP should connect to the rest of the project paths as well as under the overpass.
- Rollingwood Drive should show SUP connections across the highway. This should be the case at all east-west street crossing locations since these crossings will be connecting to SUP

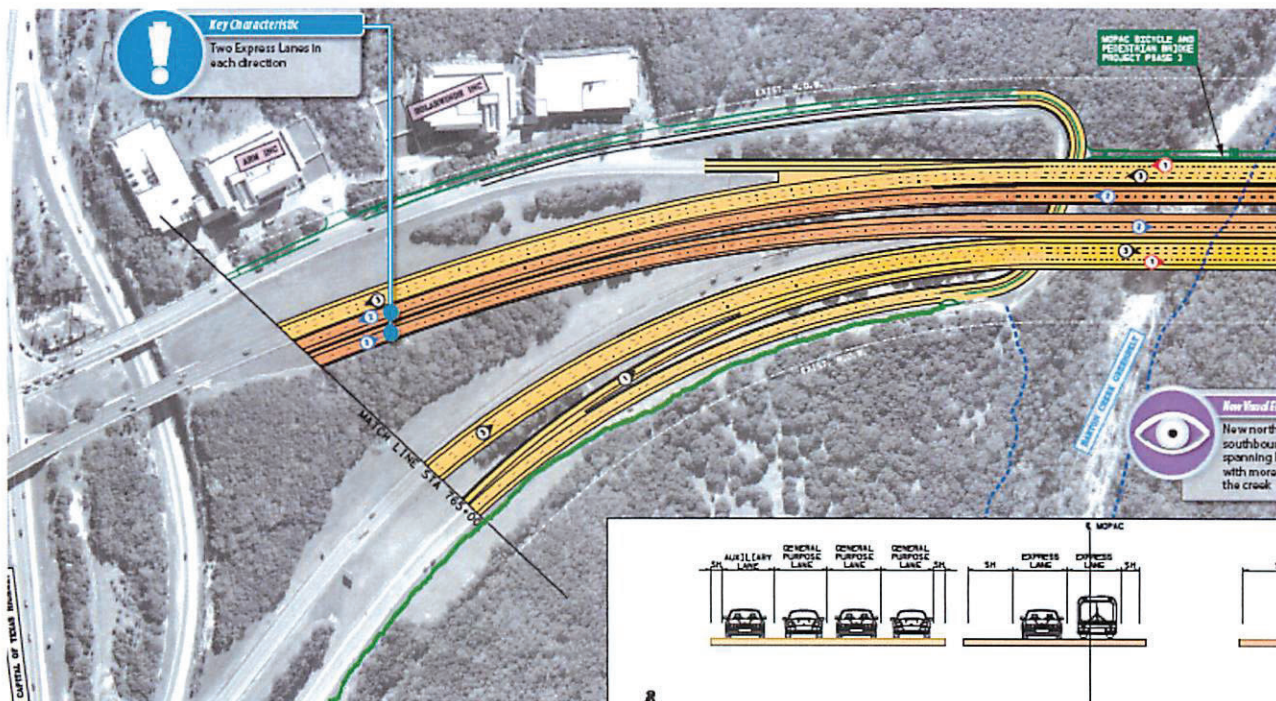
along the frontage road. ATD recommends that safety and comfort for pedestrians and cyclists crossing east-west should be a high priority of the project.

- The Crenshaw pedestrian and bicycle bridge across Lady Bird Lake under MoPac/Loop 1 is very heavily used (4000 daily users, comprised of 10% cyclist and 90% pedestrian in 2021), both by Butler Trail users as well as for multimodal connectivity to the roadway network. On busy days, this bridge can be over capacity and crowded, creating conflicts between pedestrians, cyclists, and scooter users. These issues are with today's volumes and population, which are only expected to grow. ATD requests that as a part of the proposed major bridge improvements over the lake, this pedestrian bridge also be widened or duplicated to accommodate future volumes.

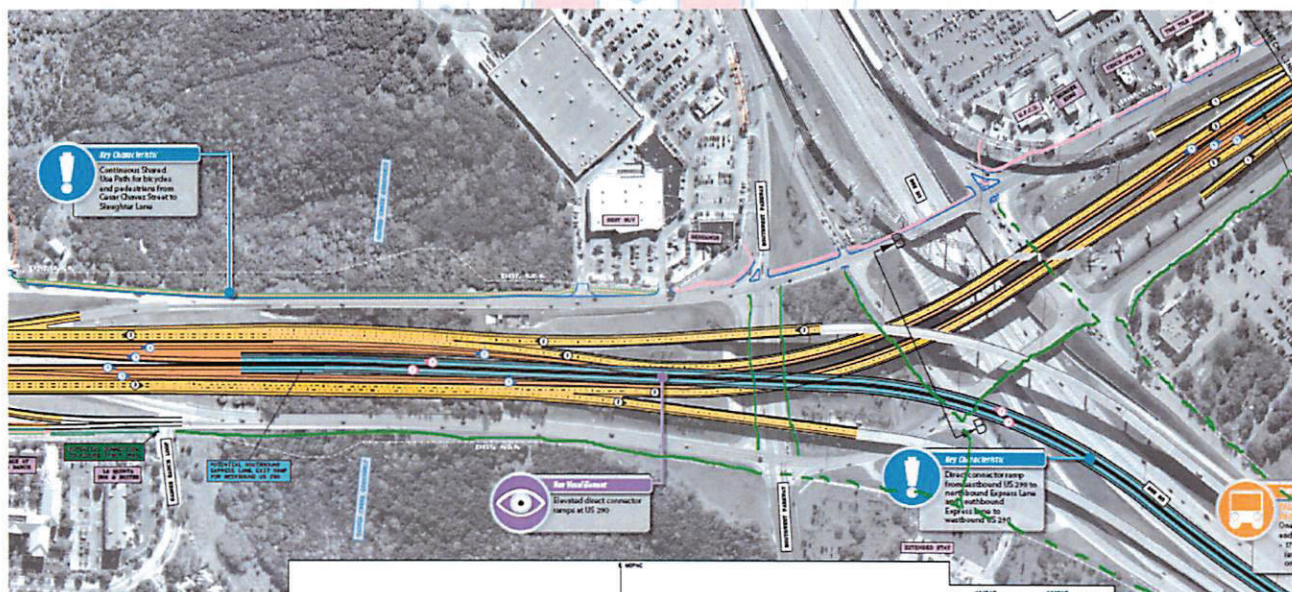
Loop 360 Connectivity: The two following graphics pertain to comments related to pedestrian/bicycle connectivity at Loop 360.

- Proposed 360 (Walsh Tarlton project) pedestrian and bicycle facilities as represented in dashed lines should be shown in schematics to illustrate how MoPac/Loop 1 will connect to these planned facilities. SUP should connect from these facilities east-west across MoPac/Loop 1 where there are existing pedestrian ramps and signals but no safe and accessible path. SUP should connect to the existing trail to the MoPac/Loop 1 Mobility Bridges as well as along the southbound frontage road to the Greenbelt trailhead parking. These improvements would represent substantial benefit to safety, accessibility, and connectivity to the City's multimodal networks and natural resources.





Greenbelt Bridge to South of US 290/William Cannon Drive: Comments related to this portion of the corridor are illustrated in the following graphic.



- SUPs proposed as part of the Oak Hill Parkway project currently under construction (shown in dashed lines) should be shown to illustrate how MoPac/Loop 1 project will tie in appropriately. SUP in solid lines should be added to tie into this work. Notably, there are currently no safe ped/bike crossings at Southwest Parkway or on any leg of the US 290 interchange. Safety deficiencies of that magnitude should be corrected with a project of this

scale. On the north-south frontage road bridges, there is sufficient width to include SUPs without adding bridge width.

- As part of Violet Crown Trail – North, the City of Austin Urban Trails Program is constructing a trail crossing under MoPac/Loop 1 at Williamson Creek and running south along MoPac/Loop 1 as a shared use path until William Cannon Drive. The schematics should reflect this upcoming project (to begin construction February 2022) and show how the SUP on MoPac/Loop 1 will tie in.
- Schematics should show City of Austin William Cannon Corridor work as “work by others” to demonstrate how proposed improvements will tie in appropriately.
- There is currently no pedestrian crossing on the north side of Davis Lane across MoPac / Loop 1. This should be in the schematics to tie into existing sidewalks.


Storm Water/Environment

- **Sensitive Corridor Environment:** The South MoPac/Loop 1 project traverses some of the most environmentally sensitive areas of Austin. Concerns span a wide range of issues including pollution of the Edwards Aquifer, Barton Springs, Barton Creek, Williamson Creek, and many other sensitive environmental resources. Endangered species may be present within the corridor as well. The City of Austin has previously communicated these concerns to CTRMA related to the corridor. The current public engagement does not reduce our heightened concern related to the sensitive environmental resources within this corridor. We request that all prior City of Austin comments related to avoiding, minimizing and mitigating environmental issues, including storm water quality and quantity as well as those related to endangered species and other environmental concerns continue to be incorporated into the on-going evaluation efforts.
- **Exemplary Project:** As has been done by CTRMA on other regional projects such as SH 45 SW, we request that the agency in constructing and operating the proposed MoPac/Loop 1 South project seek to develop an exemplary project from the perspective of environmental stewardship. We request that CTRMA go above and beyond standard TxDOT design approaches to achieve a truly superior project environmentally. Our community has been very clear that a high level of environmental stewardship is a necessary element to win public opinion and political support.



MEMORANDUM

TO: Robert Spillar, P.E., Director,
Austin Transportation Department

FROM: Kimberly A. McNeeley, M.Ed., CPRP, Director 
Austin Parks and Recreation Department

DATE: January 6, 2022

SUBJECT: MoPac South Alternatives

In recent weeks, the Austin Parks and Recreation Department (PAR) has been assessing the potential impacts to parkland and historic resources related to the MoPac South Environmental Study, which has resumed after a multi-year hiatus.

As a review, in the of Spring 2015, the Capital Area Metropolitan Planning Organization (CAMPO) released its 2040 Regional Transportation Plan, which included a proposal to include an elevated structure over Lady Bird Lake as part of the MoPac South expansion. At the April 28, 2015, meeting of the Austin Parks and Recreation Board, the board approved a motion recommending that the Austin City Council “not approve or accept the MOPAC South Environmental Study. The study showed potential impact to Zilker Metropolitan Park, particularly expansion of the existing Lady Bird Lake Bridge, and potential increased traffic expansion on Cesar Chavez Street that could require a taking of parkland for such an expansion.” The Austin City Council subsequently passed Resolution No. 20150507-026 expressing concern about impacts of the CAMPO 2040 plan, specifically the MoPac expansion, and directed the City Manager to “provide a report on a range of alternatives.”

On October 21, 2015, the Central Texas Regional Mobility Authority (CTRMA) released six operational configurations. In order to understand the impacts of the various alignments to parkland, consider environmental concerns and review impacts to historic resources, the PAR team met with representatives from Austin Transportation Department (ATD) and CTRMA and made multiple site visits to review potential areas of impact. The visits outlined the following:

- Zilker Park is designated as a National Register Historic District and includes numerous historic sites, buildings, and structures.
- The MoPac South project may also impact Lamar Beach, which is a portion of the Town Lake Metro Park System that spans the area along Cesar Chavez St. from MoPac to Lamar Blvd.
- The Ann and Roy Butler Hike and Bike Trail is a significant recreational amenity that travels beneath the footprint of the MoPac crossing over Lady Bird Lake.

- There are significant and iconic viewsheds of the Austin skyline from the Zilker Clubhouse that may be compromised by an elevated structure over Lady Bird Lake.

PARD communicated care should be taken to minimize or eliminate, to the extent possible, impacts to these beloved historically significant, environmental sensitive and iconic spaces.

In early 2021, PARD initiated the Zilker Park Vision Plan, a community-based planning process that will result in a guiding framework for the restoration and future enhancement of the 350-acre park and associated facilities. As part of the planning process, PARD and the consultant team have re-opened a dialogue with ATD and CTRMA to ensure coordination and identify opportunities for collaboration. Through this renewed dialogue PARD has communicated any expansion of the current right-of-way through the park could negatively impact the Austin Nature and Science Center and the Zilker Botanical Gardens. Impacts include, but are not limited to, noise and visual intrusions; disruptions to access, egress and circulation patterns; and threats to heritage trees.

With that said, PARD also recognizes that the planning processes present opportunities to reassess circulation patterns and improve parking facilities in conjunction with the MoPac South project. PARD understands these deliberations involve the balancing of multiples objectives, compromises, and trade-offs, and we look forward to continued discussions with ATD and CTRMA staff as a viable alignment for the MoPac South project is identified.

Should you have any questions, please contact my office at (512) 974-6717.

cc: Liana Kallivoka, PhD, PE, LEED Fellow, Assistant Director, Parks and Recreation Department
Ricardo Soliz, Park Planning Division Manager, Parks and Recreation Department
Kim McKnight, MSHP, AICP, Program Manager, Parks and Recreation Department
Laura Esparza, Acting Assistant Director, Parks and Recreation Department
Lucas Massie, M.Ed., CPRP, Assistant Director, Parks and Recreation Department
Suzanne Piper, DBA, Chief Administrative Officer, Parks and Recreation Department



November 18, 2015

Attachment #3

Mr. Mario Espinoza
Deputy Executive Director
Central Texas Regional Mobility Authority (CTRMA)
3300 N. IH 35, Ste. 300
Austin, Texas 78705

RE: Loop 1 S MoPac Express Lane Project – Transportation Comments

Dear Mr. Espinoza:

Thank you again for the continued coordination with your staff with the various technical stakeholders on this project. The Austin Transportation Department (ATD) has reviewed the six alternatives that have been presented for public comment. We would like to share the following comments with the CTRMA:

- ATD notes that several elements of the City of Austin concept have been incorporated into all six alternatives including the addition of a collection and distribution (C-D) road and right-side exit at Loop 360, and direct connections at US 290 to/from Oak Hill. We agree that these elements will benefit drivers in both the general purpose and express lanes.
- ATD supports many elements of CTRMA's new 'Wishbone Concept' (Two express lanes + Elevated Ramps Near Barton Skyway) as it meets the City's goals of 1) eliminating the fly-overs at the lake 2) minimizing impacts to parkland 3) maximizing benefits to general purpose lanes and express lanes, 4) minimizing impacts to Austin High School, and 4) providing express transit access to both sides of SW Austin via Loop 1 and US 290 (Oak Hill).
- Further, it is noted that travel times on CTRMA's new 'Wishbone Concept' are essentially the same as the option with the elevated fly-overs to downtown.
- ATD staff has remaining concerns regarding the CTRMA's new Wishbone and similar concepts including:
 - CTRMA's proposal provides 4 express lanes to/from south MoPac, south of US 290, in addition to 2 express lanes to US 290 (Oak Hill). CTRMA's own data shows that travel times remain fairly consistent between the 2- and 4-lane options. In the northbound direction, how will demand from the Oak Hill corridor be balanced with that from the South MoPac Corridor at the interchange merge? At this location, the northbound facility as proposed by CTRMA would have three lanes of demand squeezing into just two lanes of capacity north of the interchange. This situation does not occur in the concept originally provided by the City for consideration which had only 2 express lanes serving the south MoPac corridor – one in each direction, and 2 express lanes serving the Oak Hill corridor – one in each direction (e.g., a total of 4 express lanes serving Southwest Austin, consistent with CTRMA's original 4-lane proposal).



- CTRMA's proposed alternatives do not indicate infrastructure enhancements at the Loop 1 and Lake Austin Boulevard intersection as proposed by the City. A loop ramp (as shown in the City's concept) could improve operations for all vehicles as well as serve as a potential queue jump for transit. CTRMA staff has indicated they are in positive discussions with TxDOT regarding this feature, however, none of the proposed concepts reflect this. We believe that this ramp configuration as proposed by the City could have positive benefits to arterial traffic congestion on Lake Austin Boulevard, and 5th and 6th Streets, and relieve pressure on Austin High School traffic.
- For all alternatives, we believe there could be impacts to parkland (4f) during construction. Likewise, TxDOT environmental representatives have raised concerns related to (6f) impacts as well. The City needs to better understand the potential impacts and plans for mitigation, as construction will directly affect parking assets and the pedestrian/bike bridge located below the existing MoPac bridge that are critical to City of Austin mobility needs.
- CTRMA has communicated that they are committed to assuring transit service is available to operate on the proposed express lanes. This has been stated at public meetings and is part of the understood purpose of the project. ATD believes it is important that transit facilities such as remote park and rides and all other necessary transit infrastructure be incorporated as part of the recommended project and constructed or procured at the same time the express lanes are constructed.
- While the Center for Transportation Research (CTR) study concludes that all alternatives do not negatively impact City streets, we remain concerned about potential impacts to Cesar Chavez and other downtown streets. We contend that the express lanes should be managed such that additional volume is not added to Cesar Chavez during peak hours. At the very least, we contend the CTRMA should commit to monitor resultant traffic conditions on Cesar Chavez due to the project and commit to mitigate/manage any negative impacts.

I look forward to continuing our coordination with you over the next several months as a preferred alternative is selected and finalized.

Respectfully,

A handwritten signature in black ink that reads "Robert Spillar, P.E." with a stylized flourish at the end.

Robert Spillar, P.E.
Director, Austin Transportation Department

Cc: Marc A. Ott, City Manager
Robert Goode, Assistant City Manager

Official Travis County Commissioners Court Comments on MoPac South Project

Charlie Watts [REDACTED]

Thu 1/6/2022 4:08 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Scheleen Walker [REDACTED]; Cathv Stephens [REDACTED]; Zara Stanfield [REDACTED]; Kimberly Guerra [REDACTED]

Please find the attached comments unanimously approved by the Travis County Commissioners Court on January 4, 2022.

Charlie Watts, AICP

Planning Project Manager

Travis County, Transportation and Natural Resources

[REDACTED]

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Travis County Commissioners Court Voting Session Agenda Request

Meeting Date: Tuesday, January 4, 2022

Agenda Language:

Receive a CTRMA presentation on the MoPac South Express Lanes project and take appropriate action on the submission of comments by the Commissioners Court for the public comment period ending January 7, 2022. (Commissioners Shea & Howard)

Prepared By/Phone Number: Scheleen Walker, Planning Manager - Long Range,
[REDACTED]

Elected/Appointed Official or Department Head: Cynthia McDonald

Commissioners Court Sponsor(s): Commissioner Shea, Precinct Two
Commissioner Howard, Precinct Three

Press Inquiries: Hector Nieto, [REDACTED]

Background/Summary of Request:

The Central Texas Regional Mobility Authority (CTRMA) Executive Director James Bass has been invited to provide a public presentation before the Travis County Commissioners Court at the January 4, 2022 Commissioners Court Voting Session regarding the CTRMA's MoPac South Express Lanes project. The three members of the CTRMA Board appointed by the Travis County Commissioners Court have also been invited to attend the discussion as well.

As a reminder, the CTRMA is a quasi-independent entity of the State that operates solely in Travis and Williamson Counties. As such, the Travis County Commissioners Court appoints three of the CTRMA Board members, Williamson County appoints three, and the Governor appoints the Chair as the seventh member. Therefore, three members of the CTRMA Board are accountable to the elected officials of the Travis County Commissioners Court. The CTRMA Board has broad authority to provide a wide range of transportation infrastructure and services within Travis and Williamson Counties, with oversight from those two County Commissioners Courts and the Governor's office.

The CTRMA and Texas Department of Transportation (TxDOT) have unexpectedly restarted the National Environmental Policy Act (NEPA) planning process for the Mopac South Express Lanes project. The project has been paused since the last Public Meeting held in November 2015 due to litigation. To resume the process, the CTRMA re-released public engagement materials from more than 5 years ago and is requesting comments on:

- Project goals and objectives
- Mobility, connectivity, and safety concerns

- Express lane(s) operational configuration options
- Environmental constraints

Members of the Travis County Commissioners Court have requested that the Court provide comments during this comment period.

MoPac South Express Lanes Project

The MoPac South Express Lanes Project study proposes to add one or two express lanes in each direction along an eight mile section of MoPac South between Cesar Chavez Street and Slaughter Lane. Six express lane alternatives are presented in the on-line “open house” presentation the CTRMA released on November 22, 2021, for comment through January 7, 2022. Presentation materials also include a no build alternative which is required to be studied in the environmental impact process.

The key differences in alternatives are found in the number of express lanes, how ramps are configured near Lady Bird Lake and connectivity to downtown. The six variations of the express lane(s) alternative are the same ones proposed in 2015 before the project was paused despite major regional transportation projects that have been implemented, are under construction or approved, and major changes in land development patterns.

The generalized description of the six alternatives includes:

- 1A: One express lane + downtown direct connection
- 1B: One express lane without downtown direct connection
- 2A: Two express lanes + downtown direct connection
- 2B: Two express lanes without downtown direct connection
- 2C: Two express lanes + elevated ramps near Barton Skyway
- 3: City of Austin proposal

Brief Description of Alternatives from the Open House Materials

No-Build Alternative-

No improvements to existing facility. Alternative provides the impacts if the responsible agency continued to operate and maintain the project with no changes (will be carried forward for further analysis in the EIS process).

1A: One express lane with downtown direct connection-

Access to and from downtown: one-lane, elevated direct connect ramps in each direction, to and from Cesar Chavez Street

1B: One express lane without downtown direct connection-

Access to and from downtown via merging across three general-purpose lanes and existing ramps

2A: Two express lanes with downtown direct connection-

Access to and from downtown: one-lane, elevated direct connector ramp in each direction, to and from Cesar Chavez Street

2B: Two express lanes without downtown direct connection-

Access to and from downtown via merging across three general purpose lanes and existing ramps

2C: Two express lanes with elevated ramps near Barton Skyway-

Access to and from downtown via merging across three general-purpose lanes and existing ramps

3: City of Austin proposal-

Access to and from downtown: one-lane, elevated direct connector ramp in each direction, to and from Cesar Chavez Street. Two express lanes in each direction from Cesar Chavez Street to US 290. One express lane in each direction from US 290 to Slaughter Lane. The diagram shows access from downtown to southbound express lane direct connector is at Lake Austin Blvd. and access to downtown from northbound direct connector is at Cesar Chavez Street and 5th Street

Environmental Study Process

The Environmental Study being conducted on this project is an Environmental Assessment (EA) per the National Environmental Policy Act of 1969 (NEPA). An EA includes “an analysis of a full range of alternatives (including a “No Build” Alternative) and an assessment of potential impacts to the human and natural environment.” “If the EA determines that the environmental impacts will be significant, an Environmental Impact Statement (EIS), a more extensive level of environmental review, will be required.”

Opportunity for Comment and Next Steps

Currently, the CTRMA is asking the public to comment on the project after viewing project information provided through an on-line virtual open house. Most of this project information is the same information based on the Capital Area Metropolitan Planning Organization (CAMPO) 2035 model that was publicly available in 2015. The on-line virtual open house became available on Nov. 22, 2021 and extends through Jan. 7, 2022.

The CTRMA anticipates holding an additional open house in 2022 after scoring the alternatives using public input and updated information that includes the most recent CAMPO travel demand model, 2045. Additionally, the recommended preferred alternative will be presented. CTRMA will then conduct the studies required for an EA for the recommended preferred build alternative and the no-build alternative. This will be followed by a public hearing in 2024 on the draft EA for the recommended preferred build alternative and the no-build alternative. Following this public hearing, the final EA will be published and TxDOT will issue an environmental finding. Next, the project will be cleared for construction.

Staff Recommendations:

TNR staff recommends official comments from the Travis County Commissioners Court be submitted during the current comment period. TNR staff is not providing

comments for Court consideration on the current proposed alternatives and performance analyses during this comment period, since the alternatives have not yet been updated with current information and data. TNR staff recommends the comments encourage the CTRMA to update their data analyses using current traffic and population data and return for formal public comment before presenting a preferred alternative.

Issues and Opportunities:

Public Comment Opportunity

The public comment period on the MoPac South Project closes on January 7, 2022. However, comments can be sent to the CTRMA throughout the NEPA process, but they will not be included in the official record.

Opportunity to Improve the Public Input Process

In the current Open House information, the CTRMA states that “Each Express lane(s) option will be analyzed against a set of criteria developed based on public input and the CAMPO 2045 Travel Demand Model. These operational performance scores, combined with public input, will determine the Recommend Preferred Alternative.” TNR staff is concerned that the current public engagement documents imply that the CTRMA does not intend to seek public comment solely on the updated (to CAMPO 2045 model, at a minimum) six alternatives before a recommended preferred alternative is brought forward for comment at the next Open House.

This shortchanges the public by not providing them with the opportunity to have their comments on the updated alternatives considered before selecting the recommended preferred alternative. The public input process could be greatly improved by taking the time to incorporate public comments on the updated alternatives into the process used to select the recommended preferred alternative. It also will provide the CTRMA with useful, informed public input to consider when selecting the preferred alternative, rather than public input based on alternatives analyses done several years ago.

Fiscal Impact and Source of Funding:

N/A

Required Authorizations:

Cynthia C. McDonald	County Executive	TNR	[REDACTED]
Isabelle Lopez	Financial Manager, Senior	TNR	[REDACTED]
Anna Bowlin	Development Services Director	TNR	[REDACTED]

CC:

Julie Wheeler	Intergovernmental Relations Officer	IGR	[REDACTED]
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Sydnia Crosbie	Chief Deputy	TNR	[REDACTED]
David Greear	Public Works Director	TNR	[REDACTED]
Charlie Watts	Planning Project Manager	TNR	[REDACTED]
Cathy Stephens	Senior Planner	TNR	[REDACTED]

Attachments:

None



CTRMA

January 4, 2022

c/o Mopac South Environmental Study
3300 N. I-35, Suite 625
Austin, TX 78705
MoPacSouth@ctrma.org

The Travis County Commissioners Court wishes to submit the following comments on the MoPac South Environmental Study virtual open house as official comments for consideration.

We understand that the CTRMA is restarting the MoPac South Environmental Study and that this virtual open house is “intended to re-engage the public on where we left off in November 2015.” The materials presented at this virtual open house are the same materials that were publicly available in 2015. They are based on data from the CAMPO 2035 model and have not been updated to reflect the CAMPO 2045 model. However, the CTRMA has announced that they intend to update the materials for the next public meeting where the recommended preferred express lane(s) alternative will be presented. We are concerned that all public comment received during the current comment period will be based on outdated information and should not be used to inform the selection of the preferred alternative.

Major changes have occurred since 2015.

- Changes that affect traffic patterns
 - Major projects opened to traffic include:
 - US 183 South Toll lanes
 - SH 45 SW
 - SH 71 W Safety Improvements
 - Mopac North Managed Lanes
 - SH 71 E Toll Lanes
 - SH 130 N Toll Lane in each Direction
- Regional and local long-range plans have been updated
 - Major plan changes since the CAMPO 2035 Plan include:
 - I-35 Capital Express project added
 - Project Connect added
 - Loop 360 Interchanges added

- “Y” at Oak Hill tolls removed
- Lone Star Rail removed
- Managed Lanes on Loop 1 South increased from 1 to 2 lanes in each direction
 - Local plan changes increased density and housing units in downtown Austin.
- Development and population have increased significantly since the 2005 base year used to develop forecasts for the 2035 CAMPO Plan and model.
- Current commuting patterns have been affected by the COVID pandemic and increased teleworking. These changes may continue into the future.

Current public engagement process could seem disingenuous and problematic.

Asking the public to comment on outdated materials confuses the public and complicates the environmental study process. It is problematic since the CTRMA stated that the recommended preferred alternative will be selected based on public input and scores using new data. At this time, the public has no opportunity to provide input on the alternatives based on the new data. There is no benefit from collecting public input based on old data that creates faulty assumptions. The current virtual open house public input is largely irrelevant and should not be used to advance the environmental study process.

We strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with updated data and information for all alternatives when it is available, before a preferred alternative is recommended. This will ensure that the public has the best information available when providing input. It also will provide the CTRMA with useful, informed public input to consider when selecting the preferred alternative, rather than public input based on alternatives analyses done several years ago.

Additional Items Needing Clarification

Environmental Assessment (EA) versus Environmental Impact Statement (EIS)

Since the project study area is located in a very environmentally sensitive area that includes Barton Creek, Barton Springs and the Edwards Aquifer Recharge Zone, locations of endangered species and Lady Bird Lake, many people believe that the environmental study already should be conducted as an EIS rather than an EA. A clearer explanation is needed so the public understands why you are doing an EA instead of an EIS, and how the CTRMA will ensure our environment is adequately protected when constructing and operating the project.

Visual Information Improvements

The public information needs to include better visual material so that the public understands graphically the impacts on the study area and how the project will function. We suggest updating the materials with profile renderings, cross sections, updated videos and possibly traffic simulation models for the next update.

Operational Evaluation at RM 2244 Intersection and the Barton Skyway Relief Project

Revise the project scope to include evaluation of operational improvements to the RM 2244 intersection at the MoPac frontage road and elements of the CTRMA Barton Skyway Ramp Relief Project. The public should be allowed to comment on these proposed improvements prior to selection of the recommended preferred alternative.

Extension of Public Comment Period

Please extend the current public comment period for an additional 30 days since this comment period occurred during the holiday season and the resurgence of COVID cases throughout the region.

Additional Operational Alternative


Evaluate an additional alternative that includes restriping existing lanes to accommodate peak hour High Occupancy Vehicle (HOV) lanes. The public should be allowed to comment on this proposed improvement prior to selection of the recommended preferred alternative.

Thank you for the opportunity to comment. The Commissioners Court is confident that the CTRMA and the region working together, with public input on updated alternatives, can realize significant mobility and access improvements while also preserving our valuable environmental resources along the MoPac South corridor.

DocuSigned by:

C21317DB291D47D...

Judge Andy Brown
Travis County

DocuSigned by:

38D10DAB088649F...

Commissioner Jeffrey W. Travillion
Precinct One

DocuSigned by:


49E111C68FCC406...

Commissioner Brigid Shea
Precinct Two

DocuSigned by:

C9FFD0713B4148F...

Commissioner Ann Howard
Precinct Three

DocuSigned by:

C46630EAEF2B43A...

Commissioner Margaret J. Gomez
Precinct Four

Extend Public Input Process re: MoPac South

cbwidaho [REDACTED]

Thu 1/6/2022 4:29 PM

To: MoPac South <mopacsouth@ctrma.org>

📎 1 attachments (186 KB)

Mopac South Travis Co comment letter 01-04-22.pdf;

TO: CTRMA

c/o Mopac South Environmental Study
3300 N. I-35, Suite 625 Austin, TX 78705

I concur with the Travis County Commissioners Court's position expressed in the attached letter:

- The current public engagement process could seem disingenuous and problematic.
- Asking the public to comment on outdated materials confuses the public and complicates the environmental study process.
- It is problematic since the CTRMA stated that the recommended preferred alternative will be selected based on public input and scores using new data.
- At this time, the public has no opportunity to provide input on the alternatives based on the new data.
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- The current virtual open house public input is largely irrelevant and should not be used to advance the environmental study process.

I strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with **updated data** and information for all alternatives when it is available, before a preferred alternative is recommended. This will ensure that the public has the best information available when providing input. It also will provide the CTRMA with useful, informed public input to consider when selecting the preferred alternative, rather than public input based on alternatives analyses done several years ago.

The timing of this process has blindsided the community, and could be considered disenfranchisement of community stakeholders. Instead, tap the brakes, and create a genuine public engagement process that does not fall over the winter holiday break and in the midst of a surge of Covid-related hospitalizations, incorporate a robust communication framework, a genuine review of alternatives, and easy access with ample time for the public to review updated, current materials.

Thank you in advance for your cooperation.

Sincerely,

Cynthia Wilcox
President, Oak Hill Association of Neighborhoods



CTRMA

January 4, 2022

c/o Mopac South Environmental Study
3300 N. I-35, Suite 625
Austin, TX 78705
MoPacSouth@ctrma.org

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Judge Andy Brown
Travis County

Commissioner Jeffrey W. Travillion
Precinct One

Commissioner Brigid Shea
Precinct Two

Commissioner Ann Howard
Precinct Three

Commissioner Margaret J. Gomez
Precinct Four

[SPAM] DO NOT BUILD

Kristian Harper [REDACTED]

Thu 1/6/2022 7:31 PM

To: MoPac South <mopacsouth@ctrma.org>

Please, for the love of God...do not build. Austin is one of the most uniquely beautiful cities in the world. Leave it alone...!

FW: MoPac South Contact Us Form [#533]

Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>

Fri 1/7/2022 7:38 AM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Katie Kenneally <Katie.Kenneally@atkinsglobal.com>

FYI: Forwarding to the outlook email for tracking purposes.

From: Mopac South Contact Form <no-reply@wufoo.com>

Sent: Friday, January 7, 2022 6:42 AM

To: Sylvia Shelton <sshelton@ctrma.org>; jhayter@ctrma.org; Kenneally, Katie M <Katie.Kenneally@atkinsglobal.com>; Gilpin, Charlotte (K-Friese) <Cgilpin@kfriese.com>; Reid, Zane S <Zane.Reid@atkinsglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>; Story, Elizabeth A <Elizabeth.Story@atkinsglobal.com>

Subject: MoPac South Contact Us Form [#533]

Name *	irene pickhardt
Email *	[REDACTED]
Address	<input type="checkbox"/> [REDACTED] [REDACTED] United States
Message *	<p>Adding lanes to MoPAC South will result in degradation of the aquifer. The recharge zone need better protections than those offered in the environmental study.</p> <p>It is critical that rainwater percolate through the limestone to recharge the aquifer.</p> <p>Please make adjustment in your plans based on recommendations by hydrologists.</p> <p>Thank you.</p>

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Comments

donprimosic@gmail.com

Fri 1/7/2022 7:52 AM

To: MoPac South <mopacsouth@ctrma.org>

Before you try to "fix" MoPac, connect 45 to 290 and 35. Also buy new ROW for new thoroughfares. You keep compounding traffic issues by using the same old roadways. You laughed at 130 when it was proposed and now look at its use. A major thoroughfare plan for the next 75 or 100 years is needed. Your plan is weak just like your Slaughter intersection design than wasn't needed based on your design projected traffic counts. It's cute but that's all. It's never used to capacity even at peak times. That's because 90% of the traffic flows thru on MoPac. The other waste is your concentration on bike lanes. Another complete waste of pavement and money not to mention poor, poor utilization. Taking up half of the travel lanes like on Escarpment is ridiculous and not financially feasible. To use vehicle pavement thicknesses for bikes is not engineering logic. Keeping your bike department justified is more logical. Now I see you're putting physical objects in roadways or streets. That concept went out when "islands" and speed bumps were determined to cause more harm than good. I base my comments on being a registered professional civil engineer in Texas since 1978.

Connect 45 to 290 and 35. That makes so much sense.

These environmental folks cry about the aquifer issue. Austin does not take any water from the aquifer to the best of my research. Also the Barton Creek screamers don't realize that the two city water intake facilities are upstream from the Barton Creek discharge point and take water from the Colorado River.

Over and out.

FW: MoPac South Contact Us Form [#534]

Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>

Fri 1/7/2022 8:25 AM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Katie Kenneally <Katie.Kenneally@atkinsglobal.com>

Forwarding for tracking purposes.

From: Mopac South Contact Form <no-reply@wufoo.com>

Sent: Friday, January 7, 2022 8:23 AM

To: Sylvia Shelton <sshelton@ctrma.org>; jhayter@ctrma.org; Kenneally, Katie M <Katie.Kenneally@atkinsglobal.com>; Gilpin, Charlotte (K-Friese) <Cgilpin@kfriese.com>; Reid, Zane S <Zane.Reid@atkinsglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>; Story, Elizabeth A <Elizabeth.Story@atkinsglobal.com>

Subject: MoPac South Contact Us Form [#534]

Name *	Donna Ramsey
Email *	[REDACTED]
Address	<input type="checkbox"/> [REDACTED] [REDACTED]

Message *

Leave Mopac South of the river alone. By expanding the road you risk environmental damage to Barton Creek and Barton Springs. Mopac already impacts the park with noise and air pollution. If you build this road it will only encourage more traffic and soon you'll be back asking for more road. Please don't do it. Instead, why not actually improve public transportation in the areas that feed into Mopac and by that means take traffic off the road instead of encouraging more. If this plan for the widening of Mopac goes forward, I can't help but wonder if the Zilker family might institute legal recovery of the parkland for their family as the land is no longer being used for the original designated purpose. What a loss that would be. In short, don't build more road. The costs to the environment, Barton Creek, Barton Springs and the park are far too high. Building more roads is your answer to all problems, but in this instance, your "road-building hammer" is not the right tool to fix the problem.

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Mopac south tollway

Nelissa Conners [REDACTED]

Fri 1/7/2022 9:01 AM

To: MoPac South <mopacsouth@ctrma.org>

I am against the proposed tollway and any tollway in Texas. Tollways are a gift to the wealthier class. Living in Austin is getting too expensive and is unaffordable for many. Roadways should be fee to use.

Nelissa Conners

Comments to Mopac South Open House #5

Amy Pattillo [REDACTED]

Fri 1/7/2022 9:07 AM

To: MoPac South <mopacsouth@ctrma.org>

Dear CTRMA staff:

Please receive my comments to the Mopac South Open House #5, as attached.

Best regards,

Amy

AMY J. PATTILLO

[REDACTED]

January 6, 2022

RE: Comments to the Mopac South Environmental Study (Please enter this letter, and the attachments, in full, into the record of public comments to the Mopac South Environmental study Open House #5 (November 2021))

Dear Chairman Jenkins, Vice Chairman Meade, Treasurer Singleton, Secretary Doss, and Board Members Armbrust, Langmore, and Gaddes:

Back in November 20, 2015, during Open House #4, many people in Travis County commented on the six express lane (EL) alternatives for Mopac South that are now re-presented (in a flattened form) in Open House #5. That was six years ago. The decision to re-present the same six EL alternatives in Open House #5 has been framed by CTRMA staff as a “restart” of the project. The CTRMA Board is set to receive comments from elected officials and members of the public pointing to multiple concerns with spending time and resources on a public comment period that presents the public with information that is six years old. Among these comments, in particular, I concur with the Travis County Commissioners Court’s positions regarding the deficiencies of the Open House #5 public comment period.

In addition, the primary issue that I see with the way the Mopac South project has been “restarted” is that many of us in Travis County already spent a significant amount of time six years ago studying the information provided about the plans to improve Mopac South, and commenting. We were under the impression that CTRMA was collecting public input in order to identify areas of the proposed EL designs that the community identifies as still needing improvement and to receive ideas for improvements. We were under the impression CTRMA’s self-proclaimed robust public comment process would include a good faith effort to collaborate with the community on improving the EL designs proposed. If we who live next to this project are going to bear the cost of construction-based traffic delays in our area for 4-5 years, at the end of that time we want an improved multi-modal infrastructure with the lowest footprint possible that does not have design flaws that will replace old bottlenecks with new ones. By restarting the Mopac South project with the same EL design alternatives presented six years ago, based on the same data that was already outdated when it was presented during Open House #4, CTRMA has not shown that the time and resources our community previously spent commenting on design issues during Open House #4 has mattered in any way.

During the presentation by Executive Director James Bass to the Travis County Commissioners Court on January 4, 2022, ED Bass asserted that under the NEPA process, CTRMA could have moved forward to select a preferred alternative without providing Open House #5, but that so much time had passed since Open House #4 that the agency made the decision to restart the project with a presentation of the material from the previous open house. While I appreciate the sentiment behind Open House #5 as one of benevolence to the community, representing the same six EL design alternatives to the public six years after a public comment period in which the public actively engaged with detailed design comments, leaves me wondering what exactly the public could comment on at this point that would lead CTRMA to update the designs of the six EL alternatives in response to public comment before scoring the projects and selecting a preferred alternative.

In addition, I would like to comment on several relevant items missing from the timeline presented in the Project History and Next Steps in Open House #5, slide 7. The timeline states the project was “on hold” from March 2016-August 2021. While I recognize that CTRMA did not hold a public open house for 6 years, for those of us who remained engaged in, and spent time and resources working on, the Mopac South project between March 2016 and August 2021, it is clear CTRMA spent time and money studying ways to improve the Mopac South corridor during the last six years.

I appreciate CTRMA staff continuing to meet with and study options for improvements to the six EL design alternatives for Mopac South during the “on hold” period. In my former roles of designated Technical Working Group representative and then also Council Member of the City of Rollingwood, I participated in multiple meetings with CTRMA staff regarding Mopac South between 2016 and 2021. The meetings included higher level meetings with the CTRMA Executive Director and Board Members, and more detailed meetings with CTRMA staff. Meeting discussions included an evaluation of modifications to the 2244/Bee Caves Road intersection as part of the Mopac South project and an evaluation of shifting toll lanes underground, rather than as elevated lanes. Letters attached to this public comment memorialize several of these collaborative discussions (*see* attachment F) and the recordings of City of Rollingwood Council Meetings during 2017 include multiple meetings where Mayor McKee, Council Member Hundley, and I reported on the discussions and received input. Of note, there was a pause in discussions between CTRMA and the City of Rollingwood for a brief period following the December 2017 letter from Executive Director Heiligenstein, after Governor Abbott’s declaration in late November 2017 that all toll road projects under study needed to be removed from the Texas Unified Transportation Program (UTP). Until the pause following the Governor’s announcement regarding toll roads, my impression from the meeting conversations and correspondence from ED Heiligenstein was that CTRMA staff intended to *update* the design alternatives in view of public comments and go out for another open house in 2018 before starting the process to select a preferred alternative.

One of the projects that I was pleased to see spun out from the Mopac South conversations during the “on hold” period is the Barton Skyway Ramp Relief project. I appreciate Board Member Armbrust advocating for this project to be studied and moved forward. I appreciate CTRMA having taken time to meet with representatives from the City of Rollingwood to receive feedback about the Barton Skyway Relief project and make modifications to the design in response to this feedback. While I served on the Rollingwood City Council, I included a discussion of the Barton Skyway Ramp Relief project on multiple agendas for Rollingwood City Council meetings and requested input from the public on this project. The project had a positive reception from those who took the time to engage and the Rollingwood City Council was in support of CTRMA moving forward with it. I hope that CTRMA will continue to move forward with the Barton Skyway Ramp Relief project, whether as an independent project or part of the Mopac South Environmental Study. The Barton Skyway Ramp Relief project directly addresses the most congested portion of roadway in the Mopac South Project boundaries, with minimal additional infrastructure and no toll requirements. Ironically, the estimated cost of constructing the Barton Skyway Ramp Relief project is \$15 million – just under the \$16.5 million in funding allocated by the legislature under Rider 42 for CTRMA to study addressing the congestion on Mopac South with goals that align clearly with the solution offered by the Barton Skyway Ramp Relief project – congestion which is primarily caused by the bottleneck currently introduced by the Barton Skyway Ramp area.

In addition, I note that the CTRMA board recently voted during the August 25, 2021 meeting to approve the spending on a project to add trees to the right-of-way next to Austin Memorial Park Cemetery (AMP), as part of the requirements to mitigate impacts caused by the Mopac Improvement Project (Mopac North) project. AMP is one of the historic properties in the National Register of Historic Places (NHRP) within the area of potential effects (APE) considered in the Mopac North project, with mitigation evaluated based on a FONSI under an EA level study. In the Mopac South project, known registered places in the APE include the Zilker Park Historic District and significant areas over portions of Barton Creek. Regardless of whether a FONSI finding in the Mopac North based on an EA level study was correct, the impact of soil changes to a cemetery are *not* equivalent to the likely pollution of a primary water source and one of the natural wonders of our area of Barton Springs Pool by any study process for a roadway over the Edwards Aquifer that is less rigorous than an EIS. There is no amount of tree planting or cleaning that is going to restore

Barton Springs Pool if the water is contaminated by Mopac South construction. I hope that the CTRMA board will exercise prudent environmental stewardship for the natural water resources in our area by not voting to fund a preferred alternative until an EIS has been performed on the Mopac South project. I understand the CTRMA board has been advised in the past that it cannot vote on or comment on preferences regarding a particular project alternative, but I have heard no such guidance that would preclude the board from requiring a more rigorous, EIS level of study, before deciding to vote to fund the Mopac South project.

Further, the Mopac South study originated, and is based on assumptions about congestion that were understood more than six years ago, when telecommuting technologies were available, but not widely adopted. In the last few years, the pandemic forced companies that had previously foregone investments in telecommuting technologies and management structures, to do so, allowing large numbers of daily commuters to work from home. The congestion assumptions forecast in 2010, about what traffic conditions would be like in 2035, could not have envisioned the world we live in now in 2022 in which large companies and government entities have shifted to technology solutions to support remote work by such large numbers of employees. The financial forecasting models for bond-based financing of demand rate toll roads prior to 2020 are no longer supported by the choices employers are making to reduce the number of employees driving to work each day. It would be a missed opportunity for the CTRMA board not to take a moment to consider what technology solutions CTRMA may incentivize our region to invest in, in order to effectively solve transportation issues in our area with the lowest environmental and infrastructure footprint needed, with the highest return on investment not just for investors funding toll roads, but also for our region.

In addition to the requests that have been made by the Travis County Commissioners Court regarding the Mopac South project, I would request that the CTRMA board move to include one or more meetings of the Technical Working Group for the Mopac South project to the schedule prior to a selection of a preferred alternative. The Technical Working Group has provided a single location for the volume of stakeholders involved in this project to send representatives to gather, ask questions, and share information.

In conclusion, I've included multiple attachments to this letter that include more specific comments. Attachment A (starting at p. 4) details my comments to specific portions of the materials presented in Open House #5. Attachment B (starting at p. 7) includes the slides from Open House #5. Attachment C (starting at page 50) are the comments I submitted during Open House #4, which I have incorporated into my comments on Open House #5. Attachment D (starting at page 69) are the slides from Open House #4. Attachment E (starting at page 135) is a portion of the official correspondence between the City of Rollingwood and CTRMA in 2017.

I appreciate each of you serving our community on the CTRMA board and your willingness to consider what residents are asking for as you make decisions to improve transportation in the Travis-Williamson County region.

Best regards,
/Amy Pattillo/

Attachment A

Please consider the following notes on the slides provided from the Virtual Open House #5 Mopac South website (and incorporated in attachment B for reference).

1. Need for consistency with local and regional plans

Slide 3 “Purpose & Need” includes a “Project Goals and Objectives” of “provide consistency with local and regional plans. Open House #5 includes six alternatives, including predicted delays and predicted travel times, based on the CAMPO 2035 plan. The alternatives presented at Open House #5 are inconsistent with the regional transportation plan in effect, which is the CAMPO 2045 plan.

In addition, the CAMPO 2035 plan only provided for study of one express lane in each direction, with the CAMPO 2040 plan directing the study of no, one, or two express lanes in each direction, and the CAMPO 2045 plan designating two express lanes in each direction. At Open House #4, CTRMA released six design alternatives, which studied no, one, and two express lanes in each direction, but applying the CAMPO 2035 traffic demand model, even though the CAMPO 2040 plan was already passed and in effect. The original presentation of the six alternatives applying the CAMPO 2035 model at Open House #4 was also inconsistent with the regional transportation plan in effect at that time, which was the CAMPO 2040 plan.

The public has not had the opportunity to view or comment on the six alternatives with the CAMPO 2045 traffic demand model applied. Moreover, slide 12 “Long Range Transportation Planning” that states “we’re updating to CAMPO 2045” without actually updating the information provided to the public to the traffic demand model available for the CAMPO 2045 plan. A slide that says the plan will be updated to CAMPO 2045 is insufficient to have provided the public with the opportunity to comment on the predicted traffic data that will accompany a study based on the traffic demand model in the CAMPO 2045 plan.

In addition, I would note that the CAMPO 2045 traffic demand model was available to CTRMA prior to CTRMA removing the project from being on hold in September 2021. Rollingwood City Administrator Lewis, Assistant City Administrator Wayman, and I met with ED Bass in July of 2021 and one of the requests we had was for CTRMA to assist the City of Rollingwood in receiving the CAMPO 2045 traffic demand model from CAMPO. ED Bass assured the three of us that he had spoken with CAMPO and the CAMPO 2045 traffic demand model was ready and available for access by the City of Rollingwood.

2. Need for a comparison of 2 HOV lanes with 2 Express lanes

Slide 14 “Alternatives Considered” lists build alternatives of “add general purpose-lane(s) in each direction”, “add high occupancy vehicle (HOV) lane(s) in each direction”, “add transit only lane(s) in each direction”, “add express lanes in each direction”, and use TDM management. As I previously noted in comments to Open House #3 and Open House #4, the previous comparisons at Open House #1 and Open House #2 put 1 HOV compared with 2 Express lanes and found that the 2 Express lanes were better. The first phase of alternatives considerations did not provide a lane-to-lane comparison of benefits.

3. Need for public opportunity to comment on the study impact of each of the six alternatives within the APE

I note that the APE boundaries reflected in slide 33 “Archeological & Historical Resources” in Open House #5 are expanded to include additional area not shown in the APE boundaries in slides for Open House #4. In particular, the APE areas reflected in Open House #5 include more area directly over Barton Creek and the Edwards Aquifer recharge zone than previously incorporate and expand the footprint of the Zilker Park Historic District. The Zilker Park Historic District and Deep Eddy Historic District host pools which host almost a million visitors annually and require a rigorous level of oversight to protect and preserve so that they are available to generations to come.

The APE evaluation should be rigorous given the sensitivity of areas presented. The importance of the archeological and historic areas in the APE to our region reflects the need for the project to be evaluated under an EIS, with mitigation efforts elevated to reduce both direct and indirect effects within the APE.

As noted on Slide 16 “Express Lane(s) Operational Configuration Options”, “six variations of the express lane(s) alternative are under evaluation. The key differences are how the ramps are configured near Lady Bird Lake”. Clearly, the EL alternatives that include elevated ramp infrastructure will have a larger footprint and higher environmental impact than the EL alternative that does not have elevated ramp infrastructure. The public should be provided with the opportunity to comment on the APE studies for each of the 6 EL, not on an APE study conducted after a single preferred alternative is identified.

4. Need for an EIS evaluation of the Mopac South Project

Slide 34 “Water Quality Protections” states “due to the environmentally sensitive nature of the Edwards Aquifer Recharge Zone, the Mobility Authority exceeded the environmental protection requirements for construction of the 45 SW Toll Road, resulting in 98% removal of the increase in Total Suspended Solids.” I appreciate CTRMA setting a precedent with 45 SW Toll Road exceeding the environmental protection requirements in the Edwards Aquifer Recharge Zone – and note that the environmental protection requirements were sent under an EIS. The 45 SW Toll Road study sets the precedent road study of areas impacting the Edwards Aquifer Recharge Zone under an EIS, as well as going above and beyond what is required under an EIS.

5. Need to study the proposed shift of the southbound exit ramp with modeling available to the public

Slide 41 “Non-tolled improvements” lists an improvement of “shift the southbound Bee Caves exit ramp further north to allow for safer weaving for westbound Bee Caves traffic.” I have continued to ask for modeling of the proposal to shift the exit ramp further north. Given the topography of the area, and the fact that vehicles frequently accelerate up the hill on the frontage road, moving the exit ramp further north does not necessarily make the weaving safer – particularly if it intersects with cars as they are accelerating uphill.

6. Need to include a value of no increased elevations over the Bee Caves Road intersection, proximate to Zilker Park in what is learned from Public Input

Slide 18 “Public Input is Shaping MoPac South” includes “no increased elevations over Lady Bird Lake”. In reviewing the public input from Open House #4 it is also clear that a significant amount of public input also does not want increased elevations over the Bee Caves Road intersection, proximate to Zilker Park. Proposed EL alternative 2C is named “Two Express Lanes with Elevated Ramps Near Barton Skyway”, however this label is misleading. In previous schematics, the ramps are shown starting next to the Zilker Park preserve and proximate to Zilker

Park, expanding over Bee Caves Road. There is a significant amount of public comment that indicates a preference for no elevated lanes within the Bee Caves to Lady Bird Lake corridor.

7. Need to include full schematics of each of the proposed alternatives for the public to understand how Mopac North and Mopac South are connected

I note that slide 20 “1A”, slide 22 “1B”, slide 24 “2A”, slide 26 “2B”, slide 28 “2C” and slide 30 “C” provide top level diagrams of proposed alternatives that for the first time show connection to the toll roads now present in Mopac North, however the alternatives are segmented to stop at Barton Skyway. Since 2015, I’ve studied the full length schematics of each of the 6 alternatives in depth. Even with an extensive knowledge of the full length schematics of each of the proposed alternatives, I find the flattened diagrams confusing and the segment shown insufficient to understand how vehicles using the toll roads would access the Bee Caves Road intersection.

A member of the public approaching a study of the proposed alternatives for the Mopac South project for the first time, or even for the 100th time since 2015, is not informed from the top level diagrams shown how toll lane users would access the Bee Caves Road intersection. For example, it is not clear from the segment of each alternative shown in slides 20, 22, 24, 26, 28, and 30 how a vehicle traveling southbound in the toll lane from Mopac North would exit the toll lane after crossing the river and access Bee Caves Road. In addition, it is not clear how a vehicle traveling east on Bee Caves, crossing under Mopac, and entering Mopac northbound would access the north bound toll lane.

Who is the Mobility Authority?

Who We Are:

Independent government agency created in 2002, governed by a seven-member board of directors.

What We Do:

Enhance quality of life and economic vitality by improving the regional transportation system in Travis and Williamson counties.

Corridors we Manage:



Projects under Construction:



Our Partners:



FOUNDING COUNTIES:



What is the MOPac South Environmental Study?

The MOPac Expressway south of Cesar Chavez Street is a vital artery, providing a critical link from southwest Travis and Hays counties to downtown Austin.

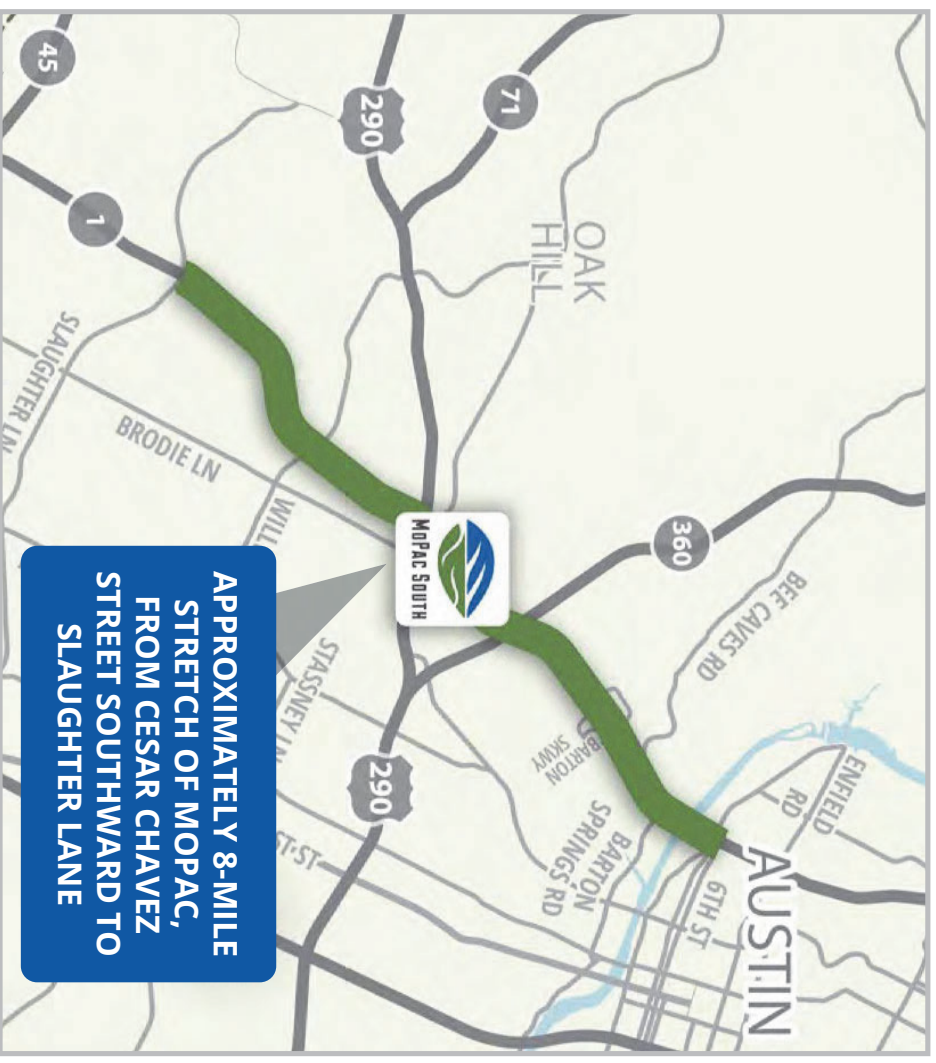
MOPac is ranked among the top 20 most congested corridors in the state.*

The corridor attracts up to 179,000 cars and trucks per day.**

Expanding population and development have led to increased traffic congestion, negatively impacting mobility and quality of life.

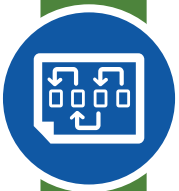
If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035.***

The Environmental Assessment (EA) is being conducted per the National Environmental Policy Act of 1969 (NEPA).



*Texas Transportation Institute, 2020
**2019 STARS 2 - TxDOT Traffic Count Database
***CAMPO 2035 Travel Demand Model

Purpose & Need



PROJECT PURPOSE *(What we are trying to do)*

- Provide an opportunity for reliable travel times
- Improve operational efficiency
- Create a dependable and consistent route for transit
- Facilitate reliable emergency response



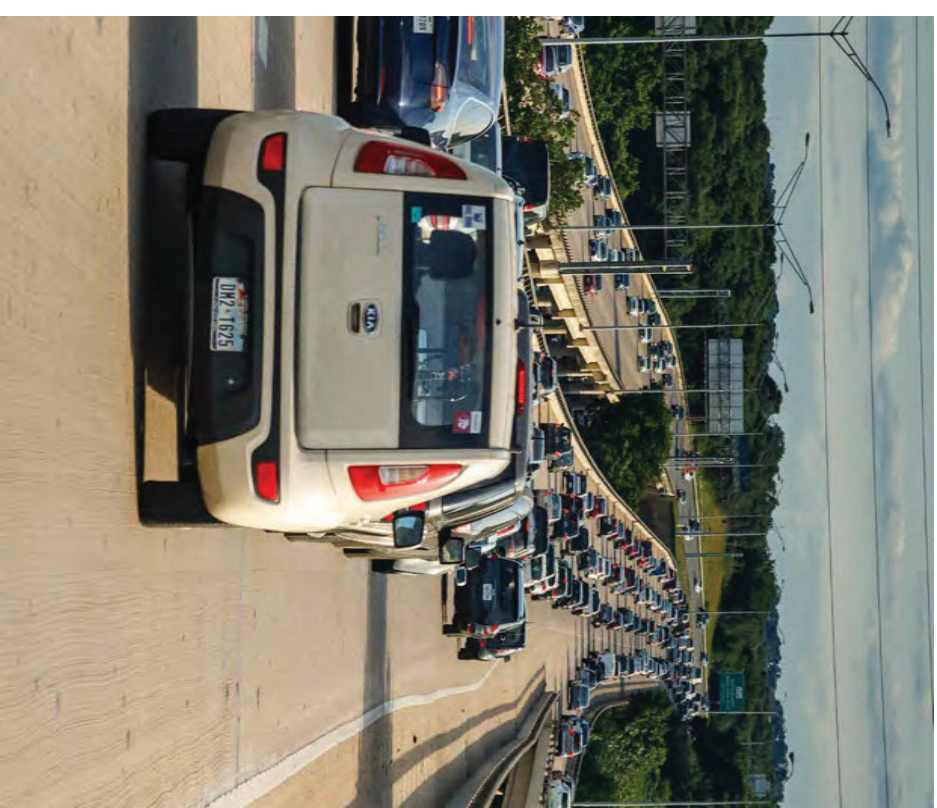
PROJECT NEED *(What problems need to be addressed)*

- Current and forecasted congestion levels are creating unreliable travel times
- Under the No-Build Alternative (Do Nothing), it could take an additional 35 minutes to travel between Cesar Chavez Street and Slaughter Lane by 2035
- Emergency response times are impacted by traffic congestion



PROJECT GOALS AND OBJECTIVES

- Provide consistency with local and regional plans
- Reduce congestion delays and provide travel time savings for all roadway users
- Be constructible while minimizing impacts to the natural and human environment
- Avoid and minimize impacts to water quality
- Deliver relief in a timely manner
- Facilitate congestion management
- Increase opportunities for transit and ridesharing
- Increase opportunities for pedestrians and bicyclists

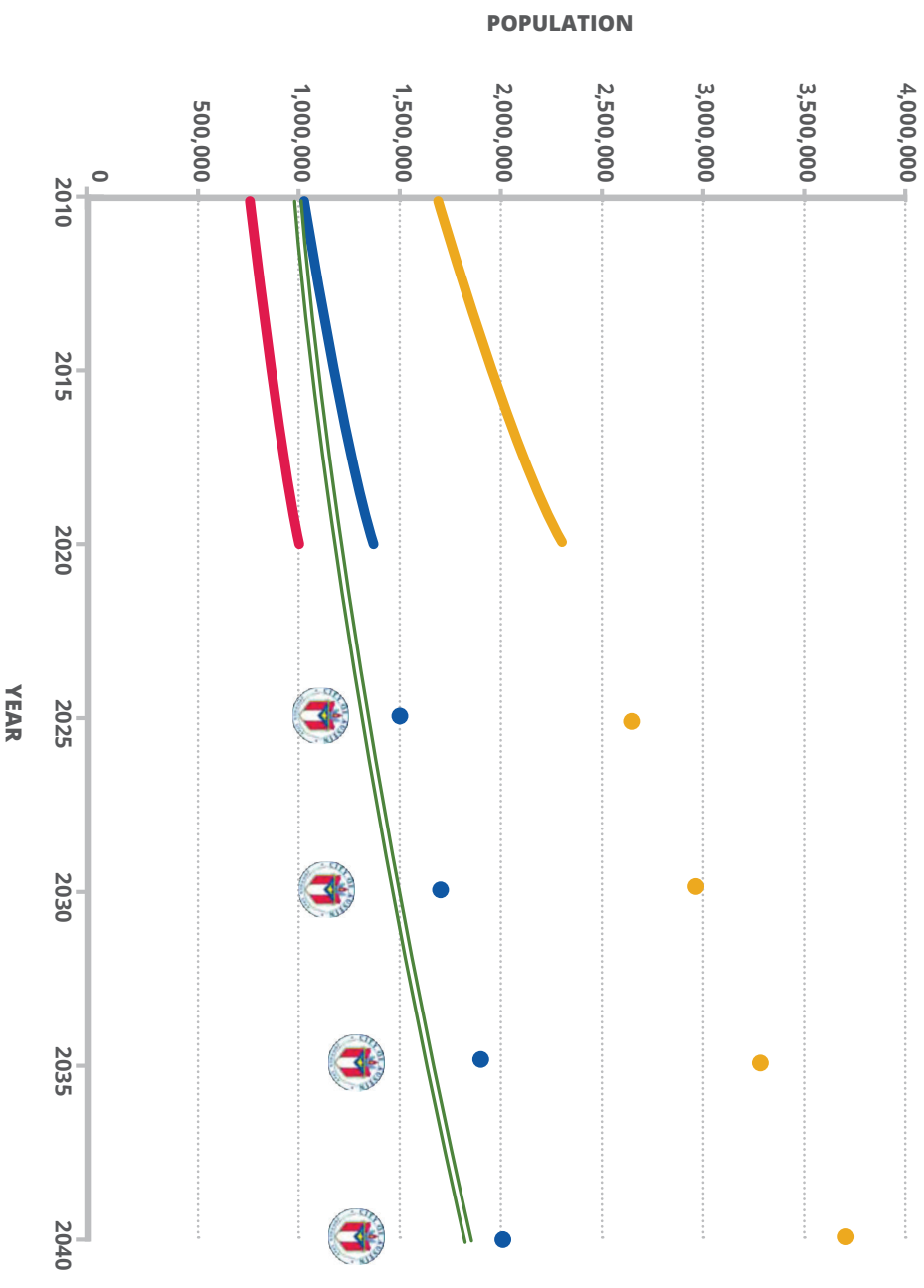


Population and Jobs Forecast

- Demand for Austin roadways is growing at a rapid pace.
- Projects a population increase of 750,000 people and 350,000 new jobs by 2040.

LEGEND:

- City of Austin  City of Austin Forecast
- Travis County  Travis County Forecast
- MSA  MSA Forecast*
- Imagine Austin Study Area Forecast 





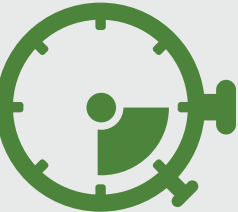
*The Metropolitan Statistical Area (MSA) is a six-county metropolitan area including Bastrop, Caldwell, Hays, Travis, Burnet, and Williamson counties. As MoPac is a major artery connecting people at a regional level, the impacts of the project will be realized across the MSA.

Data provided by the City of Austin Department of Planning and Imagine Austin, the City's 30-year Comprehensive Plan



Travel Time Comparison

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	2015	2035 (No Build)	Additional Travel Time
NORTHBOUND 	 23 minutes	 52 minutes	+29 
SOUTHBOUND 	 16 minutes	 51 minutes	+35 

 Morning Peak Period NB (7-9 a.m.)

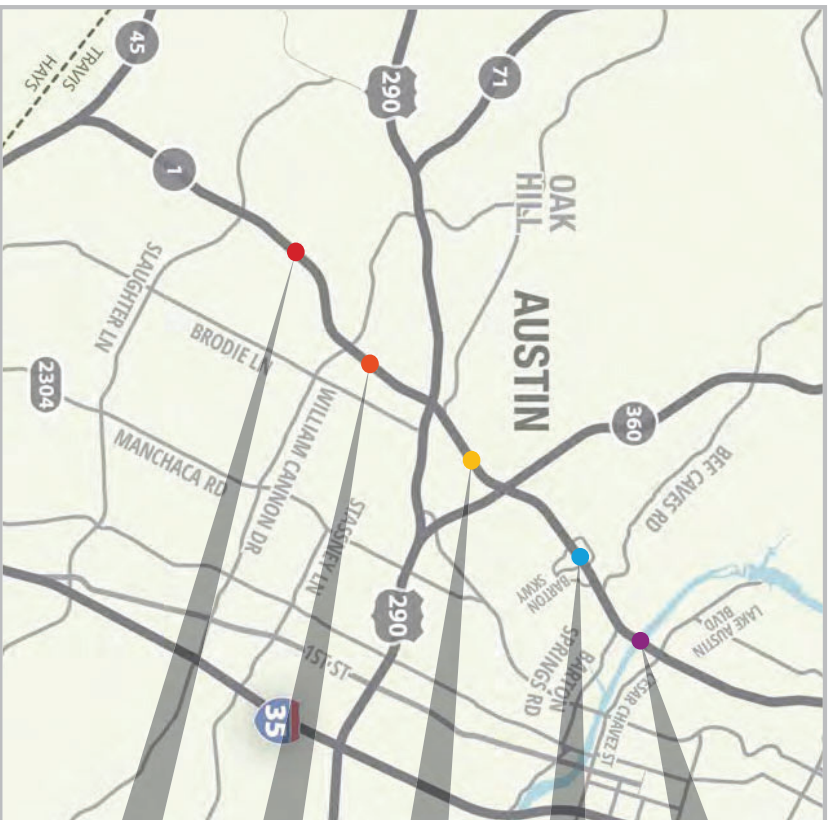
 Evening Peak Period SB (4-6:30 p.m.)

Travel times are based on CAMPO 2035 Travel Demand Model



Demand for MOPac South

AVERAGE DAILY TRAFFIC VOLUMES ARE PROJECTED TO INCREASE BY UP TO 105% BY 2049.*

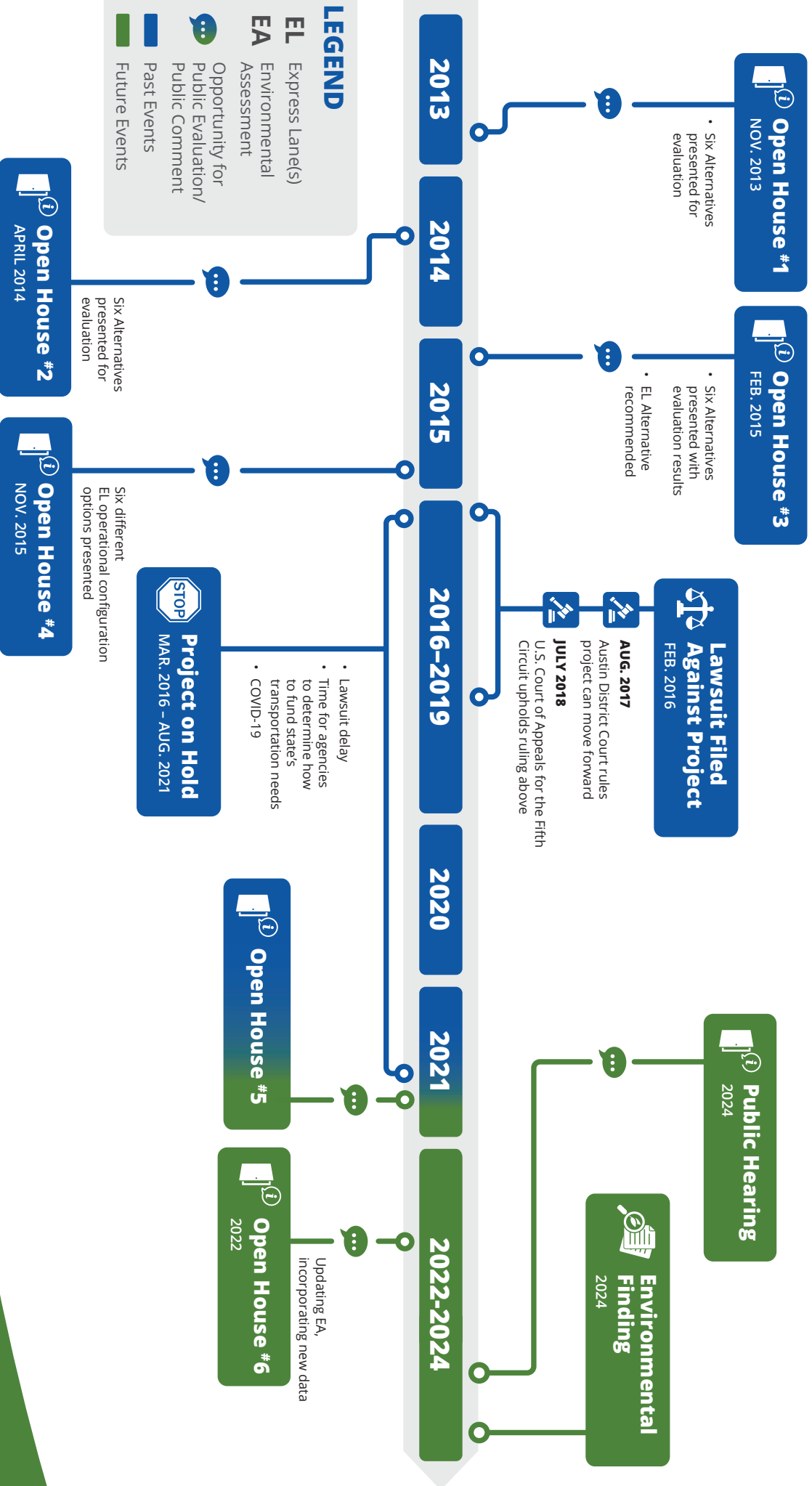


	 2018 Counts	 2049 Forecasts*	 Percent Growth
1 MoPac at Lady Bird Lake	179,400	292,600	+63 %
2 MoPac at Barton Skyway	174,400	296,500	+70 %
3 MoPac at South of Loop 360	125,500	257,600	+105 %
4 MoPac North of William Cannon Drive	117,500	214,400	+82 %
5 MoPac North of Davis Lane	77,300	141,600	+83 %

*Traffic forecast based on the 2035 CAMPO Travel Demand Model for opening year 2029 plus 20 years to 2049. A 20 year look ahead is the regulatory requirement.



Project History and Next Steps



Next Steps

*Open House #6
2022*



Present Recommended Preferred Alternative for public input based on CAMPO 2045 Plan

*Public Hearing
2024*



- Present Preferred Alternative for public input
- Submit Draft Environmental Assessment Document

*Finalize
Environmental
Studies
2024*



- Submit Draft Environmental Assessment Document
- Submit Final Environmental Assessment Document
- Environmental Finding

*Construction
2025**



*If approved for construction; contingent upon funding and environmental clearance



What is the National Environmental Policy Act (NEPA)?



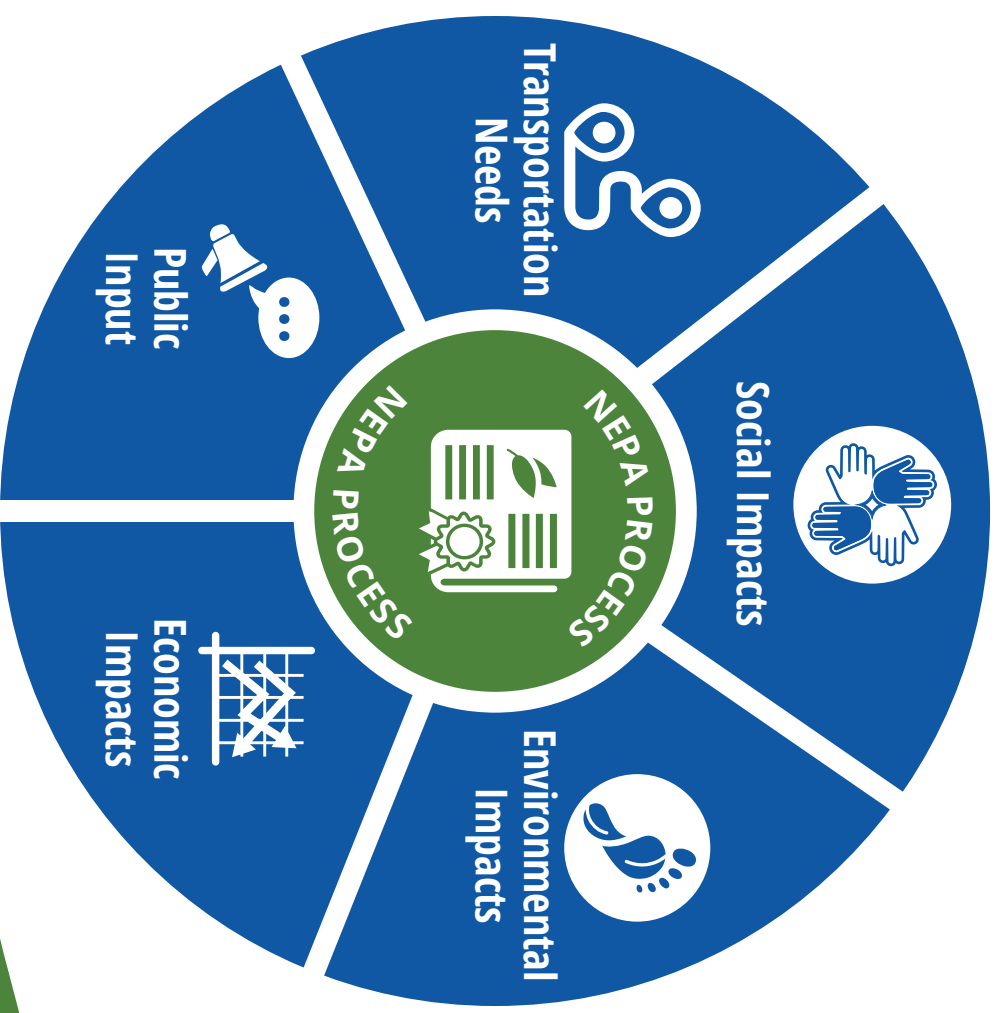
NEPA is a federal law and is required when a project receives any federal funding or approval

Establishes procedures followed by agencies in making decisions, but does not dictate the outcome

Considers potential impacts of actions on the social, economic, and physical environment

Requires public outreach to improve project outcomes

Ensures informed decisions by forecasting, documenting, and disclosing what happens if a course of action is taken



The Mobility Authority Project Development Process

PUBLIC INPUT IS CONSIDERED AT EVERY STAGE OF PROJECT DEVELOPMENT



PUBLIC INPUT

(Online, E-Mail, Mail, Phone, Open Houses, Stakeholder Meetings)



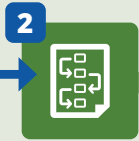
INITIATION & SCOPING OF PROJECT



Adopt Regional Transportation Plan that includes CTRMA Project

CTRMA Board votes to initiate Environmental Study

PURPOSE & NEED



Establish Purpose and Need

FULL RANGE OF POTENTIAL ALTERNATIVES



Evaluate Alternatives that meet the Purpose & Need



CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

PHASE I SCREENING: BASE CRITERIA



Measure Alternatives against criteria

PHASE II SCREENING: REASONABLE ALTERNATIVES



Select/refine Recommended Build Alternative



ENVIRONMENTAL ANALYSIS OF ALTERNATIVES



Select Recommended Preferred Alternative

RECOMMENDED PREFERRED ALTERNATIVE



Recommended Preferred Build and No-Build Alternatives move forward

PUBLIC HEARING



LAST PUBLIC MEETING FOR FEEDBACK



Review Draft Environmental Assessment (EA) submittal to TxDOT

FINAL EA PUBLISHED



TxDOT issues an Environmental Finding



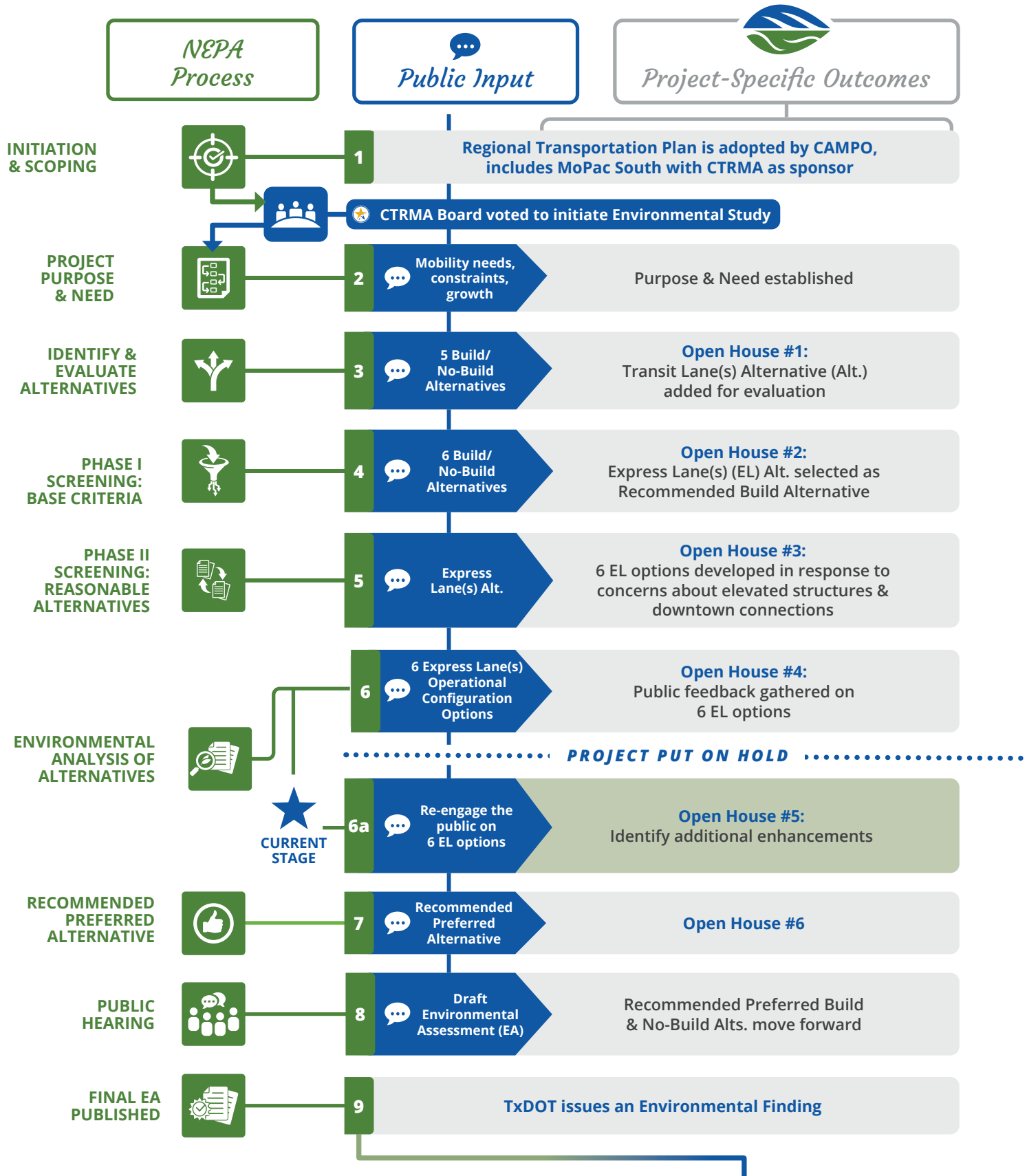
Texas Department of Transportation



If Build Alternative is approved, CTRMA Board votes to fund next phase of project development work



MoPac South Project and the NEPA Process



Long Range Transportation Planning

WE'RE UPDATING TO CAMPO 2045



CAMPO's Regional Transportation Plan (RTP) is the blueprint that guides the planning, design, and funding of infrastructure projects



RTP is updated every 5 years to:

- Confirm validity
- Ensure consistency with current and forecasted transportation conditions and trends
- Balance needs with available resources

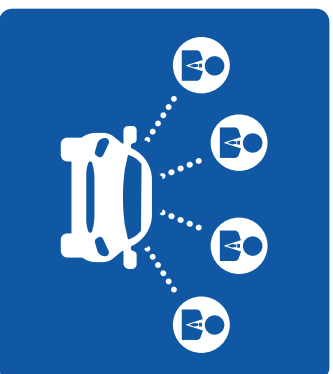


The update extends the plan 25 years into the future and includes all regionally significant road and transit projects expected to be implemented during that time.



We Are Updating to CAMPO 2045

Reflects projected changes to travel behavior and effects of development and transportation facilities completed since the CAMPO 2035 model



Considers future developments and future roadway and transit improvements



Incorporates revised demographics



Insights further refine proposed project design



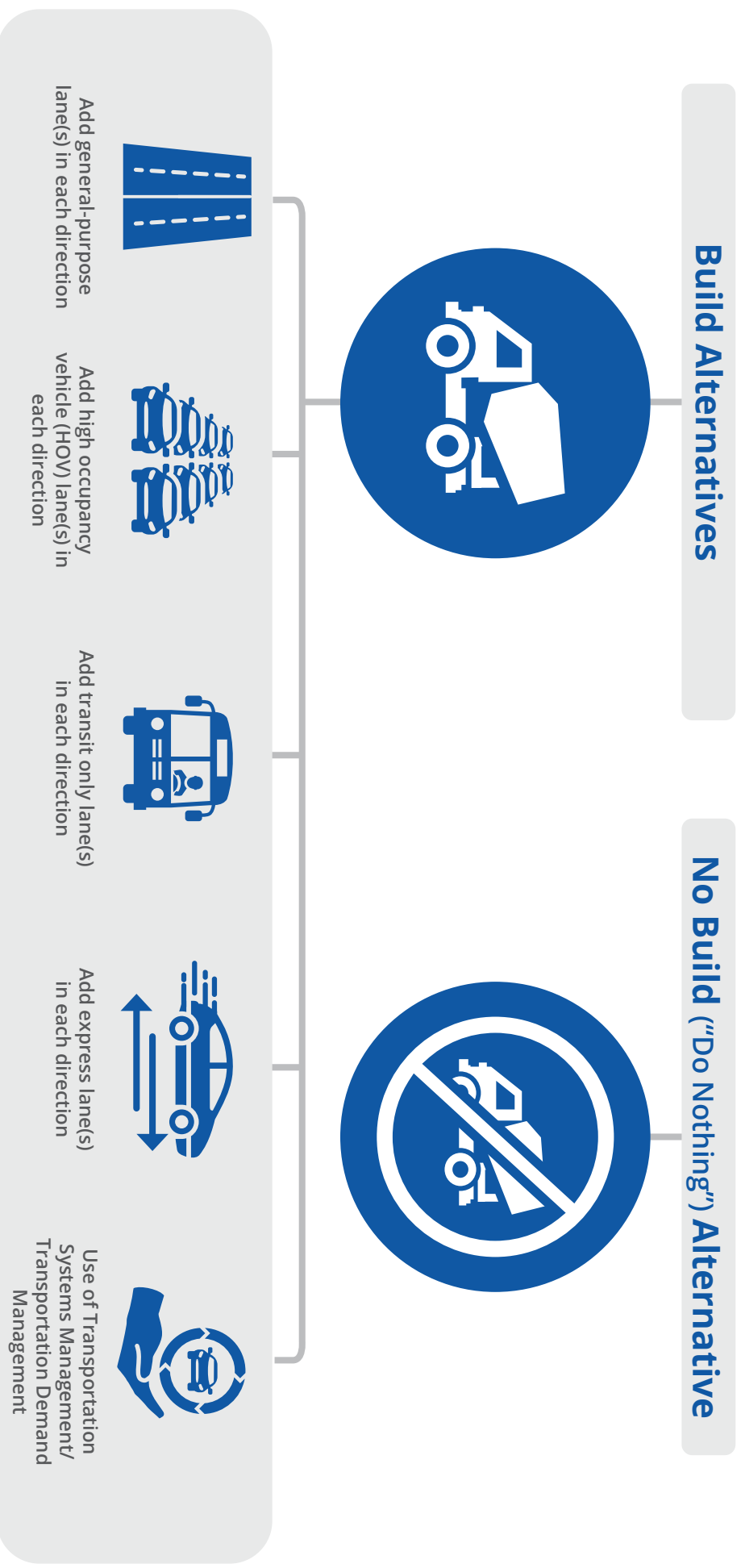
MOPac South data will be re-evaluated against the CAMPO 2045 Travel Demand Model to identify the Recommended Preferred Alternative.

Project data is required to be evaluated against the most recent Regional Transportation Plan, which is CAMPO 2045



Alternatives Considered

PRELIMINARY ALTERNATIVES PROPOSED FOR THE MOPAC SOUTH ENVIRONMENTAL STUDY:










These alternatives were presented and considered at Open Houses 1 and 2, in 2013 and 2014, respectively.



Recommended Build Alternative

Why Express Lane(s)?*

- 1**
RELIABILITY
OFFERS RELIABLE TRAVEL TIMES

- 2**
PEAK TRAVEL
PROVIDES SHORTEST PEAK PERIOD TRAVEL TIME FOR ALL VEHICLES

- 3**
TIME SAVINGS
PROVIDES TIME SAVINGS FOR ALL USERS

- 4**
ENVIRONMENT
MINIMIZES IMPACTS TO THE ENVIRONMENT

- 5**
RELIEF
DELIVERS RELIEF IN A TIMELY MANNER

- 6**
TRANSIT
INCREASES OPPORTUNITIES FOR TRANSIT AND RIDESHARING

- 7**
BIKE/PED
INCLUDES NEW BICYCLE AND PEDESTRIAN FACILITIES


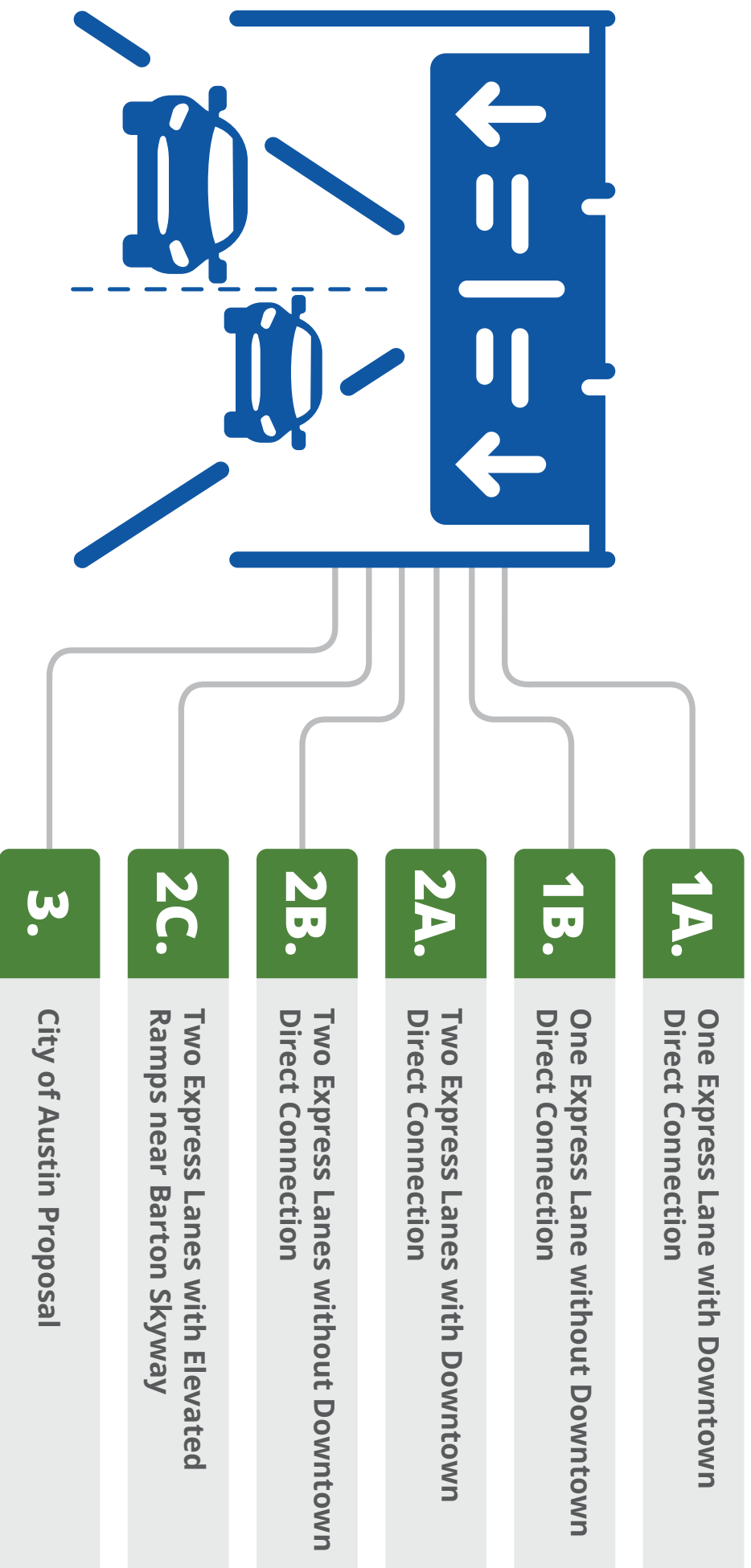
Express Lane(s) Alternative was identified as the Recommended Build Alternative at Open House #2 in 2014.

*In accordance with the National Environmental Policy Act, the No Build Alternative will continue to move forward as a baseline for comparison.



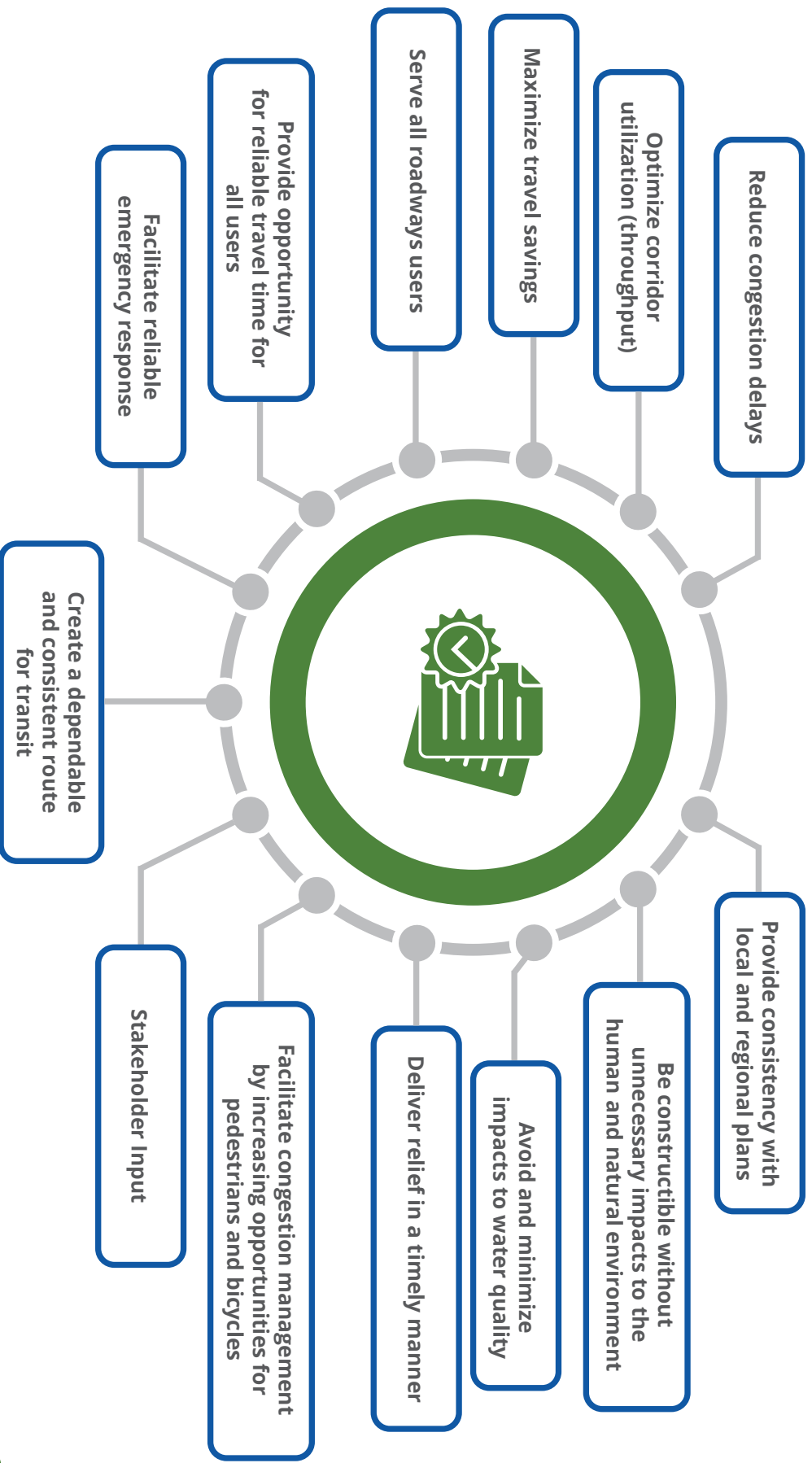
Express Lane(s) Operational Configuration Options

SIX VARIATIONS OF THE EXPRESS LANE(S) ALTERNATIVE ARE UNDER EVALUATION. THE KEY DIFFERENCES ARE HOW THE RAMPS ARE CONFIGURED NEAR LADY BIRD LAKE.



Evaluation Criteria

EACH EXPRESS LANE(S) OPERATIONAL CONFIGURATION OPTION IS MEASURED AGAINST THE FOLLOWING CRITERIA



Criteria was developed collaboratively with stakeholders and using input gathered from Open Houses #1 and #2. Evaluation results will be presented at Open House #6 following the CAMPO 2045 Travel Demand Model Update.



Public Input is Shaping Mopac South



Community input has been a valuable part of the development process for Mopac South, with adjustments made based on public input, including:

- Potential to add new direct connection at US 290
- Added new collector distributor road from Barton Skyway to Loop 360
- Added south to north Texas Turnaround at Barton Skyway
- Lengthen turn lane leading to Texas Turnaround at Loop 360
- Reconfigured Bee Cave Road/RM 2244 southbound exit ramp
- Ramp improvements at William Cannon Drive
- Added third southbound general-purpose lane south of William Cannon Drive



We know the public values:

- Downtown connectivity options
- No increased elevations over Lady Bird Lake
- No direct connector ramps near Austin High School

Each express lane(s) operational configuration option will be analyzed against a set of criteria developed based on this feedback, and the CAMPO 2045 Travel Demand Model. These operational performance scores, combined with public input, will determine the Recommend Preferred Alternative.



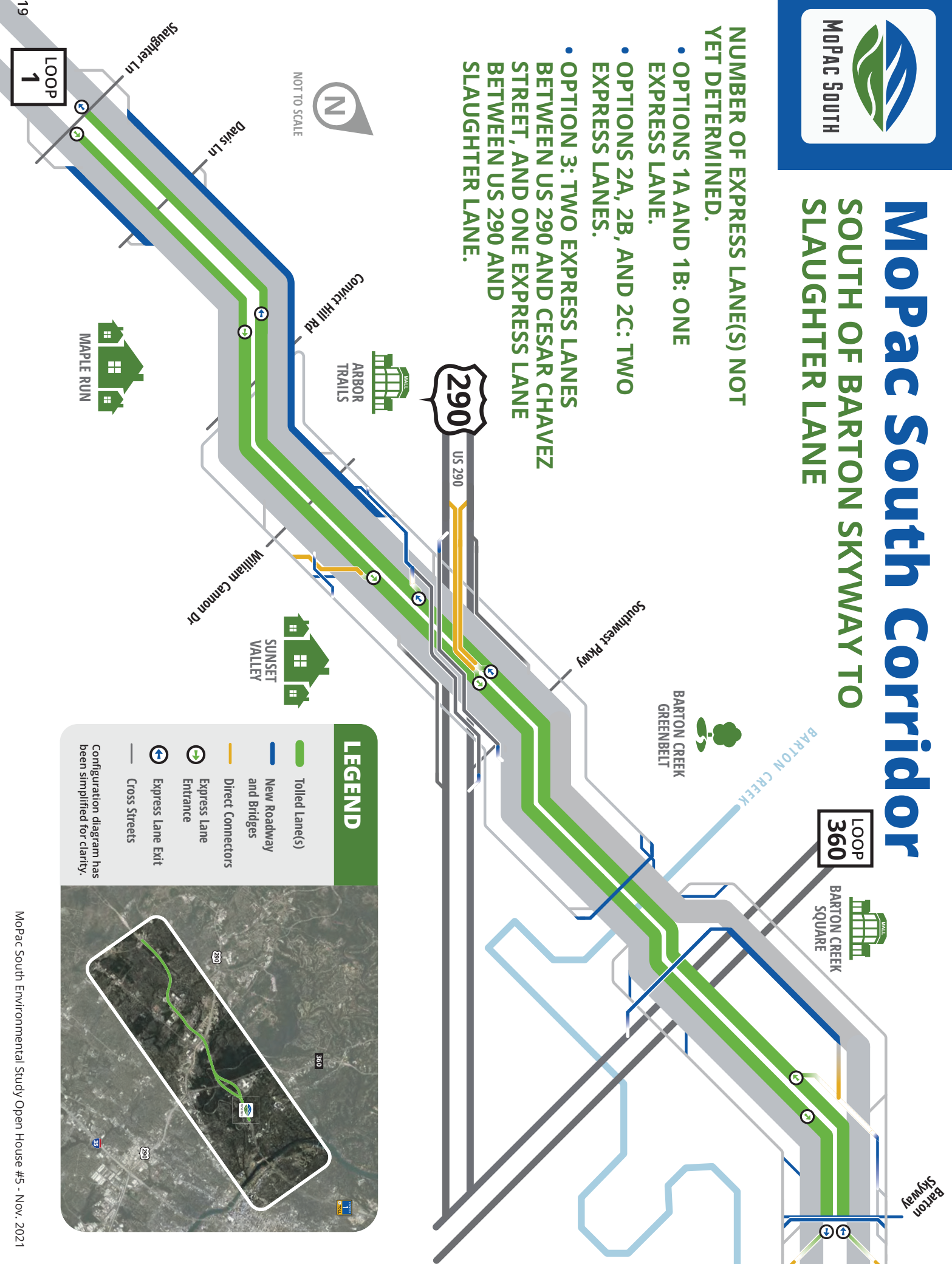


MOPac South Corridor

SOUTH OF BARTON SKYWAY TO SLAUGHTER LANE

NUMBER OF EXPRESS LANE(S) NOT YET DETERMINED.

- OPTIONS 1A AND 1B: ONE EXPRESS LANE.
- OPTIONS 2A, 2B, AND 2C: TWO EXPRESS LANES.
- OPTION 3: TWO EXPRESS LANES BETWEEN US 290 AND CESAR CHAVEZ STREET, AND ONE EXPRESS LANE BETWEEN US 290 AND SLAUGHTER LANE.



LEGEND

- Tolled Lane(s)
- New Roadway and Bridges
- Direct Connectors
- ➔ Express Lane Entrance
- ➔ Express Lane Exit
- Cross Streets

Configuration diagram has been simplified for clarity.





1A: One Express Lane with Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECT RAMP IN EACH DIRECTION, TO AND FROM CESAR CHAVEZ STREET

LEGEND
Configuration diagram has been simplified for clarity.

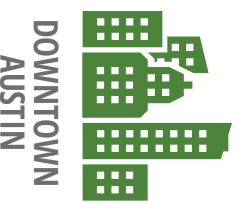
- Existing General Purpose lanes
- Proposed Tolled Express Lane
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane

EXISTING BRIDGE WIDENED TO ADD ONE EXPRESS LANE AND ONE GENERAL PURPOSE LANE IN EACH DIRECTION

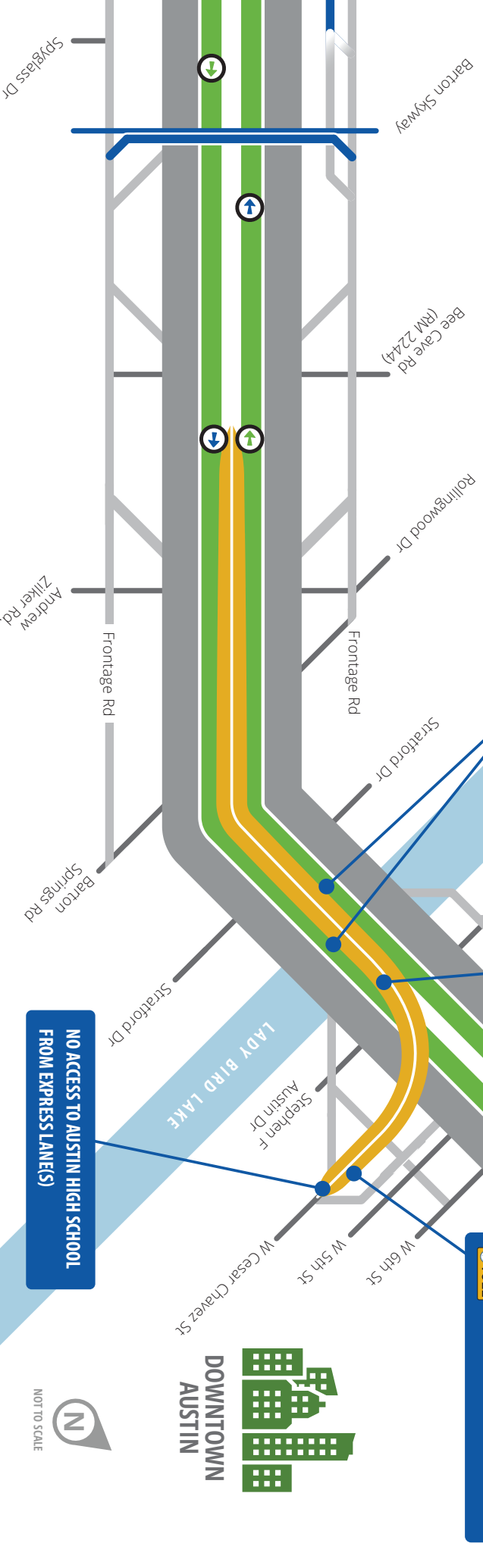
EXPRESS LANE EXIT
CESAR CHAVEZ STREET

EXPRESS 1 TOLL
DOWNTOWN ACCESS TO SOUTHBOUND EXPRESS LANE

NO ACCESS TO AUSTIN HIGH SCHOOL FROM EXPRESS LANES











NOT TO SCALE



1A: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 38 minutes	 36 minutes
2035 EXPRESS LANES	 10 minutes	 10 minutes

 Morning Peak Period NB (7-9 a.m.)

 Evening Peak Period SB (4-6:30 p.m.)





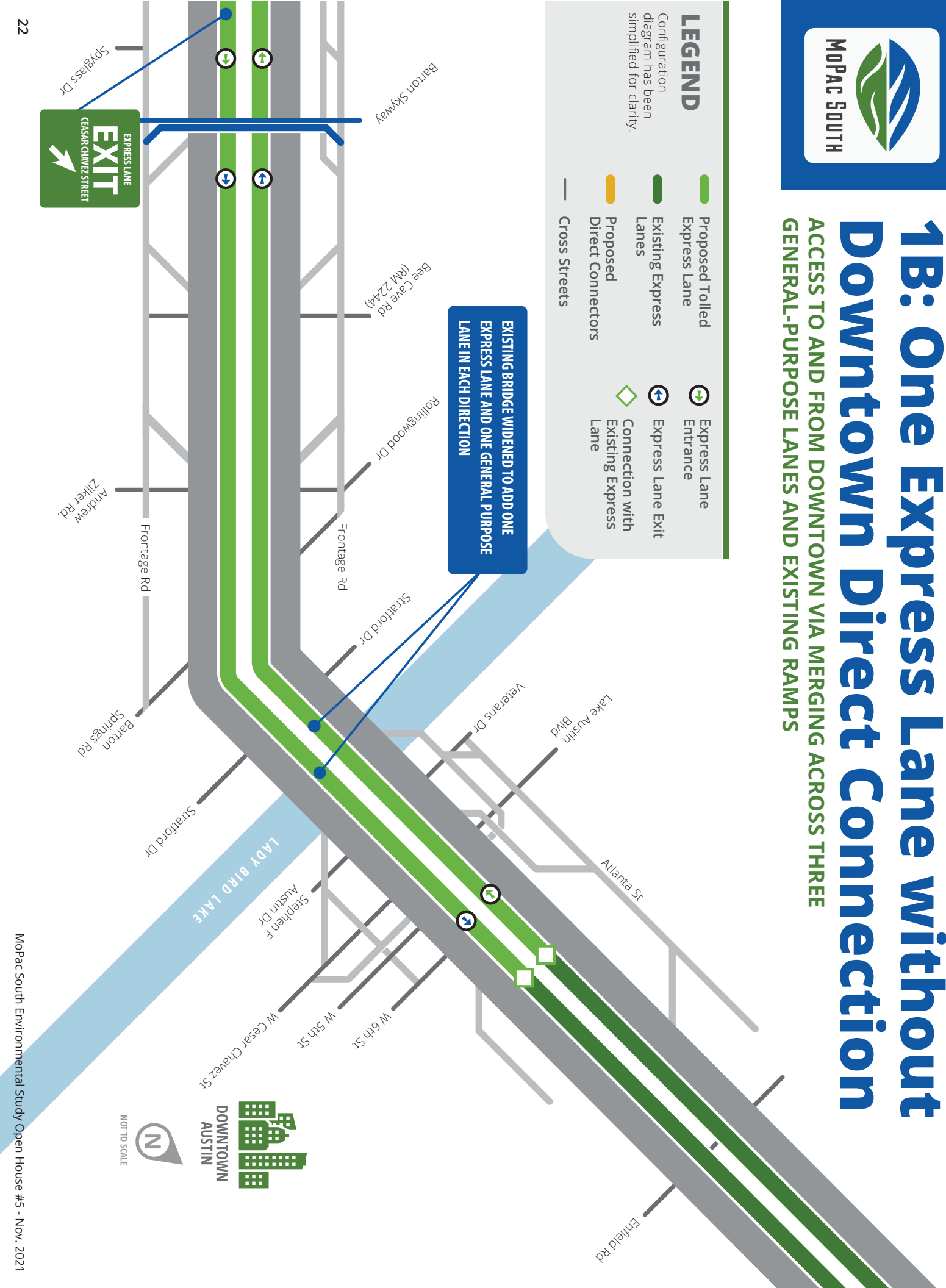
1B: One Express Lane without Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN VIA MERGING ACROSS THREE GENERAL-PURPOSE LANES AND EXISTING RAMPS

LEGEND
Configuration diagram has been simplified for clarity.

- Proposed Tolled Express Lane
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane

EXISTING BRIDGE WIDENED TO ADD ONE EXPRESS LANE AND ONE GENERAL PURPOSE LANE IN EACH DIRECTION



1B: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 40 minutes	 42 minutes
2035 EXPRESS LANES	 14 minutes	 20 minutes

 Morning Peak Period NB (7-9 a.m.)

 Evening Peak Period SB (4-6:30 p.m.)





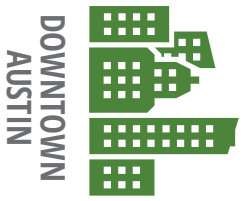
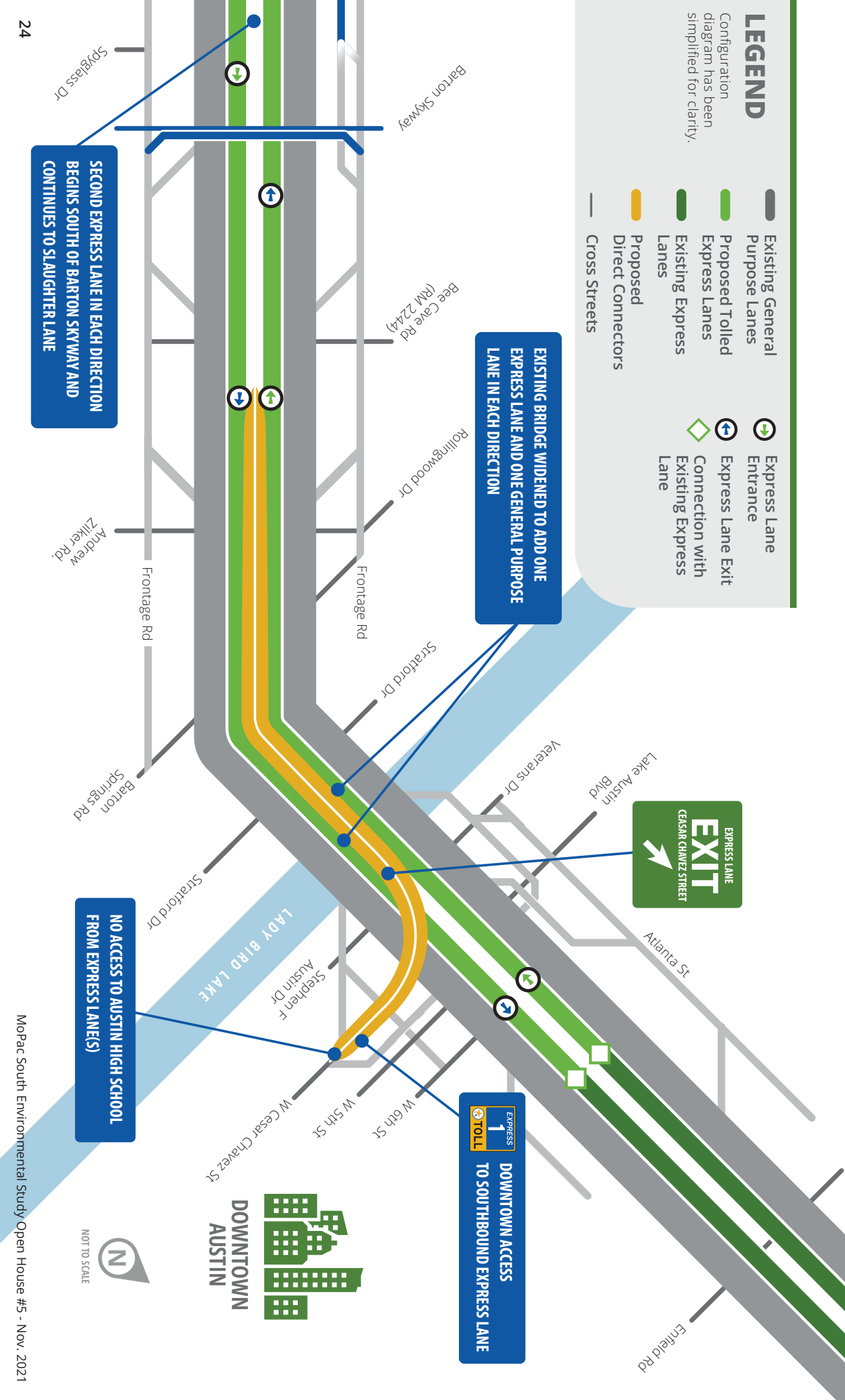
2A: Two Express Lanes with Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECTOR RAMP IN EACH DIRECTION, TO AND FROM CESAR CHAVEZ STREET

LEGEND

Configuration diagram has been simplified for clarity.

	Existing General Purpose Lanes		Express Lane Entrance
	Proposed Tolled Express Lanes		Express Lane Exit Connection with Existing Express Lane
	Existing Express Lanes		Proposed Direct Connectors
	Proposed Direct Connectors		Cross Streets













NOT TO SCALE

2A: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 32 minutes	 29 minutes
2035 EXPRESS LANES	 9 minutes	 9 minutes

 Morning Peak Period NB (7-9 a.m.)

 Evening Peak Period SB (4-6:30 p.m.)





2B: Two Express Lanes without Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN VIA MERGING ACROSS THREE GENERAL-PURPOSE LANES AND EXISTING RAMPS

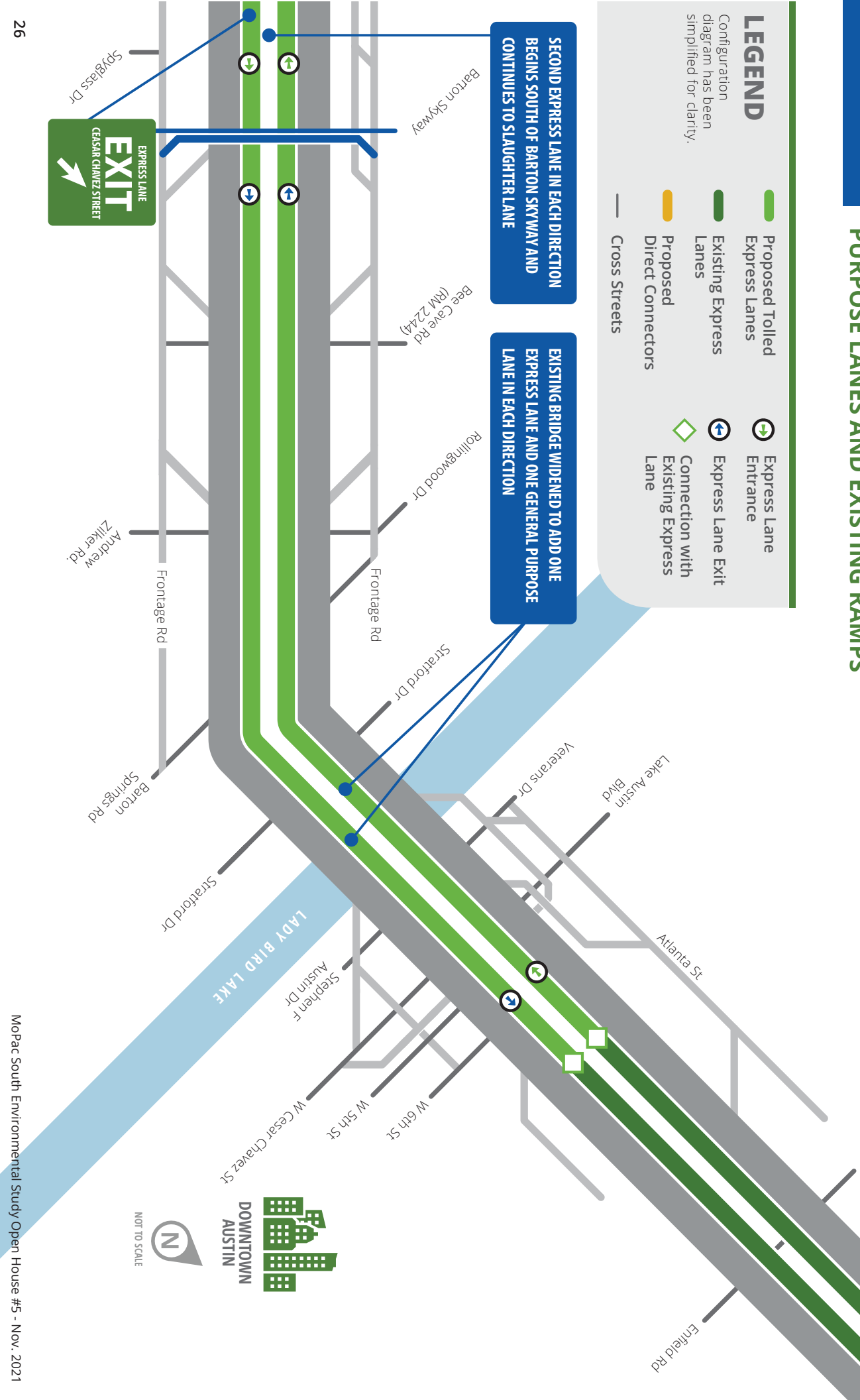
LEGEND

Configuration diagram has been simplified for clarity.

- Proposed Tolled Express Lanes
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane

SECOND EXPRESS LANE IN EACH DIRECTION BEGINS SOUTH OF BARTON SKYWAY AND CONTINUES TO SLAUGHTER LANE

EXISTING BRIDGE WIDENED TO ADD ONE EXPRESS LANE AND ONE GENERAL PURPOSE LANE IN EACH DIRECTION



NOT TO SCALE

2B: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 32 minutes	 36 minutes
2035 EXPRESS LANES	 13 minutes	 13 minutes

 Morning Peak Period NB (7-9 a.m.)

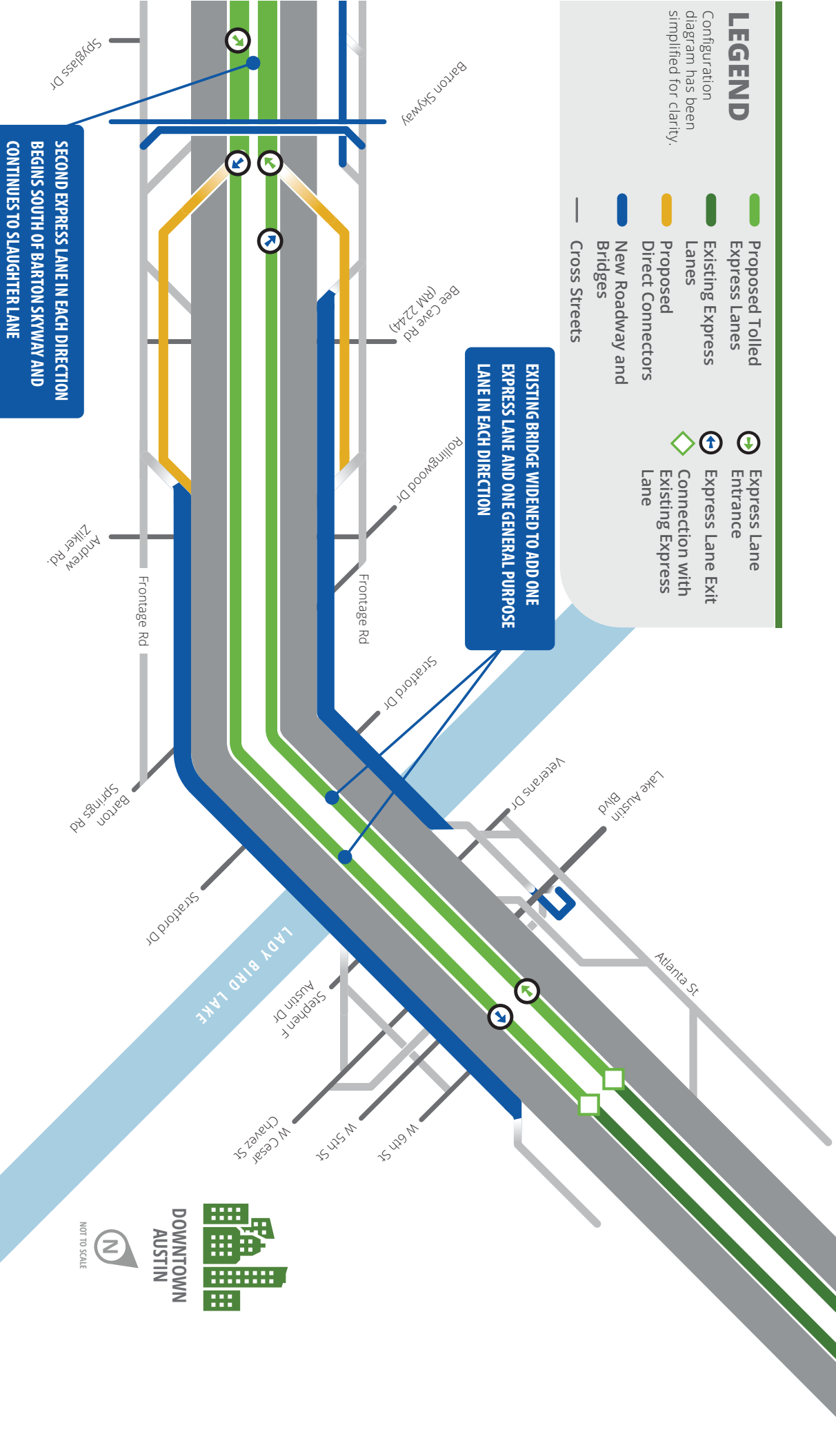
 Evening Peak Period SB (4-6:30 p.m.)





2C: Two Express Lanes with Elevated Ramps Near Barton Skyway


ACCESS TO AND FROM DOWNTOWN VIA MERGING ACROSS THREE GENERAL-PURPOSE LANES AND EXISTING RAMPS



2C: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 33 minutes	 31 minutes
2035 EXPRESS LANES	 9 minutes	 9 minutes

 Morning Peak Period NB (7-9 a.m.)

 Evening Peak Period SB (4-6:30 p.m.)





3: City of Austin Proposal

ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECTOR RAMP IN EACH DIRECTION, TO AND FROM CESAR CHAVEZ STREET. TWO EXPRESS LANES IN EACH DIRECTION FROM CESAR CHAVEZ STREET TO US 290. ONE EXPRESS LANE IN EACH DIRECTION FROM US 290 TO SLAUGHTER LANE.

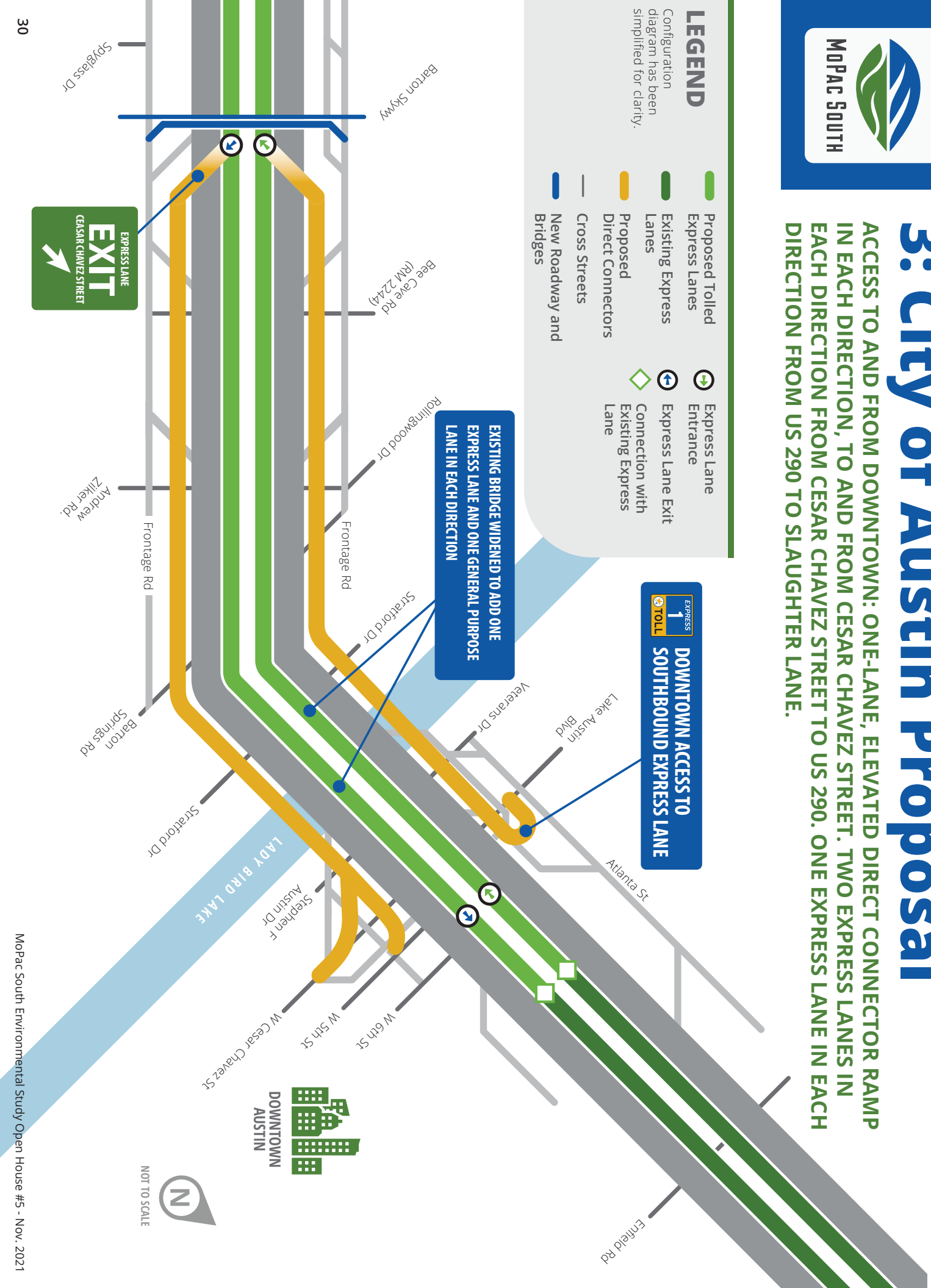
LEGEND

Configuration diagram has been simplified for clarity.

- Proposed Tolled Express Lanes
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- New Roadway and Bridges
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane

EXPRESS TOLL
DOWNTOWN ACCESS TO SOUTHBOUND EXPRESS LANE



EXISTING BRIDGE WIDENED TO ADD ONE EXPRESS LANE AND ONE GENERAL PURPOSE LANE IN EACH DIRECTION



3: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 41 minutes	 37 minutes
2035 EXPRESS LANES	 11 minutes	 11 minutes

 Morning Peak Period NB (7-9 a.m.)

 Evening Peak Period SB (4-6:30 p.m.)



Environmental Evaluations



Air Quality



Traffic Noise



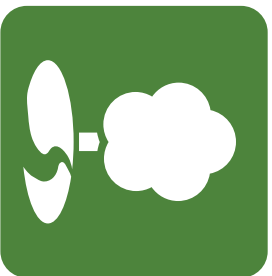
Hazardous Materials



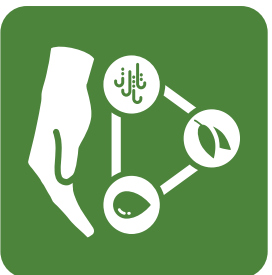
Cultural Resources



Biological Resources



Land Use and Parkland



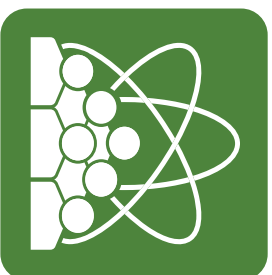
Ecological Resources



Water Quality & Water Resources



Indirect and Cumulative Impacts



Social and Community Impacts



Environmental Justice



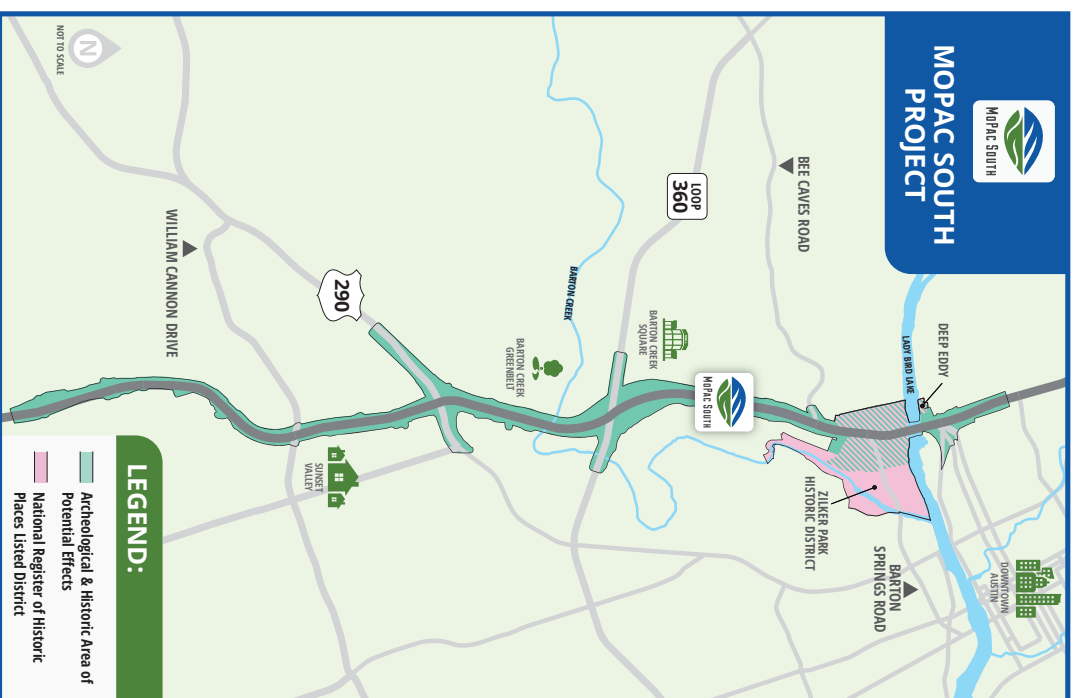
Archeological & Historic Resources

Section 106 of the National Historic Preservation Act (NHPA)

- Considers effects on Historic Properties including, Historic (45+ Years) and Archeological Resources in Area of Potential Effects (APE):
 - Identification of Cultural Resources and Historic Properties
 - Determine Effect on Historic Properties
 - Minimize Impact to Historic Properties
- Studies will address these types of effects within the APE:
 - Direct (Disturbance)
 - Indirect (Viewshed, Noise, Vibration)

Known Cultural Resources in APE

- Zilker Park Historic District
- Deep Eddy Historic District
- Charles Johnson Homestead
- Archeological Sites





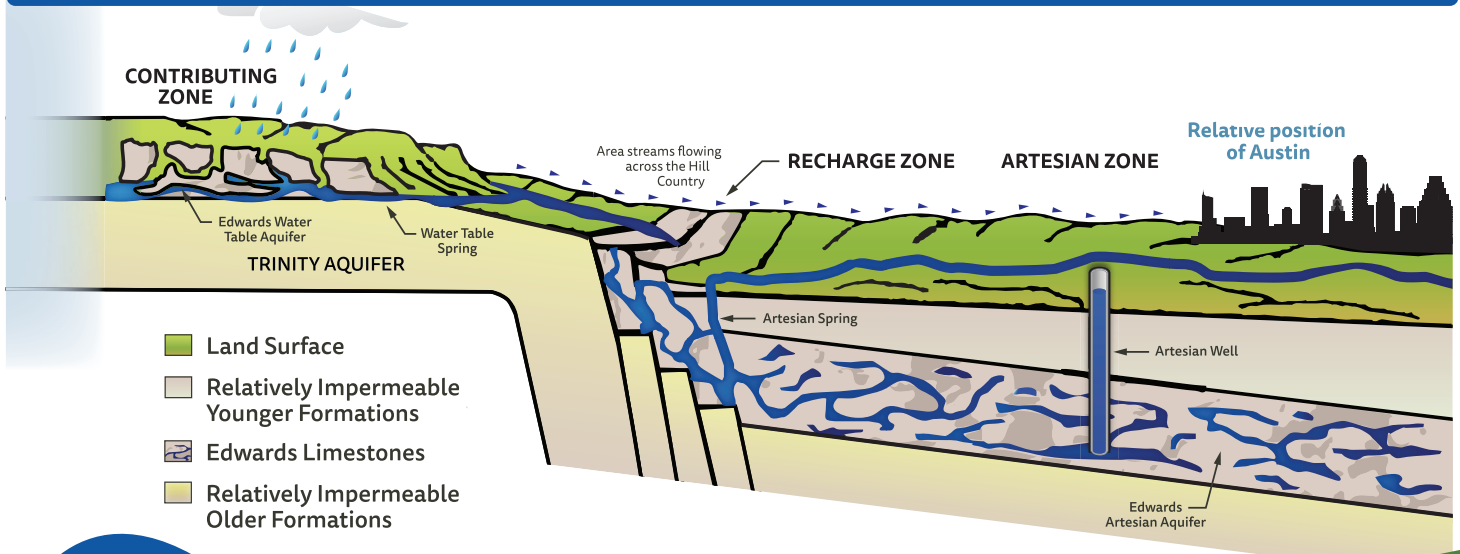
Water Quality Protections

- Edwards Aquifer is a drinking water source for South Central Texas.
- Fractures, caves, sinking streams, and sinkholes act as conduits to the aquifer.
- Karst is a type of landscape formed by the dissolution of rocks.
- Several diverse fauna rely upon the Aquifer.

- Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Requirements:
 - Minimize erosion and sedimentation
 - Develop an Edwards Aquifer Protection Plan for contaminants
- Potential water quality treatment measures:
 - Permeable Friction Course (PFC) Pavement
 - Water quality ponds
 - Vegetative controls
 - Hazardous materials traps

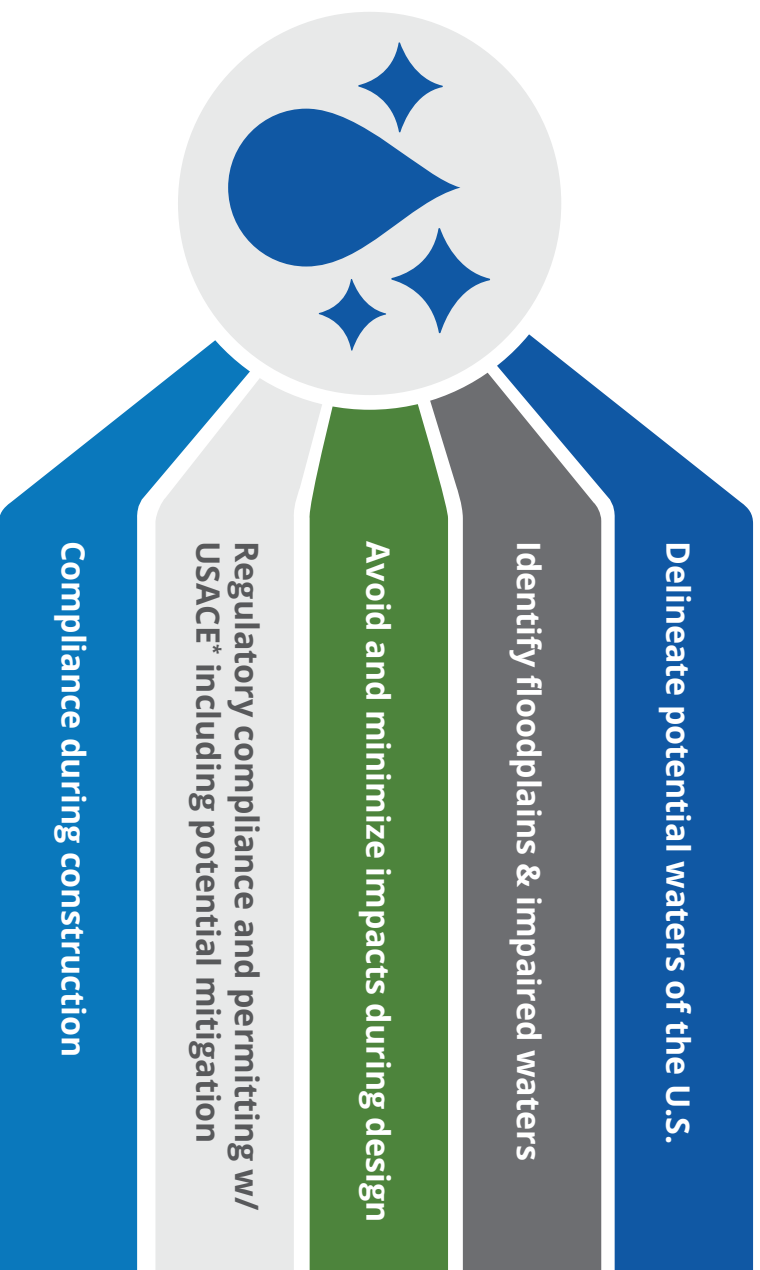
Due to the environmentally sensitive nature of the Edwards Aquifer Recharge Zone, the Mobility Authority exceeded the environmental protection requirements for construction of the 45SW Toll Road, resulting in 98% removal of the increase in Total Suspended Solids.

WHAT IS THE EDWARDS AQUIFER RECHARGE ZONE?



Water Resources

IN ADDITION TO THE EDWARDS AQUIFER RULES, THE PROJECT WILL ALSO COMPLY WITH THE CLEAN WATER ACT.



- Demonstrate compliance with other regulations and conditions including but not limited to:
- Section 106 (Cultural Resources)
 - Endangered Species Act
 - Section 401 Water Quality
 - Regulatory Floodplains



*United States Army Corps of Engineers

Threatened and Endangered Species

SPECIES OF INTEREST INCLUDE, BUT ARE NOT LIMITED TO:



Golden-cheeked Warbler
*Setophaga chrysoparia*¹



Barton Springs Salamander
*Eurycea sosorum*²



Tooth Cave Ground Beetle
*Rhadine persephone*³

Environmental Efforts

- Potential Habitat Assessments including Presence-Absence Surveys
- 5 years of Golden-cheeked Warbler Surveys without presence
- Minimizing impacts during design process
- Incorporating conservation and recovery measures
- Preparing a Biological Assessment for consultation with the USFWS
- Consulting with resource agencies, U.S. Fish and Wildlife Service (USFWS) and Texas Parks and Wildlife Department (TPWD).

Karst Zones

SOME THREATENED AND ENDANGERED SPECIES ARE FOUND IN KARST ZONES

- What are karst zones?
 - Zone 1: Areas known to contain endangered cave fauna
 - Zone 2: Areas having a high probability of suitable habitat for endangered cave fauna
 - Zone 3: Areas that probably do not contain endangered cave fauna
- These are established by U.S. Fish and Wildlife.



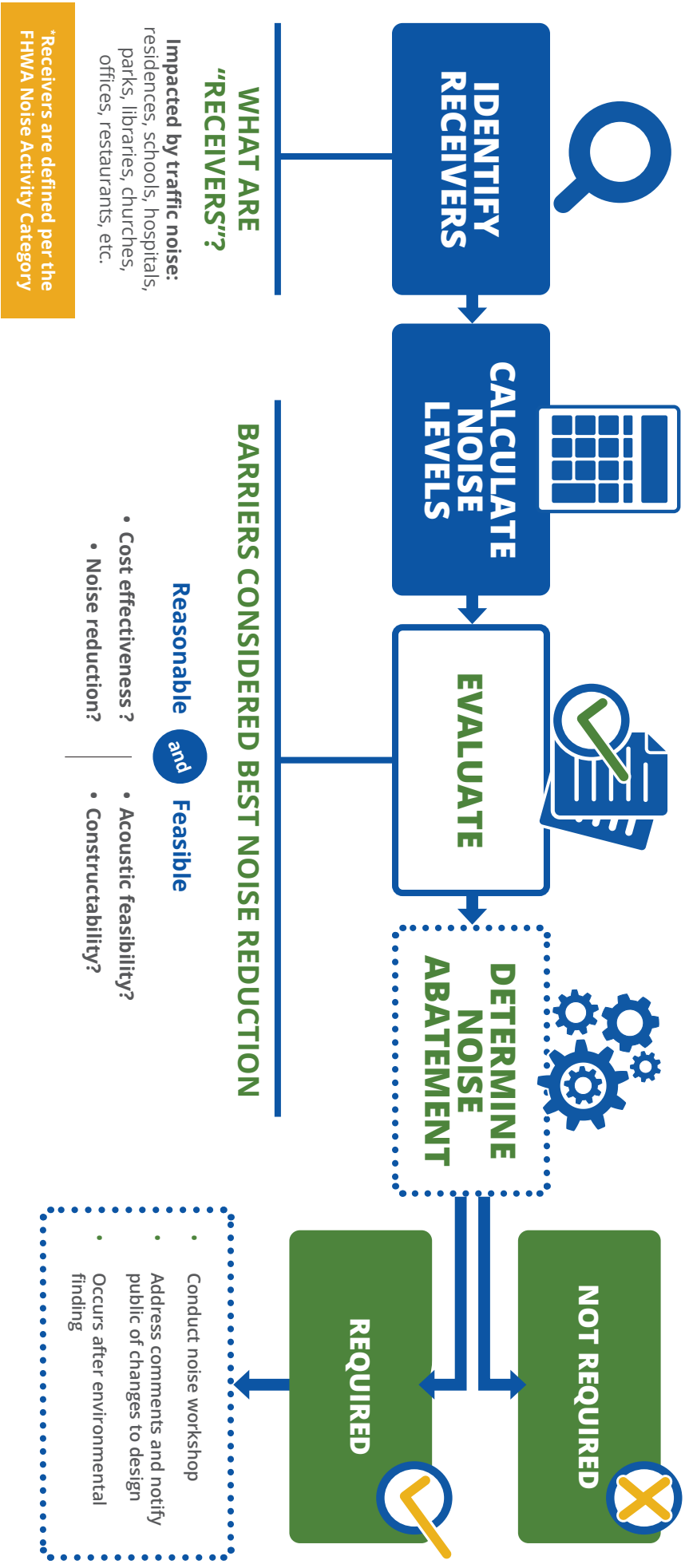
¹ Audubon.org

² U.S. Fish & Wildlife

³ CommunityImpact.com

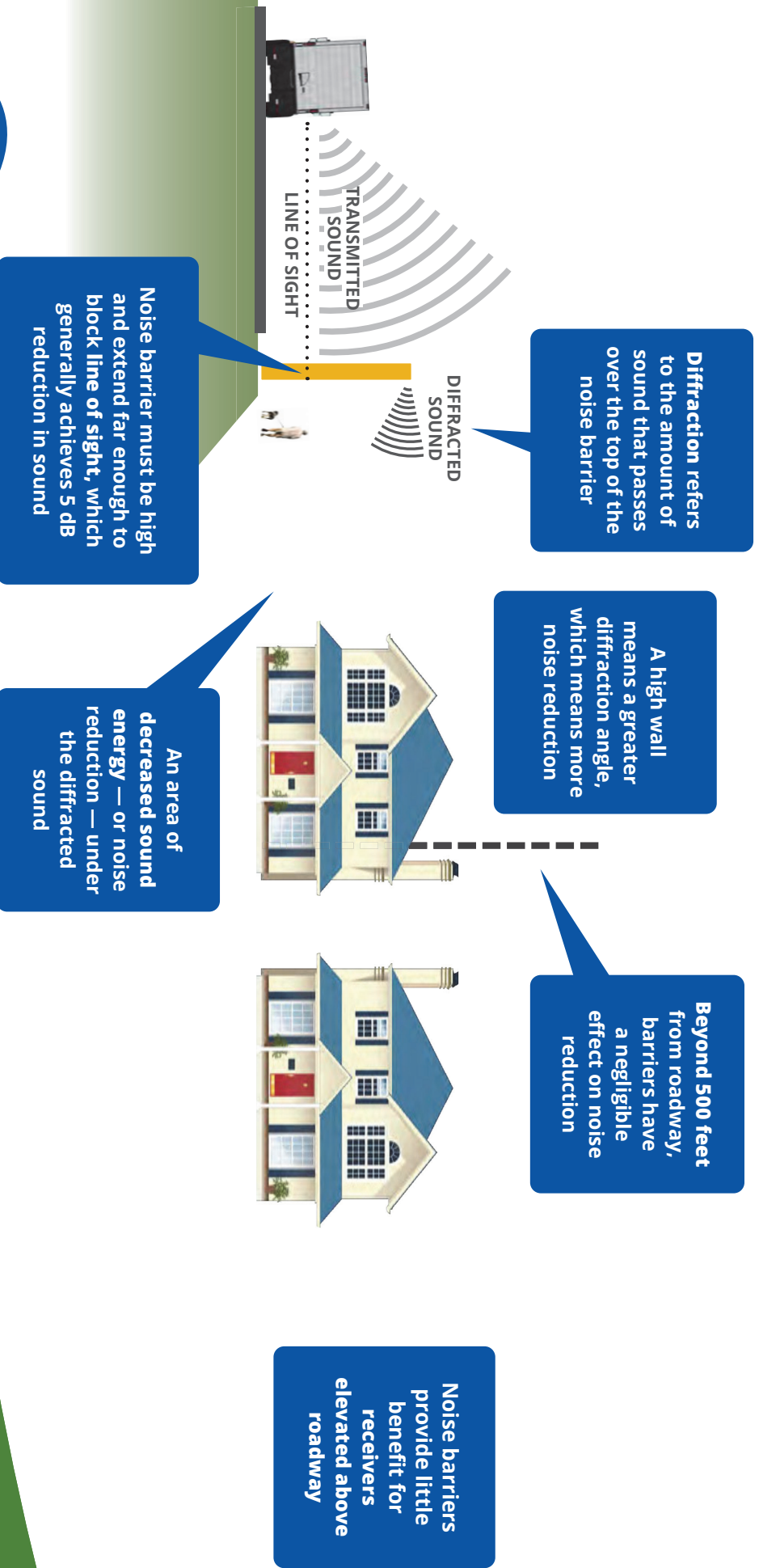
Traffic Noise Evaluation

NOISE AND BARRIER ANALYSIS BEGINS BEFORE THE PUBLIC HEARING AND FINALIZES AFTER COMMUNITY NOISE WORKSHOPS. THIS INCLUDES MITIGATION.



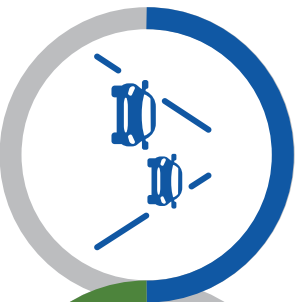
Traffic Noise & Abatement

- Sound is generated from tires, engines, and heavy truck exhaust stack
- The majority of sound comes from friction of tires with road and increase with vehicle speed
- Heavy truck traffic is louder than standard automobile traffic noise



Project Benefits

**NON-TOLLED
IMPROVEMENTS**



**TRAVEL TIME
BENEFITS**



**OPERATIONAL
IMPROVEMENTS/
EFFICIENCY**



**DEPENDABLE
ROUTE FOR
TRANSIT**



**IMPROVED
EMERGENCY
RESPONSE TIMES**



**ADA-COMPLIANT
BICYCLE AND
PEDESTRIAN
FACILITIES**



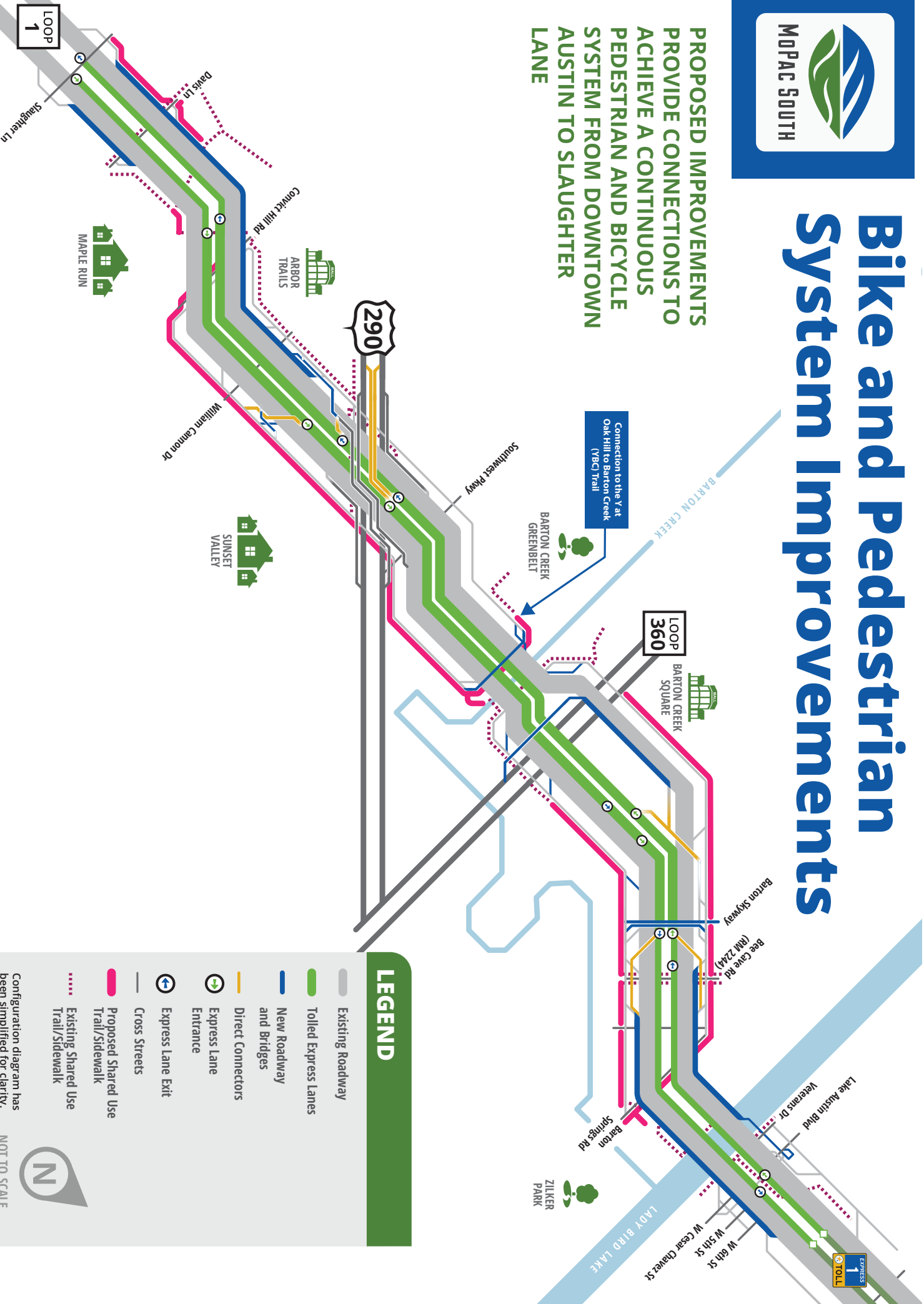
**INCREASED
WATER QUALITY
MEASURES**





Bike and Pedestrian System Improvements

PROPOSED IMPROVEMENTS TO PROVIDE CONNECTIONS TO ACHIEVE A CONTINUOUS PEDESTRIAN AND BICYCLE SYSTEM FROM DOWNTOWN AUSTIN TO SLAUGHTER LANE



LEGEND

- Existing Roadway
- Tolled Express Lanes
- New Roadway and Bridges
- Direct Connectors
- Express Lane Entrance
- Express Lane Exit
- Cross Streets
- Proposed Shared Use Trail/Sidewalk
- Existing Shared Use Trail/Sidewalk

Configuration diagram has been simplified for clarity.



NOT TO SCALE

Non-Tolled Improvements

First Street and Cesar Chavez Street entrance ramps to southbound MoPac

Widens existing bridge over Lady Bird Lake to five non-tolled general-purpose lanes in both directions

South-to-north non-signalized U-turn at Barton Skyway

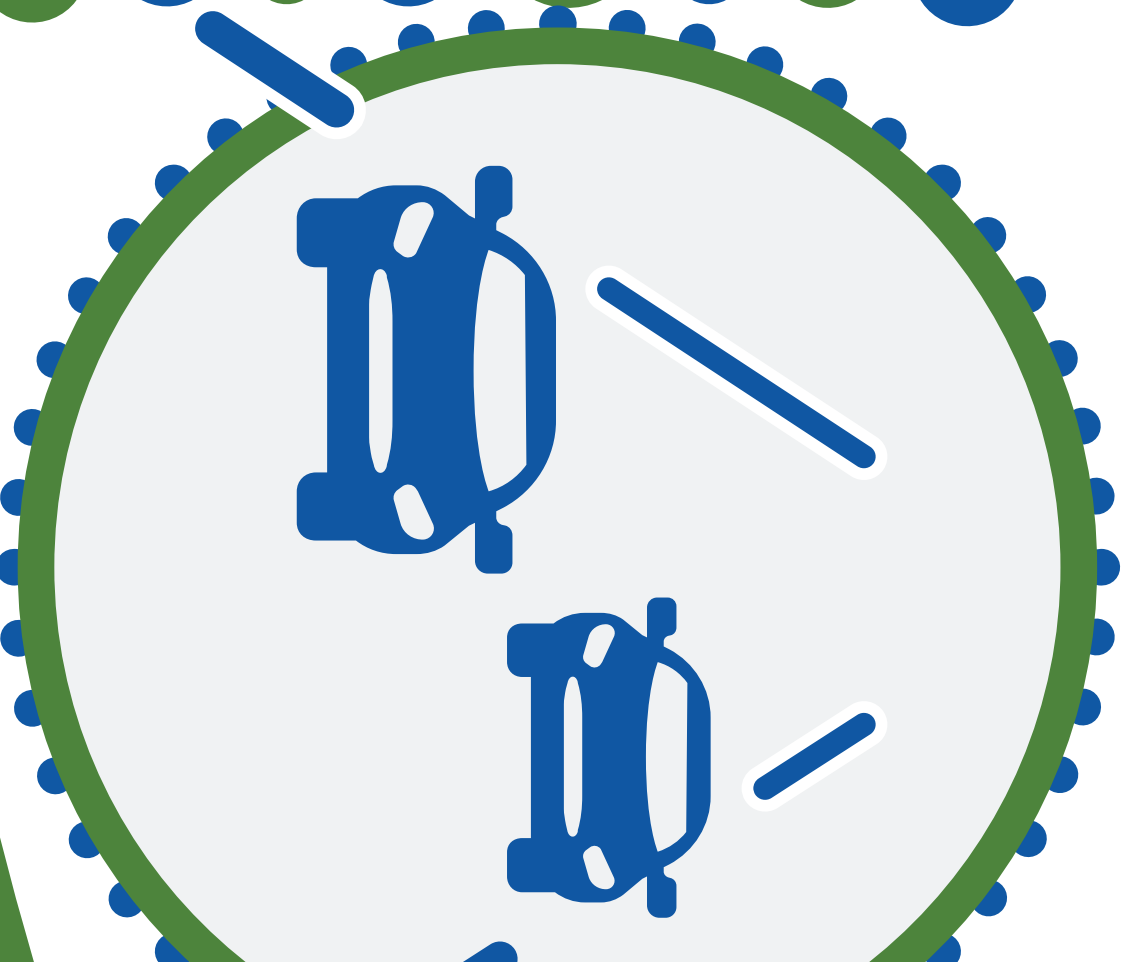
Southbound non-tolled collector distributor for Bee Cave Road and Barton Skyway entrance to southbound MoPac to bypass signals

Additional southbound non-tolled general-purpose lane south of William Cannon Drive

Repaved general-purpose lanes throughout corridor

Shift the southbound Bee Caves exit ramp further north to allow for safer weaving for westbound Bee Caves traffic

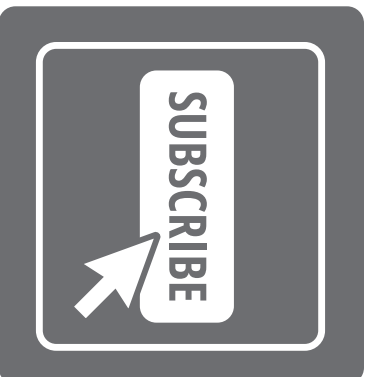
Ramp operational improvements on the northbound frontage road north of William Cannon



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By Phone*



Official Comments Submittal

TO BE INCLUDED IN THE OFFICIAL RECORD FOR THE OPEN HOUSE, COMMENTS MUST BE RECEIVED BY JANUARY 7, 2022.

You may submit in many ways:



Email

MoPacSouth@ctrma.org



Online

voh.MoPacSouth.com



Mail

Central Texas Regional
Mobility Authority
c/o MoPac South
Environmental Study
3300 North I-35, Suite 625
Austin, Texas 78705

Comments submitted outside the official comment period or via other channels than those listed above will not be considered part of the record for this open house.



Amy J. Pattillo, Attorney at Law



November 20, 2015

RE: Additional Comments to the Mopac South Environmental Study (Please enter this letter, and the attachment, in full, into the record of public comments to the Mopac South Environmental Study November 2015 Open House)

Dear Chairman Wilkerson & Board Members Mills, Bennett Jr., Meade, Armbrust, Singleton, & Heimsath:

First, thank you for your service on the CTRMA board. Over the last two years, I had the honor and privilege of serving the City of Rollingwood on its City Council; this position served to further increase my appreciation for those willing to give of their time, energy, and resource to serving the public, particularly in unpaid positions. Thank you for the time you all give to our community by overseeing mobility solutions with the Central Texas region.

Second, I offer comments to the Mopac South Environmental Study. I wholeheartedly support the official comments by the City of Rollingwood with regard to the Mopac South Environmental Study. In addition, my term on the Rollingwood City Council has recently ended, so I offer additional comments as an individual resident of Rollingwood, informed, in part, by the time I spent on the Council. I am thankful that the City of Rollingwood and its residents have actively engaged in the Mopac South Environmental Study public comment process, given that the project will significantly impact the eastern landscape and access to our city.

With regard to comments by the public, I am hopeful that the CTRMA board will receive copies, in full, of all the comments submitted by all community members who take the time to comment during the current comment period. In addition, I respectfully request that to the extent I, and others, have submitted multiple, separate comment letters or signed petition letters during the comment period, that the CTRMA staff not be permitted to selectively interpret and categorize these comments without also publishing all the comments in full. Many members of the community, myself included, have submitted multiple comments as responsible citizens who are actively engaged during the public comment period - asking questions and actively commenting on issues as the issues are clarified. Please receive each of the comments I submitted and signed during the comment period as an exercise of free speech and active participation throughout a public comment period, not as an attempt to "stack the vote".

During the time I served on the Council, I had the pleasure of speaking with you all during your April Board meeting and presenting the City of Rollingwood's first position regarding the first "Double Decker over Lady Bird Lake" alternative. I appreciate your willingness to listen to the position of the City of Rollingwood and many of its residents and to ask your staff to evaluate alternatives to placing a Double Decker that would extend not only over Lady Bird Lake, but most of the eastern boundary line of the City of Rollingwood. Among the 6 alternatives now being presented to the public, there are 3 alternatives that would place double decker, elevated lanes along the eastern side of the City of Rollingwood: (1 and 2) the 1 or 2 lanes in each direction with direct connect (aka Double Decker over Lady Bird Lake); and (3) the 2 lanes in each direction with elevated lanes near Barton Skyway (aka Two Elevated

Lanes over Bee Caves Road). I ask you again to weigh the adverse impact of elevated lanes to the aesthetics and property values of the area proximate to Rollingwood and the surrounding properties in Austin. Please do not select an alternative that would place elevated lanes over Lady Bird Lake or over Bee Caves Road.

In addition, before you select any alternative, I respectfully request that the CTRMA board provide the public with at least one more public comment period, if not more, during which the CTRMA staff address the following issues raised in the attachment to this letter, which is part of my comments:

- (1) The Mopac South Environmental Study needs to provide information about the actual work done or that will be done to avoid unnecessary impacts to the natural and human environment, not mere summary statements;
- (2) The Mopac South Environmental Study needs to study and evaluate an alternative that includes 2 HOV lanes in each direction;
- (3) The Mopac South Environmental Study needs to present multiple alternatives without elevated lanes in the Cesar Chavez to Barton Skyway corridor that include TSM improvements to optimize travel times, such as improving the TSM for the 2 express lanes in each direction without direct connect;
- (4) The Mopac South Environmental Study needs to present all alternatives with the Bee Caves northbound on-ramp entry length returned to the current length or longer;
- (5) The Mopac South Environmental Study needs to present a Topographical model and traffic simulation of the Proposed Bee Caves Southbound exit ramp for each of the alternatives;
- (6) The Mopac South Environmental Study needs to provide the public with consistently applied rationale, traffic studies, and other information to compare the use of inside lane toll road entrance/exits are used at some locations, but recommending elevated lanes at others;
- (7) The Mopac South Environmental Study needs to remove or change the dangerous and bottlenecking inner lane toll road exit on northbound Mopac before the Enfield exit and assess the impact to travel times from the toll road exit on northbound Mopac before the Enfield exit, at the 5th/Cesar Chavez interchange;
- (8) The entire Mopac South Environmental Study (including, but not limited to, the project purpose, project goals and objections, project need, problems to be addressed, all underlying data and modeling, CSS, travel times, traffic modeling, and comparisons of alternatives) needs to be updated for all 6 alternatives, in addition to previously considered alternatives, to the reflect all aspects of the CAMPO 2040 plan;
- (9) The Mopac South Environmental Study needs to provide improved designs for the Bee Caves Road/Mopac intersection, or provide a written rationale for why improvements to the Bee Caves Road/Mopac intersection are not a part of the Study; and
- (10) The Mopac South Environmental Study needs to provide travel times for the general traveling public and toll lane users between a point on Mopac

itself near Cesar Chavez to a point on Mopac itself near Slaughter Lane to provide travel time information for the majority of the traveling public not exiting or entering at Cesar Chavez.

As addressed in the attachment, currently, the CTRMA staff has failed to provide the public with sufficient or reliable information about each of the 6 alternatives upon which the public can collaborate with CTRMA to evaluate the benefits and significant impacts of each alternative. CTRMA staff have failed to treat each of the 6 alternatives evenly and have failed to evenly include TSM into the 2 express lanes each way without direct connection that could significantly reduce the travel times of those intending to use the toll lanes and the general traveling public. In addition, CTRMA staff have failed to provide a rationale to support the decision to recommend elevated lanes for the Cesar Chavez toll exit lanes, but to use inner lane toll lane exits at other points along Mopac that have a higher volume of exiting traffic than is predicted for Cesar Chavez.

The attachment to this letter includes additional details about each of the issues above that I request be evaluated and addressed by CTRMA as part of the NEPA analysis for the Mopac South Environment Study and as part of the information provided to the public for collaborating with CTRMA.

I recognize that CTRMA has already spent a significant amount of money developing the Mopac South Environmental Study and that CTRMA may have been able to check off many boxes in the NEPA process, however, the public still has not received sufficient information about any of the alternatives for the public to collaborate with CTRMA in the CSS process or other processes. The CTRMA staff presented an initial plan to the public with 2 express lanes in each direction, which did not fall within the scope of the authority given to CTRMA to build a toll road under the CAMPO 2035 plan (only allowing for 1 express lane in each direction). CTRMA has now spent a significant amount of additional resources developing 6 alternatives, under the CAMPO 2035 plan, and has failed to provide the public with sufficient or accurate information upon which the public rely in comparing the alternatives and collaborating with CTRMA. During open house meetings, the public asks questions about environmental impacts, such as aesthetic and noise impacts or mitigation options and the public is told that these factors will not be considered until after a preferred alternative is selected. How can a preferred alternative be selected if the public has not been provided with data allowing for comparison of environmental impacts of *each* alternative? During open house meetings, the public asks questions about traffic studies for Mopac South and is consistently told that the person who could answer the question is not in the room or that the information being requested is confidential/not ready for public consumption – and from my personal experience, even if the person with the answer to a question is in the room, it is doubtful they would have the authority to provide an answer on behalf of CTRMA. In addition to providing the public with additional opportunities to collaborate and comment on the Mopac South Environmental Study, please consider selecting leadership for this project who can provide effective management of the project and ensure that the public is provided with responses to basic questions about the impacts of the project. Please ensure, as part of the Mopac South Environment Study, that the public has been provided with sufficient, fair and, accurate information to collaborate in the study process. Please ensure that CTRMA staff does not merely hold meetings in order to check a box showing that a meeting was held within a specific community, but that staff is prepared to provide

sufficient and accurate information to the public who spend the time and energy to attend the meetings and become educated about the project.

It is undoubtedly a daunting challenge to gather public support for a transportation project that requires digging up an 8 mile portion of land in Austin that includes the Edwards Aquifer and Barton Springs, along with hundreds of acres of parkland and preserved green space. There is a good reason for this: residents of Travis County in the past, and currently, value maintaining the environment and water supply for future generations, and green space aesthetic near Downtown Austin, over achieving the very top travel times. To the extent that a region of counties has decided, in the CAMPO 2040 plan, to allow toll roads on Mopac 1 South, please respect the values of residents who live along this roadway and select alternatives for these toll roads that will achieve the goals of improving travel times in the region with the least impact to the environment and green space aesthetic of the areas near Downtown Austin, including Lady Bird Lake, Zilker Park, and Rollingwood.

In addition, please serve the community by providing an Environmental Impact Statement for the Mopac South Environmental Study. There will be a significant impact, which will be impossible to mitigate by barriers and buffers, to the natural resources, environment, water quality, and quality of life of residents and businesses in Rollingwood and the surrounding areas of Austin if Mopac South is modified in any way. Please address the significant impacts to the environment identified in the attachments to this letter in an Environmental Impact Statement.

Multiple CTRMA staff have made verbal promises to me that CTRMA will collaborate with the City of Austin, TxDot, and the City of Rollingwood to improve the design of the pedestrian area under Mopac at the Barton Springs and Rollingwood Drive area. I have been told that the current proposal for pedestrian traffic in all 6 alternatives meets engineering practice requirements. Whether or not this is true, anyone who has practical experience walking through this area can immediately identify that the current proposal is not a safe solution for managing pedestrian traffic in the area (of note: I have challenged multiple CTRMA staff members to try to safely walk a jogging stroller through their proposed pedestrian cross walk locations – no one has taken me up on this challenge yet). Push button cross walks are, in practice, dangerous for this area and the proposed pathway require pedestrians to cross 3 intersections with variable high speed traffic and blind spots. Please evaluate placement of a pedestrian overpass across Barton Springs on the east side of Mopac within the CTRMA ROW. Also, please ask the CTRMA staff to keep their promise to reevaluate and redesign this pedestrian traffic area during the next phase of the Mopac South Environmental Study.

Thank you for considering my comments.

Best regards,

A handwritten signature in black ink, appearing to read "Amy J. Pattillo". The signature is fluid and cursive, with a long horizontal flourish at the end.

Amy J. Pattillo

[submitted for official public comment via fax to CTRMA]

Attachment – Please include this attachment in full in the public comments to the Mopac South Environmental Study and in the comments to be evaluated during the NEPA process

(1) The Mopac South Environmental Study needs to provide information about the actual work done or that will be done to avoid unnecessary impacts to the natural and human environment, not merely summary statements.

Of note, the “Project Goals and Objectives” sheet available in the Mopac South Environmental Study Virtual Open House states, as a third goal: “*Be constructible without unnecessary impacts to the natural and human environment.*” CTRMA has failed to provide the public with sufficient information to prove that the Mopac South project will be constructible without unnecessary impacts to the natural and human environment.

CTRMA needs to clearly provide the public with specific information about the studies of areas where there could be impact to the natural and human environment. Currently CTRMA has merely provided summary statements.

CTRMA needs to provide the public with additional information about the necessary impacts to the natural and human environment that cannot be mitigated.

Threatened and Endangered Species

With respect to threatened and endangered species, the “Environmental Study Update” flyer available in the Mopac South Environmental Study Virtual Open House states: “Field surveys were conducted in the project area. No listed threatened or endangered species were encountered.” There are pictures of birds, karst species, fresh water mussels, and salamanders shown on the flyer.

The data currently provided in the Environmental Study is insufficient to support CTRMA’s claims. Endangered salamanders are known to exist at Barton Springs Pool (<https://tpwd.texas.gov/huntwild/wild/species/bartonspringssalamander/>). Areas of Austin have been designated as preserves for the Golden Cheek Warbler (<https://www.austintexas.gov/ecoweb/golden-cheeked-warbler>). Both of these endangered species are known to be located near the project area or their environments. With respect to salamanders in Barton Springs, the Edwards Aquifer recharge zone feeds Barton Springs, a known habitat of endangered species and any development in that zone will impact the water quality in Barton Springs and the habitat of this species.

The environmental study merely states that “field surveys were conducted in the project area”, but does not indicate the scope of this work. There is no indication of which portions of the project area were surveyed or how the surveying work was performed. The report is disturbingly ambiguous, providing no parameters or structure. Given that endangered species are known to be proximate to the project area, CTRMA needs to provide the public with more information about the actual studies that were performed to assess whether threatened or endangered species are present in the project area.

Water Quality

With respect to Water Quality, the “Environmental Study Update” available in the Mopac South Environmental Study Virtual Open House states “The Mobility Authority plans to meet

water quality standards on this project to protect the Barton Springs segment of the Edwards Aquifer Recharge Zone, as required by the Texas Commission on Environmental Quality. Water quality treatment measures on MoPac could be enhanced by this project by implementing the latest, most modern technologies available: Permeable Friction Course (PFC) Pavement, Water Quality Ponds, Vegetative Controls, Hazardous Materials Traps.”

First, at the next open house, CTRMA needs to inform the public whether the latest, most modern technologies available for water quality treatment will *actually* be used on the project, or if there is some specific condition that would trigger their use. CTRMA’s current statement implies that the use of these modern technologies is conditional or optional.

Second, at the next open house, CTRMA needs to inform the public of what the water quality standards are (including code sections and other requirements) that CTRMA understands as required by TCEQ for protecting the Barton Springs segment of the Edwards Aquifer Recharge Zone. In addition, CTRMA needs to provide the public with a map showing which portion of the project is the “Barton Springs segment of the Edwards Aquifer Recharge Zone”.

Third, at the next open house, CTRMA needs to inform the public of what the water quality standard are (including code sections and other requirements) that CTRMA understands as required by TCEQ for protecting the portion of the project that are not the “Barton Springs segment of the Edwards Aquifer Recharge Zone”.

Fourth, at the next open house, CTRMA needs to inform the public of what additional measures will be taken to protect the water quality of Lady Bird Lake and protect the lake from pollutants and run off during and after construction.

Traffic Noise

With respect to Traffic Noise, the “Environmental Study Update” available in the Mopac South Environmental Study Virtual Open House states: “Given the 98% projected population growth in Travis and Hays counties, traffic noise along MoPac is going to continue to increase over time, regardless of whether or not we build improvements. A detailed noise analysis will be conducted once a recommended Express Lane configuration has been determined. The community will be engaged in next steps after the analysis is complete.”

During the November Open House at Hill Country Middle School, the CTRMA staff and CTRMA’s noise consultant were asked by members of the public, during a Q&A session, if any of the alternatives would create more noise or if any would create the least amount of noise. The noise consultant stated that there actually is preliminary noise data for the project, but it was not available for public consumption. He also stated that based on the preliminary data, there is no plan that provides any more or less noise than any other because for all the plans, the noise would be mitigated, but that we could not rely on his statement.

During the next open house, CTRMA should provide the public with noise impact data pre and post mitigation for each of the 6 alternatives and any other alternatives. The public has received no notice of whether any of the 6 alternatives would emit, pre or post mitigation, more noise than any of the other alternatives. The public has been provided with an answer of “you can’t have that information”, regarding an issue that will impact the enjoyment of park land in Austin and in Rollingwood, along with the enjoyment of private property along Mopac. CTRMA has failed to provide the public with information that proves that CTRMA can meet the goal of “Be constructible without unnecessary impacts to the natural and human environment.”

In addition, CTRMA has failed to establish that all 6 of the alternatives would have the same traffic noise impact. CTRMA must evaluate the noise impact of *all* alternatives against no build, not just a recommended configuration against no build.

Furthermore, CTRMA has presented 6 alternatives, 3 of which include elevated lanes traveling along the eastern boundary of Rollingwood, as well as impacting Zilker Park. CTRMA has failed to establish that pre or post mitigation, the 3 alternatives with elevated lanes in the Cesar Chavez to Barton Skyway corridor would have the same traffic noise impact as the 3 alternatives without elevated lanes in this corridor.

It is deceptive for CTRMA to state: “The community will be engaged in next steps after the analysis is complete.” When CTRMA staff are asked to clarify what these “next steps” include, at multiple Open House meetings I have participated in during the previous Open House period and this Open House period, the public has been informed that only those residents closest to Mopac will have a vote on whether to implement noise mitigating measures. It is inaccurate and deceptive for CTRMA to state that “the community” will be engaged in next steps after the analysis is complete when there is a small selection of residents who may be able to participate in the process. In addition, when CTRMA staff are asked which properties would qualify for votes on noise mitigation options for the corridor between Lady Bird Lake and Bee Caves Road, the Zilker Club House has been designated as “the community” that would get a voice on noise mitigation measures for Mopac South – we have been told multiple times that no one in Rollingwood will get to vote on noise mitigation measures.

Since there is no guarantee to the communities adjacent to Mopac that any noise mitigation barriers will be implemented, at the next open house, CTRMA needs to provide the public with full noise analysis of pre and post mitigation noise impacts for each of the alternatives presented.

In addition, at the next open house, CTRMA needs to stop deceiving the public and identify who “the community” is that would actually have a vote on the use of noise mitigation barriers along Mopac South.

(2) The Mopac South Environmental Study needs to study and evaluate an alternative that includes 2 HOV lanes in each direction.

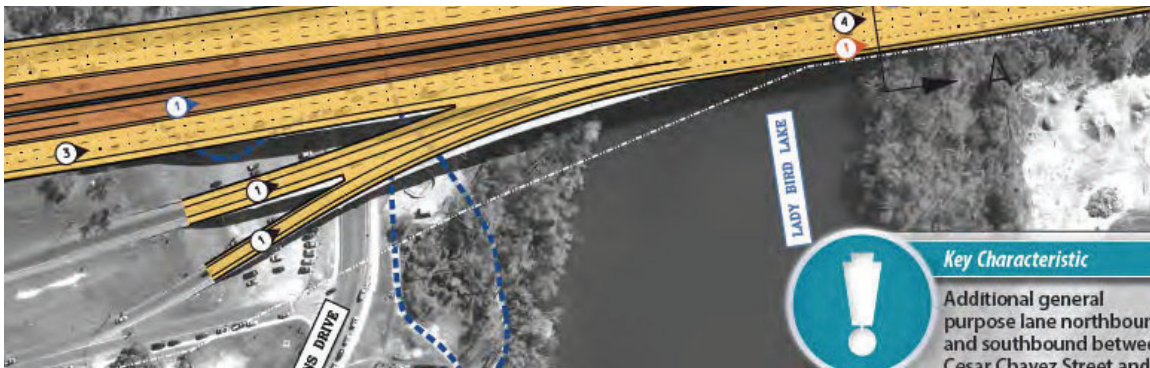
CTRMA staff appears to have initially compared the travel time estimates and impact of 1 HOV lane in each direction on Mopac South with 2 toll lanes in each direction on Mopac South. This is not an even or fair comparison of alternatives to toll lanes. An alternative with 2 HOV lane in each direction, optimized with TDM and TSM strategies, should be considered along with 2 toll lanes in each direction, optimized with the same or even TDM and TSM strategies.

(3) The Mopac South Environmental Study needs to present multiple alternatives without elevated lanes in the Cesar Chavez to Barton Skyway corridor that include TSM improvements to optimize travel times, such as improving the TSM for the 2 express lanes in each direction without direct connect.

As to the 2 lanes in each direction *without* direct connection alternative, CTRMA needs to update this alternative to include TSM improvements and other optimizations before comparing the 6 alternatives. The 2 express lanes in each direction without direct connection

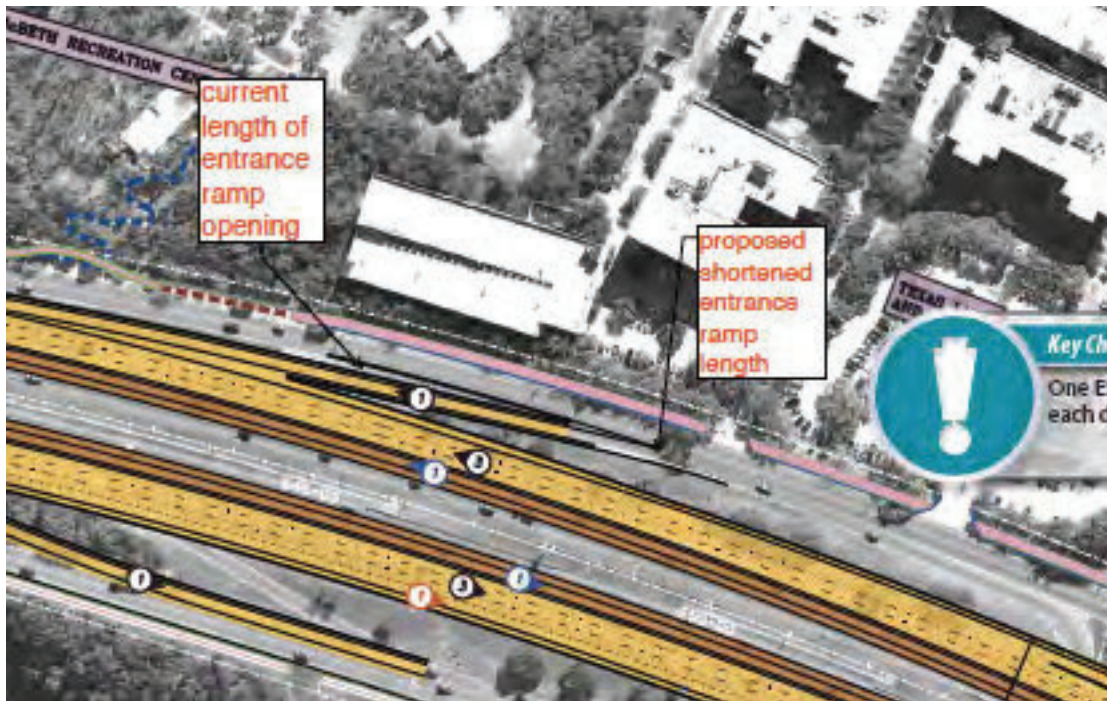
alternative is merely the 2 express lanes in each direction with direct connection, without any design adjustments that could improve the travel times *without* requiring elevated lanes. To fairly evaluate the 2 express lanes in each direction without direct connection alternative against other alternatives, it should be optimized to use the extra ROW space available because no elevated lanes are required.

For example, at the next open house, CTRMA needs to provide the public with the 2 express lanes in each direction without direct connection alternative, adjusted to include the TSM provided in the 2 lanes in each direction with elevated lanes near Barton Skyway. This TSM includes: (1) The 2 lanes in each direction with elevated lanes near Barton Skyway includes an extra general purpose lane on each side between Cesar Chavez and Bee Caves Road. These additional capacity lanes should be integrated into the 2 lanes in each direction without direct connection alternative to improve travel times for exited toll lane traffic and general traffic between Bee Caves Road and Cesar Chavez. (2) The 2 lanes in each direction with elevated lanes near Barton Skyway includes a separate lane for southbound inbound Cesar Chavez traffic from southbound inbound Lake Austin Blvd traffic (see map below). This configuration of 2 lanes removes a current known, significant bottleneck where inbound Lake Austin Blvd traffic and Cesar Chavez traffic merge before entering Mopac. Removing this bottleneck from the 2 lanes in each direction without direct connection alternative will improve travel times for southbound traffic between Cesar Chavez and Bee Caves Road.



(4) The Mopac South Environmental Study needs to present all alternatives with the Bee Caves northbound on-ramp entry length returned to the current length or longer.

5 of the alternatives presented propose shortening the entry length of the northbound on-ramp from Bee Caves Road. I have marked a cut out of the map for the 2 express lanes in each direction without direct connect to show the point where the on-ramp entry currently ends. In addition, I have marked the map to show the point where the on-ramp entry is proposed to end in the 5 alternatives. (see map below). In future presentations of alternatives, CTRMA needs to clearly show that the northbound on-ramp entry length is the same or longer than the current length. Any shortening of the entry length of this on-bound ramp will create a bottleneck for traffic flow on the frontage road, which will lead to additional traffic backup on Bee Caves Road. Please ensure that the alternatives do not remove existing access, capacity and infrastructure.

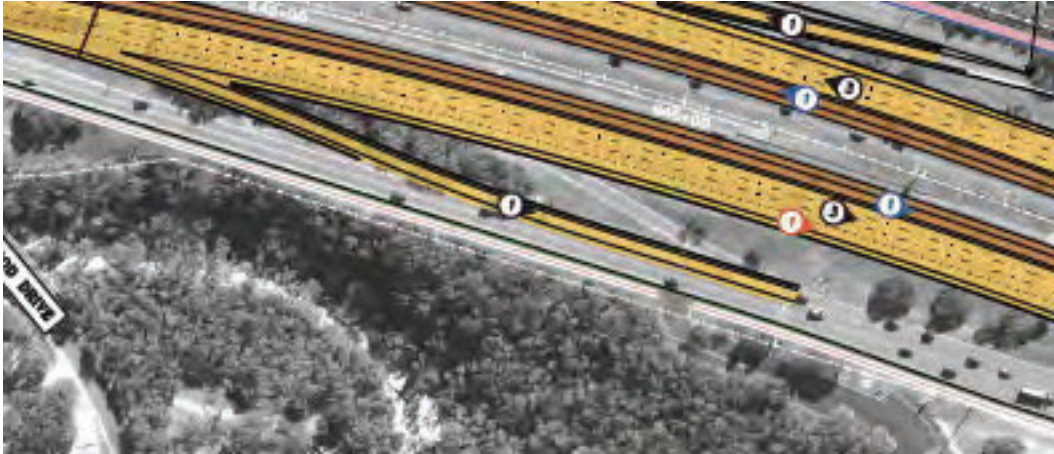


(5) The Mopac South Environmental Study needs to present a Topographical model and traffic simulation of the Proposed Bee Caves Southbound exit ramp.

5 of the alternatives propose adjusting the position of the exit ramp at Bee Caves road for southbound traffic (see map below). Currently, it is difficult to exit at Bee Caves/2244 and merge across all the lanes of traffic, to arrive at the westbound lane of Bee Caves Road. Backing up the exit ramp to provide extra space for merging may reduce this dangerous merging condition. In addition, the topography of the frontage road significantly contributes to the dangerous merging condition. Cars accelerate up the steep incline, which terminates with a sudden rise, and then levels out proximate to the driveway into Parks Hills church. The accelerating cars reach the rise and then intersect with cars exiting the ramp and attempting to merge across multiple lanes of traffic.

At the next Open House, CTRMA should present a topographical model of the proposed Bee Caves Southbound exit ramp for each of the alternative. Engineers for CTRMA have noted that different alternatives require different amounts of right of way, which impacts the design constraints for positioning and lengthening the Bee Caves Southbound exit ramp.

In addition, at the next Open House, CTRMA should provide a traffic simulation of the traffic merging into the frontage lane, showing where vehicles will enter the frontage road, using real modeling of the speeds at which vehicles travel up the steep incline and showing the inclines. Traffic modeling should show impacts at peak and non-peak hours.

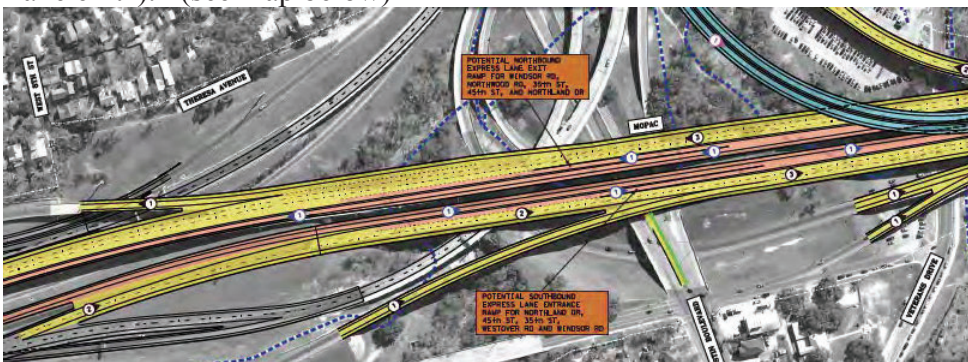


(6) The Mopac South Environmental Study needs to provide the public with consistently applied rationale, traffic studies, and other information to compare the use of inside lane toll road entrance/exits are used at some locations, but recommending elevated lanes at others.

All 6 alternatives offered by CTRMA for the Mopac South Project focus on moving traffic to and from a point on Cesar Chavez in front of Austin High School to and from a point by Slaughter Lane. CTRMA has prioritized moving toll lane traffic to and from a point well into Cesar Chavez, a downtown street that is not a highway or a bypass (or Mopac) in the shortest amounts of time. The Mopac South Environmental Study is tasked with developing toll roads on Mopac from the Cesar Chavez interchange (which also includes 5th street and Lake Austin Blvd connections) to the Slaughter Lane interchange. CTRMA, however, has myopically focused the project on putting toll road users onto Caesar Chavez itself, and has only provided travel time data reflecting the expected travel times in the toll and general lanes for the portion of traffic on Mopac that enters or exits Cesar Chavez.

There are many other toll road entrance/exit points along the Mopac South Project corridor that require toll lane traffic to merge in and out of an inside lane, and service multiple exits, rather than a single exit.

In all 6 alternatives, CTRMA has placed a toll road exit for northbound toll traffic at the top of the north side of the Lady Bird Lake bridge, before the Enfield exit (“the Enfield Toll Lane exit”). (see map below)



The Enfield Toll Lane exit is the only toll road exit point for all northbound toll road traffic needing to exit Mopac at the following exit points: Windsor Road, Northwood Road, 35th street, 45th street, and Northland Drive. **CTRMA has selected, as part of the Mopac South project, to place a single toll road exit point, from an inside lane, to service toll lane traffic exiting from 5 exit points on Mopac.**

CTRMA has not provided the public with any information indicating why a single, inside lane exit point is recommended for exiting traffic for 5 exits along Mopac before Enfield, but elevated lanes are recommended in 3 alternatives for exiting traffic for a single exit at Cesar Chavez.

CTRMA has failed to show that Cesar Chavez, in comparison with other exit points on Mopac, will receive an amount of traffic that justifies the cost and environmental impact of elevated lanes to move traffic into and off of Cesar Chavez alone with no or minimal time in general purpose lanes – in fact, CTRMA did a study with results claiming that the elevated lanes will not place any more traffic on Cesar Chavez than would be on Cesar Chavez under no build conditions. The study, using Dynamic Traffic Modeling, indicates that drivers will choose alternate routes into and out of downtown, to avoid the congestion on Cesar Chavez, and as a result, the elevated lanes will not place any more traffic on Cesar Chavez.

CTRMA has failed to provide the public with information as part of the Mopac South project showing what percentage of travelers on Mopac are predicted to use each of the Enfield Toll Lane exit, Cesar Chavez Toll Lane exit, or the Barton Skyway/Bee Caves toll lane exit. In the 3 alternatives that propose elevated toll lanes for Cesar Chavez toll lane exits, there is no supporting rationale or traffic volume study comparisons for these interchanges to support the use of elevated lanes to service a SINGLE Mopac exit point when the Enfield Toll Lane Exit uses an inner lane exit to service 5 Mopac exit points and the Bee Caves/Barton Skyway Exit also uses an inner lane exit to service 2 Mopac exit points. CTRMA has failed to identify any consistently applied engineering rationales, traffic volumes studies, or any other information, as the reasons for even studying the use of elevated lanes to service a SINGLE Mopac Exit when inner lane entrance/exits are recommended in other locations for servicing MULTIPLE Mopac Exits.

The length of the “on ramp” for the Enfield Toll Lane Exit is significantly shorter than any proposed on or off ramp proposal for the entrances and exits to the Northbound toll lane entrance and exit before Bee Caves Road. CTRMA has failed to provide any rationale, traffic studies, or any other information to support the design of the Enfield Toll Lane Exit as a very very short length inner lane “on ramp”, for serving 5 Mopac exits, to support the proposed 3 alternatives that include elevated lanes for serving 1 Mopac exit at Cesar Chavez, or to support the proposed longer inner lane entrance/exit for the Barton Skyway and Bee Caves northbound exits.

Elevated lanes are not the only way to improve travel times. CTRMA needs to provide the public with one or more alternatives without elevated toll lanes that apply TSM,

optimizations and consistent engineering rationale to the design and position of **ALL** toll road entrances and exits. **Until CTRMA presents the public with an alternative that requires no elevated lanes, but optimizes toll lane entrances/exits, it is impossible for there to be a fair comparison of an alternative without elevated toll lanes to an alternative with elevated toll lanes.**

(7) The Mopac South Environmental Study needs to remove or change the dangerous and bottlenecking inner lane toll road exit on northbound Mopac before the Enfield exit and assess the impact to travel times from the toll road exit on northbound Mopac before the Enfield exit.

Creating a new bottleneck in general purpose lanes

The Enfield Toll Lane exit is currently proposed at a point where northbound Mopac traffic is often congested during peak times in the morning *and afternoon*. CTRMA has failed to show how travel times will be impacted for the general traveling public and for toll lane users due to the merging of toll lane traffic (destined for 5 exits from Mopac) into general lanes at this existing congestion point during morning and afternoon peak hour traffic. Even without CTRMA providing this data, it is clear that the Enfield Toll Lane Exit will create a new bottleneck into the traffic flow on Mopac as cars merge out of the toll lane into already congested lanes. The impact of a new bottleneck in an already congested area during peak times is certain to back up traffic well into the bridge over Lady Bird Lake and farther beyond. Will CTRMA introduce the Enfield Toll Lane Exit as it is presented, only to create a new bottleneck in northbound Mopac traffic, in order to later justify adding an elevated direct connect from the toll lane to the Enfield exit itself?

Impact of Enfield Toll Lane exit on Mopac South travel times not assessed

Even if the point selected for the Enfield Toll Lane exit were not an existing congestion point during morning and afternoon peak hour traffic, CTRMA has failed to provide any expected travel times for vehicles entering the toll road at Slaughter, but not exiting at Cesar Chavez, and continuing over the river. CTRMA has myopically focused on predicting “reliable” travel times between Slaughter Lane for the percentage of traffic that enters or exists from Cesar Chavez, but failed to provide any expected travel times for toll or general lane travelers to travel from Slaughter Lane to any point that is *on Mopac*, such as this last north bound exit included in the Mopac South environmental study.

Creating a Deathtrap

To make matters even worse, CTRMA has positioned the Enfield Toll Lane Exit in such a manner that it is feasible for those exiting the toll lane, as the plan is currently presented, exit the toll lane and merge across traffic on Mopac to exit at Enfield Road. In speaking with engineers for CTRMA, I have been told that the distance between the Toll Lane exit and the Enfield Road Exit is not the required number of feet for the Enfield Toll Lane Exit to be a proper exit point for Enfield Road – be that as it may, drivers do not care whether a proper distance has been allowed for merging across to an exit – if there is an opening for drivers to exit from the toll lane and stop traffic to merge over to Enfield, attempts to merge across and exit will happen and it will create a chokehold in traffic. During peak periods, when the traffic is slower in this area, drivers will try to merge across 3 lanes of slow moving traffic that has limited visibility because

of the incline of Mopac. During non-peak periods, when the traffic is faster in this area, drivers will try to merge across 3 lanes of fast moving traffic, which will lead to deaths. To the extent that barriers may be put in place along the portion of the map that is a dotted line, this line should extend past the Enfield exit – not stop before it. Will CTRMA introduce the Enfield Toll Lane Exit as it is presented, only to create a new dangerous merging area for general northbound Mopac traffic, in order to later justify adding an elevated direct connect from the toll lane to the Enfield exit itself?

(8) The entire Mopac South Environmental Study (including, but not limited to, the project purpose, project goals and objections, project need, problems to be addressed, all underlying data and modeling, CSS, travel times, traffic modeling, and comparisons of alternatives) needs to be updated for all 6 alternatives, in addition to previously considered alternatives, to reflect the CAMPO 2040 plan.

CTRMA is only authorized by statute to build toll roads on Mopac between Cesar Chavez and Slaughter Lane in accordance with the CAMPO 2040 plan and “in all respects for the benefit of the people of the counties in which an authority operates and of the people of this state, for the increase of their commerce and prosperity, and for the improvement of their health, living conditions, and public safety.” (*see* Texas Transportation Code Chapter 370). The CAMPO 2040 plan is the active plan for the region. (*see* the CAMPO website, which states “the CAMPO 2035 plan is no longer the active long-range plan for the capital area” and “the CAMPO 2040 Regional Transportation Plan is the active long-range plan for the capital area.”)

Of note, the “Project Goals and Objectives” sheet available in the Mopac South Environmental Study Virtual Open House states, as a first goal: “Provide consistency with local and regional plans.”

The Mopac South Environmental Study is currently based on the CAMPO 2035 plan, which is not the active plan for the region. In addition, the Mopac South Environmental Study is currently based on the CAMPO 2035 plan, which only authorizes CTRMA to build one toll lane in each direction on Mopac South. CTRMA specifically withdrew the request to amend the CAMPO 2040 plan to include two toll lanes in each direction on Mopac. The CAMPO 2035 regional plan does not support an Environmental Impact Study of Mopac South that includes two toll lanes in each direction. The CAMPO 2035 plan, and its underlying data and models, generated based on the multitude of information provided throughout the entire CAMPO 2035 plan, cannot be used as the basis for elimination or selection of toll road alternatives that include more than one lane in each direction on Mopac South.

CTRMA spent 3 years holding meetings for the Mopac South Environmental Study with project purpose, goals and objections, need, problems to be addressed, traffic times, and traffic modeling all based on the CAMPO 2035 plan. The CAMPO 2035 plan is a regional planning document, focused on designing a plan for building *and interconnecting* roadways throughout multiple counties. The CAMPO 2035 plan provided for building *and interconnecting a single express lane* in each direction on Mopac South. The Regional Toll Network Analysis and the Traffic Demand Model incorporated into the CAMPO 2035 plan reflect planning for one express lane in each direction on Mopac South, as that one toll lane is interconnected within the region.

Despite the fact that the CAMPO 2040 plan is the active plan during the current open house, and despite the fact that the CAMPO 2035 plan fails to provide authority for CTRMA to study, design, or evaluate 2 express lanes in each direction, during the November 2015 Open House, CTRMA staff have continued to evaluate the travel times for each of the 6 alternatives (4 of which include 2 express lanes in each direction) based on the Traffic Demand Model provided by the CAMPO 2035 plan, modified by 2015 blue tooth data.

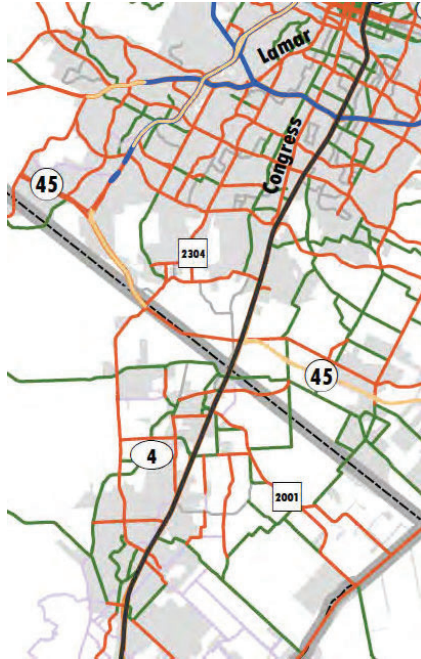
The CAMPO 2035 plan does not take into account Regional Toll Network Analysis and Traffic Demand Model based on the CAMPO 2040 plan. The Regional Toll Network Analysis and Traffic Demand Model for the CAMPO 2040 plan should take into account, in the demand on Mopac South, that 2 express lanes in each direction are allowed. According to CTRMA, one express lane in each direction is not a financially viable option for taking the Mopac South project out for bonding. If this is true, then it stands to reason that the Traffic Demand Model for 2 express lanes in each direction would differ from the Traffic Demand Model for 1 express lane in each direction in the CAMPO 2035 plan. In addition to financial viability, CTRMA has all but eliminated the option for one express lane in each direction on Mopac South by in comparison with two express lanes in each direction. There are differences in capacity, ability to handle emergencies, financial viability, and average travel times.

In addition, the CAMPO 2040 plan has a significant error, which should be corrected as CTRMA participates in evaluating the effects of the Mopac South toll road on the EJ community in accordance with NEPA. For the Regional Toll Network Analysis CTRMA is required to perform, as part of the NEPA analysis, to be accurate. Page 152, column 3 of the CAMPO 2040 plan under “Regional Toll Network Analysis” states “The interconnected network of existing and planned toll roads and express lanes form a regional toll network. Project sponsors evaluate the effects of the toll roads and express lanes on the EJ community for individual road projects in accordance with the National Environmental Policy Act (NEPA). CAMPO also evaluates the regional toll network for the effect of the total interconnected network on the EJ community. CAMPO will conduct the 2040 Plan Regional Toll Network Analysis (RTA) after the Transportation Policy Board adopts the 2040 Plan. CAMPO’s most recent RTA includes all planned and potential toll projects, except for the IH 35 express lanes.” This statement is not correct. CAMPO’s most recent RTA based on the 2035 plan only includes potential toll projects of one express lane in each direction on Mopac South. The CAMPO 2040 plan includes two express lanes in each direction on Mopac South. CTRMA has made assertions as to the significant differences in the effects of one toll lane in each direction and two toll lanes in each direction. The RTA based on the CAMPO 2040 plan should be updated to include potential toll projects of two express lanes in each direction on Mopac South.

In addition, the CAMPO 2040 plan reflects updates to the following maps and information, which impact the Mopac South Environmental Study:

- Pp. 28-33, including map 2: population growth and changes in population density from 2010 to 2040
- Pp. 33-35, including map 3: employment forecasts and changes in employment density from 2010 to 2040
- Pp. 35-36, including map 4: CAMPO centers in 2040

- P. 49, map 6: Road types in 2040, which include a combination of toll roads and arterial roads that connect Mopac South to I-35 through two different routes: (1) 45 (toll way from 2035 plan + new section of 45 connecting to I-35 in 2040 plan labeled as “arterial roadway”); and (2) 1626 through Buda. (see pull out of map 6 below)
- P 50-54: congestion characteristics in 2040, including AM and PM delays, including Mopac South and the roadways interconnected to Mopac South
- P 54-61: updates to public transportation, including the use of transit-related apps, and changes to bicycle and pedestrian facilities



Portion of Map 6 from the CAMPO 2040 plan showing arterial roads and toll roads connecting Mopac South from the south to I-35 2 different routes: 45 and 1626.

Specifically, the CAMPO 2040 plan, on p. 64, states, “the existing transportation system described previously [in pp. 1-63 of the CAMPO 2040 plan] is used to assess current traffic congestions. CAMPO generates a travel demand model using the current and forecast socioeconomic data and information about the transportation system and land use. CAMPO 2040 plan, page 63. The plan states: “the four-step travel demand model process is described in Figure 11. The model is calibrated to observe 2010 traffic counts. Once calibrated, the model is used to forecast future traffic conditions.”

Clearly, the CAMPO 2040 traffic demand model will be different from the CAMPO 2035 traffic demand model because of the litany of factors that are considered in generating the CAMPO 2040 traffic demand model and the plans for additional roadways within the region.

Further, the CAMPO 2040 plan includes additional issues that need to be evaluated as part of the study and evaluation of toll roads under the authority of the CAMPO 2040 plan and in compliance with NEPA:

- p. 131-133: freight corridors, freight movement, freight related improvements to the road system (with a list of improvements to be made including Loop 1 South from RM 2244-Cesar Chavez) and freight rail improvements;
- p. 133-135: environmental factors
- p. 135-141: air quality
- p. 141-142: energy conservation
- p. 142: water issues
- p. 143-148: climate change
- p. 148-152 : environmental justice
- p. 152-158 : regional toll network analysis
- p. 158-160 : emerging technologies

The entire Mopac South Environmental Study needs to be reevaluated and reset, in writing, to reflect the CAMPO 2040 plan. The difference between the CAMPO 2035 plan and CAMPO 2040 plan is not merely a change in language from “one express lane in each direction” to “two express lanes in each direction”. As noted above, there are multiple differences between the CAMPO 2035 and CAMPO 2040 that significantly impact the underlying data used to support the Mopac Environmental Impact Study. It is insufficient for CTRMA to select one alternative and then update that alternative to reflect the CAMPO 2040 plan. Each of the 6 alternatives, or any additional alternatives, should be updated to reflect the CAMPO 2040 plan and represented to the public for comment.

(9) The Mopac South Environmental Study needs to provide improved designs for the Bee Caves Road/Mopac intersection, or provide a written rationale for why improvements to the Bee Caves Road/Mopac intersection are not a part of the Study.

During the last comment period, the City of Rollingwood and its residents requested, in multiple forums, that the Bee Caves Road/Mopac interchange be separately evaluated and redesigned to improve efficiency as part of the Mopac South Environmental Study. CTRMA is performing Intersection Environmental Studies for the intersections at Slaughter Lane and LaCrosse Avenue. The problem statement for the studies of these intersections indicates that these intersections “were originally constructed in 1992 and have grown increasingly congested over the years. Traffic congestion at these intersections is causing travel delays and adversely affecting access and mobility.” In the “Proposed Action, Purpose and Need Statement” released in June 2015 for the Intersection Environmental Studies, Table 1 indicates that the Bee Caves Road intersection was completed in 1982, by a decade pre-dating the Slaughter Lane and La Crosse avenue intersections. The demand on Bee Caves Road is also known to have significantly increased since the intersection was built in 1982.

At the October 2015 Rollingwood City Council Meeting, Assistant Executive Director Mario Espinoza addressed the Rollingwood City Council. One of the first things he shared is that the Bee Caves intersection would not be considered for improvement as part of the Mopac South Environmental Study.

Please consider adding the Bee Caves road interchange, which is a gateway to Bee Caves Road and Barton Springs, to be improved as part of the Mopac South Environmental Study. If

CTRMA continues to decline this request, please provide the public with a written rationale for the Bee Caves intersection not being updated and improved as part of the Mopac South Intersections Study or Mopac South Environmental Study. Of note, in the “Proposed Action, Purpose and Need Statement” released in June 2015 for the Intersection Environmental Studies, Table 2 on page 6 provides data about the amount of delay per vehicle and number of vehicles using the Slaughter and La Crosse interchanges at peak times. In your rationale, please provide similar traffic analysis regarding the amount of delay per vehicle and number of vehicles using Bee Caves interchange at peak times and explain why improvements are not recommended for this interchange.

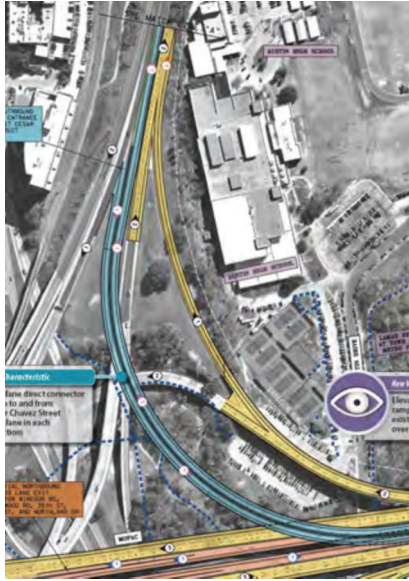
In addition, please consider that the expansion of Bee Caves Road to include a center turn lane and bike and pedestrian facilities is already underway to support the predicted increase in traffic volumes on Bee Caves Road.

At some point, the Bee Caves Road infrastructure of 1982 will need to be updated. If CTRMA is going to dig up the entire interchange at Bee Caves and Mopac to add toll lanes across the intersection, but not actually improve the intersection in any way, please, at the least, do not add elevated lanes over the Bee Caves Road exit that would add any infrastructure that would reduce or remove options for future improvement of the interchange.

(10) The Mopac South Environmental Study needs to provide travel times for the general traveling public and toll lane users between a point on Mopac itself near Cesar Chavez to a point on Mopac itself near Slaughter Lane, along with providing northbound afternoon travel times, to provide travel time information for the majority of the traveling public not exiting or entering at Cesar Chavez.

During the November Open House meeting at Hill Country Middle School, I asked the CTRMA staff and contractor who provided the travel time estimates for CTRMA, what specific points on the map were selected for the travel time estimates. I asked this question to clarify whether the travel times estimated to and from Cesar Chavez were based on the point at which toll road users enter or exit the toll road, which would vary among the alternatives, or whether they were based on a particular point on or near Cesar Chavez.

The CTRMA travel time estimator (and since then additional staff) stated that the point on Cesar Chavez that was used for the travel time estimates for all 6 alternatives is the point ½ miles in on Cesar Chavez where traffic lets out (for Northbound) or enters the toll road (for South bound) in front of Austin High on Cesar Chavez in the 2 express lanes in each direction with direct connect alternative (portion of 2 express lanes in each direction with direct connect shown in map below).



The CTRMA staff has only provided travel time estimates for northbound average travel times for those drivers who enter Mopac at Slaughter Lane, use the general purposes or toll lane, and *then exit Cesar Chavez*. The CTRMA staff has only provided travel time estimates for southbound average travel times for those drivers who enter Mopac *from Cesar Chavez*, not Mopac itself, and use general purpose or toll lanes.

In addition, the northbound travel times provided are only for am traffic and the southbound travel times provided are only for pm traffic. One glance at Google maps in the afternoon and it is clear there are unique and significant traffic congestion issues for northbound traffic on Mopac that exits Cesar Chavez and that remains on Mopac over the Cesar Chavez interchange. Peak northbound travel times should be provided.

CTRMA staff has failed to provide any travel time estimates for travel between two points *on Mopac itself*. The public has not been provided with sufficient or reliable information about the differences in travel times for the majority of traffic on Mopac that does not exit Cesar Chavez, to reach different portions of Mopac.

CTRMA staff have myopically focused on travel time estimates for only the percentage of travelers who use Cesar Chavez as an exit or entrance to Mopac, which is only 11% of Northbound Mopac travelers and 9.3% of Southbound Mopac travelers (according to the 2015 projections from the Mopac North EA).

According to the traffic data provided in Appendix N of the Environmental Assessment for the Mopac North Project, 2015 projected data for northbound traffic on Mopac, of the 86800 daily drivers reaching the Cesar Chaves/5th street exit, 63500 (74%) continue on Mopac North, without exiting, and 23300 exit. Of those exiting at Cesar Chavez/5th, only 13800 (15%) fork to the right and take the Cesar Chavez exit; the remaining 9500 (11%) take the 5th street exit.

According to the traffic data provided in Appendix N of the Environmental Assessment for the Mopac North Project, 2015 projected data for Southbound traffic on Mopac, of the 86800 daily drivers on Mopac at the point where Cesar Chavez and Lake Austin Blvd entrances connect with Mopac South, only 8100 (9.3%) of these cars arrive from the Cesar Chavez ramp.

Based on 2015 numbers, which were used in the Mopac North EA, CTRMA staff has only estimated travel times for an estimated 15% of the traveling public northbound and 9% of the traveling public southbound.

For the public to compare the travel time impact of each of the 6 alternatives, and other alternatives, CTRMA needs to provide travel time estimates between points actually on Mopac itself. In particular, for northbound travel time estimates, CTRMA needs to provide the public with travel time estimates for general and toll lane users between the north most point of the Mopac Environmental Study. For northbound and southbound traffic this point is north of the exit at Enfield.

In addition, for the public to compare the travel time impact of each of the 6 alternatives, and other alternatives, CTRMA needs to provide travel time estimates for the segments of the Mopac Improvement project where there are differences in each of the projects. For example, CTRMA needs to provide travel time estimates between 360 and Cesar Chavez and between 360 and the north most points of the Mopac South Environmental study for each of the 6 alternatives. For the public to compare the differences in impacts between the different alternatives, the public needs to be provided with sufficient and reliable (unrounded) data estimated travel times for the segments of alternatives that are different.

Of note, at the Open House at Hill Country Middle School, I was told, by CTRMA staff, that the reason that the travel times for toll lanes users of the 2 elevated lanes in each direction with direct connect and the 2 elevated lanes in each direction with elevated lanes near Barton Skyway are both “9 minutes” each way, is that the numbers are rounded. I asked how the southbound toll traffic estimates, in particular, for these two plans could be within 30 seconds of one another. I was told that it could be that the graphic designer put in the wrong numbers. I have since been shown the unrounded numbers and I still question their accuracy based on what I know about the current traffic issues for southbound traffic between the Cesar Chavez interchange and the Bee Caves interchange, during peak afternoon traffic.

Of note, the “Project Goals and Objectives” sheet available in the Mopac South Environmental Study Virtual Open House states, as a second goal: Reduce congestion delay and provide travel time savings for all roadway users. Currently, CTRMA staff has only provided that that allows the public to evaluate congestion delay and potential travel time savings for 9-15% of the total roadways users each direction. This is insufficient.

WELCOME

Please sign in and:

- Explore the exhibits
- Submit a comment form
- Fill out a community survey
- Ask questions



HOW TO SUBMIT COMMENTS

Today at the Open House:



Give comments verbally to the court reporter



Fill out a comment form

Electronic Method:



Go to the website: ***www.MoPacSouth.com***



Send a fax to 512-996-9784

Mail:



Central Texas Regional Mobility Authority

c/o MoPac South Environmental Study

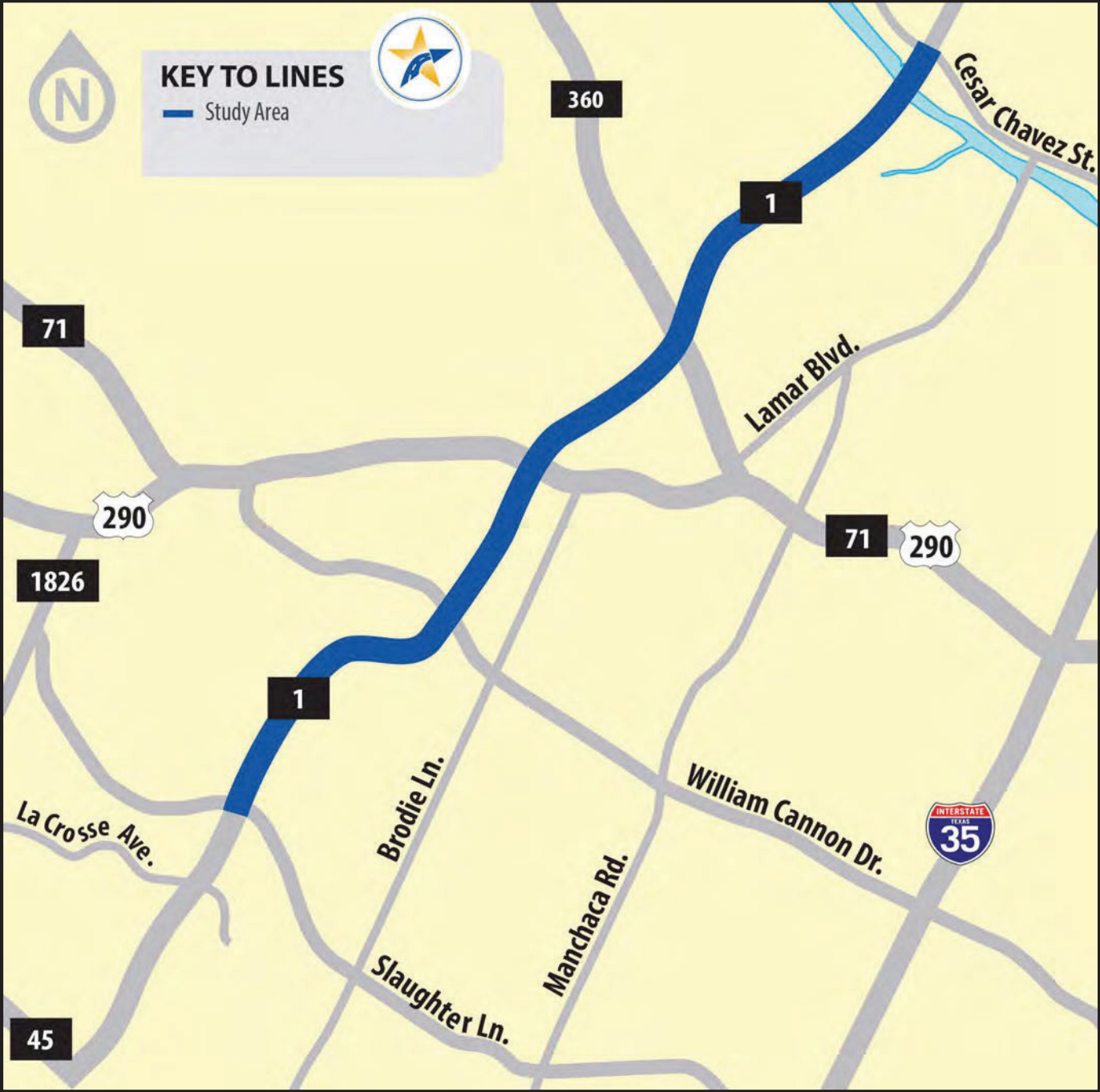
3300 North I-35, Suite 300

Austin, Texas 78705

All comments must be received by **November 20, 2015**
to be part of the official record of the Open House.



STUDY LOCATION



ANTICIPATED TIMELINE



PURPOSE OF THE OPEN HOUSE

- Learn more about the MoPac South Environmental Study
- Review and provide input on operational configurations for the Express Lanes Alternative

The Mobility Authority responded to the community's call for more analysis of the Express Lanes Alternative and extended the project schedule to look at additional operational configurations and conduct more detailed analyses.



COMMUNITY INPUT WAS INCORPORATED

- Added a direct connection at US 290 – *City of Austin*
- Added a new collector-distributor road at Loop 360 – *City of Austin*
- Shifted direct connection touchdown farther east on Cesar Chavez Street – *Austin ISD*
- Added a Texas Turnaround at Barton Skyway – *City of Rollingwood*
- Lengthened the Texas Turnaround at Loop 360 to increase capacity – *Stakeholder Comment*
- Reconfigured RM 2244 southbound exit ramp – *City of Rollingwood and Stakeholder Comment*
- Made ramp improvements at William Cannon Drive – *Stakeholder Comment*
- Added a third southbound general purpose lane south of William Cannon Drive – *Stakeholder Comment*
- Incorporated improvements at Lake Austin Boulevard – *Travis County*
- Added more Bike/Pedestrian facilities north of RM 2244 – *City of Rollingwood*



PUBLIC & AGENCY OUTREACH ACTIVITIES TO DATE

- 1 Agency Scoping Meeting
 - October 29, 2013
- 3 Open Houses
 - November 7, 2013
 - April 29, 2014
 - February 26, 2015
- 3 Virtual Open Houses
- 387 official comments
- 4 Technical Work Group Meetings
 - April 16, 2014
 - December 3, 2014
 - February 17, 2015
 - October 16, 2015
- 2 Community Workshops
 - October 22, 2015
 - November 5, 2015
- 62 Stakeholder Meetings



AGENCIES & THEIR ROLES IN THE ENVIRONMENTAL PROCESS

Who They Are	What They Do
<p>Decision Making Agency TxDOT Environmental Division</p>	<ul style="list-style-type: none"> Review and approve the Environmental Assessment and technical reports
<p>Lead Agencies Central Texas Regional Mobility Authority TxDOT Austin District</p>	<ul style="list-style-type: none"> Manage environmental and engineering process Provide technical review and guidance
<p>National Environmental Policy Act Technical Work Group</p> <ul style="list-style-type: none"> U.S. Army Corps of Engineers Texas Historical Commission Texas Parks and Wildlife Department Barton Springs Edwards Aquifer Conservation District Capital Area Metropolitan Planning Organization* Capital Metro City of Austin City of Rollingwood City of West Lake Hills <p>Invited:</p> <ul style="list-style-type: none"> U.S. Fish and Wildlife Service U.S. Department of Agriculture <ul style="list-style-type: none"> Natural Resources Conservation Service U.S. Department of Interior <ul style="list-style-type: none"> Office of Environmental Policy and Compliance U.S. Environmental Protection Agency Texas Commission on Environmental Quality Lower Colorado River Authority Travis County City of Sunset Valley LBJ Wildflower Center 	<ul style="list-style-type: none"> Provide input on the: Purpose and Need for the project; screening and development of alternatives; methodologies to define impacts; and identification of the preferred alternative. Review the draft and final EA

● Agencies that provide potential permits and other approvals for this project.

* Capital Area Metropolitan Planning Organization prepares the Long-Range Transportation Plan that identifies potential projects and allocates state and federal funding for both environmental studies and construction projects.



WHAT ARE WE TRYING TO DO? (PROJECT PURPOSE)

- Provide an opportunity for reliable travel times
- Improve operational efficiency
- Create a dependable and consistent route for transit
- Facilitate reliable emergency response

85% of respondents agree or strongly agree that the Draft Purpose and Need for this project are appropriate.

Source: Community Survey, spring 2014



MoPac South
ENVIRONMENTAL STUDY

PROJECT GOALS AND OBJECTIVES

- Provide consistency with local and regional plans
- Reduce congestion delay and provide travel time savings for all roadway users
- Be constructible without unnecessary impacts to the natural and human environment*
- Avoid and minimize impacts to water quality*
- Deliver relief in a timely manner*
- Facilitate congestion management*
 - Increase opportunities for transit and ridesharing
 - Increase opportunities for pedestrians and bicyclists









**Major theme identified through public input provided via fall 2013 and spring 2014 Community Surveys.*



MoPac South
ENVIRONMENTAL STUDY

WHAT PROBLEMS NEED TO BE ADDRESSED? (PROJECT NEED)

- Current and forecasted congestion levels are creating unreliable travel times
- Under the No Build Alternative (Do Nothing), it could take an **additional 35 minutes** to drive from Cesar Chavez Street to Slaughter Lane in 2035

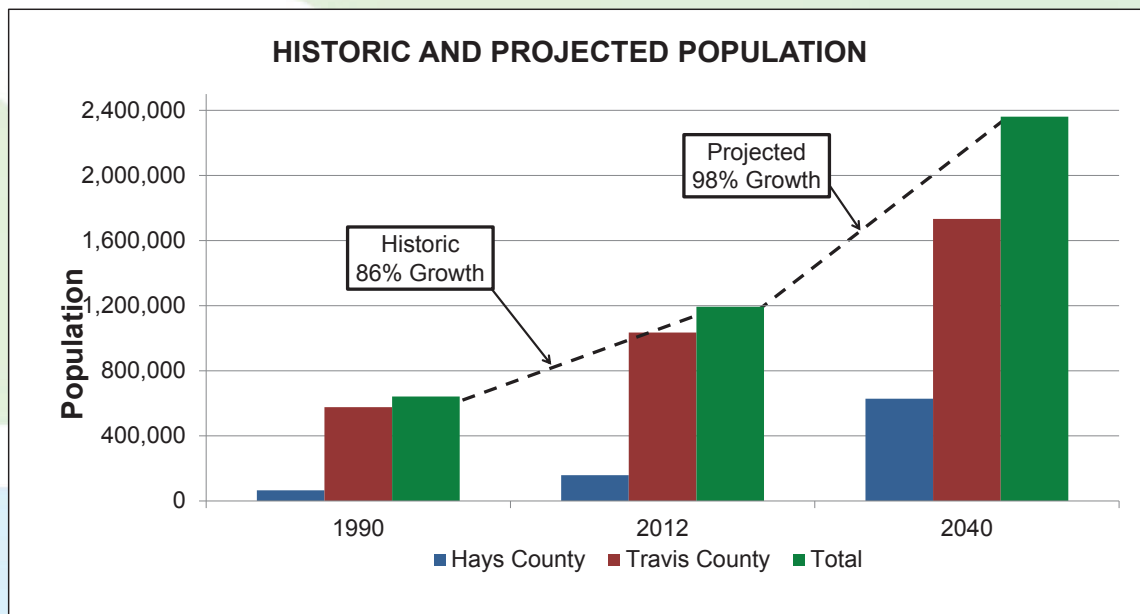
TRAVEL TIME (IN MINUTES) between Cesar Chavez Street and Slaughter Lane			
	2015	2035 (NO BUILD)	ADDITIONAL TRAVEL TIME
 Northbound			+29
 Southbound			+35
 Morning peak period northbound (7-9 a.m.)		 Evening peak period southbound (4-6:30 p.m.)	
Source: CDM-Smith 2015 using Bluetooth data			

- Emergency response times are impacted by traffic congestion

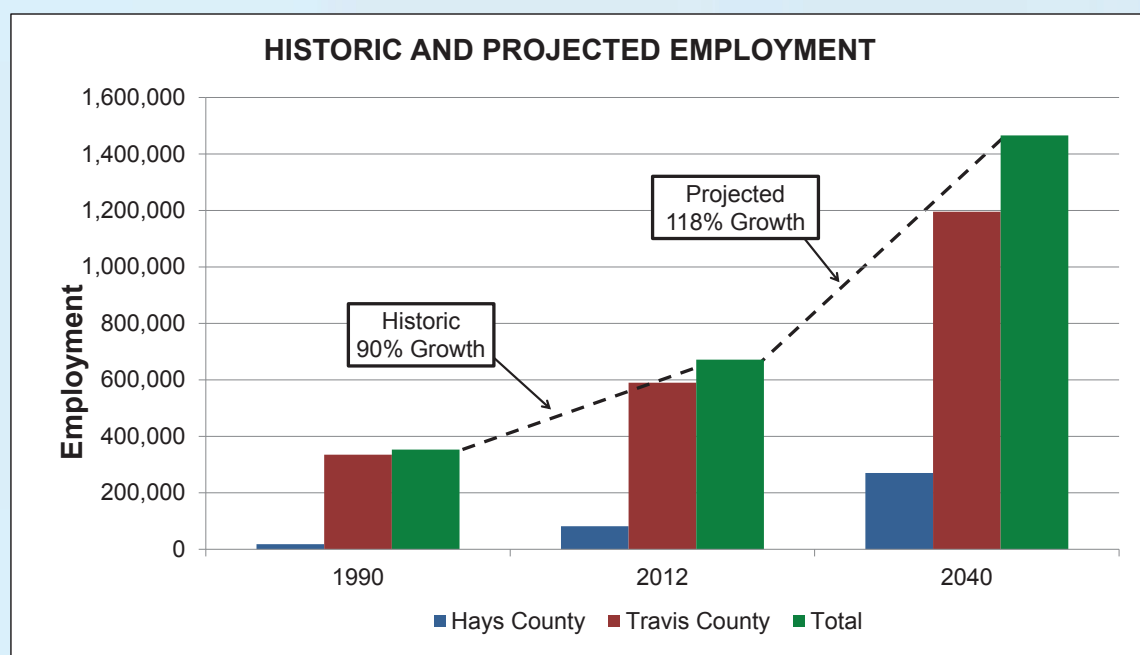


WHAT PROBLEMS NEED TO BE ADDRESSED? (PROJECT NEED)

Forecasted population and employment growth in Travis and Hays counties



Source: U.S. Census Bureau: 1990 Census & 2008-2011 American Community Survey; CAMPO 2040 Forecast



Source: U.S. Census Bureau: 1990 Census & 2008-2011 American Community Survey; CAMPO 2040 Forecast



EXPRESS LANES

EXPRESS LANES ALTERNATIVE is recommended for the following reasons:

- Offers reliable travel times for single occupancy vehicles, high occupancy vehicles, vanpools, buses and emergency vehicles
- Provides the shortest peak period travel time for all vehicles, including those using the general purpose lanes
- Configurations with two Express Lanes in each direction and a downtown direct connection reduce annual delay by over 3.5 million vehicle hours of travel; twice that of the HOV Lane Alternative and 15 times more than the Transit Only Lane Alternative. Configurations with one Express Lane in each direction or no downtown direct connection reduce annual delay by over 2.5 million vehicle hours of travel; 50% more than the HOV Lane Alternative and 10 times as much as the Transit Only Lane Alternative.
- Avoids unnecessary impacts to the natural and human environment, and avoids and minimizes impacts to water quality
- Delivers relief in a timely manner
- Increases opportunities for transit and ridesharing and includes new bicycle and pedestrian facilities

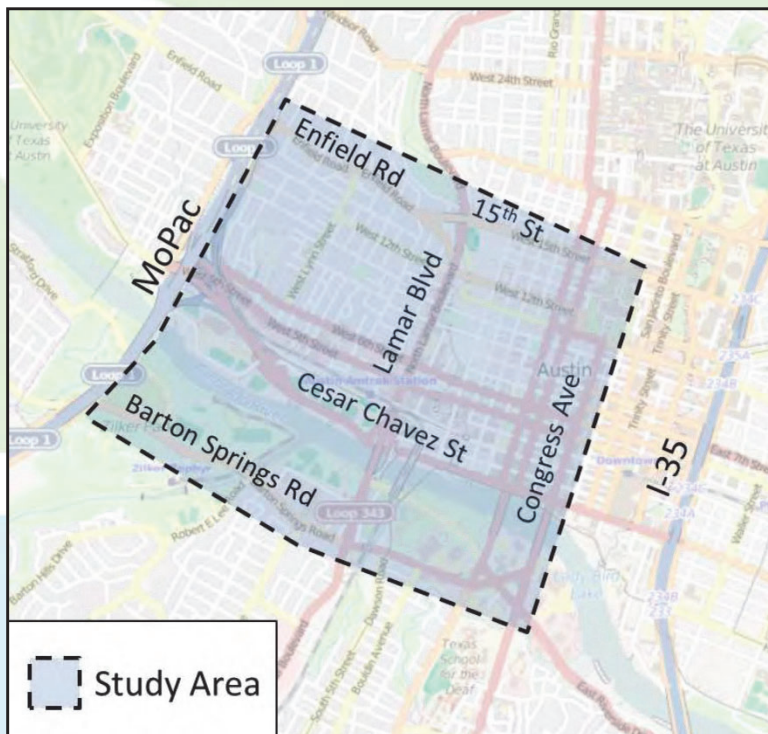
In accordance with the National Environmental Policy Act, the No Build (Do Nothing) Alternative will continue to move forward as a baseline for comparison.



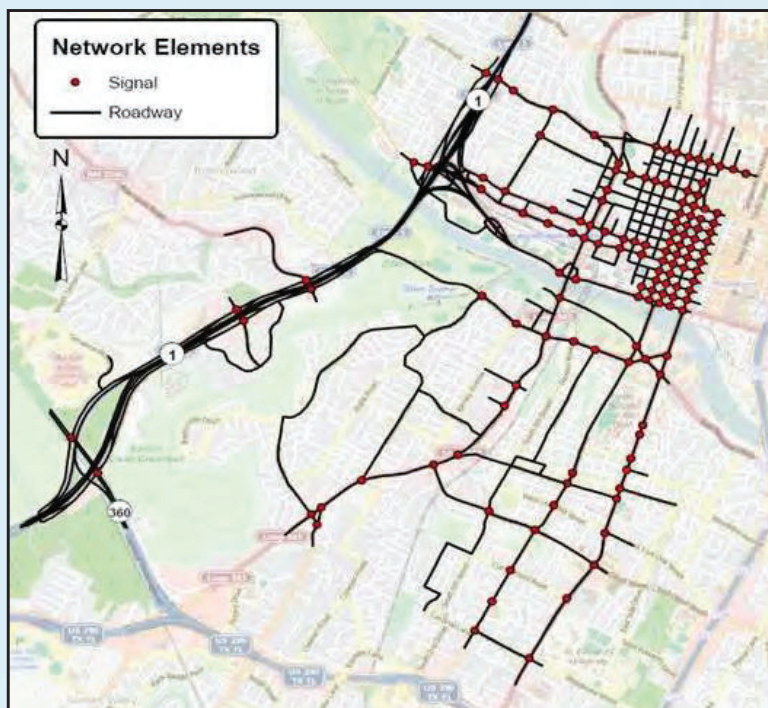
MoPac South
ENVIRONMENTAL STUDY

DYNAMIC TRAFFIC ASSIGNMENT STUDY

University of Texas' Center for Transportation Research analyzed how the addition of Express Lanes might impact traffic patterns on downtown streets.



Downtown study area: Street-level travel time evaluations were conducted on the major streets in this zone.

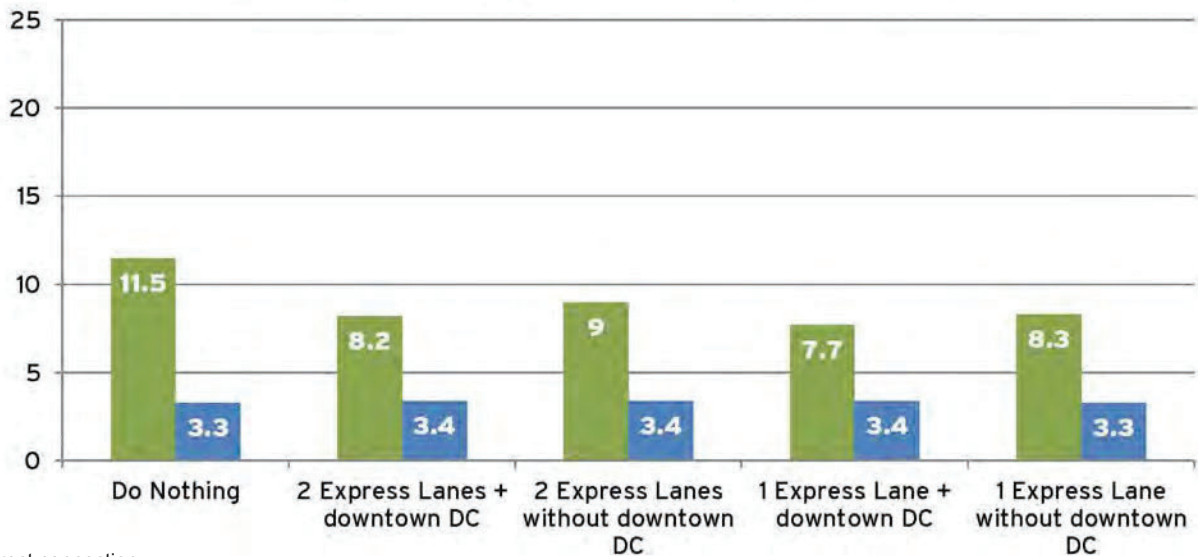


Model area: To properly analyze the impacts of the MoPac South Express Lanes on the study area, the limits of the model area extend beyond the Study Area boundaries.



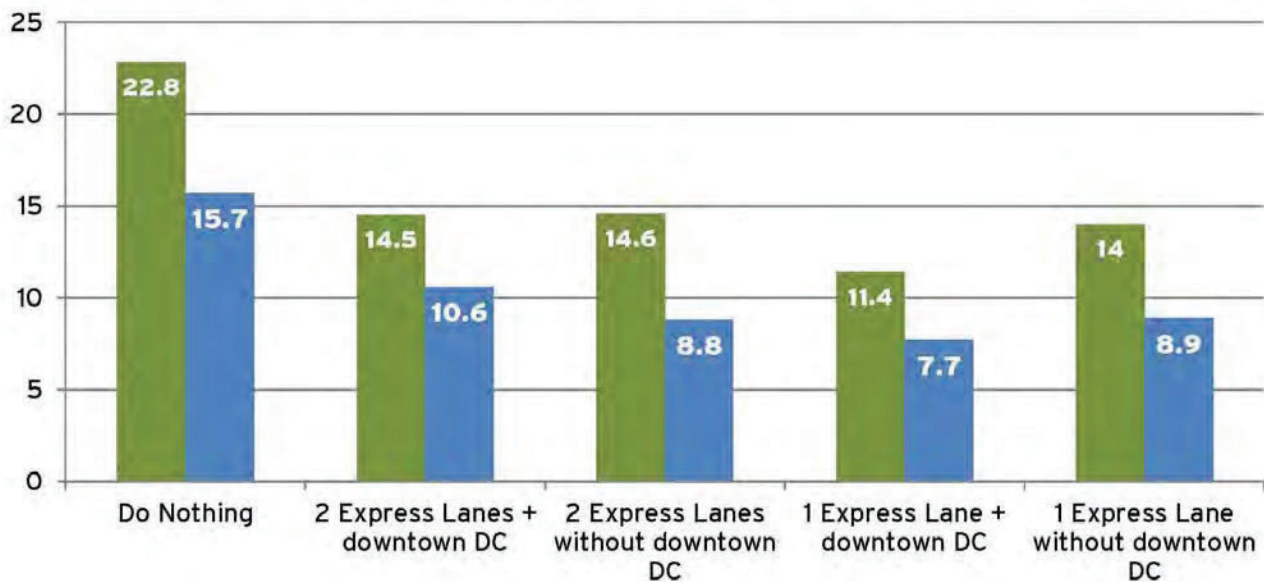
DYNAMIC TRAFFIC ASSIGNMENT STUDY RESULTS

2020 AVERAGE MORNING PEAK PERIOD TRAVEL TIMES (IN MINUTES)



DC = direct connection

2020 AVERAGE AFTERNOON PEAK PERIOD TRAVEL TIMES (IN MINUTES)

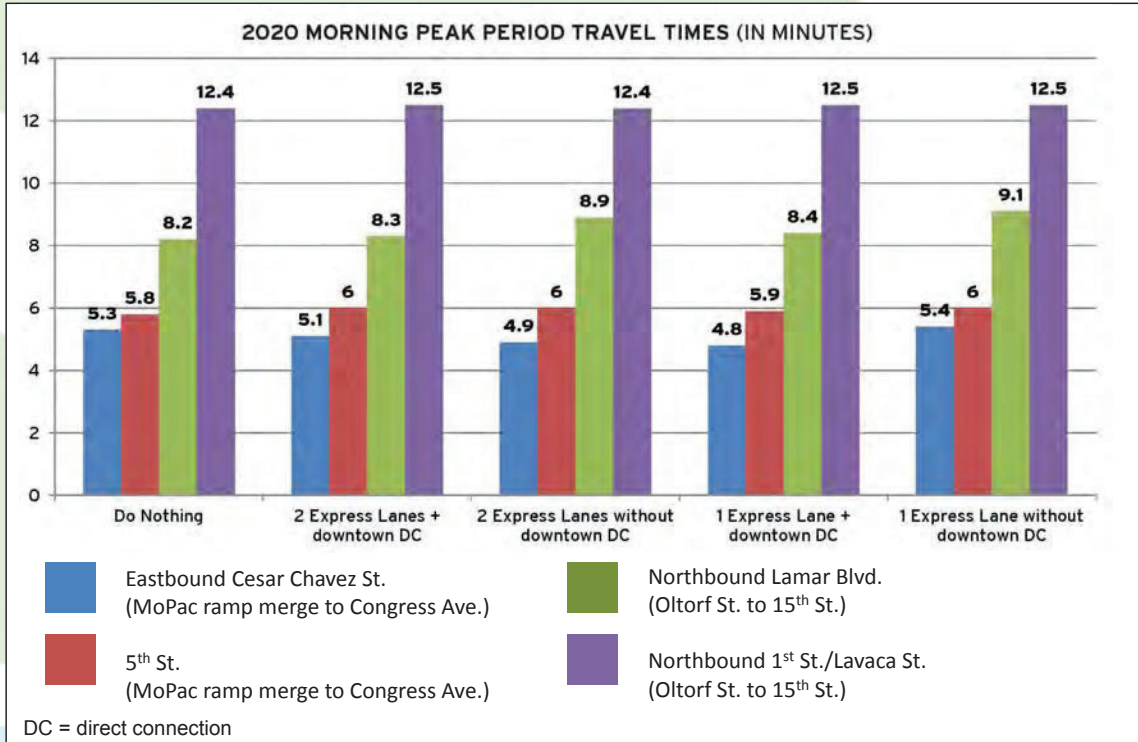


DC = direct connection

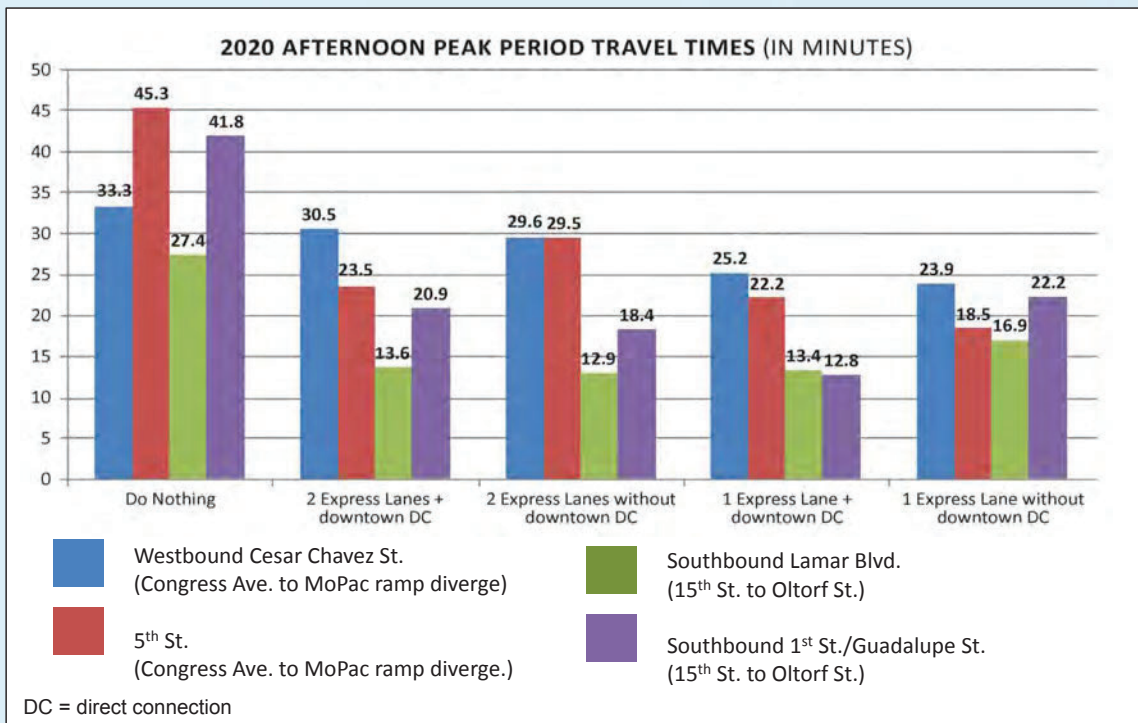
- Model Area
- Downtown Study Area



DYNAMIC TRAFFIC ASSIGNMENT STUDY RESULTS



Modeled configurations present travel times on all routes within one minute of the No Build (Do Nothing) Alternative.



Modeled configurations would result in lower peak period travel times when compared to the No Build (Do Nothing) Alternative.



WHICH OPERATIONAL CONFIGURATION WILL MOVE FORWARD?

The following goals and objectives will be used to further develop and evaluate the Express Lanes Alternative:

- Reduce congestion delay and provide travel time savings for all roadway users
 - Reduce congestion delay and optimize capacity utilization
 - Maximize travel time savings
 - Serve all roadway users
- Be constructible without unnecessary impacts to the natural and human environment
- Facilitate congestion management
 - Increase opportunities for transit and ridesharing



OPERATIONAL CONFIGURATIONS

**ONE EXPRESS LANE +
DOWNTOWN DIRECT CONNECTION**

**ONE EXPRESS LANE WITHOUT
DOWNTOWN DIRECT CONNECTION**

**TWO EXPRESS LANES +
DOWNTOWN DIRECT CONNECTION**

**TWO EXPRESS LANES WITHOUT
DOWNTOWN DIRECT CONNECTION**

**TWO EXPRESS LANES + ELEVATED
RAMPS NEAR BARTON SKYWAY**

CITY OF AUSTIN PROPOSAL



ONE EXPRESS LANE + DOWNTOWN DIRECT CONNECTION

- **Number of Express Lanes in Each Direction:** One
- **Access to Downtown:** One-lane, elevated direct connect ramp in each direction, to and from Cesar Chavez Street
- **New Elevated Structure:** One northbound and one southbound ramp near Cesar Chavez Street (approximately 30 feet above existing pavement; lower than two existing structures in the intersection)



2035 Travel Time

TRAVEL TIMES (peak period in minutes) between Cesar Chavez Street and Slaughter Lane		
	A.M. (Northbound)	P.M. (Southbound)
Today	23	16
2035 No Build	52	51
2035 General Purpose Lanes	38	36
2035 Express Lanes	10	10
Morning peak period northbound (7-9 a.m.)		Evening peak period southbound (4-6:30 p.m.)



Estimated Additional Right-of-Way

- *From Zilker Park* **none**
- *From Lady Bird Lake* **none**
- *From Lamar Beach Park (along Cesar Chavez Street)* **1.0 acre**

Conversion of park land to transportation use would require approval by the City of Austin.

- *From commercial property (for Shared Use Path)* **0.02 acres**

Total additional right-of-way 1.02 acres



Construction Cost Estimate: \$315 M*

* Does not include final design, right-of-way acquisition, utility adjustments and other project development costs.



ONE EXPRESS LANE WITHOUT DOWNTOWN DIRECT CONNECTION

- **Number of Express Lanes in Each Direction:** One
- **Access to Downtown (Northbound):** Exit Express Lanes south of Barton Skyway into left-most general purpose lane and weave across three lanes to access existing Cesar Chavez Street exit
- **Access from Downtown (Southbound):** Enter general purpose lanes using existing Lake Austin Boulevard entrance ramp and weave across three lanes to access Express Lane south of Barton Skyway
- **New Elevated Structure:** None



2035 Travel Time

TRAVEL TIMES (peak period in minutes) between Cesar Chavez Street and Slaughter Lane		
	A.M. (Northbound)	P.M. (Southbound)
Today	23	16
2035 No Build	52	51
2035 General Purpose Lanes	40	42
2035 Express Lanes	14	20

Morning peak period northbound (7-9 a.m.) Evening peak period southbound (4-6:30 p.m.)



Estimated Additional Right-of-Way

- *From Zilker Park* **none**
 - *From Lady Bird Lake* **none**
 - *From Lamar Beach Park* **none**
 - *From commercial property (for Shared Use Path)* **0.02 acres**
- | | |
|--------------------------------------|-------------------|
| Total additional right-of-way | 0.02 acres |
|--------------------------------------|-------------------|



Construction Cost Estimate: \$275 M*

* Does not include final design, right-of-way acquisition, utility adjustments and other project development costs.



BENEFITS OF PROVIDING TWO EXPRESS LANES IN EACH DIRECTION

There is sufficient right-of-way to add two Express Lanes in each direction along MoPac South. While adding one Express Lane would significantly improve mobility, adding two Express Lanes would better meet the Purpose and Need of the project of providing reliable travel times for vehicles, transit and emergency responders.

- More than double the number of vehicles would be able to move through the Express Lanes if two lanes in each direction are provided instead of one. (*FHWA 2003*)
- Building two Express Lanes would increase the cost of the project by less than 10%. Costs would be significantly higher to construct a second Express Lane in the future.
- A second Express Lane would require an additional 24 feet of pavement. This would not significantly change the environmental impacts of the project.
- The corridor would be disturbed again if a second Express Lane is constructed in the future, impacting the environment, traffic flow and neighboring homes and businesses.
- With two Express Lanes, toll rates would be lower because more vehicles would be able to use them.
- Facilities with two Express Lanes in each direction allow for more efficient and safer incident management.



TWO EXPRESS LANES + DOWNTOWN DIRECT CONNECTION

- **Number of Express Lanes in Each Direction:** Two
- **Access to Downtown:** One-lane, elevated direct connect ramp in each direction, to and from Cesar Chavez Street
- **New Elevated Structure:** One northbound and one southbound ramp near Cesar Chavez Street. (approximately 30 feet above existing pavement; lower than two existing structures in the intersection)



2035 Travel Time

TRAVEL TIMES (peak period in minutes) between Cesar Chavez Street and Slaughter Lane		
	A.M. (Northbound)	P.M. (Southbound)
Today	23	16
2035 No Build	52	51
2035 General Purpose Lanes	32	29
2035 Express Lanes	9	9

Morning peak period northbound (7-9 a.m.) Evening peak period southbound (4-6:30 p.m.)



Estimated Additional Right-of-Way

- From Zilker Park **none**
- From Lady Bird Lake **none**
- From Lamar Beach Park (along Cesar Chavez Street) **1 acre**

Conversion of park land to transportation use would require approval by the City of Austin.

- From commercial property (for Shared Use Path) **0.02 acres**

Total additional right-of-way	1.02 acres
--------------------------------------	-------------------



Construction Cost Estimate: \$350 M*

** Does not include final design, right-of-way acquisition, utility adjustments and other project development costs.*



MOPAC SOUTH
ENVIRONMENTAL STUDY

TWO EXPRESS LANES WITHOUT DOWNTOWN DIRECT CONNECTION

- **Number of Express Lanes in Each Direction:** Two
- **Access to Downtown (Northbound):** Exit Express Lanes south of Barton Skyway into left-most general purpose lane and weave across three lanes to access existing Cesar Chavez Street exit
- **Access from Downtown (Southbound):** Enter general purpose lanes using existing Lake Austin Boulevard entrance ramp and weave across three lanes to access Express Lane south of Barton Skyway
- **New Elevated Structure:** None



2035 Travel Time

TRAVEL TIMES (peak period in minutes) between Cesar Chavez Street and Slaughter Lane		
	A.M. (Northbound)	P.M. (Southbound)
Today	23	16
2035 No Build	52	51
2035 General Purpose Lanes	35	36
2035 Express Lanes	13	18

Morning peak period northbound (7-9 a.m.) Evening peak period southbound (4-6:30 p.m.)



Estimated Additional Right-of-Way

- *From Zilker Park* **none**
- *From Lady Bird Lake* **none**
- *From Lamar Beach Park* **none**
- *From commercial property (for Shared Use Path)* **0.02 acres**

Total additional right-of-way	0.02 acres
--------------------------------------	-------------------



Construction Cost Estimate: \$310 M*

* Does not include final design, right-of-way acquisition, utility adjustments and other project development costs.



MOPAC SOUTH
ENVIRONMENTAL STUDY

TWO EXPRESS LANES + ELEVATED RAMPS NEAR BARTON SKYWAY

- **Number of Express Lanes in Each Direction:** Two
- **Access to Downtown (Northbound):** Exit Express Lanes using new elevated ramp near Barton Skyway and Bee Cave Road and enter right-most general purpose lane south of Lady Bird Lake in order to access the existing Cesar Chavez Street/5th Street exit
- **Access from Downtown (Southbound):** Once on southbound MoPac, get in the right-most general purpose lane in order to enter the Express Lanes using new elevated ramp near Barton Skyway and Bee Cave Road
- **New Elevated Structure:** One northbound and one southbound ramp near Barton Skyway and Bee Cave Road (approximately 30 feet above existing pavement)



2035 Travel Time

TRAVEL TIMES (peak period in minutes) between Cesar Chavez Street and Slaughter Lane		
	A.M. (Northbound)	P.M. (Southbound)
Today	23	16
2035 No Build	52	51
2035 General Purpose Lanes	33	31
2035 Express Lanes	9	9

Morning peak period northbound (7-9 a.m.) Evening peak period southbound (4-6:30 p.m.)



Estimated Additional Right-of-Way

- *From Zilker Park* **none**
- *From Lady Bird Lake* **none**
- *From Lamar Beach Park* **none**
- *From commercial property (for Shared Use Path)* **0.02 acres**

Total additional right-of-way **0.02 acres**



Construction Cost Estimate: \$340 M*

** Does not include final design, right-of-way acquisition, utility adjustments and other project development costs.*



CITY OF AUSTIN PROPOSAL

Characteristics Unique to Concept:

- Westbound Lake Austin Boulevard turnaround to southbound collector-distributor road
- From Bee Cave Road, eastbound to northbound movement is only for access to downtown.
- Access to northbound MoPac via turnaround at Barton Skyway and northbound entrance ramp
- Northbound collector-distributor road for the Bee Cave Road entrance ramp, Express Lane and general purpose lane exit ramps trying to access Cesar Chavez Street/5th Street
- Southbound collector-distributor road for Cesar Chavez Street /5th Street and Lake Austin Blvd entrance ramps accessing the general purpose lane entrance ramp, Express Lane entrance ramp and Bee Cave Road exit ramp
- Southbound collector-distributor road for Bee Cave Road and Barton Skyway entrance ramps to southbound Express Lane, eastbound Loop 360 and southbound MoPac general purpose lanes
- Entrance and exit ramp between Barton Skyway and Loop 360 are reversed. No access from Loop 360 to northbound Express Lane
- No MoPac general purpose lane or ramp improvements south of US 290



CITY OF AUSTIN PROPOSAL

- **Number of Express Lanes in Each Direction:** Two between Cesar Chavez Street and US 290; One between US 290 and Slaughter Lane
- **Access to Downtown (Northbound):** Exit Express Lanes using new one-lane, elevated exit ramp to northbound collector-distributor road north of Barton Skyway and over Lady Bird Lake in order to access the existing Cesar Chavez Street/5th Street exit
- **Access from Downtown (Southbound):** From Lake Austin Boulevard, enter the new collector-distributor road over Lady Bird Lake and use the new one-lane, elevated entrance ramp north of Barton Skyway to enter the Express Lanes
- **New Elevated Structure:** One northbound and one southbound ramp near Barton Skyway (approximately 30 feet above existing pavement); new northbound and southbound collector-distributor road bridges over Lady Bird Lake



2035 Travel Time

TRAVEL TIMES (peak period in minutes) between Cesar Chavez Street and Slaughter Lane		
	A.M. (Northbound)	P.M. (Southbound)
Today	23	16
2035 No Build	52	51
2035 General Purpose Lanes	41	37
2035 Express Lanes	11	11
Morning peak period northbound (7-9 a.m.)		Evening peak period southbound (4-6:30 p.m.)



Estimated Additional Right-of-Way

- From Zilker Park **3.94 acres**
Conversion of Zilker Park Historic District land to transportation use would require the approval of the City of Austin and State Historic Preservation Officer.
 - From Lady Bird Lake **0.33 acres**
Conversion of Lady Bird Lake to transportation use would require approval from the National Park Service.
 - From Lamar Beach Park **none**
 - From commercial property (for Shared Use Path) **0.02 acres**
- | | |
|--------------------------------------|-------------------|
| Total additional right-of-way | 4.29 acres |
|--------------------------------------|-------------------|



Construction Cost Estimate: \$335 M*

* Does not include final design, right-of-way acquisition, utility adjustments and other project development costs.



CONNECTIONS TO DOWNTOWN

A downtown connection to/from the Express Lanes could be included with the project and is being evaluated as part of this study. It is not dependent on the number of Express Lanes that would be constructed in each direction (one or two).

- 40% of MoPac South traffic heads downtown in the morning. 51% of traffic leaving downtown is heading to MoPac South. This traffic utilizes Cesar Chavez Street, 5th/6th Streets, and Enfield Road. (CDM Smith 2014)
- A downtown connection eliminates a weaving condition that would be created by Express Lane traffic (including buses and emergency responders) that would merge into general purpose lane traffic to access downtown ramps. This weaving condition would negatively impact both Express Lane and general purpose lane traffic.
- A downtown connection would provide a more reliable trip for transit riders, emergency responders and drivers because it would eliminate the need to utilize the general purpose lanes for any portion of the trip.

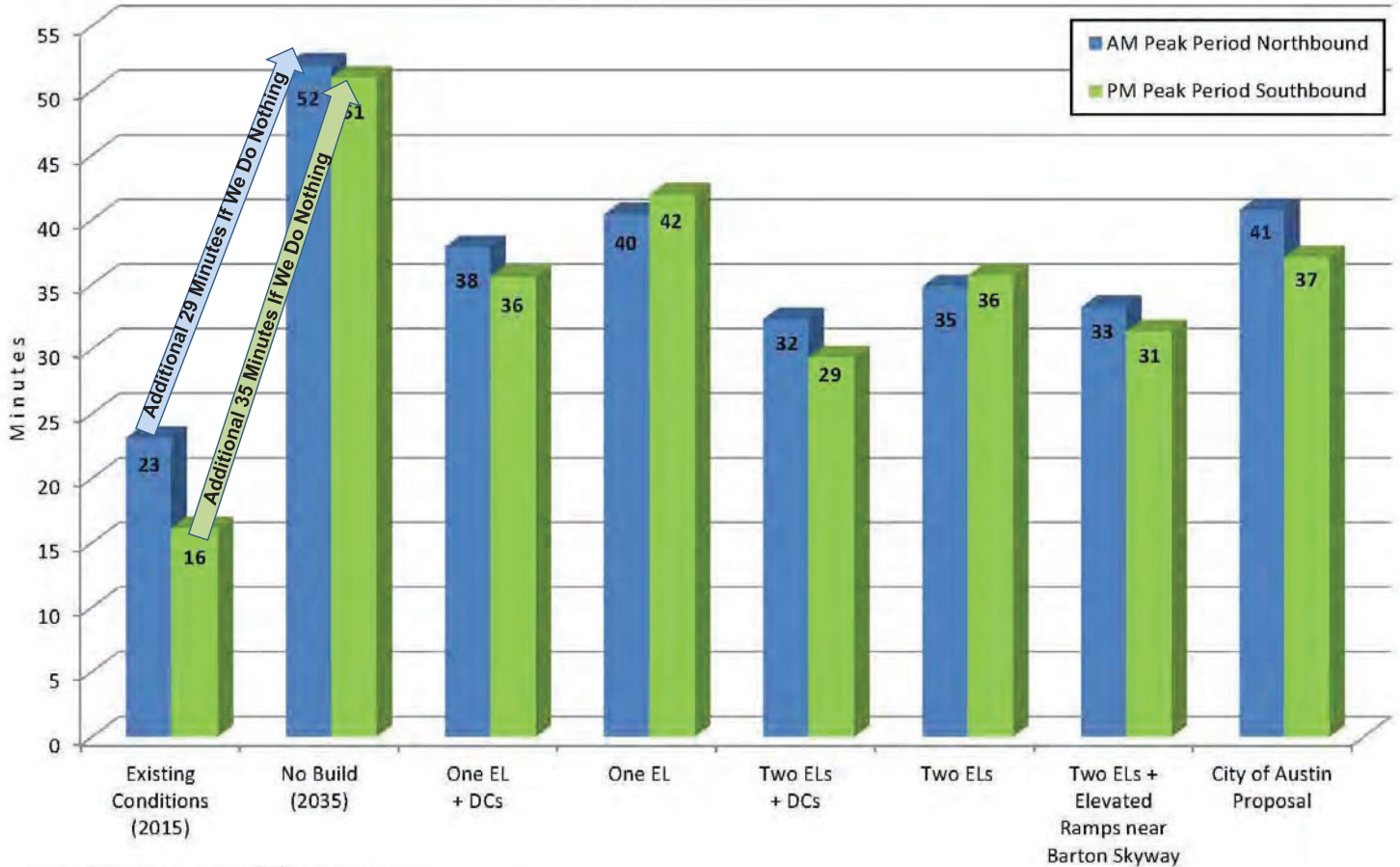
Direct connections into downtown would improve travel times for Express Lane drivers by **up to 4 minutes** in the morning and **10 minutes** in the evening.

Direct connections into downtown reduce weaving on the general purpose lanes, resulting in improved travel times for general purpose lane drivers by **up to 3 minutes** in the morning and **7 minutes** in the evening.



TRAVEL TIMES (2035)

General Purpose Lanes in 2035

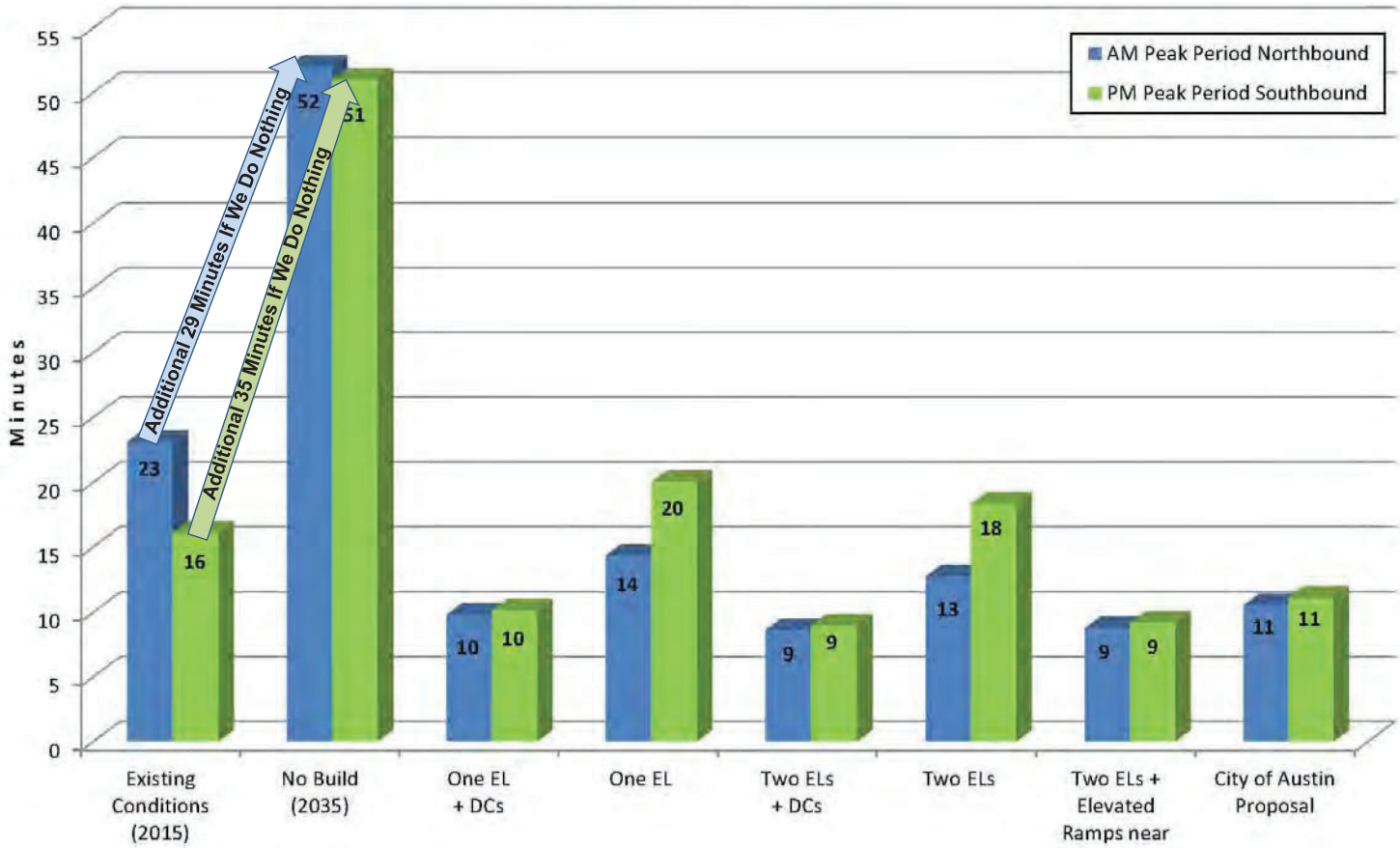


DC = Direct Connection to/from Downtown
 EL = Express Lanes
 AM Peak Period is 7-9 a.m.
 PM Peak Period is 4-6:30 p.m.



TRAVEL TIMES (2035)

Express Lanes in 2035



DC = Direct Connection to/from Downtown

EL = Express Lanes

AM Peak Period is 7 -9 a.m.

PM Peak Period is 4-6:30 p.m.



BIKE AND PEDESTRIAN SYSTEM

Proposed bicycle and pedestrian improvements connect with existing city of Austin facilities and the Violet Crown Trail to provide a continuous bike/pedestrian system from Slaughter Lane to downtown.



ENVIRONMENTAL STUDIES

These social, economic, and environmental issues are being considered:



Air Quality & Traffic Noise



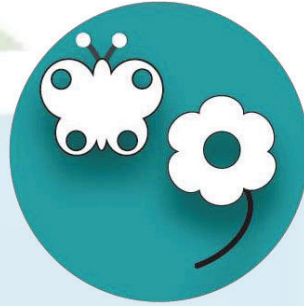
Water Resources



Archeological & Historic Resources



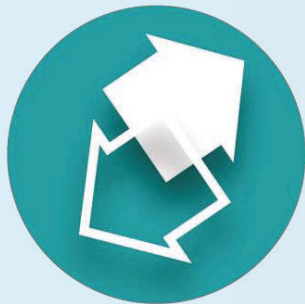
Land Use & Parkland



Vegetation & Wildlife



Threatened & Endangered Species



Indirect & Cumulative Impacts



Social & Community Impacts



Hazardous Materials

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.



MoPAC SOUTH
ENVIRONMENTAL STUDY

THREATENED AND ENDANGERED SPECIES

Field surveys were conducted in the project area. **No listed threatened or endangered species were encountered.**

Birds



Photo by U.S. Fish & Wildlife Service

Golden-cheeked Warbler (*Dendroica chrysoparia*)

Karst species



Photo by Dr. Jean Krejca, Zara Environmental LLC

Harvestman (*Texella* sp.)

Fresh water mussels



Photo by Texas Parks and Wildlife Department

Texas Fatmucket (*Lampsilis bracteata*)

Salamanders



Photo by Dr. Jean Krejca, Zara Environmental LLC

Barton Springs Salamander (*Eurycea sosorum*)



CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act and 36 CFR 800 requires Federal agencies to:

- Take into account the effects of their undertakings on historic properties (36 CFR 800.1)
- Complete the 106 process prior to the approval of the expenditure of funds or issuance of a license
- Seek and consider the views, comments and input of the public on effects on historic properties
- Involve consulting parties in findings, determinations and resolutions of any adverse effects made during the 106 process

Section 106 Consulting Parties identified for the MoPac South Environmental Study include:

- Texas Historical Commission
- City of Austin
- Preservation Austin

Several other organizations have expressed an interest in the Section 106 process. **If you or your organization would like to receive updates on this topic, please sign up for the project mailing list at www.MoPacSouth.com.**



CULTURAL RESOURCES

Tasks completed:

- Prepared the archeological background study
- Consulted with federally-recognized tribes
- Established areas of potential effect

Next Steps:

- Complete reconnaissance survey for non-archeological historic properties
- Eligibility consultation with Texas Historical Commission, city of Austin and Preservation Austin
- Identify a Build Alternative
- Effects consultation with Texas Historical Commission, city of Austin and Preservation Austin



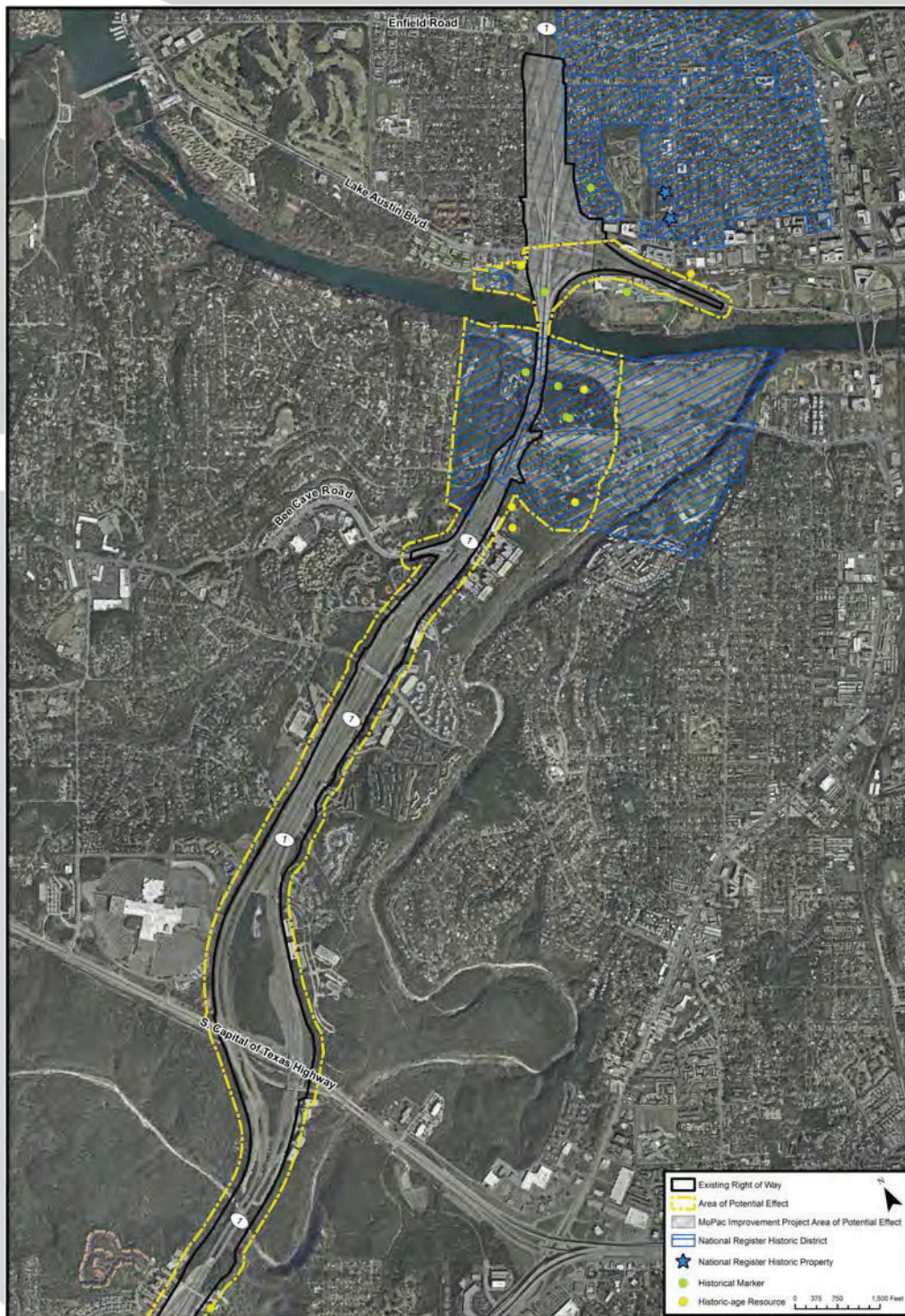
HISTORIC RESOURCES

This map is a zoomed in view of the historic resources within the Area of Potential Effect from Cesar Chavez Street to just north of Bee Cave Road.



HISTORIC RESOURCES

This map shows the historic resources within the Area of Potential Effect from Cesar Chavez Street to just south of Loop 360.



HISTORIC RESOURCES

This map shows the historic resources within the Area of Potential Effect from Loop 360 to Slaughter Lane.



WATER QUALITY

The Mobility Authority plans to meet water quality standards on this project to protect the Barton Springs segment of the Edwards Aquifer Recharge Zone, as required by the Texas Commission on Environmental Quality.

Water quality treatment measures on MoPac could be enhanced by this project by implementing the latest, most modern technologies available:

- Permeable Friction Course (PFC) Pavement
- Water Quality Ponds
- Vegetative Controls
- Hazardous Materials Traps



BARTON CREEK

- All Operational Configurations feature travel lanes on new bridges over Barton Creek within the existing MoPac South right-of-way.
- New bridges would span the creek and columns would be placed outside the water channel.
- To protect water quality, a Stormwater Pollution Prevention Plan and a Water Pollution Abatement Plan will be developed for approval by the Texas Commission on Environmental Quality.
- The Study Team has been working with the MoPac Bicycle and Pedestrian Bridge Project Team to implement lessons learned from that project.
- If the project is approved for construction, a geotechnical investigation would be conducted to determine subsurface soil and rock conditions, determine if there are any karst features in the footprint of the proposed bridge foundations, and provide foundation recommendations for the bridge supports. Guidelines for karst feature protection would be developed, similar to the geotechnical investigation conducted for the MoPac Bicycle Bridge Project.



Photo by MoPac South Study Team

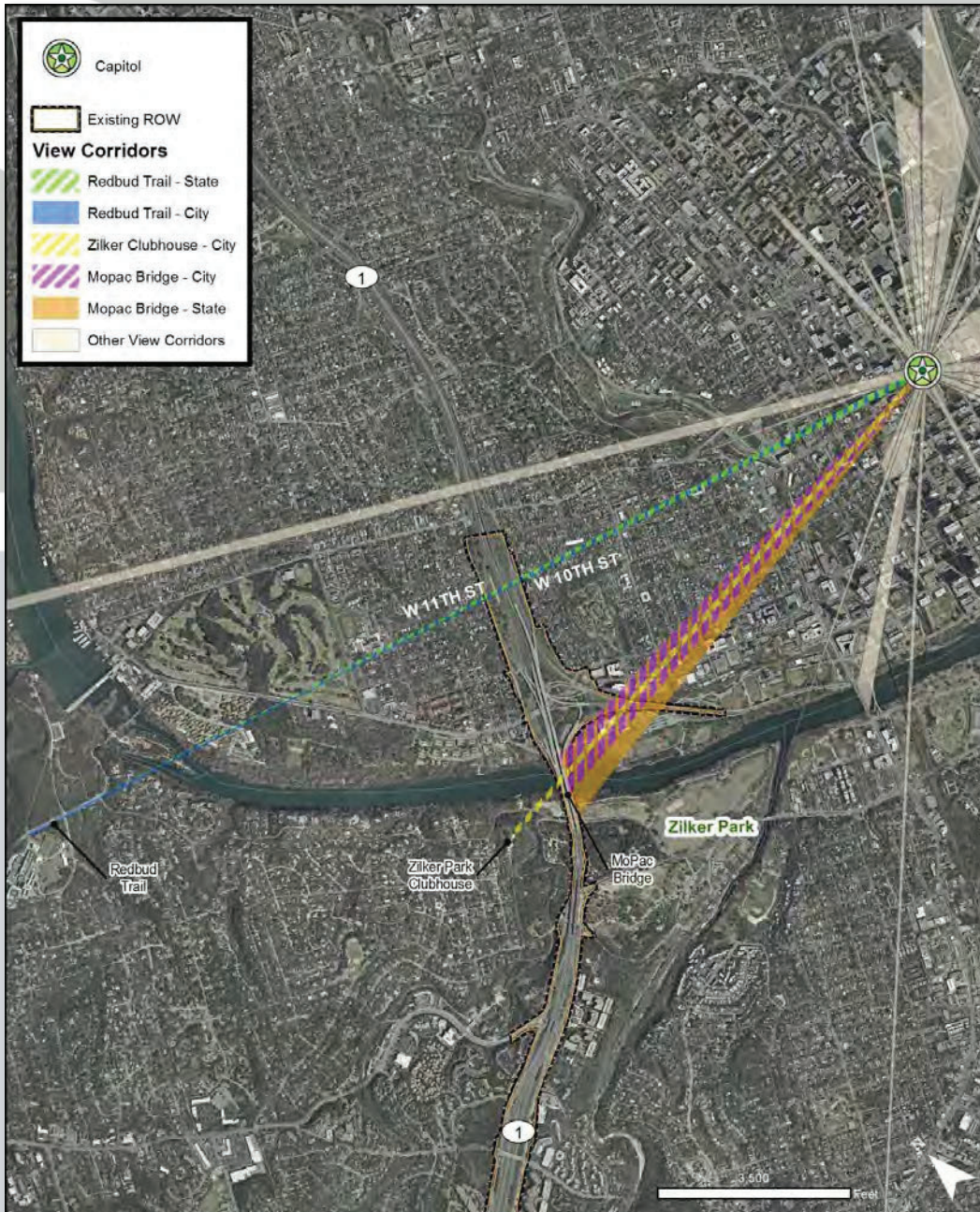


Photo courtesy City of Austin



CAPITOL VIEW CORRIDORS

None of the operational configurations under consideration would impact your view of the Capitol.



The Capitol View Corridor is a plane that extends from a defined viewpoint or points to the base of the Capitol dome.

In 1983, protections were placed on the remaining views of the Texas State Capitol building, called Capitol View Corridors.

(TEX. GOV. CODE ANN. § 3151.002: Texas Statutes – Section 3151.002)



MoPac South
ENVIRONMENTAL STUDY

TRAFFIC NOISE

Given the 98% projected population growth in Travis and Hays counties by 2040 (CAMPO 2015), traffic noise along MoPac is going to continue to increase over time, regardless of whether or not we build improvements. A detailed noise analysis will be conducted once a recommended Express Lane configuration has been determined. The community will be engaged in next steps after the analysis is complete.

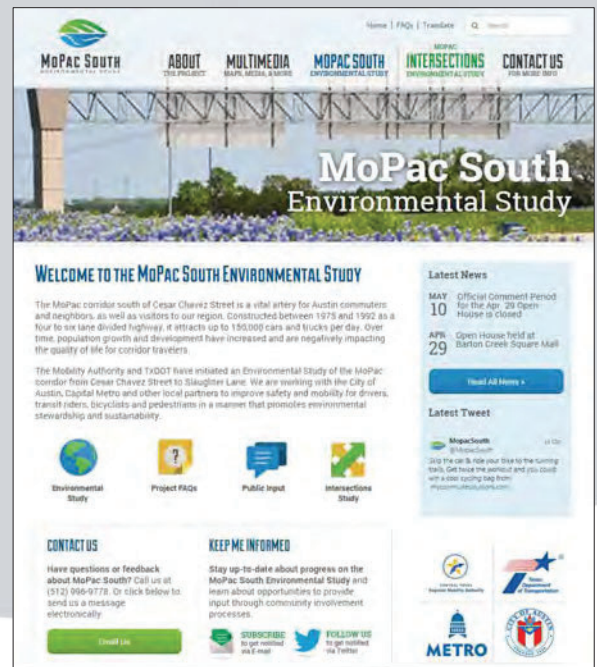


NEXT STEPS

- Compile and consider input from tonight's meeting
- Continue to listen to and engage the community
- Identify the best operational configuration for the Express Lanes Alternative based on the project's Purpose and Need, goals and objectives, and public comments

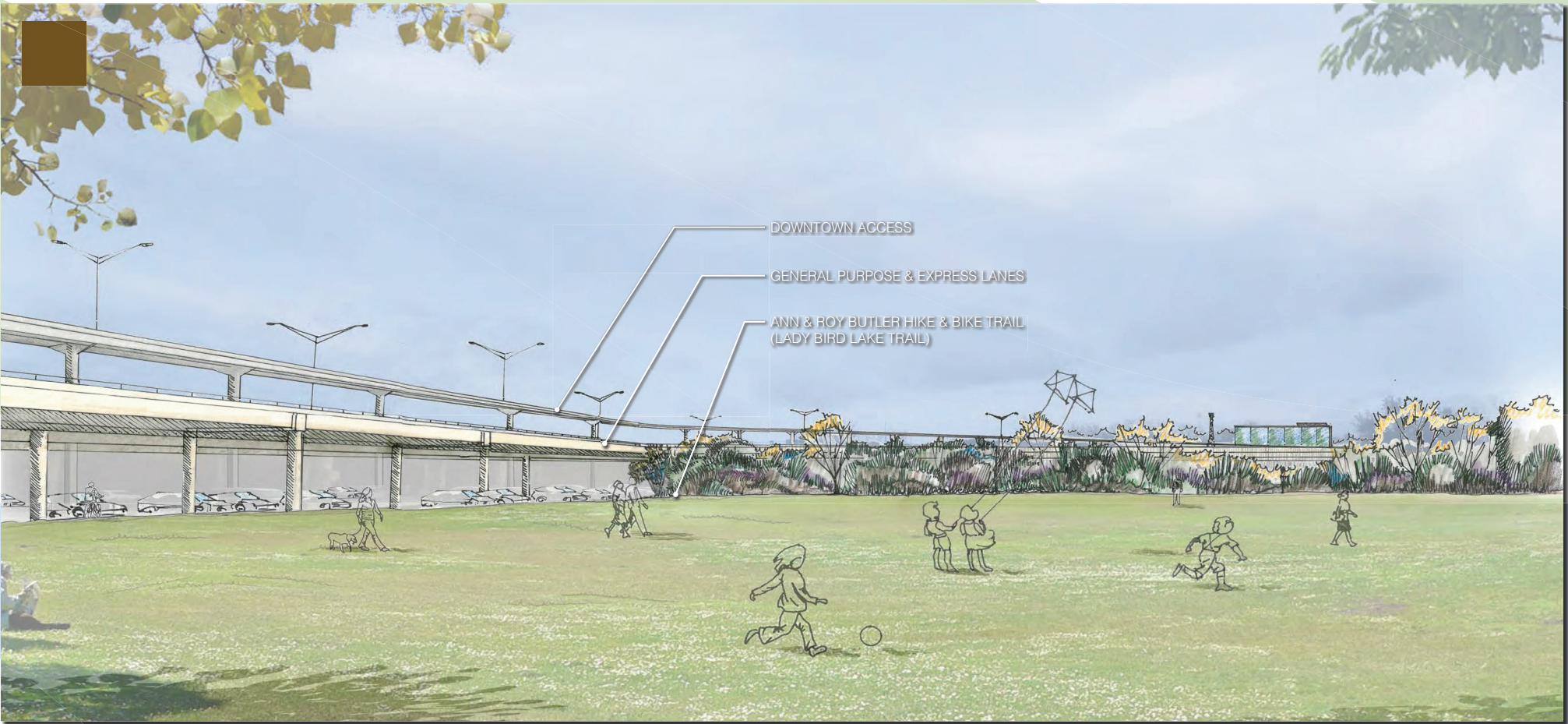
How to stay involved:

- Visit www.MoPacSouth.com
- Sign-up for the e-newsletter
- Follow us on  Twitter **@MoPacSouth**
- Call us:
512-996-9778
- Participate in meetings
- Invite us to meet with your group



VIEW FROM ZILKER PARK

ONE EXPRESS LANE IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



Looking North

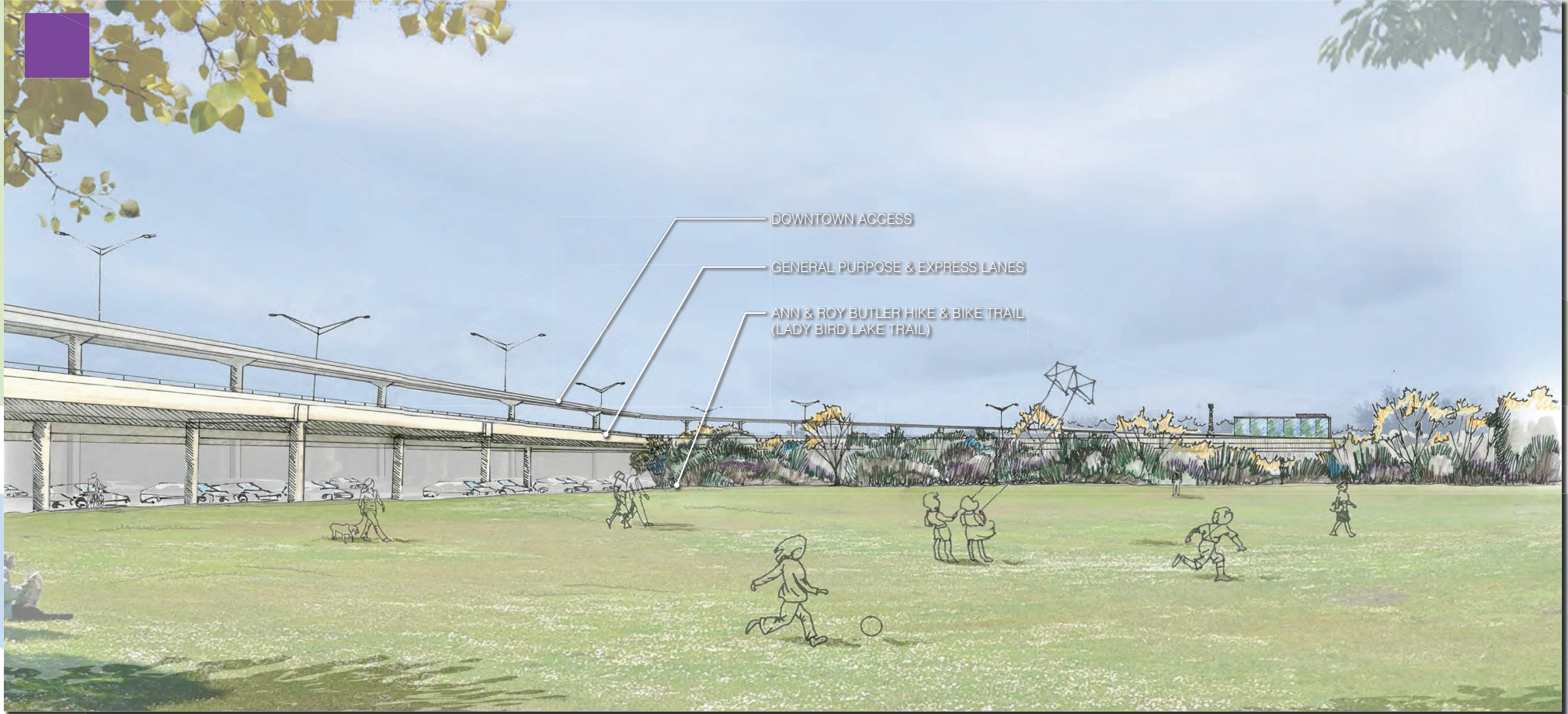


MoPac South
ENVIRONMENTAL STUDY

The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.

VIEW FROM ZILKER PARK

TWO EXPRESS LANES IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



Looking North



MoPac South
ENVIRONMENTAL STUDY

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VIEW FROM ZILKER CLUBHOUSE

ONE EXPRESS LANE IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



Looking East



MoPac South
ENVIRONMENTAL STUDY

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VIEW FROM ZILKER CLUBHOUSE

TWO EXPRESS LANES IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



Looking East



MOPAC SOUTH
ENVIRONMENTAL STUDY

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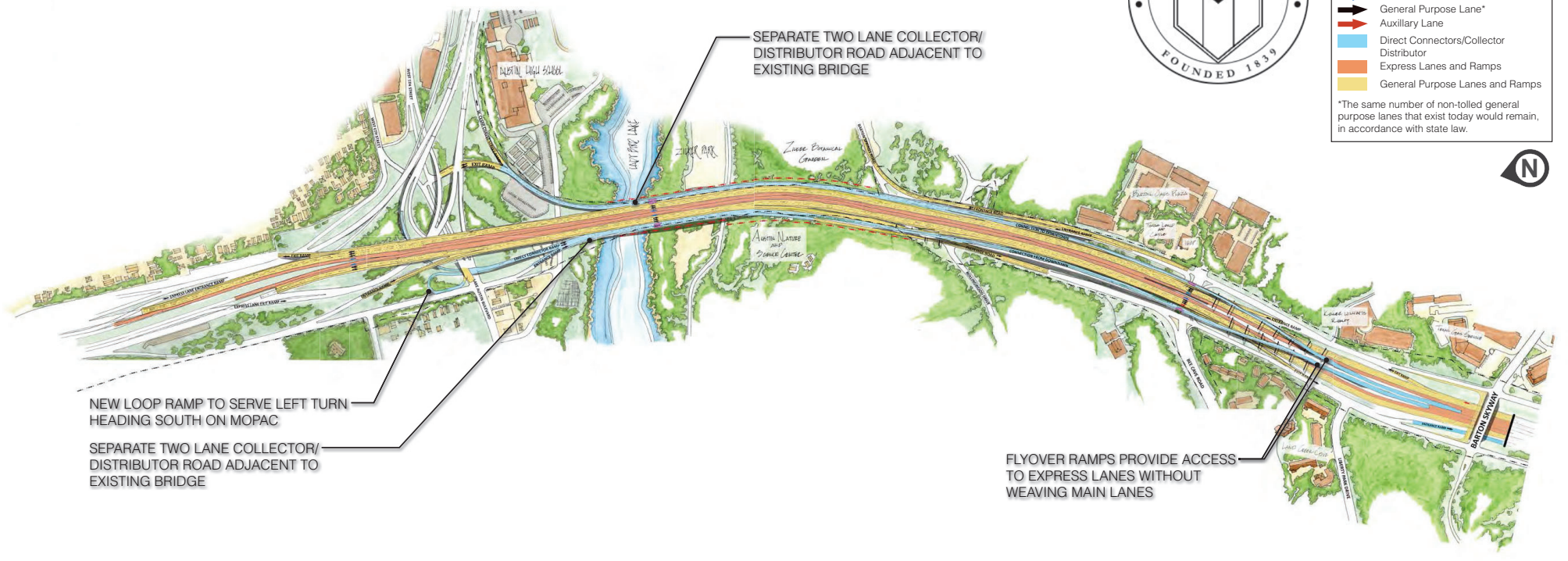
OVER LADY BIRD LAKE

CITY OF AUSTIN PROPOSAL



- LEGEND**
- - - Proposed R.O.W.
 - - - Existing R.O.W.
 - Straddle Bent
 - Direct Connector Lane
 - Express Lane
 - General Purpose Lane*
 - Auxiliary Lane
 - ↔ Direct Connectors/Collector Distributor
 - Express Lanes and Ramps
 - General Purpose Lanes and Ramps

*The same number of non-tolled general purpose lanes that exist today would remain, in accordance with state law.



NEW LOOP RAMP TO SERVE LEFT TURN HEADING SOUTH ON MOPAC

SEPARATE TWO LANE COLLECTOR/DISTRIBUTOR ROAD ADJACENT TO EXISTING BRIDGE

SEPARATE TWO LANE COLLECTOR/DISTRIBUTOR ROAD ADJACENT TO EXISTING BRIDGE

FLYOVER RAMP PROVIDE ACCESS TO EXPRESS LANES WITHOUT WEAVING MAIN LANES



VIEW FROM ZILKER CLUBHOUSE

CITY OF AUSTIN PROPOSAL



Looking East



VIEW FROM ZILKER CLUBHOUSE

TWO EXPRESS LANES + ELEVATED RAMPS NEAR BARTON SKYWAY



Looking East



MoPac South
ENVIRONMENTAL STUDY

VIEW FROM ZILKER CLUBHOUSE

ONE EXPRESS LANE IN EACH DIRECTION + WITHOUT DOWNTOWN DIRECT CONNECTION



Looking East



MoPac South
ENVIRONMENTAL STUDY

The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.

VIEW FROM ZILKER CLUBHOUSE

TWO EXPRESS LANES IN EACH DIRECTION WITHOUT A DOWNTOWN DIRECT CONNECTION



Looking East

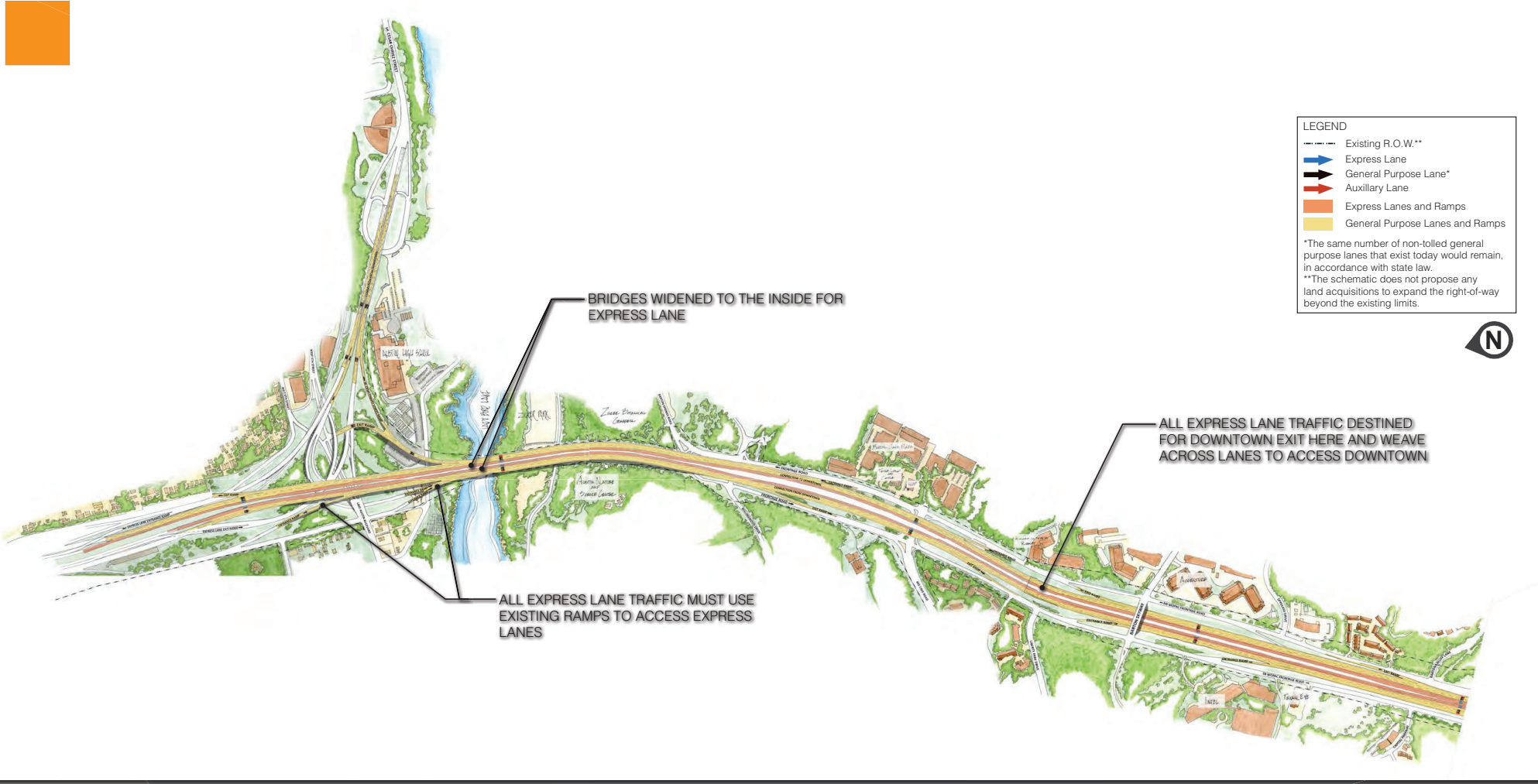


MoPac South
ENVIRONMENTAL STUDY

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OVER LADY BIRD LAKE

ONE EXPRESS LANE IN EACH DIRECTION WITHOUT A DOWNTOWN DIRECT CONNECTION

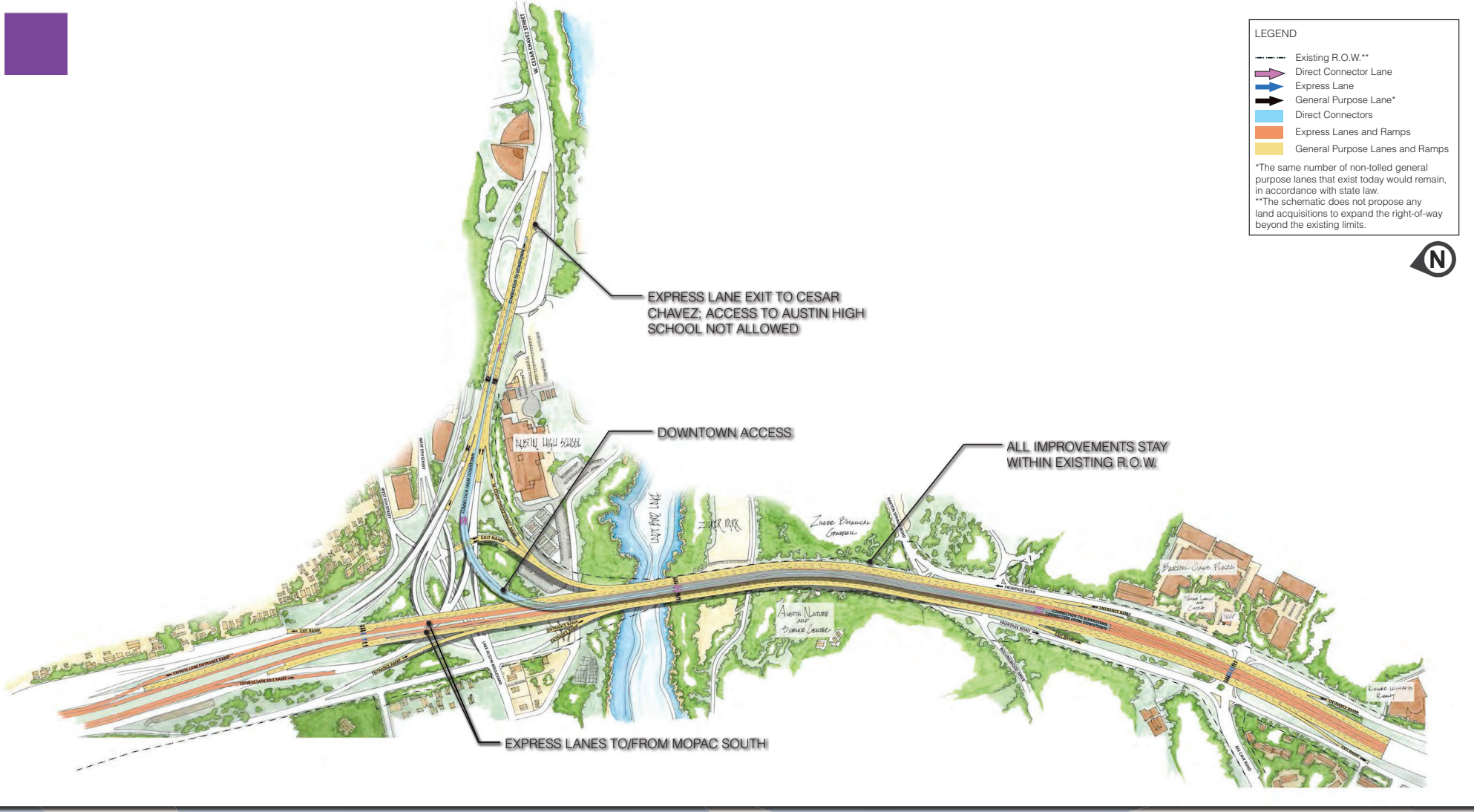


The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.



OVER LADY BIRD LAKE

TWO EXPRESS LANES IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



LEGEND

- Existing R.O.W.**
- Direct Connector Lane
- Express Lane
- General Purpose Lane*
- Direct Connectors
- Express Lanes and Ramps
- General Purpose Lanes and Ramps

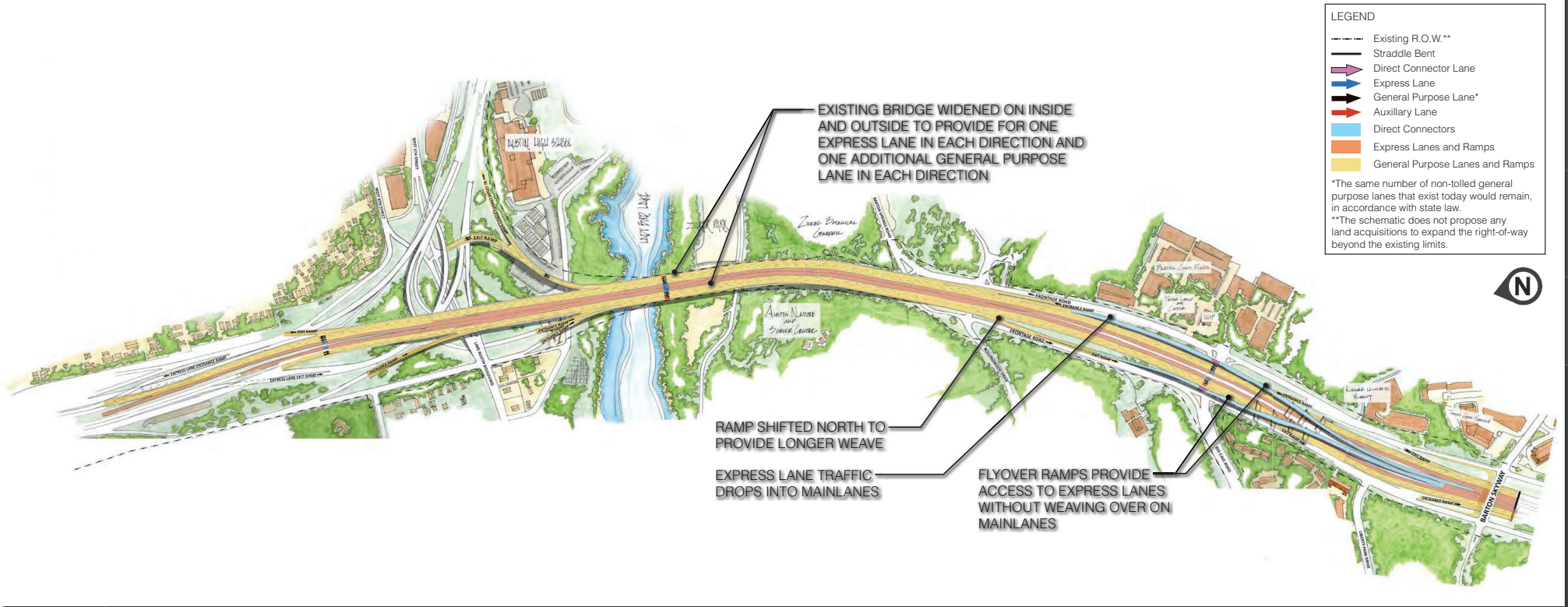
*The same number of non-tolled general purpose lanes that exist today would remain, in accordance with state law.
 **The schematic does not propose any land acquisitions to expand the right-of-way beyond the existing limits.



The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.

OVER LADY BIRD LAKE

TWO EXPRESS LANES + ELEVATED RAMPS NEAR BARTON SKYWAY



The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.

UNDER THE BRIDGE OVER LADY BIRD LAKE

CITY OF AUSTIN PROPOSAL



Looking Southwest



NORTHBOUND VIEW AT BEE CAVE ROAD

TWO EXPRESS LANES IN EACH DIRECTION + ELEVATED RAMPS NEAR BARTON SKYWAY



ONE LANE EXPRESS LANE RAMPS EXTEND OVER THE MAINLANES JUST SOUTH OF BEE CAVE ROAD, PROVIDING ACCESS TO EXPRESS LANES WITHOUT IMPACTING MAIN LANE TRAFFIC.

BARTON SKYWAY



Looking North



MoPac South
ENVIRONMENTAL STUDY

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SOUTHBOUND VIEW AT BEE CAVE ROAD

TWO EXPRESS LANES IN EACH DIRECTION + ELEVATED RAMPS NEAR BARTON SKYWAY



BEE CAVE ROAD



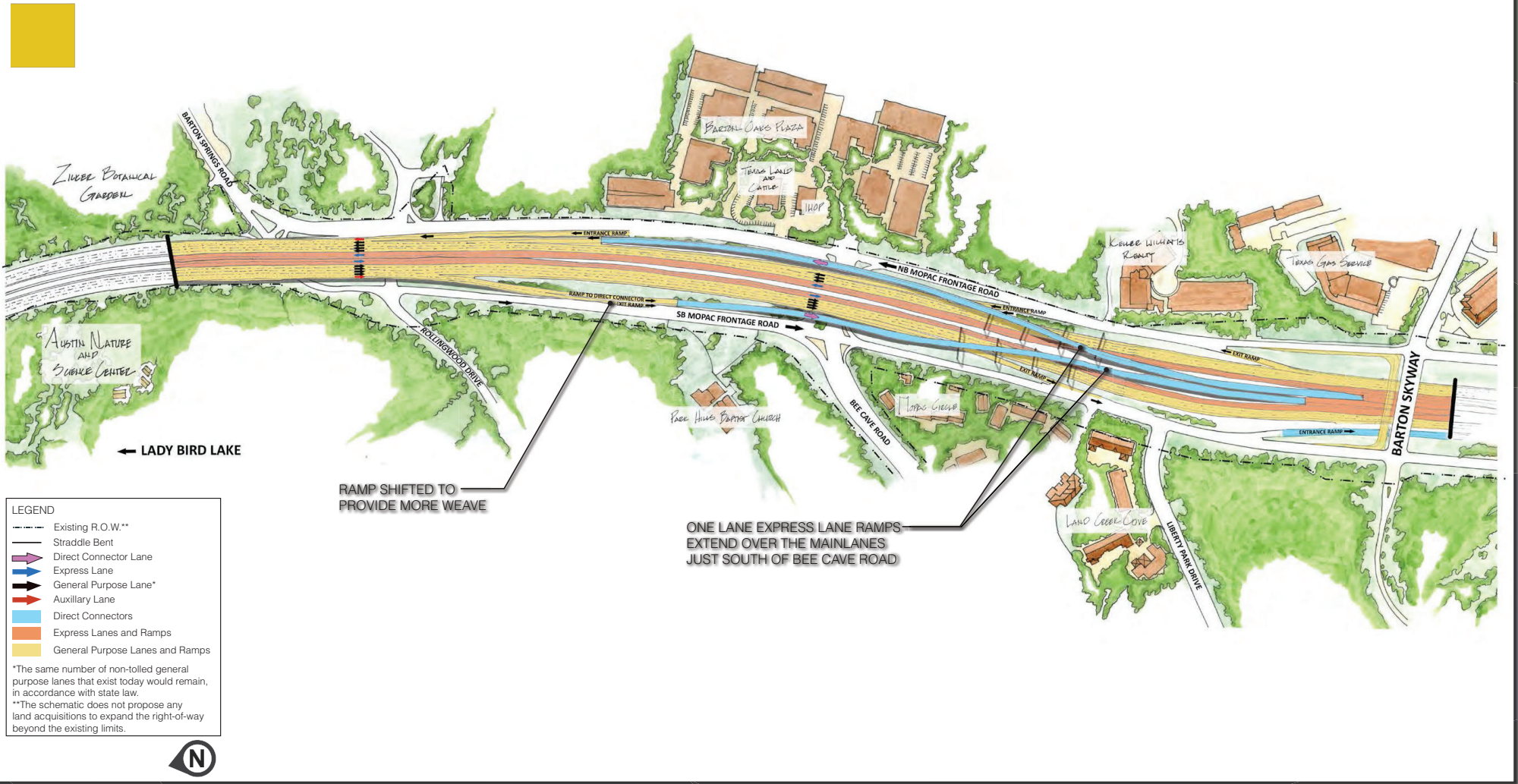
Looking South



MoPac South
ENVIRONMENTAL STUDY

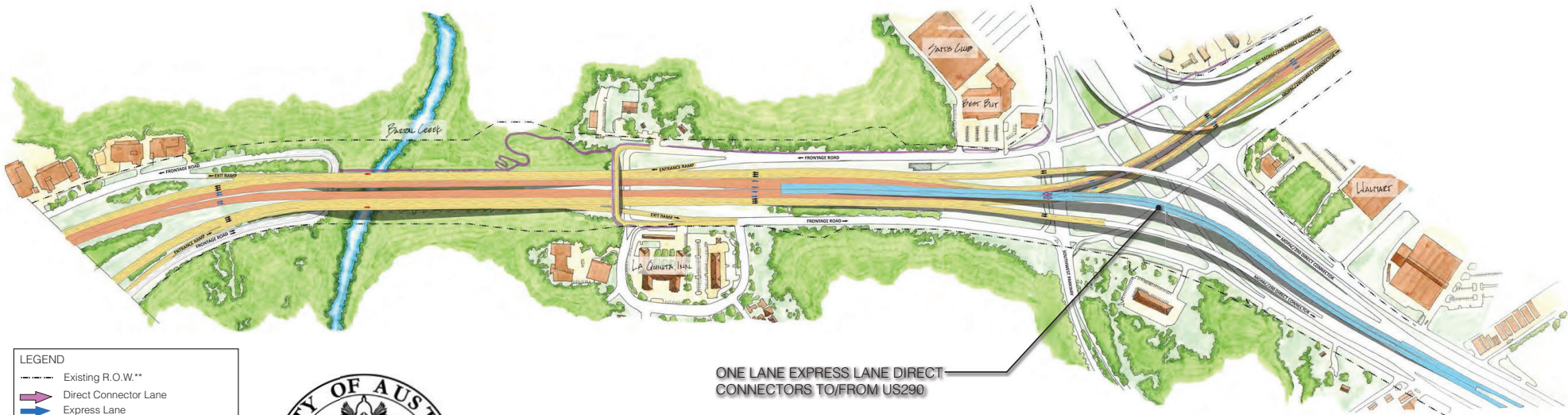
NEAR BEE CAVE ROAD

TWO EXPRESS LANES + ELEVATED RAMPS NEAR BARTON SKYWAY



AT US290

CITY OF AUSTIN PROPOSAL



ONE LANE EXPRESS LANE DIRECT CONNECTORS TO/FROM US290

LEGEND

- Existing R.O.W.**
- ↔ Direct Connector Lane
- ↔ Express Lane
- ↔ General Purpose Lane*
- ↔ Auxillary Lane
- ↔ Direct Connectors
- ↔ Express Lanes and Ramps
- ↔ General Purpose Lanes and Ramps

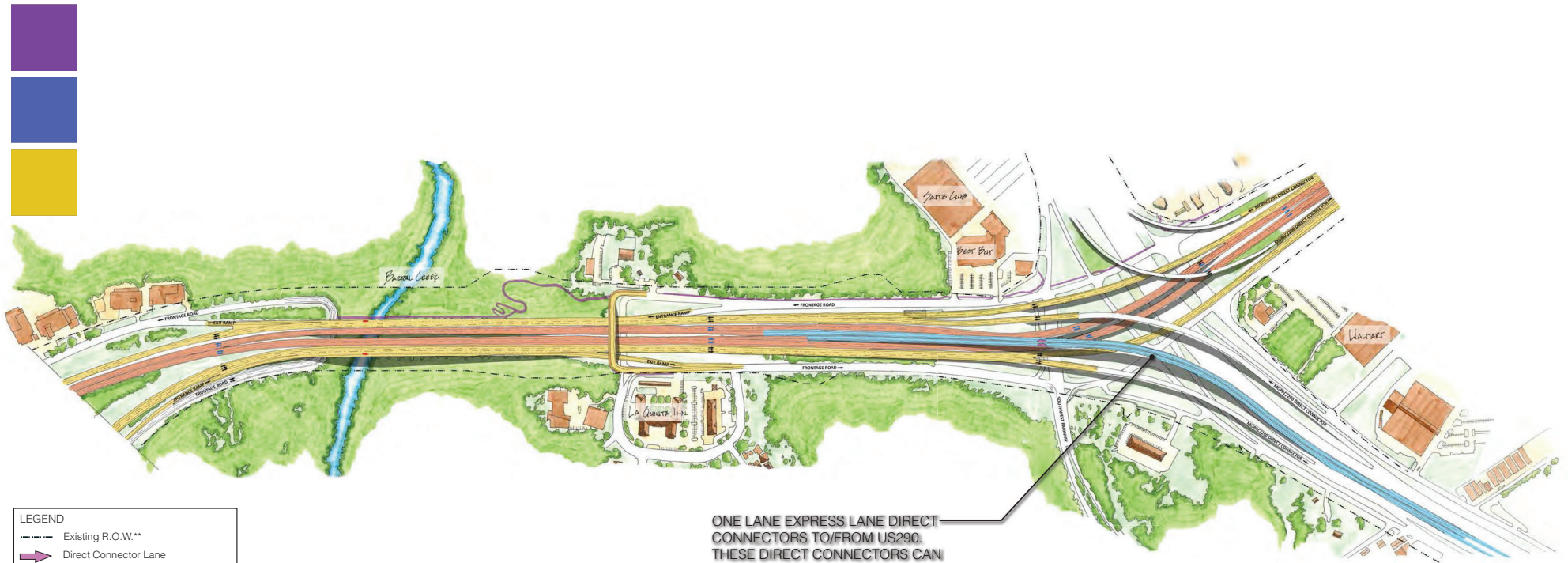
*The same number of non-tolled general purpose lanes that exist today would remain, in accordance with state law.
 **The schematic does not propose any land acquisitions to expand the right-of-way beyond the existing limits.



The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.

AT US290

TWO EXPRESS LANES + DOWNTOWN DIRECT CONNECTION
 TWO EXPRESS LANES WITHOUT DOWNTOWN DIRECT CONNECTION
 TWO EXPRESS LANES + ELEVATED RAMPS NEAR BARTON SKYWAY



- LEGEND**
- Existing R.O.W.**
 - ↔ Direct Connector Lane
 - Express Lane
 - General Purpose Lane*
 - Auxiliary Lane
 - Direct Connectors
 - Express Lanes and Ramps
 - General Purpose Lanes and Ramps

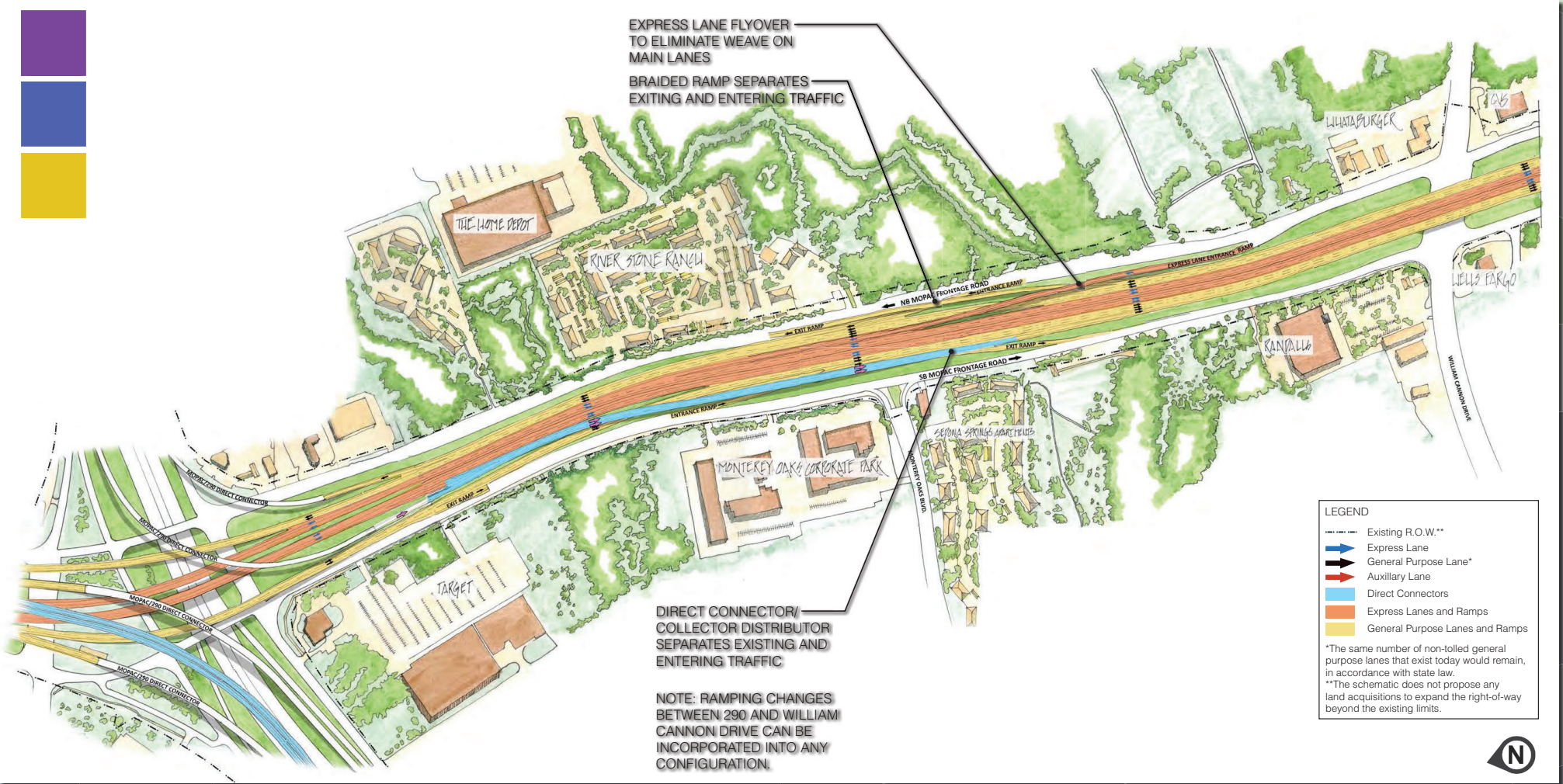
ONE LANE EXPRESS LANE DIRECT CONNECTORS TO/FROM US290. THESE DIRECT CONNECTORS CAN BE INCORPORATED INTO ANY CONFIGURATION.

*The same number of non-tolled general purpose lanes that exist today would remain, in accordance with state law.
 **The schematic does not propose any land acquisitions to expand the right-of-way beyond the existing limits.



AT US290

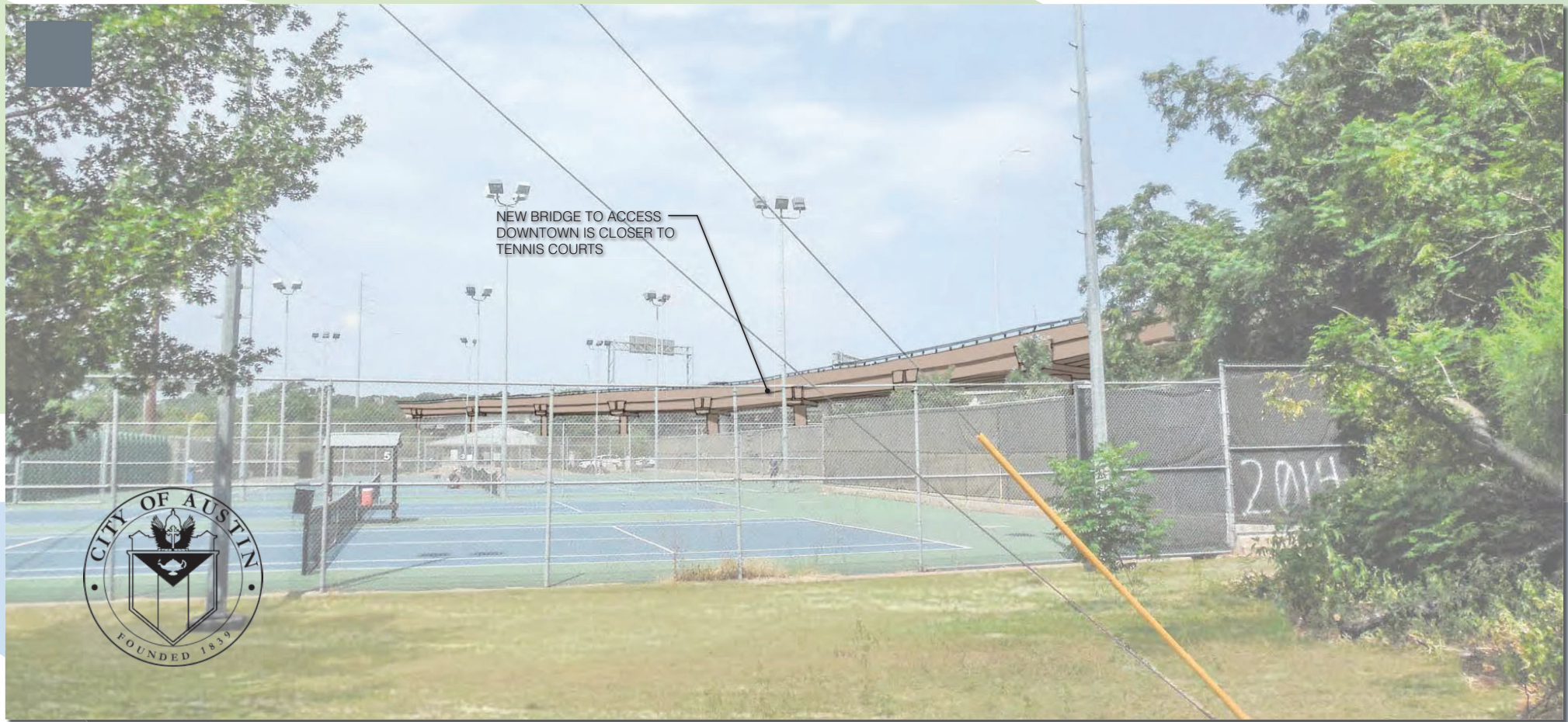
TWO EXPRESS LANES + DOWNTOWN DIRECT CONNECTION
TWO EXPRESS LANES WITHOUT DOWNTOWN DIRECT CONNECTION
TWO EXPRESS LANES + ELEVATED RAMPS NEAR BARTON SKYWAY



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VIEW FROM AUSTIN HIGH SCHOOL TENNIS COURTS

CITY OF AUSTIN PROPOSAL



Looking Northwest



VIEW FROM AUSTIN HIGH SCHOOL TENNIS COURTS

ONE EXPRESS LANE IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



Looking Northwest



MoPac South
ENVIRONMENTAL STUDY

The artist renderings shown are conceptual in nature and are for discussion purposes only. Final alignments and construction elements may vary.

VIEW FROM AUSTIN HIGH SCHOOL

TWO EXPRESS LANES IN EACH DIRECTION + A DOWNTOWN DIRECT CONNECTION



Looking Northwest



MOPAC SOUTH
ENVIRONMENTAL STUDY

OPEN HOUSE #3 SURVEY RESULTS SUMMARY

TOP PRIORITIES



Water Quality Enhancements:
Selected by 77% of 148 respondents



Bicycle and Pedestrian Facilities:
Selected by 76% of 130 respondents



Roadway Signage:
Selected by 69% of 120 respondents



Landscaping:
Selected by 60% of 130 respondents



Wall Textures:
Selected by 34% of 47 respondents



Public Art:
Selected by 33% of 57 respondents

LOWEST PRIORITIES

TOP PREFERENCES

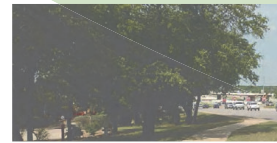
Water Quality Enhancements
"When possible, more options like this would be aesthetically pleasing versus concrete detention."



Water Quality Enhancements:
Bio-Filtration Pond
131 Respondents



Landscaping:
Wildflower Plantings
121 Respondents



Landscaping:
Tree Grouping
125 Respondents



Bicycle and Pedestrian Facilities:
Path Along Roadway
117 Respondents

Landscaping
"Please take the ecological function into consideration as these plans move forward! Not doing so would be a major failure!"

Bicycle and Pedestrian Facilities
"There should be protected bicycle roadways along MoPac."

Bridge Enhancements
"Bridge enhancements are very pleasing, just keep natural colors."

LOWEST PREFERENCES

Defining Characteristics
"Decreased impact of noise and lighting; sidewalks along service roads; landscaping with Texas trees; materials to reduce sound and runoff toxicity into streams."



Water Quality Enhancements:
Concrete Box Detention
134 Respondents



Roadway Signage:
Standard Overhead Structure
106 Respondents

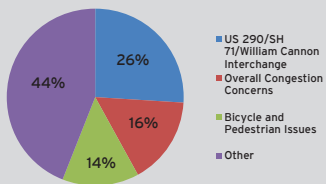


Bridge Enhancements:
Existing Standard Construction
96 Respondents

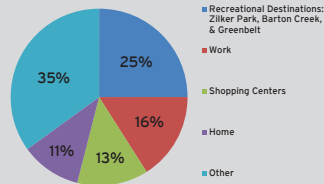
Wall Textures
"You really notice the need and quality after installation."

MAP INPUT OPPORTUNITIES

Safety Concerns 88 Commentors

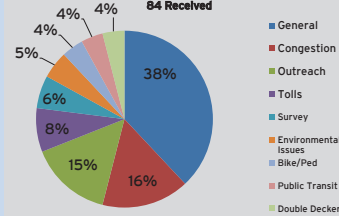


Frequent Destinations 88 Commentors



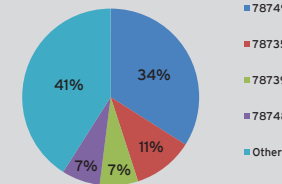
COMMENTS

Comments 84 Received

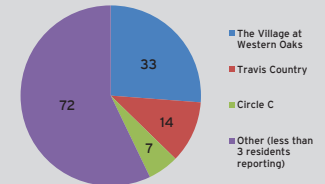


GEOGRAPHICAL DATA

Zip Codes 141 Reporting



Participating Neighborhoods 126 Residents Reporting



MOPAC SOUTH

TRAIL ENHANCEMENT OPPORTUNITIES ALONG THE PROJECT CORRIDOR

What items are most important to you?





CITY OF ROLLINGWOOD



March 7, 2017

Mike Heiligenstein
Executive Director
3300 N. IH-35, Suite 300
Austin, Texas 78705

Dear Mr. Heiligenstein:

Thank you for meeting with us on January 26, 2017. It was a pleasure meeting with you and Dee Anne. As you suggested, we would be happy to bring a group from Rollingwood to your offices to study and discuss with you and your staff the various configurations/details of the designs currently being proposed for MoPac South improvements. We will be in touch soon to set up a date and time for that meeting.

In the meantime, I am also taking you up on your offer to provide the following information to us:

- 1) All traffic studies, whether draft or final, for the Bee Cave Road (R.M. 2244) and MoPac (Loop 1) intersection;
- 2) All traffic studies, whether draft or final, for traffic exiting the south bound Bee Cave Road (R.M. 2244) exit when headed south on MoPac; and,
- 3) All traffic studies, whether draft or final, for the intersection of Rollingwood Drive and Barton Springs Road/MoPac (Loop 1) frontage road.

As I stated at our meeting, the City of Rollingwood and our citizens continue to be very concerned about the impact that the MoPac South improvements will likely have on the intersection of Bee Cave Road (R.M. 2244) and MoPac (Loop 1). Adding to this concern, I have recently been informed that this intersection currently handles even more traffic on a daily basis than the intersection of MoPac and Cesar Chavez. The intersection of MoPac and Bee Cave Road is already problematic and every indicator suggests to Rollingwood that it will continue to get worse unless it is adequately addressed. Elevated lanes over Bee Cave Road at MoPac, which would use up most if not all of the right of way, would severely restrict the ability to address both

present and future problems at that intersection. Because the design and construction of the MoPac South improvements will either directly or indirectly affect this already strained intersection, it is imperative to fully consider and address any impacts to this intersection resulting from the design and construction of the MoPac South improvements as part of the National Environmental Policy Act (“NEPA”) review before a design is chosen. The current problems with this already extremely congested intersection as well as future adverse impacts on this intersection associated with the MoPac South project are currently and will continue to be magnified with special events traffic during the Austin City Limits Festival, the Trail of Lights festival, Blues on the Green concerts, and other similar events at Zilker Park.

It is the City of Rollingwood’s position that the proposed design alternative that includes two express lanes in each direction without relying on elevated lanes has not been fully “optimized.” In other words, we feel that this design alternative was proposed and prematurely dismissed, rather than taking the time and attention necessary to incorporate effective engineering designs into the alternative to make it as functional as it should be. Unless and until all of the proposed designs have been “optimized,” then a fully informed comparison of designs and meaningful selection of a preferred design cannot and should not be made.

As we have expressed to you before, the City of Rollingwood continues to oppose elevated lanes of any kind over MoPac. We do not want to see the same mistakes in elevated roadway design experienced by other U.S. cities, including Texas cities such as Dallas (I-345) and Houston (I-45 Pierce Elevated), repeated here in Austin, especially in the heart of an area that is so special, historic, and irreplaceable. Zilker Park, Lady Bird Lake, the City of Rollingwood, and the City of Austin all deserve better and working together we can do better.

Thank you again for meeting with Mike Dyson, Charles Winfield, and me. We look forward to continuing to work with you and we want to actively participate in the process of selecting a final design for MoPac South improvements. We appreciate your receptiveness to our participation in the process.

Sincerely,

Roxanne McKee

Mayor

cc: Senator Kirk Watson

Representative Donna Howard



CENTRAL TEXAS
Regional Mobility Authority

April 5, 2017

Mayor Roxanne McKee
City of Rollingwood



Dear Mayor;

Thank you for reaching out to me concerning the very important MoPac South Project and its impact on your community. I look forward to meeting with you and your advisors, first to clearly ascertain your immediate concerns, and then to make sure we provide valuable feedback.

Concerning the information you requested, and as a result of our discussions on January 26, we have contracted with CDM Smith, a nationally respected traffic modeler, to study the impact on the intersections you referenced.

I can assure you the RMA does not take any design options lightly, nor will we dismiss good ideas. Many of the added features of the existing alternatives have come from our public outreach efforts with citizens and public bodies just like yours, and in fact, Rollingwood has made several good suggestions. I concur and personally have experienced the “event” congestion that you have referenced, but I am confident this project will help relieve congestion not just on event days, but also for everyday congestion. The issue with four tolled express lanes without direct access to Cesar Chaves remains how an express lane would exit to downtown from the center of the corridor, across three lanes of existing roadway, without causing even more congestion and backup. Also the issue of optimizing the alternative of express transit needs to be considered, and the weaving of buses from the express lanes to exit downtown.

It is important to remember that we are not talking about more traffic on MoPac due to the new lanes, no matter what their configuration. It is about how to provide some reliability in the corridor, and to improve the mobility of both non-tolled and Express lane traffic. Traffic on MoPac will only get worse in the future as more folks move to the greater Austin region. We have already been delayed over a year due to the lawsuit. During that time there have been no credible alternatives suggested.

3300 N IH-35, Suite 300, Austin, Texas 78705

Telephone: (512) 996-9778 | Fax: (512) 996-9784 | MobilityAuthority.com

Ray A. Wilkerson, *Chairman* • James H. Mills, Jr., *Vice Chairman* • Robert L. Bennett, Jr., *Treasurer*
David B. Armbrust • David Singleton • Nikelle S. Meade • Charles Heimsath • Mike Heiligenstein, *Executive Director*

Mayor Roxanne McKee
Page Two

An interim analysis should be complete by late-May, and I look forward to meeting and reviewing the results. If you would also like a pre-study meeting to review all the alternatives, and perhaps better understand the process, we will make ourselves available at your convenience.

Again Mayor, thanks for your input and I know that your highest concern is for your community – I respect and understand that position. I also look forward to proving to you that we will leave no stone unturned in our effort to address your concerns.

Sincerely yours

A handwritten signature in blue ink that reads "Mike Heiligenstein". The signature is written in a cursive style with a large initial "M".

Mike Heiligenstein
Executive Director

cc: Senator Kirk Watson
Representative Donna Howard
Chairman Ray Wilkerson



CITY OF ROLLINGWOOD

November 27, 2017

Mr. Mike Heiligenstein
Executive Director
Central Texas Regional Mobility Authority
3300 N IH-35, Suite 300
Austin, TX 78705

Re: MoPac South Project

Dear Mr. Heiligenstein:

Thank you again for hosting our recent meeting at your offices. We appreciate the opportunity to discuss various aspects of the Mopac South Environmental Study (“MoPac South Project” and “MoPac South”) planning process and design alternatives with you and Central Texas Regional Mobility Authority (“CTRMA”) staff. We also appreciate the involvement of CTRMA board chair Ray Wilkerson and CTRMA board member David Armbrust at the meeting. This letter provides comments on several of our highest priority issues related to the MoPac South planning process, alternatives analysis, and design elements.

I. The MoPac South process and design should ensure that the Bee Cave Road (RM 2244) intersection functions efficiently and can be improved in its existing configuration in the future.

We appreciate CTRMA staff’s willingness to think seriously and creatively about how best to improve the Bee Cave Road (RM 2244) intersection (“Bee Cave Intersection”) for both the present and the future. As you are aware, this is a vital intersection for our City, our residents, and local businesses. It represents a gateway to not only Rollingwood, but much of Western Travis County.

We understand that the Bee Cave Road intersection is not currently part of the project area and design, however, we want to inform you that the City of Rollingwood does not support the elimination of the Bee Cave Road intersection by creating a “Right-in Right-out” traffic pattern where RM 2244 meets the MoPac access road. The elimination of the Bee Cave Road intersection and shift to this “Right-in Right-out” traffic pattern would negatively impact our residents and local businesses; exacerbate existing traffic problems related to the existing location of MoPac on-ramps and off-ramps; create new traffic issues at the Rollingwood Drive/Andrew Zilker underpass; and, encourage an increase in cut-through traffic along Rollingwood Drive through the heart of our City.

Historically speaking, it appears that the traffic flows and travel times of those traveling north or south in the Austin area take priority over those traveling east or west. With a “Right-in Right-out” traffic pattern at Bee Cave Road/MoPac, those traveling east on Bee Cave Road and attempting to go north on MoPac would have a significant distance and, at certain times of the day, minutes added to their travel times as they made their way south to Barton Skyway to make a turnaround to head north.

Given that this intersection at Bee Cave Road and MoPac sees more traffic than at the Cesar Chavez/MoPac intersection, we believe that the Bee Cave Road intersection should be given highest priority. While “Right-in Right out” is an option, we do not think that it is the “right one” (pardon the pun).

Similarly, the City of Rollingwood does not support a “Diverging Diamond” or “Continuous Flow” intersection at the Bee Cave Road intersection. We think that this type of design in this location would be too confusing for drivers and would not adequately address the traffic problems now or in the future.

In addition, with respect to the Bee Cave Road/MoPac intersection, the City of Rollingwood respectfully requests that any configuration of toll road options proximate to Bee Cave Road use as little of the right of way as possible to allow for flexibility in future improvements of this vital intersection.

II. The City of Rollingwood continues to support the development of an alternative design for MoPac South which incorporates “underpasses” similar to the underpass design utilized on the Mopac Improvement Project (“MoPac North project”) or the “cantilever approach” proposed for the I-35 Improvement Project.

We appreciate your willingness to study the feasibility of all potential congestion relief options that are at or below grade level – specifically, an express lane underpass design between Bee Cave Road (RM 2244) and Barton Springs Road that we discussed with you at our recent meeting. This alternative would mirror the express lane underpasses that were constructed as part of the MoPac North project, which have been touted by CTRMA representatives in media reports as being both less expensive to build and having less visual and sound impact to surrounding neighborhoods than braided, elevated overpasses.

We ask that this express lane underpass option be fully designed and studied as a part of the ongoing alternative analysis for MoPac South. If the design of express lane underpasses for MoPac South will require any design waivers from TxDOT, we request that CTRMA staff meet with us to discuss it and to work cooperatively to see if there are any design changes or improvements that would reduce or eliminate the need for waivers from TxDOT. In the meantime, we request that you provide us with copies of the “as-built” design layouts and drawings for the North MoPac express lane underpasses.

Recently, in TxDOT reports to the media regarding the I-35 project, TxDOT proposes eliminating the upper deck that runs between Martin Luther King Jr. and Airport Boulevards, replacing the two free lanes on each side with added freeway lanes tucked under the frontage lanes using a cantilever approach. We ask that this cantilever design option proposed for I-35 be fully considered as a part of the ongoing alternative analysis for MoPac South.

III. The City of Rollingwood remains opposed to the “Two Express Lanes + Elevated Ramps near Barton Skyway” alternative in its current configuration.

We appreciate CTRMA presenting to the City during one of the recent meetings preliminary sketches of a potential adjustment to the design of the “Two Express Lanes + Elevated Ramps near Barton Skyway” (“Wishbone”) alternative.

The preliminary sketches propose reducing the elevation of the elevated ramps down to the grade of the existing main MoPac travel lanes north of the Bee Cave Road intersection, and shift the higher elevations to the south of the Bee Cave intersection. In spite of this, the City of Rollingwood continues to have serious concerns regarding the Wishbone alternative in its current configuration and in the preliminary sketches. As we indicated in previous correspondences to you, the City remains unconvinced that the Wishbone alternative with elevated ramps near Barton Skyway will improve traffic flow into or out of downtown Austin, or on MoPac.

Most importantly, it appears that the current design of the Wishbone alternative presented to the public and the preliminary sketches provided during the meeting would place the elevated braided overpasses in a configuration that would conflict with general use traffic using the northbound MoPac entrance ramp to the north of the Bee Cave intersection and the southbound MoPac exit ramp to the north of the Bee Cave intersection. Our concern is that the current placement of the elevated express lanes will only serve to exacerbate traffic issues associated with the entrance and exit ramps, rather than improving them.

We also are highly concerned that the proposed Wishbone alternative design will create a “static” situation that will result in a deterioration of the traffic flow in and around the Bee Cave intersection without any acceptable way to improve this critical and highly utilized intersection in the future.

As we have mentioned in previous correspondence to you, Dallas (I-345) and Houston (I-45 Pierce Elevated) are actively engaged with TxDOT in planning efforts to remove elevated portions of highways that are eyesores, divide neighborhoods, create noise and light pollution, are expensive to maintain, and add little or no transportation efficiency. TxDOT has proposed that

the I-35 project focus on eliminating the upper deck that runs between Martin Luther King Jr. and Airport Boulevards, replacing those two free lanes on each side with added freeway lanes tucked under the frontage lanes using a cantilever approach.

As to MoPac South, the Wishbone alternative design will cost an additional \$30 million over and above the two express lane design without elevated, tolled lanes and will not achieve any real benefit to justify either the financial cost or the significant impacts to the human and natural environment.

IV. The City of Rollingwood continues to support the “Two Express Lanes Without Downtown Direct Connections” as the best option that has been presented by CTRMA, and asks that it be fully “optimized” consistent with the “Wishbone” alternative.

The City of Rollingwood continues to take the position that the alternative which contains two express toll lanes in each direction without “double decker” elevated lanes (“Two Express Toll Lanes Without Direct Connection To Downtown” alternative) (“Two Express Toll Lanes”) should be the preferred option at this time. We are disappointed that this alternative has not been improved or “optimized” since it was first presented to the public at the November 10, 2015 Open House despite repeated requests to do so.

By contrast, the Wishbone alternative has been “optimized” in several ways in which the Two Express Toll Lanes alternative has not. We are hopeful that this does not mean that CTRMA has prematurely abandoned a reasonable alternative in favor of a predetermined outcome or alternative.

CTRMA has represented that the optimizations that have been added to the Wishbone alternative yield travel times on the express lanes that are the same as the travel times estimated for the “double decker” plan: 9 minutes. We think that once the Two Express Toll Lanes alternative is fully optimized like the Wishbone alternative has been, it will show that the travel times are comparable. These two alternatives in their current state cannot be fairly compared to each other or reasonably evaluated by the public.

Currently, Two Express Toll Lanes without a direct connection alternative is merely the same plan proposed for the original double decker configuration over Lady Bird Lake without the infrastructure for the double decker. Optimizing the Two Express Toll Lanes alternative to include TSM improvements and additional capacity will improve the travel times without requiring elevated lanes. Optimizing the Two Express Toll Lanes alternative should, at a minimum, include the following:

1. Improvement of the design and placement of the on-ramps and off-ramps surrounding the Bee Cave Road and MoPac intersection given the available R.O.W.
2. The Wishbone alternative includes an extra general-purpose lane on each side between Cesar Chavez and Bee Cave Road. These additional capacity lanes should be integrated into the Two Express Toll Lanes between Bee Cave Road and Cesar Chavez. Consistent

with the Wishbone alternative, adding the additional lanes of capacity to each side of the bridge across Lady Bird Lake (from 5 lanes each direction to 6 lanes each direction) will remove one of the existing merging bottlenecks for southbound MoPac traffic entering from the southbound MoPac frontage road, 5th Street, Cesar Chavez and Lake Austin Blvd. The southbound additional capacity lane could serve as a dedicated exit lane for the Bee Cave Road exit. The northbound additional capacity lane could serve as an additional on-ramp lane from the Bee Cave Road/Barton Springs frontage road. Adding these lanes provides more opportunities for studying alternative designs for improving the on and off ramps accessing Bee Cave Road.

3. The Wishbone alternative includes a dedicated lane for traffic entering southbound MoPac from Lake Austin Blvd and 5th Street. This configuration of 2 lanes removes a known bottleneck where inbound Lake Austin Blvd/5th Street traffic and Cesar Chavez traffic merge before entering MoPac. Removing this bottleneck from the Two Express Toll Lanes alternative will improve travel times for southbound traffic between Cesar Chavez and Bee Cave Road.
4. Improvement of the routes on and off of MoPac used by both toll lane and non-toll lane traffic.

As stated above, the City of Rollingwood continues to posit that the Two Express Toll Lanes Without Downtown Direct Connections alternative is the option which fully meets all MoPac South project "goals and objectives" while having the fewest adverse impacts to the human and natural environment and significantly improving travel times. This alternative is fully consistent with the CAMPO 2040 Regional Transportation Plan. As noted in the past, the CAMPO 2040 plan does not include the provision of direct, tolled access into downtown as a goal. Likewise, the provision of direct, tolled access into downtown is not part of the purpose or need for the MoPac South Project. Furthermore, this alternative is more fiscally responsible because it would cost an estimated \$30 million less than the Wishbone concept and an estimated \$40 million less than the double decker over Lady Bird Lake, all while achieving similar results in transportation efficiency. This alternative would provide tolled express lane users and emergency vehicles plenty of time and ability to safely maneuver and exit downtown.

As previously stated, we are hopeful that CTRMA has not prematurely abandoned a reasonable alternative in favor of a predetermined outcome or alternative. We note that the following FAQ was published on the "MoPacSouth.com" website on or before October 29, 2017, but was removed as of November 3, 2017:

"Why do we need a connection between downtown and the Express Lanes?"

Four of the Express Lane configuration options presented in November 2015 include a non-weaving or direct connection between the proposed MoPac South Express Lanes and the downtown Austin core. Two configurations utilized direct connector ramps that elevated over the existing bridges at Lady Bird Lake. Two other configurations utilized "wishbone" ramps that elevated over the general purpose lanes in the area of Bee Cave

Road/Barton Springs Road and would allow Express Lane traffic to merge easily into the correct lane for accessing/exiting downtown.

A non-weaving connection like these between downtown Austin and the Express Lanes would serve the approximately 40% of MoPac South drivers that head downtown in the morning, or the approximately 51% of traffic leaving downtown in the evening to travel on MoPac South. This type of connection increases the safety of all users by eliminating a potentially dangerous weaving condition that would [be] exist in the two [of the] Express Lane configurations under consideration that require Express Lane traffic to merge into the general purpose lanes south of Lady Bird Lake to access existing downtown ramps.

Direct connections to/from downtown would improve travel times for Express Lane users by up to four minutes in the morning and 10 minutes in the evening. These connections would improve travel times for each general purpose lane user by up to 3 minutes in the morning and 7 minutes in the evening."

We continue to have concerns that the MoPac study process has included positions like the one presented in the FAQ to the public regarding elevated lanes on the MoPac South Environment Study website, when the non-elevated alternatives have not yet been similarly optimized. In addition, we request that you provide us with the traffic data that was used as the basis for calculating the statistics in the FAQ statement of: "*A non-weaving connection like these between downtown Austin and the Express Lanes would serve the approximately 40% of MoPac South drivers that head downtown in the morning, or the approximately 51% of traffic leaving downtown in the evening to travel on MoPac South.*"

V. **The City of Rollingwood requests that CTRMA update all proposed alternatives for the MoPac South project to show interconnection with the MoPac North project as currently constructed and the MoPac Intersections Environmental Study as finalized, with a dedicated public comment period for review and comment on the proposed interconnections.**

We respectfully request that prior to any final environmental decision as part of the MoPac South Environmental Study, CTRMA release at least one alternative design reflecting the interconnection between the MoPac South Project and the MoPac North Project because the MoPac north of Lady Bird Lake portion is now constructed. A dedicated period of time for the public to review and comment on such design should be provided.

Recently, CTRMA completed a portion of the MoPac North Project that included restriping the general purpose lanes of southbound MoPac between Enfield and Lady Bird Lake to remove the previously dedicated, general purpose southbound Winsted entrance ramp. CTRMA reassigned the general purpose entrance ramp lane to be a dedicated southbound toll exit lane.

The City of Rollingwood, its residents, and its businesses have been negatively impacted from the reassignment of the southbound Winsted entrance ramp as a dedicated southbound toll exit lane. This reassignment has introduced a new bottleneck into the general purpose lanes in southbound MoPac, causing more travel delays for southbound traffic exiting at Bee Cave Road

into the City's commercial and residential areas. Rollingwood residents attempting to leave the downtown Austin center through alternative routes to access the City of Rollingwood through Barton Springs and Stratford Road are encountering more delays.

In the MoPac North project, as currently constructed, the southbound lanes terminate with a toll lane exit south of Enfield Road, and the northbound lanes start with a toll lane entrance north of Enfield Road. In the proposed alternatives for the MoPac South project, the newly constructed southbound toll lane exit south of Enfield Road does not appear, however, a southbound toll lane entrance is shown south of Enfield Road. In addition, in the proposed alternatives for the MoPac South project, the newly constructed northbound toll lane entrance north of Enfield road does not appear, however, a northbound toll lane exit ramp is shown south of Enfield.

The City of Rollingwood, in participating in Technical Working Group meetings and other meetings with CTRMA officials regarding the MoPac South Environmental Study, has frequently commented on and requested clarification of how the proposed alternatives for the MoPac South project will connect with the final design in the 2012 FONSI for the MoPac North Project, which is now nearing completion. CTRMA has not provided the City of Rollingwood or the public with clarification on how the MoPac South project will connect with the MoPac Improvement Project, as MoPac north of the Lady Bird Lake is now configured and built. Both the Technical Working Group for the MoPac South Environmental Study and the public should have an adequate opportunity to review proposals for interconnecting the MoPac North Project, as approved in the FONSI, and the MoPac South Project.

In an Austin-American Statesman article dated October 26, 2017, titled "On southbound Mopac, toll lane drivers win, Winsted drivers lose," Ben Wear reports on the reassignment of the Winsted entrance ramp as a toll exit lane and states:

Furthermore, mobility authority officials said, the new configuration is the safer option and aligns with typical highway design.

"Normally a ramp has to merge when it comes into a major highway like this," said Steve Pustelnyk, director of community relations for the mobility authority, noting that is the case on most of southbound MoPac's other entrances northward to RM 2222 and beyond. The crunch on southbound MoPac's four-lane bridge over Lady Bird Lake, Pustelnyk said, generally causes afternoon slow-and-go traffic for several miles north of the river.

Had the striping remained the same near the Winsted entrance, Pustelnyk said, what is expected to be high-speed traffic from the toll lane would have to come to a sudden stop to merge into a lane of much slower MoPac traffic.

"Either way, this is a problem for everybody driving the southbound MoPac corridor," Pustelnyk said. "And the backups won't be resolved until we add capacity on the bridge, and south of the bridge."

The statements by CTRMA's representative in the Statesman article indicate that CTRMA has a plan for resolving the backups caused by reassigning the Winsted entrance ramp, but that the

plan will not be in place until “we add capacity on the bridge and south of the bridge”. This plan for resolving the backups has not been released to the public as part of the MoPac South Project. CTRMA’s representative’s statement also indicates that the effectiveness of the MoPac North project to relieve traffic backups caused by the reassignment of a general purpose lane to a toll lane is tied to, and dependent upon, the MoPac South Project being built. Clearly the two projects are intended to rely on each other. Thus far, however, the public has only been presented with these two projects as separate endeavors and has not been provided with an adequate opportunity to comment on proposed interconnections of the two projects.

We respectfully request that CTRMA provide the public with proposed alternatives that clarify the design interconnecting the MoPac South and MoPac North projects, and provide evidence to support the statement that adding capacity on the bridge and south of the bridge will solve the current backup caused in the general purpose lanes by CTRMA’s reassignment of a general purpose lane to toll traffic on southbound MoPac north of Lady Bird Lake.

It is unclear from the current proposed alternatives in the MoPac South Environmental Study whether CTRMA’s plan to resolve the backups caused by reassigning the Winsted entrance ramp would: (1) include adding an additional lane of capacity to the bridge to replace the Winsted entrance ramp; or, (2) remove the current southbound toll lane exit point south of Enfield on southbound MoPac, instead routing the toll lane traffic across the bridge in a new toll lane and returning the lane space to the Winsted entrance ramp.

In addition, the statements by CTRMA’s representative in the Statesman article indicate that CTRMA chose to realign the Winsted entrance because “it is the safer option and aligns with typical highway design” and, without the realignment, the high-speed traffic on the toll lanes would have to come to a sudden stop to merge with the slower general lane traffic on MoPac South. The current proposed alternatives for the MoPac South project are inconsistent with this. All 6 alternatives show a proposed exit point for the northbound toll lane traffic just prior to the Enfield lane exit, and require drivers to merge from the inner toll lane into the slower general lane traffic on MoPac North *without* a dedicated toll exit lane. It appears that inconsistent safety and highway design principles are being applied to the MoPac North project and the MoPac South project with regard to toll lane egress.

Currently, the proposed alternatives for the MoPac South project for northbound traffic south of the Enfield exit add an unsafe condition in which northbound toll lane traffic would come to a halt when attempting to merge into the slower northbound general lane traffic just prior to Enfield lane. It is unclear whether CTRMA has a plan to address this safety issue. In addition, the proposed exit point for the northbound toll lane traffic prior to the Enfield exit, without a dedicated toll exit lane, introduces a new bottleneck into general purpose lanes that would negatively impact traffic flow on northbound MoPac, thereby negatively impacting the flow of eastbound traffic from Bee Caves Road attempting to head northbound on MoPac.

Along a similar vein, we respectfully request that prior to any final environmental decision as part of the MoPac South project, CTRMA also release at least one alternative design for, and provide a dedicated period of time for the public to review and comment on, proposed

interconnections between the MoPac South Environmental Study and the MoPac Intersection Project, as finalized in the FONSI issued on December 22, 2015.

While the MoPac Intersections project has the goal to improve intersections at Slaughter and La Crosse, which do not directly abut the City of Rollingwood, Rollingwood is impacted by changes throughout the MoPac South project that potentially change the volume of traffic expected on MoPac South. Currently, none of the proposed alternatives for the MoPac South project show interconnectivity with the final design in the MoPac Intersections study, including the removal of traffic lights that currently control the flow of traffic on the lanes of MoPac South. In addition, the MoPac Intersections study does not show interconnectivity with any alternative of the MoPac South project, including toll lanes that run along the inner lanes of MoPac South in its current configuration.

VI. The City of Rollingwood continues to request implementation of Bike and Pedestrian Infrastructure to provide consistent, direct access to and from downtown Austin as part of the MoPac South improvements

As part of Technical Working Group meetings and other working group meetings hosted by CTRMA, representatives of the City of Rollingwood have commented on the lack of consistent, direct bike and pedestrian connectivity traveling from the south end of the project to connect with downtown Austin in the alternatives presented. In particular, CTRMA has proposed the bike and pedestrian path for the MoPac South project running alongside the northbound lane of MoPac, terminate on the south side of Barton Springs Road, however, the MoPac South project terminates at Cesar Chavez.

Currently, the proposed bike and pedestrian connection in the MoPac South project alternatives from the south side to the north side of Barton Springs Road requires 3 cross walks in an area with high speed traffic and topography that creates blind spots. A bike and pedestrian bridge over Barton Springs Road has been proposed by the City of Rollingwood with support from City of Austin staff. The proposed location (where bike traffic now crosses under MoPac) is in TxDOT right of way. This necessary connection point should be considered as a bike and pedestrian infrastructure improvement through the MoPac South project. It is important to have multimodal transportation options to give south Austin bikes and pedestrians cross street bicycle connectivity accommodations.

In addition, representatives of the City of Rollingwood have requested clarification on whether the current bike and pedestrian path that connects Barton Springs Road to Stratford Road, running on the east side of MoPac, will be replaced or updated as part of the MoPac South project. On 5 of the 6 alternatives, the current bike and pedestrian connection is removed, and in the “City of Austin” alternative, the bike and pedestrian connection is relocated.

We ask that infrastructure improvement options for providing bike and pedestrian connections from the south side of Barton Springs to the north side of Barton Springs and from the north side of Barton Springs to Stratford Drive, parallel with and proximate to MoPac, be fully designed and studied as a part of the ongoing alternative analysis for MoPac South. Additional bike and pedestrian infrastructure could help address special event traffic issues around and near

Zilker Park and Barton Springs Road and may minimize the need for temporary road closures and barricading during special events by providing separate, permanent facilities for bike and pedestrian traffic across Barton Springs Road.

Finally, we very much appreciate the opportunity to work closely and candidly with CTRMA staff on the process and design of MoPac South improvements, and we look forward to continuing to work closely with the CTRMA, as well as other state and local governmental officials and employees to fully participate in the NEPA planning process for the MoPac South Project.

Please continue to keep us informed about the next NEPA Technical Working Group meeting, as well as any additional Open Houses or other public meetings scheduled for this important Project.

Thank you for your time and attention to these matters.

Sincerely,



Roxanne McKee, Mayor
City of Rollingwood

Cc: Mr. Ray A. Wilkerson
Chairman, Board of Directors
Central Texas Regional Mobility Authority

Mr. David B. Armbrust
Board Member, Board of Directors
Central Texas Regional Mobility Authority


Mr. Al Alonzi
Assistant Division Administrator
Texas Division
Federal Highway Administration



Mr. Russell Zapalac
Chief Planning and Project Officer
Texas Department of Transportation



Mr. Terry G. McCoy, P.E.
District Engineer, Austin District
Texas Department of Transportation



Mr. Ashby Johnson
Executive Director
Capital Area Metropolitan Planning Organization





CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

December 20, 2017

The Honorable Roxanne McKee
Mayor
City of Rollingwood
403 Nixon Drive
Rollingwood, TX 78746

RE: MoPac South Environmental Study

Dear Mayor McKee:

Thank you for your inquiries regarding the MoPac South Environmental Study. We look forward to continuing our conversation with you about this critical mobility improvement project. It is our mission to implement innovative, multi-modal transportation solutions that reduce congestion and enhance quality of life and economic vitality in Central Texas.

The MoPac corridor south of Cesar Chavez Street is the 24th most congested roadway in the state. If we do nothing to address congestion, drivers will spend an additional 35 minutes traveling the corridor by 2035. The Mobility Authority is driven to provide a viable solution that meets the mobility needs and aligns with community values.

The NEPA process

I would like to briefly walk through where we've been and where we're headed as per the National Environmental Policy Act of 1969 (NEPA). The NEPA process is required by federal and state law; it is procedural, public, thorough, and ensures informed decisions.

In February 2016, Save Our Springs Alliance and other plaintiffs filed a suit to stop this study and two other projects; as a result, virtually all work was halted. This past August, the US District Court ruled in favor of the process as previously implemented. With this now behind us, we are beginning to re-engage.

As you know, and as presented to the public, the Express Lane(s) alternative is the Recommended Build Alternative for MoPac South. Express Lanes are a viable congestion management tool for increasing reliability for both drivers and transit. Congestion along the MoPac corridor comes at a high cost to travelers—in terms of time lost, diminished quality of life, and fuel consumption. Not to be overlooked is the impact to our environment – in terms of impact on emissions, water quality, and noise pollution. Increasing demand for MoPac, an already overburdened and congested corridor, requires the smartest long term solution possible. This increase in demand along the South MoPac corridor will undoubtedly impact not just MoPac, but the neighboring network of cross streets such as Bee Caves Rd.

3300 North IH-35, Suite 300 Austin, Texas 78705

Telephone: (512) 996-9778 | Fax: (512) 996-9784 | www.MobilityAuthority.com

Ray A. Wilkerson, *Chairman* • Nikelle Meade, *Vice-Chair* • David Singleton, *Treasurer* • Charles Heimsath, *Secretary* •
David B. Armbrust • Amy Ellsworth • Mark Ayotte • Mike Heiligenstein, *Executive Director*

Following the initial public roll out of the Express Lane(s) Alternative as envisioned by CAMPO, we developed six different potential operational configurations for the vicinity of Lady Bird Lake. These operational configurations were presented to the public for comment at the last open house in November 2015. Each configuration is still being considered and refined. No recommendation has been made to date. Each are receiving the same level of analysis and will be compared against the same criteria. Per the NEPA process, the No Build, or “do nothing”, alternative is always on the table and will be carried forward to completion of the environmental document.

Also per the NEPA process, we will continue evaluation of the proposed schematic design for the Express Lane(s) Alternative in order to ensure that this recommended mobility solution works within current and future conditions. This will include a review of intersection operations along the entire corridor to ensure that ingress and egress will function properly with any proposed improvements. Stakeholder input is important at this stage of the process.

Community outreach efforts in 2018 will include the fifth open house for the project and provide the ample, required time for the official comment period. We will review further comments from the City at that time in concurrence with the other many and varied stakeholder interests and comments.

Following this outreach, and as part of the Draft Environmental Assessment (the environmental document for the study), the project team will thoroughly analyze the Build Alternative and No Build Alternative for potential impacts to the natural and human environment. Per the NEPA process, the draft of the document will be presented at a public hearing for public and agency review. Once comments are received and addressed, a final Environmental Assessment will be prepared for the TxDOT Environmental Division. They will provide the final decision on whether the Build Alternative moves forward or the No Build Alternative is selected. We anticipate a decision in 2019.

City of Rollingwood Priority Issues

We have reviewed your priority issues sent to us this November. It is our understanding these issues include:

- That the MoPac South study process and schematic ensures that the operation of the RM 2244/Bee Cave Road intersection functions as efficiently as possible and can be improved in its existing configuration in the future without eliminating movements (Section I of the November letter).
- That the development of options to relieve congestion on MoPac South include below grade level alternatives (Sections II, III, IV of the November letter).
- That the MoPac South study process provide revisions, available for public comment, to all configurations that clearly identify how the project will connect to the recently completed MoPac North Project and the TxDOT Slaughter Lane and La Crosse Ave intersections project (Sections IV and V of the November letter).
- That the MoPac South design provides consistent, direct access to and from downtown Austin, including for pedestrians and cyclists (Section VI of the November letter).

Review of some of your recommendations is already in progress:

- The Mobility Authority recognizes the importance of the interchange of MoPac and RM 2244/Bee Cave Road. We developed multiple options to improve the efficiency of the

interchange in response to the City's concerns and presented concepts to City representatives on July 31, 2017. Each of these options works toward not only optimizing intersection performance but also reducing elevation of the MoPac corridor through the area. We remain engaged in refining those options for further consideration and will continue to look at efforts to preserve flexibility for future intersection improvements at this location.

- In reference to the underpasses for the northern MoPac Express Lane project, these were an alternative design recommended by the contractor, CH2M Hill. Although the contractor presented this concept to us as a project benefit, the contractor incurred significant cost overruns and schedule delays that significantly extended the projected schedule of the project and caused prolonged construction disruption.
- The Alternatives and configurations for the project maintain pedestrian and bicycle connectivity to and from downtown Austin. The Mobility Authority is committed to multi-modal transportation and as such over eight miles of shared use path are proposed for pedestrians and bicyclists from Slaughter Lane to Lady Bird Lake.

Thank you again for taking the time to provide us your comments. We at the Mobility Authority believe that communities make projects better and welcome the opportunity to enhance the resident and commuter experience. The study team will be relaunching the broader community outreach efforts in 2018. As mentioned earlier, this will include the fifth open house for the project and ample time for the official comment period.

Also importantly, we all need to recognize that this project comes to us at the recommendation of the local MPO and the approval of the Texas Transportation Commission. Our project menu is directly outlined by their process and as such must be followed in the development of alternatives. If at any time CAMPO should change course on this project or any others we are scheduled to develop, we would be obligated to respond and adapt accordingly.

I can assure you the Mobility Authority Board and staff are committed to listening to all of our stakeholders and providing thoughtful consideration to all public comments.

Please look for future updates in the coming months.

Sincerely,



Mike Heiligenstein
Executive Director

cc: Senator Kirk Watson
Mr. Ray Wilkerson, Chairman, Central Texas Regional Mobility Authority
Mr. David B. Armbrust, Board Member, Central Texas Regional Mobility Authority
Mr. Al Alonzi, Federal Highway Administration
Mr. Terry G. McCoy, PE, Texas Department of Transportation
Mr. Ashby Johnson, Executive Director, Capital Area Metropolitan Planning Organization

MoPac south open house

Joel Hull [REDACTED]

Fri 1/7/2022 9:22 AM

To: MoPac South <mopacsouth@ctrma.org>

I prefer plan 3 with the addition of at least one non-tolled road between 290 and Slaughter. This additional non-tolled road really should have been built years ago.

My secondary choice is 2C with the same additional non-tolled road between 290 and Slaughter

The express lanes should not be tolled or the tolls should expire after 5 years.

Joel

Extend public comment period!

Girard Kinney [REDACTED]

Fri 1/7/2022 10:31 AM

To: MoPac South <mopacsouth@ctrma.org>

1. The Purpose and Need and the environmental documents posted completely fail to address safety in any meaningful way. There is no mention of Vision Zero and no mention of ending traffic deaths and serious injuries. TxDOT has a Road to Zero policy and the City of Austin has robust Vision Zero policies, metrics, and strategies. Mopac South must meaningfully address traffic deaths and serious injuries.
2. CTRMA is currently doing an Environmental Assessment to determine whether they will proceed with a full Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). Given that these improvements will directly impact the recharge zone of the Edwards Aquifer, Zilker Park, and Lady Bird Lake, CTRMA should conduct a full EIS.

Girard Kinney, AIA

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

FW: MoPac South Contact Us Form [#535]

Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>

Fri 1/7/2022 11:04 AM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Katie Kenneally <Katie.Kenneally@atkinsglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>

Tracking purposes.

From: Mopac South Contact Form <no-reply@wufoo.com>

Sent: Friday, January 7, 2022 11:02 AM

To: Sylvia Shelton <sshelton@ctrma.org>; jhayter@ctrma.org; Kenneally, Katie M <Katie.Kenneally@atkinsglobal.com>; Gilpin, Charlotte (K-Friese) <Cgilpin@kfriese.com>; Reid, Zane S <Zane.Reid@atkinsglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>; Story, Elizabeth A <Elizabeth.Story@atkinsglobal.com>

Subject: MoPac South Contact Us Form [#535]

Name *	DOTTIE PARR
Email *	[REDACTED]
Address	<input type="checkbox"/> [REDACTED] [REDACTED]

Message *

I just went through the MoPac South Virtual Exhibit. I'm onboard with just about all of the alternative except more toll lanes, especially on MoPac. In my opinion, toll lanes are expensive, infrequently used (at least on MoPac), and not worth the tax dollars spent on them.

I certainly can't afford to use them twice a day and resent tax dollars used to help well off people get around town faster while the other 90% of us sit in traffic. Sour grapes? Perhaps but I rarely see more than 1 car/truck take a MoPac toll road while I'm coming to work or headed home from work.

My other concern would be that the added bike/pedestrian lanes be added to the access roads where possible & only to the main MoPac lanes when only totally necessary, such as bridges. They are too distracting to drivers when placed close to the driving lanes.

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FW: MoPac South Contact Us Form [#537]

Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>

Fri 1/7/2022 12:27 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Katie Kenneally <Katie.Kenneally@atkinsglobal.com>


Tracking purposes.

From: Mopac South Contact Form <no-reply@wufoo.com>

Sent: Friday, January 7, 2022 12:25 PM

To: Sylvia Shelton <sshelton@ctrma.org>; jhayter@ctrma.org; Kenneally, Katie M <Katie.Kenneally@atkinsglobal.com>; Gilpin, Charlotte (K-Friese) <Cgilpin@kfriese.com>; Reid, Zane S <Zane.Reid@atkinsglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinsglobal.com>; Prescott, Meridith <Meridith.Prescott@atkinsglobal.com>; Story, Elizabeth A <Elizabeth.Story@atkinsglobal.com>

Subject: MoPac South Contact Us Form [#537]

Name *	Lindsay Castaneda
Email *	
Message *	<p>I am writing to comment on the MOPAC south expansion project. This is not the time to work on this action of town. We are dealing with construction all over south Austin and do not need any more. The infrastructure should have been in place before we allowed the city to grow in the manner it has. As a parent of Austin High students , a project this size would drastically impact traffic flow in and out of campus. We also have a lot of new high school drivers on that road as well , they don't have the skills to drive in the chaos of construction.</p>
Per Texas Transportation Code, §201.811(a)(5) check each of the following boxes that apply to you:	<ul style="list-style-type: none"> • I could benefit monetarily from the project or other item about which I am commenting

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FW: MoPac South Contact Us Form [#536]

Prescott, Meredith <Meredith.Prescott@atkinglobal.com>

Fri 1/7/2022 12:27 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Katie Kenneally <Katie.Kenneally@atkinglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinglobal.com>

Tracking purposes.

From: Mopac South Contact Form <no-reply@wufoo.com>

Sent: Friday, January 7, 2022 11:40 AM

To: Sylvia Shelton <sshelton@ctrma.org>; jhayter@ctrma.org; Kenneally, Katie M <Katie.Kenneally@atkinglobal.com>; Gilpin, Charlotte (K-Friese) <Cgilpin@kfriese.com>; Reid, Zane S <Zane.Reid@atkinglobal.com>; Lacy, Hillary <Hillary.Lacy@atkinglobal.com>; Prescott, Meredith <Meredith.Prescott@atkinglobal.com>; Story, Elizabeth A <Elizabeth.Story@atkinglobal.com>

Subject: MoPac South Contact Us Form [#536]

Name *

Lynn Boswell

Email *

[REDACTED]

Address

[REDACTED]
[REDACTED]

Message *

I'm writing to you as someone who lives near MoPac in central Austin and also as the Austin ISD Trustee for District 5, a single-member district that includes Austin High and much of Central, West Central and near Southwest Austin. Virtually everyone in the area I represent will be impacted greatly by the decisions made about MoPac South. And most students in this area will eventually pass through Austin High before they graduate from Austin ISD. So while I am speaking for myself, rather than on behalf of the AISD board, I am also in a unique position to share what I am hearing about the MoPac South project from many people in this part of the Austin ISD community.

I am hearing two broad categories of interest and concern. First, people remain deeply supportive of ensuring that there are no direct connector ramps near Austin High School, and that any changes made are designed to minimize congestion, air pollution, and noise near the campus, and to maximize safety for drivers, cyclists and pedestrians. Second, people feel the need for more time and information to ensure they are up to speed and fully informed. That includes an interest in more detail about the proposals people are being asked to choose among, an interest in up-to-date information that can be used to make up-to-date decisions, and the chance to engage more deeply and meaningfully as we are invited to re-engage after a hiatus of more than five years.

I know that the Austin High community and previous D5 Trustee Amber Elenz were deeply involved in the original phase of planning for MoPac South, with the goal of ensuring that impacts on Austin ISD schools, especially Austin High, were considered. As a parent, I followed this project during its early phase. As a trustee, I

have discussed the initial phase of engagement, concerns and AISD-related priorities with Trustee Elenz and many of the parent advocates who were most involved until 2015. I have also encouraged current families to engage with the process as it begins to move forward again.

Because Austin High is located at the intersection of MoPac and Cesar Chavez, this project has the potential to have especially large impacts on the campus and the people it serves. Students travel to Austin High from the north, the south, and the east. Traffic is congested at pickup and dropoff, which coincide with busy times for downtown, as well. There are safety issues for new drivers, for cyclists, for pedestrians, and for others who use the roads and trails near Austin High. Exhaust from cars impacts athletes who practice on fields adjacent to the busy highway. And high levels of noise from traffic have the potential to impact students' ability to learn. The campus serves more than 2300 students, and most children in West Central and near Southwest Austin will be students at Austin High at some point. Decisions made about South MoPac will impact the campus community long into the future, along with all who use the roads and parks in the area.

I appreciate that the focus on designs that avoid direct connector ramps near Austin High is included in the Virtual Open House, and I have highlighted that fact when I have shared information with people. While that captures one of the most essential concerns that I am hearing, the details will matter greatly, and people are very interested in learning more about each proposal and having a more meaningful chance to share what matters to them currently. I am hearing from people new to this conversation that the Virtual Open House does not provide the opportunity to do that in a way that is clear enough or current enough. People want and need greater detail about what's being considered. They are interested in current data that can ensure decisions are made for the Austin of 2022 rather than the Austin of 2015. And many are asking for more time and opportunities to learn and to be heard before the next important decisions are made.

One wonderful and frustrating feature of campus communities is that populations are, in part, transient. Students are deeply connected to their communities while they are part of a specific school. Parents engage deeply with the schools their children currently attend. And while teachers and administrators often serve as a thread that unites one group of students and families with the next, they also move on. Most families who had students at Austin High in 2015 are no longer part of the AISD community, because their children have graduated. They care deeply about the school, but they are no longer encountering day-to-day traffic concerns near campus. Austin High also has a new principal, who does not yet have the detailed knowledge that the previous principal had amassed about MoPac South and its impacts in the area. Because of this, most people at Austin High and many people in AISD new to the conversation about MoPac South, especially as it relates to their current campuses.

As you move forward, I hope you will respond to the community's concerns by extending the January 7 deadline for this phase of the project, by offering more detail about what's being considered, and by bringing the data that's being shared and relied on up to date so it reflects current conditions.

As someone who drives in this area frequently and also spends a great deal of time in the parks near MoPac and Lady Bird Lake, I also want to share some comments about the plan itself. First, I strongly support the priority of keeping any direct access away from Austin High. Second, if access moves forward at Cesar Chavez, I hope it will be placed as far north as possible, near the bluff that faces Lady Bird Lake, leaving as much space as possible for

parkland north of the lake and for safe access near Austin High. Third, I hope that any plan will prioritize protecting future development of the City of Austin's Lamar Beach Plan, in case that ever moves forward. That plan includes thoughtful planning about traffic patterns, greater safety for people who use the park and trail, and important enhancements to public land in a much-loved and heavily-used area. Finally, I ask that Austin ISD be included in MoPac South planning as an important stakeholder in this process, as a major landholder in an area that is deeply impacted by MoPac and its connectors, as a valued partner in seeking solutions, and as an essential part of the future and success of the community we all love and share.

Thank you.

Lynn Boswell

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Reject bad ideas for improving traffic flow on S. Mopac

Mike MURPHY [REDACTED]

Fri 1/7/2022 12:42 PM

To: MoPac South <mopacsouth@ctrma.org>

Extend the Comment period for 30 days. Calling for comments from the public over the holidays amounts to discouraging public comment as people are distracted by other obligations.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single occupancy vehicle peak hour demand” increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Sincerely,

T. M. Murphy
[REDACTED]

Mopac South

Sparks, Grant (USATXW) [REDACTED]

Fri 1/7/2022 1:23 PM

To: MoPac South <mopacsouth@ctrma.org>

Please accept this email as my strong endorsement of the positions taken in comments submitted by the Travis County Commissioners Court and the City of Rollingwood; including recent comments submitted by Amy Pattillo.

I am concerned that the CTRMA is relying on six year old information and severely limiting the public comment period for this proposed project. The negative impact of the current proposal to the residents of the City of Rollingwood, Zilker Park and other adjacent areas will be irreversible and should not be implemented without further significant revisions and considerations.

Thank you.

Grant and Andreas Sparks
[REDACTED]

Public Comment MOPAC SOUTH

Karen Clary [REDACTED]

Fri 1/7/2022 1:25 PM

To: MoPac South <mopacsouth@ctrma.org>

Greetings.

All of the proposed alternatives have pros and cons.

I agree with the public values (p .17, Open House #5 -Nov. 2021 Document:

1. No increased elevations over Lady Bird Lake.
2. No direct connector ramps near Austin High School.

As a result, I do not support Alternatives 1A, 2A, or 3.

I recommend that Alternatives 2B and 2C be carried forward for further consideration.

Thank you for your attention,

Karen H. Clary

Sent from my iPhone

Comments on mopac proposal

Marsha [REDACTED]

Fri 1/7/2022 1:44 PM

To: MoPac South <mopacsouth@ctrma.org>

This project is a grave mistake and will do more damage overtime to the environment, endangering so many things too many to list. There is a reason why people pay much higher prices on the west side they don't want another 1 35

In Austin. No one wants this - especially the neighborhoods that live on either side. I can see you all getting many class action law suits for devaluing neighborhoods and increase in pollution, crime, billboard trash, ruin of trees and natural trails will be polluted around the precious green belt.

This is Not a green solution. You should have bought the railroad when you had the chance.

Also extend feedback for another month- it is sneaky to do this short time- during the holidays and a raging pandemic - that is equivalent to suppression of citizens voices.

Marsha

Keep on Keepin on

Mopac South Public Comment

Elkins, Jules R [REDACTED]

Fri 1/7/2022 1:47 PM

To: MoPac South <mopacsouth@ctrma.org>

Jules Elkins

Assistant Professor of Instruction
Department of Geography and the Environment
The University of Texas at Austin

[REDACTED]

[REDACTED]

[REDACTED]

January 6, 2022

CTRMA

c/o Mopac South Environmental Study
3300 N. I-35, Suite 625 Austin, TX 78705
MoPacSouth@ctrma.org

To the CTRMA:

As an Austin resident and Professor of Environmental Health and Urban Planning, I wish to submit the following comments on the MoPac South Environmental Study virtual open house as official comments for consideration.

1. Extend the public comment period.

The material provided to the public is based on outdated 2015 information. Without updated information, input made by the public is at best faulty. Additionally, the comment period fell over two major holidays, which tends to significantly reduce public engagement.

2. Health Assessment.

Increasing Mopac South by up to 4 additional lanes will significantly increase the levels of pollution to which residents of Austin will be exposed. There is a robust body of scientific evidence that shows that traffic-related air pollution (TRAP) is one of the major sources of exposure in urban areas and has been associated with a wide range of adverse human health effects. These include higher rates of asthma onset and aggravation, cardiovascular disease, impaired lung development in children, preterm and low-birthweight infants, childhood leukemia, and premature death. Emerging evidence links TRAP with neurotoxicity and the alteration of neurobehavioral function.

The human health effects of the expansion of Mopac have not been adequately assessed nor have they been communicated in any substantive or meaningful way to the public. Asking for public comment, and then basing decisions upon those comments, is misleading when the basic scientific information has not been presented.

3. Analyze real alternatives to added toll lanes.

The proposed six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. I encourage the analysis of a range of alternatives that make

better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

4. Include the climate implications as a primary concern in the Mopac South plans.

The transportation sector is the greatest contributor to US carbon emissions—and just as important as vehicles are the roads and highways they travel on. The [State Highway Induced Frequency of Travel](#) (SHIFT) calculator, developed by the Rocky Mountain Institute, shows that the impact of 4 additional lanes for 8.8 miles will induce up to 116 million vehicle miles travelled per year, which is about 1.2 million metric tons of CO₂ emissions by 2050.

5. Engage the public in a robust and meaningful conversation about what kind of

Austin we as a community want for the future.

The average citizen’s understanding of the impacts of infrastructure is more nuanced than it was fifty years ago. There is a broad coalition of people in Austin — neighbors concerned with continued negative impacts from a highway or people who are interested in different forms of mobility — that are pushing innovative options for transit that do not include cars and expanded roadways. We need to continue and expand this community conversation and ask again and again: Who is the greater good that benefits from a “utilitarian infrastructure project”? If the answer doesn’t prioritize the planet, public health and safety for everyone — including people who cannot or do not drive — or the vitality of our precious public spaces, then we must fight for an alternative that does.

Moving transit away from highways and cars is happening all over America. If we look in our backyard to Houston and the proposed expansion of I-45, there is tremendous public outcry over this proposed project because the impacts on the community are intense and the benefits questionable. In a 2019 [Houston Chronicle editorial](#), urban planner and academic, Jeff Speck, wrote that the NHHIP “can be described as having significant costs and significant benefits. The costs are best understood as tremendous, and the benefits are best understood as false.”

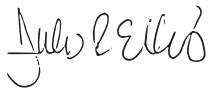
We live on a rapidly warming planet. We know what kind of infrastructure projects are going to help, and which are going to hurt our chances of survival. These are not just roads, but questions of collective action. Most people want access to safe places to walk and bike where they live. Most people say they would like to reduce greenhouse gas emissions. However, the infrastructure that will allow us to do this requires trade offs, such as losing a traffic lane to put in a bike lane, or muscling through a few months of construction near neighborhoods in order to build a new transit stop.

In Conclusion

Breaking free of the status quo will require creativity and a commitment on the part of transportation officials. It will require a clear mandate from voting citizens that they want to see funding go towards green spaces, bus service, and fixing inadequate sidewalk facilities, with less towards asphalt and road widening. It will require elected officials to show political courage and boldness and implement the will of a representative democracy — not just the squeakiest wheels with the largest campaign donations.

Let's slow down and have this vitally important community conversation about our future as Austinites and the future of Austin.

Sincerely,



Jules R. Elkins

Assistant Professor of Instruction
Department of Geography and the Environment
The University of Texas at Austin



Mopac South Comment Period : last day

LEIGH ZIEGLER [REDACTED]

Fri 1/7/2022 1:59 PM

To: MoPac South <mopacsouth@ctrma.org>

Please look for alternative options to adding lanes to Mopac and resist adding impervious cover to the heart of Austin South which holds the most viable residential and greenspace near downtown. Help to preserve the lifeblood of Barton Springs, Zilker Park and the trails as well as the livelihood of nearby residences. At some point it may be necessary to add a single lane to each side but at this time please consider all alternatives coordinated with plans for I-35 and give attention to the value, character and ecology that draw so many to the area. Find another way!

Leigh Ziegler
[REDACTED]

Do what you can, with what you have, where you are! Theodore Roosevelt

Comments in opposition to MoPac South Project

Robin Bradford [REDACTED]

Fri 1/7/2022 2:09 PM

To: MoPac South <mopacsouth@ctrma.org>

I'm writing as a 30-year Austin resident and lover of Austin's natural paths and waterways for recreation and quality of life. As a registered voter (78756), I request that you:

Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.

Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

With such love & gratitude,
Robin

Robin Bradford
(she/her/hers)

[Redacted signature]

[Redacted signature]

Opposed to CTRMA's proposed Mopac South Project

Laura Fairbanks [REDACTED]

Fri 1/7/2022 2:12 PM

To: MoPac South <mopacsouth@ctrma.org>

My name is Laura Fairbanks and I've lived in Austin the last 45 years.

What I love about Austin is Barton Springs and green space trails available in the heart of Austin -so important for well being of Austin residents.

This project will have adverse environmental impacts on all of those those areas. Austinites in the past have worked very hard to keep the green space clean for future generations. I will continue their efforts because nature is so important for all of us. We must respect and appreciate what it contributes to our lives.

Sincerely, Laura

Sent from my iPhone, Laura

MoPacSouth

Danny McCormack 

Fri 1/7/2022 2:39 PM

To: MoPac South <mopacsouth@ctrma.org>

DO NOT APPROVE THIS PROJECT. WOULD BE DETRIMENTAL TO BARTON SPRINGS AND THE GREENBELT. DAN MCCORMACK

Sent from [Mail](#) for Windows

Comments from Greater Edwards Aquifer Alliance

Annalisa Peace [REDACTED]

Fri 1/7/2022 2:41 PM

To: MoPac South <mopacsouth@ctrma.org>

Please accept these comments from the fifty-two member groups of the Greater Edwards Aquifer Alliance.

Thank you for the opportunity to submit these comments.

Annalisa Peace

Executive Director

Greater Edwards Aquifer Alliance

[REDACTED]

Alamo, Austin, and Lone Star chapters of the Sierra Club
Bexar Audubon Society
Austin, Bexar and Travis Green Parties
Bexar Grotto
Boerne Together
Bulverde Neighborhood Alliance
Bulverde Neighbors for Clean Water
Cibolo Nature Center
Citizens for the Protection of Cibolo Creek
Comal County Conservation Alliance
Environment Texas
First Universalist Unitarian Church of San Antonio
Friends of Canyon Lake
Friends of Dry Comal Creek
Friends of Government Canyon
Fuerza Unida
Green Society of UTSA
Guadalupe River Road Alliance
Guardians of Lick Creek
Headwaters at Incarnate Word
Helotes Heritage Association
Kendall County Well Owners Association
Kinney County Ground Zero
Leon Springs Business Association
Medina County Environmental Action
Native Plant Society of Texas – SA
Northwest Interstate Coalition of Neighborhoods
Preserve Castroville
Preserve Lake Dunlop Association
Preserve Our Hill Country Environment
San Antonio Audubon Society
San Antonio Conservation Society
San Geronimo Valley Alliance
San Marcos Greenbelt Alliance
San Marcos River Foundation
Save Barton Creek Association
Save Our Springs Alliance
Scenic Loop/Boerne Stage Alliance
Securing a Future Environment
SEED Coalition
Signal Hill Alliance
Sisters of the Divine Providence
Solar San Antonio
Texas Cave Management Association
Trinity Edwards Spring Protection Association
Water Aid – Texas State University
Wildlife Rescue & Rehabilitation
Wimberley Valley Watershed Association

January 7, 2022

Central Texas Regional Mobility Authority
Submitted via e-mail to mopacsouth@ctrma.org

RE: MoPac South Environmental Study

These comments are submitted on behalf of the fifty-two member organizations of the Greater Edwards Aquifer Alliance, whose allied mission is to preserve the Edwards and Trinity aquifers, springs, streams and rivers, contributing watersheds, flora and fauna, and the history and culture of the Texas Hill Country

We first request that you extend the comment period for at least an additional thirty days. The comment period fell entirely over the holidays. Extending the comment period will ensure robust and full public input.

We further recommend that you:

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a “finding of no significant impact” demonstrates bad faith for the entire environmental review process. Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour “high occupancy vehicles” (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-COVID world where telecommuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted “single-occupancy vehicle peak hour demand” increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.” The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan (“2035 model”). The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data



and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 model has any conception of this new world. Both also ignore the “induced demand” problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.

Analyze real alternatives to added toll lanes. The six “alternatives” offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.

Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Thank you for the opportunity to submit these comments,

Respectfully,

Annalisa Peace
Executive Director
Greater Edwards Aquifer Alliance

Comments on MoPac South Project

Jean Hopkins [REDACTED]

Fri 1/7/2022 3:21 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Hoppy Goddin [REDACTED]; Ann Kitchen <ann.kitchen@austintexas.gov>; Steve Adler <steve.adler@austintexas.gov>; gina.hinojosa@house.texas.gov <gina.hinojosa@house.texas.gov>; sarah.eckhardt@senate.texas.gov <sarah.eckhardt@senate.texas.gov>

To Whom It May Concern.

We understand that today is the final day to comment on the proposed Mopac South project, and wish to have our comments included in the public record.

We believe this project is a terrible idea, and has not received adequate (and required) environmental review.

We live less than a block from Lady Bird Lake. Jean rows four or five times a week from the Texas Rowing Center, across from Austin High School. Hoppy swims at Barton Springs Pool regularly. We always take out of town visitors to the Pool because we consider it such a unique and special Austin asset. Both of us use the Ann Butler Hike and Bike Trail regularly to get around our neighborhood, and for recreation. Our two granddaughters, now in elementary school, will eventually be students at Austin High. We take them to Zilker Park almost every week. Our family and our friends enjoy the Barton Creek greenbelt.

This project poses potentially severe impacts to our immediate neighborhood and the activities we most cherish as Austin residents.

It appears that the project as proposed would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. This will create substantial adverse impacts on Barton Springs (which feeds Barton Springs Pool and Lady Bird Lake), the Trail, the High School, Zilker Park and the Barton Creek greenbelt.

How can a project of this scope, in such an environmentally sensitive area, not have significant environmental impacts? - including on the two federally protected salamander species living in the area?

Jean is a retired environmental professional and used to prepare environmental impact statements and assessments as an employee of the US Geological Survey, as a consultant for geothermal and pipeline development companies, and for regional Habitat Conservation Planning efforts. She is at a loss how you could justify pursuing a FONSI, as opposed to preparing a full environmental impact statement, for a project of this scope.

We do not believe adding another lane to MoPac will improve traffic problems. The traffic modeling data appears to be based on a 2009 model. It must be updated to use current data as part of the environmental review.

The alternatives assessed in the review do not include a full evaluation of a "no build" alternative that improves traffic flow utilizing readily available methods included but not limited to dedicated HOV lanes, public transit, and ramp metering.

We believe that climate change is an urgent and immediate problem. The environmental review must analyze the impacts of building more capacity for single-occupancy vehicles, and seriously assess the cumulative impact of ignoring an opportunity to redirect Austin's transportation planning towards a more sustainable path.

Finally, we believe you have done a disservice to the public by releasing the document with a comment period over the winter holidays. Please provide the very sizeable interested public with a meaningful opportunity to review and comment, by extending the comment deadline for at least 30 days, following the publication of current, relevant traffic data and analysis.

Thank you for the opportunity to comment on this massive, and massively mis-directed, project. We sincerely hope you will subject it to the thorough review it deserves.

Jean Hopkins and Hoppy Goddin

[REDACTED]

Strongly Opposed to MoPac South Project Proposal

Kathryn Turpin [REDACTED]

Fri 1/7/2022 3:27 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Kathryn Turpin [REDACTED]

I am strongly opposed to the current proposal for the MoPac South expansion.

I urge CTRMA to extend the comment period for at least another 30 days.

The comment period occurred primarily over the holidays, when many people are out of town or busy with holiday stuff - *or* with COVID issues.

A full environmental impact assessment should be made before any expansion is built. MoPac goes right over a highly sensitive area - the Edwards Aquifer, which feeds Barton Springs pool. Should we not know what the impact on this sensitive area would be before we build it?

I am opposed to any kind of a "double decker" road over Town Lake or Zilker Park - or the City's nature preserve by the Botanical Gardens. No more park land or resources should be taken without serious and thorough deliberations - including all alternatives. Besides - isn't Austin considering destroying the double decker lanes on IH 35 because those double decker lanes have not been a long-term solution to traffic?

There are many other less extreme alternatives, that would have far less adverse consequences on the environment and the surrounding area.

These other less extreme alternatives should be fully considered first.

The traffic data should be updated, and the updated results should be provided to the public, so the public has the most current and accurate information.

I urge CTRMA to give more consideration to other alternatives than simply adding toll lanes. Have toll lanes been that successful in Austin in relieving traffic flow?

Climate change must be one of the factors that is considered in this process. We have all become much more aware of the significant - and immediate - effects that climate change is having on each of us individually and as communities. Our community leaders should lead on this issue.

Thank you,

Kathryn

Kathryn L. Turpin
[REDACTED]

Toll road over Town Lake

Thomas Serhus [REDACTED]

Fri 1/7/2022 3:53 PM

To: MoPac South <mopacsouth@ctrma.org>

This is a short-sighted, archaic way of providing access around Austin.
It would cause irreparable damage to the lake and trail areas - AND it would be an awful aesthetic.

Thomas Serhus

Sent from my iPhone

City of Rollingwood Comments - MoPac South Environmental Study Virtual Public Meeting

Ashley Wayman [REDACTED]

Fri 1/7/2022 4:01 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Gavin Massingill <gmassingill@rollingwoodtx.gov>; Ashley Wayman <awayman@rollingwoodtx.gov>

Good Afternoon,

On behalf of Mayor Gavin Massingill, please see the attached comments from the City of Rollingwood regarding the MoPac South Environmental Study Virtual Public Meeting. Please confirm receipt of this email and the attached comment letter, and please do not hesitate to contact me if you have any questions.

Best,

Ashley Wayman

Ashley Wayman
Interim City Administrator
City of Rollingwood





January 7, 2022

Mr. James Bass
Executive Director
Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N IH-35, Suite 625
Austin, TX 78705

RE: Official Public Comment on the MoPac South Environmental Study Virtual Public Meeting Number Five

Dear Mr. Bass:

Thank you for the opportunity to comment on the documents provided at Virtual Public Meeting Number Five for the MoPac South Project. The following comments are based on our review of these documents and the CAMPO 2045 Transportation Plan (2045 Plan) and are made in addition to numerous comments, official city actions, official resolutions, and personal engagement by multiple elected officials to both CTRMA and CAMPO over the past six and a half years.

Although little evidence exists as to the consideration or incorporation of any of our previous comments into your current plans, the City wishes to maintain its robust historic record on this issue and trusts that your full review of our previous communications will lead to a more collaborative approach going forward. While the City does not wish to restate each of its earlier comments at length, we enclose all correspondence since April of 2015 and incorporate the same by reference herein for inclusion in the record of comments for Open House Number Five (see Appendix A for all enclosures). Additionally, because CTRMA has not updated the project materials since they were released to the public in 2015, the City's earlier comments are still apposite and have yet to be addressed.

While the City of Rollingwood appreciates CTRMA's efforts to restart the MoPac South Environmental Study, it shares the concerns, expressed by Travis County and others, that it is difficult to meaningfully comment on outdated information. Indeed, because CTRMA has not updated the MoPac South alternatives in over five years, and because some of the existing alternatives do not comply with the 2045 Plan, the City cannot comprehensively address the current alternatives, or their satisfaction of the criteria established by CTRMA. Similarly, although CTRMA has indicated that it will select a preferred alternative based on new data, it has not

THE CITY OF ROLLINGWOOD



publicly released that data such that the City has had no opportunity to review and incorporate any new data into its comments.

Accordingly, to meet the current deadline, the City submits the following comments based on the information it has at this time. However, because the available information is inherently incomplete, the City requests more detailed information and additional time to comment so that we, as a community, can engage with CTRMA staff on the project. Without this additional time and information, the City, along with other public stakeholders, are placed at the distinct disadvantage of having to comment without knowing what, exactly, they are commenting on.

Compliance with CAMPO 2045 Plan

First, the CAMPO 2045 Plan requires that the MoPac South Project have two express lanes in each direction on MoPac, from Cesar Chavez to Slaughter Lane. Only alternatives 2A, 2B, and 2C are consistent with the 2045 Plan because alternatives 1A, 1B, and 3 (the City of Austin proposal) only have one express lane in each direction.¹ However, the Open House Number Five documents state that all six variations of the express lane alternatives are under evaluation and that “project data is required to be evaluated against the most recent Regional Transportation Plan, which is CAMPO 2045.” This raises the following questions:

- Is it CTRMA’s intent to re-evaluate all six express lane alternatives, even though the 2045 Plan requires two express lanes in each direction?
- Or are alternatives 2A, 2B, and 2C the only 2045 Plan-compliant alternatives (assuming the facts in the footnote below)?
- To the extent any new analysis or data for any of the alternative plans exist, we respectfully request copies so that we may study them in greater detail.

The 2045 Plan also requires the construction of an auxiliary lane on southbound MoPac from the RM 2244/Bee Caves Road entrance ramp to the southbound Loop 360 exit ramp, including an acceleration lane. This appears to require two additional lanes—an auxiliary lane and an acceleration lane.² However, none of the proposed plans show these required lanes and how they will fit into the overall plan that is adopted.

- Will additional right-of-way be required to construct the auxiliary and acceleration lanes and what will their configuration be?
- Do all six alternatives include these additional lanes?
- Are there any schematics that show these lanes?

¹ Even alternatives 2A, 2B, and 2C do not technically comply with the 2045 Plan because the proposed two express lanes only extend from Slaughter Lane to Barton Skyway, not to Cesar Chavez. But, based on the information we have before us, we are presupposing this is either an error in the presentation materials or will be corrected at some future date.

² These terms are often used interchangeably, and it is unclear what exactly is required by the 2045 Plan in this regard.

Second, the Past Events information contained on the MoPac South website includes links to detailed schematics presented in Open House Number Four. It also includes the following statement:

NOTE: Project materials, schematics, cost estimates, and other data linked below were developed in 2015 and have not been updated since. Updated materials will be provided virtually at Open House 5 beginning Nov. 22, 2021.

However, we have been unable to locate any updated schematics for the six alternatives, and the existing schematics contain very little detail with respect to geometrics.

- Will the detailed schematics presented in Open House Number Four be utilized for the updated analysis based on the 2045 Plan travel demand model?
- If not, we request copies of any new schematics. We also request that any updated schematics show the interconnection with the MoPac North Project, as it is currently constructed, as well as the proposed design and connection of Cesar Chavez to MoPac North when constructed.

Efficient Functioning of the Bee Cave (RM 2244) Intersection

The City reiterates its comments from the enclosed letter that the design of the MoPac South Project should ensure that the RM 2244 intersection with MoPac functions efficiently, and that the design does not preclude making improvements to the existing operation in the future. Such improvements may include widening the RM 2244 and MoPac frontage road approaches to better accommodate projected demand for travel west on RM 2244. The City has been in discussions with TxDOT concerning improvements to RM 2244, and it would be beneficial to all entities involved that we work together towards a long-term vision.

As we have previously stated, RM 2244 is a vital corridor for the City of Rollingwood and contains all of the City's commercial properties, which provide vital sales tax revenue. Additionally, the City is aware of and is sensitive to the needs and concerns of our faith-based community partner who owns property along the frontage road and adjacent to this key intersection. Any change to the RM 2244 intersection will have a direct and dramatic impact on the City and its residents. Therefore, we request that the MoPac South plan evaluation criteria include consideration of the need for upgraded intersections along MoPac South, such as RM 2244, Rollingwood Drive, and Barton Springs Road.

Significantly, the Open House Number Five documents do not include any schematics showing the intersection of RM 2244/Bee Caves Road. At one time, there was a proposal to close the intersection of RM 2244 at MoPac so that all eastbound traffic from RM 2244 would be required to turn south along the MoPac frontage road and complete a U-turn at Barton Skyway in order to proceed north along MoPac and the frontage road (the "right-in, right-out" option). The Open House Number Five documents do not show that as a proposed option, but they also do not negate it.

- Is there a plan to change the intersection of RM 2244 at MoPac? If so, please provide any detailed plans that are under consideration.
- Has there been any consideration to how changes to the RM 2244 intersection could impact traffic along Rollingwood Drive (for example, people may use Rollingwood Drive as a cut-through to avoid the RM 2244 intersection)? If so, we would appreciate copies of any such study.

The City of Rollingwood continues to oppose dramatic changes to the RM 2244 intersection, including the diverging diamond and continuous flow options that have been previously discussed. This intersection is the gateway to our City, how most of our citizens exit to go to work, and it is the center of our commercial tax base. Working together and establishing an efficient design for the RM 2244 intersection is vital to the City of Rollingwood.

The City of Rollingwood Opposes Elevated Lanes over MoPac and Elevated Ramps near Barton Skyway.

The City supports improvements to MoPac South that serve to increase mobility and safety; however, we oppose roadway designs that place elevated lanes over MoPac (e.g., Alternatives 2A and 2C). As we stated in the November 2017 letter, elevated lanes increase noise, are unsightly, and are currently being removed throughout the State of Texas, with I-35 in downtown Austin being the most recent example. Elevated lanes would not only affect the quality of life in Rollingwood, they would also negatively impact Zilker Park, the Zilker Park Club House, and Barton Springs.

Likewise, the City of Rollingwood opposes elevated ramps near Barton Skyway in a wishbone configuration (e.g., Alternative 2C). Although we have not had an opportunity to review CTRMA's updated plan, data, or traffic modeling, the City is unconvinced that the wishbone alternative with elevated ramps at Barton Skyway would improve traffic flow into or out of downtown. Instead, it appears from the preliminary sketches that the proposed configuration would conflict with general traffic using the northbound MoPac entrance ramp to the north of the Bee Cave intersection and the southbound MoPac exit ramp to the north of the Bee Cave intersection. We believe this could actually exacerbate traffic problems associated with these ramps rather than improving them.

The City of Rollingwood instead continues to support an alternative, such as 2B, that contains two express toll lanes in each direction without elevated lanes or a direct connection to downtown. As we have expressed before, and again without the benefit of updated traffic modeling, we are concerned the travel time comparisons between options 2B and 2C are not a fair comparison because the wishbone configuration has been optimized in several ways in which the two express toll lanes alternative has not. Thus, while CTRMA's current materials suggest an estimated travel time of 9 minutes—compared to 13 minutes for the non-elevated, two toll-lane alternative—the City believes that, properly optimized as set forth in the November 2017 letter, both options would produce comparable travel times.

The City also continues to support the development of an alternative design for Mopac South incorporating an express lane underpass design between RM 2244 and Barton Springs Road, which would mirror the express lane underpasses that were constructed as part of the MoPac North Project. Underpass lanes are both less expensive to construct and reduce road noise pollution. The City also supports the cantilever design currently being considered for the I-35 project between Airport Boulevard and Martin Luther King Drive.

Finally, the City reiterates the comments, as detailed in the enclosed letter, that CTRMA should (1) update all proposed alternatives for the MoPac South Project to show interconnection with the MoPac North Project and (2) implement bicycle and pedestrian infrastructure to provide consistent, direct access to and from downtown Austin as part of the MoPac South improvements.

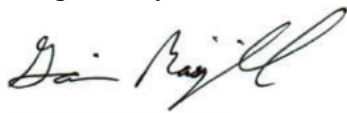
Additional Open House and Opportunity to Comment

The City of Rollingwood joins Travis County in its request that CTRMA repeat the virtual open house process once it has provided updated data, modeling, and information regarding all of the alternatives to the public. This will allow the City, and others, to offer complete and specific comments and will ensure that CTRMA is able to select a preferred alternative based on informed, data-based public input rather than assumptions and speculation on outdated information.

Once again, the City of Rollingwood appreciates CTRMA's efforts in conducting this process and working toward improved mobility for all of the MoPac stakeholders. The City recognizes the need for improvements to MoPac, supports the goal of improving vehicle, bike, and pedestrian traffic in the area, and looks forward to continuing to work with CTRMA, CAMPO, and TxDOT to accomplish those goals.

Should you have any questions, please do not hesitate to contact me.

Respectfully,

A handwritten signature in black ink, appearing to read "Gavin Massingill". The signature is fluid and cursive, with a large initial "G" and a long, sweeping tail.

Gavin Massingill
Mayor
City of Rollingwood

APPENDIX A



CITY OF ROLLINGWOOD

04/01/15

Capital Area Metropolitan Planning Organization
Board of Directors

Sent Via Certified Mail
Sent Via Email

Sirs/Madams:

The City of Rollingwood Council Members and myself have attended, participated, and listened to citizens' comments at the Public Hearings and have considered the proposed double-decked expansion at a public hearing of the City Council held on March 11, 2015. The consensus that has resulted from these meetings is that the City Council Members and I have very strong objections to the current MoPac South Expansion Project plans. Please add these comments to the public comments for the CAMPO 2035 and 2040 plans.

The following is a summary of the Pros and Cons concerning the proposed plans:

Pros

- Improve traffic flow will benefit uses of MoPac entering and exiting at the City.
- The proposed exit ramp onto Bee Caves Road would improve the dangerous existing ramp.
- Possible improvement to the Rollingwood Drive/MoPac intersection are desired.
- Possible improvement to the Bee Caves Road/MoPac intersection are desired.
- Possibilities for improvements/developments to the Hike and Bike trails would be beneficial.

Cons

- Noise levels will significantly increase from the proposed elevated lanes.
- Light pollution will significantly increase from the proposed elevated lanes.
- Use of park areas by youth sports teams and the public and park development will be negatively impacted.
- The proposed MoPac connection to I-35 is not being discussed in the plan, and would adversely impact Rollingwood with increased traffic on MoPac.
- Ingress/Egress "short window" access for Express Lanes at Barton Skyway and Hwy. 360.
- The necessity of traveling south to Barton Skyway to reach Express Lanes from the City.

- Lack of an entry/exit point feasibility study.
- Proposed Bike/Pedestrian lane plan is not considered to be safe or rational.
- Residents' views of downtown Austin will be obstructed.
- An upper deck and exit located in the immediate vicinity of Austin High School is believed to be an undesirable infringement on the school.
- It is believed that the plan for northbound lanes to merge to one lane will result in an increase in traffic congestion at the point of merger and backing up from that point.
- The project's plans for access to and from Cesar Chavez Street may not be sufficient to address the increase of 15,000 workers from two new developments in that area and any new plan should provide for additional traffic capacity on Cesar Chavez Street, particularly at Lamar Street Bridge, into the downtown area.

As stated, these are only a summary of the issues and comments that have been made by City Council members and myself, and are further based on concerns voiced by residents of the City. As for noise and light pollution and the visual impact, no one can recall a double-decked highway in a vicinity like ours, where the location of homes and parks on the immediately surrounding hills will suffer the effects all the more, being on more of an even elevation with the elevated highway.

The City of Rollingwood's City Council Members and myself appreciate the traffic reduction efforts of CAMPO and the opportunity to provide input to the project's plan. We sincerely hope that such input is seriously considered to develop a final plan that is publicly acceptable as well as functionally sound.

Sincerely,



Thom Farrell
Mayor
City of Rollingwood

Cc: Victor Vargas P.E. Area Engineer, TxDOT

**RESOLUTION
OPPOSING THE CURRENT
CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION'S
PLANS TO CONSTRUCT ELEVATED LANES
ON HIGHWAY 1 (MOPAC) ACROSS LADYBIRD LAKE**

WHEREAS, The current Capital Area Metropolitan Planning Organization's plans to construct double-decked elevated lanes on Highway 1 (MoPac) across Lady Bird Lake would significantly increase the noise, light and air pollution levels in the vicinity of such proposed lanes; and

WHEREAS, The City is situated on hills adjacent to MoPac which compounds not only the effect of pollution resulting from the proposed elevated highway, but would have a unique visual impact on residents of the City;

WHEREAS, Park development, general public use, and the use of the park areas by youth sports teams will be negatively impacted by such an increase in noise, light, and air pollution; and

WHEREAS, The exit for the planned lanes in the immediate vicinity of Austin High School is seen as an infringement on the school and will result in significant increase in pollution in the immediate vicinity of school sports activities and recreational activities occurring on the lake and adjacent hike and bike trails; and

WHEREAS, The plans for an elevated, direct connection express lane to terminate on the already congested Cesar Chavez will result in an increase in traffic congestion at the point of merger and will cause traffic backups on Mopac, Mopac frontage roads, and other roadways in the vicinity of the City; and

WHEREAS, The project's plan does not provide for such imminent additional capacity on Cesar Chavez street, particularly at the Lamar street bridge, into the downtown area; and

WHEREAS, The City Council of the City of Rollingwood desires to work with the City of Austin and Travis County to develop alternatives to the proposed elevated additional lanes and exits;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ROLLINGWOOD:

1. The City opposes the current Capital Area Metropolitan Planning Organization's plans to construct double-decked elevated lanes on Highway 1 (MoPac) across Lady Bird Lake.

2. The City urges the City of Austin and/or County of Travis to work together with each other and all other affected jurisdictions to develop and propose alternatives to the double-decked elevated highway over Lady Bird Lake that will address traffic congestion on MoPac in a reasonably equivalent manner that minimizes the negative effects on property and uses in the vicinity of MoPac.

Passed and Approved the 15th day of April, 2015.



Thom Farrell, Mayor

Attest:



Robyn Ryan, City Secretary



City of Rollingwood

July 23, 2015

Mr. Al Alonzi
Assistant Division Administrator
Texas Division
Federal Highway Administration

Mr. Russell Zapalac, P.E.
Chief Planning and Project Officer
Texas Department of Transportation

Mr. Mike Heiligenstein
Executive Director
Central Texas Regional Mobility Authority
3300 N IH-35, Suite 300
Austin, TX 78705

Mr. Ashby Johnson
Executive Director
Capital Area Metropolitan Planning Organization

Re: MoPac South Project

Dear Sirs:

On February 18, 2015, Mike Heiligenstein spoke to the City of Rollingwood (the "City") to provide a general overview of the MoPac South Project (the "Project"), and to solicit comments about its initial design. He accurately observed that the Project was in "our backyard"

and since then, both the Central Texas Regional Mobility Authority (“CTRMA”) and the Capital Area Metropolitan Planning Organization (“CAMPO”) have received numerous comments from Rollingwood residents, and the City voiced its concerns in various meetings about the Project.

The City sent a letter, dated April 1, 2015, detailing what it considers to be the *pros* and *cons* of the Project, and on April 15, 2015, the City of Rollingwood adopted a Resolution Opposing the Current Plans to Construct Elevated Lanes on MoPac.

CTRMA representatives have repeatedly said the initial design, which included elevated lanes, was simply “lines on a page.” CTRMA has also consistently maintained that it is open to alternative design approaches, like the alternative submitted by the City of Austin on May 18, 2015.

In its May 12, 2015 Newsletter, CTRMA said it was extending the MoPac South Environmental Study process in order to allow for additional community input and engineering analysis on the Project, based on comments and other feedback from the public. On behalf of the citizens of Rollingwood, we wish to thank you for extending the process to fully allow for increased transparency into the planning process, and additional public input.

The City of Rollingwood is a municipal corporation and political subdivision of the State of Texas. Consistent with current Federal Highway Authority (“FHWA”) and Texas Department of Transportation (“TxDOT”) National Environmental Policy Act (“NEPA”) guidance, the City should be included in the environmental review process for the MoPac South Project as a “Participating Agency.” Under FHWA and TxDOT guidelines, the roles and responsibilities of Participating agencies include, but are not limited to:

- Participating in the NEPA process starting at the earliest possible time, especially with regard to the development of the purpose and need statement, range of alternatives, methodologies, and the level of detail for the analysis of alternatives.
- Identifying, as early as practicable, any issues of concern regarding the Project’s potential environmental or socioeconomic impacts. Participating agencies also may participate in the issue resolution process described later in this guidance.
- Providing meaningful and timely input on unresolved issues.
- Participating in the scoping process. The scoping process should be designed so that agencies whose interest in the project comes to light as a result of initial scoping activities are invited to participate and still have an opportunity for involvement.

It appears that the City has already been designated as a Participating Agency in the MoPac South NEPA planning process. The City of Rollingwood is specifically identified on CTRMA’s MoPac South website (www.MoPacsouth.com) as one of the governmental agencies participating in the MoPac South Environmental Study as part of the National Environmental Policy Act Technical Working Group (“NEPA Technical Working Group”). The members of the NEPA Technical Working Group are specifically responsible for “providing input on the: Purpose and Need for the project; screening and development of alternatives; methodologies to define impacts; and identification of the preferred alternative.” In addition, the members of the

NEPA Technical Working Group are responsible for review of both the draft and final EA before they are issued publically.

The City welcomes this formal role as a Participating Agency in the MoPac South planning process and looks forward to coordinating closely with TxDOT, CTRMA, CAMPO, the City of Austin and other federal, state, and local agencies and providing early input into the NEPA process. Although we expect that there will be a structure for coordination with the Decision Making Agency, TxDOT, the Lead Agencies, CTRMA and the TxDOT Austin District, and the other Participating Agencies, as well as ample opportunity for input from the City into the planning process, we want to take this initial opportunity to raise a few topics of importance.

Rollingwood supports a sustainable solution to improve mobility and safety.

Rollingwood has previously expressed its support for a number of aspects of the Project, including improved traffic flow on MoPac near the City, increased safety at the entrance and exit ramps to and from FM 2244 and, although not specifically described in any proposed plan, improvements to the intersection of Rollingwood Drive and Barton Springs Road/MoPac Access Road, as well as the developments of hiking and biking trails between Rollingwood and Zilker Park.

The City's April 15 Resolution expressed our opposition to CTRMA's plan to construct elevated lanes on MoPac. It was our position, and it remains our position, that the design and construction of elevated lanes on this portion of MoPac will have unacceptable and irreversible negative impacts on both the human and natural environment in an area, which is in many ways the ecological and recreational heart and soul of the greater Austin community. The negative impacts of elevated lanes across Lady Bird Lake, and directly adjacent to Zilker Park, the Austin Botanical Gardens, and the City would be felt by Austinites, and visitors, alike. However, our opposition to constructing elevated lanes should not be interpreted as opposition to the needed improvements to MoPac South that serve to increase mobility and safety, while being sustainable and sensitive to both the human and natural environment.

The City still believes that a "direct connect" to or from Cesar Chavez via elevated lanes will not improve traffic flow into or out of downtown Austin, and has not been provided with any studies that demonstrate otherwise. Unless and until Travis County and the City of Austin choose to make improvements to Cesar Chavez, a tolled "direct connect" to Cesar Chavez will only serve to increase traffic problems near Austin High School.

Rollingwood does not oppose the construction of two express lanes in each direction.

CAMPO and CTRMA have indicated their desire to construct two express lanes in each direction on MoPac South. While the City remains adamantly opposed to the construction of elevated lanes near the City of Rollingwood, we are not generally opposed to the construction of two express lanes in each direction.

Rollingwood is not currently in a position, however, to comment on the use of tolled lanes because we have only seen one proposed design. Rollingwood has not seen any plans

indicating how CAMPO or CTRMA intend to deal with the intersection between MoPac and FM 2244. As you know, the citizens of Rollingwood, and West Lake Hills, will be inconvenienced for a significant period of time during the construction of the Project, and our residents already contend with an inordinate amount of special event traffic (e.g. ACL, Blues on the Green, Trail of Lights, etc.). Despite our repeated efforts to convince TxDOT to modify the special event traffic patterns in and around Rollingwood, the traffic plans are consistently *rubber stamped* by TxDOT without regard to the impact to the residents of Rollingwood, West Lake Hills, and the rest of the traveling public. Rollingwood has previously raised these concerns with CTRMA, but we have yet to see any plans that would address these concerns.

Rollingwood supports the design of a “Signature Bridge” over Lady Bird Lake.

Austin is home to creative and talented minds who love the vibrancy of our growing economy, the natural resources, as well as the recreational opportunities that abound in our region. Our downtown skyline has become a canvas for architectural creativity and expression, which our community has worked hard to foster as we experience unprecedented growth. Lady Bird Lady and the hike and bike trail serve as an oasis for people who seek to paddle, run, hike, or bike in a natural setting. This area is iconic in its representation of the value we place the environment as well as the places that make Austin a special community.

We have serious concerns that if the Project, including the bridge, is built using the standard design-build project delivery method, the eventual construction and delivery of the bridge will prioritize a product that meets mobility needs as inexpensively and quickly as possible, without regard for aesthetics. We are certain that the greater Austin area does not want to create a roadway bridge design that fails to take into account the uniqueness of Austin, and the surrounding environment.

We have the opportunity to work together to create an architecturally significant bridge that serves the purpose of addressing the need for increased mobility and safety while being an aesthetically pleasing gateway to downtown. This approach is by no means novel. The City of Dallas recently partnered with Dallas Area Rapid Transit, Dallas County, North Texas Tollway Authority, Texas Department of Transportation - Dallas District, Texas Parks and Wildlife Department and the U.S. Army Corps of Engineers to design and build not one, but three architecturally significant bridges for highway projects as a part of the Trinity River Corridor Project (see www.trinityrivercorridor.com). Our creative, vibrant, and unique community has an opportunity to work together with our partner agencies create something that is iconic and lasting. We should work together to plan for, design, and build a MoPac South Bridge spanning the lake that respects the architectural beauty, innovation, and mobility this area needs and deserves.

In conclusion, the City is very supportive of the goals of increased mobility and safety. However, the City remains firmly opposed to elevated lanes. The City is also supportive of improvements to MoPac South that will enhance traffic flow around the intersection of FM 2244 and Rollingwood Drive and looks forward to reviewing designs that take into account traffic flows during construction, anticipates future traffic increases, and improves mobility during special events. The City of Rollingwood welcomes its enhanced role as a Participating Agency in

the planning process and its future involvement on the NEPA Technical Work Group. We urge TxDOT, CTRMA, CAMPO, and our fellow Participating Agencies to take advantage of the opportunity to plan, design and build an architecturally significant bridge over Lady Bird Lake, which will over time become an iconic part of the heart and soul of our community.

Finally, we look forward to working closely with the other Participating Agencies to fully participate in the NEPA process, especially with regard to the development of the purpose and need statement, the screening and development of the range of alternatives, methodologies to define impacts, and the level of detail for the analysis of alternatives, and the eventual identification of the preferred alternative for the MoPac South Project.

In that regard, please let us know as soon as possible about the next NEPA Technical Working Group meeting, which we expect will occur prior to the Open House scheduled for some time in August.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thom Farrell', written over a horizontal line.

Thom Farrell, Mayor
City of Rollingwood



November 18, 2015

Mr. Al Alonzi
Assistant Division Administrator
Texas Division
Federal Highway Administration

Mr. Russell Zapalac, P.E.
Chief Planning and Project Officer
Texas Department of Transportation

Mr. Mike Heiligenstein
Executive Director
Central Texas Regional Mobility Authority
3300 N IH-35, Suite 300
Austin, TX 78705

Mr. Ashby Johnson
Executive Director
Capital Area Metropolitan Planning Organization

Re: MoPac South Project

Dear Sirs:

This letter provides our comments on the materials, presentations, and statements of the Central Texas Regional Mobility Authority ("CTRMA") and its representatives related to the CTRMA's October 21, 2015 presentation to the Rollingwood City Council, the CTRMA's October 22, 2015 Rollingwood Area Workshop, the CTRMA's November 10, 2015 MoPac South Environmental Study Open House, and the CTRMA's MoPac South Environmental Study Virtual Open House, which was launched online on October 21, 2015.

We would first like to briefly respond to the CTRMA's August 6, 2015 letter, which was sent from Mike Heiligenstein to Mayor Farrell. Thank you for noting that you "appreciate the City's support for mobility and safety improvements to the MoPac South corridor and your willingness to partner with us as we further develop our Express Lanes alternative." We appreciate your ongoing communication and your desire to partner with us as you develop the plans for the MoPac South Project (the "Project") and conduct the Environmental Study for the Project in accordance with the National Environmental Policy Act ("NEPA").

We were, however, a bit puzzled by the following statement contained in the CTRMA's August 6 letter: "While I understand your concerns regarding the elevated lanes, if the original MoPac had never been built due to similar concerns, we would have had an additional 150,000 vehicles winding their way through neighborhoods and city streets on their way to downtown and area employment centers." We have consistently voiced our support for needed improvements to MoPac South that serve to increase mobility and safety, while being sustainable and sensitive to both the human and natural environment. As we have stated, Rollingwood supports a sustainable solution to improve mobility and safety, and has previously expressed its support for a number of aspects of the Project, including improved traffic flow on MoPac near the City, and increased safety at the entrance and exit ramps to and from FM 2244. However, we want to make sure that the design of the roadway does not repeat the mistakes of the past in ways more fully discussed below.

In addition, the CTRMA's August 6 letter states that: "You are correct to point out that CAMPO supports the two express lanes in each direction — in fact it was a unanimous vote." It is important to keep in mind that the CAMPO 2035 Regional Transportation Plan included only one express lane in each direction for MoPac. The CTRMA requested an amendment to the CAMPO 2035 Plan, which would have changed the scope of the MoPac South project in the CAMPO 2035 Plan from one express lane each direction to two express lanes each direction, and which would have aligned the CAMPO 2035 Plan with the CTRMA "Preferred Alternative". The proposed amendment to the CAMPO 2035 Plan was withdrawn on or about March 30, 2015. The CAMPO 2035 Plan still contains one express lane in each direction for MoPac; however, the CAMPO 2040 Plan, which was adopted by unanimous vote, does include two express lanes in each direction.

The City of Rollingwood does not support elevated lanes of any kind over MoPac.

Cities across the country are actively addressing the negative impacts associated with urban elevated highways. These elevated highways were designed and built during the 1950's, 1960's, and 1970's in an effort to move people living in suburban areas to downtown centers. Cities like New York, Milwaukee, Portland, and San Francisco have all torn down and redesigned elevated urban highways and overpasses in order to improve livability, aesthetics, noise, and transportation. Right here in Texas, both Dallas (I-345) and Houston (I-45 Pierce Elevated) are actively engaged with TxDOT in planning efforts to remove elevated portions of highways that are eyesores, divide neighborhoods, create noise and light pollution, are expensive to maintain, and add little or no transportation efficiency.

Our City and the greater Austin community values and wants to preserve and promote what are our innate strengths in this unique area: walkability, urban parks, bike paths, and the clustering of many different uses close together. With this in mind, we are keenly aware that the noisy, hulking presence of an elevated urban highway, or elevated toll lanes, will only degrade the value of what is perhaps the greater Austin community's most unique, valued and productive land. In this irreplaceable setting, elevated, limited-access toll lanes connecting to downtown, with their small number of entry and exit points, will not move car traffic any more efficiently during rush hour than does the two-express lane option without elevated, direct connect toll lanes, with its multiplicity of route options. In addition, due to its elevated nature and small number of entry and exit points, the elevated, limited-access toll lanes connecting to downtown does not serve to facilitate reliable emergency response in any way.

Elevated "double decker" lanes directly adjacent to Zilker Park and spanning over Lady Bird Lake will soar approximately 45 to 50 feet above ground level and will destroy the viewshed and natural beauty of this special and unique part of the Austin area. It will also adversely impact historic properties, most notably the Zilker Park Historic District, and will transform the character, look and feel from peaceful and green to austere and industrial. In addition to being an eyesore, elevated toll lanes over MoPac will almost certainly increase noise and light pollution to the Zilker Park Historic District, the Nature and Science Center, Zilker Botanical Gardens, Deep Eddy Pool, Lady Bird Lake, Austin High School, and nearby parks and residential neighborhoods, including Rollingwood Park and the City of Rollingwood.

Likewise, the newly introduced proposal to add two, elevated "wishbone" tolled lanes which also would soar 40 to 50 feet above ground level are not a viable alternative. Like the original double decker design over Zilker Park and Lady Bird Lake, these alternative "double decked" lanes over MoPac will also be an eyesore, will create an austere and industrial feel in this area, and will almost certainly increase noise and light pollution directly to nearby parks and residential neighborhoods, including Rollingwood Park and the City of Rollingwood. Shifting the elevated toll lanes to the south will not improve or overcome all of the negative impacts that will result. In addition, this design will cost an additional \$30 million over and above the two express lane design without elevated, tolled lanes and will not achieve any real benefit to justify either the financial cost or the significant impacts to the human and natural environment.

Throughout the initial MoPac South environmental planning process, the CTRMA has promoted its use of a "Context Sensitive Solutions (CSS) process" to ensure that "any mobility improvements not only meet the needs of the community they serve, but fit into the physical setting while reflecting the unique features and characteristics of the project area." According to the CTRMA's materials, CSS is a collaborative approach to develop transportation facilities that fit within its surroundings." In addition, the CTRMA touts that CSS "is an approach that **leads to preserving and enhancing scenic, aesthetic, historic, community and environmental resources**, while improving or maintaining safety, mobility and infrastructure conditions." (emphasis added). Both of the elevated toll lane proposals will directly conflict with the physical setting and destroy the unique features and characteristics of the project area. They will also diminish or destroy the scenic, aesthetic, historic, community and environmental resources of this special area. For these reasons, the CTRMA should not pursue either of the elevated toll lane proposals as a preferred alternative.

As we indicated in our previous correspondence, the City still believes that a “direct connect” to or from Cesar Chavez via elevated lanes will not improve traffic flow into or out of downtown Austin, or on MoPac, and has not been provided with any relevant 2040 traffic studies that demonstrate otherwise. Travis County and the City of Austin do not appear to have any plans to make improvements to Cesar Chavez, meaning a tolled “direct connect” to Cesar Chavez will likely only serve to increase traffic problems near Austin High School. In addition, the entire notion of elevated, tolled lanes directly connecting to Cesar Chavez appears to be contrary to the vision that the City of Austin has for the downtown area. The City of Austin has consistently promoted a denser downtown with an increased number of housing units in the urban core, while emphasizing walkability and bicycling. At the same time, the City of Austin has been reducing or eliminating the amount and availability of public parking in downtown Austin. With this in mind, it seems rather counterintuitive to put any priority on designing and potentially building elevated, limited access, direct connect toll lanes for private vehicle traffic to go directly downtown when the policy of the City of Austin appears to prioritize a reduction in the amount of private vehicles downtown.

The two express lanes alternative with no elevated, direct connect lanes to downtown is the best option that has been presented by the CTRMA.

The alternative which contains two express toll lanes each direction without “double decker” elevated lanes should be the preferred option at this time. It is the option which fully meets all of the MoPac South project "goals and objectives" while having the fewest adverse impacts to the human and natural environment. It will have significantly less impact to historic sites, Zilker Park, schools, and neighborhoods than either of the double decker options while still significantly improving travel times and capacity on our roadway with estimated 2035 travel times that are within minutes of either of the double decker options. This alternative will also undoubtedly result in significantly less public controversy and “push back” from nearby neighborhoods, businesses, and residents specifically because elevated freeway lanes are not part of the design.

This alternative is also fully consistent with the CAMPO 2040 Regional Transportation Plan. The CAMPO 2040 plan does not include the provision of direct, tolled access into downtown as a goal. Likewise, the provision of direct, tolled access into downtown is not part of the purpose or need for the MoPac South Project. In addition, this alternative is also more fiscally responsible because it will cost an estimated \$30 million less than the elevated “wishbone” concept and an estimated \$40 million less than the double decker over Lady Bird Lake concept, while achieving similar results in transportation efficiency. This alternative will provide tolled express lane users and emergency vehicles plenty of time and ability to safely maneuver and exit downtown.

In contrast to the alternatives which employ elevated toll lanes, the two toll lanes alternative without any elevated lanes much better meets the stated goals of the CSS process. This alternative will meet the needs of the Austin area community they serve, but also fit into the physical setting while reflecting the unique features and characteristics of the project area. In addition, this alternative does a much better job of preserving and enhancing scenic, aesthetic,

historic, community and environmental resources, while improving or maintaining safety, mobility and infrastructure conditions.

CAMPO and its consultants should use 2040 traffic data to analyze the alternatives and their impacts to the human and natural environment.

During this initial phase of this planning process for MoPac South, CTRMA and its consultants have used various different traffic studies to analyze the alternatives and forecast anticipated travel times. Most recently the CTRMA utilized a draft 2020 downtown study performed by the University of Texas to evaluate the various alternatives and forecast travel times. In addition, the CTRMA has at times been utilizing “2015 Bluetooth Data” provided by CDM Smith to evaluate the alternatives. We have serious reservations regarding the use of these studies to analyze the various alternatives. This is especially true in the case of the 2015 Bluetooth Data. This sort of data should not be utilized in any manner to analyze alternatives or forecast travel times because it is heavily skewed for a variety of reasons, not the least of which is the fact that the data is being gathered during a time in which significant traffic delays on MoPac South are being caused by the ongoing construction on the MoPac North Project.

In addition, the CTRMA has been using 2035 traffic data to analyze the alternatives and forecast travel times, which was evident at both the February 2015 Open House and at the November 2015 Open House. As noted above, the CAMPO 2040 Plan is now being utilized as the basis for the purpose and need for the MoPac South Project. As such, the analysis of the project should fully include all traffic impacts from all of the roadways contained in the CAMPO 2040 Regional Plan, including any roads which will serve to connect I-35 and MoPac. In addition, all analysis and forecasted travel times should employ the use of 2040 traffic data in order to be complete, accurate, and fully transparent to the public.

On a related note, the traffic data used on the "baseball cards" distributed by the CTRMA at the City of Rollingwood Workshop contained inaccurate information regarding travel times. The CTRMA staff and consultants initially speculated that the inaccurate information was likely the result of a rounding error, and then later indicated that it was likely an error that was made when the data was incorporated into the marketing and graphic materials.

High Occupancy Vehicle (HOV) and transit only lanes need to be studied and objectively evaluated.

The CTRMA has not done any evaluation regarding what the anticipated forecasted travel times would be for alternatives employing HOV, transit only lanes, or additional free lane capacity. The CTRMA has apparently based the decision not to analyze these alternatives on their position that no regional funding is available for this Project to provide free lanes. As noted above, the goals and objectives of the MoPac South Project are to ease congestion and provide relief for all roadway users. Under NEPA, the CTRMA should rigorously explore and objectively evaluate all reasonable alternatives, including alternatives employing HOV, transit only lanes, or additional free lane capacity. In addition, the CTRMA should devote substantial treatment in detail to each alternative that employs HOV, transit only lanes, or additional free lane capacity so that reviewers may evaluate their comparative merits against the other

alternatives that have been proposed. Finally, the alternatives which would employ HOV, transit only lanes, or additional free lane capacity should be included even if they are not within the jurisdiction of the CTRMA for funding or other reasons.

We therefore ask that the CTRMA rigorously explore and objectively evaluate alternatives employing HOV, transit only lanes, and additional free lane capacity. In addition, the HOV and transit only lanes should be compared with the toll and general purpose lane options as part of the environmental study. This is especially true in light of the fact that 2040 traffic data should be employed, and there now appears to be additional regional funding available to fund the construction of roads that are free to the public.

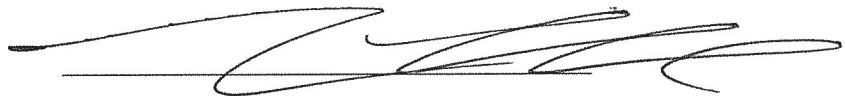
The City of Rollingwood supports a multi-use path on the west side of the MoPac access road.

The City fully supports the addition of a multi-use path to be located on the west side of the MoPac access road, from Lady Bird Lake to Barton Creek Mall. However, instead of the proposed 8-foot wide sidewalk, the City proposes the construction of a 11-foot wide multi-use path designed to accommodate both bicyclists and pedestrians, and which will seamlessly connect with Phase III of the MoPac bicycle and Pedestrian project.

Finally, we look forward to continuing to work closely with the CTRMA, as well as other state and local governmental officials and employees to fully participate in the NEPA planning process for the MoPac South Project.

Please continue to keep us informed about the next NEPA Technical Working Group meeting, as well as any additional Open Houses or other public meetings scheduled for this important Project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thom Farrell', written over a horizontal line.

Thom Farrell, Mayor
City of Rollingwood



CITY OF ROLLINGWOOD

March 7, 2017

Mike Heiligenstein
Executive Director
3300 N. IH-35, Suite 300
Austin, Texas 78705

Dear Mr. Heiligenstein:

Thank you for meeting with us on January 26, 2017. It was a pleasure meeting with you and Dee Anne. As you suggested, we would be happy to bring a group from Rollingwood to your offices to study and discuss with you and your staff the various configurations/details of the designs currently being proposed for MoPac South improvements. We will be in touch soon to set up a date and time for that meeting.

In the meantime, I am also taking you up on your offer to provide the following information to us:

- 1) All traffic studies, whether draft or final, for the Bee Cave Road (R.M. 2244) and MoPac (Loop 1) intersection;
- 2) All traffic studies, whether draft or final, for traffic exiting the south bound Bee Cave Road (R.M. 2244) exit when headed south on MoPac; and,
- 3) All traffic studies, whether draft or final, for the intersection of Rollingwood Drive and Barton Springs Road/MoPac (Loop 1) frontage road.

As I stated at our meeting, the City of Rollingwood and our citizens continue to be very concerned about the impact that the MoPac South improvements will likely have on the intersection of Bee Cave Road (R.M. 2244) and MoPac (Loop 1). Adding to this concern, I have recently been informed that this intersection currently handles even more traffic on a daily basis than the intersection of MoPac and Cesar Chavez. The intersection of MoPac and Bee Cave Road is already problematic and every indicator suggests to Rollingwood that it will continue to get worse unless it is adequately addressed. Elevated lanes over Bee Cave Road at MoPac, which would use up most if not all of the right of way, would severely restrict the ability to address both

present and future problems at that intersection. Because the design and construction of the MoPac South improvements will either directly or indirectly affect this already strained intersection, it is imperative to fully consider and address any impacts to this intersection resulting from the design and construction of the MoPac South improvements as part of the National Environmental Policy Act (“NEPA”) review before a design is chosen. The current problems with this already extremely congested intersection as well as future adverse impacts on this intersection associated with the MoPac South project are currently and will continue to be magnified with special events traffic during the Austin City Limits Festival, the Trail of Lights festival, Blues on the Green concerts, and other similar events at Zilker Park.

It is the City of Rollingwood’s position that the proposed design alternative that includes two express lanes in each direction without relying on elevated lanes has not been fully “optimized.” In other words, we feel that this design alternative was proposed and prematurely dismissed, rather than taking the time and attention necessary to incorporate effective engineering designs into the alternative to make it as functional as it should be. Unless and until all of the proposed designs have been “optimized,” then a fully informed comparison of designs and meaningful selection of a preferred design cannot and should not be made.

As we have expressed to you before, the City of Rollingwood continues to oppose elevated lanes of any kind over MoPac. We do not want to see the same mistakes in elevated roadway design experienced by other U.S. cities, including Texas cities such as Dallas (I-345) and Houston (I-45 Pierce Elevated), repeated here in Austin, especially in the heart of an area that is so special, historic, and irreplaceable. Zilker Park, Lady Bird Lake, the City of Rollingwood, and the City of Austin all deserve better and working together we can do better.

Thank you again for meeting with Mike Dyson, Charles Winfield, and me. We look forward to continuing to work with you and we want to actively participate in the process of selecting a final design for MoPac South improvements. We appreciate your receptiveness to our participation in the process.

Sincerely,

Roxanne McKee

Mayor

cc: Senator Kirk Watson

Representative Donna Howard



CITY OF ROLLINGWOOD

November 27, 2017

Mr. Mike Heiligenstein
Executive Director
Central Texas Regional Mobility Authority
3300 N IH-35, Suite 300
Austin, TX 78705

Re: MoPac South Project

Dear Mr. Heiligenstein:

Thank you again for hosting our recent meeting at your offices. We appreciate the opportunity to discuss various aspects of the Mopac South Environmental Study (“MoPac South Project” and “MoPac South”) planning process and design alternatives with you and Central Texas Regional Mobility Authority (“CTRMA”) staff. We also appreciate the involvement of CTRMA board chair Ray Wilkerson and CTRMA board member David Armbrust at the meeting. This letter provides comments on several of our highest priority issues related to the MoPac South planning process, alternatives analysis, and design elements.

I. The MoPac South process and design should ensure that the Bee Cave Road (RM 2244) intersection functions efficiently and can be improved in its existing configuration in the future.

We appreciate CTRMA staff’s willingness to think seriously and creatively about how best to improve the Bee Cave Road (RM 2244) intersection (“Bee Cave Intersection”) for both the present and the future. As you are aware, this is a vital intersection for our City, our residents, and local businesses. It represents a gateway to not only Rollingwood, but much of Western Travis County.

We understand that the Bee Cave Road intersection is not currently part of the project area and design, however, we want to inform you that the City of Rollingwood does not support the elimination of the Bee Cave Road intersection by creating a “Right-in Right-out” traffic pattern where RM 2244 meets the MoPac access road. The elimination of the Bee Cave Road intersection and shift to this “Right-in Right-out” traffic pattern would negatively impact our residents and local businesses; exacerbate existing traffic problems related to the existing location of MoPac on-ramps and off-ramps; create new traffic issues at the Rollingwood Drive/Andrew Zilker underpass; and, encourage an increase in cut-through traffic along Rollingwood Drive through the heart of our City.

Historically speaking, it appears that the traffic flows and travel times of those traveling north or south in the Austin area take priority over those traveling east or west. With a “Right-in Right-out” traffic pattern at Bee Cave Road/MoPac, those traveling east on Bee Cave Road and attempting to go north on MoPac would have a significant distance and, at certain times of the day, minutes added to their travel times as they made their way south to Barton Skyway to make a turnaround to head north.

Given that this intersection at Bee Cave Road and MoPac sees more traffic than at the Cesar Chavez/MoPac intersection, we believe that the Bee Cave Road intersection should be given highest priority. While “Right-in Right out” is an option, we do not think that it is the “right one” (pardon the pun).

Similarly, the City of Rollingwood does not support a “Diverging Diamond” or “Continuous Flow” intersection at the Bee Cave Road intersection. We think that this type of design in this location would be too confusing for drivers and would not adequately address the traffic problems now or in the future.

In addition, with respect to the Bee Cave Road/MoPac intersection, the City of Rollingwood respectfully requests that any configuration of toll road options proximate to Bee Cave Road use as little of the right of way as possible to allow for flexibility in future improvements of this vital intersection.

II. The City of Rollingwood continues to support the development of an alternative design for MoPac South which incorporates “underpasses” similar to the underpass design utilized on the Mopac Improvement Project (“MoPac North project”) or the “cantilever approach” proposed for the I-35 Improvement Project.

We appreciate your willingness to study the feasibility of all potential congestion relief options that are at or below grade level – specifically, an express lane underpass design between Bee Cave Road (RM 2244) and Barton Springs Road that we discussed with you at our recent meeting. This alternative would mirror the express lane underpasses that were constructed as part of the MoPac North project, which have been touted by CTRMA representatives in media reports as being both less expensive to build and having less visual and sound impact to surrounding neighborhoods than braided, elevated overpasses.

We ask that this express lane underpass option be fully designed and studied as a part of the ongoing alternative analysis for MoPac South. If the design of express lane underpasses for MoPac South will require any design waivers from TxDOT, we request that CTRMA staff meet with us to discuss it and to work cooperatively to see if there are any design changes or improvements that would reduce or eliminate the need for waivers from TxDOT. In the meantime, we request that you provide us with copies of the “as-built” design layouts and drawings for the North MoPac express lane underpasses.

Recently, in TxDOT reports to the media regarding the I-35 project, TxDOT proposes eliminating the upper deck that runs between Martin Luther King Jr. and Airport Boulevards, replacing the two free lanes on each side with added freeway lanes tucked under the frontage lanes using a cantilever approach. We ask that this cantilever design option proposed for I-35 be fully considered as a part of the ongoing alternative analysis for MoPac South.

III. The City of Rollingwood remains opposed to the “Two Express Lanes + Elevated Ramps near Barton Skyway” alternative in its current configuration.

We appreciate CTRMA presenting to the City during one of the recent meetings preliminary sketches of a potential adjustment to the design of the “Two Express Lanes + Elevated Ramps near Barton Skyway” (“Wishbone”) alternative.

The preliminary sketches propose reducing the elevation of the elevated ramps down to the grade of the existing main MoPac travel lanes north of the Bee Cave Road intersection, and shift the higher elevations to the south of the Bee Cave intersection. In spite of this, the City of Rollingwood continues to have serious concerns regarding the Wishbone alternative in its current configuration and in the preliminary sketches. As we indicated in previous correspondences to you, the City remains unconvinced that the Wishbone alternative with elevated ramps near Barton Skyway will improve traffic flow into or out of downtown Austin, or on MoPac.

Most importantly, it appears that the current design of the Wishbone alternative presented to the public and the preliminary sketches provided during the meeting would place the elevated braided overpasses in a configuration that would conflict with general use traffic using the northbound MoPac entrance ramp to the north of the Bee Cave intersection and the southbound MoPac exit ramp to the north of the Bee Cave intersection. Our concern is that the current placement of the elevated express lanes will only serve to exacerbate traffic issues associated with the entrance and exit ramps, rather than improving them.

We also are highly concerned that the proposed Wishbone alternative design will create a “static” situation that will result in a deterioration of the traffic flow in and around the Bee Cave intersection without any acceptable way to improve this critical and highly utilized intersection in the future.

As we have mentioned in previous correspondence to you, Dallas (I-345) and Houston (I-45 Pierce Elevated) are actively engaged with TxDOT in planning efforts to remove elevated portions of highways that are eyesores, divide neighborhoods, create noise and light pollution, are expensive to maintain, and add little or no transportation efficiency. TxDOT has proposed that

the I-35 project focus on eliminating the upper deck that runs between Martin Luther King Jr. and Airport Boulevards, replacing those two free lanes on each side with added freeway lanes tucked under the frontage lanes using a cantilever approach.

As to MoPac South, the Wishbone alternative design will cost an additional \$30 million over and above the two express lane design without elevated, tolled lanes and will not achieve any real benefit to justify either the financial cost or the significant impacts to the human and natural environment.

IV. The City of Rollingwood continues to support the “Two Express Lanes Without Downtown Direct Connections” as the best option that has been presented by CTRMA, and asks that it be fully “optimized” consistent with the “Wishbone” alternative.

The City of Rollingwood continues to take the position that the alternative which contains two express toll lanes in each direction without “double decker” elevated lanes (“Two Express Toll Lanes Without Direct Connection To Downtown” alternative) (“Two Express Toll Lanes”) should be the preferred option at this time. We are disappointed that this alternative has not been improved or “optimized” since it was first presented to the public at the November 10, 2015 Open House despite repeated requests to do so.

By contrast, the Wishbone alternative has been “optimized” in several ways in which the Two Express Toll Lanes alternative has not. We are hopeful that this does not mean that CTRMA has prematurely abandoned a reasonable alternative in favor of a predetermined outcome or alternative.

CTRMA has represented that the optimizations that have been added to the Wishbone alternative yield travel times on the express lanes that are the same as the travel times estimated for the “double decker” plan: 9 minutes. We think that once the Two Express Toll Lanes alternative is fully optimized like the Wishbone alternative has been, it will show that the travel times are comparable. These two alternatives in their current state cannot be fairly compared to each other or reasonably evaluated by the public.

Currently, Two Express Toll Lanes without a direct connection alternative is merely the same plan proposed for the original double decker configuration over Lady Bird Lake without the infrastructure for the double decker. Optimizing the Two Express Toll Lanes alternative to include TSM improvements and additional capacity will improve the travel times without requiring elevated lanes. Optimizing the Two Express Toll Lanes alternative should, at a minimum, include the following:

1. Improvement of the design and placement of the on-ramps and off-ramps surrounding the Bee Cave Road and MoPac intersection given the available R.O.W.
2. The Wishbone alternative includes an extra general-purpose lane on each side between Cesar Chavez and Bee Cave Road. These additional capacity lanes should be integrated into the Two Express Toll Lanes between Bee Cave Road and Cesar Chavez. Consistent

with the Wishbone alternative, adding the additional lanes of capacity to each side of the bridge across Lady Bird Lake (from 5 lanes each direction to 6 lanes each direction) will remove one of the existing merging bottlenecks for southbound MoPac traffic entering from the southbound MoPac frontage road, 5th Street, Cesar Chavez and Lake Austin Blvd. The southbound additional capacity lane could serve as a dedicated exit lane for the Bee Cave Road exit. The northbound additional capacity lane could serve as an additional on-ramp lane from the Bee Cave Road/Barton Springs frontage road. Adding these lanes provides more opportunities for studying alternative designs for improving the on and off ramps accessing Bee Cave Road.

3. The Wishbone alternative includes a dedicated lane for traffic entering southbound MoPac from Lake Austin Blvd and 5th Street. This configuration of 2 lanes removes a known bottleneck where inbound Lake Austin Blvd/5th Street traffic and Cesar Chavez traffic merge before entering MoPac. Removing this bottleneck from the Two Express Toll Lanes alternative will improve travel times for southbound traffic between Cesar Chavez and Bee Cave Road.
4. Improvement of the routes on and off of MoPac used by both toll lane and non-toll lane traffic.

As stated above, the City of Rollingwood continues to posit that the Two Express Toll Lanes Without Downtown Direct Connections alternative is the option which fully meets all MoPac South project "goals and objectives" while having the fewest adverse impacts to the human and natural environment and significantly improving travel times. This alternative is fully consistent with the CAMPO 2040 Regional Transportation Plan. As noted in the past, the CAMPO 2040 plan does not include the provision of direct, tolled access into downtown as a goal. Likewise, the provision of direct, tolled access into downtown is not part of the purpose or need for the MoPac South Project. Furthermore, this alternative is more fiscally responsible because it would cost an estimated \$30 million less than the Wishbone concept and an estimated \$40 million less than the double decker over Lady Bird Lake, all while achieving similar results in transportation efficiency. This alternative would provide tolled express lane users and emergency vehicles plenty of time and ability to safely maneuver and exit downtown.

As previously stated, we are hopeful that CTRMA has not prematurely abandoned a reasonable alternative in favor of a predetermined outcome or alternative. We note that the following FAQ was published on the "MoPacSouth.com" website on or before October 29, 2017, but was removed as of November 3, 2017:

"Why do we need a connection between downtown and the Express Lanes?"

Four of the Express Lane configuration options presented in November 2015 include a non-weaving or direct connection between the proposed MoPac South Express Lanes and the downtown Austin core. Two configurations utilized direct connector ramps that elevated over the existing bridges at Lady Bird Lake. Two other configurations utilized "wishbone" ramps that elevated over the general purpose lanes in the area of Bee Cave

Road/Barton Springs Road and would allow Express Lane traffic to merge easily into the correct lane for accessing/exiting downtown.

A non-weaving connection like these between downtown Austin and the Express Lanes would serve the approximately 40% of MoPac South drivers that head downtown in the morning, or the approximately 51% of traffic leaving downtown in the evening to travel on MoPac South. This type of connection increases the safety of all users by eliminating a potentially dangerous weaving condition that would [be] exist in the two [of the] Express Lane configurations under consideration that require Express Lane traffic to merge into the general purpose lanes south of Lady Bird Lake to access existing downtown ramps.

Direct connections to/from downtown would improve travel times for Express Lane users by up to four minutes in the morning and 10 minutes in the evening. These connections would improve travel times for each general purpose lane user by up to 3 minutes in the morning and 7 minutes in the evening."

We continue to have concerns that the MoPac study process has included positions like the one presented in the FAQ to the public regarding elevated lanes on the MoPac South Environment Study website, when the non-elevated alternatives have not yet been similarly optimized. In addition, we request that you provide us with the traffic data that was used as the basis for calculating the statistics in the FAQ statement of: "*A non-weaving connection like these between downtown Austin and the Express Lanes would serve the approximately 40% of MoPac South drivers that head downtown in the morning, or the approximately 51% of traffic leaving downtown in the evening to travel on MoPac South.*"

V. **The City of Rollingwood requests that CTRMA update all proposed alternatives for the MoPac South project to show interconnection with the MoPac North project as currently constructed and the MoPac Intersections Environmental Study as finalized, with a dedicated public comment period for review and comment on the proposed interconnections.**

We respectfully request that prior to any final environmental decision as part of the MoPac South Environmental Study, CTRMA release at least one alternative design reflecting the interconnection between the MoPac South Project and the MoPac North Project because the MoPac north of Lady Bird Lake portion is now constructed. A dedicated period of time for the public to review and comment on such design should be provided.

Recently, CTRMA completed a portion of the MoPac North Project that included restriping the general purpose lanes of southbound MoPac between Enfield and Lady Bird Lake to remove the previously dedicated, general purpose southbound Winsted entrance ramp. CTRMA reassigned the general purpose entrance ramp lane to be a dedicated southbound toll exit lane.

The City of Rollingwood, its residents, and its businesses have been negatively impacted from the reassignment of the southbound Winsted entrance ramp as a dedicated southbound toll exit lane. This reassignment has introduced a new bottleneck into the general purpose lanes in southbound MoPac, causing more travel delays for southbound traffic exiting at Bee Cave Road

into the City's commercial and residential areas. Rollingwood residents attempting to leave the downtown Austin center through alternative routes to access the City of Rollingwood through Barton Springs and Stratford Road are encountering more delays.

In the MoPac North project, as currently constructed, the southbound lanes terminate with a toll lane exit south of Enfield Road, and the northbound lanes start with a toll lane entrance north of Enfield Road. In the proposed alternatives for the MoPac South project, the newly constructed southbound toll lane exit south of Enfield Road does not appear, however, a southbound toll lane entrance is shown south of Enfield Road. In addition, in the proposed alternatives for the MoPac South project, the newly constructed northbound toll lane entrance north of Enfield road does not appear, however, a northbound toll lane exit ramp is shown south of Enfield.

The City of Rollingwood, in participating in Technical Working Group meetings and other meetings with CTRMA officials regarding the MoPac South Environmental Study, has frequently commented on and requested clarification of how the proposed alternatives for the MoPac South project will connect with the final design in the 2012 FONSI for the MoPac North Project, which is now nearing completion. CTRMA has not provided the City of Rollingwood or the public with clarification on how the MoPac South project will connect with the MoPac Improvement Project, as MoPac north of the Lady Bird Lake is now configured and built. Both the Technical Working Group for the MoPac South Environmental Study and the public should have an adequate opportunity to review proposals for interconnecting the MoPac North Project, as approved in the FONSI, and the MoPac South Project.

In an Austin-American Statesman article dated October 26, 2017, titled "On southbound Mopac, toll lane drivers win, Winsted drivers lose," Ben Wear reports on the reassignment of the Winsted entrance ramp as a toll exit lane and states:

Furthermore, mobility authority officials said, the new configuration is the safer option and aligns with typical highway design.

"Normally a ramp has to merge when it comes into a major highway like this," said Steve Pustelnyk, director of community relations for the mobility authority, noting that is the case on most of southbound MoPac's other entrances northward to RM 2222 and beyond. The crunch on southbound MoPac's four-lane bridge over Lady Bird Lake, Pustelnyk said, generally causes afternoon slow-and-go traffic for several miles north of the river.

Had the striping remained the same near the Winsted entrance, Pustelnyk said, what is expected to be high-speed traffic from the toll lane would have to come to a sudden stop to merge into a lane of much slower MoPac traffic.

"Either way, this is a problem for everybody driving the southbound MoPac corridor," Pustelnyk said. "And the backups won't be resolved until we add capacity on the bridge, and south of the bridge."

The statements by CTRMA's representative in the Statesman article indicate that CTRMA has a plan for resolving the backups caused by reassigning the Winsted entrance ramp, but that the

plan will not be in place until “we add capacity on the bridge and south of the bridge”. This plan for resolving the backups has not been released to the public as part of the MoPac South Project. CTRMA’s representative’s statement also indicates that the effectiveness of the MoPac North project to relieve traffic backups caused by the reassignment of a general purpose lane to a toll lane is tied to, and dependent upon, the MoPac South Project being built. Clearly the two projects are intended to rely on each other. Thus far, however, the public has only been presented with these two projects as separate endeavors and has not been provided with an adequate opportunity to comment on proposed interconnections of the two projects.

We respectfully request that CTRMA provide the public with proposed alternatives that clarify the design interconnecting the MoPac South and MoPac North projects, and provide evidence to support the statement that adding capacity on the bridge and south of the bridge will solve the current backup caused in the general purpose lanes by CTRMA’s reassignment of a general purpose lane to toll traffic on southbound MoPac north of Lady Bird Lake.

It is unclear from the current proposed alternatives in the MoPac South Environmental Study whether CTRMA’s plan to resolve the backups caused by reassigning the Winsted entrance ramp would: (1) include adding an additional lane of capacity to the bridge to replace the Winsted entrance ramp; or, (2) remove the current southbound toll lane exit point south of Enfield on southbound MoPac, instead routing the toll lane traffic across the bridge in a new toll lane and returning the lane space to the Winsted entrance ramp.

In addition, the statements by CTRMA’s representative in the Statesman article indicate that CTRMA chose to realign the Winsted entrance because “it is the safer option and aligns with typical highway design” and, without the realignment, the high-speed traffic on the toll lanes would have to come to a sudden stop to merge with the slower general lane traffic on MoPac South. The current proposed alternatives for the MoPac South project are inconsistent with this. All 6 alternatives show a proposed exit point for the northbound toll lane traffic just prior to the Enfield lane exit, and require drivers to merge from the inner toll lane into the slower general lane traffic on MoPac North *without* a dedicated toll exit lane. It appears that inconsistent safety and highway design principles are being applied to the MoPac North project and the MoPac South project with regard to toll lane egress.

Currently, the proposed alternatives for the MoPac South project for northbound traffic south of the Enfield exit add an unsafe condition in which northbound toll lane traffic would come to a halt when attempting to merge into the slower northbound general lane traffic just prior to Enfield lane. It is unclear whether CTRMA has a plan to address this safety issue. In addition, the proposed exit point for the northbound toll lane traffic prior to the Enfield exit, without a dedicated toll exit lane, introduces a new bottleneck into general purpose lanes that would negatively impact traffic flow on northbound MoPac, thereby negatively impacting the flow of eastbound traffic from Bee Caves Road attempting to head northbound on MoPac.

Along a similar vein, we respectfully request that prior to any final environmental decision as part of the MoPac South project, CTRMA also release at least one alternative design for, and provide a dedicated period of time for the public to review and comment on, proposed

interconnections between the MoPac South Environmental Study and the MoPac Intersection Project, as finalized in the FONSI issued on December 22, 2015.

While the MoPac Intersections project has the goal to improve intersections at Slaughter and La Crosse, which do not directly abut the City of Rollingwood, Rollingwood is impacted by changes throughout the MoPac South project that potentially change the volume of traffic expected on MoPac South. Currently, none of the proposed alternatives for the MoPac South project show interconnectivity with the final design in the MoPac Intersections study, including the removal of traffic lights that currently control the flow of traffic on the lanes of MoPac South. In addition, the MoPac Intersections study does not show interconnectivity with any alternative of the MoPac South project, including toll lanes that run along the inner lanes of MoPac South in its current configuration.

VI. The City of Rollingwood continues to request implementation of Bike and Pedestrian Infrastructure to provide consistent, direct access to and from downtown Austin as part of the MoPac South improvements

As part of Technical Working Group meetings and other working group meetings hosted by CTRMA, representatives of the City of Rollingwood have commented on the lack of consistent, direct bike and pedestrian connectivity traveling from the south end of the project to connect with downtown Austin in the alternatives presented. In particular, CTRMA has proposed the bike and pedestrian path for the MoPac South project running alongside the northbound lane of MoPac, terminate on the south side of Barton Springs Road, however, the MoPac South project terminates at Cesar Chavez.

Currently, the proposed bike and pedestrian connection in the MoPac South project alternatives from the south side to the north side of Barton Springs Road requires 3 cross walks in an area with high speed traffic and topography that creates blind spots. A bike and pedestrian bridge over Barton Springs Road has been proposed by the City of Rollingwood with support from City of Austin staff. The proposed location (where bike traffic now crosses under MoPac) is in TxDOT right of way. This necessary connection point should be considered as a bike and pedestrian infrastructure improvement through the MoPac South project. It is important to have multimodal transportation options to give south Austin bikes and pedestrians cross street bicycle connectivity accommodations.

In addition, representatives of the City of Rollingwood have requested clarification on whether the current bike and pedestrian path that connects Barton Springs Road to Stratford Road, running on the east side of MoPac, will be replaced or updated as part of the MoPac South project. On 5 of the 6 alternatives, the current bike and pedestrian connection is removed, and in the “City of Austin” alternative, the bike and pedestrian connection is relocated.

We ask that infrastructure improvement options for providing bike and pedestrian connections from the south side of Barton Springs to the north side of Barton Springs and from the north side of Barton Springs to Stratford Drive, parallel with and proximate to MoPac, be fully designed and studied as a part of the ongoing alternative analysis for MoPac South. Additional bike and pedestrian infrastructure could help address special event traffic issues around and near

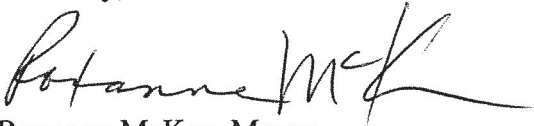
Zilker Park and Barton Springs Road and may minimize the need for temporary road closures and barricading during special events by providing separate, permanent facilities for bike and pedestrian traffic across Barton Springs Road.

Finally, we very much appreciate the opportunity to work closely and candidly with CTRMA staff on the process and design of MoPac South improvements, and we look forward to continuing to work closely with the CTRMA, as well as other state and local governmental officials and employees to fully participate in the NEPA planning process for the MoPac South Project.

Please continue to keep us informed about the next NEPA Technical Working Group meeting, as well as any additional Open Houses or other public meetings scheduled for this important Project.

Thank you for your time and attention to these matters.

Sincerely,



Roxanne McKee, Mayor
City of Rollingwood

Cc: Mr. Ray A. Wilkerson
Chairman, Board of Directors
Central Texas Regional Mobility Authority

Mr. David B. Armbrust
Board Member, Board of Directors
Central Texas Regional Mobility Authority

Mr. Al Alonzi
Assistant Division Administrator
Texas Division
Federal Highway Administration



Mr. Russell Zapalac
Chief Planning and Project Officer
Texas Department of Transportation



Mr. Terry G. McCoy, P.E.
District Engineer, Austin District
Texas Department of Transportation



Mr. Ashby Johnson
Executive Director
Capital Area Metropolitan Planning Organization





July 10, 2019

Mr. Ashby Johnson
Executive Director
Capital Area Metropolitan Planning Organization



Re: Regional Arterials Study, "Draft June 2019"

Dear Mr. Johnson:

The City of Rollingwood appreciates the opportunity to comment on the Regional Arterials Study. As part of the current process phase of "Draft June 2019" during the Public Open House for the Regional Arterials Study, the City of Rollingwood respectfully submits the following comments regarding current and future safety and connectivity needs in view of the "vision network" presented in the "Arterials Boards". The City of Rollingwood is a primary connector point for most of Western Travis County and desires to see improvements to the safety, mobility, economy, and environment of multimodal transportation choices along the roadways that intersect and border the City of Rollingwood and provide connectivity to downtown Austin.

I. The Regional Arterials Study and the need for providing local governments and the public a current version of the Regional Corridor Inventory for all counties

During one of the phases of the Regional Arterials Study, in April 2019, CAMPO distributed a Travis County Regional Corridor Inventory to Small Cities in Travis County and requested comments on the descriptions of roadways impacting small cities. The Travis County Regional Corridor Inventory includes an itemized inventory of local roadways, listed by regional project numbers, and descriptions of existing design, planned improvements, and "new facilities". The City of Rollingwood provided the following comments related to the Travis County Regional Corridor Inventory:

- (a) As to regional project number 90, "Bee Cave/Barton Springs/Riverside Connection", which includes 9 separate project segment descriptions along Bee Caves Road:

i. As to “90.1, Project/Facility Name: Bee Cave Rd – FM 2244; County: Travis; Project Type: Improvement; From SH 71; To: SL1; Source: CAMPO Gap; 2045(Design Type) Undivided; 2045 (improvement, # lanes): 4”, the City of Rollingwood, through Council Member and TAC Appointee Amy Pattillo, commented: *It is confusing that the entire length of Bee Cave Road is listed as a segment and characterized as undivided, 4. The majority of Bee Caves Road now is 4 lanes with a center turn lane.*

ii. As to “90.6, Project/Facility Name: Bee Cave Rd – FM 2244; County: Travis; Project Type: Improvement; From 0.1 Mile East of Redbud Trail; To: 1000 Ft. West of Buckeye Trail; Source: TxDot; 2045(Design Type) Divided; 2045 (improvement, # lanes): 5”, the City of Rollingwood, commented: *It is inconsistent that in 90.2, 90.3, 90.4, and 90.5, Bee Caves Road is described as divided 4 and in 90.6, 90.7, 90.8 and 90.9 it is described as divided 5. All these segments, existing or as planned for improvement (from my knowledge) are 4 lanes with a center turn lane.*

iii. As to “90.10, Project/Facility Name: Mopac Frontage Rd; County: Travis; Project Type: Existing; From Mopac Frontage Rd; To: Barton Spring Rd; Source: CAMPO Gap; 2045(Design Type) Divided; 2045 (improvement, # lanes): 6”, the City of Rollingwood, commented: *The portion of the Mopac frontage road between Bee Cave Road and the start of Barton Springs Road is only 2 lanes on each side, 4 lanes total.*

- (b) As to regional project number 316, Mopac, which includes a single listing of “316.2, Project/Facility Name: Mopac; County: Travis; Project Type: Existing; From SH 45 S; To: Cesar Chavez; Source: TxDot; 2045(Design Type) Divided; 2045 (improvement, # lanes): 6 (non-tolled) + 4 Managed Lanes (tolled) + 4 frontage”, the City of Rollingwood, commented: *The description of Mopac appears to only include the bounds from the Northern point to Cesar Chavez, but not from Cesar Chavez to the Southern point. The description of Mopac, north of Cesar Chavez is marked as existing, however, is inconsistent with what currently exists, which is 6 (non-tolled) with 2 managed lanes (tolled). There are also portions of Mopac North of Cesar Chavez that do not include 4 frontage and also portions south bound from the 5th street exit to the 5th street entrance ramp that are only 2 non-tolled lanes. Before the Inventory is distributed to Councils and Commissioners Courts, I would respectfully request the opportunity to review and comment on the additional description of Mopac for the one or more segments proposed between Cesar Chavez and SH 45 SW.*

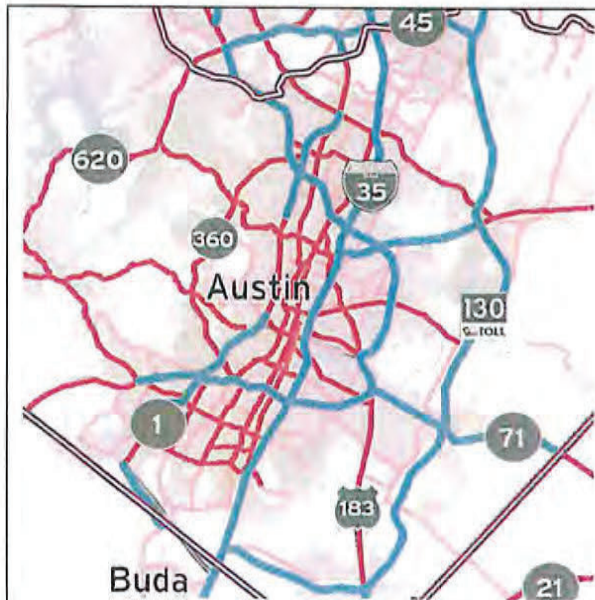
The City of Rollingwood notes that the “Draft June 2019” Public Open House does not include a Regional Corridor Inventory for any of the counties, for review by the public. In addition, the City of Rollingwood has not been provided with any updated draft of the Travis County Regional Corridor Inventory indicating whether any of the City of Rollingwood’s comments have been incorporated into the Travis County Regional Corridor Inventory or whether any other local government comments have been incorporated into the Travis County Regional Corridor Inventory.

In addition, the City of Rollingwood respectfully submits that the maps provided as part of the “Draft June 2019” Open House documents do not provide the City of Rollingwood, or its businesses and residents, with information indicating that the maps are based on the information collected into the Regional Corridor Inventory for each county. At a minimum, the “Draft June 2019” Open House

documents do not inform the City of Rollingwood or the general public regarding the assumptions made regarding the existing and/or planned updates to Mopac or Bee Caves Road.

The City of Rollingwood notes the following:

(1) As to the “existing” map on page 7 of the “Arterial Boards”:



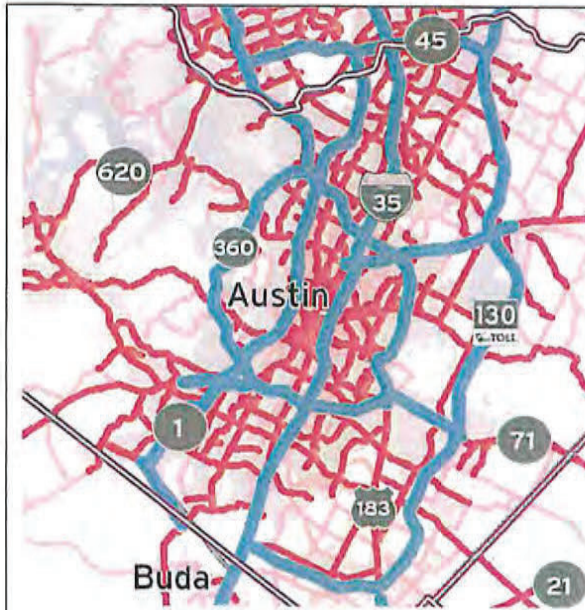
(a) Loop 1 is classified, from 45N to the 45SW, as a “limited access” segment, a “principal arterial” segment, a “limited access” segment, a “principal arterial” segment, a “limited access” segment and a “principal arterial” segment. The Regional Corridor Inventory previously provided to the City of Rollingwood does not reflect a separate description for each of these alleged segments, and also does not include any project description for Loop 1 South of Cesar Chavez.

(b) In addition, it is unclear from the Arterial Boards what criteria is used to label a segment of a roadway as “limited access” or “principal arterial”. There are portions of Loop 1 illustrated that include “managed lanes” and are labeled as both a “principal arterial” and “limited access” and there are portions of Loop 1 illustrated that do not include managed lanes and are labeled as both a “principal arterial” and “limited access”.

(c) Bee Caves Road is shown as a “principal arterial” from east to west, however, the Regional Corridor Inventory describes 9 segments of Bee Caves Road.

(d) It is unclear whether the Regional Corridor Inventory previously provided to the City of Rollingwood was informed by the “existing” map on page 7 of the “Arterial Boards” or whether the Regional Corridor Inventory has been updated to reflect the “existing” map.

(2) As to the “planned” map on page 7 of the “Arterials Boards”, based on the “2040 Planned Network:



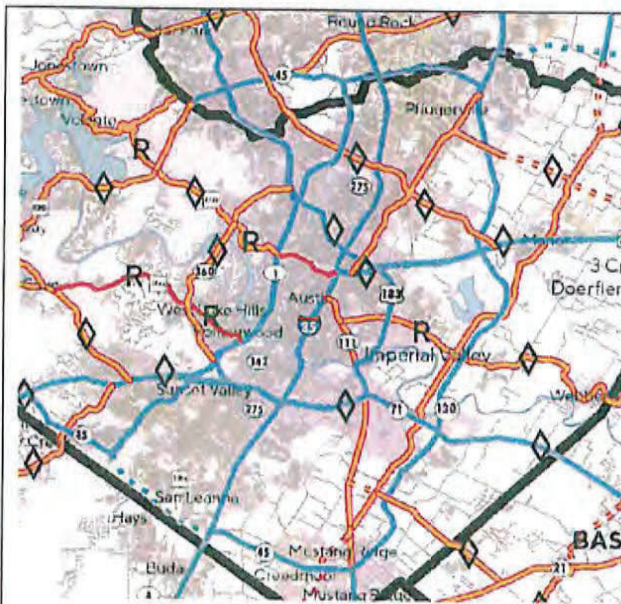
(a) Loop 1 is classified, from 45N to the 45SW, as a “limited access” segment. The Regional Corridor Inventory previously provided to the City of Rollingwood does not provide any description of any planned improvements to Loop 1 to support the “planned” map.

(b) Based on project descriptions in the CAMPO 2040 plan, the “planned” map appears to show primarily “managed lane” planned roadways as the “limited access” roadways.

(c) The CAMPO 2040 Plan specifically segments planned updates to Loop 1 South between the limits of Cesar Chavez and Slaughter Lane, but provides no planned improvements between Slaughter Lane and 45SW.

(d) It is unclear whether the Regional Corridor Inventory previously provided to the City of Rollingwood was informed by the “planned” map on page 7 of the “Arterial Boards” the CAMPO 2040 plan, or whether the Regional Corridor Inventory has been updated to reflect the “planned” map or CAMPO 2040 plan.

(3) As to the “Scenario A” map on p. 8 and “Scenario B” and “Scenario C” maps on p. 9 of the “Arterials Boards”:



(a) In “Scenario A”, “Scenario B”, and “Scenario C”, Bee Caves Road is proposed as including a “reversible lane” scenario. P. 5 of the “Arterial Boards” shows the only potential design option for a reversible lane by repurposing a center turn lane as a reversible lane. It is unclear from the Regional Corridor Inventory that the “improvement” listed under regional project number 90.1 of Bee Caves Road as an undivided 4 lane road, would contemplate using the almost completed safety improvement of a center turn lane between Loop 360 and Rollingwood Drive, as a reversible lane, instead of a center turn lane.

(b) In “Scenario A”, “Scenario B”, and “Scenario C”, it is unclear why a dotted line is proposed between the southern point of Loop 1 and I-35 as a “limited access” roadway, but the existing improvements, of both SH45SW, which is shown on both the “existing” and the “planned” maps, and the upgrade of FM 1626 from a “minor arterial” in the existing map to a “principal arterial” in the “planned” map, are not considered. The City of Rollingwood has commented in the past requesting that the traffic impacts on Mopac South due to the constructions of SH45SW and the upgrade to FM1626 have not yet been adequately measured; the City of Rollingwood is opposed to converting Loop 1 into an I-35 bypass, to the detriment of local traffic, which would be effected if Loop 1 is designed with express lanes directly connected to I-35 South of downtown Austin to I-35 North of downtown Austin.

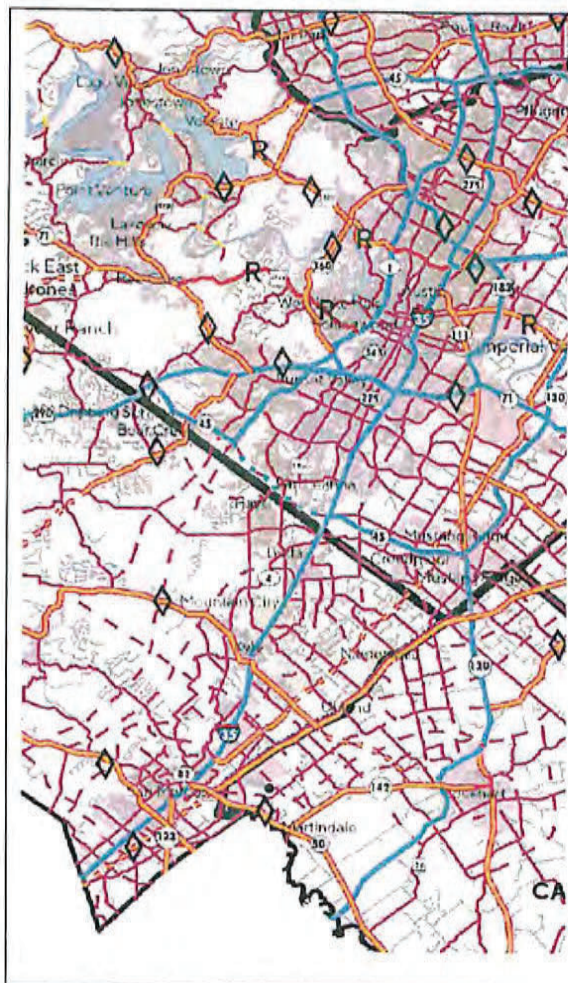
(4) As to the “Scenario B” map on p. 9 of the “Arterials Boards”:



(a) "Scenario B" does not show the now opened SH45SW, but instead proposes upgrading an additional potential through-traffic bypass from I-35 onto Loop 1 through Buda and Brodie Lane. The Regional Corridor Inventory provided to the City of Rollingwood only includes descriptions of projects in Travis County and the proposed "Scenario B" does not provide sufficient information for evaluating the impact of the proposed regional corridors in Hays County to connect to Loop 1. Again, the City of Rollingwood is opposed to converting Loop 1 into an I-35 bypass, to the detriment of local, daily traffic, which would be effected if Loop 1 is designed with multiple regional corridors directly connecting from I-35 South of downtown Austin, through Loop 1, to I-35 North of downtown Austin.

(b) "Scenario B" does not address the improvements needed for traffic flow east-west through downtown Austin on Cesar Chavez.

(5) As to the “Scenario C” map on p. 9 of the “Arterials Boards”:



(a) “Scenario C” provides a regional corridor for the traffic flow east-west through downtown Austin on Cesar Chavez, which the City of Rollingwood continues to support.

(b) “Scenario C” proposes a regional corridor that would extend a new facility through the entirety of Hays County, connecting to updated regional corridors at the southern tip of Hays County that would potentially directly connect to I-35. The Regional Corridor Inventory provided to the City of Rollingwood only includes descriptions of projects in Travis County and the proposed “Scenario C” does not provide sufficient information for evaluating the impact of the proposed regional corridors in Hays County to connect to Loop 1. Again, the City of Rollingwood is opposed to converting Loop 1 into an I-35 bypass, to the detriment of local, daily traffic, which would be effected if Loop 1 is designed with multiple regional corridors directly connecting from I-35 South of downtown San Marcos, through Loop 1, to I-35 North of downtown Austin.

II. The Regional Arterials Study for Improvements to Bee Caves Road (RM 2244)

Bee Caves Road is a main artery for east-west connectivity in western Travis County. The portion of Bee Caves Road that intersects the City of Rollingwood provides the main point of connectivity for access to the business district in Rollingwood and provides a main point of connectivity for pass-through traffic flowing between western Travis County and Downtown Austin.

In evaluating the Regional Arterials Study, the City of Rollingwood notes that TxDot is currently leading a gap project to improve the portion of Bee Caves Road within the Rollingwood City limits, spanning from the intersection at Rollingwood Drive to Montebello Drive. The planned improvements will increase the safety and mobility of Bee Caves Road through the addition of a center turn lane, shoulders, elevation of a low water crossing that is frequently closed during flood events, and addition of pedestrian support. With the completion of the Bee Caves Road project from 360 to Rollingwood Drive, the volume of traffic on Bee Caves Road is expected to increase, and the additional gap project

on Bee Caves Road through Rollingwood is planned to contribute additional safety features to support the additional traffic volume.

Additionally, in evaluating the Regional Arterials Plan, the City of Rollingwood notes the previously authorized divergent diamond at SL 360 and RM 2244 (Bee Caves Road) in the fiscally constrained portion of the 2019 UTP. Modifications to 360/2244 to the west of Rollingwood should be studied to evaluate the impact that changes in traffic flow at this intersection are likely to have to the volume of traffic anticipated on Bee Caves Road between SL 360 and MoPac.

At a general level, the City of Rollingwood is **not supportive** of the placing a reversible lane throughout RM2244 within the City of Rollingwood as proposed in “Scenario A”, “Scenario B”, and Scenario C” of the “Arterials Boards”, for several reasons.

First and foremost, Bee Caves Road is a winding urban road, with blind corners and blind horizons. Short of adding a significant number of traffic lights along Bee Caves Road through the City of Rollingwood, the presence of a bi-directional center turn lane provides a safety feature necessary for traffic to flow safely through the City and access both sides of Bee Caves Road.

Second, Bee Caves Road traverses the City’s business district, which provides the City’s only source of sales tax revenue. A reversible lane through the City would effectively bifurcate the business district and place additional barriers to customer access to the City’s businesses on both sides of the road, all times of day. While the City of Westlake Hills supports almost 70% of their annual budget from sales tax, the City of Rollingwood’s sales taxes comprise a significantly smaller portion of the City’s annual budget. The City of Rollingwood is less than 1 square mile and any barriers to customer access to the City’s business district have a direct, tangible impact to the City’s sales tax and to the viability of the small businesses in the City. For example, as the City of Rollingwood has commented on many times over the years, the road closure at Bee Caves and Mopac during special events at Zilker Park is a barrier to customers freely accessing the business district, which has a negative economic impact on the City. The City is concerned that a reversible lane would have a daily negative impact to its businesses similar to a special events road closure.

In addition, in an effort to increase the sales tax base of the City, the City of Rollingwood is in the process of engaging a firm to perform a Comprehensive Commercial Corridor Analysis, with plans to evaluate effective redevelopment of the City’s business district to increase sales tax. The City is beginning, in earnest, a plan to revitalize and promote redevelopment of the business district in an effort to increase sales tax in order to continue to provide city services, including police service for response on the Bee Caves Road corridor and Mopac frontage areas. The City of Rollingwood respectfully requests that if further evaluation of a reversible lane is to be considered, the City of Rollingwood and other stakeholders who would be directly impacted, would be provided multiple opportunities to review any proposed designs and evaluate any negative impacts to the businesses in the City.

III. The Regional Arterials Study for Improvements to Mopac and Mopac at Bee Caves Road

In evaluating the Regional Arterials Study, the City of Rollingwood notes that CTRMA is currently conducting the Mopac South Environmental Study, studying potential improvements to Mopac from Cesar Chavez to Slaughter Lane. The City of Rollingwood has participated in commenting on the Mopac South Environmental Study and has received comments in response from CTRMA. Attached to this letter is the following previous correspondence related to the Mopac South Environmental Study, which is incorporated by reference with the City's comments regarding the Regional Arterials Study:

- 04-01-15 - Letter from Rollingwood "Pros and Cons"
- 04-15-15 – City of Rollingwood Adopts Resolution opposing plans to construct elevated lanes
- 07-23-15 – Letter from Rollingwood Mayor Thom Farrell to TxDot, CTRMA and CTRMA
- 08-06-2015– Letter from CTRMA Executive Director Heiligenstein to Rollingwood Mayor Farrell
- 08-13-2015 – Letter from TXDOT Chief Planning and Project Officer Russell Zapalac
- 11-18-2015 - Letter from Rollingwood Mayor Farrell to CTRMA Executive Director Heiligenstein
- 03-07-2017 – Letter from Rollingwood Mayor McKee to CTRMA Executive Director Heiligenstein
- 04-05-2017 – Letter from CTRMA Executive Director Heiligenstein to Rollingwood Mayor McKee
- 11-27-2017 – Letter from Rollingwood Mayor McKee to CTRMA Executive Director Heiligenstein
- 12-20-2017 – Letter from CTRMA Executive Director Heiligenstein to Rollingwood Mayor McKee

In evaluating the Regional Arterials Study, the City of Rollingwood notes that the City has consistently voiced support for improvements to Mopac South that serve to increase mobility and safety, however the City has not supported roadway designs that place elevated lanes over Mopac. In addition, the City requested HOV and transit only lanes be evaluated as an alternative, prior to the November 2017 call by Governor Abbott for removal of all new toll road projects from the statewide transportation plan. In the 11-18-2015 letter from Rollingwood Mayor Farrell, the City of Rollingwood requested that CTRMA

“rigorously explore and objectively evaluate alternatives employing HOV, transit only lanes, and additional free lane capacity. In addition, HOV and transit only lanes should be compared with toll and general purpose lane options as part of the environmental study. This is especially true in light of the fact that 2040 traffic should be employed, and there now appears to be additional regional funding available to fund the construction of roads that are free to the public.”

The City of Rollingwood respectfully notes that CTRMA has not yet provided an alternative as part of the Mopac South Environmental Study that focuses on HOV, transit only lanes or additional free lane

capacity. The City of Rollingwood notes that the Regional Arterials Study should include an evaluation of studying non-toll based alternatives for improving Mopac South to reduce congestion, particularly in the corridor from Cesar Chavez to 360.

In evaluating the Regional Arterials Study, the City of Rollingwood notes that CTRMA performed an initial evaluation of potential improvements to the Mopac/Bee Cave Road intersection (the “Bee Caves Road intersection”). The City of Rollingwood notes that in the 11-27-2017 letter from Rollingwood Mayor McKee, the City of Rollingwood asserts the Mopac South process and design should ensure that the Bee Caves Road intersection functions efficiently and can be improved in its existing configuration in the future. The City of Rollingwood appreciated CTRMA staff’s willingness to think creatively about how to improve the Bee Caves Road intersection for the present and future, but opposed the “Right-in Right-out” configuration presented by CTRMA that eliminated east-west connectivity, and opposes any changes to the Bee Caves Road intersection that would eliminate the east-west connectivity of the intersection.

In addition, in evaluating the Regional Arterials Study, the City of Rollingwood respectfully submits that roadway designs should prioritize mobility improvements to roadways that are most congested, using techniques that are shown to actually reduce congestion for our region, including TDM options such as lengthening on and off ramps in congested areas to mitigate bottlenecks. The City of Rollingwood notes that Texas’ Most Congested Roadways 2018 released by TTI, the 10.38 mile segment of Mopac from US 183 to Loop 360 is ranked in 2018, with toll lanes, as the 21st most congested highway, however the 7.51 mile segment of Mopac from Loop 360 to SH45 is only ranked as the 272nd most congested highway. CTRMA’s proposed alternatives in the Mopac South Environmental Study focus on providing toll lane drivers, to and from Slaughter Lane and Cesar Chavez, a 9-10 minute travel time by going around the significant congestion on Mopac between Cesar Chavez and Loop 360, rather than focusing on improving mobility for all drivers on Mopac between Cesar Chavez and Loop 360. The City of Rollingwood respectfully notes that the Regional Arterials Study should evaluate options for reducing congestion for all drivers on Mopac between Cesar Chavez and Loop 360. Furthermore, the City of Rollingwood respectfully notes that the Regional Arterials Study should avoid adding new roadways that effectively connect Mopac to I-35 through roadways that only serve pass-through traffic, rather than resolving congestion and safety issues for those who live and work in the City of Rollingwood and downtown Austin.

In addition, in evaluating the Regional Arterials Study, the City of Rollingwood notes that improvements need to be made to the Bee Caves Road intersection to improve the flow of traffic and pedestrian safety during Special Events at Zilker Park. The City of Rollingwood notes that during Special Events at Zilker Park, TxDot frequently allows traffic control plans that include closing down and re-routing the eastbound lane of Bee Caves Road as it intersects with Mopac in the Bee Caves Road intersection. The Bee Caves Road intersection and the Special Events at Zilker Park are outside the Rollingwood City limits, however, TxDot allows the City of Austin to close the intersection and reroute traffic at the intersection during special events in a configuration that significantly shifts traffic impacts onto Bee Caves Road into the City, impeding regular access to the business district in Rollingwood and causing a negative economic impact to the City’s businesses and sales tax revenue. For example, during the Trail of Lights event at Zilker Park, in 2018 the City of Austin closed the eastbound lane of the Bee Caves Road intersection and rerouted traffic on all access points to the intersection for 14 consecutive days, at peak evening rush hour, causing substantial traffic delays for the traveling public within miles

of the closure. Zilker Park also annually hosts other large scale events including the Austin City Limits Festival, Kite Festival, Blues on the Green, and Zilker Hillside Theatre Events, effectively providing the functional capacity of Darrell K. Royal Texas Memorial Stadium and the Frank Erwin Center in a park setting. In evaluating the Regional Arterials Study, the City of Rollingwood notes that improvements to the Bee Caves Road intersection should evaluate traffic levels and impacts due to Special Events traffic and consider improvements to safety and mobility in this area, without eliminating existing connectivity.

Finally, in evaluating the Regional Arterials Plan, the City of Rollingwood notes that improvements need to be made to Southbound Mopac between Enfield Road and Bee Caves Road to mitigate the impact of CTRMA reassigning a general purpose lane to traffic exiting from the southbound toll lane. The City of Rollingwood notes here, and in the 11-27-2017 letter from Rollingwood Mayor McKee, that this reassignment has introduced a new bottleneck into the general purposes lanes of southbound MoPac, causing more travel delays for southbound traffic exiting at Bee Caves Road into the City's commercial and residential areas. The City of Rollingwood has experienced a significant increase in cut-through, high-speed traffic on multiple residential streets, many of which have not formerly experienced any cut-through traffic, as a direct result of drivers attempting to find alternate routes to avoid the bottlenecked congestion introduced by the Winsted entrance ramp lane reassignment.

IV. The Regional Arterials Study for Traffic Dampening and Safety Improvements to Rollingwood Drive

Rollingwood Drive is a residential street, accommodating 84 homes, including 68 driveways directly connected to Rollingwood Drive. Rollingwood Drive provides the primary vehicular and pedestrian connectivity point to Rollingwood Park and the Zilker Nature Preserve. Rollingwood Drive has heavy use by pedestrians and cyclists alike; on weekends, the cycling traffic increases significantly as large riding groups traverse through Rollingwood to connect to cycling routes in Western Travis County. Rollingwood Drive is the shared route for all school-aged residents who cycle to Hill Country Middle School and Westlake High school.

The majority of Rollingwood Drive does not include sidewalks, requiring pedestrians and cyclists use the shoulders of the roadway for passage. In 2017, the City of Rollingwood completed a street striping project to add striped shoulders to Rollingwood Drive, as a way to delineate pedestrian and cycling shoulder areas and to visually narrow the road for traffic dampening.

The speed limit on Rollingwood Drive is set to 30 mph, with a segment of Rollingwood Drive adjacent to Rollingwood Park marked as a park zone with a 25 mph speed limit. The park zone was implemented in 2010 in an effort to promote safety on Rollingwood Drive and also to encourage pass-through traffic to route through Bee Caves Road, which has a speed limit of 40 mph, intersects the City's business district, and is a 4 lane highway for accommodating pass-through traffic.

Recently, changes to the configuration of Mopac North with the addition of toll lanes and new bottlenecks have directly caused a significant increase in the amount and speeds of pass-through traffic on all residential streets in Rollingwood, including Rollingwood Drive. The City of Rollingwood and its residents plan for Rollingwood Drive to continue to function as a residential street, purposed for

residential and pedestrian/cyclist traffic, and desire to further promote the routing of all pass-through traffic to Bee Caves Road through increased traffic dampening measures to discourage high-speed pass-through traffic on residential streets. The City of Rollingwood plans to go out for bids in 2019 for a corridor study of all streets in the City of Rollingwood and to evaluate additional options for traffic dampening and safety improvements to residential streets.

In evaluating the Regional Arterials Study, the City of Rollingwood notes that additional traffic dampening and safety measures are needed on Rollingwood Drive, and connecting residential streets, to maintain the residential character and safety of Rollingwood Drive by promoting routing of pass-through traffic to Bee Caves Road, while maintaining all current connectivity points to the City for residential and bike/pedestrian uses. In addition, the City of Rollingwood notes that adjustments to the infrastructure of roadways adjacent to the City of Rollingwood are needed to provide improved direct connectivity points from Barton Springs Road and Mopac for pass-through traffic to access Bee Caves Road or Loop 360 for east-west travel in Travis County.

V. The Regional Arterials Study for Improvements to Cesar Chavez

Cesar Chavez is an important downtown connectivity point for commuters traveling between Downtown Austin and the City of Rollingwood. While the distance of the commute between the Bee Caves Road exit and the Cesar Chavez exit on Mopac is less than a mile, the travel time delays between these two exits, along with the travel time delays on Cesar Chavez into and out of Downtown Austin, continue to increase and the length of time on weekdays considered “rush hour” in this area also continues to increase. The recent changes to the configuration of Mopac North to add toll lanes, without also improving Cesar Chavez, have only lengthened commute travel times and lengthened the amount of time on week days deemed “rush hour” conditions. The Mopac South Environmental Study includes multiple alternatives with direct connects that would funnel even more traffic directly onto Cesar Chavez as a primary access point into Downtown Austin. In response to questions about the impacts of the proposed direct connect alternatives on Cesar Chavez, CTRMA performed traffic studies and has articulated that the plan for managing the increase in toll lane traffic directed to Cesar Chavez is for general lane drivers to find an alternative route into downtown, rather than improving Cesar Chavez to handle toll lane directed traffic.

In evaluating the Regional Arterials Study, the City of Rollingwood notes that additional mobility improvements are needed on Cesar Chavez to accommodate current traffic levels and to handle the anticipated increases in traffic levels due to predicted increases in overall traffic in the region, and that plans would include increased mobility on Cesar Chavez to handle both general lane drivers and toll lane drivers if toll lanes are added to Mopac South.

VI. The Regional Arterials Study for Improvements to Pedestrian and Bike Pathways

The City of Rollingwood notes that the “Arterials Boards” (page 2) states:

“The Regional Arterials Study is just one piece of the upcoming CAMPO 2045 Plan. The CAMPO 2045 Plan will be multimodal in nature, meaning it will include driving, walking, biking, transit, and using technology and travel habits as options to help meet the region’s transportation needs.”

The City of Rollingwood looks forward to viewing proposed multimodal improvements, integrated into arterial improvements, as part of the CAMPO 2045 Plan.

For example, the City of Rollingwood looks forward to the addition of bike and pedestrian Infrastructure to provide consistent, direct access to and from downtown Austin as part of the Mopac South improvements. The addition of infrastructure for bike and pedestrian from the south side of Barton Springs to the north side of Barton Springs and from the north side of Barton Springs to Stratford drive, parallel with and proximate to Mopac, will help address special event traffic issues around and near Zilker Park and Barton Springs Road and may minimize the need for temporary road closures and barricading during special events by providing separate, permanent facilities for bike and pedestrian traffic across Barton Springs Road. In addition, the City of Rollingwood looks forward to the CTRMA proposed addition of a multi-use path on the southbound side of Mopac that will accommodate both bikes and pedestrians and will connect and seamlessly with Phase III of the Mopac bicycle and Pedestrian project.

As previously noted, the City is working with TxDot on improvements to Bee Caves Road and looks forward to working with local and regional partners to integrate shared used path into the improvement plan to support future bike and pedestrian traffic and increase connectivity to other bike and pedestrian paths in the area. Bee Caves Road is a major artery into Mopac South and there is a need for consistent, east to west direct bike and pedestrian on Bee Cave Road. A successful urban city today is one that embraces trails, bike lanes, sidewalks, and encourages alternatives to driving. We look forward to working with you to be a constructive part of the solution and thank you again for the opportunity to comment.

Sincerely,



Michael R. Dyson
Mayor
City of Rollingwood

cc: Gerald Daugherty, Travis County Commissioner, Precinct 3
Tucker Ferguson, P.E., Austin District Engineer, Texas Department of Transportation
Mike Heiligenstein, Executive Director, Central Texas Regional Mobility Authority
Linda Anthony, Mayor, City of West Lake Hills
Steve Adler, Mayor, City of Austin

NO MOPAC SOUTH TOLL ROAD

Alice Gordon [REDACTED]

Fri 1/7/2022 4:03 PM

To: MoPac South <mopacsouth@ctrma.org>

Austin is a city of a certain size. Its traffic is ruinous. BUT now is not the time for fossil-fuel-dominant travel to be encouraged by a government that has come close to destroying the natural beauty.

What is Austin about, A WHOLE LOTTA TRAFFIC?

Send the congesting hordes another way, a way that doesn't destroy the air, the water—which are Austin's most revered jewels—the recreation Nature herself promotes in Austin, and the quality of life. You are mistaken to think the hideous freeway you're trying to ressurect has anything at all to do with quality of life. Quality of life is NOT based on quality of TRAFFIC in Austin.

Really, this proposal is profoundly unacceptable.

I agree with all prior official comments that place environmental and conservation issues first in this matter.

Respectfully and in hope the government will come to its senses,

Alice Gordon

Mopac South

cvanr63 <[REDACTED]>

Fri 1/7/2022 4:18 PM

To: MoPac South <mopacsouth@ctrma.org>

January 7, 2022

Dear Mr. Bass,

I have been a member of Park Hills Baptist Church for the last 49 years and have been involved in access issues most of that time. I support the concerns listed below.

I am submitting this input on behalf of the Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to our immediate physical proximity to Mopac, we have significant interest in how the expansion plan is developing in our area and the impact it may have to our immediate environment and to the use of our property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, our property is heavily used for the traffic and parking needs for the major events in our city park.

We appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. We are also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. We have concerns with some of the options that are being considered at this time.

As much as it is our desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, we believe we need the assistance of professional input from traffic and other experts on the impact these proposals would have on our property. At this early stage, we are aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:

(1) We are concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. We support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in our location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.

The option of adding noise-preventing walls would cause our intersection to be covered with concrete, instead of preserving the green environment the community enjoys today. Every spring, we have lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of our property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. We would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.

Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. We have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. We do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.

(2) We are concerned for what impact the current plans will have on ingress-egress to our property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact

our exit lane (currently it is on the north of the Mopac exit ramp to 2244). We want to ensure that moving the ramp to the north would not negatively affect our ability to use our property exit.

(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. We are concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). We realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, we cannot support any options that might inhibit the future development of this intersection.

Thank you for the opportunity to submit our comments and concerns.

Carl Van Ryswyk

Dbl decker bridgeXXXXX

Monica Solomon 

Fri 1/7/2022 4:26 PM

To: MoPac South <mopacsouth@ctrma.org>

Please DO NOT build double decker bridge over Zilker Park. We said no to this before and we say no now!!!!

Thank you

Monica Solomon

Austin, tx

Sent from my iPhone

SBCA comment on MoPac South Project

Sydney Garcia [REDACTED]

Fri 1/7/2022 4:50 PM

To: MoPac South <mopacsouth@ctrma.org>

Dear CTRMA Board Member,

Please see the attached comments related to the MoPac South Toll Project.

Save Barton Creek is dedicated to protecting Barton Springs, the Onion and Barton Creek watersheds, and the Barton Springs Edwards Aquifer. In addition, we support water quality protection in all Austin and Central Texas creeks.

We would like to serve as a resource to you as you make decisions affecting the fragile Barton Creek watershed.

Thank you,

Sydney Garcia
(She/her/hers)
Operations Manager





Central Texas Regional Mobility Authority
3300 N. I-35, Suite 625
Austin, TX 78705
MoPacSouth@ctrma.org

Save Barton Creek Association would like to submit the following official comments for consideration to the MoPac South Environmental Study virtual open house.

The Central Texas Regional Mobility Authority (CTRMA) is resuming its efforts to add a double-deck toll bridge over Zilker Park, Lady Bird Lake, and Austin High School, and to add 4 toll lanes (2 each way) to South Mopac from Cesar Chavez to Slaughter Lane. This initiative was abandoned in 2015, but quietly resurfaced at the very end of 2021. The CTRMA is asking the public to review and comment on the materials, exhibits, and information in its MoPac South Environmental Study by January 7, 2022. The materials provided on the mopacsouth.com website appear to be the same materials from the original study in 2015 with limited updates.

We respectfully ask the CTRMA to extend the comment period for at least 30 more days and to make ALL comments submitted before 2022 available for public record at this time. Providing such a limited comment window — and during the holiday season — has not allowed the public to learn about this issue and respond accordingly. There have been many important comments submitted on this issue since 2015 that continue to be relevant and need continued consideration.

SBCA is monitoring the MoPac South proposal because of its inevitable impact on an environmentally sensitive area that includes Barton Creek, Barton Springs, and the Edwards Aquifer Recharge Zone. SBCA supports the Travis County Commissioners Court in their multiple concerns and suggested alternatives.

We strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with updated data and information for all alternatives when it is available, before a preferred alternative is selected. This will ensure that the public has access to the best information available when providing feedback. It also will provide the CTRMA with useful, informed public input to consider when evaluating alternatives, rather than public input based on analyses done several years ago.

Sincerely,

Clark Hancock, Board President



Comments on MoPac South Project

Sue Carter [REDACTED]

Fri 1/7/2022 4:57 PM

To: MoPac South <mopacsouth@ctrma.org>

Hello,

> We understand that today is the final day to comment on the proposed Mopac South project, and wish to have our comments included in the public record.

>

> We believe this project is a terrible idea, and has not received adequate (and required) environmental review.

> This project poses potentially severe impacts to our immediate neighborhood and the activities we most cherish as Austin residents.

>

> It appears that the project as proposed would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. This will create substantial adverse impacts on Barton Springs (which feeds Barton Springs Pool and Lady Bird Lake), the Trail, the High School, Zilker Park and the Barton Creek greenbelt.

>

> How can a project of this scope, in such an environmentally sensitive area, not have significant environmental impacts? - including on the two federally protected salamander species living in the area? We do not believe adding another lane to MoPac will improve traffic problems. The traffic modeling data appears to be based on a 2009 model. It must be updated to use current data as part of the environmental review.

>

> The alternatives assessed in the review do not include a full evaluation of a "no build" alternative that improves traffic flow utilizing readily available methods included but not limited to dedicated HOV lanes, public transit, and ramp metering.

>

> We believe that climate change is an urgent and immediate problem. The environmental review must analyze the impacts of building more capacity for single-occupancy vehicles, and seriously assess the cumulative impact of ignoring an opportunity to redirect Austin's transportation planning towards a more sustainable path.

Nick and Sue Carter
[REDACTED]

Comments for the restart of its proposed Mopac South project

Rodolfo Carrera [REDACTED]

Fri 1/7/2022 5:43 PM

To: MoPac South <mopacsouth@ctrma.org>

Please,

Extend the comment period at least 30 days.

Prepare a full Environmental Impact Statement (EIS).

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.

Fully evaluate a “no build” or “very limited build” alternative that improves traffic flow using the existing pavement.

Update the traffic modeling data and give the public another opportunity to give input before selecting a “preferred alternative.”

Analyze real alternatives to added toll lanes.

Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown.

Analyze the climate change impacts of building more capacity for single-occupancy vehicles, as well as climate change impacts of increased concrete.

Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Rodolfo Carrera, PhD

[REDACTED]

[REDACTED]

Public Comment Letter from Park Hills Baptist Church

Samuel Clintoc [REDACTED]

Fri 1/7/2022 5:48 PM

To: MoPac South <mopacsouth@ctrma.org>

To the staff of CTRMA,

We are submitting the attached letter as our Public Comment on the Mopac South Environment Study Virtual Meeting #5.

We would appreciate a confirmation that you received this letter.

V. Samuel Clintoc, Ph. D.

Senior Pastor

Park Hills Baptist Church of Austin, Texas

[REDACTED]

January 7, 2022

CTRMA
c/o MoPac South Environmental Study
3300 N. I-35, Suite 625,
Austin, TX 78705

Public Comment on the Mopac South Project
Virtual Open House Meeting #5

Dear Mr. Bass,

We are submitting this input on behalf of the Park Hills Baptist Church, located at 900 S. Mopac Expressway, which has about 700 linear feet of frontage road on Mopac Southbound at the intersection with 2244. Due to our immediate physical proximity to Mopac, we have significant interest in how the expansion plan is developing in our area and the impact it may have to our immediate environment and to the use of our property of eight acres in a very desirable and flourishing part of our city. In addition, due to our close proximity to Zilker Park, our property is heavily used for the traffic and parking needs for the major events in our city park.

We appreciate and support the efforts to alleviate the growing traffic concerns in our city in a way that does not negatively affect the environment and natural beauty of our city. We are also grateful for the opportunity to submit our comments and concerns regarding the six options currently on the table. We have concerns with some of the options that are being considered at this time.

As much as it is our desire to not be obstructionist in this matter and to provide the most economically feasible and practical solutions to the traffic problem, we believe we need the assistance of professional input from traffic and other experts on the impact these proposals would have on our property. At this early stage, we are aware of particular concerns related to safety, traffic, access, property value, and a host of additional issues that need to be properly explored. For example:

(1) We are concerned that options 2C and the City of Austin proposal will significantly affect the natural beauty and environment that can be experienced from Rollingwood and make this area increasingly look like the impersonal concrete jungles of Houston and Dallas. We support your criteria of seeking to preserve the natural environment, but feel strongly that these two options fail on this criterion in our location. These options would bring all the merging traffic from downtown to the front of our church property on an elevated flyover over the Bee Caves intersection, in order to merge near the Spyglass Parkway.

The option of adding noise-preventing walls would cause our intersection to be covered with concrete, instead of preserving the green environment the community enjoys today. Every


 **PARK HILLS BAPTIST CHURCH**
PROCLAIMING CHRIST | AUSTIN, TEXAS

spring, we have lots of people from the city coming to our hill to take pictures with bluebonnets and the background of the city skyline. Adding concrete walls in front of our property or erecting elevated flyovers would significantly impact the natural environment and aesthetics of this area. We would oppose the use of concrete walls as a solution to deal with the noise pollution created by these plans.

Austin is a special and unique city, with its outdoor beauty as a key part of the appeal that sets it apart from other cities. We have seen the effects of adding flyovers at the intersection of 360/290 and S. Lamar. The people using the properties immediately adjacent to those flyovers have to live constantly with the view of the massive concrete and steel beams over their heads. We do not support a plan that could potentially turn our beautiful location and intersection into such a concrete and steel-filled environment. Austin does not need to become like Dallas or Houston.

(2) We are concerned for what impact the current plans will have on ingress-egress to our property. None of the current options provide details on how the new ramp from Mopac Southbound onto the service road would impact our exit lane (currently it is on the north of the Mopac exit ramp to 2244). We want to ensure that moving the ramp to the north would not negatively affect our ability to use our property exit.

(3) The intersection of 2244 with Mopac is heavily used and needs coordinated improvements in the near future. Bringing the downtown connector lanes to merge with Mopac near this intersection will significantly affect the options to improve the intersection in the future. We are concerned for the impact those changes might have on our main entrance point (currently right at the intersection between the southbound service road and 2244). We realize that the intersection developments may not be part of your direct responsibility, but we need coordinated efforts between CTRMA and the City of Rollingwood to ensure that the option for the Mopac expansion will not interfere with the future development of this intersection and our main entrance. Without this clarity, we cannot support any options that might inhibit the future development of this intersection.

Thank you for the opportunity to submit our comments and concerns. We look forward to being able to discuss these matters further with your staff. Feel free to contact our Senior Pastor, Dr. V. Samuel Clintoc at 

The Pastors of Park Hills Baptist Church
V. Samuel Clintoc, Ph. D.
Russ Bennett
Taylor Dueker

Farm&City Comments on MoPac South

Jay Crossley [REDACTED]

Fri 1/7/2022 5:59 PM

To: MoPac South <mopacsouth@ctrma.org>

Attachments available until Feb 6, 2022

Hello,

Thanks for this opportunity to comment on proposals to improve the quality of life for everyone living, working,, driving, walking, biking, and using personal mobility devices around the MoPac South corridor. Please let me know if the attached letter or attachments come through okay. I hope that the attachments can be included with our letter as comments on this project. The text of our letter comments are included below just in case the pdf's don't work.

Thanks,
Jay

[Click to Download](#)

FarmAndCity_Comments_MopacSouth_010621.pdf
377 KB

January 6, 2022

CTRMA, c/o MoPac South Env. Study
3300 N. I-35, Suite 625
Austin, TX 78705

Sent via email to MoPacSouth@ctrma.org

Dear CTRMA board members, James Bass, staff, and consultants,

Thank you for this opportunity to comment on the MoPac South Environmental Study Virtual Public Meeting and for your public service to the people of the Austin region.

Below I will explain three distinct comments that I hope will be useful to the process of considering what investments along MoPac South will be best for all the people of the region. These three topics that I will address are:

The need for a better Purpose and Need for MoPac South focused on safe access
The apparent lack of focus on traffic deaths, serious injuries, and crashes
The flaws of the regional growth forecasting and travel demand modeling system

The need for a better Purpose and Need for MoPac South focused on safe access
The proposed purpose and need for the MoPac South project seems insufficient for addressing the real problems and needs of the people of Travis and Williamson County. Most importantly, the high costs of our car-dependent, high-speed transportation system are ignored, even though traffic crashes are measurably a much bigger problem than congestion. Using National Safety Council estimation methodology for the economic impacts of crashes shows that traffic crashes cost the people of the Austin region about twice as much as the estimated costs of congestion from the Texas A&M Transportation Institute's Urban Mobility Study. Similarly, the MoPac roadway causes significant health and environmental damage to the people and nature of the Austin region. The purpose and need statement should include these issues. Further, the chosen metric in the purpose and need of "reliable travel times" is an insufficient purpose to address the complex transportation needs of the people of the region. Focusing on travel time and congestion biases our transportation decision making system toward addressing the needs of people who drive more than others and people who choose to live in car-dependent sub-urban and rural places that are forced to drive long distance commutes. On average the amount that we drive is directly proportional to income. Low income people in our region drive much less than higher income people and people living in poverty in the region overwhelmingly live in the dense parts of the urban core that are not well served by these proposed kinds of freeway expansions.

Including "reliable travel time" in the purpose and need precludes the possibility of providing various transportation solutions that might better serve people. Instead, CTRMA should seek to improve safe multimodal access by all modes of travel, as outlined in the Smart Growth America report, *The Why and How of Measuring Access to Opportunity: a Guide to Performance Management* (<https://smartgrowthamerica.org/resources/measuring-access-to-opportunity/>). For every resident in Travis and Williamson County, CTRMA could measure each resident's ability to access jobs and other opportunities within half an hour of travel by all modes. Then this analysis could be done to study implementation of various investment scenarios, and analyze who will benefit from these improvements and to what extent. CTRMA could then optimize a suite of investments to equitably provide the most benefit to the most people.

I believe it is possible that the best investment CTRMA can make in this corridor is to add managed lanes, even though that is not my first guess. The purpose and need should be written to allow for this possibility, but it should not proscribe added automobile capacity as the only way to answer the question. Regional mobility authorities in Texas are authorized to invest in complex multimodal transportation solutions, including adding sidewalks in neighborhoods, safety and speed management interventions on existing streets, investing in public transit, along with capacity for cars.

The apparent lack of focus on ending traffic deaths, serious injuries, and crashes
Traffic deaths and serious injuries do not seem to be addressed at all in the Environmental

documents for the MoPac South project. The Texas transportation policy world has changed quite a lot since 2015 in this regard. CTRMA is overdue for adopting a Vision Zero goal to end traffic deaths in alignment with the Texas Transportation Commission's Road to Zero goal and the City of Austin Vision Zero goal. Similarly, Travis and Williamson Counties and the Capital Area Metropolitan Planning Organization (CAMPO) should stand with the state and the families of our region in giving the highest priority to ending traffic deaths and serious injuries.

Any further work on this project should include meaningful analysis of traffic deaths and serious injuries along this corridor and meaningful analysis of how future scenarios and investment proposals would impact traffic deaths and serious injuries. Such analysis should be smart enough to factor in circular feedback loops in travel demand models and the concept of induced demand. Often studies of freeway projects like this have focused on the metric of traffic deaths per vehicle miles traveled (VMT), which allows for hiding the fact that a project could increase VMT resulting in increased suffering, even if the rate of deaths per VMT were lower.

If CTRMA is to be meaningfully aligned to the state goals, then no project should move forward that does not have a reasonable chance of reducing deaths and serious injuries in this corridor in half from 2018 numbers by 2035.

The flaws of the regional growth forecasting and travel demand modeling system
The CAMPO regional growth forecasting system has consistently underestimated dense urban growth, while the travel demand models used in our region have consistently overestimated traffic and congestion. The region needs to reform this system by replacing the single forecast concept with equitable scenario planning to allow projects like the proposed MoPac South to include meaningful decision making that allows for stress testing the estimated outcomes of various proposals given meaningful reasonable alternative futures.

The Federal Highway Administration has encouraged State DOTs and MPOs to use equitable scenario planning through publications such as Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning, August 2014, USDOT, FHWA (https://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/fhwahep14046.pdf) and Supporting Performance-Based Planning and Programming through Scenario Planning, June 2016, USDOT, FHWA (https://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/fhwahep16068.pdf).

The Texas Department of Transportation (TxDOT) has used scenario planning to entertain multiple reasonable future alternatives in equitable planning processes such as the Texas Transportation Plan 2050, and TxDOT Houston has developed the Sustainable Ways to Integrate Future Transportation (SWIFT) tool that could be adapted to the Austin region to facilitate equitable scenario planning processes here.

The CAMPO 2035 Regional Transportation Plan included elements of scenario planning to entertain reasonable future growth scenarios, but these processes and planning techniques seem to have been abandoned. The CAMPO 2045 RTP envisions a future that

will result in converting 350 square miles of currently rural or open space to sub-urban or urban, with 69% of the region's expected 4 million residents living in car-dependent sprawl or rural areas, a future that is distinctly different than the visions articulated through various regional planning processes, such as Envision Central Texas, the Imagine Austin plan, or various Travis County planning processes.

Recently, there has been much discussion of the problem of CTRMA's public materials still using analysis based on CAMPO's 2035 RTP forecasts. While the 2035 forecasts underestimated Travis County's 2020 population by 78,688 people compared to the decennial census, the 2045 forecasts not only underestimated Travis County's 2020 census population by 8470 people, but overestimated Hays County population by 8085 people and Williamson County population by 13,373 people, only a year and a half after the forecasts were published.

Consistently overestimating sub-urban growth is one of the reasons travel demand models have consistently been wrong about traffic in our region. But also, the travel demand models themselves have various flaws, as outlined by Norm Marshall of the transportation and modeling firm, Smart Mobility, in his comments on the I-35 central project, which I am included here for reference. CTRMA should have much better decision making information and systems available if it is to truly enhance quality of life and economic vitality for the people of the Austin region. Also attached is a Farm&City report on the flaws of the regional forecasting system which can be found here:

https://drive.google.com/file/d/1qHeyF-ip_sUqklN09usjyNwaH28xUrMy/view?usp=sharing

I hope that these comments are helpful as CTRMA continues to study how to improve quality of life for the people who live, work, play, go to school, and travel along the MoPac corridor. Thank you for your service to all the people of the Austin region and for your consideration of these comments.

Sincerely,

Jay Blazek Crossley
Executive Director

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Valid Modeling of the I-35 Capital Express Central Project.pdf
2.4 MB

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fhwahep14046.pdf
4.3 MB

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fhwahep16068.pdf
8.2 MB

[Click to Download](#)

CAMPOGrowthForecasts_Printable.pdf
11.1 MB

Jay Blazek Crossley
Executive Director
FarmAndCity.org

twitter.com/jaycrossley
jay@farmandcity.org
713-244-4746



JANUARY 7, 2022

CTRMA, C/O MOPAC SOUTH ENV. STUDY
3300 N. I-35, SUITE 625
AUSTIN, TX 78705

SENT VIA EMAIL TO MOPAC SOUTH@CTRMA.ORG

Dear CTRMA board members, James Bass, staff, and consultants,

Thank you for this opportunity to comment on the MoPac South Environmental Study Virtual Public Meeting and for your public service to the people of the Austin region.

Below I will explain three distinct comments that I hope will be useful to the process of considering what investments along MoPac South will be best for all the people of the region. These three topics that I will address are:

- The need for a better Purpose and Need for MoPac South focused on safe access
- The apparent lack of focus on traffic deaths, serious injuries, and crashes
- The flaws of the regional growth forecasting and travel demand modeling system

The need for a better Purpose and Need for MoPac South focused on safe access

The proposed purpose and need for the MoPac South project seems insufficient for addressing the real problems and needs of the people of Travis and Williamson County. Most importantly, the high costs of our car-dependent, high-speed transportation system are ignored, even though traffic crashes are measurably a much bigger problem than congestion. Using National Safety Council estimation methodology for the economic impacts of crashes shows that traffic crashes cost the people of the Austin region about twice as much as the estimated costs of congestion from the Texas A&M Transportation Institute's Urban Mobility Study. Similarly, the MoPac roadway causes significant health and environmental damage to the people and nature of the Austin region. The purpose and need statement should include these issues.



Further, the chosen metric in the purpose and need of “reliable travel times” is an insufficient purpose to address the complex transportation needs of the people of the region. Focusing on travel time and congestion biases our transportation decision making system toward addressing the needs of people who drive more than others and people who choose to live in car-dependent sub-urban and rural places that are forced to drive long distance commutes. On average the amount that we drive is directly proportional to income. Low income people in our region drive much less than higher income people and people living in poverty in the region overwhelmingly live in the dense parts of the urban core that are not well served by these proposed kinds of freeway expansions.

Including “reliable travel time” in the purpose and need precludes the possibility of providing various transportation solutions that might better serve people. Instead, CTRMA should seek to improve safe multimodal access by all modes of travel, as outlined in the Smart Growth America report, *The Why and How of Measuring Access to Opportunity: a Guide to Performance Management* (<https://smartgrowthamerica.org/resources/measuring-access-to-opportunity/>). For every resident in Travis and Williamson County, CTRMA could measure each resident’s ability to access jobs and other opportunities within half an hour of travel by all modes. Then this analysis could be done to study implementation of various investment scenarios, and analyze who will benefit from these improvements and to what extent. CTRMA could then optimize a suite of investments to equitably provide the most benefit to the most people.

I believe it is possible that the best investment CTRMA can make in this corridor is to add managed lanes, even though that is not my first guess. The purpose and need should be written to allow for this possibility, but it should not proscribe added automobile capacity as the only way to answer the question. Regional mobility authorities in Texas are authorized to invest in complex multimodal transportation solutions, including adding sidewalks in neighborhoods, safety and speed management interventions on existing streets, investing in public transit, along with capacity for cars.

The apparent lack of focus on ending traffic deaths, serious injuries, and crashes

Traffic deaths and serious injuries do not seem to be addressed at all in the Environmental documents for the MoPac South project. The Texas transportation



policy world has changed quite a lot since 2015 in this regard. CTRMA is overdue for adopting a Vision Zero goal to end traffic deaths in alignment with the Texas Transportation Commission's Road to Zero goal and the City of Austin Vision Zero goal. Similarly, Travis and Williamson Counties and the Capital Area Metropolitan Planning Organization (CAMPO) should stand with the state and the families of our region in giving the highest priority to ending traffic deaths and serious injuries.

Any further work on this project should include meaningful analysis of traffic deaths and serious injuries along this corridor and meaningful analysis of how future scenarios and investment proposals would impact traffic deaths and serious injuries. Such analysis should be smart enough to factor in circular feedback loops in travel demand models and the concept of induced demand. Often studies of freeway projects like this have focused on the metric of traffic deaths per vehicle miles traveled (VMT), which allows for hiding the fact that a project could increase VMT resulting in increased suffering, even if the rate of deaths per VMT were lower.

If CTRMA is to be meaningfully aligned to the state goals, then no project should move forward that does not have a reasonable chance of reducing deaths and serious injuries in this corridor in half from 2018 numbers by 2035.

The flaws of the regional growth forecasting and travel demand modeling system

The CAMPO regional growth forecasting system has consistently underestimated dense urban growth, while the travel demand models used in our region have consistently overestimated traffic and congestion. The region needs to reform this system by replacing the single forecast concept with equitable scenario planning to allow projects like the proposed MoPac South to include meaningful decision making that allows for stress testing the estimated outcomes of various proposals given meaningful reasonable alternative futures.

The Federal Highway Administration has encouraged State DOTs and MPOs to use equitable scenario planning through publications such as Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning, August 2014, USDOT, FHWA (https://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/fhwahep14046.pdf) and Supporting Performance-Based

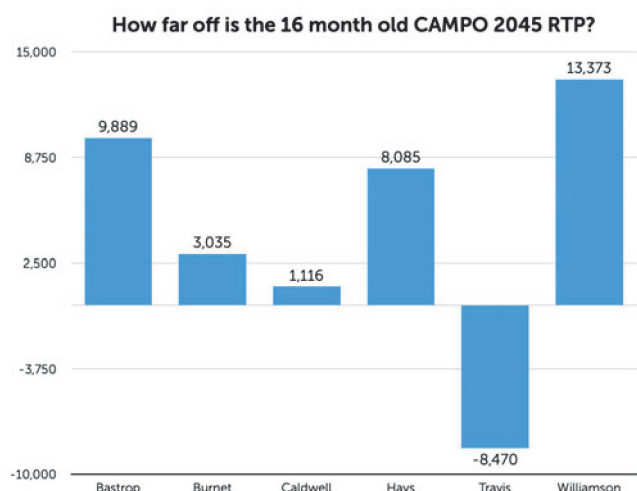
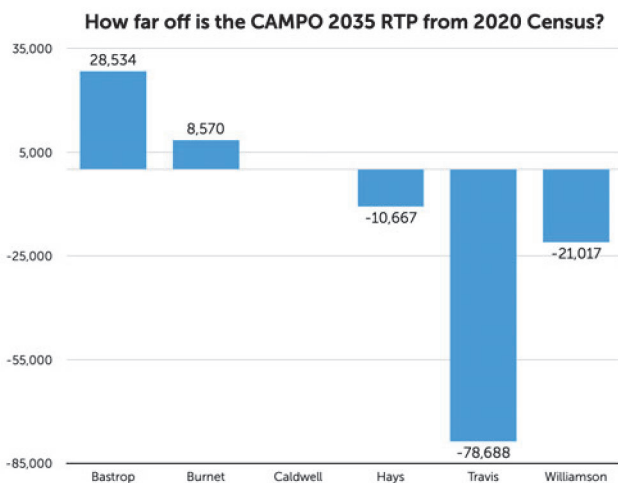


Planning and Programming through Scenario Planning, June 2016, USDOT, FHWA (https://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/fhwahep16068.pdf).

The Texas Department of Transportation (TxDOT) has used scenario planning to entertain multiple reasonable future alternatives in equitable planning processes such as the Texas Transportation Plan 2050, and TxDOT Houston has developed the Sustainable Ways to Integrate Future Transportation (SWIFT) tool that could be adapted to the Austin region to facilitate equitable scenario planning processes here.

The CAMPO 2035 Regional Transportation Plan included elements of scenario planning to entertain reasonable future growth scenarios, but these processes and planning techniques seem to have been abandoned. The CAMPO 2045 RTP envisions a future that will result in converting 350 square miles of currently rural or open space to sub-urban or urban, with 69% of the region's expected 4 million residents living in car-dependent sprawl or rural areas, a future that is distinctly different than the visions articulated through various regional planning processes, such as Envision Central Texas, the Imagine Austin plan, or various Travis County planning processes.

Recently, there has been much discussion of the problem of CTRMA's public materials still using analysis based on CAMPO's 2035 RTP forecasts. While the 2035 forecasts





underestimated Travis County's 2020 population by 78,688 people compared to the decennial census, the 2045 forecasts not only underestimated Travis County's 2020 census population by 8470 people, but overestimated Hays County population by 8085 people and Williamson County population by 13,373 people, only a year and a half after the forecasts were published.

Consistently overestimating sub-urban growth is one of the reasons travel demand models have consistently been wrong about traffic in our region. But also, the travel demand models themselves have various flaws, as outlined by Norm Marshall of the transportation and modeling firm, Smart Mobility, in his comments on the I-35 central project, which I am included here for reference. CTRMA should have much better decision making information and systems available if it is to truly enhance quality of life and economic vitality for the people of the Austin region. Also attached is a Farm&City report on the flaws of the regional forecasting system which can be found here: https://drive.google.com/file/d/1qHeyF-ip_sUqkIN09usjyNwaH28xUrMy/view?usp=sharing

I hope that these comments are helpful as CTRMA continues to study how to improve quality of life for the people who live, work, play, go to school, and travel along the MoPac corridor. Thank you for your service to all the people of the Austin region and for your consideration of these comments.

Sincerely, 

Jay Blazek Crossley
Executive Director

Valid Modeling of the I-35 Capital Express Central Project

Prepared by Norman Marshall, President, Smart Mobility, Inc.

December 2020



Qualifications

I received a B.S. in Mathematics from Worcester Polytechnic Institute (1977) and an M.S. in Engineering Sciences from Dartmouth College (1982). My studies at Dartmouth College included graduate courses in transportation modeling.

I have 33 years of professional experience in transportation modeling and transportation planning including 14 years at RSG Inc. (1987-2001) and 19 years at Smart Mobility Inc. (2001-now).

My primary professional focus is regional travel demand modeling and related transportation planning. I am a nationally known expert in this field and have completed projects in over 30 states including work for the U.S. government, state Departments of Transportation, Metropolitan Planning Organizations, cities and non-profit organizations. One of my particularly notable projects is a \$250,000 project with the California Air Resources Board where I led a team including the University of California in reviewing the state's regional travel demand models.

I have many peer-reviewed publications and conference presentations, including presentations at national Transportation Research Board conferences in 2017, 2018 and 2019.

I am an Associate Member of the Transportation Research Board.

My resume is attached as Appendix B.

Executive Summary

Valid modeling of the I-35 Capital Express Central Project is required for the public to be assured that the benefits and impacts of the project are properly disclosed, and that prudent investments are made.

Valid modeling requires:

- 1) Impossibly high traffic volumes must not be assumed – There is a maximum traffic throughput per hour for every roadway. For I-35 in central Austin, this maximum throughput has been reached during peak periods, and therefore peak period traffic volumes cannot increase significantly. The preliminary analysis done for TxDOT assumes that traffic will grow another 47% by 2045 and 66% by 2050 – whether the roadway is widened or not. This is ridiculous. Any subsequent analysis predicated on either of these assumptions would be worthless.
- 2) Modeled I-35 peak period speeds must be realistic – The Capital Area Metropolitan Planning Organization (CAMPO) regional travel demand model overestimates current and future I-35 peak period traffic volumes, in part, because it also overestimates I-35 congested speeds. Realistic speed modeling is needed for realistic traffic volume modeling.
- 3) Over-capacity modeled traffic must not be considered “demand” – The CAMPO model overestimates congested speeds and traffic volumes. However, the assigned traffic volumes are still much lower than the true “latent demand” that would occur without any congestion. This latent demand is so great that no amount of I-35 widening can satisfy all of it.
- 4) Overcapacity traffic volumes must not be input to Dynamic Traffic Assignment (DTA) or microsimulation – Freeway widening studies often obscure over-capacity traffic assignment problems by filtering them through another more detailed model. This is a case of “garbage in – garbage out.” Invalid model inputs result in invalid model outputs.
- 5) Modeling must show that un-tolled I-35 lanes will be congested in both the No Build and Build alternatives – Given the high amount of latent demand in the I-35 corridor, traffic will divert from lower-speed streets to I-35 until the travel times are the same, i.e. until I-35 is congested.
- 6) An alternative where all lanes are tolled must be analyzed – A moderate toll on all lanes is the only way to satisfy the project Purpose and Need that is focused on congestion and delay. Therefore, at least one alternative where all lanes are tolled should be fully analyzed.
- 7) Horizon year modeling assumptions for downtown Austin must be plausible – The 2045 CAMPO assumptions concerning downtown Austin’s jobs, housing and high auto mode share are impossible. There would not be enough road capacity for the workers to leave the downtown. Some combination of changes in jobs, housing and/or mode share is needed for modeling to be realistic.
- 8) Modeling must consider impacts to downtown Austin streets – No trip begins or ends on I-35. If widening I-35 results in higher entering and exiting traffic volumes downtown, this also means higher volumes on intersecting streets. These impacts should be considered direct impacts of the project and be analyzed.

1) Impossibly High Traffic Volumes Must Not Be Assumed

The *Purpose and Need Draft Technical Report* (October 2020) states:

By 2045, traffic is expected to reach 303,700 vpd [vehicles per day], an increase of approximately 47% over 2019.

This is one of the primary justifications for the project and it is **misinformation**. In the congested parts of I-35, peak period traffic throughput will not increase above current levels unless the road is widened because it cannot increase above capacity. There is an absolute traffic capacity per hour that already has been reached. There could possibly be increases in off-peak traffic volumes – but not enough that daily traffic would increase by 47%.

The CAMPO regional travel demand model has a pretense of being capacity constrained. However, as is documented below, it is not. The I-35 traffic forecasts that have been developed by HDR and Alliance Transportation Group for TxDOT¹ do not even have pretend to be capacity constrained, but simply apply arbitrary growth rates to existing daily traffic volumes. Nevertheless, the HDR report references the CAMPO model traffic growth rates as validation. Therefore, I first address the CAMPO model and then the HDR/ATC forecasts.

The CAMPO regional travel model includes an hourly capacity value for each roadway segment. Modeling best practice is to use “ultimate capacity”, i.e. the “maximum volume that should be assigned to a link by the forecasting model.”² Assigned volumes that exceed capacity are errors, and assigned volumes that greatly exceed capacity are serious model errors. Alan Horowitz, one of the most respected experts in travel demand modeling wrote:

I am quite familiar with alternatives that assign traffic well beyond a volume-to-capacity ratios (v/c) of 1, and I cannot fathom why anybody would take any of this seriously, either as a realistic representation of the future or as a strawman case study...

... do not publish any alternative/scenarios with facilities loaded beyond a v/c ratio of 1.1.³ (Horowitz 2019)

As shown in Figure 1, the CAMPO model assigns many important roadways including I-35 in excess of 1.1, even in the 2015 model base year.

¹ Best, Matthew, HDR. Memorandum to Adam Kaliszewski, DOT, regarding Mobility35 Capital Express: Traffic Projections Methodology Memorandum, January 2, 2020.

² Cambridge Systematics, Vanasse Hangen Brustlin, Gallop, Bhat, C.R., Shapiro Transportation Consulting and Martin/Alexious/Bryson. Travel Demand Forecasting: Parameters and Techniques, National Cooperative Highway Research Program Report 716, 2012.

³ Horowitz, Alan. Posting on the Travel Model Improvement Program (TMIP) listserv, March 2019.

Figure 1: CAMPO 2015 Model Afternoon Peak Period Volume-to-Capacity Ratio Exceeding 1.1 (RED)



The red lines represent roadway segments that are assigned more than 110% of capacity for the entire 3-hour afternoon peak period (3:30 – 6:30 p.m.) All the model traffic assignments for the red links, including I-35, are impossibly high, and should not be used as a basis for planning.

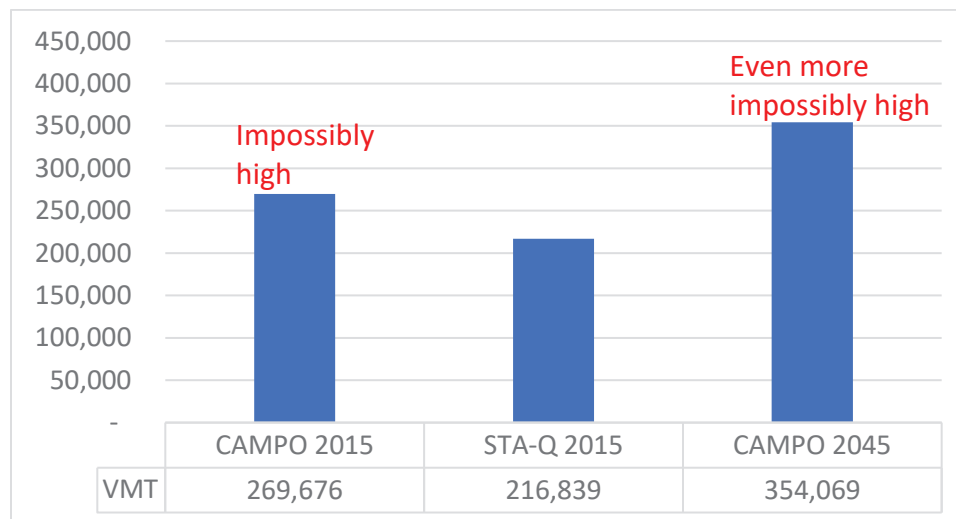
The CAMPO model relies on 40-year-old Static Assignment Algorithm (STA) that was adopted when computers were less powerful than today’s smart phones. STA treats every road segment as independent of other road segments. In peak periods, traffic on I-35 is characterized by queues behind bottlenecks. In STA there are no queues behind bottlenecks, and the CAMPO model cannot capture backups at the merges on I-35 or accurately model conditions during the peak of rush hour traffic.

In my peer-reviewed journal article: *Forecasting the impossible: The status quo of estimating traffic flows with static traffic assignment and the future of dynamic traffic assignment*⁴, I document that STA always produces impossibly high freeway traffic volumes in congested networks and cannot be relied on for planning. The only solution is to replace STA with a more modern Dynamic Traffic Assignment (DTA) algorithm. Alan Horowitz also wrote: “Choose DTA over STA whenever possible.”⁵

Implementing DTA in the CAMPO model will be a significant effort which was not possible within this review. However, I implemented an intermediate STA-Q model that calculated real-world delays more accurately than the CAMPO model. (Details on the STA-Q model are provided in Appendix A.) As shown in Figure 3, the STA-Q model eliminates most of the roadway segments with V/C greater than 1.1 in the 2015 model, including all the I-35 segments.

The over-capacity CAMPO model assignments for I-35 shown in Figure 1 are impossible. The STA-Q assignments are more realistic. Figure 2 shows vehicle miles traveled (VMT) for the I-35 general purpose freeway lanes for the 8-mile section between Routes 71 and 290 for the afternoon peak periods.

Figure 2: 2015 Model Afternoon Peak Period (3:30-6:30) VMT



If the CAMPO model properly constrained traffic volumes to capacity, the 2015 modeled VMT would be in the same range as the STA-Q value. Furthermore, the 2045 modeled VMT would also be in the same range of as the 2015 STA-Q value because I-35 is already at capacity during the afternoon peak period, and traffic throughput cannot increase significantly.

⁴ Marshall, Norman. Forecasting the impossible: The status quo of estimating traffic flows with static traffic assignment and the future of dynamic traffic assignment, *Research in Transportation Business & Management*, Volume 29, 2018, 85-92. <https://www.sciencedirect.com/science/article/pii/S2210539517301232?via%3Dihub>

⁵ Horowitz, Alan. Posting on the Travel Model Improvement Program (TMIP) listserv, March 2019.

Figure 3: STA-Q 2015 Model Afternoon Peak Period Volume-to-Capacity Ratio Exceeding 1.1 (RED)



As shown in Figure 3, traffic assignments of over 110% of capacity are almost eliminated in the 2015 afternoon peak period.

As has been documented above, the CAMPO model is not useful for planning because it assigns traffic volumes greater than 110% of capacity to important roadways including I-35. Nevertheless, the traffic forecasting approach that TxDOT has adopted is even worse.

The January 2020 HDR memo to TxDOT indicates that Alliance Transportation Group proposed growth rates for this project in 2018 and that these rates were approved by TxDOT (p. 9). For the central part of the corridor, a compound growth rate of 1.5 per year has been adopted for the period 2016 – 2050. This represents an assumption of 66% percent growth. Considering a 3-lane section of I-35 that is congested today during peak periods, accommodating 66% more traffic would require 5 congested lanes in 2050. But it is assumed that these vehicles that would fill 5 lanes of congested traffic will somehow squeeze into the existing 3 lanes in the No Build alternative. This is ludicrous and makes any subsequent analysis worthless.

As is documented in Appendix A, the maximum sustained traffic throughput is likely substantially below 100% of the capacity value assumed in both the CAMPO and STA-Q models and well below the 110% value used as a threshold in Figures 1 and 3. A realistic freeway capacity should be established in the I-35 study, and not exceeded in the traffic forecasts.

Modeling Requirement #1: Impossibly high traffic volumes must not be assumed.

2) Modeled I-35 Peak Period Speeds Must Be Realistic

The *Purpose and Need Draft Technical Report* (October 2020) states:

I-35 within Travis County is located within a heavily urbanized area that consistently ranks within the Top 3 Most Congested Roadways in Texas, currently #2, as measured by Texas Transportation Institute (TTI) in 2019, and roadways with the highest Annual Congestion Costs at more than \$200M (TTI 2019).

The “more than \$200M” is misinformation. As discussed in Section 5, un-tolled urban freeways will always become congested during peak periods, so measuring them against hypothetical uncongested conditions is pointless because it is impossible to eliminate the delay. In general, the wider these freeways are, and the more traffic is carried, the more “delay” there will be.

However, the TTI data provide useful information about congested I-35 speeds. In the most recent 2020 TTI accounting (December 2020), data are based on INRIX real-time speed data for calendar year 2019.⁶ The data have a high degree of variability in peak period travel times on this section of I-35, including:

- Mean travel time 2.88 times free-flow travel time,
- 95th percentile travel time 5.14 times free-flow travel time.

TTI calls the 95th percentile multiplier the “Planning Time Index” suggesting that travelers with critical arrival times need to allow this much time.

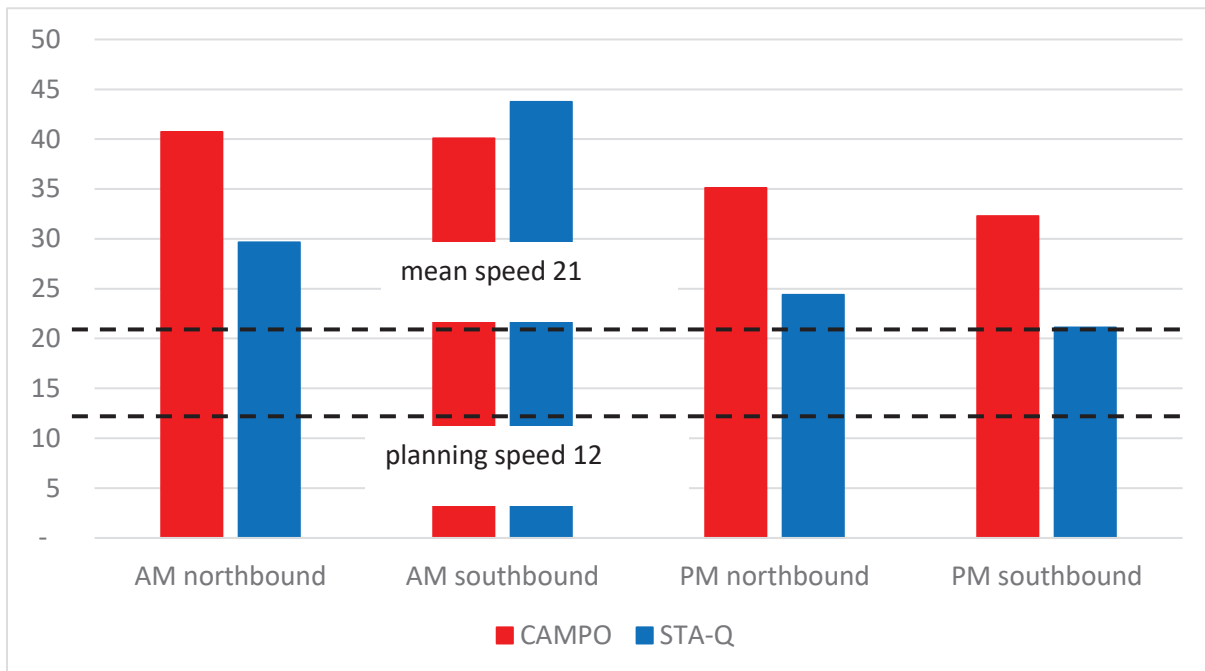
⁶ Texas A&M Transportation Institute. Technical Memorandum Analysis Procedures and Mobility Performance Measures: 100 Most Congested Texas Road Sections. November 2020.

These delay multipliers can be translated into average speeds:⁷

- Mean speed 21 mph,
- 95th percentile “planning” travel time 12 mph.

In the CAMPO model, travelers choose their destinations and routes based on model speeds. In order to model these decisions accurately, the speeds need to match reality, i.e. somewhere between the planning speed of 12 mph and the mean speed of 21 mph. As shown in Figure 4, the CAMPO model speeds are much higher. The STA-Q speeds are closer, especially for the afternoon peak period.

Figure 4: CAMPO and STA-Q 2015 Modeled I-35 Morning and Afternoon Peak Period Speeds Compared to Data



The CAMPO model simultaneously overestimates peak period traffic volumes on congested I-35 (as documented in the previous section) and overestimates peak period speeds on congested I-35. Without correcting these deficiencies, the model is not useful for I-35 planning.

Modeling Requirement #2: Modeled peak period I-35 speeds must be realistic.

⁷ TTI gives a free-flow speed for this section of I-35 of 60.7 mph.

3) Over-Capacity Modeled Traffic Must Not Be Considered “Demand”

The over-capacity traffic assignments in the CAMPO model are errors. Sometimes, roadway widening proponents try to spin these errors as indicative of the true underlying traffic demand. This is wrong.

Demand is not a point, as anyone who has taken Economics 101 has had hammered into them repeatedly; demand is a curve with more demand when the price is lower and less demand when the price is higher. For un-tolled roads, this “price” is primarily based on the value of travel time. The generalized price for toll roads includes both cost and time. As shown in this illustration from the Federal Highway Administration, there is a market equilibrium balance between demand and price/supply (Figure 5).

Figure 5: Market Equilibrium User Costs and Traffic Volumes (FHWA)⁸

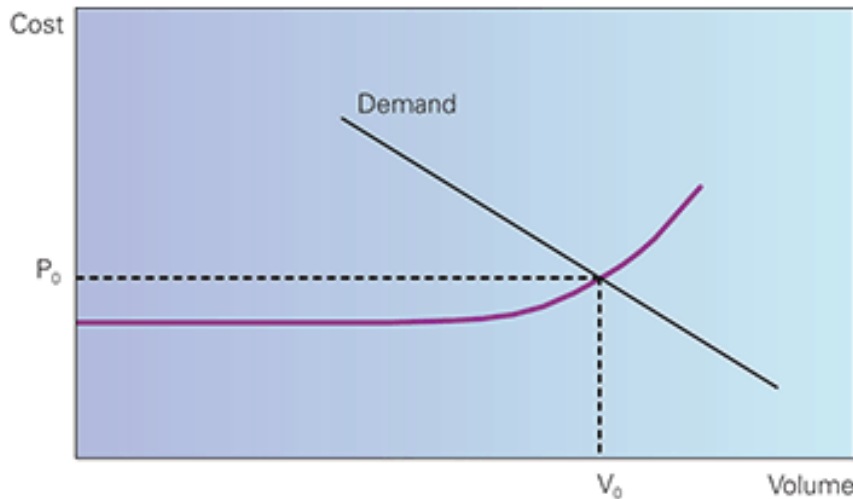


Exhibit 4. Equilibrium user costs and traffic volumes.
P = price. V = volume.

Source: Federal Highway Administration, 2017.

The narrative accompanying the figure reproduced above states:

When supply and demand are in balance, a market is said to be in *equilibrium*. This is often represented as the intersection of a supply curve and a demand curve, which determines the market-clearing price and quantity (see Exhibit 4). At this point, everyone who purchases the good is willing to (collectively) buy that amount at that price, and producers are willing to supply that quantity at that price. If either the supply or demand curves shift, the market price and quantity will also change.

For highway travel, demand is determined as described above. The “supply” curve, however, is essentially represented by the generalized cost curve. The intersection of these two curves determines how high traffic volumes will be and what the associated average highway-user costs will be at that volume level. When the level of demand is

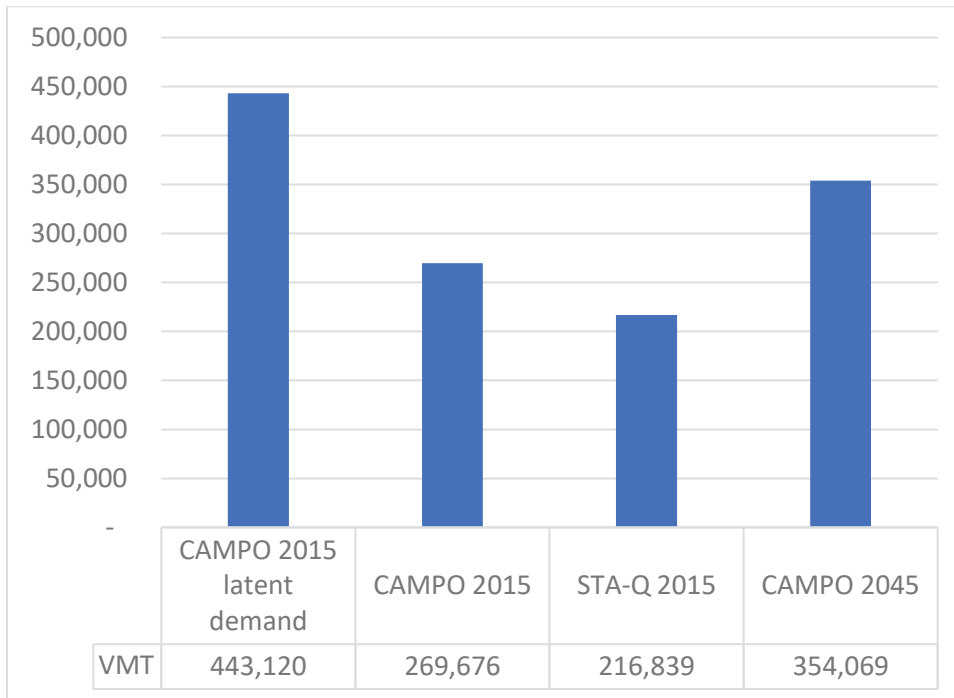
⁸ Federal Highway Administration. Economics: Pricing, Demand, and Economic Efficiency – A Primer. 2017. https://ops.fhwa.dot.gov/publications/fhwahop08041/cp_prim4_03.htm

low relative to the capacity of the road, it will be uncongested, and prices will be relatively constant even as volumes increase (the “flat” part of the user cost curve in Exhibit 4). However, when demand levels are high and the road is congested, both user costs and traffic volumes will be higher, potentially rising sharply as demand continues to increase.

At any speed (supply), there is a corresponding demand. If the CAMPO model estimates speed correctly, it should also estimate demand correctly. The over-capacity assignments result from overestimated model speeds.

If speed is increased as a result of widening (i.e. a drop in “price”), a new equilibrium is reached with higher demand. If delays could be eliminated completely, the maximum demand would be reached. The CAMPO model can be used to estimate this “latent” demand.⁹ As shown in Figure 6, this 2015 “demand” is higher than even the exaggerated 2045 CAMPO model forecast. This is evidence that “latent demand” for I-35 can never be satisfied through expansion.

Figure 6: 2015 Model Afternoon Peak Period VMT – Including 2015 Latent Demand if I-35 Had No Delays



The CAMPO model outputs do not estimate latent demand. Instead, they estimate demand at an unrealistic speed (price) that is somewhere between the real speed and the free-flow speed. This arbitrary and unrealistic demand point is useless for planning purposes.

Modeling Requirement 3: Over-capacity modeled traffic must not be considered “demand.”

⁹ Latent demand estimated with an “all-or-nothing” assignment.

4) Overcapacity Traffic Volumes Must Not Be Input to DTA or Microsimulation

The CAMPO regional travel demand model is characterized as a “macro” model. The primary analysis for the I-35 project will likely be done in a microsimulation (“micro”) model that covers only a small part of the geographic region covered by the CAMPO model. It is possible that the study may also employ an intermediate “meso” model with Dynamic Traffic Assignment (DTA) – again for a subarea much smaller than the full region.

These DTA and microsimulation models are capacity constrained. When over-capacity traffic volumes (or over-capacity subarea trip tables) are input into them, the downstream models can only report that the inputs are impossible and generate error messages. Sometimes, these error messages are spun as being indicative of latent demand. As discussed in Section 1.3, this claim is false.

This is an example of an old computer adage – “garbage in – garbage out.” The two-model process is analogous to money laundering. Bad macro model forecasts are filtered through the micro model and come out as very detailed precise-looking numbers. However, the underlying macro model forecasts (or arbitrary trend forecasts as approved by TxDOT) are invalid, and the micro model outputs also are invalid.

Modeling Requirement 4: Overcapacity traffic volumes must not be input to DTA or microsimulation.

5) Modeling Must Show that Un-Tolled I-35 Lanes Will Be Congested in Both the No Build and Build Alternatives

In 1992 Anthony Downs coined the term *triple convergence* to describe how peak period traffic congestion is inevitable because drivers will compensate for capacity increases by (a) shifting routes, (b) shifting travel time of travel, and (c) shifting travel mode (Downs 1992). After capacity expansion, the new equilibrium will be just as congested as the old equilibrium. Downs describes how drivers will choose “limited-access roads that are faster than local streets if they are not congested”, but the attractiveness of such routes will cause them to become congested “to the point where they have no advantage over the alternate routes” (i.e. over arterial and local street routes). Managed lanes do not change this fundamental economic law.

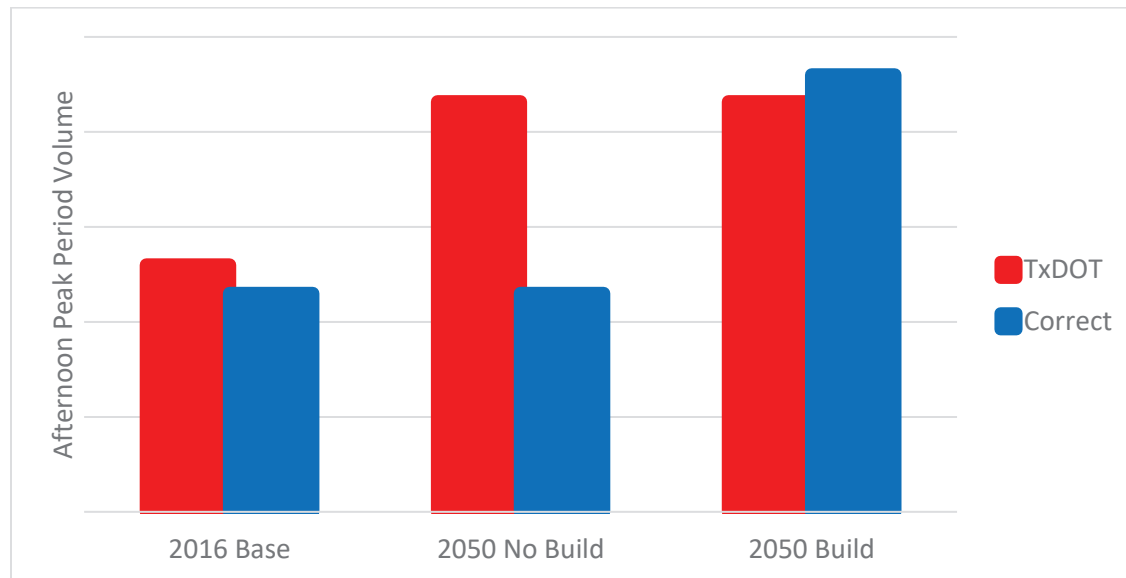
Valid modeling can capture these effects, but the invalid approach TxDOT apparently plans to use does not.

Table 1: Correct Alternatives Modeling for I-35 Free Travel Lane Volumes

	TxDOT	Correct
2016 Base	Over-capacity volumes	Existing volumes
2050 No Build	Over-capacity + 66%	Like current volumes
2050 Build	Over-capacity + 66% + maybe a bit more	Enough traffic growth that freeway lanes become congested “to the point where they have no advantage over the alternate routes.”

In the TXDOT approach there is little difference between No Build and Build traffic volumes. In the correct approach, there is a huge difference as shown in Figure 7.

Figure 7 Correct Alternatives Modeling for I-35 Free Travel Lane Volumes



If the TXDOT microsimulation modeling has similar traffic volumes inputs for the 2050 No Build and Build alternatives, it is likely to show severe congestion for the No Build alternative and reduced congestion in the Build alternative. It would be invalid to conclude that this is representative of reality.

Modeling Requirement 5: Modeling must show that un-tolled I-35 lanes will congested in both the No Build and Build Alternatives.

6) An Alternative Where All Lanes Are Tolled Must Be Analyzed

It will be impossible to build enough I-35 lanes to eliminate congestion because the true latent demand as shown in Figure 6 is almost twice the traffic volume today, and even higher in the future.

Therefore, the only way to counter the triple convergence effect is to toll all lanes. This would make the generalized cost of the high-speed lanes equal to the generalized cost of the parallel low-speed lanes. This basic traffic law has been accepted when planning managed toll lanes but also needs to be accepted when planning any type of freeway expansion.

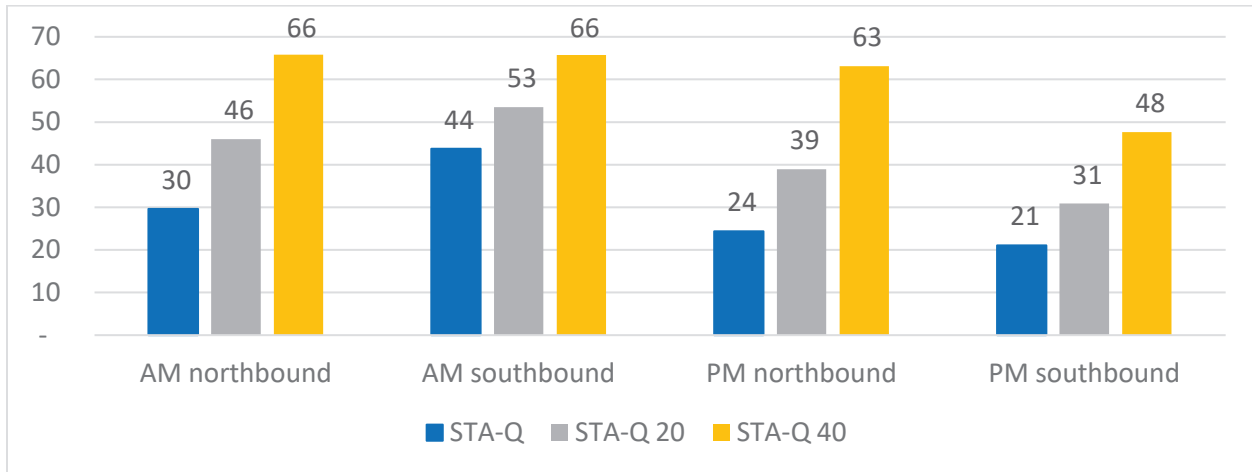
Similarly, tolling is the only way to truly address the project Purpose and Need which includes addressing “severe traffic congestion” and delay on I-35.

If all lanes are tolled, the tolls need not be as high as they are for managed lanes such as those on Mopac. I tested tolling all freeway lanes in the Austin region with the STA-Q model at two different toll levels – 20 cents a mile and 40 cents a mile (50 cents and \$1 per mile for trucks). I applied the tolls for the entire 24 hours.¹⁰

¹⁰ It is likely that the optimal toll strategy would involve higher peak period tolls and lower off-peak tolls. However, testing variable tolls would require revamping the CAMPO model to provide correct feedback signals to non-work trips where the model chooses travel destinations based on off-peak travel times and costs.

Figure 8 shows modeled I-35 speeds for the two toll alternatives.

Figure 8: 2015 Modeled I-35 Morning and Afternoon Peak Period Speeds for Free, 20 Cent Per Mile and 40 Cent Per Mile Alternatives



As shown in Figure 8, a moderate 20 cent per mile toll significantly improves I-35 peak period speeds. The 40 cent per mile toll results in free-flow speeds except for the afternoon peak period in the southbound direction. Tolling all lanes is the only way for the project to satisfy its Purpose and Need of addressing congestion and delay.

Express toll lanes have much higher toll rates in peak periods – forcing people to choose between extremely high tolls and extreme congestion. This gives an advantage to higher-income travelers. These moderate tolls on all lanes are a much fairer way to institute pricing.

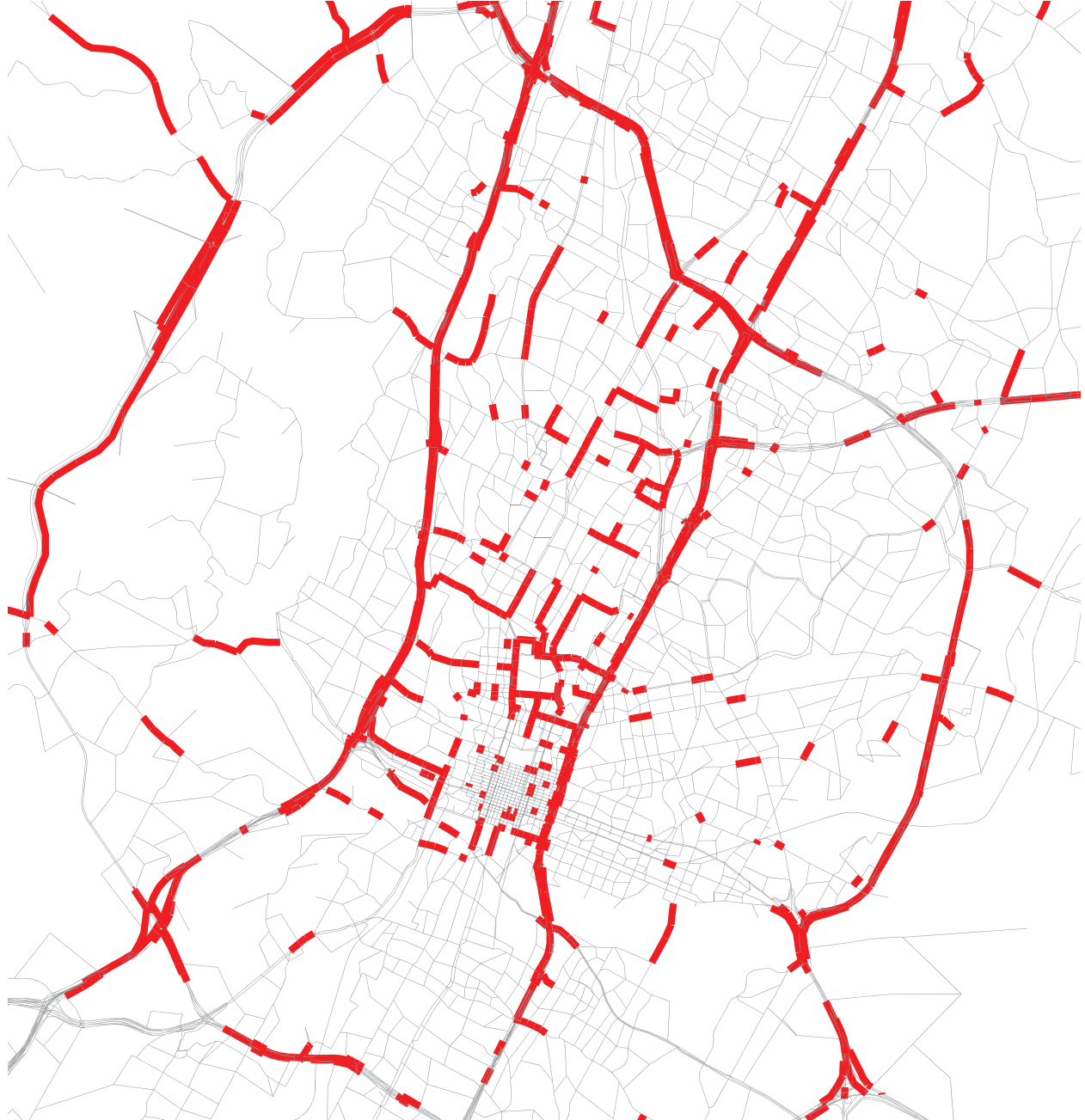
Tolling all lanes would raise a lot of revenue. As collection costs would be low with modern technology, most of the money could be returned to the community in the form of lower taxes and/or in multimodal transportation investments. To ensure equitable access, the credit-based congestion pricing concept that the Texas A&M Transportation Institute and the UT Center for Transportation Research have studied to deploy in the Austin region could be used.

Modeling Requirement 6: An alternative where all lanes are tolled must be analyzed.

7) Horizon Year Modeling Assumptions for Downtown Austin Must Be Plausible

So far, I have only presented CAMPO and STA-Q model outputs for the 2015 base year rather than for the 2045 CAMPO horizon year. This is because the 2045 CAMPO modeling assumptions are implausible. In Section 1, I documented that assigned volume-to-capacity ratios of greater than 1.0 are impossible, and that assignments greater than 1.1 should not be used for planning. Figure 9 shows that all major roadways in the 2045 CAMPO model in central Austin have volume-to-capacity ratios greater than 1.1 in 2045.

Figure 9: CAMPO Model 2045 Afternoon Peak Period Volume-to-Capacity Ratio Exceeding 1.1 (RED)



The STA-Q 2015 model eliminated most of the $V/C > 110\%$ roadways by reassigning traffic to less congested streets, but this is not possible given the 2045 model inputs. As shown in Figure 10, the 2045 STA-Q model has many fewer road segments with V/C greater than 110% than in the CAMPO model, but many critical links in downtown Austin remain impossibly over capacity as shown in a more detailed map in Figure 11.

Figure 10: STA-Q Model 2045 Afternoon Peak Period Volume-to-Capacity Ratio Exceeding 1.1 (RED)



Figure 11: STA-Q Model 2045 Afternoon Peak Period Volume-to-Capacity Ratio Exceeding 1.1 Downtown Austin (RED)



To the south, all roadways crossing the river have $V/C > 110\%$ including:

- Mopac
- Lamar
- First,
- Congress,
- I-35 main line
- I-35 frontage

To the west, the streets and roads with V/C > 110% include:

- 29th
- 24th
- Enfield
- 6th
- Cesar Chavez

To the north the streets and roads with V/C > 110% include:

- Mopac
- Lamar
- Guadalupe
- Duval
- I-35 main line
- I-35 frontage

All these V/C exceeding 110% assignments are impossible. The underlying problem is that the assumptions about future downtown jobs and housing are incompatible with the modeled auto mode share. It is impossible in either the CAMPO or STA-Q model for the downtown workers to leave their workplaces and head for home during the afternoon 3-hour peak period. It is probable that these implausible assumptions will carry over into the TxDOT 2050 modeling. The jobs and housing downtown should be adjusted, or alternatively, downtown travel mode must shift significantly away from auto mode to transit, and to walk and bicycle modes. This would require major investments in transit. No amount of I-35 widening can solve this problem.

Unless 2050 downtown auto work trips can be accommodated somewhere on the road network, realistic modeling is impossible. This sort of jobs/road network imbalance would never occur in the real world because workplaces would stop adding jobs downtown before it did.

Addressing the downtown Austin over-capacity issue is a minimal requirement for modeling the central section of I-35. Ideally, the TxDOT modeling also should address the many other over-capacity areas in the CAMPO 2045 model including:

- Much of Williamson County and especially Round Rock, SH 45 and intersecting roads, US 183
- SR 71 east of US 183
- Lockhart
- San Marcos,
- The hill country between San Marcos and Dripping Springs (where there aren't enough roadways to support the assumed development)
- SR 71 west of US 290

As with downtown Austin, the assumed growth in these areas is not possible given the planned roadway system. While the Austin region has doubled its population roughly every 20 years for a long time, this will need to stop sometime this century. Otherwise the Austin region's population would exceed the current population of the entire state of Texas by the year 2100 (nonsensical). The STA-Q modeling indicates that even one more doubling will not be possible without drastic changes in travel behavior.

The region cannot support a doubling in VMT with the planned roadway system; therefore, growth must be accompanied with significant reductions in VMT per capita. This could be accomplished through a combination of more compact growth and reprioritization of transportation investments away from freeway capacity to transit and walk and bike infrastructure.

Modeling Requirement 7: Modeling assumptions for downtown Austin must be plausible.

8) Modeling Must Consider Impacts to Downtown Austin Streets

No trip begins or ends on I-35. If widening I-35 results in higher entering and exiting traffic volumes downtown, this also means higher volumes intersecting streets. These impacts should be considered direct impacts of the project and be analyzed. The detailed model area should be like that shown in Figure 11 above – including the river to the south, Mopac to the west, and at least as far as 45th Street to the north.

I illustrate how ramp assumptions can affect traffic on local streets by modeling an alternative where most I-35 ramps between Routes 71 and 290 were eliminated. The only ramps kept are a single northbound on-ramp and a single southbound off-ramp north of 12th Street to link to the northern section with four freeway lanes in each direction.

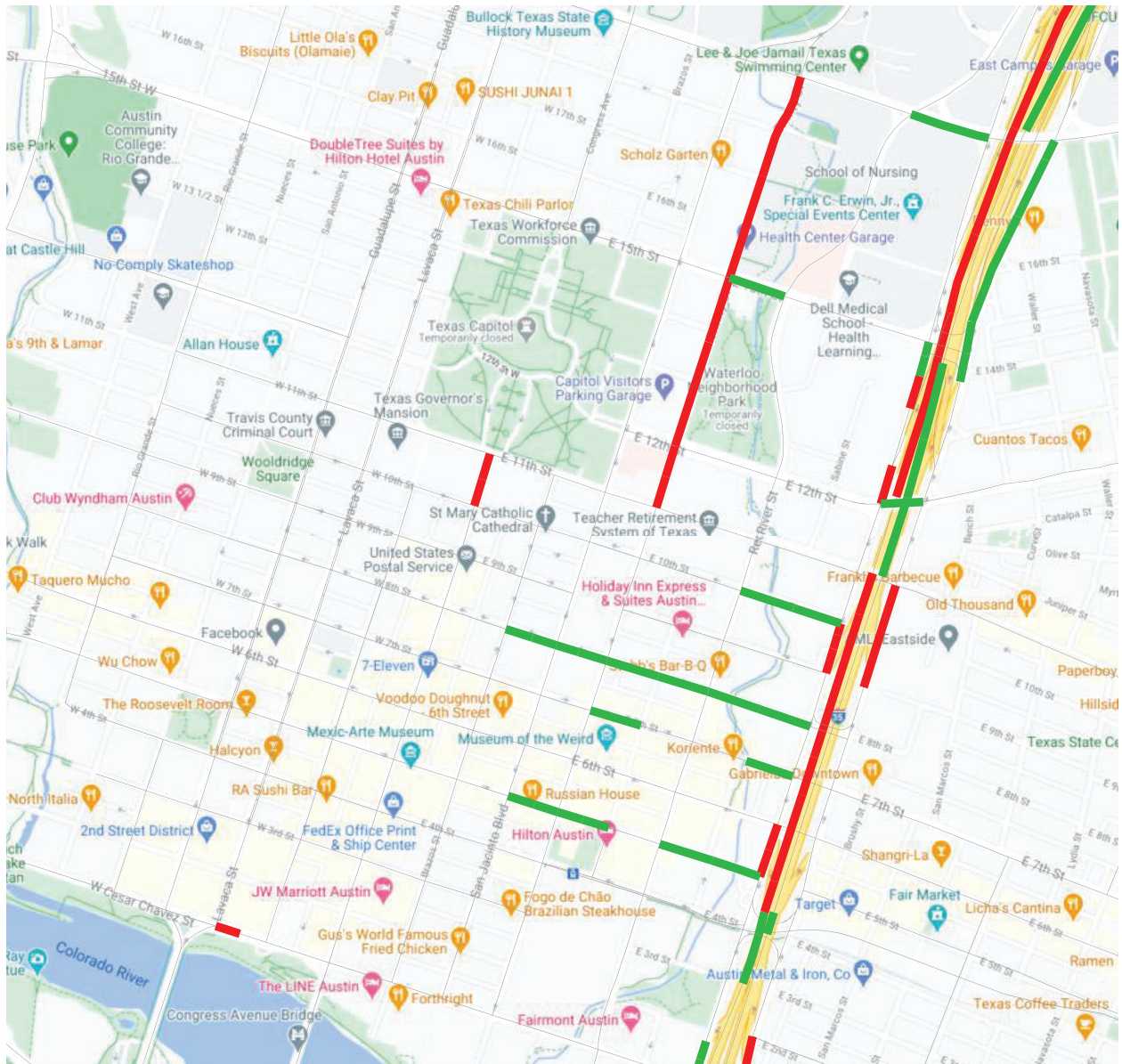
Reducing the number of ramps would greatly improve I-35 operations because the merges and associated lane changes and weaves reduce effective capacity considerably. When I-35 is modeled without tolls, travelers jump on and off the freeway lanes, but generally only gain a few seconds in peak travel times because the freeway lanes are congested. When I-35 is modeled with tolls, ramp volumes are considerably lower as it would not pay for travelers to jump on and off the freeway lanes so frequently.

Eliminating almost all the ramps has only moderate impacts on I-35 in the modeling. Travelers in the model sort themselves out between the freeway lanes and the frontage roads south of SR 71 or north of US 183, and the volumes and speeds do not change significantly on either the freeway lanes or frontage roads as compared to the modeling with the current ramp configuration. Therefore, the ramp removal alternative does not perform significantly better or worse than the complicated set of ramps that exist today. There is enough latent demand for I-35 that the free lanes will continue to be congested even if a significant number of ramps are removed. Some travelers shift to other routes, but other travelers replace them.

However, as shown in Figure 12, the ramp changes would have some significant, and mostly beneficial, impacts on Austin Streets. In the afternoon peak period, there would be a significant increase in Trinity Street northbound traffic leaving downtown as well as significant traffic decreases on multiple east-west streets near to I-35.

Modeling Requirement 8: Modeling must consider impacts to downtown Austin streets.

Figure 12: STA-Q Model with Most I-35 Ramps Removed PM Peak Period Increase of Greater than 1000 Vehicles (RED), Decrease of More than 1000 Vehicles (GREEN)



Appendix A: Capacity, STA, DTA and STA-Q

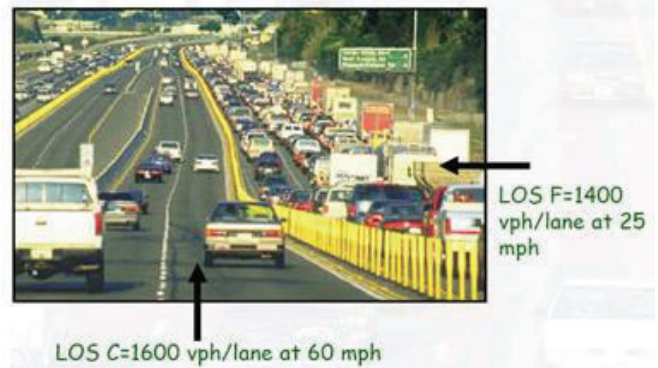
Capacity

Section 1 describes how roadways cannot carry traffic volumes in excess of capacity and introduces a threshold of 110% of capacity beyond which model outputs are invalid. The maximum sustained traffic flow on I-35 likely is significantly less than 100% of modeled capacity.

Freeway capacity in the CAMPO travel demand model varies slightly by area type ranging from 2,130 vehicles per lane per hour in rural areas to 2,170 vehicles per hour in the Central Business District (CBD).¹¹

While traffic volumes can reach these levels for short periods, traffic at this level is unstable and often breaks down to stop-and-go conditions with significantly lower throughput. Once traffic breakdown occurs (as is common on I-35), vehicle throughput can be well below the maximum capacity as illustrated in this photo where congested traffic has a throughput of only 1400 vehicles per lane per hour in stop-and-go conditions vs. the adjacent managed lanes carrying 1600 vehicles per lane per hour at freeway speeds while appearing to be almost empty by comparison.

Figure A1: SR 91, Orange County, California¹²



For this reason, managed lanes are maintained at much lower traffic levels that the capacity assumed in the CAMPO model as described in a Federal Highway Administration (FHWA) document¹³:

The capacity a single directional lane can carry does not assure travel reliability as the flow rates become unstable at this point, and speeds and throughput can suddenly deteriorate... Managing flow below capacity can better assure travel benefits. Ongoing research sponsored by NCHRP is defining the appropriate values associated with different managed flow rates. In the meantime, the "rule of thumb" various states have adopted is a maximum managed flow threshold of approximately 1600 to 1650 vehicles/hour/lane (vphpl) for a single managed lane, assuming a vehicle mix composed largely of passenger cars, some buses and no heavy trucks. This value generally supports conditions corresponding to LOS C or better for most conditions. Observed maximum flow rates on geometrically restricted HOV lanes typically range from 1500 vphpl to 1750 vphpl. Multi-lane treatments may obtain somewhat higher values approaching

¹¹ Alliance Transportation Group. CAMPO TDM Development Report. Table 5, p. 12. 2019.

¹² FHWA Federal Highway Administration (FHWA). Freeway and Operations Handbook Chapter 8 Managed Lanes, January 2011..

¹³ FHWA.

1700 to 1900 vphpl since there is less friction in flow and no constraints caused by the slowest moving vehicle.

Figure A2 reproduced from a University of Texas report illustrates the complex relationships between capacity, traffic volume, and travel time. Important things to note in Figure A2 are:

- 1) True capacity represented with the vertical black line cannot be exceeded
- 2) In uncongested conditions (the lower left quadrant), as traffic volume increases, travel time increases.
- 3) In congested conditions (the upper left quadrant), longer travel times generally are correlated with less traffic throughput.

Point #3 is counterintuitive and the relational between travel time and throughput is not strictly causal. In many cases, the stop-and-go conditions represented with extremely high travel times result from downstream bottlenecks rather than the volume on that link. This is a fundamental problem with Static Traffic Assignment (STA); road segments are not independent of each other.

Figure A2: Relationships Between Capacity, Volume and Travel Time¹⁴

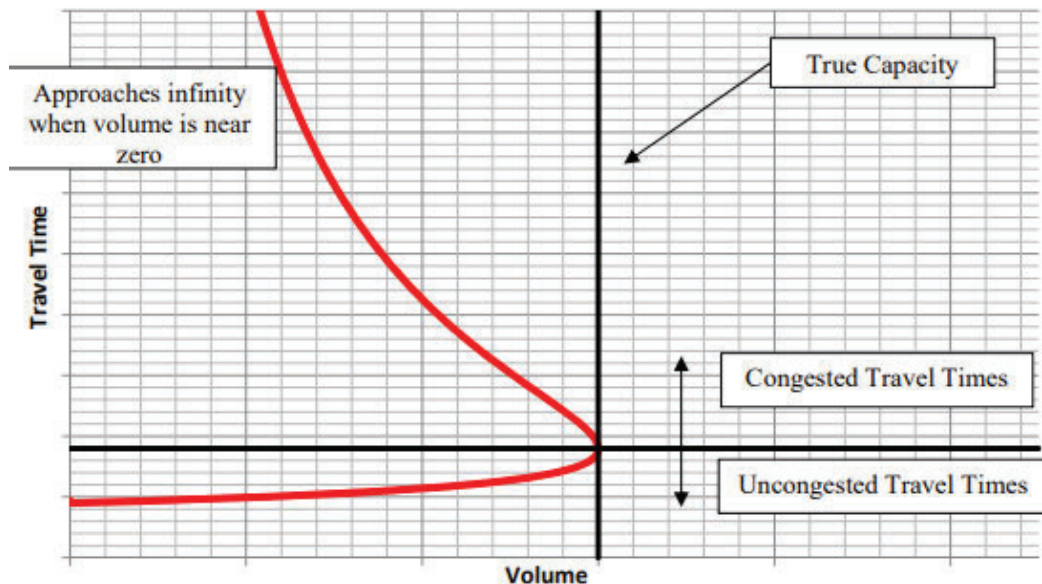


Figure 9.1: Travel time and link volume relationship used in DTA

The maximum I-35 capacity that can be sustained for a 3-hour peak period is probably significantly less than 2000 vehicles per lane per hour. Therefore, the CAMPO model capacity values are likely too high, and there is no reason to set an even higher threshold of 110% of the CAMPO model capacity as was done in the Section 1 graphics. The true capacity number should be established within the I-35 study and used as an upper limit for forecasts.

¹⁴ J.C. Duthie, N Nesamuddin, N Juri, T Rambha, C Melson, C Pool, S. Boyles, W. Waller and R. Kumar. Investigating Regional Traffic Assignment Modeling for Improved Bottleneck Analysis: Final Report, University of Texas Center for Transportation Research, 2013.

Static Traffic Assignment (STA) Deficiencies

The CAMPO regional travel demand uses a 40-year-old Static Traffic Assignment (STA) algorithm. Another graphic from the same UT technical report illustrates why STA cannot properly account for congestion delays. An STA model has no capacity constraint but instead adds a delay based on the volume-to-capacity ratio.

Figure A3: STA Is Not Capacity Constrained¹⁵

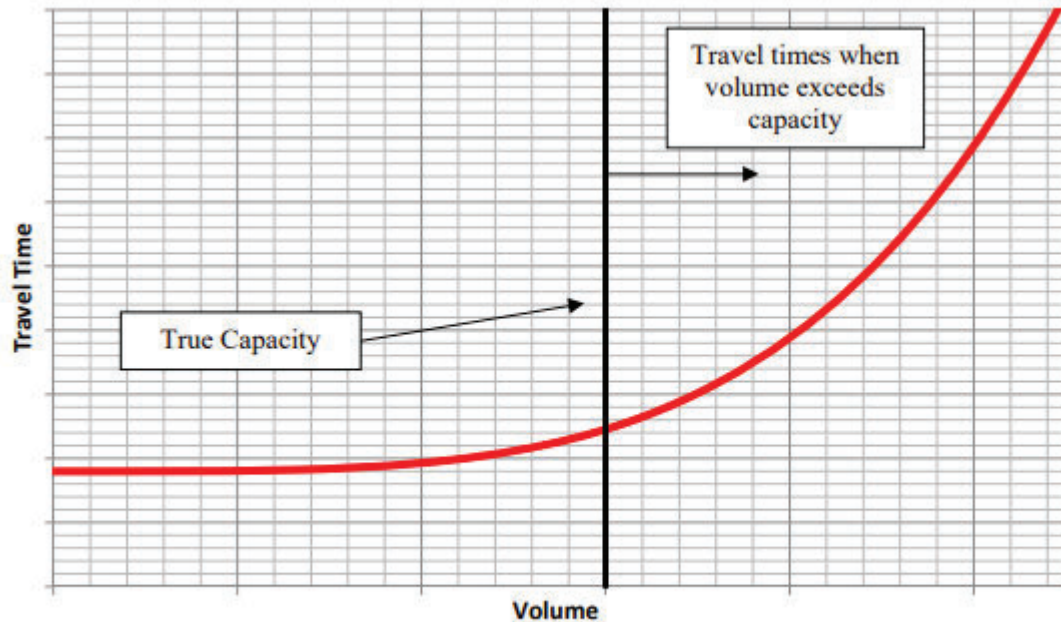


Figure 9.2: Travel time and link volume relationship used in STA—The BPR Function

The travel time multiplier is calculated from the model's volume-to-delay function coefficients. The CAMPO model assumes the free-flow speed on I-35 in the study area varies from 65 mph to 72 mph. At 100% of model capacity, the model assumes that I-35 operates at 33-36 mph. At 110% of model capacity, the model assumes that I-35 operates at 23-26 mph. As documented in Section 2, actual I-35 speeds are:

- Mean speed 21 mph,
- 95th percentile "planning" travel time 12 mph.

Therefore, even at 110% of modeled capacity, the CAMPO model speeds are higher than the actual speeds.

Furthermore, these problems are much worse for modeled freeway ramps. The CAMPO model assumes that ramps in the study area have free-flow speeds of 25-35 mph. At 100% of capacity, the modeled ramp speeds are 22-30 mph and at 110% of capacity, the modeled ramp speeds are 20-29 mph. Given that a typical ramp is only about 700 feet in length, the delay calculated for a single ramp at 110% of

¹⁵ J.C. Duthie, N Nesaruddin, N Juri, T Rambha, C Melson, C Pool, S. Boyles, W. Waller and R. Kumar. Investigating Regional Traffic Assignment Modeling for Improved Bottleneck Analysis: Final Report, University of Texas Center for Transportation Research, 2013.

capacity is less than 5 seconds. In the CAMPO 2015 model, there is a ramp assigned with $V/C = 1.44$ with a total travel time of 17 seconds and a delay of only 9 seconds – essentially no delay at all.

Dynamic Traffic Assignment (DTA)

In my peer-reviewed journal article: *Forecasting the impossible: The status quo of estimating traffic flows with static traffic assignment and the future of dynamic traffic assignment*¹⁶, I document that STA always produces impossibly high freeway traffic volumes in congested networks and cannot be relied on for planning. The only solution is to replace STA with a more modern Dynamic Traffic Assignment (DTA) algorithm. Rather than assign traffic volumes above 100% of capacity, traffic in a DTA model spills back onto upstream roadway segments. The delays in these resulting queues are realistically estimated. Leading modeling expert Alan Horowitz wrote: “Choose DTA over STA whenever possible.”¹⁷

CAMPO and TxDOT should replace STA with DTA in all regional modeling applications as soon as possible.

STA-Q

The capacity can be considered as the maximum possible discharge volume for a road segment. The CAMPO regional travel demand model has 3-hour morning and afternoon peak periods. In general, traffic volumes are lower than the average throughput at the beginning and end of the peak period, and higher than average in the middle of the peak period. If a segment averages $V/C = 1$ across the entire hour peak period, this implies that the traffic volume entering the link in the middle of the time period is higher than capacity, and a queue will form behind the segment.

The problems with STA cannot be eliminated, but Dr. Xuesong Zhou of Arizona State University has observed that a modified STA can roughly approximate these queue delays. I am calling this STA-Q (for queue).

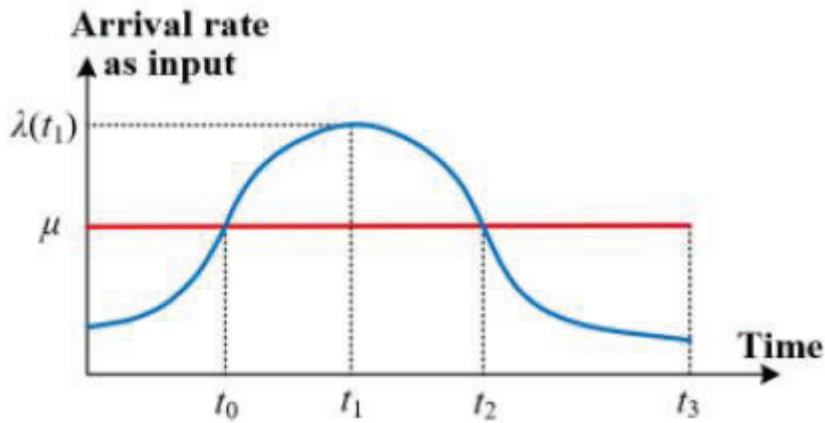
I have borrowed some graphics from Dr. Zhou’s team to illustrate queue concepts. Figure A4 illustrates the generalized evolution of a bottleneck over time assuming a constant discharge rate μ (shown in red) and vehicles arriving $\lambda(t)$ (shown in blue). There are four distinct stages:

- 1) before time t_0 , $\lambda(t) < \mu$ and there is no bottleneck
- 2) between t_0 and t_2 , $\lambda(t) > \mu$ and the queue lengthens
- 3) between t_2 and t_3 , $\lambda(t) < \mu$ queue shortens and clears at time t_3
- 4) after time t_3 , $\lambda(t) < \mu$ and there is no queue

¹⁶ Marshall, Norman. Forecasting the impossible: The status quo of estimating traffic flows with static traffic assignment and the future of dynamic traffic assignment, *Research in Transportation Business & Management*, Volume 29, 2018, 85-92. <https://www.sciencedirect.com/science/article/pii/S2210539517301232?via%3Dihub>

¹⁷ Horowitz, Alan. Posting on the Travel Model Improvement Program (TMIP) listserv, March 2019.

Figure A4: Temporal Stages of a Bottleneck



The maximum arrival rate occurs at time t_1 . The maximum queue is at time t_2 . The area between times t_0 and t_2 between the blue and red lines represents the accumulated queued vehicles and this is equal to the area between times t_2 and t_3 and between the red and blue lines which represents the vehicles cleared from the queue.

Figure 2 provides a different representation of the same bottleneck with a focus on the queue length which is 0 for $t \leq t_0$ and for $t \geq t_3$.

Figure A5: Queue Length Representation

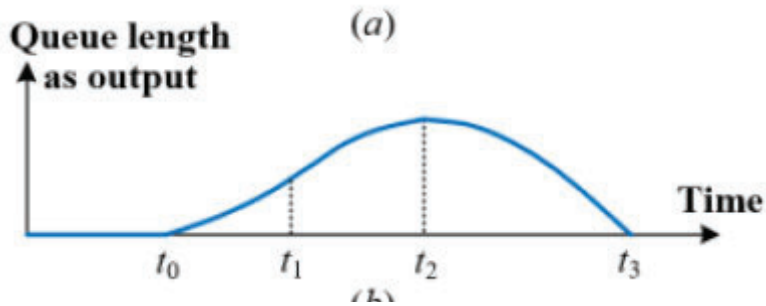
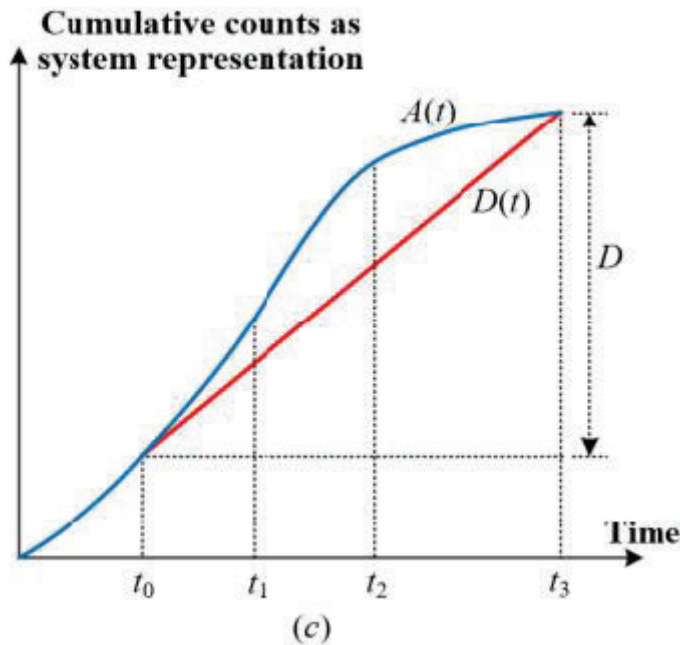


Figure A6 shows a third representation of the same bottleneck with a focus on the cumulative arrivals $A(t)$ (blue) and the cumulative departures $D(t)$. At times t_0 and t_2 , $A(t) = D(t)$.

Figure A6: Cumulative Counts Representation



Between times t_0 and t_2 , the vertical difference between the cumulative arrival and departure curves at time t is the queue length $Q(t)$, and delay at time t is $w(t) = Q(t)/\mu$. In a 3-hour peak period, this queue delay could be many minutes.

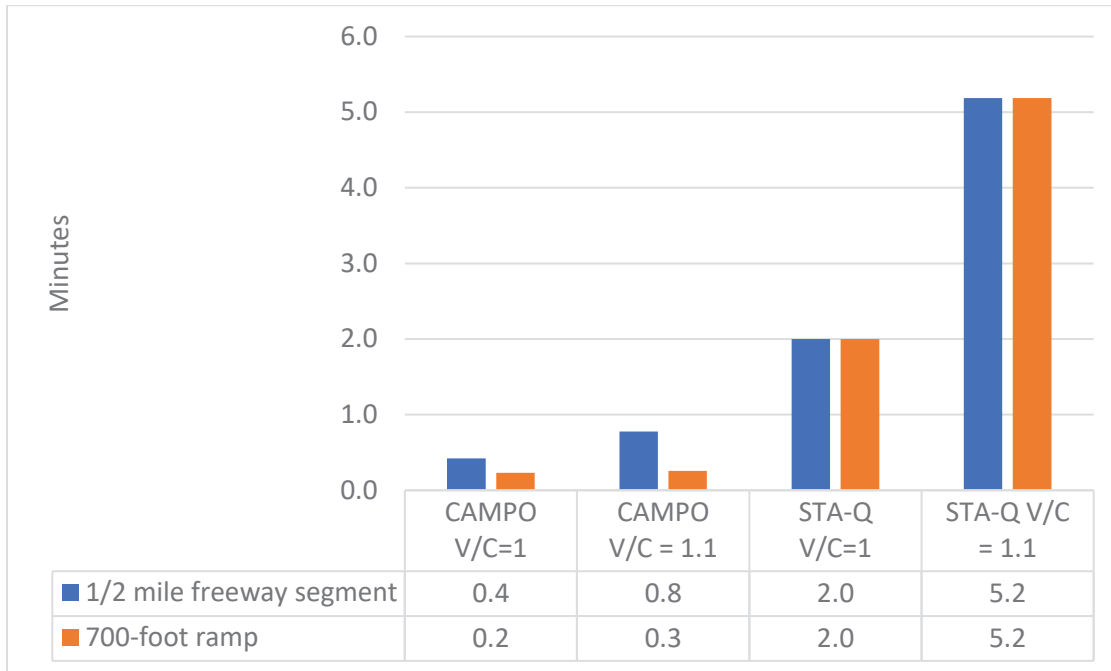
The STA volume-to-delay function is controlled by two parameters assigned to each road segment – alpha and beta. STA-Q keeps the alpha and beta coefficients so that it can be implemented with standard travel demand modeling software. However, it modifies the alpha parameter on a road segment by road segment basis.

In conventional STA, it is assumed that the delay function is a multiplier of free-flow travel time. For short road segments, including most ramps, the free-flow travel times are short. Therefore, even very high volume-to-capacity values translate into unrealistically short delays. The time delay for a queue behind a bottleneck does not depend on the length of the road segment, and the queue delay time should be modeled as independent of the segment length or free-flow time. To make the calculated delays independent of length, the STA-Q alpha parameter is divided by the free-flow travel time. The Austin region STA-Q model has been parameterized so that the modeled queue delay at $V/C = 1$ is 2 minutes for any road segment – regardless of functional type, length, or free-flow speed.

The beta exponent is 10.0. This makes the modeled queue delay at $V/C = 1.1$ equal to 5.2 minutes for any road segment – regardless of functional type, length, or free-flow speed.

Figure A7 compares the calculated CAMPO and STA-Q model delays for two typical road segments: 1) a freeway segment ½ mile in length, and 2) a ramp 700 feet in length.

Figure A7: Comparison of CAMPO and STA-Q Road Segment Delays at V/C = 1 and V/C = 1.1



The alpha parameter for the ½ mile freeway segment is $2 / 0.5 = 4.0$. The alpha parameter for the 700-foot ramp is $2 / (700/5280) = 15.1$

In the CAMPO model, I-35 model segments are generally quite short because the mainline freeway segments are split by so many ramps. As each roadway segment is independent in STA, an extended stretch of high V/C segments will result in adding multiple delays. In the 2015 model, this largely prevents V/C > 1.1 segments.

Appendix B: Norman L. Marshall Resume

NORMAN L. MARSHALL, PRESIDENT

EDUCATION:

Master of Science in Engineering Sciences, Dartmouth College, Hanover, NH, 1982
Bachelor of Science in Mathematics, Worcester Polytechnic Institute, Worcester, MA, 1977

PROFESSIONAL EXPERIENCE: (33 Years, 19 at Smart Mobility, Inc.)

Norm Marshall helped found Smart Mobility, Inc. in 2001. Prior to this, he was at RSG for 14 years where he developed a national practice in travel demand modeling. He specializes in analyzing the relationships between the built environment and travel behavior and doing planning that coordinates multi-modal transportation with land use and community needs.

Regional Land Use/Transportation Scenario Planning

Portland Area Comprehensive Transportation System (PACTS) – the Portland Maine Metropolitan Planning Organization. Updating regional travel demand model with new data (including AirSage), adding a truck model, and multiclass Dynamic Traffic Assignment (DTA) including differentiation between cash toll and transponder payments.

Vermont Agency of Transportation-Enhanced statewide travel demand model to evaluate travel impacts of closures and delays resulting from severe storm events. Model uses innovate Monte Carlo simulations process to account for combinations of failures.

California Air Resources Board – Led team including the University of California in \$250k project that reviewed the ability of the new generation of regional activity-based models and land use models to accurately account for greenhouse gas emissions from alternative scenarios including more compact walkable land use and roadway pricing. This work included hands-on testing of the most complex travel demand models in use in the U.S. today.

Chicago Metropolis Plan and Chicago Metropolis Freight Plan (6-county region)— developed alternative transportation scenarios, made enhancements in the regional travel demand model, and used the enhanced model to evaluate alternative scenarios including development of alternative regional transit concepts. Developed multi-class assignment model and used it to analyze freight alternatives including congestion pricing and other peak shifting strategies.

Envision Central Texas Vision (5-countyregion)—implemented many enhancements in regional model including multiple time periods, feedback from congestion to trip distribution and mode choice, new life style trip production rates, auto availability model sensitive to urban design variables, non-motorized trip model sensitive to urban design variables, and mode choice model sensitive to urban design variables and with higher values of time (more accurate for “choice” riders). Analyzed set land use/transportation scenarios including developing transit concepts to match the different land use scenarios.

Municipal Planning

City of Grand Rapids – Michigan Street Corridor – developed peak period subarea model including non-motorized trips based on urban form. Model is being used to develop traffic volumes for several alternatives that are being additionally analyzed using the City’s Synchro model

City of Omaha – Modified regional travel demand model to properly account for non-motorized trips, transit trips and shorter auto trips that would result from more compact mixed-use development. Scenarios with different roadway, transit, and land use alternatives were modeled.

City of Dublin (Columbus region) – Modified regional travel demand model to properly account for non-motorized trips and shorter auto trips that would result from more compact mixed-use development. The model was applied in analyses for a new downtown to be constructed in the Bridge Street corridor on both sides of an historic village center.

City of Portland, Maine – Implemented model improvements that better account for non-motorized trips and interactions between land use and transportation and applied the enhanced model to two subarea studies.

City of Honolulu – Kaka’ako Transit Oriented Development (TOD) – applied regional travel demand model in estimating impacts of proposed TOD including estimating internal trip capture.

City of Burlington (Vermont) Transportation Plan – Led team that developing Transportation Plan focused on supporting increased population and employment without increases in traffic by focusing investments and policies on transit, walking, biking and Transportation Demand Management.

Transit Planning

Regional Transportation Authority (Chicago) and Chicago Metropolis 2020 – evaluated alternative 2020 and 2030 system-wide transit scenarios including deterioration and enhance/expand under alternative land use and energy pricing assumptions in support of initiatives for increased public funding.

Capital Metropolitan Transportation Authority (Austin, TX) Transit Vision – analyzed the regional effects of implementing the transit vision in concert with an aggressive transit-oriented development plan developed by Calthorpe Associates. Transit vision includes commuter rail and BRT.

Bus Rapid Transit for Northern Virginia HOT Lanes (Breakthrough Technologies, Inc and Environmental Defense.) – analyzed alternative Bus Rapid Transit (BRT) strategies for proposed privately-developing High Occupancy Toll lanes on I-95 and I-495 (Capital Beltway) including different service alternatives (point-to-point services, trunk lines intersecting connecting routes at in-line stations, and hybrid).

Roadway Corridor Planning

I-30 Little Rock Arkansas – Developed enhanced version of regional travel demand model that integrates TransCAD with open source Dynamic Traffic Assignment (DTA) software, and used to model I-30 alternatives. This model models freeway bottlenecks much more accurately than the base TransCAD model.

South Evacuation Lifeline (SELL) – In work for the South Carolina Coastal Conservation League, used Dynamic Travel Assignment (DTA) to estimate evaluation times with different transportation alternatives in coastal South Carolina including a new proposed freeway.

Hudson River Crossing Study (Capital District Transportation Committee and NYSDOT) – Analyzing long term capacity needs for Hudson River bridges which a special focus on the I-90 Patroon Island Bridge where a microsimulation VISSIM model was developed and applied.

PUBLICATIONS AND PRESENTATIONS (partial list)

DTA Love: Co-leader of workshop on Dynamic Traffic Assignment at the June 2019 Transportation Research Board Planning Applications Conference.

Forecasting the Impossible: The Status Quo of Estimating Traffic Flows with Static Traffic Assignment and the Future of Dynamic Traffic Assignment. *Research in Transportation Business and Management* 2018.

Assessing Freeway Expansion Projects with Regional Dynamic Traffic Assignment. Presented at the August 2018 Transportation Research Board Tools of the Trade Conference on Transportation Planning for Small and Medium Sized Communities.

Vermont Statewide Resilience Modeling. With Joseph Segale, James Sullivan and Roy Schiff. Presented at the May 2017 Transportation Research Board Planning Applications Conference.

Assessing Freeway Expansion Projects with Regional Dynamic Traffic Assignment. Presented at the May 2017 Transportation Research Board Planning Applications Conference.

Pre-Destination Choice Walk Mode Choice Modeling. Presented at the May 2017 Transportation Research Board Planning Applications Conference.

A Statistical Model of Regional Traffic Congestion in the United States. Presented at the 2016 Annual Meeting of the Transportation Research Board.

MEMBERSHIP/AFFILIATIONS

Associate Member, Transportation Research Board (TRB)

Member and Co-Leader Project for Transportation Modeling Reform, Congress for the New Urbanism (CNU)



MODEL LONG-RANGE
TRANSPORTATION PLANS:
*A Guide for Incorporating
Performance-Based
Planning*

AUGUST 2014



U.S. Department of Transportation
Federal Highway Administration

Technical Report Documentation Page

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16. Abstract This Guidebook informs State departments of transportation (DOTs), metropolitan planning organizations (MPOs), and regional transportation planning organizations (RTPOs), as well as their planning partners such as transit agencies, local governments, and Federal agencies, about effective practices for incorporating performance-based planning into the development of a long range transportation plan. A performance-based plan sets the foundation of goals, objectives, performance measures, and targets that support decisions for long-range investments and policies, and guides programming, as well as shorter-range decisions that move toward achievement of desired system performance outcomes. This document identifies key components present in a "model" transportation plan, as well as process elements that are necessary to reflect the priorities of the community and support attainment of desired performance outcomes for the multimodal transportation system. Examples and case studies illustrate the Guide's key points.			
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Table of Contents

Agencies Index – Notable Practices	vii
1. Introduction.....	1
Guidebook Purpose	2
Background	3
Organization of Guidebook	5
2. Overview: Developing a Performance-Based Transportation Plan... 7	
Key Elements of a Performance-based Transportation Plan.....	7
Formats for Performance-based Transportation Plans.....	16
Process of Developing a Performance-based Transportation Plan.....	19
3. Public and Stakeholder Participation and Agency Collaboration ... 24	
Engagement in a Performance-based Plan	25
Public and Stakeholder Participation	27
Interagency Consultation and Coordination	38
Carrying Engagement Through to Implementation	40
4. Scoping and Baseline Information	41
Description of Multimodal Transportation System	41
Information on Existing Conditions and Trends	42
Future Challenges and Risks.....	44
Revenue Projections.....	47
Consideration of Applicable Planning Studies, Policies, Performance-based Plans ...	47
5. Strategic Vision, Goals and Objectives.....	49
Developing a Vision	49
Goals and Objectives: Definitions.....	50

Linking Transportation Plan Goals and Objectives to Broader Plans.....	58
6. Performance Measures and Targets	60
Key Roles for Performance Measures in the Transportation Plan.....	61
Identifying, Selecting, and Implementing Performance Measures for the Plan.....	67
Identifying Desired Trends or Targets.....	75
7. Transportation System Performance Report	81
Comparing Trends to Targets	81
Examples: Within and Outside of the Transportation Plan.....	82
8. Identification of System Needs, Potential Strategies, and Costs	87
Performance Needs Assessment	87
Financial Planning.....	89
Identification of Possible Solutions and their Costs	91
9. Investment Analysis and Selection	102
Scenario Analysis to Compare Alternative Investment Strategies	102
Using Performance Information to Support Project Prioritization and Selection of a Preferred Alternative.....	108
10. Connecting the Transportation Plan and Programming	111
Connection with the TIP and STIP and Project Prioritization	111
Support for Project Development	114
Planning Studies	114
Future Directions and Planning Cycles.....	115
11. Case Studies.....	116
Case Study: Arizona Department of Transportation - What Moves You Arizona: 2010-2035 Long-Range Transportation Plan.....	116
Case Study: Metropolitan Transportation Commission (MTC), San Francisco Bay Area – Plan Bay Area	121

Case Study: Michigan Department of Transportation – 2035 Long Range Transportation Plan	132
Case Study: Pikes Peak Area Council of Governments – Moving Forward Update 2035	144
North Central Pennsylvania Planning and Development Commission: Case Study on Connecting Planning and Project Prioritization	153
Appendix: Federal Requirements for Transportation Plans	158
Metropolitan Transportation Plan	158
Statewide Transportation Plan	165
Resources	172
FHWA/FTA Transportation Planning Resources	172
Federal Resources on Data and Tools	174
Other Resources	175

List of Figures

Figure 2-1. Framework for PBPP	8
Figure 2-2: MnDOT Family of Plans	17
Figure 2-3: Connections between MTP, CTP, and AR in Maryland	18
Figure 2-4: Arizona Plan Development Process: Building Blocks	22
Figure 3-1. Sample Outcomes from DVRPC Choices and Voices Tool	32
Figure 6-1. Pike’s Peak Area Council of Governments – 2035 Moving Forward Update to the Regional Transportation Plan	63
Figure 6-2. A Subset of Performance Measures included in the Southern California Association of Governments’ 2012-2035 RTP	65
Figure 6-3. Proposed California MPO Performance Measures	71
Figure 6-4. Genesee Transportation Council – LRTP 2035 Performance Measures	77
Figure 6-5. CMAP Examples of Targets in Go To 2040 Plan	78
Figure 7-1. Safety Performance Results from 2002 Maryland DOT Attainment Report	82
Figure 7-2. Safety Performance Results from 2013 Maryland DOT Attainment Report	83
Figure 7-3. PeMS System Report Used by MPOs in California	84
Figure 7-4. Champaign-Urbana Annual Performance Report Card Excerpt	85
Figure 7-5. Sample Chart from UDOT’s <i>Strategic Direction and Performance Measures</i> Report	86
Figure 9-1. Arizona 2035 Long Range Transportation Alternative Investment Choices (AIC) “Grades” ...	103
Figure 9-2. Minnesota Department of Transportation: Using Scenarios to Link Management Systems to the LRTP	104
Figure 9-3. Minnesota Department of Transportation: Final MnSHIP Investment Priorities	105
Figure 9-4. Graphical depiction of Scenario 1 from SCAG’s Transportation Plan Development Process .	106
Figure 9-5. Colorado LRTP Presentation of Alternative Investment Scenarios	108

Figure 9-6. Metropolitan Transportation Commission: Project Performance Assessment	110
Figure 11-1: Project Performance Assessment Results, incorporating Support for Targets and Benefit/Cost	127
Figure 11-2: Plan Bay Area Process and Timeline	129
Figure 11-3: Michigan DOT Performance Measure Development Process	136
Figure 11-4. Sample Displays of Performance Trends in Relation to Targets from Michigan DOT	139

List of Tables

Table 2-1. Performance-based Elements of Transportation Planning Specified in Federal Law	12
Table 4-1. Key Risks Identified by MnDOT	46
Table 11-1. Adopted Plan Bay Area Performance Targets.....	123
Table 11-2. Evolution of Regional Transportation Plan Goals	125
Table 11-3. Recommended objectives for the 2030 LRP for reaching the plan’s goal of system improvement	137
Table 11-4. Selection of goals, objectives, and performance measures from the Moving Forward Update... ..	148
Table 11-5. Moving Forward Update Goals, Evaluation Criteria, and Evaluation Criteria Weight Values	149
Table 11-6. Transportation Project Type Descriptions (North Central PA)	154
Table 11-7. Highway Restoration Criteria and Weighting	155
Table 11-8. Highway/New Capacity Criteria and Weighting.....	156


Agencies Index – Notable Practices

<i>Arizona DOT</i>	21, 22, 23, 51, 58, 88, 103
<i>Baltimore Metropolitan Council</i>	39, 66, 99, 109
<i>Caltrans</i>	83
<i>Capital Region Transportation Planning Agency</i>	95
<i>Champaign County Regional Planning Commission</i>	28, 85
<i>Chicago Metropolitan Agency for Planning</i>	74, 78
<i>Colorado DOT</i>	107
<i>Delaware Valley Regional Planning Commission</i>	31
<i>Denver Regional Council of Governments</i>	57, 78, 99
<i>Genesee Transportation Council</i>	77, 113
<i>Lima-Allen County Regional Planning Commission</i>	76
<i>Maryland DOT</i>	18, 39, 42, 59, 61, 82, 87
<i>Metro</i>	35, 57, 78, 99
<i>Metropolitan Transportation Commission</i>	6, 16, 78, 99, 109, 110, 121
<i>Metropolitan Washington Council of Governments</i>	110
<i>Michigan DOT</i>	6, 45, 68, 73, 107
<i>Mid-America Regional Council</i>	66, 83, 109
<i>Minnesota DOT</i>	17, 29, 35, 45, 104
<i>North Central Pennsylvania Regional Planning and Development Commission</i>	67, 113
<i>North Central Texas Council of Governments</i>	56
<i>Ohio-Kentucky-Indiana Regional Council of Governments</i>	78
<i>Old Colony MPO</i>	85
<i>Pikes Peak Area Council of Governments</i>	19, 59, 62, 66, 68, 78, 109
<i>Pima Association of Governments</i>	45
<i>Puget Sound Regional Council</i>	90
<i>San Diego Association of Governments</i>	68, 115
<i>San Joaquin Council of Governments</i>	34
<i>Southeast Michigan Council of Governments</i>	105
<i>Southern California Association of Governments</i>	64, 65, 106
<i>Southwestern Pennsylvania Commission</i>	65
<i>Tennessee DOT</i>	35
<i>Utah DOT</i>	85
<i>Wilmington Area Planning Council</i>	66, 73, 109

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1. Introduction

Performance-based planning and programming (PBPP) has become a focus in the transportation community, as transportation agencies around the country work to ensure that scarce resources are used effectively and transparently to achieve desired agency, regional, state, and national goals. PBPP refers to the application of performance management principles within the planning and programming processes of transportation agencies. PBPP is a data-driven, strategic approach, providing for public and stakeholder involvement and accountability, in order to make investment and policy decisions to attain desired performance outcomes for the multimodal transportation system.

The FHWA and FTA *Performance Based Planning and Programming Guidebook*¹ was developed to provide transportation agencies with useful information to help them establish a performance-based planning and programming process that leads to investment decisions that are based on performance information. This Guidebook on *Model Long-Range Transportation Plans* is a companion document to the PBPP Guidebook to provide detailed information about developing a performance-based statewide long-range or metropolitan transportation plan.

While a PBPP approach can be applied within a wide range of transportation planning documents, the statewide long-range transportation plan (LRTP)² and metropolitan transportation plan (MTP)³ are critical documents in the transportation planning and investment decisionmaking process, identifying key desired outcomes and strategies for the transportation system and setting a framework for all of the investments made within a State or region. Within this Guidebook, the term “transportation plan” is used to refer both to statewide LRTPs and MTPs.

At both the statewide, nonmetropolitan, and metropolitan levels, the transportation plan is envisioned by regulation to be a central document that establishes agreed upon goals, policy decisions, and strategic investment to achieve the goals. It coordinates with investment plans, related planning documents and processes (e.g., Strategic Highway Safety Plans, Asset Management Plans, Congestion Management Process, State Freight Plans, etc.), and programming documents, including the State and metropolitan Transportation Improvement Programs (STIP/TIP). As a result, a performance-based transportation plan sets the foundation of goals, objectives, performance measures, and targets that support decisions for long-range investments and policies, and guide programming, as well as shorter-range decisions that move toward achievement of the desired system performance outcomes.

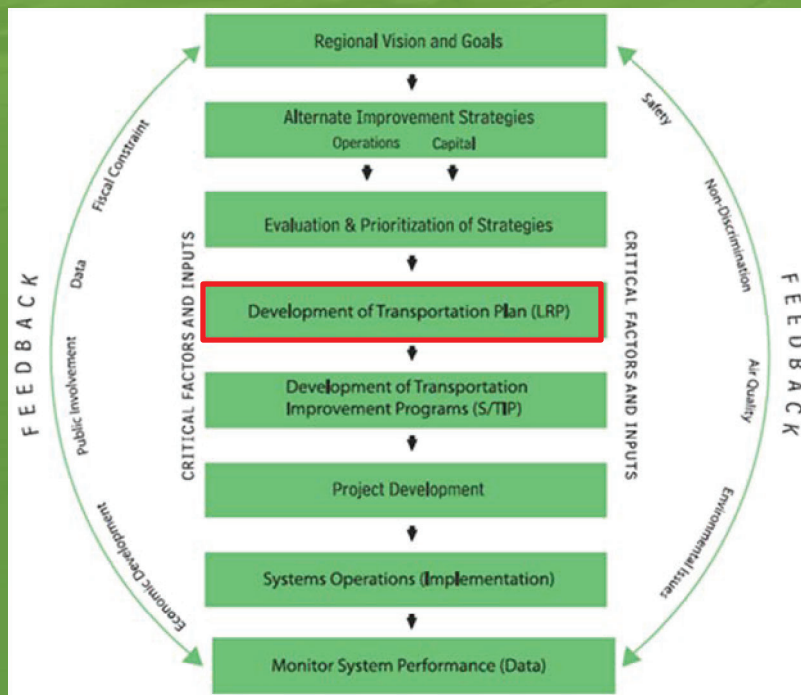
¹ Available at: http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/.

² 23 USC § 135 (f).

³ 23 USC § 134 (i).

KEY ROLE OF THE TRANSPORTATION PLAN

The statewide and metropolitan transportation plan play a critical role in the overall transportation investment decisionmaking process, and guide the development of Transportation Improvement Programs (STIP and TIPs) and projects.




Source: FHWA, *The Transportation Planning Process: Key Issues – A Briefing Book for Transportation Decisionmakers, Officials, and Staff*, available at:
<http://www.planning.dot.gov/documents/briefingbook/bbook.htm>

Guidebook Purpose

This Guidebook is intended to provide staff at State Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs), and Regional Transportation Planning Organizations (RTPOs) or Rural Planning Organizations (RPOs) – as well as their planning partners within transit agencies, local governments, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and stakeholders – with useful information for developing a performance-based transportation plan.

The Guidebook provides a framework within which agencies can:

- 
- ▶ Strengthen the ways in which they use and analyze performance information to advise and engage decision-makers, stakeholders and the public;
 - ▶ Guide improved implementation of the transportation plan to achieve plan outcomes;
 - ▶ Understand effective practices for developing a performance-based transportation plan;
 - ▶ Create better alignment of performance monitoring between States, MPOs, and transit agencies, along with coordination with FHWA and FTA field staff; and
 - ▶ Revisit the performance measures and targets developed in previous planning cycles to ensure the measures and targets continue to reflect the agency's goals and any changing circumstances, if relevant.

This document identifies the key components that would be present in a “model” transportation plan, as well as process elements that are necessary to ensure the development of a well-reasoned, balanced plan that reflects the priorities of its community and supports attainment of desired system performance outcomes for the multimodal transportation system. Examples drawn from statewide and metropolitan transportation plans are provided for illustrative purposes, but are not meant to be prescriptive or one-size-fits-all models. Individual States and MPOs can utilize different approaches, reflecting differences in Federal requirements between State LRTPs and MTPs, as well as the unique situations and practices of agencies.

Background

Transportation agencies have been increasingly incorporating performance-based approaches into their planning activities, seeking to improve performance in areas that matter to the public and stakeholders. Transportation plans (MTPs and LRTPs) serve as guiding documents in metropolitan and statewide transportation decisionmaking, and are subject to various Federal requirements.

The MTP required of MPOs describes the ways the region plans to invest in the transportation system. The MTP addresses topics such as: policies, strategies, and projects for the future; a systems level approach by considering roadways, transit, nonmotorized transportation, and intermodal connections; projected demand for transportation services over 20 years; regional land use, development, housing, and employment goals and plans; cost estimates and reasonably available financial sources for operation, maintenance, and capital investments; and ways to preserve existing roads and facilities and make efficient use of the existing system. MTPs must be

updated every five years in air quality attainment areas and every four years in nonattainment or maintenance areas.⁴

Statewide LRTPs are required to “provide for the development and integrated management and operation of transportation systems and facilities (including accessible pedestrian walkways and bicycle transportation facilities) that will function as an intermodal transportation system.”⁵

Statewide transportation plans contain many of the same elements as metropolitan transportation plans, but vary more significantly by State and are subject to fewer formal requirements.

Statewide long-range transportation plans can be policy-, corridor-, or investment-based, and they may refer to specific projects, but are not required to do so. Moreover, statewide LRTPs do not have a Federally-defined update requirement.

The passage of Federal legislation, the Moving Ahead for Progress in the 21st Century Act (MAP-21), in 2012 strengthened the growing focus within transportation agencies on using performance-based approaches in transportation planning. The law established national goals and calls for the use of performance-based approaches within metropolitan transportation planning and statewide and nonmetropolitan transportation planning to support those national goals. It also requires that agencies set targets in relation to a set of national performance measures, and calls for coordination of target-setting between States and MPOs to ensure consistency.


FEDERAL REQUIREMENTS FOR PERFORMANCE-BASED PLANNING

Metropolitan transportation planning: “[MPOs]..., in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning.” 23 USC § 134(c)(1); 49 USC § 5303(c)(1). “The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals....” 23 USC §134(h)(2); 49 USC § 5303(h)(2).

Statewide and nonmetropolitan transportation planning: “The statewide transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals...and the general purposes [of the public transportation program]. The performance measures and targets established [in relation to national performance measures] shall be considered by a State when developing policies, programs, and investment priorities reflected in the statewide transportation plan and statewide transportation improvement program.” 23 USC § 135(d)(2); 49 USC § 5304(d)(2).

⁴ FHWA, The Transportation Planning Process: Key Issues – A Briefing Book for Transportation Decision-makers, Officials, and Staff, <http://www.planning.dot.gov/documents/briefingbook/bbook.htm>.

⁵ 23 USC §135(a)(2).



In addition to new Federal requirements related to performance-based planning, there are a wide range of other requirements associated with transportation plan development that remain unchanged. A performance-based plan, consequently, should address system performance outcomes within the context of these established requirements -- addressing issues such as public involvement, agency consultation, and environmental mitigation – and recognizing the significant experience that MPOs and State DOTs have in developing and updating their transportation plans.

Moreover, many transportation agencies have been increasing their use of data and performance measures within planning, including use of visualization, scenario planning, and other tools to communicate performance information within transportation plan development. As agencies around the country continue to advance approaches to use and communicate performance information in transportation planning, this Guidebook highlights good practices related to performance-based transportation plan development.

Organization of Guidebook


The guidebook starts with an overview of key elements of a performance-based transportation plan and the role of stakeholder participation and agency collaboration in this process. It then is structured to loosely reflect the steps associated with development of a performance-based transportation plan.

Chapter 2: Overview of Developing a Performance-Based Transportation Plan discusses key elements of a performance-based plan. These elements include goals and objectives, performance measures, targets, system performance reports, and investment strategies. This chapter also discusses the range of issues addressed by the transportation plan.

Chapter 3: Public and Stakeholder Participation and Agency Collaboration discusses the vital role of public, stakeholder, and agency engagement throughout the plan development process. A performance-based plan, in particular, will engage agency partners, the public, and stakeholders in discussions about desired performance outcomes, understanding how performance will be measured and is changing, and in making tradeoffs associated with investment decisions.

Chapter 4: Scoping and Baseline Information captures the significant amount of background work necessary at the beginning of plan development. Some agencies refer to this as a scoping step where supporting materials are collected and baseline information is gathered, including a description of the multimodal transportation system, existing system performance, anticipated challenges, and revenue forecasts.

Chapter 5: Strategic Vision, Goals and Objectives addresses the strategic elements of the transportation plan. Plan development often includes visioning in order to engage communities and stakeholders in defining what they want their State, region, or community elements to look



like. Goals and objectives identify desired outcomes and are used as a basis for selecting performance measures.

Chapter 6: Performance Measures and Targets addresses the use of measures and targets as focal points for investment decisionmaking in a performance-based transportation plan. Performance measures will include national measures established by US DOT, as well as community-driven measures, as desired. Target-setting methods are based on factors including available resources, trend analysis, and data.

Chapter 7: The System Performance Report discusses the existing performance of the transportation system, State, or region, in relation to established performance measures and targets. As agencies integrate on-going information collection into cycles of plan development, the system performance report may serve as a key component of the baseline information that informs future plan development cycles and as a tool to communicate with the public and other stakeholders.

Chapter 8: Identification of System Needs, Potential Strategies, and Costs discusses approaches used to identify investment needs to meet desired performance outcomes, to identify and screen strategies and projects concepts, and estimate costs.

Chapter 9: Investment Analysis and Selection discusses scenario analysis, and identifies approaches for assessing and selecting investment priorities in the transportation plan based on performance information.

Chapter 10: Beyond the Transportation Plan: Connecting to the STIP/TIP and Measuring Progress discusses how the transportation plan can be translated into programming decisions that reflect priorities identified through the planning process.

Chapter 11: Case Studies provides more in-depth examples of development of two MTPs (developed by the Metropolitan Transportation Commission in the San Francisco Bay Area and the Pikes Peak Area Council of Governments in the Colorado Springs region), two statewide LRTPs (Michigan DOT's Statewide Transportation Plan, and Arizona DOT's long range plan), and the project prioritization process used by a rural transportation planning organization (the North Central Pennsylvania Planning and Development Commission).

The **Appendix: Federal Requirements for Transportation Plans** documents **Federal transportation planning requirements** for MPOs and State DOTs, specifically focused on their transportation plans.

A **Resources** section at the end of the Guidebook provides links to the resources identified in each section of the document.



2. Overview: Developing a Performance-Based Transportation Plan

A performance-based transportation plan is the centerpiece of a comprehensive performance-based transportation planning process, and serves as an umbrella document that guides development of STIPs, TIPs, and capital programs.

Building on current practice and based on Federal requirements for these documents, there are variations in how States and regions develop, structure, and present their transportation plans. This flexibility enables State DOTs, RTPOs, and MPOs to develop their transportation plans in ways that meet and respond to the needs of their communities. Historically, State LRTPs have often been strategic documents, which lay out key priorities, policies, and strategies, but may not identify a specific set of planned investments. State DOTs often include more detailed strategies and investment plans in supporting documents, including modal plans, operations plans, freight plans, and the like. By contrast, MTPs generally include more detailed information on specific investments and involve more extensive modeling and analyses of alternatives. This is in response to Federal requirements to demonstrate that improvements will address system deficiencies as well as meet fiscal constraint. Moreover, in regions where transportation air quality conformity is part of the requirements, this detailed analysis is conducted to demonstrate conformity.

Similarly, a performance-based transportation plan may be developed and organized in different ways – there is no one formula or standardized approach to use. However, there are some common elements that make a transportation plan performance-based.

Key Elements of a Performance-based Transportation Plan

As a strategic document that lays out a vision for the future, a transportation plan may be designed in a fairly simple format to communicate key issues to the public. The transportation plan is developed with a minimum 20-year forecast period at the time of adoption that provides for the development and implementation of the multimodal transportation system. It also may encompass a range of more technical information. Regardless of how a transportation plan is structured and whether it is developed for a State, rural area, or metropolitan area, a performance-based transportation plan plays a key role in a performance-based planning and programming process, as shown in Figure 2-1.


Figure 2-1. Framework for PBPP



Source: FHWA Performance-based Planning and Programming Guidebook, Page iv.

In fact, the development of a performance-based transportation plan encompasses all of the key elements shown in Figure 2-1 under “Planning.” It includes the setting of a strategic direction (“where do we want to go?”), which encompasses goals and objectives and performance measures. This step is built on a foundation of data from monitoring and evaluation of system performance (the feedback loop from implementation activities, answering the question, “where are we now?”). The development of a performance-based plan includes analysis of how the State or region will move toward achieving identified goals and objectives through investments and policies (“how are we going to get there?”). The resulting transportation plan identifies achievable targets and investment priorities, including capital and operating strategies that will be carried forward into programming.

Transportation agencies typically are already undertaking many of the actions identified in “PBPP” so developing a performance-based transportation plan builds on existing practice. What a model performance-based approach brings is a more systematic approach to using information on



transportation system performance – past, present, and anticipated future – in order to develop investment priorities.

A performance-based transportation plan should include the following:

1. Baseline information on the transportation system

- a. Identification of elements of the integrated multimodal transportation system⁶ – Existing transportation facilities, including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle networks, and intermodal connectors. Particularly for States, the plan should address commercial motor vehicle, waterway, and/or aviation facilities, particularly with respect to intercity travel.
- b. A compilation of baseline data – the latest available estimates and assumptions for population, land use, travel, mode share, employment, congestion, and economic activity current and forecasted transportation and land use conditions and trends.
- c. Consideration of applicable planning studies, policies, performance-based plans (such as the State Strategic Highway Safety Plan⁷, State Asset Management Plan⁸, MPO Congestion Management Process⁹, Transit Asset Management Plan¹⁰, or State Freight Plan¹¹), disaster preparedness plans, conservation plans, inventories of natural or historic resources, and modal plans such as rail plans, pedestrian and bicycle plans, and transit plans. Key regional equity and environmental justice issues such as access to jobs and affordability should also be considered.
- d. Consideration and analysis of revenue projections based on realistic assumptions about funding all capital, operating, and maintenance costs associated with the surface transportation system. This may be a somewhat iterative process, revisited as new information and forecasts are developed through the plan development.

- 2. Goals and objectives** – The transportation plan lays out a vision for the future of the area (State or region). In a performance-based approach, the transportation plan clearly identifies goals and objectives, which play a critical role in driving a performance-based approach to decisionmaking. Goals reflect key priorities for desired outcomes for the

⁶ 23 USC § 134 (i)(2)(A) and 23 USC § 135 .


⁷ 23 USC § 148.

⁸ 23 USC § 119(e)(4).

⁹ 23 USC § 134 (k)(3).

¹⁰ 49 USC § 5326(c).

¹¹ 23 USC § 167.



transportation system and/or for society as a whole. Supporting objectives are specific, measurable statements that support achievement of goals, and play a key role in shaping investment and policy priorities. Goals and objectives should reflect State or regional priorities and policy directions, while considering the Federally-required planning factors and supporting national goal areas specified in law. Goals and objectives may be derived from other transportation or related plans and processes.

3. **Performance measures** – A performance-based transportation plan includes performance measures that are used to support objectives and help in making informed investment and policy decisions. Performance measures serve as a basis for comparing alternative improvement strategies and for tracking performance over time. The selection of performance measures is a critical selection that will guide the analysis and selection of policies and investment strategies.
4. **Preferred Trends and Targets** – The transportation plan should identify the intended direction (e.g., reduce, increase, maintain) for each measure, and/or identify specific targets (numerical levels) to attain. These preferred trends and targets are used to compare plan alternatives against the desired level, and serve as a basis for tracking progress over time. Federal law requires States and MPOs to set targets in relation to a set of national performance measures; these targets are required to be included in the MTP and should be included in the statewide LRTP.¹² Identifying specific targets will be informed by analysis of financial resource constraints, as well as expected trends in population and other factors.
5. **System Performance Report** – A performance-based transportation plan includes a discussion of conditions and performance of the transportation system, relative to the targets and desired trends identified in the document. This information can serve as baseline information within the plan, and typically will include tracking of progress over several years to show recent trends in performance. As planning occurs through multiple cycles, the system performance report serves as a baseline in development and refinement of plan goals, objectives, and targets. For instance, information from the performance report can be used to support refinement of targets associated with the time-frame of the transportation plan as well as near-term or mid-term targets. A system performance report evaluating the condition and performance of the transportation system with respect to

¹² 23 USC § 134 (i)(2)(B) and 23 USC § 135 (f)(7)(A).

performance targets established for the national performance measures is required for the MTP and should be included in the statewide LRTP.¹³

6. **Forecasts of Future Conditions and Needs**¹⁴ – In addition to documenting past performance, the transportation plan should identify future factors and conditions that will impact performance, and needs. Anticipated trends in population, mode share, employment, freight movement, and other factors – as well as expected revenues for transportation investments and stressors on the transportation system (such as a backlog of maintenance needs) – will affect the future of a State or region, including the ability to attain desired outcomes. Needs relate to the ability to attain targets or preferred trends, and address the shortfall between expected performance and desired conditions. Taken together, needs reflect the investment required to bring the system to the level of performance at which all targets would be achieved during the time horizon of the plan.
7. **Strategies and Investments**¹⁵ – The transportation plan should identify policies, strategies, and investments that will support the attainment of performance targets and desired trends, ultimately helping to support desired goals. These will include operational and management strategies, capital investment and other strategies, and transit enhancement activities. In addition, bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each MPO and State.¹⁶ In a performance-based approach, scenario analysis may be a useful approach to compare alternative transportation investment and land use options, as well as alternative levels of funding. Priorities should have a clear link to the goals and objectives stated earlier in the plan, and should be used to guide project priorities including in the STIP and TIP.
8. **Financial plan** – To determine how the adopted strategies in the transportation plan can be implemented, the transportation plan should indicate resources from public and private sources that are reasonably expected to be made available to carry out the plan, potentially including additional financing strategies. A financial plan is required in MTPs, and may be included in the statewide LRTPs.¹⁷

¹³ 23 USC § 134 (i)(2)(C) and 23 USC § 135 (f)(7)(B).

¹⁴ 23 USC § 134 (i)(2)(F) &(G) and § 135.

¹⁵ 23 USC § 134 (i)(2)(F) & (G) and 23 USC § 135 (f)(8).

¹⁶ 23 USC § 217; see also http://www.fhwa.dot.gov/environment/bicycle_pedestrian/overview/policy_accom.cfm.

¹⁷ 23 USC § 134 (E) and 23 USC § 135 (F).

Federal law calls for statewide LRTPs and MTPs to include a description of the performance measures and targets associated with the national performance measures established by U.S. DOT.¹⁸ However, a performance-based transportation plan should not only address national goals and performance measures, but also be driven by the State or region’s own priorities. Building on public input and coordination with stakeholder agencies and organizations, a performance-based transportation plan addresses a full range of transportation system and societal performance outcomes selected for the plan.

The table below identifies how Federal code describes these performance-based elements of transportation planning.

Table 2-1. Performance-based Elements of Transportation Planning Specified in Federal Law

Plan Element	State	Metropolitan
	Planning Process	
Performance-based approach	“The statewide transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals...” (23 USC §135(d)(2)(A)) “The performance measures and targets established [in relation to national performance measures] shall be considered by a State when developing policies, program, and investment priorities reflected in the statewide transportation plan.” (23 USC §135(d)(2)(D))...	“The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals...” (23 USC §134(h)(2)(A)) “[MPOs]..., in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning.” (23 USC § 134(c)(1))
Performance targets	“Each State shall establish performance targets that address [the national performance measures], where applicable, to use in tracking progress towards attainment of critical outcomes for the State.” (23 USC §135(d)(2)(B))	“Each metropolitan planning organization shall establish performance targets that address [the national performance measures], where applicable, to use in tracking progress towards attainment of critical outcomes for the region of the metropolitan planning organization.” (23 USC §134(h)(2)(B))
Integration of other performance-based plans¹⁹	“shall integrate into the statewide transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in this	“shall integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in other State

¹⁸ 23 USC § 134(i)(2)(B) and 23 USC § 135 (f)(7)(A).

¹⁹ Examples of other performance-based plans include the National Highway System asset management plan (23 USC § 119(e)); the Transit Asset Management Plan (49 USC § 5326); applicable portions of the Highway Safety Improvement Program, including the Strategic Highway Safety Plan (23 USC § 148); the Public Transportation Agency Safety Plan (49

paragraph, in other State transportation plans and transportation processes, as well as any plans developed pursuant to chapter 53 of title 49 by providers of public transportation in urbanized areas not represented by a metropolitan planning organization required as part of a performance-based program.” (23 USC § 135(d)(2)(C))

transportation plans and transportation processes, as well as any plans developed under chapter 53 of title 49 by providers of public transportation” (23 USC § 134(h)(2)(D))

Transportation Plan Component

Performance measures and targets

Encouraged – “...should include...a description of the [national] performance measures and performance targets used in assessing the performance of the transportation system...” (23 USC § 135(f)(7)(A))

Required – “A description of the performance measures and performance targets...[for the national measures]” (23 USC § 134(i)(2)(B))

System performance report

Encouraged - “...should include...a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets [for the national measures]” (23 USC § 135(f)(7)(B))

Required – “Evaluating the condition and performance of the transportation system with respect to the performance targets [for the national measures]” (23 USC § 134(i)(2)(C))

Strategies

Encouraged - “Should include capital, operations, and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system.” (23 USC § 135(f)(8))

Required to include:


- Operational and management strategies (23 USC § 134(i)(F))
- Capital investment and other strategies (23 USC § 134(i)(G))
- Transportation and transit enhancement activities (23 USC § 134(i)(2)(H))

Financial plan

Encouraged - “May include...a financial plan that “(i) demonstrates how the adopted statewide transportation plan can be implemented; “(ii) indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan; and (iii) recommends any additional financing strategies for needed projects and programs.” (23 USC § 135(f)(5)(A))

Required – “A financial plan that--(I) demonstrates how the adopted transportation plan can be implemented; (II) indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan; and (III) recommends any additional financing strategies for needed projects and programs.” (23 USC § 134(i)(2)(E))

USC § 5329(d); the Congestion Mitigation and Air Quality Improvement Program performance plan (23 USC § 149(l)); the State Freight Plan (MAP-21 sec. 1118); and the congestion management process.



It is important to note that in addition to the performance-based elements noted above, a transportation plan must meet all Federal transportation planning requirements, which include the following:


- ▶ Eight planning factors,²⁰ which must be considered in the planning process (and may be used as a basis for developing plan goals, objectives, and performance measures)
 - (A) support the economic vitality [of the United States, the States, nonmetropolitan areas, and metropolitan areas], especially by enabling global competitiveness, productivity, and efficiency;
 - (B) increase the safety of the transportation system for motorized and nonmotorized users;
 - (C) increase the security of the transportation system for motorized and nonmotorized users;
 - (D) increase the accessibility and mobility of people and for freight;
 - (E) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
 - (F) enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
 - (G) promote efficient system management and operation; and
 - (H) emphasize the preservation of the existing transportation system.
- ▶ Consultation with various interested parties, including:
 - With respect to each area of the State under the jurisdiction of an Indian tribal government, consultation with the tribal government and the Secretary of the Interior²¹
 - Consultation with other agencies, which include State and local agencies responsible for “land use management, natural resources, environmental protection, conservation, and historic preservation”²²
 - Coordination with air quality agencies, required in metropolitan areas that are in nonattainment for ozone or carbon monoxide²³

²⁰ 23 USC § 134(h)(1) and 23 USC § 135(d)(1).

²¹ 23 USC § 135(f)(2)(C).

²² 23 USC § 134(i)(5)(A) and 23 USC § 135(f)(2)(D).

²³ 23 USC § 134(i)(3).

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- ▶ Participation by interested parties – “provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment” on the plan.²⁴
 - ▶ A discussion of environmental mitigation activities and potential areas in which to carry out these activities.²⁵ Identification and assessment of human and natural environment should occur, including but not limited to community assessment, cultural resources, historic resources, farmlands, wetlands and/or ecosystem and wildlife habitat as appropriate.
 - ▶ Analysis of equity and environmental justice - Title VI of the 1964 Civil Rights Act (42 U.S.C. 2000d-1) and agency implementing regulations prohibit recipients of Federal financial assistance from taking actions that discriminate on the basis of race, sex, color, national origin, or religion. Title VI bars intentional discrimination as well as disparate impact discrimination (i.e., a neutral policy or practice that has a disparate impact on protected groups). Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, further amplifies Title VI by providing that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." These requirements apply not only during project development, but as well to the processes and products of statewide and metropolitan transportation planning, including development of transportation plans.²⁶

The guiding EJ principles followed by DOT are briefly summarized as follows:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

²⁴ 23 USC § 134(i)(6) and 23 USC § 135(f)(3).

²⁵ 23 USC § 134(i)(D) and 23 USC § 135(f)(4)(A).

²⁶ For more information, see: FHWA, “Implementing Title VI Requirements in Metropolitan and Statewide Planning” at http://www.fhwa.dot.gov/environment/environmental_justice/facts/ej-10-7.cfm.



Formats for Performance-based Transportation Plans

Given the different Federal requirements for transportation plans at the statewide and metropolitan levels, a performance-based plan may take on different formats and include different levels of detail.

A MODEL PERFORMANCE-BASED TRANSPORTATION PLAN

A model performance-based transportation plan identifies goals, key performance measures and targets; discusses existing system performance; and identifies a prioritized set of investments and policies that support attainment of targets, based on a financial plan. Based on MAP-21 requirements, MPOs must incorporate performance measures, targets, a system performance report, and financial plan directly into their transportation plans. State L RTPs also may use this approach.

An example of a model performance-based metropolitan transportation plan is Plan Bay Area, adopted in 2013 by the **Metropolitan Transportation Commission (MTC)**, the MPO for the San Francisco Bay Area, and the Association of Bay Area Governments (ABAG). Plan Bay Area is an integrated land use, transportation, and housing plan. Plan Bay Area was developed within a framework of performance measures, and includes 10 key and ambitious targets adopted based on input from a broad range of stakeholders engaged in the process. Two of the targets are mandated by State law – addressing greenhouse gas emissions and adequate housing – and the other eight voluntary targets seek to promote healthy and safe communities, as well as equity concerns, economic vitality, and transportation system effectiveness. With the targets clearly identified, MTC and ABAG formulated possible scenarios — combinations of land use patterns and transportation investments — that could be evaluated together to see if (and by how much) they achieved (or fell short of) the performance targets. An iterative process of scenario-testing yielded preferred alternatives, both for transportation investments and a land use strategy, which were adopted in the plan. The transportation component of the plan lays investment strategies and identifies specific projects and programs to be implemented over the duration of the plan timeframe. The plan also contains a chapter on “performance,” which describes how the plan performs against each of the targets.²⁷

²⁷ For more information, see: Plan Bay Area, <http://www.onebayarea.org/regional-initiatives/plan-bay-area/final-plan-bay-area.html>, as well as the case study on MTC in Chapter 11.

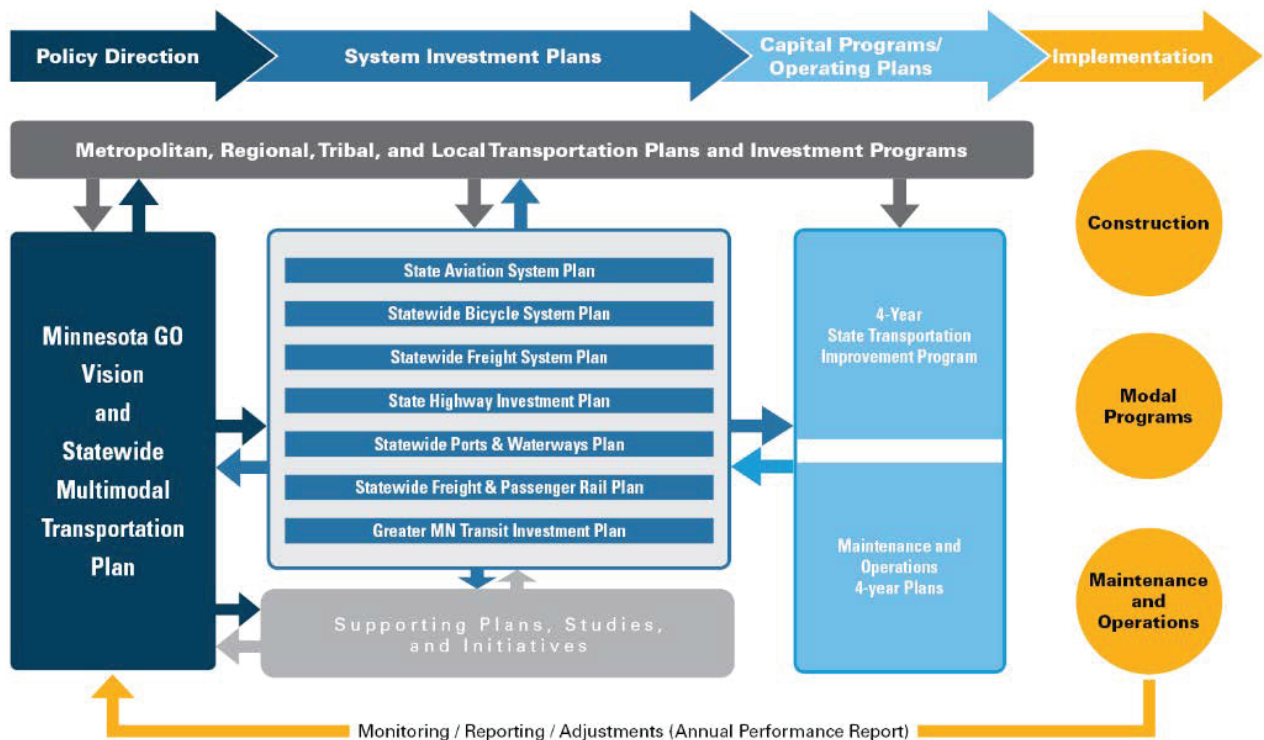
A DOCUMENT THAT PROVIDES STRATEGIC DIRECTION TO A “FAMILY” OF PLANS OR THE PROGRAMMING PROCESS

As a strategic document, an alternate approach sometimes used by the State DOT is for the statewide LRTP to set the direction for investment decisionmaking by laying out goals, objectives, and performance measures, and connect to more detailed modal or investment plans or to the STIP, which includes more detail on targets, specific investments, and prioritization processes. For instance, a high-level policy or strategy document in the transportation plan may be combined with more detailed investments plans that cover portions of the transportation system.

As an example of this approach, **Minnesota DOT (MnDOT)** shows a strong connection among a family of plan documents that together link the transportation plan to more detailed planning and programming using a performance-based approach, as shown in Figure 2-2.

Figure 2-2: MnDOT Family of Plans

MnDOT Plans and Programs



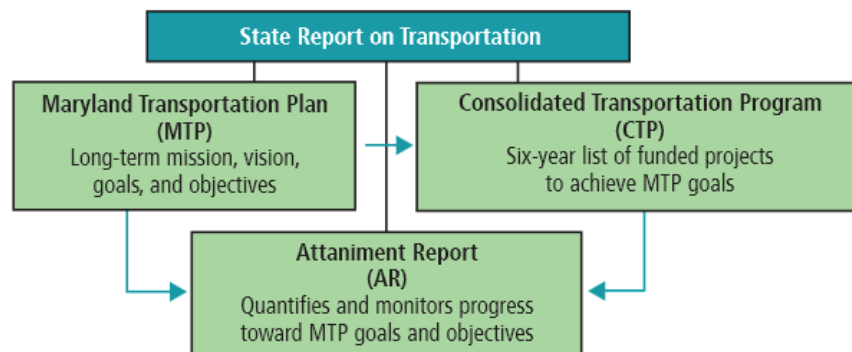
Source: Minnesota Department of Transportation, *Minnesota State Highway Investment Program*, Page 11.

The MnDOT approach is based on a 50-year vision, and has four tiers. The first tier consists of policy direction, which guides the agency. Policy direction comes from the Statewide Multimodal

Transportation Plan (SMTP), which is updated every four years, and describes statewide policy objectives and strategies to help MnDOT and its partners make progress toward the Minnesota GO 50-year vision. Each SMTP objective is accompanied by a performance measure or collection of performance measures that track the effectiveness of SMTP strategies. The second tier is the State’s modal investment plans (State Highway Investment Plan, the Highway Systems Operations Plan, the Greater Minnesota Transit Investment Plan, the State Aviation System Plan, and others), which are updated every four to six years, and use measures and targets to assess system performance, identify needs, and establish spending priorities. The third tier is the Statewide Transportation Improvement Program (STIP), which is updated annually and documents projects to be funded and implemented over the upcoming four years. The fourth tier is implementation of capital projects, modal programs, and operations. The State’s annual performance report is the main mechanism through which up-to-date information informs the other tiers in the planning process.

As another example of a performance-based transportation plan that is largely policy-based, the **Maryland DOT** focuses on system performance outcomes with clear connections across three key documents: the Maryland Transportation Plan (MTP), the Consolidated Transportation Program (CTP), and the annual Attainment Report (AR), as shown in the following diagram.²⁸


Figure 2-3: Connections between MTP, CTP, and AR in Maryland



Source: Maryland Department of Transportation.

The MTP lays out a strategic direction for the State’s transportation investments, and identifies key goals and strategies and performance measures. In recent years, Maryland DOT has made an explicit connection between the MTP and the projects in the CTP. For each project in the CTP, each

²⁸ For more information, see: Maryland DOT, http://www.mdot.maryland.gov/Office_of_Planning_and_Capital_Programming/Maryland_Transportation_Plan/Index.html.



of the modal agencies of Maryland DOT must identify which of the MTP's goals (one or more) the project supports. Moreover, as of 2010, Maryland DOT requires all localities submitting their requested list of projects to provide information on which MTP goals the project would support. By placing more responsibility on local governments to consider how their priorities support State goals, Maryland DOT hopes agencies throughout the State will increasingly see the MTP as a plan that guides not only the State DOT but works broadly to advance the State goals. The Attainment Report is developed annually and tracks progress toward MTP goals and objectives using performance data. The Attainment Report identifies specific targets that have been developed for many of the objectives by the modal agencies.

Process of Developing a Performance-based Transportation Plan


The process of developing a performance-based transportation plan relies on data to inform decisions, as well as stakeholder engagement and interagency collaboration. While there is no one schedule or flow diagram for development of a transportation plan that applies to all agencies, the process of developing a performance-based transportation plan typically involves the following key steps: visioning through public and stakeholder outreach (with performance information used in communications), establishing a baseline (including information on existing conditions, revenue forecasts, and future challenges and needs), setting goals and objectives, identifying performance measures, setting targets, analyzing investment scenarios, establishing an investment and financial plan, and monitoring progress toward plan goals through the collection of performance information. These steps may not all be sequential, but generally are somewhat iterative. Public and stakeholder participation, as well as communication and collaboration among agencies, should occur throughout the process.


Below are two examples of transportation plan development processes that include the key steps discussed throughout this guide, yet also reflect the diversity in ways in which a performance-based plan may be developed (more details on these examples are available in the case studies in Chapter 11).

MPO Example: Pikes Peak Area Council of Governments' MTP

The ***Pikes Peak Area Council of Governments (PPACG)***, the MPO for the Colorado Springs, CO region, used a performance-based approach in developing its *Moving Forward Update: 2035 RTP*, relying on data and public, stakeholder, and agency engagement to develop investment priorities. Its process involved the following steps:

- ▶ Step 1: Establish the Foundation for Decision Making: Development of a Vision, Mission and Principles

- 
- Each of the advisory committees reviewed PPACG’s vision, mission, and principles and made some minor changes from the last update in 2008.
 - ▶ Step 2: Develop Transportation Goals and Performance Measures
 - Through workshops, stakeholders identified their key issues and expressed desired goals and measures; this resulted in 17 goals. PPACG then used additional public involvement techniques, such as focus groups and attendance at numerous community events to increase input on the goals and measures.
 - ▶ Step 3: Gather Baseline Conditions
 - The PPACG transportation team obtained data assembled from local, State and Federal agencies, along with many feasibility and environmental studies conducted in the region. The team then identified data needs for evolving the agency’s knowledge of investment types, locations, and impacts.
 - ▶ Step 4: Define Evaluation Criteria and Assign Weighting
 - PPACG developed criteria to evaluate projects relative to each goal. PPACG then created a customized Multi-Criteria Analysis (MCA) process to assist decision-makers in evaluating the relative importance of each goal in relation to the other goals. Input for this process was obtained from the Technical Advisory Committee, the Community Advisory Committee, and a random dial telephone survey.
 - ▶ Step 5: Develop Regional Modeling System
 - Using a variety of forecasting and analysis tools (travel models and other software), PPACG staff developed materials to inform stakeholders and the public on investment alternatives. Limitations to the approach were identified to be addressed in future planning cycles.
 - ▶ Step 6: Create Preferred Planning Scenario
 - Using a facilitated process, three (trend, in-fill, and conservation) alternative future socio-economic scenarios were developed. These scenarios were then evaluated using the PPACG modeling tools against the adopted goals and by staff from participating agencies to identify issues with their goals and plans.
 - ▶ Step 7: Evaluate and Score Projects
 - Project scoring was discussed with project applicants and potential scoring process and criteria adjustments were considered. The board-approved goal weightings were used to show the relative importance of each goal. Staff scored each submitted project using the modeling tools for three scenarios (preferred, in-fill,



conservation/sprawl) and found that 75 percent of the top-scoring projects were top-scoring regardless of which scenario was employed.

- ▶ Step 8: Create a Fiscally Constrained Project List
 - The PPACG plan participants used the scores and financial plan to create a fiscally constrained project list. The agency also considered how to enhance flexibility and target known problem areas. This list was approved with some modifications by the Board of Directors.
- ▶ Step 9: Identify Methods to Minimize and Mitigate Undesirable Impacts
 - PPACG identified ways to reduce potential impacts and eliminate fatally-flawed projects. Staff emphasized that further refinement of this process to ensure context sensitive solutions would be necessary in future planning cycles.
- ▶ Step 10: Ongoing Monitoring of the Moving Forward Update 2035 RTP
 - PPACG evaluated monitoring techniques and sought public input on them. The agency has identified monitoring techniques as an area with high potential for future improvement.

By involving various stakeholders and technical committees, and laying out clear criteria for project scoring, PPACG was able to bring additional transparency to its planning process and enhance plan readers' understanding of how the plan were created and refined. For more process details, see Chapter 2 of PPACG's Moving Forward Update.²⁹

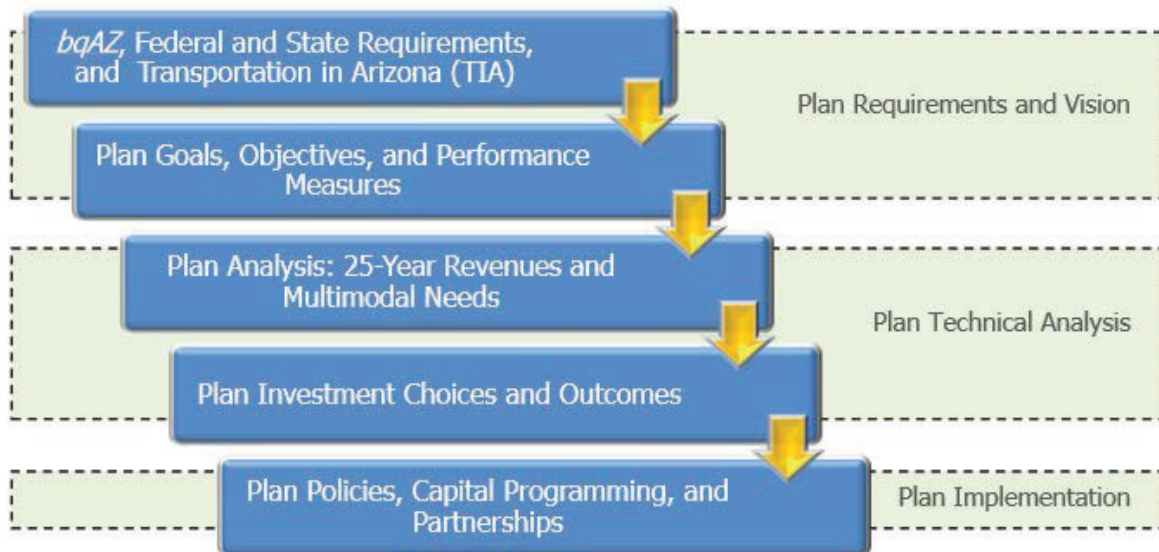
State DOT Example: Arizona LRTP

In 2011, **Arizona DOT** completed its statewide long-range transportation plan, *What Moves You Arizona*, with a horizon year of 2035. The LRTP is strategic in nature, and provides direction to guide future investments; it does not examine or recommend specific projects. It takes a performance-based approach by documenting existing conditions, as well as future trends that could influence system performance and investment needs; defining State transportation system goals, objectives, and performance measures that reflect input from stakeholders and partner agencies; assessing future needs and anticipated revenues; considering an array of programmatic investment choices to illustrate likely future system performance under different investment mixes; and establishing a preferred investment option that is based on a realistic revenue forecast (fiscally-constrained). The plan also builds on the comprehensive 2050 land use and multimodal transportation vision developed in the *Building a Quality Arizona (bqAZ)* plan.

²⁹ Available at: http://www.ppacg.org/files/TRANSP/LRTP-Jan2012/chap2_planning.pdf.


The plan was developed based on the following “Building Blocks,” with public and stakeholder involvement at each key step of its process:

Figure 2-4: Arizona Plan Development Process: Building Blocks



Source: Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011), Page 14.

- ▶ **Plan Requirements and Vision:** The LRTP’s initial activities involved acknowledging previous and concurrent plans, Federal and State requirements, and existing conditions, as developed in the *Transportation in Arizona Report*. Initial activities also included the development of Plan goals, objectives, and performance measures. The six *Building a Quality Arizona* principles were adopted as “bedrock goals,” while goals for system preservation, partnership, and fiscal stewardship were added as Arizona DOT’s priorities. Arizona DOT then developed modal objectives for each goal area and high-level performance measures. In this step, Arizona DOT also identified its role (owner-operator, partner, participant, or none) in achieving each plan goal.
- ▶ **Plan Technical Analysis:** Technical analysis was conducted in order to determine a Recommended Investment Choice (RIC).
 - First, 25-year baseline revenues were estimated, along with an estimate of multimodal transportation needs and the cost to meet these needs. These needs were explained and analyzed by mode.
 - Using the projected available revenues and 25-year multimodal needs as a base, Alternative Investment Choices (AICs) were developed and considered by ADOT and were vetted through a Plan committee structure and extensive stakeholder and public outreach. AICs were defined at revenue baseline by considering investment



mixes between preservation, modernization, and expansion improvements. Plan performance measures – including mobility and accessibility, system preservation, economic development, linking transportation and land use, environmental performance, safety, and investment in alternative modes – then were used to compare the outcomes of Plan implementation and develop a RIC. The RIC emphasizes preserving and modernizing the existing highway system, with limited expansion – a significant departure from historic investment patterns.

- The Plan also involved analysis of revenues that would be required to meet two additional scenarios: “full state needs” and “vision” (implementing the first 25 years of the 2050 *bqAZ* vision).

▶ **Plan Implementation** - The LRTP recognized that implementation will occur over time and will require commitment to delivering a capital program that is responsive to LRTP recommendations. A final step in the LRTP process involved identification of new and enhanced policies in areas like access management, context sensitive solutions, complete streets, enhanced data and technical methods, and processes to reflect the focus on preservation and modernization. Policies for monitoring implementation of the plan over time were also identified.

For more information about Arizona DOT’s plan development process, see Chapter 2 of *What Moves You Arizona*.³⁰

These two examples highlight that although the two plans are quite different in scope – the PPACG Plan identified specific projects, while the Arizona Plan identified general investment priorities – both MPOs and State DOTs can use a performance-based approach to the development of their transportation plans, and will involve many similar steps.

³⁰ *What Moves You Arizona: Long-Range Transportation Plan, 2010-2035*: <http://www.azdot.gov/docs/default-source/planning/lrtp-2011-1129.pdf?sfvrsn=2>.

3. Public and Stakeholder Participation and Agency Collaboration

Public and stakeholder participation, and cooperation and consultation with other government agencies, are hallmarks of effective transportation plan development. The “cooperative” aspect of transportation planning has been included in the Federal regulations since ISTEA as a part of the 3-C (continuing, cooperative and comprehensive) process. The development of a transportation plan must include participation by interested parties, including the general public, transportation providers, and representatives of system users.³¹ State DOTs and MPOs also must consult with other agencies and governments in the development of the transportation plan. For instance, in the development of the MTP, MPOs are required to consult “with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation,”³² as appropriate. When public lands or Indian Tribal lands are within a metropolitan area, the MPO shall ensure appropriate involvement for affected Federal agencies and Indian Tribal governments.³³ State DOTs are required to coordinate with MPOs, regional transportation planning organizations (RTPOs), and Indian tribal governments, as applicable, in the development of the statewide LRTP, as well as State and local agencies.³⁴

The development of a performance-based transportation plan is supported by this cooperative and consultative process. A performance-based approach provides both a challenge and an opportunity by introducing a data-driven aspect that must be effectively communicated to a range of participants in the planning process. Key benefits include a better-informed public and stakeholders, agreement on common goals and desired performance outcomes among agencies, and in turn, improved investment decisions that meet the needs of the traveling public, businesses and industry, and communities.

³¹ 23 USC § 134 (i)(6) and 23 USC § 135 (f)(3). MPOs and States “shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties a reasonable opportunity to comment on the proposed plan.” Also, States “shall provide nonmetropolitan local elected officials or, if applicable, through regional transportation planning organizations...an opportunity to participate.”

³² 23 USC § 134 (i)(5).

³³ For more information, see: <http://www.tribalplanning.fhwa.dot.gov/consult.aspx>, which includes all relevant statutory and regulatory references.

³⁴ 23 USC § 135 (f)(2).

Engagement in a Performance-based Plan

Engagement of the public, stakeholders, and other agencies should occur throughout the process of developing a performance-based transportation plan – from the early steps of setting of a strategic direction through the analysis of investment options and selection of a preferred investment approach. While the following sections of this guidebook discuss these steps in more detail, this section highlights some key roles for this engagement within the development of a performance-based plan:

- ▶ Defining a vision, goals, and objectives,
- ▶ Identifying performance measures that reflect key goals and objectives,
- ▶ Selecting preferred trends and targets, and
- ▶ Making trade-offs to develop investment priorities.

Defining a Vision, Goals, and Objectives

While most transportation plans involve the public and stakeholders in defining a vision, a performance-based plan places increased importance on developing clear agreed-upon goals and objectives, since the strategic direction of goals and objectives will be used in defining performance measures. Consequently, it is critical for public involvement to engage participants in defining desired *outcomes*. In a performance-based plan, the public and stakeholders are involved in not just providing general concepts, but clearly defining or prioritizing goals and specific objectives, which will lead to performance measures and achievable targets that are used in assessing plan options and/or selecting investments.

Identifying Performance Measures

While selection of performance measures in a performance-based plan is often thought of as a “data-


ARIZONA'S STATEWIDE PLAN

In preparing *What Moves You Arizona*, the 2035 long range plan for the state, Arizona DOT conducted extensive public outreach to engage participation in determining goal plans. A formal public participation plan was developed in 2009 to guide the outreach process. The Councils of Government and Metropolitan Planning Organizations in the state helped to design the plan, which was also open to public comment.

The Plan focused on public involvement during two key phases: Goals and Objectives and Alternative Investment Choices. Facebook, surveys, videos and radio, TV and newspaper advertising were all used to engage and inform the public to participate in the planning process. For instance, a survey was distributed to collect community input in the goals and objectives for the LRP. Workshops with special interest groups were conducted to review and discuss goals and objectives.



Source: Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011), Page 23: <http://www.azdot.gov/docs/default-source/planning/lrtp-2011-1129.pdf?sfvrsn=2>



driven” process, the public and stakeholders play a critical role in helping to define performance measures to be used in the transportation plan. Therefore, it is important to work with the public and stakeholders to clearly define what is *important* and *meaningful* to measure.

In public engagement, it is important to have the engaged participants help to define what is meant by different objectives and what metric is most appropriate. Goals associated with mobility, livability, and quality of life can manifest themselves in different ways, and stakeholders may have different views of what these terms mean. Working with stakeholders to define how to measure performance helps to clarify what is most critical to the public, and guides the analysis of strategies in the plan.

The public participation plan should therefore actively and continuously strive to use plain language and to ensure that measures used in the plan are understood by the stakeholder community. It is also valuable to make explicit links between how the transportation system affects areas such as livability and quality of life in the discussions of performance outcomes.

Selecting Preferred Trends and Targets

In a performance-based plan, interagency coordination in the development and selection of performance targets across State DOTs, MPOs, and public transportation agencies is important to ensure consistency.³⁵ The public may not play a direct role in setting specific targets, as targets will need to be developed based on technical analysis of historical data, expected future performance, resource constraints, and available strategies. However, the public and stakeholders should play an important role in determining the appropriate direction or desired trends associated with selected performance measures and in helping to inform the priority placed on different goals and objectives.

Making Tradeoffs and Identifying Priorities

Finally, in a performance-based plan, the public and stakeholders will play a key role in examining alternative investment and policy scenarios, and various governments and agencies will provide input to inform the selection of preferred strategies. Within this process, stakeholders can rely upon performance information and the results of analysis to help in understanding the implications of different investment and policy scenarios, and can react to these results and express preference.

³⁵ 23 USC § 134(h)(2)(B)(i)(II).

The following sections describe techniques that can be used to support public and stakeholder participation and interagency collaboration, with a focus on these performance-based aspects of a transportation plan.

Public and Stakeholder Participation

The adopted public participation plan (PPP) associated with a State or regional transportation plan should identify opportunities for engagement as well as useful techniques to employ. Existing communication approaches in the PPP should be evaluated in relation to the type of information and engagement techniques that will be most effective to support the incorporation of performance information in the process of developing the transportation plan.

The PPP includes a process for soliciting information and considering the needs of all affected parties including those traditionally underserved by existing transportation systems, such as low-income and minority households.³⁶

Therefore, appropriate communication of performance-related information should be targeted to each stakeholder need, and should consider effective ways to engage the community in a discussion about desired system performance outcomes and priorities. For example, staff presenting information about the transportation system and expected performance should avoid using technical jargon understood only by transportation professionals. In addition, it should be made clear that the discussion addresses all modes of transportation, including walking, biking, and transit.

FEDERAL REQUIREMENTS FOR PARTICIPATION


Metropolitan transportation planning: MPOs must develop a participation plan “in consultation with all interested parties” and “provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan” (23 USC §134(i)(6)(B))

Statewide and nonmetropolitan transportation planning: States must develop a consultative process involving regional transportation planning organizations, if available, and “provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan” (23 USC § 135(f)(3)(A))

Sample Engagement Techniques in a Performance-based Plan

Both the "what" and "how" of engaging the public, stakeholders and other partners must be thoughtfully identified so that the agency receives the kinds of information it needs to advance a performance-based approach. There are a wide range of resources on public involvement techniques, such as the report *Public Involvement Techniques for Transportation Decision-Making*,

³⁶ 23 CFR § 450.210 (a)(1)(vii) and 316 (a)(1)(vii).



which provide useful ideas for engaging audiences.³⁷ The USDOT Public Involvement Reference Tool also includes a wide array of resources and links to 52 State and territories' transportation agency public involvement related websites.³⁸

Because the engagement needed for a performance-based plan extends into more detailed considerations of performance measures and tradeoffs among strategies, it may involve multiple steps and components that go beyond what agencies have conducted in the past. For instance, the ***Champaign Urbana Urbanized Area Transportation Study (CUUATS)***, a division within the ***Champaign County Regional Planning Commission*** in Illinois, developed an extensive array of public involvement strategies for the development of its performance-based LRTP, *Sustainable Choices 2040*. Strategies applied included a roving “community conversations bus,” public meetings, and web site input.³⁹

The public participation plan, therefore, should provide a road map of important steps and sequences, a schedule, identify resources, and assign responsibilities for implementation. This will help frame the outreach and media plan, the number and type of meetings involved, where meetings are held, the types of engagement strategies being used, including web and other input mechanisms, and the anticipated outcomes. Two key components of these strategies in a performance-based plan are to *communicate information* and to *gather information* from the public and stakeholders.

COMMUNICATING INFORMATION


Communicating information is characterized by a flow of information from the planning agency. Within a performance-based planning process, the goal is to provide objective information to the public and other interested parties on relevant issues in a manner that can be easily understood by the target audience. Performance reporting provides transparency that can enhance an agency's credibility in the eyes of policymakers and the general public. Sample methods of information giving include direct marketing (email and mail), factsheets, newsletters, flyers, brochures, and websites.

Making performance information available on a web site can be important in encouraging effective and meaningful communication with the public in developing a performance-based plan. In a performance-based approach, website information can communicate existing and forecasted future system performance, and show the expected performance results or impacts of different packages of strategies or scenarios.

³⁷ See FHWA, http://www.fhwa.dot.gov/planning/public_involvement/publications/techniques.

³⁸ See FHWA, http://www.fhwa.dot.gov/planning/public_involvement/get_involved/aboutpirt.cfm.

³⁹ For more information, see: <http://www.cuuats.org/lrtp/public-involvement>.



Communicating expected future performance can also be helpful for the public and stakeholders to understand and provide informed input to prioritize alternative investment options. As an example, in order to facilitate an understanding of the practical implications of each of the three Minnesota State Highway Investment Plan (MnSHIP) Investment Approaches, **Minnesota DOT** analyzed and included in its outreach materials a fictitious scenario of a seven-hour driving trip from Winona to Bemidji. The “folios” were used to illustrate the key differences in system performance and how the public would experience the transportation system across the three alternative approaches. For instance, the folios note:

- ▶ Under Approach A, pavement condition on the drive is generally good but congestion is a problem for a large portion of the drive. In terms of bicycling conditions, bike trails are available in some areas but generally not well marked or protected.
- ▶ Under Approach B, pavement conditions on interstates and major roads are good, while the condition on local roads varies. Congestion has worsened under this approach, but additional lanes allow for more passing opportunities. Bicycling conditions are generally poor, with bicycle lanes that are unprotected, in poor condition, or nonexistent.
- ▶ Under Approach C, interstates are in good driving condition but other roads are not, causing significant wear and tear on vehicles. Some additional capacity reduces congestion and improves traffic flow. Bicycling conditions are good, with well-marked bike paths, abundant signage, and protected highway crossings for bicyclists.

This hypothetical example was used to help the public understand what conditions it could expect under each of the scenarios, allowing participants to provide meaningful input based on a more thorough understanding of the approaches.⁴⁰

Visualization is a technique that helps translate data into more easily understood graphics and images to more effectively communicate information. Visualization is highly useful in a performance-based planning process to help communicate performance information, particularly for complex, spatially relevant transportation data.⁴¹ The intent of visualization in public engagement is to help the public understand the context, to add insight to problem solving and to communicate with the public. It is used to communicate performance measures, trends and impacts of strategies to the transportation system. Visualization also can help communicate the complex nature of trade-offs between investing in various types of transportation projects and programs. For example, investments in capacity expansion may relieve some congestion, but

⁴⁰ For more information, see: <http://www.dot.state.mn.us/planning/mnship/investment.html>.

⁴¹ According to statute, to the maximum extent practicable, States and MPOs shall employ visualization techniques to describe plans. 23 USC § 135 (f)(3)(B) and § 134 (i)(6)(C). For more information, see FHWA’s Visualization website: www.fhwa.dot.gov/planning/scenario_and_visualization/visualization_in_planning/visplanning.cfm.

could increase asset management costs in the future, as maintenance work may be deferred to pay for capital projects. By presenting information graphically, it is possible for the participants to interpret information more effectively.⁴²

GATHERING INFORMATION

In addition to sharing information, the process of developing a transportation plan involves gathering information from the public and stakeholders on attitudes, opinions, and preferences. Gathering information is critical to assist decision making by providing insight into issues in which the public and other interested parties have a stake. In developing a performance-based plan, information gathering should involve use of techniques to gather input on values, goals, and priorities, with the public understanding implications on system performance. This could involve soliciting input on the most appropriate measures of performance, and using techniques to understand how the public would make tradeoffs in relation to system performance outcomes. Sample methods of information gathering in relation to goals, objectives, performance measures, and investment priorities include blogs, citizen's panels and user groups, town hall meetings, qualitative research (interviews, focus groups, workshops, etc.), and quantitative research (polling, surveys, etc.).

Gathering qualitative and quantitative information on the public's priorities can involve ranking different goals or outcomes to help support making tradeoffs and prioritizing investments. For instance, in developing its transportation plan *Moving Forward Update*, **PPACG** conducted a statistically-valid random phone survey to query the public on how they would rank the importance of each evaluation criteria, which were used in selecting projects to include in the transportation plan along with results from the MPO's Transportation and Community Advisory Committees.⁴³


METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS – FOCUS GROUPS

Recognizing that traditional public meetings often bring out stakeholders with specific interests, MWCOG worked with America Speaks, a consultancy focusing on inclusive and deliberative public decisionmaking, to engage a demographically representative group of residents in the development of the National Capital Region's Financially Constrained Long-Range Transportation Plan (CLRP). Due to this structured approach to representative engagement of constituents, elected officials were particularly interested to hear the results of these focus groups, and gained additional perspectives that had not been provided in other venues.

Source:

<http://americaspeaks.org/projects/topics/planning-growth/mwcog-congestion-forums/>

⁴² Effective Visualization Techniques for Public Presentation of Transportation Projects.
http://www.netc.uconn.edu/pdf/netcr48_00-6.pdf



Scenario planning is a process that can help transportation professionals to prepare for what lies ahead by providing a framework for developing a shared vision for the future by analyzing various forces. The *FHWA Scenario Planning Guidebook* provides assistance on how to use scenario planning to help develop a transportation plan. The Guidebook features six main phases that can be used in scenario planning:

- ▶ “Phase 1: How Should We Get Started? Scope the effort and engage partners.
- ▶ Phase 2: Where Are We Now? Establish a baseline analysis. Identify factors and trends that affect the State, region, community, or study area.
- ▶ Phase 3: Who Are We and Where Do We Want to Go? Establish future goals and aspirations based on values of the State, region, community, or study area.
- ▶ Phase 4: What Could the Future Look Like? Create baseline and alternative scenarios.
- ▶ Phase 5: What Impacts Will Scenarios Have? Assess scenario impacts, influences, and effects.
- ▶ Phase 6: How Will We Reach Our Desired Future? Craft the comprehensive vision. Identify strategic actions and performance measures.”⁴⁴

Scenario planning offers an analytic approach to developing a vision, goals, and objectives. As part of scenario planning, stakeholders shape alternative descriptions or scenarios of what the future could look like. These alternative scenarios are then assessed using transportation models, sketch-planning tools, or other quantitative methods to estimate the impact of the alternative visions of the future on performance measures or indicators of desired outcomes. Several scenario planning tools such as CommunityViz, Envision Tomorrow, and I-PLACE3S are GIS-based and allow for 2-D or 3-D visualization.⁴⁵ The results of this assessment allow stakeholders to explore the trade-offs between future scenarios, the impacts of external factors such as the economy and growth, and select a future vision and/or investment priorities that bring them closest to their desired performance outcomes.

A website can also be used to provide the public with opportunities to **provide feedback based on performance information**.⁴⁶ For example, the *Delaware Valley Regional Planning Commission (DVRPC)* used an online platform called “Choices and Voices,” which allowed visitors to its site to determine their preferred future building pattern, develop an investment budget, and investigate

⁴³ For more information, see: http://www.ppacg.org/files/TRANSP/LRTP-Jan2012/chap2_planning.pdf.

⁴⁴ FHWA Scenario Planning Guidebook, October 2010. Available at:

http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/

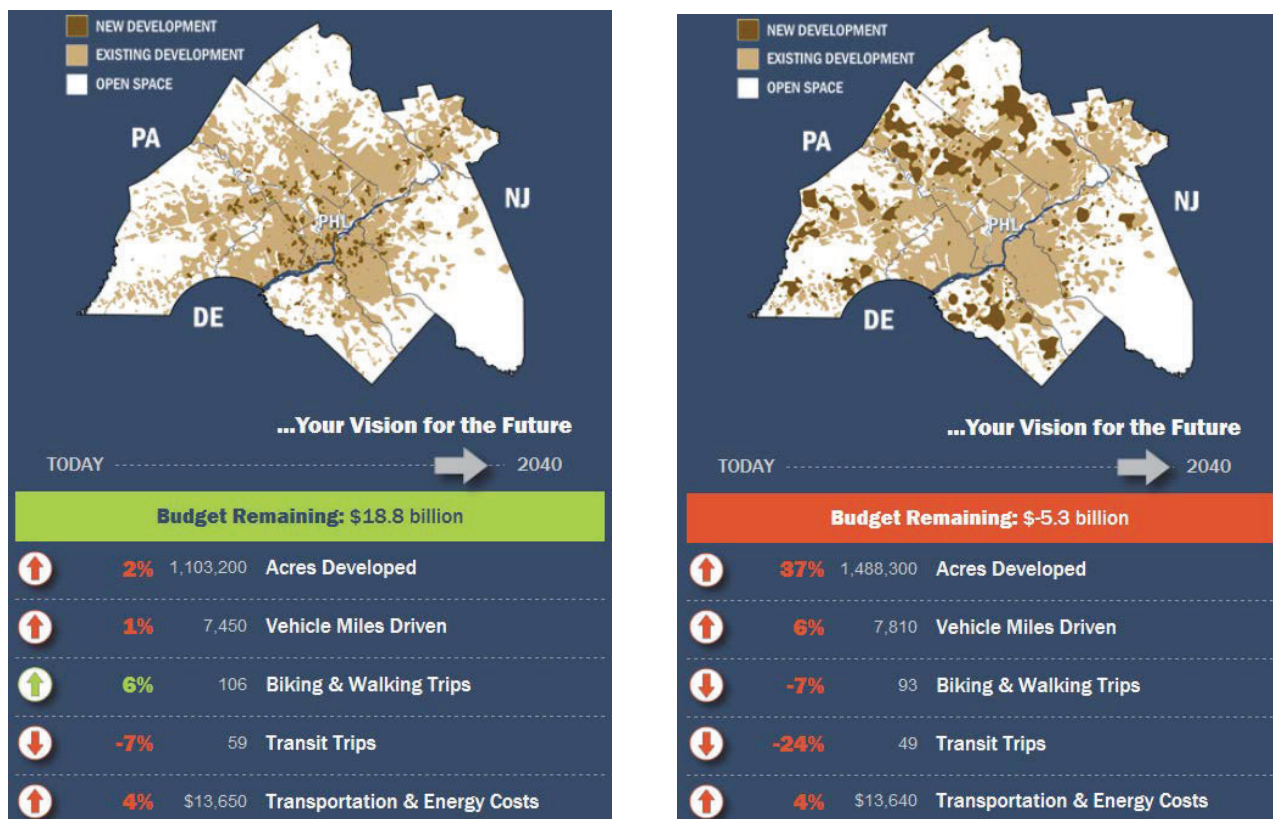
⁴⁵ The Lincoln Institute of Land Policy, *Opening Access to Scenario Planning Tools*, 2012. Available at:

https://www.lincolinst.edu/pubs/dl/2027_1352_Opening%20Access%20to%20Scenario%20Planning%20Tools.pdf.

⁴⁶ 23 USC § 135 (f)(3)(B) and § 134 (i)(6)(C).

transportation projects to be implemented during a 27-year horizon. Individual choice regarding investments and development patterns was then translated into fiscal, environmental, and safety-related outcomes. Below are two example outputs from the Choices and Voices tool.

Figure 3-1. Sample Outcomes from DVRPC Choices and Voices Tool



Source: DVRPC Connections 2040 Choices & Voices website: <http://www.dvrpc.org/asp/ChoicesAndVoices/>.

In the Cleveland area, through a grant from the Partnership for Sustainable Communities, the region has developed an on-line tool to allow the public to “be the planner” for the region and make choices that will affect the area’s Vibrant NEO (Northeast Ohio) 2040 plan. While this effort is broader than an MPO’s transportation plan, the Imagine My NEO tool⁴⁷ lets users provide input on their priorities for making the region a quality place to live. They can also explore the impacts various projects and policies are expected to have on the region. Using a fixed number of tokens, users can make decisions about how to invest the tokens in projects and policies of varying costs – options include cutting taxes, investing in transportation, upgrading parks and recreational

⁴⁷ Information about and access to the tool is available at <http://vibrantneo.org/>.

facilities, and job training for workers. Upon completion, users can choose to submit their final policy and project choices to the agency, as well as post them to a variety of social media outlets.

Considerations in Involving the Public in a Performance-based Plan

It can be difficult to engage the public about long term transportation planning. Many community members will not be familiar with technical terms and concepts and measures of success may be very different so this means that engaging communities involves three critical tasks:

1. Capturing attention in a positive manner by addressing topics that directly impact the community,
2. Engaging in a process that includes techniques such as scenario planning, and
3. Bringing both professional planners and the community into agreement on a set of desired outcomes and performance measures.

While transportation system performance aspects like pavement and bridge conditions are critical to a well-functioning transportation system, for most community members, transportation affects livability. Livability is about tying the quality and location of transportation facilities to broader opportunities such as access to good jobs, affordable housing, quality schools, and safer streets and roads.⁴⁸ This is reflected in measures such as reliability, safety, trip quality, travel time, and trip cost, yet often can be challenging to define in quantitative terms with a limited set of measures. The public has been increasingly involved in a dialogue on how choices about housing locations will impact livability, commute times, and transportation costs. Discussing these tradeoffs – as well as the role that asset condition plays in safety and costs for preserving the transportation system – can be a useful way to engage people in thinking about transportation issues.


The general public is often not familiar with how transportation projects are funded, which can vary significantly between jurisdictions and based on the mode of transportation. Engaging the public in the long range planning process provides an opportunity to provide information to

MICHIGAN LRTP OUTREACH STRATEGIES

In preparing an update to the Michigan Transportation Plan: Moving Michigan Forward (2030 MITP), MDOT employed outreach techniques that both communicated the revision process and gathered stakeholder input by consulting with numerous state, regional, and local agencies. Using household surveys, direct mail, a website, e-mail, webinars and online surveys, MDOT also reached out to thousands of citizens and numerous stakeholder interest groups representing the diverse needs and concerns of Michigan's residents and businesses. Responses reaffirmed the vision, goals, objectives, strategies; a focus on corridors of highest significance, and decision principles established for the 2030 MITP.

Source: www.michigan.gov/slrp

⁴⁸ For more information, see FHWA's Livability web site at: <http://www.fhwa.dot.gov/livability/>.



educate the public about the processes that lead to transportation projects being funded. This can help inform discussions about changes that can be made, for example, to increase funding for specific types of projects the public is particularly concerned about. Because most agencies face significant gaps between needs and revenues to meet those needs, providing this educational component can lead to more productive conversations about solutions and approaches to address this challenge.


One approach for engaging the public is linking the transportation plan with community land use plans, and encouraging adoption of plan goals that link together community outcomes related to land use, transportation and economic considerations.⁴⁹ For instance, the **San Joaquin Council of Governments (SJCOG)** and the **San Joaquin Valley Air Pollution Control District's** Blueprint Planning Process provided a unique opportunity to work together to convey a regional vision of land use and transportation that will be used to guide growth in the San Joaquin Valley over the next 50 years.⁵⁰

Equity is another important consideration for DOT/MPO planners to keep in mind to ensure the process is inclusive. Specifically:

- ▶ Title VI prohibits exclusion from participation in, denial of benefits of, and discrimination under Federally assisted programs on grounds of race, color, or national origin.
- ▶ Americans With Disabilities Act of 1990 states that no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.
- ▶ Improving Access to Services for Persons with Limited English Proficiency, Executive Order 13166 requires Federal agencies to identify any needs for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them.
- ▶ Environmental Justice in Minority Populations and Low-Income Populations, Executive Order 12898 instructs Federal agencies to identify and address instances in which adverse human health or environmental effects of their actions disproportionately affect minority and low-income populations.
- ▶ Age Discrimination Act of 1975 prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance.

⁴⁹ A useful resource of many examples of growing coordination of land use & transportation planning/project implementation can be found here: http://www.fhwa.dot.gov/planning/processes/land_use/toolkit.cfm.

⁵⁰ For more information, see: <http://www.valleyblueprint.org/>.



The public involvement process used in developing the transportation plan must include a process for “seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low income and minority households, who may face challenges accessing employment and other services.”⁵¹ Agencies have employed a number of strategies to engage traditionally underserved population; for example, **Tennessee DOT** has developed a *Traditionally Underserved Populations Outreach and Analysis Approach*.⁵² For more information, see NCHRP Report 710 “Practical Approaches for Involving Traditionally Underserved Populations in Transportation Decisionmaking.”⁵³

The examples below, from **Metro**, the MPO for Portland, Oregon, and **Minnesota DOT**, illustrate the continuous nature of public involvement throughout the development of a performance-based transportation plan. Providing information about the process schedule and opportunities for the public and stakeholders to be involved is helpful for bringing increased clarity and transparency to the long range planning process.

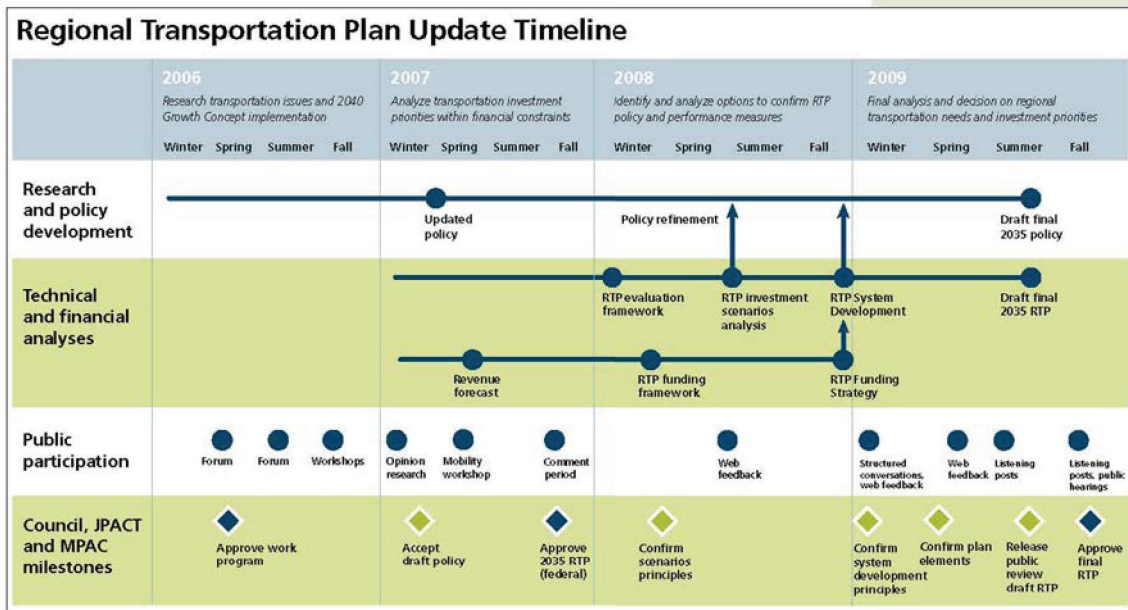
⁵¹ 23 CFR 450 § 210(a)(1)(viii) and 316(a)(1) (vii).

⁵² For more information, see: <http://www.tdot.state.tn.us/plango/pdfs/tup.pdf>.

⁵³ http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_710.pdf

PORTLAND METRO, INVOLVEMENT APPROACHES

Metro, the MPO for the Portland Oregon region, completed an update to its 2035 RTP in 2010. This plan update included performance measures to link transportation investments to reducing the region's carbon footprint, job creation, protecting the urban growth boundary and enhancing travel options. Metro worked closely with stakeholders throughout the plan update process and engaged the public, public agencies, and targeted stakeholders in regional forums; stakeholder task force and advisory committee workshops; public opinion research; meetings with county coordinating committees; and public open houses and hearings; as well as web input. The visual below highlights key milestones in the initial plan update timeline.

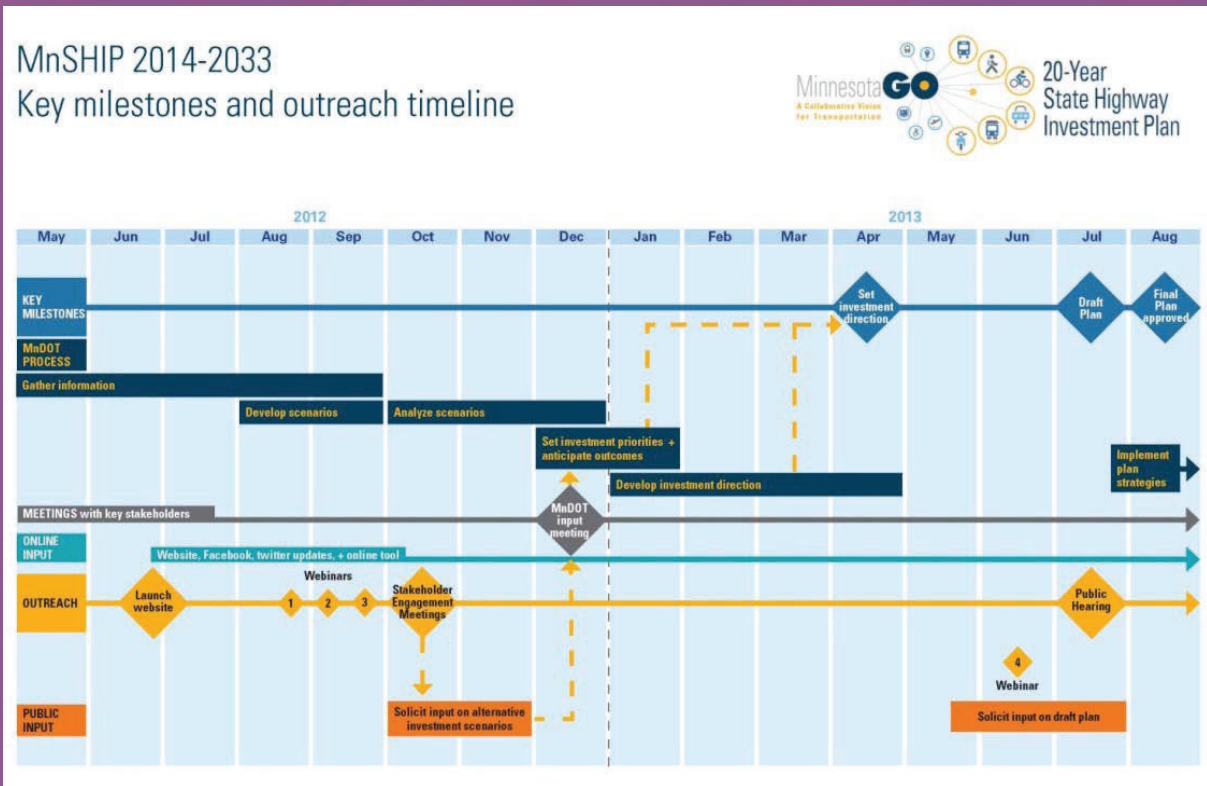


Source: Oregon Metro, 2035 Regional Transportation Plan Executive Summary (2007), Page 17.

For more information, see: http://library.oregonmetro.gov/files//rtp_exec_summary_final.pdf and http://library.oregonmetro.gov/files//2035_rtp_appendix_june2010_web.pdf.

MnSHIP OUTREACH STRATEGIES

The process of developing Minnesota DOT's State Highway Investment Plan (MnSHIP), which is part of MnDOT's Family of Plans, involved extensive public and stakeholder participation. MnSHIP incorporates risk, performance-based planning, and scenario-based planning to establish a fiscally-constrained investment direction for highway projects taking place over a 20-year period. The public involvement plan included a wide range of activities, including stakeholder engagement meetings, press releases, project e-mail distributions, a website, webinars, use of social media platforms, and a public hearing. These were used during the process of gathering information, developing and analyzing scenarios, and developing investment priorities. The diagram below outlines these techniques and their phasing.



Source: Minnesota Department of Transportation *State Highway Investment Plan*, Key Milestones and Outreach Timeline, <http://www.dot.state.mn.us/planning/mnship/pdf/MnSHIPcalendar070113.pdf>.

Interagency Consultation and Coordination

In addition to engaging the public and stakeholder organizations, the development of a transportation plan involves consultation and coordination among agencies. Interagency collaboration in developing a performance-based transportation plan should involve a diverse range of transportation providers including transit agencies, State and local agencies, transportation industry representatives, and agencies responsible for environmental resources. Specifically, the statewide transportation plan is developed in cooperation with MPOs or in cooperation with affected nonmetropolitan officials with responsibility for transportation or, if applicable, through regional transportation planning organizations.⁵⁴

Intergovernmental and agency participation is characterized by the shared influence of participants on final policy solutions and perhaps shared roles in implementation. Partners have a direct involvement in decision making, including the development of alternatives and choice of a preferred solution. Two-way communication is essential and all parties should have clear roles. Communication and collaboration between agencies should begin as early as possible in the plan development process and continue throughout. Facilitating the involvement of a diverse group of professionals with different perspectives can lead to the generation of new ideas and innovative approaches that might not otherwise arise. Having involved interested agencies early in the process can also result in these agencies being more invested in the approval and subsequent implementation of the plan.

Collaboration among agencies is particularly important in a performance-based plan, in which performance measures, data, and targets should be coordinated among agencies. For instance, if a State DOT includes several MPOs, the targets that MPOs set for measures should be developed in coordination with the State to ensure they are consistent with State targets; States should also coordinate with MPOs in their target-setting. Federal statute requires coordination in the development of performance targets in regard to the national performance measures: “Selection of performance targets [in relation to the national measures] by a State shall be coordinated with the relevant metropolitan planning organizations to ensure consistency, to the maximum extent practical...In urbanized areas [not represented by a MPO] selection of [public transportation] performance targets by a State shall be coordinated, to the maximum extent practicable, with providers of public transportation...”⁵⁵ Moreover, “Selection of performance targets by a metropolitan planning organization shall be coordinated with the relevant State to ensure consistency, to the maximum extent practicable,” and “shall be coordinated to the maximum extent practicable, with providers of public transportation.”⁵⁶

⁵⁴ 23 USC § 135 (f)(2).

⁵⁵ 23 USC § 135(d)(2) and 49 USC 5304(d)(2).

⁵⁶ 23 USC § 134(h)(2)(B) and 49 USC 5303(h)(2)(B).

Coordination is especially important for MPOs whose planning areas include jurisdictions in two or more States, particularly when the approaches to transportation planning in those States vary significantly. In this case, an MPO will be coordinating with more than one State in setting targets, acknowledging and addressing where any differences in approach may exist. Some research has been conducted on approaches to coordination and institutional arrangements for multi-state MPOs.⁵⁷ Establishing a pattern of collaboration on issues that benefit both parties, such as data sharing, can foster closer relationships and improved collaboration in other areas, such as target setting.

Even outside of the nationally required measures, State DOTs, MPOs, and transit agencies can benefit from coordination in their consideration of performance measures and targets to ensure consistency in approaches. As an example of this type of coordination, the **Baltimore Metropolitan Council (BMC)** used **Maryland DOT's** annual performance Attainment Report as a key tool and “springboard” in identifying the performance measures it would use in tracking progress toward regional goals and for incorporation in its MTP. The Attainment Report provided critical information about available transportation data as well as State goals for transportation. This strengthened alignment of the MPO’s planning activities and focus with broader State priorities.

It is also good practice for a lead planning agency developing a transportation plan to consult with agencies such as toll road operators and other transportation service providers, as well as local governments and other agencies that have a role in implementing strategies, to ensure that targets are realistic and achievable. These agencies can also be engaged in supporting data collection for tracking progress toward targets. Particularly with respect to freight planning, having a State freight advisory committee with representation from both the State and regional perspective can be particularly useful in considering how transportation can best support the State’s economy, as well as the economies of its various regions.

REGIONAL TRANSPORTATION PLANNING ORGANIZATIONS (RTPOs)

RTPOs have existed for decades, but their role was formalized by MAP-21 (23 USC § 135(m)). RTPOs can be authorized by state DOTs to conduct nonmetropolitan planning and project selection. By doing so, states are fulfilling their coordination requirement by fully delegating the work to the RTPO. RTPOs may be particularly useful in regions that may become an MPO, or have unique characteristics that are better served by local control. Colorado, Iowa, and North Carolina (among others) have RTPOs or MPOs covering the entire state, although state LRTP documents vary considerably in format and scope.

⁵⁷ Multi-State Metropolitan Planning Organizations: Approaches, Cases, and Institutional Arrangements, NCHRP report for AASHTO Standing Committee on Planning, http://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/NCHRP08-36%2844%29_FR.pdf.



Carrying Engagement Through to Implementation

The public participation plan that supports development of the performance-based transportation plan provides a strong basis for carrying the engagement from plan development into implementation. By linking performance outcomes during scenario analysis from the plan to the selection of individual projects in the STIP or TIP as well as through on-going reporting on system performance, the public is aware of the goals and measurable progress toward them. Therefore, the transportation plan development process should consider:

- ▶ What needs to be done to track progress over the next 5-10 years or longer?
- ▶ How will the public have access to system performance information: mobile devices, dashboards, websites, push-outs vs. pull-outs, etc.?
- ▶ How will the transportation plan set the stage for continued public and stakeholder engagement that links planning with project development – including the National Environmental Policy Act (NEPA)?
- ▶ What on-going communication to decision-makers and the public will occur?

Engaging with the public and stakeholders in a cooperative manner should be a continuous process both throughout the development of the transportation plan as well as between plan cycles. Performance reporting efforts, for example, can help to convey information about progress and keep stakeholders involved with the latest developments in transportation. This allows participants in outreach activities to draw explicit connections between the input they provided and changes that have been implemented.

4. Scoping and Baseline Information

Development of a performance-based transportation plan begins with baseline information that forms a foundation for the strategic elements of the plan. This baseline information typically includes information on the existing multimodal transportation system, including its condition and performance, as well as factors that are likely to affect the future of the planning area and the future performance of the transportation system, including availability of financial resources. This baseline also captures potential changes in perspective of the region or State's priorities, including policies or principles that have been adopted, as well as data on the difference in growth anticipated in the previous plan to actual changes that have occurred.

Information that impacted the previous transportation plan development is compared to this new data in the plan scoping step. These data represent a broad array of information on land use, population, economic development, employment changes, available revenue, goals and priorities of individual communities, and many other factors that may be specific to that individual area. Within the PBPP framework, this baseline information includes feedback from past plans and the on-going monitoring and evaluation of system performance, and includes:


- ▶ A description of the multimodal transportation system;
- ▶ Information on existing system conditions and performance;
- ▶ Factors and trends that will influence the future;
- ▶ Revenue projections; and
- ▶ Consideration of applicable planning studies, policies, performance-based plans.

Each of these elements is described briefly below.

Description of Multimodal Transportation System

The transportation plan should describe elements of the multimodal transportation system, including not only highways and transit, but also multimodal and intermodal facilities and pedestrian and bicycle networks.⁵⁸ It should also address integrated management and operations of transportation systems and facilities. By including all elements of the integrated multimodal transportation system in decisionmaking, decision-makers, stakeholders, and the public can better understand the system needs and how the investment strategies support the State or region's future. Within a performance-based plan, clearly defining the transportation system as a

⁵⁸ 23 USC 134 (i)(2)(A).



multimodal system can help decision-makers and the public consider goals, objectives, and performance measures that are multimodal in nature.

Many State DOT LRTPs are truly multimodal and describe all modes, including freight and passenger rail and aviation, and include goals and performance measures that relate to all modes. Maryland DOT's statewide plan, for example, is developed in coordination with the State's modal agencies to address all modes of transportation, as well as links between modes. Because many of the State's goals, such as safety and security, system preservation, and economic prosperity are cross-cutting in nature, the statewide plan development provides a unique opportunity to highlight each agency's part in furthering the broad goals for the transportation system.

Information on Existing Conditions and Trends

Before looking to the future, transportation agencies collect a significant amount of information on current conditions as well as established trends to inform transportation plan development.

In addition to gathering baseline data on population, land use, travel, employment, and economic activity, planning staff should collect data related to existing system performance. Traffic counts and travel-time studies routinely support establishing a baseline condition related to congestion. Common metrics related to congestion and travel patterns include: Vehicle Miles Traveled (VMT) – both on the system overall as well as per capita; Vehicle Hours Traveled (VHT) on the system and on specific corridors of interest; levels of traffic congestion and delay; and mode shares in various parts of the region or State.

In recent years, technology has greatly enhanced the ability to collect data on system performance in an ongoing, real-time way, including information on transportation system reliability. In addition, data on performance areas such as safety and the environment are important indicators. Current data provides a baseline for setting targets and comparison with existing targets. In addition, historical information on performance changes (both related to the metrics above as well as other areas such as pavement and bridge condition, accessibility, etc.) in the past and relevant agency actions is also useful. Agencies continue to identify innovative sources of data through partnership development as well. Planners, for example, can build working relationships with traffic management center operators and help them more clearly understand the planning process. This may allow the operators to be more involved in the performance measure conversation by serving as technical experts on data collection and analysis capabilities. Relationships with bicycle and pedestrian groups, or even telecommunications companies, may help facilitate the collection of data that would be difficult to collect otherwise (e.g. use of bicycle and pedestrian facilities).

A performance-based transportation plan is based on comprehensive information about the transportation system, and may include additional information on the operation and condition of the system collected in previous planning cycles or planning activities. Quality data is critical to establishing an accurate baseline of current conditions. A sample of data sources includes the Highway Performance Monitoring System (HPMS); the National Performance Management Research Data Set (NPMRDS); data collected through the Congestion Management Process (CMP) and Highway Safety Improvement Program (HSIP); other management systems addressing bridge, pavement, and transit conditions; as well as data from other State agencies and local governments, among others. The 2013 update of FHWA's Traffic Monitoring Guide includes a chapter on Pedestrian and Bicycle Counting, which can be used when collecting pedestrian and bicycle count data.

Using a performance-based approach may involve new partners and bring new stakeholders into the transportation plan development process in order to assemble this baseline information, since multiple aspects of performance – including safety, environmental condition, asset condition, accessibility, and reliability – should be considered. Moreover, data integration across State and local transportation agencies' data sources is an important consideration to ensure that data are comparable and provide relevant information.

Baseline information can appear in the form of a Transportation System Performance Report (See Chapter 7 for more discussion), and identify how system performance has changed in relation to key performance measures and targets. Development of the System Performance Report also lays the groundwork for understanding how well strategies implemented in the past contributed to changes in performance.

A NOTE ABOUT CHANGES IN DATA SOURCES AND MODELS

Data collection technologies and modeling capabilities continue to evolve. It is important to recognize that the best information on some performance metrics may change over time due to use of newer data sources or models. For example, air pollutant emissions estimates in many regions changed due to the introduction of the MOVES model, which replaced the previous MOBILE model for calculating emissions. In establishing a baseline of performance, therefore, it is important to understand and explain any changes in approach that will affect comparisons of performance results over time.

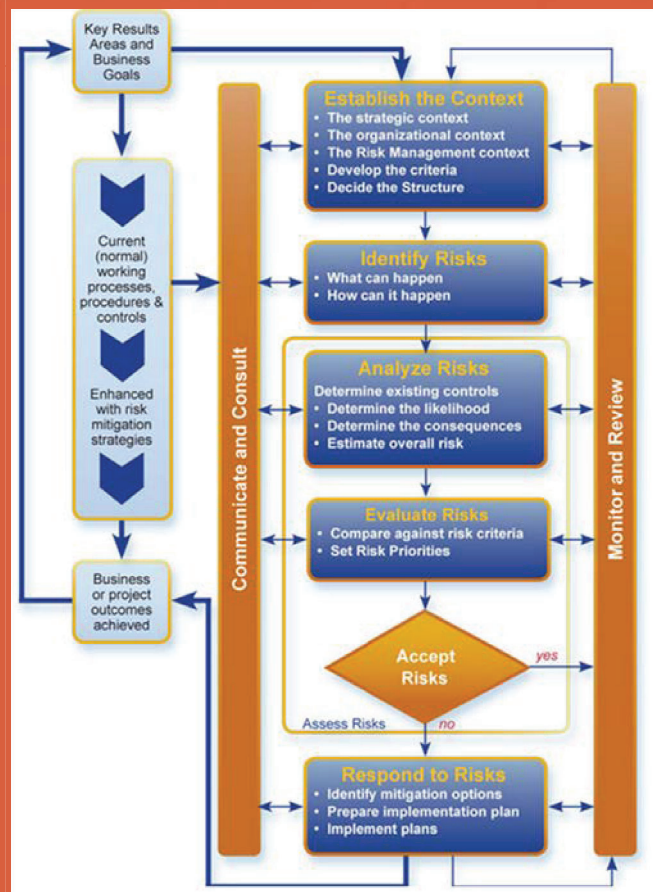
Future Challenges and Risks

In addition to providing information on current and past performance, the transportation plan should consider and discuss current and potential future challenges that are expected to affect the performance of the transportation system. In particular, projected population and employment growth is often a strong indicator of the future demands that will be placed on the transportation system. Below are some examples of challenges commonly identified in this section of the transportation plan:

- ▶ Demographic shifts including future population projections, an aging population, etc.
- ▶ Discrepancies between projected needs and projected revenues
- ▶ Congestion and its consequences (economic, quality of life, etc.)
- ▶ Environmental challenges
 - Air quality
 - Climate change
 - Risk from severe weather events
 - Water quality
- ▶ Safety challenges
- ▶ Changes in technology that will enhance the efficiency of the transportation system
- ▶ Long-term shifts in travel behavior and choices


MINNESOTA DOT ENTERPRISE RISK MANAGEMENT (ERM) FRAMEWORK

The ERM addresses three types of risks to the agency: (1) strategic-level risks, which impede the agency's ability to meet its vision and mission; (2) business-line (or operational) level risks, which affect the agency's ability to deliver products and services and meet performance targets; and (3) project-level risks, which threaten the scope, schedule, cost, or quality of agency projects. The Agency's ERM process is depicted in the figure below.



Source: Minnesota DOT, *Enterprise Risk Management Framework and Guidance*, Page 2.

http://www.dot.state.mn.us/riskmanagement/pdf/erm_framework.pdf



In addition to these common challenges, context-specific challenges can also be raised. Transportation planners to some degree play a role as “futurists,” anticipating future economic, political, environmental, geographic, or demographic changes and determining how they are most likely to impact the transportation system. Some examples of these include:

- ▶ The *2035 State Long-Range Transportation Plan* for **Michigan DOT** includes the long-range demographic forecast of a “dramatic increase in aging and retired populations.” The plan predicts as a result that “transport to health, recreational, and other activities will increase in importance.”⁵⁹
- ▶ The **Pima Association of Governments** in Tucson, Arizona estimates in its RTP 2040 “If we don’t expand alternatives to driving alone while we build new roads and improve existing ones, average traffic speeds during peak hours could slow to 23 miles per hour by the year 2040.”

Part of assessing how future changes are likely to impact the transportation system involves identifying key **risks** that are likely to affect the transportation system, and considering how to incorporate risk considerations into transportation planning.

Risk is the positive or negative effect of uncertainty or variability upon agency objectives. Transportation agencies consider managing risk as part of the strategic and systematic process of operating, maintaining, and improving physical assets and managing their highway network with a focus on the program and agency level. A risk-based approach to managing the transportation system can make the case for the difficult tradeoffs during decisionmaking because of constrained revenue necessary to maintain the entire system.⁶⁰

Since 2003, **Minnesota DOT** has used performance information to guide the development of the family of plans that make up the agency’s statewide LRTP. The State’s business and multimodal objectives, described as Key Results Areas (KRAs), play an important role in the LRTP and measuring progress toward implementation of the plan. In 2013, Minnesota DOT (MnDOT) established an Enterprise Risk Management (ERM) Framework and Guidance, which created a framework for establishing the standards, processes and accountability structure used to identify, assess, prioritize, and manage key risk exposures across the agency. The ERM is used by MnDOT in

⁵⁹ Michigan DOT, *2035 State Long-Range Transportation Plan*, available at:

http://www.michigan.gov/documents/mdot/MDOT_2035MIPlan4approval_398932_7.pdf.

⁶⁰ Additional information can be located in the publication series: Risk-Based Transportation Asset Management; Evaluating Threats, Capitalizing on Opportunities; Examining Risk-based Approached to Transportation Asset Management; Achieving Policy Objectives by Managing; Managing Risks to Critical Assets; and Managing External Threats through Risk-Based Asset Management. These are located at the FHWA Asset Management Publications and Risk Publications websites: <http://www.fhwa.dot.gov/asset/pubs.cfm?thisarea=risk> and <http://www.fhwa.dot.gov/asset/pubs.cfm>.

the planning process to identify and manage threats to the achievement of the KRAs. Some of the key capital risks that MnDOT has identified include the potential jeopardization of the State’s bond rating, lack of alignment with vision that results in a lack of public trust, deferring bridge investments, lack of responsiveness to respond to local opportunities, and untimely or reduced capital investment leading to unsustainable maintenance costs (see Table 4-1 below for risks). For each risk, MnDOT identified the extent to which it could mitigate the risk through policies and investments. Although MnDOT is not always able to mitigate these risks, their consideration plays a more prominent role in decisionmaking. Thus, the ERM is used as a tool that supports implementation of the LRTP. In developing the Minnesota State Highway Investment Plan (MnSHIP), for instance, MnDOT systematically identified the likelihood and impact of different risks and conducted scenario analysis to assess the trade-offs associated with various investment mixes.

Table 4-1. Key Risks Identified by MnDOT

Key capital investment risks	Mitigated risk by 2023 (of 3 ✓)	Mitigated risk by 2033 (of 3 ✓)
GASB 34: pavement and bridge conditions deteriorate, jeopardizing state bond rating	✓✓	✓
Federal policy: failure to achieve MAP-21 performance targets on NHS reduces funding flexibility	✓✓✓	✓
MnDOT policy: misalignment with Vision & Statewide Multimodal Transportation Plan results in loss of public trust	✓✓	✓
Bridges: deferring bridge investments viewed as an unwise/unsafe strategy	✓✓✓	✓✓
Responsiveness: rigid investment priorities limits ability to support local economic development and quality of life opportunities	✓✓	-
Maintenance budget: untimely or reduced capital investment leads to unsustainable maintenance costs	✓✓	✓
Public input: investment inconsistent with MnSHIP public outreach results in loss of public trust	✓✓	-

Source: Presentation by Ryan Wilson, Minnesota Department of Transportation, Performance-based Planning and Programming Workshop, September 19-20, 2013.



Revenue Projections

Considering potential revenue sources early in the process ensures that performance-based planning activities are based on realistic assumptions about available funding for capital, operating, and maintenance costs associated with the surface transportation system. Providing realistic funding and revenue forecasts from the outset supports decision-maker, stakeholder, and public trust by providing understanding of the limits of funding to support implementation of strategies. Transportation systems are challenged to accommodate many competing needs, and fiscal constraint is needed to set priorities for allocating resources to address those needs. Fiscal constraint also helps clarify what is possible with existing funding sources, and can inform debate about if there is a need for new funding sources.

Consideration of Applicable Planning Studies, Policies, Performance-based Plans

The transportation plan should build upon existing goals, objectives, performance measures, and strategies identified in a wide range of transportation plans, as well as other planning documents. These include required transportation plans, such as the State Strategic Highway Safety Plan, State Asset Management Plan, MPO Congestion Management Process, Transit Asset Management Plan, as well as State Freight Plan. States and MPOs are required to integrate into the statewide and metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in other State transportation plans and transportation processes, as well as any performance-based plans developed by public transportation providers.⁶¹ In addition, many other regional or State plans, including disaster preparedness plans, conservation plans, pedestrian and bicycle master plans, economic development plans, and others, should be considered in the development of the transportation plan.

⁶¹ 23 USC § 134 (h)(2)(D) and 23 USC § 135(d)(2)(C).

Addressing Challenges Associated with Incomplete Data on Bicycle and Pedestrian Modes of Transportation

Transportation agencies are regularly faced with challenging decisions regarding how to allocate resources between various modes of transportation. These challenges are compounded by gaps in the data available for active transportation modes, such as biking and walking. Whereas VMT data for cars is readily available, data about demand for bicycle and pedestrian facilities is less prevalent. The Transportation Research Board recently published Research Circular E-C183: Monitoring Bicyclist and Pedestrian Travel and Behavior, which provides information about the latest advancements in this area. In addition, a number of jurisdictions and agencies have devised ways to capture the frequency with which bicycle and pedestrian facilities are used, and methods of measuring the impacts of investments in these facilities. Examples include:

- **Colorado DOT formed a bicycle/pedestrian counting program** in 2010 that uses in-pavement bicycle/pedestrian counters. The technology measures quantity of users and records data that provides useful information on travel patterns. The data helps inform decisions and investments related to bicycle and pedestrian infrastructure.
- **Pikes Peak Area Council of Governments and the City of Colorado Springs have sponsored several volunteer-based bicycle and pedestrian count programs** on trails and lanes around the region. The data is used to estimate existing use, potential future use, and to identify project priorities.
- **The Seamless Travel Project is a joint effort between Caltrans, the University of California at Berkeley, and Alta Planning + Design** to create a model for estimating bicycle and pedestrian demand. The project was pilot tested in San Diego over the course of two years, and was designed to not only count quantity of cyclists and pedestrians, but also to identify the factors that influence bicycling and walking. After the pilot test, the team developed a number of approaches for modeling demand.
- **The City of Tucson's ADA Sidewalk Inventory Study Report**, which identifies gaps in the City's sidewalk network in an effort to make the network more accessible for all users. The report includes recommendations for pedestrian improvements based on need and the priority criteria identified at the beginning of the sidewalk inventory study process.

For more information about these programs and studies, see the Resources List.

5. Strategic Vision, Goals and Objectives

A performance-based transportation plan should be based on a clear vision of a desired future, including desired outcomes. Consequently, identifying goals and objectives is critical to providing strategic direction for the plan. Because each step of a performance-based planning process cascades from previous steps, these strategic elements set the stage for performance measures that are incorporated in the plan. The vision, goals, and objectives of the transportation plan should take into account the full range of planning factors, which address transportation system and community outcomes.


Developing a Vision

The first step in a planning process is to develop a vision that provides an overarching statement of desired outcomes, and leads to well defined goals and objectives. Usually a vision statement is concisely worded, but broad in its reach, and is intended to be compelling and inspiring.

As the “hook” that captures the imagination, the vision statement addresses several key issues:

- ▶ **A desired achievement or condition.** More than simply the condition of the transportation system, a performance-based transportation plan focuses on improvements from the perspective of transportation “customers”, and may include a focus on improved (safer, more reliable, more cost effective, less polluting, or more enjoyable) travel conditions, as well as economic and quality of life conditions. A vision statement may meld transportation and broader community outcomes, addressing issues such as land use, housing, and economic opportunities.
- ▶ **Inspiration.** A vision can help inspire the imagination and establish momentum toward new approaches or policies. It is appropriate to set a vision that will take concerted effort among partners, and require transportation investment choices that contribute toward that vision.
- ▶ **A timeline.** By common practice, most transportation plans include a timeline in their title, such as “2040 Long Range Transportation Plan.” Federal regulations specify that LRTPs look out at least 20-years. A general principle to consider in determining whether to look 20, 30, or even 50 years out is that visioning works best if you go far out enough to get beyond present-day problems but not so far out that it becomes too difficult to assess how to get there.

A vision sets the stage for preparing and implementing a performance-based transportation plan. The benefits of a visioning process include high engagement, a big-picture orientation, aligned



actions and outcomes, and *a more focused plan*. Developing the transportation vision for the State or region includes extensive public and stakeholder involvement.


The use of scenario planning in developing a vision, as well as goals and objectives, continues to expand as it helps communities consider a broader range of issues beyond land use and transportation to include economic uncertainty, social equity, housing affordability, water quality, impacts of climate change, accessibility and other concerns. As described in Chapter 3, scenario planning is a useful tool for assisting in imagining alternative futures that organizations can use to help them improve decisions regarding a vision of the future, goals, objectives, and investments. Importantly, scenario planning can be helpful in surfacing underlying values and perspectives that align around a common understanding of how best to move forward in light of the range of controllable (i.e., investment decisions and policies) and uncontrollable (i.e., economy, population growth) factors that influence outcomes. Scenario planning can be the catalyst for bringing individuals, agencies, jurisdictions, and private sector entities together to think creatively and comprehensively about what they want their future to look like and what strategies or solutions result in the most desired outcomes. FHWA has encouraged scenario planning as a beneficial enhancement of the traditional transportation planning process.

Goals and Objectives: Definitions

In preparing the performance-based transportation plan, it is useful to distinguish between *goals* and *objectives*, as well as guiding *principles* and *policies* that are often discussed within a plan.

- ▶ A GOAL is a broad statement that describes a desired end state: “Foster livable communities that increase transportation choices.”
- ▶ AN OBJECTIVE is a specific, measurable statement that supports achievement of a goal: “Increase access to jobs and housing via transit.”
- ▶ A PRINCIPLE is a statement that reflects values or priorities, but does not directly address an outcome that can be measured. It may involve a fundamental truth or proposition that serves as the foundation for decisionmaking: “Coordinated land use, transportation, and economic development are the foundation of an equitable, sustainable community.”
- ▶ A POLICY involves a course of action intended to influence and determine decisions and actions: “Support coordinated land use and transportation planning.”

In a performance-based transportation plan, the goals (and associated objectives) are important for identifying desired outcomes and should be used as a basis for selecting performance measures used in the plan. Well-crafted goals and objectives frame and directly influence performance measurement, so this is a critical step. The FHWA *Performance Based Planning and*



Programming Guidebook provides in-depth information on how to develop goals and objectives for a performance-based planning process.⁶²

The integration of other performance-based plans and coordination with other planning processes in the region or State is an important aspect of developing goals and objectives in metropolitan and statewide long-range transportation plans. Other performance-based plans with strategic relevance for the transportation plan may include a State asset management plan, a strategic highway safety plan, a metropolitan congestion management plan, a State freight plan, a transit asset management plan, a transit agency safety plan, a transportation systems management and operations plan, and others. Through the creation of each of these plans, stakeholders with in-depth knowledge of that functional area are typically brought together to shape the goals and objectives of that plan. The goals and objectives within these plans should inform the development of the overarching, long-range goals and objectives of the transportation plan. In turn, subsequent updates of the functional plans should be fit under the “umbrella” of the goals and objectives of the transportation plan. The process of developing the transportation plan enables decision-makers and the public to explore goals and objective from different plans, understand potential conflicts and commonalities, and create a forum for discussing priorities and trade-offs and developing and selecting achievable targets.


Establishing Goals

Transportation plan goals traditionally relate to the planning factors in Federal legislation.⁶³ The goals are often adapted to reflect how each of the factors is unique to the conditions of each State or region. Performance management approaches within transportation agencies have increased the focus on goals that directly relate to transportation system performance: infrastructure condition, safety, congestion, and reliability. However, the inclusion of external partners and stakeholders in the planning process often widens the range of goals considered to include community outcomes such as livability, sustainability, the economy, and equity.

A key value of developing a transportation plan is that it is a process where the community – including stakeholders, partner agencies, and transportation system users – considers all of its goals in the context of its resources, and is forced to make trade-offs among the various competing priorities. Consequently, public involvement, stakeholder engagement, and input from partners are critical to establishing and defining commonly agreed-upon goals. For example, the **Arizona DOT** worked to ensure inclusion of a wide array of perspectives in developing its recent plan, *What Moves You Arizona* (November 2011). Arizona DOT developed a participation plan that

⁶² FHWA, Performance Based Planning and Programming Guidebook, September 2013. Available at: http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/.

⁶³ 23 USC § 134 (h) and § 135 (d).



included: direct coordination with COGs and MPOs; e-newsletters; online comments; 3 videos; emails; a Facebook page; surveys; radio, TV, and newspaper advertising; 8 workshops with special interest groups; and open house presentations.⁶⁴


While a goal itself is generally broad, it is important to consider what kind of data and analysis will be needed to develop measurable objectives to evaluate progress toward attaining the goal as part of transportation investment decisionmaking. Data availability should be considered at this stage to help ensure that the information needed for measuring outcomes is available and not too costly to collect and maintain. By considering data needs early in the process, organizations can help avoid unintended expenditures for data collection and management.

In addition to planning factors, MAP-21 establishes broad national goals in seven performance areas [23 USC § 150(b)]:

- ▶ **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- ▶ **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.
- ▶ **Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System.
- ▶ **System Reliability** – To improve the efficiency of the surface transportation system.
- ▶ **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- ▶ **Environmental Sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- ▶ **Reduced Project Delivery Delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

These are *national* goals and a State or region should have a range of goals that align with these national goals and may have goals that address other transportation-related concerns. For instance, some plans include goals that address quality of life issues, accessibility, public health, or equity. Some goals may also address specific issues or concerns, such as bicycling and walking.

⁶⁴ Arizona DOT <http://www.azdot.gov/docs/default-source/planning/lrtp-2011-1129.pdf?sfvrsn=2>.



However, while objectives address specific geographies, conditions, or partners, goals generally more broad.

There are several resources or relevant plans that States and regions can reference when developing goals in specific areas (e.g., safety, infrastructure condition, congestion) for the transportation plan. Some resources exist as part of national literature whereas others are planning documents and management systems used by a region or State. The section below provides information on pertinent resources for several goal areas to assist in forming transportation plan goals (as well as corresponding objectives and performance measures).

SAFETY

A Strategic Highway Safety Plan (SHSP) is a statewide coordinated safety plan that provides a comprehensive framework for reducing fatalities and serious injuries on all public roads. Through the development and update of the plan, the State department of transportation works collaboratively with Federal, State, local, and private sector safety stakeholders to establish statewide goals, objectives, and key emphasis areas that enable the State to reduce highway fatalities and serious injuries. This involves identification and analysis of highway safety problems in the State. The SHSP is a requirement of the Highway Safety Improvement Program (HSIP)⁶⁵ and the goals, objectives, performance measures, and targets of the SHSP should be integrated into the transportation plan. This is a key resource for selecting safety goals and objectives in the transportation plan.

More information on the SHSP can be found at:

- ▶ FHWA Office of Safety, Strategic Highway Safety Plan (SHSP) Website.⁶⁶
- ▶ NCHRP Report 500: *Guidance for Implementation of the AASHTO Strategic Highway Safety Plan*. This is a series of volumes each focused on addressing a specific type of highway crash or contributing factor.⁶⁷
- ▶ Transportation Safety Planners Desk Reference prepared by the Transportation Safety Planning Working Group with support from FHWA, 2007.⁶⁸
- ▶ NCHRP Report 546: *Incorporating Safety into Long-Range Transportation Planning*, 2006.⁶⁹


⁶⁵ 23 USC § 148.

⁶⁶ FHWA Office of Safety, Strategic Highway Safety Plan (SHSP) Website: <http://safety.fhwa.dot.gov/hsip/shsp/>.

⁶⁷ NCHRP Report 500: Guidance for Implementation of the AASHTO Strategic Highway Safety Plan: <http://safety.transportation.org/guides.aspx>.

⁶⁸ Transportation Safety Planners Desk Reference: http://tsp.trb.org/assets/FR_Safety%20Planner_1_17_07FINAL.pdf.

⁶⁹ NCHRP Report 546, *Incorporating Safety into Long-Range Transportation Planning* (2006): <http://www.trb.org/Main/Blurbs/156716.aspx>.



In addition, Public Transportation Agency Safety Plans must include performance targets based on national safety performance criteria and state of good repair criteria, and identify strategies “to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions.”⁷⁰ These agency safety plans also can be a resource for selecting safety goals and objectives in the transportation plan.

INFRASTRUCTURE CONDITION

Each State is required to develop a risk-based asset management plan for the National Highway System (NHS) to improve or preserve the condition of the assets and the performance of the system.⁷¹ A State asset management plan must include a listing of the pavement and bridge assets on the NHS in the State, including a description of the condition of those assets; asset management objectives and measures; performance gap identification; lifecycle cost and risk management analysis; a financial plan; and investment strategies. States must address pavements and bridges but are encouraged to include all infrastructure assets within the highway right-of-way in their risk-based asset management plan, and may include roads other than on the NHS. In addition, Transit Asset Management Plans include “capital asset inventories and condition assessments, decision support tools, and investment prioritization”, and can be a useful resource for the transportation plan.⁷²

A comprehensive transportation asset management plan (TAMP) will serve as an important resource in developing goals and objectives for infrastructure condition within a State, metropolitan area, or rural area transportation plan. The TAMP serves as a management tool to achieve a common understanding and commitment to improve performance, and acts as a focal point for information about the DOT’s assets, management strategies, long-term expenditure forecasts, and business management processes. More information on the TAMP, transportation asset management, and transit asset management is available on the FHWA Office of Asset Management Website and from the FTA State of Good Repair and Asset Management Website.⁷³

CONGESTION MANAGEMENT

A congestion management process (CMP) is a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system

⁷⁰ 49 USC § 5329(d)


⁷¹ 23 USC § 119(e)

⁷² 49 USC § 5326

⁷³ FHWA Office of Asset Management, Transportation Asset Management Plans Website:

<http://www.fhwa.dot.gov/asset/plans.cfm> FTA, State of Good Repair and Asset Management Website:

<http://www.fta.dot.gov/13248.html>



performance and assesses alternative strategies for congestion management that meet State and local needs. The CMP is intended to move these congestion management strategies into the funding and implementation stages. A CMP is required in Transportation Management Areas (TMAs), metropolitan areas with population exceeding 200,000. Beginning with SAFETEA-LU, metropolitan areas were encouraged to integrate the CMP into the development of their metropolitan planning process. The CMP, as defined in Federal regulation, includes several activities that are significant for the development of congestion reduction objectives in both State and metropolitan transportation plans. The CMP includes the development of congestion management objectives, establishment of measures of multimodal transportation system performance, and the collection of data and system performance monitoring to define the extent and duration of congestion and determine the causes of congestion. For more information, see FHWA's Congestion Management Process Guidebook.⁷⁴

SYSTEM RELIABILITY

Transportation system users desire travel time reliability – consistent and predictable travel times. Travel time reliability is a reflection of the variability of travel time. Travelers and shippers like to know what to expect and travel time reliability gives them greater certainty when using the transportation system. Unreliable travel is caused by non-recurring events, such as weather conditions, work zones, special events, and traffic incidents, as well as fluctuations in traffic volumes.

There are several new resources to assist States and MPOs in incorporating reliability into the goals, objectives, and performance measures of their transportation plans. The second Strategic Highway Research Program (SHRP 2) created several products that are helpful to planners. The *SHRP 2 Guide to Incorporating Reliability Performance Measures into the Transportation Planning and Programming Processes*⁷⁵ offers assistance in incorporating reliability throughout the planning process including goals and objectives.

Planning practitioners are increasingly using vehicle probe data to obtain information on travel time reliability. FHWA has acquired a national data set of average travel times for use in performance measurement. This data set is being made available to States and metropolitan planning organizations (MPOs) as a tool for performance measurement. The National Performance Management Research Data Set (NPMRDS) is a vehicle probe-based travel time data set and consists of average travel times reported every 5 minutes on the National Highway System (NHS) as defined in MAP-21 and on the five-mile radius of arterials at border crossings. To obtain more

⁷⁴ FHWA Congestion Management Process Guidebook:

http://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/.

⁷⁵ Available at: <http://www.trb.org/Main/Blurbs/168855.aspx>.

information on the national performance measurement data, refer to the FHWA NPMRDS Frequently Asked Questions.⁷⁶

FREIGHT MOVEMENT AND ECONOMIC VITALITY

Understanding performance of the freight transportation system and the challenges that come with increasing demand for freight transportation is important to improving mobility and productivity and establishing goods movement goals in the transportation plan.⁷⁷ Travel time data for freight is available through the NPMRDS discussed above. States and regions can create freight plans that establish goals, objectives, and strategies for improving goods movement and economic activity in the area. These plans and any standing working groups or committees focused on freight movement should be considered in the development of transportation plan goals.

ENVIRONMENTAL SUSTAINABILITY

FHWA has created multiple resources that can support State DOTs and MPOs in developing transportation plan goals in the areas of environmental sustainability. Sustainability as a concept may be considered broadly to include consideration of three primary principles: social, environmental, and economic. “The goal of sustainability is the satisfaction of basic social and economic needs, both present and future, and the responsible use of natural resources, all while maintaining or improving the well-being of the environment on which life depends.”⁷⁸ Planners can use the FHWA Sustainable Highways Initiative website to obtain information on how to incorporate sustainability goals in their transportation plans.⁷⁹ From that website, planners can access FHWA’s sustainability self-assessment tool, INVEST, to evaluate, score, and improve the sustainability of their transportation plans. Additionally, FHWA has information useful for setting climate change-related goals and performance measures for the transportation plan on the FHWA Office of Planning, Environment, and Realty’s Climate Change website.^{80,81}

As an example, the **North Central Texas Council of Governments (NCTCOG)** used the INVEST System Planning module to evaluate the sustainability of its *Mobility 2035* metropolitan transportation plan. The INVEST tool results aligned with planning areas that NCTCOG had emphasized in the past, such as social considerations and air quality elements, but also pointed

⁷⁶ Available at: http://www.ops.fhwa.dot.gov/freight/freight_analysis/perform_meas/vpds/npmrdsfaqs.htm.

⁷⁷ http://www.fhwa.dot.gov/planning/freight_planning/index.cfm


⁷⁸ <http://www.sustainablehighways.dot.gov/overview.aspx#quest1>.

⁷⁹ Available at: <http://www.sustainablehighways.dot.gov/default.aspx>.

⁸⁰ Available at: http://www.fhwa.dot.gov/environment/climate_change/adaptation/.

⁸¹ Available at:

http://www.fhwa.dot.gov/environment/climate_change/mitigation/publications_and_tools/ghg_planning/.



out issues that hadn't been considered, like addressing infrastructure resiliency to climate hazards such as increased flooding, and measuring performance on sustainability outcomes. NCTCOG is planning to incorporate advances in these areas into its next transportation plan, *Mobility 2040*.

Crafting Objectives

Objectives are specific, measurable statements that support achievement of a goal. An objective should include or lead to development of a performance measure in order to support decisionmaking. For instance, under a broad goal related to improving travel options, an objective might be to: “increase bicycling and walking.” An ideal objective is often described as SMART (specific, measurable, agreed-upon, realistic, time-bound). In this case, the objective would be crafted more specifically to define a performance measure and target: for instance, “By 2035, achieve 10 percent of work trips made by bicycling and walking.”

A single goal may have many objectives. For example in the Denver Regional Council of Governments’ (DRCOG) 2035 *Metro Vision Regional Transportation Plan*, adopted in 2011, the TDM subchapter includes:

Two important overall Metro Vision [objectives] are directly related to TDM:


- *Reduce the percent of trips to work by SOV to 65 percent by 2035, and*
- *Reduce the regional per capita VMT by 10 percent by 2035.*

The current SOV to work share is about 74 percent. The current per capita VMT is about 26 miles. The goal is to bring that value down to 23 miles per person by 2035.⁸²

Data become more important in moving from broad goals to objectives. Baseline data addressing the issue of concern, such as bridge condition, transit overcrowding, or incident response time, help focus planners on important performance gaps or conditions that need monitoring or improvement. It is also important to consider what data will be needed to support implementation and monitoring.

In general, objectives that guide decisions in a transportation plan should reflect intended outcomes that are experienced by system users or the public. Outcome objectives typically reflect changes noticeable to the public that are influenced by a variety of factors (e.g. reduce hours of incident-based delay), output objectives reflect the activities or results of activities undertaken to affect outcomes (e.g. reduce clearance time for traffic incidents), and activity measures reflect

⁸² DRCOG 2035 Metro Vision Regional Transportation Plan
[http://www.drcog.org/index.cfm?page=regionaltransportationplan\(rtp\)](http://www.drcog.org/index.cfm?page=regionaltransportationplan(rtp)).



actions taken by transportation agencies that relate to strategy implementation (e.g. increase the number of cameras tracking system conditions). More information on objective types can be found in the FHWA *Performance Based Planning and Programming Guidebook*.

An objective may be framed to address a type of travel (e.g., passenger, freight), travel mode (e.g., rail, buses, passenger vehicles), or geography (e.g., urbanized area, nonurbanized area). Thus, one goal area might have several objectives that address different aspects of the issue. For example, there may be separate objectives addressing:

- ▶ Congestion on interstates and non-interstates, or
- ▶ Reliability of various transit modes and highway travel.


An objective may also focus on a specific component of the region or transportation system where an issue is of key importance, such as “Increase access to transit within targeted growth areas.”

When multiple objectives are used, it is important that objectives not contradict or conflict with each other. Any contradiction of objectives should be resolved before inclusion in the final transportation plan.

Linking Transportation Plan Goals and Objectives to Broader Plans

Goals and objectives can support broader community visions, as articulated in State and regional comprehensive planning documents. Goals do not need to be under the control of transportation agencies, but should be able to be affected through transportation investment decisions.

For instance, the Arizona transportation plan, *What Moves You Arizona: 2010-2035*, references the *Building a Quality Arizona 2050 (bqAZ)* vision, in which **Arizona DOT** worked with organizations, stakeholders, and residents across the State to develop a comprehensive vision. The bqAZ framework presented a multimodal transportation system that recognized and strengthened the relationship between land use and transportation by connecting activity and employment centers statewide. Several of the LRTP goals are directly drawn from bqAZ Guiding Principles. The Arizona LRTP also recognizes that many of the goals (e.g., support economic growth, link transportation and land use, improve mobility and accessibility) are the responsibility of many public and private partners, so the plan discusses the role that ADOT expects to play. For instance, under the goal to “support economic growth,” ADOT’s role is to develop and operate a State Transportation System



that provides predictable freight and people movement to create/retain jobs and support a competitive and thriving economy.⁸³

Similarly, recognizing the common issues across agencies, the **Maryland DOT** worked with the Maryland Department of Planning and Maryland Department of Housing and Community Development, which are responsible for land use and housing plans, respectively, in development of the Maryland Transportation Plan. In this way, visions and goals associated with those plans could be considered and incorporated into the Maryland DOT's LRTP development process. The **Pikes Peak Area Council of Governments** collaborated with the US Fish and Wildlife Service, the Environmental Protection Agency, and the US Army Corps of Engineers, as well as State agencies such as the Historic Preservation Office in developing its goals to ensure that they aligned with other key regional and State priorities.

Recognizing that planning is a continuing process, the transportation plan goals and objectives can build upon those found in previous transportation plans, while considering new challenges and factors that may suggest a need to adjust.

⁸³ Arizona DOT, What Moves You Arizona: 2010-2035 Long-Range Transportation Plan (2011). <http://www.azdot.gov/docs/default-source/planning/lrtp-2011-1129.pdf?sfvrsn=2>.

6. Performance Measures and Targets

Performance measures and associated targets are the centerpiece of a performance-based transportation plan. They are used in a performance-based transportation plan to define in specific and measurable terms the desired outcomes of the plan. Performance measures and associated targets provide an objective means to inform decisions about strategies and investments in the transportation plan, and serve as indicators to assess progress toward achieving desired outcomes. Because of this elevated role, the performance measures selected for the transportation plan should meaningfully reflect all of the goals and objectives of the plan, which are based on the region's or State's vision and support the national goals as set forth in MAP-21.

Federal law requires States and MPOs to set targets in relation to the set of national performance measures.⁸⁴ It also requires MPOs⁸⁵ and encourages State DOTs⁸⁶ to include the national performance measures and these performance targets in their transportation plans. In addition,

NATIONAL PERFORMANCE MEASURES

National performance measures address the following issues:


- ▶ For the National Highway Performance Program (NHPP):
 - Pavement conditions on the Interstate system and remainder of the National Highway System,
 - Bridge conditions on the NHS,
 - Performance of the Interstate system and remainder of the NHS
- ▶ For the Highway Safety Improvement Program (HSIP):
 - Number and rate per vehicle mile traveled of fatalities
 - Number and rate per vehicle mile traveled of serious injuries
- ▶ For the Congestion Mitigation and Air Quality Improvement Program (CMAQ):
 - Traffic congestion
 - On-road mobile source emissions
- ▶ Freight movement on the Interstate system
- ▶ Public transportation:
 - State of good repair
 - Safety

Source: 23 USC § 150(c) and 49 USC § 5326(c) and § 5329(d)

⁸⁴ The U.S. DOT is required to promulgate rulemaking within 18 months of October 1, 2012. The conclusion of the rulemaking process will result in the publication of the final rule (including an effective date) in the Federal Register. The States will then set associated performance targets within 12 months of the effective date and MPOs will set targets within 180 days of the establishment of State targets.

⁸⁵ 23 USC § 134 (h)(2)(B).

⁸⁶ 23 USC § 135 (d)(2)(B).



transportation plans also may include a range of additional performance measures beyond the national measures.

Some States document performance measures and targets in documents other than the transportation plan. For example, the Maryland DOT has a limited set of performance measures in its current transportation plan, but its annual attainment report identifies specific targets and tracks progress toward the transportation plan goals and objectives.⁸⁷

Key Roles for Performance Measures in the Transportation Plan

Performance measures serve several key roles in a performance-based transportation plan, as discussed in the PBPP Guidebook:

- ▶ Clarify the definition of goals;
- ▶ Monitor and report toward implementation of plan goals and objectives;
- ▶ Identify location, extent, and intensity of performance needs or deficiencies, which will serve as a reference for target setting; and
- ▶ Evaluate potential impacts of scenarios, programs, or projects.


Clarify the Definition of Goals

As noted earlier, a goal is a broad statement, and a performance measure is an indicator used to assess the progress toward a goal. Performance measures are the specific, measurable attributes of performance that must be changed in order to reach the goal. For example, the performance measures of “average transit travel time to work” and “average travel speeds on highways” could be used as performance measures that translate the overarching goal of “mobility” into specific indicators that should be changed in order to reach the goal.

Performance measures should be clearly defined to ensure that stakeholders and the public understand what is being measured and that they reflect the performance attributes that are of greatest value for the community. For instance, mobility can be defined in many ways and it is important to work with the public and stakeholders to define what is meant by “mobility” and what is the most useful measure or measures of it. Similarly, issues like economic vitality and livability are multi-faceted concepts for an area. By defining specific performance measures,

⁸⁷ Maryland DOT, State Report on Transportation.

http://www.mdot.maryland.gov/Office_of_Planning_and_Capital_Programming/Plans_Programs_Reports/Index.html.



attention is focused on key issues of concern that can be influenced by transportation policies and investments.

Some goal areas may compete. For instance, the goals of increasing vehicle travel speeds and improving pedestrian safety may seem to be at odds with each other, since faster travel speeds can lead to a less hospitable pedestrian environment and more crashes. Consequently, it is important to clearly identify priorities and values when selecting and defining performance measures, particularly for those that address broad goals such as mobility.

Monitor and Report on Progress toward Transportation Plan Goals and Objectives

One of the most important roles for performance measures is to allow transportation plan goals and objectives to be tracked over time to inform the public, planners, and decision-makers on the state of the transportation system relative to the characteristics that it values the most. By monitoring and reporting on these measures, all stakeholders can see whether or not the region or State is moving toward the desired goals and objectives of the plan. This enables decision-makers to examine what is happening on the system and make more informed decisions. States and regions use performance measurement tools to evaluate their transportation system and guide investments decisions reflected in the transportation plan. Performance information, together with public and stakeholder input, supports decision-makers in making investment choices and trade-offs within available resources.

Performance measures developed to track goals and objectives in a performance-based transportation plan are included in the plan along with a report on the current and past conditions for those measures (discussed in Chapter 7).

For example, the ***Pikes Peak Area Council of Governments (PPACG)*** in Colorado used an extensive public involvement process to develop a set of 17 goals, associated objectives with targets for years 2015, 2025, and 2035, and between one and twelve performance measures per goal for its *Moving Forward Update 2035* Regional Transportation Plan, adopted in 2012. PPACG hosted five workshops or focus groups among a wide variety of regional stakeholders and a website survey to develop and refine this set of goals, objectives, and performance measures. The region strove to meet three standards for each performance measure developed:⁸⁸

- ▶ Consistent data are likely available or can be obtained to facilitate analysis;
- ▶ The measure can be applied at system, corridor, and project levels; and

⁸⁸ For more information, see PPACG case study and references in Chapter 11.

- ▶ The measure is quantitative in nature.

The table below provides an example of the thorough nature of the PPACG MTP’s goals, objectives, and performance measures. For each goal, specific objectives with targets were established for short-, mid-, and long-term timeframes. PPACG has listed as its first objective for each goal the development of a baseline for comparison by 2015. This is a necessary step for any performance-based planning endeavor.

**Figure 6-1. Pike’s Peak Area Council of Governments –
2035 Moving Forward Update to the Regional Transportation Plan**

Goal: Improve the operation of transportation systems and services to enhance emergency response, minimize travel times and maximize service quality of all modes of commercial and private travel throughout the region.

Objectives:

By 2015

- Verify baseline for comparison
- Maintain commercial vehicle and auto per capita travel time at 2005 levels
- Increase the # of transit routes with a headway (time between buses) of 60 minutes or less by 15% and implement signal preemption for buses
- Utilize demand management strategies to reduce peak hour travel by 10% from 2005 levels.

By 2025

- Maintain commercial vehicle and automobile per capita travel time at 2005 levels
- Increase the number of transit routes with a headway (time between buses) of 60 minutes or less by 25% and implement signal preemption for buses
- Reduce transit and non-motorized travel time by 20% from 2005 levels
- Utilize demand management strategies to reduce peak hour travel by 20% from 2005 levels

By 2035

- Maintain commercial vehicle and automobile per capita travel time at 2005 levels
- Increase the number of transit routes with a headway (time between buses) of 60 minutes or less by 35% and implement signal preemption for buses
- Reduce transit and non-motorized travel time by 30% from 2005 levels
- Utilize demand management strategies to reduce peak hour travel by 30% from 2005 levels

Performance Measures:

- Average transit travel time to work
- # of routes with headway of 60 minutes or less
- Travel time during peak and off-peak travel hours for auto, trucks, non-motorized travel, and transit

Source: Pike's Peak Area Council of Governments, *2035 Moving Forward Update*.

With a similar emphasis on the use of performance measures to monitor MTP goals, the ***Southern California Association of Governments (SCAG)*** developed a set of nine goals for its *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): Towards a Sustainable Future*. With the exception of the security goal, each goal was mapped to one or more “performance outcomes” to enable the region to “quantify regional goals, estimate the impacts of proposed investments, and evaluate progress over time.”⁸⁹ The performance outcomes in the SCAG plan are:

- ▶ Mobility/Accessibility
- ▶ Reliability
- ▶ Location Efficiency
- ▶ Productivity
- ▶ Safety and Health
- ▶ Economic Well-Being
- ▶ Cost Effectiveness
- ▶ System Sustainability
- ▶ Environmental Quality

For each performance outcome, SCAG established performance measures or indicators, definitions, targets (typically directional), and the data source.

⁸⁹ SCAG RTP, <http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx>.

Figure 6-2. A Subset of Performance Measures included in the Southern California Association of Governments' 2012-2035 RTP

Performance Measure/ Indicator	Definition
Share of growth in High Quality Transit Areas (HQTAs)	Share of the region's growth in households and employment in HQTAs
Land consumption	Additional land needed for development that has not previously been developed or otherwise impacted, including agricultural land, forest land, desert land, and other virgin sites
Average distance for work or non-work trips	The average distance traveled for work or non-work trips separately
Percent of work trips less than 3 miles	The share of total work trips which are fewer than 3 miles
Work trip length distribution	The statistical distribution of work trip length in the region

Source: Southern California Association of Governments, *Regional Transportation Plan 2012-2035: Sustainable Communities Strategy*, Performance Measures Appendix, Table 2 (April 2012).

Identify Performance Needs and Deficiencies

A key role for performance measures is to identify deficiencies in meeting the performance objectives of the transportation plan (see Chapter 8 for more discussion). To assess the performance needs and deficiencies in the State or region, analysts typically conduct an in-depth assessment through data collection and/or the use of modeling and simulation tools to assess performance and identify the gaps between current conditions and targets.

For example, the **Southwestern Pennsylvania Commission (SPC)**, the MPO for the Pittsburgh, Pennsylvania region, uses the measures of travel time, speed, and delay to identify regional mobility needs. Through its Congestion Management Process (CMP), SPC has a monitoring program that collects data on 100 corridors every 3 years using travel time runs with GPS. The results are aggregated by corridor and reviewed with other agencies and the community to compare and validate the patterns of congestion and identify sources of congestion. This data collection helps transportation practitioners customize strategies for specific corridors based on the unique needs and travel patterns of that area. Findings from the CMP, as well as SPC's Regional Operations Plan, inform the strategies that are considered in the region's long range planning process.⁹⁰

⁹⁰ Southwestern Pennsylvania Commission RTP, http://www.spcregion.org/trans_lrp.shtml.

Evaluate Potential Impacts of Scenarios, Programs, or Projects for Investment

The fourth critical function of performance measures in a performance-based transportation plan is in the evaluation of strategies or solutions to address performance needs or deficiencies. This includes the evaluation of scenarios, programs, projects, strategies, or policies to identify the likely impacts of the solution on the performance characteristics of interest for the region or State.

Examples are described below.

- ▶ Both the **Baltimore Metropolitan Council (BMC)** and the **Wilmington Area Planning Council (WILMAPCO)** use project prioritization to rank projects based on their ability to meet the goals set forth in each MPO's respective long range plan.⁹¹
- ▶ **Pikes Peak Area Council of Governments** in Colorado, in its project selection process, uses a cost-benefit analysis methodology that measures benefits including time savings, vehicle operating cost savings, greenhouse gas and criteria pollutant emission savings, and accident cost savings. The MPO developed a system that integrated a VISUM travel network model with the TREDIS economic benefit model.⁹²
- ▶ The **Mid-America Regional Council** in the Kansas City area also scores projects using

VERMONT AGENCY OF TRANSPORTATION: PEDESTRIAN AND BICYCLE PERFORMANCE MEASURES

Vermont Agency of Transportation (VTrans) has developed a number of bicycle and pedestrian measures to measure its progress toward enhancing these modes of transportation. These measures are currently used to monitor the efficiency and effectiveness of transportation projects and programs throughout the state. The performance measures fall into five of six categories. The measures represent a mix of outcome and output measures. Examples include:


- Number of minutes per day the average Vermont resident spends doing pedestrian and bicycle activity
- Miles of shared-use paths
- Number of schools and students participating in pedestrian or bicycle safety education programs or events
- Percent of all workers who commute to work by walking or bicycling

For more information, see:

http://vtransengineering.vermont.gov/sites/aot_program_development/files/documents/ltf/BikePedTechMemo3.pdf

⁹¹ For more information, see: <http://www.baltometro.org/plans/transportation-outlook-2035-prioritization> and <http://www.wilmapco.org/priority/>.

⁹² See Chapter 11 and references list for more information.



a process that relates clearly back to performance measurements chosen to reflect objectives. The MPO's 2040 long range plan includes a series of goals and measures that address livability issues, and its annual progress report contains data that is considered during project prioritization to evaluate program priorities with on-the-ground changes.⁹³

- ▶ The **North Central Pennsylvania Regional Planning and Development Commission** developed a project prioritization process to address the need for the agency to make targeted investments of limited resources in its large region. After an iterative process of developing prioritization criteria using Decision Lens (software provided to the agency by Pennsylvania DOT), all projects in the agency's 2011 TIP were scored against "Overall Transportation Criteria," which include 14 measures related to five key topics with respective weights assigned to them: safety (36 percent), job creation and community benefits (23 percent), transportation planning and project support (14 percent), project location factors (12 percent), and transportation benefits (16 percent). North Central continues to work with other agencies and Pennsylvania DOT to identify indicators to track its investments in preserving the existing system, one of the agency's and State's priorities.⁹⁴

Chapter 9 discusses investment analysis in more detail.

Identifying, Selecting, and Implementing Performance Measures for the Plan


Identifying and selecting a mutually-agreed upon set of common performance measures for use in a State or metropolitan transportation plan may involve public input, coordination among multiple agencies, evaluation by a technical committee, and approval by senior leaders in the region or State. It also involves coordination of performance measures selected for related planning documents and use of national measures. Performance measures have importance in investment decisions and should reflect the values and priorities of a region or State, as well as national goals. Moreover, they should be grounded in the realities of data availability and technical evaluation.

A sample of actions to take in developing a set of performance measures include:

- ▶ Clarifying and confirming the roles of the performance measures in the transportation plan and beyond.
- ▶ Identifying the primary audiences for communicating information through the performance measures.

⁹³ For more information, see: http://www.fhwa.dot.gov/livability/creating_livable_communities/booklet06.cfm.

⁹⁴ For more information, see: http://www.ncentral.com/trans/?page_id=55 or <http://www.ncentral.com/wp-content/uploads/2013/08/Final-Chapter-6-0.pdf>.

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- ▶ Agreeing to a list of evaluation criteria for individual measures and the set of measures (see next section: Attributes of Effective Performance Measures in transportation plans).
 - ▶ Gathering a list of recommended performance measures based on transportation plan goals, objectives from a broad range of planning partners and stakeholders, and performance measures from related transportation plans for the State or region.
 - ▶ Obtaining public input on potential performance measures.
 - ▶ Evaluating performance measures for data availability and other chosen evaluation criteria.
 - ▶ Reaching consensus on a set of performance measures based on evaluation results.
 - ▶ Obtaining approval from senior leadership/governing boards.

The **Michigan DOT** and **Pikes Peak Area Council of Governments** each held four to five workshops or focus groups to obtain input on performance measures and select a minimum set of measures. The **San Diego Association of Governments (SANDAG)** used a technical workshop group made up of staff from local member government agencies to lead the development of a set of measures, conducted general outreach to the public, and involved the SANDAG policy board at key points including the approval of the final list of performance measures.

Performance measures can support a broad range of goal areas such as mobility, safety, security, air quality, infrastructure condition, and livability. Those in the transportation plan should integrate performance measures from:

- ▶ The State’s Strategic Highway Safety Plan, a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads.⁹⁵
- ▶ State Transportation Asset Management Plan (TAMP), “a tactical-level document which focuses its analysis, options development, programs, delivery mechanisms, and reporting mechanisms on ensuring that strategic objectives are achieved.”⁹⁶ Each State is required to develop a risk-based asset management plan for the NHS. The TAMP must include asset management objectives and performance measures which should be considered for adoption in the transportation plan. The TAMP is the State’s central framework for asset management including information about its assets, management strategies, and expected long-term costs.

⁹⁵ 23 USC § 148 (c).

⁹⁶ <http://www.fhwa.dot.gov/asset/plans.cfm>.

- ▶ **Transit Asset Management Plan.**⁹⁷ As established by MAP-21, all Federal Transit Administration (FTA) grantees and their subrecipients must develop transit asset management plans that include, at a minimum capital asset inventories and condition assessments; and investment prioritization. In addition, each designated recipient of FTA formula funding will be reporting progress on the performance measures established by the U.S. DOT on transit asset condition. These performance measures along with any others added to the transit asset management plan should be considered in the development of performance measures for the transportation plan.
- ▶ The congestion management process (CMP),⁹⁸ defined previously, establish metropolitan regions' congestion management objectives and performance measures and use those measures to identify mobility needs. The CMP is an important source of mobility-related performance measures for the transportation plan.
- ▶ **Transit Agency Safety Plan,**⁹⁹ a comprehensive agency safety plan that includes methods for identifying and evaluating safety risks throughout the public transportation system of the recipient, strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions. This plan should also be used in developing performance measures in the transportation plan related to transit safety.
- ▶ **State Freight Plan**¹⁰⁰ is a multi-modal (includes air, rail, truck and maritime transport) and intermodal plan to improve freight movement and connections to markets, supporting economic importance of freight movement. It identifies transportation networks important to freight-dependent industries and recommends multimodal strategies to increase strategic freight system efficiency. States and metropolitan areas should consult this plan for any relevant performance measures to include in their transportation plans.
- ▶ Other relevant State or regional plans such as pedestrian and bicycle plans.

While Federal rulemaking will specify the way in which national performance measures are defined for the program areas specified in MAP-21, some useful resources to consider to help in selecting performance measures and associated targets in the transportation plan are listed below:

- ▶ **Safety measures** – Information related to safety can be found in the FHWA publication: *Strategic Highway Safety Plans: A Champion's Guidebook to Saving Lives, Second Edition*, specifically Chapter 3: SHSP Content, which describes performance management and

⁹⁷ 49 USC § 5326(c).

⁹⁸ 23 CFR § 450.320(a),(b).

⁹⁹ 49 USC § 5329(d).

¹⁰⁰ 23 USC § 167.

objective setting, and *A Primer on Safety Performance Measures for the Transportation Planning Process*.¹⁰¹

- ▶ **Operations and congestion measures** – The FHWA publication, *Advancing Metropolitan Planning for Operations: The Building Blocks of a Model Transportation Plan Incorporating Operations - A Desk Reference*, is a helpful resource in setting operations-related objectives and selecting performance measures.¹⁰² The FHWA *Congestion Management Process Guidebook* also provides a useful discussion about a range of performance measures.¹⁰³
- ▶ **Livability measures** - The *Role of FHWA Programs in Livability: State of the Practice Summary* offers information on common livability performance measures and analysis tools that can be used to estimate the impact of strategies on livability-related performance measures.¹⁰⁴
- ▶ **Bridge and pavement condition measures** –The *National Bridge Investment Analysis System* website¹⁰⁵ and resources on the FHWA Office of Asset Management web site¹⁰⁶ provide information on assessing these conditions.
- ▶ **Sustainability measures** – Planners can refer to *A Guidebook for Sustainability Performance Measurement for Transportation Agencies* from NCHRP for information related to sustainability performance measures.¹⁰⁷
- ▶ **Freight measures** – Resources for developing freight measures include NCFRP Report 10 *Performance Measures for Freight Transportation*¹⁰⁸ and the FHWA Office of Freight Management and Operations Performance Measure webpage.¹⁰⁹
- ▶ **Bicycle and pedestrian network and accessibility measures** – For many agencies, completing a network of bicycle and pedestrian trails and other facilities is a key step in making walking and bicycling viable alternative travel modes. FHWA’s Bicycle and Pedestrian Program provides a number of resources that can be helpful in selecting measures for these modes.¹¹⁰

¹⁰¹ Strategic Highway Safety Plans: A Champion’s Guidebook to Saving Lives, Second Edition: <http://safety.fhwa.dot.gov/hsip/shsp/guidebook/index.cfm#toc>. A Primer on Safety Performance Measures for the Transportation Planning Process: <http://safety.fhwa.dot.gov/hsip/tsp/fhwahep09043/>.

¹⁰² Available at: <http://ops.fhwa.dot.gov/publications/fhwahop10027/index.htm>.

¹⁰³ Available at: http://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/.

¹⁰⁴ Available at: http://www.fhwa.dot.gov/livability/state_of_the_practice_summary/research03.cfm.

¹⁰⁵ Available at: <http://www.fhwa.dot.gov/tpm/resources/nbias/>.

¹⁰⁶ Available at: <https://www.fhwa.dot.gov/asset/>.

¹⁰⁷ Available at: <http://www.trb.org/Main/Blurbs/166313.aspx>.

¹⁰⁸ Available at:

http://www.trb.org/Main/Blurbs/Performance_Measures_for_Freight_Transportation_165398.aspx.

¹⁰⁹ Available at: http://ops.fhwa.dot.gov/FREIGHT/freight_analysis/perform_meas/index.htm.

¹¹⁰ Available at: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/.

With the implementation of MAP-21 performance management requirements, State DOTs, MPOs, and transit agencies will be increasingly coordinating on the implementation of performance measures. Recently, California MPOs, with SANDAG leading the coordination, conducted a collaborative effort to identify a “common, standardized set of up to ten transportation performance monitoring indicators”¹¹¹ that would be used by all MPOs and State agencies dealing with both Federal and State regulations to help support the implementation of Senate Bill 375 (SB 375) and MAP-21. Many California MPOs will continue to track progress on their own unique plan measures, which are often more directly aligned with their regional priorities, but the standardized set will provide continuity, ability for comparison, and possible opportunities for collaboration between MPOs to address technical challenges or other issues. A technical group of representatives from MPOs and State agencies took into consideration the diversity of regions including rural and urban, external factors and available statewide data sources. These results were distributed in 2013, through a final report. The proposed performance monitoring indicators are in the following figure:

Figure 6-3. Proposed California MPO Performance Measures

Table 1: Proposed Performance Monitoring Indicators					
ID	Inventory Ref. (Appendix B)	MAP-21 Category	Statewide Performance Monitoring Observed Data	Performance Measure (Model Based)	Referenced In
Congestion Reduction					
1	A-8/A-1	VMT	✓	✓	SB 375 & MAP-21
		a. VMT per capita* b. Percent of Congested Freeway Highway Vehicle Miles [PeMS]	✓	✓	
2	A-16/A-18	Mode Share (Travel to Work)*	✓	✓	SB 375 & MAP-21
Infrastructure Condition					
3		Sate of Good Repair	✓		MAP-21
		a. Highways			
		b. Local Streets			
		c. Highway Bridges			
		d. Transit Assets			
System Reliability					
4	A-65	Freeway/Highway Buffer Index [PeMS]	✓	✓	MAP-21
Safety					
5	A-39	Fatalities/Serious Injuries	✓	✓	MAP-21
		a. Fatalities/Serious injuries per capita* b. Fatalities/Serious injuries per VMT*			

¹¹¹ SANDAG, Statewide Performance Monitoring Indicators for Transportation Planning, Final Report, June 2013, http://sgc.ca.gov/meetings/20130916/Agenda_Item_4_SANDAG_Indicators_Final_Report.pdf.

Economic Vitality					
6	C-33	Transit Accessibility (Housing and jobs within 0.5 miles of transit stops with frequent transit service)*	✓	✓	SB 375
7	A-84	Travel Time to Jobs	✓	✓	SB 375 & MAP-21
Environmental Sustainability					
8	B-1/B-5	Change in Agricultural Land*	✓	✓	SB 375
9	E-5	CO2 Emissions Reduction per capita (modeled data)*		✓	SB 375 & MAP-21
* Indicator relates to public health			[PeMS] Indicator for MPOs that have access to PeMS data		

Source: SANDAG, *Statewide Performance Monitoring Indicators for Transportation Planning*, Final Report (June 2013).

Attributes of Effective Performance Measures in Transportation Plans

Selecting performance measures for the transportation plan is a challenging but important task. The FHWA *Performance Based Planning and Programming Guidebook* offers six factors that should be considered when selecting performance measures for a performance-based transportation plan.

Does it represent a key concern? Performance measures represent the most important concerns or interests for a region or State.

Is it clear? The performance measure should be understandable.

Are data available? Each measure must be able to be measured effectively through the collection of available, reliable, and accurate data to provide a consistent and trustworthy result for planning and investment decisions.

Can it be forecasted? Consider which measures can be forecasted when evaluating potential solutions.

Is the measure something the agency and its investments can influence? Each measure should depend to at least some extent on the policies and investments chosen for the transportation plan and STIP or TIP.

Is the measure meaningful for the types of services or area? Ensure that the measures are tied to the desired outcomes and values that are described in the vision, goals, and objectives of the transportation plan. Consider if the measure needs to be different for rural and urban areas.

The ultimate purpose of performance measurement is not just reporting the performance of the system, but the development of actions that improve performance.

The criteria used by the **Wilmington Area Planning Council (WILMAPCO)** in Delaware and its planning partners in selecting performance measures for its MTP were reliable, relevant, regional, and easy-to-understand. Three questions were also kept in the forefront as they considered their performance measures:

- ▶ Can we explain this measure and can it be easily understood by the general public?
- ▶ Will data be available for this measurement over time?
- ▶ Is it clearly tied back to the MTP goals and objectives?

Michigan DOT and its planning partners established 11 criteria that had to be met for a performance measure to be adopted. Criteria included “Does the measure indicate causality?”, “Is the measure an early warning indicator?”, and “Does the measure predict outcomes?” To be selected, a measure needed the following characteristics: data to support it, public interest in the measure, control by the State in effected measures, value in reporting on the measure, supported decisionmaking, and enhanced accountability. In the end, nineteen core measures were included in the plan, with seven subordinate measures.¹¹²

Measures that Reflect Diverse Transportation Plan Goals

As a set, the performance measures selected should represent a limited number of measures to meaningfully measure the goals

¹¹² http://www.michigan.gov/documents/mdot/MDOT_SLRP_rept_Goals_Objectives_Performance_Report_11-17-06_180916_7.pdf.

MEASURES OF LIVABILITY AND SUSTAINABILITY

Mobility, livability and sustainability goals have increasingly become a focus in transportation planning. New evaluation tools and methods have been developed to help MPOs and States evaluate and measure livability related principles impacted by transportation. A number of new resources have been developed to provide guidance to incorporating sustainability into transportation decisionmaking. Some examples include:

FHWA’s sustainability self-assessment tool, *INVEST*. *INVEST* defines actionable criteria that transportation agencies can fulfill in order to be more sustainable. FHWA developed *INVEST* to guide, measure, and recognize “above-and-beyond” performance in the sustainable planning, design, and construction of transportation infrastructure.

NCHRP Report 708: A Guidebook for Sustainability Performance Measurement for Transportation Agencies provides model sustainability-related performance measures, including data sources and examples of use.

EPA’s Guide to Sustainable Transportation Performance Measures, which identifies evaluation methods and data sources associated with 10 key measures. The guide is intended to help transportation agencies use performance measurement to better account for environmental, economic and social impacts of projects and planning.

(continued on next page)

in the transportation plan. Agencies with significant experience developing a performance-based plan and tracking progress toward the plan over time have suggested that the ideal number of performance measures to have within a transportation plan is between 10 and 15 measures. This allows the agency and the public to stay focused on the issues that are most important, and keeps the resources that must be spent on tracking performance at a reasonable level.

It is worthwhile to consider measures that reflect plan goals for livability, sustainability, active transportation, growth management, location efficient housing, community service provision, and accessibility. In 2011, EPA completed a *Guide to Sustainable Transportation Performance Measures*.¹¹³ The guidebook identifies 10 performance measures (largely already in use by MPOs) that can readily be developed and applied in transportation decision-making:

- ▶ Transit accessibility
- ▶ Bicycle and pedestrian mode share
- ▶ VMT per capita
- ▶ Carbon intensity
- ▶ Mixed land uses
- ▶ Transportation affordability
- ▶ Distribution of benefits by income group
- ▶ Land consumption
- ▶ Bicycle and pedestrian activity and safety
- ▶ Bicycle and pedestrian level of service

The **Chicago Metropolitan Agency for Planning (CMAP)** used the “H+T Index as a measure in its *Go To 2040* regional plan,¹¹⁴ along with a goal to reduce combined housing and transportation costs for working families to 53 percent of income in 2015 and 45 percent in 2040.”¹¹⁵

(continued from previous page)

The FHWA *Livability in Transportation Guidebook* includes case studies of how MPOs and states have incorporated livability metrics into their transportation decision making process. The guidebook indicates though that existing transportation measures are often not comprehensive enough to effectively evaluate “community development, housing and environmental goals.” As such, additional measures will be needed to help agencies understand how their plans and projects impact livability.

The Center for Neighborhood Technology designed a housing and transportation affordability index, known as *H+T Index*, to better demonstrate the affordability of housing according to the transportation costs associated with its location. Traditional affordability measures disregard transportation costs, which are often significant for many households. The tool can be used by planners to benchmark and set targets for affordability.

¹¹³ http://www.fhwa.dot.gov/livability/state_of_the_practice_summary/research03.cfm;
http://www.epa.gov/smartgrowth/pdf/Sustainable_Transpo_Performance.pdf.

¹¹⁴ CMAP, <http://www.cmap.illinois.gov/about/2040/livable-communities/land-use-housing>.

¹¹⁵ <http://htaindex.cnt.org/applications.php>.

PORTLAND, OREGON REGIONAL ACTIVE TRANSPORTATION PLAN

The Regional Active Transportation Plan (ATP) was developed as an implementation strategy of the 2035 RTP. It outlines a vision, plan, and policy to advance progress towards active transportation goals and targets. It is currently being proposed for adoption as a component of the Regional Transportation Plan. As part of the RTP, targets and performance measures were set to track progress in meeting goals related to safety, active transportation, basic infrastructure and access to daily needs. The plan acknowledges such measures as important tools for “measuring progress and maintaining accountability.” The ATP details specific targets for active transportation mode share and safety. An example of these targets, and comparison to modeled mode shares, is included below:

Active transportation mode	2010 modeled mode share for all trips (4-county area)	2035 modeled mode share for all trips with full build out of 2035 State RTP Network	Active Transportation Target (tripling of 2010 modeled mode share)
Transit	3.8%	4.9%	11.4%
Walking	8.9%	9.6%	26.7%
Bicycling	2.8%	3.1%	8.4%

2011 Oregon Household Activity Survey and modeled data, Metro 2012

As part of the ATP, additional measures were recommended to evaluate and measure progress. Some examples include:

- Bicycle and pedestrian miles traveled
- % increase in bicycle network separated from traffic
- % of regional trails completed

For more information, see: <http://www.oregonmetro.gov/index.cfm/go/by.web/id=39005>

Identifying Desired Trends or Targets

While a performance measure allows comparison, a performance-based transportation plan should identify desired trends (e.g., reduce, increase, maintain) or targets (specific numerical figures) associated with performance measures. A target clarifies the level of performance on a specific measure or a direction that the region or State intends to achieve within a given timeframe in order to make progress toward achieving transportation plan goals and objectives.

They provide transparency, clarity, and accountability to the investment decisionmaking process. Targets allow potential projects or other strategies to be evaluated and compared according to how much they help the region or State in achieving the desired level of performance. Decision-makers can evaluate a decision in relation to a desired end state. Additional information can be found in the FHWA *Performance-Based Planning and Programming Guidebook*.

MAP-21 requires States and MPOs to set targets for each of the national performance measures. MPOs are required to include the performance targets for the national measures in their transportation plans and States should do so (see Table 2-1 earlier in the document).

In the context of the transportation plan, given the 20+ years outlook into the future, MPOs and State DOTs may choose to develop specific numerical targets or to indicate whether they are aiming to increase or decrease measures. Including a specific numerical target puts more focus on the resources required and the tradeoffs that may be necessary to meet these targets, but it can be challenging to agree on an appropriate target. Identifying a desired direction can be helpful when making comparisons among different investment alternatives, and allow more flexibility in making changes to targets. For instance, State DOTs using targets will frequently include them in a separate report and not the transportation plan.

Data-driven target development needs to take into consideration that performance targets will likely compete. An increase toward one target can reduce progress toward another target. For example, improving travel times for motor vehicles could reduce pedestrian safety.

One MPO that is embracing a performance-based planning approach by including specific performance measures and targets in its transportation plan is the ***Lima-Allen County Regional Planning Commission*** (see text box).

COMPETING TARGETS

When targets compete, it will be necessary for the State or region's stakeholders to clearly identify their priorities and values as it relates to the performance targets so that informed trade-offs can be made based on the area's values.

LIMA-ALLEN COUNTY REGIONAL PLANNING COMMISSION'S TARGET-SETTING THROUGH COLLABORATION

The Lima-Allen County Regional Planning Commission (LACRPC) is the MPO for Allen County and adjacent municipalities in northwest Ohio. The 2040 Transportation Plan (released in 2013), embraces MAP-21's performance-based planning approach. The plan identifies four transportation goals for the largely rural area, which focus on supporting economic opportunities, making targeted infrastructure investments, protecting the natural and built environments, and promoting vibrant, livable communities.

There are 3-6 specific objectives, and associated performance measures and targets under each of the four goals. These targets include: achieving a 3.5% increase in annual transit ridership, protecting wetlands at 95% of current acreage, and expanding bike/ped network mileage by 7% each year through 2040. As directed by MAP-21, LACRPC worked with the local transit authority and the Ohio DOT to ensure that their regional goals align with broader state and national objectives.

For more information, see: <http://www.lacrpc.com/transportation.aspx>.

The **Genesee Transportation Council**, the MPO for Rochester, NY, uses directional targets in its transportation plan to show the desired and likely change for each measure relative to a benchmark. The performance measures are multimodal and include performance on transit, roadways, rails, trails, and sidewalks.

Figure 6-4. Genesee Transportation Council – L RTP 2035 Performance Measures

Performance Measure	What it Evaluates	Benchmark	Desired Change	Likely Change
Number of Fatalities	Safety	100	Decrease	Slight Decrease
Federal-Aid Highways with Pavement Fair or Better	System Preservation	90.3 percent	Increase	Slight Decrease
Non-Deficient Bridges	System Preservation	64.8 percent	Increase	Slight Decrease
Average Age of Transit Buses	System Preservation	7.65 years	Decrease	Slight Decrease
Travel Time Index on Major Roadways	Mobility	1.10	Decrease	Slight Increase
Transit On-Time Performance	Mobility	84 percent	Increase	Slight Increase
Passenger Rail On-Time Performance	Mobility	70 percent	Increase	Slight Decrease
Median Incident Clearance Time on Major Roadways	Mobility	52 minutes	Decrease	Slight Decrease
Median Transit Load Factor	Accessibility	0.93	Slight Increase	Slight Increase
Gaps in Core Multi-Use Trails Network	Accessibility	36 miles	Decrease	Slight Decrease
Federal-Aid Highways in TMA with Complete Sidewalks	Accessibility	19.6 percent	Increase	Slight Increase
Emissions of Nitrogen Oxides	Environment	18,914.8 Kg/day	Decrease	Decrease
Emissions of Volatile Organic Compounds	Environment	13,537.8 Kg/day	Decrease	Decrease
Emissions of Carbon Dioxide Equivalent	Environment	11,385 tons/day	Decrease	Slight Decrease
Direct Energy Usage	Environment	146.2 billion BTUs/day	Decrease	Slight Decrease

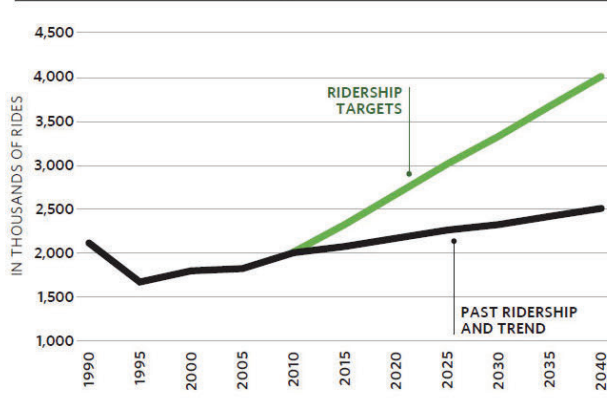
Source: Genesee Transportation Council, *2035 Long Range Transportation Plan*, Page 110.

An important component of a performance target is the timeframe within which the specified level of performance should be achieved. In the context of a transportation plan, the timeframe of the target is often based on the length of the plan (25+ years) to correspond to the expected

outcomes of the strategies, projects, or other investments specified in the plan. MPOs such as the **Denver Regional Council of Governments, Metropolitan Transportation Commission, and Portland Metro** use this method. For example, DRCOG’s *2035 Metro Vision Regional Transportation Plan*, contains the targets: “Reduce the percent of trips to work by SOV to 65 percent by 2035,” and “Reduce the regional per capita VMT by 10 percent by 2035.” There are other variations of timeframes used less often. The **Chicago Metropolitan Agency for Planning (CMAP)** uses a trend line to illustrate its performance targets in transit ridership and transit access in its transportation plan: *Go To 2040*. Text near the graphs specifically calls out targets for 2015 and 2040.

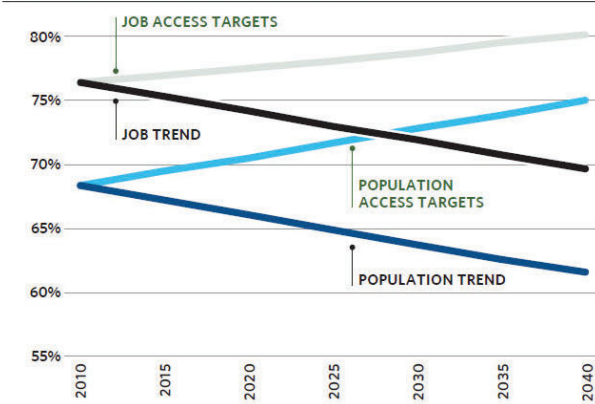
Figure 6-5. CMAP Examples of Targets in Go To 2040 Plan

Figure 62. Transit ridership targets, 1990-2040



Sources: Regional Transportation Asset Management System, Chicago Metropolitan Agency for Planning analysis, 2010

Figure 63. Transit access targets, 2010-2040




Source: Chicago Metropolitan Agency for Planning analysis, 2010

Source: Chicago Metropolitan Agency for Planning, *Go To 2040*, Page 294.

As noted previously, the **Pikes Peak Area Council of Governments’** transportation plan sets performance targets for three timeframes: 2015, 2025, and 2035. The **Ohio-Kentucky-Indiana Regional Council of Governments**, Cincinnati, Ohio, uses the planning cycle (typically 4 years) as the timeframe for the targets in its plan.

As identified in NCHRP Report 666, *Target-Setting Methods and Data Management to Support Performance-Based Resource Allocation by Transportation Agencies*, there are many relevant factors that should be considered when setting a target. These factors include—
 “political/legislative influence, customer and stakeholder perspective, agency experience in using performance measures and targets, commitment to regular communicating and reporting, span of agency control, financial resources, and timeframe.”¹¹⁶

¹¹⁶ Available at: <http://www.trb.org/Publications/Blurbs/164178.aspx>.




Research from the NCHRP Report 666 found that there was a wide range of approaches used to set targets for performance-based resource allocation by transportation agencies. The commonly used approaches include:

- ▶ **Policy-driven.** Under this approach, targets are established in a “top-down” manner such that senior executive management or an external political body sets the targets. This is typically done in the context of larger transportation goals or policies.
- ▶ **Modeling.** This is used to develop targets based on what is possible given the resource or funding constraints. It is also used to determine what strategies or funding is needed to achieve the target, which in turn may drive an iterative revision of the target.
- ▶ **Consensus-based process.** Targets are established collaboratively with a variety of transportation stakeholders. An analysis of the planning context and constraints on possible investment performance is used in this approach.
- ▶ **Reliance on formal and informal customer feedback.** Transportation system user feedback on system performance and objectives is gathered through a variety of survey and outreach methods to set targets.
- ▶ **Use of benchmarks from peer agencies.** Targets are established based on review of similar investment approaches and results for performance measures of interest as experienced by other transportation agencies.

Setting performance targets for the transportation plan generally involves several steps. First, it relies upon gathering useful baseline information on the region or State’s current conditions or performance. For instance, in developing bridge condition targets, data gathered during bridge inspections provides a valuable source of information.

Next, analysis is typically conducted to assess likely expected future performance, recognizing that population growth, demographic and technological changes, economic conditions, and other factors will affect future performance. Travel demand models are commonly used for analysis of the highway network, and can be used to support forecasts of future performance in relation to some measures of mobility and congestion. These models can also be used in combination with emissions models to assess air pollutant and greenhouse gas emissions or with other tools in order to develop an understanding of anticipated trends. Moreover, travel models can identify segments of the system that are expected to operate below acceptable levels, and can be used to test potential remedies. Other forecasting and analysis tools can be used for safety, asset condition, and other measures.

Setting performance targets requires regions and States to determine anticipated conditions or performance levels that are attainable by implementing improvements within funding constraints. The target level ideally should not be too easy to reach or purely aspirational/unattainable.



Consequently, it is important to ground the target in the existing and anticipated fiscal constraints of the region or State. A tool like the Highway Economic Requirements System – State Version (HERS-ST) software package can be used to help predict the investment required to achieve certain highway system performance levels, particularly in relation to pavement condition.¹¹⁷ FHWA is currently undertaking research to assess ways to possibly adapt HERS-ST to further help support target setting for pavement condition, safety, and travel time-related measures.

In addition to understanding anticipated revenues, consideration should be given to construction cost trends when establishing targets over the time horizon of the plan. Inflation of construction materials or increased fuel prices can impact construction costs and the ability to implement projects. The National Highway Construction Cost Index (NHCCI) is intended as a price index that can be used to track pure price-changes associated with highway construction costs and to convert current-dollar expenditures on highway construction to real- or constant-dollar expenditures¹¹⁸ providing year of expenditure cost estimating. Forecasting future construction cost trends can be challenging but should be considered as a factor in target setting.

Targets in the transportation plan should be developed in a collaborative process between the State and MPO, transit agencies, local transportation departments, and other stakeholder agencies, building on the coordination that will need to occur in setting targets for the national measures under MAP-21. Given the overlapping boundaries between States and MPOs, and the need for a shared vision on expectation for future performance and collective identification of strategies, collaboration in target setting is vital to ensure consistency among targets.

¹¹⁷ Available at: <http://www.fhwa.dot.gov/infrastructure/asstmgmt/hersfact.cfm>.

¹¹⁸ <http://www.fhwa.dot.gov/policyinformation/nhcci/desc.cfm>.

7. Transportation System Performance Report

As noted in the discussion of baseline information, the development of a transportation plan typically starts with baseline information on the State or region, and in a performance-based plan, will also include information about existing system performance. This contextual information includes statistics about the transportation infrastructure condition and performance in relation to performance measures and targets established in previous long-range planning cycles or other transportation plans. In addition, the development of the system report plays a critical role in informing the agency regarding key issues and challenges with the system, which in turn can inform goal- and priority-setting.

Comparing Trends to Targets

A baseline of performance and trends provides information that is needed to contextualize future expected performance, for example, under various investment scenarios, or funding levels. The change in performance trends as a result of specific investments or scenarios enables planners and their partners to compare how outcomes may change depending on investment and select a scenario or investment strategy.

As agencies gather increasing amounts of data and expand their analysis capabilities, many have shifted to providing a wealth of information that would traditionally be in the performance report in a variety of ways, often interactive. Having readily accessible information about performance can not only help drive performance-based planning, but can also strengthen outreach to stakeholders and other agencies. In some cases, the performance reporting and performance-based planning enhance agencies' credibility in the eyes of policymakers and the general public. Having clear graphics is critical to communicating performance information. Moreover, a balance

THE SYSTEM PERFORMANCE REPORT

MPOs are required to include “a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets” established for the national performance measures.

23 USC § 134(i)(2)(C)

State DOTs are encouraged to include information contained in a system performance report in the LRTP; they may also reference support documents such as separate performance reports, online dashboards, or other products. State DOTs are responsible for coordinating statewide transportation planning across all modes, which can include sea ports, airports, transit, railways, and highways; thus, the system report lays out the system components.

must be struck in making performance information simple and easy-to-understand while also providing enough background information to contextualize performance, such as explaining some of the external factors that may have influenced performance outcomes.

Examples: Within and Outside of the Transportation Plan

Maryland DOT has been publishing its Attainment Report (AR) for over a decade, since 2002. Over time, Maryland DOT has adapted the AR so that it is less text heavy, and uses more graphics, charts, and other visuals to clearly communicate information. Maryland DOT has moved on-line with the AR, to display key indicators. Maryland DOT is developing a “dashboard” that will make it easy to communicate key trends. The figures below, from the 2002 and 2013 Attainment Reports, respectively, provide examples of the agency’s evolution in the use of graphics to both convey and contextualize performance information. The example from 2013 provides clear information about how the year’s performance relates to that of years past, and indicates the performance target for the year 2015.

Figure 7-1. Safety Performance Results from 2002 Maryland DOT Attainment Report

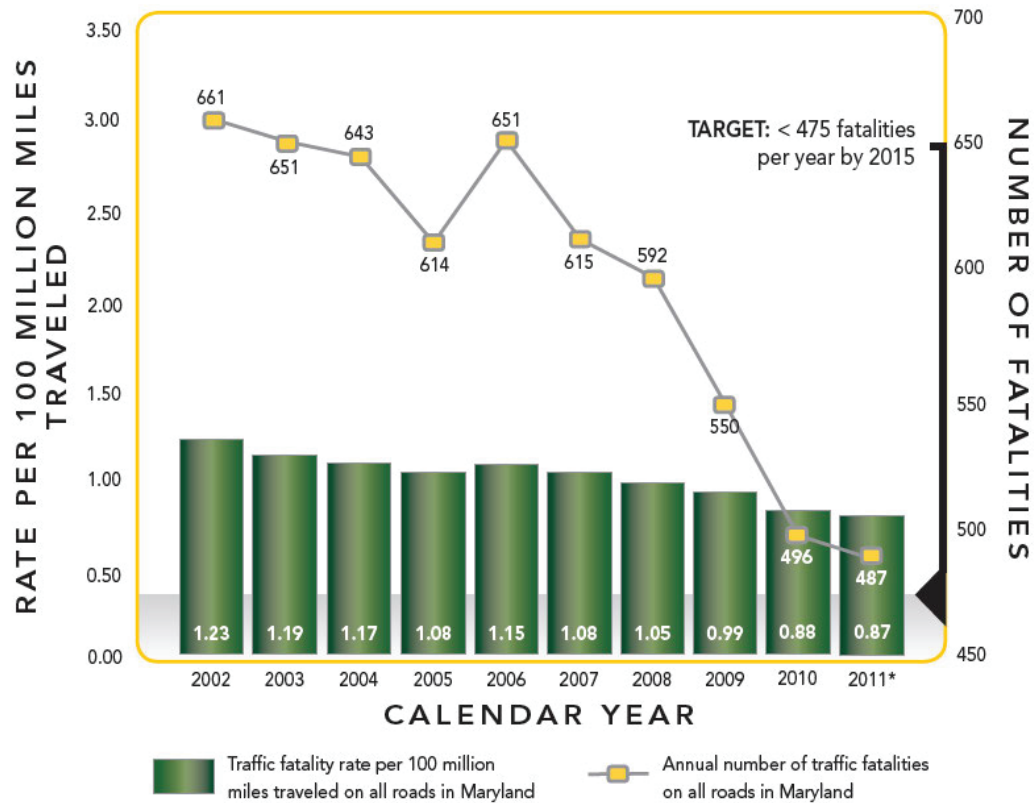
Fatalities and injuries by persons using each mode

Mode	Performance Measure	Data
State Highway Administration	Injuries and fatalities on State and Toll Facilities	Year 2000:
	Overall injury and fatalities – number and rate per 100 million vehicle miles	<u>Overall:</u> Fatalities: 445 Fatality Rate: 1.21 Injuries: 31,468 Injury Rate: 85.4
	Pedestrian injury and fatalities – number and rate per 1 million population	<u>Pedestrian:</u> Fatalities: 69 Fatality Rate: 13.0 Injuries: 578 Injury Rate: 109.1

Source: Maryland DOT, 2002 Attainment Report, Page 14.

Figure 7-2. Safety Performance Results from 2013 Maryland DOT Attainment Report

Annual Number of Traffic Fatalities on All Roads in Maryland



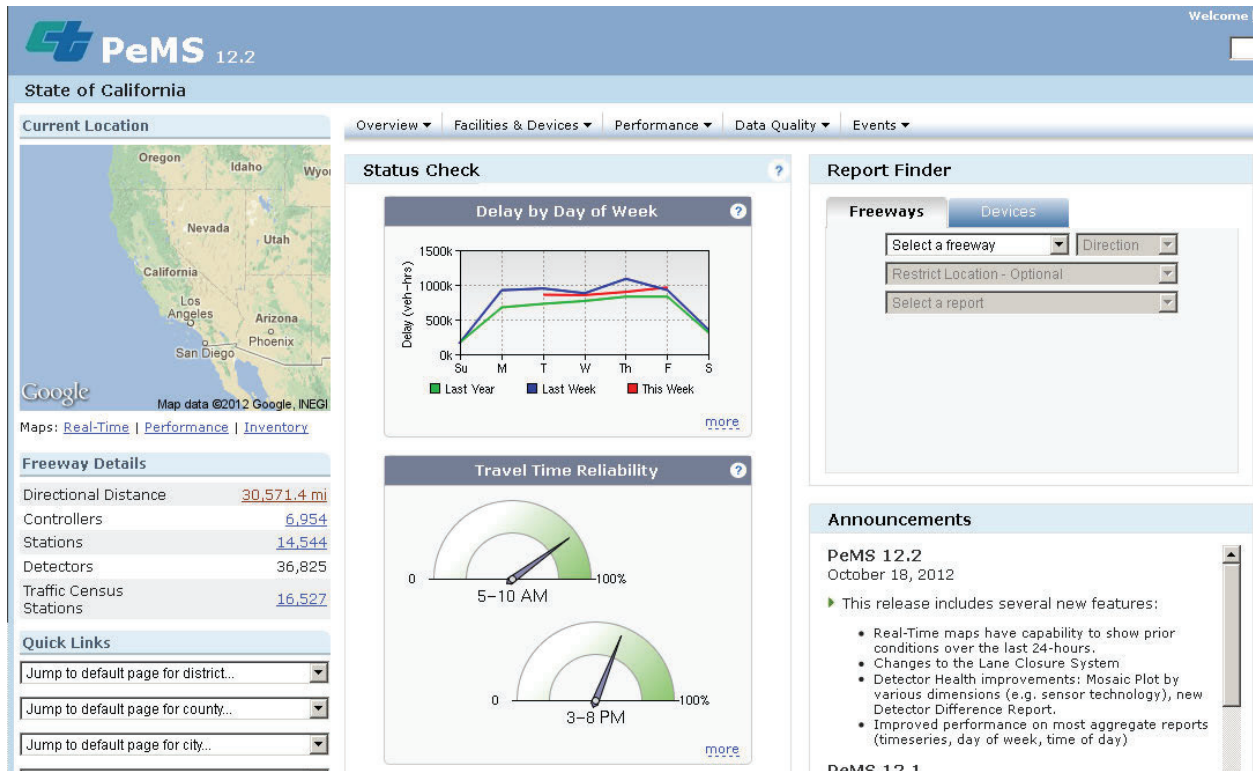
Source: Maryland DOT, 2013 Attainment Report, Page 20.

The **Mid-America Regional Council** of the Kansas City metro area’s *Transportation Outlook 2040* contains a robust analysis of system performance and identification of performance measures. The plan’s annual performance report includes performance measures related to all goals in the long range plan.¹¹⁹

Using the Performance Measurement System (PeMS), **Caltrans** collects system performance data and displays it through its website. PeMS data is used by several California MPOs to conduct performance-based planning and report on system performance in their MTPs. The figure below shows a snapshot of the PeMS homepage. Among many other features, it provides a way to easily view freeway delay and reliability.

¹¹⁹ For more information, see: <http://www.marc.org/Transportation/Metropolitan-Transportation-Plan>.

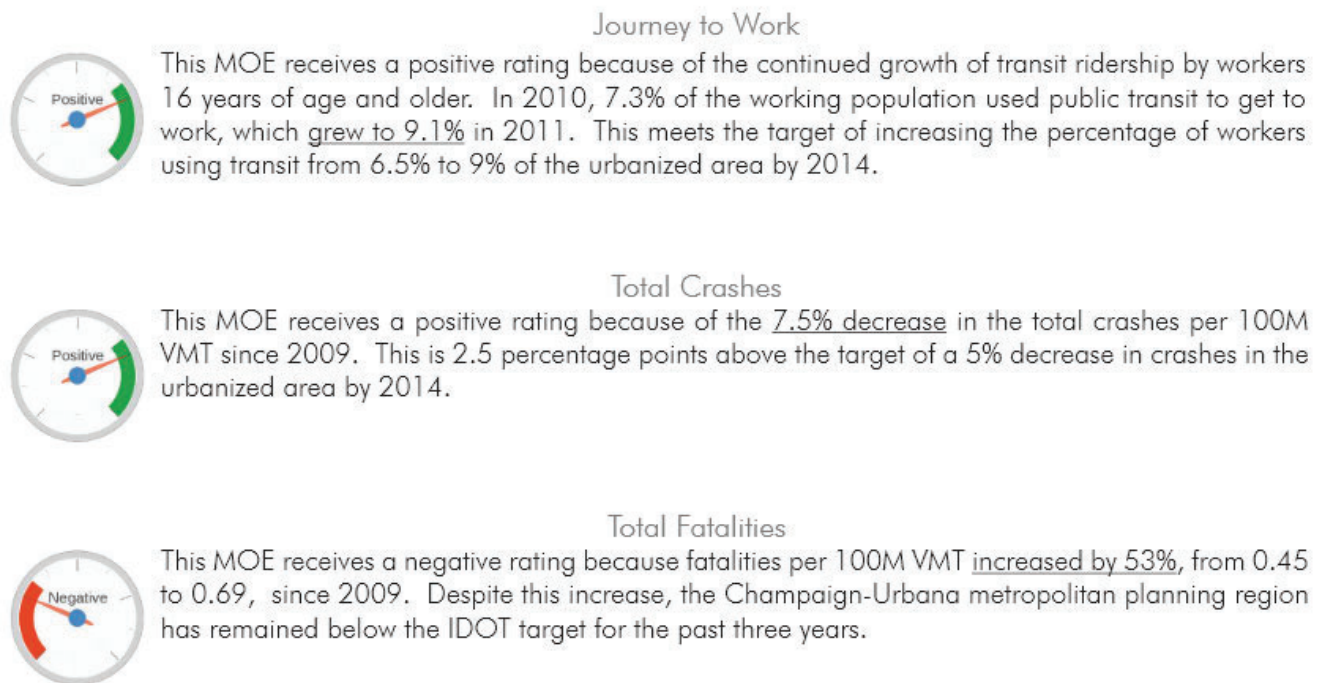
Figure 7-3. PeMS System Report Used by MPOs in California



Source: Caltrans, PeMS website, <http://pems.dot.ca.gov/>.

The **Champaign County Regional Planning Commission** in Illinois uses a variety of graphics to clearly communicate objectives in its transportation plan, as well as to explain performance in its annual performance “report card” (see Figure below for example from the report card). The **Old Colony MPO** in Massachusetts also uses graphics to reinforce its emphasis on performance and the process it undertook to develop outcome-based measures.

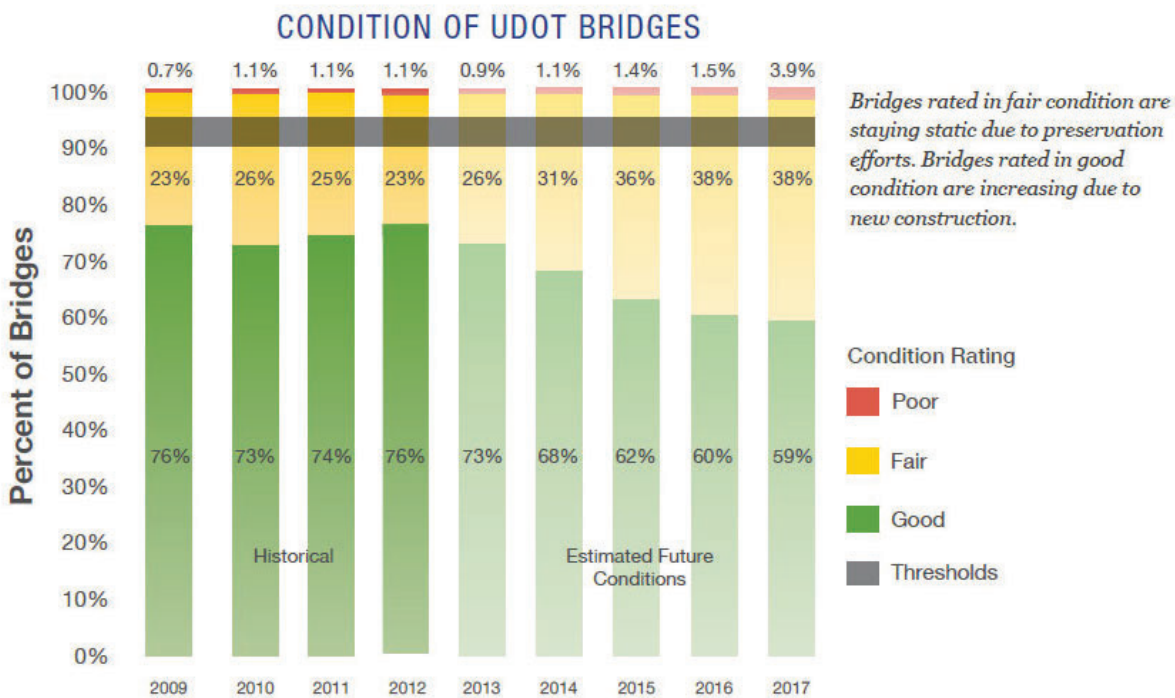
Figure 7-4. Champaign-Urbana Annual Performance Report Card Excerpt



Source: Champaign County Regional Planning Commission (CUUATS), 2012 LRTP Report Card (April 2013).

The **Utah DOT** publishes a Strategic Direction and Performance Measures Report, which tracks progress toward the agency’s long range plan goals. In this annual report, UDOT provides not only data on historical system performance but also identifies expected future performance, based on the trends established over the previous few years in comparison to targets.

Figure 7-5. Sample Chart from UDOT's *Strategic Direction and Performance Measures Report*



Source: Utah Department of Transportation, *2014 Strategic Direction and Performance Measures*, Page 12.

8. Identification of System Needs, Potential Strategies, and Costs

A fundamental part of any performance-based transportation plan is the estimation of needs and available resources to address those needs. During this phase of plan development, planners are gathering information that will be used to support investment analysis. In order to perform the most effective performance-based investment analysis, four steps are commonly undertaken:


- ▶ Needs assessment;
- ▶ Financial planning;
- ▶ Identification of possible solutions, and their costs; and
- ▶ Solutions screening (based on environmental and social considerations, policies, and other factors).

These steps may be conducted somewhat iteratively or concurrently with one another. In addition, an effective performance-based approach includes public and stakeholder engagement and agency collaboration, and assessment of how the selected alternative contributes to performance outcomes.

Performance Needs Assessment

As noted in Section 7, the system performance report summarizes the system trends in comparison to targets. The transportation plan also typically identifies stakeholder and public needs together with an assessment of key challenges and trends that will impact system performance or needs in the future. Needs assessment builds on that information. It typically involves a financial component, identifying the funding that will be needed to operate, maintain, and serve expected transportation demands. Within a performance-based plan, needs assessment also may involve comparing *expected conditions or performance* with *desired conditions or performance outcomes*, using State or MPO-set targets. This form of needs assessment goes beyond simply adding up needed expenditures. Instead, this step functions as a form of gap analysis to assess where there are areas of expected unsatisfactory performance, and what it would take to achieve desired performance.

In the Maryland Transportation Plan, **Maryland DOT** defines transportation needs as the projects and services required to operate and maintain the current transportation system, as well as the expansion of services and infrastructure necessary to meet the needs of the State's growing population and the associated demand for travel. These costs include system operation,



maintenance, preservation and expansion as provided by MDOT's five modal agencies and Maryland's share of the Washington Metropolitan Area Transit Authority's system. Operating and maintenance needs include the costs of service for transit trips on buses, heavy rail, light rail, commuter rail, and para-transit vehicles; operations and maintenance of roadways; dredging for the Port of Baltimore; and continued funding for many other system necessities.¹²⁰

State DOTs and MPOs use many different methods to identify system needs. One of the most used methods for identifying needs is the travel demand model. Travel demand models have been in use for decades, and are growing increasingly sophisticated and granular. The purpose of these models is to match origins and destinations for trips, and forecast the demand on segments (links) of the system. Although some travel demand models are capable of providing information on multiple modes, they are most useful for analysis of the highway network and for identifying infrastructure project needs. Travel demand models are nearly ubiquitous among MPOs, but are also used for nonmetropolitan planning and forecasting of inter-regional travel.

Using a travel demand model, planners can identify segments of the system that are expected to operate below level of service standards set in the MPO or State DOT targets.¹²¹ Using the model, potential remedies for the project can be tested. Based on knowledge of the extent of deficiency and the best-performing remedy, project concepts can be drafted.


Other types of predictive models and analysis tools can also be used to assess needs. For instance, the Highway Economic Requirements System – State Version (HERS-ST) model, developed by FHWA, can be used to help determine performance-based highway investment needs and outcomes of various funding levels. HERS-ST considers engineering principles, system deficiencies, and economic criteria to determine efficient improvements needed to meet a certain level of system performance or to have a net benefit. The National Bridge Investment Analysis System (NBIAS) similarly is an analysis tool developed by FHWA that estimates bridge maintenance, improvement, and replacement needs.¹²² It produces over 200 performance metrics for investing in bridges and different budget levels.

In its transportation plan, **Arizona DOT** used HERS-ST and NBIAS to estimate investment needs and performance outcomes of various budget levels on the existing system, and then used a variety of sources, including regional long-range transportation plans, to identify system expansion needs. In

¹²⁰ Maryland Department of Transportation, *2035 Maryland Transportation Plan: Moving Maryland Forward*, draft, September 2013.

¹²¹ It may be desirable for certain segments to operate at different levels of service. For example, congestion in a central business district may be recognized as a positive sign of economic activity. A lower level of service on these segments might be laid out in the performance measures/targets, or correction of the level of service may be taken into account in the project selection criteria.

¹²² For more information about how NBIAS has been used, see: <https://www.fhwa.dot.gov/tpm/resources/nbias/>.



total, the analysis estimated needs associated with highway preservation, modernization, and expansion to total \$43.3 billion over the 25 year plan horizon. In addition, ADOT estimated needs for public transportation, including urban “state-of-good repair” needs, urban expansion needs, and rural preservation and expansion needs, as well as needs associated with freight and passenger rail and aviation. In addition to capital needs, ADOT also estimated the operating costs associated with highway and public transportation system operations over the Plan timeline, including non-capital system traffic management operations and routine maintenance. In total, the result suggested a cost of \$88.9 billion to address these needs. ADOT also examined a plan “vision level” needs assessment that quantified the cost associated with the first 25 years of the State’s bqAZ vision, which included more significant highway expansion/maintenance, bus and passenger rail expansion and modernization, bicycle and pedestrian improvements, and aviation improvements. This analysis resulted in an estimate of \$250.1 billion in needs.¹²³

Financial Planning


A key component of a performance-based transportation plan is reviewing and estimating available financial resources. Developing a financial resource estimate typically involves developing an inventory of available funding streams, along with projections of funding that is forecast to be available from each funding stream over the life of the transportation plan. During this process, it is helpful to note the types of investments that are eligible using each funding stream. Financial resource estimation typically culminates in a chapter or other defined section of the transportation plan that discusses available financial resources to devote to transportation projects. This section is sometimes labeled the “Financial Plan.” The financial plan serves as a key input for investment analysis, project selection, and moving projects from the transportation plan to the STIP/TIP.

MPOs are required to create a financial plan that demonstrates how the transportation plan can be implemented; that is, the MPO’s MTP must be cost feasible.¹²⁴ The financial plan is critical to demonstrating fiscal constraint for MPOs. State DOTs can opt to include a financial plan in the statewide transportation plan.¹²⁵ Even if the statewide transportation plan does not include a financial plan, it should be informed by the financial plan and investment strategies from the State asset management plan for the NHS and investment priorities of the public transit asset management plans.

¹²³ Arizona Department of Transportation, *What Moves You Arizona: Long Range Transportation Plan 2010-2035*, November 2011, available at: <https://www.azdot.gov/docs/default-source/planning/lrtp-2011-1129.pdf?sfvrsn=2>.

¹²⁴ 23 USC § 134 (i)(2)(E)

¹²⁵ 23 USC § 135(f)(5)



FHWA provides guidance to transportation agencies on the reasonability of assumptions regarding the agency's available resources.¹²⁶ In long-range planning, agencies sometimes consider implementing pricing mechanisms to finance specific projects or to incentivize certain behaviors that provide benefits such as congestion reduction to the traveling public. According to FHWA, enactment of specific taxes or pricing strategies can be considered reasonable if there is clear evidence of support for the taxes or fees and specific strategies are in place for securing the necessary approvals. As an example, in its Transportation 2040 plan, the **Puget Sound Regional Council**, the MPO for the Seattle metropolitan area, included roadway pricing strategies that would be phased in over the life of the plan.¹²⁷ According to PRSC, these pricing strategies will support a 132 percent peak period increase in local transit service (108 percent increase off-peak), the extension of regional light rail, and investments in walking and biking facilities. Together, they are expected to result in a 9 percent reduction in regional greenhouse gas emissions from the trend.

The financial plan will usually contain information on funding sources at the Federal, State, and local levels. Reasonably expected funds should be estimated and projected over the entire lifespan of the transportation plan. Anticipating the overall level of Federal revenues and local match is a core element of the financial analysis.


Anticipating future levels of funding can be challenging. Educated guesses can inform the estimate's deviation from a flat line projection. Funding streams may fluctuate (e.g., State gas tax revenues in the event of a recession), so planners should build a margin of error in their estimates. Further, the purchasing power of the dollar will deteriorate over time due to inflation. Planners should apply inflation factors to each revenue stream to ensure that investment decisions are being made using common figures.¹²⁸

There may be many sources of funding, including local funding, State funding (revenue from motor fuel taxes, registration fees, etc.), Federal funding, debt financing, toll equity and public-private partnerships. The volume and flexibility of available funding has a profound influence on the investments that are included in the transportation plan's investment package. The total pool of available funds impacts the number and size of projects that the agency can afford to build. Flexible funds allow for money to be directed toward projects that provide the best performance return—regardless of project type, mode or functional class of the roadway.

¹²⁶ For more information, see: http://www.fhwa.dot.gov/planning/guidfinconstr_qa.cfm.

¹²⁷ Puget Sound Regional Council, Transportation 2040, May 2010, available at: <http://www.psrc.org/transportation/t2040>.

¹²⁸ For more information on financial planning, see https://www.fhwa.dot.gov/planning/guidfinconstr_qa.cfm.




In practice, forecasting revenue early in the development of the performance-based transportation plan (in the scoping or baseline phase) will provide information about the financial constraints that must be considered when developing trends and targets. However, more detailed financial planning typically occurs through the plan development process. There will likely be more transportation system performance improvement needs and desired implementation strategies than available funding. To determine how adopted strategies in the transportation plan can be implemented, the transportation plan indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs.

Identification of Possible Solutions and their Costs

Based on system needs assessment and resource availability, planners – working with the public and stakeholders, and relying on existing planning documents, including the SHSP, transportation asset management plan, and other documents – can identify potential solutions to address the needs or performance gaps. While traditionally, the focus of long-range planning has been on capital projects, it is important to consider a wide range of potential strategies. These may include the following:

- ▶ Infrastructure projects are capital projects, which include physical improvements, rehabilitations, or replacements to a component of the transportation system. These can include roadway infrastructure, bicycle/pedestrian improvements, Intelligent Transportation Systems technologies, and public transportation rolling stock, among others. Capital needs are sometimes further divided into:
 - Preservation: Activities that protect transportation infrastructure by sustaining asset condition or extending asset service life; preservation includes resurfacing of pavements, replacing aged transit vehicles, upgrading rail track, and airport runway rehabilitation.
 - Modernization: Improvements that upgrade efficiency, functionality, and safety without adding capacity; examples of modernization activities include access control, hazard elimination, lane reconstruction, and bus system upgrades.
 - Expansion: Improvements that add transportation capacity through the addition of new facilities and or services; expansion activities include adding new highway lanes, expanding bus service, construction of new highway facilities, and adding rail passenger service or facilities.
- ▶ Programs are non-physical improvements to the transportation system. Transportation system management & operations (TSMO) strategies, such as incident management, traveler



information, and ridesharing programs. They also include traffic safety campaigns and air quality outreach efforts.

- ▶ **Policies** are a course of action, guiding principle, or rule enforced to create an impact on the transportation system. Examples include enhanced law enforcement to support safety, such as strict enforcement of pedestrian right of way or child safety seat use. Other examples include integrated transportation and land use planning, complete streets policies, and parking restrictions.
- ▶ **Pricing and subsidies** create financial incentives either to support or reduce certain behaviors. Congestion pricing, for instance, can encourage travelers to drive less during peak periods and shift to alternative modes. Subsidies are funds that defray the actual cost to the public of using the transportation system. Examples of subsidies are public transit operating assistance, reduced tolls for carpools, and subsidized borrowing of money.

Methods to Identify Potential Solutions

The development of the transportation plan will involve analysis to identify potential solutions to contribute to the gap in performance in comparison to desired trends or targets. There are a number of methods that can be used to identify potential solutions.

Data Analysis – This allows for identification of specific problem or “hot spot” areas, particularly related to traffic accidents and congestion.

Modeling – As noted earlier, the travel demand model can be used to identify specific deficiencies, in particular, related to traffic congestion, and to help identify and analyze potential infrastructure solutions. Modeling can also be used to assess different types of land use patterns and policies.

Other types of predictive models can also be useful to planners. These tools evaluate and forecast the transportation system through the lens of economic development, land use, or greenhouse gas emission, among others. Transportation Asset Management systems predict changes in physical infrastructure condition and the investments needed to achieve performance.

Other Plans – Projects concepts can be imported from the cost feasible plan or needed project list in a previous transportation plan or plan developed by another agency. Strategies may also be identified in documents, such as the Strategic Highway Safety Plan, State Freight Plan, Transportation Asset Management Plan, a corridor study, or a freight analysis.

Public and Stakeholder Input – An important method of identifying or prioritizing potential solutions is through public involvement, and is often tied together with needs assessment. Regular communication with the public helps to identify public concerns about the transportation system, gauge the demand for new services, and understand the community’s priorities for

improvements. Some public involvement is reactionary, in that the public will communicate with the State DOT or MPO due to a severe deficiency or failure of a facility/service. As noted in Chapter 3, there are many tools for effectively gathering public and stakeholder input, including website comment submission forms, surveys, and interactive tools to enable the public to assess the performance impacts of different types of solutions. Other types of public involvement include visioning exercises, staffing a citizens’ advisory committee, and holding regular meeting with community groups.

Intergovernmental Consultation – This is a powerful method of identifying needs for the transportation plan. MPOs are a platform for intergovernmental consultation between member local governments. MPOs can also identify projects with other public agencies in the region, such as the transit provider, port/airport authority, toll authority, or commuter services office. Intergovernmental coordination is an important task for State DOTs, since Federal statute calls for coordination and consultation with a wide variety of stakeholders. Both States and MPOs can include projects on tribal lands. Advisory committees can be useful for quick, broad consultation. A common type of advisory committee is the technical committee, which is composed of career service staff members of local governments.


More formal relationships can be built with public transportation operators, and seaport/airport authorities. Transit operators can provide a list of needed transit improvements. Port and airport authorities can do the same (generally this

PROJECT SCREENING DURING INVESTMENT ANALYSIS

An alternative to early screening is to evaluate policy impacts simultaneously with performance-based selection criteria. Projects that violate a project screen are assigned a very large weighting that, if triggered, ranks the project so low that it will not qualify for selection.

The table below shows a hypothetical analysis of three roadways segments in an MPO area, with a locally-developed screen for whether the project will infringe on park land. If the project infringes on park land, thirty points are subtracted from the project’s score. Route 2 has the highest rating for all performance metrics, including safety. However, because it impacts park land, it has thirty points subtracted from the total. This heavy penalty ensures projects that do not pass the screen cannot score high enough for selection. Under the selection system shown below, Route 3 will receive funding priority, followed by Route 1. Route 2 has been effectively eliminated from consideration by using the system.

Project	Impacts Park Land	Safety	All Other Criteria	Total
Route 1	0	6	67	73
Route 2	-30	10	80	60
Route 3	0	8	71	79



will include only land-side facilities). Operating assistance and maintenance costs can be included as a separate line item.

Through all of these mechanisms, transportation planners will have a “wish list” of projects and policies that could be analyzed as part of the plan. Together with the financial plan, these strategies form the basis for investment analysis and selection of a preferred alternative in the plan. These project concepts or investment priorities also could be incorporated into an investment plan.

Cost Estimation

Using project descriptions, it is possible—and useful—to estimate the costs to implement projects. The cost of each line item can be estimated using industry handbooks, State procurement agencies, or previous agency experience with similar projects. Several handbooks from organizations such as ARTBA, AASHTO, and APTA (as well as others) can provide quick-reference cost estimates. For example, the Pedestrian and Bicycle Information Center (PBIC) recently developed a report to assist with estimation of pedestrian bicycle infrastructure costs.¹²⁹ The agency’s experience with similar projects and an analysis of local commodity and labor markets can yield a more accurate cost estimate. Related investments can be combined together into a grouping of similar projects.¹³⁰ This method can help defray some of the analysis cost later during the planning process. In general, this method is used for lower-cost, non-controversial line items projects typical of system preservation projects. It is also very important, in estimating costs, to consider not only the upfront capital costs of a specific project, but also the long-term costs of maintaining and operating any transportation facilities constructed as part of that project. FHWA offers guidance on using life-cycle cost analysis (LCCA) to select from design alternatives that would yield the same level of performance or benefits.¹³¹

Solutions Screening

Given the wide range of potential strategies and transportation investments that could be implemented, the development of the transportation plan should screen solutions to ensure they meet State, regional, and community goals, and address all Federal requirements.

In a performance-based plan, goals and performance measures function as a key mechanism for narrowing down to the most promising strategies. This process may involve modeling or scenario analysis (described further, with examples, in Chapter 9).

¹²⁹ See <http://www.pedbikeinfo.org/bikecost/>.

¹³⁰ 23 CFR 771(c) and (d) and/or 40 CFR part 93.

¹³¹ See <http://www.fhwa.dot.gov/infrastructure/asstmgmt/primer04.cfm>.

In addition to performance metrics that are explicitly included in the plan, screening of solutions should consider a broad range of factors – quantitative and qualitative – that are important to the community and required by Federal law. Specifically, transportation projects have the potential to impact a broad set of issues, and the transportation plan is required to address certain requirements to avoid or mitigate adverse impacts to the natural or human environment. The planning process therefore should integrate environmental resource plans and other related plans in order to avoid or minimize impacts to protected resources; this integration with various other plans helps to screen possible solutions for compatibility with environmental protection goals and other issues.

Some screening processes are required by Federal law (examples are discussed below). Additional screening procedures may be required by State law. Optional, locally-developed project screens can also be included at the direction of MPO or State DOT senior leadership. These “screens” could be included as performance measures or as other quantitative attributes (e.g. project prioritization or scoring) that are directly addressed as a component of the transportation plan. In other cases, specific analysis may be conducted if a performance metric has not been identified but an issue can be addressed in a qualitative manner.

An example of a project policy screen is the **Capital Region Transportation Planning Agency (CRTPA)** in the Tallahassee, Florida metropolitan area.

PLANNING AND ENVIRONMENT LINKAGES (PEL)


PEL represents an approach to transportation decisionmaking that considers environmental goals early in the planning stage and carries them through project development, design, and construction. This can lead to a seamless decisionmaking process that minimizes duplication of effort, promotes environmental stewardship, and reduces delays in project implementation.

The PEL approach is intended to establish coordination early – starting with transportation problem identification in planning and continuing through the rest of the project delivery process in such a way that environmental, community, and economic issues and concerns are appropriately considered and addressed. PEL lays the foundation for a broad consensus on goals and priorities when developing solutions for the complex issues surrounding the management and construction of the transportation system.

By advancing Integrated planning, PEL involves the connection between transportation planning, resource conservation and management plans (for instance, local watershed and/or habitat conservation plans), and important information regarding sensitive resources (such as the location of wetlands, endangered species, environmental justice populations, etc.). This type of collaborative planning offers opportunities to see and act on broader scale patterns and trends in our communities, regions, and ecosystems that may be missed if only explored at the project level.

For more information, see:

<http://environment.fhwa.dot.gov/integ/index.asp>.



CRTPA developed the Canopy Roads Project Screen to evaluate projects on its roads lined with mature oak trees. The screen identifies projects which may impact the tree cover shade, a valued community asset.¹³²

Below are several common screens that are applied due to Federal requirements:

ASSESSMENTS OF NATURAL AND HUMAN ENVIRONMENTAL RESOURCES


Multiple pieces of Federal policy—most notably the National Environmental Policy Act (NEPA) of 1964—provide the framework for protection of natural resources and sensitive habitats. In addition to including environmental goals and performance measures in a performance-based plan, the transportation plan should consider protected habitats, wetlands, and other protected land areas, as well as noise and water pollution, and human environment considerations, such as historic structures, scenic areas, parks, or cultural landmarks, among others. The development of a transportation plan is required to include consultation with agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation, including comparison of transportation plans with State conservation plans or maps and inventories of natural or historic resources, if available.¹³³ Moreover, transportation plans must include discussion of potential environmental mitigation activities, which will generally address the context and some of the potential impacts associated with proposed transportation improvements identified in a transportation plan.

Consequently, this environmental screening process may include analysis of:

- ▶ Regional development and growth patterns;
- ▶ Local land use, growth management, or development plans and projections of future land use, natural resource conservation areas, and development;
- ▶ Demographic trends and forecasts, including population and employment projections;
- ▶ GIS overlays showing past, current, or predicted future conditions of the natural and built environments;
- ▶ Environmental scans that identify environmental resources and environmentally sensitive areas;
- ▶ Descriptions of airsheds, water resources and watersheds; and

¹³² The 2008 Review of Florida’s MPO Long Range Transportation Plans, <http://www.cutr.usf.edu/programs/pcm/files/2008-11-LRTPReview.pdf>.

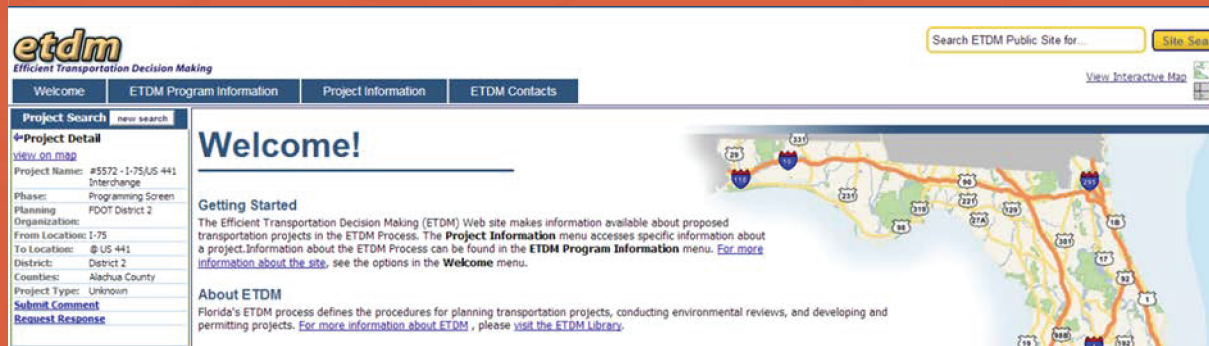
¹³³ 23 USC 134(i)(5) and 23 USC 135(f)(2)(D).

- 
- ▶ The outputs of natural resource planning efforts, such as wildlife conservation plans, watershed plans, special management areas, and multiple species habitat conservation plans.

When scenario analysis is used in a planning, the resulting model outputs, coupled with GIS layer mapping, can help to inform the investments included in the plan.

FLORIDA EFFICIENT TRANSPORTATION DECISION MAKING


The Florida DOT developed the Efficient Transportation Decision Making (ETDM) program to better assess the sociocultural and environmental impacts of proposed transportation projects. ETDM seeks to improve transportation decision making by facilitating early and ongoing interagency interaction throughout the project development process to better balance meeting mobility needs and protecting community and natural resources. The process integrates screens at various phases of the review process, so that potential issues can be identified and addressed earlier in project development. ETDM uses Environmental Screening Tool (EST), an online, interactive database with mapping capabilities, to support communication between agencies, planners, engineers and the public. EST compiles project data and allows agencies to review, analyze and provide feedback for projects. It also allows the public to access project information and status updates, and send comments directly to the project sponsors. ETDM enhances long range transportation planning by generating better information on the potential impacts of proposed projects, and helping MPOs produce more accurate cost-estimates for projects that require environmental mitigation.



Source: Florida Department of Transportation ETDM website: <https://etdmpub.fla-etat.org>.

AIR QUALITY CONFORMITY

Air quality conformity functions as a form of screening in air quality nonattainment and maintenance areas subject to these requirements. In these areas, the MPO's transportation plan must show that it conforms to the State Implementation Plan for air quality; that is, it ensures that Federal funding and approval goes to those transportation activities that are consistent with air quality goals. Conformity applies to metropolitan areas' transportation plans, transportation improvement programs (TIPs), and projects funded or approved by the FHWA or FTA, for those areas subject to these requirements. In some areas, this process has played a key role in making tough decisions in order to meet both air quality and mobility goals, and has required State and



local transportation officials to find ways to reduce vehicle emissions by developing transportation plans that will reduce single-occupant vehicle (SOV) travel through increased travel options, such as transit, bicycling, and walking, or transportation control measures.

EQUITY ANALYSIS AND ENVIRONMENTAL JUSTICE

As discussed earlier, equity analysis and environmental justice analysis are important to ensure that planned projects do not have a disproportionate or burdensome adverse impact on areas that have a high concentration of minority and low-income households. Agencies must determine whether environmental justice populations would be subjected to disproportionately high and adverse human health or environmental effects as a result of a transportation plan, project, or activity, and to avoid, minimize, or mitigate these effects.


As an example of this type of analysis, in its long range plan, *Metro Vision 2035*, **Denver Regional Council of Governments (DRCOG)** used GIS to identify low-income and minority areas throughout the Denver region and transpose these areas on maps of regional transportation projects. Through this exercise, DRCOG was able to confirm that many large transportation projects are in these areas, while over half of the anticipated regional system expenditures under the fiscally constrained plan are for public transit and non-roadway projects and services, which disproportionately benefit minority and low-income residents. DRCOG has also resolved to ensure that future road projects include elements that benefit non-drivers. In order to determine the most effective uses for its FTA Job Access and Reverse Commute (JARC) program funds, DRCOG conducted an analysis to identify employment areas that are underserved by transit in order to improve accessibility to all employment centers in the region.¹³⁴

Similarly, in the development of *PlanIt 2035*, **Baltimore Metropolitan Council's (BMC)** long range plan, BMC staff conducted GIS analysis to estimate the accessibility of minority and low-income populations with respect to home-based work and home-based non-work trips and ensure that the plan would have no disproportionate adverse impacts on their communities. BMC identified and compared impacts for both existing and committed projects and under the preferred alternative scenario.¹³⁵

As discussed in more detail below, the **Metropolitan Transportation Commission (MTC)** of the San Francisco Bay Area sought to add equity performance measures to its most recent long range plan, Plan Bay Area, due to the region's significant affordability challenges. The purpose of this effort

¹³⁴ For more information, see <http://www.denverregionalequityatlas.org/> and <https://www.drcog.org/index.cfm?page=TransportationFundingEquity>.

¹³⁵ For more information, see: <http://www.baltometro.org/plans/final-plan-it-2035-2> and <http://www.baltometro.org/transportation-equity/access-to-jobs-2>.



was to identify how to measure whether the region’s low-income residents would benefit from proposed transportation projects. As a result, MTC added an equitable access measure, the share of low-income and lower-middle income residents’ household income consumed by transportation and housing, with a target of decreasing this value by 10 percent, from 66 percent to 56 percent (rather than increasing by 3 percent, the projected rise according to trend data). Plan Bay Area policies will aim to stabilize the length and duration (and thereby, cost) of commute trips for lower-income residents (see case study in Chapter 11 for more details).

Conducting project screening requires the MPO or State DOT to obtain or generate information about protected resources. Geographic Information Systems are an invaluable tool during screening. State resource agencies—such as the State Historic Preservation Office—may be able to provide GIS datasets that can be cross-referenced with the List of Needed Projects. Consultation with State agencies and special purpose districts (i.e. - water resources board, council of governments) may yield useful information. Information obtained through public involvement may alert planners to problematic projects. Finally, MPOs and State DOTs should maintain datasets of information on issues of concern. Projects that fail to meet standards set in the project screen will require more detailed analysis before advancing to scenario analysis or project selection phases.

ANALYSIS OF ECONOMIC BENEFITS


Economic benefits associated with transportation projects can be analyzed, and this information can also be used to screen potential solutions and to support project prioritization and selection. Economic analysis is an approach that can be used to assess the overall benefits of projects by monetizing the benefits that stem from transportation investments (e.g., travel time savings, fuel savings, lives saved, etc.). The identification of net benefits or benefit cost ratio (monetized benefits divided by costs) can be used to help support project selection.

An economic analysis allows project performance outcomes from various performance areas to be directly compared. It represents the return-on-investment analysis used by public agencies and is an important process. NCHRP 08-36 Task 101, *Understanding How to Develop and Apply Economic Analyses: Guidance for Transportation Planners* is a good resource for planners interested in additional information.¹³⁶ FHWA provides guidance on values to use in the monetization process in its TIGER Benefit-Cost Analysis (BCA) Resource Guide.¹³⁷

Transportation investments also can lead to wider economic benefits and regional or localized economic development impacts. Business productivity occurs as transportation investments

¹³⁶ [http://onlinepubs.trb.org/onlinepubs/nchrp/docs/nchrp08-36\(101\)_FR.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/nchrp08-36(101)_FR.pdf).

¹³⁷ <http://www.dot.gov/policy-initiatives/tiger/tiger-bca-resource-guide-2014>.



enable businesses to gain efficiency by reorganizing their operations or changing the mix of inputs used to generate products and services. There are at least three classes of transportation system impacts that can directly lead to wider benefits for business organization and operation—reliability, connectivity and accessibility. The Transportation Project Impact Case Studies (T-PICS) tool includes relative project examples to assist transportation agencies in gauging the wider economic benefits they can expect from their transportation projects.¹³⁸

¹³⁸SHRP2 Project C11,
http://www.fhwa.dot.gov/goshrp2/Solutions/Capacity/C03_C11/TPICSEconomic_Analysis_Tools.

9. Investment Analysis and Selection

Building on identification of needs and financial resources, a performance-based transportation plan will involve analysis of alternative investment choices in order to develop a preferred investment strategy. Scenario analysis is often a key analytical and public involvement technique during this phase of plan development. The consequences of alternative investment choices on transportation system performance are analyzed by applying the performance measures that link directly to the Plan's goals and objectives, and making comparisons. This is typically followed by selection of a preferred alternative, which may include the identification of individual projects or funding for different categories of investments.

Scenario Analysis to Compare Alternative Investment Strategies

In development of the transportation plan, scenario analysis allows agencies to test possible approaches to meeting future needs and identify the most effective package of policies or investments. Scenario development and analysis may address:

- ▶ Different packages of investments, addressing investments across different modes (e.g., transit, highways) or types of strategies (e.g., demand management, system preservation, system expansion) within a fiscally constrained budget;
- ▶ Different land use patterns (distribution of population and employment); and/or
- ▶ Different levels of transportation funding and/or performance expectations.

Scenario planning is often an inclusive and interactive process, involving considerable public participation. Using performance measures to compare alternatives helps in selecting the strategies that will most ably support attainment of objectives, and in making informed tradeoffs among different investment options. In some cases, scenario planning may also consider expected future changes in technology, policy, or the economy that could significantly impact transportation.

In order to be able to evaluate key differences between scenarios, it is important to establish a baseline that serves as a hypothetical point of comparison for projected performance in light of changes in strategies, focus, or funding in the future. Generally, the “business as usual” or current trend scenario – what would occur absent any significant changes in agency focus or action – serves as the baseline for comparing scenarios.

Analyzing Alternative Investment Packages within a Fiscally Constrained Budget

For example, **Arizona DOT’s** transportation plan examined what it calls “alternative investment choices” or AICs, which allocated baseline revenues across three investment types: preservation, modernization, and expansion. The AICs in the Arizona transportation plan address alternative ADOT capital programming priorities, and do not address specific projects.¹³⁹ Specifically, two AICs were designed to assess two starkly different investment choices and their implications on performance outcomes: 1) a “highway focus” alternative (AIC A), reflecting a preservation-oriented investment approach with limited system expansion; and 2) an “expanded travel choices” alternative (AIC B), shifting funding from preservation to expansion, including to non-highway investments such as transit, rail, aviation, and other modes. The outcomes of the alternatives were analyzed in terms of performance measures that directly reflect the transportation plans goals and objectives. In addition, AIC A and B were assessed with respect to the 25-year needs, ADOT priorities, and stakeholder input. The analysis resulted in the Recommended Investment Choice (RIC) that is a combination of the two alternatives enabling preservation of the current system and expanded travel choices. Each investment option was given a qualitative “grade” in relation to each plan goal area. The grades reflect the impact of reduced revenues compared to ADOT’s most recent investments, which reflected a relatively well-funded capital program.

Figure 9-1. Arizona 2035 Long Range Transportation Alternative Investment Choices (AIC) “Grades”

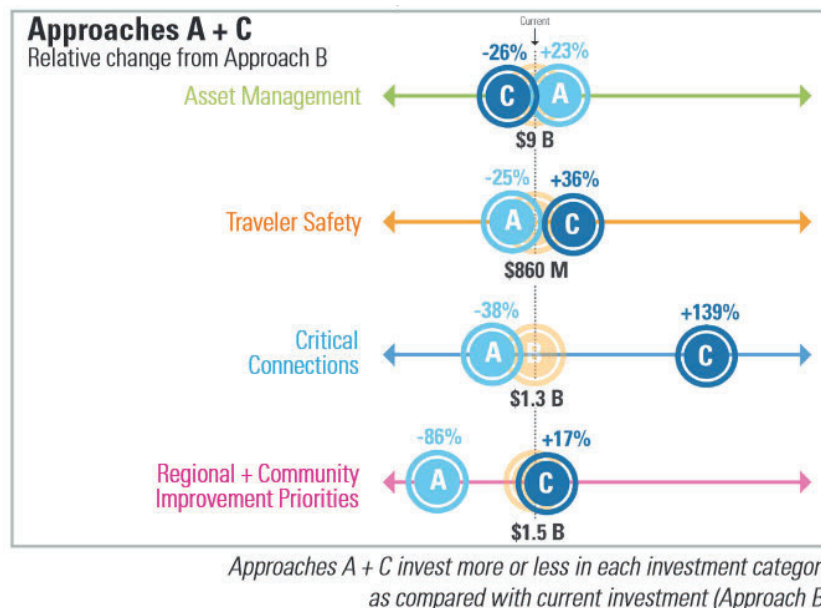
Goal Area	ADOT Existing Investment Strategy	AIC A	AIC B	RIC
Improve Mobility/Accessibility	B	D	C+	C-
Preserve and Maintain System	B+	A	D	A-
Support Economic Development	C+	D	B-	C-
Link Transportation and Land Use	C-	C-	B	C+
Consider the Environment and Natural Resources	B-	B-	B+	B+
Enhance Safety and Security	C+	C-	B-	B-
Investment in Non-Highway Modes	D	D	C+	C

Source: Arizona DOT, *What Moves You Arizona: Long-Range Transportation Plan, 2010-2035*, Table 6-3.

¹³⁹ Arizona Department of Transportation, *What Moves You Arizona, Long-Range Transportation Plan 2010 – 2035*. Available at: <http://www.azdot.gov/docs/default-source/planning/lrtp-2011-1129.pdf?sfvrsn=2>.

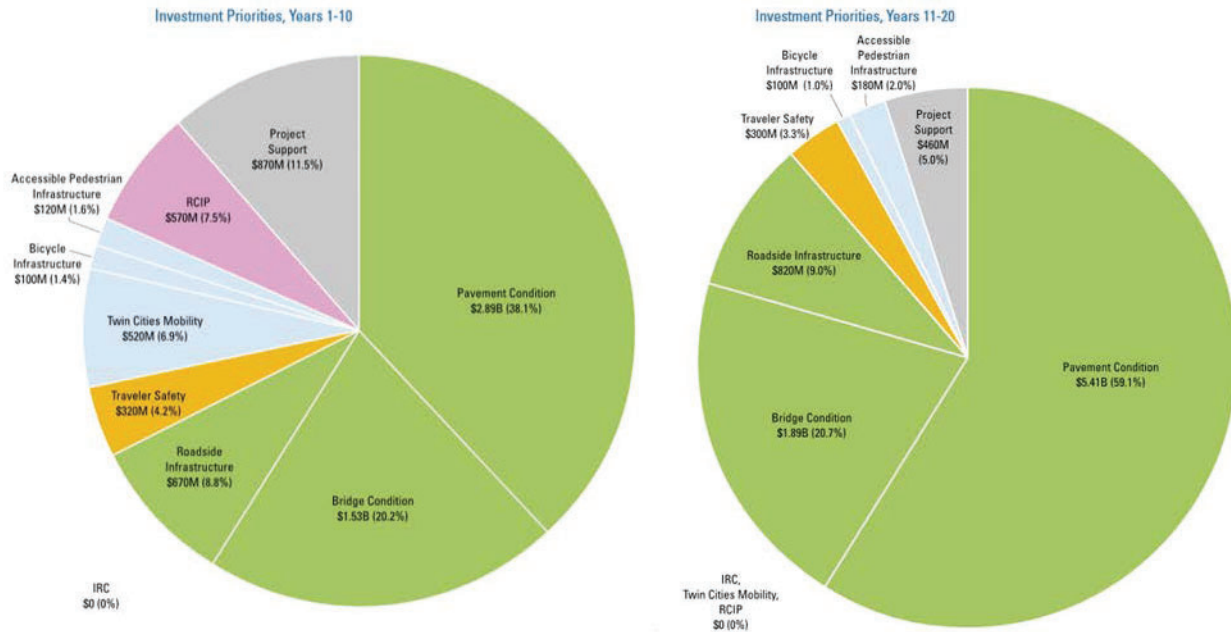
Similarly, **Minnesota DOT (MnDOT)** used a performance-based approach to compare alternative investment options in developing its State Highway Investment Plan: 2014-2033 (MnSHIP). MnDOT developed three alternative approaches to dividing funding between its investment categories: asset management, traveler safety, critical connections, regional and community improvement priorities, and project support. The three approaches to investment are illustrated in a graphical folio or brochure to support stakeholder review and understanding of the fairly different investment directions that the State could take in the long term. The three approaches are Approach A – Focus on maintaining existing infrastructure on the entire system, Approach B – Current investment direction, and Approach C – meet interstate infrastructure needs, and investment in mobility, local priorities, and non-motorized options. The folio illustrating the approaches contains highlights of the approach, a hypothetical driving scenario, strengths and drawbacks, a table comparing this approach to current funding levels, and major outcomes of the approach – this information effectively translated the expected impacts of each scenario to residents and decision-makers. Each approach assumes constant revenue, constant system size, fiscal constraint, and acknowledgement of the difficult trade-offs, without a preference for one solution over another. The figure below compares expected performance of Approaches A and C relative to the “business as usual” Approach B. As a result of this exercise, MnDOT identified its investment priorities for the first and second ten-year periods (see Figure 9-2 below).

**Figure 9-2. Minnesota Department of Transportation:
Using Scenarios to Link Management Systems to the LRTP**



Source: Minnesota Department of Transportation, “Scenario Planning: Background – MnSHIP Investment Approaches,” <http://www.dot.state.mn.us/planning/mnship/pdf/approaches.pdf>.

Figure 9-3. Minnesota Department of Transportation: Final MnSHIP Investment Priorities



Source: Minnesota Department of Transportation, *Minnesota State Highway Investment Plan: 2014-2033*, Page ES-4.

For more information on MnSHIP, see the Plan and the investment categories.¹⁴⁰

As another example, the **Southeast Michigan Council of Governments (SEMCOG)**, the MPO for the Detroit metropolitan area, conducted a scenario analysis of alternative funding between types of projects (pavement repair versus capital). SEMCOG used five funding scenarios: continuing current allocation, public opinion, preservation first, transit first, and maximum performance (a blended scenario). Ultimately, a modified preservation first scenario was selected due to findings about expected performance under that scenario.¹⁴¹

FHWA has developed a set of resources that are helpful in preparing the financial elements of the transportation plan as well as STIPs and TIPs.¹⁴² This set of tools includes spreadsheets that are intended to be used to develop and compare funding scenarios. It also addresses the use of financial data in performance-based planning.

¹⁴⁰ Minnesota State Highway Investment Plan: 2014-2033:

<http://www.dot.state.mn.us/planning/mnship/investment.html> and

<http://www.dot.state.mn.us/planning/mnship/index.html> (investment categories).

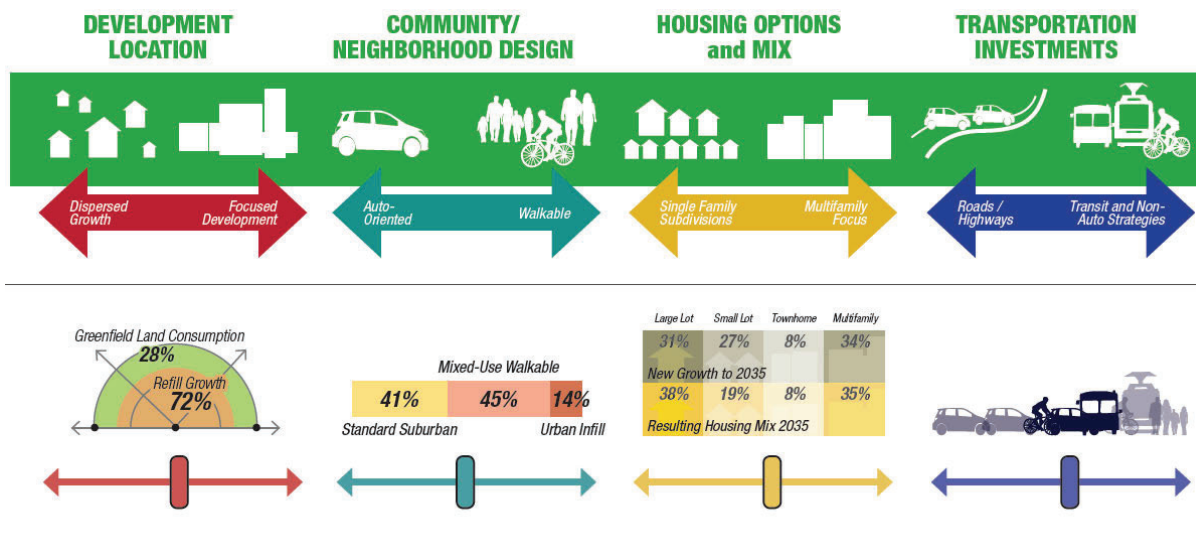
¹⁴¹ For more information, see: <http://www.semco.org/Long-RangeTransportationPlans.aspx>.

¹⁴² FHWA, Transportation Planning Capacity Building, Financial Planning and Constraint Planning Tools for Transportation. Available at: http://www.planning.dot.gov/financial_tools.asp.

Alternative Land Use and Transportation Investment Scenarios

Scenario planning can be used to test alternative land use scenarios, in addition to transportation investments. MPOs and RTPAs in California commonly use scenario planning to develop their preferred scenario for transportation plan development, relying on extensive public participation and scenario planning software tools and transportation models to identify trends and develop targets for the preferred scenario. For example, in the development of its most recently adopted 2035 transportation plan and Sustainable Communities Strategy, the **Southern California Association of Governments (SCAG)** used scenario analysis as a tool in the public outreach workshops that took place during plan development.¹⁴³ Scenario 1, depicted in the figure below, represents the region’s trend line or baseline, which was estimated using (1) past performance data and (2) an analysis of the land use and transportation plans currently in place in various jurisdictions throughout SCAG’s planning area. The scenario analysis relied heavily on the baseline and trend information, as each additional scenario was compared to Scenario 1 in terms of development location, community and neighborhood design, housing options and mix, and transportation investments. The identification of scenarios through numbers rather than terms (such as “transit-focused” or “compact development”) forced participants to think about the merits of each scenario before jumping to conclusions about scenarios based on their titles.

Figure 9-4. Graphical depiction of Scenario 1 from SCAG’s Transportation Plan Development Process



Source: Southern California Association of Governments, 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy. Adopted April 2012.

¹⁴³ Southern California Association of Governments, 2012-2035 Regional Transportation Plan/ Sustainable Communities Strategy. Available at: <http://rtpscs.scag.ca.gov/Pages/default.aspx>.



Alternative Funding Level Scenarios

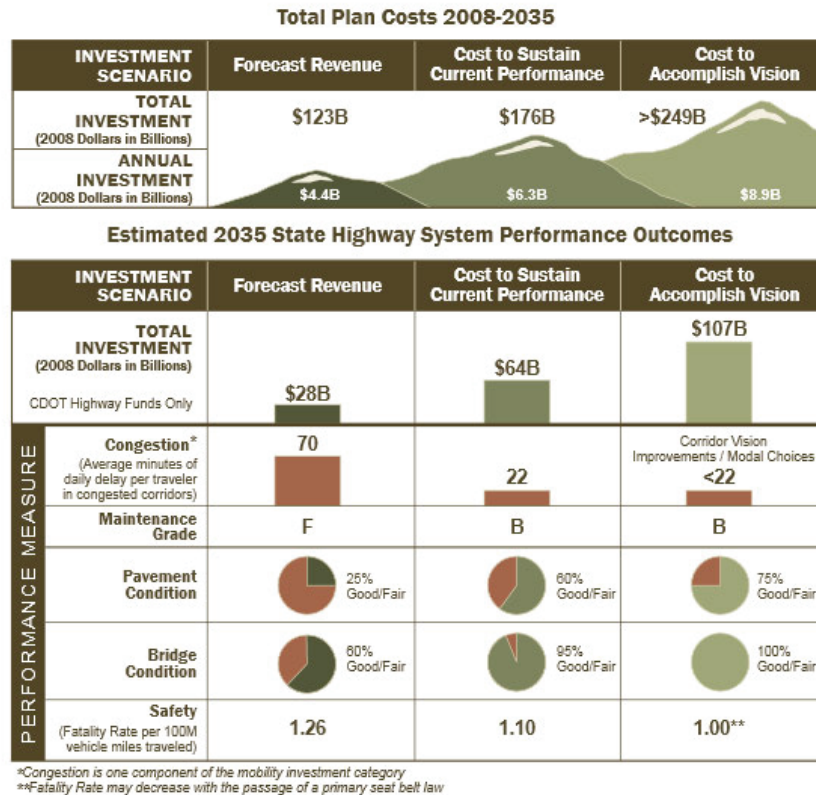
State and MPO transportation plans may explore alternative levels of funding availability, and impacts on performance outcomes. This differs from analyzing alternative investment packages, as discussed above, in that funding level is the leading difference between scenarios as opposed to types of transportation investments.

For example, **Michigan DOT** performed scenario analysis of alternative funding strategies taking into consideration pavement, bridge, safety and congestion. Michigan DOT developed scenarios for various investment strategies with different funding levels. The Transportation Commission approved the preferred scenario. The State conducted a limited scenario analysis, using three economic scenarios: high oil prices, agrarian-focused economy, and modernization of the system. These were modeled for economic impacts on the State.¹⁴⁴

Colorado DOT's LRTP identifies the level of performance that could be expected from three different funding scenarios, showing that the cost to maintain current performance levels exceeds projected revenues and discussing potential funding mechanisms to close the gap (see Figure 9-5).

¹⁴⁴ For more information on how Michigan conducts its long range planning efforts, visit the State's long range planning website at http://www.michigan.gov/mdot/1,1607,7-151-9621_14807_14809---,00.html.

Figure 9-5. Colorado L RTP Presentation of Alternative Investment Scenarios




Source: Colorado Department of Transportation, 2035 Statewide Transportation Plan, Page 37.

The result of scenario analysis is the creation of a preferred planning scenario or selected alternative.

Using Performance Information to Support Project Prioritization and Selection of a Preferred Alternative

Some transportation agencies make explicit linkages between anticipated performance results and selection of a preferred investment alternative or projects in the transportation plan. This is more common at the MPO level, where the MTP identifies specific projects or project concepts. The MPO's MTP contains a financially constrained list of transportation projects for the MPO study area. In a performance-based transportation plan, projects are selected and ranked based on their ability to achieve the plan's desired performance targets in a cost-effective way. Performance measures and targets provide information to support the project prioritization and selection process. Project prioritization may involve ranking projects in order of their ability to help the



State or metropolitan area cost-effectively reach each goal or performance targets and assigning weights to each goal or target.

For instance, the ***Pikes Peak Area Council of Governments*** in Colorado used projected performance on 17 SMART (specific, measurable, agreed-upon, realistic, time-bound) objectives to select projects for its cost feasible plan. PPACG requested that member governments seeking State and Federal monies for transportation projects submit their list of projects for consideration to be included in the MTP. PPACG staff then scored the submitted projects using three planning scenarios (Trend, Infill, and Conservation) in order to determine the uncertainty associated with different land-use futures on transportation projects. After the PPACG Board of Directors adopted the preferred planning scenario, staff then scored projects against the preferred scenario. The reasoning behind this effort was to provide the Board with additional information under the assumption that projects that score well in all cases have less risk of being “bad” investments. The scoring was conducted using evaluation criteria for weighting objectives based on input from a Transportation Advisory Committee, Community Advisory Committee, and public input.

Similarly, both the ***Baltimore Metropolitan Council (BMC)*** and the ***Wilmington Area Planning Council (WILMAPCO)*** use project prioritization processes within the MTP development process to rank projects based on their ability to meet the goals set forth in each MPO’s respective long range plan. The ***Mid-America Regional Council (MARC)*** in the Kansas City area also scores projects using a process that relates clearly back to performance measurements chosen to reflect objectives. The agency uses a 100-point scoring system, which includes inputs relating to all LRTP policy goals, to evaluate projects for inclusion in the regionally-significant project list. The scoring system was developed in coordination with the agency’s transportation committee. After the scoring analysis, the agency conducts more detailed follow-up technical analysis from committees, the public, and stakeholders.¹⁴⁵

In the development of its most recent long-range plan, Plan Bay Area, the ***Metropolitan Transportation Commission (MTC)*** found that conducting project-level assessments helped to advance a more performance-based approach to decisionmaking beyond what could be analyzed under broad packages of strategies within scenario analysis. MTC conducted assessments of expected project performance by project type in terms of benefit-cost assessment and an assessment of the impact on regional targets in order to help prioritize investments in the MTP. MTC analyzed all 1000 uncommitted projects in its targets assessment and approximately 100 “significant projects” in its benefit-cost assessment. Through this analysis, the MPO began to strengthen a requirement of making a “compelling case” for project funding. The analysis generally found that transit and regional programs were most supportive of regional targets. Road

¹⁴⁵ For more information, see: http://www.fhwa.dot.gov/livability/case_studies/kansas/index.cfm.

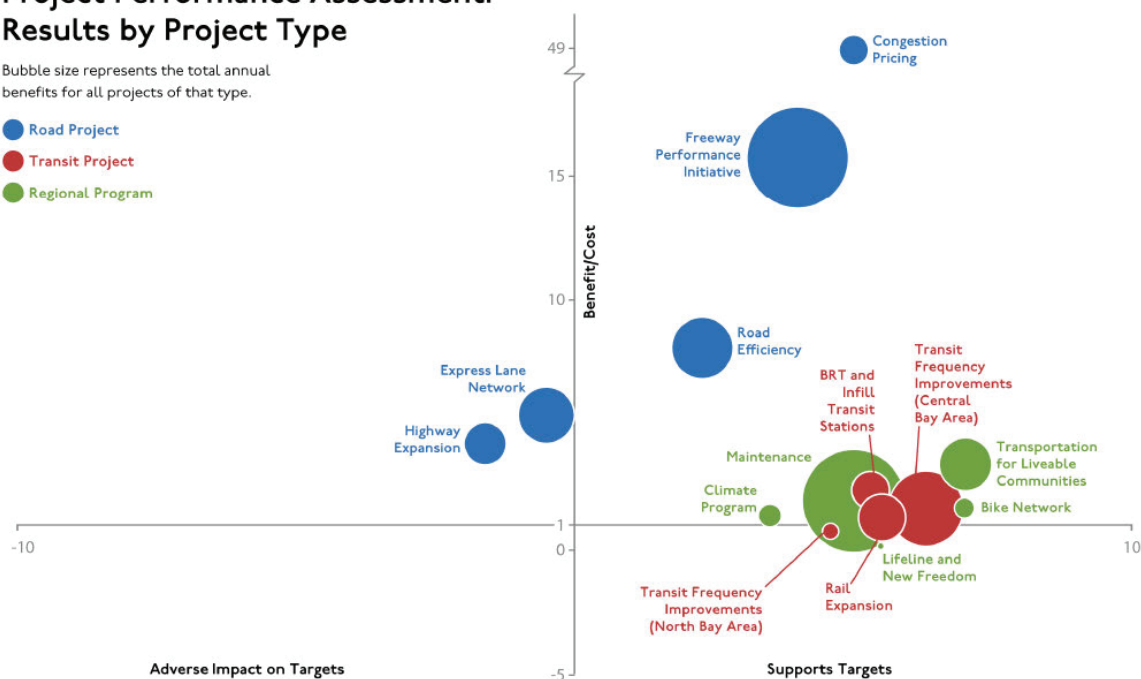
efficiency projects (e.g., congestion pricing, freeway operational improvements) had some of the highest benefit-cost ratios, while highway capacity projects often were less supporting of targets and less cost-effective. As a result of this analysis, thirty-four projects were considered “low-performing”; of those, 12 projects were withdrawn by sponsors, 13 projects were re-scoped, and one project slated for rejection was settled through arbitration; eight projects were approved due to their impact on communities of concern, air quality, or recreational trips.

Figure 9-6. Metropolitan Transportation Commission: Project Performance Assessment

**Project Performance Assessment:
Results by Project Type**

Bubble size represents the total annual benefits for all projects of that type.

- Road Project
- Transit Project
- Regional Program



Source: Metropolitan Transportation Commission, Plan Bay Area Performance Assessment, Page 53.

It is important to recognize that not all MPOs and State DOTs score individual projects as part of the transportation plan development process. This may be to allow flexibility to jurisdictions or the agency in selecting projects. However, a performance-based plan should analyze the overall performance of the plan. For instance, the Transportation Planning Board of the **Metropolitan Washington Council of Governments (MWCOCG)** does not score individual projects, which generally are identified by Maryland, Virginia, and the District of Columbia. However, it does present the anticipated performance of the plan across different performance metrics. By laying out a framework of regional goals and identifying performance measures, the MPO builds consensus on common principles and priorities.

10. Connecting the Transportation Plan and Programming

The transportation plan is a central, unifying document in the transportation planning process. It summarizes goals and performance targets, assesses current system performance, inventories future challenges and needs, and analyses and proposes an investment strategy to be funded over the next twenty years or more to improve performance toward those targets. To be effective, however, the transportation plan must connect to other planning and programming documents in a multi-year cycle of planning.


Connection with the TIP and STIP and Project Prioritization

The documents most directly connected to the transportation plan are the MPO Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP). The TIP and STIP are critical documents in a PBPP process, as they commit transportation dollars to funding for specific projects, and reflect short-term priorities.

Given that the State transportation plan is not required to have a financial plan, some State DOTs use the LRTP as a policy document to set a strategic direction for investment decisionmaking. In a performance-based plan, this would occur through the identification of goals, objectives, and performance measures, as well as desired trends or targets. Using a performance-based approach, the State DOT may then develop an *investment plan or plans*, which often are associated with an individual mode of transportation, and identify specific investments or categories of investments and associated funding plans. Investment plans may have a mid-range time horizon, such as 10 years. Together with the LRTP, investment plans can form a “family of plans” that is more flexible than a project-based LRTP because the entire document does not need to be updated as frequently. The projects identified are moved to the STIP when they are ready to advance.

A performance-based transportation plan will provide direction to how the TIP and STIP will be developed. The transportation plan may have a chapter or section of narrative discussion that explains how components of the plan will translate into the program. The narrative discussion illustrates to the reader how the information used and generated by the planning process will influence the development of purpose and need, project development, design, and eventual implementation of projects. It also provides transparency, accountability, and predictability to the process.

The transportation plan can support development of a performance-based TIP and STIP by:

- 
- ▶ Identifying goals, objectives, and targets that can be used in the TIP or STIP development process to assess consistency with the transportation plan;
 - ▶ Identifying project selection criteria and weighting that are used to prioritize projects to be included in the TIP or STIP; or
 - ▶ Identifying performance targets that are used as a basis for assessing the anticipated effects of the TIP or STIP.


Consistency of Projects with Plan Goals and Targets

A performance-based TIP and STIP will, as practicable, include a discussion of the anticipated effect of the program of projects toward achieving performance targets identified in the transportation plan. Moreover, the projects included in the TIP and STIP should be consistent with investment priorities to achieve targets presented in the transportation plan and other performance management plans, such as highway and transit asset management plans, the SHSP, the public transportation agency safety plan, the CMAQ performance plan, and State freight plan.

Maryland DOT provides an example of connections between the State's transportation plan and projects in its STIP. The Maryland Transportation Plan (the MTP) lays out a strategic direction for the State's transportation investments, and identifies key goals and strategies. In recent years, MDOT has made an explicit connection between the projects in the agency's Consolidated Transportation Program (CTP) and the goals in the MTP. For each project in the CTP, each of the modal agencies of Maryland DOT must identify which of the MTP's goals (one or more) the project supports. As of 2010, Maryland DOT requires all localities submitting their requested list of projects to provide information on which MTP goals the project would support. By placing more responsibility on local governments to consider how their priorities support State goals, Maryland DOT intends for agencies throughout the State to consider the MTP as a plan that guides investment strategies and supports project selection.

Project Prioritization / Selection Criteria and Weighting

Performance measures and targets from the transportation plan can be used to support STIP or TIP project prioritization and selection processes. The process developed for projects can include multiple steps: 1) application process and preliminary screening; 2) project evaluation; and 3) project prioritization and selection. Similar to the process that may be used in developing the transportation plan, project prioritization for the STIP or TIP may involve ranking projects in order of their ability to help the State or metropolitan area cost-effectively reach each goal or performance targets and assigning weights to each goal or target.




As an example, the **Genesee Transportation Council** in Rochester, New York, used the goals and performance measures in its *Long Range Transportation Plan 2035* to develop TIP project evaluation criteria. Recognizing their high levels of cost-effectiveness, GTC dedicates funding directly to two priority projects: Implementation of the Highway Emergency Local Patrol (HELP) Program, which provides emergency roadside service to disabled vehicles; and funding for the Regional Transportation Operations Center. For the remainder of funding, GTC collaborated with NYSDOT Region 4 to solicit project proposals for the TIP from counties, municipalities and other eligible entities, and used a structured, performance-based process to evaluate project submissions. A Rater's Guide was developed to provide a consistent rating scale for TIP projects, using specific criteria to score how well a proposed project supports the region's goals and objectives. Funding is not divided up by mode or major category initially. Rather, all projects are ranked using a set of common criteria and mode-specific criteria to select the most beneficial projects for funding. Common criteria used for evaluating projects tie directly to the goals and performance measures in the LRTP and include: safety, mobility, community and economic development, system continuity and optimization, environment, and fiscal responsibility. Mode-specific project evaluation criteria are unique to the following types of projects: highway and bridge, public transportation, bicycle and pedestrian, system management and operations, and goods movement.¹⁴⁶

The **North Central Pennsylvania Regional Planning and Development Commission** developed a project prioritization process for its TIP, which used performance measures to score and rank projects (See case study in Section 11 for more information).

Assessing Anticipated Impact of the TIP or STIP

As discussed above, TIPs and STIPs provide an opportunity to link specific projects to long range plan goals, including those that may be more difficult to quantify, such as livability or economic development. The TIP or STIP can provide information, for example, about whether a specific project is expected to have a significant, moderate, or minimal impact on enhancing economic vitality of the region, as defined by the agency. Linking projects to a goal such as economic vitality provides the agency with the opportunity to track the level of investment it is making in projects that further economic vitality outcomes. In addition to using performance information to rank projects, the TIP or STIP could include an overall assessment of the program of projects in helping to achieve performance targets. As an example, several MPOs in New York State have conducted an assessment of energy and greenhouse gas implications of projects in their TIPs, based on

¹⁴⁶ Genesee Transportation Council, *Long Range Transportation Plan 2035* website (2011), <http://www.gtcmpto.org/docs/LRTP.htm> and *Transportation Improvement Program 2014-2017* (2013), <http://www.gtcmpto.org/Docs/TIP.htm>



guidance from New York State DOT. These calculations address both direct energy and emissions from motor vehicles, as well as the energy and emissions associated with construction of projects.¹⁴⁷

Support for Project Development

Beyond the TIP and STIP documents, identified performance outcomes in the transportation plan can also be used to support project development. Similar to the concept of linking planning-environment linkages, where environmental information from the planning process is used to help support decisionmaking in project development, the performance information in a transportation plan can be used to support project-level information about project purpose and need.


Moreover, it is important to recognize the significant role of system preservation in transportation decisionmaking. In many States and MPOs, 50 to 90 percent of funding is allocated to preservation and maintenance; therefore, new project selection makes up a relevantly limited portion of total funding. That means, however, that how that limited funding is spent is especially critical and emphasizes the importance of good business practice of coordinating improvements in relation to preservation (e.g. when road is resurfaced, add bike lane then). In many cases, agencies can support plan goals by integrating capacity, safety, or livability enhancements into preservation projects.

Planning Studies

Planning studies can provide important information to complex implementation strategies. Corridor or subarea plans are conceptual level planning studies¹⁴⁸, which focus on a particular corridor or sub-area where there is a transportation need. For projects or needs that have been identified in the transportation plan, a corridor or subarea study can be used to better refine the project or need. The results can then feed back into the transportation plan or more provide a more detailed design, concept and scope before the project is programmed into the STIP/TIP. A planning study can also be useful to help define problems or identify potential solutions to carry forward into the NEPA and project development process. A study can assist when funding is limited and decisions are needed as to what improvements can be made in a timely and cost-effective manner. A study is advised if the project is complex: for example, if the project is regionally significant, has environmental constraints, incorporates analysis of housing and

¹⁴⁷ FHWA, *A Performance-Based Approach to Addressing Greenhouse Gas Emissions through Transportation Planning* (2014).

¹⁴⁸ http://environment.fhwa.dot.gov/integ/corridor_nepa_guidance.pdf.



community development options, is costly or controversial, or has the potential for many alternatives that could be indistinct and confusing.

Future Directions and Planning Cycles

Transportation planning is an ongoing cyclical process. Performance-focused organizations will view each cycle as an opportunity to evaluate progress, refine analysis methods, and make changes to the planning process. As an example, in 2013, the ***San Diego Association of Governments (SANDAG)*** was in the process of establishing goals for its next MTP. The agency took a statistically significant survey of the public on the agency's existing goals, which provided the board with much better information about the public's priorities. SANDAG had 38 performance measures in the last plan, but wanted to reduce this figure by the next plan. By streamlining its current set of performance measures to a more manageable number, SANDAG was able to build on priorities identified in previous planning efforts while making necessary changes to enhance its performance-based planning process.

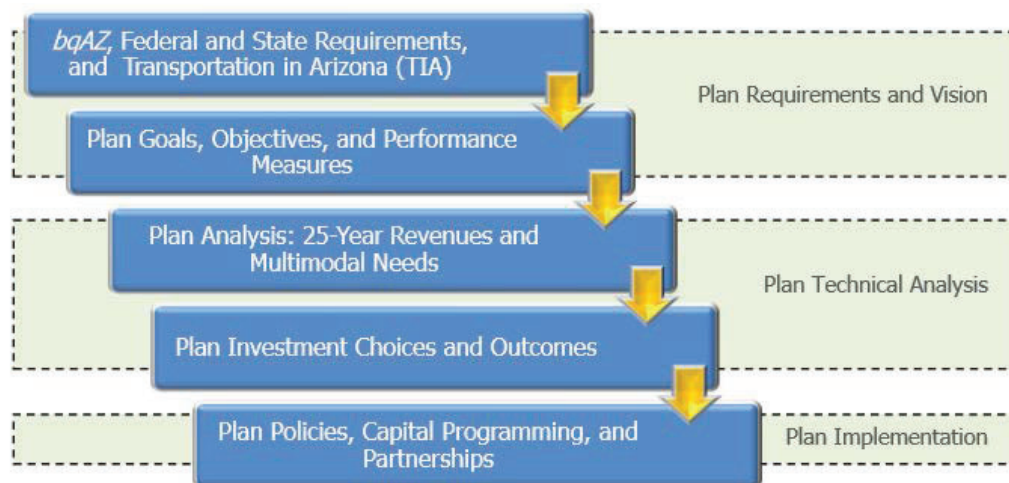
Planners should also avail themselves of information generated during previous plan cycles and information generated during the development of other performance-based documents. Over multiple planning cycles, more reliable information is generated and more accurate analysis methods are developed.

11. Case Studies

Case Study: Arizona Department of Transportation - What Moves You Arizona: 2010-2035 Long-Range Transportation Plan

In 2011, the Arizona Department of Transportation (ADOT) completed its statewide long-range plan, *What Moves You Arizona*, with a horizon year of 2035. The LRP provides strategic direction to guide future investments; it does not examine or recommend specific projects. The plan takes a performance-based approach by documenting existing conditions and future trends that could influence system performance and investment needs; defining State transportation system goals, objectives, and performance measures that reflect input from stakeholders and partner agencies; assessing future needs and anticipated revenues; considering programmatic investment choices to illustrate likely future system performance under different investment mixes; and establishing a preferred investment option that is based on a realistic revenue forecast (fiscally-constrained). The plan builds on the comprehensive 2050 land use and multimodal transportation vision developed through the *Building a Quality Arizona (bqAZ)* long-range planning effort. *Building a Quality Arizona* is a statewide planning effort to integrate transportation, land use, community, and economic development planning and identify long-term needs and potential funding sources.¹⁴⁹

What Moves You Arizona was developed based on the following “Building Blocks,” with public and stakeholder involvement at each key step of its process:



Source: Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011), Page 14.

¹⁴⁹ Pima Association of Governments, 2040 Mobility Matters fact sheet, *Building a Quality Arizona*.

Overview of Plan

What Moves You Arizona provides an in-depth review of Arizona’s transportation planning decisions and how they were reached. The organization of the plan generally follows a standard transportation planning process. The plan’s chapters are:

1. Executive Summary
2. Plan Development
3. Goals, Objectives, and Performance Measures
4. Multimodal Needs
5. Transportation Revenues
6. Investment Alternatives and Outcomes
7. Considerations for Plan Implementation

Outreach


Arizona DOT worked to ensure that a wide array of perspectives were considered in developing *What Moves You Arizona*. Arizona DOT conducted extensive public outreach to engage participation in determining goal plans. A formal public participation plan was developed in 2009 to guide the outreach process. The Councils of Government and metropolitan planning organizations in the State helped to design the plan, which was also open to public comment.

The plan focused on public involvement during two key phases: Goals and Objectives and Alternative Investment Choices. Facebook, surveys, videos and radio, TV, and newspaper advertisements were all used to engage and inform the public about participating in the process. A survey was distributed to collect community input in the goals and objectives for the LRP and workshops with interest groups were conducted to review and discuss goals and objectives.¹⁵⁰

Visioning

“In Phase One of ADOT’s planning process — the transportation vision — we take the approach of the sky is the limit. If money was no object, what would Arizona’s transportation future look like? No fiscal restraint means everything is on the table. In 2008 and 2009, ADOT worked with community members and organizations throughout the State to develop the transportation vision by reviewing the needs for the next 40 years. This vision was called the Building a Quality Arizona (bqAZ) Statewide Transportation Planning Framework and was established with no fiscal

¹⁵⁰Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011).



constraints. The transportation vision for the State sets the comprehensive foundation for other plans that are fiscally constrained.”¹⁵¹

Goals, Objectives, and Performance Measures

According to *What Moves You Arizona*, the goals, objectives, and performance measures of ADOT’s plan form a performance-based framework that is “the foundation for ADOT’s accountability to its partners, stakeholders, and the public.”¹⁵² ADOT and its partners developed eight plan goals through a process that began with *bqAZ*’s Vision and Guiding Principles. The *bqAZ* framework presented a multimodal transportation system that recognized and strengthened the relationship between land use and transportation by connecting activity and employment centers. Several of the goals are directly drawn from *bqAZ* Guiding Principles. ADOT’s staff worked with LRP development teams, the public, stakeholders, and its policy committee to review, revise, and vet the plan’s goals and objectives.

The Arizona LRP also recognizes that many of the goals (e.g., support economic growth, link transportation and land use, improve mobility and accessibility) are the responsibility of many public and private partners, so the plan discusses the role that ADOT itself expects to play. For instance, under the goal to “support economic growth,” ADOT’s role is to develop and operate a State Transportation System that provides predictable freight and people movement to create/retain jobs and support a competitive and thriving economy.

For each goal, a high-level objective was developed. For example, the objective “Be a good steward of Arizona’s natural, cultural, and environmental resources while improving and maintaining the transportation system” was developed to support the plan goal “Consider natural, cultural, and environmental resources.”¹⁵³

Performance measures for the LRP were built from existing ADOT measures and through collaboration and coordination with a number of committees. In selecting the performance measures, ADOT and its partners considered the following:

- “State statutory requirements for specific measurement categories;
- Experiences and approaches used in other States;
- An emphasis on measuring system performance changes that are influenced by plan-level resource allocation decisions (as opposed to program and project-level decisions);
- The need to use “indirect” or “proxy” measures in some areas due to the inability to conduct or support direct measurement of outcomes and impacts; and

¹⁵¹ Arizona DOT, Planning to Programming website.

¹⁵² Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011).

¹⁵³ Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011).

- A focus on system results where ADOT can have a direct impact or influence.”¹⁵⁴

The performance measures developed for ADOT’s LRP were intended to be used as the basis for lower-level performance measures for programs and projects that connect the transportation plan’s performance-based planning framework to capital investments. The measures were also to be used for performance monitoring to track progress toward the plan’s goals and objectives. Targets were not established for the objectives or performance measures in the LRP; rather, the plan explains that performance trends will be helpful in gauging the effectiveness of investments. The first six goal areas are outcome-oriented in nature and are associated with outcome-based performance measures. The LRP explains that the last two goal areas will have process-oriented performance measures developed during plan implementation. The first two goal areas and their associated measures are shown in the figure below.


Improve Mobility and Accessibility
- Percentage of roadway miles at acceptable congestion levels – Applies volume to capacity ratios (V/C) to different road functional classes to assess how well the overall highway system will accommodate current and future travel demand - an unacceptable congestion level may be one where mobility has been degraded to the point where the user no longer feels comfortable, safe, and satisfied with the transportation service provided
- Average speed during peak periods in urban areas – Assesses of the quality of travel in urban areas
- Total annual (or average daily) hours of delay – Provides an indication of how well the system is being operated (particularly in urban areas)
- Amount of rural highways “improved” – Provides a means to compare how different investment strategies will lead to improved transportation system access
System Preservation and Maintenance
- Percentage of State System lane miles with “fair” or better pavement conditions – describes anticipated pavement conditions for the overall systems based on widely accepted engineering standards
- Number of structurally deficient bridges – Identifies how many bridges on the State Highway System cannot be maintained above a specified federal condition standard
- Percent of required maintenance spending – Assesses the degree to which current maintenance levels will be sustained under different system expansion assumptions
- Percent of rural transit preservation needs met – Provides an output-based assessment of how future spending will meet estimated needs

Source: Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011), Page 31.

Identifying System Needs

Arizona DOT used HERS-ST and NBIAS to estimate investment needs on the existing system, and then used sources including regional long-range plans to identify system expansion needs. In total, the analysis estimated needs associated with highway preservation, modernization, and expansion to total \$43.3 billion over the 25-year plan horizon. In addition, ADOT estimated needs for public transportation, including urban “state-of-good repair” needs, urban expansion needs, and rural

¹⁵⁴ Arizona DOT, *What Moves You Arizona: 2010-2035 Long-Range Transportation Plan* (2011).



preservation and expansion needs, as well as needs associated with freight and passenger rail and aviation. In addition to capital needs, ADOT also estimated the operating costs associated with highway and public transportation system operations over the Plan timeline, including non-capital system traffic management operations and routine maintenance. In total, the result suggested a cost of \$88.9 billion to address these needs. ADOT also examined a plan “vision level” needs assessment that quantified the cost associated with the first 25 years of the State’s *bqAZ* vision, which included more significant highway expansion/maintenance, bus and passenger rail expansion and modernization, bicycle and pedestrian improvements, and aviation improvements. This analysis resulted in an estimate of \$250.1 billion in needs.

Investment Decisions

The Arizona transportation plan examined what it calls “alternative investment choices” or AICs, which allocated baseline revenues across three investment types: preservation, modernization, and expansion. The AICs in the Arizona transportation plan address alternative ADOT capital programming priorities, and do not address specific projects.¹⁵⁵ Specifically, two AICs were designed to assess two starkly different investment choices and their implications on performance outcomes: 1) a “highway focus” alternative (AIC A), reflecting a preservation-oriented investment approach with limited system expansion; and 2) an “expanded travel choices” alternative (AIC B), shifting funding from preservation to expansion, including to non-highway investments such as transit, rail, aviation, and other modes. The outcomes of the alternatives were analyzed in terms of performance measures that directly reflect the transportation plan’s goals and objectives. AIC A and B were assessed with respect to the 25-year needs, ADOT priorities, and stakeholder input. The analysis resulted in the Recommended Investment Choice that is a combination of the two alternatives enabling preservation of the current system and expanded travel choices.

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¹⁵⁵ Arizona DOT, What Moves You Arizona: 2010-2035 Long-Range Transportation Plan (2011).

Case Study: Metropolitan Transportation Commission (MTC), San Francisco Bay Area – Plan Bay Area

Background

The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco region. The organization is responsible for planning, coordinating, and financing for transportation in the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.

In 2010, MTC, together with the Association of Bay Area Governments (ABAG), the Bay Area Air Quality Management District (BAAQMD), and the Bay Conservation and Development Commission (BCDC), formed a joint initiative to foster a more sustainable future. This initiative, termed OneBayArea, creates a forum for coordinating efforts to protect and preserve the natural environment and human health among the region's nine counties.




Source: MTC.

Plan Bay Area, the region's most recent long range plan, passed in 2013. Plan Bay Area is the first plan to be developed jointly and approved by both ABAG and MTC. It is also the first plan to integrate long range transportation planning with housing and land use strategies through the year 2040. Developing an integrated long range plan ensures that Plan Bay Area meets both the region's priorities and the requirements included in California's 2008 Senate Bill 375 (SB 375), which sets regional reduction targets for greenhouse gas emissions from cars and light trucks. SB 375 also requires each of the State's metropolitan areas to develop a Sustainable Communities Strategy (SCS) that lays out a plan for achieving the regional GHG reduction targets, accommodates population growth, and promotes compact development.

A History of Performance-Based Planning

Plan Bay Area is the latest in a series of four regional long range plans that incorporate performance measures to track the progress toward achievement of key objectives not only for greenhouse gas reductions, but also for other quality of life benefits.

- ▶ **2001 Regional Transportation Plan (for year 2025).** As part of the Regional Transportation Plan (RTP) for 2025, MTC developed 11 performance measures under the Plan's six goal



areas. The development of appropriate performance measures was the result of a lengthy process that involved a regional research institution, a stakeholder working group with representatives from the environmental community, business community, and other relevant transportation partners, and internal MTC committees. In the 2001 Performance Assessment that accompanied the RTP, the agency used measures to assess the potential performance of the system under the five alternatives developed as part of the Draft Environmental Impact Review and included in the 2025 RTP.

- ▶ **Transportation 2030 (2005 Regional Transportation Plan).** As part of the 2030 RTP, MTC expanded on its performance evaluation of investment alternatives by utilizing performance measures to evaluate the performance of more than 400 individual projects. To conduct such a large and detailed analysis, MTC developed performance measures that mapped to a new set of corridor objectives that were, in turn, closely tied to the Plan's goals. The plan's six broad goals were largely carried over from the previous RTP. To develop the objectives and measures, MTC established a committee comprised of partner transportation agencies, members of the MTC Advisory Council, and other interested stakeholders. The committee adopted 28 performance measures that could be grouped into two categories: those that address future needs for individual improvements relative to corridor objectives; and those that assess the impacts of groups of projects on travel within a corridor. Each of the 400 projects included in the evaluation underwent a project needs assessment, a corridor benefits analysis, a cost assessment, and one additional evaluation if the project was related to freight. Ultimately, the evaluation informed which projects were selected for inclusion in Transportation 2030.
- ▶ **Transportation 2035 (2009 Regional Transportation Plan).** In the 2009 Plan, MTC built off the lessons learned during the development of Transportation 2030 and underwent a 3-step performance assessment process. During the first step, a "What If?" visioning conducted early in the long range planning process, MTC determined that, based on expected future trends and varying investment scenarios, the region would adopt a series of highly specific and ambitious performance objectives that were intended to serve as benchmarks to measure the region's progress. For the first time, MTC contextualized seven goal areas for the RTP within the "three E's" of sustainability: economy, environment, and equity. The 11 specific performance objectives that were included in the plan were each adapted from State plans and legislation. They were used in the second phase of the performance assessment to conduct quantitative evaluations of projects (comparing costs and benefits), and qualitative assessments that evaluated how the projects addressed Transportation 2035's goals. In the final phase of the assessment, MTC evaluated how well the plan met the adopted performance objectives.

Performance-Based Planning in Plan Bay Area

Building off the legacy of Transportation 2035 and the two preceding long range plans, Plan Bay Area establishes seven broad integrated goals and ten associated performance targets. A clear evolution from the preceding plans, the performance targets established in Plan Bay Area were used to evaluate both investment scenarios and projects, and were utilized to assess projects both quantitatively and qualitatively. The Plan Bay Area performance targets, which were also contextualized within the “three E’s,” were selected over a 5-month process driven by MTC’s Ad Hoc Committee on Performance Measures. The first two targets are required under SB 375, while the remaining eight targets were developed through a collaborative process that relied on the input of local stakeholders, equity, environment and business advocates, and members of the public. Each of the targets aims to achieve the sustainability mission of OneBayArea and the requirements in SB 375.

Table 11-1. Adopted Plan Bay Area Performance Targets

Goal/Outcome	Performance Target
Required by SB 375	
Climate Protection	Reduce per-capita CO ₂ emissions from cars and light-duty trucks by 15% by 2035. <i>Source: CARB, as required by SB 375</i>
Adequate Housing	House 100% of the region’s projected growth by income level without displacing current low-income residents. <i>Source: ABAG, as required by SB 375</i>
Voluntary	
Healthy and Safe Communities	Reduce premature deaths from exposure to particulate emissions: <ul style="list-style-type: none"> • Reduce premature deaths from exposure to PM_{2.5} by 10%. • Reduce PM₁₀ emission by 30%. • Achieve greater reductions in highly impacted areas. <i>Source: Adapted from Federal & State air quality standards by BAAQMD</i>
	Reduce by 50% the number of injuries and fatalities from all collisions (include bike and pedestrian). <i>Source: Adapted from California State Highway Strategic Safety Plan</i>
	Increase the average daily walking or biking per person for transportation by 70% (for an avg. of 15 min/person/day).

	<i>Source: Adapted from U.S. Surgeon General's guidelines</i>
Open Space and Agricultural Preservation	Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries). <i>Source: Adapted from SB 375</i>
Equitable Access	Decrease by 10% the share of low-income and lower-middle income residents' household income consumed by transportation and housing. <i>Source: Adapted from Center for Housing Policy</i>
Economic Vitality	Increase gross regional product by an average annual growth rate of approximately 2% (in current dollars). <i>Source: Bay Area Business Community</i>
Transportation System Effectiveness	Increase non-auto mode share by 10% and decrease automobile VMT per capita by 10%. <i>Source: Adapted from Caltrans Smart Mobility 2010</i>
	Maintain the transportation system in a state of good repair: <ul style="list-style-type: none"> • Increase local road pavement condition index to 75 or better. • Decrease distressed lane-miles of state highways to less than 10% of total lane-miles. • Reduce share of transit assets past their useful life to 0%. <i>Source: Regional and state plans</i>

Source: Plan Bay Area.

Developing Targets

As in the previous performance-based plans, the performance targets were designed to align with the regional long range goals. An evolution of the goals developed in each of the four performance-based long range plans is presented in the table below (goals are listed in the order in which they are presented in each plan).

Table 11-2. Evolution of Regional Transportation Plan Goals

2001 Plan Goals	Transportation 2030	Transportation 2035	Plan Bay Area
1. Mobility of People & Freight	1. A Safe & Well Maintained System	1. Maintenance & Safety	1. Climate Protection
2. Safety	2. A Reliable Commute	2. Reliability	2. Adequate Housing
3. Economic Vitality	3. Access to Mobility	3. Freight	3. Healthy & Safe Communities
4. Community Vitality	4. Livable Communities	4. Clean Air	4. Open Space & Agricultural Preservation
5. The Environment	5. Clean Air	5. Climate Protection	5. Equitable Access
6. Equity	6. Efficient Freight Travel	6. Access	6. Economic Vitality
		7. Livable Communities	7. Transportation System Effectiveness

MTC’s performance measure selection and target setting processes are conducted in tandem. Many of the measures and targets in the plan were adapted from stakeholders’ plans (such as Caltrans’ SHSP) following a process in which MTC ensured that measures (a) align with plan goals and (b) correspond with targets that can be forecasted and validated using the agency’s models. Below are the five criteria MTC developed to select individual measures and their corresponding performance targets. The first four criteria apply most directly to the selection of performance measures, while the final criterion reflects the agency’s process of setting targets based on reasonable assumptions and data.

- Targets should be able to be forecasted well using the agency’s models
(Expected performance can be predicted with reasonable accuracy)
- Targets should be able to be influenced by regional agencies in cooperation with local agencies
- Targets should be easy for the general public to understand
- Targets should address multiple areas of interest
(The target should address more than one of the “three E’s” of sustainability)
- Targets should have some existing basis for the long-term numeric goal
(Targets have a basis in literature and analysis and are not arbitrarily determined)

Three additional criteria were established to identify the set of measures and targets:

- The total number of targets selected should be relatively small
- Each of the targets should measure distinct criteria
- The set of targets should provide some quantifiable metric for each of the identified goals

MTC's Ad Hoc Committee on Performance Measures considered more than 90 potential performance targets for inclusion in Plan Bay Area, and ultimately settled on ten that capture the needs of a broad set of stakeholders and, unlike in years past, focus on societal benefits that can be achieved through a combination of transportation and land use policies. As a result of this interdisciplinary, outcome-driven effort, while previous plans were generally structured around traditional transportation measures, Plan Bay Area includes many targets that aim to improve affordable housing, public health, and economic vitality.

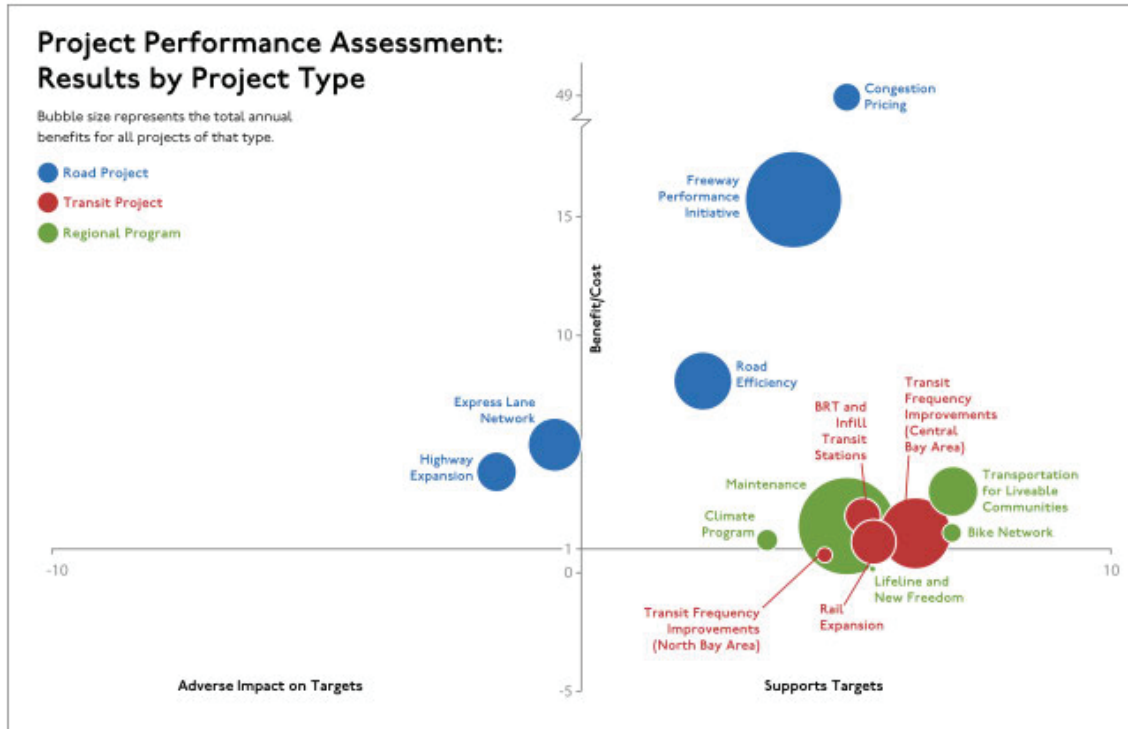
Assessing Performance as Part of Plan Development

As performance-based planning has evolved in the San Francisco region, the utility of the performance measures has expanded. In 2001, performance measures were basic and were only used to assess the various alternative scenarios proposed in the Draft Environmental Impact Review. Over time, the performance measures have taken on a more important role in determining not only preferred scenarios, but also specific investments in individual transportation projects.

The performance-based planning process conducted as part of Plan Bay Area was done in seven key steps:


- 1. Transportation Project Performance Assessment (June-November 2011).** In this phase of the performance assessment, MTC and ABAG first had to develop and adopt performance targets. The setting of targets was based on the region's broad sustainability objectives. Once targets were set, MTC was able to conduct a project level assessment to determine the extent to which individual projects support the regional objectives (qualitative assessment), and to compare projects for cost-effectiveness (quantitative assessment). Once a complete review of projects was complete, MTC developed charts to depict the performance of various projects (and project types), and to select projects for inclusion in the Plan. The figure below shows the benefit/cost and target support findings by project type.

Figure 11-1: Project Performance Assessment Results, incorporating Support for Targets and Benefit/Cost



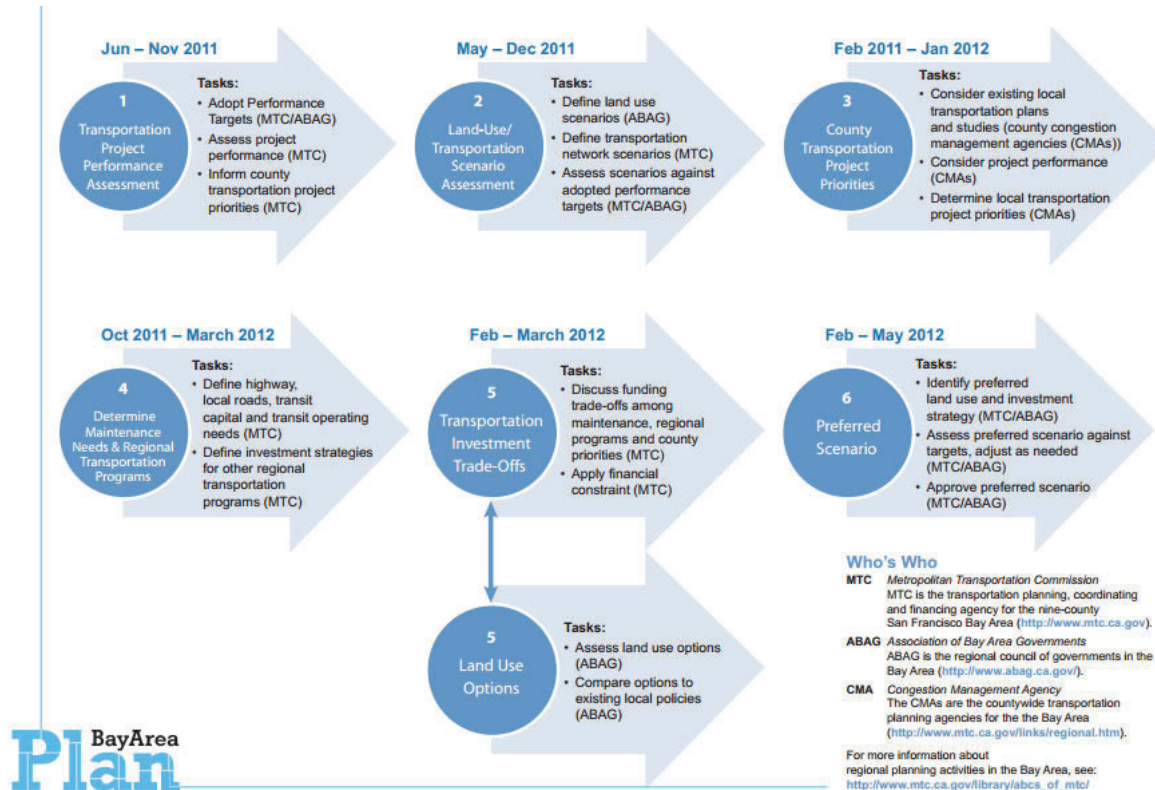
Source: Plan Bay Area Performance Assessment Report, Page 53.

- 2. Land-Use/Transportation Scenario Investment (May-December 2011).** As the project performance assessment was underway, MTC and ABAG developed scenarios to compare varying combinations of investments and land use patterns. The land-use scenarios (developed by ABAG), and the transportation network scenarios (developed by MTC) were assessed against the performance targets to identify where action would need to be taken to meet the adopted targets.
- 3. County Transportation Project Priorities (February 2011-January 2012).** During this phase of assessment, MTC worked with the Congestion Management Agencies (countywide transportation planning agencies) to consider local plans, studies, and project performance, and to determine local project priorities.
- 4. Determine Maintenance Needs & Regional Transportation Programs (October 2011-March 2012).** In determining maintenance needs and regional programs, MTC defined the needs of the highway system, local roads, and transit operating and capital needs. Simultaneously, investment strategies were defined for other regional transportation programs.

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- 5. Transportation Investment Trade-Offs & Land Use Options (February-March 2012).** In phase five, MTC discussed transportation funding trade-offs, and applied financial constraints. The performance assessment was used to identify high- and low-performing projects. Because of fiscal constraints, “low performing” projects were subject to a “compelling case process” in which a compelling argument had to be made for why they should be included in the plan. A handful of “low-performing” projects were included in the plan because they were found to provide significant benefits to disadvantaged communities, which supported the region’s equity goals. Also during this phase, ABAG assessed the varying land use options and compared them to existing local policies.
 - 6. Preferred Scenario (February-May 2012).** In the final phase of the assessment, MTC and ABAG together identified a preferred land use and investment strategy, assessed it against targets, and approved a final preferred scenario to align with the targets.
 - 7. Environmental Review and Final Approval (June 2012-July 2013).** After the preferred scenario was selected, it went through a California Environmental Quality Act (CEQA) review to ensure the consideration of reasonable alternatives to the plan. Upon completion of that review, MTC’s board approved the plan.

The figure below presents a flow chart of the first six steps in MTC’s process (prior to the CEQA review).

Figure 11-2: Plan Bay Area Process and Timeline



Source: One Bay Area.

Planning for the Next Long Range Plan

In considering the development of future long range plans, MTC is focused on improving its analysis capabilities and process in three areas.

- ▶ **State of Good Repair (SGR) analysis** – MTC is identifying and pursuing opportunities to do more in-depth analysis related to the condition of its key transportation assets. Because a large percentage (nearly 90 percent) of the MPO’s current budget is spent on maintaining existing systems, having the ability to do greater SGR analysis will allow MTC to better understand the benefits of maintaining existing infrastructure.
- ▶ **Integration of MAP-21 targets** – Like most transportation agencies, MTC is already considering the actions it can take to integrate the targets it sets per MAP-21 requirements into its next RTP. Because the MAP-21 targets will most likely go into effect in 2015-2016, MTC must identify opportunities to align that target-setting process with its RTP process.

- ▶ **Travel model upgrades** – MTC is in the process of upgrading its activity-based travel demand model to better capture information about travel patterns in the Bay Area region. These upgrades will likely include: using smaller travel zones to capture more bicycle and pedestrian trips; incorporating additional information on the road and transit network, which will allow for more detailed analysis of the impacts of suburban growth; and improved benefit-cost analysis to allow for a benefits-cost assessment that spans multiple years throughout the life of the plan.

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What is Notable?

Plan Bay Area's inclusion of performance-based goals and targets make it a model for regional performance-based long range planning.

Effective interagency collaboration in identify performance goals, objectives, and targets. MTC, ABAG, and their partners collaborated to conduct extensive research on the future needs for the region, based on trends related to changing demographics (as baby boomers continue to age, and racial and ethnic diversity increases), a growing population, and an increased demand for transit oriented development. The adopted targets reflect the broad base of stakeholders consulted to select performance measures in Plan Bay Area. Each of the targets included in table 1 includes a source that shows the varying interests reflected in the final set.

Effective integration of regional land use, housing, and equity goals. The seven goals and 10 associated performance targets established in Plan Bay Area are unique because they not only aim to comply with requirements included in SB 375, but they also address the region's broader long-range sustainability objectives (the 3E's: economy, environment, equity). While there is widespread recognition of the overlapping influences transportation, land use, housing, and equity have on each other in shaping regional dynamics and transportation patterns, many agencies have not yet developed regional plans that effectively integrate policies for all of these areas.

Aspirational and realistic targets. Plan Bay Area uses both aspirational and realistic performance targets to express both the magnitude of desired changes as well as likely outcomes based on fiscal constraints. Both types of targets are informative for the general public and decision-makers. As an example, MTC coordinated with the State in establishing the requirement that the Bay Area reduce per-capita CO₂ emissions from cars and light-duty trucks by 15% by 2035 to ensure that struck a balance between being ambitious and realistic.

Attainable scale. One of the most challenging components of developing a performance-based plan is identify and including the right number of performance targets to be achieved. The first criteria that MTC identified for their set of targets was that the "total number of targets selected should be relatively small." Given its extensive analytical capabilities, MTC could have adopted additional performance targets. However, the agency prioritized the need to focus both its and the public's attention on the most important issues.

Case Study: Michigan Department of Transportation – 2035 Long Range Transportation Plan

Background

The Michigan Department of Transportation (MDOT) is responsible for nearly 10,000 miles of highway, over 4,500 bridges, railroad tracks, nonmotorized trails, and four airports.¹⁵⁶ It administers several State and Federal transportation programs and conducts transportation planning for the entire State, including all modes of transportation. MDOT is overseen by the State Transportation Commission, a six-member body appointed by the Governor with responsibility for creating policy for all State transportation programs. The State Transportation Commission is ultimately responsible for the development and implementation of the Michigan’s transportation plan.¹⁵⁷

The MDOT mission is “Providing the highest quality integrated transportation services for economic benefit and improved quality of life.”¹⁵⁸ This is woven into MDOT’s performance-based approach to planning.

A History of Performance-Based Planning

Michigan DOT (MDOT) has a 17-year history of using performance-based approaches to develop programs and manage its investments. MDOT has advanced and expanded its performance-based methods over that period. MDOT’s performance-based planning evolution reflects a focus on accountability to the public, transparency, and strategic investment decisionmaking, especially as transportation needs far outstrip available funds. Performance-based planning at MDOT began in 1997 when the State Transportation Commission set pavement and bridge condition goals with targets for the State’s trunkline highway system. The first system performance measures tracked by MDOT were related to roadway pavement condition, bridge condition, and safety.¹⁵⁹


The next major step in performance-based planning for MDOT was the development of its first performance-based plan in 2005. The *MI Transportation Plan Moving Michigan Forward 2005 – 2030 Long-Range Transportation Plan* (2030 LRP) established goals, objectives, and 19 related core performance measures and seven subordinate measures to allow MDOT to track the State’s progress toward desired plan outcomes. MDOT followed the 2030 LRP with its initial

¹⁵⁶ A Citizen’s Guide to MDOT (2013).

¹⁵⁷ About the State Transportation Commission Webpage (2014).

¹⁵⁸ MDOT Strategic Plan Overview (2010).

¹⁵⁹ 2035 State Long-Range Transportation Plan (2012).



Transportation System Condition Report in 2007 which reports on measures associated with the goal areas of the long-range plan. The report offers a snapshot of progress toward the plan’s goals and is updated semi-annually.¹⁶⁰ In 2010, the Governor of Michigan began the *Mi Dashboard* online feature to provide the public with an easy way to view the performance of the State in several key areas such as economic strength.¹⁶¹ Mi Dashboard includes an Infrastructure Dashboard, which displays performance measure values and a “thumbs up” or “thumbs down” evaluation of progress on each measure. The Infrastructure Dashboard displays transportation-related measures in the areas of safety, mobility, accountability, infrastructure conditions, and economic growth. MDOT began to offer its *Michigan Transportation Scorecard* in 2011 to provide the public with a simple way of understanding performance trends. This scorecard also identified performance targets or desired trends for all of the performance measures. Many of the measures and targets in the scorecard are also in the in-depth, updated *Transportation System Condition Report*. In 2012, the Michigan developed the *2035 State Long-Range Transportation Plan (2035 LRP)* as an update to the 2030 plan. The 2035 plan reaffirmed much of the 2030 plan, and provided a few necessary updates. It retained the performance-based essence of the 2030 plan and incorporated by reference the *Transportation System Condition Report* and the *Michigan Transportation Scorecard*.

Performance-Based Planning at Michigan DOT

Michigan DOT uses performance-based planning and programming as a tool to make the most efficient and effective use of available funds to meet the State’s most critical transportation needs.¹⁶² MDOT recognizes that it needs the public’s confidence in its activities to maintain or increase funding for its programs, and uses performance-based planning to help build that confidence. MDOT has monitored the public’s priorities and needs through regular surveys, referred to as “Attitudes and Perceptions of Transportation.” This helps MDOT ensure that its goals, activities, and investments are aligned with the priorities of the public. Additionally, MDOT provides multiple performance measure dashboards aimed at a public increasingly concerned about government efficiency.


OVERVIEW OF PLAN

MDOT’s focus on communicating with the public extends to its 2035 LRP. The plan is brief (approximately 20-pages long), and provides highlights of MDOT’s transportation planning process

¹⁶⁰ Transportation System Condition Report Webpage (2014).

¹⁶¹ Mi Dashboard Webpage (2014).

¹⁶² FHWA, Performance Based Planning and Programming Newsletter, *Performance Based Planning and Programming in Michigan: Cooperation, Coordination, and Collaboration*.



and its overarching strategic direction and priorities. The plan is presented in a way that is easy for the public to understand, and it contains links to reports and white papers for those readers interested in a more in-depth understanding. Individual modal plans are associated with the LRP, including aviation, freight, and rail.

The brief plan is presented as a revision to the 2030 LRP. It includes the following main sections:

- MI Transportation Plan 2035 Introduction/Overview
- Michigan’s Transportation Challenges
- Continued Support for Components of the Long Range Plan
- Michigan’s Transportation Goals
- Strategies to Achieve the Goals
- Conclusion

The brief 2035 LRP document, in conjunction with the 2030 Transportation Plan: *Moving Michigan Forward*, is considered to be the State’s current long-range plan. When combined with the 2030 LRP and the supporting reports referenced in the 2035 plan, Michigan’s total plan is performance-based. The LRTP is a policy document that provides the overall direction for transportation planning and programming decisions at all levels.


Michigan DOT’s 2035 LRP is supported by more than 30 additional resources. The supporting documents include studies that feed into the LRP, as well as analyses of how the plan will impact Michigan. The supporting resources include white papers on specific modes or issues, such as aviation, regional transportation planning, and intercity bus; relevant planning documents, such as the *Corridor and Borders Report*, a study on transit use in Michigan, and a study of intercity rail; and several studies on the LRP’s impacts on security, environment, and land use.¹⁶³

The supporting materials that are most crucial for the performance-based aspects of the plan are the *Goals, Objectives, and Performance Measures* reports for the 2030 LRP and the 2035 LRP. The white paper for the 2030 LRP defines the plan’s objectives, as well as the 19 core and seven subordinate performance measures. The process and decision criteria for selecting the performance measures are thoroughly documented in the report. The measures are related to the *Transportation System Condition Report* and *Michigan Transportation Scorecard*, both of which provide information on how well the State is performing.

OUTREACH

There was a strong emphasis on public involvement during the development of the 2035 LRP, although less comprehensive than the outreach conducted in the development of the 2030 plan.

¹⁶³ 2035 MI Transportation Plan Technical Report White Papers webpage.



The public participation plan adopted prior to the 2035 LRP process contained fourteen elements, including environmental justice (EJ) outreach and tribal coordination. Meeting locations were arranged based on population centers with EJ groups. Interpreters for Spanish and Arabic were made available. Webinars played an important role during the development process. The stakeholder groups involved in the development of the 2035 plan included committees related to economic development, asset management, Complete Streets, engineering operations, a funding task force, and the Michigan Transportation Research Board. Overall, MDOT conducted interviews with over 2,000 individual households, held three webinars, and executed 15 public meetings for comments on the plan revisions. MDOT strives to ensure that all stakeholders know that MDOT wants to hear from them.

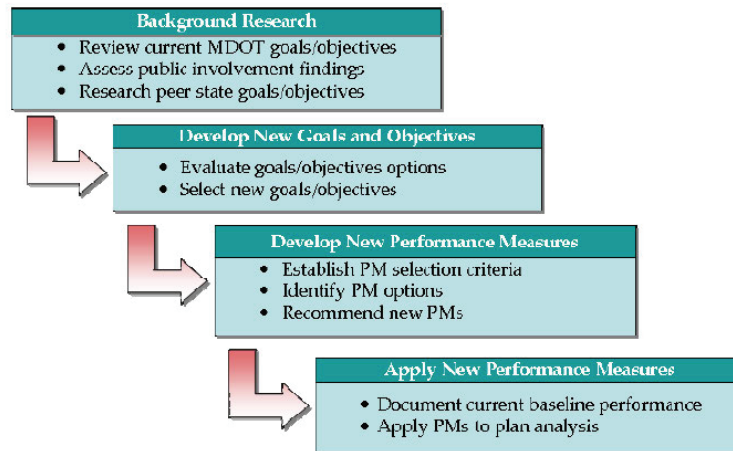
VISIONING

MDOT undertook a visioning process to inform development of the 2030 plan. This visioning process included working with a futurist, EJ outreach, tribal coordination, and other activities. The futurist was brought in to help convey what the region will look like over the next 50 years. The visioning process included the use of scenario planning where scenarios were developed around different potential futures. Three potential future scenarios were built based on a theme: high oil prices, agrarian-focused economy, and system modernization. Stakeholders examined which transportation strategies would be used in each of these cases and found that maintaining the transportation assets or infrastructure was a common strategy that would be necessary in each of the imagined futures. This helped the planners to identify asset management as priority investment area.

GOALS AND PERFORMANCE MEASURES

The process for developing goals, objectives, and performance measures for 2030 LRP followed four basic steps. The four steps are illustrated in the diagram below from the 2030 LRP *Goals, Objectives, and Performance Measures Report*. The goals, objectives, and performance measures of the 2030 LRP were included by reference into the 2035 LRP, an update of the previous plan. The figure below shows the process that MDOT used to develop goals, objectives, and performance measures in the 2030 LRP.

Figure 11-3: Michigan DOT Performance Measure Development Process



Source: Michigan DOT, 2005-2030 Goals, Objectives, and Performance Measures Report (2006).

Michigan's 2035 LRP has four goal areas that were retained from the 2030 LRTP:

- System Improvement
- Efficient and Effective Operations
- Safety and Security
- Stewardship (includes system preservation, environmental protection, and fiscal responsibility)

Each goal has at least one objective for each element of the MDOT mission statement: integration, economic benefit, and quality of life. These three categories were intentionally chosen to provide a tight link between the State's long-range plan and the agency's mission statement.

The goals in the LRP were developed with the help of a Customers and Providers Committee working with MDOT staff to review and reassess the goals of the previous State transportation plan. In addition, current and emerging agency priorities, MDOT's mission, Federal planning factors, and the preferred public vision were taken into account. The MDOT Performance Measures Sub Team, a subset of the larger Michigan Transportation Plan Team, led the drafting of objectives for each goal. The team developed a simple strategic framework of goals and objectives that had the minimum number of goals and objectives that could still capture the State's direction for transportation improvements. As an example, the objectives for the goal of system improvement (as shown in the 2030 *Goals, Objectives, and Performance Measures Report*) are listed below:


Table 11-3. Recommended objectives for the 2030 LRP for reaching the plan’s goal of system improvement

Objective Category	Objectives
Integration	3.1 Expand intermodal connectivity and the number of modal options for freight and passengers.
	3.2 Address system bottlenecks and weaknesses to reduce congestion, enhance continuity, and improve modal connections.
Economic Benefit	3.3 Improve travel time reliability and predictability for passengers and freight.
	3.4 Modernize facilities to accommodate the efficient movement of people, goods, and services.
	3.5 Address congestion to reduce its cost to businesses and the state’s economy.
	3.6 Respond to the unique transportation needs of economic development opportunities.
Quality of Life	3.7 Expand transportation system access.
	3.8 Reduce delay.
	3.9 Employ context sensitive solutions to respond to the values that the public places on aesthetics, cultural resources, and natural landscapes.

Source: Michigan DOT, 2005-2030 Goals, Objectives, and Performance Measures Report (2006).

The MDOT Performance Measures Sub Team established 11 criteria to evaluate potential performance measures. These criteria were used to develop a “short list” of 36 potential performance measures. As outlined in the *2030 Goals, Objectives, and Performance Measures Report*, the criteria for short-listing a performance measure were:

- Current measure used by MDOT
- Data availability
- Analytic capability – MDOT’s capacity to conduct the data analysis necessary for the measure
- Clarity
- Public interest
- Control/causality – MDOT’s ability to impact the measured aspect of performance
- Value of measure in communicating something of importance to the public, stakeholders, and staff
- Ability of measure to support decisionmaking
- Use as an accountability tool
- System-wide or Statewide applicability
- Corridor level applicability



To narrow the pool of performance measures, the MDOT team developed a list of the top seven criteria:¹⁶⁴

1. Is the measure currently used by MDOT?
2. Is the measure in the current state long-range plan?
3. Does the measure indicate the level of achievement toward *MI Transportation Plan* goals?
4. Does the measure focus on one or more of the plan's emphasis areas – integration, economic benefit, and quality of life?
5. Do the measures adequately address a cross section of modes?
6. Is high quality data readily available to support the measure?

To be selected, a measure needed the following characteristics: data to support it, public interest in the measure, control by the State in affecting the measure, value in reporting on the measure, supported decisionmaking, and enhanced accountability. In the end, 19 core measures were included in the plan, with seven subordinate measures. The measures did not correspond one-to-one with the plan objectives and were instead organized as “overarching” or by mode. Baseline values were provided in the *Goals, Objectives and Performance Measures report* for as many measures as possible.

Since the development of the performance measures for the 2030 LRP, MDOT has developed a revised set of performance measures to broaden its view of the transportation system to include level of service, airport condition, transit fleet condition, and passenger rail service levels. These measures are documented in the 2010 Transportation System Condition Report that is updated on a semi-annual basis and is now titled the *Transportation System Measures Report*. In the report, the measures are directly associated with the LRP goal areas. The measures were developed internally to MDOT and focused on those measures that could be evaluated with existing sources of data. MDOT anticipates that the measures will change over the years, but will continue to ensure that the performance measures are aspects of performance that are supportive of the LRP goals.

TARGETS

During MDOT's evolution of performance-based planning, it established targets or “aims” for each of its measures as part of the *Transportation System Measures Report* referenced in the 2035 LRP. As an example, one aim in the report is to “Sustain 85% of all non-freeway bridges on the trunkline system in good or fair condition.”¹⁶⁵ The measures report includes safety performance targets from Michigan's Strategic Highway Safety Plan, such as “Reduce fatalities and serious injuries from

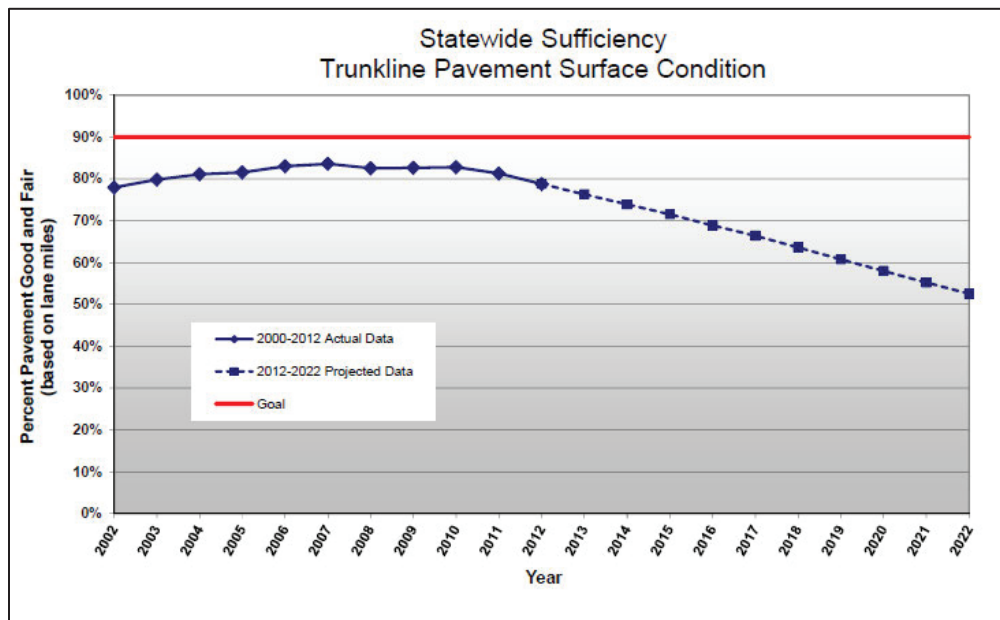
¹⁶⁴ MDOT, 2005-2030 Goals, Objectives, and Performance Measures Report (2006).

¹⁶⁵ MDOT, 2013 System Performance Measures Report (2014).

889 and 5,706 in 2011 to no more than 750 and 4,800 in 2016. This equates to a 3.4% reduction per year.”¹⁶⁶

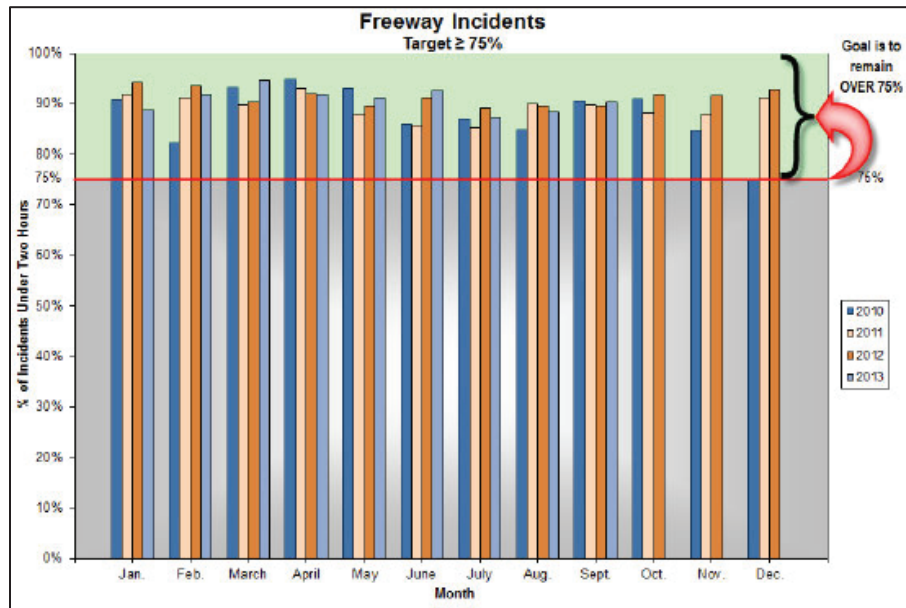
MDOT also graphically displays performance trends for most performance measures in comparison to the target performance levels. Two example graphs are shown below from the 2013 *Transportation System Measures Report*. The line graph illustrates the past, current, and projected future levels of pavement surface condition against the 90% target for that measure. The bar chart shows the percent of freeway closures due to incidents that were under 2 hours. The chart clearly indicates how well the State is performing against the 75% goal.

Figure 11-4. Sample Displays of Performance Trends in Relation to Targets from Michigan DOT



Source: Michigan DOT, 2013 System Performance Measures Report (2014).

¹⁶⁶ MDOT, 2013 System Performance Measures Report (2014).



Source: Michigan DOT, 2013 System Performance Measures Report (2014).

INVESTMENT DECISIONS

During the 2030 LRP development, MDOT performed an investment scenario analysis to identify the level of funding that would be needed to achieve the plan's visions. The four scenarios established in the 2005-2030 State Long-Range Plan were:

- ▶ "Business as Usual" - Funding levels remain as anticipated and relative allocations across program areas stay the same.
- ▶ "Change the Mix"- Assumes the same funding levels as anticipated, but shifts funding from preservation to multi-modal and modernization programs.
- ▶ "Move Ahead"- Provides for 16% additional revenue which is allocated to multi-modal preservation and highway modernization programs.
- ▶ "Flexible New Revenue"- Increases State transportation revenues by 42% over 25 years.

MDOT examined the economic and performance impacts of four investment scenarios and identified the investment levels needed to achieve the plan's vision.

In the 1990s, MDOT was able to successfully make the case to the public for a gas tax increase by illustrating how the State would not be able to meet targeted performance levels for bridge and pavement conditions in the future given the existing level of revenue.¹⁶⁷

PERFORMANCE MONITORING

There are several opportunities for the public, stakeholders, and MDOT staff to obtain up-to-date performance information on a wide range of performance measures. One such example is the already-mentioned *Transportation System Measures Report*.

The *MiScorecard Performance Summary* is updated regularly and reports on the status of 32 performance measures that provide a thorough picture of both MDOT's organizational performance as well as transportation outcome measures including those in the areas of safety, asset condition, and mobility. The scorecard provides directional or numeric targets for each measure, a color code to indicate how close they are to meeting the target, and whether progress was made toward the target since the last reported measurement.

The Infrastructure Dashboard contains an overlapping set of performance measures using same indicator format as *MiScorecard*. It is focused on the performance areas of safety, condition, mobility, economic growth, and accountability for a wide variety of infrastructure elements: highways, bridges, transit, dams, rail, waterways, and borders.

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¹⁶⁷ Interview, Susan A. Gorski, Section Manager, Statewide & Urban Travel Analysis Section, Michigan Department of Transportation, March 18, 2014.

What is Notable?

As documented in the 2012 *Corridors and International Borders White Paper*, Michigan DOT's Corridors and Borders program provides for detailed performance measurement along 17 corridors around the state. These are important corridors for commuting, trade, and interstate travel. A corridor is considered to be a 20-mile wide area around a major highway in metropolitan and nonmetropolitan areas. The focus on Corridors of Highest Significance help provide an integrated network of major routes important to the State's economic recovery goals.

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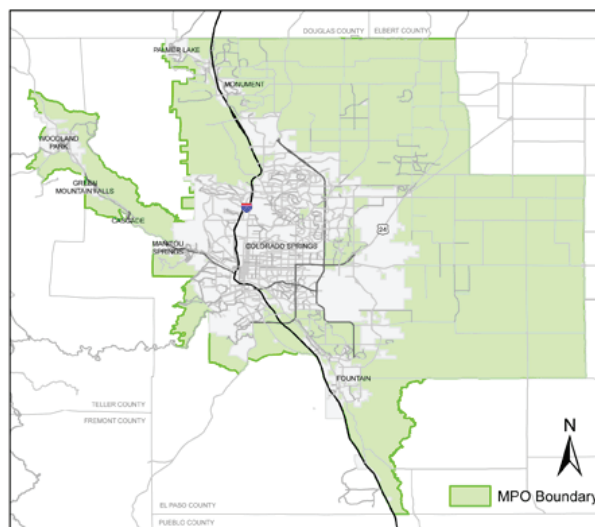
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Case Study: Pikes Peak Area Council of Governments – Moving Forward Update 2035

Background

The Pikes Peak Area Council of Governments (PPACG), the MPO for the greater Colorado Springs, CO region, has 16 member governments representing 3 counties and 13 municipalities. As a regional planning agency PPACG helps coordinate local planning efforts between cities, towns, and counties in the region. PPACG’s regional transportation plan developed in cooperation with two counties and seven municipalities. The most recent plan, the *Moving Forward Update 2035* Regional Transportation Plan, is an update of the previous plan, *Moving Forward*, and was approved by the MPO Board in 2012. The *Moving Forward Update* is the region’s first RTP to incorporate performance-based elements. In its planning process, PPACG solicited input from a much broader variety of stakeholders and the public than previous plans.




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Developing the Plan

To solicit input for the plan, PPACG drew from the expertise of a Technical Advisory Committee and a Community Advisory Committee, as well as agencies and other plans to ensure the alignment of regional goals. The *Moving Forward Update* was developed through 10 key steps:

1. Establish the Foundation for Decision Making: Development of a Vision, Mission and Principles
 - Each of the advisory committees reviewed PPACG’s vision, mission, and principles and made some minor changes from the last update in 2008.
2. Develop Transportation Goals and Performance Measures
 - Through workshops, stakeholders identified their key issues and expressed desired goals and measures. This resulted in 17 goals, of which 8 were not overtly transportation goals and came primarily from new participating agencies. PPACG then used additional public involvement techniques, such as focus groups and attendance



at numerous community events such as 4th of July Parades, and farmers markets to increase input on the goals and measures.

3. Gather Baseline Conditions

- The PPACG transportation team obtained data assembled from local, State and Federal agencies, along with many feasibility and environmental studies conducted in the region. The team then identified data needs for evolving the agency's knowledge of investment types, locations, and impacts.

4. Define Evaluation Criteria and Assign Weighting

- PPACG developed criteria to evaluate projects relative to each Goal. PPACG then created a customized Multi-Criteria Analysis (MCA) process to assist the decision-makers in evaluating the relative importance of each goal in relation to the other goals. Input for this process was obtained from the Technical Advisory Committee, including State and Federal resource and regulatory agencies, the Community Advisory Committee, and a random dial telephone survey. The results of this effort were every goal was ranked as most important and every goal was ranked as least important (even safety). The final Board-approved weighting reflected the average views of the approximately 8 paradigms of citizens in the region. Limitations to the approach were identified to be addressed in future planning cycles.

5. Develop Regional Modeling System

- PPACG located, populated, and adapted tools to evaluate the impact of growth and investments in the region. The list of these and their use are:
 - TELUM: A free tool that develops a neutral, quantitative, forecast of socio-economic growth in the future.
 - CommunityViz: An inexpensive GIS extension that develops additional socio-economic growth scenarios to bracket future growth possibilities and minimize the risk of making inefficient investments due to changed growth patterns.
 - HERS-ST: A free tool that forecasts and prioritizes individual and regional roadway maintenance needs and outcomes at different levels of investment.
 - PPACG TDM: A 4-step travel demand model that can quickly forecast changed conditions due to individual and grouped transportation project implementation.
 - PPACG CMP: A traffic corridor analysis tool used to examine existing and forecast future intersection congestion levels as part of the Congestion Management Process.
 - Vista: A free GIS extension that conducts advanced spatial analysis of habitat and conservation analysis and can support adaptive management of sites and alternatives.

- N-SPECT: A free tool that forecasts changes in water quality and runoff quantity conditions based on changes in climate, land use, and land cover.
- MOVES: A free tool that estimates air pollution emissions from on-road mobile sources.
- TNM: A free tool that is used for predicting noise impacts in the vicinity of roadways.

6. Create Preferred Planning Scenario

- Using a facilitated process, three (trend, in-fill, and conservation) alternative future socio-economic scenarios were developed. These scenarios were then evaluated using the PPACG modeling tools against the adopted goals and by staff from participating agencies to identify issues with their goals and plans. An interesting outcome was that the conservation scenario was also the “sprawliest” scenario due to leap frog development. A second workshop was held to work through minimizing serious conflicts and maximizing synergistic positive impacts. A “preferred” land use scenario that best aligned all participating agency priority goals and accomplished some secondary goals was developed.

7. Evaluate and Score Projects


- Project scoring was discussed with project applicants and potential scoring process and criteria adjustments were considered. The board-approved goal weightings were used to show the relative importance of each goal. Staff scored each submitted project using the modeling tools for three scenarios (preferred, in-fill, conservation/sprawl) and found that 75 percent of the top-scoring projects were top-scoring regardless of which scenario was employed.

8. Create a Fiscally Constrained Project List

- The PPACG plan participants used the scores and financial plan to create a fiscally constrained project list – although some changes in priority were made to take into account allowable uses of funding. The agency also considered how to enhance flexibility and target known problem areas. This list was approved with some modifications by the Board of Directors.

9. Identify Methods to Minimize and Mitigate Undesirable Impacts

- PPACG utilized a Green Infrastructure approach to meet the requirement of identifying strategies to mitigate negative impacts from transportation investments. This effort was made easier due to having tools that can to some degree analyze the magnitude of both negative impacts and mitigation efforts. PPACG contracted with the Conservation Fund to hold a three-day workshop that examined the economic, ecologic, and social benefits of making green infrastructure type investments through the watersheds in the MPO area. PPACG also involved the adjacent, downstream, Pueblo MPO staff for development of this Green Infrastructure plan because they



share the watersheds that the plan is based in. Staff emphasized that further refinement of this plan to ensure context sensitive solutions is necessary in future planning cycles.

10. Ongoing Monitoring of the Moving Forward Update 2035 RTP

- PPACG evaluated monitoring techniques and sought public input on them. The agency has identified monitoring techniques as an area with high potential for future improvement. The monitoring effort led to consolidation/removal of some goals that cannot reliably be evaluated or were exceptionally controversial. For the 2040 Moving Forward Update PPACG has reduced the number of goals from 17 to 13.

Interagency Collaboration

PPACG put considerable effort into recruiting non-transportation agency stakeholders. This recruitment included writing formal invitation letters to the agencies to help support and justify their participation within their agency. In order to create a more collaborative environment, PPACG contracted with the US Institute for Environmental Conflict Resolution to teach a course to participants on methods for effective collaboration. In addition, PPACG contracted with a professional facilitator to improve workshop productivity. This was especially useful as conflicting goals and desires were identified from the participating agencies. These participating agencies included State and Federal resource and regulatory agencies (Environmental Protection Agency, US Army Corps of Engineers, US Fish and Wildlife Service, US Forest Service, Bureau of Land Management, State Historic Preservation Office, Colorado Department of Wildlife, Colorado Department of Public Health and Environment) along with local and private agencies that make investments or decisions that impact or are impacted by transportation investments, such as municipal planning departments, the Area Agency on Aging, the County Health Department, the regional Chamber of Commerce, school districts, local housing authorities, etc. A valuable tertiary outcome of this process was a much more informed set of stakeholders regarding other agency goals and trade-offs between alternative investments.

Adopting a Planning Framework

In developing the *Moving Forward Update*, PPACG used the TCAPP (now PlanWorks) planning framework to identify what needed to be achieved through the regional plan and how those objectives would be reached. The framework includes the following items:

- ▶ Vision, Mission, and Principles
- ▶ Goals and Performance Measures
- ▶ Project Evaluation Criteria

▶ Weighting of Evaluation Criteria

GOALS AND PERFORMANCE MEASURES

The goals and performance measures were developed to outline and guide the desired outcome of investment decisions, and also to evaluate various systemic options. The formulation of the goals drew from existing plans (transportation and other participating agency) and the performance measures were designed to meet the following three criteria:

- ▶ Consistent data is likely available or can be obtained to facilitate analysis
- ▶ The measure can be applied at system, corridor, and project levels
- ▶ The measure is quantitative in nature

To come to a consensus on a final consolidated list of goals and corresponding objectives and performance measures, PPACG held four workshops/focus groups with regional stakeholders to develop an initial list. Once the Board reviewed the initial set of goals and performance measures, it was released for public comment in 2010. After receiving approximately 70 comments on the draft list, PPACG held a fifth workshop to refine and finalize the list. The MPO Board approved a final set of 17 goals, each of which has a number of corresponding performance measures and SMART (specific, measurable, agreed-upon, realistic, time-bound) objectives. Because the objectives are SMART, they contain performance targets, which are broken down by different time periods (by 2015, by 2025, and by 2035). The first three goals, corresponding objectives for 2015, 2025, and 2035, and performance measures are presented in the following table.

Table 11-4. Selection of goals, objectives, and performance measures from the *Moving Forward Update*

Goal 1: Maintain or improve current transportation system infrastructure
<p>Objectives</p> <p><u>By 2015</u></p> <ul style="list-style-type: none"> • Verify baseline for comparison • Maintain current condition w/ 0 degradation from a 2007 baseline <p><u>By 2025</u></p> <ul style="list-style-type: none"> • Improve conditions by 5% from 2007 baseline <p><u>By 2035</u></p> <ul style="list-style-type: none"> • Improve conditions by 10% from 2007 baseline
<p>Performance Measures</p> <ul style="list-style-type: none"> • % of surface condition lane miles for roads and non-motorized facilities in good/fair condition • % of person miles and freight miles traveled on roads in good/fair conditions • # of bridges w/ an index/sufficiency rater of 50 or higher • Age and/or mileage of transit vehicles • Traffic control operations
Goal 2: Improve the operation of transportation systems & services to enhance emergency response, minimize travel times & maximize service quality of all modes of commercial & private travel throughout the region

Objectives

By 2015

- Establish baseline for comparison
- Maintain commercial vehicle and auto per capita travel time at 2005 levels
- Increase the # of transit routes with a headway (time between buses) of 60 minutes or less by 15% and implement signal preemption for buses
- Utilize demand management strategies to reduce peak hour travel by 10% from 2005 levels

By 2025

- Maintain commercial vehicle and automobile per capita travel time at 2005 levels
- Increase the number of transit routes with a headway (time between buses) of 60 minutes or less by 25% and implement signal preemption for buses
- Reduce transit and non-motorized travel time by 20% from 2005 levels
- Utilize demand management strategies to reduce peak hour travel by 20% from 2005 levels

By 2035

- Maintain commercial vehicle and automobile per capita travel time at 2005 levels
- Increase the number of transit routes with a headway (time between buses) of 60 minutes or less by 35% and implement signal preemption for buses
- Reduce transit and non-motorized travel time by 30% from 2005 levels

Performance Measures

- Average transit travel time to work
- # of routes with headway of 60 minutes or less
- Travel times during peak travel hours for autos, trucks, non-motorized travel, & transit
- Travel times during off-peak travel hours for autos, trucks, non-motorized travel, & transit

PROJECT EVALUATION CRITERIA & WEIGHTING

Using the goals and SMART objectives containing performance targets, PPACG, with input from the participants, established a set of evaluation criteria for inclusion in the plan to structure the assessment of all projects under consideration. One evaluation criterion was established per goal.

With such a large number of criteria, PPACG needed a weighting system to reflect and emphasize the relative importance of each criterion for the region's transportation system. Both the Transportation and the Community Advisory Committees engaged in a ranking exercise, as did the public (via a phone survey), and the result was an average ranking for each criterion that was adopted by the MPO Board. A table showing the plan's goals, associated evaluation criteria, and adopted criteria weight values is presented below.

Table 11-5. *Moving Forward Update* Goals, Evaluation Criteria, and Evaluation Criteria Weight Values

Goal	Evaluation Criteria	E.C. Weight Value (Rank)
1. Maintain or improve current transportation system infrastructure	Transportation System Condition Preservation and Rehabilitation	9.5 (1)

2. Improve the operation of transportation systems & services to enhance emergency response, minimize travel times & maximize service quality of all modes of commercial & private travel throughout the region	Regional Mobility Improvement or Regional Congestion Reduction	7.8 (3)
3. Invest transportation funding within categories towards those projects/programs that have the highest life-cycle cost-effectiveness	Cost Effectiveness	7.2 (5)
4. Improve system connectivity and accessibility by completing connections within and/or between modes	System Connectivity	8.1 (2)
5. Improve safety for all travelers	Safety	7.6 (4)
6. Increase security of the transportation system by implementing secure transportation improvements and securing existing transportation facilities	Security	4.3 (16)
7. Increase opportunity for all travelers, including special needs and protected-class travelers, to choose methods of travel other than single occupant motor vehicles	Multimodal Use	6.2 (6)
8. Decrease the gap between funding needed to achieve the transportation plan goals, and funding currently available to invest in the transportation system	Private Partnership	5.0 (11)
9. Ensure transportation system investment benefits are equally distributed to citizens with disabilities, low incomes, and other special needs residents in the region	Environmental Justice	5.1 (10)
10. Reduce transportation-related adverse impacts to communities, neighborhoods, and rural areas identified for cultural, environmental, and/or historical preservation	Adverse Transportation Impact Reduction	4.6 (14)
11. Improve economic competitiveness of the region by enhancing the transportation system	Economic Vitality	5.7 (8)
12. Use transportation investments to incentivize infill in, and redevelopment of, existing communities	Infill/Redevelopment	4.4 (15)
13. Improve, protect and mitigate impacts of critical habitat and connecting corridors suitable for threatened, endangered, and imperiled species	Protect Wildlife Habitat	4.9 (12)
14. Minimize the amount of stormwater runoff and transportation-associated pollutants that enter the region's streams	Protect Streams and Reduce Stormwater Runoff	5.2 (9)
15. Reduce absolute regional transportation-related GHG emissions	GHG Emissions	3.5 (17)
16. Attain existing and future national air quality health standards	CO Reduction	4.9 (13)
17. Communicate and collaborate within and between interests and jurisdictions during development of plans and programs in order to improve the efficiency and effectiveness of decision-making in the Pikes Peak Region	Regional Collaboration	6.0 (7)

What's Next?

PPACG is currently in the process of developing its 2040 Regional Transportation Plan. Similar to the 2035 plan, the 2040 RTP will include a set of broad goals for the region's transportation system, and the goals will be accompanied by performance measures and SMART objectives. In early 2014, PPACG adopted the 13 goals with one to three performance measures per goal. These 13 goals align almost exactly with goals 1-6 and 9-14 in the table above. While there is some variation in the performance measures associated with each goal, the broad objectives of each are similar to those from the 2035 plan.

Three significant differences between the goals and performance measures included in the 2035 plan, and those that have been released in draft form on PPACG's website, are an absence in the 2040 materials of job and housing-related measures, metrics that target the prevalence of bike/ped infrastructure, and measures that assess transportation funding gaps. Under the 2035 RTP's goal seven, performance measures targeted transit-oriented development, mode share, VMT, bicycle and pedestrian level of service and infrastructure, and vehicle occupancy. Goal eight's measures assessed funding opportunities and public-private partnerships (PPPs). Under goal 11, which still exists in the most recent 2040 draft goals, there is no longer a performance measures that addresses job growth in the region.

There has also been an emergence of new performance measures in the 2040 draft, including the use of the Planning Time Index to measure improved system operation; a non-motorized System Connectivity and Accessibility Index as well as a measure of transit ridership increase to measure improved system connectivity and accessibility; and injury and fatality metrics (rather than crash rates) to assess safety.

What is Notable?

Short-, mid-, and long-term objectives. Although setting targets for 15-20 years in the future is important, setting interim targets ensures that the region is on track to meet its goals, and allows for an agency to rethink long-term objectives.

Developing a baseline. PPACG has listed as its first objective for each goal the development of a baseline for comparison by 2015. This is a necessary step for any performance-based planning because it enables the agency to track progress through time.

Broad collaboration. PPACG undertook a significant amount of collaboration, in addition to the inclusion of the public's input. One particularly notable example of collaboration was PPACG's efforts to gather public input on the assignment of relative weights to the evaluation criteria. As noted above, PPACG conducted a weighting exercise with both Advisory Committees, and then conducted a statistically-valid random phone survey to query the public on how they would rank the importance of each evaluation criteria. The final weights were an average of the responses from all three groups.



Pikes Peak Area Council of Governments

Pikes Peak Area Council of Governments, Moving Forward Update.

<http://www.ppacg.org/programs/transportation>.

Pikes Peak Area Council of Governments, Regional Bicycle/Pedestrian Traffic Count Program.

<http://ppacg.org/transportation/bike-ped-counts>.

Pikes Peak Area Council of Governments, 2013 Annual Report.

<http://www.ppacg.org/files/ANNUAL%20REPORTS/2013%20PPACG%20Annual%20Report-web.pdf>.



North Central Pennsylvania Planning and Development Commission: Case Study on Connecting Planning and Project Prioritization

PROJECT PRIORITIZATION PROCESS

The following is an excerpt from the North Central Pennsylvania Planning and Development Commission's (North Central) project prioritization process showing the use of performance data in project selection by a rural planning organization.

IDENTIFYING PROJECT SELECTION CRITERIA AND WEIGHTING

North Central facilitated an interactive process with its partners in developing project selection criteria for both its transportation planning program (under the auspices of the LRTP), and economic/community development.

Methodology

Members of the Project Prioritization Committee began meeting in December 2008 and continued throughout 2009 in developing selection criteria and elements of the regional core system. Samples from existing transportation and economic/community development projects were used in determining and evaluating the merits of various selection criteria. Beyond the identification and weighting of criteria, the Project Prioritization Committee serves as a steward of the Regional Action Strategy (RAS), monitoring implementation and involved in the evaluation of candidate projects of regional significance. Guiding principles throughout the project included creating a new process that would be intuitive and easy to use.

Recognizing that not all criteria necessarily convey the same level of importance, the next step in the process was to identify a preferred weighting for each project selection criterion. As part of identifying recommended weighting, PennDOT offered North Central the use of a dynamic, group-enabled software called Decision Lens. The software has been developed to improve capital resource planning and decisionmaking. PennDOT in fact has already begun using the tool as part of the most recent update of its Interstate Maintenance (IM) Program. The Decision Lens software subjected each proposed criterion to rigorous pairwise comparisons, or "judgments," which yielded more meaningful and candid results. Members of the Project Prioritization committee were able to vote anonymously on the criteria before discussing the initial results. The results of the committee's deliberations with regard to both criteria development and their subsequent weighting are described in the tables that follow.

A Microsoft Access database was developed to track projects and to apply a recommended weighting to candidate projects as they are data entered and “scored” as part of their evaluation.

Transportation

There are various types of transportation projects that compete for discrete transportation funding “buckets”. These range from highway capacity-adding projects to more non-traditional projects such as Transportation Enhancements. Recognizing the nature of these funding silos, North Central sought to identify selection criteria for each transportation project type against six major categories, as shown in Table 11-6 below. A summary of each project type, including their associated criteria and recommended weighting, follows.

Table 11-6. Transportation Project Type Descriptions (North Central PA)

Project Type	Description
Highway Restoration	This includes projects such as repairs or rehabilitation to extend the life of the existing roadway, which could include resurfacing, concrete rehabilitation, base repair, drainage improvements, and shoulder stabilization. Depending on the condition of the pavement, drainage and sub-base, it could involve complete reconstruction. (It does not include any addition of highway lanes.)
Highway/New Capacity	This includes projects such as the construction of roadways, interchanges or bridges on new alignment, or widening to existing roadways resulting in the addition of lanes.
State Bridges > 8 feet	This includes projects such as the rehabilitation or replacement of an existing state-owned bridge to remove a deficiency, or systematic preventive maintenance activities to maintain a bridge in good condition.
Local Bridges > 20 feet	This includes projects such as the rehabilitation or replacement of an existing local bridge to remove a deficiency, or systematic preventive maintenance activities to maintain a locally-owned bridge in good condition.
Safety	These are stand-alone projects to address specific safety issues. This may include projects to eliminate sight distance problems at intersections, correction of hazardous curves, projects that improve pedestrian safety and other projects that address areas with high accident rates or crash clusters.

Project Type	Description
Transportation Enhancements	These projects include bicycle lanes, sidewalks, and trails and shared use pathways that improve accessibility and mobility for bicycles and pedestrians; scenic beautification, wayfinding signage, welcome centers, transportation museums, historic preservation, streetscapes, and other related projects.

Source: Gannett Fleming, Inc.

Highway Restoration Criteria and Weighting

This is the most common project type that North Central administers as part of its rural transportation planning program. In developing selection criteria, North Central decided to weigh future highway restoration projects against their position on the region’s highway network; traffic volumes; surface conditions; percentage of trucks, and the latest date the roadway in question was resurfaced.

Of the five criteria established for this project type, North Central has weighted the candidate project’s relationship to the Core System, along with existing surface condition, as the two most important considerations in evaluating candidate projects. This generally means that North Central will be prioritizing roadway improvements toward the highest-order roadways in the region, on the primary roadways that connect the region’s economic centers and priority investment areas such as KOZ sites and highway interchanges. **Table 11-7** shows the various elements of the Highway Restoration criteria and related weightings in more detail.

Table 11-7. Highway Restoration Criteria and Weighting

Project Criteria	Rating	Guidelines	Weighting
What <u>Network</u> is the project on?	1	Other State Routes (or non-network)	31%
	5	Access to KOZ or other Regional Investment Areas	
	5	Access to DCNR Investment Area (priority recreational routes/green segments)	
	10	Core System (priority transportation routes/red segments)	
What is the AADT?	1	< 2,000 vehicles per day	12%
	5	2,000 – 4,999	
	7	5,000 – 9,999	
	10	10,000 +	
What is the IRI?	1	< 150 inches per mile	31%
	3	150 - 199	
	5	200 - 299	
	10	300 +	

Project Criteria	Rating	Guidelines	Weighting
Percentage of Trucks	1	< 5 percent	14%
	5	5-10 percent	
	10	> 10 percent	
Resurfacing Date	1	< 10 years	12%
	5	10-20 years	
	10	20+ years	

Source: Gannett Fleming, Inc.

Highway/New Capacity Criteria and Weighting

New capacity projects are much less common, but much more visible and carry a higher profile in comparison to highway restoration jobs. In the future, North Central will be putting a greater emphasis on new capacity-adding projects that support business retention and growth. North Central will be evaluating future capacity-adding projects in relation to location within the region’s highway network; effectiveness (in terms of how well the project addresses existing or anticipated conditions); support of business growth; percentage of trucks; and the project’s overall value for dollar spent.

Of the five criteria established for this project type, North Central has weighted the candidate project’s ability to support business retention and expansion as the primary criterion for considering these types of projects. **Table 11-8** shows the various elements of the Highway/New Capacity criteria and related weightings in more detail.

Table 11-8. Highway/New Capacity Criteria and Weighting

Project Criteria	Rating	Guidelines	Weighting
What <u>Network</u> is the project on?	1	Other State Routes (or non-network)	19%
	5	Access to KOZ or other Regional Investment Areas	
	5	Access to DCNR Investment Area (priority recreational routes/green segments)	
	10	Core System (priority transportation routes/red segments)	
Project Effectiveness	0	Project fails to address existing conditions/problems	22%
	5	Project addresses most of existing or anticipated conditions/problems and improves mobility/reduces congestion	
	10	Project effectively addresses existing or anticipated conditions/problems and provides a significant improvement in	

Project Criteria	Rating	Guidelines	Weighting
Supporting Business Retention & Growth	0	mobility/reduces congestion	30%
	10	Does not support existing business/industry Supports existing or emerging business/industry and/or development of entrepreneurs/new enterprise	
Percentage of Trucks	1	< 5 percent	8%
	5	5-10 percent	
	10	> 10 percent	
Cost Factors	1	High cost/requires additional dollars to the TIP (e.g., "spike" funds)	21%
	5	Medium cost/some additional dollars plus TIP	
	10	Relatively low cost/Can be afforded within the TIP	

Source: Gannett Fleming, Inc.

Appendix: Federal Requirements for Transportation Plans

Below is text from Moving America for Progress in the 21st Century (MAP-21) focusing on metropolitan and statewide transportation plans and use of a performance-based approach within the planning process. Key elements relative to a performance-based approach are noted in **bold** for emphasis. Other parts of law discuss the broader the metropolitan and statewide and nonmetropolitan transportation planning process, including other process-related requirements.

Metropolitan Transportation Plan

SEC. 1201. METROPOLITAN TRANSPORTATION PLANNING.

(a) In General.--Section 134 of title 23, United States Code, is amended to read as follows:

“Sec. 134. Metropolitan transportation planning

“(h) Scope of Planning Process.--

“(1) In general.--The metropolitan planning process for a metropolitan planning area under this section shall provide for consideration of projects and strategies that will--

“(A) support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

“(B) increase the safety of the transportation system for motorized and nonmotorized users;

“(C) increase the security of the transportation system for motorized and nonmotorized users;

“(D) increase the accessibility and mobility of people and for freight;

“(E) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

“(F) enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

“(G) promote efficient system management and

operation; and

“(H) emphasize the preservation of the existing transportation system.

“(2) Performance-based approach.--

“(A) In general.--The metropolitan transportation planning process **shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals** described in section 150(b) of this title and in section 5301(c) of title 49.

“(B) **Performance targets.--**

“(i) **Surface transportation performance targets.--**

“(I) In general.--Each metropolitan planning organization shall establish performance targets that address the performance measures described in section 150(c), where applicable, to use in tracking progress towards attainment of critical outcomes for the region of the metropolitan planning organization.

“(II) Coordination.--Selection of performance targets by a metropolitan planning organization shall be coordinated with the relevant State to ensure consistency, to the maximum extent practicable.

“(ii) **Public transportation performance targets.--**Selection of performance targets by a metropolitan planning organization shall be coordinated, to the maximum extent practicable, with providers of public transportation to ensure consistency with sections 5326(c) and 5329(d) of title 49.

“(C) Timing.--Each metropolitan planning organization shall establish the performance targets under subparagraph (B) not later than 180 days after the date on which the relevant State or provider of public transportation establishes the performance targets.

“(D) **Integration of other performance-based plans.--**A metropolitan planning organization shall integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described

in other State transportation plans and transportation processes, as well as any plans developed under chapter 53 of title 49 by providers of public transportation, required as part of a performance-based program.

“(3) Failure to consider factors.--The failure to consider any factor specified in paragraphs (1) and (2) shall not be reviewable by any court under this title or chapter 53 of title 49, subchapter II of chapter 5 of title 5, or chapter 7 of title 5 in any matter affecting a transportation plan, a TIP, a project or strategy, or the certification of a planning process.

“(i) Development of Transportation Plan.--

“(2) Transportation plan.--A transportation plan under this section shall be in a form that the Secretary determines to be appropriate and shall contain, at a minimum, the following:

“(A) Identification of transportation facilities.--

“(i) In general.--**An identification of transportation facilities** (including major roadways, transit, multimodal and intermodal facilities, nonmotorized transportation facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions.

“(ii) Factors.--In formulating the transportation plan, the metropolitan planning organization shall consider factors described in subsection (h) as the factors relate to a 20-year forecast period.

“(B) **Performance measures and targets**--A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with subsection (h)(2).

“(C) **System performance report**--A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in

subsection (h)(2), including--

``(i) progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports; and

``(ii) for metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.

``(D) **Mitigation activities.**--

``(i) In general.--A long-range transportation plan shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.

``(ii) Consultation.--The discussion shall be developed in consultation with Federal, State, and tribal wildlife, land management, and regulatory agencies.

``(E) **Financial plan.**--


``(i) In general.--A financial plan that--

``(I) demonstrates how the adopted transportation plan can be implemented;

``(II) indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan; and

``(III) recommends any additional financing strategies for needed projects and programs.

``(ii) Inclusions.--The financial plan may include, for illustrative purposes, additional



projects that would be included in the adopted transportation plan if reasonable additional resources beyond those identified in the financial plan were available.

“(iii) Cooperative development.--For the purpose of developing the transportation plan, the metropolitan planning organization, transit operator, and State shall cooperatively develop estimates of funds that will be available to support plan implementation.

“(F) **Operational and management strategies.**--Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.

“(G) **Capital investment and other strategies.**--Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs.

“(H) **Transportation and transit enhancement activities.**--Proposed transportation and transit enhancement activities.

“(3) Coordination with clean air act agencies.--In metropolitan areas that are in nonattainment for ozone or carbon monoxide under the Clean Air Act (42 U.S.C. 7401 et seq.), the metropolitan planning organization shall coordinate the development of a transportation plan with the process for development of the transportation control measures of the State implementation plan required by that Act.

“(4) Optional scenario development.--

“(A) In general.--A metropolitan planning organization may, while fitting the needs and complexity of its community, **voluntarily elect to develop multiple scenarios** for consideration as part of the development of the metropolitan transportation plan, in accordance with subparagraph (B).

“(B) Recommended components.--A metropolitan planning organization that chooses to develop multiple scenarios under subparagraph (A) shall be encouraged to consider--

“(i) potential regional investment strategies for the planning horizon;

“(ii) assumed distribution of population and employment;

“(iii) a scenario that, to the maximum extent practicable, maintains baseline conditions for the performance measures identified in subsection (h)(2);

“(iv) a scenario that improves the baseline conditions for as many of the performance measures identified in subsection (h)(2) as possible;

“(v) revenue constrained scenarios based on the total revenues expected to be available over the forecast period of the plan; and

“(vi) estimated costs and potential revenues available to support each scenario.

“(C) Metrics.--In addition to the performance measures identified in section 150(c), metropolitan planning organizations **may evaluate scenarios developed under this paragraph using locally-developed measures.**

“(5) Consultation.--

“(A) In general.--In each metropolitan area, the metropolitan planning organization shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of a long-range transportation plan.

“(B) Issues.--The consultation shall involve, as appropriate--

“(i) comparison of transportation plans with State conservation plans or maps, if available; or

“(ii) comparison of transportation plans to inventories of natural or historic resources, if

available.

“(6) Participation by interested parties.--

“(A) In general.--Each metropolitan planning organization shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan.

“(B) Contents of participation plan.--A participation plan--

“(i) shall be developed in consultation with all interested parties; and

“(ii) shall provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan.

“(C) Methods.--In carrying out subparagraph (A), the metropolitan planning organization shall, to the maximum extent practicable--

“(i) hold any public meetings at convenient and accessible locations and times;

“(ii) employ visualization techniques to describe plans; and

“(iii) <<NOTE: Public information.>> make public information available in electronically accessible format and means, such as the World Wide Web, as appropriate to afford reasonable opportunity for consideration of public information under subparagraph (A).

“(7) <<NOTE: Public information.>> Publication.--A transportation plan involving Federal participation shall be published or otherwise made readily available by the metropolitan planning organization for public review, including

(to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web, approved by the metropolitan planning organization and submitted for information purposes to the Governor at such times and in such manner as the Secretary shall establish.

“(8) Selection of projects from illustrative list.--

Notwithstanding paragraph (2)(C), a State or metropolitan planning organization shall not be required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (2)(C).

Statewide Transportation Plan

SEC. 1202. STATEWIDE AND NONMETROPOLITAN TRANSPORTATION PLANNING.

(a) In General.--Section 135 of title 23, United States Code, is amended to read as follows:

“Sec. 135. Statewide and nonmetropolitan transportation planning

“(a) General Requirements.--

“(2) Contents.--The statewide transportation plan and the transportation improvement program developed for each State shall provide for the development and integrated management and operation of transportation systems and facilities (including accessible pedestrian walkways and bicycle transportation facilities) that will function as an intermodal transportation system for the State and an integral part of an intermodal transportation system for the United States.

“(3) Process of development.--The process for developing the statewide plan and the transportation improvement program shall provide for **consideration of all modes of transportation** and the policies stated in section 134(a) and shall be continuing, cooperative, and comprehensive to the degree appropriate, based on the complexity of the transportation problems to be addressed.

“(d) Scope of Planning Process.--

“(1) In general.--Each State shall carry out a statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will--

“(A) support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;

“(B) increase the safety of the transportation system for motorized and nonmotorized users;

“(C) increase the security of the transportation system for motorized and nonmotorized users;

“(D) increase the accessibility and mobility of people and freight;

“(E) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

“(F) enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;

“(G) promote efficient system management and operation; and

“(H) emphasize the preservation of the existing transportation system.

“(2) **Performance-based approach.**--

“(A) In general.--The statewide transportation planning process **shall provide for the establishment and use of a performance-based approach to transportation decisionmaking to support the national goals** described in section 150(b) of this title and in section 5301(c) of title 49.

“(B) **Performance targets.**--

“(i) Surface transportation performance targets.--

“(I) In general.--Each State shall establish performance targets that address the performance measures described in section 150(c), where applicable, to use in tracking progress towards attainment of critical outcomes for the State.

“(II) Coordination.--Selection of

performance targets by a State shall be coordinated with the relevant metropolitan planning organizations to ensure consistency, to the maximum extent practicable.

“(ii) **Public transportation performance targets.**--In urbanized areas not represented by a metropolitan planning organization, selection of performance targets by a State shall be coordinated, to the maximum extent practicable, with providers of public transportation to ensure consistency with sections 5326(c) and 5329(d) of title 49.


“(C) **Integration of other performance-based plans.**--A State shall integrate into the statewide transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in this paragraph, in other State transportation plans and transportation processes, as well as any plans developed pursuant to chapter 53 of title 49 by providers of public transportation in urbanized areas not represented by a metropolitan planning organization required as part of a performance-based program.

“(D) **Use of performance measures and targets.**--The performance measures and targets established under this paragraph shall be considered by a State when developing policies, programs, and investment priorities reflected in the statewide transportation plan and statewide transportation improvement program.

“(3) **Failure to consider factors.**--The failure to take into consideration the factors specified in paragraphs (1) and (2) shall not be subject to review by any court under this title, chapter 53 of title 49, subchapter II of chapter 5 of title 5, or chapter 7 of title 5 in any matter affecting a statewide transportation plan, a statewide transportation improvement program, a project or strategy, or the certification of a planning process.

“(f) **Long-range Statewide Transportation Plan.**--

“(1) **Development.**--Each State shall develop a long-range statewide transportation plan, with a **minimum 20-year forecast period for all areas of the State**, that provides for the



development and implementation of the intermodal transportation system of the State.

“(2) Consultation with governments.--

“(A) Metropolitan areas.--The statewide transportation plan shall be developed for each metropolitan area in the State in cooperation with the metropolitan planning organization designated for the metropolitan area under section 134.

“(B) Nonmetropolitan areas.--

“(i) In general.--With respect to nonmetropolitan areas, the statewide transportation plan shall be developed in cooperation with affected nonmetropolitan officials with responsibility for transportation or, if applicable, through regional transportation planning organizations described in subsection (m).

“(ii) Role of secretary.--The Secretary shall not review or approve the consultation process in each State.

“(C) Indian tribal areas.--With respect to each area of the State under the jurisdiction of an Indian tribal government, the statewide transportation plan shall be developed in consultation with the tribal government and the Secretary of the Interior.

“(D) Consultation, comparison, and consideration.--

“(i) In general.--The long-range transportation plan shall be developed, as appropriate, in consultation with State, tribal, and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation.

“(ii) Comparison and consideration.-- Consultation under clause (i) shall involve comparison of transportation plans to State and tribal conservation plans or maps, if available, and comparison of transportation plans to

inventories of natural or historic resources, if available.

“(3) Participation by interested parties.--

“(A) In general.--In developing the statewide transportation plan, the State shall provide to--

“(i) nonmetropolitan local elected officials or, if applicable, through regional transportation planning organizations described in subsection (m), an opportunity to participate in accordance with subparagraph (B)(i); and

“(ii) citizens, affected public agencies, representatives of public transportation employees, freight shippers, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties a reasonable opportunity to comment on the proposed plan.

“(B) Methods.--In carrying out subparagraph (A), the State shall, to the maximum extent practicable--

“(i) develop and document a consultative process to carry out subparagraph (A)(i) that is separate and discrete from the public involvement process developed under clause (ii);

“(ii) hold any public meetings at convenient and accessible locations and times;

“(iii) employ visualization techniques to describe plans; and

“(iv) make public information available in electronically accessible format and means, such as the World Wide Web, as appropriate to afford reasonable opportunity for consideration of public information under subparagraph (A).

“(4) Mitigation activities.--

“(A) In general.--A long-range transportation plan **shall include a discussion of potential environmental**

mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.

“(B) Consultation.--The discussion shall be developed in consultation with Federal, State, and tribal wildlife, land management, and regulatory agencies.

“(5) Financial plan.--The statewide transportation plan **may include--**

“(A) **a financial plan** that--

“(i) demonstrates how the adopted statewide transportation plan can be implemented;

“(ii) indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan; and

“(iii) recommends any additional financing strategies for needed projects and programs; and


“(B) for illustrative purposes, additional projects that would be included in the adopted statewide transportation plan if reasonable additional resources beyond those identified in the financial plan were available.

“(6) Selection of projects from illustrative list.--A State shall not be required to select any project from the illustrative list of additional projects included in the financial plan described in paragraph (5).

“(7) Performance-based approach.--The statewide transportation plan should include--

“(A) **a description of the performance measures and performance targets used in assessing the performance of the transportation system** in accordance with subsection (d)(2); and

“(B) **a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets** described in subsection (d)(2), including progress achieved by the metropolitan planning



organization in meeting the performance targets in comparison with system performance recorded in previous reports;

“(8) Existing system.--The statewide transportation plan should include **capital, operations and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system.**

“(9) Publication of long-range transportation plans.--Each long-range transportation plan prepared by a State shall be published or otherwise made available, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.

Resources

FHWA/FTA Transportation Planning Resources

Federal Highway Administration and Federal Transit Administration, Performance Based Planning and Programming Guidebook.

http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/.

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http://environment.fhwa.dot.gov/integ/corridor_nepa_guidance.pdf.

Federal Highway Administration, Visualization for Transportation Planning.

http://www.fhwa.dot.gov/planning/scenario_and_visualization/visualization_in_planning/visplanning.cfm.

Involvement Statutory/Regulatory Requirements.

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<http://www.fhwa.dot.gov/asset/plans.cfm>.

Federal Highway Administration, Asset Management Publications.

<http://www.fhwa.dot.gov/asset/pubs.cfm>.

Federal Transit Administration, State of Good Repair and Asset Management.

<http://www.fta.dot.gov/13248.html>.

Congestion Management Process

Federal Highway Administration, Congestion Management Process Guidebook.

http://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/.

Environment

Federal Highway Administration, *A Performance-Based Approach to Addressing Greenhouse Gas Emissions through Transportation Planning*.



http://www.fhwa.dot.gov/environment/climate_change/mitigation/publications_and_tools/ghg_planning/

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U.S. Environmental Protection Agency, Guide to Sustainable Transportation Performance Measures. http://www.epa.gov/smartgrowth/pdf/Sustainable_Transpo_Performance.pdf.

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Federal Highway Administration, HERS-ST Highway Economic Requirements System – State Version. <http://www.fhwa.dot.gov/infrastructure/asstmgmt/hersfact.cfm>.

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http://www.ops.fhwa.dot.gov/freight/freight_analysis/perform_meas/vpds/npmrdsfaqs.htm.

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Center for Neighborhood Technology, Housing and Transportation Affordability Index.

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https://www.lincolnst.edu/pubs/dl/2027_1352_Opening%20Access%20to%20Scenario%20Planning%20Tools.pdf.

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Volume 1 : Research Report, and Volume 2: Guide for Target Setting and Data Management.
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<http://www.trb.org/Main/Blurbs/168855.aspx>.

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U.S. Department of Transportation
Federal Highway Administration

Office of Planning, Environment, & Realty (HEP)
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Allocation Game

The regional growth forecasts
in the CAMPO 2045 Regional
Transportation Plan

TABLE OF CONTENTS

Recommendations for the CAMPO Transportation Policy Board	3
What has happened so far in developing the 2045 growth forecasts	4
Why the CAMPO regional growth forecasts matter so much	6
There are real concerns with the State Demographer forecasts	8
What happened with the 2040 CAMPO growth forecasts?	10
Alternative Analysis: Different futures for the people of the region	12
What we want: Sustainable, Equitable regional growth policies	14



RECOMMENDATIONS FOR CAMPO TPB



Ensure open, transparent process for the 2045 Forecasts

At the very least have a very public, open discussion of what has happened in this process, including a discussion at the Transportation Policy Board of how 391,555 more expected people were added to Williamson County in contradiction of the results of the UrbanSim modeling. There still is time for meaningful discussion and changes to be entertained by the RTP Subcommittee, the Technical Advisory Committee, and the TPB level.

Start on robust scenario planning system now, well before the 2050 RTP

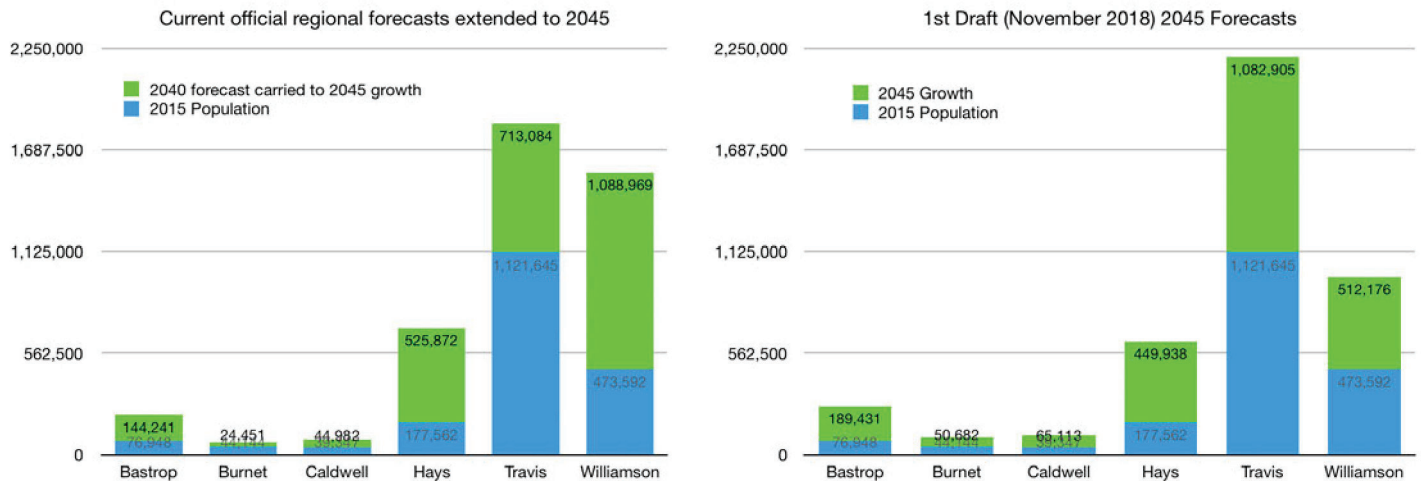
CAMPO should reform the forecasting system to yield at least two robust growth forecasts of different reasonable scenarios that can be used for all planning activities to analyze meaningful alternatives based on their expected outcomes in multiple future growth scenarios.

Each time we decide on proposed transportation investments, we should be able to compare against both growth scenarios and get the costs and benefits in all scenarios, before making a decision. This improved decision making system should be used for the development of the RTP as a whole, for things like the regional arterials study, and incorporated into submissions for TIP calls for projects. The possibility of adopting this model in less than 5 years should be entertained.



WHAT HAS HAPPENED SO FAR IN THE DEVELOPMENT OF THE 2045 CAMPO FORECASTS

Usually, every five years, all Texas Metropolitan Planning Organizations (MPO) adopt new regional growth forecasts as part of the adoption of a new Regional Transportation Plan (RTP). The MPO Transportation Policy Board (TPB) ultimately decides on the entirety of the RTP, including the growth forecasts, but the forecasts go through various steps along the way to a vote by the TPB. Here are the major steps we are aware of in the development of the current draft 2045 forecasts.



The UrbanSIM Model predicted much less growth for Williamson County than previously predicted, but still a doubling of population in this 1st Draft.

The First Draft

Staff chose to use the 2016 demographer data for high-growth scenario, even though new 2018 data is available where the demographer has discontinued the practice of high-growth scenarios.

While the Texas State Demographer has always clearly stated that the high-growth scenarios should not be used for long-range planning, as far as we know, all Texas MPOs have repeatedly chosen to forgo this advice. The high-growth scenarios are suggested for short-range planning. Many MPO leaders have noted that strong growth continued in Texas metro regions from 2010 to 2019, but that only validates their use for medium-range planning, and not necessarily more for growth projections 20 years into the future. Section three of this report also includes critiques of the state demographer forecasts themselves, which systematically underestimated urban growth in Texas in the last decade.

which is understandable given that TXDOT and Federal funds are partially allocated based on these numbers

CAPCOG instead uses the numbers that the Texas State Demographer recommends.

The state demographer data was fed into a complex modeling program called UrbanSim to produce the first draft results which were published in Technical Advisory Committee (TAC) meeting in October 2018. Various subjective choices are made in calibrating UrbanSim and many other inputs are included aside from just the state demographer data. Input from local governments is allowed to change the model. This software doesn't just allocate growth by county, but actually predicts future

land use and densities of housing and jobs across the metropolitan region.

One of the inputs in UrbanSim is the planned roadway network from the 2040 RTP. We know that expanding roadways causes induced development or sprawl and that marginally more people will choose to live in more car-dependent places for every mile of additional roadway. So the model attempts to capture this phenomenon when making estimated housing and work location decisions. This is the essence of the circular logic of Texas sprawl.

The initial draft showed a dramatic shift in the expected growth of Williamson and Travis Counties in different directions, with Travis expected to add 369,821 more people by 2045 than the previous forecast & Williamson expected to add 576,793 less people than thought in the previous forecast.

The Second Draft

A second draft of the 2045 regional growth forecasts was presented to the TAC in October 2019 and discussed at the TPB in December 2019. This draft showed a dramatic shift from the first draft, with 391,555 people added back to Williamson County by 2045. We need a complete, public explanation of what happened here.

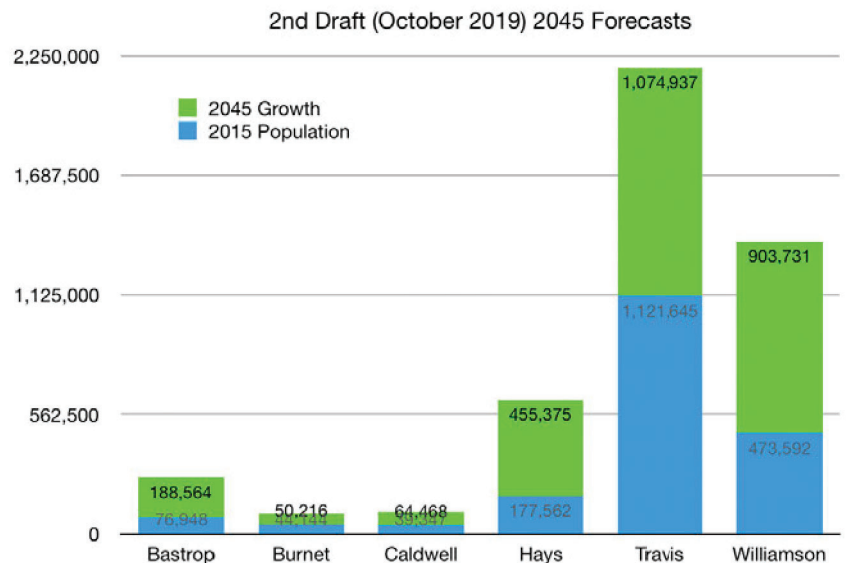
After the first draft was presented to the TAC, local governments were informed that they could submit further input. Williamson County argued that the results for their county were way off and submitted a report to CAMPO staff asking for adding more growth to the county.

The second draft was presented to TAC in October 2019. A member of the TAC asked Greg if anything substantial had changed since the last time they saw this, and he answered “no.”

The second draft was discussed by the TPB in December 2019. Some members of the policy board questioned staff about the forecasts and asked specifically how they differed from the state demographers forecasts. While this was a very brief discussion of a very complex process, no staff member mentioned that Williamson County has requested and received an additional allotment of 391,555 future expected people between the first and second draft.

Even with this change, the 2nd draft reduces expected growth in Hays & Williamson County substantially compared to the 2040 official forecasts.

Along with the allocation of regional growth forecasts, CAMPO staff are working with TXDOT on updated travel demand models to guide the region’s decision making on transportation and land use. The model seems to prioritize driving as quickly as possible from a to b, which does not seem to be an explicit goal of the region, and certainly is not as important as crashes, health, affordability, or congestion. Our understanding is that they used a Static Demand Model and/or Hedonic trans modeling using TransCAD to run the Travel Demand Model, but this is not our area of expertise.



The 2nd Draft reallocated 391,555 more people back to Williamson County, above UrbanSIM model predictions.

WHY THE CAMPO REGIONAL GROWTH FORECASTS MATTER SO MUCH

The conclusions of this regional growth forecast allocation exercise will have substantial impact on the federal funding applications for Project Connect, TXDOT funding allocations, and myriad public processes, from school creation and closing decisions to development permit review applications.

To whatever extent we can entertain sustainable, equitable, dense infill growth, the better our actual future transit ridership expectations will be and better chances of Federal funding for Project Connect.

The circular logic of sprawl forecasting

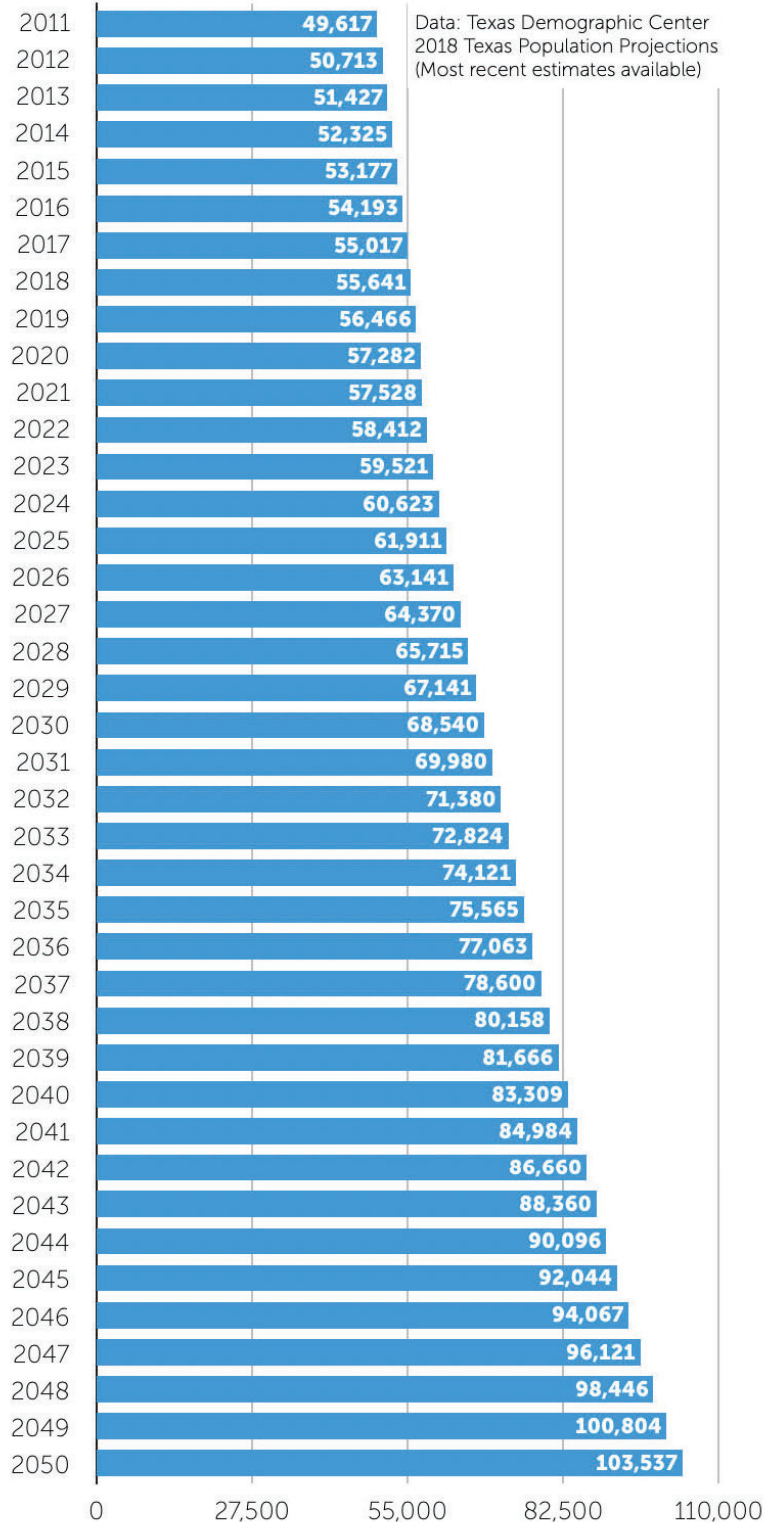
Amidst our climate, traffic death, affordability, and fiscal crises, many question continuing the policies of sprawl, while others argue for providing for expected growth before it comes. We desperately need the MPO to serve the role of trustworthy analysis and complex, regional decision making and the development of the RTP and its growth forecasts is the cornerstone of regional planning in America.

But something strange happens at most MPOs. A new RTP is supposed to be based upon the new growth forecasts. Part of the process is modeling millions of location decisions by residents, businesses, and public institutions. All of us make such decisions dependent in a huge way upon the available transportation system.

So, to predict where people will live in 2045, one of the inputs in the model is the 2040 RTP roadway network, which includes massive capacity expansion.

This is the process of induced demand, actually built into the planning regime. Once we assume marginally more people

Net increase EACH YEAR in number of humans expected to be living in the CAMPO metropolitan region



will live in Liberty Hill because of the expansion of 183, then our Travel Demand Models will show a need for trips from there to the rest of the region.

Then, agencies like TXDOT run models comparing how all these people expected to live in Liberty Hill will get around in a No Build Scenario - where we don't build all the capacity proposed in the 2040 RTP - versus the expansion option. The model will show terrible congested if we don't widen the roadways - because we assumed the widening of the roadways in the creation of the model.

Overcoming this circular logic is one of the key reform that CAMPO needs to make to allow efficient, equitable decision-making going forward.

The Structural Inequity of Texas MPOs

Another structural problem in CAMPO decision making is the structural inequity dictated by the Joint Powers Agreement and the structure of the Technical Advisory Committee. All Texas MPOs are set up like a slightly modified Senate, with counties with only 25,000 residents having a full vote, and cities of a million residents having four, meaning residents of the smaller county have ten times as much voting power per person. This geographic inequity has also contributed to race, ethnic, and gender inequity in the representation at MPO policy boards, where people of color and women are dramatically under represented.

MPO growth forecasts have broad reaching impacts

As noted above, the growth forecasts actually impact spending allocation decisions at the state and federal level, but they also impact many different public policy decision-making systems. School districts use the CAMPO growth forecasts when they are trying to predict where children will live. Traffic Impact Analysis (TIA) regimes at local governments rely upon the regional growth forecasts to predict future trips. Any time you hear a story about TXDOT or a local government worrying that congestion on any particular corridor will be spiraling out of control, they are basing that prediction on the CAMPO regional growth forecasts.

And these forecasts play heavily in local government debt decisions.

Williamson and Hays County lead Texas in debt

The residents of Williamson and Hays County currently carry the #1 and #2 highest rates of county debt per capita in the State of Texas. Much of this debt is for road bonds, much of which is assuming future needs for roadway capacity based upon our regional growth forecasts.

Regional policies dictate heavily our rates of traffic deaths, driving, affordability, and health

These decisions we make at the regional level, including the growth forecasts and all the public decisions that use the forecasts, have dramatic impacts on millions of lives. The Austin region suffers from one of the highest rates of traffic deaths for a Texas metro area. We drive much more per capita than the people of Houston and Dallas - Fort Worth. Access to affordable housing in affordable locations is increasing hard to find.

We are on the brink of non-attainment for our air quality, although many are already suffering in our region from the high health costs of particulate matter and ozone. And the environmental devastation incumbent in the growth forecasts themselves is so unfathomable that most people continue not to grasp the basic truths. Our existing 2040 forecasts assume that about 750 square miles of the CAMPO region that are currently rural or open space will be converted to sub-urban. Continuing this growth pattern would mean cutting tens of millions of trees, increasing carbon emissions, keeping traffic deaths high, and crippling our economy with inefficient urban form.

THERE ARE REAL CONCERNS WITH THE STATE DEMOGRAPHER GROWTH FORECASTS

The Texas Demographic Center was created in the 1980s by the State of Texas to “establish a state level liaison to the U.S. Census Bureau for better dissemination of Texas census data. In the mid-1980s, the Texas Population Estimates and Projections Program was established with the overall objective of providing annual estimates of the population of Texas counties and places and biennial projections of the population of the state and counties,” according to the about page at Demographics.Texas.Gov.

Their forecasts are used at all levels of government to aid in transportation planning and many other policy areas. Until recently, they published forecasts in three different scenarios: a low growth, medium growth, and high growth model, but they have discontinued this practice and instead now publish a single forecast which is closest to the medium growth model from before, but most MPOs are still using the high growth models.

The high growth models systematically underestimated major urban county growth and overestimated sub-urban county growth in the 2010 forecasts

If you compare the original 2010 census based forecasts from the State Data Center with subsequent annual census estimates, Travis, Dallas, Tarrant, and Harris County grew more than expected, and almost all sub-urban counties in the major metros grew less than expected. It is possible that trends and policies changed in an unexpected way, but it is also possible there are flaws in the forecasting methodology that seem to bias toward phantom sub-urban growth.

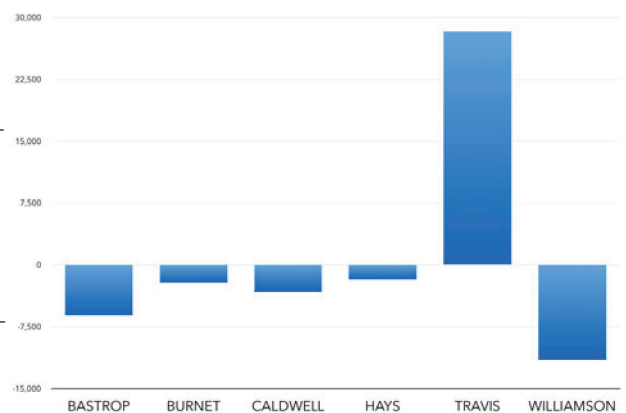
It is important to keep in mind that the 2040 CAMPO regional growth forecasts chose even higher growth forecasts for Williamson & Hays County than the high growth model from the State Demographic Center.

The most current State Demographic Center forecasts assume a bizarre proposal of static growth rates for Hays and Williamson County

The most recent state demographer forecasts (2018) contain bizarre differences between Travis County and Hays and Williamson County growth patterns. We analyzed the annual growth rate these forecasts were predicting for each county and found that the State Demography Center is claiming that they expect Hays and Williamson County to maintain around a 4% annual growth rate through 2050, while Travis' growth rate would decrease from 2.5% to about 1% a year.

The most important thing about understanding growth rates is that if someone tells you they are from a fast growing county (in terms of a high growth rate), that almost always means they are from a relatively small county. The proposal that Travis County's growth rate will decrease is normal. A proposal that Hays and Williamson County could maintain the growth rate of the small sub-urban counties they are today ad nauseam is not a reasonable proposal. We also found that the State Demography Center's projected growth rates differ greatly from recent history of these counties.

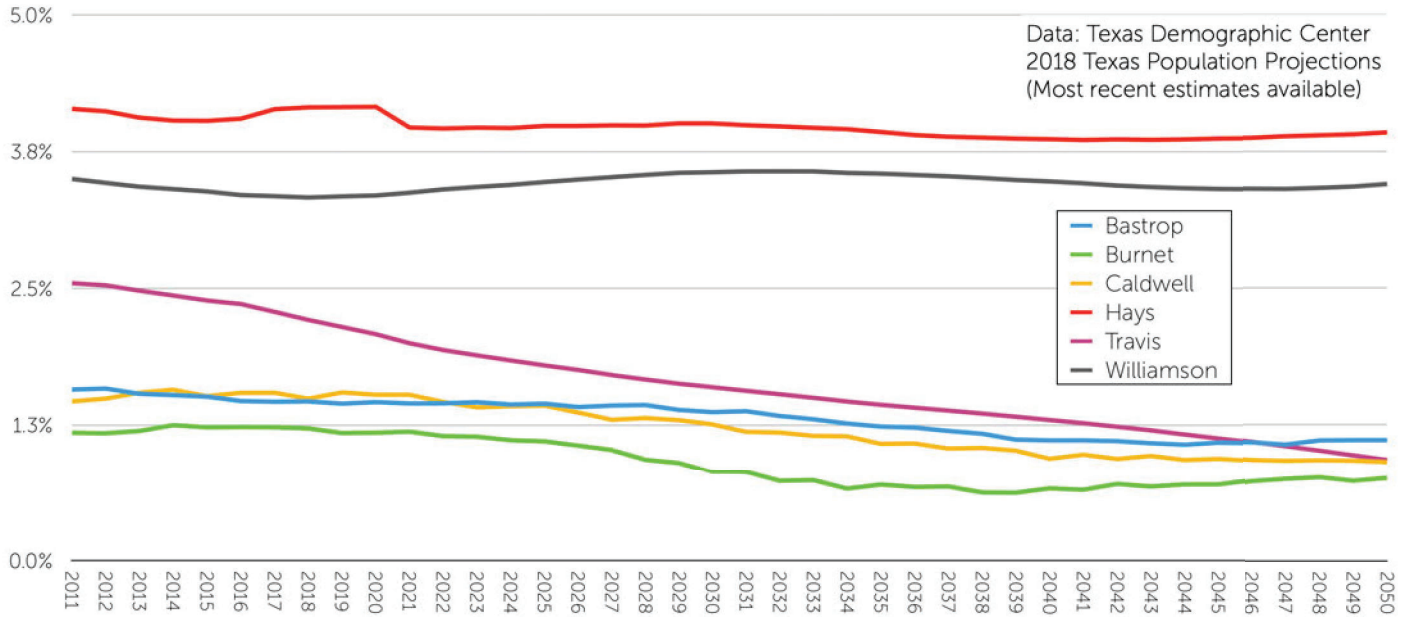
How much more or less has each CAMPO county grown 2010-2016 compared to official forecasts?



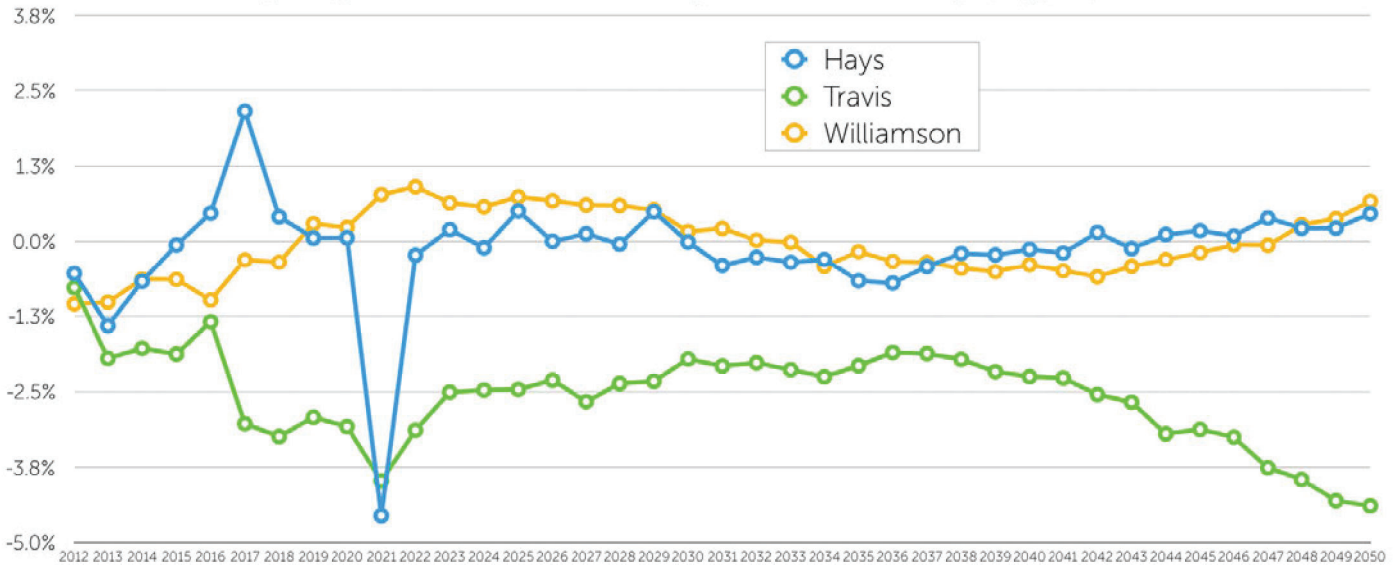
This chart compares the Texas State Demographers' 2000-2010 trend estimates for county's growth to US Census estimates for actual county population in 2016. The Capital Area Metropolitan Planning Organization uses the high estimates from the Texas State Demographer for long-range transportation planning, regional growth forecasts, and travel demand models. These figures are then used for allocating funding, prioritizing projects, and presented to the public when considering alternative proposals for projects, such as whether or not to add single occupant vehicle capacity to I-35.

While Travis County has grown more from 2010 to 2016 than all the other counties in the region combined, the inequitable regional planning process has been used to allocate higher funding per capita to suburban and rural counties than Travis where the majority of regional residents live and the vast majority of the region's economy is made.

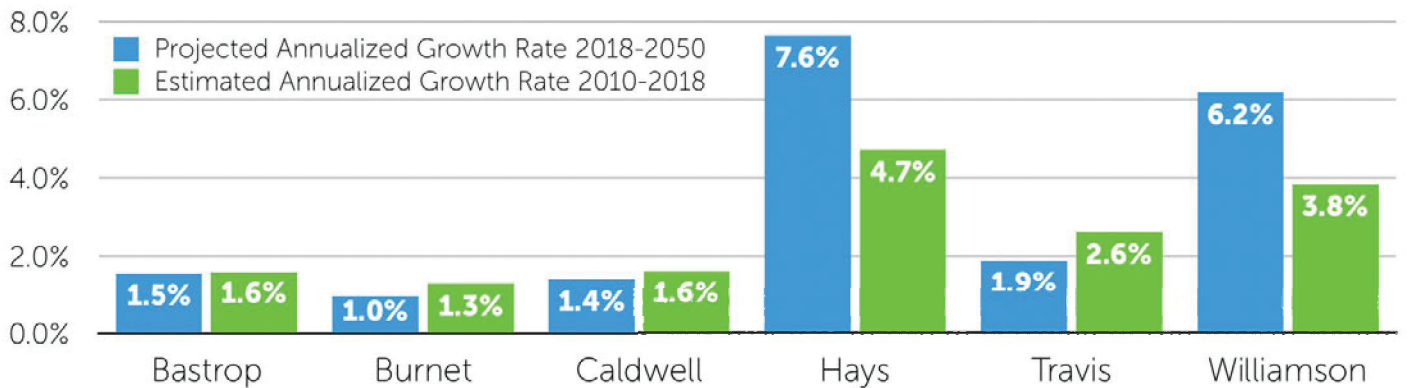
Projected annual growth rate by county in the Austin region 2010-2050



Rate of change of growth rate for each county from Texas Demography projections 2010-2050



How Texas Demographer Projected County Growth Rates Compare to Recent Census Estimates



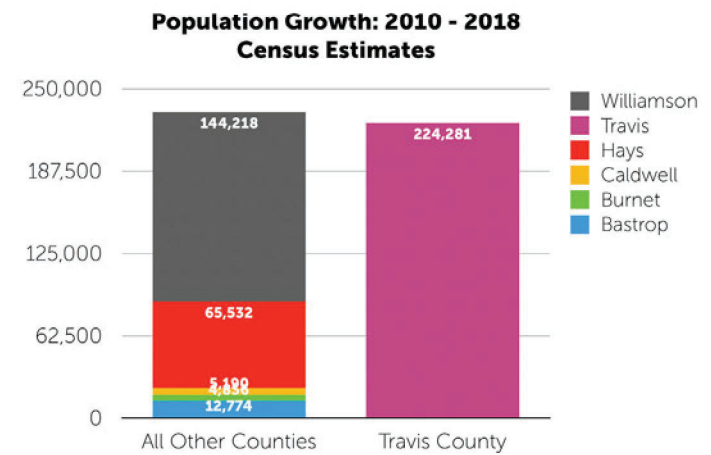
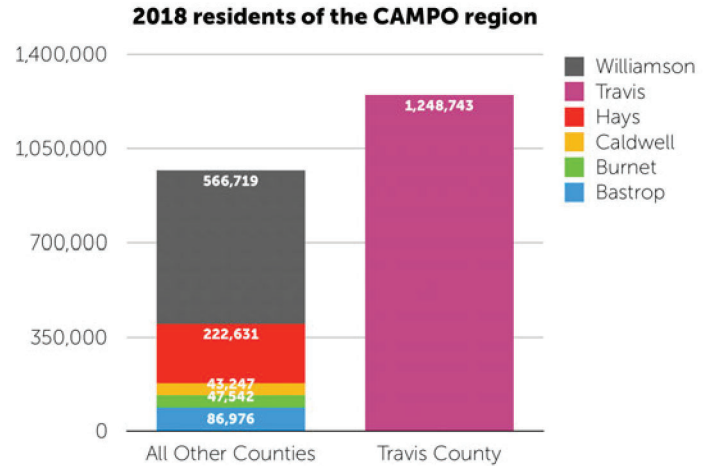
WHAT HAPPENED WITH THE 2040 CAMPO GROWTH FORECASTS?

The Austin region has grown from 1,759,027 to 2,215,858 residents from 2010 to 2018 according to US Census Bureau estimates, an annual growth rate of 3.2%. Most current residents live in Travis County (1,248,743 people or 58.2% of regional population), with less than half as many people living in the next largest, Williamson County (566,719 people or 24.0%).

Since 2018, the most residents were added to Travis County. At 49.1%, Travis saw slightly less than a majority of regional growth. However, growth rates of Williamson (5.2%) and Hays (4.7%) remain higher than the other counties of the region, higher than Travis (2.7%), Bastrop (2.2%), Caldwell (1.7%), and Burnet (1.4%).

Yet, the high rates of growth in Williamson and Hays have not actually met the expectations set out in the regional growth forecasts established by the CAMPO Transportation Policy Board upon adoption of the 2040 Regional Transportation Plan, which predicted 6.4% annual growth this decade for Williamson and 5.2% for Hays.

Williamson County seems to have added 30,340 less people than the official regional growth forecasts predicted, with all counties in the region growing slower than expected, except for Travis, which added 25,243 more people than expected. This general pattern of underestimating growth in



How many more or less people were added 2010-2018 to each county compared to CAMPO 2040 Forecasts



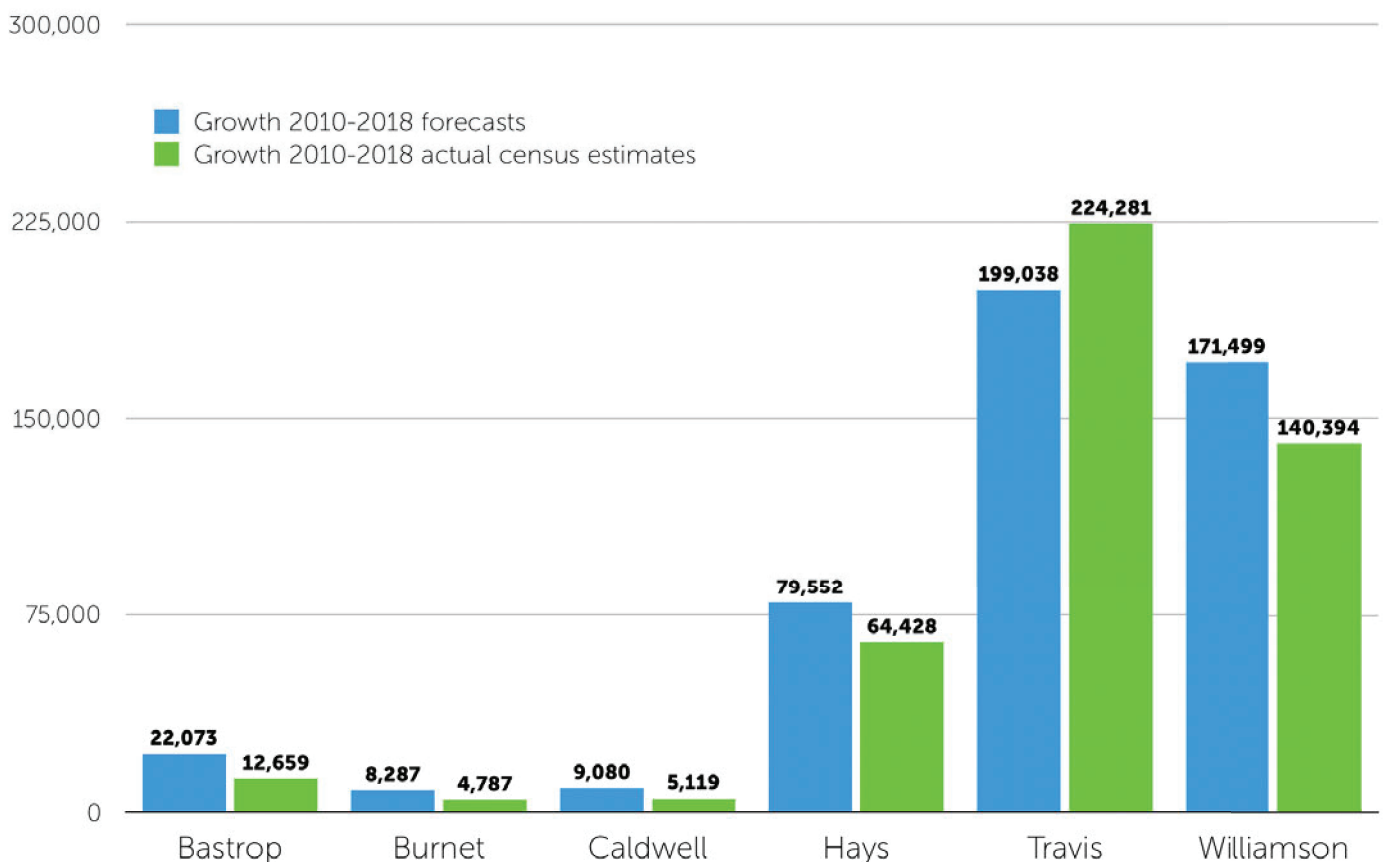
the urban core and overestimating growth in sub-urban and rural counties matches the similar problem found in the predictions from the Texas State Demographic Center. However, CAMPO over-estimated sub-urban county growth in the Austin region to a much higher extent than the Texas State Demography Center.

There are published critiques of the CAMPO process for allocating regional growth during development of the 2040 Regional Transportation Plan, most prominently “Unsupportable Demographic Forecasts Lead to Broken CAMPO 2040 Regional Transportation Plan” prepared by Norm Marshall for the Save Our Springs Alliance, which remains readily available on-line.

Importantly, these regional growth forecasts impact a wide variety of public decision-making processes, including funding allocation decisions at the regional, state, and federal level. When TXDOT scores projects in the Unified Transportation Program regional growth forecasts as used as one of the indicators to rank projects for funding. When we hear outrageous claims, such as the radical proposal that it might take two hours to travel on I-35 from downtown Austin to Round Rock, the Travel Demand Models are incorporating these regional growth forecasts.

For the last five years, many public decision making processes have assumed greater growth for the whiter, wealthier, sub-urban counties than they have achieved. While we did not dig back further, there is no reason to think that this inequity has not been happening for decades. The structural inequity at CAMPO has been in place for at least 15 years, with the people of sub-urban and rural counties having much greater voting power per person on the TPB and TAC than residents of Travis County. We believe the apparent perversion of the regional growth forecasts process may be a violation of Title VI of the Civil Rights Act of 1964, causing disproportionate impacts on people of color.

Actual CAMPO Region Growth vs. CAMPO Forecasts 2010-2018



ALTERNATIVES ANALYSIS: A DIFFERENT FUTURE FOR THE PEOPLE OF CAPITAL AREA REGION

To overcome the flaws and bias of the current regional growth forecasting and travel demand modeling system, we believe CAMPO should adopt a robust scenario planning system instead. Essentially, this would mean keeping the current modeling system as one alternative growth scenario, but adopting at least a second alternative growth scenario. The lack of doing this means that all environmental processes in the region are not truly considering meaningful alternatives.

Continuous use of at least two reasonable growth scenarios

In order to explain how this might work, we have developed an alternative growth forecast using CAMPO data and GIS shape files for the 2040 Regional Transportation Plan. All representations of this data, conclusions, and maps are solely the product of Farm&City and are not endorsed by CAMPO staff or TPB in any way, even though this process begins with the CAMPO 2040 growth forecasts.

The first two maps on the next page are simply a representation of the original 2040 forecasts, which include the baseline data for 2010 and the official growth forecasts for 2040. However, the third map is a Farm&City creation of an alternative growth scenario. We believe CAMPO should adopt a robust, open process to develop two or more alternative scenarios that would be much more complex than this simple model, but this allows an illustration of the points.

This simple model also could be used to allow analysis of various current proposals. Many have been advocating for Capital Metro to analyze Project Connect proposals including such an alternative growth model alongside the existing forecast, but staff believe that Federal Transit Administration rules prohibit them from in any publishing analysis based on any growth forecasts not officially adopted by CAMPO. Similarly current CAMPO projects like the Regional Arterials Study could be looked at again through this second lens to see how the results in terms of traffic and costs change.

Developing multiple reasonable growth alternatives for the region can provide us the ability to understand the costs and benefits of different land use strategies, but it also can give much greater information on the impacts of different transportation strategies. A transit investment will be more efficient, affordable, and useful to people if more people live, work, and go to school within walking distance of the stations. Similarly, roadway costs rise dramatically with low density development.

Current CAMPO Planning Regime

	2040 Regional Growth Forecasts	
	Costs	Benefits
No Build Scenario	\$450 / capita	\$400 / capita
Alternative A	\$550 / capita	\$650 / capita
Alternative B	\$650 / capita	\$700 / capita
Alternative C	\$300 / capita	\$350 / capita

Proposed CAMPO Planning Regime

	Growth Forecast X		Growth Forecast Y	
	Costs	Benefits	Costs	Benefits
No Build Scenario	\$450 / capita	\$400 / capita	\$450 / capita	\$350 / capita
Alternative A	\$550 / capita	\$650 / capita	\$700 / capita	\$800 / capita
Alternative B	\$650 / capita	\$700 / capita	\$600 / capita	\$500 / capita
Alternative C	\$300 / capita	\$350 / capita	\$400 / capita	\$900 / capita

These maps represent an example of looking at multiple scenarios to better understand options for growth and development. The base shapes in these maps are Transportation Analysis Zones (TAZ) and in each scenario, the actual or predicted number of residents and jobs have been added together.

Yellow areas are rural – less than 1,000 people or jobs per acre. Light orange areas are sub-urban – between 1,000 and 10,800 people or jobs / acre. Dark orange and brown areas are urban – more than 10,800 people or jobs / acre, with the darkest brown being the most dense areas.

2010 Baseline Scenario

2 million residents
1.5 million living in drivable sub-urban or rural areas
0.5 million living in walkable urban areas

2040 Official Forecast

4 million residents
3 million living in drivable sub-urban or rural areas
1 million living in walkable urban areas

If we realize this scenario – the current official forecast – 750 square miles of rural land will be converted to sub-urban – everywhere that you see orange replacing yellow from the map above.

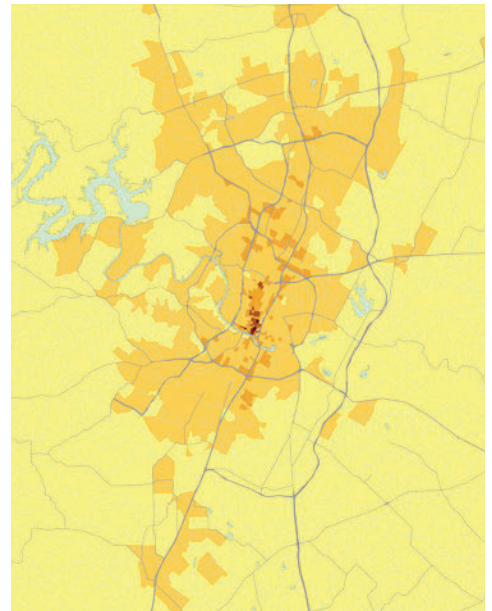
2040 Alternative Scenario

4 million residents
2 million living in drivable sub-urban or rural areas
2 million living in walkable urban areas

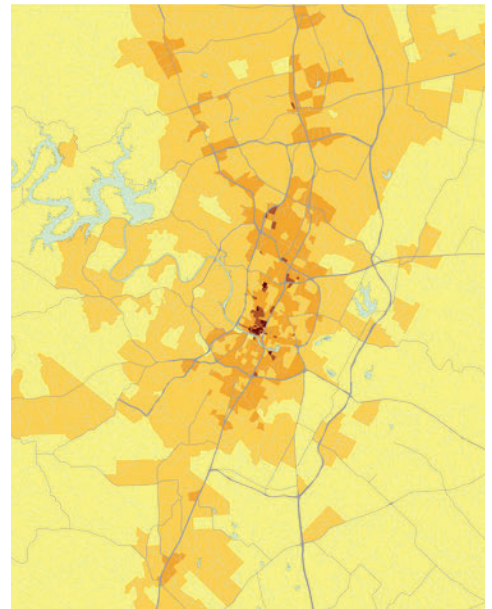
This scenario was developed by Farm&City as illustrative of the possibility for different options and planning strategies. In this model, every single TAZ grows at the rate the entire region is expected to grow – essentially doubling population and jobs.

This means a neighborhood of 1,000 residents and 400 jobs in 2010 would grow to 2,000 residents and 800 jobs in this 2040 Alternative Scenario. In this scenario, growth is focused broadly everywhere that we have human infrastructure already, but not just in downtown or in any one jurisdiction.

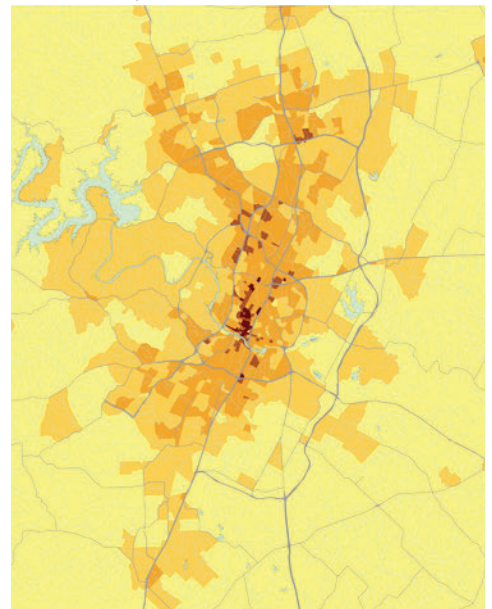
CAMPO residents likely have lifestyle preferences similar to that documented by the Kinder Houston Area Survey that half of the 7.5 million people of the Houston region want drivable sub-urban and half want walkable urban. Currently the Austin region is not providing about half a million people what they want, but this scenario would provide what we believe the market demands.



2010 Baseline Scenario



2040 Official Forecast



2040 Alternative Scenario

WHAT WE WANT: SUSTAINABLE, EQUITABLE REGIONAL GROWTH POLICIES

The people of the Austin region deserve a modern regional decision-making system that equitably represents us all and entertains the idea of a sustainable future for a currently growing metro region. Old battle lines need to be abandoned and wild overreach by certain parties needs to be pulled back to within reason. However, the people and leaders of counties that have enjoyed out-sized influence should expect a regional government that continues to serve them well and does everything it can to facilitate their vision for their future.

While much of this report is focused on pointing out the problems with the regional growth forecasts and how decision-making has occurred at CAMPO committees, we truly believe that the current CAMPO staff and staff leadership are doing a great job, having inherited a long feud with our regional governance remaining in a big mess because of this feud. It is time for this feud to end and for the people of the region to work together well to plan for adding another 2 million people, such that all our communities can harness this growth to improve quality of life for all.

While many across the Austin region do not seem to share our understandings of climate change and the consequences of massive destruction of open land, we think it is beyond time to be tolerant of our regional government not taking a reasonable approach to combating climate change. Similarly, our transportation system has dramatically failed to provide safety to the people of the Austin region, with one of the highest rates of traffic deaths per capita in one of the most dangerous states in the nation in terms of traffic violence. We hope these issues can also be addressed.

Ensure open, transparent process for the 2045 Forecasts

At the very least have a very public, open discussion of what has happened in this process, including a discussion at the Transportation Policy Board of how 391,555 more expected people were added to Williamson County in contradiction of the results of the UrbanSim modeling. There still is time for meaningful discussion and changes to be entertained by the RTP Subcommittee, the Technical Advisory Committee, and the TPB level.

Start on robust scenario planning system now, well before the 2050 RTP

CAMPO should reform the forecasting system to yield at least two robust growth forecasts of different reasonable scenarios that can be used for all planning activities to analyze meaningful alternatives based on their expected outcomes in multiple future growth scenarios.

Each time we decide on proposed transportation investments, we should be able to compare against both growth scenarios and get the costs and benefits in all scenarios, before making a decision. This improved decision making system should be used for the development of the RTP as a whole, for things like the regional arterials study, and incorporated into submissions for TIP calls for projects. The possibility of adopting this model in less than 5 years should be entertained.

Establish Quality Control measures in regional growth forecast process

Population growth forecasts, traffic forecasts, and transit ridership forecasts as well as other forecasts

of human behavior are produced by computer software. As such, they can all produce wrong results if their inputs are not correct. There are many sources of input error. One common source is simply mistyping, typing "87" when what was meant was "78." Errors of this kind are sometimes caught by the software itself; in other cases, they produce obviously wrong results but they can also produce subtly incorrect results.

Another class of errors are those produced when the software requires the user to make assumptions about the input data or chose among available data sets. A widely know example is choosing which employment data to use since there are no less than seven Federal sources of employment data. Even with an individual source, there may be options of the time periods for which data is available and the granularity of the data.

There are numerous methods available for guarding against and checking for errors. Sometimes the software itself provides cross checks; in other cases, organizations have gone so far as to have two separate teams doing the modeling so that their results can be compared. What is critical is that the organization have an explicit quality control plan which spells out the kind of errors that are likely to occur and the steps that should be taken to prevent them.

At a minimum, an organization should conduct formal reviews of the inputs to a model that include other individuals than the ones who developed the model and provide a written record of the review. While it is desirable to include individuals who are specialists in the software being used, it is also valuable to conduct reviews with reviewers who are not specialists. Indeed, merely by asking questions, such reviewers may be able to direct attention to possible errors or questionable decisions.

Inclusive, meaningful robust future scenario planning

We should change our regional growth planning paradigm completely, such that our transportation (and urban planning) plans are made dynamically alongside dynamic plans for where people will live and work in the future. We should meaningfully entertain the possibility for smart growth, safe, multimodal access, and massive infill and be able to meaningfully see what transportation investment choices might mean in different growth scenarios. In the past, various choices have meant all Texas MPOs meaningfully entertain the possibility for sprawl growth and massive experiment in car-dependent, single family neighborhoods, and we have then tried to fit our transportation system to that world.

There are various examples of MPOs following federal guidelines, while planning for a more sustainable, equitable future.

<https://www.nrdc.org/sites/default/files/implementation-report.pdf>
<http://www.portlandonline.com/portlandplan/?a=288082&>

Regionally, we should be planning for at least half of the residents of the region to have affordable options to live in walkable urban neighborhoods. I believe that we need a regional Equitable Transit-Oriented Development strategy complemented by ETOD strategy at the City of Austin and other large cities in the region.

Aligning regional transportation planning goals with citizen visions

Many Metropolitan Planning Organization's have undertaken regional planning activities intended to identify the vision, values, goals, and hopes of the people of the region. The Houston - Galveston

WHAT WE WANT: SUSTAINABLE, EQUITABLE REGIONAL GROWTH POLICIES

Area Council conducted an extensive public outreach effort as part of the Our Great Region 2050 process, which was funded by a Federal Sustainable Communities grant.

Unfortunately, a similar grant in the Austin region was given to a separate outside entity, Envision Central Texas, and the lessons learned about what the people of the Austin region want for their future did not seem to leap from that independent entity into the work of CAMPO.

There is a widespread conception that CAMPO should function as a confederation of governments, which we believe violates the intent and code of the Federal laws that apply to such MPOs. Instead, we believe CAMPO should seek to actively engage the people of the region and to guide all regional work through scientifically valid planning processes yielding a citizens' vision for our future.

We believe a valid process listening to the people of the region would lead to inclusion of a series of goals not currently articulated in CAMPO planning documents:

- Adopt regional climate change emissions reduction goals and integrate into RTP
- Adopt regional Vehicle Miles Traveled reduction goals and integrate into RTP
- Adopt regional goal to end traffic deaths and serious injuries by 2040 and integrate into RTP.
- Adopt regional land conservation goals and integrate into RTP.
- Adopt regional affordable housing + transportation strategy and incorporate into RTP.

Build an equitable regional strategy

While most of this report seeks to focus on the regional growth forecasts, these issues cannot be discussed without considering the equity critiques of CAMPO itself. Lack of equitable democratic institutions ultimately hurts us all, while many suffer disproportionately from the shortcomings of our inequities every day. We believe that structural reform of the MPO is necessary to effectively plan for the future of all the people of the Austin region. Along these lines, we believe the following suggestions may help build a regional governance to effectively represent us all:

- Redesign of Joint Powers Agreement: House & Senate model using current TPB as Senatorial body, and a new elected regional board with proportional representation as House (or short-term, adding significant voting seats for Austin and Travis County)
- Create a Citizen Advisory Committee with proportional representation ensuring race, gender equity.
- Prioritize race, gender, geographic representation on TPB, TAC, all CAMPO committees
- Hold member governments accountable to equity provisions in current JPA
- Create voting seats for non-government entities on the TAC
- Merge CAPCOG and CAMPO, possibly AAMPO and AACOG, with an eye toward ensuring equitable, proportional representation of all communities — guaranteeing rural/ suburban representation, balancing out the historical suburban domination of both entities.
- Complete overhaul of environmental justice policies and procedures — current analysis is clearly meaningless. Must include analysis of impacts of funding between modes, representation, and other actual equity issues.



Revised February 5, 2020

Farm&City is a 501(c)(3) nonprofit committed to high quality urban and rural human habitat in Texas in perpetuity. Farm&City was started in 2017 to execute its vision for and has several initiatives: 1,000 Texans for Transit, Vision Zero Texas, 50 Million Texans, and Decide Texas.

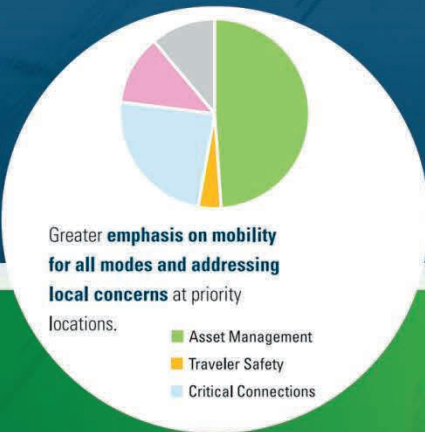
"Allocation Game: The regional growth forecasts in the CAMPO 2045 Regional Transportation Plan" is a project of Farm&City. Staff involved with this project were Heather Yu and Jay Blazek Crossley. Ruven Brooks has been assisting Farm&City with GIS mapping and other analytical capabilities in a volunteer capacity during this time.

Please feel free to support our mission and work and make a donation at:

<http://www.FarmAndCity.org>

Thank you for your support.





Supporting Performance-Based Planning and Programming through Scenario Planning

JUNE 2016



U.S. Department of Transportation
Federal Highway Administration

Notice

The contents of this report reflect the views of the authors, who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official policy of the U.S. Department of Transportation.

This report does not constitute a standard, specification, or regulation.

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16. Abstract This guidebook addresses how scenario planning can be used to support and advance the practice of performance-based planning and programming (PBPP). Scenario planning can use metrics, models, data sets, and tools to estimate and evaluate scenarios based on their ability to maximize system performance and support achievement of goals and performance targets. The guidebook presents a framework for connecting established scenario planning processes with the four phases of PBPP: direction, analysis, programming, and implementation. Three case studies provide examples of agencies of varying sizes that have used scenario planning in innovative ways to advance the practice of PBPP. A section and appendix of scenario planning and performance measurement tools that can be used in, or incorporated into, scenario planning is also provided.			
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Contents

- Figures iii**
- Tablesv**
- Acknowledgmentsvi**
- Executive Summary vii**
- 1. Purpose and Context 1**
 - Related Resources* 1
 - Intended Audiences* 3
 - How to Use the Guidebook* 4
- 2. What are Scenario Planning and Performance-Based Planning and Programming (PBPP)?6**
 - What Is Scenario Planning?* 6
 - Scenario Planning Framework* 10
 - What Is Performance-Based Planning and Programming?* 11
- 3. How Can Scenario Planning Inform Performance-Based Planning and Programming?16**
 - Direction: Goals, Objectives, and Measures* 18
 - Analysis: Trends, Targets, and Strategies* 22
 - Programming: Investments, Priorities, and Resources* 46
 - Implementation: Monitoring, Evaluation, and Reporting*..... 48
 - Performance-Based Scenario Planning Tools*..... 51
- 4. Getting Started: Designing a Scenario Planning Process to Support PBPP63**
 - Step 1: Evaluate Community Context* 63
 - Step 2: Identify Desired Outcomes*..... 63
 - Step 3: Identify Scenario Planning Purpose*..... 63
 - Step 4: Identify Scenario Planning/PBPP Linkages* 64
 - Step 5: Define Scenario Planning Approach* 64
 - Step 6: Define Scenario Planning Engagement*..... 64
 - Step 7: Define Resources for Scenario Planning Effort*..... 64
 - Step 8: Prepare Scope for Scenario Planning Effort*..... 65
- 5. Keys to Success66**
 - Strengthen Connections between Scenario Planning and PBPP*..... 66
 - Use Creativity to Push the Limits of Existing Tools* 67

<i>Be Strategic in Engaging Decisionmakers, Stakeholders, and the Public</i>	68
<i>Respect the Local Context</i>	69
6. Case Study Summaries	71
<i>Champaign-Urbana Urbanized Area Transportation Study</i>	71
<i>Fresno Council of Governments</i>	74
<i>Hillsborough County MPO</i>	77
7. Resources	79
Appendix A. Getting Started: A Worksheet for Designing a Scenario Planning Process to Support PBPP	A-1
Appendix B. Scenario Planning Tools	B-1
<i>PBPP Tools</i>	B-1
<i>Scenario Planning Tools</i>	B-11
Appendix C. Case Studies	C-1
<i>Synthesis and Comparative Table of Case Studies</i>	C-1
<i>Champaign-Urbana Urbanized Area Transportation Study</i>	C-3
<i>Lessons Learned</i>	C-15
<i>Fresno Council of Governments</i>	C-17
<i>Hillsborough County MPO</i>	C-35

Please note: Many agency names and publication titles mentioned in the document are hyperlinked, providing digital users the ability to click for direct access to agencies’ websites or other documents mentioned in the text. These links are provided in full in the Resources section.

Figures

Figure ES-1: Applications of Scenario Planning to Performance-Based Planning and Programming.....	viii
Figure 2-1: Scenario Planning Process Framework from the 2011 Scenario Planning Guidebook.....	10
Figure 2-2: The Performance-Based Planning and Programming Process Framework	12
Figure 3-1: Applications of Scenario Planning to Performance-Based Planning and Programming.....	17
Figure 3-2: MnSHIP Investment Approaches Developed for Scenario Planning	28
Figure 3-3: Index Used by DVRPC to Compare Three Alternative Land Use Scenarios	29
Figure 3-4: Example Comparison of Scenarios A through F in Relation to Different Performance Goals from DRCOG	31
Figure 3-5: BRTB Analysis of Three Scenarios across Different Performance Measures	35
Figure 3-6: SEMCOG Scenario Analysis	40
Figure 3-7: CDOT Analysis of Cost to Sustain Current Performance.....	41
Figure 3-8: DVRPC Choices and Voices Interactive Tool.....	42
Figure 6-1: CUUATS’ Sustainable Choices 2040 Scenarios	71
Figure 6-2: CUUATS’ Modeling Suite Used to Develop the Sustainable Choices 2040 Plan	72
Figure 6-3: Fresno COG’s Four Scenarios Evaluated for the 2014 RTP/SCS	75
Figure 6-4: Imagine 2040 Preferred Scenario.....	77
Figure C-1: Sustainable Choices 2040 Planning Pillars	C-4
Figure C-2: Graphic Artist’s Sketch of Public Input	C-7
Figure C-3: Visual Representations for Traditional Development and Sustainable Choices 2040 Scenarios	C-8
Figure C-4: CUUATS’ Statistical Models.....	C-10
Figure C-5: Regional Population and Employment Projections under Traditional and Sustainable Choices Scenarios.....	C-11
Figure C-6: Fresno County, California	C-17
Figure C-7: Fresno COG’s GHG Reduction Targets in the 2014 RTP/SCS	C-19
Figure C-8: Example of Fresno’s Goal, Objectives, and Policies Organization	C-21
Figure C-9: Scenario B+ from the San Joaquin Valley Regional Blueprint Process	C-23
Figure C-10: The Four Fresno COG Scenarios	C-28
Figure C-11: Expected Performance with Respect to Active Transportation, GHG Emissions Reductions, Transit-Oriented Development, and Vehicle Miles Traveled (respectively) under Each Scenario	C-30
Figure C-12: Hillsborough County MPO’s Imagine 2040 Planning Process	C-36

Figure C-13: Imagine 2040 Preferred ScenarioC-40

Figure C-14: Visualization of Expected Performance for Each ScenarioC-42

Figure C-15: Expected Freight Performance under Investment Levels 1, 2, and 3C-43

Figure C-16: Vulnerability Analysis Results – Expected Impacts under Three
Investment LevelsC-45

Tables

Table 3-1: Tri-County RPC Scenarios Considered in Developing the 2040 Transportation Plan.....	27
Table 3-2: DRCOG Scenarios Addressing Changes to Land Use and Transportation Investments and Policies.....	30
Table 3-3: Outcome Measures Used by DRCOG to Evaluate Scenarios	30
Table 3-4: Six Scenarios Evaluated by Durham-Chapel Hill-Carrboro MPO and the Capital Area MPO.....	32
Table 3-5: BRTB Options Addressed in Scenarios	34
Table C-1: Example of the Alignment of Performance Measures used to Evaluate Scenario and the Performance Measures in the Sustainable Choices 2040 Plan.....	C-13
Table C-2: 2013 Household Income Quartiles	C-18
Table C-3: Fresno COG’s Sustainable Communities Strategy Scenario Performance Indicator Comparisons	C-29
Table C-4: Spending by Transportation Mode by Revenue Scenario	C-31
Table C-5: Revenues Programmed by Transportation Mode	C-32
Table C-6: Hillsborough County MPO Population and Employment Growth.....	C-35
Table C-7: LRTP Performance Measures.....	C-37
Table C-8: Performance Measures Used to Evaluate Scenarios.....	C-41

Acknowledgments

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Rob Terry	Fresno Council of Governments (CA)
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Executive Summary

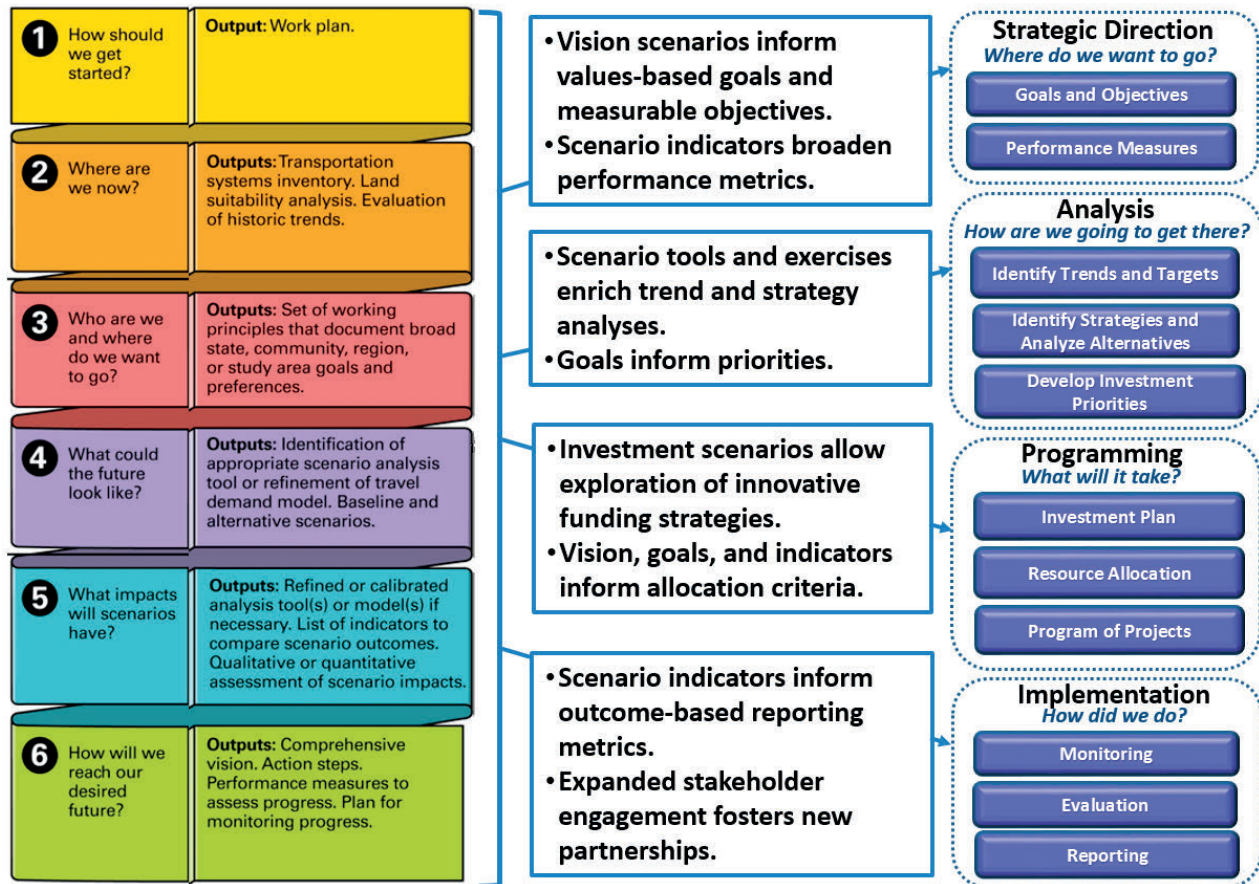
The use of performance-based methods of planning and decisionmaking continues to increase throughout the United States as agencies seek new and improved methods, tools, and practices to maximize the performance of their transportation systems. This guidebook focuses on how scenario planning can be used to support and advance the practice of performance-based planning and programming (PBPP). PBPP is the application of performance management within the planning and programming processes to achieve desired performance outcomes for the multimodal transportation system. Scenario planning has long been used by transportation agencies in the U.S. as a tool for visioning and identifying preferred land use and transportation scenarios for future growth. Many scenario planning exercises today are transitioning to a greater focus on analysis and the use of more sophisticated metrics, models, data sets, and tools to test and evaluate scenarios. This analysis is based on their ability to maximize transportation system performance and support achievement of performance goals and targets, as well as recognize the interaction with broader community goals (i.e. economic development, environment, environment, public health, housing, etc.).

This guidebook is a companion to the Federal Highway Administration (FHWA) 2013 Performance-Based Planning and Programming [PBPP] Guidebook and 2014 Model Long Range Transportation Plans: A Guide for Incorporating Performance-Based Planning. It builds on existing FHWA literature on PBPP by illustrating the ways in which scenario planning can be used to strengthen agencies' ability to engage in performance-based planning and decisionmaking. This Guidebook is organized around the four key phases in the PBPP process—Direction, Analysis, Programming, and Implementation—so practitioners can understand the applications of various scenario planning types and techniques that are most appropriate to apply at different planning phases or for different considerations and topics.

Intended Audiences – This Guidebook is intended for use by transportation practitioners involved in statewide, metropolitan, and nonmetropolitan planning and programs. Practitioners are frequently looking for ways to engage their communities in considering how to enhance the performance of the transportation system through improved decisionmaking processes, and scenario planning is important tool for accomplishing the task. Practitioners can use the information in this Guidebook to understand more fully the considerations that should be incorporated into decisions about designing and conducting a scenario planning process.

Framework – This guidebook introduces a framework, shown in Figure ES-1, which identifies linkages between the six-step scenario planning process identified in the FHWA 2011 Scenario Planning Guidebook and each of the four stages of PBPP. The six-step scenario planning process can be repeated or performed iteratively at different points in the PBPP process and for different purposes. For example, an agency might use scenario planning to conduct a visioning exercise at the beginning of its long range plan development. The agency might employ scenario planning again and scenario analysis techniques to identify the performance implications of different variations of the preferred scenario or to explore how the preferred scenario would perform, vis-à-vis other potential scenarios, if significant technological, economic, climatic, or weather-related changes were to significantly “disrupt” the transportation system.

Figure ES-1: Applications of Scenario Planning to Performance-Based Planning and Programming



Case Studies – This guidebook contains three in-depth case studies of MPOs that have used scenario planning to support PBPP in advanced and innovative ways. The **Champaign-Urbana Urbanized Area Transportation Study (CUUATS)** in Illinois used scenario planning and analysis in the development of its most recent long range plan to identify the performance implications of a trend scenario and a “sustainable choices” scenario, which assumed several potential future changes to the region. The agency found entrepreneurial ways to integrate considerations such as public health into the planning process and has used scenario planning to support development of various corridor studies. The **Fresno Council of Governments** in California used scenario planning in the development of its regional transportation plan and Sustainable Communities Strategy to consider the performance implications of four scenarios, with a particular focus on reducing greenhouse gas emissions. The agency also conducted an analysis of four revenue/investment scenarios to identify which package of projects to fund, given expected revenues and ability to flex funds between different modes. The **Hillsborough County MPO** in Florida used scenario planning to develop a regional land use vision, consider four separate investment packages with different modal emphases, and consider potential impacts of future hurricane events on the transportation system.

Keys to Success – The guidebook concludes with a chapter on key recommendations for maximizing the value of scenario planning and its potential to inform and support PBPP. These are summarized according to the following four principles, each of which is discussed in detail in Chapter 5.

- ▶ Create and Strengthen Connections between Scenario Planning and PBPP
- ▶ Use Creativity to Push the Limitations of Existing Tools
- ▶ Identify the Best Methods for Engaging Decisionmakers, Stakeholders, and the Public
- ▶ Consider the Local Context

PBPP and Scenario Planning Tools – Appendix B, which contains the information provided in the final section of Chapter 3 in greater detail, provides an overview of available PBPP and scenario planning tools, including capabilities, applicability to different phases of PBPP, descriptions of relevance and potential applications to scenario planning, and performance measures each considers.

1. Purpose and Context

The purpose of this guidebook is to help transportation practitioners build their knowledge of ways in which scenario planning methods, metrics, processes, and outcomes can enhance transportation decisionmaking across the spectrum of the performance-based planning and programming (PBPP) process.

PBPP helps transportation agencies achieve desired multimodal system performance outcomes by applying systematic, coordinated performance management strategies to long range planning, short-range programming, project development, and evaluation. This Guidebook examines ways in which scenario planning can add value to, and be enriched by, the analyses, methods, metrics, and collaboration that support the entire spectrum of PBPP. In particular, the Guidebook discusses topics such as:

- ▶ The incorporation of PBPP goals and performance measures into scenario planning and scenario analyses processes;
- ▶ The incorporation of scenario planning metrics and findings into the ongoing PBPP process;
- ▶ Opportunities to apply scenario planning methods to PBPP decisionmaking phases beyond the initial visioning stage in which scenario planning has most frequently been applied.

In recent years, transportation agencies have applied scenario planning methods to strategic planning and programming tasks, including assessments of long-term risks, financing, system management and operations, and corridor planning. In addition, they have used scenario planning techniques to consider potential impacts and implications of complex, rapidly changing demographic, environmental, economic, and technological forces that are not easy to assess with traditional models or analysis tools. Scenario planning tools have also helped planners consider the role of transportation in achieving comprehensive sustainability for communities, regions, states, and the nation as a whole. Such broader analyses help advance the principles of the Federal multiagency Partnership for Sustainable Communities initiative, which seeks to identify and implement solutions for improving sustainability by facilitating access to affordable housing, increasing transportation options while lowering transportation costs, ensuring equity, and protecting the environment (i.e., addressing the “triple bottom line” of environmental, economic, and social sustainability).

Related Resources

This Guidebook builds on a framework established in the 2011 FHWA [Scenario Planning Guidebook](#), which serves as an essential resource for transportation practitioners seeking to understand the fundamentals of scenario planning. The 2011 Guidebook defined a comprehensive, six-step process for conducting scenario planning. It provided extensive guidance and numerous case studies on the use of scenario planning for transportation decisionmaking. It particularly supports visioning and long range planning processes that involve building consensus on a preferred future scenario in which transportation investments

complement desired land use policies, community development goals, and principles for environmental preservation and quality of life.

This Guidebook also serves as a companion to the 2013 FHWA [Performance-Based Planning and Programming \[PBPP\] Guidebook](#) and 2014 [Model Long Range Transportation Plans: A Guide for Incorporating Performance-Based Planning](#). The 2013 PBPP Guidebook serves as a resource for practitioners from all types of transportation agencies on how to transition to more performance-based planning and programming processes. The 2014 [Model Plans Guidebook](#) focused specifically on incorporating performance-based planning into the development of statewide and metropolitan long range transportation plans. The 2014 Guidebook builds on existing FHWA resources on PBPP by illustrating the ways in which scenario planning can be used to strengthen agencies' implementation of performance-based planning and decisionmaking. FHWA also is developing related resources such as a "next generation" scenario planning guidebook with in-depth discussions of scenario planning typologies, methods, and analytics and recently released a primer, [Advancing Transportation Systems Management and Operations through Scenario Planning](#), on applying scenario planning to support transportation systems management and operations (TSMO).

Additionally, through a cooperative effort between the Transportation Research Board, the American Association of State Highway and Transportation Officials (AASHTO), and the Federal Highway Administration (FHWA) following the enactment of SAFETEA-LU, several products related to scenario planning and performance measures as part of collaborative transportation decisionmaking processes were developed as part of the second edition of the Strategic Highway Research Program (SHRP2). Following

EXISTING FHWA SCENARIO PLANNING AND PERFORMANCE-BASED PLANNING RESOURCES

[FHWA 2011 Scenario Planning
Guidebook](#)

[FHWA 2013 Performance-Based
Planning and Programming
Guidebook](#)

[FHWA 2014 Model Long Range
Transportation Plans: A Guide for
Incorporating Performance-Based
Planning](#)

[FHWA 2016 Advancing
Transportation Systems Management
and Operations through Scenario
Planning Primer](#)

[FHWA Scenario Planning and
Visualization in Transportation
website](#)

[FHWA Performance-Based Planning
and Programming website](#)

[FHWA PlanWorks website](#)

FEDERAL SCENARIO PLANNING RESOURCE UNDER DEVELOPMENT

["Next Generation" Scenario Planning
Guidebook \(update to the 2011
Scenario Planning Guidebook\)](#)

SAFETEA-LU, the Moving Ahead for Progress in the 21st Century Act (MAP-21), and now the Fixing America's Surface Transportation Act (FAST), FHWA and AASHTO have continued working to integrate these research-based products into the “everyday business” of long range planning, programming, corridor studies, and environmental review undertaken by State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs). This guidebook provides links to SHRP2 products (particularly PlanWorks) that are applicable to key phases throughout the PBPP process, many of which are featured on the FHWA PlanWorks website, which is profiled below on page 21.

Intended Audiences

This Guidebook is intended for use by transportation practitioners who are making investment recommendations or decisions for long or short range planning horizons; who are looking for ways to engage their communities and transportation system users in considering alternatives to address goals; and who want to examine implications for the performance of the transportation system under a variety of potential future conditions. Practitioners can use the information in this Guidebook to understand more fully the considerations that should be incorporated into decisions about how to design and conduct a scenario planning process that informs, and is informed by, the agency's comprehensive PBPP process.

MPOs, State DOTs, and transit agencies are the key agency audiences for this Guidebook. MPOs have historically led the application of scenario planning for transportation decisionmaking in the U.S. State DOTs and transit agencies, however, are increasingly examining ways to incorporate scenario planning and analysis into their long range planning processes. In addition

FEDERAL DIRECTIVES FOR PBPP AND SCENARIO PLANNING

Metropolitan Planning Organizations (MPOs) lead the cooperative transportation planning process for the distribution of Federal funds in urban regions. To encourage a data-driven approach to decisionmaking, the Moving Ahead for Progress in the 21st Century Act (MAP-21) of July 6, 2012 first required the use of PBPP by transportation agencies through the identification of performance measures and setting of performance targets with respect to those measures. It also strengthened the emphasis on the importance of scenario planning as a tool for MPOs to address the needs and complexity of their communities by considering multiple scenarios during the development of the metropolitan transportation plan (23 USC Section 134(i)(4)). Although MAP-21 specifically addressed the use of scenario planning by MPOs, State DOTs are also encouraged to explore the use of scenario planning to inform their planning processes.

MAP-21 encourages scenario planning to include potential regional investment strategies for the planning horizon; assumed distribution of population and employment; a scenario that maintains baseline conditions for the performance measures; a scenario that improves the baseline conditions; revenue constrained scenarios based on the total funds expected to be available over the forecast period of the plan; and the estimated costs and potential revenues available to support each scenario.

The Fixing America's Surface Transportation (FAST) Act, signed into law on December 4, 2015, continued MAP-21's emphasis on scenario planning as a key tool for supporting PBPP.

to serving as key stakeholders in regional and statewide scenario planning processes, transit agencies are also beginning to apply scenario planning to their own long range and operational plans.

Although some agencies have been conducting scenario planning exercises for years or even decades, others are in the early stages of considering how scenario planning can help them address their unique challenges. This Guidebook serves as a resource for these agencies by illustrating ways in which scenario planning approaches can—and should—be customized to address specific topics or issues, to work within the agency’s budget, and to contribute to the agency’s overall performance-based planning and programming process. Small and mid-size MPOs that are new to scenario planning, often with limited resources, will find information in this guidebook about using scenario planning to support their performance-based planning and programming process.

In addition, the Guidebook is intended to be useful for agencies of all sizes seeking to understand how they can build on experience to advance their use of scenario planning to support and inform PBPP. Some agencies profiled in this Guidebook are considering how scenario planning can be used as a tool not only to shape a vision and policy direction (through identification of goals, objectives, and performance measures), but also to analyze the impacts of unpredictable driving forces on future conditions, to support project prioritization and programming, and to improve the performance-based framework for ongoing evaluation, reporting, and system monitoring.

How to Use the Guidebook

The remaining chapters of this Guidebook cover the following:

Chapter 2: What are Scenario Planning and Performance-Based Planning and Programming (PBPP)? provides an overview of the purpose of scenario planning and of tools commonly used for scenario planning. It also discusses the PBPP process, the framework for which FHWA developed over the past few years. This chapter lays the foundation for understanding the concepts in Chapter 4.

Chapter 3: How Can Scenario Planning Inform Performance-Based Planning and Programming? Chapter 3 relates the practical applications of scenario planning to each of the four main stages of the PBPP process: Direction, Analysis, Programming, and Implementation. It also provides an overview of the potential synergies between PBPP and scenario planning tools.

Chapter 4: Getting Started: Considerations for Designing Your Scenario Planning Process is intended for use by practitioners as a self-assessment tool or guideline with questions to consider in developing a scenario planning process appropriate in the context of a specific region or State.

Chapter 5: Keys to Success summarizes the content of the Guidebook and provides a summary of the themes outlined throughout the guide that helps practitioners achieve the maximum benefit from a scenario planning process.

Chapter 6: Case Study Summaries contains three summaries of the full case studies in Appendix C that identify the practices and lessons learned of three agencies in different regions of the U.S. that used scenario planning to address unique sets of circumstances and challenges. The agencies profiled are the Champaign-Urbana Urbanized Area Transportation Study (CUUATS), Fresno Council of Governments (COG), and Hillsborough County Metropolitan Planning Organization (MPO).

The **Resources** section provides links to the guidance and examples referenced throughout the document and additional material on scenario planning and PBPP.

Appendix A contains a worksheet version of the questions provided in Chapter 4 (Getting Started) that practitioners can use for self-assessments.

Appendix B provides a table of detailed information on the PBPP and scenario planning tools that are summarized at the end of Chapter 3.

Appendix C contains in-depth case studies about the three agencies profiled in Chapter 6, including more details on practices and lessons learned.

2. What are Scenario Planning and Performance-Based Planning and Programming (PBPP)?

What Is Scenario Planning?

Scenarios are stories about the future that planners develop to consider and prepare for possible challenges and opportunities.

Scenario planning helps transportation agencies work with stakeholders and the public to establish a vision and implement a strategic plan for success in uncertain times. Well-crafted scenarios inspire critical thinking about issues and events that could significantly affect a region's economy, environment, and quality of life.

In addition to using modeled forecasts based on historical trends or formulas, scenarios typically use words, pictures, and numbers to describe complex data analyses in the form of holistic, plausible illustrations of future conditions. Scenario planning typically includes both qualitative and quantitative analyses to illustrate the tradeoffs between different futures and their relative impacts on different community goals. This robust discussion of tradeoffs and identification of a preferred set of strategies based on that tradeoff discussion can lead to more thoughtful, effective, and resilient plans. Scenarios enable planners, the public, and decisionmakers to consider jointly the different variables that influence and are influenced by transportation to ensure careful consideration of different public policy and investment decisions to support a broader set of community goals.

SCENARIO PLANNING IN FEDERAL LEGISLATION

23 USC 134(i)(4) outlines the use of scenario planning by MPOs:

“(A) IN GENERAL.—[An MPO] may, while fitting the needs and complexity of its community, voluntarily elect to develop multiple scenarios for consideration as part of the development of the metropolitan transportation plan, in accordance with subparagraph (B).

“(B) RECOMMENDED COMPONENTS.—[An MPO] that chooses to develop multiple scenarios under subparagraph (A) shall be encouraged to consider— “(i) potential regional investment strategies for the planning horizon; “(ii) assumed distribution of population and employment; “(iii) a scenario that, to the maximum extent practicable, maintains baseline conditions for the performance measures identified in subsection (h)(2); “(iv) a scenario that improves the baseline conditions for as many of the performance measures identified in subsection (h)(2) as possible; “(v) revenue constrained scenarios based on the total revenues expected to be available over the forecast period of the plan; and “(vi) estimated costs and potential revenues available to support each scenario.

“(C) METRICS.—In addition to the performance measures identified in section 150(c), [MPOs] may evaluate scenarios developed under this paragraph using locally-developed measures.

Scenario planning is a term that describes a wide range of approaches. No two scenario planning endeavors are exactly alike. The literature on scenario planning includes several definitions and variants on how to develop and use scenarios. Despite these variations, commonalities provide structure to scenario planning, such as the following:

- ▶ Scenarios represent alternative future conditions that could materialize in response to drivers such as shifts in external forces (for example new technology, environmental patterns or global trade patterns) or the consequences of deliberate policy choices played out over time (such as land use policies or infrastructure investments); visioning is one form of scenario planning that emphasizes desired end states and outcomes rather than external forces and uncertainty.
- ▶ Scenario planning enables a wide array of people, including stakeholder or the public, to identify a range of potential consequences (e.g. impacts on the environment or public health) associated with alternative decisions, and to consider how those consequences could affect their ability to achieve goals or to experience desired community outcomes.
- ▶ By examining the impacts of alternative decisions on their ability to achieve visions and goals, planners can identify robust

CONSIDERING FREIGHT

Freight movement is an increasingly important and complex topic that agencies are incorporating into scenario planning and PBPP. Highlighted in the 2015 FAST Act, efficient freight movement is essential to achieving goals for economic competitiveness and community vitality. Freight operations also have a significant impact on air quality, land use, sustainability, and environmental conditions. Reflecting the needs and priorities of freight providers in scenario variables and evaluation criteria helps to ensure a more robust consideration of trends and issues related to overall travel demand and safety, environmental and economic concerns, and investment decisions. A few useful resources for practitioners seeking to consider freight movement more effectively in their scenario planning and PBPP analyses include the following:

- [Integrating Freight Considerations into the Highway Capacity Planning Process PlanWorks application](#)
- [SHPR2 Railroad-DOT Mitigation Strategies](#) model agreements, sample contracts, training materials, and best practices to identify and circumvent sources of conflict and to advance projects
- [NCHRP Report 750: Scenario Planning for Freight Transportation Infrastructure Investment](#) national study

strategies or policy options that best “hold up” across the spectrum of possible future conditions.

In short, scenario planning can “formalize the consideration of uncertainty in the planning process.”¹ This dynamic method helps participants identify correlated and causal variables and to consider how different combinations of these variables influence outcomes. This gives people the freedom to imagine that conditions could change in the future if given enough time.

In the public sector, scenario planning is often applied to provide a forum for engaging diverse stakeholders, illustrating comparisons and discussing tradeoffs, and encouraging system-level thinking that breaks down the silos of specialization to address challenging public policy issues. Scenario planning informs, but does not dictate, agencies’ identification of a vision or strategic course of action. A deliberative process that draws on empirical data and quantitative analysis, scenario planning helps people anticipate what the future might hold, envision the future they want, craft goals and strategies for realizing the desired future, and develop tactics for managing potential challenges and maximizing opportunities along the way.

Scenario planning has become a significant component of long range transportation planning among increasing numbers of transportation agencies for more than a decade. Throughout the early 2000s, most scenario planning initiatives were conducted by MPOs to envision strategies for coordinating land use and transportation plans. More recently, scenario planning in transportation has begun to examine a broader range of variable relationships beyond land use

ELEMENTS COMMON TO SCENARIO PLANNING

“While scenario planning can be implemented in many ways, the key elements include:

- Use of scenarios to compare and contrast interactions between multiple factors, such as transportation, land use, and economic development;
- Analysis of how different land use, demographic, or other types of scenarios could impact transportation networks;
- Identification of possible strategies that lead a State, community, region, or study area toward achieving elements of the preferred future; and
- Public engagement throughout the process.

Scenario planning shares common elements with both alternatives analysis and visioning exercises, but primarily differs from these processes in examining interactions between multiple factors, including both internal and external forces, as a way to assess possible future outcomes.”

Source: 2011 FHWA Scenario Planning Guidebook

¹ J. Zmud, Transportation Research Board Webinar, “Applying Scenario Methods to Transportation Planning and Policy,” Oct. 23, 2014.

and transportation. These include scenarios that take into account goals and objectives related to transportation system performance, housing affordability, economic competitiveness, adapting to climate change, water conservation, fiscal sustainability, public health, and energy conservation. This broadening of factors is generating plans and policies that are more integrated, as communities gain a better understanding of the connections between factors such as housing affordability and transportation accessibility or multimodal investments and better public health outcomes.

Scenario planning can be used at different stages of a planning process. The development of many long range transportation plans starts with a visioning process. Scenarios are often crafted during this stage to help identify a desirable future or preferred direction that a community wants to achieve over the long term. For example, an aspirational scenario commonly developed in regional plans over the past 20 years identified a future in which transportation investments and development patterns reduced single-occupant vehicle miles traveled by encouraging more walking, biking, transit use, and shorter car trips. These direction-setting scenario efforts often lead to new policy frameworks to guide goals, objectives, and programming decisions.

Once a clear vision or direction is in place, additional forms of scenario planning can also be useful in supporting the development of long range, financially constrained project investment plans and Transportation Improvement Programs (TIPs) for short-range funding allocations. Scenario planning can support analyses of the extent to which different funding levels or investment packages (e.g., combinations of transit services, highway improvements, bridge constructions, nonmotorized facilities) could help achieve system performance goals and objectives.

Another application of scenario planning is to test the performance of a given plan or a set of assumptions against a variety of potentially radical shifts in conditions over which local, regional, and State agencies have little or no control. These include, for example, economic conditions such as global trade patterns, environmental conditions such as weather patterns and sea levels, demographic conditions such as concentrations of age groups and urban settlement preferences, and technological conditions such as the use of connected autonomous vehicles and web-based mobile applications. Agencies can use scenario planning to consider the implications of external variables on system performance or the potential impacts of transportation infrastructure on external conditions. This allows for identification of tactics that could make the system resilient to a wide variety of uncertain but possible future conditions. For example, alternative land use and transportation scenarios could help to inform regional ecosystem and environmental mitigation plans developed with tools such as the FHWA Eco-Logical approach.

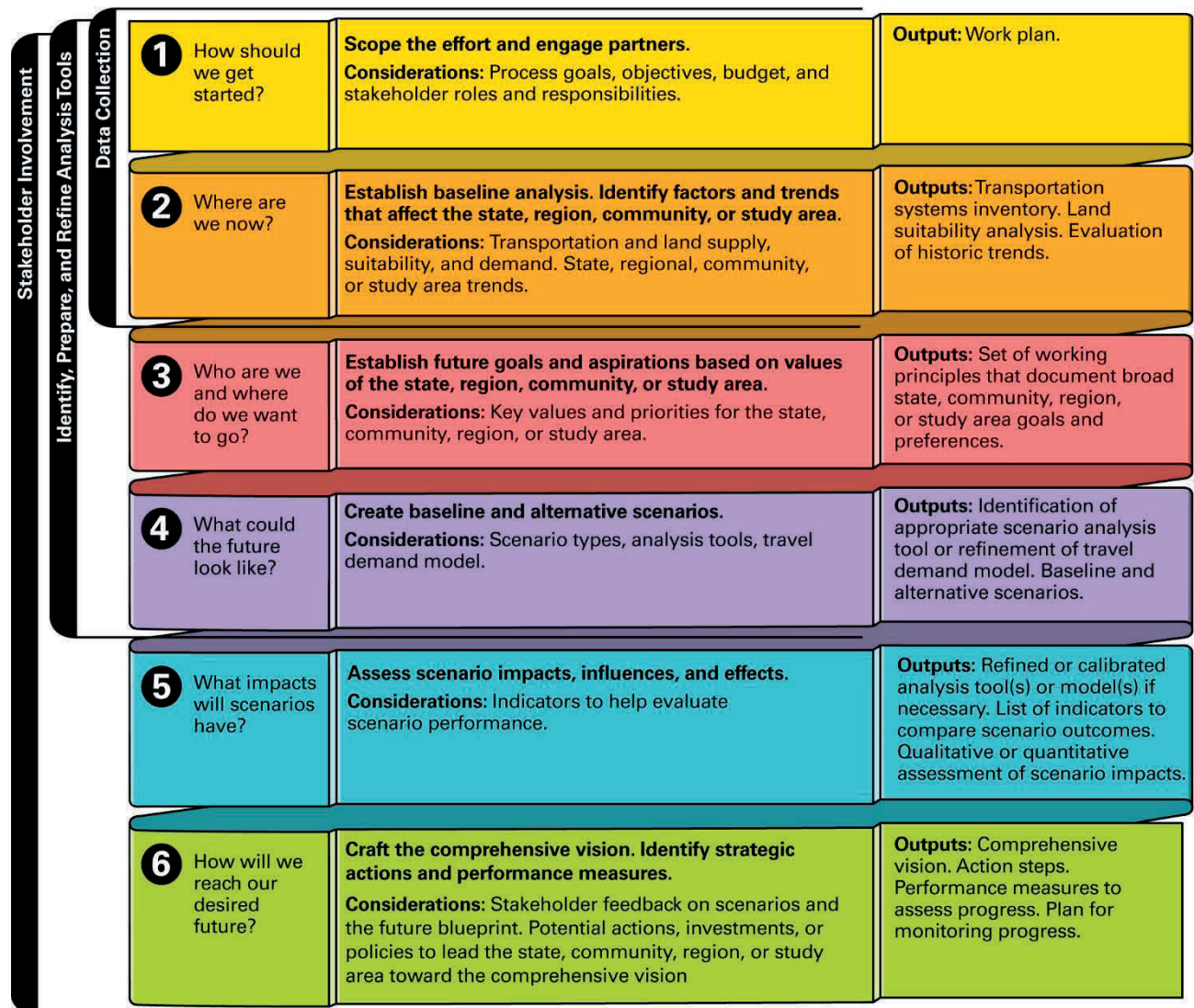
"A great reason to do scenario planning is to raise the profile of key decisions facing your community. Illustrating the implications of different choices draws attention to those choices, and deepens community understanding and dialogue."

- Beth Alden, Hillsborough County MPO

Scenario Planning Framework

Figure 2- illustrates the six-step framework defined in the original 2011 FHWA Scenario Planning Guidebook. This framework remains useful and relevant and was generated at a time when most transportation agency scenario planning efforts were geared toward shaping a vision for future land use and transportation investments. The specific inputs, outputs, and other descriptive elements of the framework can be modified to support other types of scenario analyses such as the effectiveness of financial investment packages or impacts of external driving forces.

Figure 2-1: Scenario Planning Process Framework from the 2011 Scenario Planning Guidebook



What Is Performance-Based Planning and Programming?

Performance-Based Planning and Programming (PBPP) is the application of performance management within the planning and programming processes of transportation agencies to achieve desired performance outcomes for the multimodal transportation system. It encompasses a range of activities undertaken by transportation agencies with other agencies, stakeholders, and the public as part of a 3C (cooperative, continuing, and comprehensive) transportation planning process. It includes development of federally required products such as long range transportation plans, strategic highway and transit agency safety plans, highway and transit agency asset management plans, the congestion management process, other plans that are not federally required, and programming documents such as State and metropolitan Transportation Improvement Programs (TIPs).

PBPP attempts to ensure that transportation investment decisions are made—in both long-term planning and short-term programming of projects—based on their ability to meet established goals. Fundamentally, the use of performance measurement to guide planning is intended to improve decisionmaking, increase transparency, and create consistency between transportation goals and objectives and the investments made to improve the performance of the transportation system.

MAP-21 first established national performance goals and placed increased emphasis on performance management within the Federal-aid highway program and transit programs, and requires use of performance-based approaches in

NATIONAL GOALS FOR THE FEDERAL-AID HIGHWAY PROGRAM 23 USC § 150(b)

Federal regulations require the use of a performance-based approach to support seven national goals for the transportation system. These goals serve as an important basis for developing goals that are integrated into the planning of States, MPOs, RTPOs, transit agencies, and other planning partners.

1. **Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. **Infrastructure Condition** - To maintain the highway infrastructure asset system in a state of good repair.
3. **Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System.
4. **System Reliability** - To improve the efficiency of the surface transportation system.
5. **Freight Movement and Economic Vitality** - To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. **Environmental Sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. **Reduced Project Delivery Delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

statewide, metropolitan, and nonmetropolitan transportation planning. The FHWA 2013 Performance-Based Planning and Programming Guidebook created a framework, shown in Figure 2-2, for understanding the fundamental steps in a performance-based planning process.

Figure 2-2: The Performance-Based Planning and Programming Process Framework



Source: 2013 PBPP Guidebook

For the purposes of this Guidebook, PBPP is considered to have four key phases. These are described in more detail below.

Strategic Direction (*Where do we want to go?*) – In the transportation planning process, strategic direction is based on a vision for the future, as articulated by the public and stakeholders. PBPP includes:

- ▶ **Goals and Objectives** – Stemming from a State or region’s vision, goals address key desired outcomes, and supporting objectives (specific, measurable statements that support achievement of goals) play a key role in shaping planning priorities. Goals can be derived from a visioning or scenario building exercise at this point and one or more scenarios can be carried forward into the subsequent phases.

- ▶ **Performance Measures** – Performance measures support objectives and serve as a basis for comparing alternative improvement strategies (investment and policy approaches) and for tracking results over time.

Analysis (*How are we going to get there?*) – Driven by data on performance, along with public involvement and policy considerations, agencies conduct analysis to develop investment and policy priorities.

- ▶ **Identify Trends and Targets** – Preferred trends (direction of results) or targets (specific levels of performance desired to be achieved within a certain timeframe) are established for each measure to provide a basis for comparing alternative packages of strategies. This step relies on baseline data on past trends, tools to forecast future performance, and information on possible strategies, available funding, and other constraints.
- ▶ **Identify Strategies and Analyze Alternatives** – Performance measures are used to assess strategies and to prioritize options. Scenario analysis might be used to compare alternative packages of strategies, to consider alternative funding levels, or to explore what level of funding would be required to achieve a certain level of performance.²
- ▶ **Develop Investment Priorities** – Packages of strategies for the LRTP are selected that support attainment of targets, considering tradeoffs between different goal areas, as well as policy priorities.

Programming (*What will it take?*) Programming involves selecting specific investments to include in an agency capital plan and/or in a Transportation Improvement Program (TIP) or State Transportation Improvement Program (STIP). In a PBPP approach, programming decisions are made based on their ability to support attainment of performance targets or contribute to desired trends, and account for a range of factors.

- ▶ **Investment Plan** – To connect the Long Range Transportation Plan (LRTP), which has an outlook of at least 20 years, to selection of projects in a TIP/STIP, some areas develop a mid-range (e.g., 10-year) investment plan or investment program.
- ▶ **Resource Allocation / Program of Projects** – Project prioritization or selection criteria are used to identify specific investments or strategies for a capital plan or TIP/STIP. Projects included in the TIP/STIP are selected based on performance and show a clear link to meeting performance objectives.

² This description of scenarios is narrower than that employed in this Guidebook. In Chapter 3, this guidebook discusses a wide range of scenarios, including investment strategy scenarios, which can be considered in this phase or earlier in the PBPP process.

Implementation (*How did we do?*) – These activities occur throughout implementation on an ongoing basis, and include:

- ▶ **Monitoring** – Gathering information on actual conditions.
- ▶ **Evaluation** – Conducting analysis to understand to what extent implemented strategies have been effective.
- ▶ **Reporting** – Communicating information about system performance and the effectiveness of plans and programs to policymakers, stakeholders, and the public.

Each stage of the PBPP process is marked by distinctive areas of focus and specific results or products (e.g., LRTP, TIP).

- ▶ In the Direction phase, the focus is on broadly desired outcomes, and the results include goals and performance measures that set the context for all remaining stages.
- ▶ In the Analysis phase, the focus is on establishing performance targets and strategies designed to help attain those targets, resulting in products such as a fiscally constrained long range plan.
- ▶ In the Programming phase, the focus is on shorter-term actions and investments, and the results could include a TIP, a STIP or other investment program, or a local capital improvement program.
- ▶ In the Implementation phase, the focus is on evaluating progress toward the goals and performance targets; results could include annual performance reports, “dashboards,” and retrospective studies.

In a PBPP approach, each step in the process is clearly connected to the next to ensure that goals translate into specific measures, which then form the basis for selecting and analyzing strategies for the long range plan. Ultimately, project selection decisions are influenced by expected performance results. Qualitative public input and quantitative data analyses are critical sources of information throughout the PBPP process. The public’s vision for the future of the community plays a key role in determining goals, performance measures, and investment priorities. Analyses of system performance trends and the effectiveness of possible improvements helps to inform selection of priorities.

SYSTEM PERFORMANCE REPORT

23 USC Section 134(i)(2)(C) outlines the requirement that metropolitan transportation plans contain a System Performance Report, which will evaluate “performance of the transportation system with respect to the performance targets...” Specifically, Section 134(i)(2)(C)(ii) explains the requirement to include a discussion about the preferred scenario:

“For metropolitan planning organizations that voluntarily elect to develop multiple scenarios, an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets...”

Like all planning, the transportation decisionmaking process is cyclical. Over time, and as planning cycles advance, goals and objectives may be adjusted, and performance measures and targets may be refined to ensure they focus on the most important and achievable priorities. Keeping the next step in mind is critical to a coherent, effective PBPP process. Toward this end, scenario planning can be used to improve the PBPP process by explicitly addressing uncertainties and by encouraging consistency among goals, objectives, and metrics as they are applied throughout each phase, from visioning and plan development through project selection and ongoing performance evaluation.

3. How Can Scenario Planning Inform Performance-Based Planning and Programming?

Scenario planning is an important tool that supports performance-based planning and programming. Scenario planning helps participants visualize and articulate, in both qualitative and quantitative terms, how a combination of strategies will help meet community goals and performance targets. PBPP attempts to ensure that transportation investment decisions are made, in both long-term planning and short-term programming of projects, based on their ability to meet established goals for improving the transportation system. Furthermore, it involves measuring progress toward meeting goals, and using information on past and anticipated future performance trends to inform investment decisions.

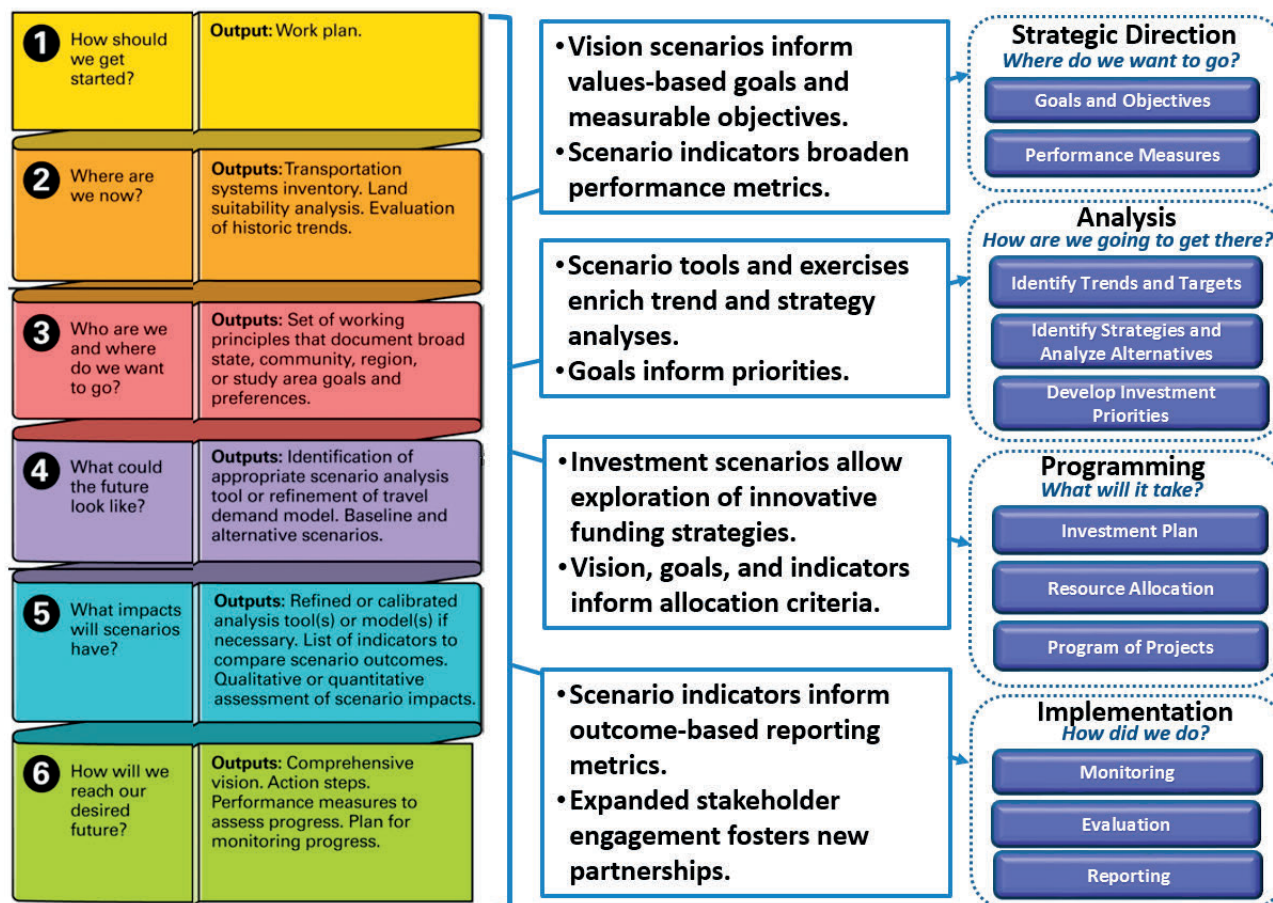
A scenario planning process conducted to support any element of the PBPP process can help agencies and stakeholders engage in strategic thinking and decisionmaking activities such as defining a shared vision and performance goals, analyzing trade-offs between possible strategies, assessing the impacts and implications of external driving forces, and identifying investment priorities that advance desired outcomes. The process can help participants consider how various factors, such as revenue constraints, demographic trends, equity issues, economic shifts, or technological innovation, can affect a State or region and the performance of its transportation system. Using performance-based scenario planning, MPOs, State DOTs, and other planning agencies can take a comprehensive approach to PBPP by exploring multiple scenarios for making a well-informed selection of a preferred alternative with the most potential for supporting goals, objectives, and performance targets.

Scenario planning can be used to support multiple points within performance-based planning and programming. This chapter discusses the potential usefulness of scenario planning applications within each of the four key phases of the PBPP process:

- ▶ Direction: Goals, Objectives, and Measures
- ▶ Analysis: Trends, Targets, and Strategies
- ▶ Programming: Investments, Priorities, and Resources
- ▶ Implementation: Monitoring, Evaluation, and Reporting

As illustrated in Figure 3-1, scenario planning can provide valuable resources to support all stages of the performance-based planning and programming process. The six-step scenario framework shown on the left side of Item 4 is process oriented and can be applied iteratively to various points of PBPP shown on the right-hand column, with variations to address the relevant considerations of each PBPP phase. The boxes in the middle column identify important connections and applications of scenario planning to PBPP.

Figure 3-1: Applications of Scenario Planning to Performance-Based Planning and Programming



For example, vision-oriented scenario planning processes can help shape goals, policies, and objectives in the early Strategic Direction stages of PBPP and provide a wide range of information and indicators for considering trends and weighing alternatives at the Analysis stage. During the Programming stage of PBPP, the values-based goals and objectives that flow from a visioning process can help guide development of resource allocation criteria, and planners can choose to develop a tailored scenario planning approach to weigh alternative investment strategies (or “packages” of strategies or projects). The Implementation and Evaluation stages of PBPP can draw on scenario planning indicators to measure broad outcomes and system performance and can benefit from the partnerships that can be fostered during the wide stakeholder outreach typically associated with a scenario planning process. Data from the Implementation and Evaluation phase that measure how actual and anticipated performance compare can be used to engage decisionmakers and members of the public who participated in scenario planning to demonstrate that performance improvements are being achieved.

Direction: Goals, Objectives, and Measures

Engaging the Public and Stakeholders

Performance-based planning and programming depends on a vision and supporting goals and objectives. These elements give performance measures meaning. A transportation agency will typically develop a vision and goals during the early stages of developing its long range transportation plan. Once the agency establishes its vision and goals, it can move on to developing objectives, identifying transportation system performance measures, and evaluating strategies.

A visioning process actively involves the public, the business community, and elected officials on a broad scale, educating them about growth trends and trade-offs and current system performance. Through this process, agencies can collect input regarding values and priorities and translate the input into quantifiable scenario evaluation criteria and guiding principles to shape scenario themes.

Visioning exercises help identify community goals using techniques such as workshops, focus groups, and other events. The vision often consists of a preferred spatial allocation of growth, design of future development, and transportation network improvements. The vision is directly connected to the goals and objectives found in the long range transportation plan.

The Sacramento Blueprint adopted in 2004 is an example of a regional vision for growth and development. Regional leaders from various disciplines were concerned about the effect on quality of life of adding 1.7 million new residents to the region between 2000 and 2050. They came together to study how the growth could be accommodated through different land use and transportation patterns before arriving at a preferred scenario that the **Sacramento Area Council of Governments (SACOG)** unanimously adopted. The Sacramento Blueprint set direction for the region's Metropolitan Transportation Plan for 2035. For more than a decade, the Blueprint has served as a strong, frequently referenced vision to guide transportation and land use planning throughout the region.

ENVISION UTAH

Established in 1997, Envision Utah is a “nonprofit, nonpartisan public private partnership.” Envision Utah engages stakeholders during the direction-setting phase of the planning process. Its work is based on the premise that the public has the right to decide what the State’s future should look like, and that the entire process of scenario planning should be designed to allow the public to choose the path forward. Scenario planning conducted by the organization in coordination with partners has resulted in establishing consensus regarding the direction in which the Salt Lake City region would develop. This in turned informed feasibility analyses for projects, such as the TRAX light rail system and Frontrunner commuter rail system, both of which were ultimately completed. Envision Utah builds capacity among planners in the region for scenario planning and has played a major role in helping Utah establish a common vision for the future. Along with working on State visioning projects, the organization has worked with several local and regional agencies and developed scenario planning tools and guides. The bulk (85%) of its funding coming from private sources.

Source: Envision Utah

Maintaining a Focus on Equity in the Direction Phase

Transportation agencies of all types and at all levels of government have a responsibility to meaningfully involve all populations in decisionmaking, to promote environmental justice, and to protect the public health, safety, and welfare of all communities. To accomplish this, agencies implement various approaches to meet the letter and spirit of Federal laws, regulations, and Executive Orders. Effective transportation decisionmaking depends on recognizing, responding to, and properly addressing the unique needs, cultural perspectives, and financial limitations of different groups, including those that have been traditionally underserved.³ Developing an understanding of the values and viewpoints of different groups can be greatly aided by implementing a more comprehensive and inclusive approach to

“The employment of scenario planning has coordinated the long-term visions and goals for our region. Its flexibility allows for each community to retain its own voice and character while discussing the broader issues, challenges, and opportunities that are likely to impact us both collectively and individually in the future.”

Rob Terry, Fresno Council of Governments

engaging the public in transportation decisionmaking processes. NCHRP Report 710: Practical Approaches for Involving Traditionally Underserved Populations in Transportation Decisionmaking provides State DOTs, MPOs, and other transportation agencies with a rich source of practical and effective tools, techniques, and approaches for identifying and connecting with populations that have traditionally been underrepresented in transportation decisionmaking. Agencies can use local knowledge to develop community profiles, and national data can support analyses of population characteristics and locations. Outreach and coordination based on this information can enable agencies to determine and respond to community-specific needs.

Developing Performance Measures

Performance measures define how achievement of goals and objectives will be assessed. The process of designing and testing performance-based scenarios involves the development of indicators that could be shaped into performance measures. The metrics used for a scenario planning initiative should bear relevance to (and ideally be incorporated into) metrics used for the ongoing PBPP process. Applying the scenario planning tools and data to the development of goals and objectives in the long range transportation planning process can help shape performance measures that will inform decisionmaking throughout the process of selecting projects for plans and programs and for system performance evaluation.

Engaging the public and stakeholders in discussions about which performance measures should be used—in addition to those mandated for use through Federal rulemakings—in relation to goals and objectives is an important component of performance-based scenario planning. A

³ Traditionally underserved groups include: low-income populations; minority populations (those identifying as Black, Hispanic or Latino, Asian American, American Indian and Alaskan Native, Native Hawaiian, and Other Pacific Islander); populations with limited English proficiency; low literacy populations; seniors; people with disabilities (including those with visual or hearing impairments); and transit-dependent populations.

performance-based approach to scenario planning in the direction-setting phase of PBPP might use measures relating to infrastructure condition, safety, traffic congestion levels, walkability, accessibility, and greenhouse gas emissions, among others. It can also include measures related to community goals and values for economic prosperity, environmental sustainability, and quality of life. Scenario planning and PBPP tools or models used to compare alternatives might need to be adjusted to use quantitative, as well as qualitative, metrics. Consequently, considering what data and tools are available, and are expected to be available on a regular basis in the future, is important when selecting performance measures for scenario planning and PBPP.

The **Metropolitan Transportation Commission (MTC)**, which conducts long range transportation planning for the San Francisco Bay Area, provides an example of how performance measures can be used in all phases of planning, including the direction phase, and how scenarios can influence the measures. MTC considered expected future trends and a variety of investment scenarios to identify performance objectives for its LRTP, Plan Bay Area, adopted in 2013. The performance measures then were used to conduct quantitative evaluations of projects to score projects on how well they would address and support the agency's goals. The vision planning step and its supporting scenario planning process is the critical link for establishing goals and performance measures.

PLANWORKS: BETTER PLANNING. BETTER PROJECTS.

PlanWorks is a web resource that supports collaborative decisionmaking in transportation planning and project development. It has four major components: a Decision Guide, Assessments, Applications of special topics, and a Library of publications and case studies.

Decision Guide: The Decision Guide describes more than 50 key decision points that present opportunities for cooperation in the planning, programming, and environmental review process. Organized into four overarching categories of Long Range Planning (LRP), Programming (PRO), Corridor Planning (COR) and Environmental Review/NEPA/Permitting (ENV), information about each decision point includes policy considerations, stakeholder concerns, data needs, case studies, examples, and links to supportive tools. The following decision points provide key opportunities for ensuring consistency and leveraging resources across scenario planning and PBPP processes.

- LRP-2, LRP-3, LRP-4, LRP-5: Approving long range plan vision and goals; Developing evaluation criteria, methods and measures; Identifying current and future transportation deficiencies; Developing financial assumptions
- LRP-7, LRP-8: Developing planning scenarios; Evaluating proposed scenarios
- PRO-1, PRO-2, PRO-3, PRO-4: Identifying program revenue sources; Identifying project selection criteria; Programming projects from adopted plan; Prioritizing projects
- COR-2, COR-3: Developing corridor problem statements; Developing corridor goals
- COR-5: Identifying corridor evaluation criteria, methods and measures
- COR-6, COR-7, COR-8: Approving range of solution sets; Adopting preferred solution; Prioritizing corridor projects
- ENV-3: Linking planning-level vision and goals to project-level purpose and need.
- ENV-5: Approving project-level evaluation criteria, methods and measures
- ENV-6, ENV-7: Approving range of project alternatives; Selecting alternatives to carry forward
- ENV-10: Approving preferred alternative
- ENV-12: Reaching consensus on avoidance and minimization strategies

Assessments: All of the three self-assessments to identify collaboration strategies for agency teams and stakeholders can help practitioners to identify opportunities for linking scenario planning processes and outcomes to PBPP decision making processes.

Applications: PlanWorks includes 16 subject-area resource pages, nearly all of which provide direction and ideas for linking methods, metrics, and outcomes of scenario planning and PBPP processes. Particularly germane topics include Economic Development (note links to the related SHRP2 EconWorks tool), Freight, GHG Emissions, Human Environment, Land Use, Natural Environment, Performance Measures, Planning and Environment, Planning and Operations, Safety and Security, Stakeholder Collaboration, and Visioning.

Analysis: Trends, Targets, and Strategies

The purpose of the analysis phase is to gather information on baseline and forecast conditions; identify problems, needs, or performance gaps; consider external factors that could impact transportation system performance; and identify strategies or alternatives that address those needs or gaps and are aligned with the goals and objectives. A transportation agency accomplishes the analysis stage by comparing different sets of strategies using a set of performance measures that can be forecasted.

Identifying Baseline Information, Trends, and Targets

Identifying baseline information and trends is a key early component of the performance-based planning scenario planning effort. This baseline information typically includes information on the existing multimodal transportation system, including its condition and performance, and factors that are likely to affect the future of the planning area and the future performance of the transportation system, including availability of financial resources. It is the establishment of baseline conditions (safety, congestion, infrastructure) and expected trends (population, employment, land use) that drives the baseline scenario, which is the “likely future” or “status quo.” This story about the future helps identify the key trends from which alternative futures can be evaluated and compared.

Traditional transportation planning conducted in the analysis phase of PBPP relies on four-step travel demand models that predict system deficiencies based on locally generated forecasts of population, employment, and land use development patterns. Travel demand models have not traditionally been designed to enable consideration of broader issues and metrics associated with the values and aspirations identified in the initial direction-setting phase of PBPP. Supporting the analysis phase with a performance-based scenario planning process can complement the traditional modeling approach and enhance community engagement and perspectives on transportation investment needs by incorporating a broader array of issues and considering a variety of different future conditions beyond the trend-based forecast. For example, planners can use tools such as the [FHWA SHRP2 Utility Bundle](#) to help incorporate utility infrastructure data (e.g., water, sewer, and electricity) into scenarios of alternative transportation investment packages in order to identify potential location conflicts up front. This kind of planning-level feasibility assessment can help agencies to avoid costly delays in later stages of project development.

SCENARIO PLANNING IN REGIONS EXPERIENCING MINIMAL GROWTH

Traditional approaches to scenario planning assumed that a region or State will continue to grow and focused on how and where that growth should occur. However, a number of regions in the US are currently experiencing low or even negative population growth. Scenario planning can be conducted in a way that focuses exploration on future conditions and strategies that make sense for this context as well. Scenario planning can focus on determining which strategies will use an agency’s resources most cost effectively to preserve or improve performance, and tools for scenario planning increasingly allow for making adjustments to assumptions to account for declining population growth.

The **Hillsborough County MPO**, which conducts transportation planning for a portion of the Tampa, Florida metropolitan area, provides a good example of how the identification of baseline conditions and trends within scenario planning during the analysis phase can inform the broader planning process, including development of performance measures. For its most recent long range plan, the MPO studied baseline conditions for a wide range of measures that reflected the community's overarching concerns and values, such as energy and water use, water quality, commute length, access to transit, and air pollution. By using a scenario planning process to identify and assess metrics associated with community values, the MPO could incorporate the key issues that were most meaningful and relevant to the community into the analysis phase of its PBPP process.

Developing and Analyzing Scenarios

Scenarios describe a set of future conditions that enable planners, the public, and stakeholders to envision different possible futures for policy and investment options. Stakeholders assess and compare scenarios through qualitative and quantitative comparisons, including comparisons in relation to performance targets. In the analysis phase of PBPP, practitioners typically create a baseline scenario, which assumes that current plans for transportation investment are carried out and that recent development patterns remain the same, or a “no build” scenario that assumes no new transportation investments. Alternative scenarios are then created to examine how changes in trends or investments might affect the region or State.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

To develop its 2040 statewide plan, California DOT (Caltrans) utilized scenario analysis to understand better how different investment strategies would influence greenhouse gas emissions in the State. The agency evaluated the following scenarios:

- A baseline scenario, which accounted for existing Sustainable Communities Strategies plans
- A scenario with aggressive VMT reduction strategies that assumed the construction of passenger rail
- A scenario in which advanced vehicle and fuel strategies were implemented

The results of the alternatives analysis led to specific recommendations in the statewide transportation plan for 2040. Caltrans identified the following benefits from scenarios:

- Ability to understand the multiple strategy combinations to achieve GHG reduction targets
- Identify trends of the most promising and risky strategies
- Inform near-term public policy decisions
- Increase awareness of the transportation system
- Understand the impacts of the fuel network, alternative technologies, and behavioral changes.

Source: Caltrans

Some of the different types of scenarios that might be developed in the analysis phase of a PBPP process (or, at a less detailed level, in the direction-setting phase) include:

- ▶ Transportation policies or investment strategies – exploring different scenarios for packages of transportation solutions, which could include different emphases for transportation investments or policies
- ▶ Land use patterns – exploring different scenarios of distributions of population and employment, often in combination with different transportation policies or investment strategies
- ▶ External factors – exploring factors that are outside the control or influence of transportation and land use planning agencies (e.g. broad economic trends)
- ▶ Performance levels – exploring different scenarios for future performance and what is required for achieving it, such as a scenario to maintain baseline conditions or to attain target levels
- ▶ Funding levels – exploring different scenarios based on levels of funding that might be available.

As noted above, equity is a critical consideration for scenario planning, given the importance of ensuring the process is inclusive. Specifically, the scenario planning processes need to be designed to accommodate all populations, as required in:

- Title VI of the Civil Rights Act of 1964, which prohibits exclusion from participation in, denial of benefits of, and discrimination under Federally-assisted programs on grounds of race, color, or national origin.
- The Americans With Disabilities Act of 1990, which states that no qualified individual with a disability shall, by reason of such disability, be excluded from

SCENARIO PLANNING FOR TRANSPORTATION SYSTEM MANAGEMENT & OPERATIONS

Although traditionally the transportation planning process has focused primarily on infrastructure investment needs, transportation agencies are increasingly putting more emphasis on transportation system management and operations strategies (TSMO) to address congestion, safety, and reliability. The results of a TSMO-informed plan can influence activities such as signal coordination, incident management, congestion pricing, and ridesharing programs, to name a few. The PlanWorks [“Linking Planning and Operations”](#) Application provides resources for integrating TSMO into the overarching PBPP process.

Scenario planning can play a role in evaluating TSMO strategies, which typically are not well addressed in regional travel models. Some scenario planning methods can help agencies to explore the potential opportunities and impacts associated with new and emerging technologies before they are deployed. Meanwhile, other scenario planning processes can help an agency optimize its strategy for maintaining safe, efficient travel in an area where some changes are likely, but not yet fully defined. To support efforts such as these, the FHWA primer [Advancing Transportation Systems Management and Operations through Scenario Planning](#) was published in 2016.

participation in or be denied the benefits of services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.

- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, which requires Federal agencies to identify any needs for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them.
- Executive Order 12898, Environmental Justice in Minority Populations and Low-Income Populations, which instructs Federal agencies to identify and address instances in which adverse human health or environmental effects of their actions disproportionately affect minority and low-income populations.
- The Age Discrimination Act of 1975, which prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance.

SCENARIOS OF TRANSPORTATION POLICY/INVESTMENT STRATEGIES

State DOTs and MPOs can use scenario planning to support performance-based analysis by exploring different transportation policy and investment scenarios. This approach involves designing scenarios that involve different types or sets of transportation investments; these scenarios are then compared against a baseline and against each other, to help select a preferred alternative.

An example of an agency using this approach during the analysis phase is the **Southeast Michigan Council of Governments (SEMCOG)**, in the Detroit area, which used scenario planning in summer 2009 to analyze the effects of different investment scenarios as part of the development of its 2035 Regional Transportation Plan. SEMCOG crafted five scenarios (or “themes”) in which funding allocations varied among the program areas of pavement preservation, highway capacity, bridge preservation, safety, transit, nonmotorized, and roadway operations. The first scenario represented the trend, extending recent allocations into the future. In addition to the trend scenario, the other four scenarios were:

- ▶ *Public Opinion* – Allocate more funds to programs preferred by the public
- ▶ *Preservation First* – Emphasize pavement and bridge performance
- ▶ *Transit First* – Emphasize transit system performance
- ▶ *Maximize Performance* – Balance funding across priorities to achieve relatively equal performance in each category

SEMCOG studied the five scenarios using the following performance measures:

- ▶ Percent of pavement in good or fair condition
- ▶ Hours of delay per 1,000 vehicle miles
- ▶ Percent of bridges in good or fair condition
- ▶ Fatalities per 100 million vehicle miles
- ▶ Extent of transit network
- ▶ Percentage of the population within 1/2 mile of a nonmotorized facility

SEMCOG used several tools for its analysis: its travel demand model; geographic information systems (GIS), to perform a buffer analysis for the non-motorized system); the Highway Economic Requirements System-State Version (HERS-ST); the Michigan DOT Pavement Condition Forecasting System and Bridge Condition Forecasting System; and the National Bridge Investment Analysis System (NBIAS). The MPO also used AssetManager NT to analyze and visualize relationships within and across the program areas.

SEMCOG used the scenarios as a public engagement tool to help the public better understand investment trade-offs under an economic forecast that anticipated an extended, deep recession.

Through this scenario planning process, SEMCOG was equipped with better information to support its decisionmaking. Ultimately, the MPO selected a hybrid scenario that emphasized maintenance and preservation.

Another example is the **Tri-County Regional Planning Commission (RPC)**, the MPO for the Lansing region in Michigan. During the analysis phase of its planning process, Tri-County RPC used scenario planning and technical modeling to help inform decisionmaking and project selection in the Regional 2040 Transportation Plan. To ensure consistency and transparency, the agency linked the plan's goals and objectives to performance measures that it then used to assess a set of alternative scenarios. Tri-County RPC developed eight alternative scenarios reflecting

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION

Space Coast TPO in Florida utilized Scenario Planning in its analysis phase to test strategies for reducing projected future congestion as well as achieving other goals and objectives of its 2040 LRTP. The TPO Priority Reliever, referred to as the preferred Vision Scenario for 2040, included many high priority regional connections from the 2035 LRTP and increased transit service on popular routes. The scenario planning exercise helped identify the public's preferences for future development (e.g., more transportation choices, balancing growth with conservation, maintaining existing transportation assets), and this input informed the goals and objectives of the 2040 LRTP.

Compared to the base case scenario, or (Current Trend), the priority reliever scenario reduced vehicle miles traveled, vehicle hours of travel, and vehicle hours of delay significantly. This Priority Reliever scenario became the basis for the 2040 needs plan.

Because of the scenario planning, the TPO also developed a policy framework for local agencies to work towards the long-term goals, by identifying land use changes and new potential revenue sources to fund transportation projects that support the 2040 Vision.

Source: Space Coast TPO

different levels of emphasis for investments. The agency compared the alternative scenarios to base year and trend scenarios to provide a clear picture of their relative impacts on the performance measures.

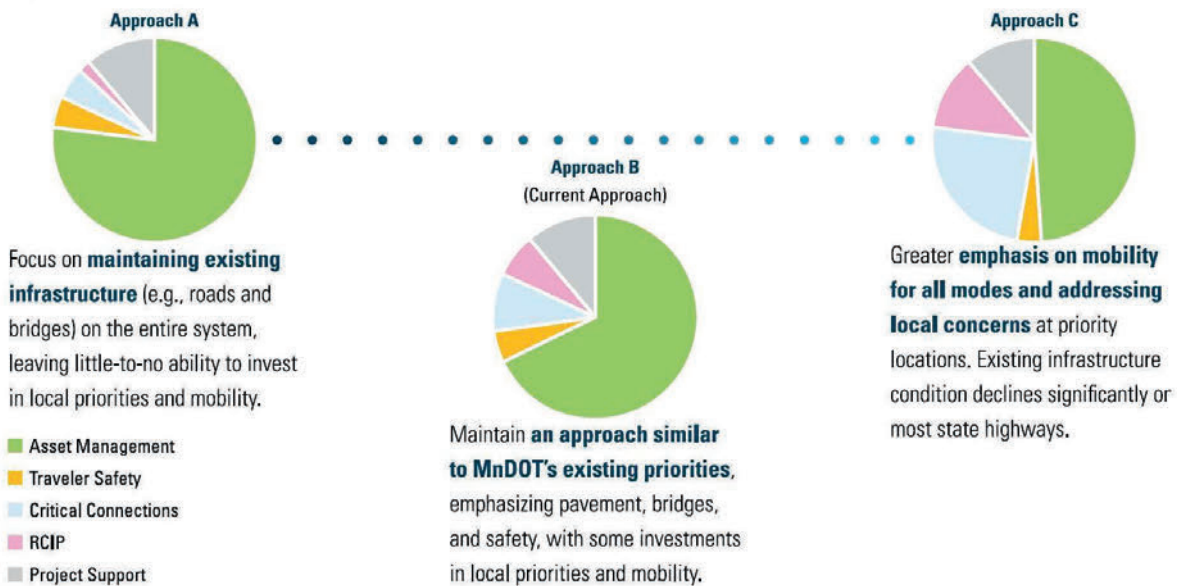
Table 3-1: Tri-County RPC Scenarios Considered in Developing the 2040 Transportation Plan

Alternative	Descriptive Name
1	High Transit
2	Medium Transit
3	Demand Reductions/Improve Operations
4	Combinations of 2 and 3
5	Combination of 2, 3, and 6a
6A	Planned Highway Options List
6B	Planned Highway Options List, 2040 Trend
7	Highways Only

Source: Tri-County Regional Planning Commission

At the State level, **Minnesota DOT** used a type of scenario analysis to examine necessary trade-offs in the development of the 2013 Minnesota State Highway Improvement Plan (MnSHIP), which links the policies and strategies in the State’s Multimodal Transportation Plan to investment priorities on the State highway network. The agency developed three distinct investment scenarios and modeled expected 20-year outcomes for each. Scenarios A and C represented different allocations of funding across different investment categories, while Scenario B represented MnDOT’s then-current spending across categories. Each scenario was described in terms of anticipated system performance and risks, both addressed and remaining. According to the agency, “this step allow[ed] MnDOT and the public to better understand the tradeoffs associated with different Performance Levels.” The following illustrates the three different approaches.

Figure 3-2: MnSHIP Investment Approaches Developed for Scenario Planning



Source: Minnesota DOT

The public, stakeholders, and DOT staff reviewed the scenarios. The feedback received from this analysis process directly influenced the development of MnSHIP’s 20-year investment priorities. To develop the preferred investment scenario, MnDOT focused on several key factors: stakeholder and public input, revenue outlook, State requirements and related risks, previous MnSHIP priorities, current and projected performance, MnDOT policy, and Federal Law (MAP-21). Using these factors and the results of the scenario analysis, MnDOT developed a 20-year Investment Plan that identifies how investment priorities in the first 10 years and in the second 10 years of the plan will be distributed among and between mobility improvements (for automobiles, bicyclists, and pedestrians), safety improvements, local and regionally driven priorities, and maintenance of the existing system, to maximize performance.

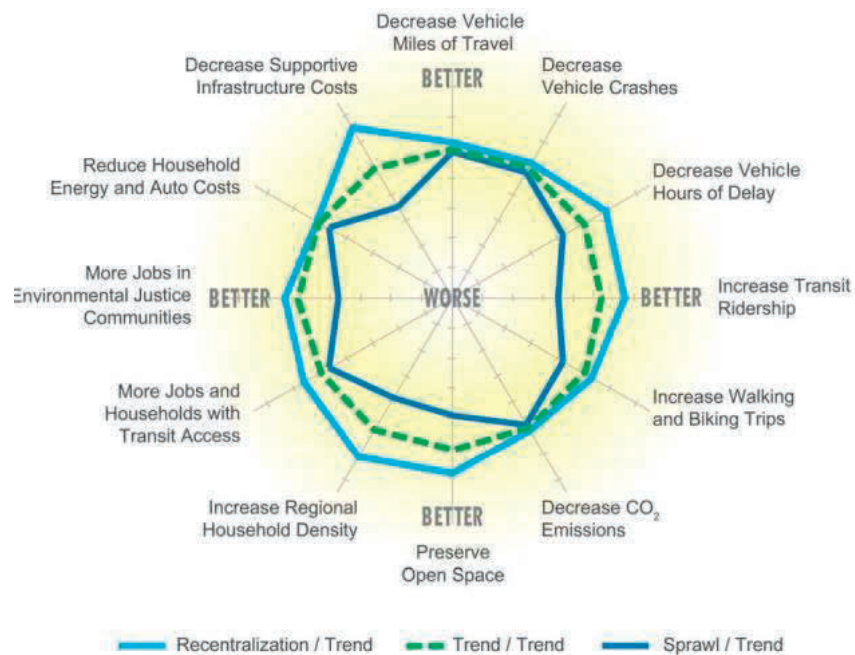
COMBINED LAND USE AND TRANSPORTATION SCENARIOS

Scenario planning often has played a key role in enhancing the planning process extending the traditional realm of considering different transportation investments to explore how land use patterns can influence transportation system performance. By developing scenarios for alternative land use patterns or distributions of population and employment, this information helps inform local governments and communities about the important role of land use decisions in transportation system performance (and transportation investments on land use decisions), equity, and quality of life, thereby bringing into the planning process a broader set of strategies and considerations. Such scenarios can be developed for both the direction-setting and analysis phases of PBPP. The direction-setting scenarios might be depicted as sketches of general development trends, designed to help planners identify desired overarching policies and goals. Analysis-level scenarios can delve more deeply into the impacts of specific investment packages or policy decisions on targeted subareas such as corridors or systems such as rail and bus transit networks.

In a performance-based planning approach, considering alternative land use scenarios can be used to help shape a common vision for the future among multiple individual local governments that play a lead role in land use planning. By articulating more clearly the performance outcomes of these land use decisions, elected officials and decisionmakers can draw connections between their local policies and the transportation system performance and conditions experienced by their residents.

The **Delaware Valley Regional Planning Commission (DVRPC)** developed a 2008 report, *Making the Land Use Connection*, which informed the agency’s 2035 long range plan. Figure 3-3 shows a graphic from the 2035 plan, developed during the analysis phase, that displays the expected trade-offs between three land use scenarios with respect to twelve different measures, each of which corresponds to objectives such as improving safety.

Figure 3-3: Index Used by DVRPC to Compare Three Alternative Land Use Scenarios



Source: *DVRPC*

Getting to the preferred vision can inspire development of goals that set a framework for action and determine specific performance measures that can bring substantial clarity to what is important to the public, in a way that is effective in communicating to decisionmakers. Nevertheless, these values should inform the performance measures and strategies that ultimately guide the designing of specific projects. During the analysis phase, transportation agencies can explore scenarios that include combinations of different land use patterns and different transportation investment strategies.

One example is the **Denver Regional Council of Governments (DRCOG)**. Scenario analyses in successive DRCOG regional transportation planning efforts have built off previous scenario planning endeavors. For its *2035 Metro Vision* plan update, DRCOG developed five scenarios that focused on changes to the urban growth boundary, density, the fiscally constrained roadway

network, the fiscally constrained transit network, and driving and transit pricing; these scenarios are shown in Table 3-.

Table 3-2: DRCOG Scenarios Addressing Changes to Land Use and Transportation Investments and Policies

Scenario	Expansion of the Urban Growth Boundary	Density Increase (2000–2035)	Change to the Fiscally Constrained Roadway Network	Changes to the Fiscally Constrained Transit Network	Pricing Changes
A	None	23%	None	None	None
B	+70 share miles	12%	+300 miles of minor arterials and collectors	None	None
C	+150 square miles	0%	+600 miles of minor arterials and collectors	None	None
D	+70 square miles	12%	+300 miles of minor arterials and collectors; +300 miles new freeway/tollway capacity	None	None
E	None	23%	–100 miles of highway capacity	Additional rail and bus rapid transit	None
F	None	23%	–100 miles of highway capacity	Additional rail and bus rapid transit	Auto operating costs doubled; transit free

Source: DRCOG

DRCOG evaluated the six scenarios on the following 12 outcome measures.

Table 3-3: Outcome Measures Used by DRCOG to Evaluate Scenarios

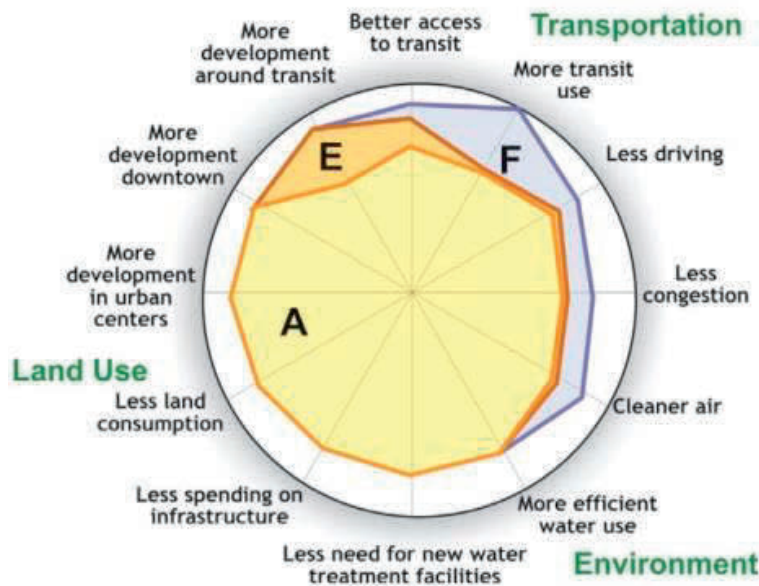
1. Increase in transit use
2. Decreased need for new water treatment facilities
3. Decrease in driving
4. Decrease in spending on infrastructure
5. Decrease in congestion
6. Decrease in land consumption
7. Improvement in air quality
8. Increase in development in urban centers
9. Increase in efficiency of water use
10. Increase in development downtown
11. Improved access to transit
12. Increase in development near transit

Source: DRCOG

The agency used visuals like the one in Figure 3-4 to show the comprehensive forecasted performance of each scenario with respect to the 12 performance goals. These goals align with the overall vision for the region, and are associated with measurable outcomes. Furthermore, the

goals are interrelated, and achieving each goal will produce co-benefits that support progress toward the other goals. The use of scenario planning in this case was an effective way to consider the cumulative benefits and co-benefits of a set of strategies.

Figure 3-4: Example Comparison of Scenarios A through F in Relation to Different Performance Goals from DRCOG



Source: *DRCOG*

DRCOG ultimately identified Scenario F as the one that would result in the best performance overall for the region. The scenario planning exercise gave DRCOG an improved understanding of the effects of a potential change to the region’s urban growth boundary. Performance measures in the agency’s 2035 plan include all of the transportation-related measures used to evaluate the scenarios, and the agency continues to track performance in these areas to improve data-driven decisionmaking.

Similarly, the **Durham-Chapel Hill-Carrboro MPO** and the **Capital Area MPO** in North Carolina worked together in developing combined transportation and land use scenarios for the development of their **2040 Metropolitan Transportation Plan**. The agencies developed six alternative scenarios in the analysis phase, each comprising a transportation scenario and a land use scenario, as illustrated in Table 3-.

The MPOs evaluated the alternative scenarios based on several performance measures, including level of roadway congestion, average travel time, mode share, and transit ridership. In addition, the MPOs reviewed performance measures by transit service sub-areas and specific travel corridors to overcome diluting effects that large, regional models can have. The results of this scenario analysis then were used by MPO staff to develop a preferred scenario, which included road, bus transit, and rail transit investments.

Table 3-4: Six Scenarios Evaluated by Durham-Chapel Hill-Carrboro MPO and the Capital Area MPO

Alternative	Transportation Scenario	Land Use Scenario
1	<u>Roadway Intensive</u> – abundant highway projects, no light or commuter rail	<u>Community Plan</u> – population and employment growth occurs based on current land use plans
2	<u>Transit Intensive</u> – includes large bus transit improvements, extensive light rail, and commuter rail service.	<u>Community Plan</u> – Population and employment growth occurs based on current land use plans
3	<u>Moderate</u> – includes most of the highway, bus, and rail transit projects included in the 2040 MTP	<u>Community Plan</u> – Population and employment growth occurs based on current land use plans
4	<u>Trend and Transit Plans</u> – includes highway projects at current spending levels; bus and rail transit projects that are in the 2040 MTP	<u>Community Plan</u> – Population and employment growth occurs based on current land use plans
5	<u>Transit Intensive</u> – includes large bus transit improvements, extensive light rail, and commuter rail service.	<u>All-in-Transit</u> – Population and employment growth based on current land use plan but uses additional and more intensive transit-oriented development, and land use modeling increased attractiveness to rail and premium transit
6	<u>Moderate</u> – includes most of the highway, bus, and rail transit projects included in the 2040 MTP	<u>All-in-Transit</u> – Population and employment growth based on current land use plan but uses additional and more intensive transit-oriented development, and land use modeling increased attractiveness to rail and premium transit

Source: Durham-Chapel Hill-Carrboro MPO; Capital Area MPO

The **Transportation Planning Board (TPB) of the Metropolitan Washington Council of Governments** also conducted a CLRP Aspirations Scenario Study as part of the analysis phase during development of its 2040 Constrained Long Range Transportation Plan (CLRP). The Study was presented to the TPB in 2013. The Aspirations Scenario Study was developed to integrate the best components of previous TPB scenario studies⁴ into a comprehensive scenario that could offer a promising path forward for the region. Previous TPB studies had provided conclusions about effective regional strategies for improving travel conditions, but those studies focused on issues of land use or transportation, but not both. The CLRP Aspirations Scenario combined an alternative land use scenario with more dense, transit-oriented development; a regional network of variably price lanes; and high quality bus rapid transit (BRT) and circulator bus service focused on supporting the land use plan.

SCENARIOS EXPLORING EXTERNAL FACTORS

⁴ The land use and transportation components of the study were based largely on findings from previous scenario analysis – the Regional Mobility and Accessibility Study (2006) and the Regional Value Pricing Study (2008).

Scenarios can be used to explore how external, or exogenous, factors, might affect transportation system performance and investment needs. When looking toward the next 20 to 40 years, many factors beyond land use that are not commonly considered in transportation planning but could have substantial impacts on travel demand are highly uncertain. For instance, substantial changes in fuel prices, macroeconomic conditions, technologies, or climate conditions could have important implications on transportation system performance, investment needs, and the value of different types of transportation investments and policies. Scenario planning can be used to explore how well the current vision might respond to different uncontrollable or external forces and to increase clarity regarding the actions that can be taken in the face of various futures (i.e., serve as a guide to action).

"One of the reasons we do scenario planning is to look at contingencies and, as necessary, develop 'fall-back' positions. For example, we need to prepare for the possibility that the transportation funding outlook never improves, or even worsens. In our next Plan update, we may look at how quickly automated vehicles reach a saturation point on our roads, and what implications that has for congestion and an aging population."

- Beth Alden, Hillsborough County MPO

This approach is essentially a “stress test” for different transportation strategies. Rather than focusing on optimizing system performance within one set of assumed future conditions, planners can use scenarios to compare the resiliency or adaptability of given strategies to change. For example, the agency might assign a score (e.g., low, medium, or high) for each strategy based on how well it could be expected to perform in each scenario. Using this approach might demonstrate that some projects or strategies perform well in many different plausible future conditions. The outcome of the process could lead to the need for a shift in project priorities or strategies. It could also generate new or modified performance metrics for ongoing system monitoring. This approach can inform the long range plan and program and other efforts such as a risk-based asset management planning exercise.

An example of using this type of approach is demonstrated by the **Baltimore Regional Transportation Board (BRTB)**, which undertook, during the analysis phase, a scenario planning process addressing land use and transportation strategies and scenarios of divergent futures. In developing the Plan It 2035 transportation plan, approved in 2011, the BRTB undertook a visioning process (Imagine 2060). Ultimately, BRTB used scenario planning to develop a preferred scenario for the Imagine 2060 vision. The agency developed several land use scenarios with supporting transportation options, which they presented to the public for input (Table 3-).

Table 3-5: BRTB Options Addressed in Scenarios

Land Use Options	Transportation Options
<u>Downtowns</u> : new growth concentrated in downtown areas; mix of uses in downtowns; limited new suburban growth	<u>Urban Multi-modal Transportation</u> : light rail/commuter rail service radiating from downtown Baltimore; local bus service in the urban core and inner suburbs; downtown pedestrian and bicycle networks; increased capacity on roadways serving high density areas
<u>Town and Village Centers</u> : new growth concentrated in town and village centers; mix of uses in town and village centers; limited new suburban growth	<u>Local and Regional Connections</u> : light rail/commuter rail service radiating from downtown Baltimore; express bus service from park and ride lots to employment centers; local transit service downtown; pedestrian and bicycle networks in downtown areas; increased capacity on roads serving medium density areas and the City of Baltimore
<u>Established neighborhoods</u> : new growth concentrated in suburban residential areas; mostly residential and retail uses in these areas; limited new downtown growth	<u>Commuter Options</u> : maintenance of existing light rail/commuter rail and bus service; modest bus service from park and ride lots to employment centers; modest improvements to bicycle and pedestrian facilities; increased capacity on roadways serving high and medium density areas
<u>Expanding Suburbs</u> : new growth concentrated in suburban and rural areas; mostly residential and retail uses in these areas; limited new downtown growth	<u>Expanding Roadways</u> : maintenance of existing light rail/commuter rail and bus service; maintenance of existing pedestrian and bicycle facilities; increased capacity on all major roadways.

Source: BRTB

BRTB returned to scenario planning in the development of its next long range transportation plan, Maximize 2040: A Performance-Based Transportation Plan. BRTB focused significant effort attempting to answer the question: “How can the region make informed decisions about the future, especially when there are a lot of uncertainties about the future?” To begin answering this question, the agency surveyed the public, focusing on social, economic, technological, environmental, and political forces that could shape the transportation landscape in the future. Survey participants identified several external forces that could be highly influential in the future.

BRTB then worked with focus groups to review public input and determine the most critical of these forces to analyze further. The focus group recommended that BRTB assume two forces identified by the public (the top two vote getters in the public input process) were almost certain to happen and should be built into any scenarios as underlying assumptions. These forces are: (1) an aging, more diverse population; and (2) lack of funding to meet all transportation needs and aspirations. The group then selected three other forces on which the scenarios should focus: (1) changes in preferences with respect to travel and work; (2) sea level rise and increase in severe weather events owing to climate change; and (3) advances in vehicle-to-network and vehicle-to-vehicle technologies, including autonomous vehicles.

Based on these recommendations, BRTB developed three scenarios for possible changes between 2014 and 2014:

1. “Wash Overflow” – Washington DC’s population and job growth extends to the Baltimore region
2. “Simmered Up” – Sea level rise and extreme weather events due to climate change
3. “Zuber Connected” – advances in vehicle-to-vehicle and vehicle-to-network communication systems and sensors

BRTB invited stakeholders from several organizations (e.g., the Public Advisory Committee, local universities and colleges, Maryland DOT, local jurisdictions, businesses, advocacy groups) to analyze the impacts of the different scenarios, using a qualitative analysis approach, as shown in Figure 3-5.

"Scenario planning enabled our region to have a reasoned conversation regarding contentious topics for which there is a significant degree of future uncertainty. The process of evaluating possible outcomes of different paths gave our region the tools to debate which outcomes were unacceptable, identify the efforts necessary to achieve the preferred outcome and whether our region had the willingness to commit to those efforts. Scenario planning was most helpful in our region's efforts to identify a preferred future vision for how Waco should develop and in identifying future resources to implement priorities within the Metropolitan Transportation Plan."

- Chris Evilia, Waco MPO

Figure 3-5: BRTB Analysis of Three Scenarios across Different Performance Measures

	Much less/worse	Less/worse	Same	More/better	Much more/better
			Wash Overflow	Simmered	Connected
Socioeconomic Indicators					
• Gross domestic product			More/better	Less/worse	More/better
• Jobs			More/better	Less/worse	Same
• Population			More/better	Less/worse	More/better
• Average Age			Same	More/better	More/better
Regional Travel Trends					
• Distance to work			Same	Same	More/better
• Distance to shop			Less/worse	Same	Less/worse
• Personal auto use			Less/worse	Same	More/better
• Transit use			More/better	More/better	Less/worse
• Freight deliveries			More/better	More/better	More/better
• Total miles traveled			More/better	Less/worse	More/better
Performance Measures					
• Traveler safety (injuries/fatalities)			Less/worse	Same	More/better
• Traffic flow (individual)			Less/worse	Less/worse	Same
• Traffic flow (freight)			Less/worse	Less/worse	Same
• Road/bridge conditions			Less/worse	Less/worse	Less/worse
• Transit infrastructure conditions			Less/worse	Less/worse	Less/worse
• Air quality			Less/worse	Same	More/better

Source: BRTB

As the BRTB moves forward in the *Maximize 2040*, the results of the scenario planning process are helping inform the process of project evaluation and selection. In addition, the BRTB will revisit the issues raised in the scenario planning process periodically over the next several years, both to stay informed about new developments and potentially to refine goals and performance measures based on new developments.

At the State level, **Washington State DOT (WSDOT)** conducted a scenario planning analysis exercise to develop its State Freight Mobility Plan; this exercise is described in NCHRP Report 750. The agency recognized the challenge to predicting future demand for freight with a fixed growth rate, given the range of changes to economic conditions and business sourcing patterns that could influence the system in 2030 and beyond. WSDOT used scenario analysis to consider the potential effects of varying scenarios on the future of the State's freight system. The agency's goal was not to predict the future, but to better prepare itself for a variety of potential futures. The agency looked at four scenarios:

- ▶ *One World Order* – A highly regulated, “green” world in which natural resources are scarce, with high energy costs and environmental sensitivity
- ▶ *Naftastique* – A scenario in which U.S. trade is focused within North America rather than Asia
- ▶ *Technology Savior* – A scenario in which advances in technology disburse goods production and improve material abundance
- ▶ *Global Marketplace* – A scenario under which trade is relatively free and global, similar to conditions today.

WSDOT, in coordination with the Massachusetts Institute of Technology's Center for Transportation and Logistics, convened a statewide scenario planning symposium with experts representing freight carriers, shippers, industry associations, universities, and Federal, State and local governments. Participants were divided into groups. Each group focused on one of the four scenarios and identified investment priorities to best address the scenario. The exercise resulted in the following overarching conclusions. They are accurate and applicable regardless of which scenario (or combination of scenarios) is realized:

- ▶ Demand will increase on the east-west transcontinental rail system and the State Freight Waterway Economic Corridors.
- ▶ Demand for truck services along the I-5 corridor and in urban centers is also likely to grow more rapidly than indicated in a previous forecast (e.g., the FAF3 [Freight Analysis Framework, 3rd version]).

Scenario planning enabled WSDOT to improve its ability to make informed, data-driven decisions about the investments that are most likely to create the greatest future benefits in the face of changes that could occur with respect to freight demand.⁵ These findings informed the identification of Freight Economic Corridors, which are roadways, railways, and waterways critical to the movement of commerce in the State. Freight Economic Corridors are used to

⁵ Washington (State) DOT, <http://www.wsdot.wa.gov/freight/freightmobilityplan.htm>; Transportation Research Board, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_750v1.pdf.

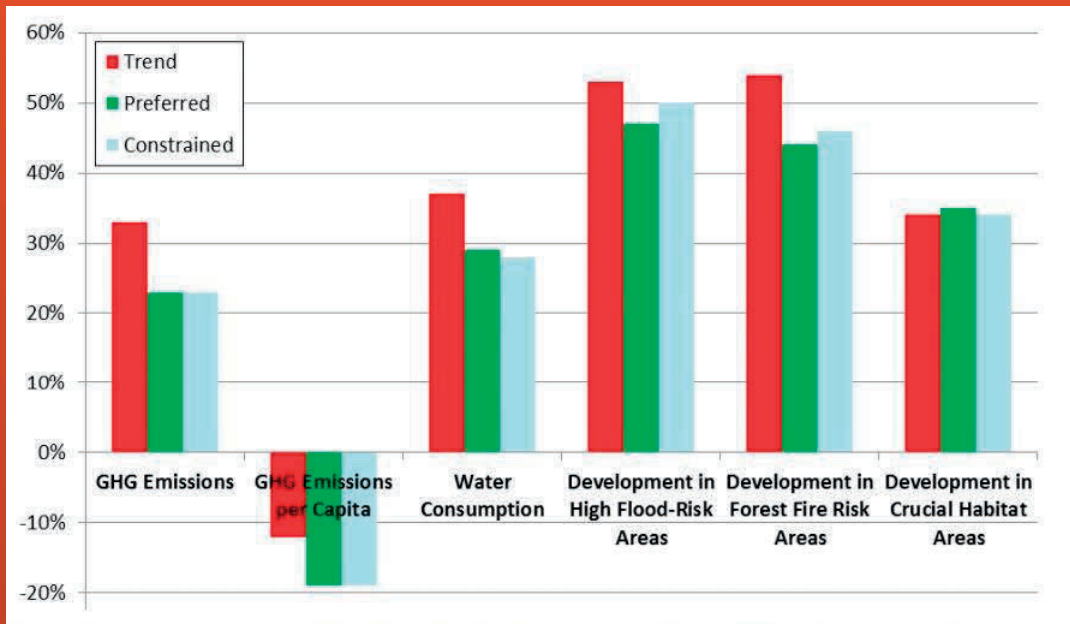
address system condition and capacity issues and develop performance measures to improve freight mobility.

The **Delaware Valley Regional Planning Commission (DVRPC)** provides another example of the use of scenario planning during the analysis phase to guide the development of its regional plan, *Connections 2045*. The agency assembled a group of regional stakeholder experts—a “Futures Group,” which included academics, economists, and major organization leaders—that conduct parallel work but had not previously been involved in DVRPC’s planning efforts. The Group went through a process to identify five “Forces of Change” that were modeled over a 30-year horizon. These forces were enduring urbanism, the free agent economy, severe climate, transportation on demand, and the US energy boom. The impacts and challenges that arose under different scenarios led to the identification of potential action steps the agency could take to position itself more strategically to confront the challenges. The agency used *Impacts 2050*, a sociodemographic system dynamics model (from the NCHRP 750 report series) and Rapid Policy Analysis Tool (RPAT). The agency published a Future of Scenario Planning White Paper to summarize its previous and current scenario planning work.

MID-REGION COUNCIL OF GOVERNMENTS

Through the Central New Mexico Climate Change Scenario Planning Project (CCSP), Mid-Region Council of Governments (MRCOG), which serves the Albuquerque region, analyzed transportation and land use scenarios to determine how best to manage congestion, reduce emissions, and adapt to the potential impacts of climate change. MRCOG analyzed the performance of three scenarios—trend, preferred, and constrained—with respect to a set of six potential future climate-related challenges to understand the region’s susceptibility to hazards such as droughts, wildfires, and flooding. Agency staff used MRCOG’s four-step travel demand model and the UrbanSim land use model to analyze the three scenarios. As the chart below shows, the preferred scenario outperformed the others on most of the climate-related measures. Although the agency ultimately adopted the Trend scenario, as it reflected existing local plans, the MRCOG policy board adopted the preferred scenario as a policy vision toward which it would continue to work. The goals in the Metropolitan Transportation Plan are aligned with this preferred scenario. MRCOG is currently working with local agencies on tasks that would support the implementation of the preferred scenario.

MRCOG modified its Project Prioritization Process to reflect the preferred scenario-based policy vision; project selection criteria that support the preferred scenario are used as part of the TIP development.



*Note: The above graph shows the percent change by 2040 from 2012 for each scenario. The data were based on an interim dataset and slightly differ from data contained in the approved plan.

Source: Mid-Region Council of Governments

GAINESVILLE METROPOLITAN TRANSPORTATION PLANNING ORGANIZATION: PEAK OIL ANALYSIS

For its 2035 long range transportation plan, the Gainesville MTPO developed and analyzed four mode-based scenarios:

- BRT Emphasis
- Highway Emphasis
- Streetcar Emphasis
- Hybrid

The MPO then developed a baseline scenario and ran each modal scenario through the agency's travel demand model, using a single set of land use patterns based on the adopted local government comprehensive plans. Gainesville MTPO evaluated each scenario based on its projected impact on vehicle travel, congestion, delay, growth patterns, and mode shares (transit, bike and pedestrian, auto)—the same performance measures tied to goals in the plan and on which the agency tracks performance.

The agency also considered the performance of each scenario under a potential future condition of “peak oil,” which would represent a future in which peak global oil production occurred in 2010, after which point oil would become less available and more expensive. To incorporate peak oil into the different scenarios, the agency adjusted its travel demand model to account for how rising fuel prices would influence travel demand. The analysis assumed that rising fuel prices would lead to reduced single occupancy vehicle miles traveled. The findings from this analysis indicate that, under peak oil conditions, the region would need to prioritize energy-efficient travel modes. When applied to the different scenarios, peak oil would likely reduce vehicle miles traveled by 18 percent compared to the base scenario. Additionally, peak oil would likely reduce vehicle hours traveled by 33 to 35 percent compared to the baseline. Ultimately, the MPO used a hybrid scenario to develop its 2035 Needs Plan based on an improved understanding of the likely implications of this scenario under a peak oil future.

Source: Gainesville Metropolitan Transportation Planning Organization

SYSTEM PERFORMANCE SCENARIOS

One of the key values of scenario planning in supporting a performance-based planning approach is that it allows decisionmakers to understand alternative approaches to achieving their performance targets and optimize the use of limited transportation funds. Consequently, transportation agencies analyzing system performance scenarios should consider a scenario that, to the maximum extent practicable, maintains baseline conditions for performance associated with the national performance measures, and at least one scenario that improves the baseline conditions for as many of the national performance measures as possible.

As noted earlier, **Southeast Michigan Council of Governments (SEMCOG)** used a scenario planning approach to analyze different investment scenarios in support of its 2035 regional transportation plan. Each scenario was defined based on percentages of funding being allocated toward different program areas (transit, pavement, bridge, expansion, safety, and nonmotorized). One of the four themed scenarios was focused on “Maximize Performance” and was designed to optimize performance across each program area. SEMCOG also developed “investment versus performance” graphics that illustrated how current prioritization differed from the public’s preference for goal prioritization, helping to facilitate discussions about future investments. The figure below shows baseline (2010) performance in key program areas, targets for 2030 performance under each scenario, and the funding split associated with achieving those targets. A key step in SEMCOG’s approach was to examine the relationship between investment levels and performance.

SEMCOG continues to monitor how funding in the region is invested across the various program areas, but primarily focuses on system performance as it relates to progress toward the vision for the region. On its website, the MPO tracks progress toward a set of comprehensive performance measures for the region, which include transportation indicators related to road and bridge conditions, fatalities and serious injuries in vehicular crashes, transit ridership, and air quality.

Figure 3-6: SEMCOG Scenario Analysis

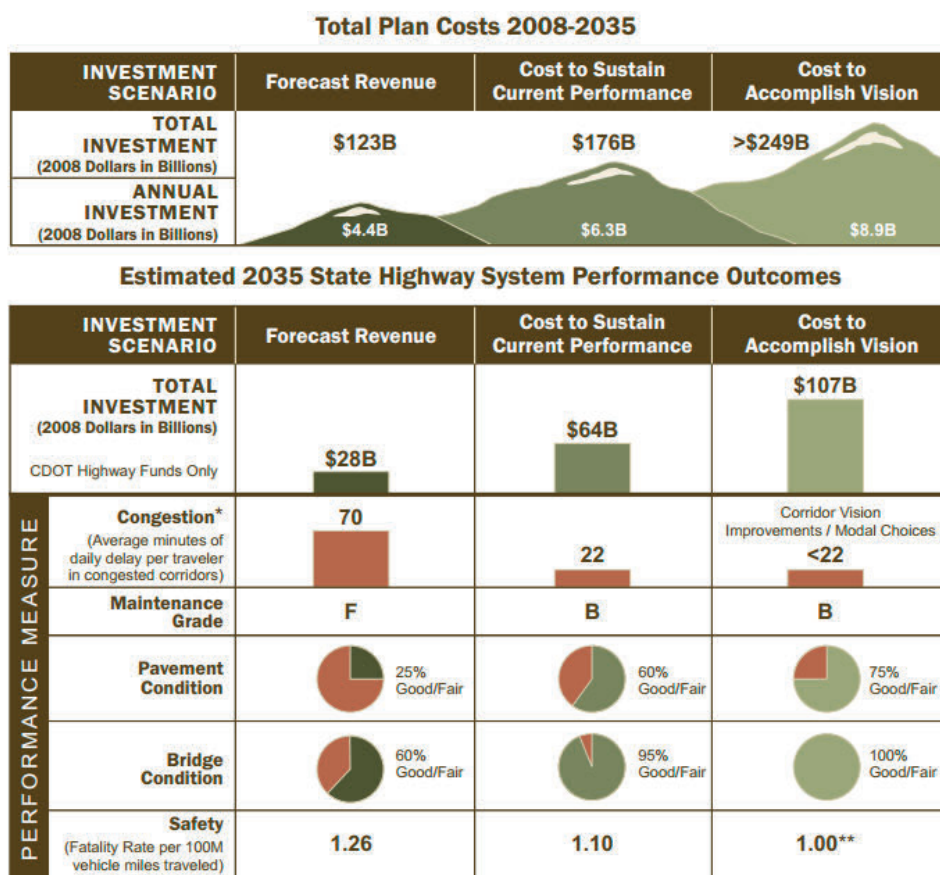
Program Area		1. Current Allocation		2. Public Opinion		3. Preservation First		4. Transit First		5. Maximum Performance	
		2030 Target	Funding Split	2030 Target	Funding Split	2030 Target	Funding Split	2030 Target	Funding Split	2030 Target	Funding Split
Transit	Current system	Current System	21%	< Current System	12%	< Current System	21%	Transit Vision	41%	Transit Vision	22%
Pavement	57 % pavement in good or fair condition	57%	21%	49%	18%	85%	31%	40%	14%	97%	21%
Bridge	85 % bridges in good or fair condition	100%	6%	100%	7%	85%	3%	80%	3%	99%	3%
Expansion	2.9 hours of congestion delay per 1,000 vehicle miles traveled	2.6	10%	2.6	10%	3.0	2%	3.0	0.0%	2.3	10%
Safety	0.77 fatalities per 100 million vehicle miles traveled	0.74	0.5%	NA	7%	0.73	0.8%	0.73	0.8%	0.72	2.0%
Nonmotorized	13 % population and employment within ½-mile of nonmotorized facility	44%	0.5%	100%	5%	44%	0.5%	13%	0.0%	100%	2.0%
Roadway Operations	NA		41%		41%		41%		41%		41%

Source: SEMCOG

Another example of this approach was applied by the **Colorado Department of Transportation (CDOT)** in its 2035 Statewide Transportation Plan during the analysis phase of its planning process. The statewide plan addresses the funding-performance link by analyzing three investment scenarios, each of which forecasted anticipated performance-based on investment levels. For example, CDOT estimates that under the forecasted revenue scenario, pavement condition will deteriorate significantly (25 percent of roads in good/fair condition) and that congestion will increase to 70 minutes of delay per traveler. CDOT developed scenarios for the “cost to sustain current performance” and the “cost to accomplish vision” in the plan. This

information was valuable to make clear to decisionmakers how funding shortfalls would affect system performance.

Figure 3-7: CDOT Analysis of Cost to Sustain Current Performance



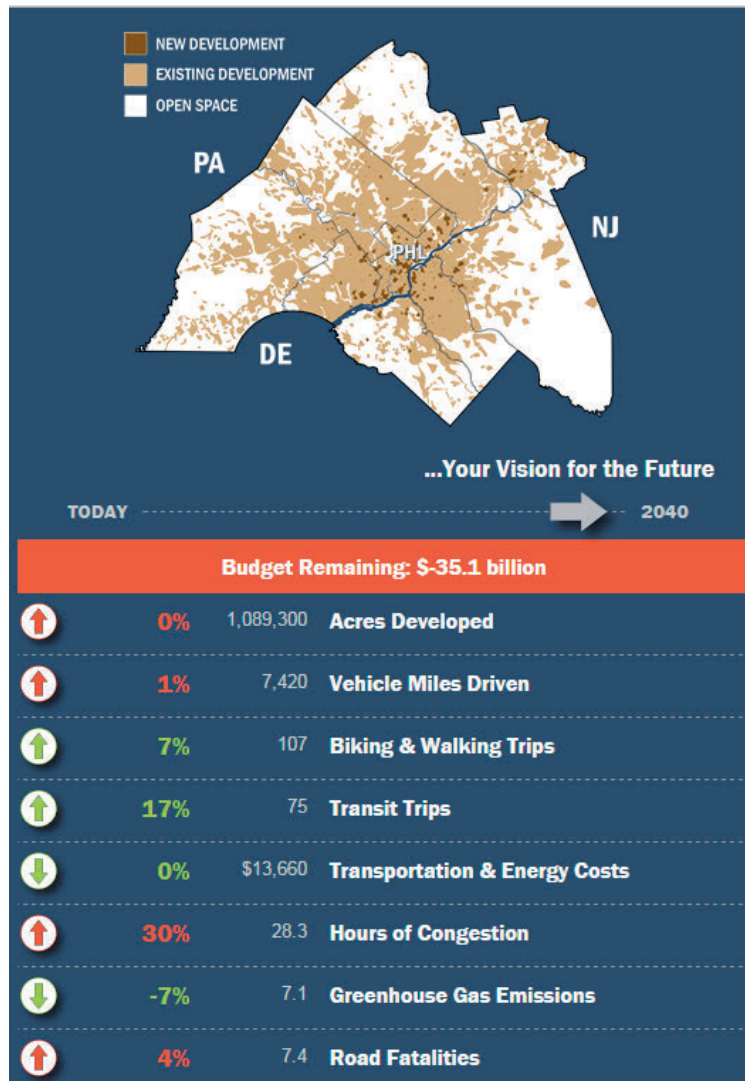
*Congestion is one component of the mobility investment category
 **Fatality Rate may decrease with the passage of a primary seat belt law

Source: Colorado DOT

The Delaware Valley Regional Planning Commission (DVRPC) combined the information collected from multiple rounds of scenario planning into an online tool called Choices and Voices, which engaged stakeholders and the public in the analysis of fiscally-constrained system performance scenarios. The tool is interactive and enables users to identify their preferred transportation focus (e.g., emphasis on roadways or on new modal choices) and preferred housing/land use development types for the region. It also gives users the option to identify the condition of different components of the transportation system they would prefer to have the region maintain and then see the cost associated with different levels of investment. By adjusting their preferences with respect to a variety of investment types and levels, and identifying specific transit projects to support, users can see the anticipated impacts on budget and performance. Regarding performance, users can see the expected outcomes on the following measures: acres of land developed; VMT; biking, walking and transit trips; transportation and energy costs; hours of congestion, greenhouse gas emissions; and roadway fatalities. The exercise requires achieving a balanced budget before submitting the vision, which forces users to comprehend and make difficult trade-offs that resemble those that must be made by agencies like DVRPC. This allows

users to see the corresponding performance results. The tool links to social media, so users can publicly share their visions with those in their social networks.

Figure 3-8: DVRPC Choices and Voices Interactive Tool



Source: DVRPC

FUNDING SCENARIOS

Although MPO plans must be fiscally constrained, and State long range transportation plans should be built with recognition of expected available funding, scenarios also can be developed to explore the impacts of different levels of transportation funding on system performance. In some cases, scenarios can be developed for issues associated with specific transportation parameters or goal areas. For example, an agency might decide to compare the impacts of different highway maintenance funding levels on pavement quality. Tools can be used to predict pavement condition associated with different amounts of investment, as it reflects different amounts of resurfacing, repair, and rehabilitation.

An agency can also use different funding scenarios to assess performance across multiple outcomes during the analysis phase of PBPP. The **Hillsborough County MPO** in Florida offers an example of this approach. In designing its 2040 long range plan, the MPO examined how low, medium, and high levels of financial investment would affect system performance for several key measures, including:

- ▶ Pavement preservation
- ▶ Highway congestion
- ▶ Transit vehicle fleet age
- ▶ Transit level of service
- ▶ Pedestrian and bicycle level of service
- ▶ Vehicle, bicycle, and pedestrian crashes

The levels of investment approach shows the low level of investment represents the recent trend extended into the future. The medium and high investment levels represent scenarios in which more funding is directed to the priority. The Hillsborough County MPO took this approach a step farther by quantifying what level of performance would be possible under different levels of overall funding. The MPO demonstrated that a new sales tax for transportation would enable it to invest in these categories at higher levels and could demonstrate just how much the additional investment would benefit the transportation system.

OREGON DEPARTMENT OF TRANSPORTATION – STATEWIDE INTEGRATED MODEL

To create the 2006 Oregon Transportation Plan, the Oregon Department of Transportation (ODOT) developed an integrated model to better understand the impact of policy changes on the State’s transportation system during the analysis phase of PBPP. The model was used to analyze seven different scenarios:

- Reference scenario (baseline) – Assumes funding levels that allow the State to maintain current (year 2006) purchasing power through 2030
- High fuel price scenario (sensitivity to external changes) – Assumes major increases in fuel prices during the plan period
- Relaxed land use scenario (sensitivity to external changes) – Assumes increased land availability in rural areas and the urban fringe
- Flat funding scenario (policy) – Assumes declining purchasing power due to inflation
- Maximum operations scenario (policy) – Assumes operational improvements rather than capacity expansion
- Major improvements scenario (policy) – Assumes additional funding to meet the needs for all transportation modes; evaluates the impacts of projects included in MPO plans
- Roadway pricing scenario (policy) – Evaluates the impacts of road pricing scenarios

These scenarios were evaluated according to eight broad topics that correlate with the Oregon Transportation Plan’s Vision statement. These topics include mobility and accessibility, economic vitality, effectiveness and efficiency, equity, public support for the system and financial feasibility, reliable and responsive, safety, and sustainability. ODOT developed specific performance measures for each topic to conduct the scenario analysis.

The scenario planning process allowed ODOT to better understand the implications of its potential changes to its policy direction, and as a result, informed the agency’s decision to reinforce its “Fix It First” approach as an investment strategy across all modes.

Source: Oregon DOT

INCORPORATING EQUITY INTO SCENARIO PLANNING

Concern over equity has long been prevalent in planning, with the issue garnering increased attention in the past decade. Despite equity being a key concern for most planners, incorporating it into the analysis phase of scenario planning continues to be challenging, in part due to tool and data limitations. Advances in GIS technologies have made analyses of equity considerably easier in recent years and methodologies continue to burgeon. Primary challenges to incorporating equity into scenario planning relate to spatial modeling limitations, knowledge limitations, conceptual limitations, resource limitations, and lack of political traction.

As technology advances and the industry continues to place issues of equity at the forefront of planning processes, equity will more easily find its place in scenario planning. As described in resources such as the [FHWA Environmental Justice Resource Guide](#), techniques such as the following can help incorporate equity analyses into planning processes:

- Bringing equity leaders into the conversation at the very beginning of the process;
- Including analyses that look beyond traditional land use and transportation models within scenario development and evaluation;
- Creating engagement mechanisms that balance the need for storytelling, shared learning, and problem solving;
- Paying attention to the implied versus actual influence participants have over the decisions and eventual outcomes of the process; and
- Using data and analysis as the starting point, rather than as a conclusory piece, in discussions about equity issues.

MPOs are using these methods to improve the incorporation of equity analyses into planning. For example, in developing [Plan Bay Area](#), the [Metropolitan Transportation Commission \(MTC\)](#) created a Regional Equity Working Group. Composed of stakeholders representing equity interests from the nonprofit, public, and private sectors, the working group assisted MTC in developing and evaluating scenarios.

Expanded GIS technologies have also enabled analyses that look beyond land use and transportation. A key example is Opportunity Mapping, in which planners geographically overlay social factors to understand where residents lack social capital. These maps allow planners to assess current conditions and use the information to shape scenarios. [The Baltimore Metropolitan Council \(BMC\)](#) developed a series of [Opportunity Maps](#) and an index with six categories (Education, Housing and Neighborhood Quality, Social Capital, Public Health and Safety, Employment and Workforce, and Transportation and Mobility), each with sub-categories. Each category was mapped individually and as a composite to provide a picture of opportunity in the region. BMC's analysis illustrated the geographical connections between a variety of social factors, which provides a clearer picture of advantages and disadvantages. The exercise also helped BMC understand the relationships between different indicators, which are key for understanding disadvantage. Continued effort in research and the development of comprehensive models will allow equity concerns to be placed at the forefront of performance-based planning and scenario planning processes.

Source: [Metropolitan Transportation Commission](#); [Baltimore Metropolitan Council](#); [University of Maryland](#)

Programming: Investments, Priorities, and Resources

The programming phase of PBPP is where agencies, officials, and the public must consider the realities of funding rules, project readiness, fiscal constraints, and political considerations to make difficult decisions about which investments are the “best bet” for achieving desired performance levels. Programming is essentially the process of slotting projects into certain funding programs and scheduling project funding. The process is often quite complicated, given the variety of restrictions and directives associated with the blend of Federal, State, regional, local, or other funding sources that support a multimodal transportation program.

Regardless of the numbers and types of funding sources, however, the projects listed in the metropolitan Transportation Improvement Program (TIP) and the State TIP (STIP) should flow logically from the goals, objectives, projects, and priorities established in the transportation plan. Scenario planning that influences the development of a vision, goals, performance measures, or preferred strategies can add value to the programming process.

Using Scenario Planning Metrics to Inform Programming Decisions

The programming process typically has two components: identifying project prioritization and selection criteria, and evaluating proposed projects against the criteria to establish a priority list of projects for funding in the TIP/STIP. At this stage, reflecting the vision or preferred scenario developed in earlier PBPP stages is important to remind decisionmakers and the public what the region is working toward. Losing sight of the desired future is easy when one is focused on more immediate challenges.

A scenario planning process should inform the development of policies and plan recommendations and performance target setting. An MPO or other regional agency could have designed the performance metrics and scenarios with substantial public input, but the trust and buy-in emanating from a successful scenario planning initiative can quickly erode if the results are not incorporated visibly and meaningfully into plans and programs. To ensure a robust and credible PBPP process, transportation agencies need to connect the vision to institutionalized decisionmaking elements such as the project selection criteria and other prioritization methods used in transportation programming.

"Transportation scenario planning has been happening in Utah between UDOT, UTA and the MPOs for over a decade now. The results are evident in the development of dozens of multi-modal projects, which evolved over the course of a decade of joint planning among a variety of stakeholders. A robust analysis of six scenarios led to the final decision to move forward with the University Light Rail project. Each of the scenarios reflected consideration of a series of factors, including the impact the Light Rail line would have as part of a unified transportation system over the next 20-30 years."

- G.J. LaBonty, Utah Transit Authority

One of the hallmarks of a successful PBPP process is a transparent, technically sound relationship between the goals established in the long range plan and the funding allocated through the transportation improvement program. TIP project selection criteria and prioritization

processes, therefore, should clearly reflect the goals, policies, performance measures, and targets established in the direction-setting and analysis phases of PBPP. Anticipating this need, planners should consider the following points when designing a scenario planning process to support the development of a long range plan and/or a funding program:

- ▶ The results of a scenario planning exercise are unlikely to have a significant influence on funding decisions unless the process includes a focused implementation strategy for applying those results to the project prioritization and selection process. Planners should “start with the end in mind” when designing a scenario planning exercise by considering the ways in which the outcomes can be reflected in decisions made throughout the entire PBPP process.
- ▶ The project selection process is guided by the long range plan but is also subject to external rules and constraints of funding programs. When conducting a scenario planning process, transportation planners should be upfront with stakeholders and the public about the types of investments that their agencies can support, and work with partner agencies to identify and coordinate funding for strategies that could strengthen the impact of infrastructure investments, such as programs to improve public health, community development, and quality of life.
- ▶ Transportation agencies can use scenario planning processes as an opportunity to improve the ways in which they incorporate equity and environmental justice issues into long range plans and funding decisions. This can be done by developing performance metrics and conducting analyses of issues associated with topics such as neighborhood access to jobs and essential services, housing and transportation costs compared to income levels, and other indicators that can be affected by transportation investments.

The funding streams involved in the programming process reflect a legacy of transportation programs that emphasize transportation system performance. Priorities emerging from scenario planning processes that support broader community objectives, such as livability of communities, integration of transportation and land use, and environmental quality might not align with traditional interpretations of funding eligibility and purpose. More effort could be required to quantify impacts in new and different ways during the project selection process to reflect these values.

Although, some, including Federal, funding programs have become increasingly flexible over the past few years, a community could still have needs that do not align well with available funding restrictions. One solution might be to carve out subsets within specific funding sources (such as Surface Transportation Program (STP) funds) to directly support local projects that further the community’s vision. Atlanta Regional Commission’s Livable Centers Initiative is a good example. Started in 1999, the Initiative was designed to encourage planning and implementation of its livability principles on the ground in local communities. The initiative provides funds to local governments to develop plans for “livable centers”—areas in which development that occurs is consistent with the regional vision and policies—and then provides an incentive in the form of implementation dollars.

Analyzing Alternative Project Investment Scenarios

Scenario planning can be used within the programming and project selection process to explore how best to achieve given priorities under several different project funding scenarios, such as different packages of investments or schedules for project implementation. This analysis could reveal a gap between new high priority projects identified in the scenario process and the constraints of available funding sources. Due to the rules associated with various project costs or types, lower-priority projects might better qualify for available funds. Scenario planning could help planners identify additional funding criteria considerations or other changes in the decisionmaking framework that would ensure better continuity between the vision and the programming phase.

Scenario planning can also be used to explore and test the resiliency of proposed projects to potential impacts of external forces. Researchers at the Massachusetts Institute of Technology followed a traditional scenario methodology in examining uncertain future changes for a freight planning scenario framework that has been used to test selected projects. Similar to approaches used in planning analysis, the approach suggests:

- ▶ Creating three very different scenarios that describe what the future might look like. These are based on macroeconomic conditions.
- ▶ Evaluating proposed projects under each of the scenarios. The evaluation is qualitative, but is used to determine whether a project makes sense in each of three or more vastly different futures.
- ▶ Prioritizing the projects that make sense under many different future conditions compared to those that work within fewer or no scenarios.

Given the iterative nature of scenario planning, a scenario analysis exercise in the programming phase of PBPP could trigger the need to reconsider decisions made during earlier phases. A scenario planning exercise that bridges the analysis and programming phases might generate new information that could lead to modifications of previously identified strategies, packages of projects, or balances struck between the various priorities (e.g., reducing congestion vs. improving safety) competing for resources. Scenario planning, like other planning processes, is most valuable when tested or fine-tuned multiple times to account for new information or changes in conditions.

Implementation: Monitoring, Evaluation, and Reporting

The final step in PBPP is implementation, which involves monitoring system performance, evaluating the impacts of investments, and reporting progress toward achieving long range goals and performance targets.⁶ Scenario planning is not typically applied during this phase of PBPP, but the work conducted in scenario planning during previous phases should be very clearly reflected in the performance measures used for monitoring, evaluation, and reporting. As the saying goes, “If it isn’t measured, it doesn’t count.” The challenge to transportation agencies is to develop and track a full array of decisionmaking, evaluation, and reporting measures that

⁶ The FHWA PBPP Guidebook discusses each of these aspects of the implementation phase, and their distinguishing features, in more depth.

meaningfully reflect their vision and goals. Scenario planning processes often require agencies to develop new metrics to address broader concerns. Incorporating those metrics into the final stages of PBPP—as is, or modified—ensures that the agency reaps the full value of its investment in a scenario planning process. Using tools like the online Chicago Metropolitan Agency for Planning “dashboard” profiled below can help agencies demonstrate to the public that their vision and concerns are reflected in the agency’s ongoing monitoring and evaluation process.

The process of monitoring, evaluation, and reporting on performance provides an opportunity to monitor the outcomes of the plan implementation process, both in terms of system performance and broader goals and desired outcomes; to reflect on the usefulness of the tools and accuracy of the assumptions used in scenario planning over time (e.g., to inform possible model modifications or assumptions); and to provide information to the public, decisionmakers, and stakeholders regarding performance—in general and vis-à-vis trends analyzed in scenario planning. When designing reports and monitoring systems, agencies should consider questions such as the following:

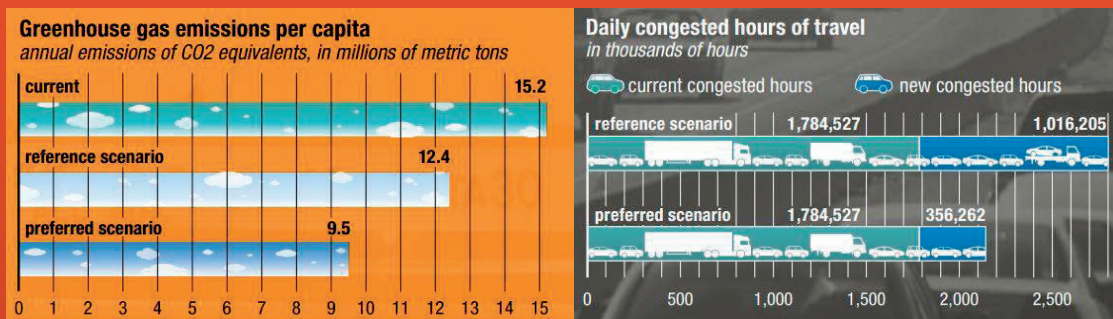
1. What performance results have been accomplished?
2. Is the vision being implemented?
3. Did the outcome of the implementation strategy provide the expected level of performance improvement (e.g., safety improvements, reduction in fatalities, and serious injuries)?
4. How is progress supporting the vision? How are we balancing multiple desired outcomes?
5. If performance has not improved as expected or projected, what factors might be influencing this outcome, and what can be done to mitigate them?

Agencies that have conducted multiple scenario planning iterations can use the monitoring phase to consider lessons learned and to improve the scope of future planning exercises. For example, an MPO that is implementing the major projects from the long range plan can use this final PBPP phase to examine how the actual results of the investment compare to those that were envisioned or predicted. The assessment might reveal a need to adjust assumptions or add variables to future analyses of similar projects or strategies. Agencies can use this phase to consider questions such as the following: Did our models produce forecasts that were relatively accurate? Were our assumptions accurate? Were the methods appropriate? The implementation phase is critical for maximizing the value of future scenario planning exercises.

Transportation agencies can also continue to monitor and respond to changes in the driving forces that were assumed in exploratory scenarios. For instance, although peak oil and high fuel prices were a common concern several years ago, increased domestic energy production and other global factors affecting oil prices have changed some of that thinking, and new or revised scenarios for the future might be considered. Meanwhile, the introduction of autonomous connected vehicles into the mainstream marketplace could happen much faster than expected. As factors like these evolve, previously developed scenarios, plans, and priorities might need to be revisited.

CHICAGO METROPOLITAN AGENCY FOR PLANNING

To develop its [GO TO 2040 Plan](#), the [Chicago Metropolitan Agency for Planning \(CMAP\)](#) undertook an extensive scenario planning exercise, in which the agency received feedback from stakeholder groups and residents regarding several future scenarios. By using interactive online tools that used MetroQuest’s “Invent the Future” public engagement software, and through public meetings, the agency gathered input from 35,000 residents. The input emphasized the need for a scenario in which the agency focuses on maintaining the existing system and making improvements to improve the system’s efficiency. The agency used the public’s input to develop the preferred Regional Scenario, which includes a combination of actions that will best prepare the region to achieve its goals for 2040. The analysis, in which the agency compared the preferred scenario to current performance and a reference scenario based on expected trends, went beyond the broad goal statements of the Regional Vision to identify the best courses of action to reach the public’s goals.



One of the goals of the GO TO 2040 plan is to “track [the] region’s performance to assess where to make improvement to reach the desired future.” CMAP and the Chicago Community Trust (CCT) developed and now maintain the website, [MetroPulse](#), to monitor the region’s performance toward implementing Go TO 2040 plan, which will support implementation-oriented analyses to inform subsequent scenario planning cycles. MetroPulse is an online dashboard that tracks select indicators—including measures related to regional mobility—to provide information to the public and decision makers.

Sources: [CMAP](#); [CMAP MetroPulse](#)

Performance-Based Scenario Planning Tools

Please note: FHWA does not endorse the use of any specific private sector tools or models identified in this section. The purpose of this section is solely to provide information about the capabilities and relevant uses of available tools.

A rich suite of tools is available to support scenario planning for PBPP. The selection of the right tools should take into account the different phases (direction, analysis, programming, and implementation) of the PBPP process; key driving issues and related performance metrics; public outreach and engagement goals; technical capacity; and resource needs. The case studies and examples described throughout this guidebook demonstrate that most transportation agencies engaged in scenario planning use a combination of visualization, forecasting, impact analyses, process-oriented, and community outreach tools to help them transition from the broad, policy-level strategic direction-setting to more detailed impact analyses in the analysis and programming stages.

Given the nature of many scenario planning exercises as robust processes of stakeholder and community engagement, tools are available to help design effective outreach and decisionmaking processes. Tools also have been designed specifically that create user-friendly, web-based interfaces to inform and engage the public in goal identification, scenario tradeoffs considerations, and provide input on preferences for how different scenarios perform. Traditional public outreach methods and tools (e.g., surveys, public meetings and forums, stakeholder groups) can also be easily adapted to support performance-based scenario planning efforts.

In addition to community engagement tools, a host of tools has been created specifically to support scenario planning aimed at informing policy direction and strategic planning. Common features of these tools include the ability to visualize and analyze scenarios geographically that have different development and land use policy assumptions that are influenced by or influence travel demand and travel behavior. These tools can be very helpful in clarifying comprehensive land use and transportation policy direction and incorporating cross-agency buy-in for regional performance metrics across different community sectors (e.g., transportation, economy, environment, housing, equity). The development of comprehensive scenarios that evaluate performance against key indicators can help build community buy-in for transportation system performance, land use and development goals, environmental outcomes, and cost benefit considerations. The analysis of scenarios against key indicators during the direction-setting phase can help inform the creation of specific performance measures and targets in the project programming and implementation phases for both transportation and non-transportation factors.

Tools that support building consensus on policy direction are typically supplemented at later phases with tools that support the identification of specific programmatic or project needs and evaluate those specific projects against environmental, financial, or other transportation performance measures. Many of the more detailed project needs and impact evaluation tools are also designed to focus on specific modes (e.g., highways, transit, ITS) or issues (e.g., air quality, safety, benefit costs). The use of these project-oriented tools enables a finer level of analysis to evaluate specific projects against key performance metrics and can help establish project and program priorities, performance targets and monitoring mechanisms.

While a broad suite of off-the-shelf tools is ready for supporting scenario planning for PBPP, methods and tools are continuously evolving. As scenario planning processes become more common in addressing future uncertainties or developing new performance measures, often a need develops to creatively adapt existing tools and methods or create new ones. This includes developing new assumptions about how different future conditions will influence travel demand and travel behavior, safety or operations. It can also involve creating new methods or assumptions within existing analytical tools to evaluate transportation system resiliency or transportation system performance in light of uncertain futures relative to climate change, global economic factors, fiscal uncertainty, or predominance of automated vehicles. Finally, a host of new tools and methods is emerging to better identify multimodal and active transportation (biking, walking, and transit) system needs and performance measures.

The following tables summarize different types of tools that might be helpful in supporting scenario planning for performance-based planning at the policy or project and programming phases. This list of tools is not comprehensive, but rather a sampling to illustrate types of tools and how they can produce useful synergies between scenario planning and PBPP. A more detailed list of relevant tools is included in Appendix B.

- ▶ Engagement and collaboration tools
- ▶ Performance measure development tools
- ▶ Direction-setting tools
- ▶ Performance evaluation tools

ENGAGEMENT AND COLLABORATION TOOLS

The tools in this category can aid planners in helping scope their scenario planning and performance-based planning and programming process to engage key stakeholders, the public, and decisionmakers to ensure diverse participation and integration across different sectors. Some of the tools in this category are specifically designed to make it easy for the public to understand tradeoffs among alternative scenarios and to voice their preferences.

METRO OF OREGON:

METROSCOPE

Some agencies have combined models that allow them flexibility to simulate various trends and policies in ways that are readily accessible to staff for scenario work. Metro, the MPO for the Portland, Oregon region, developed a set of decision support tools dubbed Metroscope. The tools include an economic model that predicts region-wide employment and households, a travel model that converts travel time by mode to comparable costs by mode, and two real estate models that predict the locations of households and employment respectively, plus related attributes like land consumed and prices. The land use forecasts created by Metroscope are adjusted to reflect local planning efforts and undergo a rigorous review process by local governments and the Metro Council. Metroscope is an integral tool that Metro uses to help inform regular decisions on whether to expand the Urban Growth Boundary, as well as providing land use assumptions that inform Regional Transportation Plan modeling. This multi-model approach represents an alternative to the use of sketch tools that produces robust results.

Source: [Metro](#)

Tool	Relevance to Scenario Planning and PBPP
<p>PlanWorks: Publicly available web-based tool provides a plethora of resources to help transportation professionals to anticipate, plan, and execute collaborative techniques at 44 distinct decision points in long-range planning, programming, corridor planning, and environmental review. Relevant applications: <u>Stakeholder Collaboration</u>, and <u>Visioning</u></p>	<p>Useful for designing an engagement plan for a scenario planning project and for anticipating and addressing common problems with engaging stakeholders at any stage of PBPP.</p>
<p>CrowdGauge: Open-source online tool for designing educational/ gaming exercises that walk participants through a series of screens exploring their personal priorities for their community, the potential impacts of proposed plan elements on their priorities, and the impacts of their conceptual budget choices on their previously stated priorities.</p>	<p>Useful in assessing public preferences related to planning and programming scenarios or decisions.</p>
<p>EngagingPlans: Proprietary web based, mobile-enabled suite of tools designed to reach, inform, and involve citizens and stakeholders in public projects and decisionmaking. The EngageApps module enables participants to collaboratively map insights, visualize impacts, or explore and react to plan elements through collaborative mapping, interactive workbooks, and trade-off simulators.</p>	<p>Users can customize the modules to engage the public and collaborate with stakeholders at many stages of the PBPP process. EngageApps provides some basic collaborating scenario building tools.</p>
<p>MetroQuest: Proprietary public participation platform that allows input in many ways including ranking, mapping, budget allocation, project selection, and visual preference surveys.</p>	<p>Useful at all stages of scenario planning and PBPP. Can be used to understand preferences or to gain input on specific projects, which is useful in the programming stage.</p>

PERFORMANCE MEASURE DEVELOPMENT TOOLS

This set of tools can help transportation agencies identify a range of performance metrics and targets beyond traditional transportation measures. The tools can be incorporated into the scenario evaluations and help transportation practitioners better align performance and programming decisions with community goals. Many of the performance measures identified in these tools are reflected in the previously noted scenario planning tools.

Tool	Relevance to Scenario Planning and PBPP
<p>PlanWorks: Relevant applications: Performance Measurement</p>	<p>Useful for identifying performance measures for any stage of PBPP or scenario planning</p>

Tool	Relevance to Scenario Planning and PBPP
Community Vision Metrics: Provides a list of performance measures that planners can use to match with their respective context and goals.	Useful for identifying performance measures for any stage of PBPP or scenario planning
Sustainable Communities Index: Similar to Community Vision Metrics, but this tool provides more robust information on methods for calculating the metrics and identifying data resources.	Useful for identifying performance measures for any stage of PBPP or scenario planning
Transportation and Health Tool: Tool for examining the health impacts of transportation systems; uses 14 indicators relating to transportation and public health, with data available at the State, MSA, and urbanized area-levels.	Useful for identifying health-related performance measures for any stage of PBPP or scenario planning

DIRECTION-SETTING TOOLS

The past decade has witnessed a great proliferation of computer-based tools to aid in scenario development. The spectrum ranges from complex, high-computing, multivariate models to simplified spreadsheet or sketch-planning based tools. These tools are designed to support the creation of plausible future conditions and quantitatively assess those conditions against key indicators. Many of these tools can not only generate visualizations representative of geographically based future conditions, but they also include the ability to predict scenario performance against a wealth of key indicators beyond traditional transportation metrics. Tools that incorporate predictive capabilities often incorporate research on travel behavior dynamics that can be applied over long-range planning horizons. Predictive tools developed based on empirical data from national data (e.g. RPAT, EERPAT) can be run quickly, while more detailed models (Urbanism) will require more effort to develop and often require specialized travel survey data.

The tools in this category are designed to create and analyze integrated scenarios of the future that reflect the interrelated nature of different transportation, development, infrastructure and environmental policies and conditions. When combined with the use of travel demand models or other enhanced transportation needs identification and assessment (performance evaluation) tools, these direction-setting tools can be very effective in helping set policies, identify performance metrics, and determine investments that could achieve desired performance outcomes.

These tools are categorized as follows:

- ▶ **Visualization:** The primary function of these tools is to visualize relationships among key variables that influence travel choices. The user will typically have the opportunity to make adjustments to input scenarios that can be quickly visualized in a GIS interface.
- ▶ **Predictive:** These tools are capable of producing a “forecast” of travel behavior and choices for a future year, under a range of condition and input assumptions. These tools operate and function more like models by explicitly representing households or firms.

- ▶ Analytical: These tools typically estimate changes in travel by applying factors generated from empirical research. Many analytical tools are supported by spreadsheet-based equations.

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>PlanWorks: Relevant application: Visioning [Visualization]</p>	<p>Stakeholder engagement Agency collaboration Environmental, Economic, and Community Considerations</p>	<p>Useful at the direction-setting and analysis phases of scenario planning or PBPP to identify opportunities for engagement and integration of goals, objectives, and measures across PBPP process.</p>
<p>Envision Tomorrow: A web-based multifaceted analysis and visualization scenario planning tool that can be used at the site, corridor, or regional scale. Scenario comparisons can help guide identification of specific project needs, produce small-area concept plans, and model complex regional issues. [Analytical]</p>	<p>Land Development Cost of Infrastructure Real Estate Value Housing (affordability, demand, mix) Parking (demand, costs) Jobs-to-Housing Ratio Employment Connectivity Energy Use Carbon Emissions Water Consumption Solid Water/Waste Water Return on Investment</p>	<p>Useful at the direction-setting and analysis phases of PBPP to identify community values and driving issues; develop and assess integrated land use and transportation policies and identify key performance metrics that can be folded into later phases of the PBPP process.</p> <p>Informs: Policy, Project Identification, Performance Metric Identification and Objectives</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>UrbanFootprint and RapidFire: Web-based and spreadsheet tools to develop integrated land use and transportation scenarios. Scenario comparisons can help guide identification of specific policy and project needs relative to achieving desired performance against a range of indicators.</p> <p>[Predictive]</p>	<p>Greenhouse Gas Emissions Air Pollution Water and Energy Consumption Vehicle Miles Traveled Transit, Walk, Bike Mode share Vehicle Emissions Capital Infrastructure Costs O&M/Public Works Costs City Revenues Household/Business Costs Public Health Impacts Housing Diversity & Affordability Access to Jobs and Services</p>	<p>Useful at the direction-setting and analysis phases of PBPP to identify community values and driving issues; develop and assess integrated land use and transportation policies against key performance metrics that can be folded into later phases of the PBPP process.</p> <p>Informs: Policy, Project Identification, Performance Metric Identification and Objectives</p>
<p>UrbanSim: A modeling tool that predicts behavior or interaction within a network or system to help illustrate the cause and effect of different scenario variables relative to environmental, transportation, economic and development goals</p> <p>[Visualization]</p>	<p>Accessibility Mode share VMT Congestion GHG emissions Jobs Land Development Demographics</p>	<p>Useful in direction-setting phase when to better understand issues and opportunities of different land use, real estate, housing and transportation investments or policies. Key metrics can be incorporated into later phases of PBPP.</p> <p>Informs: Policy, Project Identification, Performance Metric Identification and Objectives</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>CommunityViz: A land use scenario sketch-planning tool, often used to develop, portray, and evaluate different scenarios at the small area and regional scales across a range of performance indicators</p> <p>[Visualization]</p>	<p>Annual CO, CO2 & NOx Auto Emissions</p> <p>Annual Hydrocarbon Auto Emissions</p> <p>Commercial Energy Use</p> <p>Commercial Floor Area</p> <p>Commercial Jobs</p> <p>Commercial Jobs to Housing Ratio</p> <p>Labor Force</p> <p>Population</p> <p>Residential Dwelling Units</p> <p>Residential Energy Use</p> <p>Residential Water Use</p> <p>School Children</p> <p>Vehicle Trips per Day</p>	<p>Useful in direction-setting phase when to better understand issues and opportunities of different land use and transportation investments or policies. Key metrics can be incorporated into later phases of PBPP.</p> <p>Informs: Policy, Project Identification, Performance Metric Identification and Objectives</p>
<p><u>Energy and Emissions Reduction Policy Analysis Tool (EERPAT):</u> Built on the GreenSTEP model foundation, this is a policy analysis tool that enables planners quickly to evaluate and compare a large number of scenarios based on their effectiveness in reducing greenhouse gas emissions. Meant to aid in evaluating different policies.</p> <p>[Predictive]</p>	<p>VMT</p> <p>GHG emissions and fuel use by vehicle</p>	<p>Useful at the direction-setting and analysis phases of PBPP to identify promising policies to support GHG emission reduction goals.</p> <p>Informs: Policy, Performance Metric Identification and Objectives</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>Rapid Policy Assessment Tool (RPAT): The Rapid Policy Assessment Tool (RPAT) evaluates policy scenarios to identify the most promising sets of policies for improving multiple policy objectives. Currently, RPAT can provide information on the following changes in a regional system regarding changes in urban form, demographics, transportation supply, and transportation policies.</p> <p>[Predictive]</p>	<p>Daily VMT; Daily trips by mode; Average travel speeds by vehicle type; Vehicle hours of delay; Fuel consumption; Regional highway and transit infrastructure costs; Regional transit operating costs; Annual traveler cost; Accident rates; Regional accessibility; Job accessibility by income group</p>	<p>Useful at the direction-setting and analysis phases of PBPP to identify promising regional transportation, land-use, and demand management policies. Informs: Policy, Performance Metric Identification and Objectives</p> <p>Useful for identifying performance measures at regional screening level of PBPP</p>

PERFORMANCE EVALUATION TOOLS

These tools help transportation agencies identify project needs and strategies and evaluate those projects against a wide range of performance measures. These tools include needs identification tools based on specific performance targets (e.g., safety, mobility, operations, air quality, pavement conditions) and project analysis tools aimed at looking for specific cost-benefit considerations and environmental outcomes. This suite of tools can be helpful in supplementing the scenario planning tools described above when transitioning to the project-programming phase or in response to specific driving issues. These tools are best used when the direction-setting phase is complete, and more detailed analysis is desirable to prioritize specific projects relative to their impacts on key performance metrics.

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>Safety Analyst: Automates and improves many of the procedures that transportation agencies use to identify safety problems and prioritize improvements.</p>	<p>Crash reduction</p>	<p>Useful in the analysis and programming phases of PBPP.</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p><u>Systemic Safety Project Selection Tool:</u> Helps planners identify types of improvements that, through widespread adoption, may have a large benefit. Compliments Safety Analyst, which is more oriented towards identifying hot spots and countermeasures.</p>	<p>Crash reduction by type and location</p> <p>Safety risk factors identification</p> <p>Countermeasure identification</p>	<p>Useful in the analysis phase to determine what types of policies or improvements may have the greatest effect.</p>
<p><u>Highway Economic Analysis Requirements System (HERS) and State Version (HERS-ST):</u> Uses Highway Performance Monitoring System Data (HPMS) to evaluate the current and future performance of the highway system under alternative investment scenarios or rules. Model can provide cost estimates for achieving economically optimal program structures, as well as predict system condition and user cost levels resulting from a given level of investment.</p>	<p>Cost-benefit analysis based on travel time and safety; vehicle operation, emissions, and highway agency costs.</p>	<p>Useful in the analysis phase—to identify needs - and during the evaluation phase to identify the most effective improvements. Brings investment scenarios into these phases.</p>
<p><u>National Bridge Investment Analysis System (NBIAS):</u> Similar to HERS, but focused on bridges. This tool evaluates bridge investment needs and impacts on bridges of alternative investment levels.</p>	<p>Money spent</p> <p>Work performed</p> <p>Backlog of needs (\$, bridges)</p> <p>User benefits (potential, obtained)</p> <p>Distribution of deck, superstructure, substructure ratings</p> <p>Structurally deficient bridges</p> <p>Bridge health index</p>	<p>Useful in the analysis phase—to identify needs - and during the evaluation phase to identify the most effective improvements. Brings investment scenarios into these phases.</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>Transit Economic Requirements Model (TERM-lite): Helps local/ regional transit agencies assess their state of good repair (SGR) backlog, level of investments to attain SGR, and the impact of variations in funding on future asset conditions and investment needs. Metrics provide performance implications of alternative project priorities and funding levels.</p>	<p>Metrics associated with State of Good Repair</p>	<p>Useful in the analysis phase—to identify needs - and during the evaluation phase to identify the most effective strategies. Brings investment scenarios into these phases.</p>
<p>TREDIS: A web-based economic analysis system for regional scenario or corridor planning, or project level prioritization. It utilizes economic forecast methods to enable comparison of long-term impact for alternative planning and policy scenarios, or alternative mode and corridor design solutions. Results are summarized in terms performance indicators, societal benefit/cost and economic impacts.</p>	<p>Cost-benefit analysis (user and societal benefit)</p> <p>Economic impact analysis (productivity, jobs, income, GDP)</p> <p>Mobility (congestion, speed, reliability)</p> <p>Accessibility (labor, delivery, intermodal)</p> <p>Safety (crash reduction and injury/death)</p> <p>Resource use (fuel consumption)</p> <p>Environment (emissions by class)</p> <p>Development (housing, commercial sq. ft.)</p> <p>Financial (revenues, tolls, fees, transfers)</p>	<p>Useful in scenario planning to compare the cost/benefit ratio and economic impact of different packages of investments and policies.</p> <p>Useful in the evaluation phase to assess alternative planning scenarios, in either economic terms or performance metric terms.</p> <p>Informs: Policy, Project Identification, Performance Metric Identification and Objectives</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p>REMI-TransSight: A PC-based software system that provides regional forecasts of long-term benefits, costs and economic impacts. Can be used at the community, corridor or regional scale to assess alternative policies, plans and projects.</p>	<p>Cost-benefit analysis based on travel time, and safety; vehicle operation, emissions, and transportation agency costs.</p> <p>Economic impact analysis based on cost, productivity and competitiveness changes. Results in terms of jobs, income, GDP, output.</p> <p>Fiscal impact in terms of revenues and costs to government</p>	<p>Useful in scenario planning to compare the cost/benefit ratio and economic impact of different packages of investments and policies.</p> <p>Useful in the analysis phase to assess alternative planning scenarios.</p> <p>Useful in the evaluation phase to identify the most effective improvements.</p> <p>Informs: Policy, Project definition, and Objectives</p>
<p>Travel Demand Management (TDM) Models: Evaluate how TDM strategies can support vehicle trip reduction goals</p>	<p>Changes in mode share</p> <p>Vehicle-trips</p> <p>VMT</p> <p>Average vehicle occupancy and ridership</p>	<p>Useful in the analysis and programming phases of PBPP.</p>
<p>Travel Demand Models: Forecasts future vehicle travel & transit ridership on regional highway networks. Simulates trip generation, distribution, mode choice, and route assignment using aggregate socio-economic data by travel zone.</p>	<p>Trip generation</p> <p>Trip distribution</p> <p>Mode choice</p> <p>Trip assignment</p> <p>Congestion</p> <p>Freight Traffic</p>	<p>Useful in the analysis and programming phases of PBPP.</p>
<p>Simplified Trips-on-Project Software (STOPS): Identifies and evaluates transit project investments based on New Starts and Small Starts project criteria. Relies on census data, regional travel model data, and current GTFS data from individual metro areas.</p>	<p>Transit ridership (trips-on-project measure) for all travelers and for transit dependent</p> <p>Change in automobile VMT based on the change in overall transit ridership between scenarios.</p>	<p>Useful in the analysis and programming phases of PBPP.</p>

Tool	Sample Performance Metrics	Relevance to Scenario Planning and PBPP
<p><u>Infrastructure Voluntary Evaluation Sustainability Tool (INVEST):</u> Self-evaluation tool transportation agencies can use to assess performance on various sustainability criteria. Includes modules for evaluation of highways at the system planning scale, project-based evaluations, and maintenance and operations.</p>	<p>81 criteria related to sustainability outcomes in highway system planning, project development, operations and maintenance</p>	<p>Useful for the monitoring and evaluation phases of PBPP; informs Policy, Project Identification, Performance Metric Identification and Objectives, and Programming Priorities</p>
<p><u>MOVES:</u> A modeling platform supported by US EPA for multiple scale emissions analysis, from detailed “project level” assessments to emission inventories at the regional or national level, for greenhouse gases, air pollutants, and air toxics. Useful in conducting air quality analysis associated with different policy or project interventions at the State, county or project scales.</p>	<p>Inventory or emission rates of various GHG and air pollutant emissions Energy consumption Outputs can be summarized by on roadway facility type, vehicle type, etc.</p>	<p>Useful in the detailed analysis and programming phases of PBPP</p>
<p><u>Tool for Operations Benefit Cost Analysis (TOPS-BC):</u> Estimates benefit to cost ratios for system management and operations strategies.</p>		<p>Useful in the analysis and programming phases of PBPP.</p>

4. Getting Started: Designing a Scenario Planning Process to Support PBPP

This chapter identifies the factors to consider and address in designing a scenario planning process. As scenario planning is a process that can support decisions at each phase of PBPP, such planning can be done in many different ways. The intent of this chapter is not to provide explicit direction in scoping a scenario planning process. Rather, the purpose is to help a project manager or a technical committee or advisory group consider the key issues that could be addressed and some of the practical elements involved in using scenario planning to inform PBPP. The insights and notes developed by working through these questions can provide useful material and information for subsequent activities such as estimating potential costs and needed resources, developing a scope of work, describing the project in a Unified Planning Work Program, and, if necessary, writing a Request for Proposals to elicit consultant support.

The questions below are organized in a series of steps, starting with the most basic context-setting step to the advanced step of preparing a scope. The questions in this chapter, and recommended exercises for answering them, are provided in Appendix A as a worksheet.

Step 1: Evaluate Community Context

1. How is your region developing?
2. What are the major issues or drivers influencing growth and development?
3. What are the most promising opportunities that will shape development in years to come? What major issues may be affecting equity in the community; assessed with a community profile, including the identification of populations and their characteristics, and identifying data sources?

Step 2: Identify Desired Outcomes

1. What plans are due for an update?
2. What new plan(s) is your organization expected to develop soon?
3. What is your agency looking to accomplish in these updates?
4. What major trends are of greatest concern to your agency's board?

Step 3: Identify Scenario Planning Purpose

1. Which element(s) of your PBPP process could benefit from scenario planning and analysis?
2. What issues would you like to address from previous planning processes?
3. How could scenarios be used to improve plans and decisions?
4. How can scenarios improve the ongoing decisionmaking process?

5. Are there particular trade-offs your agency would like to better illustrate for the public and decisionmakers?
6. How will scenario planning help your agency define transportation performance measures and set targets?

Step 4: Identify Scenario Planning/PBPP Linkages

1. How can you apply/ build on scenario planning tools, data, and skills to support the ongoing PBPP process?
2. How could the scenario tools, models, data, or inputs inform subsequent efforts such as corridor studies?
3. How could you maximize the usefulness of the scenario analysis tools or data planning to inform other work or improve efficiencies?

Step 5: Define Scenario Planning Approach

1. At what point in your agency's PBPP process will scenario planning be deployed?
2. Do you anticipate using scenarios to identify preferred future conditions, helping to shape the region's vision, principles, or goals?
3. Do you anticipate using scenarios to test different courses of action against radically different future conditions, helping test the validity of underlying assumptions or the resiliency of planned investments?
4. Do you anticipate using scenarios to test different courses of action against relatively predictable future conditions, helping to hone strategies and set priorities?

Step 6: Define Scenario Planning Engagement

1. What information do you need from stakeholders and the public to develop scenarios and plans? How will you use the information and ideas that are offered?
2. What groups or individuals have information that is necessary for crafting and analyzing scenarios?
3. How can the public benefit from your approach to scenario planning?
4. At what point will decisionmakers be involved in scenario development or evaluation?
5. What methods will you use to engage each stakeholder group?
6. What resources do you have or need to conduct engagement activities?

Step 7: Define Resources for Scenario Planning Effort

1. How much could you achieve through scenario planning with minimal data and analysis tools?
2. What data are needed to support your preferred scenario planning approach?

3. What data are available?
4. What tools are available to conduct scenario planning and analysis?
5. What are the strengths and weaknesses of existing tools?
6. What do you want to analyze, but cannot with existing tools?
7. What other tools could help close the gaps between what you'd like to do and what you can do?
8. What are your priorities for purchasing data (if your budget will allow this?)
9. If you purchase data, will you have resources to purchase subsequent releases of the data?
10. If you can obtain desired data and tools, can scenario planning still provide value?
11. What is staff's level of experience with scenario planning?
12. What outside resources are available (e.g., universities, Federal agencies, foundations, civic groups)?

Step 8: Prepare Scope for Scenario Planning Effort

1. Will the entire scenario planning process be conducted in-house, or will consultants be hired to assist?
2. What can you budget for the scenario planning project?
3. Who needs to be involved in the scoping process?
4. How much do you and your board know about other existing plans affecting the growth and development of your region?
5. What specific questions, processes, and outcomes will this scenario planning effort address?
6. How do you plan to consult with other agencies and stakeholders in your region?
7. How will you ensure the public understands the purpose of the processes and has reasonable expectations of the results?
8. How will you communicate the scenarios and results of the analysis to stakeholders and the public?
9. How will you provide access to the scenarios and data for decisionmaking?
10. Will the scenarios continue to be used over time, creating a need for data and tool support?

5. Keys to Success

As the practice of scenario planning has evolved to consider and address increasingly complex questions, the usefulness of scenario planning as a tool to address transportation agencies' most pressing issues and challenges is greater than ever. With limited resources, agencies need to ensure they are maximizing the value of their investment in a scenario planning exercise. As this guidebook discusses, a scenario planning exercise is most valuable when it is shaped to substantively inform and link the agency's entire PBPP process. Specifically, this means that the metrics, data, and outcomes of an agency-sponsored scenario planning process are visibly reflected in adopted plans, performance measures and targets, programming decisions, project prioritization and selection criteria, and ongoing monitoring, evaluation and reporting activities.

This guidebook identifies several illustrative examples, tips, and tools for achieving the most from a scenario planning process. Four key recommendations that represent the themes and lessons learned from the practitioners profiled throughout this guidebook are discussed below.

Strengthen Connections between Scenario Planning and PBPP

Scenario planning is most beneficial to an agency when it is conducted as a key informative component of a larger PBPP process. The following are a few steps that can be taken to improve connections between scenario planning and PBPP.

- ▶ **Carefully consider ways in which scenario planning can best inform each PBPP stage** in your agency's case. In some cases, scenario planning is used in the development of a vision, while in others it is used to forecast expected performance of different scenarios and either support selection of a scenario or prompt reconsideration of the desired future scenario. In yet other cases, scenario planning can help look at packages of specific projects or different levels of emphasis on specific modes, or even to test the potential impacts of exogenous factors such as technological changes.
- ▶ Establish goals and **identify desired outcomes for the scenario planning process** itself. Practitioners should ask themselves questions that lead to the identification of desired outcomes. For example, is there a specific topic on which the agency seeks to gain more information? Is the purpose of scenario planning to understand the performance implications of an already-chosen scenario? If the latter is the case, is the exercise intended to prompt reconsideration of the chosen scenario? The answers to these questions, and others, should be clearly identified by agency staff and supported by relevant decisionmakers. In completing this step, agencies should ensure that they can formulate clear statements about what will be accomplished once the process is complete. Desired outcomes should help fill gaps or needs evident within the agency's broader PBPP process.
- ▶ **Consider the performance measures** that will be used to evaluate scenarios and **ensure they are consistent** with the objectives, performance measures, and targets in the long range plan and program, and those used to monitor, evaluate, and report system performance. If limitations exist with respect to the agencies' tools or available data, the

agency should consider whether opportunities exist to address this by, for example, considering whether proxy measures can be used to support consideration of a factor for which ideal data are not available. In addition, **the criteria for evaluating scenarios should be determined and agreed upon to at the beginning of the scenario process.** This will help ensure that the process maintains a focus on, and ultimately achieves, the desired outcomes.

Use Creativity to Push the Limits of Existing Tools

As transportation professionals and agencies are increasingly interested in understanding the connections between transportation and topics such as safety, public health, accessibility, environmental impacts, and energy and other resource usage, practitioners and academicians have pursued new and innovative ways to consider them by expanding on the capabilities of more traditional scenario planning tools. Meanwhile, agencies are transitioning to new types of travel demand modeling approaches, such as activity-based and multimodal models. Entrepreneurial creativity will continue to be needed to modify and invent tools that can meaningfully address the array of topics and questions that arise during scenario planning and PBPP.

- ▶ It is important to **consider the pros and cons of PBPP and scenario planning tools** and decide which makes the most sense to use, depending on the objectives of the exercise. The scale of the area being studied, for example, would determine whether a regional-level planning tool makes more sense than a tool that can be customized or adjusted at a more localized, or even parcel, level.
- ▶ There are many opportunities to **incorporate new and existing data sets and tools into scenario planning with creativity.** For example, the Champaign-Urbana Urbanized Area Transportation Study (CUUATS) and many other MPOs have worked to refine their travel demand models to better account for active transportation modes and to improve the accuracy of model interactions between land use and transportation. In the development of its 2040 long range plan, despite not being able to model health impacts or accessibility at the county level, CUUATS developed two additional models to evaluate conditions at a localized scale: a Health Impact Assessment to measure the relationship between the built environment and obesity, and an accessibility and mobility analysis model. Fresno COG, for example, developed an Integrated Transportation and Health Model, which relates physical activity, air pollution, and travel behaviors to specific health outcomes based on established causal relationships reported in the scientific literature for heart and respiratory disease; stroke; diabetes; cancers of the breast, colon, and lung; dementia; and depression. FHWA and other Federal agencies are developing tools and guidance on this topic—such as the [FHWA Health in Transportation Corridor Planning Framework](#) and the [Transportation and Health Tool developed by US DOT and the US Center for Disease Control](#)—to enable consideration of public health in scenario planning.
- ▶ Because of the rapid pace of innovation and development of new tools that can be incorporated into scenario planning, agencies should consider whether it will be most cost effective to **invest in developing capacity in-house** to allow for refinement of tools

and analysis capabilities that can be employed at any point in time, as opposed to only during plan update cycles. CUUATS conducts most of its modeling and analysis in-house, which has allowed the agency to use its scenario planning tools to inform several corridor studies conducted as follow-up tasks to the long range plan.

Be Strategic in Engaging Decisionmakers, Stakeholders, and the Public

Public and stakeholder involvement is a cornerstone of scenario planning and PBPP. The accuracy and legitimacy of a planning process depends on the quality of the engagement with decisionmakers, stakeholders, and the public. Having a shared regional or statewide vision is critical to ensuring plans will be implemented, which is what makes scenario planning worthwhile. Educating and involving elected officials is important to enhance the applicability and relevance of scenario planning. Discussions with these groups should maintain focus on priorities for system performance and how targets relating to these priorities can be accomplished.

- ▶ **Scenario planning can generate excitement** and help a community or State come together around a common vision informed by input received from stakeholders and the public. **Reporting on performance** in the implementation phase of PBPP helps maintain the momentum and excitement generated by scenario planning. Keeping stakeholders and the public—as well as decisionmakers and policymakers—apprised of performance improvements annually can be an effective way to promote engagement, prevent discouragement regarding the relatively slow pace of change, and demonstrate that progress has been made.
- ▶ When **scenarios are tied to performance measures**, the public has a better understanding of how investments, or types of investments, translate into different potential futures and future system performance with respect to the components they care about such as safety and reliability. The public and stakeholders also can see how well the agency is “connecting the dots” by demonstrating that the objectives and performance measures they helped establish are being used in the selection of projects.
- ▶ **Carefully considering the timeline** for scenario planning and planning for potential contingencies can help the process run more smoothly. In the case of Fresno COG, the agency found that making schedule adjustments was necessary to accommodate additional requests for review and to increase buy-in. Developing a schedule that encourages input early and throughout the process and also allows contingency time can be beneficial.
- ▶ **Be thoughtful about when the public and stakeholders will be consulted** in both the scenario planning process and the broader PBPP process it aims to inform. This decision should be aligned with the desired outcomes for a scenario planning process that have been identified. Once the outcomes and consultation periods are clear, they should be communicated to all interested parties. Having an understanding of the desired outcomes and scope of the process will make clear what considerations are on the table and which are considered to be outside the scope. Individuals or groups with special interests might

try to steer the conversation toward a topic that is not central to the discussions, so a clear understanding of the desired outcomes can help keep the process on track.

- ▶ **Creativity should be employed to improve public and stakeholder involvement** whenever possible. In addition to best practices such as providing translation and interpretation services when needed, agencies can do many innovative things to engage their constituents. DVRPC developed the “Choices and Voices” interactive online tool to help demonstrate the budget and performance trade-offs with which the agency was grappling. Universities, libraries, transit providers, telecom or tech companies, community service organizations, and many other partners can help increase or facilitate opportunities for residents to become involved. Fresno COG used a cost-effective “mini grant” program to recruit local partners to engage residents in its planning process using a variety of means including social media. For public and stakeholder involvement, **agencies should take actions to encourage the inclusion of all people and groups**, even those whose interests are not always aligned with the agency’s long-term vision. This is valuable for improving understanding, identifying opportunities to collaborate and reach mutually agreeable solutions, and keeping lines of communication open.

Respect the Local Context

Another key to an effective scenario planning exercise is ensuring that it addresses the issues that are important to the community, and that it takes into account important geographic, environmental, demographic, economic, political, social, or other features of the region.

- ▶ **Identify the issues** that need to be addressed. Each region faces unique issues that might have impact(s) on the transportation system and other factors that affect transportation. In some cases, these may be exogenous factors. Examples of questions that could be asked include:
 - Is our region growing? If so, how rapidly? Where is growth likely to occur?
 - How are global trade patterns likely to affect our region?
 - Is the region susceptible to certain effects of climate change? If so, which ones?
 - Do energy prices have a significant impact on our transportation system?
 - Are any significant investments planned for our region, such as a new airport, a port expansion, or a new high-speed rail line?
 - What are the key threats to safety and security that our region faces?
- ▶ Also important is to **consider factors that are most likely to affect transportation system performance**, particularly in light of the State’s or the region’s unique issues, advantages, or challenges. In some cases, the strategies that are most popular or have the fewest barriers to implementation might also be those with a relatively low amount of potential to “move the needle” when it comes to performance. Scenario planning provides an opportunity to demonstrate which strategies rise to the top in terms of potential performance impact.

The self-assessment worksheet in Appendix A has been developed to help agencies identify opportunities to maximize the value of scenario planning.

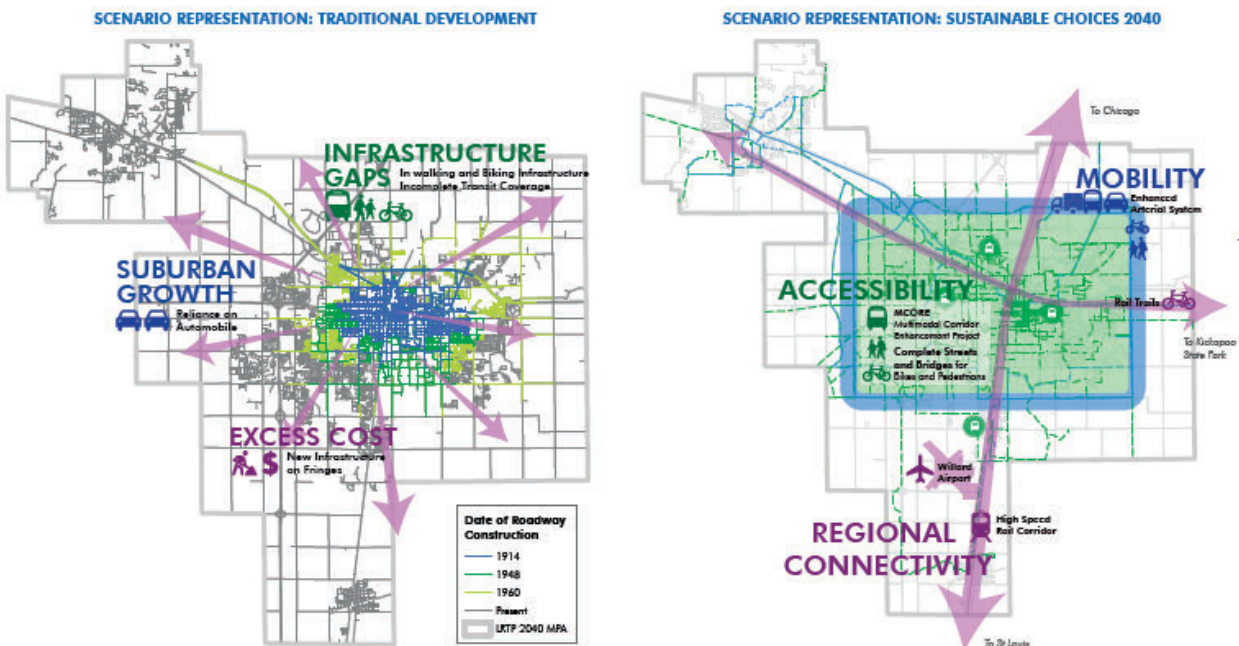
6. Case Study Summaries

This section provides brief summaries of the full-length case studies in Appendix C.

Champaign-Urbana Urbanized Area Transportation Study

The Champaign-Urbana Urbanized Area Transportation Study (CUUATS) has been using scenario planning and analysis for over a decade and has been recognized in previous FHWA publications for its use of performance-based planning to improve decisionmaking.⁷ For its most recent long range plan, Sustainable Choices 2040, CUUATS analyzed two scenarios: a traditional development (or trend) scenario and a sustainable choices scenario, which was created based on input CUUATS received from the public and regional stakeholders through a very extensive public outreach process.

Figure 6-1: CUUATS' Sustainable Choices 2040 Scenarios



Source: *CUUATS*

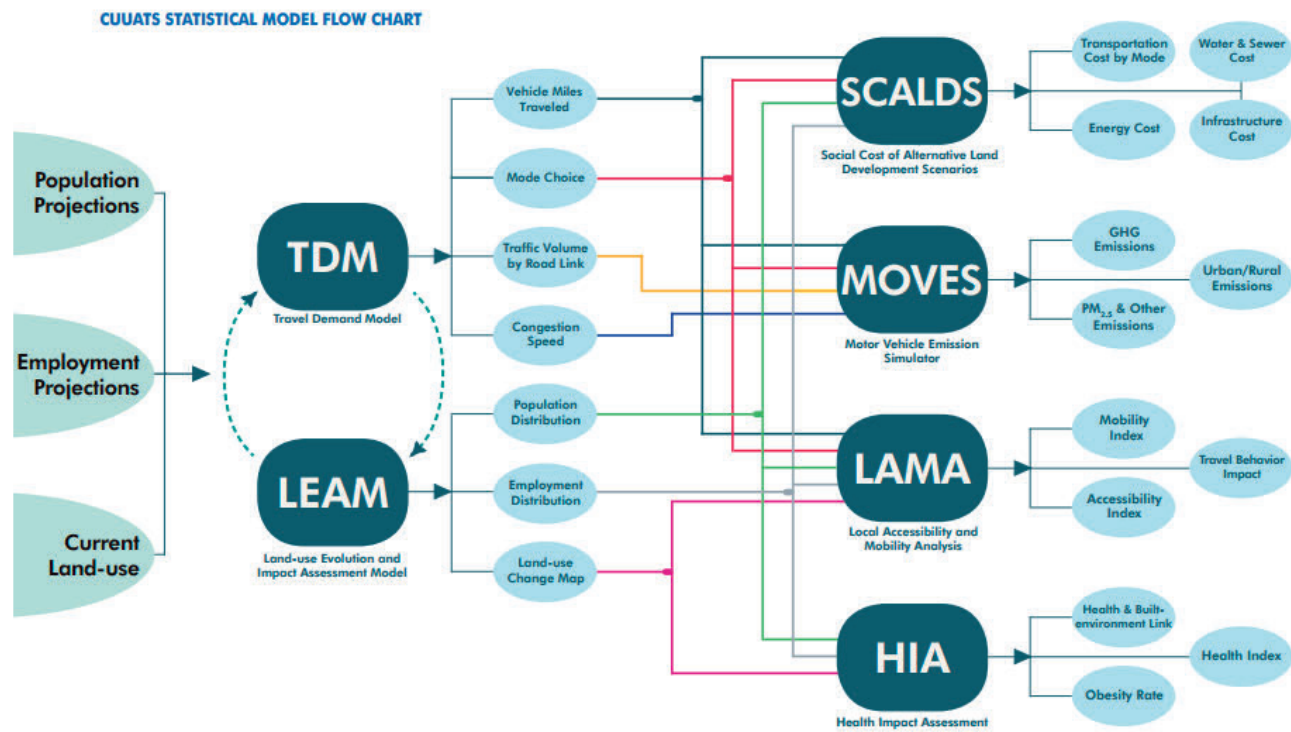
In previous scenario planning cycles (2004 and 2009) and in four corridor studies, CUUATS tested and refined many scenarios. By 2014, the public had reached consensus on how to grow and invest

⁷ For more detailed information about the agency's use of performance measures and targets in planning, see the case study on the agency in the FHWA *Performance-Based Planning and Programming Guidebook*: http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/pbppguidebook.pdf.

in transportation, so testing a single scenario that reflected the public’s preferences against the “business as usual” scenario was reasonable. Limiting the number of scenarios was also logical, given the relatively slow growth in the region and that most of the transportation funding was already committed to a few major projects. As a next step, CUUATS plans to create new project prioritization criteria in the coming years based on the 2014 plan goals and objectives.

CUUATS has technically savvy staff team. The agency maintains a large and skilled team by serving as a consulting agency for the entire region and by identifying and pursuing funding sources for innovative research. CUUATS has developed models for more effectively evaluating relationships between transportation and public health, for example. More generally, the agency is continually seeking ways to update and improve its modeling and analysis capabilities.

Figure 6-2: CUUATS’ Modeling Suite Used to Develop the Sustainable Choices 2040 Plan



Source: CUUATS

Strong relationships with various local and State agencies and other organizations (including the University of Illinois-Urbana Champaign) have been critical to CUUATS for obtaining data, leveraging funds, and building political support for regional initiatives. Long range planning and scenario planning processes have worked smoothly in significant part because of the high degree of collaboration and coordination among local agencies.

LESSONS LEARNED

- ▶ Strong and collaborative relationships between the MPO and the agency's member jurisdictions and other partners are extremely important; they improve the MPO's effectiveness and its ability to acquire funding to innovate. This, in turn, improves the quality of the scenario planning and scenario analyses the agency undertakes. Some examples of strong relationships from the Champaign-Urbana region that have improved the agency's capacity and ability to obtain funding include:
 - Informal lines of communication between the CUUATS and its various partners are always open. Many of these relationships date back to 1998, when the Campus Area Transportation Study (CATS) was formed to discuss transportation issues affecting the university area and to update the campus master plan.
 - Illinois DOT has frequently provided CUUATS with funding for different initiatives. In some cases, the funding is contingent on CUUATS providing technical assistance to other MPOs in the State.
 - Among CUUATS' member agencies is a strong sense of the need to do what is best for the region, even when it means "taking turns" with respect to which jurisdiction receives limited funding resources first. Strong relationships have enabled this approach.
 - The member agencies have service area boundary agreements in place to minimize interjurisdictional competition for development and jobs.
 - CUUATS worked with the Champaign-Urbana Public Health District to conduct health surveys in coordination with the 2040 plan outreach and engagement. This has been beneficial for the Health District and has enabled CUUATS to consider public health in its modeling and planning processes more fully (e.g., using HIA tools). CUUATS has worked with the Health District to obtain health-related grants for complete streets policies for two member communities. Because of strong relationships and taking specific confidentiality trainings, CUUATS staff have access to health data that allows them to analyze health on a level that is unparalleled throughout the country.
- ▶ Building in-house capacity has been critical to the agency's continued success. In some cases, having in-house staff complete analyses can be more cost effective and can position the agency to manage future planning cycles more efficiently. Having a highly skilled team of staff allows CUUATS to function successfully as a consulting firm for the entire region; grants and individual projects (developing cities' bicycle plans, for example) account for about half of the agency's revenue.
- ▶ The presence of a university with strong planning and engineering departments can be a significant benefit, particularly for a smaller MPO. UIUC faculty have assisted CUUATS in various ways (e.g., providing expertise on high-speed rail, developing modeling tools for the

agency's use). Nearly all of CUUATS' staff members were educated at UIUC, which provides the agency a steady stream of planning and engineering graduates.

Fresno Council of Governments

Fresno COG first used scenario planning in 2006–2007 as part of the San Joaquin Valley Blueprint planning process, in which the participating agencies used the UPlan scenario modeling tool to help establish a regional land use and transportation vision to guide growth over 50 years—a period in which the population is expected to more than double. The Blueprint process positioned the agency to better respond to the 2008 mandate in California Senate Bill 375 (SB 375) that all MPOs work with the California Air Resources Board (CARB) to set greenhouse gas (GHG) emission reduction targets. To set its initial GHG emission targets, Fresno COG used the Vision California RapidFire model, a spreadsheet-based tool. The agency ran various scenarios to identify the emission reduction targets that were realistically feasible for 2020 and 2035 (approximately 4 percent and 6 percent, respectively). In 2014, Fresno COG completed the 2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The SCS, required by SB 375, demonstrates how the region will meet its GHG emission targets of 5 percent by 2020 and 10 percent by 2035 (based on 1990 levels). The agency's experience setting GHG emission targets helped them prepare for more in-depth scenario planning and analysis.

For its 2014 plan, Fresno COG first went through a series of focus group meetings to identify an agreed-upon list of 10 indicators that would be used to evaluate scenarios. The indicators chosen reflected GHG emissions reduction, housing types, residential density, compact development, transit-oriented development, land consumption, important farmland protection, vehicle miles traveled, criteria pollutant emissions reduction, and active transportation and transit.

Then, staff developed three scenarios (A, B, and C), two of which were carried over from the GHG target setting process (B and C). Scenario A reflected public input from a community workshop. Scenario D was introduced by a coalition of stakeholder agencies late in the planning process, based on their desires to see more resource growth in rural areas. The four scenarios are described in Figure 6-3. Fresno COG built and tested the new scenario on a very tight schedule, but was unable to circulate it widely for public review, given the timing of the process. For its next planning process, the agency does not plan to repeat this experience of introducing additional scenarios later in the process. The establishment of stronger “ground rules,” or a well-defined scope for the scenario planning exercise, could help avoid similar situations in the future.

The MPO Board ultimately chose Scenario B, which was the most consistent with locally adopted plans and the most politically feasible of all the scenarios. Although it produced a bigger footprint than the other scenarios, Scenario B still achieved significant improvements compared to the historic trend line. The agency then conducted an analysis of four revenue/investment scenarios, to identify which package of projects to fund, given expected revenues and ability to flex funds between different modes. The differences between scenarios were slight, however, because many of the significant projects in the existing program had been approved by a local referendum.

Figure 6-3: Fresno COG’s Four Scenarios Evaluated for the 2014 RTP/SCS

Scenario >	A	B	C	D
Central Theme	Public input from November 2012 workshop	Current planning assumptions	Foothill growth to City of Fresno	Foothill growth to existing communities
Proposed By...	Public	Member Agencies	RTP Round Table	Coalition of Community Organizations
Defining Characteristics	<ul style="list-style-type: none"> • Considers public input from November 2012 workshop • Growth in the metro area conforms to historical trend • Some rural communities receive much higher growth 	<ul style="list-style-type: none"> • Follows current general and specific plan updates • Growth allocation follows historical trend • Includes development in Friant Ranch, Millerton, and the proposed pharmacy school 	<ul style="list-style-type: none"> • Additional 4% of countywide growth allocated to City of Fresno along corridors and activity centers • Unincorporated growth constrained to 10 existing communities; little change in incorporated cities • Development in Friant Ranch, Millerton, and the proposed pharmacy school not included 	<ul style="list-style-type: none"> • Developed by coalition of community organizations • Increased redevelopment and higher density for new growth • Growth reduced from the foothill communities and reallocated to existing cities and communities • Development in Friant Ranch, Millerton, and the proposed pharmacy school not included
Communities with Significant Changes in Growth Allocation*	<p>Less Growth</p> <ul style="list-style-type: none"> • Clovis, Coalinga, Parlier, Sanger • Auberry, Friant Ranch, Millerton, Shaver Lake <p>More Growth</p> <ul style="list-style-type: none"> • Firebaugh, Fresno, Huron, Kerman, Kingsburg, Orange Cove, San Joaquin • Caruthers, Easton, Lanare, Laton, Raisin City, Riverdale, Squaw Valley 	Each city/community receives growth based on historical trend	<p>No Growth</p> <ul style="list-style-type: none"> • Auberry, Friant Ranch, Millerton, Raisin City, Squaw Valley <p>More Growth</p> <ul style="list-style-type: none"> • Fresno 	<p>No Growth</p> <ul style="list-style-type: none"> • Friant Ranch, Millerton <p>Less Growth</p> <ul style="list-style-type: none"> • Auberry <p>More Growth</p> <ul style="list-style-type: none"> • Biola, Bowles, Caruthers, Del Rey, Easton, Lanare, Laton, Raisin City, Riverdale, Tranquillity

Source: Fresno COG

Public engagement for the RTP/SCS process was extensive. The COG’s public information officer created a very successful mini grant program that provided local community organizations with outreach training and support. This greatly increased community participation among a wide array of demographic groups. The agency also established an “RTP Roundtable,” which was specific to the RTP/SCS process and included 35 representatives from member organizations, community groups, and other agencies (e.g., transit operators and community and special-interest groups). The use of a roundtable was extremely effective in persuading all the stakeholders to collaborate and establishing widespread buy-in to the process and its results.

At the site visit, the team engaged in a detailed discussion about the different capabilities of the Envision Tomorrow scenario evaluation tool used for the 2014 plan and Urban Footprint, which the agency is considering for its next scenario planning initiative. In addition, the staff described its

four-step travel demand model, and talked about the potential of transitioning to an activity-based model that would better reflect the nuances of walking, biking, and urban design on vehicle travel patterns. The agency is also working with the State public health department to develop an Integrated Transportation and Health Model (ITHIM), which will be run in-house, to model the benefits of active transportation.

LESSONS LEARNED

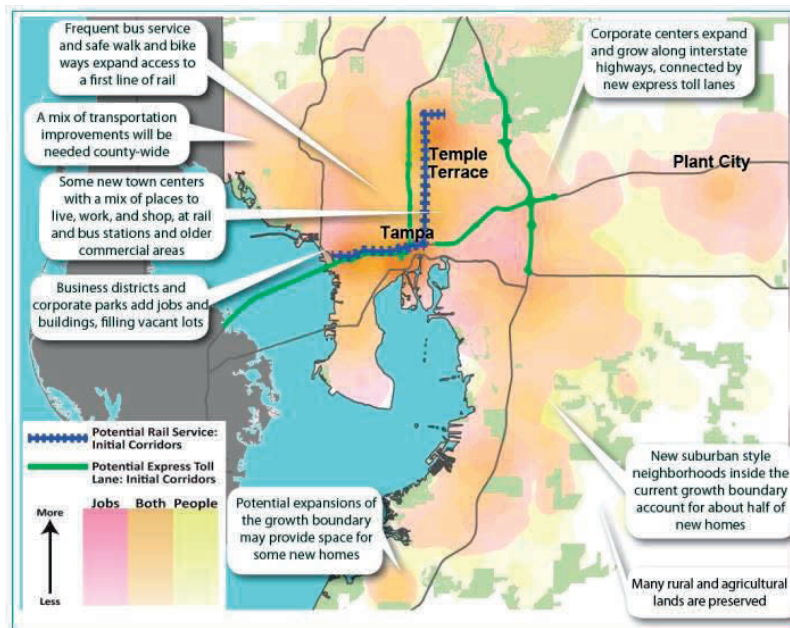
- ▶ Identifying the performance measures that will be used to evaluate scenarios early in the scenario planning process helps ensure a productive and effective process. Tying scenario planning to performance measures allows for more effective communication about why some scenarios perform better than others and the extent to which goals can be achieved under each scenario.
- ▶ In hindsight, the Fresno COG's staff found that evaluating scenarios that were not consistent with reality (e.g., those that did not take approved development plans into consideration) was not a particularly productive exercise. The lesson learned from this experience was that setting ground rules regarding what changes will, and will not, be formally considered in developing scenarios is essential. Any evaluation of expected impacts under unrealistic scenarios should be completed simply to understand the likely impacts of future decisions.
- ▶ Engaging with partners early and often throughout the scenario planning process was key for ensuring unanimous consensus in selecting a scenario and assuaging local agencies' concerns about the (perceived) need to protect their land use authority.
- ▶ The mini-grant program for local community-based organizations to engage residents in the planning process was successful and cost effective. The relationships strengthened as a result of that program have enhanced the quality of planning in the region (e.g., through the engagement of non-English-speaking communities) and resulted in greater support in the community for the smart growth principles that date back to the Regional Blueprint process.
- ▶ Having highly skilled technical staff who are responsive is important for enhancing the ability to incorporate performance measures into scenario planning and conduct analyses that improve stakeholders' understanding about planning and investment options.
- ▶ Inclusion of groups whose interests are often not aligned with the agency's (e.g., Building Industry Association in this case) is valuable to improve understanding, identify opportunities for mutually agreeable solutions, and keep lines of communication open.

Hillsborough County MPO

The Hillsborough County MPO recognizes that uncertainty is inevitable in planning. It deals with this uncertainty by using scenario analysis at nearly every step of its long range transportation planning. The MPO's most recent scenario planning endeavor was in 2013–2014 as it developed *Imagine 2040*, the region's long range transportation plan and land use vision. The MPO worked with the county's Planning Commission, which oversees land use planning for the county and its local governments, to design future land use scenarios and settle on a vision for the region's land use. The MPO then developed its LTRP. The previous (2035) LRTP included a single list of transportation priorities. Local governments wanted more flexibility and public opinion polling, however, after a failed transportation referendum challenged their perceptions of public priorities. Therefore, the MPO created packages of projects in four categories—Preserve the System, Reduce Crashes and Vulnerability, Minimize Delay for Drivers and Shippers, and Real Choices When Not Driving—and looked at how low, medium, and high levels of investment would affect performance measures for each category. Some of the key outcomes to this approach were:

- ▶ The public and decisionmakers knew what the MPO could afford with current funding.
- ▶ The process built public support for generating additional transportation revenues.
- ▶ The performance measures developed for the project provided a basis for project selection and ongoing monitoring and evaluation criteria. The MPO will continue using its performance measures to evaluate transportation performance through its Crash Management/Congestion Management Program.

Figure 6-4: *Imagine 2040 Preferred Scenario*



Source: Hillsborough County MPO

LESSONS LEARNED

- ▶ Considering the extent to which a planning process can affect policies related to topics beyond transportation, such as land use, is important. The Hillsborough County MPO's strong relationship with the Planning Commission (which was a lead agency in developing the plan) meant that the MPO had a reasonable chance at successfully influencing land use plans and policies to achieve a vision.
- ▶ Opinion polling can be a useful tool in helping agencies understand what matters to citizens; in the case of Hillsborough County MPO, it informed project categories and investment scenarios. Conducting opinion polling and other types of outreach can provide information that informs how scenarios are designed and which performance measures resonate with decisionmakers and the public. To the extent practicable, highly resonant performance measures should be used to evaluate scenarios.
- ▶ Using funding scenarios can be instrumental in educating the public about what current funding levels could achieve, and what would be necessary to achieve more desirable levels of performance.
- ▶ High levels of coordination between local government and MPO staff can support stronger land use-transportation coordination. The Imagine 2040 transportation plan and local land use plans were prepared at the same time and developed to be mutually supportive. This can enhance agencies' ability to implement the land use vision that will support the preferred scenario.

7. Resources

Federal Scenario Planning and PBPP Resources

FHWA Website on Scenario Planning and Visualization in Transportation,
http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/

FHWA Website on Performance-Based Planning and Programming,
http://www.fhwa.dot.gov/planning/performance_based_planning/

PlanWorks: Better Planning. Better Projects, <https://fhwaapps.fhwa.dot.gov/planworks/>

- ▶ Integrating Freight Considerations into the Highway Capacity Planning Process Application, <https://fhwaapps.fhwa.dot.gov/planworks/Application/Show/16>
- ▶ Decision Guide, <https://fhwaapps.fhwa.dot.gov/planworks/DecisionGuide>
- ▶ Assessments, <https://fhwaapps.fhwa.dot.gov/planworks/Assessment>
- ▶ Applications, <https://fhwaapps.fhwa.dot.gov/planworks/Application>
 - Linking Planning and Operations Application, <https://fhwaapps.fhwa.dot.gov/planworks/Application/Show/7>

FHWA 2011 Scenario Planning Guidebook,
http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/

FHWA 2013 Performance-Based Planning and Programming Guidebook,
http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/

FHWA 2014 Model Long Range Transportation Plans: A Guide for Incorporating Performance-Based Planning, http://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/

FHWA 2014 Performance-Based Planning for Small Metropolitan Areas,
http://www.fhwa.dot.gov/planning/performance_based_planning/small_mpo_report/fhwahep15015.pdf

FHWA 2016 Advancing Transportation Systems Management and Operations through Scenario Planning Primer, <http://www.ops.fhwa.dot.gov/publications/fhwahop16016/index.htm>

Transportation Research Board Resources

NCHRP Report 750, Scenario Planning for Freight Transportation Infrastructure Investment,
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_750v1.pdf

NCHRP Report 710: Practical Approaches for Involving Traditionally Underserved Populations in Transportation Decisionmaking, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_710.pdf

NCHRP Planning Snapshot 3: Scenario Planning,
[http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36\(120\)_Snapshot2014-003ScenarioPlanning.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36(120)_Snapshot2014-003ScenarioPlanning.pdf)

J. Zmud, Transportation Research Board Webinar, “Applying Scenario Methods to Transportation Planning and Policy,” Slides available at: <http://onlinepubs.trb.org/onlinepubs/webinars/141023.pdf>

SHRP2 Railroad-DOT Mitigation Strategies,
https://www.fhwa.dot.gov/goshrp2/Solutions/PlanningEnvironment/R16/RailroadDOT_Mitigation_Strategies

SHRP2 Utility Bundle,
https://www.fhwa.dot.gov/goshrp2/Solutions/Renewal/R01A_R01B_R15B/Utility_Bundle

Resources for Considering Equity in Scenario Planning

Equity through Transit, Metropolitan Washington Council of Governments,
<http://www.mwcog.org/planning/regionforward/communities.asp>

The Community Engagement Guide for Sustainable Communities, Kirwin Institute and PolicyLink,
<http://kirwaninstitute.osu.edu/?my-product=the-community-engagement-guide-for-sustainable-communities>

The Geography of Opportunity in Austin and How it is Changing, Kirwin Institute,
<http://kirwaninstitute.osu.edu/my-product/austi/>

Opportunity Mapping: A conceptual Analysis and Application to the Baltimore Area, University of Maryland,
http://www.appam.org/assets/1/7/Opportunity_Mapping_A_conceptual_Analysis_and_application_to_the_Baltimore_Metropolitan_Area.pdf

Tools to Support Scenario Planning and PBPP

BCA.net, <http://bca.transportationeconomics.org/models/bca-net>

CityEngine, <http://www.esri.com/software/cityengine>

Community Vision Metrics, http://www.fhwa.dot.gov/livability/tools/community_vision/

CommunityViz, <http://placeways.com/communityviz/index.html>.

CrowdGauge, <http://crowdgauge.org/>

CubeLand, <http://www.citilabs.com/software/cube/>

Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects,
https://www.environment.fhwa.dot.gov/ecological/eco_index.asp

Energy and Emissions Reduction Policy Analysis Tool (EERPAT),
https://www.planning.dot.gov/fhwa_tool/

EngagingPlans, <http://urbaninteractivestudio.com/engagingplans/>

Envision Tomorrow, <http://www.envisiontomorrow.org/>

FHWA Health and Transportation Corridor Planning Framework,
https://www.fhwa.dot.gov/planning/health_in_transportation/planning_framework/the_framework/fhwahep16014.pdf

Highway Safety Manual, <http://safety.fhwa.dot.gov/hsm/>

Highway Economic Analysis Requirements System (HERS),
<https://www.fhwa.dot.gov/infrastructure/asstmgmt/hersindex.cfm>

Highway Economic Analysis Requirements System – State Version (HERS-ST),
<https://www.fhwa.dot.gov/infrastructure/asstmgmt/hersindex.cfm>

INDEX, <http://crit.com/>

Integration of Safety in the Project Development Process and Beyond: A Context Sensitive Approach (ITE publication), <http://library.ite.org/pub/e4edb88b-bafd-b6c9-6a19-22e98fedc8a9>

INVEST 1.0, <https://www.sustainablehighways.org/>

iPlaces³S, <http://www.sacreregionblueprint.org/technology/>

MetroQuest, <http://metroquest.com/>

Motor Vehicle Emission Simulator (MOVES), <http://www.epa.gov/otaq/models/moves/>

National Bridge Investment Analysis System (NBIAS), <https://www.fhwa.dot.gov/bridge/nbi.cfm>

PlanWorks: Better Planning. Better Projects, <https://fhwaapps.fhwa.dot.gov/planworks/> and
https://www.fhwa.dot.gov/goshrp2/Solutions/Capacity/C01/PlanWorks_Better_planning_Better_projects

Production Exchange and Consumption Allocation System (PECAS),
<http://www.hbaspecto.com/pecas/>

Rapid Policy Analysis Tool (RPAT) (formerly known as SmartGAP),
https://www.fhwa.dot.gov/goshrp2/Solutions/All/C10_C04_C05_C16/Advanced_Travel_Analysis_Tools_forIntegrated_Travel_Demand_Modeling, <http://www.trb.org/Main/Blurbs/168842.aspx>

Regional Ecosystem Framework (Eco-logical),
<https://www.environment.fhwa.dot.gov/ecological/ImplementingEcoLogicalApproach/default.asp>

REMI-TransSight, <http://www.remi.com/products/transight>

Safety Analyst (AASHTO-Ware), <http://www.safetyanalyst.org/>

SHRP2 – Guide to Establishing Monitoring Programs for Travel-Time Reliability (LO2),
<http://www.trb.org/Main/Blurbs/168764.aspx>

SHRP2 – Handbook for Incorporating Reliability Performance Measures into Transportation Planning and Programming (LO5), http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-L05-RR-2.pdf

SHRP2 – Reliability by Design (LO7), http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-L07-RR-1.pdf

SHRP2 – Incorporating Travel-Time Reliability into the Highway Capacity manual (LO8),
http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-L08-RW-1.pdf

SHRP2 – Tools for Assessing Wider Economic Benefits of Transportation (C11),
http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_PB_C11.pdf

Simplified Trips-on Project Software (STOPS), <https://www.fta.dot.gov/funding/grant-programs/capital-investments/stops-%E2%80%93-fta%E2%80%99s-simplified-trips-project-software>

Social Cost of Alternative Land Development Scenarios (SCALDS),
<https://www.fhwa.dot.gov/scalds/scalds.html>

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Appendix A. Getting Started: A Worksheet for Designing a Scenario Planning Process to Support PBPP

As this Guidebook has described, scenario planning is a tool that can support decisions at each phase of PBPP) There are many different ways this can be done. This self-assessment is designed to help you think about how to use scenario planning to support your agency’s PBPP process. The intent of this self-assessment is not to give you explicit direction in scoping your agency’s scenario planning process. Rather, the purpose is to help a project manager and, if desired, a technical committee or advisory group, to consider the key issues that could be addressed and some of the practical elements involved in using scenario planning to inform the overall PBPP. The insights and notes you develop by working through this self-assessment can provide useful material and insights for subsequent activities such as estimating potential costs and needed resources, developing a scope of work, describing the project in a Unified Planning Work Program, and (if needed) writing a Request For Proposals to elicit consultant support.

The questions below are organized in a series of steps, starting with the most basic context-setting step to the advanced step of preparing a scope. The table includes three columns. The left-hand column poses questions to consider during the corresponding step. The middle column provides suggestions for gathering specific information to help answer the question; feel free to gather additional or different information to suit your needs. The right-hand column provides space for your responses.

Question	Information to Consider	Your Responses
Step 1: Evaluate Community Context		
1. How is your region developing?	Summarize/ map regional growth trends and forecasts	
2. What are the major issues or drivers influencing growth and development?	List top five issues/ drivers	

Question	Information to Consider	Your Responses
<p>3. What are the most promising opportunities that will shape development in years to come? What are the most promising opportunities that will shape development in years to come? What major issues may be affecting equity in the community; assessed with a community profile, including the identification of populations and their characteristics, and identifying data sources?</p>	<p>Summarize/ map opportunities</p>	

Step 2: Identify Desired Outcomes		
<p>1. What plans are due for an update?</p>	<p>List plans that will be updated within 3-5 years</p>	
<p>2. What new plan(s) is your organization expected to develop soon?</p>	<p>List any planning efforts about to start or recently launched</p>	
<p>3. What is your agency looking to accomplish in these updates?</p>	<p>List five new policy emphases</p>	
<p>4. What major trends are of greatest concern to your agency's board?</p>	<p>List five concerns recently expressed by board members</p>	

Step 3: Identify Scenario Planning Purpose		
1. Which element(s) of your PBPP process could benefit from scenario planning and analysis?	List aspects of your PBPP process that are influenced by high uncertainty, contention, and/or new aspirations	
2. What issues would you like to address from previous planning processes?	List the top 5 issues that have emerged from previous planning processes	
3. How could scenarios be used to improve plans and decisions?	List specific decision points where scenario consideration could add value	
4. How can scenarios improve the ongoing decisionmaking process?	Brainstorm ways scenario planning could help improve the overall PBPP process or framework	
5. Are there particular trade-offs your agency would like to better illustrate for the public and decisionmakers?	List trade-offs that your agency grapples with	
6. How will scenario planning help your agency define transportation performance measures and set targets?	Describe the connection between scenarios and performance measures	
Step 4: Identify Scenario Planning / PBPP Linkages		
1. How can you apply / build on scenario planning tools, data, and skills to support the ongoing PBPP process?	Brainstorm ways to make scenarios planning elements part of each PBPP phase (vision, goals, plan development, programming, project development, monitoring, evaluation of results)	
2. How could scenario tools, models, data, or inputs inform subsequent efforts such as corridor studies?	List upcoming studies that should be linked to the scenario analysis	

<p>3. How could you maximize the usefulness of the scenario analysis tools or data planning to inform other work and/or improve efficiencies?</p>	<p>List other work efforts conducted by your agency and/or partner agencies that would benefit from the scenario tools and data</p>	
<p>Step 5: Define Scenario Planning Approach</p>		
<p>1. At what point in your agency’s PBPP process will scenario planning be deployed?</p>	<p>Prepare a timeline of planning processes; indicate where and how scenario planning can influence results or outcomes</p>	
<p>2. Do you anticipate using scenarios to identify preferred future conditions, helping to shape the region’s vision, principles, or goals?</p>	<p>Identify community values and goals that may be important to flesh out when describing and evaluating different stories of potential future conditions</p>	
<p>3. Do you anticipate using scenarios to test different courses of action against radically different future conditions, helping to test the validity of underlying assumptions or the resiliency of planned investments?</p>	<p>Identify game-changing trends and/or events that could significantly affect future conditions and transportation supply or demand</p>	
<p>4. Do you anticipate using scenarios to test different courses of action against relatively predictable future conditions, helping to hone strategies and set priorities?</p>	<p>Identify elements of the PBPP process that would benefit from more clearly defined priorities or focused tactics.</p>	

Step 6: Define Scenario Planning Engagement

<p>1. What information do you need from stakeholders and the public to develop scenarios and plans? How will you use the information and ideas that are offered?</p>	<p>List inputs and insights you hope to gain through engagement; identify ways in which the input can influence PBPP decisions, documents, and outcomes</p>	
<p>2. What groups or individuals have information that is necessary for crafting and analyzing scenarios?</p>	<p>Create a list and cross-reference with the input you hope to gain</p>	
<p>3. How can the public benefit from your approach to scenario planning?</p>	<p>List benefits such as (for example) helping people communicate with your agency more effectively; engage in meaningful dialogue about key issues; address contentions or thorny subjects; etc.</p>	
<p>4. At what point will decision-makers be involved in scenario development and/or evaluation?</p>	<p>Brainstorm how and why to engage decisionmakers</p>	
<p>5. What methods will you use to engage each stakeholder group?</p>	<p>Brainstorm methods for engaging stakeholders</p>	
<p>6. What resources do you have or need to conduct engagement activities?</p>	<p>Estimate budget for existing/ acquired materials and staff time for public and stakeholder engagement</p>	

Step 7: Define Resources for Scenario Planning Effort

<p>1. How much could you achieve through scenario planning with minimal data and analysis tools?</p>	<p>Outline an approach to scenario planning that relies on qualitative analysis</p>	
<p>2. What data is needed to support your preferred scenario planning approach?</p>	<p>List data needs and potential sources</p>	
<p>3. What data are available?</p>	<p>Match data needs with available data and highlight the gaps</p>	

4. What tools are available to conduct scenario planning and analysis?	List tools that may help with your scenario planning	
5. What are the strengths and weaknesses of existing tools?	List pros and cons for each existing tool	
6. What do you want to analyze, but cannot with existing tools?	List gaps in existing tools	
7. What other tools could help close the gaps between what you'd like to do and what you can do?	List tools you would like to explore for your scenario planning process	
8. What are your priorities for purchasing data (if your budget will allow this)?	List data you would like to purchase	
9. If you purchase data, will you have resources to purchase subsequent releases of the data?	Consider how important the data are to have and to keep updated	
10. If you are unable to obtain desired data and tools, can scenario planning still provide value?	List potential benefits of a more qualitative approach	
11. What is staff's level of experience with scenario planning?	Evaluate staff's ability to conduct scenario planning in-house	
12. What outside resources are available (e.g., universities, Federal agencies, foundations, civic groups)?	List, contact potential partners in the region to gauge their interest and potential to contribute resources	
Step 8: Prepare Scope for Scenario Planning Effort		
1. Will the entire scenario planning process be conducted in-house, or will consultants be hired to assist?	Decide what can be done in-house and what to include in a RFP for consultants	
2. What can you budget for the scenario planning project?	Estimate budget based on available funding and desired outcomes/level of effort	
3. Who needs to be involved in the scoping process?	Pull together a Steering Committee to oversee the development of the scope	

<p>4. How much do you and your board know about other existing plans affecting the growth and development of your region?</p>	<p>Develop a task in the scope to review and summarize existing plans and create a repository for them</p>	
<p>5. What specific questions, processes, and outcomes will this scenario planning effort address?</p>	<p>Develop a task for the scenario development and evaluation process based upon how the results will be used.</p>	
<p>6. How do you plan to consult with other agencies and stakeholders in your region?</p>	<p>Develop a task for engaging these key stakeholders</p>	
<p>7. How will you ensure the public understands the purpose of the process and has reasonable expectations of the results?</p>	<p>Develop a task for engaging the public that counters potential misperceptions or confusion</p>	
<p>8. How will you communicate the scenarios and results of the analysis to stakeholders and the public?</p>	<p>Develop a task for communication that calls for clear and accessible presentation of the results</p>	
<p>9. How will you provide access to the scenarios and data for decisionmakers?</p>	<p>Develop a task to give access to decisionmakers, which supports integrating scenarios into on-going decisionmaking</p>	
<p>10. Will the scenarios continue to be used over time, creating a need for data and tool support?</p>	<p>Develop a task that describes ongoing support activities to keep the scenarios up-to-date</p>	

Appendix B. Scenario Planning Tools

PBPP Tools

Please note: FHWA does not endorse the use of any specific private sector tools or models. The purpose of this appendix is solely to provide information about the capabilities and relevant uses of available tools.

PBPP Tool (and Applicable PBPP Phase) ⁸	General Description/ Purpose	Inputs, Outputs, and Scale ⁹	How does or could the tool inform scenario planning and vice versa?	PBPP-SP Tool Relationship Challenges and Information/Suggestions for Addressing Challenges ¹⁰
TIP prioritization calculator/ scoring sheet (P)	Enables decisionmakers to determine funding priorities and select projects, using evaluation criteria weighted according to local policy priorities.	<u>Inputs:</u> Long range plan, asset management plan, financial forecasts, project studies <u>Outputs:</u> Prioritized list of projects for short-term funding program. <u>Scale:</u> Project	The tool could provide locally important performance metrics to consider in evaluating scenarios. Scenario planning could provide a basis for adding new performance metrics to inform scoring of projects, particularly outcome-oriented measures (e.g. health, economic dev.)	Some traditional TIP metrics may not be easy to forecast for scenarios (e.g. safety). Some scenario planning metrics may be qualitative and/or difficult to assess at the project scale (community quality of life, economic equity, etc.). Hillsborough County provides an example of forecasting safety and reliability.
Economic Simulation Models: TREDIS and REMI-TranSight (A, P, I)	Compare costs, benefits, and economic impacts at community, regional, or corridor level. Useful in roadway, transit, or rail scenario planning in the programming and analysis phases to compare the C/B ratio, economic impact or financial consequences of different investments. Come pre-loaded with local economic data. Use inputs from a travel demand model;	<u>Inputs:</u> Travel model trip tables, including trips, travel times and costs <u>Outputs:</u> Benefit/Cost ratio; Economic impact (Jobs, income); Financial impact (revenues, expenditures) and Development impact (housing, commercial and industrial development) <u>Scale:</u> All	The tool could be used to compare cost/benefit ratios and economic impacts between different transportation investment scenarios. The tool can also be used for analysis of wide range of impacts, which is compatible with scenario planning. Scenario planning could provide the alternative transportation investments to run through the model for comparison.	These tools are focused on quantitative transportation metrics and their monetary value in terms of either societal benefit or impact on the economy of a predefined region. They require the use of travel demand models, which may not otherwise be needed for scenario planning.

⁸ The applicable PBPP phases are: direction (D), analysis (A), programming (P), implementation (I), or all.

⁹ Scale could be project, corridor, study area, region, or State.

¹⁰ Challenges include: data/scale compatibility, ability to forecast, quantitative/qualitative, etc.

	TREDIS allows engineering estimates for project-level analysis.			
<u>TDM Evaluation Model</u> (A, P, I)	The TDM Evaluation Model is an FHWA tool for evaluating relative benefits of different investments. It deals with TDM strategies and how they support vehicle trip reduction. Using this model in scenario planning may require the dedication of substantial time towards model development and deployment. Useful in the analysis and programming phases.	<u>Inputs:</u> Come from 4-step travel models, plus impact on cost or travel time by mode. <u>Outputs:</u> Changes in modal share, vehicle-trips, VMT, average vehicle occupancy and ridership expressed at a market level defined by the user <u>Scale:</u> All	The tool can provide basic information needed to evaluate a TDM heavy scenario. Scenario planning may call for a focus on TDM.	The tool is focused on transportation; land use would be constant between different scenarios. The tool requires use of a travel demand model, which may not otherwise be needed for scenario planning.
<u>PlanWorks</u> (All)	PlanWorks is a web-based resource that supports decisionmaking in transportation planning, programming, and environmental review. The tool helps practitioners identify whom to engage and how. It can also be used to set up an engagement plan for a scenario planning project.	<u>Inputs:</u> No technical inputs <u>Outputs:</u> For each key decision point, Plan-Works provides policy and stakeholder questions, data needs, case studies and examples, and links to tools that can help support the decision. <u>Scale:</u> All	The tool provides techniques for overcoming common problems with engaging stakeholders – an issue at each stage of PBPP and in scenario planning.	
<u>Tool for Operations Benefit Cost Analysis (TOPS-BC)</u> (D, A)	TOPS-BC is a tool managed by FHWA that transportation planners can use to estimate benefit to cost ratios for different system management and operations strategies.	<u>Inputs:</u> Geographic scope of analysis; strategy types; size, scope, and implementation of deployment; time horizon; operating parameters of TSM&O strategy; average c/v ratio for entire facility (all lanes); arterial link length; free-flow speed <u>Outputs:</u> Impacts of operating strategies; B/C tools most relevant to the needs of specified analysis;	The tool could provide locally important benefit, cost and other metrics to consider in evaluating scenarios.	

		life-cycle cost of TSM&O strategies; congested speed; VMT; VHT; # of crashes; fuel consumption; congested speed; annual benefit; B/C ratio. <u>Scale:</u> Project, corridor. Allows for combinations of strategies.		
<u>Safety Analyst</u> (A, P, I)	This tool automates and improves many procedures transportation agencies use to identify safety problems and prioritize improvements. It can also be used to compare costs and benefits of alternative safety improvements at specific locations or across locations. It is especially useful in the analysis and programming phases of PBPP.	<u>Inputs:</u> Database of roadway characteristics, traffic volume, and crash data. <u>Outputs:</u> Identification of sites for improvements, counter-measure selection, economic appraisal of counter-measures, C-B ratio of counter-measures and ranked list of sites and improvements, before/after evaluations. <u>Scale:</u> All	The tool supports identification of goals. May also be used in evaluating scenarios, and the network screening tool can identify hot spots for safety improvements. Scenario planning supports the tool by setting priorities, one of which may involve reducing crashes.	The scale is an issue for counter-measures. Safety Analyst is not set up to evaluate non-site specific safety improvements.
<u>Infrastructure Voluntary Evaluation Sustainability Tool (INVEST)</u> (All)	INVEST is an FHWA-developed self-evaluation tool that agencies can use to assess performance on various sustainability criteria. It includes modules for evaluation at the system planning scale, project-based evaluations, and maintenance and operations. The tool requires little technical expertise.	<u>Inputs:</u> Answers to self-evaluation questions <u>Outputs:</u> Score of gold, silver, or bronze (which are connected to a numeric value). <u>Scale:</u> All	The tool evaluates the sustainability of different scenarios. Scenario planning establishes a vision and preferences.	

<p><u>Highway Economic Analysis Requirements System (HERS)</u></p> <p>and</p> <p><u>Highway Economic Analysis Requirements System-State Version (HERS-ST)</u></p>	<p>HERS-ST uses Highway Performance Monitoring System Data (HPMS) to evaluate current and future performance of the highway system under alternative investment scenarios or rules. It can be set to select roadway improvements over funding period based on investment rules and budget. It calculates B-C ratios, and examines options such as pavement preservation; reconstruction of existing pavement (w/ and w/o new lanes); new lanes; and widening of roadway or shoulder. Scenario are compared to each other and to regular highway maintenance. HERS-ST then recommends improvement types or no improvement for the funding period. It uses pavement measures such as IRI, present serviceability rating (PSR), and cracking for roadways.</p>	<p><u>Inputs:</u> As input, HERS-ST accepts highway-section records in the Highway Performance Monitoring System format.</p> <p><u>Outputs:</u> For each highway section, model predicts future condition and capacity deficiencies based on section-specific information. Model identifies improvements to correct each deficiency and determines a B-C ratio for each potential improvement. The most economically attractive improvement for each facility is identified. Projects to be implement-ted are determined by comparing the relative merit (e.g., B/C ratios) of each candidate improvement.</p> <p><u>Scale:</u> All, however the network will be limited by data availability.</p>	<p>The HERS-ST software simulates the selection and implementation of highway capital improvements consistent with the principles of incremental benefit-cost analysis. The analysis considers travel time, safety, vehicle operating, emissions, and highway agency costs. The model optimizes highway investment given funding constraints or performance objectives specified by the analyst.</p> <p>Scenario planning could be used to set investment parameters (such as high, medium, low), set goals for highway performance, and select the critical indicators that the tool would help to measure.</p>	<p>Possible issues of scale/ jurisdiction given the use of highway section data. Much of the network may be unavailable for HERS.</p>
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<p><u>Systemic Safety Project Selection Tool</u> (All)</p>	<p>Guides user through a risk-based approach (rather than locating hot spots with high crash rates) to safety mgmt. that complements traditional site analyses and countermeasure selection. It can help planners identify improvement types that, through widespread adoption, have large benefits. As such, it nicely compliments the Safety Analyst approach. It is especially useful in rural areas and on local streets where crash rates are low, but risk factors may be high.</p>	<p><u>Inputs:</u> Crash data, roadway characteristic data, traffic volume data <u>Outputs:</u> Safety risk factors identification, countermeasure identification <u>Scale:</u> Region</p>	<p>The tool could help set performance targets, goals, and/or vision for a region. Can help elevate discussions on safety and point to high-risk areas and trends.</p> <p>Scenario planning could call for an emphasis on safety, in which case this tool could be used to go beyond traditional site analyses and countermeasure selections and instead focus on areas of high risk and system wide countermeasures that might produce the most bang for the buck.</p>	<p>Challenges include lack of data, especially at local level and rural areas and a potential lack of analytical technical skills. Training and technical assistance can help solve these challenges.</p>
<p><u>Highway Safety Manual Parts B and C</u> (All)</p>	<p>The HSM, like several other tools in this table, represents advancements in predicting crashes and estimating reductions from countermeasures. Its primary focus is introduction and development of analysis tools for predicting impacts of transportation projects and decisions on road safety.</p>	<p><u>Inputs:</u> Crash data, roadway characteristic data, traffic volume data <u>Outputs:</u> Statewide network screening, diagnosis, countermeasure identification, economic appraisal, project prioritization and evaluation <u>Scale:</u> Network, corridor, study area, region</p>	<p>The tool identifies alternatives that are preferred safety solution.</p> <p>Scenario planning identifies safety patterns in the region and establishes priorities for safety expenditures.</p>	<p>Challenges include resources, lack of data, and analytical capabilities. Resources to improve data for all public roads and training in data and analysis will help combat these challenges.</p>
<p><u>Integration of Safety in the Project Development Process and Beyond: A Context Sensitive Approach - Chapter 4</u> (P, I)</p>	<p>This report conveys a common understanding of and approach to how substantive safety, or performance-based safety, should be integrated into project development and throughout the project life cycle.</p>	<p><u>Inputs:</u> Crash data, roadway characteristic data, traffic volume data, SHSPs, HSP, and TMPs <u>Outputs:</u> Project evaluation, alternative analysis <u>Scale:</u> Project, network, corridor, study area, region</p>	<p>Provides information that helps planners and other stakeholders incorporate safety quantitatively with flexibility in design when considering the community context. Scenario planning identifies safety as a pressing concern to which the agency should dedicate more funding, while also providing information about the context in which the</p>	<p>Challenges include resources, analysis capabilities and local roadway and volume data availability. Training and technical assistance will help combat these challenges.</p>

			improvements would be made.	
<u>TSP eHandbook</u> (All)	Provides State DOT and MPOs with a framework for navigating the fundamentals and advanced methods of safety data collection and analysis; demonstrates how the results of that analysis can be applied to PBPP to develop safety goals, objectives, performance measures and targets; identify and prioritize projects; and evaluate progress towards safety priorities.	<u>Inputs:</u> Safety data: crash data, roadway characteristic data, traffic volume data, and safety information from public/stakeholder input <u>Outputs:</u> Identification of safety projects eligible for HSIP funds; set of safety evaluation criteria for transportation projects <u>Scale:</u> All	The tool provides performance metrics to evaluate scenarios; could be used to compare safety-related outcomes among scenarios. Scenario planning provides additional metrics related to safety, to inform project evaluation.	The tool is focused only on highway safety. It could be used alongside a more robust scenario planning tool to add an additional dimension to project/plan evaluation.
<u>National Bridge Investment Analysis System (NBIAS)</u> (P)	NBIAS, like HERS, is used to determine relationships between investment levels and performance measures. It produces the results, useful for target setting, by relating investments for bridges to outcomes. It evaluates bridge investment needs and the impacts on bridges of alternative investment levels using data from the NBI. NBIAS calculates user cost impacts of all potential improvements and provides programs of investments based on budget levels and on the B/C analysis of potential improvements. NBIAS provides future forecasts of the same bridge condition data items as in the current year NBI data. NBIAS can be	<u>Inputs:</u> Bridge inventory (from NBI); deck, super-structure, and substructure condition; element level data can be imported or predicted from a set of synthesis, quantity, and conditions (SQC) models; other data: cost data reported to FHWA, element models derived from state data, user cost parameters from HERS <u>Outputs:</u> Determines 20 year cost scenarios for highways bridges for two scenarios: maintain conditions and performance and improve conditions and performance <u>Scale:</u> All	The tool can be used to prioritize funding for necessary bridge infrastructure improvement. Scenario planning allows for varying funding scenarios to be considered to determine optimal investment levels.	The tool is specific to bridges only.

	used to evaluate investment needs and the impacts on bridges of alternative levels of investment, using the data from NBI.			
<u>Transportation and Health Tool</u> (A)	Provides access to data that practitioners can use to examine health impacts of transportation systems; uses 14 indicators relating to transportation and public health.	<u>Inputs:</u> Geographic area of interest <u>Outputs:</u> Data reported for 14 health/transportation indicators reported at the state, MSA, or UZA-level <u>Scale:</u> State, MSA, UZA	The tool could provide additional performance metrics for long-term program/project evaluation. Scenario planning could provide a basis for consideration of transportation-related health goals or objectives.	This tool does not allow for the consideration of additional scenarios, it only reports "what is."
<u>BCA.Net</u> (A, P, I)	Web-based decision support tool that assists Federal, State, and local authority decisionmakers in evaluating the benefits and costs of highway projects; forecasts transportation and non-transportation effects of highway investments and maintenance strategies, and estimates the economic value of these effects over the useful life of projects in dollar terms	<u>Inputs:</u> Benefits including: travel time; vehicle costs; safety; emissions; induced travel; reliability, noise, construction impacts, habitat and water quality, economic effects, community impacts, parking costs, equity and option value benefits. Costs include: initial costs, continuing costs, rehab costs, end of project costs <u>Outputs:</u> B-C ratio; net present value; cost effectiveness; internal rate of return; payback period; graphical representations <u>Scale:</u> All	The tool can help determine if a project should be undertaken; can compare various transportation improvement options/scenarios; and can help establish project priorities. Scenario planning can provide alternatives for BCA analysis.	The tool requires detailed data on benefits (some which are difficult to monetize) and costs
<u>TERM-lite</u> (A, P, I)	TERM-lite is an analysis tool that helps transit agencies assess their SGR backlog, level of investments to attain SGR, and the impact of funding changes on asset conditions and investment needs. It simulates long term impacts of constrained funding on the priorities of asset condition, safety,	<u>Inputs:</u> Inventory of capital assets <u>Outputs:</u> Current SGR backlog; assets conditions; multi-criteria prioritization rankings (based on agency goals); long-term SGR plan <u>Scale:</u> Regional, local	The tool can be used to prioritize limited investment funds and assess the impact of investment on future conditions. Scenario planning can provide alternatives and help prioritize projects/investment packages.	The tool is limited to transit capital assets and is only useful at the local or regional scale.

	security, reliability, and O&M cost impact.			
<u>SHRP2 - Guide to Establishing Monitoring Programs for Travel-Time Reliability (LO2)</u> (D, A)	This guide helps users design systems and methods for gathering data related to travel time reliability. This data can then be used to establish a baseline condition and identify areas in need of improvements.	<u>Inputs:</u> Nonrecurring factors of congestion incl.: incidents, weather, work zones, fluctuations in demand, special events, traffic control devices, and inadequate base capacity <u>Outputs:</u> Estimated travel time reliability <u>Scale:</u> Freeways, toll roads, urban arterials	The tool can be used to establish a baseline travel time reliability condition and identify area where improvements can be made. Through scenario planning, a varied combinations of improvements can be tested to understand where investments will have the greatest impact on travel time reliability.	The tool requires inputs of specialized data that may be difficult to collect.
<u>SHRP2 - Handbook for Incorporating Reliability Performance Measures into Transportation Planning and Programming (LO5)</u> (A, P)	The handbook helps DOTs and MPOs better-integrate reliability data into their planning and programming in order to improve transportation-related decisionmaking	<u>Inputs:</u> Travel time reliability data <u>Outputs:</u> Programming decisions that consider travel time reliability <u>Scale:</u> Freeways, toll roads, urban arterials	The tool helps ensure that a robust set of factors are included when making decisions. Differing travel time reliability scenarios can be used to evaluate decisions.	Specialized data and tools (above and beyond those needed for scenario planning) are required to effectively incorporate reliability into the planning and programming process.
<u>SHRP2 – Reliability by Design (LO7)</u> (P, I)	This guidebook is designed to assist users with choosing and implementing highway design interventions to mitigate travel-time reliability problem areas	<u>Inputs:</u> Non-recurring congestion and travel time reliability data <u>Outputs:</u> Highway design treatments that may reduce congestion and improve travel time reliability <u>Scale:</u> Urban and rural freeways	New highway design treatments could inform the development of different scenarios to be assessed. The potential impacts of highway design interventions can be assessed to help inform investment in infrastructure.	The tool requires existing data on nonrecurring congestion and travel time reliability in order identify problem areas.
<u>SHRP2 - Incorporating Travel-Time Reliability into the Highway Capacity Manual (LO8)</u> (A)	This publication presents "a new analytical procedure which enables planners and engineers to estimate travel-time reliability performance measures."	<u>Inputs:</u> Travel times, ideally over a one-year period <u>Outputs:</u> Travel-time reliability statistics <u>Scale:</u> Corridor (major freeways and urban arterials)	Incorporating travel time reliability will help assure robust scenarios for consideration. Proposed changes/ investments can be incorporated to model impacts on travel time reliability.	The tool requires complex data, time, and resources to implement.

<p><u>SHRP2 - Tools for Assessing Wider Economic Benefits of Transportation (C11)</u></p>	<p>A suite of analysis tools used to assess a highway project's potential economic impact.</p>	<p><u>Inputs:</u> Proposed highway project <u>Outputs:</u> Regional economic impact <u>Scale:</u> Unknown</p>	<p>The tool can provide economic impact data to help inform scenarios. Differing scenarios can be compared to determine which scenario results in the greatest economic impact.</p>	
<p><u>Eco-Logical</u></p>	<p>9-step process that: organizes current methods for natural resource identification, avoidance, minimization and mitigation related to infrastructure impacts through integrated planning; builds relationships; and uses performance metrics.</p>	<p><u>Inputs:</u> Vary <u>Outputs:</u> Vary <u>Scale:</u> All</p>	<p>The tool could provide an identification of an agreed upon priority of conservation areas, potential mitigation measure, and performance metrics.</p> <p>Scenario planning allows for expedited alternative analysis.</p>	<p>Challenges include agency collaboration, data sharing and data management. Identifying stakeholders to be responsible for central data storage and management will help combat these challenges.</p>
<p><u>Travel Demand Models</u></p>	<p>A common tool used to estimate existing and future origin-destination (OD) demands at the county/regional scale. Oriented towards auto trips and roadways, provides detailed information to help identify needs and performance against common mobility factors. Relies on experienced travel demand forecasting professionals and generates transportation needs based on socioeconomic data.</p>	<p><u>Inputs:</u> Highway and transit network; zone-to-zone travel times, costs, etc.; land use data. <u>Outputs:</u> Trip generation Trip distribution Mode choice Trip assignment Congestion Freight Traffic <u>Scale:</u> County/region</p>	<p>When combined with use of land use and sketch scenario planning models, it helps identify different travel demand/ transportation needs for different scenarios to identify roadway capacity needs. It can demonstrate how different scenarios perform against indicators such as congestion. In a PBPP approach, an agency uses the model to identify projects that will perform best regardless of future changes. Using scenarios can tie into risk-based asset management planning as well.</p>	<p>Analysis with standard tools, such as a travel-demand model, is more complex and may require a higher level of resource investment to conduct a meaningful exercise.</p>
<p><u>Simplified Trips-on-Project Software (STOPS)</u></p>	<p>Intensive transit travel demand model, STOPS helps transportation practitioners identify and evaluate transit project investments based on New Starts and Small Starts project criteria.</p>	<p><u>Inputs:</u> Census data, regional travel model data and current GTFS data from individual metro areas. <u>Outputs:</u> Transit ridership (trips-on-project measure) for all travelers and for transit dependent. Change in auto-mobile VMT</p>	<p>When combined with other land use or sketch scenario planning tools, it can help identify specific transit needs associated with different scenarios. It can also test out transit ridership associated with different land use and investment decisions. If agency is</p>	<p>Similar to the travel demand model, the tool requires detailed socio-economic and specific transit investments to be well defined.</p>

		based on the change in overall transit ridership between scenarios. <u>Scale:</u> Region	targeting a mode split or level of ridership at the corridor or system level, it can evaluate different transit investment to achieve goals.	
<u>Motor Vehicle Emission Simulator (MOVES)</u> (A, P, I)	Motor Vehicle Emission Simulator - emission modeling system that estimates total emissions & energy use from all on-road sources (cars, trucks, buses, motorcycles) at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics.	<u>Inputs:</u> Meteorology, fuel, I/M program, age distribution, speed distribution, VMT by vehicle type, road type distribution, ramp fraction, VMT by hour, day, and month, vehicle (source type) population <u>Outputs:</u> Total emission inventory in units of mass (g, kg, lbs., tons) and emission rates per mile or vehicle of criteria pollutants, green-house gases, and air toxics including NOx, VOC, and PM for time and place specified <u>Scale:</u> National, county, and project by hour, day (weekday or weekend), month, or year	The tool is useful in testing how different transportation investment strategies impact existing levels of emissions and air pollutants. If scenario planning exercises are driven by goals for emission or air pollutant reduction, MOVES model can help evaluate most effective set of strategies.	The tool could eventually include other mobile sources (e.g., non-road, marine, locomotive, aviation sources).

Scenario Planning Tools

Please note: FHWA does not endorse the use of any specific private sector tools or models. The purpose of this table is solely to provide information about the capabilities and relevant uses of available tools.

Scenario Planning Tool (and Applicable PBPP Phase) ¹¹	General Description/ Purpose	Inputs, Outputs, and Scale ¹²	How does or could the tool inform PBPP and vice versa?	PBPP-SP Tool Relationship Challenges and Information/Suggestions for Addressing Challenges ¹³
<u>CommunityViz</u> (D)	A land use scenario sketch-planning tool, usually used to develop regional long range visions.	<u>Inputs:</u> Existing development, local land use plans, environmental features, etc. Criteria selected from pre-established set contained within tool. <u>Outputs:</u> Alternative land development patterns, associated impacts on selected criteria <u>Scale:</u> Region	Provides a basis for a long range vision & policies. It provides new evaluation criteria to be applied to the analysis, programming, and/or implementation phases. Travel demand model data can build a baseline and initial forecasts. Existing policy priorities can help to identify appropriate evaluation criteria and weights.	A primary challenge is that CV data scale/ polygons may not match up with travel demand model or other datasets used for planning process. A potential solution is to integrate/match up existing local data sources with CV data when creating base data for the scenario process.
<u>INDEX</u> (D, A)	A tool that simulates impacts associated with land-use and transportation scenarios.	<u>Inputs:</u> ESRI ArcView shapefiles with transportation system attributes, socioeconomic and land-use data. <u>Outputs:</u> 56 indicators: land consumption; housing and employment density; proximity to transit; emissions. Outputs expressed as tables and maps showing performance of each sketch; indicators expressed per unit (e.g. persons/sq. mile, vehicle trips/capita, auto cost in \$/ capita). Indicators can be displayed according to the zone (input) geography defined by the user and compared across alternatives. <u>Scale:</u> All	The tool helps establish direction (vision) by clearly illustrating impacts for difference scenarios. It could also help identify new measures to carry through to programming and evaluation phases. PBPP could help the user cull the 56 indicators and select those most important.	It is unclear if the tool provides rigorous quantitative tools needed to compare projects, which are critical for the programming phase.

¹¹ The applicable PBPP phases are: direction (D), analysis (A), programming (P), implementation (I), or all.

¹² Scale could be project, corridor, study area, region, etc.

¹³ Challenges include: data/scale compatibility, ability to forecast, quantitative/qualitative, etc.

<p><u>Rapid Policy Analysis Tool (RPAT)</u> (D)</p>	<p>This tool, formerly known as SmartGAP, can be used by planners to evaluate smart growth policies on travel demand. It is a fairly simply model that is not intended to evaluate the cost and benefits of specific projects. However, it can be useful at the visioning and direction-setting phase to identify promising smart growth policies and investments.</p>	<p><u>Inputs:</u> Pop. And employment by place type; daily auto and transit trips per capita; VMT by functional class; employment and number of firms; expected future employment growth; base and future population by age; base and future avg. per capita income; truck and bus VMT by functional class; lane miles and transit revenue miles; % growth by place type; % increase in auto operating cost; % increase in lane miles and transit revenue miles per capita; % of employees offered commute options; % road miles with ITS treatment; auto operating surcharge per VMT; bicycle ownership and usage; increase in parking cost and supply. <u>Outputs:</u> VMT; vehicle and transit trips; avg. travel speeds by vehicle type; delay; fuel use; emissions; infrastructure costs; transit operating costs; annual traveler cost; regional accessibility; accident rates; walking increase; job accessibility by income group. <u>Scale:</u> All</p>	<p>The tool can help with scoping and bounding. A scenario writing exercise is needed to scope the analysis.</p>	<p>A set of input elasticities and other parameters are needed for the analysis. Some of this can be derived from travel models; the remaining parameters need to be established from direct sources (BLS, DMV, et al)</p>
<p><u>Regional Eco-system Framework</u> (Eco-Logical) (D, A, P)</p>	<p>A process for overlaying transportation infrastructure on regional natural and cultural resources to identify priority areas for conservation, avoidance, and mitigation. This is a useful process for evaluating different plans and scenarios and understanding how they may affect natural resources.</p>	<p><u>Inputs:</u> Natural resource data, cultural resource data, transportation infrastructure, land cover. <u>Outputs:</u> Map of ecological priorities (and intersections with transportation infrastructure). <u>Scale:</u> Region</p>	<p>The tool could provide different versions of the map, showing how ecological priorities would change based on different ecological inputs or transportation build-out scenarios. PBPP could provide a basis for new types of data to be included in REF (sea-level rise, high-development with more land developed).</p>	

<p><u>Energy and Emissions Reduction Policy Analysis Tool (EERPAT)</u></p> <p>(D, A)</p>	<p>Planners can use this high-level scenario analysis tool to evaluate effects of various GHG emissions reduction strategies at the statewide level. It includes sub-models addressing household characteristics, travel demand, fuel economy, electric vehicles, energy consumption, and tailpipe / electricity CO2 emissions. It can evaluate GHG reduction strategies and strategy interactions not directly addressed by conventional travel demand and emissions models. It may not be suitable for evaluating effects of projects.</p>	<p><u>Inputs:</u> Transportation system characteristics, population, VMT, etc. <u>Outputs:</u> GHG emissions, vehicle miles traveled, travel delay, and other measures. <u>Scale:</u> State</p>	<p>The tool is helpful in the direction-setting phase for states looking to reduce GHG.</p>	<p>The tool is developed for the State scale, limiting its application in scenario planning, which has most often been conducted at regional scales.</p>
<p><u>Community Vision Metrics</u></p> <p>(All)</p>	<p>This FHWA-developed tool helps planners identify performance measures relevant to their context and goals. It provides a customized list of metrics but does not provide information about how to calculate the measures or identify data sources.</p>	<p><u>Inputs:</u> Check boxes for livability area of interest, geographic scale, setting/density, and transportation mode. <u>Outputs:</u> List of applicable performance measures. <u>Scale:</u> All</p>	<p>The tool can help in the identification of performance measures. PBPP influences the tool by setting parameters for areas of interest, geographic scale, setting/density, and transportation mode.</p>	<p>The output is simply a list of measures without instruction on methods or data resources.</p>
<p><u>Sustainable Communities Index</u></p> <p>(All)</p>	<p>Similar to Community Vision Metrics, however, this tool provides more robust information on methods for calculating the metrics and identifying data resources.</p>	<p><u>Inputs:</u> Lists topics and the user can drill down in various topics to find measures and information on how to calculate the measures and data resources. <u>Outputs:</u> List of applicable performance measures. <u>Scale:</u> All</p>	<p>The tool can help in the identification of performance measures.</p>	<p>The output is simply list of measures with some instruction on methods and data resources.</p>

<p>UrbanSim (D, A, I)</p>	<p>This program is a complex and powerful modeling platform available to simulate metro real estate markets and impacts of land use and transportation plans. Used to predict behaviors or interaction within a network or system to illustrate the cause and effect of different scenario variables relatives to environmental, transportation, economic, and development goals. Can be used in conjunction with activity-based travel models to analyze alternatives and explore strategies to achieve target outcomes. It's a free, open source program but may require technical assistance to use.</p>	<p><u>Inputs:</u> Transit investments, roadway improvements by type, pricing strategies, TDM/ bike-sharing; comp. plans, zoning codes, parking availability and pricing, TOD, urban villages and centers, subsidies, impact fees, Financing, UGBs, protection of environmentally sensitive areas <u>Outputs:</u> Housing Units by type, density, price (affordability), Non-residential buildings by type, density, price, Acreage in agricultural land, forest, open space, households by income, size, life cycle, employment by sector and building type; transportation accessibility, mode shares, VMT, delay, emissions <u>Scale:</u> All</p>	<p>The tool has a wide array of outputs, many of which are consistent with common PMs, making it relatively easy to address common PMs and new PMs simultaneously. The tool is useful in the direction-setting phase to help illustrate issues and opportunities of different land use, real estate, housing, and transportation investments or policies. Key metrics can be incorporated into later phases of PBPP. Travel demand model data could help to build baseline and initial forecasts. Existing policy priorities can help to identify appropriate evaluation criteria and weights.</p>	<p>The tool uses a python-based programming language, which has a steep learning curve</p>
<p>Envision Tomorrow (D, A)</p>	<p>A set of urban and regional planning tools that can be used to model development feasibility on a site-by-site basis as well as create and evaluate multiple land use scenarios, test and refine transportation plans, produce small-area concept plans, and model complex regional issues</p>	<p><u>Inputs:</u> Unknown <u>Outputs:</u> Infill development or redev., cost of infrastructure, building value and revenue, housing mix, affordability, parking costs, jobs-to-housing ratio, distribution and employment space, connectivity, land cover and availability, impervious cover in special areas (e.g. aquifers), water, wastewater, energy consumption, enhanced ROI, building energy consumption <u>Scale:</u> All</p>	<p>The tool is built to produce a set of indicators that the creators recommend be monitored for performance over time. Existing performance measures could inform the set of indicators that are evaluated by the tool.</p>	<p>The tool requires ArcGIS and Network Analyst, an extension of ArcGIS.</p>

<p>UrbanFootprint (D, A)</p>	<p>UrbanFootprint gives users access to land use, policy, and resource planning tools across a range of sectors. Its detailed data ‘canvas’ of existing buildings, land uses, and other details of the built environment, combined with functionality for testing the application of land use or policy changes, serves to inform policy, planning, and funding decisions and aid in implementation and monitoring.</p>	<p><u>Inputs:</u> Data from ArcGIS-based systems. <u>Outputs:</u> Carbon emissions, travel behavior, pollution, energy and water use, fiscal and cost consequences, public health impacts, land consumption and conservation impacts, housing mix and affordability <u>Scale:</u> Local to Regional - but seems best suited for regional work</p>	<p>Useful in the direction and analysis phases of PBPP to identify values and driving issues. Useful for developing and accessing integrated land use and transportation policies against performance metrics that can be folded into later phases of PBPP. Travel demand model data can help build baseline and initial forecasts. Existing policy priorities can help to identify appropriate evaluation criteria and weights.</p>	
<p>iPlaces³S (D, A, I)</p>	<p>Web-based modeling platform for scenario planning currently managed by SACOG. Evaluates how alternative development approaches or transportation investments may impact indicators. Developed by the CA Energy Commission (CEC), the CA Dept. of Transportation and the U.S. Dept. of Energy. Private company provides programming, maintenance and web hosting. Internet-based, so no specialized hardware or software is required.</p>	<p><u>Inputs:</u> Interactive menus prompt input on some key regional variables (like VMT, for example), and other data is uploaded in shapefile form. Common shapefiles include parcel-level land use, transportation and energy use data. <u>Outputs:</u> Employees, dwelling units, population, water consumption, jobs by sector, vehicle trips per household, vehicle miles traveled per household, transit ridership, pedestrian friendliness, pedestrian and bike trips, electricity / natural gas / gasoline demand, ROI <u>Scale:</u> All</p>		<p>The tool was originally meant to be open source, but not widely distributed or supported.</p>
<p>UPlan (P)</p>	<p>Companion to iPLACES3S; can be used to determine what policy types are needed to implement the vision from that program. Software runs in ArcGIS and is available at no cost online. It is available through UC-Davis.</p>			
<p>PECAS (A)</p>	<p>PECAS is a spatial economic input-output model supporting the MEPLAN and TRANUS systems. PECAS assesses two</p>	<p><u>Inputs:</u> Industry, government, household data. <u>Outputs:</u> Activity allocations by activity category by zone, commodity flow</p>		

	components of planning to model economic flows-"space" (including both land and floor space), and "activity allocation."	quantities from production zone to consumption zone via exchange zone, imports and exports by exchange zone and exchange prices by commodity by exchange zone. <u>Scale:</u> State, Region		
<u>PlanWorks Visioning and Transportation Application</u> (D)	This Application includes a model approach, a step-by-step process, case studies, and a guide for generating consensus and shared outcomes for transportation projects. Intended to help practitioners assess the possibilities of visioning, in identifying steps when engaging in visioning, and in establishing links between outcomes and transportation planning and project development processes.	<u>Inputs:</u> Not applicable. This is a guide that details the steps in a visioning process, organizing the timeline and providing answers to frequently asked questions. <u>Outputs:</u> Not applicable. This is a guide that details the steps in a visioning process, organizing the timeline and providing answers to frequently asked questions. <u>Scale:</u> All	The tool is a viable template for the visioning stage, so it can be incorporated into the direction component.	The tool is solely qualitative, helping to guide stakeholder discussions rather than inform decisionmaking.
<u>RapidFire</u> (All)	RapidFire is a spreadsheet-based tool that is a companion to Urban Footprint. It is used to evaluate scenarios at the national, state, regional, and local scales. It constitutes a single framework into which data and research-based assumptions about the future are loaded to test the impacts of varying land use patterns and policies across a range of critical metrics.	<u>Inputs:</u> Demographic projections, travel behavior projections, technical factors for fuel and energy emissions, residential/commercial development allocation assumptions. <u>Outputs:</u> Land consumption Transportation costs/emissions/VMT Public health costs Water, energy use Fiscal impacts. <u>Scale:</u> City, county, region, state.	Useful in the direction and analysis phases of PBPP to identify community values and driving issues; develop and assess integrated land use and transportation policies against key performance metrics that can be folded into later phases of the PBPP process. PBPP should form the basis for all data inputs, projects, and performance measures.	The tool likely requires technical assistance to use to its full potential, or a significant learning curve is needed to incorporate new users.
<u>CrowdGauge</u> (D)	Scenario visioning tool available as open source software. Participants walk through series of screens exploring their personal priorities for their community, the potential impacts of proposed plan elements on	<u>Inputs:</u> Citizen voting on predetermined categories. <u>Outputs:</u> Unknown <u>Scale:</u> All	The tool is used visioning or as a means of gaining public support for priorities after the analysis phase. The tool helps visualize the tradeoffs in costs and benefits of proposed projects and policies, so the tool	The tool is not a forecasting or analysis tool.

	their priorities, and the impacts of their budget choices on their previously-stated priorities.		can have potential project costs and benefits stemming from the analysis phase added as inputs.	
<u>MetroQuest</u> (D, P)	Public participation platform that works on kiosks, tablets, and smartphones. Versatile interfaces that allow voting, ranking, mapping, and other types of inputs. It has a tool to detect and negate ballot-stuffing. Offers cloud-based data storage.	<u>Inputs:</u> Citizens can add comments to maps, rank priorities, answer survey questions, allocate money. <u>Outputs:</u> Unknown <u>Scale:</u> All, but best suited for corridor or study area.	The tool is useful at all stages of scenario planning and PBPP. Can be used to understand preferences or to gain input on specific projects, which is useful in the programming stage.	The tool is not a forecasting or analysis tool.
<u>CityEngine</u> (D, A, P)	An ESRI visualization tool that creates a 3D model of the city. This tool can be integrated with ArcGIS and used to compare land use planning scenarios, or to perform simple network analysis.	<u>Inputs:</u> GIS files, python scripts, drawing, Open Street Map, zoning rules. <u>Outputs:</u> 3D models, maps, reports based on scenario comparison, network and shadow analysis, viewsheds, traffic impact analysis. <u>Scale:</u> All	Useful for evaluating design aspects of projects, stakeholder engagement, and scenario planning for programming phase. PBPP should form basis for all data inputs, projects, and performance measures.	
<u>UrbanCanvas</u> (D, A, P)	Similar to CityEngine, but integrated with UrbanSim. Provides 3D visualization and scenario comparisons but with lower analytical capability than CityEngine. Some components it lacks may be available through UrbanSim.	<u>Inputs:</u> Parcels, buildings, zoning, projects. Uses .shp format. <u>Outputs:</u> 3D models, simulations, maps, graphs. <u>Scale:</u> All	The tool is useful for evaluating design aspects of projects, stakeholder engagement, and scenario planning for programming phase. PBPP should form the basis for all data inputs, projects, and performance measures.	The tool only accepts polygon files, so it may not be useful for transportation projects. The tool should only be used in conjunction with UrbanSim.
<u>CubeLand</u> (A, P)	Part of Cube modeling software, Cube Land forecasts land use and land price by simulating the real estate market under different economic conditions. For a user-defined scenario, Cube Land forecasts the supply and the demand for different types of properties, and estimates the location of households and non-residential activities.	<u>Inputs:</u> Regulation specifics. Jobs and households. Land supply. <u>Outputs:</u> Uses bid rent functions to test economic growth scenarios. <u>Scale:</u> Region	The tool could help determine the economic ramifications of land use policies. PBPP could influence the projects selected for use in the tool.	It is unclear as to the validity of the forecasting methodology, but the details are publicly available, so the tool can be vetted.

<p><u>EngagingPlans</u> (D)</p>	<p>An online portal to share progress and gather public input online for a successful engagement strategy with community members.</p>	<p><u>Inputs:</u> Idea wall; discussion & comments; surveys, polls, instant results. <u>Outputs:</u> Updates, event timeline, document library, FAQs, email subscription, social media links, image gallery. <u>Scale:</u> All</p>	<p>The tool helps stakeholders engage in strategic thinking and decisionmaking activities. PBPP can be used to collect data from users and inform goals, objectives, and priorities.</p>	<p>The tool is unlikely to reach a representative audience or collect useful data. Feedback is qualitative. It is best to use it for engaging participants and keeping them informed, but not for collecting data or forecasting trends.</p>
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Appendix C. Case Studies

Synthesis and Comparative Table of Case Studies

	Champaign-Urbana Urbanized Area Transportation Study	Fresno Council of Governments	Hillsborough County MPO
Context			
Population	145,400 (2010 Census)	965,974 (2014 estimate)	1,291,600 (2013 estimate)
Character of study area	Smaller metropolitan area, university town with well-educated workforce	Lower income, high unemployment; high Hispanic population, agricultural	Large metropolitan area
Power distribution	Dominant core area	Dominant major city	Multiple cities and MPOs
Number of jurisdictions	5	16	4
Motivation for Scenario Planning	Help the public understand the benefits that can be achieved by pursuing a more sustainable scenario	Compliance with Senate Bill 375 and Sustainable Communities Strategy requirement	Considering how the county should grow (rapid growth already occurring)
Scenarios			
Number	2	4	3 for each approach used in the Imagine 2040 LRTP
Nature of scenarios	Status quo/business as usual vs. sustainable choices (high level of investment in transit and bike/pedestrian infrastructure)	Status quo; metro less dominant; local plans; more growth, Corridors and centers; redevelopment and higher densities	Status quo (Suburban Dream), increased density and mix of uses (Bustling Metro), and focus on job centers (New Corporate Centers). For the investment scenarios: High, Medium, and Low levels of investment.
Models used	Travel demand model, land use model	4-step travel demand model	Regional 4-step travel demand model and REMI econometric modeling tool (storm surge vulnerability analysis)
Tools used	SCALDS, MOVES, LAMA, HIA	RapidFire, Envision Tomorrow	MetroQuest and social media (public outreach), GIS (for level of service),
Number indicators	74 in 2040 long range plan; 22 in latest annual report card	40 reduced to 10	31 (analysis), 13 (visioning approach), 3 (investment approach)
Nature of indicators	Multi-disciplinary	Transportation and land use including prime farmland; smart growth oriented (TOD, Density, multi-	Multi-disciplinary and transportation-oriented

		modal)	
Range of variance among scenarios	Selection of two highly differentiated scenarios led to relatively significant variation (in relation to the region's relatively small size)	Relatively minor	Significant difference between arrangement of land uses and transportation networks and significant differences in funding levels
Implementation	The region continues to focus its investments on key projects identified in the current and previous LRTP, as well as heavy investment in the regional bicycle and pedestrian network.	Selected scenario reflects all existing land use and transportation plans; region is investing in significant transit improvements in the core area.	To be determined. The biggest challenge according to the MPO is implementing through the TIP.
Special features			Consideration of a hypothetical hurricane that follows the path and is the same strength as a hurricane that struck in 1921
Relation to PBPP			
Nature of PBPP work	Extensive use of performance measures throughout plans and processes; annual report card published.	Target setting on GHG emissions	Extensive use of performance measures to evaluate land use and transportation scenarios. Use of scenarios during analysis phase to compare performance under different funding levels and priorities.
Impact of scenario work on PBPP	Helped agency understand performance implications of scenarios	Helped agency understand performance implications of scenarios	The land use/transportation scenarios supported the development of goals and objectives. The approach to investment scenarios supported the selection of priorities by the MPO.

Champaign-Urbana Urbanized Area Transportation Study

The Champaign-Urbana Urbanized Area Transportation Study (CUUATS) is the transportation division of the Champaign County Regional Planning Commission (CCRPC)—the region’s MPO. The Champaign-Urbana (C-U) area is located in Central Illinois, 2-3 hours’ drive south of Chicago and about two hours’ drive west of Indianapolis. The CUUATS Policy Committee has representatives from Champaign County, the Cities of Champaign and Urbana, the Village of Savoy, the University of Illinois-Urbana Champaign (UIUC), the Champaign-Urbana Mass Transit District (C-U MTD) and the State of Illinois.

The Champaign-Urbana area had 145,361 residents at the time of the 2010 Census, while the region’s MSA was home to 231,891 residents. Between 2000 and 2010, the urbanized area saw a 17.3 percent increase in population, and the population is projected to increase by approximately 30 percent between 2010 and 2040. The Champaign-Urbana area is a regional employment center because of the presence of educational, health care, and manufacturing employers in the area, particularly UIUC. With a student body of nearly 45,000, the University serves as the region’s economic and cultural center.

Public policies and investments to promote more efficient land use and development patterns seem to be taking hold in the urban area. While the population and employment opportunities have continued to grow since 1990, population and residential density have leveled off and increased, respectively, in the last five years. The proportion of commuters who bike, walk, or take transit to get to work is 22 percent, which is higher than the rate in many peer regions. Between 2009 and 2014, the region increased its mileage of bicycle facilities by over 60 percent. Over the same period, carsharing use and Amtrak ridership increased, while vehicle ownership decreased.

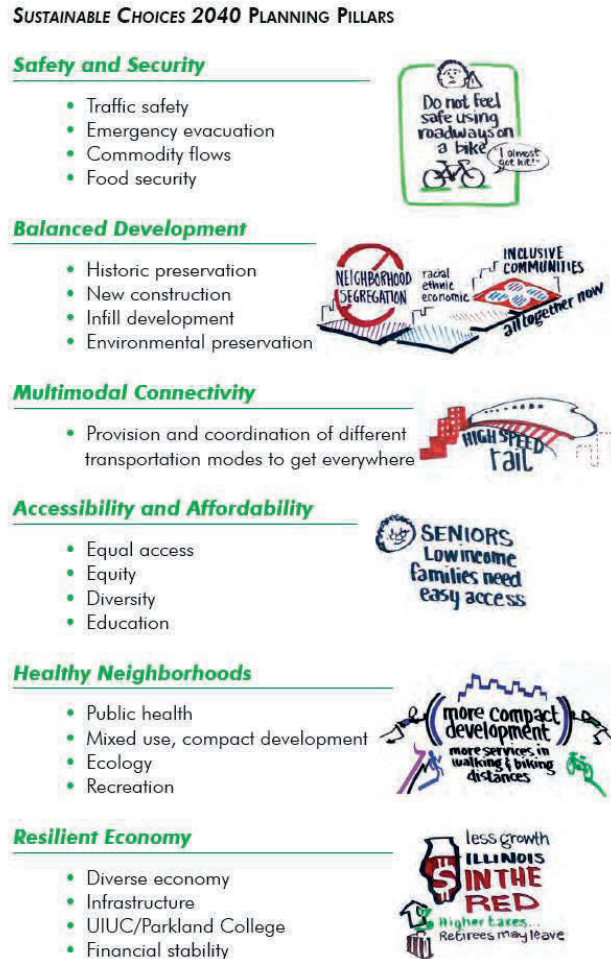
PBPP EXPERIENCE

CUUATS’ use of performance measures and targets, performance monitoring, and data-driven decisionmaking has been profiled in various FHWA publications, including the *PBPP Guidebook* and *Model Long Range Transportation Plans Guidebook*. Since 2004, CUUATS has used Measures of Effectiveness (MOEs) to monitor progress toward specific goals and objectives. Since 2011, the agency has published an annual Report Card to demonstrate how the region is doing on the objectives and measures identified in the long range plan. This requires the agency regularly to take stock of how well the region is doing, as well as identify areas in which performance has not been as strong. The most recent annual report provided performance results for 22 MOEs. The annual report is an effective tool for informing member agencies and elected officials about progress that has been made and the direction in which the region is moving. In turn, many elected officials reference the report in their discussions with community members, and a few local governments in the C-U region, such as the City of Champaign, have begun to use report cards to track their performance as well.

In December 2014, CCRPC approved the long range transportation plan for the Champaign-Urbana Urbanized Area, *Sustainable Choices 2040*. The agency’s previous plan, from 2009, was *LRTP 2035: Choices*. The agency first set performance targets in its 2035 Plan; these targets varied

between realistic and aspirational targets, depending in part on the availability of data. The goals and objectives in the 2040 plan were formulated based on a public input along with MAP-21 priorities, State transportation policy factors, local knowledge, and current local planning efforts. The Sustainable Choices 2040 plan groups performance goals according to the following six “planning pillars,” each of which is clearly aligned in the plan with Federal, State and regional goals (shown in Figure C-1):

Figure C-1: Sustainable Choices 2040 Planning Pillars



Each planning pillar is divided into a number of Specific, Measurable, Agreed upon, Realistic, and Time-bound (SMART) objectives (between 5 and 15), and each objective is tied to a performance measure and data source. Multiple strategies are identified in the plan for accomplishing each objective, as well as the party responsible for leading implementation of each strategy.

The Sustainable Choices 2040 plan contains 59 objectives and 74 performance measures. They include a mixture of both outcome and output measures, and are discussed in more depth below in

the context of their alignment with the performance measures CUUATS used to evaluate its scenarios.

As described below in the Scenario Analysis Tools section, CUUATS uses a variety of tools and data sources for measuring performance on each LRTP objective. Most of the modeling data is generated by CUUATS or by local and regional agencies (e.g., transit service providers, local governments, school districts).

SCENARIO PLANNING EXPERIENCE

CUUATS used scenario analysis processes in developing two previous long range plans, which were finalized in in 2004 (LRTP 2025) and 2009 (Choices 2035). For LRTP 2025, CUUATS considered 15 scenarios in all. First, CUUATS developed three scenarios that varied in terms of the projects and land use developments expected. Scenario 1 reflected transportation projects and land use developments already in the pipeline for implementation during the 20-year plan horizon; Scenario 2 was similar to Scenario 1 but also included additional developments and introduced an “enhanced arterial fringe road concept,” which would create a higher-speed, limited access corridor around the urbanized area; and Scenario 3 was similar to Scenario 2 but included the enhanced arterial fringe roadway system with specific study areas (i.e., corridor studies to determine the exact route of the system, whereas the route was assumed in Scenario 2). In addition, CUUATS initially considered three land use and transit service “alternatives” (i.e., scenarios—Alternatives A, B, and C), which ranged from dispersed development patterns (the status quo) to compact, activity center-focused development.¹⁴ CUUATS used indicators such as total vehicle miles traveled (VMT), roadway congestion, transit usage and ridership, housing near transit, population density, and infrastructure costs to evaluate combinations of the investment scenarios and land use alternatives. The scenarios were largely roadway-based (i.e., did not consider land use variations), which was due primarily to the limitations of the tools the agency used. CUUATS began developing its first travel demand model in 2000, which was used for the 2025 plan. The model used TranPlan and developing it required the agency to build its TAZs; staff did everything in-house. Because this process was the first in which the agency had a model to use, the member agencies wanted to test a variety of scenarios, which were generally developed based on questions raised by members, such as, “What if we expand [example] roadway?” Ultimately, the agency ended up evaluating five alternatives (rather than the initially planned three), which resulted in consideration of 15 scenarios. Another outcome of the 2025 Plan process was the identification of specific corridors needed to be studied in more depth to identify the most appropriate recommendations.

In the Choices 2035 plan process, CUUATS considered three different scenarios: a 2005 Base Year Scenario, a 2035 No Improvements Scenario, which assumed no changes to the network, and a 2035 Full Improvement Scenario, which reflected future conditions if all proposed improvements were made to the existing network. In essence, the scenario analysis process involved identifying how much proposed changes would improve future performance and conditions. A limitation to this analysis was the travel demand model’s lack of accuracy as a mode choice model; mode choice

¹⁴ Champaign-Urbana Urbanized Area Transportation Study, LRTP 2025, Appendix 6: Scenarios and Alternatives Information: http://www.ccrpc.org/transportation/pdf/LRTP/Appendix-6_Scenarios.pdf.

improvements to the model were not completed in time for this plan update, so the model that was used simply assigned 6-7 percent of all trips to transit (and none to biking or walking). For the first time, however, the agency's model did consider land use; the agency divided its set of Traffic Analysis Zones (TAZs) into smaller TAZs to achieve a higher level of accuracy. Scenario planning for the 2035 plan also took into consideration the local jurisdictions' comprehensive plan and other plan updates. The Choices 2035 plan compared scenarios based on population projections, VMT (total, per household, and per capita), vehicle hours traveled (VHT) (total, per household, and per capita), and total trips by both transit and auto.¹⁵

Following the 2035 plan development experience, CUUATS updated the agency's travel demand model (TDM) to incorporate active modes of transportation. The agency also developed additional models to complement the TDM outputs. Since 2004, CUUATS has completed five corridor studies, four of which used specific scenario techniques to develop scenarios to present to the public. The corridor studies ultimately informed recommendations about design to accommodate freight needs and alleviate the use of the interstate system for local trips. The corridor studies helped the agency reach an approach of "mobility around the city, and multimodalism in the community." The preferred scenarios that were identified in these corridor studies, as well as comments received through the corridor study processes, informed both the 2035 and 2040 plans.

To develop the Sustainable Choices 2040 Plan, CUUATS first conducted public outreach and initial modeling to develop goals and objectives. The agency's goal was to confirm that the agency had an accurate understanding of the changes most residents wanted to see in the community. CUUATS Sustainable Choices 2040 public outreach was extensive. The agency used social media, a website, videos (to explain what an MPO and a long range transportation are), newspaper ads, youth outreach events, surveys, four public visioning sessions, and a community conversations bus, which traveled to 29 different areas throughout the region, to engage the public to provide input for the plan.¹⁶ A professor from UIUC served as a facilitator for the public visioning meetings, which helped to ensure a neutral presentation of information. A graphic artist created sketches throughout meetings to reflect the comments made by members of the public. CUUATS' heavy investment in thorough public engagement was made possible through additional funding provided by Illinois DOT and the donation of the community conversations bus by CU-MTD. In total, CUUATS received 1500 public comments from 35 public events and 23 agency presentations; the comments confirmed that the agency was moving in the right direction by continuing to follow the principles in the 2025 and 2035 plans.

¹⁵ Choices 2035 Plan: <http://www.ccrpc.org/transportation/lrtp2/Documents/Final%20Plan/Complete%20Plan.pdf> (for the full list of indicators, see page 131 of the plan).

¹⁶ Details available in Appendix A of the plan.

Figure C-2: Graphic Artist's Sketch of Public Input



The insights generated from this outreach and during the process of developing the Sustainable Choices 2040 scenario also led the agency to conclude that it was critical to define more broadly the role of transportation in achieving larger community goals and outcomes. According to the plan, “the transportation network is intricately tied to many other conditions in the community such as land-use, public health, the environment, and the economy. The overall built environment operates most effectively when all these different processes can work together to facilitate safe and efficient access and mobility from different points in the community to serve each of our daily needs.”

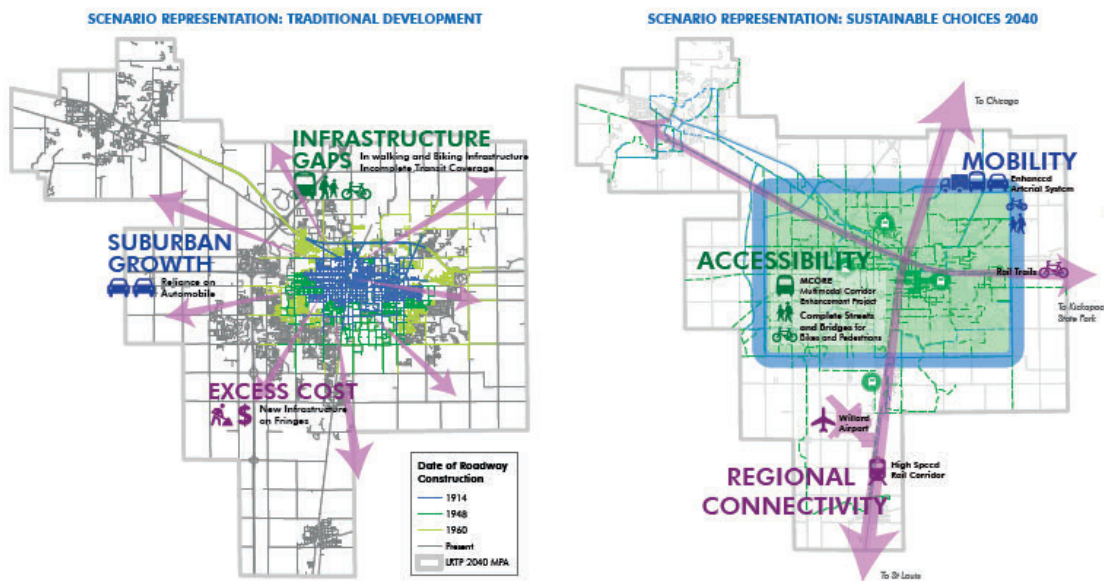
Based on public input, agency input, local plans, and existing data, CUUATS staff then developed and analyzed the scenarios. The scenario analysis was conducted after the majority of public input had been collected, to illustrate strategies and to explore potential impacts of future trends and events, rather than as an up-front visioning or goal-setting tool. To develop the scenarios, CUUATS identified performance in the year 2010 as the baseline scenario, against which the other two scenarios would be compared. The agency then developed two scenarios, Traditional Development and Sustainable Choices, each described and depicted (in Figure C-3) briefly below.

The **Traditional Development** scenario represented expected conditions based on historic system growth trends and patterns. It included development projects that are relatively certain to move forward based on plans and projects already approved from MPO member agencies.

The **Sustainable Choices** scenario was built to reflect ideas and input that CUUATS received from the public. It included several significantly different assumptions about transportation and land use compared to the traditional scenario: 1) a high speed rail corridor between Chicago and downtown Champaign would serve as a significant catalyst for growth in downtown Champaign, downtown

Urbana, the University Avenue corridor, the University Research Park, and industrial area around Olympian Drive; 2) an intensive transit corridor system linking downtown Urbana and Champaign; 3) increased density on and around University Avenue and Campustown, and 4) more frequent transit service on additional and existing routes.

Figure C-3: Visual Representations for Traditional Development and Sustainable Choices 2040 Scenarios



The comparison of the traditional development scenario to the sustainable choices scenario identifies the scenario that best represents the public’s vision for the future while also identifying the forecasted outcomes under each scenario. The inclusion of the high-speed rail corridor project between Chicago and downtown Champaign adds an externally influenced component to the Sustainable Choices scenario.

The use of only two scenarios is not typical of MPO scenario planning processes, most of which involve three or more scenarios. CUUATS’ approach was built upon lessons learned from previous scenario planning efforts of LRTP 2025 and Choices 2035, as well as scenario planning exercises conducted for four of the corridor studies completed between the LRTP 2025 and LRTP 2035. Also in a departure from typical practice, the scenarios were not labeled in a value-neutral manner. Rather than using objective titles like “A” and “B” or numbers, to avoid implying that one scenario is better than another, the Sustainable Choices 2040 scenario is an illustration of an ideal future envisioned by the public, which explains the use of an idealistic title for the multi-faceted scenario. The purpose of CUUATS’ approach was to evaluate the feasibility and benefits of the public’s preferred scenario, rather than to decide which of the two scenarios better represents the public’s vision. CUUATS’ decision to use only two scenarios was influenced by the fact that the public reached a remarkable consensus about the overall vision for the future, as well as by the agency’s previous experience, which indicated that differences in performance are hard to measure in a small

region (fewer permutations of projects and plans also results in fewer scenarios). In addition to the public engagement activities discussed above, CUUATS consulted with other key agencies including the region’s transit agency and Illinois DOT.

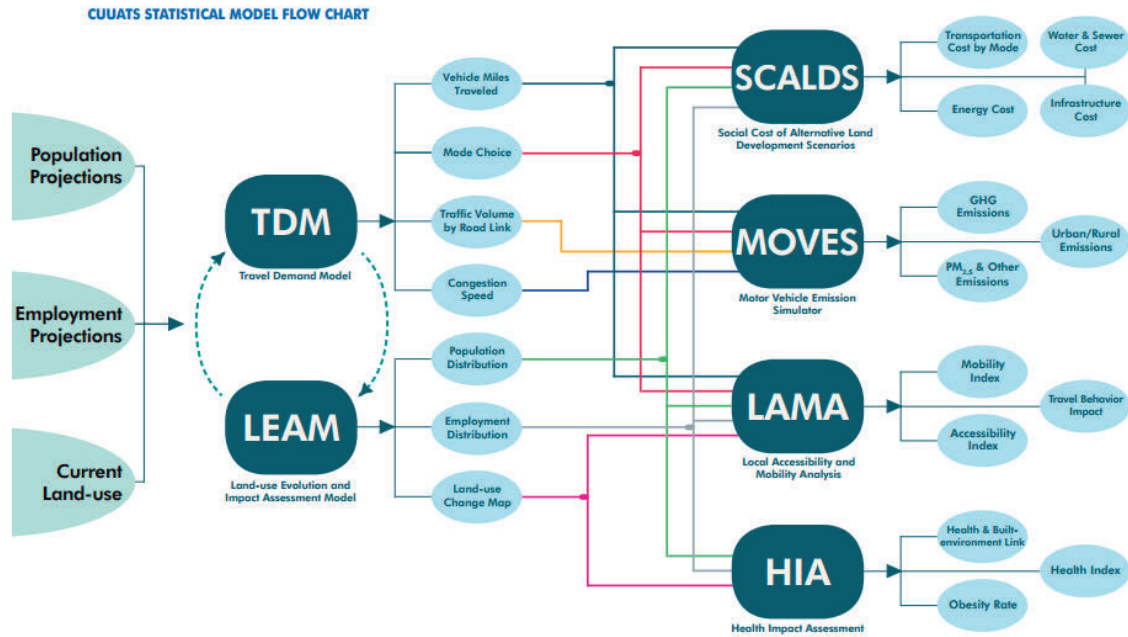
A notable component of the 2040 Sustainable Choices scenario was the incorporation of a high-speed (220 miles per hour) rail corridor running through Champaign-Urbana from Chicago to St. Louis. The high-speed rail corridor would have huge impacts on the region—reducing travel time to Chicago from 2.5-3 hours to 45 minutes, making C-U a possible bedroom community of Chicago and opening up Chicago-based job opportunities to C-U residents. Significantly, the rail line would enable frequent commutes between two major University of Illinois campuses. Through the 2040 plan public engagement, CUUATS found that the overwhelming majority of area residents want the high-speed rail line, and are actively campaigning for a route that would serve the area. To understand the implications of the high-speed rail line for the area, CUUATS worked with a UIUC professor with expertise in high-speed rail in Taiwan, who conducted a feasibility study for the high-speed rail corridor.

SCENARIO ANALYSIS TOOLS

CUUATS uses travel demand modeling for long range plan development as well as corridor and other studies. Since the development of the 2035 Plan, CUUATS has worked to refine its travel demand model to better account for active modes of transportation and better model interactions between land use and transportation, as well as the impacts of transportation on livability, social costs, greenhouse gas emissions, and public health. In developing Sustainable Choices 2040, CUUATS used four county-level models as well as two additional models to evaluate conditions at a localized (neighborhood) scale: The Health Impact Assessment (HIA) and Local Accessibility and Mobility Analysis (LAMA).

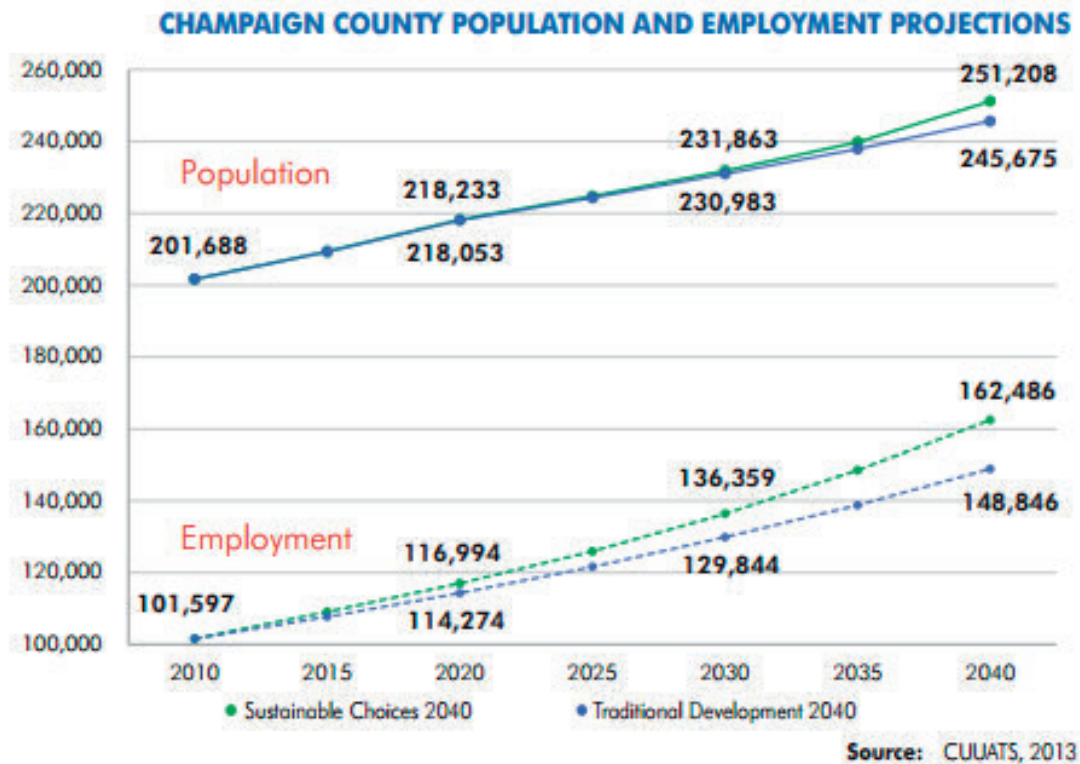
Figure C-4 below provides an overview of how these various models work together to identify projected impacts. The plan emphasizes the strong connections between the transportation system and other factors that affect quality of life, which explains why the agency chose to evaluate its scenarios based on a variety of performance measure types and topic areas. The plan states: “The CUUATS modeling suite is designed to provide a holistic approach to planning analysis through the integration of localized transportation, land use, emission, social costs, accessibility, mobility, and population health at the County level and at the local level in the Champaign-Urbana area.”

Figure C-4: CUUATS' Statistical Models



Population and employment projections are key inputs to the CUUATS modeling and analysis process. To project county-level population changes shown in Figure C-5, CUUATS used HandyAndy, an interregional cohort-component model created by Dr. Andy Isserman of UIUC. Dr. Isserman also developed TrenDandy, an Excel workbook tool that uses Regional Economic Information System (REIS) data to perform employment projections (using geo-coded Business Analyst industry employment data, cross-referenced with local data). Current land use data is identified using GIS software and local knowledge of the area.

Figure C-5: Regional Population and Employment Projections under Traditional and Sustainable Choices Scenarios



Two important modeling tools used by CUUATS are a Travel Demand Model (TDM) and a Land-Use Evaluation and Impact Assessment Model (LEAM). The TDM is a person-trip model built using the Cube Voyager software platform. It employs a traditional four-step travel forecasting process to evaluate auto and transit trips for daily and peak hour scenarios. First developed at the University of Illinois, LEAM is a suite of interconnected models that predict changes in land-use over the planning horizon. The model is used primarily to identify spatial distribution of population and employment growth in the region.

The TDM was integrated with the LEAM to account for the interrelationship between land-use and transportation. The integrated TDM/LEAM identified expected mode share, VMT, and congestion under each scenario. CUUATS runs both models every five years, so that the outcomes become inputs for the next planning cycle. Staff have made significant modifications to the TDM and LEAM to indicate which land is most desirable for development and where growth is most likely to take place.¹⁷ The next section will explain in further detail the tools and corresponding measures used to identify expected impacts under each scenario.

¹⁷ CUUATS staff indicated that LEAM is a tool better suited to larger metropolitan areas to use in simulating growth patterns without requiring a high degree of accuracy (e.g. at the parcel level).

SCENARIO ANALYSIS PERFORMANCE MEASURES

Using the findings under different scenarios from the integrated travel demand and land use model, CUUATS calculated the expected impacts under each scenario for other aspects of quality of life. The specific tools used, and the measures used by each, were:

The Social Cost of Alternative Land Development Scenarios (SCALDS) – CUUATS used this FHWA-developed model to test the impacts of the two different land use scenarios. CUUATS localized some of the model’s inputs to estimate social costs and development impacts more accurately. The model identified the scenarios’ impacts on:

- ▶ Housing (LEAM output, SCALDS input)
- ▶ Local new infrastructure costs
- ▶ Annual operating cost of all services (per resident and per employment)
- ▶ Daily water use (per resident and per employment)
- ▶ Annual energy use per resident (in MMBtu)
- ▶ Transportation Personal Miles Traveled for driving, transit, biking, and walking

The MOtor Vehicle Emission Simulator (MOVES) – CUUATS used this EPA-developed model to identify expected emission/air quality impacts of transportation-related activities under each scenario. The agency used its TDM and other local datasets to develop detailed inputs for the model. The measures generated from this model were:

- ▶ GHG emissions
- ▶ PM_{2.5} and other pollutant emissions

Local Accessibility and Mobility Analysis (LAMA) – LAMA is a qualitative and quantitative analysis of accessibility and mobility in different neighborhoods or planning areas in the region. Quantitative measurements of built-environment variables are combined with public input to present a more comprehensive assessment of the existing conditions at the local level.

- ▶ Mobility Index (e.g., availability of bus routes, bike lanes, sidewalks)
- ▶ Accessibility Index (availability of jobs, grocery stores, and other services)

These indices provide an understanding of the impact of accessibility and mobility on travel behavior and transportation costs.

Health Impact Assessment (HIA) – CUUATS completed an HIA to establish a relationship between the built environment and the local obesity rate. The HIA rates factors based on their strength in the model. CUUATS found that obesity rates were generally lower in neighborhoods with higher population density, better land use mix, higher accessibility to jobs and services, and better transit connectivity.

- ▶ Relationship between built environment and obesity rate
- ▶ Health Index (Uses built environment variables to identify physical activity implications)

The narrative of the project identification section of the plan reiterates the key aspects of the Sustainable Choices 2040 scenario—in particular, its emphasis on increasing non-automobile mode share. Generally, projects identified in the plan appear to be consistent with the Sustainable Choices 2040 scenario and vision. While the majority of the projects listed in the plan are roadway projects, most of them include bicycle and pedestrian facilities. There are also seven non-roadway improvements, including the proposed high-speed rail line, and over 700 bicycle and pedestrian projects that have been compiled from other area plans.

The performance measures used to evaluate the two development scenarios are closely linked to objectives and performance measures in the 2040 plan. The plan includes many more measures than those used to evaluate the scenarios because the scenario evaluation process was focused on long-term outcomes and with the scenarios serving as broad approximations, whereas the plan development models incorporated more system performance output measures. As shown in **Error! eference source not found.** below, although the performance measures used to evaluate scenarios differ from those in the 2040 plan, the connections between the two are very clear.

Table C-1: Example of the Alignment of Performance Measures used to Evaluate Scenario and the Performance Measures in the Sustainable Choices 2040 Plan

Scenario Analysis Performance Measures	Relevant Performance Measures in Sustainable Choices 2040 Plan (selection)
Mobility Index (e.g., availability of bus routes, bike lanes, sidewalks)	<ul style="list-style-type: none"> ▶ Miles of existing non-ADA compliant sidewalks upgraded along paved roads in the urbanized area ▶ Number of miles of different types of trails and bicycle infrastructure (two measures) ▶ Percentage of the C-U MTD [transit agency] service area contained inside the urbanized area ▶ Number of new rural transit trips connecting to the urbanized area ▶ Percentage of transportation projects fully adhering to the CUUATS Complete Streets Policy ▶ Number of transit, bicycle, and/or shared use connections leading to a downtown area

<p>Accessibility Index (Availability of jobs, grocery stores, and other services)</p>	<ul style="list-style-type: none"> ▶ Miles of existing non-ADA compliant sidewalks upgraded along paved roads in the urbanized area ▶ Number of short term projects completed according to various C-U SRTS Project plans ▶ Number of new pedestrian and coordinated bicycle plans (two measures) ▶ Number of ordinances [to provide year-round access to sidewalks, bike paths, and transit stops] implemented by municipalities within the urbanized area ▶ Number of direct transit routes and links between neighborhoods and community interest points and major employers ▶ Number of Zipcar locations and new car share programs in the area (two measures) ▶ Percentage of transportation projects fully adhering to the CUUATS Access Management Guidelines ▶ Number of areas with improved scores according to LAMA ▶ Miles of new sidewalks connecting to bus stops ▶ Number of new bicycle facilities located within a 1/4 mile of affordable housing ▶ Number of mixed use developments with bicycle, pedestrian, and transit access ▶ Combined transportation and housing costs as a percentage of median income
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CUUATS used scenario analysis to validate priorities and identify projects and strategies in the Sustainable Choices 2040 plan. In the coming years, CUUATS plans to:

- ▶ Incorporate the LAMA and HIA tools and methods into future scenario planning exercises.
- ▶ Update its project prioritization guidelines to reflect the six planning pillars in the 2040 plan better.
- ▶ Update its TDM to make it a mode-choice model with five travel choices (drive alone, carpool, take transit, bike, or walk) and improve land use analysis capabilities.
- ▶ Identify improved methods for creating population and employment projections.
- ▶ Continue to partner with the Champaign-Urbana Public Health District and other health agencies to collect health data, map changes over time, and incorporate health impacts into scenario planning using health-related performance measures.

- ▶ Develop an interactive website that will be used to educate members of the public and engage them in an ongoing conversation about local transportation priorities and their impact on neighborhoods.
- ▶ Continue discussions with policy and technical committees surrounding the appropriate number of performance measures to track to ensure that key priorities are still clear.
- ▶ Complete sidewalk and ramp inventory to identify coverage gaps and provide data to the cities.

Lessons Learned

- ▶ Strong and collaborative relationships between the MPO and the agency's member jurisdictions and other partners are extremely important; they improve the MPO's effectiveness and its ability to acquire funding to innovate. This, in turn, improves the quality of the scenario planning and scenario analyses the agency undertakes. Some examples of strong relationships from the C-U region that have improved the agency's capacity and ability to obtain funding include:
 - Informal lines of communication between the CUUATS and its various partners are always open. Many of these relationships date back to 1998, when the Campus Area Transportation Study (CATS) was formed to discuss transportation issues affecting the university area and to update the campus master plan.
 - CUUATS, CU-MTD, and other partners successfully worked together to obtain the only Federal Transportation Investment Generating Economic Recovery (TIGER) grant in the State of Illinois. The TIGER-funded Multimodal Corridor Enhancement Project will create a network of complete and transit-friendly streets throughout the downtown and core areas.
 - Illinois DOT has frequently provided CUUATS with funding for different initiatives. In some cases, the funding is contingent on CUUATS providing technical assistance to other MPOs in the State.
 - Among CUUATS' member agencies, there is a strong sense of the need to do what is best for the region, even when it means "taking turns" with respect to which jurisdiction receives limited funding resources first. Strong relationships have enabled this approach.
 - The member agencies have service area boundary agreements in place to minimize interjurisdictional competition for development and jobs.
 - CUUATS worked with the Champaign Urbana Public Health District to conduct health surveys in coordination with the 2040 plan outreach and engagement. This has been beneficial for the Health District, and has enabled CUUATS to consider public health more fully in its modeling and planning processes (e.g., by using HIA tools). CUUATS has worked with the Health District to obtain health-related grants for complete streets policies for two member communities. Because of strong

relationships and taking specific confidentiality trainings, CUUATS staff have access to health data that allows them to do health analyses on a level that is unparalleled throughout the country.

- ▶ Building in-house capacity has been critical to the agency's continued success. In some cases, it can be more cost-effective to have in-house staff complete analyses, and can also position the agency to manage future planning cycles more efficiently. Having a highly skilled team of staff allows CUUATS to function successfully as a consulting firm for the entire region; grants and individual projects (developing cities' bicycle plans, for example) account for about half of the agency's revenue.
- ▶ The presence of a university with strong planning and engineering departments can be a significant benefit, particularly for a smaller MPO. UIUC faculty have assisted CUUATS in various ways (e.g., providing expertise on high speed rail, developing modeling tools for the agency's use). Nearly all of CUUATS' staff members were educated at UIUC, which provides the agency a steady stream of planning and engineering graduates.

RESOURCES

- ▶ CUUATS 2025 LRTP: <http://www.ccrpc.org/transportation/lrtp.php>
- ▶ CUUATS Choices 2035 Plan: <http://www.ccrpc.org/transportation/lrtp2/documents.html>
- ▶ CUUATS Sustainable Choices 2040 Plan: <http://cuuats.org/lrtp/documents/long-range-transportation-plan-sustainable-choices-2040-final/lrtp-2040-executive-summary/view>

Fresno Council of Governments

The Fresno Council of Governments (Fresno COG) is the MPO for the Fresno-Clovis, California area in the State's Central Valley (see Figure C-6). Fresno COG's territory covers Fresno County and its member agencies include the County of Fresno and the Cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma. Mayors for each city (or the elected officials they appoint) and the Chairman of the County Board of Supervisors are the members of the agency's Policy Board. The Board is assisted in its decisionmaking process by a Policy Advisory Committee (PAC), which includes all city managers and the county administrator, and the Transportation Technical Committee (TTC), which includes senior staff from each member agencies and technically inclined members of other location organizations (e.g., the bike coalition). Fresno COG has a "double-weighted" voting system, which provides for an urban/rural balance of all interests.¹⁸

Figure C-6: Fresno County, California



Fresno COG is part of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the San Joaquin Valley Regional Policy Council (SJVRPC). Both the District and Council cover the same eight-county San Joaquin Valley region of San Joaquin, Stanislaus, Merced, Madera, Fresno,

¹⁸ To approve any action, a vote must pass two tests: Agencies representing over 40% of the population must be in favor of an action, and a majority (i.e. at least nine) of all the members must support the action.

<http://www.fresnocog.org/about-cog>.

Kings, Tulare, and Kern counties. The San Joaquin Valley is home to over 4 million people, and the population is expected to grow to more than 7.5 million residents by 2050. The San Joaquin Valley, often referred to as California’s heartland, is also the fastest-growing region in the State and the hardest hit by the economic downturn. Communities in the Valley struggle with poor air quality and rising levels of childhood asthma, obesity, and diabetes.

Fresno County has been growing steadily for decades. As of 2013, the estimated population of Fresno County was 955,272, an increase of 25,000 residents in just the three years since 2010. A little more than half of the County’s residents live in the City of Fresno (2013 population 509,924), which is California’s fifth largest city. More than 65 percent of the County’s inhabitants are minorities, primarily Mexican Hispanics (over 50 percent of all residents) and Asians (over 10 percent of all residents); the Asian community includes a sizeable Hmong population.

Table C-2: 2013 Household Income Quartiles

	Fresno County	California
Under \$25,000	28%	20%
\$25,000 – \$49,999	25%	21%
\$50,000 – \$74,999	17%	17%
Over \$75,000	29%	41%

Source: US Census American Community Survey

Fresno County is the top agricultural-producing county in the US, yet the area suffers from relatively high unemployment (around 11 percent in 2014) and low incomes (see Table C-2). County residents also have significantly lower levels of educational attainment than those in the rest of the State. Fresno Area Express (FAX), whose service area covers the City of Fresno and other urban areas in the county, is in the process of constructing high capacity bus corridors, which were considered in the agency’s most recent scenario planning process.

PBPP EXPERIENCE

In 2014, Fresno COG’s Board approved the agency’s 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). The 2014 Regional Transportation Plan, with a horizon year of 2040, was the eighteenth in a series of quadrennially updated plans that date back to 1975. It was the first RTP to incorporate a Sustainable Communities Strategy, in accordance with California Senate Bill 375 (SB 375). Enacted in 2008, SB 375 requires all California MPOs to develop an SCS that provides an integrated transportation and land use plan for meeting GHG emission reduction targets established by the California Air Resources Board (CARB).

As shown in Figure C-7, California law requires the Fresno COG region to achieve a five percent drop in per capita GHG emissions (compared to 2005 levels) by the year 2020, and to cut another five percent by 2035. Air quality analyses conducted for the 2014 plan development process predict

that implementation of the 22 goals laid out in the adopted RTP/SCS, shown below, will meet and even exceed the CARB targets.

Figure C-7: Fresno COG's GHG Reduction Targets in the 2014 RTP/SCS

Year	Per Capita GHG Reduction Targets	Fresno COG Per Capita GHG Reduction
2020	5%	9%
2035	10%	11%
2040	NA	12%

The adopted RTP/SCS includes six goals, each of which is supported by objectives as shown in the list below. Each objective is further supported by several policies, as illustrated in Figure C-8.

- ▶ General Transportation
 - An efficient, safe, integrated, multimodal transportation system
 - Improved mobility and accessibility for all regardless of race, income, national origin, age, or disability
 - Planning outcomes that are consistent with various planning efforts
 - A regional transportation network consistent with the intent of SB 375
 - Support cooperative efforts between Federal, State, and local agencies and the public to plan, develop and manage our transportation system
 - Attainment and maintenance of Federal and State ambient air quality standards (criteria pollutants) as set by US EPA and CARB.
- ▶ Highways, Streets, and Roads
 - An integrated and efficient highways, streets and roads network
 - Efficient use of available transportation funding
 - Acceptable level-of-service for the highways, streets and roads network
- ▶ Mass Transportation
 - An efficient and fiscally responsible public transportation mobility system
 - A safe and reliable public transportation service
 - An effective public transportation system
 - Public transit services with a positive public image in communities served
 - An integrated multimodal transportation system which facilitates the movement of people

- A coordinated policy for public transportation that complements land use and air quality policies
- ▶ Aviation
 - A fully functional and integrated air service and airport system that is complementary to the regional transportation system
- ▶ Non-Motorized
 - Maximize bicycling and walking through their recognition and integration as valid and healthy transportation modes in transportation planning activities
 - Safe, convenient, and continuous routes for bicyclists and pedestrians of all types which interface with and complement a multimodal transportation system
 - Improved bicycle and pedestrian safety through education and enforcement
 - Increased development of the regional bikeways system, related facilities, and pedestrian facilities by maximizing funding opportunities
- ▶ Rail
 - A safe, efficient and convenient rail system which serves the passenger and freight needs of the region and which is integrated with and complementary to the total transportation system
 - A transportation system that efficiently and effectively transports goods throughout Fresno County

Figure C-8: Example of Fresno’s Goal, Objectives, and Policies Organization

Goal : An efficient, safe, integrated, multimodal transportation system.	
Objective: Maintain and improve existing facilities as the basic system which will address existing and future travel demands.	Objective: Manage the financial resources which are available from government, the private sector, and users of the transportation system in a cost-effective manner to meet regional needs.
Policies: Manage the transportation system in a manner designed to increase operational efficiency, conserve energy and space, reduce air pollution and noise, and provide for effective goods movement, safety, personal mobility and accessibility.	Policies: Procure and leverage federal, state and local transportation funding to the maximum degree possible, in order to develop a regional transportation network which serves the residents of the region in the most economical, effective and efficient manner possible.
Continue support for the preservation of existing transportation facilities and, where practical, addressing transportation needs by using existing transportation modes efficiently.	Encourage new or reconstructed facilities to incorporate design standards which extend the life cycle and reduce maintenance costs.
Maintain stringent safety requirements for all transportation modes, and identify problem (hazardous) locations and implement counter measures for anticipated problems wherever possible.	Pursue additional funding sources for development of major transportation programs and projects. Work with all interest groups to reach consensus and initiate an active public information program regarding transportation funds needed.
Identify those transportation problems where transportation systems management can be effective.	

The plan’s objectives or policies do not correlate directly to specific performance measures or targets, except for those related to GHG emissions, although the agency did consider broadly the relationships between goals, objectives, and performance measures. The agency developed an array of performance measures for its scenario analysis process, and for an environmental justice analysis.

SCENARIO PLANNING EXPERIENCE

The 2014 RTP/SCS was built in part upon policies adopted through a broader regional scenario planning process. In 2006, the eight regions that comprise the San Joaquin Valley Councils of Governments/ Regional Policy Council (SJVRPC) came together to establish the San Joaquin Valley Regional Blueprint, a regional vision for land use and transportation intended to guide local and regional plans for Valley area growth over the next 50 years (a period in which the population is expected to more than double). Fresno COG’s participation in this larger planning process influenced its approach to scenario planning and its development of the 2014 RTP/SCS land use and transportation policies.

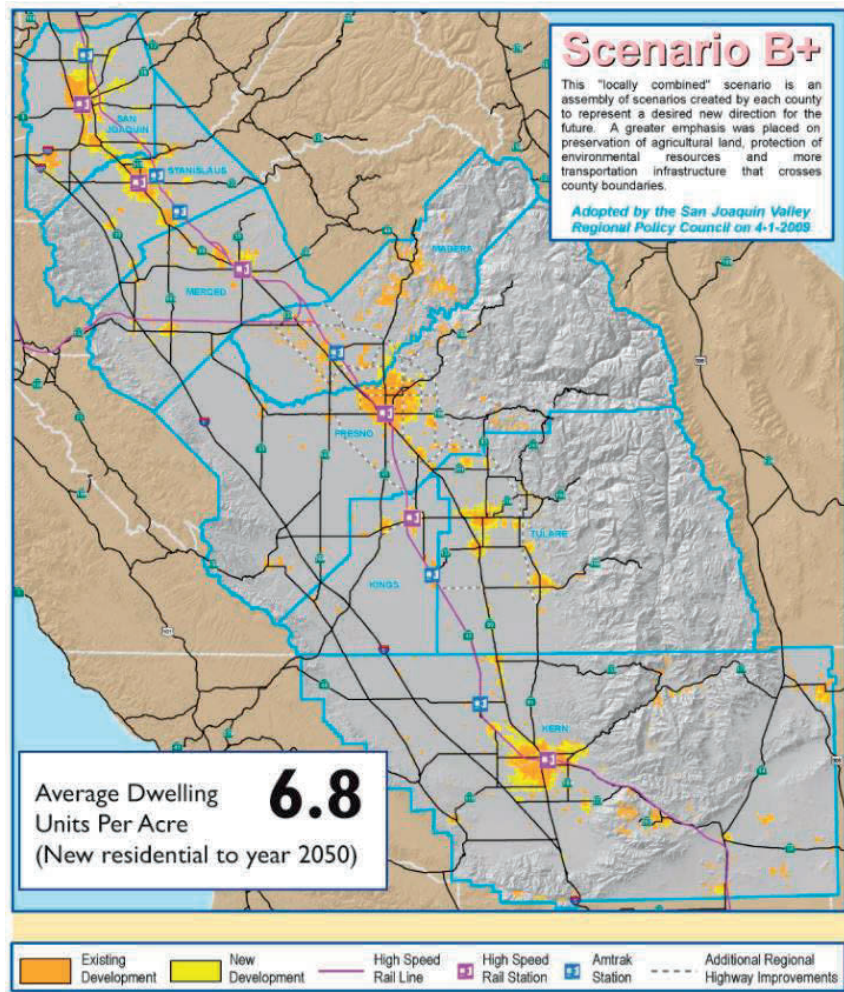
The Regional Blueprint process involved three major phases: Values and Vision; Goals, Objectives, and Performance Measures; and Evaluation of Alternative Growth Scenarios. With funding from the State’s Regional Blueprint Planning Program, each of the eight agencies developed its own countywide Blueprint, which was then woven into the single Valleywide Blueprint. UC-Davis

faculty and students and local planners worked together to develop alternative growth scenarios for each county using the UPlan analysis tool.

SJVRPC used the Vision California Rapid Fire model, a comprehensive modeling tool, to evaluate the impacts of varying land use scenarios on environmental performance. The model used a hybrid scenario developed by aggregating the compact development options from the Blueprint Plans developed by Fresno COG and the other MPOs in the San Joaquin Valley. The scenarios were evaluated based on VMT projections and the amount of farmland expected to be developed under each scenario. The results of the scenario analysis provided a regional context and useful data to inform the subsequent development of the Fresno COG 2014 SCS.

In 2009, the Policy Council endorsed Scenario B+ (illustrated in Figure C-9), along with 12 supporting smart growth principles. Under the preferred scenario, compared to historic patterns, less land is consumed for development, more resources are preserved for future generations, distinctive communities are enhanced, and more travel choices are available. Additional information about the performance measures used to evaluate the four Blueprint scenarios, and how scenarios were selected, is available from the Valley Blueprint website links listed in the footnotes. Following the Regional Blueprint process, Fresno COG's large cities, Clovis and Fresno, both updated their General (comprehensive) Plans to increase their focus on inward growth and development.

Figure C-9: Scenario B+ from the San Joaquin Valley Regional Blueprint Process



Following the planning process, SJVRPC developed a two-pronged approach for implementing the Blueprint strategy. The Blueprint Integration Project (BIP) was established to work with rural and agricultural communities to implement the Blueprint’s goals and objectives. The Smart Valley Places (SVP) program was developed to support implementation in urbanized metropolitan areas. Though the grants that funded the BIP and SVP ended in 2014, the impact of these programs continues through the ongoing collaboration among local agencies, elected officials, the public and non-governmental organizations to address the region’s problems.

Due to timing, the Blueprint process fed right into the SB 375-required GHG reduction target setting. Because the Blueprint process had occurred, the ideas and lessons from scenario planning in that process were relatively fresh, and because of the discussions that had taken place in the Blueprint process, the cities were more comfortable with the smart growth principles and had a better understanding of the value, for example, of active transportation. To set GHG targets, Fresno COG developed three scenarios and came up with draft GHG reduction targets. Although CARB

ultimately did not adopt the agency's recommendations, the exercise led to numerous data and tool improvements that Fresno COG employed in developing scenarios for its 2014 process. It also led to strengthened relationships between the COG and its member agencies, as they increasingly understood the purpose and vision of regional planning. During the target-setting process, three Fresno COG staff members went to Sacramento to meet with CARB and help them understand that both agencies share the same goals; this was ultimately a very valuable use of time and resources. CARB assisted Fresno COG with developing and refining its models.

To develop the 2014 RTP/SCS, Fresno COG established a 35-member RTP Roundtable that included 16 staff from member agencies, 16 representatives of stakeholder groups, and 3 "at large" representatives. The Roundtable, which advised the Fresno COG Board, participated in 12 meetings between August 2012 and November 2013. Inspired by a similar Roundtable established for the SJVRPC Blueprint process, the Fresno group was, according to MPO staff and agency representatives, an invaluable resource for fostering the level of regional collaboration upon which the plan's success depends.

The planning process was supported by a robust, intensive public engagement effort, featuring dozens of workshops, focus groups, community meetings, briefings, surveys, and small group discussions. The COG supplemented its small staff by establishing an innovative mini-grant program to recruit, train, and support a variety of community organizations to facilitate outreach with their constituents. Many of the grant recipient organizations went door-to-door to solicit input. Each mini-grant was worth about \$3,000. The entire program cost approximately \$25,000 and resulted in high turnout at workshops. The grant recipients had to attend training sessions, which helped ensure their staff understood what MPOs, RTPs, and SCS's are, so they would be adequately prepared to explain the process and answer residents' questions. One challenge with the mini-grant program was ensuring that grantees were not biased in their presentation of the issues to constituents—in the future, impartiality will be emphasized in trainings. The mini-grant program resulted in strong relationships between Fresno COG and the recipients, and has set a high bar with respect to engagement—community groups in the region are now asking other COGs to implement similar programs.

Fresno COG brought in translators to help facilitate community meetings and to convert published documents into as many as five different languages (in many cases with help from the mini-grant recipient organizations). COG staff also sought coverage by local news media, conducted a "transportation needs and values survey," worked with the library (a mini-grant recipients) to make sure computer users would see information about the plan, and used online social media tool to share information. To reduce the barriers to attending meetings, Fresno COG provided food and daycare and offered free transit service to meetings. In addition, the agency used web conferencing to enable remote participation in meetings. To ensure that all interested parties were able to have their voices heard, the agency extended the engagement period multiple times to allow for more inputs and comments and heighten satisfaction with the process. To reduce potential points of contention, the agency responded to all comments individually. In the future, the agency plans to develop a social media policy to guide interactions on Facebook and other sites.

Relationship-building and education was critical; the agency's significant investments of time, money, and in-kind resources for public engagement (including 19 meetings and a 150-attendee public meeting) yielded a high level of return—both in terms of improving the quality of the process and in achieving buy-in and support, among the community and decisionmakers, for the final plan. This was especially important given that the agency's member cities initially feared that Fresno COG's planning would infringe in some way upon their land use authority. Over time, through tireless engagement, they came to understand that the COG was trying to help them understand the implications of their land use decisions, and that they could take advantage of Fresno COG's technical skills to improve the quality of their own planning.

The COG, recognizing the need for agreed-upon indicators to evaluate scenarios, developed a list of 38 potential indicators that could be used.¹⁹ The agency only considered indicators for which staff knew data were available and that had already been used in the past. To select the top ten indicators for developing and evaluating the RTP/SCS scenarios, Fresno COG solicited input from the Roundtable and from participants in six focus group meetings, each with a specific topic focus, conducted in September 2012. Based on the input received, the agency decided to evaluate each scenario based on the following ten criteria and associated performance measures:

- ▶ **Greenhouse gas emissions reduction:** Percentage of per person GHG reduction against 2005
- ▶ **Housing by types:** Percent of housing by types
- ▶ **Residential density:** Average housing units per acre of new growth
- ▶ **Compact development:** Average number of people per acre
- ▶ **Transit oriented development:** Share of the region's growth in households and employment within half-mile of Bus Rapid Transit (BRT)/high capacity bus service
- ▶ **Land consumption:** Acres of land consumed due to new development
- ▶ **Important farmland:** Total acres of important farmland (prime, unique and statewide importance) consumed due to new growth
- ▶ **Vehicle miles traveled:** Total Vehicle Miles Traveled (VMT) on a typical day in 2035
- ▶ **Criteria pollutant emissions:** Tons of pollutants released per a typical day in 2035 (CO, Reactive organic gases, NO_x, PM₁₀, PM_{2.5})
- ▶ **Active transportation and public transit:** Weekday person trips by transit, walk and bike modes

Some participants of the focus groups, and RTP Roundtable and TTC members proposed other indicators that the agency should consider using in the future, as data and tools become available. The agency found that establishing the indicators for scenario evaluation up-front allowed the

¹⁹ This list is available in Appendix J, Item 8:
http://www.fresnocog.org/sites/default/files/publications/RTP/Final_RTP/Fresno_COG_2014_RTP-SCS_Appendix_Final.pdf.

agency to keep the discussion steered toward the indicators, and gave the agency the ability to deny mid-process requests to consider other factors.

After identifying the performance measures to be used in evaluating scenarios, Fresno COG developed and analyzed four scenarios, each of which featured alternative patterns of land development, density, and design. Implications of each scenario, in terms of the ten indicators listed above, were compared to each other and to a status quo scenario. Three of the scenarios (A, B, and C) were circulated broadly for public discussion in the late summer of 2013. Shortly after this public engagement period, a local coalition of community-based organizations proposed a fourth scenario (D), which COG staff analyzed (under significant time pressure) at the direction of the agency's TTC and PAC. The fourth scenario was included in the planning process and documents, but was not circulated for public review along with the other three, due to the timing of its introduction.

Key elements of the four Draft SCS Scenarios are listed below and summarized in Figure C-10. Expected performance outcomes under each scenario are summarized in Table C-3.²⁰

Figure C-11, selected from a presentation given by Fresno COG to the TTC and PAC, provides graphic depictions of the scenario evaluation results.

- ▶ **Scenario A** – This scenario is based upon public input collected at a community workshop in November 2012. The ratio of metro vs. non-metro growth is controlled, with more growth allocated to some rural communities than has occurred historically.
- ▶ **Scenario B: “Current Planning Assumptions”** – This scenario was developed in consultation with planners and representatives of COG member governments and agencies. Growth occurs according to historical patterns in each city and community, with some modifications based on current general plans, proposed land uses, and the latest planning assumptions. Unique among the four scenarios, this scenario includes actively proposed development projects in Millerton New Town, Friant Ranch, and the proposed pharmacy school.
- ▶ **Scenario C: “Foothill Growth to City of Fresno”** – This scenario was developed by the RTP Roundtable, principally to test concepts that would require more aggressive urban development than assumed in current plans. It assumes four percent of additional growth (beyond what City of Fresno was projected to receive) being reallocated away from the foothills and into corridors and activity centers in the City of Fresno. Under this scenario, growth in unincorporated areas would be constrained to ten existing communities. It does not include Scenario B's developments in Millerton New Town, Friant Ranch, and the proposed pharmacy school.
- ▶ **Scenario D: “Foothill Growth to Existing Communities”** – This scenario was developed by a Coalition of Community Based Organizations. Using the same population and

²⁰ For a more legible version of this table, see:

http://www.fresnocog.org/sites/default/files/publications/SCS/Performance_Measures_Matrix.pdf

employment forecasts as Scenarios A, B, and C, this scenario accommodates growth through redevelopment and higher densities within existing cities and communities, and allocates further growth to the unincorporated rural communities in the County areas. Like Scenarios A and C, this scenario does not include proposed developments in Millerton New Town, Friant Ranch, and the proposed pharmacy school.

Although none of the measures used to evaluate scenarios directly addressed social equity, the topic was part of discussions throughout the scenario planning process. Questions regarding where development would occur, who would benefit, etc. were regularly raised, which was unsurprising given the economic hardship faced by many of the County's residents. In November 2013, the Fresno COG Policy Board unanimously selected Scenario B as the Preferred Scenario to guide the RTP/SCS. Scenario B did not perform as strongly as the other three scenarios in terms of the ten priority indicators, but it was still a significant improvement over the trend line projection (status quo scenario). As with the other three scenarios, the preferred Scenario B exceeded the GHG reduction targets established by CARB. Perhaps the most compelling element of Scenario B is that it was the most politically feasible: it reflected adopted local land use plans and current development projects, which in turn reflect, to varying extents, the smart growth principles developed through the SJVRPC Blueprint process. Implementing Scenario B required only modest modifications, if any, to local land use policies and plans. Key "next steps" needed to implement the preferred scenario will focus upon supporting implementation of local general plans, especially the City of Fresno's, which calls for aggressive land use changes, as well as pursuing funding to implement the RTP/SCS transportation strategies.

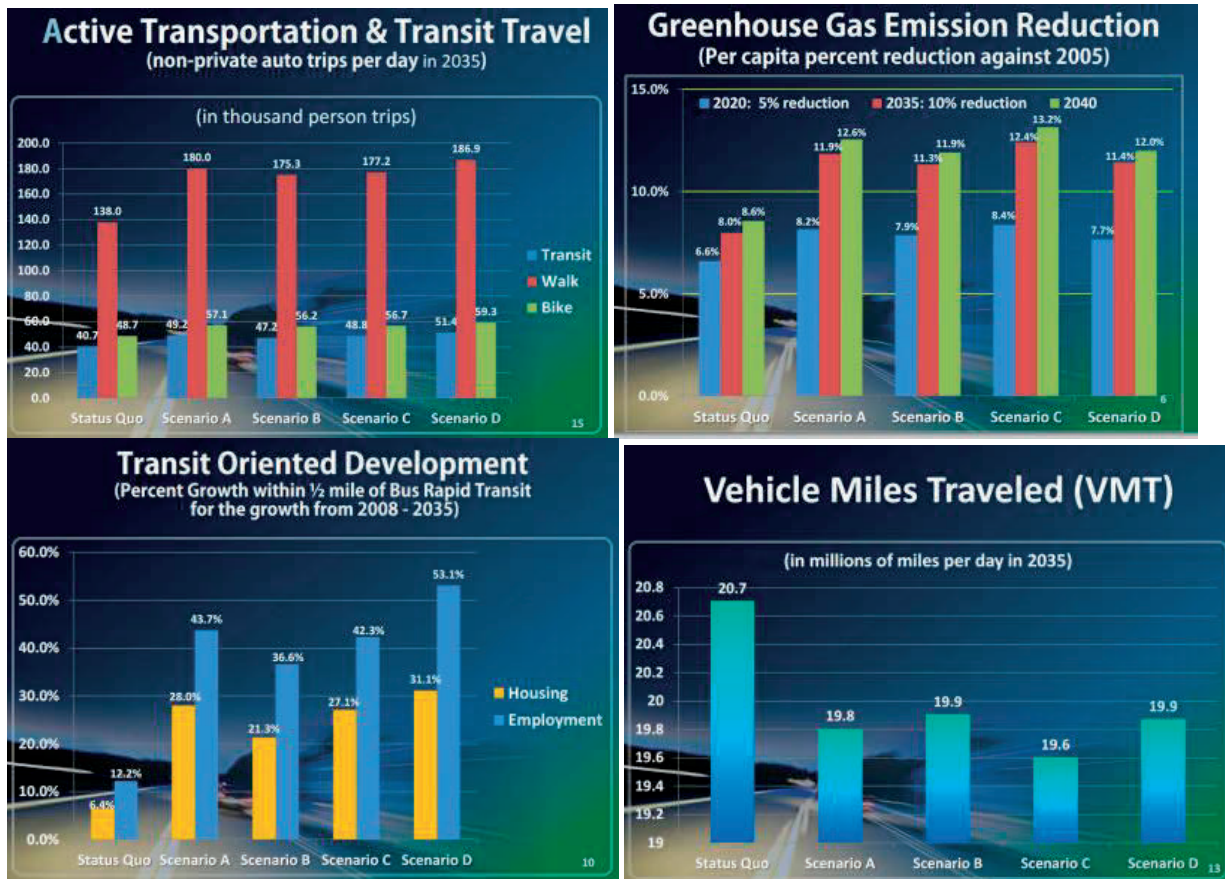
Figure C-10: The Four Fresno COG Scenarios

Scenario >	A	B	C	D
Central Theme	Public input from November 2012 workshop	Current planning assumptions	Foothill growth to City of Fresno	Foothill growth to existing communities
Proposed By...	Public	Member Agencies	RTP Round Table	Coalition of Community Organizations
Defining Characteristics	<ul style="list-style-type: none"> • Considers public input from November 2012 workshop • Growth in the metro area conforms to historical trend • Some rural communities receive much higher growth 	<ul style="list-style-type: none"> • Follows current general and specific plan updates • Growth allocation follows historical trend • Includes development in Friant Ranch, Millerton, and the proposed pharmacy school 	<ul style="list-style-type: none"> • Additional 4% of countywide growth allocated to City of Fresno along corridors and activity centers • Unincorporated growth constrained to 10 existing communities; little change in incorporated cities • Development in Friant Ranch, Millerton, and the proposed pharmacy school not included 	<ul style="list-style-type: none"> • Developed by coalition of community organizations • Increased redevelopment and higher density for new growth • Growth reduced from the foothill communities and reallocated to existing cities and communities • Development in Friant Ranch, Millerton, and the proposed pharmacy school not included
Communities with Significant Changes in Growth Allocation*	<p>Less Growth</p> <ul style="list-style-type: none"> • Clovis, Coalinga, Parlier, Sanger • Auberry, Friant Ranch, Millerton, Shaver Lake <p>More Growth</p> <ul style="list-style-type: none"> • Firebaugh, Fresno, Huron, Kerman, Kingsburg, Orange Cove, San Joaquin • Caruthers, Easton, Lanare, Laton, Raisin City, Riverdale, Squaw Valley 	Each city/community receives growth based on historical trend	<p>No Growth</p> <ul style="list-style-type: none"> • Auberry, Friant Ranch, Millerton, Raisin City, Squaw Valley <p>More Growth</p> <ul style="list-style-type: none"> • Fresno 	<p>No Growth</p> <ul style="list-style-type: none"> • Friant Ranch, Millerton <p>Less Growth</p> <ul style="list-style-type: none"> • Auberry <p>More Growth</p> <ul style="list-style-type: none"> • Biola, Bowles, Caruthers, Del Rey, Easton, Lanare, Laton, Raisin City, Riverdale, Tranquillity

Table C-3: Fresno COG's Sustainable Communities Strategy Scenario Performance Indicator Comparisons

Performance Measure/Indicator	Definition	Scenario A	Scenario B	Scenario C	Scenario D	Status Quo
Greenhouse Gas emission reduction	Percentage of per person greenhouse gas reduction against 2005.	2020: -8.15% 2035: -11.85% 2040: -12.55%	2020: -7.86% 2035: -11.32% 2040: -11.91%	2020: -8.36% 2035: -12.40% 2040: -13.15%	2020: -7.7% 2035: -11.4% 2040: -12%	2020: -6.59% 2035: -7.97% 2040: -8.56%
Housing	Percent of housing by types	Single Family: 44.1% Town Homes: 9.0% Multi-Family: 46.9%	Single Family: 53.1% Town Homes: 9.1% Multi-Family: 37.8%	Single Family: 45.1% Town Homes: 8.3% Multi-Family: 46.6%	Single Family: 36.6% Town Homes: 14.6% Multi-Family: 48.8%	Single Family: 77.7% Town Homes: 7.3% Multi-Family: 15.1%
Residential density	Average housing units per acre of <u>new growth</u>	8.3 Housing Units per acre	7.4 Housing Units per acre	8.5 Housing Units per acre	10.2 Housing Units per acre	4.6 Housing Units per acre
Compact development	Average number of people per acre	27.6 people per acre	21.1 people per acre	24.7 people per acre	31.1 people per acre	13.9 people per acre
Transit-oriented development	Share of the region's growth in households and employment within half-mile of Bus Rapid Transit (BRT)	Housing Units: 27,475 (28.0%) Employment: 35,805 (43.7%)	Housing Units: 20,389 (21.3%) Employment: 29,958 (36.6%)	Housing Units: 26,416 (27.1%) Employment: 34,646 (42.3%)	Housing Units: 33,415 (31.1%) Employment: 43,518 (53.1%)	Housing Units: 5,787 (6.4%) Employment: 9,969 (12.2%)
Land consumption	Acres of land consumed due to new development	11,226 acres	14,675 acres	12,542 acres	9,961 acres	22,308 acres
Important farmland consumed	Total acres of important farmland (prime, unique and state-wide importance) consumed due to new growth	90.6 acres	37.6 acres	27.4 acres	21.3 acres	352 acres
Vehicle Miles Traveled (VMT)	Total Vehicle Miles Traveled (VMT) on a typical day in 2035	Total VMT: 19,789,601 miles Per capita VMT: 15.2 miles Per capita reduction: -11.1%	Total VMT: 19,924,347 miles Per capita VMT: 15.3 miles Per capita reduction: -10.5%	Total VMT: 19,638,153 miles Per capita VMT: 15.1 miles Per capita reduction: -11.8%	Total VMT: 19,878,208 miles Per capita VMT: 15.3 miles Per capita reduction: -10.7%	Total VMT: 20,743,263 miles Per capita VMT: 15.9 miles Per capita reduction: -6.8%
Criteria pollutants emissions	Tons of pollutants released per a typical day in 2035: Carbon Monoxide, Reactive Organic Gases, Nitrogen Oxide, Particulate Matter 10, Particulate Matter 2.5	Carbon Monoxide: 40 tons Reactive Organic Gases: 4.6 tons Nitrogen Oxide: 11.3 tons Particulate Matter 10: 7.9 tons Particulate Matter 2.5: 1.0 tons <i>(All Pass Conformity)</i>	Carbon Monoxide: 40 tons Reactive Organic Gases: 4.6 tons Nitrogen Oxide: 11.4 tons Particulate Matter 10: 7.9 tons Particulate Matter 2.5: 1.0 tons <i>(All Pass Conformity)</i>	Carbon Monoxide: 40 tons Reactive Organic Gases: 4.6 tons Nitrogen Oxide: 11.3 tons Particulate Matter 10: 7.8 tons Particulate Matter 2.5: 1.0 tons <i>(All Pass Conformity)</i>	Carbon Monoxide: 40 tons Reactive Organic Gases: 4.6 tons Nitrogen Oxide: 11.4 tons Particulate Matter 10: 7.9 tons Particulate Matter 2.5: 1.0 tons <i>(All Pass Conformity)</i>	Carbon Monoxide: 41 tons Reactive Organic Gases: 4.8 tons Nitrogen Oxide: 11.6 tons Particulate Matter 10: 8.2 tons Particulate Matter 2.5: 1.0 tons <i>(All Pass Conformity)</i>
Active Transportation and transit travel	Weekday person trips by transit, walk and bike modes	Transit: 49,155 trips Walk: 180,009 trips Bike: 57,065 trips	Transit: 47,202 trips Walk: 175,316 trips Bike: 56,213 trips	Transit: 48,765 trips Walk: 177,172 trips Bike: 56,743 trips	Transit: 51,448 trips Walk: 186,909 trips Bike: 59,302 trips	Transit: 40,650 trips Walk: 138,033 trips Bike: 48,715 trips
Central Theme of Scenario - Proposed by...		Public Input from November 2012 Public Workshop	Current planning assumptions - member agencies	Foothill growth to City of Fresno - RTP Roundtable	Foothill growth to existing communities - Coalition of Community Organizations	

Figure C-11: Expected Performance with Respect to Active Transportation, GHG Emissions Reductions, Transit-Oriented Development, and Vehicle Miles Traveled (respectively) under Each Scenario



In addition to evaluating land use and transportation scenarios for the 2014 RTP/SCS, Fresno COG also analyzed four alternative combinations of revenue projections and priority projects. Each scenario assumed the same total future funding levels, but varied the types of allocations within three main “flexible” funding sources: RSTP, CMAQ, and TAP. The four revenue projection scenarios are described below and are shown in Table C-4.²¹

- ▶ **Traditional** – Continuation of modal allocations in the current Transportation Improvement Program (TIP).
- ▶ **Increased Active Transportation** – This analysis adjusted the percentages per mode within each of the three main funding sources to support moderate increases in bicycle, pedestrian, transit, and street capacity projects.

²¹ Details on each are available in Appendix C of the RTP/SCS.

- ▶ **Emphasis on Active Transportation** – Under this projection, a significant commitment was made to increase the direct funds toward projects that would deliver complete streets, bike lanes, new sidewalks, etc.
- ▶ **Emphasis on Maintenance** – Developed at the request of the PAC, the fourth scenario redirects all flexible funds to support the “fix it first” emphasis on preserving the existing local street and road network, with correspondingly fewer funds allocated to bicycle, pedestrian, transit, and capacity expansion projects.

Table C-4: Spending by Transportation Mode by Revenue Scenario

Mode	Revenue Projection 1: Traditional	Revenue Projection 2: Increased Active Transportation	Revenue Projection 3: Emphasis on Active Transportation	Revenue Projection 4: Emphasis on Maintenance
Bicycle & Pedestrian	3.59%	4.89%	9.03%	3.26%
Streets & Roads Capacity Increasing	24.06%	24.00%	22.96%	22.96%
Streets & Roads Operations and Maintenance	24.91%	23.02%	17.54%	26.45%
Streets & Roads - Any Type	8.53%	8.53%	8.53%	8.53%
Transit	30.56%	31.56%	34.07%	30.45%
Other/Multiple Modes	8.34%	7.99%	7.87%	8.34%

To score projects submitted, Fresno COG uses Project Evaluation Criteria, which were developed by the Financial Element Technical Working Group and approved by the Board. The Criteria vary by mode and project type (bike and pedestrian, capacity increasing road projects, operations and maintenance road projects, and transit), so that only similar projects are evaluated against each other.

When the projects (by mode) were compared against the revenue projection scenarios (again, by mode), Projections 1 and 2 (Traditional and Increased Active Transportation) resulted in the same project list (“A”), due to the relatively low amount of eligible flexible funds. Revenue Projections 3 and 4 also produced the same project list (“List B”). The difference between Lists A and B was the inclusion in List B of five fiscally unconstrained, capacity-increasing projects (most of which bicycle and pedestrian components).

Based on this analysis, the Policy Board chose List A as the most inclusive, cost-effective and financially constrained. Taking into account the bicycle and pedestrian components of capacity-increasing projects in List A, Fresno COG developed an estimate of modal allocations for the preferred scenario, as shown in Table C-5.

Table C-5: Revenues Programmed by Transportation Mode²²

Project Type	Total Dollars		Number of Projects	
	Dollar Amount	Percentage	Number	Percentage
Bicycle & Pedestrian	\$112,708,000	2.52%	202	13.75%
Streets & Roads Capacity Increasing	\$1,747,945,000	39.16%	297	20.22%
Streets & Roads Operations and Maintenance	\$1,011,398,000	22.66%	894	60.86%
Transit	\$1,591,878,000	35.66%	76	5.17%
TOTAL	\$4,463,929,000	100%	1469	100%

It is important to note that a limitation to the effectiveness of project prioritization in California is the limited amount of flexibility allowed in spending projects funded by sales tax measures. All sales tax funding measures voted upon must identify which in advance which projects will be funded with the money generated from the tax.

DATA AND TOOLS

In 2012, the eight-MPO consortium that conducted the Blueprint process hired a consultant team, which used forecasting models to develop county-level Year 2050 population and employment projections for use in the scenario planning process. The projections determined total household population and employment numbers Countywide, and allowed for assessment of other metrics such as household sizes and vacancy rates.

In the 2006-07 Regional Blueprint scenario planning process, the tools used did not allow Fresno COG to do parcel-level modeling. Fresno COG used Envision Tomorrow to develop land use scenarios for its 2014 plan.²³ Throughout the 2014 process, the tools and capabilities were evolving; as needs for more analysis were identified, the agency’s staff tried to see which could be met by increasing their analysis capabilities, given the tools and data available. COG staff are now (after completion of the 2014 process) considering various modifications and additions to the agency’s suite of scenario modeling tools. One tool of particular interest is Urban Footprint, an open-source, online scenario modeling tool that bears similarity to Envision Tomorrow, but provides more flexibility and customization by the user. Perhaps most notably to Fresno COG, Urban Footprint users can allocate two or more different land use types within parcels, as opposed to allocating only one type to the entire parcel, which allows for a more accurate analysis of the impact of mixed use development. Since Urban Footprint is run from the cloud, users can access it with a basic internet browser and a high-speed data connection, which reduces the need to invest in a powerful desktop computer and staff training to support GIS modeling. The online feature makes Urban Footprint a

²² As explained above, these figures represent estimates made after consideration of the spending on bicycle- and pedestrian-specific components of road projects.

²³ Appendix J Items 5 and 7 discuss the land use modeling conducted and the development of each scenario. http://www.fresnocog.org/sites/default/files/publications/RTP/Final_RTP/Fresno_COG_2014_RTP-SCS_Appendix_Final.pdf.

bit more time-consuming to use because of the need to upload and download data and/or to wait for runs to be completed. However, it could reduce the amount they agency needs to spend on software, training, and technical support fees, which may be particularly appealing to smaller MPOs with fewer staff and computing resources.

Fresno COG's Travel Demand Model (TDM) uses Cube software and is based on a traditional four-step process, with modifications to reflect mode splits and the multimodal implications of different assumptions about land use density, diversity, design, and location (destination). Fresno COG made a number of updates to its TDM to improve its ability to estimate GHG reductions under each scenario in the GHG target-setting process, including splitting TAZs into smaller zones in high-density areas to reflect smart growth policies.²⁴ The TDM does include transit. Staff hope to upgrade in the future to an activity-based model. COG also used the CARB's Emissions Factors (EMFAC) model. Together, CARB and Fresno COG designed and ran five sensitivity tests to the model to estimate GHG reductions and verify that the region's reduction targets could be met.

Fresno COG also used a number of off-model tools to address issues not covered by the TDM such as ride-sharing, employer-based commute strategies, bicycle and walk facility enhancements, and ITS deployments.²⁵ Fresno COG is working with the State's public health department to develop an Integrated Transportation and Health Model (ITHIM) in-house. The ITHIM is from England and was adapted by the health department; the Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area and the San Diego Association of Governments (SANDAG) have also developed ITHIMs for their own regions. The ITHIM estimates the health co-benefits and potential harms from active transport and low carbon driving in urban populations. It relates physical activity, air pollution, and travel behaviors to specific health outcomes based on established causal relationships reported in the scientific literature for: heart and respiratory disease; stroke; diabetes; cancers of the breast, colon and lung; dementia; and depression. This is particularly significant given the high incidence with which the County's population faces many of these health problems.

In addition to more effectively considering public health in its future scenario planning activities, Fresno COG also continues to seek ways to more meaningfully consider (and, ultimately, address) social equity. In addition, staff are currently working on the agency's Congestion Management Process and are using the Process as an opportunity to explore improved performance monitoring systems that could be implemented.

LESSONS LEARNED

- ▶ Identifying the performance measures that will be used to evaluation scenarios up early in the scenario planning process helps ensure a productive and effective process. Tying scenario planning to performance meaures allow for more effective communication about

²⁴ Appendix J of the plan describes these in more detail.

http://www.fresnocog.org/sites/default/files/publications/RTP/Final_RTP/Fresno_COG_2014_RTP-SCS_Appendix_Final.pdf.

²⁵ Id.

why some scenarios are better performing than others and the extent to which goals can be achieved under each scenario.

- ▶ In hindsight, the Fresno COG's staff found that evaluating scenarios that were not consistent with reality (e.g., those that did not take preapproved development plans into consideration) was not a particularly productive exercise. The lesson learned from this experience was that it is important to set ground rules regarding what changes will, and will not, be formally considered in developing scenarios. Any evaluating of expected impacts under unrealistic scenarios should be done simply to understand the likely impacts of future decisions.
- ▶ Engaging with partners early and often throughout the scenario planning process was key for ensuring unanimous consensus in selecting a scenario and assuaging local agencies' concerns about the (perceived) need to protect their land use authority.
- ▶ The mini-grant program for local community-based organizations to engage residents in the planning process was very successful and cost-effective. The relationships that were strengthened due to that program have enhanced the quality of planning in the region (e.g., through the engagement of non-English-speaking communities) and resulted in greater support in the community for the smart growth principles that date back to the Regional Blueprint process.
- ▶ Having highly skilled technical staff who are responsive is important for enhancing the ability to incorporate performance measures into scenario planning and conduct analyses that improve stakeholders' understanding about planning and investment options.
- ▶ Inclusion of groups whose interests are often not aligned with the agency's (e.g., Building Industry Association in this case) is valuable to improve understanding, identify opportunities for mutually agreeable solutions, and keep lines of communication open.

RESOURCES

- ▶ Fresno COG RTP/SCS website, <http://www.fresnocog.org/sustainable-communities-strategy-development-and-outreach>.
- ▶ San Joaquin Valley Blueprint Planning Process website, <http://www.valleyblueprint.org/>.

Hillsborough County MPO

The Hillsborough County MPO is responsible for transportation planning in Hillsborough County, Florida, which is located in the west-central portion of the State. Hillsborough County MPO's jurisdiction includes the cities of Tampa, Temple Terrace, and Plant City, and unincorporated Hillsborough County. The MPO Board is composed of elected officials from Hillsborough County, City of Tampa, City of Plant City, and City of Temple Terrace, as well as officials from the Hillsborough Area Regional Transit Authority (HART), Hillsborough County Aviation Authority, Tampa-Hillsborough Expressway Authority, Tampa Port Authority, and the Hillsborough County City-County Planning Commission.

Hillsborough County is home to about 1.2 million people and is the largest population and employment center within the Tampa Bay region, which is home to 2.8 million residents. The county is growing rapidly and is expected to add 600,000 people by 2040. The MPO boundary, as is typical in Florida, is concurrent with the county boundary, which means that the Hillsborough County MPO represents less than half of the metropolitan area's population of 2.8 million. Like Hillsborough County, the Tampa Bay region as a whole has been growing rapidly, which has led to severe traffic congestion. The region is the 12th most congested metropolitan area in the country, according to a report prepared jointly by the region's seven MPOs.

The region's land use and development pattern is an important aspect of the context for Hillsborough's transportation plans. Unlike Pinellas County, its neighbor to the west, Hillsborough County has an abundance of developable land. Therefore, it is likely to absorb much of the region's growth through 2040. A key question continuously facing the county and its transportation planners is where and how that growth will occur. The MPO's most recent scenario planning effort explored this question.

Table C-6: Hillsborough County MPO Population and Employment Growth

	2010	2040 Projection	Growth
Total Population	1,229,226	1,815,964	586,738
Total Employment	711,400	1,112,059	400,659

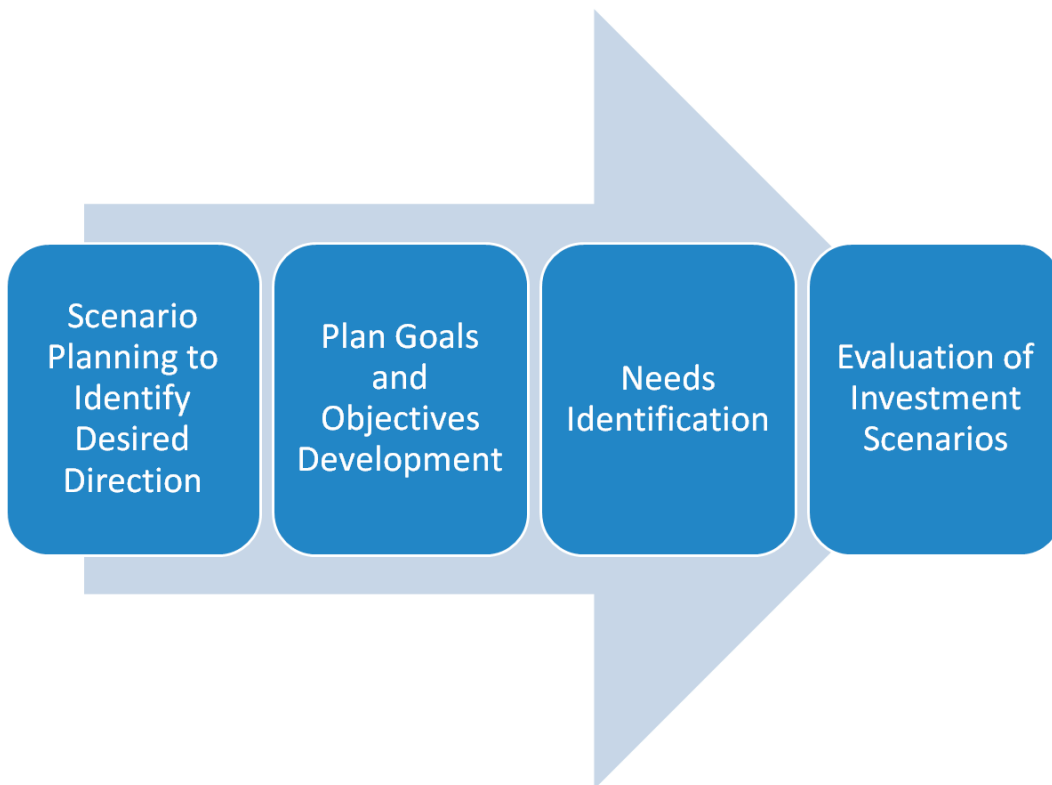
The MPO and the Hillsborough County City-County Planning Commission collaborated in 2013 and 2014 to update the MPO's long range transportation plan and the local governments' comprehensive plans concurrently. This effort was named Imagine 2040. The Hillsborough County City-County Planning Commission serves as the planning agency for all local governments in Hillsborough County. According to the Commission's website, "It performs consolidated planning services and makes independent recommendations to the Board of County Commissioners, Plant City Commission, Tampa City Council, Temple Terrace City Council and other appropriate public bodies concerning the orderly growth and development of Hillsborough County."²⁶ The MPO and

²⁶ The Planning Commission. Meeting the Planning Commissioners. Accessed February 19, 2015. <http://www.planhillsborough.org/meet-your-planning-commissioners/>.

the Planning Commission convened a working group of residents, students, business and civic leaders, retirees, and various professionals to guide development of the Plan.

The Imagine 2040 planning process is notable for its use of scenario planning at multiple points for different purposes. Hillsborough County MPO’s process used scenario planning in the Direction, Analysis, and Programming phases of the process. The MPO used scenario planning to define a preferred future land use and transportation vision for the county. Later in the process to the agency used scenario planning to compare the performance of the transportation system under a trend investment scenario (in which funding followed recent trends) and in two investment scenarios with increased funding.

Figure C-12: Hillsborough County MPO’s Imagine 2040 Planning Process



PBPP EXPERIENCE

The Imagine 2040 Plan includes six goals, each of which is divided into multiple objectives; each objective is then supported by a number of policies listed in the plan.

1. Enhance the safety and security of the transportation system for both motorized and non-motorized users.
2. Support economic vitality to foster the global competitiveness, productivity, and efficiency of local and regional businesses.

3. Improve the quality of life, promote energy conservation, and enhance the environment, while minimizing transportation-related fuel consumption, air pollution, and greenhouse gas emissions.
4. Promote accessibility and mobility by increasing and improving multi-modal transportation choices, and the connectivity across and between modes, for people and freight.
5. Assure that transportation improvements coordinate closely with comprehensive land use plans and support anticipated growth and development patterns.
6. Consider cost-effective solutions that preserve existing facilities and optimize the efficiency of Transportation System Management and operations.

The goals and objectives were informed by the first scenario planning exercise that the agency undertook to determine the preferred growth scenario that policy decisions should support. Although the goals consider the role of transportation in achieving societal benefits (e.g., improving economic vitality and global competitiveness, and reducing air pollution), the agency’s specific performance areas and measures are more narrow in scope, including only measures that can be affected by the agency’s policies and investments. The performance areas are:

- ▶ Preserve the System
- ▶ Reduce Crashes & Vulnerability
- ▶ Minimize Traffic for Drivers & Shippers
- ▶ Real Choices When Not Driving
- ▶ Major Investments for Economic Growth

Within each performance area, Hillsborough MPO identified relevant performance measures that it would use to evaluate performance. These are listed in Table C-7 below.

Table C-7: LRTP Performance Measures

Category	Measure
Preserve the System	Percentage of roads resurfaced annually (i.e., duration of resurfacing cycle in years)
Preserve the System	Number of transit road-calls (vehicle breakdowns) per day
Reduce Crashes and Vulnerability	Fatality rate per 100,000 residents
Reduce Crashes and Vulnerability	Pedestrian fatality rate per 100,000 residents (and/or Pedestrian Death Index)
Reduce Crashes and Vulnerability	Bicycle and pedestrian crashes per 100,000 residents
Reduce Crashes and Vulnerability	Injury crashes per 100 million Vehicle Miles Traveled (VMT)
Reduce Crashes and Vulnerability	Fatality crashes per 100 million VMT
Reduce Crashes and	Total crashes per 100,000 residents

Category	Measure
Vulnerability	
Reduce Crashes and Vulnerability	Total crashes per 100 million VMT
Reduce Crashes and Vulnerability	Travel time delay due to transportation network disruption (hurricane)
Reduce Crashes and Vulnerability	Lost trips due to transportation network disruption (hurricane)
Reduce Crashes and Vulnerability	Economic losses due to storm in 2014 dollars
Minimize Traffic for Drivers and Shippers	Reliability: Travel Time Index Planning Time Index (mean travel time/free flow travel time) <i>Segments with a ratio of over 0.8 identified as “needing improvement”</i>
Minimize Traffic for Drivers and Shippers	Arterial capacity (percentage increase)
Minimize Traffic for Drivers and Shippers	Incident frequency
Minimize Traffic for Drivers and Shippers	Incident duration
Minimize Traffic for Drivers and Shippers	Percent miles of congested freight routes
Minimize Traffic for Drivers and Shippers	Percent of freight hotspots mitigated
Minimize Traffic for Drivers and Shippers	Planning Time Index (freight travel time reliability measure)
Minimize Traffic for Drivers and Shippers	Buffer Index (amount of time that must be added for freight to travel through a corridor)
Minimize Traffic for Drivers and Shippers	Cost of freight delay
Real Choices When Not Driving	Transit Level of Service (Using Florida DOT’s ARTPLAN methodology)
Real Choices When Not Driving	Percentage of 2040 population and jobs served by bus system
Real Choices When Not Driving	Percentage of the population served by fixed route transit
Real Choices When Not Driving	Pedestrian Level of Service (PLOS)
Real Choices When Not Driving	Bicycle Level of Service (BLOS)
Real Choices When Not Driving	Percentage of the population living near a “good” or “excellent” walk/bike facility
Real Choices When Not Driving	Percentage of jobs located near a “good” or “excellent” walk/bike facility
Major Investments	Portion of roadway facilities at least 30 percent over capacity in 2040

Category	Measure
for Economic Growth	(according to forecast)
Major Investments for Economic Growth	Delay reduction-to-Centerline Miles (constructed) Ratio
Major Investments for Economic Growth	2040 Jobs-to-Centerline Miles (constructed) Ratio

SCENARIO PLANNING EXPERIENCE

The Imagine2040 plan and process are particularly notable because Hillsborough County MPO used scenario planning for multiple purposes to support decisionmaking in all four key phases of the PBPP process, as detailed below.

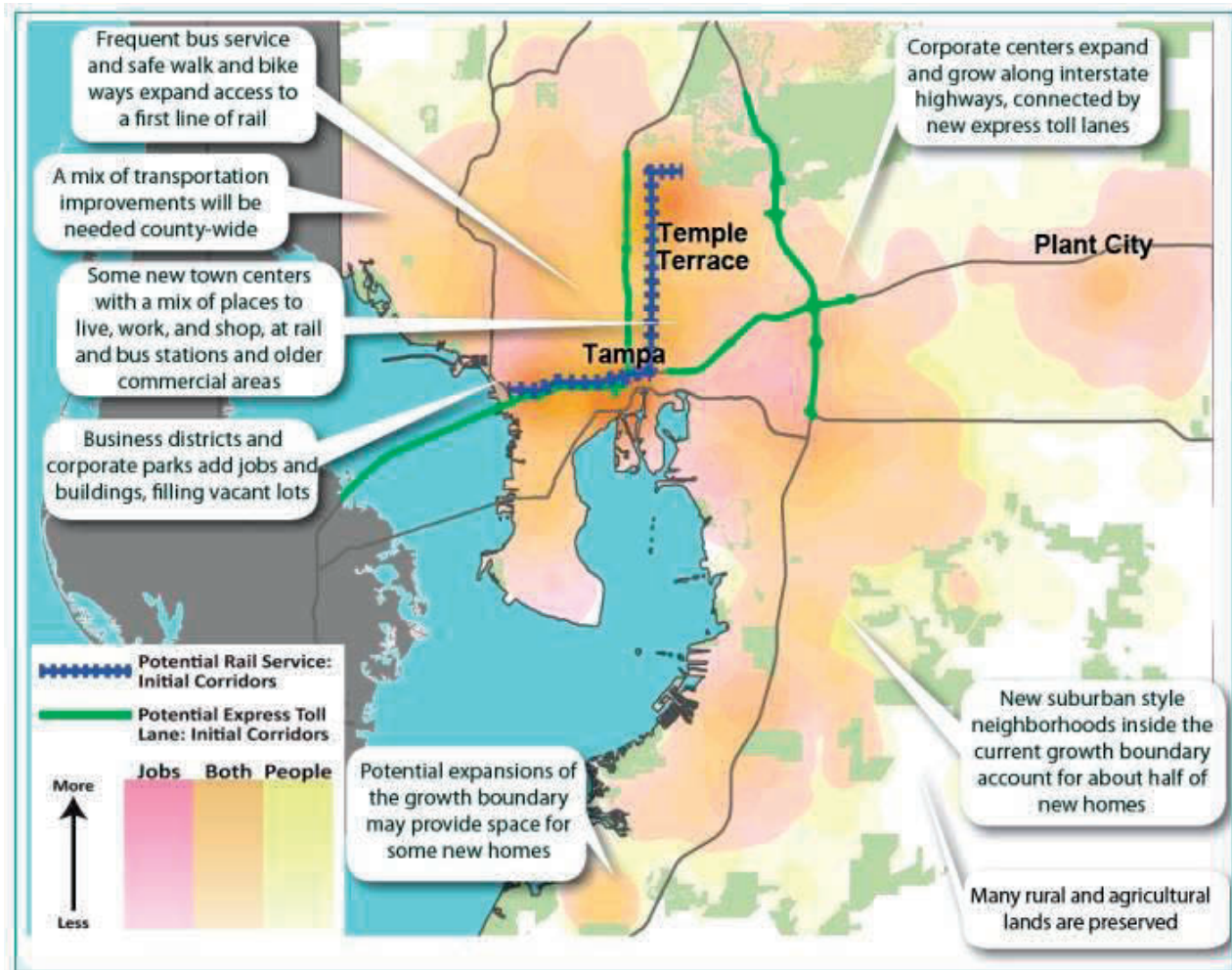
Scenario Planning to Support Direction Phase

The MPO and the Hillsborough County City-County Planning Commission convened the working group to develop the following three growth scenarios:

- ▶ **Suburban Dream:** This scenario “is primarily low-density residential growth with employment spread across the county. This vision, because it tends towards low-density residential development, will consume the most agricultural and rural land of the three.”
- ▶ **Bustling Metro:** This scenario “is a much higher density approach to residential development, occurring closer to the urban centers. Employment occurs primarily in the existing economic centers. These factors result in little demand to expand the Urban Service Area boundary, and agricultural and rural lands are protected.”
- ▶ **New Corporate Centers:** This scenario “envisions somewhat denser residential development, with most new jobs created in identified job centers. There may be a moderate need to expand the Urban Service Area boundary around the interstate highway and interchanges to accommodate these centers. Because much of the residential growth will continue in a suburban pattern, some agricultural and rural lands will be consumed by development.”

The Planning Commission and MPO took the scenarios to the public and solicited feedback through an online survey (3,500 responses), nearly 100 meetings, and interactive kiosks at 49 locations throughout the County. Based on the feedback received, the working group and MPO developed a fourth scenario called the Hybrid Scenario. This scenario is a combination of the Bustling Metro and New Corporate Centers scenarios. The Hybrid Scenario is depicted in Figure C-13, as it appears in the long range transportation plan.

Figure C-13: Imagine 2040 Preferred Scenario



The MPO used MetroQuest to obtain public input on the scenarios. The MPO states in the plan that “this online community engagement platform allowed the public to select future growth strategies as well as choose their preferred future transportation infrastructure program investment levels and major projects they want for Hillsborough County.”²⁷ The MPO also used Facebook and Twitter to communicate with the public.

Using the regional travel demand model, the MPO evaluated the scenarios according to the performance measures listed in Table 8. These measures are broader than the measures listed in Table C-, which the MPO used to assess transportation needs and evaluate investment scenarios. The MPO intentionally selected measures that it thought would resonate with the public.

²⁷ Hillsborough MPO. *Imagine 2040: Part 2 Public Engagement Summary*. September 23, 2014. <http://www.planhillsborough.org/Imagine2040/>.

Table C-8: Performance Measures Used to Evaluate Scenarios

Category	Measure
Impact on Agriculture	Potential impact on agricultural lands by increased residential development
Impact on Natural Resources	Potential for large wetlands (greater than 40 acres) and designated Significant Wildlife Habitats to be impacted by the increase in residential development
Efficient Energy Use	Energy consumption by vehicles (cars, trucks, buses, passenger rail), and by typical households living in single-family homes or apartments
Efficient Water Use	Water consumption by typical households living in single-family homes or apartments
Impact on Water Quality	Relative increase in impervious surfaces
Job Creation	Population to job ratio
Traffic Delay/Traffic Congestion	Vehicle hours of delay per person on a typical weekday
Shorter Commutes	Length of the average home-to-work trip
Air Pollution Rate	Total tons of emissions from vehicles, standardized per person
Cost to Expand Infrastructure	Relative cost of providing infrastructure to each new home or apartment
Potential for Redevelopment	Potential for previously developed office, retail or industrial land to attract a new use
Available Bus or Rail Service	Percentage of all people and jobs that are within walking distance to bus service
Access to Jobs from Underemployed Communities	A forecast of the length of the average home-to-work trip for communities protected under the Executive Order on Environmental Justice, and the percent of those communities with access to transit service running at least once every 30 minutes

The Imagine2040 Plan includes visualizations to help stakeholders and the public understand each scenario’s expected impact on performance for each of the measures listed above. The MPO presented the results graphically rather than quantitatively. Figure C-14 shows an example of these visualizations.

Figure C-14: Visualization of Expected Performance for Each Scenario



Based on the community’s input, the MPO ultimately settled on a new alternative scenario that combined aspects of the Bustling Metro and New Corporate Centers scenarios. This preferred scenario, also called the Hybrid Scenario, became the basis for the *Imagine 2040* Long range Transportation Plan. It allocates growth primarily to infill development, along with selected locations for future intense development around fixed guideway transit. It also calls for a modest expansion of the urban service boundary.

The MPO and the Hillsborough County City-County Planning Commission jointly prepared the scenarios. The MPO makes the following statements in the long range transportation plan about the *Imagine 2040* Scenario Planning project:

- ▶ The Long Range Transportation Plan’s goals, objectives, and policies take into consideration input from the preferred growth scenario
- ▶ The MPO used the Hybrid Growth Scenario to identify the needed transportation projects.

Scenario Planning to Support Analysis and Programming

In addition to developing and evaluating growth scenarios, the MPO also followed a scenario planning approach to examine how low, medium, and high levels of financial investment would affect system performance (Investment Levels 1, 2, and 3 in the plan). Under Investment Level 1, the MPO would continue recent spending levels. Investment Levels 2 and 3 represent higher levels of funding allocated to the needs identified in the long range plan. The MPO found that this scenario planning process raised public awareness about what was possible under the trend level of funding and how the additional funding could improve system performance.

The agency evaluated expected performance with respect to each of the plan’s performance measures for each Investment Level. In the example in Figure C-15, the plan identifies the expected benefits for each level of investment. In this example, the benefits are cumulative, with Investment Level 3 resulting in 117,000 daily truck trips flowing more smoothly through intersections, as well as a reduction of 10 hours per day of traffic stoppage.

Figure C-15: Expected Freight Performance under Investment Levels 1, 2, and 3

<i>Figure 3-7: Freight Program Funding Tier Spending</i>				
		Project Costs	Investment Level Costs	Investment Level Benefits
	Baseline (Total value of FDOT Freight Quick Fix projects in Hillsborough County funded in the current adopted five-year FDOT Work Program)	\$3,105,333		
LEVEL 1	72 operational and minor infrastructure projects (continuation of FDOT Freight Quick Fix program)	\$17,020,523	\$17,020,523	117 thousand daily truck trips flow better through intersections
LEVEL 2	Add one railroad grade separation	\$50,652,000	\$67,672,523	Above, plus: removes traffic stoppage of about 5 hours per day
LEVEL 3	Add second railroad grade separation	\$37,520,000	\$105,192,523	Above, plus: removes <u>another</u> traffic stoppage of about 5 hours/ day
	Total Freight Needs (Includes additional grade separations)			\$956,773,568
	Unfunded Freight Needs (Beyond Level 3 Investment)			\$851,601,045

In addition to examining investment levels, the agency looked at eight different funding scenarios that could be employed to enable higher investment levels that were analyzed. The MPO took this

step in response to a failed referendum in 2010 that would have raised additional local funding for transportation. The MPO conducted surveys following the failed referendum that found people in the county wanted to know where their additional tax dollars would go and what the benefits would be. The funding scenarios listed below represent a different combination of potential changes to existing revenues and/or reallocation of revenues. The MPO adopted Scenario 8, which depends on a one-cent sales tax dedicated to transportation. This level of funding would allow all categories (Preserve the System, Reduce Crashes & Vulnerability, Minimize Traffic for Drivers & Shippers, Real Choices When Not Driving, and Major Investments for Economic Growth) to be funded at Investment Level 2 and most would be funded at Investment Level 3. They are:

- ▶ Scenario 1 (Baseline) - Existing revenues, existing spending
- ▶ Scenario 2 - Existing revenues, refocused on programs rather than road widening
- ▶ Scenario 3 - Enhanced revenues but no new tax referendum
- ▶ Scenario 4 - ½ Cent Sales Tax with Focus on Roads (local & State priority projects)
- ▶ Scenario 5 - ½ Cent Sales Tax with Focus on Alternatives & Preservation
- ▶ Scenario 6 - ½ Cent Sales Tax with Focus on Roads (high traffic-delay roads)
- ▶ Scenario 7 – 1 Cent Sales Tax and Roll Back HART Ad Val Tax S
- ▶ Scenario 8 – 1 Cent Sales Tax and Fully Fund most Programs

Scenario Planning Exercise to Support Analysis and Decisionmaking

During the Investment Level analysis, Hillsborough County MPO also conducted a Vulnerability Analysis, which was intended to explore the estimated impact of a Category 3 hurricane on the transportation system. . The region has three major bridges that are vulnerable to the storm surge from such as hurricane. The port is another key asset that is vulnerable. The purpose of this scenario planning exercise was to quantify the economic damage from flooding and then to study how different types and levels of investment could reduce the economic damage.

The agency evaluated each of the three investment level scenarios according to three performance measures:

- ▶ Travel Time Delay due to transportation network disruption;
- ▶ Lost Trips due to transportation network disruption; and
- ▶ Economic Losses due to storm in 2014 dollars.

The findings from this analysis are in Figure C-16 below.

Figure C-16: Vulnerability Analysis Results – Expected Impacts under Three Investment Levels

LEVEL 1

Investment Level 1:

- Cost over 20 years: Approximately \$629 million;
- Funds only routine stormwater drainage improvements, and is based on current spending trend;
- 8 weeks of road network disruption due to representative Category 3 storm; and
- Economic loss to Hillsborough County: \$266 million.

LEVEL 2

Investment Level 2:

- Cost over 20 years: Approximately \$660 million;
- Funds Interstates only with drainage improvements, shoreline armoring and wave attenuation;
- 6 weeks of road network disruption due to representative Category 3 storm;
- Economic loss to Hillsborough County: \$153 million or 42% less than Investment level 1; and
- \$31 million additional investment compared with Level 1 results in \$113 million benefit in avoided losses.

LEVEL 3

Investment Level 3:

- Cost over 20 years: \$772 million;
- Funds Interstates and arterials with drainage improvements, shoreline armoring and wave attenuation;
- 3 weeks of road network disruption due to representative Category 3 storm;
- Economic loss to Hillsborough County: \$119 million or 55% less than level 1; and
- \$112 million additional investment compared with Level 1 results in \$147 million benefit in avoided losses.

The MPO assumed a sea level rise of 14 inches for this analysis. The MPO examined how long infrastructure would be disrupted by this hurricane under a “no build” (also called no adaptation) scenario. It also considered the economic impact of taking infrastructure off line. This scenario assumes no new risk management investments are built or implemented. The MPO compared this “no build” scenario with a medium- and high- risk management investment scenarios. The medium investment scenario assumed shoreline armoring, elevated coastal roadway profiles, and improved drainage on interstate highways. The high investment scenario assumed those improvements would be extended to arterials roadways. The hurricane would cause about \$266 million in economic loss under the no build scenario, \$153 million in the medium investment scenario, and \$119 million in the high investment scenario.

The outcomes of this scenario planning have been useful in the MPOs coordination with the Florida Department of Transportation (FDOT). FDOT has been working to reduce vulnerability through design each time it rebuilds a highway or bridge that could be effected by rising sea levels and storm surges.

Scenario Planning Analysis Tools to Support Implementation

When the final plan was approved and Investment Levels (1, 2, or 3) for each of the expenditure programs was confirmed, Hillsborough County MPO conducted an analysis of the expected performance of the adopted plan with respect to vehicle hours of delay and transit ridership. The development of projected performance for the adopted plan and scenario will allow the agency to periodically track performance and identify whether outcomes are trending in the desired direction and whether improvements in performance are commensurate with the investments and policy changes that have been made.

DATA AND TOOLS

The Tampa Bay Regional Planning Model (the agency's TDM) is the primary tool used by the MPO to develop the long-term transportation needs assessment and to evaluate the effectiveness of specific project investments against a traditional set of transportation system performance goals. For some measures, such as reliability and crash reduction, the MPO took the travel demand model outputs and does post-processing using separate statistical analysis software.

The MPO also uses the REMI econometric modeling tool to estimate the economic impacts of storm surge related disruption (from a Category 3 hurricane in 2040). In addition, the MPO used basic GIS software for some measures, such as Transit Level of Service (TLOS).

CONNECTIONS BETWEEN SCENARIO PLANNING AND PBPP

The Hillsborough MPO incorporates scenario planning throughout its long range transportation planning and programming process. The MPO first used a normative approach to scenario planning to evaluate three alternative future growth patterns. The MPO developed a set of performance measures to evaluate the scenarios and ultimately settled on a hybrid scenario that is characterized by more compact development than recent trends. The preferred scenario influenced the MPO's goals and objectives.

The MPO used the preferred scenario to develop goals and objectives. Then, Hillsborough County MPO used scenario planning to evaluate the extent to which outcomes could be improved under three different investment scenarios for performance measures in five areas: preserving the transportation system, reducing crashes and vulnerability, minimizing traffic for drivers and shippers, enhancing non-driving travel choices, and making investments to support economic growth. These performance areas are closely aligned with the MPO's goals, expressed in the long range transportation plan, though they were narrower in scope to reflect the key areas in which the agency has the ability to improve performance directly.

The Planning Commission is currently (early 2015) updating the local governments' comprehensive plans to reflect the Imagine 2040 preferred scenario.

RESOURCES

- ▶ Long range Transportation Plan: <http://www.planhillsborough.org/2040-lrtp/>
- ▶ Transportation Improvement Program: <http://www.planhillsborough.org/transportation-improvement-program-tip/>
- ▶ Unified Planning Work Program: <http://www.planhillsborough.org/unified-planning-work-program/>

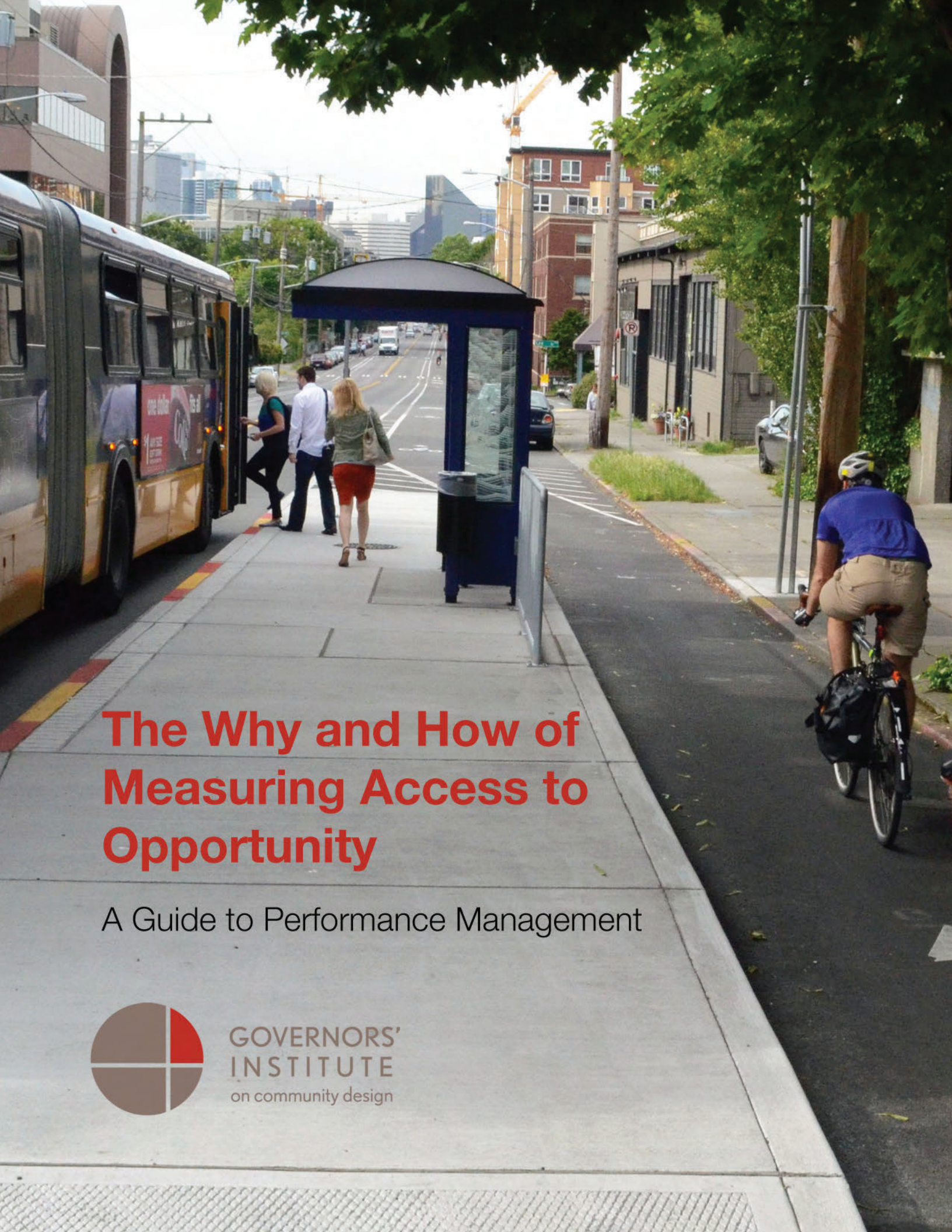


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The Why and How of Measuring Access to Opportunity

A Guide to Performance Management



GOVERNORS'
INSTITUTE
on community design



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Table of Contents

- Executive Summary..... 1**
- I. Introduction..... 3**
 - Definitions and purpose..... 3**
 - Background..... 6**
 - What we have managed in the past..... 6
 - MAP-21 performance management rules 7
 - Building on MAP-21: Opportunities to measure additional areas 9
 - New priorities in performance management 10**
 - Why incorporate destination access into transportation programs? 11**
 - Equity 14
 - The role of land use in destination access..... 15
- II. Incorporating Measures of Destination Access into Transportation Programs 17**
 - Decide how to approach destination access 18**
 - Assessing current barriers and setting goals 18
 - Evaluating scenarios 20
 - Prioritizing projects for funding 22
 - Evaluating project alternatives..... 25
 - Engage partners 26**
 - Identify the right metrics and set targets..... 28**
- III. Methods of Measuring Access to Opportunity..... 32**
 - Types of data used in measuring access to opportunity 33**
 - Introduction to data tools 38**
 - Profiles of data tools 40**
 - University of Minnesota’s Accessibility Observatory 42
 - Sugar Access 42
 - Transport Analyst tool..... 43
 - Renaissance Planning Group accessibility tool 44
 - Proxy measures for destination access..... 45
 - Transit access 46
 - Transportation affordability..... 47
 - Location efficiency and land use mix..... 47
 - Other measures related to multimodal access 48
 - Other emerging tools 49**
 - Implementation strategies..... 51**
- IV. Relevant resources 53**
 - Background resources and academic studies 53
 - Case studies and examples 55
 - Webinars 56
 - Performance management tools 57
 - More resources and data sources 58
- Appendix : Summary of Outreach..... 62**

Figures and Tables

Figure 1. Key variables contributing to measurements of accessibility.....	2
Figure 2. Connectivity influences destination access.....	4
Figure 3. Virginia DOT's project scorecard.....	6
Figure 4. Transit island and bike lane in Seattle, WA.....	9
Figure 5. The growing distance between people and jobs in metropolitan America.....	12
Figure 6. A Complete Streets approach in Austin, TX.	16
Figure 7. Access to Core Services in Southeast Michigan.	19
Figure 8. Results of Your Utah, Your Future - Tradeoffs for larger home lots.....	21
Figure 9. TIGER-funded Memorial Bridge connecting Portsmouth, NH and Kittery, ME	25
Figure 10. Portland Metro Mobility Corridor Atlas for the Portland City Central Loop.....	34
Table 1. Summary of Data Sources	37
Table 2. Summary of Data Tools.....	41

Executive Summary

Access to jobs, education, healthcare, and other essential services may be regarded as the primary purpose of transportation. Not surprisingly, transportation agencies across the country are increasingly interested in considering this as a key part of measuring system performance. Unfortunately, many transportation practitioners are not sure how to measure how well their system links people to their daily destinations and broader opportunity.

All state and metropolitan planning organizations will be required to publicly evaluate and measure the performance of their transportation system and the effectiveness of their investments. While federal rules will require them to measure factors such as congestion, safety, and infrastructure condition, there is a wide array of other priority areas that transportation agencies should also consider measuring if performance measurement is to help achieve state and regional transportation goals.

This guidebook is written to help transportation agencies integrate measurements of “access to opportunity” into their planning and investment decisions. It provides information about how some transportation agencies are already incorporating measures of access into their programs, and discusses the data and tools available to support measuring it. This guidebook might also be useful to elected and civic leaders, policy-makers, and stakeholders who wish to work with transportation agencies to address these important priorities.

Measuring the transportation network is essential to building an effective system. Transportation agencies need to measure changes in the condition of the transportation system to determine where to invest or improve it. They have historically invested in developing tools and approaches to measure priorities like safety, system condition, and traffic flow because those outcomes rose to national importance among decision-makers and the public.

National and local priorities for the country’s transportation system are evolving. This is prompting an evolution in the state of the practice in transportation performance management. Decision-makers are placing growing importance on the vital role transportation infrastructure and services play in determining the quality of life of the people served. Multimodal transportation networks connect people to employment and other economic opportunities, contribute to the overall livability and prosperity of communities, and impact many aspects of the environment, including reduced greenhouse gas emissions, air pollution, and stormwater runoff. They also provide or reduce opportunities for physical activity, influence how affordable it is to live in a community, and mitigate or perpetuate socioeconomic inequities in a region.

Transportation should help everyone get where they need to go. A transportation system is not successful unless everyone can reach the things they need within a reasonable period of time. Even robust systems are failing if some residents still face significant transportation challenges. This is a particular problem for low-income households, young people, and older adults with limited or no access to a vehicle, who often live in communities that are physically isolated from job centers and where transit service does not connect them to appropriate jobs and other destinations safely and conveniently. Sometimes transportation infrastructure itself (like a highway or rail line) is what separates these neighborhoods from the rest of the community.

Some transportation agencies are already measuring access to destinations.

Transportation agencies on the frontier of performance management are already integrating analysis of access to opportunity at several levels of decision-making, from establishing performance targets to evaluating investment scenarios and their complex impacts in long-range planning. Systematically considering these impacts helps agencies build a more robust understanding of the long-term implications of potential investments and make informed decisions about the best use of funds; more measures of performance provide greater insight, leading to more efficient operations. By establishing performance targets, agencies will be able to demonstrate how well their investments are helping regions achieve a broad range of goals, show how different funding levels would affect the ability to meet these goals, and engage leaders and the public in a conversation about how best to use scarce resources. This would ultimately increase public confidence in the transportation decision-making process and build support for funding increases as agencies make progress toward their identified goals.

New data and tools can help evaluate transportation access. The research community has made significant leaps in recent years in developing the data and methodologies necessary to measure the complex impacts of transportation investments on the factors that shape quality of life. Transportation agencies are building on this progress by moving beyond simply monitoring the impacts of these investments and toward integrating analysis of those impacts into their long-range planning and project prioritization processes.

Transportation agencies have several types of data available to them, from national datasets to household survey data, for measuring access to opportunity. Some agencies work with this data in-house, creating their own analysis tools or applications. There are also a number of new and emerging tools available to evaluate destination access for purchase. However, many of the underlying data sources used by these tools are open source or available for free download.

This guidebook suggests metrics and approaches for measuring access to opportunity to help leaders in state and regional agencies, cities, and counties create transportation systems that work better for all people and businesses.

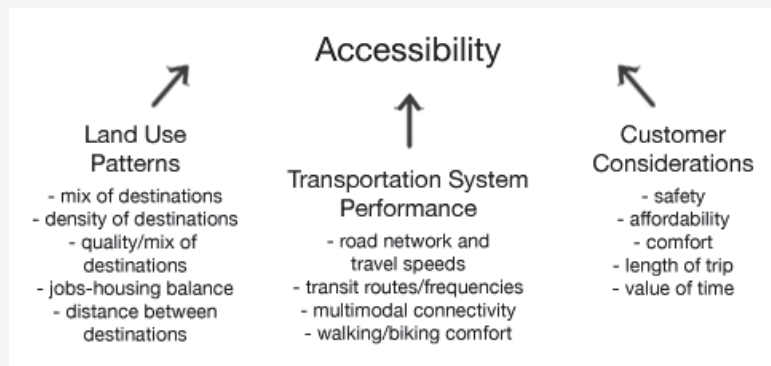


Figure 1. Some of the key variables, each with different data sources that contribute to how we measure accessibility. Projects that call for increased access to achieve community goals like economic development, equity, or connectivity, can be measured by a combination of these example variables. Some variables are controlled by transportation agencies, while they actively influence others. It is important to understand how multiple factors contribute to accessibility.

I. Introduction

In transportation planning, no issue is more cited by public officials and stakeholders than the need to connect people—and people of all abilities—to jobs and education and businesses to customers and talent. The concept of measuring how people access destinations has been around for decades, yet many transportation agencies do not currently measure how well our investments accomplish these crucial goals.

Capital and maintenance resources for transportation have become scarcer while transportation agencies face growing and changing demands on the networks they manage, leaving decision-makers with the challenging task of accomplishing more with less funding. Transportation performance management gives transportation agencies the ability to use resources strategically and efficiently, while demonstrating to the public and stakeholders that transportation investments are producing measurable outcomes. It can also help agencies evaluate whether investments are producing the expected results, and use that information to inform future decisions about how to invest scarce resources.

Definitions and purpose

The Federal Highway Administration (FHWA) defines **Transportation Performance Management** as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Performance management begins by:

- Identifying strategic goals for the transportation network;
- Developing performance measures that evaluate progress toward those goals;
- Setting targets under each of those measures; and
- Analyzing the impacts of potential investments on the goals and using that information to prioritize investments and report back to the public.¹

This is not a new practice among transportation agencies, but most have typically managed a relatively narrow list of outcomes such as pavement and bridge condition, traffic flow, ridership, and fatalities from crashes. While these outcomes are important, they are not comprehensive.²

A growing number of transportation agencies have embraced a broader range of outcomes, including better connecting all residents, particularly disadvantaged populations, to economic opportunity, resources, and essential services. This guidebook is designed to help decision-makers within state departments of transportation (DOTs), metropolitan planning organizations (MPOs), transit agencies, and other local governments expand their existing performance management practices to incorporate measures of **access to opportunity**, as well as related measures of multimodal system connectivity.

1 FHWA's 2013 Performance Measures Guidebook:

2 FHWA's Model Long-Range Transportation Plans: A Guide for Incorporating Performance-Based Planning: http://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/chapter06.cfm (more information available in Section 5)

Measuring access to opportunity means evaluating the ease with which people can reach jobs in their communities, businesses can attract customers, and both can reach the other services they need to thrive. Multimodal transportation networks play a vital role in connecting people and businesses to resources and providing safe, affordable access to employment, education, and other daily needs. These are, in fact, the primary purposes of transportation infrastructure and services. The ability to move reliably from one destination to another is only valuable if there are resources and opportunities at the end of the trip. Yet evaluating roadway performance has typically focused on the movement of vehicles rather than on how well the transportation network connects people with these opportunities.

A note on terminology: What we mean by “access to opportunity”

The goal of this guidebook is to help transportation agencies measure how well the transportation network and land use patterns within a community are enabling all members of the community to reach jobs and other resources and services, such as education, healthcare, healthy food, and recreation centers. This guidebook defines that broad concept as **access to opportunity**. It also refers to the concept of **destination access** interchangeably because we are focused on physical access to places, rather than the sociocultural and structural barriers community members face to accessing employment, high-quality education, healthcare, and other services.

This guidebook also refers to several related concepts that can support greater access to opportunity in a community. One such concept is **connectivity**, or the density of connections within a transportation network. This includes connections for each mode of travel—roads, transit routes, bicycle infrastructure, and sidewalks—as well as connections between modes, such as the completeness of sidewalk networks around transit stops. A transportation network with a high level of multimodal connectivity can make it easier and more affordable for community members to access opportunities by providing a variety of options for traveling from one place to another. This helps level the playing field by for all members of a community to access the resources they need to thrive.

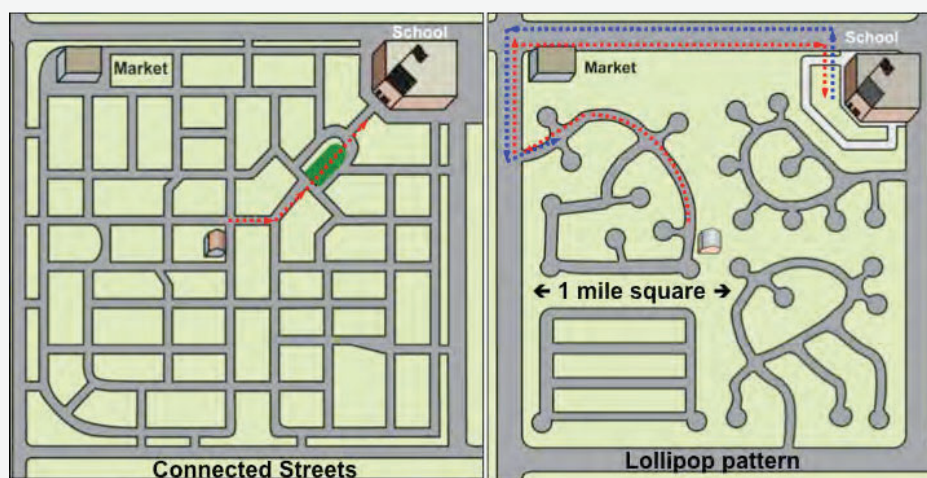


Figure 2. Connectivity influences destination access. Well-connected networks create more direct routes to destinations and provide redundancy for greater efficiency. *Image by James Wagner, INCOG.*

Another concept discussed in this guidebook is the role that land use patterns play in supporting access to opportunity, particularly the density of development and diversity of destinations in an area. Running daily errands will generally take less time and cost less money out of pocket in neighborhoods where a diversity of destinations, such as housing, jobs, schools, grocery stores, parks, and others are all physically close together. This guidebook uses the term location efficiency to refer to the physical proximity between these types of destinations.

Note: The terms “access” and “accessibility” are also used frequently in the transportation industry to refer to compliance with the Americans with Disabilities Act,³ but this guidebook uses those terms more broadly. The focus of this guidebook is on improving access to opportunity for everyone, including people with disabilities as well as other community members.

Understanding transportation as a means to an end—a connection to opportunities—also enables community planners to look holistically at their transportation challenges. In many cases, changes to land-use and development patterns can connect community members to more opportunities and improve transportation system performance and efficiency, without any changes to the transportation infrastructure itself.

Despite this growing awareness, many agencies around the country do not yet measure access to opportunity, nor do they use it as a criterion in their decisions about how to prioritize investments. This is partially because these outcomes have been hard to define and measure on a system-wide scale, let alone in evaluating specific projects. Agencies have not traditionally been able to easily and affordably access the necessary data. However, aided by a wave of new tools developed by the private sector, a number of transportation agencies are piloting approaches for integrating measures of access and connectivity into their investment decisions. These agencies provide a model for others to follow.

This guidebook provides information to help transportation decision-makers:

- Understand the benefits of measuring access to opportunity
- Integrate measures of access to opportunity into decisions about how to invest limited resources
- Learn about transportation agencies already incorporating destination access measures into their programs
- Understand the data and tools available to measure access to opportunity
- Incorporate land-use considerations into transportation decision-making

This guidebook includes four sections. **Section I** provides information on ways transportation agencies have traditionally managed performance, new measures some agencies are beginning to integrate into decision-making, and how the Fixing America’s Surface Transportation (FAST) Act and the Moving Ahead for Progress in the 21st Century (MAP-21) Act impact how transportation

3 <http://www.ada.gov>

agencies manage the performance of their systems moving forward. **Section II** discusses why and how decision-makers are incorporating access to opportunity measures into their planning and investment decisions, begins to explain the process for implementation, and profiles a number of state and local agencies around the country that are already doing so. **Section III** of this guide discusses ways to measure access to opportunity, including an overview of the factors that shape accessibility as well as approaches, data, and emerging tools agencies can use to measure access to opportunity. Section III also briefly outlines implementation strategies, and **Section IV** provides a list of relevant research, guidance, technical assistance, and other resources on performance management and measuring access to opportunity.

Background

What we have managed in the past

To effectively manage the performance of their networks, transportation agencies need to measure

changes in conditions and operations over time, which means collecting reliable and up-to-date information about the system. They must invest resources and effort to collect the right information upfront and maintain it over time.

Transportation leaders have historically invested in developing tools and approaches to measure specific results because those outcomes rose to national importance among decision-makers and the public.

For example, transportation agencies have traditionally collected traffic count data and measured traffic flow and roadway capacity to determine when additional capacity is needed. The definition of a congested transportation system varies across the nation based on the size of the community and the typical length of trips, but agencies seek to identify appropriate local standards based on expectations for traffic flow and use that as a basis for selecting projects and designing roadways.

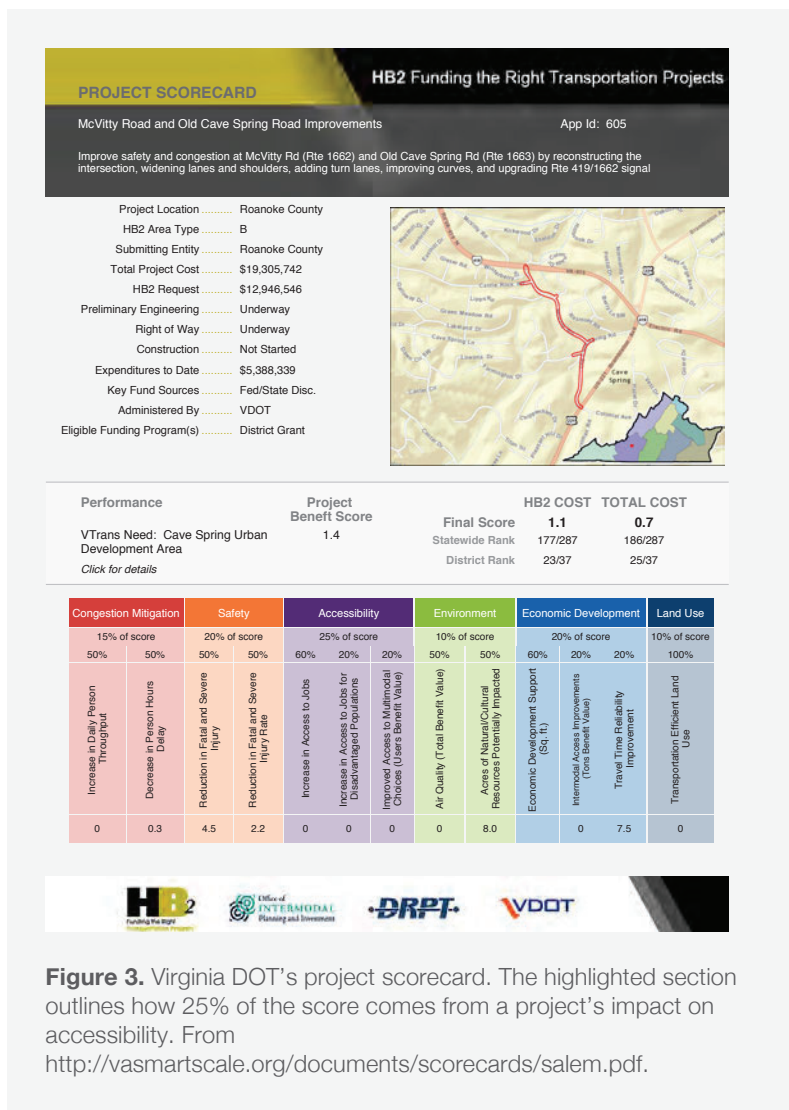


Figure 3. Virginia DOT’s project scorecard. The highlighted section outlines how 25% of the score comes from a project’s impact on accessibility. From <http://vasmartscale.org/documents/scorecards/salem.pdf>.

Transportation agencies also monitor infrastructure condition over time to determine when to invest in repair or replacement. In recent years many agencies have developed more robust asset management programs in response to growing concerns about the country's aging infrastructure coupled with shrinking transportation budgets. These programs help agencies track the lifecycles of the pavement, bridges, and buses they maintain to set schedules for routine maintenance, more costly rehabilitation, and procurements. Many agencies also assign different economic values to different roads and bridges based on traffic volume. Together, these practices help agencies systematically determine how to prioritize investments in existing infrastructure.

Many DOTs and transit agencies also currently engage in performance management through their safety programs by monitoring fatalities and serious injuries from vehicle crashes over time. Performance management is a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Like asset management, this performance-based investment approach arose out of a growing national focus on safety issues. The federal government developed programs and required data collection to better identify and track safety challenges.

Transit agencies also utilize transportation performance management to select projects and evaluate the performance of their investments. For example, agencies utilize ridership forecasts when selecting the most viable stop locations for projects funded through the federal New Starts program,⁴ and then measure ridership after the project has been in operation for a period of time to determine whether it is on track to achieve the projection.⁵

In addition to helping agencies use limited resources strategically, these applications of transportation performance management have also helped to highlight the challenges decision-makers face in meeting all of a state's transportation needs, and to communicate those challenges to decision-makers and residents. For example, engaging in asset management can help transportation agencies recognize that they may not be able to keep up with the maintenance and repair needs of their road networks at a sustainable rate given current funding levels.

MAP-21 performance management rules

MAP-21, enacted in 2012, established a performance- and outcome-based framework for the federal program to help transportation agencies invest resources in ways that support national priorities and state and regional goals. MAP-21 represented a broad shift away from creating programs that fund particular types of projects and toward a system to produce the most efficient investment of federal resources while giving agencies the flexibility to address unique local needs and priorities. The FAST Act, signed into law in December 2015, continues the performance-based framework established under MAP-21 and includes provisions that will lead to the development of tools and guidance that can assist agencies in implementing performance-based planning.

The federal transportation program has, in the past, required transportation agencies to collect information about the state of good repair of the system and the causes and rates of fatalities.

4 About the New Starts Program: <https://www.transit.dot.gov/funding/grant-programs/capital-investments/about-program>

5 Before and After Studies of New Starts Projects: <https://www.transit.dot.gov/funding/grant-programs/capital-investments/and-after-studies-new-starts-projects>

Under the current program, agencies will be engaging in performance management to a greater degree and on a broader scale than most have previously.

MAP-21 included new performance measurement requirements within the national highways, transit, and traffic safety programs. For the highway program, it established seven performance goals in the categories of safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. It tasked FHWA with oversight for establishing performance measures within the following areas:

- Pavement condition on the Interstate System and on remainder of the National Highway System
- Performance of the Interstate System and the remainder of the National Highway System
- Bridge condition on the National Highway System
- Fatalities and serious injuries on all public roads
- Traffic congestion
- On-road mobile source emissions
- Freight movement on the Interstate System

FHWA is in the process of developing and releasing rules that define how to measure performance in each of these areas. Within one year of each of those final rules on performance measures, state agencies across the country will be required to establish performance targets tied to each of these new measures. MPOs will have an additional 180 days to establish their own targets or commit to supporting those established by the states. Agencies will have flexibility to tailor the targets for the performance measures established under MAP-21 to match local conditions and needs. The Federal Transit Administration (FTA) and National Highway Traffic Safety Administration (NHTSA) underwent parallel processes to establish performance measures for transit asset management and operations, and highway traffic safety, respectively.⁶ FTA has released rules for transit asset management and safety. Now, transit agencies will work with MPOs to develop performance targets specific to their regions. Transit agencies will have 3 months to set targets, and MPOs will have an additional 180 days.

Once agencies establish performance targets, MAP-21 requires that they publicly report on their progress in reaching these targets by including System Performance Reports in their long-range transportation plans.⁷ For example, a state could choose to set a target to improve the condition of 25 percent of its highway miles within four years. The agency would then announce this target to the U.S. Department of Transportation (USDOT) and the public, along with the investments the agency plans to make to accomplish the goal. After four years, the agency would report on whether or not it achieved the established target.

6 <https://www.federalregister.gov/documents/2016/07/26/2016-16883/transit-asset-management-national-transit-database>; <https://www.federalregister.gov/documents/2016/02/05/2016-02017/public-transportation-agency-safety-plan>

7 Both states and MPOs will need to include the system performance report in their long-range plan, which will discuss their targets and their progress. The final safety rule requires states to report their target to FHWA and discuss their progress annually in their Highway Safety Improvement Program report. The proposed rules for pavements, bridges, system performance, traffic congestion, emissions, and freight movement would require states to report their targets and discuss progress in a biennial report (23 USC 150(e)) beginning in 2016.

These reporting requirements are designed to give transportation agencies tools to help track progress and achieve their goals. By setting performance targets and periodically reporting on progress, agencies can identify if their investments are producing the intended results and make adjustments if needed. FHWA is developing resources and tools to help states continue to make progress if they find themselves unable to make improvements in certain areas, many of which are listed in the Appendix. MAP-21 requires that agencies revise their performance plans if they do not meet their targets. In the case of infrastructure condition and safety deficiencies, State DOTs and MPOs will be required to dedicate a certain amount of funding toward addressing the gap.

Some transportation decision-makers are concerned about the additional public scrutiny that comes with reporting on specific performance targets, while others are welcoming the process as a way of engaging the public on challenging decisions that transportation leaders have to make every day as they prioritize scarce resources. Much of the public—and many elected officials—are not aware of the full costs needed to maintain the transportation infrastructure and services they rely on, and can develop unrealistic expectations. By establishing performance targets, transportation agencies will be able to demonstrate how well their transportation investments are helping regions achieve a broad range of goals, show how different funding levels would affect the ability to meet these goals, and engage leaders and the public in a conversation about how best to use scarce resources. This can ultimately increase public confidence in the transportation decision-making process and build support for funding increases as agencies make progress toward their identified goals.

Building on MAP-21: Opportunities to measure additional areas

Under MAP-21, states and metropolitan areas are allowed to go beyond the categories of performance measures prescribed in the legislation. This creates a window of opportunity for transportation agencies to integrate equally important state and local priorities into their long-range planning along with the MAP-21 measures. Addressing these priorities along with the MAP-21 measures will require lower effort and cost than would be needed to develop separate systems of measurement for them, or to belatedly integrate them into the systems developed under MAP-21.

Developing access and connectivity performance measures and other measures beyond those required under MAP-21 can also provide a number of additional benefits to transportation agencies, as well as the users they serve. By establishing measures that reflect other state and regional goals—such as public health or social equity goals—agencies can demonstrate a commitment to



Figure 4. Transit island and bike lane in Seattle, WA. Photo by NACTO.

investing in travelers' priorities and producing results that decision-makers and the public value. Additionally, developing measures beyond those required under MAP-21 can provide transportation agencies with a means for coordinating investment decisions more effectively with partner agencies like departments of health, environment, housing, and economic development, reducing silos and ensuring that public funds are used efficiently on a broader scale to accomplish state goals.

Several states are already working to develop performance measures that fall outside of those required by MAP-21 and integrate those measures into their criteria for making investment decisions. These measures address the priorities discussed in this guidebook as well as a broad range of state and local priorities, including:

- Mode neutral travel time
- Mobility, focusing on person throughput as opposed to vehicle throughput
- Access to jobs and other essential services
- Economic investment around transportation infrastructure
- Preservation of natural and cultural resources
- Reduction in impervious surface area and stormwater runoff
- Promotion of physical activity
- Provision of a comfortable and convenient travel experience for all modes
- Alignment of transportation investments with local and regional plans and visions
- Support for mixed-use and infill development
- Resilience to disruptions (such as natural disasters and economic downturns)

Some agencies are also looking at how the impacts of transportation projects—positive impacts such as improved access to employment, as well as negative impacts such as increased noise and air pollution—disproportionately affect different populations within a region. Integrating demographic and geographic categories into agency performance measures can help decision-makers weigh the tradeoffs of potential transportation investments according to who benefits and who is adversely impacted. This can help transportation agencies direct resources to address regional inequities over time by providing new transportation services for the people who need them most.

New priorities in performance management

Providing access to opportunity through transportation investments has been a major focus of these efforts because it gets to the heart of what makes communities livable, and regions economically prosperous and equitable. It is not enough for a community to simply contain the resources necessary to support a high quality of life for residents—employment, housing, education centers, medical care, grocery stores, and opportunities for recreation and socializing. It must also provide all of the members of a community with ways to reach those resources conveniently, safely, reliably, and affordably to fulfill their daily needs. Improving access to opportunity also supports environmental goals like reducing air pollution and greenhouse gas emissions by reducing the distances people need to travel by car.

Research on the factors that shape destination accessibility on a regional scale has highlighted the need for well-connected multimodal transportation networks. Many community members, including aging residents and people with disabilities, are may not be physically able to drive, while others

cannot afford to travel by car. Additionally, a growing number of people are seeking to live in communities where driving is not a requirement for getting around, creating strong market demand for better, multimodal connections to destinations. Because the supply of such communities has not kept up with demand, only those that can afford higher priced housing units in these communities tend to occupy them, leaving vulnerable populations in less connected areas.

Connecting people to opportunities in their region means providing reasonable cost travel options with reasonable travel times for reaching jobs and other needs, including well-connected transit networks with reliable service headways and safe routes to walk and bike between destinations. It also means ensuring that these multimodal networks actually connect people to the places they need to go, such as diverse types of jobs to meet a range of community employment needs.

While providing people with access to the right destinations to meet their needs is a relatively simple concept, in practice it can be challenging to measure how well connected people are to opportunities and resources in their region, and, therefore, how to direct investments to improve access. The factors involved are complex and some fall outside the direct purview of transportation agencies.⁸

Furthermore, different communities and populations within a region can face different barriers to accessing the resources they need to thrive. For example, the construction of elevated and limited access highways have physically divided some neighborhoods in urban areas, leading to geographic isolation of those communities. Failing to identify and address those disparities on a community-by-community basis can perpetuate systemic inequalities in the region.

Despite these challenges, a number of agencies have developed and are refining strategies for measuring or modeling access to opportunity. This guide profiles a number of regional and state agencies that have gone a step further by using measures of access and connectivity to inform investment decisions, either in the development of programs, project prioritization processes, selection processes for competitive grant programs, or evaluation of alternatives during project development. These agencies are the case studies for others to integrate connectivity and access measures into their performance management practices.

Why incorporate destination access into transportation programs?

Destination access is the ultimate goal of transportation. If we are not measuring access to destinations, and evaluating system enhancements accordingly, we risk spending large amounts of money implementing projects that, although they may improve “performance” in some particular category, ultimately do not improve the experience of system users. While it is important that travel

8 The laws governing the federal transportation planning process are found in Title 23 of the United States Code, Sections 134 and 135 (23 USC 134 and 135) and Title 49 chapters 53. The regulations derived from those laws which further define the planning requirements are contained in Title 23, Code of Federal Regulations, Section 450 (23 CFR 450). Both the statute and regulations include references to the role of land use, accessibility and intermodal considerations and related issues when transportation stakeholders, elected officials, and the public make decisions regarding the maintenance, operations, and expansion of transportation systems. 23 USC 134 (c) The plans and TIPs for each metropolitan area shall provide for the development and integrated management and operation of transportation systems and facilities.

be safe and smooth, the system cannot be considered successful unless travelers reach their destination within a reasonable period of time. Many communities around the country face significant challenges to providing all residents with access to jobs, medical care, day care, groceries and other necessities, particularly for low-income and economically disadvantaged populations. Low-income households may have limited or no access to a vehicle, and while they may rely on transit and non-motorized travel, fewer destinations fully meeting their daily needs can be reached safely and conveniently without a car. For most households, the cost of transportation is the second largest expense behind housing—greater than food or health care. A household living in an auto-dependent area may spend 25% of its income on transportation costs while a household located in a more location efficient environment closer to employment and other amenities may reduce this cost to 9%.⁹

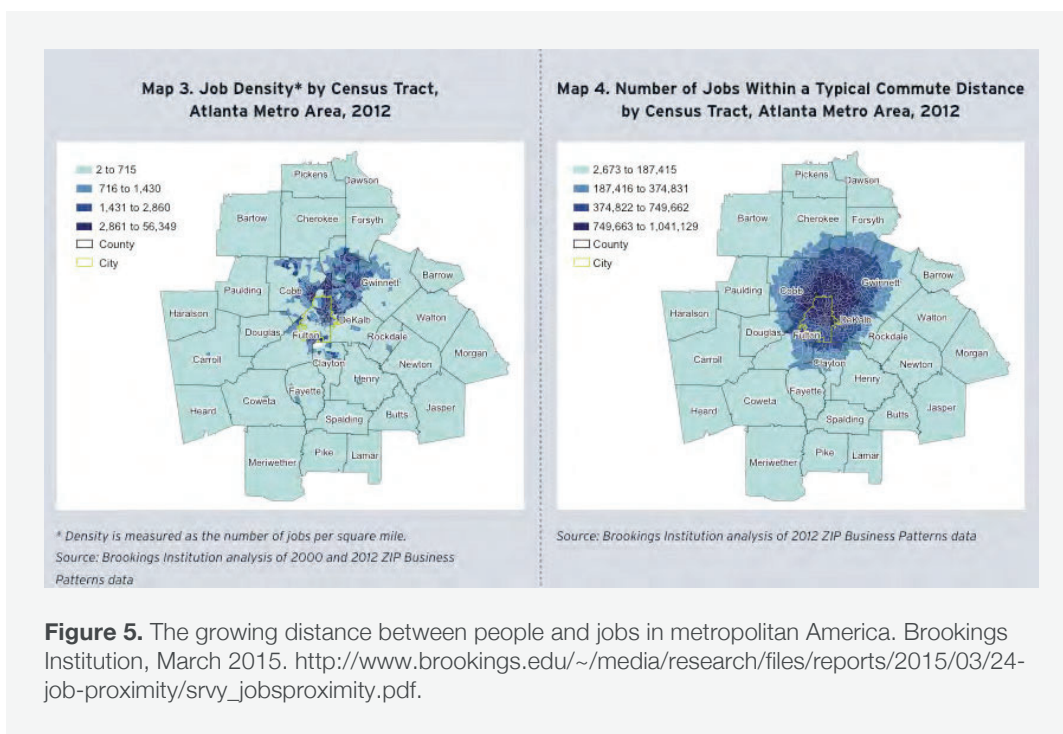


Figure 5. The growing distance between people and jobs in metropolitan America. Brookings Institution, March 2015. http://www.brookings.edu/~media/research/files/reports/2015/03/24-job-proximity/srvy_jobsproximity.pdf.

Research by Raj Chetty of Stanford University examined the connection between geographic isolation and the ability of youth to escape poverty and earn higher incomes than their parents—referred to as intergenerational mobility.¹⁰ Chetty’s research showed that intergenerational mobility varies widely across the United States, and that areas with high intergenerational mobility have less residential segregation from jobs and other destinations. His analysis showed a correlation between upward mobility and a measure of residential segregation: reduced sprawl, defined as work commutes of less than 15 minutes. Areas where commutes were shorter correlated with higher income mobility. Longer commutes can be caused by poor transportation connections or traffic congestion, but they can also be caused by transportation and land use practices that push destinations far from homes.

9 http://www.fhwa.dot.gov/livability/fact_sheets/transandhousing.cfm

10 http://www.rajchetty.com/chettyfiles/mobility_geo.pdf

Some communities do not have access to transit service. And where there is transit, it often fails to link people with work. The Brookings Institution analyzed data from 371 transit providers in the nation's 100 largest metropolitan areas, where over 95 percent of all public transit trips take place.¹¹ Brookings' research profiled each metropolitan area and showed that only about 30 percent of jobs in the 100 largest metropolitan areas are accessible by public transit trips of less than 90 minutes by the typical resident. The study also found that the accessible jobs were more likely to be in high-skill industries: about one third of the jobs in high-skill industries are accessible by transit within 90 minutes, while only one quarter of the jobs in low- or middle-skill industries are accessible via a transit trip of 90 minutes or less.

Transportation agencies often evaluate the quality of available transit service by looking at transit frequency, but that is only half of the story. The Brookings report shows that, regardless of metropolitan area, many of the highest income households are located in neighborhoods with the lowest transit coverage, yet that transit service connects them to a larger number of suitable job opportunities. Conversely, the lowest income households are located in neighborhoods with the best transit coverage but have fewer employment opportunities easily accessible via transit.

The data collected by the Brookings Institution echoes the findings of Chetty's research. Accessing low- and middle-skill jobs by public transit may be challenging for workers seeking those jobs, leading to limited opportunities for intergenerational income mobility. Workers living in growing low-income suburban communities may experience particular difficulty in accessing jobs for which they are qualified. It is an economic and transportation failure to create jobs that are not accessible to the workers who would fill them.

Many transportation agencies measuring destination access began doing so to address the challenges faced by low-income and transit-dependent households, but the issue is broader. Research shows that more and more people want to live in communities with a high level of destination access—particularly access that does not always require a vehicle. A recent survey by the Urban Land Institute found that just over half of all Americans and 63 percent of Millennials want to live where they don't often need a car to access amenities.¹² A 2014 American Planning Association study found that fewer than 10 percent of those surveyed want to live in a neighborhood where people have to drive most of the time, though 40 percent currently live in such a neighborhood.¹³

Moreover, employers are increasingly looking to locate in areas with good transit access. The success of innovation districts—clusters of knowledge-focused businesses and institutions such as information technology, biotechnology, pharmaceuticals, and health research—may hinge upon public transit access. In a study of three such districts in the United States (Silicon Beach Innovation District in Los Angeles; the Historic Technology District in Austin, TX; and Research Triangle Park, NC), the American Public Transportation Association noted that local officials in these three regions expect public transit to be the determining factor by 2045 in:

- More than \$177.83 billion of cumulative business sales through 2040;
- \$78.8 billion in wage income; and
- \$106.3 billion in gross domestic product (GDP) in the U.S. economy.

11 <http://www.brookings.edu/research/reports/2011/05/12-jobs-and-transit>

12 <http://uli.org/research/centers-initiatives/terwilliger-center-for-housing/research/community-survey/>

13 <https://www.planning.org/policy/polls/investing/pdf/pollinvestingreport.pdf>

The study cites three main reasons for these economic trends:

- High tech, high value industries seek locations providing public transit access to attract the needed workforce;
- Better access to workers enhances efficiency and therefore generates net new economic activity;
- Transportation efficiency gains create additional economic activity.^{14,15}

Not only are we failing to supply the kind of communities that so many employers and employees want, the growing demand for communities with high destination access combined with a continuing low level of supply drives up rents and pushes lower-income households to areas of lower access.

Equity

The term **transportation equity** relates to how transportation planners can provide access to affordable and reliable transportation to meet the needs of all community members, particularly traditionally underserved populations.¹⁶ Decision-makers are placing a growing focus nationally on environmental justice and the need to identify and address disproportionately high and adverse impacts of public policies and investments on minority populations and low-income populations.

This focus is particularly important in measuring how well transportation systems connect people to opportunities, resources, and essential services. Transportation agencies that measure destination access should take care not to look only at neighborhood or regional averages. While a region might perform well in general, specific neighborhoods may face significant gaps in affordable access to opportunities and services, particularly lower income neighborhoods in suburban and rural communities with poor or limited transit access.

Moreover, the high demand for walkable neighborhoods with good destination access for persons of all abilities, coupled with a housing supply in walkable neighborhoods that has not kept pace with that demand, has pushed rents to climb in many communities as destination access improves. This can exclude the people from communities that need access the most.

To address gaps in access to opportunity for vulnerable and underserved populations, transportation decision-makers should look specifically at the performance of their transportation system in providing destination access to low-income households, persons

14 <http://www.apta.com/resources/reportsandpublications/Documents/APTA-PT-Knowledge-Economy.pdf>

15 <http://www.apta.com/resources/reportsandpublications/Documents/TransitHighGrowthClustersUS-Final2013-1124.pdf>

16 Pursuing Equity in Pedestrian and Bicycle Planning:
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/equity_paper/

of all abilities, and non-drivers. Transportation agencies should also explore partnerships with other local agencies and the private sector to create affordable transit-oriented development and implement other strategies to address gentrification.^{17,18}

In measuring destination access, transportation agencies should also identify gaps in the network for persons of all abilities and consider ways to reduce those gaps, such as extending pedestrian signal timing and installing curb ramps.

The role of land use in destination access

Transportation agencies have typically focused on the direct impact of the transportation system on destination access, such as roadway speed, congestion, and level of transit service. They have resisted considering land use and development patterns because they do not have any authority in this area. But working with the local land use authorities and coordinating approaches can lead to more affordable transportation alternatives and improved destination access. Conversely, failing to consider land use impacts during transportation investment decisions can sometimes interrupt community connectivity and push development out. For these reasons, many of the transportation agencies profiled in this section have begun to incorporate land use goals and considerations more directly into their long-range plans and investment priorities.

The national highway system was built with the goal to increase connections between cities and towns and provide people with access to more destinations and businesses with access to more customers. This was an important improvement and provided regions with greater economic reach. However, in many cases, the construction of large limited access highways through urban and suburban communities cut off direct local access between destinations on either side of the highway, lengthening trips and removing the option for non-motorized modes of travel between those destinations. In some cases these highways bisected existing neighborhoods, damaging the cohesion of those communities and creating a physical barrier to accessing the opportunities on the other side.

Over time, the standards used in highway design also crept into the design of arterial roads and main streets. These standards focus on the speed and flow of vehicle travel, an important factor, but only part of what creates destination access. The proximity and mix of types of destinations, combined with development density, also improves access not only by shortening trips and making non-auto modes viable, but also by reducing the reliance on more expensive transportation infrastructure needed to support high speed vehicle travel. It is often more appropriate to design roadways for slower speeds in the core of cities and towns with dense development patterns and location efficiency because people can walk and take transit to destinations more easily.

However, this context is not considered in current speed-based transportation planning methods,

17 FTA is providing technical assistance and resources on transit-oriented development issues to help communities grow their economies, advance equity, and improve quality of life for everyone. For information on this initiative, see <http://www.todresources.org>.

18 The National Transit Institute offers courses on TOD and transportation and land use: <http://www.ntionline.com/transit-oriented-development/>, <http://www.ntionline.com/transportation-and-land-use/>

which treat speed as equally important regardless of the context of the surrounding community. Some agencies have adopted roadway design criteria that reflect that surrounding context—building on guidance from the Institute of Transportation Engineers¹⁹ and the Congress for the New Urbanism²⁰—but vehicle speed still underlies the predominant transportation planning approach. Focusing on vehicle speed leaves out those moving by other modes of transportation and does not account for the impact of proximity on the traveler’s ability to make connections.

This shortcoming is most evident when a community or a developer proposes a project that will increase the density of development. Speed, as opposed to destination access, underlies the development rules in most places, discouraging land use patterns that bring destinations closer to people. Development projects that increase density typically estimate an increase in congestion and slower vehicle speeds. As a result, they are viewed as damaging to the transportation system regardless of whether people have better or quicker access to their needs, which now are often closer. New development that brings destinations closer together is, therefore, often prohibited, or only permitted if accompanied by roadway expansions that undercut connectivity needed for the improved access.



Congestion and vehicle flow are important goals to measure and address. As the previous section pointed out, federal rules will soon require transportation agencies to measure the performance of their transportation system in these areas. But transportation agencies that do not simultaneously consider the reliability of other transportation modes and the impact of the transportation system on destination densities could build a free flowing transportation system for vehicles that pushes destinations farther from reach and reduces access to opportunity.

Focusing on destination access means looking at the whole picture: the reliability of the transportation system, the availability of transportation alternatives, and the distance to essential services.²¹ Doing so can help agencies avoid high-cost transportation solutions that could be addressed by less expensive development solutions—for example, bringing a grocery closer to communities that need one rather than expanding an arterial road to a grocery farther away.

19 <http://www.ite.org/css/>

20 http://contextsensitivesolutions.org/network/one?party_id=8036

21 <http://www.ops.fhwa.dot.gov/publications/fhwahop14034/fhwahop14034.pdf>

II. Incorporating Measures of Destination Access into Transportation Programs

One way to incorporate destination access is to include accessibility performance measures in the process for developing long-range plans. A growing number of transportation agencies are using a performance-based process to develop their plans by defining goals and then using criteria tied to those goals to develop a broad investment strategy. This performance-based approach supports the reporting DOTs and MPOs will be doing within new system performance reports in their long-range plans under MAP-21.

Many transportation agencies have already identified improving equitable access to opportunities as one of the key goals in their visions and long-range planning documents. Performance measures for destination access can help these agencies evaluate progress in meeting their goals, tailor their investment approaches, and demonstrate success.

Steps for incorporating destination access measures into transportation programs

The process for developing performance measures for destination access will vary from agency to agency, particularly based on how the measures will be used to inform planning and investment decisions. However, the following basic implementation steps can help agencies that are interested in access to opportunity measures determine how to start:

1. Come to an agreement on how destination access measures will be used to inform decision-making. Assessing barriers and setting goals may be followed by:
 - a. Evaluating scenarios
 - b. Prioritizing projects for funding
 - c. Evaluating project alternatives
2. Think about which partners will need to be engaged in the development of the metrics or informed about the changes being made to the decision-making process.
3. Identify the right metric(s) to use based on specific state or local goals and availability of data.
4. Identify potential sources of data and any major data gaps, and reach out to partners to collect the necessary data.
5. Develop an approach, methodology, or tool that agency staff can use to measure and evaluate destination access consistently over time.
6. Collect data on current conditions to serve as a baseline
7. Train agency staff.
8. Adjust the approach as necessary to better fit with local conditions and needs.

This section discusses how to begin the process of incorporating measures of destination access into transportation programs (steps 1-3) and provides guidance on how transportation agencies can do so to ensure that their planning and investment decisions improve the connections

between people and opportunities over time. Section III will explore methods for measuring destination access (steps 4 and 5) and introduce implementation strategies (steps 6-8). Section IV provides more resources.

This section also provides examples of transportation agencies that are already integrating destination accessibility measures into their planning and investment decisions. A number of the agencies leading the way in this area have adopted a broad performance management approach and integrated destination access measures at several levels of decision-making, from establishing performance targets to evaluating investment scenarios in long-range planning.²²

Another excellent resource that provides information on the decision-making process is FHWA's ²³ Planworks: Better Planning, Better Projects Decision Guide—it identifies key decision points from long range planning through permitting and outlines the purpose and outcome, roles, questions that support decision-making, data needs, input from stakeholders, and more for each decision point.

Decide how to approach destination access

States are taking several approaches to incorporating destination access into their transportation programs. These include evaluating investment scenarios within the planning process, incorporating access into the criteria for project selection, and incorporating access into the project development process.

Selecting an approach will depend on how far the state or agency wants to go with destination access. Depending on goals and resources, small steps can be taken before diving into metrics, or several of these approaches can work together to support one another.

Assessing current barriers and setting goals

A valuable first step to incorporating destination access is to evaluate the current gaps and barriers to accessing opportunities and then use the results to develop the priorities in their plans. The Metropolitan Council, the MPO for the Minneapolis/St. Paul region, recently conducted a study to identify where opportunities in the region are located, which residents have the best access to those opportunities, and how to improve equitable access for all residents of the region. The study, *Choice, Place and Opportunity: An Equity Assessment of the Twin Cities Region*, helped the Metropolitan Council develop the priority areas in its current regional vision, *Thrive MSP 2040*, adopted in May of 2014.²⁴

The Southeast Michigan Council of Governments (SEMCOG) recently conducted an analysis, *Access to Core Services in Southeast Michigan*, which will be used to help guide transportation investments in the Detroit region moving forward. Published in January 2016, the purpose of the

22 FHWA Scenario Planning Guidebook: https://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/. And FHWA Scenario planning for Operations: <http://www.ops.fhwa.dot.gov/publications/fhwahop16016/ch3.htm> (more information on scenario planning available in Section 5)

23 FHWA PlanWorks Decision Guide <https://fhwaapps.fhwa.dot.gov/planworks/DecisionGuide>

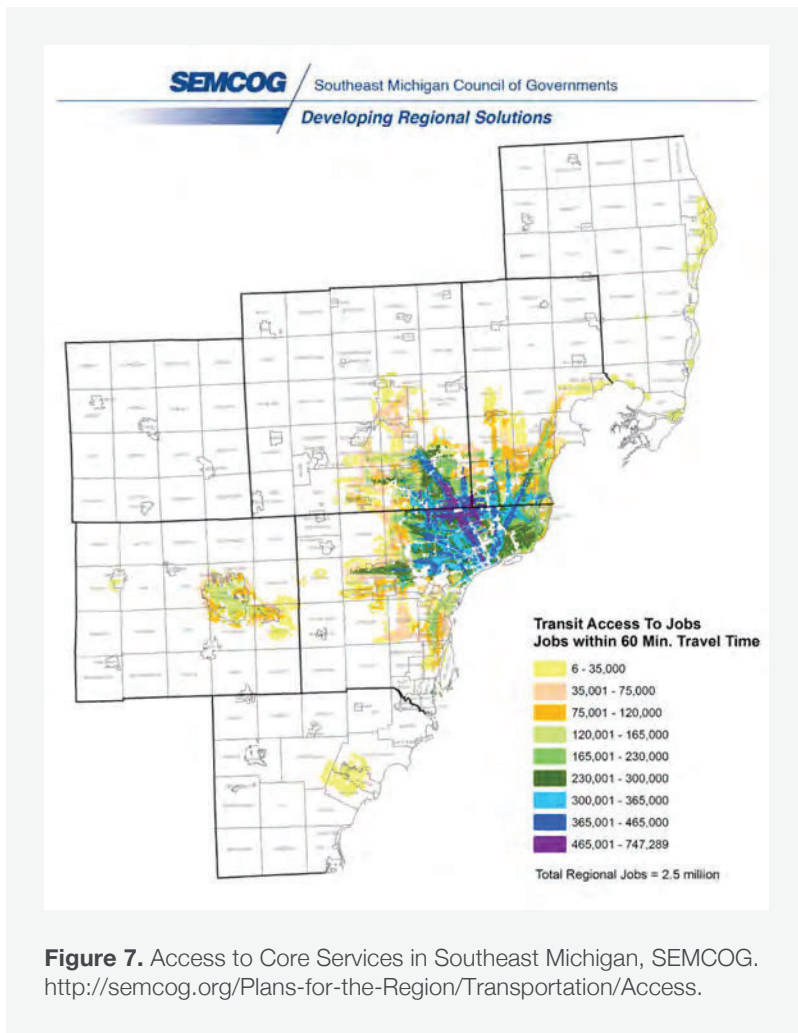
24 <http://www.metrocouncil.org/Planning/Projects/Thrive-2040/Choice-Place-and-Opportunity.aspx>

study was “to develop common measures of accessibility for comparison across the region, establish benchmarks to identify gaps and challenges where accessibility is low, set regional policies and local actions to be implemented by various stakeholders, and integrate accessibility measures and policies into regional transportation planning and decision-making processes.”

The study measured regional access to “core services”—which SEMCOG defined as fixed-route transit, jobs, supermarkets, healthcare facilities, parks, schools, and libraries—by calculating travel times from households by car, transit, biking, and walking. For each core service, the study evaluated the percentage of households able to access that service by each of the four

transportation modes within a reasonable travel time. The study included different travel time thresholds for the four modes and for each core service (for example, the study assumes people will be willing to travel for longer to reach jobs than other core services). The study also includes more specific results for specific populations: all households; transit-dependent households; households in poverty; households of older adults; households with children (for access to parks and schools only); working age population (for access to jobs only).

SEMCOG’s study found that residents of the region generally have moderate to high levels of accessibility to all of the core services in southeastern Michigan by car, although some gaps exist. By contrast, residents of the region face significant gaps when it comes to accessing core services by transit, walking and bicycling. The study concludes by proposing 10 regional policies and associated actions to



improve and expand transportation options, better align the location of core services to meet the needs and demands of residents, and improve coordination and planning to decrease accessibility barriers. SEMCOG will use the findings of the study to guide future investments.²⁵

25 <http://semcog.org/Plans-for-the-Region/Transportation/Access>

Beyond assessing the current system and barriers, each of the following approaches will require agencies to set goals for their program related to accessibility. The case studies included in each approach identify the goals the relevant agency has set and how they are using specific metrics to measure progress towards those goals. More discussion on selecting metrics and setting targets follows the approaches.

Evaluating scenarios

Agencies can incorporate destination access into their long-term planning by using accessibility performance measures as criteria for evaluating potential investment scenarios. This approach—known as scenario planning—helps agencies weigh tradeoffs between different goals and identify the best path forward.

A growing number of transportation agencies around the country are developing their regional plans by conducting a stakeholder engagement process to identify several potential long-term investment strategies for the region, and then evaluating and comparing those investment scenarios using criteria tied to regional goals. FHWA and FTA offer technical assistance to support these efforts.²⁶ Agencies that use this scenario planning approach generally evaluate the performance of each investment scenario by modeling the likely impacts in areas such as congestion, mode split, vehicle miles traveled (VMT), greenhouse gas emissions, levels of physical activity, housing costs, and other criteria identified as regional priorities. Modeling destination accessibility along with these other criteria can help agencies anticipate the short- and long-term impacts their investments will have on regional access to opportunity and weigh these impacts against other objectives.

There are several examples of agencies that have already incorporated accessibility measures of some kind into their criteria for evaluating different investment scenarios in planning. Many of the tools for mapping accessibility described in Section III will make it easier for other agencies to do so, particularly those that allow the user to model how changes to the existing transportation network and land use patterns impact destination access in the region.

Envision Utah helped pioneer the scenario planning approach in the 1990s and has since facilitated stakeholder driven visioning efforts in communities throughout the state. These efforts help citizens provide input on how they would like to see their region grow by working with them to develop several growth scenarios, modeling the impacts of those scenarios, and then surveying residents about which scenarios they prefer. Envision Utah has used accessibility-related criteria in some of these visioning projects, including modeling impacts on household transportation costs and access to parks and recreational opportunities.²⁷

Envision Utah recently facilitated a statewide initiative, Your Utah, Your Future, to create a vision for growth in the state through the year 2050. This effort involved the development and evaluation of five alternative growth scenarios. Envision Utah used projected transportation costs per household as one of several criteria to compare the five scenarios. Scenarios with a greater percentage of households located within ½ mile of public transportation and/or within 1 mile of a development

26 For information on USDOT's scenario planning technical assistance and other scenario planning resources, see http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/

27 <http://www.envisionutah.org/process/envision-utah-s-proces>

center with daily services were expected to have lower transportation costs. About 82% of Utah residents surveyed selected the two scenarios with the lowest transportation costs.²⁸



The City of Austin, Texas incorporated scenario planning tied to its performance targets into the Imagine Austin comprehensive plan visioning process. Based on community input, the city created five alternative scenarios for future growth. Austin assessed each scenario using a variety of sustainability indicators and then facilitated a public rating process before selecting a preferred scenario. These sustainability indicators included accessibility measures such as percentage of residents living within ¼ mile of transit routes and stops. The preferred growth scenario that the city ultimately included in the plan will focus development in a series of compact and walkable mixed-use activity centers, corridors, and job centers.²⁹

The Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area has used scenario analysis to develop its regional transportation plans since 2001. MTC refines its approach with the development of each plan, and has incorporated accessibility-related measures as the region has become increasingly focused on issues of equity and displacement.

In the past, MTC has developed its visioning scenarios more-or-less concurrently with the project evaluation process, but MTC now has more data available upfront on each proposed project. As a result, MTC will be able to use that data to inform decisions about projects to include in each visioning scenario for Plan Bay Area 2040, which will be completed in mid-2017.

For this update to its regional transportation plan, MTC used its performance targets to develop three “visioning” scenarios combining specific land use patterns and transportation network

28 <http://www.envisionutah.org/projects/your-utah-your-future>

29 <http://www.austintexas.gov/sites/default/files/files/Planning/ImagineAustin/webiacpreduced.pdf>

investments. Each scenario reflected different types of housing, commercial growth, and varying levels of transportation funding. MTC evaluated each scenario against regional goals and performance targets, including several equity criteria to evaluate impacts on specific populations compared to the region as a whole. Some of the accessibility-focused measures used during the scenario analysis included changes to housing and transportation affordability for low-income residents versus the rest of the region, and commute and non-commute travel times for communities of concern versus the rest of the region. Regional land use and travel demand models helped MTC perform this analysis. MTC used this evaluation and an extensive public outreach process to select a preferred investment scenario for the region. The MTC Commission and the Association of Bay Area Governments' Executive Board approved the Final Preferred Scenario in December 2016. It is now undergoing an environmental assessment as required by state law.³⁰

Prioritizing projects for funding

There is rarely enough funding to build every transportation project or make every improvement needed. Performance measures can be a powerful way to identify priorities for the investment of limited funds. Applying performance measures to project prioritization allows transportation agencies to demonstrate that their investments track their priorities and to bring transparency to a process that is often poorly understood.

Transportation agencies can use performance measures to identify projects for funding through scoring and competition. In addition to the scenario analysis described above, MTC conducted a project-level evaluation of potential (uncommitted) transportation projects using similar performance measures, representing billions of dollars in proposed investments. This included a benefit-cost analysis and targets assessment for major capacity-increasing projects, and a scoring process for smaller projects. State of good repair investments were also included.

Based on this analysis, high-performing projects were prioritized for regional funding while low-performing projects were subjected to additional analysis. Project sponsors were required to make a

compelling case for including low-performing projects in the Plan. Medium performers, the majority of projects, were subject to county congestion management agencies' discretion.³¹

One metric for scoring accessibility: change in cumulative jobs accessible within 45 minutes for road projects or 60 minutes for transit projects

The State of Virginia has also recently applied this method of project evaluation to all new capacity projects. In 2014, the Virginia legislature unanimously passed House Bill 2 (HB2) requiring the Virginia Department of Transportation (VDOT) and the Commonwealth Transportation Board (CTB) to develop a quantifiable and transparent prioritization process for making funding decisions for capacity enhancing projects within the six-year improvement program. The legislation required the CTB to prioritize projects based on enumerated priorities: congestion mitigation, economic

30 <http://mtc.ca.gov/whats-happening/news/special-features/plan-bay-area-2040-final-preferred-scenario-approved>

31 <http://data.mtc.ca.gov/performance/dashboard/>

development, “accessibility,” safety, and environmental quality. Land use coordination is also identified as a priority in areas with a population over 200,000.

In response to the legislation, VDOT and CTB researched best practices from other state DOTs and MPOs, held a peer exchange workshop, and held extensive outreach meetings with key stakeholders. From this, they developed six guiding principles for the application of the HB2 scoring framework:

- Analyze what matters to people and has a meaningful impact
- Ensure fair and accurate benefit-cost analysis
- Be both transparent and understandable
- Work for both urban and rural areas
- Work for all modes of transportation
- Minimize overlap between measures

The prioritization process that CTB now uses evaluates eligible projects against the goals set out by HB2, now called Smart Scale³² with up to 100 points assigned to a project under each category. In terms of the “accessibility” criterion, Virginia looked at jobs access during its first round of applying Smart Scale, giving 60 percent of the accessibility score based on the change in cumulative jobs accessibility within 45 minutes for road projects or 60 minutes for transit projects. Another 20 percent of the score was an equity breakout, considering the change in jobs access for disadvantaged populations. The final 20 percent is based on an assessment of the project support for connections between modes, and promotion of multiple transportation choices.

Each of the criteria is applied to projects differently based on the type of community where each project is located. For example, jobs access is 15 percent of the overall score in large urban areas, where congestion mitigation is the top priority. Jobs access is 25 percent of the score and the top

priority in medium size areas like Richmond. It is also 25 percent of the score for small cities, like Charlottesville, but just 15 percent in rural areas where economic development is the top priority.

Rather than wait until they had all the data needed to assess full destination access, Virginia started with jobs access to capture this state priority and are building to a more comprehensive standard

Projects are chosen based on a comparison of their total scores divided by the Smart Scale-funded cost of the project to determine the value for every dollar invested (in \$10 millions) to capture their cost-effectiveness.

While jobs access was the focus in the first round of Smart Scale, VDOT and CTB are considering expanding this criterion to look at broader

destination access in future rounds. Doing so will require the state to gather new data. But rather than wait until they had all the data needed to assess full destination access, Virginia started with jobs access to capture this state priority and are building to a more comprehensive standard.

32 More information on other scoring areas can be found here: <http://vasmartscale.org/>

The Smart Scale project prioritization process has been greeted positively as taking politics out of the process³³ and has made clear to the taxpayers why projects are funded and how projects not chosen for funding can be improved in order to receive funding in the future. It has allowed the state to put priorities like jobs access on par with other, more typical transportation measures, like congestion mitigation and safety.

Several MPOs also evaluate projects for funding in their TIPs based on scoring procedures that include jobs access. One example is the Sacramento Council of Governments (SACOG), whose solicitation of projects for funding includes an evaluation of projects based on seven criteria, including VMT reduction, congestion relief, multimodal options, long-term economic benefits, improved goods movement, safety and security, and state of good repair benefits.

Jobs access shows up under two of these criteria: VMT reduction and long-term economic benefits. Under VMT reduction, projects are rated as high, medium or low for the extent to which a project serves an area with employment density and how well its design will help reduce VMT in that area. In the long-term economic benefits criterion, projects are rated on the extent the project improves access to jobs within the sponsoring jurisdiction.

Another example comes from the latest solicitation³⁴ from the Metropolitan Council in the Minneapolis/St. Paul region for projects under the Surface Transportation Block Grant program. In this solicitation, the Metropolitan Council lays out nine priority criteria including jobs access. For example, the “Role in the Regional Transportation System and Economy” criterion includes a measure of the connection to jobs and manufacturing. To measure connection to jobs, applicants use a regional economy map provided by the Metropolitan Council to show existing employment within a mile, existing manufacturing and distribution-related employment within a mile and existing students in the project area.

Additionally, under the “Equity and Housing” criterion, applications are reviewed based on the housing performance score of the area in which the project is located. This score is based on housing affordability and diversification in the area as local initiatives to facilitate affordable housing creation and preservation. The weight of these factors on the overall score of each project changes based on the type of project, such as roadway expansion, roadway management, bridge rehabilitation, transit system modernization and pedestrian facilities.

At the state level, the Minnesota Department of Transportation (MnDOT) used a competitive program in 2013 called Corridors Investment Management Strategy (CIMS) to target funding to state priorities that are unlikely to be addressed through the normal programming process.³⁵ Under this program, MnDOT evaluated projects based on three areas: a benefit-cost evaluation, other qualitative factors and funding match.

While MnDOT assessed common engineering benefits (like travel time reliability) in its benefit-cost evaluation, the agency also quantified benefits areas like bicycle/pedestrian-related health benefits,

33 http://www.roanoke.com/news/politics/virginia-plans-to-pull-politics-out-of-transportation-spending/article_5d7518b5-5c77-5457-806d-37ed5f294594.html

34 <http://www.metrocouncil.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation/DraftRegionalSolicitation2016.aspx>

35 <http://www.dot.state.mn.us/cims/pdf/CIMS%20Solicitation%20Criteria%20Summary.pdf>

noise, runoff and agricultural land protection. For areas that were difficult to quantify, MnDOT qualitatively considered other factors, including improved destination access to tourist destinations, schools, health care facilities and recreational areas.

At the federal level, the USDOT's popular Transportation Investment Generating Economic Recovery (TIGER) program has also prioritized access to opportunity. Under TIGER, projects are evaluated based on the extent to which proposed projects improve safety, state of good repair, economic competitiveness, quality of life and environmental sustainability. Additionally, for the 2016 grants, applicants demonstrated these priorities in terms of access to opportunity. For example, economic benefits were demonstrated for residents of all incomes by improving access to jobs, education and other necessities. Additionally, applicants showed that projects provide quality of life benefits, such as access to transit and bicycle/pedestrian facilities, and connections to jobs and necessities, not just recreation and entertainment.

These benefits are not quantified but are rated as highly recommended, recommended, acceptable and not recommended. These ratings are given based on the information provided by the project sponsor in the application. Projects that perform well in 2-3 benefit areas move to a finalist group to be evaluated on secondary criteria (innovation and partnership), project schedule, a benefit-cost analysis and geographic distribution. A key element of the TIGER Program is the predictability of the evaluation process.

Evaluating project alternatives

Performance measures can also be used to evaluate project alternatives. In many cases, project sponsors do this informally to prepare for competitive grant programs. Applicants know their project will be evaluated for its performance in goal areas, like destination access, and design their project to be most competitive for funding.

This evaluation can be done more formally too. For example, if two different transit alternatives are under consideration for investment in a region, an agency could develop or use an existing mapping tool to evaluate how each alternative will change the number of destinations reachable within a 45-minute travel time threshold compared to the base case. An online version of such a tool could be used to collect public input on the project alternatives by allowing individuals to click on any location in the region and quickly see how different alternatives change his or her "travel time contour". If a new BRT service is proposed, residents could see for themselves how the area reachable within 45 minutes from their home will change. Businesses could also see how the potential customers accessible within 45 minutes might change.



At the state level, one example of applying performance to evaluating project alternatives can be found in Tennessee, though this evaluation focused on safety and cost, not destination access. In 2012, the Tennessee Department of Transportation (TDOT) had a backlog of more than 800 roadway projects in various stages of development, with total cost estimates at \$8.5 billion. As a pay-as-you-go state, it became challenging to plan and deliver projects quickly, which led to the creation of this project backlog. Higher cost projects particularly tended to stay on the books for years until funding became available. TDOT conducted a series of Expedited Project Delivery (EPD)³⁶ reviews of state highway projects to evaluate proposed projects for which funding was not available in order to address immediate safety and congestion needs and effectively lower project cost. This review also provided recommendations for longer-term improvements.

For each project, TDOT used the EPD process to identify immediate low-cost safety improvements such as new lane striping, curve warning signs, guard-rails, raised pavement markers, and tailored road widening and intersection re-alignments based on operational analysis of future traffic demand and field review observations. Doing so allowed TDOT to identify funding in the near future and deliver project benefits more quickly.

This same kind of procedure could be applied to additional performance areas when reviewing project alternatives. Alternatives considered in the National Environmental Protection Act are evaluated for their impact on transportation outcomes and their impact on the environment. Going forward, transportation agencies that prioritize destination access could add this important outcome area to their evaluation of project options.

A transportation agency can also set priorities for the types of projects that it wishes to see constructed in a region. For example, the Miami-Dade MPO's Governing Board has prioritized the advancement of rapid transit corridor projects by passing two resolutions in 2016. The first resolution set rapid transit corridor projects as highest priority. The second resolution endorsed the Strategic Miami Area Rapid Transit (SMART) Plan, including six bus rapid transit and six express bus corridors. The MPO then overlaid the funded projects in its TIP that are within one half mile radius of the 12 identified transit corridors to determine which projects should consider transit solutions in support of the SMART Plan.

Engage partners

Access to opportunity can mean different things to different people and entities. It is important to come to an agreement among stakeholders and the public about what it means in each community.

Once everyone agrees on exactly what the agency should measure, these partners could be key in developing data. Some of them may have access to essential data or resources for gathering it.

Partners are also important to the implementation of performance management, especially when it is used to evaluate and select projects for funding. Stakeholders should be a part of identifying methods used to ensure the application of performance measures are open and transparent. If all stakeholders understand how measures are used, they can support and explain them and bolster projects that will fit the evaluation.

36 <http://www.greshamsmith.com/showcase/projects/showcase-7/tdot-expedited-proj-delivery>

Several strategies can increase understanding of the application of destinations access performance measures and the perception of transparency. If access is part of a larger project evaluation process: 1) make the tool available online; 2) develop and distribute a simplified, non-technical version aimed at the broader public; and, 3) create a full presentation and take it “on the road” — promulgate at forums throughout the state for major stakeholders and interested parties.

If transportation agencies are seeking submissions from districts or other agencies, these strategies may still apply, and it is also important to ensure that applicants understand the evaluation process and believe they could apply it themselves. If applicants see how some projects are evaluated as improving access and others are not, they can also see how to turn a failure to receive funds in one round into an award in a future round. The best way to achieve this is to make time to meet with every applicant that does not receive funding to walk through their evaluation and give them information and support to make their project and application more competitive.

Metro in Portland, Oregon is currently updating its regional transportation plan (RTP), finalizing plan in 2018. This three-year process began with the release of a work plan in November 2015.³⁷ The work plan divides the RTP update into five phases. For each phase, the work plan includes key policy and technical partnership and engagement activities with both stakeholder partners and the public.

Policy partnerships include the agency’s standing advisory committees, which include transportation and land use technical committees that advise corresponding policy committees that, in turn, advise the Metro Council. The agency is holding a series of regional leadership forums to further engage its policy partnerships, bringing together stakeholders to explore funding, technology, and other emerging issues in depth. These forums include facilitated discussion between elected officials, community members and business leaders to provide policy direction to staff. On the technical partnership side, Metro has convened eight technical work groups on topics related to the RTP update such as transit, equity, freight, and safety. These work groups, comprised of technical experts and advisory committee representatives, will help staff prepare for the advisory committees and regional leadership forums and implement policy direction coming from them. The agency publishes advisory committee and technical work group member names and affiliations on its website as well as a calendar of meetings of each one. In addition, it posts meeting agendas in advance of meetings and meeting minutes following their approval.

These partnerships will contribute to each phase of the update process. For example, during Phase 1, partners contributed to identifying priorities to be addressed in the update. Phase 2 included identification of regional transportation needs and possible solutions. During Phase 3, Metro will begin to work with its partners to update the performance evaluation framework. Partners will review a draft list of transportation investment priorities during Phase 4 based on performance and other factors. Finally, in Phase 5, after public review of the draft RTP, regional advisory committees will finalize recommendations to the Metro Council.³⁸

Metro’s website provides content for the regional transportation plan update that is accessible and understandable by both technical and non-technical audiences.³⁹

37 <http://www.oregonmetro.gov/sites/default/files/RTP2018-WorkPlan-Nov20150final.pdf>

38 <http://www.oregonmetro.gov/sites/default/files/RTP2018-PublicEngagementPlan-Nov2015.pdf>

39 <http://www.oregonmetro.gov/public-projects/2018-regional-transportation-plan>

Identify the right metrics and set targets

A key first step transportation agencies should take to help improve the connections between people and opportunities over time is to establish performance targets for access to opportunity and track progress in meeting those targets. State DOTs, MPOs, and transit agencies will already be setting targets in the areas required under MAP-21, so this is simply a matter of incorporating destination access within this process.

While the concept of destination access is meaningful primarily on a regional scale, state agencies play a significant role in impacting regional access to opportunity. Establishing performance targets can help them direct investments to connect people to more opportunities in their regions. Like congestion, a single statewide target for destination access will be relatively meaningless by itself, but can be valuable as the sum of a number of regional targets. For example, the Chicago metropolitan area faces very different congestion challenges than southern Illinois, so a statewide congestion target would need to reflect that difference. States can consider establishing several

State agencies can use data to identify regions with significant destination access challenges.

regional targets for destination access or compiling regional goals into a single statewide target. In either case, they will need to coordinate with MPOs and local agencies to ensure that the targets reflect regional conditions and needs.

Selecting the right performance targets will depend on specific state or regional goals and challenges. There are a number of ways to define and measure access to opportunity, which means transportation agencies can take many different approaches in developing performance targets. For example, an agency that has

established a goal to improve job access for low-income populations in the region or state might consider targets such as:

- Increase by 25 percent the share of jobs in the area accessible within a 30-minute commute for low-income households
- Increase the share of low-income households living within one half mile of high frequency transit service by 15 percent
- Reduce average commute times for low-income households in the region by 20 percent
- Decrease the portion of low-income household income going toward transportation costs by 10 percent

Appropriate targets will vary to some extent depending on the type of agency. Transit agencies will generally be well-positioned to set targets for monitoring how easily people in the region can access transit service, and how well that service connects them to work and other needs. State transportation agencies may want to select targets that can be measured and easily explained on a statewide level, such as the share of household incomes statewide going toward combined housing and transportation costs.

Where statewide targets for access to opportunity may not be appropriate, state agencies can use data to identify regions with significant destination access challenges and then work with MPOs in

that area to develop regionally specific targets. Many transportation challenges do not affect entire states evenly, such as congestion, but that does not make those issues any less a state priority.

Agencies will need a clear understanding of current conditions in the state or region in order to set targets that are ambitious yet achievable, which will mean collecting data that can be used as a baseline if that information does not already exist. The Southeast Michigan Council of Governments (SEMCOG) recently conducted a regional assessment, described earlier, of the barriers residents of the Detroit metropolitan area face in reaching key services using different transportation modes. SEMCOG set benchmarks for access to opportunity in the study and will be using the results to identify priorities for future transportation projects and inform the development of future regional transportation plans.⁴⁰ See page 18 for more details on SEMCOG's analysis, Access to Core Services in Southeast Michigan.

Several transportation agencies are already incorporating performance targets related to access to opportunity into their planning. In many cases, these agencies have developed a number of performance targets that measure destination access in some way to support a variety of the goals identified within their long-range plans. For example, job accessibility measures can be used to track progress toward economic development goals, while agencies can track public health goals by measuring access to parks, trails, healthcare facilities, and grocery stores.

Some of the agencies at the forefront in this area are in California as a result of the state's Sustainable Communities and Climate Protection Act of 2008 (SB 375).⁴¹ SB 375 set regional greenhouse gas emission reduction targets for the state, and required California's metropolitan areas to develop Sustainable Communities Strategies outlining an approach for achieving the regional targets. Some California MPOs have gone beyond the requirements in SB 375 by setting other performance targets for achieving broader state and regional goals.

The Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area, for example, has included performance targets in the regional transportation plans for the Bay Area since 2001. MTC develops the targets for each plan through an extensive stakeholder engagement process by first defining goals for the region and then selecting targets that will help the region evaluate progress toward achieving those goals. During the development of its most recent approved regional transportation plan for 2040, Plan Bay Area, MTC utilized performance measures based on the identified targets at three levels:

- Evaluating projects for inclusion in the plan;
- Comparing scenarios at the regional level;
- Monitoring performance after finalizing the plan.⁴²

Plan Bay Area was the first of MTC's regional transportation plans to integrate transportation, housing, and land use strategies to meet regional goals. As noted previously, MTC is currently updating Plan Bay Area in partnership with the Association of Bay Area Governments, and plans to complete the update in mid-2017. In September 2015, after a stakeholder engagement process, MTC adopted seven goals for the updated plan and approved 13 performance targets that

40 <http://semcog.org/Plans-for-the-Region/Transportation/Access>

41 <http://www.arb.ca.gov/cc/sb375/sb375.htm>

42 <http://vitalsigns.mtc.ca.gov>

November.⁴³ The targets were used to compare potential scenarios in the plan, analyze the impacts of proposed projects, and weigh tradeoffs between the different goals of the plan. Some of MTC's 13 current targets address access to opportunity, including:

- Decrease the share of lower-income residents' household income consumed by transportation and housing by 10 percent (Goal: Equitable Access)
- Increase by 20 percent the share of jobs accessible within 30 minutes by auto or within 45 minutes by transit in congested conditions (Goal: Economic Vitality)

MTC will develop an Action Plan with near- and medium-term action items to improve progress on the performance targets – focusing on those *Plan Bay Area 2040* is having trouble meeting. These include housing affordability, displacement risk, and access to jobs. This Action Plan will be adopted concurrently with *Plan Bay Area 2040*.⁴⁴

The Southern California Association of Governments (SCAG) also uses a performance-based approach to develop its Regional Transportation Plans/Sustainable Communities Strategies. The most recent 2016 draft plan includes nine goals. SCAG developed two sets of measures tied to these goals for the plan: 1) Measures for evaluating alternative investment scenarios and selecting a preferred scenario for the plan, which can be readily measured and forecasted into the future; and 2) Performance indicators which cannot be readily forecasted but can be used to monitor progress over time toward the goals/targets identified in the plan.

While MTC's performance targets are numeric, SCAG's targets are generally directional except quantitative targets required by federal and state statutes. For example, SCAG's 2016 regional transportation plan includes the following indicators related to destination access, each of which has a performance target of "improvement over base year":

- Share of growth in High Quality Transit Areas
- Percent of income spent on housing and transportation
- Travel time to work
- Percent of residents within one half mile walk to parks and open space⁴⁵

The City of Austin, Texas is another example of an agency monitoring accessibility-related performance indicators. The city adopted its Imagine Austin comprehensive plan, described earlier, in 2012 and developed several numeric indicators tied to the vision principles in the plan.⁴⁶ Austin will use these indicators to measure progress toward achieving the plan's goals every five years. Each of the seven vision principles has at least one destination accessibility performance indicator, some of which include:

- Households within one half mile of full-service supermarkets/grocery stores (percent)
- Households within one half mile of park or accessible open space (percent)
- Households within one half mile of art/cultural venue (percent)
- Households within one half mile of library or community center

43 <http://planbayarea.org/the-plan/plan-details/goals-and-targets.html>

44 <http://mtc.ca.gov/whats-happening/news/special-features/next-steps>

45 http://scagrtpscs.net/Documents/2016/draft/d2016RTPSCS_PerformanceMeasures.pdf

46 <http://www.austintexas.gov/sites/default/files/files/Planning/ImagineAustin/webiacpreduced.pdf>

- Households within one half mile of a school, public and/or private (percent)
- Households within one quarter mile of an urban trail (percent)
- Households between one quarter and one half mile of transit and high capacity transit (percent)
- Employees between one quarter and one half mile of transit and high capacity transit
- Households within one half mile of retail and mixed-use centers (percent)
- Households within one half mile of medical services (percent)

III. Methods of Measuring Access to Opportunity

Section II provided an overview of ways transportation agencies can incorporate measures of destination access into their programs to improve the connections between people and opportunities, resources, and essential services. This section discusses a variety of approaches transportation agencies can use to measure and evaluate how well people can access destinations.

As defined in Section I, **access to opportunity** or **destination access** is the degree to which the transportation system provides people with access to jobs, schools, healthcare, recreation, and other resources and essential services. It measures the ease with which people can connect to the places they need to go. A number of factors impact destination access, including:

- The reliability of the transportation system;
- The availability of reliable and safe transportation alternatives to driving, such as transit, bicycle, and pedestrian facilities; and
- Distance and travel time to the destination, which is impacted by development patterns, or the geographic distribution of goods and services.

Transportation agencies have several types of data available to them for measuring access to opportunity, including data collected by their own staff as well as datasets available from other entities. Some agencies work with this data in-house, creating their own analysis tools or applications. A number of new and emerging tools can make it easier to do so by providing transportation agencies with a platform for robust data analysis. Transportation agencies can purchase one of these tools to help measure destination accessibility or use the approach taken by these tools to develop their own applications tailored to local conditions and specific decision-making needs. Many of the underlying data sources used by these tools are open source or available for free download.

Destination access is generally measured on a regional or local scale, but state DOTs play a significant role in impacting regional access to opportunity with their investments and have an important role to play in measuring it. Rather than doing so on a statewide basis, state DOTs can measure destination access region by region and use the results to inform statewide policy and investment decisions. For example, as described in greater detail in Section II of this guide, the Virginia Department of Transportation evaluates all proposed new capacity projects based on how they impact regional access to opportunity and uses that and other criteria to score and prioritize investments. Some of the new and emerging tools can help provide the data necessary to perform this type of analysis consistently around a state, but states will also need to collaborate with MPOs, transit agencies, and other local agencies to collect the necessary data.

This section presents types of data that a transportation agency may collect and analyze in order to make decisions regarding its transportation system. For each, this section includes some examples of third party data sources available for download or purchase, as well as case studies of how agencies have made use of each type of data. This section also examines tools that are available to assist transportation agencies with analyzing their transportation system needs. Finally, this section discusses proxy measures for access to opportunity that can help capture the concept of destination access without measuring it directly.

Types of data used in measuring access to opportunity

One way to evaluate access to destinations in a region is to analyze existing data from providers such as the U.S. Census Bureau. A transportation agency may also collect and maintain new data. Data can include transportation system characteristics such as commute trip lengths, modes of travel, transit usage, employment, household demographics, and employee travel flows. This data helps transportation agencies identify major destination access trends and challenges in a region and make planning decisions. This section discusses types and sources of data available to transportation agencies.

Demographic data includes statistical data about the population of a given study area, such as race, age, gender, marital status, geographic distribution, and citizenship. Many of these data are applicable to understanding the impacts of access to destinations on transportation equity.

The U.S. Census Bureau⁴⁷ is the most widely recognized source of demographic data in the United States. In addition to its well-known decennial Census, the Census Bureau's American Community Survey (ACS)⁴⁸ provides broad social, economic, housing and demographic profiles of regions across the United States. The ACS is updated annually, with 1 year, 3 year (discontinued in 2015), and 5 year data estimates provided. These ACS products cover various geographic levels and have differing margins of errors. Thus, it is critical for a transportation agency to select a dataset appropriate for the analysis to be performed in order to produce meaningful results.

Transportation agencies can use the ACS to help understand the changing demographic makeup of their region in addition to and beyond the data provided by the decennial Census. The ACS provides several key types of data that are critical to measuring access to opportunity and can be tracked over time, including data on the population's occupations, place of work and commute, housing costs, and access to vehicles. The ACS data is available for free download through the American Fact Finder site, as is the decennial Census data.

Many MPOs generate their own demographic forecasts for their region. They prepare reports and update tools on an annual basis describing the population trends of their region. For example, the San Diego Association of Governments (SANDAG) prepares an annual report detailing the region's demographic trends.⁴⁹ SANDAG's Data Surfer tool⁵⁰ also incorporates U.S. Census data into demographic reports that can be generated for a variety of geographic levels within the region.

Economic data includes employment and other quantitative data describing the labor market and economy of a geographic area.

The U.S. Census Bureau offers several sophisticated tools for retrieving and tracking economic data. Its Center for Economic Studies offers the Longitudinal Employer-Household Dynamics (LEHD) program,⁵¹ prepared under the Local Employment Dynamics (LED) Partnership with state governments. The LEHD program provides labor market data such as unemployment rates,

47 <http://www.census.gov>

48 <https://www.census.gov/programs-surveys/acs/>

49 http://www.sandag.org/uploads/publicationid/publicationid_2001_20213.pdf

50 <http://datasurfer.sandag.org/>

51 <http://lehd.ces.census.gov/>

wages, and job flows into and out of a particular geographic area. Under the LED Partnership, all states share Unemployment Insurance earnings data as well as their Quarterly Census of Employment and Wages data with the Census Bureau. The LEHD program combines this information with other administrative, census, and survey data to create more detailed statistics on unemployment, wages, job flows at detailed levels of geography and industry and for different demographic groups, as well as workers' residential patterns. The LED Partnership's flagship product is the Quarterly Workforce Indicators (QWI), which provides trends in employment and industry as far back as 1990. Another data product, the LEHD Origin-Destination Employment Statistics (LODES), provides annual employment statistics linking home and work locations down to the Census block level. The LED Partnership also offers Job-to-Job Flows (J2J), which offers data on worker flows between states, industries, and non-employment. LEHD offers several online tools to view and download these datasets.

In measuring Access to Opportunity, employment data, such as that provided by LEHD and LODES, is critical as it allows the identification of commute patterns and available jobs in a particular region. It shows connections between workers and jobs. Like other U.S. Census data, the LEHD and LODES datasets are available for free download.

Portland, Oregon's Metro made extensive use of LEHD and LODES data in its Mobility Corridor Atlas,⁵² which divides the Portland Metro area into 24 unique travel corridors intended to represent current mobility patterns. For each of the 24 travel corridors, the atlas provides a set of maps and charts that show a variety of information regarding the travel corridor's land use, economic, and transportation network characteristics and performance, as well as future plans. The tool presents data, such as major industries and commuter inflow/outflow in a highly graphical format to easily convey the current economic conditions of the travel corridor being studied.



Geospatial and land use data includes Geographic Information System (GIS) datasets as well as data from other electronic sources, such as GPS, satellite imagery, and geotagging. Local

52 <http://www.oregonmetro.gov/mobility-corridors-atlas>

governments may maintain their own GIS data for their communities, or access such data for free or for a nominal cost from third parties.

OpenStreetMap⁵³ is an open source data repository maintained by a community of contributors. It provides downloadable map data showing roads, trails, rail stations, and other transportation infrastructure created using aerial imagery, GPS devices, and field maps. In urban areas, it often can provide more detailed and up-to-date information on existing pedestrian networks than other data sources.⁵⁴ The data can be downloaded for free then imported into GIS or other tools for use in further analysis.

Another provider of geospatial data for transportation is HERE (formerly known as NAVTEQ).^{55,56} HERE's pedestrian and roadway network data is collected via satellites and GPS data points as well as its own vehicle fleet and local field offices.

GPS data provider TomTom also provides roadway network data to be used in data analysis through its MultiNet service.⁵⁷ The data is compiled from aerial images, paper maps, field surveys, satellite imagery, community input, and the company's mobile mapping vehicles. InfoUSA is another provider of land use data.⁵⁸

Finally, the U.S. Census Bureau, through its Topologically Integrated Geographic Encoding and Referencing (TIGER) products⁵⁹ provides GIS and mapping data for download showing features such as roads, railroads, rivers, legal and statistical geographic areas.

One successful local example is the Louisville / Jefferson County (Kentucky) Information Consortium. This multiagency partnership offers a variety of land use and other maps and GIS data for the region.⁶⁰ At the state level, many states maintain a GIS data repository. For example, New York State maintains a GIS Clearinghouse containing statewide data available for download.⁶¹

Safety data includes factors such as the number of crashes (as well as their severity), fatalities, and injuries. MPOs, state DOTs, and other transportation agencies generally track this information to locate crash "hot spots".

Transportation agencies routinely collect **traffic count data** during peak travel periods to understand the volume of vehicles traveling through a roadway section or intersection. A local government or MPO, a state DOT, or a third party consultant may collect this information.

Transit route and schedule data may be available for analysis from local transit agencies using the General Transit Feed Specification (GTFS) format⁶², originally created through a partnership

53 <https://www.openstreetmap.org>

54 <http://access.umn.edu/research/america/walking/2014/documents/CTS15-04.pdf>

55 <https://company.here.com/enterprise/location-content/overview/>

56 <http://www.navmart.com/here-navstreets.php>

57 http://www.tomtom.com/en_gb/licensing/products/maps/multinet/?WT.ac_id=ttlic_footer_multinet

58 <https://www.infousa.com/data-quality/>

59 <https://www.census.gov/geo/maps-data/data/tiger.html>

60 <http://www.lojic.org/main/>

61 <http://gis.ny.gov/>

62 <https://developers.google.com/transit/gtfs/reference>

between Google and TriMet in Portland, Oregon. These data files, consisting of multiple text files saved in a single ZIP file, include information on the routing, stop locations, and service schedules or frequencies. Many transit agencies have taken advantage of this standard to provide their route and schedule information for data analysis purposes or to be included in software developers' route planning tools such as Google Maps or mobile phone applications. In 2016, U.S. DOT released the first National Transit Map based on GTFS data from 270 transit agencies, with plans to update as additional agencies contribute.⁶³

Travel behavior data tracks the choices people make regarding transportation. Examples include transportation mode share, the number of trips taken and minutes per day spent in travel, destinations, route choices and time of day. This information is used to inform transportation planning models and traffic forecasts prepared by transportation agencies.

Transportation agencies also generally conduct **public outreach** to collect the opinions of the public and other stakeholders. Through techniques such as surveys, public meetings, and social media, the agencies gain an understanding of the public's opinion of a proposed project, how the public uses transportation and the issues they face when doing so. In addition, a number of transit agencies currently collect data on transit accessibility through ridership surveys. In evaluating access to opportunity, it is critical that modeling tools and data sources do not take the place of public outreach. Conducting effective outreach helps reach diverse populations in the community and build a greater understanding of their transportation challenges.

Table 1, on the following page, provides a summary of the major data sources discussed in this section.

63 <http://www.rita.dot.gov/bts/ntm>

Table 1. Summary of Data Sources

	U.S. Census Data, including Decennial Census and American Community Survey data	Longitudinal Employer-Household Dynamics (LEHD) Program	LEHD Origin-Destination Statistics (LODES)	OpenStreet Map	HERE Map Data (formerly NAVTEQ)	Transit Routes and Schedules	MultiNet datasets	InfoUSA	Topologically Integrated Geographic Encoding and Referencing (TIGER) datasets	Local government, state DOT and MPO data
Provider	U.S. Census Bureau	U.S. Census Bureau	U.S. Census Bureau	Hosted by University College London VR Centre, Imperial College London, and Bytemark Hosting	HERE	Local transit agencies, U.S. DOT National Transit Map	TomTom	Infogroup	U.S. Census Bureau	Various
Cost (Free/Paid)	Free	Free	Free	Free	Paid	Free	Paid	Paid	Free	Free
Type of data provided	Broad social, economic, housing, and demographic profiles	Labor market data including unemployment, wages, job flows at detailed levels of geography and industry and for different demographic groups, workers' residential patterns	Annual employment statistics linking home and work locations at the Census Block level	Roads, trails, transit stations, points of interest, and other infrastructure	Roads, trails, transit stations, points of interest, and other infrastructure	Transit route and schedule / service frequency information in General Transit Feed Specification (GTFS) format	Digital mapping information including road signage, intersections, and navigational information	Location-based data	Spatial extracts including features such as roads, railroads, rivers, legal and statistical geographic areas	Travel speed data, GIS files showing bicycle and pedestrian infrastructure, other local transportation network information
Source of information	U.S. Census Bureau surveys	Federal, state, and U.S. Census Bureau data including state-level unemployment insurance earnings data and quarterly Census of Employment and Wage data	LEHD data	Open source data maintained by a community of contributors using aerial imagery, GPS devices, personal knowledge, and field maps	Satellites, GPS data points, HERE's vehicle fleet, local field offices	Local transit agencies	Aerial images, paper maps, field surveys, satellite imagery, community input, mobile mapping vehicles	Yellow Page directories, business data, user feedback	U.S. Census Bureau's MAF/TIGER database	Local governments, regional MPOs, and state DOTs

Introduction to data tools

The types of data described above form the basis of more sophisticated analysis tools that help measure access to opportunity. In recent years, a number of private firms and research institutions have developed tools and software platforms that make it easier to evaluate destination access at a variety of geographic scales. These tools typically use geospatial modeling to map destinations that can be reached from a given location by car, transit, bicycling, and walking. Using these tools can make it easier for transportation agencies to evaluate access on a more consistent basis over time than they have in the past, which opens up greater possibilities for integrating destination access into investment decisions. These tools also have applications for land use planning and can support a more integrated approach to cross-agency land use and transportation decision-making.

This guidebook describes several tools that are currently available in more detail on the following pages, including datasets developed by the University of Minnesota's Accessibility Observatory, as well as Citilabs' Sugar Access tool, Renaissance Planning Group's GIS tool, and Conveyal's Transport Analyst platform. Agencies can purchase these tools or build on the approaches to conduct their own internal analyses within their region. There are significant overlaps in the sources of data used by these tools, many of which are open source or can otherwise be accessed for free. This means that transportation agencies can utilize their own staff or consultant resources to perform this type of analysis; the acquisition of a sophisticated tool is not a prerequisite.

The four tools profiled below build on the same basic principle: destination access is measured in terms of the time it takes to travel from one key location to another. Measuring travel times between destinations offers a more complete representation of access to opportunity than measures typically used to evaluate mobility, such as travel delay and level of service.

Under this approach, measuring destination access involves: 1) defining the types of destinations to include, 2) mapping or geocoding where those destinations are located, and 3) calculating the time it takes to travel between destinations by different modes based on the existing transportation network. Some of these tools can also measure quantities of destinations, such as the number of jobs, schools, or grocery stores, accessible within a specified travel time from an origin.

The tools described below all perform this analysis, but there are varying nuances at each step. For example, some tools include a single travel time threshold chosen based on observed travel behavior to determine whether a destination is accessible, such as 45 minutes of travel or less. Others incorporate "decay" curves that account for the rates at which willingness to travel to a destination drops off as travel times increase. Tools that integrate decay curves generally also account for the fact that willingness drops off more quickly for some modes of travel than others (for example, people are generally willing to travel longer by car than by transit, bicycle, or on foot).

These tools also vary in terms of the types of destinations included. Some tools focus exclusively on modeling household access to jobs and employer access to workers, while others include access to other destinations, such as schools, grocery stores, healthcare facilities, parks and other recreation centers, and cultural amenities.

The tools profiled in this section generally require minimal data collection on the part of the transportation agency. Sugar Access⁶⁴ by Citilabs, for example, is an ArcGIS tool that comes preloaded with the basic necessary demographic and economic data for destination access analysis and is essentially ready to use nationwide. The Renaissance Planning Group has worked with agencies to customize their tool with the necessary GIS datasets based on the agency's specific goals. However, these tools may assume the user has ArcGIS, data analysis, or programming knowledge.

These tools generally pull data from sources such as OpenStreetMap or HERE (formerly NAVTEQ) point of interest, pedestrian and roadway network data. They also typically rely on some data provided by the U.S. Census Bureau, as well as transportation and other agencies throughout the area, including GTFS data from transit agencies, GIS data from local governments, and travel speed data compiled from state DOTs and MPOs. As noted above, many of these data sources are free or open source and a transportation agency can utilize them for analysis without purchasing one of these tools.

Some tools incorporate or allow the agency to input data on demographics to help evaluate the accessibility challenges faced by specific groups. Those tools that are GIS-based also allow decision-makers to input and overlay additional data points such as types of jobs accessible from a given neighborhood, wage categories, household income levels, education levels, and health trends. In addition to the demographic and employment data available through the U.S. Census Bureau, local data collected from travel surveys can produce a more nuanced picture of accessibility challenges in an area. These surveys show the trips that people actually make in the real world. This data can help decision-makers identify areas with poor access to specific types of opportunities or services and make policy and investment decisions to address those challenges. By making investments in transit and other infrastructure, people may be able to reach additional destinations not previously accessible within a specified travel time. This could mean connecting disadvantaged populations to higher-paying jobs, addressing food deserts, improving access to healthcare, and diagnosing and addressing other regional challenges.

The GTFS data utilized as a model of the transit system being analyzed using one of these tools generally consist of scheduled route times or service frequencies. This schedule information does not necessarily reflect real world conditions such as traffic or weather. To rectify this limitation, other data sources showing actual or average service levels can be used to help the GTFS data better reflect service reliability and to approximate delays. For example, a transit agency may publish average on-time performance for its system during the previous calendar year or actual performance data may be collected in the field. By updating the GTFS data to factor in these observed or averaged conditions over a period of time, the destination accessibility calculated by one of these tools more realistically reflects what a rider may experience. It would be inaccurate to assume that the transit system will consistently operate as scheduled despite adverse traffic and weather conditions or other operational challenges.

Some of these tools also allow users to take their analysis one step further by modeling changes to the existing land use patterns and transportation networks and observing projected changes in destination accessibility. This carries major potential to help advance performance-based

64 <http://www.citilabs.com/software/sugar/sugar-access/>

transportation and land use decision-making, particularly as these tools continue to improve. Several regional planning agencies are already starting to use this capability to evaluate alternative scenarios in regional visions and long-range transportation plans.

It is worth repeating that while these tools can provide valuable insight to inform decision-making, they cannot be used as a shortcut or replacement for robust stakeholder engagement to develop a deep understanding of a region's accessibility needs. Members of a community will always be the foremost experts on the accessibility challenges they face. Some of the biggest benefits of the tools described below are, in fact, their potential applications for public engagement during long-range planning. Most of these tools can be used to visually map and display the specific accessibility barriers communities face, providing a starting point—rather than the endpoint—for discussions about priorities and solutions.

Profiles of data tools

As previously noted, numerous tools exist to assist transportation agencies with measuring access to opportunity. Several such tools are profiled in this section. The inclusion or exclusion of any tool from this guidebook is not intended to indicate an endorsement or judgment regarding the effectiveness of the tool in measuring access to opportunity. Table 2, on the following page, provides a summary of the major features and differences between the tools.

Table 2. Summary of Data Tools

	Accessibility Observatory	Sugar Access	Transport Analyst	GIS Tool
Provider	University of Minnesota	Citilabs	Conveyal	Renaissance Planning Group
Cost (Free/Paid)	Some data available for free download; state DOTs, MPOs, local governments, and transit agencies may join project to receive data sets	Paid	Free (open source) but transportation agencies may pay for Conveyal to customize / host if they do not have in-house technical capacity to do so	Paid
Data sources	<p><u>National Access Evaluation Pooled-Fund Study</u> GTFS data (transit schedules); OpenStreetMap (pedestrian network); TomTom's MultiNet and SpeedProfile datasets (road network and historical speed data)</p> <p><u>Access Across America Pooled-Fund Study</u> U.S. Census Bureau's TIGER datasets (geography and street network; U.S. Census Bureau's LEHD 2011 LODES dataset (employment and worker</p>	<ul style="list-style-type: none"> • Points of interest, pedestrian facilities, and roadways: HERE • Transit agency route and schedule data • U.S. Census Bureau data • Data from local, state, and regional agencies may be imported as GIS shapefiles 	<ul style="list-style-type: none"> • OpenStreetMap • Transit agency route and schedule data • U.S. Census Bureau demographic, economic, and land use data (such as LEHD - LODES dataset) • Data from local, state, and regional agencies may be imported as GIS shapefiles 	<ul style="list-style-type: none"> • Land use: InfoUSA employment data • Transportation network: HERE (formerly NAVTEQ) • U.S. Census Bureau demographic, economic, and land use data (such as LEHD - LODES dataset) • Data from local, state, and regional agencies may be imported as
Interface (GIS-based or web-based)	Data may be downloaded for offline analysis in GIS or other tools	GIS-based	Web-based	GIS-based
Geographic limitations of tool	Certain cities excluded from analysis where data are unavailable	None—customizable for any location	None—data is available worldwide	None—customizable for any location
Visual representation of data	Yes	Yes	Yes	Yes
Incorporates trip "decay" into analysis	No	Yes	No	Yes
Model household access to jobs/Employer access to workers	Yes	Yes	Yes	Yes
Model access to other destinations (schools, grocery stores, healthcare)	No	Yes	Yes	Yes
Model changes to existing land use patterns and transportation networks (scenario analysis)	No	Yes	Yes	Yes
Ready to use - transportation network data, points of interest, roadway travel times, and transit information are all built in	No	Yes	Yes	Yes
Incorporate agency's own data into analysis	Via offline analysis	Yes	Yes	Yes

University of Minnesota's Accessibility Observatory

The University of Minnesota's Accessibility Observatory conducts research and develops tools to advance the use and communication of accessibility-based metrics in transportation planning, engineering, and evaluation.

The Accessibility Observatory recently launched a National Accessibility Evaluation Pooled-Fund Study⁶⁵ led by the Minnesota Department of Transportation. The study will measure accessibility to jobs across the entire U.S. It will calculate the number of jobs that can be reached by driving or transit within various travel time thresholds for every Census block. Other organizations are invited to join the project, including state DOTs, MPOs, local governments, and transit agencies. The output of the study will be an accessibility dataset at the Census block level that will be available to its transportation agency partners. Participating agencies will have digital access to the accessibility datasets generated by the study.

The second part of the Observatory's study is the continuation of the Observatory's existing Access Across America⁶⁶ project. This effort evaluates and ranks the 50 largest U.S. metropolitan areas periodically according to their job accessibility by automobile, transit, bicycle, and walking. The project uses Census block data to calculate the number of jobs available from any given point weighted by the number of workers in the Census block and averaged across the metro area.

Both of these projects advance earlier evaluations of transit accessibility by assuming multiple departure times for transit trips rather than a single one, reflecting transit service frequency. They also factor in the impact of walking times in transit trip calculations by calculating travel times at the Census block, rather than block group, level.

The analysis includes accessibility metrics for multiple travel time thresholds of 10-60 minutes of travel time (representing the number of destinations accessible within each window of travel time), rather than a single threshold. However, unlike some of the tools described below, it does not incorporate trip decay, which is the declining likelihood of a traveler to use a particular mode of travel as travel time increases.

Sugar Access

Sugar Access⁶⁷ is an ArcGIS tool for transportation planners and engineers developed by Citilabs, a firm that provides software, data analysis, and professional services to help understand, model, and predict the movement of people and goods.

Sugar Access allows a transportation agency to model accessibility to employment and other destinations via driving, transit, biking, and walking. The tool can be setup to evaluate any one of these transportation modes individually, whichever mode offers the shortest travel time, or the user can weight the percentage of trips taken via driving, walking, and transit based on observed conditions. Transportation network data, points of interest, roadway travel times, U.S. Census Bureau data, and transit information are all built into the tool, meaning that it is ready-to-use

65 <http://access.umn.edu/research/pooledfund/index.html>

66 <http://access.umn.edu/research/america/index.html>

67 <http://www.citilabs.com/software/sugar/sugar-access/>

throughout the U.S. The agency may add local data or points of interest for more precise analysis of their existing or future transportation network.

Decision-makers can use the tool in a number of ways. It can provide scores that rate access to destinations such as jobs, schools, errands, recreation, hospitals, and government services for a community, including specific scores for each travel mode. It can also calculate travel times to certain types of destinations (such as restaurants) or calculate the quantity of a certain type of destination (such as jobs or schools) within a certain travel time from the origin point.

Sugar Access also allows simple scenario analysis to test the impacts of proposed transportation and land use changes in the user's community. For example, the agency could input the route of a future BRT line or the locations of bicycle infrastructure improvements to compare present versus future accessibility. The software can also model small changes to existing transit lines to calculate the impact on accessibility to destinations.

Finally, the tool also allows the default decay rates for each mode of transportation to be adjusted based on local conditions or populations. The decay rates are taken from observed travel behaviors and represent the rate at which willingness to use a particular mode of transportation drops off based on time and/or distance.

Transport Analyst tool

Transport Analyst⁶⁸ is a web-based application designed to help transportation practitioners analyze accessibility to destinations. Conveyal, a consulting firm specializing in open data and open source technology for the transport sector, originally developed the tool in collaboration with the World Bank. Transport Analyst is powered by and adds new functionality to OpenTripPlanner (OTP), a tool providing multimodal trip planning and analysis. The source code for the tool may be downloaded free of charge and Conveyal also offers a paid version of the program hosted on their servers.

Transport Analyst allows transportation agencies to measure accessibility to or from a specific point (or origin) to job centers and other locations that can be reached in a given timeframe via best and worst case scenarios using public transit, walking, biking, driving (if traffic speed data is available), or combinations of these modes. The tool can also perform regional analysis to show variations in accessibility between Census blocks throughout a study area. Decision-makers can create composite regional measures (such as population-weighted average job access for a neighborhood or city) by combining indicators. Transport Analyst is able to perform scenario analysis of two or more future potential transportation systems. It can also be used to create public outreach and consultation websites, allowing the public to see how a scenario will affect their city.

The Regional Plan Association (RPA)—a research and advocacy organization working in the New York/New Jersey/Connecticut metropolitan region—worked with Conveyal to develop two customized versions of the tool for RPA's Fourth Regional Plan initiative.⁶⁹ One version of RPA's mapping tool allows the public to see the estimated number of accessible jobs in the tri-state

68 <http://conveyal.com/projects/analyst/>

69 First version of RPA tool: <http://fragile-success.rpa.org/maps/jobs.html> and second version of RPA tool: <http://library.rpa.org/interactive/access-to-workforce/>

region from any origin point. The user may customize the place of origin, travel mode, and maximum travel time (15-90 minutes). The tool can display jobs color-coded by either industry classification or workforce level of education. The second version of the tool allows employers to see the accessible and qualified labor pool within the tri-state region from their location using the same variables and providing the same type of output as the accessible jobs tool. The tools were developed for RPA as a public engagement resource and have worked well in that capacity.

Renaissance Planning Group's accessibility tool

Renaissance Planning Group (RPG),⁷⁰ a consulting firm that works on the intersection between land use, transportation, design, and technology, has developed a tool for modeling accessibility and related factors, including mode choice. RPG has worked with a number of agencies in the Washington, DC metropolitan area to pilot the use of the tool in transportation and land use planning and investment decision-making.

The tool originated through research led primarily by Richard Kuzmyak and focused on developing responsive tools for estimating bicycle and walk demand to destinations. The goal was to factor in the effects of land use, the quality of available facilities, and impacts on motorized travel into the model. Kuzmyak's research led to the development of a GIS Walk Accessibility Model, made available in conjunction with the National Cooperative Highway Research Program (NCHRP) project 08-78, Estimating Bicycling and Walking for Planning and Project Development: A Guidebook.⁷¹

Based on the results of this study, RPG developed a GIS-based accessibility tool initially developed from data in the Washington DC region. The tool takes into account the number of opportunities (including jobs, retail, and service establishments) from a particular starting point as well as the travel time to those destinations. It can also model mode choice by calculating the likelihood that individuals will drive versus use other modes of transportation. Based on these calculations, the tool has been able to predict the overall mode share with a high level of accuracy for a particular corridor based on these calculations.

RPG's tool applies a "decay" factor representing the decreased value of destinations located farther away. For example, based on MPO travel surveys in the Washington, DC area, work trips that require 15 minutes of walking have only 37% of the value of trips with less than 1 minute of walking. For non-work trips, 15 minutes of walking reduces the value to 23% of trips with less than 1 minute of walking. The decay value is different for other modes of transportation.

RPG has applied the tool in coordination with several agencies, including the Virginia Department of Transportation (VDOT), which uses the tool within a new capital project scoring process, described in greater detail in Section II of this guide. RPG has also worked with the Maryland Department of Transportation to test the tool on a pilot corridor in the state and has used the tool to create a VMT model for a greenhouse gas reduction study for the Metropolitan Washington Council of Governments.

70 <http://www.citiesthatwork.com/>

71 http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_770.pdf

RPG's GIS tool was found to be useful in several ways during these pilot projects:

- **Diagnostics:** It can help diagnose transportation issues such as gaps between areas of trip production and areas of major attractions or destinations. The tool can also help demonstrate the best solution to accessibility challenges, which might not always be transportation improvements. For example, if a portion of a study area is located too far from existing supermarkets, the best solution might be a new market rather than transportation improvements.
- **Planning:** The tool can inform planning decisions in a variety of ways. For example, it can help planners determine where to locate new developments, such as affordable housing, based on desirable factors such as multimodal transportation opportunities to connect to key destinations. The tool has also been applied to consider adverse effects of proximity, such as locating affordable housing further away from environmental contamination or certain business types, such as liquor stores.
- **RPG's tool** can also be used for scenario planning, such as to evaluate alternative land use strategies to meet regional greenhouse gas reduction goals. It also has applications in corridor planning, and has been used to predict mode share of transportation options and better understand transportation and land use interactions.
- **Programming:** Finally, the tool can help transportation agencies prioritize transportation projects based on measures of accessibility improvement of each project relative to the others. (See the discussion of VDOT's Smart Scale project scoring process in Section II of this guide, which utilized this tool.)

Proxy measures for destination access

In addition to the tools described in the previous section, transportation agencies have used a number of approaches to evaluate and track how connected people are to opportunities and services in their region without measuring or modeling travel times between destinations. Areas that have good accessibility tend to have a variety of transportation choices and lower household transportation cost, so some agencies have evaluated these qualities as a means for identifying and addressing accessibility barriers.

This section discusses “proxy measures,” which do not measure access to opportunity directly but still help capture the concept. Using these measures can provide a valuable starting point for agencies that are not currently in a position to use the tools described above.

For example, as discussed below, a number of agencies have assessed destination access in their region by measuring distance to transit stops. This enables agencies to approximate how easily people can reach jobs and services without the need for more detailed transportation network data, and without the additional step of calculating travel times.

Proxy measures can also be used in combination with the tools in the previous section to develop a more complete understanding of access to opportunity in a region. For example, some agencies have approached the question of access by measuring travel affordability. Transportation costs have a significant impact on whether community residents can reach employment and other services they need to thrive. Evaluating affordability can help identify neighborhoods with disproportionately large travel costs and other equity concerns. Rather than replacing measures of access focused on travel time to destinations, it can provide an important counterpart for a more complete understanding of the barriers to accessing opportunities in a region.

These and other approaches for using proxy measures are described in more detail below.

Transit access

A number of agencies have evaluated accessibility by measuring the number of households, jobs, or other destinations located within a certain distance of transit stops, such as ½ mile. This approach builds on the research discussed earlier in this section about the crucial role transit plays in connecting people to jobs and other opportunities. Agencies can use transit access as a proxy measure for access to opportunity because we know that, in general, improving access to transit service can significantly increase the opportunities people can reach. This approach is especially well suited to transit agencies based on the types of data they already collect, but other agencies can measure transit access too.

There are several limitations to this approach because it focuses on whether people in an area have access to public transit, rather than whether they can actually use that service to reach the destinations they need to thrive. For example, simply measuring the distance from households to transit does not reflect the number or types of jobs that neighborhood residents can reach from their specific local transit stop. When used by itself, it also does not account for factors that determine whether people can realistically rely on the available transit service to fulfill their daily needs, such as the length of the transit trips, frequency of service, number of transfers required, and presence of sidewalks connecting stops to surrounding destinations.

Nevertheless, measuring the percentage of a region's population living and working within close proximity to transit stops is a useful approach for estimating access to opportunity and considering access during policy and planning decisions. A number of regional transportation agencies, including San Diego Association of Governments (SANDAG),⁷² Puget Sound Regional Council (PSRC),⁷³ and the Atlanta Regional Commission,⁷⁴ have used access to transit service in some way to evaluate proposed investment scenarios for planning purposes or to select projects to fund.

There are also several tools available that can help agencies go beyond simply evaluating the percentage of people and businesses served by transit. For example, the Center for Transit Oriented Development has created a TOD Database,⁷⁵ which includes geographic, economic, and demographic data for every existing and proposed fixed-route transit station in the U.S.

Decision-makers can also use the U.S. Environmental Protection Agency's Access to Jobs and Workers via Transit tool,⁷⁶ another free and publicly available GIS-based web resource. It allows users to map and compare jobs accessible by public transit from different neighborhoods, as well as households and workers accessible from employment locations. Decision-makers can use the tool to help identify inequities in transit access across a region to inform planning decisions. AllTransit by the Center for Neighborhood Technology⁷⁷ analyzes the benefits provided by transit for any location in the U.S. It helps quantify the value of transit from several distinct performance measures including jobs access, economic benefits, health, equity, transit quality, and mobility.

72 http://www.sdfoward.com/pdfs/RP_final/AppendixN-EvaluatingthePerformanceoftheTransportationNetwork.pdf

73 <http://www.psrc.org/funding/selection/fhwa-fta-project-selection/>

74 <http://www.atlantaregional.com/transportation/regional-transportation-plan>

75 <http://toddata.cnt.org>

76 <http://www.epa.gov/smartgrowth/smart-location-mapping#Trans45>

77 <http://alltransit.cnt.org/>

Transportation affordability

Measuring transportation affordability provides another lens for evaluating access to opportunity. Several agencies currently measure transportation affordability by evaluating the portion of household incomes within a region going toward transportation costs and comparing between different neighborhoods or Census blocks. Some agencies have also begun to look at combined housing and transportation costs for a more complete measure of affordability.

This approach is especially valuable for identifying and addressing equity challenges in a region. Low-income families spend a higher portion of household incomes on housing and transportation costs, particularly in neighborhoods that lack key opportunities and services. This can include neighborhoods that are not physically near jobs or contain the wrong types of jobs for residents' education levels and skill sets, neighborhoods with limited grocery stores and healthcare facilities, and neighborhoods with poor transit access or with transit service that does not connect residents to the destinations they need to reach.

The Location Affordability Portal,⁷⁸ developed by the U.S. Department of Transportation and U.S. Department of Housing and Urban Development in partnership with the Center for Neighborhood Technology, can help decision-makers model transportation and housing affordability. The Portal includes a free tool designed for researchers, developers, planners, and policymakers called the Location Affordability Index.⁷⁹ Decision-makers can use the Index to estimate the percentage of a household's income that will likely be dedicated to housing and transportation in a particular location within the U.S based on data from the 2008-2012 American Community Survey (ACS). The Index uses eight different household categories based on income, size, and number of commuters, and it can model the cost of living for each household category across a neighborhood, city, or region. This can help inform decision-making during long-range planning.

Location efficiency and land use mix

Another approach decision-makers can take to evaluate destination access is to look at the density and diversity of land uses within a neighborhood or larger geographic area. People living in location-efficient places with compact development and a mix of destinations (residential development, employment centers, restaurants and businesses, etc.) will tend to be able to access the services they need on a daily basis more easily and at lower transportation cost.

One of the simplest ways to measure land use mix is to look at the balance between jobs and housing in an area, often measured in terms of the proportion of jobs per household. Doing so does not account for whether the types of jobs in an area are the right fit for the workforce, but incorporating demographic and employer data can help address that limitation. Land use entropy indices are another simple way to quantify land use mix in an area, though they have similar limitations. Entropy indices measure dissimilarity of land uses in a geographic area by accounting for the number of land use types and balance between different types on a neighborhood scale.

78 <http://www.locationaffordability.info>

79 <http://www.locationaffordability.info/lai.aspx>

There are also several tools available to help decision-makers perform more complex analyses of location efficiency. The Smart Location Database⁸⁰ is a free nationwide web-based tool that measures accessibility and related attributes for most Census block groups in the United States using GIS data. Developed by the U.S. Environmental Protection Agency in partnership with Renaissance Planning Group, it allows decision-makers to create maps online of any geographic area showing characteristics such as housing density, land use diversity, neighborhood design, destination accessibility, transit service, employment, and demographics. Decision-makers can also download data for more advanced offline analysis using more than 90 available attributes.

Another widely known tool is Walk Score,⁸¹ a free web-based application that allows users to enter any address and provides a score for the location on a scale of 0-100 based on the number of destinations accessible within walking distance. Walk Score is designed primarily to help individuals make decisions about where to live, and the tool itself has limited direct applications for transportation planning, but it offers a useful approach for using GIS data to quantify access based on destination proximity and land use mix. Walk Score also offers several data products for purchase that decision-makers can use to conduct broader analyses to inform public policy.⁸²

Walk Score calculates a location's score based on the number of destinations within one quarter to one-and-a-half-miles walk of the location, with more credit given to locations that are closer. Walk Score also provides a Transit Score and Bike Score for the location searched. The Transit Score is based on a summed "usefulness" value for each nearby transit route, incorporating the frequency of service, type of transit, and distance to nearest transit stop. The Bike Score measures nearby bicycle infrastructure, hills, destinations, road connectivity, and the bike commuter mode share of the area.

Transportation agencies can also develop their own tools for evaluating location efficiency and density to support specific planning and decision-making processes. For example, New Jersey Transit (NJTransit), the state's public transit corporation, developed the tool Transit Score in 2008 for assessing the "transit friendliness" of a region or community in order to help determine whether areas will be able to support potential new transit service. Transit Score incorporated three factors: population density, employment density, and density of households with zero cars. Transit Score also allowed users to incorporate existing conditions, projected future conditions, and planned future conditions.⁸³

Other measures related to multimodal access

Considerations such as the safety, reliability, convenience, and comfort of the travel experience all shape accessibility by influencing whether people are willing to travel to destinations using specific modes. These considerations are, in turn, shaped by a host of characteristics associated with the existing transportation infrastructure and services and land use patterns in the area. Measuring several of these characteristics together can help decision-makers identify barriers community members face in accessing opportunities and resources.

80 <http://www.epa.gov/smartgrowth/smart-location-mapping#SLD>

81 <https://www.walkscore.com/>

82 <https://www.walkscore.com/professional/research.php>

83 <http://www.nj.gov/state/planning/docs/2011-0413-njt-transit-score-guide.pdf>

For walking and bicycling, this can include characteristics such as overall availability and condition of sidewalks and bicycle infrastructure, car travel speeds, level of physical separation from traffic on high-speed arterials, block lengths, street lighting, topography, and surrounding land use. For example, if a school is located close to housing but there is a high level of traffic on adjacent roadways, gaps in the sidewalk networks, a lack of crosswalks at convenient locations, or insufficient street lighting, many families will decide that it is too dangerous for children to walk or bike to school.

For transit, these factors can include the time it takes to reach transit stops, the frequency and reliability of service, quality of transit vehicles and stops, whether information about available service is easy to access, whether people are able to access transit through park and ride lots in more suburban communities, and whether transit stops are connected to destinations by complete pedestrian and bicycle networks.

Other emerging tools

There are a number of additional tools currently under development, or specific to a particular metropolitan area, which address some aspect of accessibility and may be helpful for agencies interested in evaluating access to opportunity. Like the proxy measures described above, most of these tools do not measure destination access directly, but can help agencies capture the concept.

Flow⁸⁴ is a new open platform tool created by Sidewalk Labs in partnership with the U.S. Department of Transportation and the seven finalists of its Smart City Challenge. It is a transportation coordination platform that helps cities work with residents to increase road, parking, and transit efficiency using analytics and messaging. The analytics collected through anonymous cell phone and sensor data allow cities to understand how their roadways are being used as well as simulate the impacts of new transportation infrastructure. It allows transportation infrastructure to be utilized dynamically depending on current conditions and demand.

Opportunity Score⁸⁵ is a new tool developed by real estate company Redfin, which also offers the well-known Walk Score tool. For any address entered, it generates a numeric value representing the availability of jobs (in major employment fields) located within a 30-minute commute from that location, with or without a car. Opportunity Score will also be able to locate affordable homes for sale within a 30-minute commute of a workplace and provides median home and rental prices for the neighborhood.

Opportunity Tool,⁸⁶ developed by data company PolicyMap, shows areas of opportunity based on up to three specific criteria such as housing, education, transportation, and demographics. It is currently available only for Philadelphia.

Transit Analyst,⁸⁷ created by GIS mobile phone application developer Azavea, shows transit access relative to “community assets,” including health clinics, recreation facilities and playgrounds, Head

84 <http://www.flowmobility.io/>

85 <https://www.redfin.com/blog/2016/03/redfin-presents-opportunity-score-at-white-house-open-data-event.html>

86 <http://opportunity.policymap.com/>

87 <http://transitanalyst.com/>

Start locations, and corner stores. The tool, which is limited to Philadelphia, shows locations of these assets reachable between 1 and 90 minutes of travel time from an origin point.

Invest in the Future of Baltimore⁸⁸ is a tool created by real estate company Zillow that provides maps shading Baltimore neighborhoods by Census tract based on opportunity (defined as access to good schools and jobs as well as low crime); development potential; affordability (total cost of living); nearby amenities; and median rent.

How Affordable is Opportunity?⁸⁹ was created by the Heller School for Social Policy and Management at Brandeis University. It compares the costs of opportunity (defined as housing and transportation) to the benefits (educational and economic opportunity and health care access). The tool compares differences in the cost-benefit ratio for children of varied racial identities. Currently, the tool includes data for 15 U.S. metropolitan areas.

Location Opportunity Footprint,⁹⁰ created by data company Community Commons, maps the areas of a city (at the Census block group level) where jobs, good schools, and affordability are present. Customizable thresholds are available for Education Data and School Proficiency Index; Number of Nearby Jobs per Worker; Monthly Cost of Housing and Transportation for Family at 50 percent Area Median Income; and Demographics.

Data2Go.nyc⁹¹ is a mapping tool created by Measure of America, a non-profit program of the Social Science Research Council. It shows more than 300 indicators for New York City including land use (such as percentage of land that is residential, commercial, industrial, or parks) and commute time (average commute time and percentage of workers with average commutes greater than 60 minutes).

National Equity Atlas⁹² aims to show economic and health inequalities in the 100 largest U.S. cities by race and gender. Created by research and advocacy organization PolicyLink, the tool compares U.S. cities and ranks them relative to each other. In terms of accessibility, the tool allows the user to graphically show the breakdown by race and ethnicity for measures such as the percent of households without a vehicle and the average travel time to work (minutes). It also provides general recommendations for expanding transportation access.

Streetwyze⁹³ is an application that will “crowd source” neighborhood amenities, based on the premise that local residents know their own communities better than an outside entity collecting data. The app will help community members determine how walkable their neighborhood is, how well it is served by public transit, where they can buy affordable healthy food, and where they can access other important services.

Affordable Housing Finder,⁹⁴ an online tool from GIS developer ESRI, generates scores for each Census block group for the following indicators: average school proficiency, average job proximity

88 http://files.zillowstatic.com/research/public/Whitehouse_Hackathon/index.html

89 <http://www.diversitydatakids.org/data/library/49/coi-lai-cob-story-maps>

90 <http://maps.communitycommons.org/footprint/?project=LOFT>

91 <http://data2go.nyc/>

92 <http://nationalequityatlas.org/>

93 <http://www.streetwyze.com/>

94 <http://esrifederal.maps.arcgis.com/apps/webappviewer/index.html?id=852f6731b72f465ab2fbbe76d4269f00>

index, average transportation cost, and average market labor index. This tool compares different neighborhoods to present housing options demonstrating tradeoffs between the measured indicators.

Open Data Network⁹⁵ is a resource created by tech start up firm Socrata to compare economic and demographic data at the local, county, and regional levels. It provides data on population information (including population change), high school and college graduation rates, and earnings (broken down by gender and educational level).

Implementation strategies

As discussed earlier, a valuable first step for states or agencies seeking to incorporate destination access is to evaluate the current barriers to accessing opportunity and then use the results to develop state or regional priorities. Once a transportation agency has selected the methods, metrics, data, and tools to measure access, implementation is the next step in the process. These new tools may require a culture shift within the agency, and may need adjustment over time. It is vital not to let the perfect be the enemy of the good in this process.

Agency staff will be the ones to shepherd these priorities and are the ones who will be responsible for implementing changes to their programs. In other words, the entire agency staff, from the director to the project planner, must be engaged in ensuring that this process is managed effectively and efficiently. They understand the demands of the program, the needs of the communities, and the expectations of outside stakeholders. Therefore, they are key to assessing the limitations of the existing processes and identifying ways to improve them.

Proper training can equip agency staff to determine how access will be integrated into project development and evaluation, identify where decision points should change, and embrace access as a departmental priority and positive outcome for the community. Discussion of how access will be incorporated in each office within the agency should be part of the implementation process. Equally important to success is the identification of possible and perceived barriers and how agency staff can overcome them.

A crucial part of measuring access is tracking how it has changed for communities over time. Once an agency begins to measure access to opportunity, they should pick some representative projects from around the state and run them through the new measures to see if the results work as anticipated. If not, it may be because of misunderstandings about what certain types of projects accomplish, or the tool may be poorly calibrated to address the goals laid out.

For example, when VDOT tested a first draft of their project selection system, officials were surprised to find that some metrics provided results contrary to expected outcomes, and that others provided significant opportunity for project sponsors to “game” the system. By testing the tool before finalizing the process, they had the chance to identify where the tool did not work in the way it was intended, in the way the legislature and public had agreed was the priority. Through testing, they found a problem and had the opportunity to fix it before they brought it to the public. As discussed earlier, VDOT is now working to expand their tool. But rather than wait until they had

95 <http://www.opendatane트워크.com/>

all the data needed to assess full destination access, VDOT started with jobs access to capture this state priority and is building toward a more comprehensive standard.

This sort of test should continuously feed an agency's process. As another example, the Tennessee Department of Transportation created a plan to evaluate the effectiveness of Expedited Project Delivery recommendations with a comparison of the estimated expenditures and the actual expenditures once a construction project is closed out. In addition, according to the plan, each route will be analyzed three years after closeout to determine if the EPD solution has in fact met the actual project needs.

IV. Relevant resources

Many of these resources are cited throughout the guide, while others build on the ideas discussed or exemplify the topics covered.

Background resources and academic studies

The Growing Distance Between People and Jobs in Metropolitan America

Brookings Institution (2015, March)

<http://www.brookings.edu/research/reports2/2015/03/24-people-jobs-distance-metropolitan-areas-kneebone-holmes>.

Analysis looking at how proximity to employment can influence a range of economic and social outcomes, from local fiscal health to the employment prospects of residents, particularly low-income and minority workers.

Measuring What We Value: Setting priorities and evaluating success in transportation

Transportation for America (2015, February)

<http://t4america.org/maps-tools/performance-measures-report/>

This guide is designed to support transportation agencies that are relatively new to performance measurement understand the benefits of performance-based decision-making and meet the requirements established in MAP-21. It provides a detailed overview of the performance-based planning framework introduced under MAP-21 and recommends a framework of key performance measures agencies can consider, including several that go beyond the MAP-21 areas. It also profiles DOTs and MPOs experiencing early successes in measuring the performance of their transportation system and making investment decisions based on the results.

Missed Opportunity: Transit and jobs in metropolitan America

Brookings Institution (2011, May)

<http://www.brookings.edu/research/reports/2011/05/12-jobs-and-transit>

A comprehensive database provides the first comparable, detailed look at transit coverage and connectivity across and within the nation's major metro areas.

Guide to Sustainable Transportation Performance Measures

U.S. Environmental Protection Agency (2011)

<https://www.epa.gov/smartgrowth/guide-sustainable-transportation-performance-measures>

This guide is intended to help transportation agencies integrate performance measures into their planning that support economic, environmental, and social sustainability. It describes 12 performance measures, including transit accessibility, bicycle and pedestrian level of service, land use mix, transportation affordability, and benefits by income group, among others. For each measure, the guidebook presents potential metrics, methodologies, and data sources. The guidebook also includes case studies of agencies implementing each of the metrics.

Model Long-Range Transportation Plans: A guide for incorporating performance-based planning

Federal Highway Administration (2014, August)

http://www.fhwa.dot.gov/planning/performance_based_planning/mlrtp_guidebook/fhwahep14046.pdf

This guide from the Federal Highway Administration provides staff at State DOTs, MPOs, and Regional Transportation Planning Organizations (RTPOs), and Rural Planning Organizations (RPOs) with information for developing performance-based transportation plans. It identifies the key components present in a “model” transportation plan, as well as process elements necessary to develop plans that reflect the priorities of the community and support achievement of desired goals. The guide also provides example from around the country to illustrate the breadth of approaches agencies can take to develop performance-based plans.

FHWA Key Issues Book

Federal Highway Administration (2015)

http://www.fhwa.dot.gov/planning/publications/briefing_book/

Provides an overview of transportation planning and will be useful for government officials, transportation decision-makers, planning board members, transportation service providers, interested stakeholders, and the public. It covers the basics and key concepts of metropolitan and statewide transportation planning, along with references for additional information.

FWHA PlanWorks: Better Planning, Better Projects

Federal Highway Administration

<https://fhwaapps.fhwa.dot.gov/planworks/>

PlanWorks is a web resource that supports collaborative decision-making in transportation planning and project development. PlanWorks is built around key decision points in long-range planning, programming, corridor planning, and environmental review. PlanWorks suggests when and how to engage cross-disciplinary partners and stakeholder groups. The PlanWorks Decision Guide is a troubleshooting guide describing the common decision points and opportunities for cooperation in the transportation planning and environmental review process and outlines the purpose and outcome, roles, questions that support decision-making, data needs, input from stakeholders, and more for each decision point. It was developed using examples of successful practice and with input from all partners in transportation decision-making. In addition, the PlanWorks Performance Measures Application provides a framework for picking measures organized around five areas of concern – transportation, environment, economic, community, and cost – and 18 specific factors.

FHWA’s TPM Toolbox

<https://www.tpmtools.org/>

The tools are intended to assist staff from transportation agencies in learning about and implementing TPM practices. The Guidebook uses case studies and illustrative examples to demonstrate how performance management results in improved decision-making through better-informed planning, programming, monitoring and reporting. The TPM Capability Maturity Model Self-Assessment is a tool for identifying logical next steps for strengthening TPM processes. It allows users to assess current TPM capabilities and identify actions to improve those capabilities. The assessment results are linked to the TPM Guidebook in order to provide clear practical actionable steps that state DOT leadership, management, and staff can implement to enhance performance-management practices. Information within the Toolbox is geared towards both state and local transportation agencies.

Case studies and examples

Case Studies in Delivering Safe, Comfortable, and Connected Pedestrian and Bicycle Networks

Federal Highway Administration (2015, December)

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/network_report/page00.cfm

This report from the Federal Highway Administration provides guidance on how to create multimodal transportation networks that make walking and bicycling viable options in a community. It provides a detailed discussion of the elements necessary in good bicycle and pedestrian networks, including cohesion, directness of routes, accessibility, availability of alternatives, safety and security, and comfort. It also suggests strategies for improving bicycle and pedestrian networks and provides examples from communities around the country.

Connecting to Opportunity: Access to Jobs via Transit in the Washington, DC region

Brookings Institution (2012, November)

<http://www.brookings.edu/research/papers/2012/11/dc-transit-job-access>

This study paper describes the data and methods used to examine transit access and commutes in the Washington, D.C. region, presents a series of measures that characterize transit access and employment opportunities for residents at multiple geographies, and concludes with a range of implications and recommendations for policymakers and other regional stakeholders.

Virginia Smart Scale (House Bill Two) website

<http://vasmartscale.org/>

Smart Scale is about investing limited tax dollars in the right projects that meet the most critical transportation needs in Virginia. This website provides information about the how a scoring process was developed for the Commonwealth Transportation Board to select the right projects for funding and how projects are evaluated with a objective and fair analysis applied statewide.

Metropolitan Transportation Commission website

<http://planbayarea.org/index.php>

Plan Bay Area is the first of the Metropolitan Transportation Commission's regional transportation plans to integrate transportation, housing, and land use strategies to meet regional goals. Seven goals were adopted in September of 2015 following a stakeholder engagement process and 13 performance targets were approved. The targets will be used to compare between potential scenarios in the plan, analyze the impacts of proposed projects, and weigh tradeoffs between the different goals of the plan.

Choice, Place and Opportunity: An Equity Assessment of the Twin Cities Region

Metropolitan Council

<http://www.metrocouncil.org/Planning/Projects/Thrive-2040/Choice-Place-and-Opportunity.aspx>

This study identifies where opportunities in the region are located, which residents have the best access to those opportunities, and how to improve equitable access for all residents of the region, and helped the Metropolitan Council develop the priority areas in its current regional vision, Thrive MSP 2040, adopted in May of 2014.

Access to Core Services in Southeast Michigan

Southeast Michigan Council of Governments

<http://semcog.org/Plans-for-the-Region/Transportation/Access>

A regional assessment of the barriers residents of the Detroit metropolitan area face in reaching key services using different transportation modes. The study set benchmarks for access to opportunity and will be used to identify priorities for future transportation projects and help guide transportation investments in the Detroit region moving forward.

Livability in Transportation Guidebook

Federal Highway Administration

https://www.fhwa.dot.gov/livability/case_studies/guidebook/

This report illustrates how livability principles are incorporated into transportation planning, programming, and project design, using examples from practice.

Applying Performance-Based Practical Design Methods to Complete Streets

Federal Highway Administration

<http://www.ops.fhwa.dot.gov/publications/fhwahop16059/index.htm>

This Primer explains how the application of performance-based practical design principles combined with transportation system management and operations strategies can promote the consideration and application of Complete Street design principles to a wider range of contexts, and includes several case studies. The result is a street system that cost-effectively meets the needs of the diverse users of the streets and the objectives of the agency.

Webinars

Measuring Accessible and Connected Communities

State Smart Transportation Initiative (2016, January 27)

<http://www.ssti.us/Events/measuring-accessible-and-connected-communities/>

Speakers from the State Smart Transportation Initiative and USDOT discuss new measures of accessibility and connectivity and tools available to transportation agencies interested in incorporating these types of measures into their investment decisions.

Accessibility: Towards a new multimodal system performance metric

State Smart Transportation Initiative (2014, December 3)

<http://www.ssti.us/Events/accessibility-towards-a-new-multimodal-system-performance-metric/>

This webinar hosted by SSTI highlights examples of transportation agencies that have begun to use accessibility performance measures, as well as emerging tools and metrics. The webinar includes a discussion of work by the Maryland DOT in partnership with Renaissance Planning Group, as well as the University of Minnesota's Accessibility Observatory.

National Transit Institute Courses on TOD and Transportation and Land Use

<http://www.ntionline.com/transit-oriented-development/> and

<http://www.ntionline.com/transportation-and-land-use/>

NTI's collaborative online learning events are free and are offered throughout the year on a variety of topics. The courses linked are to help professionals (1) effectively participate in the planning, funding, and implementation of transit-oriented projects that improve the environment, create a sense of community, and boost transit ridership and (2) develop a multimodal transportation system that supports desired land uses.

Performance management tools

Minnesota Accessibility Observatory

The University of Minnesota

<http://access.umn.edu/>

The Observatory works to advance the field of transportation system evaluation through research of new data sources and methods for accessibility evaluation; develop standards and tools to facilitate the use and communication of accessibility-based metrics in transportation planning, engineering, and evaluation; and apply tools and expertise in support of continual improvements in the planning, design, engineering, and analysis of transportation systems.

Sugar Access

Citi Labs

<http://www.citilabs.com/software/sugar/sugar-access/>

A customizable tool for purchase to score and understand your community's accessibility to employment opportunities, daily errands, public services, and much more.

Transport Analyst

Conveyal

<http://conveyal.com/projects/analyst/>

A customizable tool for purchase from Conveyal, a consultancy specializing in open data and open source technology for the transport sector.

Renaissance Planning Group

<http://www.citiesthatwork.com/>

A consulting firm that specializes in vision and scenario planning; multimodal systems planning; and strategic planning and citymaking.

Access to Jobs and Workers via Transit Tool

U.S. Environmental Protection Agency

<https://www.epa.gov/smartgrowth/access-jobs-and-workers-transit-technical-documentation-and-user-guide>

A supplementary data product derived from data used to create the transit accessibility variables in the Smart Location Database.

AllTransit

Center for Neighborhood Technology

<http://alltransit.cnt.org/>

AllTransit is the largest source of transit connectivity, access, and frequency data in America. It offers tremendous potential for planning applications to increase our understanding of the value of transit, as well as to enhance service and operations planning.

FHWA Community Vision Tool

Federal Highway Administration

http://www.fhwa.dot.gov/livability/tools/community_vision/

Helps communities select transportation performance indicators based on their goals.

More resources and data sources

FHWA Bicycle and Pedestrian Program – Mapping and GIS

Federal Highway Administration

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/ntpp/mapping_gis.cfm

The Nonmotorized Transportation Pilot Program pilot communities have used geographical information systems (GIS) in a variety of ways to plan and implement their project. GIS allows the pilots to quickly visualize data and see trends, relationships, and patterns that may have otherwise been overlooked, leading to more informed and strategic decision-making. This website provides examples of interesting and effective uses of GIS to support Nonmotorized Transportation Pilot Program projects.

Transportation Alternatives Program Performance Management Guidebook

Federal Highway Administration

http://www.fhwa.dot.gov/environment/transportation_alternatives/performance_management/guidebook/tap_pm_guidebook.pdf

This guidebook assists State Department of Transportation and metropolitan planning organization program managers in implementing a performance-based approach for the Transportation Alternatives Program to ensure that staff and decision-makers understand program goals, and that program actions are making progress towards achieving those goals.

Location Affordability Portal

U.S. Department of Housing and Urban Development and U.S. Department of Transportation

<http://www.locationaffordability.info/>

A reliable, user-friendly source of information on combined housing and transportation costs that can enable families, real estate professionals, housing counselors, policymakers, and developers to make more informed decisions about where to live, work, and invest.

Smart Location Database

U.S. Environmental Protection Agency

<https://www.epa.gov/smartgrowth/smart-location-database-technical-documentation-and-user-guide>

A nationwide geographic data resource for measuring location efficiency. It includes more than 90 attributes summarizing characteristics such as housing density, diversity of land use, neighborhood design, destination accessibility, transit service, employment, and demographics. Most attributes are available for every census block group in the United States.

Multimodal Performance

Federal Highway Administration

<https://www.fhwa.dot.gov/tpm/rule.cfm>

Prior to the issuance of the PM3 NPRM, U.S. DOT gathered public input on possible measures that could be considered to assess traffic congestion where there was strong support for measures that would reflect the movement of people (vs. vehicles) using all modes of travel, a view that FHWA has a history of supporting. Although FHWA expressed a desire in the NPRM to measure multimodal performance, the proposal did not include a multimodal performance measure. FHWA cited the lack of sufficient available data as the limitation that prevented the inclusion of such a measure in the proposal. When the NPRM was published, a number of groups, State DOTs, members of Congress, and citizens submitted comments to strongly oppose the

methodology, but not the intent, of the proposed traffic congestion measure, noting that it should more directly measure multi-modal performance. FHWA is considering these concerns through the comment review process in the determination of the final rule requirements.

Planning for a Healthier Future: Incorporating health, equity and environmental performance measures in regional transportation plans

Transportation for America (2016, March)

<http://t4america.org/docs/planning-for-a-healthier-future-0616.pdf>

This report by Transportation for America in partnership with Calthorpe Analytics discusses the results of a two-year collaborative initiative with MPOs around the country. It profiles health, equity and environmental measures that can be used to evaluate the performance of transportation investments at a regional scale. It provides guidance on selecting measures based on regional goals and includes an extensive list of specific measures, methodologies and data sources that can be used for goals tied to: land consumption, transportation and housing costs, vehicle miles traveled, mode share and transportation options, access to opportunities, safety, public health, and air pollution.

Tools for Measuring Accessibility in an Equity Framework

State Smart Transportation Initiative at the Congress for New Urbanism's 23rd Annual Meeting (2015)

https://www.cnu.org/sites/default/files/ssti_transpo_equity.pdf

This meeting abstract recommends a framework for measuring equity in transportation. It provides a discussion of four categories of equity measures: accessibility, affordability, health and safety, and procedural equity (equity within the transportation decision-making process). It profiles and compares a number of available strategies, tools, and measures for each of the four categories.

NCHRP Report 770: Estimating Bicycling and Walking for Planning and Project Development: A Guidebook

Kuzmyak, J. R., Walters, J., Bradley, M., Kockelman, K.M. (2014). Transportation Research Board.

<http://www.trb.org/Main/Blurbs/171138.aspx>

This report summarizes research on available methods and tools for transportation practitioners to use in estimating bicycling and walking demand as part of regional-, corridor-, or project-level analyses. The tools discussed use existing data and the capabilities in GIS methods to create realistic measures of accessibility. The products of the research include a guidebook for practitioners and a CD-ROM containing a GIS Walk Accessibility Model, spreadsheets, and the contractor's final report. This study led to the development of the Renaissance Planning Group's accessibility modeling tool and has been used by several agencies in the Washington, DC metropolitan area.

FHWA Scenario Planning Guidebook

Federal Highway Administration (2011, February)

http://www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/index.cfm

This guidebook provides detailed information to help transportation agencies carry out a scenario planning process from start to finish. It presents a scenario planning framework with six key phases of the process: 1) scoping the effort and engaging the right partners; 2) establishing a baseline analysis by identifying factors and trends that affect the state, region, community, or study area; 3) establishing goals for the future; 4) creating baseline and alternative scenarios for the future; 5)

assessing the impacts of each scenario; and 6) crafting a vision and identifying strategies and performance measures.

Strategic Highway Research Program

Federal Highway Administration

<https://www.fhwa.dot.gov/goshrp2/About>

The second Strategic Highway Research Program (SHRP2) has undertaken more than 100 research projects designed to address critical state and local challenges, such as aging infrastructure, congestion, and safety. The research results are now being made available in a series of effective solutions that will improve the way transportation professionals plan, operate, maintain, and ensure safety on America's roadways.

Guidebook for Developing Pedestrian and Bicycle Performance Measures

Federal Highway Administration (2016, March)

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/performance_measures_guidebook

This guidebook highlights a broad range of ways that walking and bicycling investments, activity, and impacts can be measured and documents how these measures relate to goals identified in a community's planning process. It discusses how the measures can be tracked, while also highlighting data considerations and relevant case studies.

Transportation and Health Tool

U.S. Department of Transportation and Centers for Disease Control and Prevention

<https://www.transportation.gov/transportation-health-tool>

Provides data on a set of transportation and public health indicators for each U.S. state and metropolitan area that describe how the transportation environment affects safety, active transportation, air quality, and connectivity to destinations. You can use the tool to quickly see how your state or metropolitan area compares with others in addressing key transportation and health issues.

Healthy Corridor Framework

Federal Highway Administration (2015)

http://www.fhwa.dot.gov/planning/health_in_transportation/planning_framework/the_framework/step00.cfm

Aims to support transportation agency efforts to incorporate health into corridor planning studies. It is intended to be used within an existing corridor planning process not as a stand-alone or parallel process.

PlaceFit Community Characteristic Database

Federal Highway Administration

<http://www.fhwa.dot.gov/livability/tools/placefit/>

The PlaceFit Tool provides access to a variety of existing websites based on livability characteristics that may appeal to your lifestyle choices.

Multimodal Long Distance Passenger Travel Origin Destination Data

Federal Highway Administration

<http://www.fhwa.dot.gov/policyinformation/analysisframework/01.cfm>

This data is part of FHWA’s Traveler Analysis Framework (TAF) estimating long distance passenger travel—defined as trips greater than 100 miles by various modes (highway (automobile and bus), air, and rail). The TAF integrates data from a variety of sources to create a comprehensive set of trip tables for long distance passenger movements at the county (or equivalent) to county (or equivalent) level. The TAF provides person trip flows for the base year of 2008 and future year 2040. These preliminary or “beta-version” data are deemed to be the starting point for any organization to use for their analysis. FHWA plans to improve and enhance these data in the future, and user feedback will greatly assist FHWA with that effort.

Multimodal System Performance Measures Research and Application

Federal Highway Administration

This research effort, led by Office of Operations, FHWA with a Technical Advisory Group from throughout the Department, is a follow-on to MAP-21 system performance measure rulemaking to identify new data sources and the best approaches to measuring multimodal system performance. The study includes pilot testing of relevant measures beginning in later half of 2017, with the final deliverable, a Research and Innovation plan, due in fall 2018.

Appendix: Summary of Outreach

A draft of this guidebook was shared with an Advisory Panel and at two workshops that included transportation officials from several state DOTs, as well as transit agencies and MPOs from around the country, and our federal partners. Feedback from both events and the Panel was incorporated into the final product as resources and timelines allowed, and is summarized below.

Introduction:

- Title and intro should be more specific about narrow focus on connectivity/destination access.
- Presentation of state role is great.
- More in depth executive summary would be useful at the executive level or to civic leaders.
- Important to define access based on different perspectives (elected leaders, transit providers, DOT leadership, MPOs, etc.).

Structure:

- Add a table of contents, list of charts, and glossary.
- Structure should reflect the process an agency needs to go through to start addressing access.
 - o This includes who is involved where, where are the conversation points, etc.
 - o Break guide into sections that practitioners can jump to based on where they are in the process—a matrix or continuum for the steps and depending on where you are in the process.

Other feedback:

- More real world examples would be helpful.
- More examples of smaller and rural areas using accessibility, i.e. different expectations of travel time depending on context; how to incorporate bike paths/greenways into measures.
- Include more information on public outreach.
- A lot of our MPOs are far ahead of us. Adding information about the interaction between MPOs and DOTs would be helpful.
- Positive reaction to the shift away from an academic and toward practical uses. Suggestion to include a distinction from the academic model and this use.



**GOVERNORS'
INSTITUTE**
on community design

<http://www.govinstitute.org/>

From: [Mopac South Contact Form](#)
To: [Sylvia Shelton](#); jhayter@ctrma.org; [Kenneally, Katie M](#); [Gilpin, Charlotte \(K-Friese\)](#); [Reid, Zane S](#); [Lacy, Hillary](#); [Prescott, Meridith](#); [Story, Elizabeth A](#)
Subject: MoPac South Contact Us Form [#538]
Date: Friday, January 7, 2022 1:36:54 PM

Name *	Arati Singh
Email *	[REDACTED]
Address	<input type="checkbox"/> [REDACTED]
Message *	<p>Please extend the comment period so that the Austin HS community and other impacted groups have time to respond. Thank you for your consideration!</p> <p>Arati Singh Austin HS parent and AISD Trustee</p>

MoPac South discussions

Bobby McQuiston [REDACTED]

Fri 1/7/2022 6:32 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Bobby McQuiston [REDACTED]

This is to let you know that we agree with the comments submitted by the Travis County Commissioners Court and the City of Rollingwood regarding the Open House and MoPac South discussions.

Sincerely,

Bobby and Margaret McQuiston

MoPac South Project

tom cole [REDACTED]

Fri 1/7/2022 6:44 PM

To: MoPac South <mopacsouth@ctrma.org>

I strongly believe there are numerous reasons not to proceed with this project, so please at least allow a reasonable opportunity for the public to review the current data and then provide informed feedback.

Thank you, Tom Cole

[Sent from Yahoo Mail on Android](#)

Comments for Mopac South

Heyden Walker [REDACTED]

Fri 1/7/2022 7:23 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Bobby Jenkins <bjenkins@ctrma.org>; Nikelle Meade <nmeade@ctrma.org>; David Armbrust <darmbrust@ctrma.org>; Mike Doss <mdoss@ctrma.org>; Heather Gaddes <hgaddes@ctrma.org>; John Langmore <jlangmore@ctrma.org>; David Singleton <dsingleton@ctrma.org>

Dear CTRMA Board and Staff,

I appreciate the opportunity to comment on Mopac South. I heard Mr. Bass explain that CTRMA was not required by NEPA to hold this open house so I appreciate your strong commitment to transparent public engagement. I hope that in the coming months, and by the next public comment period, the concerns expressed below have been addressed.

First and foremost, the environmental documents completely fail to address traffic deaths and serious injuries. There is no mention of safety in the purpose and need, nor is safety meaningfully addressed within the public documents. Recently TxDOT made substantial edits to their purpose and need for I-35 Cap Ex Central to meaningfully address safety. I hope that you will use that P&N as a guide and modify the P&N for this project.

Texas transportation policy has changed significantly since 2015. TxDOT now has a Road to Zero policy and the City of Austin has ROBUST vision zero policies, including those laid out in the Austin Strategic Mobility Plan. I would hope that at the very least Mopac South, which is within the City of Austin, would adhere to that adopted local policy. Any further work on this project should include meaningful analysis of traffic deaths and serious injuries and implement concrete strategies to end traffic deaths and serious injuries on this roadway.

Second, I am concerned about the timing of this open house. Starting the open house days before Thanksgiving and ending it this Friday 1/7/22, all in the middle the largest pandemic surge to date, means very few people are even aware this is happening. People have been out of work for holidays and due to illnesses. Intentionally or not, you could not have picked a better time to ensure no one would be able to respond to this open house. The City of Austin Mobility Committee and the full City Council have not had the opportunity to review this project in a public forum. In addition, the citizens of Austin have their interest in engaging and commenting on local highway projects, including this very project. While the traffic signs along Mopac announcing the open house are a positive step, only a handful of individuals have had sufficient time to review and comment.

I would like to request that CTRMA extend this open house at least 30 days to allow our other elected leaders, as well as citizens, and community groups to provide feedback on the record. I would also like to request that future open houses be a minimum of 90 days to ensure robust public feedback.

This project crosses multiple areas of environmentally sensitive land, including Lady Bird Lake, Zilker Park, and the Edwards Aquifer recharge zone. I do believe a full EIS is warranted and encourage you to undertake a full EIS.

I support and reiterate the recommendations you have received from the Travis County Commissioners Court, unanimously approved at their meeting 1/4/22.

That support includes serious consideration of striping managed lanes with the existing highway footprint, rather than spending millions in taxpayer money to add lanes and flyovers. Managed lanes are critical for moving people efficiently into our employment centers, but creating those with paint should be seriously considered.

When you bring this project back to the public in the Spring it will be very important to show the highway in profile so that people can understand the locations and heights of elevated lanes.

Finally, I think it is critically important that we consider the impacts of any expansion of highway capacity on greenhouse gas emissions and climate change. We cannot continue to ignore the fact that transportation is our single largest source of GHGs in the Austin region. The City of Austin has an adopted Climate Equity Plan that should be adhered to. We must take climate change seriously, for the sake of our children and future generations.

Thank you,
Heyden Black Walker
Board Chair, Reconnect Austin

CNU-A, National Walking College Fellow
Director of Planning
[Black + Vernooy Architecture and Urban Design](#)



NO to current proposal

Fran Clark [REDACTED]

Fri 1/7/2022 7:25 PM

To: MoPac South <mopacsouth@ctrma.org>

Hello,

I am strongly opposed to the plan for expansion of south MoPac. As proposed, this project would have severe negative effects on the Edwards Aquifer, Barton Springs, the Barton Creek green belt, Ladybird Lake, the hike and bike trail, Austin High School, and more.

Please do not move forward with this proposal without at least extending to comment period for at least 30 days to allow for further traffic data and analysis.

Thank you,

Daisy Clark

Austin

Comments on Proposed Mopac South Expansion

Joe Riddell [REDACTED]

Fri 1/7/2022 7:27 PM

To: MoPac South <mopacsouth@ctrma.org>

1. The comment period should be extended because it fell during a big holiday period.
2. This project is based on outdated assumptions about traffic.
3. New projections should be made based on matters such as:
 - a. making the existing inside lanes HOV and bus lanes during morning and evening rush hour,
 - b. recognizing that more and more drivers will instead be able to work remotely,
 - c. metering on ramps.
4. An EIS should be prepared when new projections and alternatives are being considered.
5. I am opposed to double decking the bridge over Lady Bird Lake or Zilker Park or Barton Creek.
6. I am opposed to any toll lanes.

Joe Riddell

Comments on Proposed MoPac South Tool Road Proposal

Carol Goodwin [REDACTED]

Fri 1/7/2022 7:37 PM

To: MoPac South <mopacsouth@ctrma.org>

Dear CTRMA Staff,

As an Austin resident and concerned citizen, I am writing to strongly oppose the proposed MoPac South Toll Road and to request that you address the following issues and recommendations:

- Please extend the public comment period by at least 30 days, as the original comment period fell entirely over the holidays. The information posted on CTRMA's MopacSouth.com project website was confusing regarding the current status of the project and opportunity for public comment. In order to ensure full public input, please extend the comment period and correct the misleading information on the site.
- In a project of this magnitude and scope, a comprehensive study of the environmental impact is essential. Numerous environs and public spaces will be negatively impacted by the proposed project, including Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders.
- In addition to a thorough Environmental Impact Study, the climate change impacts of building more capacity for single-occupancy vehicles and of increased concrete in the area must be analyzed.
- Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.
- Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.
- Updated traffic modeling should include COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap forward in telecommuting means a different world in the future. Neither the 2035 Model nor the 2045 Model has any conception of this new world. Both also ignore the "induced demand" problem that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree and often just increases the number of cars.

- Analyze real alternatives to added toll lanes. The six "alternatives" offered are all variations on one concept—adding toll lanes to MoPac South. Analyze a range of alternatives that make better use of existing pavement and take into account changing traffic patterns. Specifically, analyze an alternative that involves converting inside existing lanes to rush hour HOV lanes with little or no additional pavement as an option in the analysis—and pursue in the interim as a test solution for very little money.
- Do not ignore the challenge of getting Mopac traffic from the off and on ramps at Cesar Chavez all the way into and out of downtown
- Buy mitigation land to offset increases in impervious cover from the project and from induced impervious cover from secondary development.

Once initiated, projects such as this cannot be undone and often have a lasting negative impact. All alternatives must be thoroughly explored before this project is undertaken.

Sincerely,

Carol Goodwin



Comment

Karole Fedrick [REDACTED]

Fri 1/7/2022 7:45 PM

To: MoPac South <mopacsouth@ctrma.org>

Thank you for all of your hard work on this seemingly-impossible task.

I have commented before but want to add on more point on the work that has already been done between 45 and Wm. Cannon.

I would like to reiterate that there is already an available lane northbound from the Davis up to the Sunset Valley/290 East exit. From a safety standpoint, having three lanes at Davis that has to reduce to two lanes at the Wm. Cannon exit causes unnecessary and hazardous lane changes and merges only to have to change into the far-right lane again if they are going to exit at Sunset or 290.

Much of the backup southbound from 290 to Slaughter would have been eliminated if a designated exit to Davis had been included in the previous construction. Annoying.

But the latest construction between Slaughter and 45 southbound created one of the most dangerous traffic situations in the whole stretch of road at the "u-turn" crossover at Mopac and South Bay. I seriously have no idea what the engineers were thinking there. To get from Greyrock subdivision or the 45 SW Trailhead parking lot westbound on 45, drivers have to take a left on South Bay and take another left on Mopac southbound. It is nearly impossible to know for sure if traffic is coming around the curve. In the daytime, the curve obstructs vision bad enough, but the danger is multiplied at night. There are no road lights, no way to tell if headlights are in the near lane or far lane, or even how far away they are. People are flying down Mopac southbound at that point, and because of the curve, can't tell if someone is pulling out from South Bay. Shortly after South Bay, Mopac broadens out into 3 lanes. The whole dangerous situation could have been avoided if South Bay had been made a true u-turn into that new third lane offering protected as a merge lane. That intersection is a death trap.

Regardless of what you decide to do with the next phase, the problems created with the first phase need to be fixed.

Sincerely,
Karole Fedrick

[SPAM] Work harder to find a solution that respects nature, human health and residents concerns

Darcy Bontempo [REDACTED]

Fri 1/7/2022 7:49 PM

To: MoPac South <mopacsouth@ctrma.org>

Austin,

I implore you to not approve this ill-conceived "easy way out" proposal to ease Austin traffic. Austin is blessed with the beauty of Barton springs and nature. If you care about quality of life for people and wildlife then find a better solution than same old same old solution that destroys the environment and never stops the congestion that is found in cities that do not invest in public transport and more walking, biking and car sharing. The noise pollution from raised tollways is detrimental to people's mental and physical health. Lastly, if you are a religious person then use your authority to be a steward of God's creation.

Times are changing. Remote work. Climate change. Gas guzzling single person drivers. In 5 years it will be very different than it is today. See the future when nature will be priceless and more vital than tollways.

If you must have toll roads, find another route.

Thank you.

Darcy Bontempo
[REDACTED]

Comments on Mopac South

Kelly Davis [REDACTED]

Fri 1/7/2022 8:28 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Bobby Jenkins <bjenkins@ctrma.org>; Nikelle Meade <nmeade@ctrma.org>; David Armbrust <darmbrust@ctrma.org>; Mike Doss <mdoss@ctrma.org>; Heather Gaddes <hgaddes@ctrma.org>; John Langmore <jlangmore@ctrma.org>; David Singleton <dsingleton@ctrma.org>

Hello,

On behalf of Save Our Springs Alliance, please see the attached comments on MoPac South.

Thank you,
Kelly Davis



Kelly Davis
Staff Attorney

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



January 7, 2022

Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N. I-H 35, Suite 625
Austin, TX 78705

VIA EMAIL: MoPacSouth@ctrma.org

Re: Comments on MoPac South

Dear CTRMA Board and Staff:

Save Our Springs Alliance (“SOS Alliance”) submits the following comments on the proposed MoPac South project and the potential alternatives identified in Open House #5. SOS Alliance appreciates this opportunity to provide initial comments and requests that these comments and attachments be made part of the official public record.

The CTRMA proposes to add tolled express lanes to MoPac South from Cesar Chavez to Slaughter Lane, a distance of approximately 8 miles. CTRMA’s Open House #5 materials present six alternatives, all involving the addition of two to four toll lanes along the corridor. CTRMA is specifically seeking comment on: Project goals and objectives; mobility, connectivity, and safety concerns; express lane(s) operational configuration options; and environmental constraints.

PROCESS COMMENTS

1. Extend the Current Comment Period

CTRMA should extend the comment period on this Open House #5 by at least 30 days. The comment period for this project fell entirely within the holiday season, during a surge in COVID cases due to the Omicron variant. People who otherwise have a great interest in this project have been distracted with travel, holidays, and sickness. CTRMA should show good faith that it takes robust public input seriously by extending the current comment period.

2. Give the Public an Opportunity to Comment on the Most Up-to-Date Data Before Selecting a Preferred Alternative

The public-commenting process is also plagued by CTRMA's decision not to use the most up-to-date data and modelling from the 2045 CAMPO model in this round of public comments. The Open House slides indicate that the proposed alternatives are based on the 2035 CAMPO model, which was developed in 2010. But the slides indicate that later (after the close of the comment period), CTRMA will update its modeling with the 2045 data. SOS Alliance acknowledges that, at the January 4, 2022 Travis County Commissioners' Court meeting, CTRMA Executive Director James Bass stated the reasoning behind the agency's decision, and that the CTRMA *may* give the public another opportunity to submit comments based on the 2045 data before the preferred alternative is selected. But as it currently stands, CTRMA has asked the public to comment on irrelevant, outdated information. SOS Alliance concurs with the comments submitted by the Travis County Commissioners Court and Amy Pattillo regarding the deficiencies of the Open House #5 public comment period, and urges CTRMA to present 2045 data to the public during the initial public scoping process.

SUBSTANTIVE COMMENTS

1. Prepare an Environmental Impact Statement, Rather than an Environmental Assessment

CTRMA has indicated it will prepare an Environmental Assessment (EA) for the project. As you know, this portion of roadway overlies the recharge zone for the Edwards Aquifer, the most ecologically sensitive region in Texas.¹ As such, any road improvements that substantially increase vehicle miles traveled over this area, given the concomitant direct and indirect impacts associated with road construction, operation, and the subsequent urbanization that surely follows, is likely to have a significant environmental impact. In that regard, it defies common sense for CTRMA to be focusing its efforts on developing an environmental assessment in lieu of a full environmental impact statement (EIS). It also defies federal and state regulations that require an EIS be prepared where it is "*likely*" that an action has "a significant impact on the environment."²

In considering whether the effects of the proposed action are significant, current NEPA regulations explain that:

¹ Texas Water Development Board, *Aquifers of Texas* 14 (Nov. 1995) ("The aquifer feeds several well-known recreational springs and underlies some of the most environmentally sensitive areas in the state."); Edwards Plateau Ecoregional Planning Team, The Nature Conservancy, *A Biodiversity and Conservation Assessment of the Edwards Plateau Ecoregion 1-2* (2004) ("The Edwards Plateau is truly a unique place, even from a global perspective. . . . It is this varied ecological setting that makes the Edwards Plateau one of the most diverse biological regions in the world.").

² 23 C.F.R. § 771.119(i); 40 C.F.R. § 1501.3(a)(3); 43 Tex. Admin. Code § 2.84

[A]gencies shall analyze the potentially affected environment and degree of the effects of the action... In considering the potentially affected environment, agencies should consider, as appropriate to the specific action, the affected area (national, regional, or local) and its resources, such as listed species and designated critical habitat under the Endangered Species Act. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend only upon the effects in the local area.

40 C.F.R. § 1501.3(b)(1).

The potentially affected environment here includes areas of significant ecological and cultural significance. The project will affect the Edwards Aquifer, Barton Springs, Zilker Park, the Hike and Bike Trail, Lady Bird Lake, Austin High School, Barton Creek Greenbelt, and federally listed endangered species. These impacts will be significant, in part, because:

- The project would lie entirely within the environmentally vulnerable recharge zone of the Barton Springs segment of the Edwards Aquifer, which provides habitat for the federally endangered Barton Springs and Austin blind salamanders. The U.S. Fish and Wildlife Service has designated Barton Springs as critical habitat for the endangered Austin blind salamander under the Endangered Species Act.
- The Zilker Park Historic District and Barton Springs Historic District are listed on the National Register of Historic Places. In addition to these historic places, the Deep Eddy Historic District and the American Legion-Charles Johnson House would also be impacted.
- The Barton Springs segment of the Edwards Aquifer is an EPA-designated sole-source aquifer under the Safe Drinking Water Act and provides drinking water to approximately 60,000 Central Texans.

If at any point in this process, it is determined that a significant environment impact *is likely*, a full environmental impact statement (“EIS”) must be prepared. 23 C.F.R. § 771.119(i) “(If, at any point in the EA process, the [Federal Highway] Administration determines that the action is likely to have a significant impact on the environment, the preparation of an EIS will be required.)”³; *Sierra Club v. U.S. Army Corps of Eng’rs*, 446 F.3d 808, 815 (8th Cir. 2006) (“If significant environmental impact is likely, an environmental impact statement is required.”); *High Sierra Hikers Ass’n v. Blackwell*, 390 F.3d 630, 640 (9th Cir. 2004) (“If the EA establishes that the agency’s action ‘*may* have a significant effect upon the environment’ then an EIS must be prepared.” (emphasis added)). After all, the purpose of this initial study is to simply help the CTRMA decide if an EIS is needed, not substitute for one. *See Sierra Club v. Marsh*, 769 F.2d 868, 875 (1st Cir. 1985).

³ The provisions of 23 C.F.R. part 771 apply to TxDOT by virtue of the Memorandum of Understanding delegating NEPA authority to TxDOT.

In the case of the proposed addition of lanes to MoPac South, an EIS is needed given that the project will have a significant impact on the human and natural environment. Any road project that substantially increases vehicle lane miles over this area, given the concomitant direct and indirect impacts associated with road construction, operation, and the subsequent urbanization that surely follows, are likely to have a significant environmental impact. Indeed, some alternatives under consideration—elevated toll lanes—will have dramatic impacts on the social and economic environment as well as to the natural environment. Such impacts are significant and warrant the type of analysis developed in preparing an EIS.⁴

At the January 4, 2021 Travis County Commissioners Court Meeting, CTRMA Executive Director James Bass indicated that CTRMA would prepare an EA, and if the project was found to have significant environmental impacts, the agency would prepare an EIS. But for reasons discussed above and below, the bar for preparing an EIS—likely significant impacts—is more than cleared, and preparing an EA first will only add unnecessary costs and delays in finding an effective solution for congestion on MoPac. If the CTRMA makes a Finding of No Significant Impact (FONSI) based on the EA, the decision could be vulnerable to judicial challenges.

In sum, due to the impacts on water, recreational, historic and cultural resources, as well as the effect to listed endangered species and their habitat, this project will have significant impacts on the local environment.⁵ An EIS is warranted. We ask only that CTRMA do what the law requires it to do, and what other transportation agencies have already recognized they must do in similar situations⁶-- initiate a process whereby an EIS is developed. Only through the EIS process can a full and complete understanding of the impacts associated with roadway improvements along MoPac South be developed so that the public can make an informed choice about such improvements.

2. The EIS Must Evaluate this Project in the Context of Other Nearby Road Projects.

In 2015, SOS Alliance urged CTRMA and TxDOT to study the entire 18-mile proposed SH 45 SW/South Mopac expansion toll loop as the real project that was together transforming southwest Austin. The three projects (SH 45 SW, MoPac Intersections, and

⁴ See *Nat'l Wildlife Fed'n v. Coleman*, 529 F2d 359, 373 (5th Cir. 1976) (“The relevant consideration is the total impact of the highway . . . ‘a far more subtle calculation than merely totaling the number of acres to be asphalted’ is required where the environmental impact of a project is at issue.”).

⁵ CEQ explained in promulgating this rule that species are not the only concern. “The final rule includes one example, listed species and designated critical habitat under the Endangered Species Act, but this could include any type of resource such as historic, cultural, or park lands.” 85 Fed. Reg. 43,304, 43,322 (July 16, 2020).

⁶ For instance, TxDOT prepared an EIS for the Oak Hill Parkway, a project of about 8 miles spanning the Edwards Aquifer recharge and contributing zones. In 2007, FHWA recommended preparation of an EIS for adding 4 toll lanes for 6.15 miles in Bexar County, partly because of its location in an urban environment and because it would likely cause significant public controversy (see attached).

MoPac South) have instead been pushed piecemeal onto the Austin community and current Mopac commuters. But it is not too late, and indeed it is incumbent upon the CTRMA, to examine the effects of MoPac South in the context of the recently completed road projects that also lie over the Barton Springs Recharge Zone. Analysis of the impacts of this project must take into account the effects of these and other road projects past and currently under construction, such as the Oak Hill Parkway. It is the cumulative impact of so many projects on the Recharge Zone that poses the greatest threat to the Edwards Aquifer and Barton Springs.

3. The Preferred Alternative Should Not Include a Double-Decker Bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School.

Elevated lanes over MoPac—presented in the slides as “direct connections”—would have substantial impacts on the natural and human environment that are not justified by any presumed time-savings. The double-decker would forever change the look and feel of Zilker Park, Lady Bird Lake, the Butler Hike and Bike Trail, the Zilker Botanical Garden, the Austin Nature and Science Center, and Austin High School. In addition to the visual intrusion, there would be more noise and light pollution. The beauty and charm of this special area—part of what makes Austin *Austin*—would be transformed to a highly urbanized and industrial area.

4. The EIS Should Evaluate Alternatives that Do Not Involve Adding Toll Lanes to MoPac.

The six “alternatives” presented in the Open House are all a variation on adding toll lanes (two to four) to South MoPac, with and without direct connections to downtown. The EIS should fully and fairly evaluate alternatives that improve traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour high-occupancy vehicles (HOVs) and public transit, and utilizing ramp metering. These alternatives involve little to no additional pavement, cost relatively little, and could be pursued in the interim as a test solution before embarking on a financially and environmentally costly large-scale toll project.

According to past materials and correspondence, the Environmental Study of Mopac South only evaluated one HOV lane in each direction against two toll/managed lanes in each direction. CTRMA should evaluate two HOV lanes in each direction against two toll/managed lanes. An additional alternative has been seen in Seattle, Denver, and other cities, which have effectively managed congestion with lower cost projects by adding HOV lanes that change direction based on the time of day. CTRMA should also evaluate this alternative as part of the Mopac South study.

Fairly evaluating these alternatives would be in accord with CTRMA’s stated mission to “implement innovative, multimodal transportation solutions that reduce congestion and create transportation choices that enhance quality of life and economic vitality.”

5. Analyze Alternatives in the Context of Changing Driving Habits and Induced Demand

In conjunction with these evaluations, the EIS should use updated traffic modelling that takes into account changes in driving habits in a post-COVID world. Tele-commuting, flexible work schedules, and other technological and societal changes have largely eliminated the necessity of spending upwards of half a billion dollars trying to accommodate previously predicted “single-occupancy vehicle peak hour demand” increases. CTRMA should use the most updated traffic modeling that includes COVID traffic counts and the best current information on projecting traffic flows, recognizing that improved transportation technology will greatly increase efficient use of the existing pavement. The giant leap in tele-commuting means a different world in the future. The CAMPO models—whether for 2035 or 2045—have no conception of this new world.

A fair evaluation of alternatives and their relative costs and benefits must also acknowledge the issue of induced demand that has shown, time after time, that expanding roadways in urbanizing areas fails to reduce congestion to any significant degree.⁷

6. Do Not Ignore the Challenge of Getting Mopac Traffic from the Off and On Ramps at Cesar Chavez All the Way Into and Out of Downtown.

Adding express lanes to South MoPac will mean more traffic downtown, especially via Cesar Chavez. The east-west ramifications of adding traffic to MoPac should not be ignored in the environmental study of this project.

SOS Alliance observes that is exactly what happened when the MoPac Improvement Project was being studied. Not long after the “MoPac Improvement Project” opened, there was noticeable increase in traffic on Cesar Chavez—about 25% increase in the first two months.⁸ CTRMA’s then-Executive Director, Mike Heiligenstein, stated that CTRMA did not model traffic on Cesar Chavez because its traffic modelling was focused only on the MoPac Corridor.⁹

Expanding MoPac will have repercussions to beyond just the MoPac corridor, and this time, CTRMA should pay attention and figure that into its calculus if the agency truly wants to alleviate congestion in the Austin area.

⁷ See attached studies for an elaboration on “induced demand.”

⁸ *Traffic Volumes Increasing on MoPac*, Austin Monitor (Dec. 14, 2017).

⁹ *Id.* Heiligenstein: “The modeling focused on the, as I understand it, MoPac corridor. It did less of a modeling of particular side streets and [Cesar Chavez] was one of them.”

7. Analyze the Climate Change Impacts of Building More Capacity for Single-Occupancy Vehicles

There is no mention in the Open House #5 materials about climate. The extreme weather events of the past few years have shown with increasing alarm the effects climate change is already having on our planet. And transportation-related emissions are responsible for 30-40% of the region's greenhouse gas emissions.

The City of Austin has made a serious commitment to reducing our region's contribution to climate change, via the Austin Community Climate Plan and the recently adopted Climate Equity Plan. CTRMA's project should reflect those same community values.

Moreover, the cement industry is one of the main producers of carbon dioxide. The EIS should calculate how much cement will be needed to build each alternative, and the carbon footprint of each.

8. The CTRMA Should Buy Mitigation Land to Offset Increases in Impervious Cover.

To offset the impacts to water quality from the increase in impervious cover from the MoPac South project, the CTRMA should acquire land in the Recharge Zone to be set aside for permanent protection. The land could be bought in fee simple or preserved through conservation easements. In addition to the impervious cover from the project itself, the induced development created by the project will lead to even more impervious cover on the Recharge Zone, making it even more important to have land to help mitigate the impacts of that increased impervious cover. In 2007, the U.S. Fish and Wildlife Service wrote a white paper explaining why mitigation land was needed to offset water-quality impacts that would adversely affect endangered species, see attached.

Sincerely,



Kelly D. Davis
Senior Staff Attorney

Save Our Springs Alliance




U.S. Department
of Transportation
**Federal Highway
Administration**

Texas Division

March 29, 2007



CSJ: 0291-10-055
SH 16 (Bandera Road)
Bexar County

In Reply Refer To:
RECEIVED

MAR 30 2007

ENV

Mr. James P. Barta, Jr. P.E.
Director, Project Management Section
Environmental Affairs Division
Texas Department of Transportation



Dear Mr. Barta:

We have reviewed the information submitted by your letter of February 23, 2007. This information included supplemental information we had requested from TxDOT and the Alamo Regional Mobility Authority (ARMA) in our letter dated December 18, 2006, related to the ARMA's request to do an Environmental Assessment of the proposed SH 16 project from IH 410 to Loop 1604. This request was made originally by TxDOT's letter of July 26, 2006. After our initial requests for additional information were addressed, TxDOT submitted a follow up letter on November 14, 2006. A meeting of representatives of the ARMA, TxDOT and FHWA was held on January 12, 2007, in San Antonio to discuss the project and the appropriate environmental document.

This proposed project is for the expansion of SH 16 (Bandera Road) from IH 410 to Loop 1604, a total distance of about 6.5 miles. This portion of SH 16 passes through the Cities of San Antonio and Leon Valley. Currently SH 16 is a 6-lane urban arterial from IH 410 to Guilbeau Road and a 4-lane urban arterial from Guilbeau Road to LP 1604. The existing right-of-way is 120 feet to 203 feet wide. The proposed upgrade (according to the San Antonio MPO's Mobility 2030 Plan) would add 4 lanes of new, tolled capacity to the entire corridor. About 21 alternatives have been suggested for this corridor including non-capacity adding alternatives. No recent environmental studies exist for this corridor.

Our finding is that an Environmental Impact Statement (EIS) should be prepared in accordance with 23 CFR 771.119 and SAFTEA-LU Section 6002 for this project. This decision is based on several factors. First, SH 16 from IH 10 to LP 1604 is a moderate to densely developed urban corridor with development beginning at the right-of-way line. As such, the expansion of SH 16 to include controlled access lanes where there are none now could have a high probability of significant economic impacts to the businesses in the corridor. The loss of parking and reduced access at a minimum is likely to result from any addition of new travel lanes within the corridor. In some cases, actual acquisition of the business is a possibility.

MOVING THE
AMERICAN
ECONOMY



Placing the new capacity on an elevated structure or within a tunnel has been discussed as alternatives which might mitigate the economic impact to the business. But these alternatives come with significantly higher construction costs. We also feel there will be higher noise and visual impacts from an elevated structure. In addition, public comment appears to prefer an at-grade or depressed roadway. While this corridor is developed with mostly commercial development, there is some residential development, much of it in the form of multi-family dwellings. Impacts are possible to some of these units.

Second, the potential for significant controversy appears likely on this project. As mentioned above, public comment has already been received from a public meeting held July 27, 2006. At that public meeting, the public expressed project impact concerns specifically about the O. P. Schnabel property and the Onion House. There is ample evidence that the public is generally resistant to the use of tolling on projects of this type. Also, the City of Leon Valley is on record at the Agency Coordination Meeting held on June 15, 2006, as being opposed to an elevated structure and any alternative which separates through traffic from local traffic. The City is concerned about the potential economic impact to the businesses and the City of any such separation. Third, the existence of at least one park, a potentially historic structure and a school along the existing right-of-way increases the likelihood of significant impacts under the 4(f) and section 106 processes.

Should you have any questions regarding this determination, please contact me at [REDACTED] Mr. Ted West at [REDACTED] or Mr. Jesse Balleza at [REDACTED]. We look forward to working with TxDOT on this proposed project.

Sincerely,



Salvador Deocampo
District Engineer

The Fundamental Law of Road Congestion: Evidence from US Cities[†]

By GILLES DURANTON AND MATTHEW A. TURNER*

We investigate the effect of lane kilometers of roads on vehicle-kilometers traveled (VKT) in US cities. VKT increases proportionately to roadway lane kilometers for interstate highways and probably slightly less rapidly for other types of roads. The sources for this extra VKT are increases in driving by current residents, increases in commercial traffic, and migration. Increasing lane kilometers for one type of road diverts little traffic from other types of road. We find no evidence that the provision of public transportation affects VKT. We conclude that increased provision of roads or public transit is unlikely to relieve congestion. (JEL R41, R48)

We investigate the effect of lane kilometers of roads on vehicle-kilometers traveled (VKT) for different types of roads in the United States. For interstate highways in metropolitan areas we find that VKT increases one for one with interstate highways, confirming the “fundamental law of highway congestion” suggested by Anthony Downs (1962, 1992). We also uncover suggestive evidence that this law may extend beyond interstate highways to a broad class of major urban roads, a “fundamental law of road congestion.” These results suggest that increased provision of interstate highways and major urban roads is unlikely to relieve congestion of these roads.

Our investigation is of interest for three reasons. First, in 2001 an average American household spent 161 person-minutes per day in a passenger vehicle. These minutes allowed 134 person-kilometer of auto travel at an average speed of 44 km/h. Multiplying by the number of households in the US and any reasonable dollar value of time, we see that the US allocated considerable resources to passenger vehicle travel. That Americans rank commuting among their least enjoyable

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[†] To view additional materials, visit the article page at <http://www.aeaweb.org/articles.php?doi=10.1257/aer.101.6.2616>.

activities (Alan B. Krueger et al. 2009) buttresses our suspicion that the costs of congestion are large. To the extent that travel resources could have been better allocated, understanding congestion and the effect of potential policy interventions is an important economic problem.

Second, since the costs of congestion and of transportation infrastructure are both large, transportation policy should be based on the careful analysis of high quality data, not on the claims of advocacy groups. Unfortunately, there is currently little empirical basis for accepting or rejecting the claims by the *American Road and Transportation Builders Association* that “adding highway capacity is key to helping to reduce traffic congestion,” or of the *American Public Transit Association* that without new investment in public transit, highways will become so congested that they “will no longer work.”¹ Our results do not support either of these claims.

Third, with the increasing certainty of global warming comes the need to manage carbon emissions. According to the US Bureau of Transportation Statistics (2007, ch. 4) the road transportation sector accounts for about a third of US carbon emissions from energy use. Understanding the implications for VKT of changes to transportation infrastructure is immediately relevant to this policy problem.

Ours is not the first attempt to measure the effect of the supply of roads on traffic. Following Roy E. Jorgensen (1947), a large literature estimates new traffic for particular facilities after their opening or after a capacity expansion (see Phil B. Goodwin 1996 and Robert Cervero 2002 for reviews).² Studies of a particular road provide little basis, however, for assessing the impact that changes in infrastructure have on traffic in the city at large, a question that is probably more relevant to transportation policy. As Cervero’s (2002) review shows, few studies take an approach similar to ours and assess the effect of road provision on traffic over entire areas. These studies generally find a positive elasticity of VKT to the supply of roads, although their estimates of this elasticity vary widely. We improve on this literature in three respects.

First, we use more, and more comprehensive, data. To begin, we take average annual daily traffic (AADT) and a description of the road network from the US Highway Performance and Monitoring System (HPMS) for 1983, 1993, and 2003. We add a description of individual and household travel behavior taken from the 1995 Nationwide Personal Transportation Survey and 2001 National Household Travel Survey (which we jointly refer to as NPTS). These data track several measures of traffic and infrastructure for all metropolitan areas in the continental US. Together with data describing truck traffic, public transit, sectoral employment, population, and physical geography, these data are a powerful tool with which to investigate the way that VKT responds to changes in the stock of roads and transit in US metropolitan areas. Extant research, on the other hand, examines one specific state (usually California) or a small subgroup of adjacent states (usually on the East Coast) taking counties or smaller administrative units as the unit of observation.³

¹The quote from the APTA is at www.apta.com/government_affairs/aptatest/documents/testimony060921.pdf. The quote from the ARTBA is harder to find and occurs in an undated flyer which is no longer available on their website, <http://www.artba.org/>.

²While Jorgensen (1947) is our first modern source, the analysis of the effects of new facilities such as bridges and their tariffs on flows of vehicles follows a much older tradition, dating back to Jules E. J. Dupuit (1844).

³Robert B. Noland (2001) looks at data for the entire US but uses states as units of observation. Since roads in San Francisco or Buffalo are unlikely to affect behavior in Los Angeles or New York City, states appear to be “too

The resulting estimates of the relationship between infrastructure and traffic in small administrative districts from highly urbanized parts of the US are not obviously relevant to national transportation policy.

Second, we are more careful to establish a causal relationship between roads and traffic. Existing literature either does not recognize that roads and traffic may be simultaneously determined, or fails to solve this identification problem. To identify the causal effect of roads on traffic, we examine both time series and cross-sectional variation in our data and exploit three instrumental variables to predict the incidence of roads in metropolitan statistical areas (MSAs). These instruments are based on the routes of major expeditions of exploration between 1835 and 1850, major rail routes in 1898, and the proposed routes of interstate highways in a preliminary plan of the network. Our results strongly support the hypothesis that roads cause traffic.

Third, beyond data and methodological improvements, we extend the conclusions of the existing literature in three ways. Within US MSAs, we distinguish between interstate highways in their “urbanized” parts and outside. We also use data for a broad class of major urban roads. While we cannot implement our preferred identification strategy for this last class of roads, our OLS results suggest that increases in an MSA’s stock of major urban roads also lead to large increases in VKT. We deduce two further implications of the law of road congestion and confirm that these implications are consistent with observation. First, we find no evidence that the provision of public transportation affects VKT. Second, metropolitan areas with less traffic experience a larger increase in travel. Finally, we describe the foundations underlying the fundamental law of highway congestion: people drive more when the stock of roads in their city increases; commercial driving and trucking increase with a city’s stock of roads; and people migrate to cities that are relatively well provided with roads. Surprisingly, our data also suggest that a new lane kilometer of roadway diverts little traffic from other roads.

I. Roads and Traffic: A Simple Framework

To motivate our econometric strategy, consider a simple model of equilibrium VKT. To begin, let R denote lane kilometers of roads in a city, let Q denote VKT, and let $P(Q)$ be the inverse demand for VKT. The downward sloping line in Figure 1 represents an inverse VKT demand curve for a particular city.

Let $C(R, Q)$ be the total variable cost of VKT, Q , given roads, R . In equilibrium all drivers face the same average cost of travel. Holding lane kilometers constant at R , the average cost of driving increases with VKT. Hence, the average cost curve for VKT is upward sloping. This feature is well documented in the transportation literature (Kenneth A. Small and Erik T. Verhoef 2007). The left-most upward sloping curve in Figure 1 represents the supply curve $AC(R)$ associated with roads R .

Equilibrium VKT, $Q^*(R)$ is characterized by

$$(1) \quad P(Q^*) = \frac{C(R, Q^*)}{Q^*}.$$

large” a unit of observation for two reasons: states aggregate city-level variation that is useful for inference and, as we argue in Duranton and Turner (2008), the relevant economic unit appears to be the city.

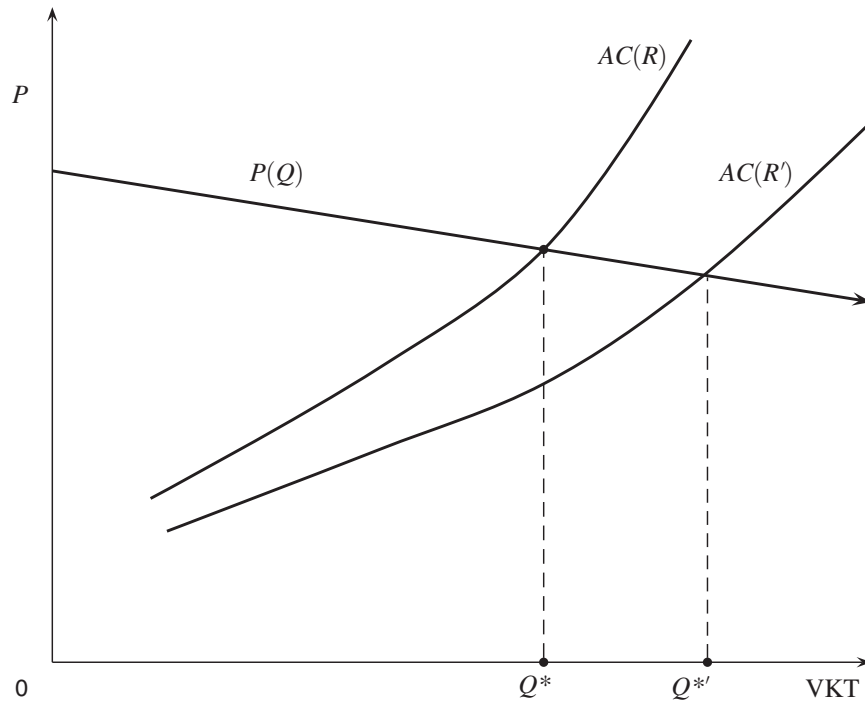


FIGURE 1. SUPPLY AND DEMAND FOR ROAD TRAFFIC

That is, willingness to pay equals average cost.

Increasing the supply of road lane kilometers from R to R' reduces the average cost of driving for any level of VKT.⁴ It thus shifts the average cost curve to the right. With R lane kilometers of roads in the city, the demand curve intersects with the supply curve at Q^* , the equilibrium VKT. With R' lane kilometers of road, the corresponding equilibrium implies a VKT of $Q^{*'}$.

We would like to learn the effect of an increase in the stock of roads on driving in cities. That is, we would like to learn about the function $Q^*(R)$ defined implicitly by equation (1). Indexing cities by i and years by t , our problem may be stated as one of estimating,

$$(2) \quad \ln(Q_{it}) = A_0 + \rho_R^Q \ln(R_{it}) + A_1 X_{it} + \epsilon_{it},$$

where X denotes a vector of observed city characteristics and ϵ describes unobserved contributors to driving. We are interested in the coefficient of R , the road elasticity of VKT, $\rho_R^Q \equiv \partial \ln Q / \partial \ln R$.

With data describing driving and the stock of roads in a set of cities, we can estimate equation (2) with OLS to obtain consistent estimates of ρ_R^Q , provided that $\text{cov}(R, \epsilon | X) = 0$. In practice, we hope that roads will be assigned to growing cities and fear that they are assigned to prop-up declining cities. In either case, the required orthogonality condition fails. Thus, we are concerned that estimating equation (2) will not lead to the true value of ρ_R^Q .

⁴There are pathological examples where increases in the extent of a road network can reduce its capacity, in particular the “Braess paradox” described in Small and Verhoef (2007). We ignore such pathological examples here.

As a next step, we partition ϵ into permanent and time-varying components, and write

$$(3) \quad \ln(Q_{it}) = A_0 + \rho_R^Q \ln(R_{it}) + A_1 X_{it} + \delta_i + \eta_{it}.$$

With data describing a panel of cities, we can estimate this equation using city fixed effects to remove all time-invariant city effects. This leads to consistent estimates of ρ_R^Q , provided that $\text{cov}(R, \eta | X, \delta) = 0$. We also estimate the first difference equation,

$$(4) \quad \Delta \ln(Q_{it}) = \rho_R^Q \Delta \ln(R_{it}) + A_1 \Delta X_{it} + \Delta \eta_{it},$$

where Δ is the first difference operator. Since all time-invariant factors drop out of the first difference equation, we are left with essentially the same orthogonality requirement as for equation (3).⁵ If, in equation (4), we include city characteristics in level and initial VKT as control variables, then we account for the possibility that these initial conditions may determine traffic growth and be correlated with changes in roadway.

To our knowledge, there is no study of a comprehensive set of metropolitan areas in the literature. The extant literature, however, has estimated variants of equations (2), (3), and (4) on a small samples of counties or metropolitan areas. While the early literature on induced demand at the area level (e.g., Frank S. Koppelman 1972) ran only simple OLS regressions in the spirit of equation (2), second generation work on the issue typically explored a variety of specifications with fixed effects and, sometimes, a complex lag structure. For instance, Mark Hansen et al. (1993) and Hansen and Yuanlin Huang (1997) use panels of urban counties and MSAs in California, while Noland (2001) uses a panel of US states. All find a positive association between VKT and lane kilometers of roadway, with estimated elasticities generally ranging between 0.3 and 0.7.

While equations (3) and (4) improve upon equation (2), we are concerned that roads will be assigned to cities in response to a contemporaneous shock to the city's traffic. To deal with this identification issue, we model the assignment of roads to cities explicitly. This leads to a two-equation model, one to predict the assignment of roads to cities, the other to predict the effect of roads on traffic:

$$(5) \quad \begin{aligned} \ln(R_{it}) &= B_0 + B_1 X_{it} + B_2 Z_{it} + \mu_{it} \\ \ln(Q_{it}) &= A_0 + \rho_R^Q \widehat{\ln(R_{it})} + A_1 X_{it} + \epsilon_{it}, \end{aligned}$$

where $\widehat{\ln(R_{it})}$ is predicted lane kilometers of roadway as estimated in the first stage. We can obtain consistent estimates of ρ_R^Q provided that we are able to find instruments to satisfy $\text{cov}(Z, R | X) \neq 0$ and $\text{cov}(Z, \epsilon | X) = 0$.

The possible simultaneous determination of VKT and lane kilometers is recognized by several authors. To instrument for lane kilometers of highways, Cervero and Hansen (2002) use about 20 instruments describing politics and physical geog-

⁵In fact, the two estimates have subtly different properties; see Jeffrey M. Wooldridge (2001, ch. 10).

raphy. This approach is subject to the problems associated with the use of a large number of instruments. Moreover, we expect the physical geography of cities, climate in particular, to affect the demand for travel directly, in addition to affecting the supply of roads. This violates the condition $\text{cov}(Z, \epsilon | X) = 0$ and invalidates the instruments. Noland and William A. Cowart (2000) use land area and population density as instruments for lane kilometers of roads. Again, we expect population density to be a determinant of the demand for travel as much as a determinant of the supply of roads. Lewis M. Fulton et al. (2000) instrument growth in lane kilometers of highways by short lags of the same variables in a first difference specification. The exclusion restriction then requires that past changes in road supply be uncorrelated with contemporaneous changes in demand. Since changes in road supply are serially correlated (and they need to be so for the instrument to have any predictive power), the exclusion restriction is unlikely to hold when new roads are supplied as a result of VKT demand shocks. We postpone a discussion of our own choice of instruments.

Each of the approaches described above relies on different variation in the data to estimate ρ_R^Q . Equation (2) relies on cross-sectional variation, while equations (3) and (4) use only time series variation. Equation (5) exploits the instrumental variables we describe later. Should all three methods arrive at the same estimate of ρ_R^Q , then all are correct, or all are incorrect, and an improbable relationship exists between the various errors and instrumental variables.

We now turn to a description of our data and estimates of ρ_R^Q based on the estimating equations presented in this section.

II. Data and Estimation

We take the (consolidated) MSA drawn to 1999 boundaries as our unit of observation. Since each MSA aggregates one or more counties, MSA boundaries often encompass much land that is not “urban” in the common sense of the word. MSAs are generally organized around one or more “urbanized areas,” however, which make up the core(s) of the MSA and typically occupy only a fraction of an MSA’s land area. By using data collected at the level of “urbanized areas” we can distinguish more from less densely developed parts of each metropolitan area.

To measure each MSA’s stock of interstate highways and traffic, we use the US HPMS “universe” and “sample” data for 1983, 1993, and 2003.⁶ The Data Appendix provides a more detailed description of the HPMS. The Federal Highway Administration in the US Department of Transportation (DOT) collects these data, which are used by the federal government for planning purposes and to apportion federal highway money. For each year, for the entire universe of the interstate highway system within their boundaries, states must report the length, number of lanes, and the number of vehicles per lane per day passing any point. This last quantity is referred to as the average annual daily traffic (AADT). We use a county identifier

⁶The HPMS is available annually. We focus on 1983, 1993, and 2003 because these dates are close to census years and to the years for which we have data on public transportation. In addition, we sometimes make use of the 1995 and 2001 HPMS.

to match every segment of interstate highway to an MSA. We then calculate lane kilometers, VKT, and AADT per lane km for interstate highways within each MSA.

In the sample data states report the same information (and more) for every segment of interstate highway within urbanized areas. By merging the sample with the universe data we distinguish urban from non-urban interstates within MSAs.

The sample data also report information about a sample of other roads within urbanized areas. This sample is intended to represent all major roads in urbanized areas within the state. From the sample data we calculate road length, location, AADT, and share of truck traffic for all major roads in the urbanized area. The HPMS sample data also assign each segment to one of six functional classes, described in DOT (1989). One of these classes is “interstate highway.” We group four of the remaining five classes; “collector,” “minor arterial,” “principal arterial,” and “other highway” into a measure of major urban roads, omitting the last class, “local roads.”⁷ Our definition of “major urban road” thus includes all nonlocal roads that are not interstate highways. Within urbanized areas, interstates represent about 1.5 percent of all road kilometers and 24 percent of VKT, while major urban roads represent 27 percent of road kilometers and another 62 percent of VKT (DOT 2005a). The Data Appendix provides more detail.

Table 1 presents MSA averages of AADT for the 228 MSAs with nonzero interstate mileage in 1983, 1993, and 2003. These data show that AADT, the number of vehicles passing any point on an average lane of interstate highway, increased from 4,832 in 1983 to 9,361 in 2003. Thus, at the end of our study period, an average lane of interstate highway carries almost twice as much traffic as at the beginning. We also find that lane kilometers of interstate highways increase by about 6 percent between 1983 and 1993 and between 1993 and 2003. Together, the increase in lane kilometers and the increase in AADT imply that interstate VKT in an average MSA more than doubled over our 20-year study period.

Table 1 also presents descriptive statistics for major urban roads. Major roads represent between three and five times as many lane kilometers as interstate highways, but only twice as much VKT. Note that urbanized area boundaries, unlike MSA boundaries, are not constant over our three cross sections, so the dramatic increase in urbanized area VKT and lane kilometers over our study period may partly reflect increases in the extent of urbanized areas.

A. Cross-Sectional Estimates of the Roadway Elasticity of VKT

We now turn to estimating the elasticity of MSA VKT to lane kilometers for each of the following categories of roads and travel: all MSA interstates (IH), urbanized MSA interstates (IHU), nonurban MSA interstates (IHNU), and major urban roads (MRU).

Table 2 reports estimates of the elasticity of MSA VKT to lane kilometers from univariate OLS regressions. Each panel considers a different type of road: MSA interstates in panel A, urbanized MSA interstates in panel B, major urban roads in

⁷Loosely, a “local road” is one that primarily provides access to land adjacent to the road, and every other class of road serves to connect local roads. The HPMS does not require states to report data on local roads, although some local roads appear in the data.

TABLE 1—SUMMARY STATISTICS FOR OUR MAIN HPMS
AND PUBLIC TRANSPORTATION VARIABLES

Year:	1983	1993	2003
Mean daily VKT (IH, '000 km)	7,777 (16,624)	11,905 (24,251)	15,961 (31,579)
Mean AADT (IH)	4,832 (2,726)	7,174 (3,413)	9,361 (4,092)
Mean lane km (IH)	1,140 (1,650)	1,208 (1,729)	1,280 (1,858)
Mean lane km (IH, per 10,000 population)	26.7 (26.9)	24.3 (20.9)	22.1 (16.4)
Mean daily VKT (MRU, '000 km)	14,553 (36,303)	22,450 (49,132)	31,242 (70,692)
Mean AADT (MRU)	3,146 (847)	3,646 (947)	3,934 (1,059)
Mean lane km (MRU)	3,885 (7,926)	5,071 (9,119)	6,471 (12,426)
Mean VKT share urbanized (IHU/IH)	0.38	0.44	0.48
Mean lane km share urbanized (IHU/IH)	0.29	0.36	0.40
Mean share truck AADT (IH)	0.11	0.12	0.13
Peak service large buses per 10,000 population	1.20 (1.02)	1.09 (0.98)	1.34 (0.98)
Peak service large buses	169 (563)	165 (562)	217 (742)
Number MSAs	228	228	228
Mean MSA population	753,726	834,290	950,054

Notes: Cross MSA means and standard deviations in parentheses. IH denotes interstate highways for the entire MSA. IHU denotes interstate highways for the urbanized areas within an MSA. MRU denotes major roads for the urbanized areas within an MSA.

TABLE 2—VKT AS A FUNCTION OF LANE KILOMETERS, UNIVARIATE OLS BY DECADE

Year:	1983 (1)	1993 (2)	2003 (3)
<i>Panel A. Dep. var.: ln VKT for interstate highways, entire MSAs</i>			
ln (IH lane km)	1.24*** (0.04)	1.25*** (0.02)	1.23*** (0.02)
R ²	0.86	0.87	0.88
<i>Panel B. Dep. var.: ln VKT for interstate highways, urbanized areas within MSAs</i>			
ln (IHU lane km)	1.26*** (0.02)	1.23*** (0.02)	1.20*** (0.02)
<i>Panel C. Dep. var.: ln VKT for major roads, urbanized areas within MSAs</i>			
ln (MRU lane km)	1.08*** (0.02)	1.13*** (0.01)	1.14*** (0.01)
<i>Panel D. Dep. var.: ln VKT for interstate highways, outside urbanized areas within MSAs</i>			
ln (IHNU lane km)	1.06*** (0.03)	1.03*** (0.04)	1.00*** (0.04)

Notes: The same regressions for different types of roads are performed in all four panels. All regressions include a constant. Robust standard errors in parentheses; 228 observations for each regression in panel A and 192 in panels B–D.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 3—VKT AS A FUNCTION OF LANE KILOMETERS, OLS BY DECADE

Year:	1983 (1)	1983 (2)	1983 (3)	1993 (4)	1993 (5)	1993 (6)	2003 (7)	2003 (8)	2003 (9)
<i>Panel A. Dependent variable: ln VKT for interstate highways, entire MSAs</i>									
ln (IH lane km)	0.92*** (0.06)	0.94*** (0.06)	0.92*** (0.05)	0.73*** (0.05)	0.76*** (0.04)	0.77*** (0.04)	0.71*** (0.05)	0.75*** (0.04)	0.76*** (0.04)
ln (population)	0.43*** (0.04)	0.42*** (0.05)	1.01*** (0.37)	0.54*** (0.04)	0.51*** (0.04)	0.46* (0.25)	0.53*** (0.04)	0.49*** (0.04)	0.39 (0.35)
Elevation range		-0.057 (0.060)	-0.076 (0.054)		-0.027 (0.056)	-0.038 (0.054)		-0.026 (0.053)	-0.030 (0.048)
Ruggedness		6.81* (3.46)	5.29 (3.24)		5.86* (3.00)	3.90 (3.00)		5.72* (3.06)	3.46 (3.11)
Heating degree days		-0.014*** (0.004)	-0.015*** (0.01)		-0.012*** (0.003)	-0.013*** (0.004)		-0.011*** (0.003)	-0.013*** (0.004)
Cooling degree days		-0.019* (0.010)	-0.027** (0.012)		-0.019*** (0.007)	-0.022** (0.009)		-0.019** (0.007)	-0.020** (0.009)
Sprawl		0.0059* (0.0031)	0.0061* (0.0036)		0.0033 (0.0028)	0.0019 (0.0029)		0.0021 (0.0027)	0.0016 (0.0027)
Census divisions		Y	Y		Y	Y		Y	Y
Past populations			Y			Y			Y
Socioeconomic characteristics			Y			Y			Y
R ²	0.93	0.94	0.95	0.94	0.95	0.96	0.94	0.96	0.96
<i>Panel B. Dependent variable: ln VKT for interstate highways, urbanized areas within MSAs</i>									
ln (IHU lane km)	1.04*** (0.03)	1.05*** (0.03)	1.06*** (0.03)	0.95*** (0.03)	0.97*** (0.03)	1.00*** (0.04)	0.92*** (0.03)	0.94*** (0.03)	0.97*** (0.04)
<i>Panel C. Dependent variable: ln VKT for major roads, urbanized areas within MSAs</i>									
ln (MRU lane km)	0.90*** (0.03)	0.89*** (0.03)	0.88*** (0.03)	0.72*** (0.04)	0.78*** (0.04)	0.80*** (0.04)	0.66*** (0.04)	0.67*** (0.04)	0.70*** (0.04)
<i>Panel D. Dependent variable: ln VKT for interstate highways, outside urbanized areas within MSAs</i>									
ln (IHNU lane km)	0.83*** (0.05)	0.85*** (0.04)	0.84*** (0.03)	0.81*** (0.04)	0.83*** (0.03)	0.82*** (0.03)	0.82*** (0.03)	0.84*** (0.03)	0.83*** (0.03)

Notes: The same regressions for different types of roads are performed in all four panels. All regressions include a constant. Robust standard errors in parentheses; 228 observations for each regression in panel A and 192 in panels B–D.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

panel C, and nonurban MSA interstates in panel D. Columns 1 to 3 consider the 1983, 1993, and 2003 cross sections in turn.

Depending on the decade, the elasticity of MSA interstate highway VKT with respect to lane kilometers is between 1.23 and 1.25. Focusing only on interstate highways in the urbanized part of MSAs yields similar results. For major urban roads and nonurban MSA interstates, we obtain slightly lower estimates between 1.00 and 1.14.

In Table 3, we consider richer specifications. In panel A of this table, the dependent variable is again MSA interstate VKT. Columns 1 to 3 consider the 1983 cross section. In the first column we include our variable of interest, the log of lane kilometers of road, MSA population, and a constant. In the second we add nine census division dummy variables along with five measures of physical geography: elevation range within the MSA, the ruggedness of terrain in the MSA, two measures of climate, and a measure of how dispersed is development in the MSA. Details about these variables

are available in the Data Appendix. In column 3 we also add socioeconomic controls: share of population with at least some college education, log mean income, share poor, share of manufacturing employment, and an index of segregation. We also add decennial population variables from 1920 to 1980 to control for the long-run growth of MSAs. Because past populations and socioeconomic variables are likely to correlate with unobserved attributes of MSAs that determine the demand for driving, regressions including these variables are useful robustness checks. Columns 4 to 6 replicate these regressions for 1993, while columns 7–9 are for 2003.

Depending on the decade, the elasticity of MSA interstate highway VKT with respect to lane kilometers ranges between 0.71 and 0.94 and is estimated precisely in each specification. While some estimates are statistically different from one, all are positive and greater than 0.71.

Turning to the other explanatory variables, we also note that the elasticity of MSA interstate highway VKT with respect to population is much less than one in all specifications. This will persist in nearly all of our estimations and suggests that people in larger cities drive much less per capita than they do in smaller cities. We consider the possible endogeneity of this variable below. We also note that VKT is higher in MSAs with mild weather, neither cold nor hot. For the other measures of geography, including the extent to which development is scattered or compact, as measured by the variable “sprawl,” we do not find a robust association with MSA interstate highway VKT.

Panel B of Table 3 is similar to panel A, but the dependent variable and the measure of roads are based on *urban* interstates. The estimations in panel B suggest that the urban interstate VKT elasticity of urban interstate lane kilometers is closer to one and larger than for all interstates. Panels C and D of Table 3 are also similar to panel A, but investigate major urban roads and nonurban interstates. These results are close to those presented in panel A.

Columns 1–4 of Table 4 replicate the sole specification of Table 2 and the three specifications of Table 3 for all interstate highways, but pool the three cross sections. Unsurprisingly the estimates for the roadway elasticity of VKT are in between the estimates of Table 3 and Table 2 for the different decades. Column 3, which controls for population and geography but not for (possibly endogenous) socioeconomic characteristics of MSAs, is our preferred specification. Hence, we take the value of 0.86 as our preferred OLS estimate of the elasticity of MSA interstate highway VKT with respect to lane kilometers (but note that OLS is not our preferred estimation method).

Appendix Table 1 (in the online Appendix) reports further regressions pooling all three cross sections for different types of roads in urbanized areas and outside. The results of this table generally confirm those of Tables 2 and 3, with the caveat that some changes in roads and traffic may reflect changes in urbanized area boundaries.

B. Fixed Effects and Time-Series Estimates of the Roadway Elasticity of VKT

Thus far we have reported estimates of ρ_R^O that exploit cross-sectional variation. We now turn to estimates of ρ_R^O based on time-series variation. Because the data are fully comparable over time only for all interstate highways within MSAs, we focus on this type of road.

TABLE 4—VKT AS A FUNCTION OF LANE KILOMETERS, POOLED OLS

MSA sample	All (1)	All (2)	All (3)	All (4)	All (5)	All (6)	All (7)	w. IHU (8)	Big (9)	Small (10)
<i>Dependent variable: ln VKT for interstate highways, entire MSAs</i>										
ln (IH lane km)	1.24*** (0.02)	0.82*** (0.05)	0.86*** (0.05)	0.85*** (0.04)	1.05*** (0.04)	1.06*** (0.04)	1.05*** (0.04)	0.95*** (0.03)	1.05*** (0.04)	1.12*** (0.08)
ln (population)		0.48*** (0.04)	0.44*** (0.04)	0.32*** (0.12)		0.34*** (0.09)	0.39*** (0.09)	0.32*** (0.09)	0.44*** (0.11)	0.31** (0.12)
Geography			Y	Y						
Census divisions			Y	Y						
Socioeconomic characteristics				Y			Y			
Past populations				Y						
MSA fixed effects					Y	Y	Y	Y	Y	Y
R ²	0.88	0.94	0.95	0.96	0.94	0.94	0.95	0.94	0.96	0.93

Notes: All regressions include year effects. Robust standard errors in parentheses (clustered by MSA in columns 1–4). Complete sample of 228 MSAs (684 observations) with interstate highways in columns 1–7; 192 MSAs (576 observations) with urban interstate highways in column 8; 114 MSAs (342 observations) above the median population size in 1990 in column 9; 114 MSAs (342 observations) below the median population size in 1990 in column 10.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Columns 5–10 of Table 4 estimate equation (3) by including MSA fixed effects in our cross-sectional regression. Because they condition out permanent determinants of VKT for each city that are potentially correlated with roadway, we prefer the specifications with MSA fixed effects to those without. In column 5 we replicate column 1 of the same table but include MSA fixed effects. In column 6, we augment the specification of column 2 with MSA fixed effects. In column 7, we repeat this for column 4. In column 8 we replicate column 6 using only the 192 MSAs that have *urban* interstate highways in all years instead of the 228 MSAs that report interstate highways in all three of our sample years. Columns 9 and 10 run the same regression again on MSAs with below- and above-median 1990 population size, respectively. All the fixed-effect estimates of the interstate VKT elasticity of interstate lane kilometers are slightly above one, except for column 8 where the estimate is slightly below one. This is obtained for the more restricted sample of MSAs with interstate highways in their urbanized area. Given the similarity between the results, however, we do not concern ourselves further with sample selection. While it is estimated precisely in all specifications, ρ_R^O is not statistically different from one at standard levels of confidence in columns 5 through 10. Overall, we note that including MSA fixed effects leads to slightly higher estimates of ρ_R^O .

We now estimate the interstate VKT elasticity of interstate lane kilometers using our first difference estimating equation (4). Unlike the fixed-effects estimations of Table 4, in the first difference regressions of Table 5, we allow the levels of MSA initial characteristics to affect the growth of traffic. Using our three cross sections we compute two cross sections of first differences. In panel A of Table 5 we pool these two cross sections of first differences to estimate equation (4). Our dependent variable is the ten-year change in interstate VKT. In column 1, we include only a constant and year dummies as controls. In column 2, we add changes in MSA population.

TABLE 5—CHANGE IN VKT AS A FUNCTION OF CHANGE IN LANE KILOMETERS

MSA sample	All (1)	All (2)	All (3)	All (4)	All (5)	Lane ↑ (6)	Lane ↑ (7)	Lane ↓ (8)	All (9)	All (10)
<i>Panel A. Dependent variable: $\Delta \ln$ VKT for interstate highways, entire MSAs, OLS</i>										
$\Delta \ln$ (IH lane km)	1.04*** (0.05)	1.05*** (0.05)	1.02*** (0.04)	1.00*** (0.04)	0.93*** (0.04)	1.09*** (0.06)	0.90*** (0.06)	0.82*** (0.09)	1.03*** (0.05)	1.03*** (0.05)
$\Delta \ln$ (population)		0.34*** (0.10)	0.40*** (0.10)	0.44*** (0.11)	0.39*** (0.13)	0.31* (0.17)	0.45** (0.21)	0.16 (0.22)		0.51** (0.20)
\ln (initial VKT)			-0.047*** (0.006)	-0.057*** (0.007)	-0.12*** (0.02)		-0.15*** (0.03)	-0.13*** (0.04)		
Geography				Y	Y		Y	Y		
Census divisions				Y	Y		Y	Y		
Socioeconomic characteristics					Y		Y	Y		
Past populations					Y		Y	Y		
MSA fixed effects									Y	Y
R^2	0.87	0.87	0.89	0.90	0.91	0.91	0.94	0.69	0.91	0.94
<i>Panel B. Dependent variable: $\Delta \ln$ VKT for interstate highways, entire MSAs, TSLS</i>										
$\Delta \ln$ (IH lane km)		1.05*** (0.05)	1.02*** (0.04)	1.00*** (0.04)	0.92*** (0.04)	1.07*** (0.06)	0.90*** (0.05)	0.82*** (0.09)		1.03*** (0.03)
$\Delta \ln$ (population)		0.093 (0.18)	0.34** (0.16)	0.45 (0.32)	1.02** (0.45)	-0.16 (0.29)	1.14 (0.72)	1.50 (1.45)		0.62* (0.37)
First stage statistic		63.3	54.3	29.2	23.9	45.7	12.3	4.05		20.1

Notes: All regressions include a constant and decade effects. Robust standard errors clustered by MSA in parentheses. 456 observations for each regression in columns 1–5 and 9–10, 205 in columns 6–7 which consider only increases in lane kilometers of more than 5 percent, and 115 in column 8 which considers declines in lane kilometers greater than 5 percent. Instrument for $\Delta \ln$ (population) is expected population growth based on initial composition of economic activity.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

In column 3, we also control for initial VKT. In column 4, we add physical geography and census division dummies. Column 5 adds decennial MSA population levels from 1920 to 1980 and initial socioeconomic characteristics of cities. In each case, our point estimate of ρ_{λ}^Q is very close to one and is precisely estimated.

Columns 6–8 consider more restricted samples of observations. Column 6 replicates column 2 using only observations with increases in lane kilometers greater than 5 percent. Column 7 uses the same selection rule to replicate column 5. Column 8 replicates column 5 again but this time using only observations with declines in lane kilometers greater than 5 percent. The results for large increases in lane kilometers are the same as for the whole sample of MSAs. The elasticity we estimate in column 8 is 0.8. These estimations do not allow us to determine whether the response of traffic to roads is nonlinear in the amount of change to the road network, or if metropolitan areas experiencing large changes are different from those experiencing small changes.⁸

Finally, column 9 of Table 5 estimates equation (4) including MSA fixed effects and year fixed effects as controls, while column 10 adds MSA population. These

⁸Apart from measurement error, decreases in lane kilometers are likely to reflect temporary closures while increases reflect new and permanent construction.

estimates are second difference estimates that exploit changes in the rate of change of roads and traffic. Strikingly, these regressions also estimate the interstate VKT elasticity of interstate highways to be very close to one.

In panel B of Table 5, we repeat the first difference regressions of panel A, except that we instrument for the change in population. Following Timothy Bartik (1991) and others after him, we construct our instrument for MSA level population growth from the initial shares of sectoral employment in the MSA and the national growth rate of each sector during the study period. Interacting these quantities yields the MSA population growth that would occur if all MSA sectors grew at the national average rate with sectoral shares constant. To construct our population growth instrument we use employment data for each MSA and the entire US for two-digit sectors from the County Business Patterns.

Despite the strength of the instrument, when running these regressions on a complete sample of MSAs, the standard errors for the coefficient on population change are much larger than in OLS. The OLS range for this coefficient is between 0.3 and 0.5. When instrumenting, the range is broader, from close to zero to above unity. We draw two conclusions from this second panel. First, there is a suggestion that the TSLS coefficient on population changes is above its OLS value when more controls are introduced. This is consistent with population migrating to MSAs where VKT increases more slowly, all else equal. Second, the coefficient on changes in lane kilometers of roads is unaffected by this change in estimation strategy. This strongly suggests that even if population is endogenous, our estimate for the elasticity of interstate highway VKT is unaffected. Our preferred estimate for the roadway elasticity of VKT in Table 5 is 1.00 from column 3 in panel B. This is the first-difference estimate for our preferred specification that takes into account the endogeneity of population.

In the online Appendix, we perform a number of further checks on our first difference results. Appendix Table 2 presents regressions conducted on each of our two cross sections of first differences separately. They confirm results of Table 5 but, like Table 3, indicate a slight decrease of ρ_R^Q over time. In Appendix Tables 3 and 4 we perform two simple falsification tests. In Appendix Table 3 we focus on changes in VKT between 1993 and 2003 as dependent variable. We show that the coefficient on contemporaneous changes in lane kilometers of interstate highways (i.e., between 1993 and 2003) is unaffected by the inclusion in the regression of earlier changes in lane kilometers of interstate highways (i.e., between 1983 and 1993). The coefficient on earlier changes is always insignificant. In Appendix Table 4, we focus on changes in VKT between 1983 and 1993 as dependent variable. We show that the coefficient on contemporaneous changes in lane kilometers of interstate highways (i.e., between 1983 and 1993) is unaffected by the inclusion in the regression of later changes in lane kilometers of interstate highways (i.e., between 1993 and 2003). The coefficient of the later changes variable is small, positive, and significant when we include contemporaneous changes in the regression.⁹

⁹This may reflect either by serial correlation in roadway changes or a lagged response in the supply of roadway to increases in VKT.

C. IV Estimates of the Roadway Elasticity of VKT

In order for estimates of equations (2), (3), and (4) to result in consistent estimates, we require that the unobserved error be uncorrelated with the stock of roads (or changes in this stock). If the demand for VKT helps to determine an MSA's road network, then our measure of roads is endogenous, and this assumption does not hold. To address this possibility, we estimate the instrumental variables system described in equation (5).

We rely on three instruments: planned interstate highway kilometers from the 1947 highway plan; 1898 railroad route kilometers; and the incidence of major expeditions of exploration between 1835 and 1850. Nathaniel Baum-Snow (2007), Guy Michaels (2008), and Duranton and Turner (2008) also use planned interstates as an instrument for features of the interstate system. Duranton and Turner (2008) use the 1898 railroad system for the same purpose. The exploration routes variable is new to the literature.¹⁰

Our measure of MSA kilometers of 1947 planned interstate highways is based on a digital image of the 1947 highway plan created from its paper record (US House of Representatives 1947) and converted to a digital map as in Duranton and Turner (2008). Kilometers of 1947 planned interstate highway in each MSA are calculated directly from this map. Figure 2 shows an image of the original plan. Our measure of MSA kilometers of 1898 railroads is based on a digital image of a map of major railroad lines in 1898 (Charles P. Gray c. 1898). This image was converted to a digital map as in Duranton and Turner (2008). Kilometers of 1898 railroad contained in each MSA are calculated directly from this map. Figure 3 shows an image of the original railroad map. Our measure of early exploration routes is based on a map of routes of major expeditions of exploration of the US between 1835 and 1850 (US Geological Survey 1970). An image based on this map is reproduced in Figure 4. Note that, in addition to exploration routes, this map shows the routes of major roads established prior to 1835 in the more settled eastern part of the country. The Data Appendix provides more detail about these variables.

Common sense suggests that all three instruments should be relevant. The 1947 plan describes many interstate highways that were subsequently built. Many 1898 railroads were abandoned and turned into roads. Many current interstate highways follow the same routes taken by early explorers. Estimates of the reduced-form equation predicting roads as a function of our instruments confirm this intuition. In almost all specifications predicting interstate lane kilometers, the first-stage statistic for the instrumental variables is large enough to pass the weak instrument tests proposed in James H. Stock and Motohiro Yogo (2005). We generally report the results of conventional TSLS estimations, but in the few cases where our instruments are weak, we also report the corresponding LIML estimates.¹¹

A qualifier is important here. Our instruments are good predictors of MSA-level stocks of interstate highways and urban interstate highways. They are not good predictors of MSA level stocks of major roads or of nonurban interstate highways.

¹⁰The discussion of the 1947 highway plan and 1898 railroad routes is derived from, and abbreviates more extensive discussions of, these variables by these earlier authors, particularly Duranton and Turner (2008).

¹¹Limited information maximum likelihood (LIML) is a one-stage IV estimator. Compared to TSLS, it provides more reliable point estimates and test statistics with weak instruments.

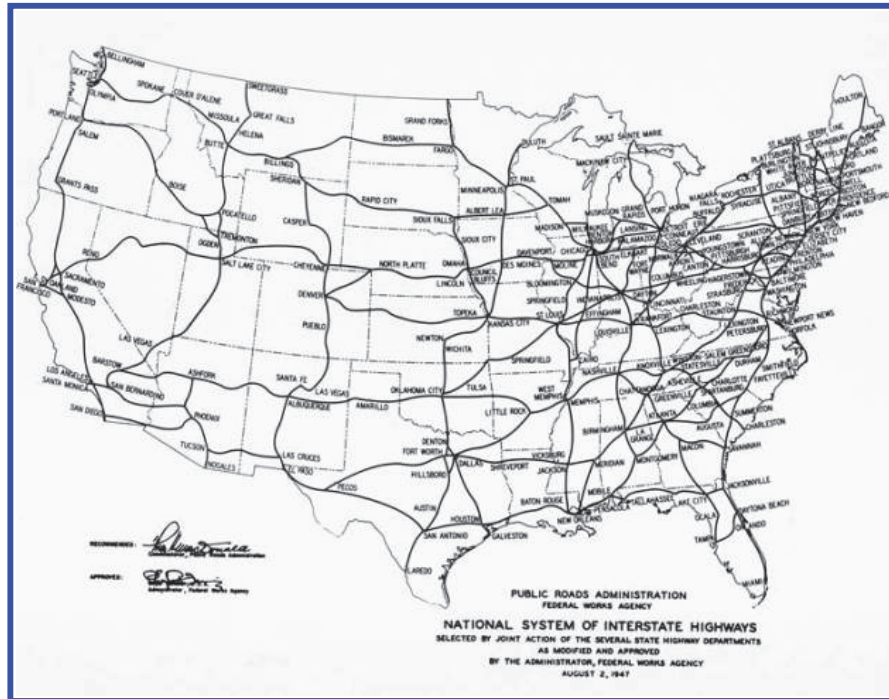


FIGURE 2. 1947 US INTERSTATE HIGHWAY PLAN

Source: Image based on US House of Representatives (1947).



FIGURE 3. 1898 US RAILROADS

Source: Image based on Gray (c. 1898).

For this reason, we conduct IV estimations only for interstate highways and urban interstate highways.

We now turn to the conditional exogeneity of our two instruments. The 1947 highway plan was first drawn to “connect by routes as direct as practicable the principal metropolitan areas, cities and industrial centers, to serve the national



FIGURE 4. ROUTES OF US MAJOR EXPEDITIONS OF EXPLORATION, 1835 TO 1850

Source: Image based on US Geological Survey (1970, p. 138).

defense and to connect suitable border points with routes of continental importance in the Dominion of Canada and the Republic of Mexico” (US Federal Works Agency, Public Roads Administration 1947, cited in Michaels 2008). That the 1947 highway plan was, in fact, drawn to this mandate is confirmed by both econometric and historical evidence reviewed in Duranton and Turner (2008). In particular, in a regression of log 1947 kilometers of planned interstate highways on log 1950 population, the coefficient on log 1950 population is almost exactly one, a result that is robust to the addition of various controls. On the other hand, population growth around 1947 is uncorrelated with planned highway kilometers. Thus, the 1947 plan was drawn to fulfill its mandate and connect major population centers of the mid-1940s, not to anticipate future population or traffic demand.

Note that the exclusion restriction associated with equation (5) requires the orthogonality of the dependent variable and the instruments conditional on control variables. This observation is important. Cities that receive more roads in the 1947 plan tend to be larger than cities that receive fewer. Since we observe that large cities have higher levels of VKT, 1947 planned interstate highway kilometers predicts VKT by directly predicting population and indirectly by predicting 1980 road kilometers. Thus the exogeneity of this instrument hinges on having an appropriate set of controls, population in particular.

Next consider the case for the exogeneity of the 1898 railroad network. This network was built, for the most part, during and immediately after the civil war, and during the industrial revolution. At this time, the US economy was much smaller and more agricultural than during our study period. In addition, the rail network was developed by private companies with the intention to make a profit from railroad operations in the not too distant future. See Robert Fogel (1964) and Albert Fishlow

(1965) for two classic accounts of the development of US railroads. As for the highway plan, the same qualifying comment applies: instrument validity requires that, conditional on control variables, rail routes be correlated with the dependent variable only through contemporaneous interstate highways. With this said, after controlling for historical populations and physical geography, it is difficult to imagine how a rail network built for profit could anticipate the demand for vehicle travel in cities 100 years later, save through its effect on roads.

Finally, consider the case for the exogeneity of routes of expeditions of exploration between 1835 and 1850. Among these routes are: a Mexican boundary survey, the Whiting-Smith 1849 search for a commercial route between San Antonio and El Paso, the 1849 Warner-Williamson expedition in search of a route from Sacramento to the Great Basin, the 1839 Farnham-Smith expedition from Peoria to Portland, and the Smith scientific expedition to the Badlands of South Dakota. Some of these expeditions were explicitly charged with finding an easy way from one place to another, and it is hard to imagine that this objective was not also important to the others. While we expect that these early explorers were drawn to attractive places, after controlling for historical populations and physical geography it is difficult to imagine how these explorers could select routes that anticipate the demand for vehicle travel in cities 150 years later, save through their effect on roads.

Table 6 presents instrumental variables estimations where our dependent variable is all MSA interstate VKT. In panel A we use all three of our instruments, and we pool our three decennial cross sections. Column 1 includes only interstate lane kilometers and decade effects as controls. Column 2 adds population as a control, column 3 adds our physical geography variables and census division indicators, column 4 adds our other city-level demographic variables, and column 5 adds decennial population levels from 1920 to 1980. We pass standard overidentification tests in all specifications and the values of our first-stage statistics suggest that our instruments are not weak, or are near the critical values suggested by Stock and Yogo (2005). In columns 2 through 5 we see that our estimates of ρ_R^O are within one standard error of one. In column 1, the coefficient of interstate highways is larger because of the correlation between interstate highway lane kilometers and population levels.

We note that the IV estimates of the roadway elasticity of VKT are slightly higher than their OLS counterparts (in Tables 3 and 4) by 0.1 to 0.2. While the differences between IV and OLS are not all significant, they are suggestive of a negative feedback between VKT and the allocation of roadway. More precisely, lane kilometers of interstate highways appear to be allocated to MSAs with a lower demand for travel. This would be consistent with the finding of Duranton and Turner (2008) that there is more road construction in cities that experience negative shocks to employment.

In columns 3, 4, and 5 of panel A our instruments are near the critical values suggested in Stock and Yogo (2005), so in panel B we present the corresponding LIML estimates. These estimates are essentially identical to the TSLS estimates of panel A.

In panels C, D, and E, we repeat the TSLS estimates of panel A using each of our instruments alone. We find that using the 1947 highway instrument alone results in slightly higher estimates, that using 1898 railroads alone results in essentially identical estimates, and that using 1835 exploration routes alone results in slightly lower estimates. In all, the IV estimates presented in panels A–E of Table 6 strongly suggest that the interstate VKT elasticity of interstate highways is close to one.

TABLE 6—VKT AS A FUNCTION OF LANE KILOMETERS, IV

	(1)	(2)	(3)	(4)	(5)
<i>Panel A (TSLS). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1835 exploration routes, ln 1898 railroads, and ln 1947 planned interstates</i>					
ln (IH lane km)	1.32*** (0.04)	0.92*** (0.10)	1.03*** (0.11)	1.01*** (0.12)	1.04*** (0.13)
ln (population)		0.40*** (0.07)	0.30*** (0.09)	0.34*** (0.10)	0.23* (0.12)
Geography			Y	Y	Y
Census divisions			Y	Y	Y
Socioeconomic characteristics				Y	Y
Past populations					Y
Overidentification <i>p</i> -value	0.60	0.11	0.26	0.24	0.29
First-stage statistic	42.8	16.5	11.8	11.5	8.84
<i>Panel B (LIML). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1835 exploration routes, ln 1898 railroads, and ln 1947 planned interstates</i>					
ln (IH lane km)	1.32*** (0.04)	0.94*** (0.11)	1.05*** (0.12)	1.02*** (0.13)	1.06*** (0.15)
Overidentification <i>p</i> -value	0.60	0.11	0.26	0.25	0.30
<i>Panel C (TSLS). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1947 planned interstates</i>					
ln (IH lane km)	1.33*** (0.05)	1.00*** (0.11)	1.10*** (0.13)	1.08*** (0.13)	1.12*** (0.15)
First-stage statistic	99.7	41.5	29.8	29.5	26.7
<i>Panel D (TSLS). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1898 railroads</i>					
ln (IH lane km)	1.31*** (0.06)	0.83*** (0.15)	1.03*** (0.18)	1.00*** (0.18)	1.02*** (0.22)
First-stage statistic	23.7	25.8	19.0	21.1	11.9
<i>Panel E (TSLS). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1835 exploration routes</i>					
ln (IH lane km)	1.25*** (0.08)	0.63*** (0.17)	0.75*** (0.18)	0.68*** (0.21)	0.72*** (0.22)
First-stage statistic	53.6	13.8	9.91	7.15	6.32
<i>Panel F (LIML). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1898 railroads, and ln 1947 planned interstates</i>					
ln (IH lane km)	1.39*** (0.04)	1.09*** (0.10)	1.18*** (0.11)	1.15*** (0.13)	1.20*** (0.16)
Overidentification <i>p</i> -value	0.69	0.10	0.31	0.25	0.29
First-stage statistic	37.9	17.7	12.1	14.4	9.51
<i>Panel G (LIML). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1898 railroads, and ln 1947 planned interstates</i>					
ln (IH lane km)	1.33*** (0.05)	0.98*** (0.13)	1.13*** (0.16)	1.08*** (0.15)	1.13*** (0.17)
Overidentification <i>p</i> -value	0.91	0.53	0.97	0.88	0.81
First-stage statistic	53.1	22.7	14.4	15.8	11.7
<i>Panel H (LIML). Dependent variable: ln VKT for interstate highways, entire MSAs</i>					
<i>Instruments: ln 1898 railroads, and ln 1947 planned interstates</i>					
ln (IH lane km)	1.26*** (0.05)	0.82*** (0.11)	0.93*** (0.13)	0.92*** (0.13)	0.97*** (0.16)
Overidentification <i>p</i> -value	0.77	0.55	0.96	0.98	0.93
First-stage statistic	52.2	21.0	14.2	14.4	9.76

Notes: All regressions include a constant (and year effects for panels A–E). Robust standard errors in parentheses (clustered by MSA in panels A–E); 684 observations corresponding to 228 MSAs for each regression for panels A–E and 228 observations for panels F–H.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

In panels A–E of Table 6 we pool our three cross sections. This may conceal cross-decade variation in our parameters. To address this issue, in panels F–H we report IV estimates of ρ_R^Q using each of our cross sections separately. We see that the roadway elasticity of VKT decreases from slightly above one in 1983 to slightly below one in 2003. This decline is not statistically significant, however, when including geographic and other controls. This (admittedly weak) trend downward suggests the conjecture that more roadway can lead to a more than proportional increase in traffic when roads are not congested. Alternatively, it may be that the most useful highway segments are developed earlier and receive more traffic. This second conjecture is consistent with John G. Fernald's (1999) conclusion that the productivity effects of the US interstate system show a marked decline over time. We hope future research will more completely investigate these issues.

In Table 6, our preferred estimate for the elasticity of interstate highway VKT with respect to lane kilometers is from panel A and column 3 at 1.03. This estimate also constitutes our preferred estimate overall since it is obtained using our preferred estimation method, which controls for the endogeneity of roads, and our preferred specification, which includes geographical controls but not the socioeconomic characteristics of MSAs.

III. Implications of the Fundamental Law of Road Congestion

We now note two logical implications of the fundamental law of road congestion. By confirming that these implications are consistent with observation, we provide further indirect evidence of the law.¹²

A. Traffic and Transit

The fundamental law of road congestion requires that new road capacity be met with a proportional increase in driving. A corollary is that if we were to somehow remove a subset of a city's drivers from a city's roads, then others would take their place. We can think of public transit in this way. Public transit serves to free up road capacity by taking drivers off the roads and putting them in buses or trains. Thus, the fundamental law implies that the provision of public transit should not affect the overall level of VKT in a city. We now investigate this proposition.

To measure an MSA's stock of public transit, we use MSA-level data on public transit. These data are based on the Section 15 annual reports, and measure public transportation as the daily average peak service of large buses in 1984, 1994, and 2004. We note that these data do not allow us to investigate other forms of public transportation, such as light rail, independently of buses.¹³

¹²In the working paper version of this article (Duranton and Turner 2009), we also show that if the long-run variable cost of producing VKT is approximately constant returns to scale, the fundamental law of road congestion then implies that the demand for travel should be flat. We provide evidence to this effect and use this result in a welfare calculation.

¹³There are too few MSAs with light rail to permit informative cross-sectional analysis. Our data indicate that there were only 11 MSAs with any light rail at all in 1984, and of these only 6 had more than 100 rail cars. The situation is only marginally better in 1994 when 21 MSAs had light rail or commuter rail service and 7 had more than 100 cars. We have experimented with an index that sums large buses and rail cars.

Since we expect that the stock of public transit in an MSA may depend in part on how congested is the road network, we are concerned that our measure of public transit will be endogenous in a regression to explain MSA interstate VKT. To deal with this issue, we again resort to instrumental variables estimation. In addition to the 1947 highway plan and 1898 railroad kilometers, we use the MSA share of democratic vote in the 1972 presidential election as an instrument in this estimation.

The 1972 US presidential election between Richard Nixon and George McGovern was fought on the Vietnam War and McGovern's very progressive social agenda. It ended with Nixon's landslide victory. Places where McGovern did well are also arguably places that elected local officials with a strong social agenda. Importantly, this election also took place shortly after the 1970 Urban Mass Transportation Act and it only briefly predates the first oil shock and the 1974 National Mass Transportation Act that followed. While total federal support for public transportation was less than \$5 billion (in 2003 dollars) for the entire decade starting in 1960, the 1970 act appropriated nearly \$15 billion and the 1974 act appropriated \$44 billion. Similar levels of funding persist to the time of this writing (for a history of US public transportation, see Edward Weiner 1997; Daniel Baldwin Hess and Peter A. Lombardi 2005). More generally, during the 1970s public transit expanded and evolved from a private fare-based industry to a quasi-public sector activity sustained by significant subsidies.

In order for a 1972 election to predict 1984 levels of public transit infrastructure, public transit funding must be persistent. In fact, the "stickiness" of public transit provision is widely observed (Jose A. Gomez-Ibanez 1996) and is confirmed in our data. The Spearman rank correlation of bus counts between 1984 and 2004 is 0.90. Our data also suggest that MSAs that voted heavily for McGovern in 1972 made a greater effort to develop public transit in the 1970s, and these high levels of public transit persisted throughout our study period. Furthermore, the raw data confirm the relevance of our instrument. The pairwise correlation between log 1984 buses and 1972 democratic vote is 0.34. This partial correlation is robust to adding controls for geography and past population. In a nutshell, the 1972 share of democratic vote is a good predictor of the 1984 MSA provision of buses, which then grew proportionately to population.

The argument for the exogeneity of the 1972 democratic vote is less strong than that for the road instruments.¹⁴ Nonetheless, a good argument can be made that funding for public transportation in American cities in the early 1970s was a response to contemporaneous social needs. More specifically, the provision of buses at this time did not seek to accommodate traffic congestion during the 1983–2003 period.

Two facts strengthen the case for our empirical strategy. First, as we show below, the results for public transportation are robust and stable as we change specifications. Second, when it is possible to conduct overidentification tests, our results always pass these tests.

¹⁴In particular, it is possible that a high-share democratic vote in 1972 was associated with a variety of other policies and local characteristics that affected subsequent VKT. Since we control for 1980 population (and thus implicitly for growth between 1970 and 1980), we would need these policies to have long-lasting effects and not be reflected in population growth. In this respect, Edward L. Glaeser, José A. Scheinkman, and Andrei Shleifer (1995) find very weak or no association between a number of urban policies (though not public transport) and urban growth between 1960 and 1990. In addition, recent work by Fernando Ferreira and Joseph Gyourko (2009) found no evidence of any partisan effect with respect to the allocation of municipal expenditure.

TABLE 7—VKT AS A FUNCTION OF LANE KILOMETERS AND BUSES, POOLED REGRESSIONS

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	LIML (7)	LIML (8)	LIML (9)	LIML (10)
<i>Dependent variable: ln VKT for interstate highways, entire MSAs</i>										
ln(IH lane km)	1.07*** (0.04)	0.82*** (0.05)	0.86*** (0.05)	0.86*** (0.04)	1.06*** (0.05)	1.06*** (0.05)	1.38*** (0.08)	0.96*** (0.10)	1.09*** (0.13)	1.18*** (0.17)
ln(bus)	0.14*** (0.02)	-0.023 (0.017)	0.026 (0.019)	0.039** (0.018)	0.021** (0.009)	0.012* (0.008)	-0.035 (0.049)	-0.081* (0.046)	0.12 (0.10)	0.21 (0.14)
ln(population)		0.51*** (0.05)	0.40*** (0.05)	0.26** (0.12)		0.32*** (0.10)		0.50*** (0.12)	0.079 (0.207)	-0.15 (0.27)
Geography			Y	Y					Y	Y
Census divisions			Y	Y					Y	Y
Socioeconomic characteristics				Y						Y
Past populations				Y						Y
MSA fixed effects					Y	Y				
R ²	0.90	0.94	0.95	0.96	0.94	0.94	—	—	—	—
Overidentification p-value							0.90	0.46	0.47	0.38
First-stage statistic							23.3	21.1	9.53	5.68

Notes: All regressions include a constant and year effects. Robust standard errors clustered by MSA in parentheses; 684 observations corresponding to 228 MSAs for each regression. Instruments for buses and lane kilometers are ln 1898 railroads, ln 1947 planned interstates, and 1972 presidential election share of democratic vote.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Regressions in Table 7 are similar to regressions in Tables 4 and 6, except that we also include the log count of large buses in an MSA as an explanatory variable. In columns 1 through 6 we present OLS regressions, while in columns 7 through 10 we report LIML regressions (rather than TSLS since our set of instruments is sometimes marginally weak). Our dependent variable is log VKT for all interstates. As in results reported earlier, the lane kilometer elasticity of VKT is close to one in all specifications. The second row gives our estimates of the bus elasticity of VKT. These estimates are consistently small, are in general precisely estimated, do not have a consistent sign, and are often statistically indistinguishable from zero.

To check the robustness of our results, Appendix Table 5 (in the online Appendix) repeats some of the regressions of Table 7 for each of our three cross sections. The resulting estimates of the bus elasticity of VKT are qualitatively unchanged. As a further check, Appendix Table 6 repeats the regressions of Table 7 using a broader measure of transit adding all train cars to our count of buses. The resulting elasticity estimates of this table are virtually identical to those of Table 7.

Consistent with the fundamental law, these results fail to support the hypothesis that increased provision of public transit affects VKT. This finding also should be of independent interest to policymakers.

B. Convergence of AADT Levels

The fundamental law of road congestion requires that each MSA have an intrinsic natural level of traffic conditional on lane kilometers of roadway. An implication of this is that a deviation from this natural level ought to be followed by a

TABLE 8—CONVERGENCE IN DAILY TRAFFIC

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS, FE (5)	TSLS (6)
<i>Dependent variable: Change in ln daily traffic (AADT) for interstate highways, entire MSAs</i>						
Initial ln IH AADT level	-0.11*** (0.02)	-0.12*** (0.02)	-0.17*** (0.02)	-0.22*** (0.03)	-0.98*** (0.05)	-0.17*** (0.02)
$\Delta \ln(\text{population})$		0.38*** (0.10)	0.48*** (0.11)	0.29** (0.14)		0.69** (0.31)
Geography			Y	Y		Y
Census divisions			Y	Y		Y
Initial share manufacturing				Y		Y
Past populations				Y		
Socioeconomic characteristics				Y		
R^2	0.26	0.32	0.39	0.44	0.82	—
First-stage statistic						47.6

Notes: All regressions include decade effects. Robust standard errors in parentheses (clustered by MSA); 456 observations corresponding to 228 MSAs for each regression. Instruments for $\Delta \ln(\text{population})$ is expected population growth based on initial composition of economic activity, interacted with the national growth of sectors.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

return to it. Traffic flows should exhibit convergence to this natural level. In this subsection we thus examine the evolution of AADT rather than vehicle kilometers traveled VKT.

The raw data suggest that such convergence may occur. From 1980 to 2000 the cross-MSA standard deviation of all interstate AADT decreases from 1.40 to 1.28. To investigate the possibility of convergence more carefully, Table 8 presents the results of “AADT growth regressions” in which we pool first differences in interstate AADT for 1990 and 2000 and regress them on initial interstate AADT levels.

In the first four columns of Table 8 we see that for interstate AADT the relationship between initial levels and changes is negative in the cross section, even as we add an exhaustive set of controls. In column 5 we see that mean reversion persists if we include MSA fixed effects and consider only time-series variation.¹⁵ In column 6 we account for the possibility of an endogenous relationship between changes in AADT and changes in population by instrumenting for the latter using our population change instrument described above. This IV estimate shows mean reversion similar to what we see in the OLS regressions.

In Appendix Table 7 (in the online Appendix), we replicate these regressions for corresponding measures of AADT for interstate highways in urbanized areas, non-urban interstates, and major urban roads, and find evidence of convergence for these roads as well.

¹⁵The much higher coefficient obtained in this regression is reminiscent of results in GDP growth regressions and might be explained by the greater importance of measurement error for differences than for levels. Our results in the other columns do not, however, appear to be driven by measurement error. Traffic convergence during the 1990s is the same in OLS or TSLS when instrumenting initial AADT with its ten-year lagged value.

TABLE 9—TRUCK VKT AS A FUNCTION OF LANE KILOMETERS, POOLED REGRESSIONS

	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)	OLS (7)	OLS (8)	TSLs (9)	TSLs (10)
<i>Dependent variable: ln Truck VKT for interstate highways, entire MSAs</i>										
ln(IH lane km)	1.30*** (0.07)	1.16*** (0.13)	1.20*** (0.13)	1.25*** (0.13)	1.19*** (0.14)	1.46*** (0.26)	1.48*** (0.27)	1.52*** (0.27)	2.09*** (0.44)	2.32*** (0.43)
ln(population)		0.16* (0.08)	0.13 (0.11)	0.23** (0.10)	1.79** (0.79)		2.14** (0.94)	2.02** (0.91)	-0.48 (0.31)	-0.77** (0.34)
Geography			Y	Y	Y					Y
Census divisions			Y	Y	Y					Y
Socioeconomic characteristics				Y	Y			Y		
Past populations					Y					
MSA fixed effects						Y	Y	Y		
R ²	0.53	0.54	0.58	0.59	0.61	0.31	0.34	0.34	—	—
Overidentification <i>p</i> -value									0.27	0.18
First-stage statistic									16.5	11.8

Notes: All regressions include a constant and year effects. Robust standard errors clustered by MSA in parentheses. Instruments are ln 1835 exploration routes, ln 1898 railroads, and ln 1947 planned interstates; 684 observations corresponding to 228 MSAs for each regression.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

IV. Where Does All the VKT Come From?

Our data show that building roads elicits a large increase in VKT on those roads. We now turn our attention to understanding where all the extra VKT comes from. In particular, we consider four possible sources of demand for VKT: changes in individual behavior; the migration of people and economic activity; increases in commercial transportation; and diversion of traffic from other roads.

A. Commercial VKT

To investigate the relationship between changes in the road network and changes in truck VKT, we first use the HPMS sample data's report of the daily share of single unit and combination trucks using each road segment on an average day. With our other data, this allows us to calculate truck VKT for all roads in our sample. With these measures of truck VKT in hand, we replicate our earlier analysis of all VKT for truck VKT.

Table 9 reports these results. Our dependent variable is all interstate highway truck VKT, and the explanatory variable of interest is lane kilometers of interstate highways. In columns 1 through 5, we report OLS estimates. In columns 6, 7, and 8 we include MSA fixed effects and identify the effect of interstate highways on truck VKT using only time-series variation. In columns 9 and 10 we report TSLs where we use our three historical variables to instrument for contemporaneous lane kilometers. In every case, our estimate of the highway elasticity of truck VKT is above one and is estimated precisely. While the OLS and fixed-effect estimates are generally within two standard deviations of one, the IV estimates in columns 9 and 10 are above two and are more than two standard deviations above one.

In all, we find that a 10 percent increase in interstate highways causes about a 10–20 percent increase in truck VKT, so that commercial traffic is at least as responsive to road supply as other traffic.

We confirm these results for all interstate highways in Appendix Table 8 which runs separate regressions for each decade. We also replicate these regressions for urbanized roads. Interestingly, truck VKT in cities responds less to changes in major roads than does interstate truck traffic to changes in interstates.

In the online Appendix, we also examine the relationship between roads and employment in traffic-intensive activities. We use County Business Patterns data for 1983, 1993, and 2003. These data provide county-level information on employment in “motor freight transportation and warehousing” (SIC 42). Appendix Tables 9 and 10 present results of regressions predicting log MSA employment in trucking and warehousing. These regressions show that employment in this sector increases with interstate lane kilometers, that it is more responsive to the supply of nonurbanized area interstate than to the supply of urbanized area interstate, and that it has become more sensitive to changes in the supply of interstate highways over the course of our study period.

An interesting explanation for our findings is that improvements to highways cause large increases in the use of these routes by long-haul truckers, while improvements to the local road network cause smaller increases in local commercial traffic.

B. Individual Driving Behavior and Highways

We now investigate the extent to which individual or household driving behavior changes in response to changes in the extent of an MSA’s interstate network. To accomplish this, we look at the relationship between lane kilometers of interstate highway and three different measures of individual and household driving taken from the 1995 and 2001 NPTS.

The NPTS actually consists of four parts. The “household survey” provides categorical variables describing the age, race, education, and income of the household head or the principal respondent.¹⁶ Confidential geocode information allows us to assign all households to MSAs.¹⁷ The “vehicle survey” provides a detailed description of each household motor vehicle including the survey respondents’ report of how many kilometers it was driven in the past 12 months. We use the vehicle survey to construct an estimate of total VKT for the household during the survey year. The “person survey” describes travel behavior for household members over the past week, commuting behavior in particular. We use the person survey to measure commuting behavior for the average commuter in a respondent household. Finally, the

¹⁶It is worth noting that the NPTS survey protocol requires a phone call, a house visit, and that respondents keep a travel diary. Thus, it should be regarded as accurate relative to other sources of self-reported travel data. The 2000 US census provides an alternative source of information regarding commute times. This information is reported for a sample of the population using 12 time-bands. A comparison between 2000 census and 2001 NPTS data of mean commute times across 227 MSAs yields a raw correlation of 0.63. This correlation is 0.85 when considering only MSAs with population above 1 million. Means computed from the NPTS appear more noisy. Regressing log census mean commute times for all commuters (including those using public transportation) against mean NPTS car commute times yields a coefficient of 1.05 in a regression without constant.

¹⁷The public use data reveal only respondents’ MSAs for respondents residing in large MSAs. We do not use earlier waves of the NPTS because they cannot be geocoded.

“trip survey” describes all household travel on a given randomly selected day. We use this survey to measure all household daily VKT.

While we provide more detailed discussion of the NPTS and some descriptive statistics in the Data Appendix, it is useful to discuss the relationship between the NPTS and HPMS based measures of VKT. The NPTS reports a per household measure of VKT on all roads, while the HPMS reports aggregate VKT on interstates and major urban roads within MSAs. Thus, the HPMS looks at all traffic on a subset of roads, while the NPTS looks at all household driving on any roads, but ignores commercial or through traffic and changes in population.

To investigate the extent to which individual or household driving behavior changes in response to changes in the extent of an MSA’s interstate network, we look at the relationship between lane kilometers of interstate highway and our three NPTS-derived measures of individual and household driving.

We perform two series of estimations using our two pooled cross sections of the NPTS. The first uses our city level cross-section estimating equation (2), adjusted to reflect the fact that our unit of observation is now a person or household in a particular city and year. In particular, we estimate

$$(6) \quad \ln(Q_j^{AR}) = A_0 + \rho_{R^{IH}}^{Q^{AR}} \ln(R_{ij}^{IH}) + A_1 X_{ij} + \epsilon_j,$$

where Q_j^{AR} denotes VKT on all roads for household (or individual) j , and i indexes MSAs. Because of the log specification, the coefficient on lane kilometers is the elasticity of household VKT on all roads with respect to interstate highway lane kilometers. We include as control variables both MSA-level characteristics and individual demographic characteristics, and allow for clustering of errors at the MSA level.

Our second set of estimations is the individual- or household-level analog of our instrumental variables estimating equation (5). Here, except for the presence of controls for individual characteristics, our first-stage equation predicts interstate kilometers and is identical to the first-stage in equation (5); the second stage corresponds to equation (6).

Table 10 reports the results of regressions to explain three measures of individual driving using pooled cross sections from the 1995 and 2001 NPTS. Panel A of the table presents OLS estimates and panel B presents TSLS estimates. In the first three columns our dependent variable is commute kilometers on a typical day for all NPTS individuals who commute. In columns 4 through 6 our dependent variable is total household vehicle kilometers on a particular travel day. In columns 7 through 9, our dependent variable is total VKT by all household vehicles in the survey year.

With the exception of the regressions in columns 4 and 7, which do not control for population, our estimates suggest a positive and statistically significant relationship between the extent of the highway network and individual travel. Our preferred estimates are the TSLS estimates in panel B. These estimates suggest that a 10 percent increase in the extent of the interstate network causes about a 1 percent increase in individual driving on all roads. While the NPTS data do not reveal which classes of roads accommodate this increase in driving, below we use the HPMS to explore the diversion of traffic between classes of roads.

TABLE 10—INDIVIDUAL TRAVEL AS A FUNCTION OF INTERSTATE LANE KILOMETERS

	ln commute distance			ln household daily VKT			ln household annual VKT		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Panel A. OLS on interstate highways, entire MSAs</i>									
ln (IH lane km)	0.094*** (0.013)	0.074*** (0.022)	0.074*** (0.021)	-0.028 (0.020)	0.087*** (0.022)	0.082*** (0.020)	-0.047*** (0.016)	0.055*** (0.016)	0.054*** (0.015)
ln (population)		0.022 (0.021)	0.25 (0.17)		-0.091*** (0.019)	0.12 (0.20)		-0.075*** (0.014)	-0.046 (0.116)
Geography		Y	Y		Y	Y		Y	Y
Census divisions		Y	Y		Y	Y		Y	Y
Past populations			Y			Y			Y
Observations	51,447	51,447	51,447	65,318	65,318	65,318	60,320	60,320	60,320
R ²	0.06	0.06	0.06	0.10	0.10	0.10	0.18	0.19	0.19
<i>Panel B. TSLS on interstate highways, entire MSAs</i>									
<i>Instruments: ln 1898 railroads and ln 1947 planned interstates</i>									
ln (IH lane km)	0.097*** (0.014)	0.10** (0.04)	0.10*** (0.04)	-0.017 (0.021)	0.11** (0.05)	0.089* (0.053)	-0.040** (0.016)	0.056** (0.027)	0.049* (0.028)
ln (population)		-0.00072 (0.0331)	0.22 (0.17)		-0.11** (0.04)	0.11 (0.21)		-0.076*** (0.022)	-0.040 (0.119)
Observations	51,447	51,447	51,447	65,318	65,318	65,318	60,320	60,320	60,320
Overidentification	0.063	0.36	0.52	0.28	0.14	0.45	0.12	0.63	0.94
<i>p</i> -value									
First-stage Statistic	51.7	18.6	16.8	50.1	17.5	15.5	49.1	16.9	14.6

Notes: All regressions include a constant and control for individual characteristics (income, education, gender, age, and race). Robust standard errors in parentheses (clustered by MSA); 228 MSAs represented in all regressions.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

C. Population Growth

By reducing the cost of transportation within a city, all else equal, improvements to a city's road network make a city more attractive relative to other cities. Given the high mobility of the US population, this suggests that changes to a city's road network should be met with changes to a city's population. In fact, this conjecture appears to be true, and the extant literature estimates the size of this effect.

Michaels (2008) and Amitabh Chandra and Eric Thompson (2000) provide suggestive evidence. Both papers consider the effect of improvements in access to the interstate system on rural counties in the US. Michaels (2008) finds that an interstate highway in a rural county leads to large increases in retail earnings. Chandra and Thompson (2000) find that improved access to the interstate system causes an overall increase in firm earnings. Together, these results show that interstate highways cause increases in the level of local economic activity. To the extent that population levels and overall economic activity are linked, this suggests that improvements to the interstate network lead to population increases.

Duranton and Turner (2008) provide more direct evidence. They consider US MSAs between 1980 and 2000 and investigate the way that population growth responds to changes in the road network. Like the current paper, they rely on an early plan of the interstate highway network and 1898 railroad routes as instruments

for the modern road network. They find that a 10 percent increase in the extent of the road network causes a 1.3 percent increase in MSA population over 10 years, and a 2 percent increase over 20 years.

D. Diversion from Other Roads

We measure traffic and lane kilometers for three exclusive classes of roads in each MSA: urbanized area interstates, nonurbanized area interstates, and major urbanized area roads. These data allow direct tests of whether changes to one class of roads affects VKT on the others. In particular, we estimate each of the three following variants of equation (2):

$$(7) \quad \ln(Q_{it}^{IHU}) = A_0 + \rho_{R^{IHU}}^{Q^{IHU}} \ln(R_{it}^{IHU}) + \rho_{R^{IHNU}}^{Q^{IHU}} \ln(R_{it}^{IHNU}) \\ + \rho_{R^{MRU}}^{Q^{IHU}} \ln(R_{it}^{MRU}) + A_1 X_{it} + \epsilon_{it},$$

$$(8) \quad \ln(Q_{it}^{IHNU}) = B_0 + \rho_{R^{IHU}}^{Q^{IHNU}} \ln(R_{it}^{IHU}) + \rho_{R^{IHNU}}^{Q^{IHNU}} \ln(R_{it}^{IHNU}) \\ + \rho_{R^{MRU}}^{Q^{IHNU}} \ln(R_{it}^{MRU}) + B_1 X_{it} + \gamma_{it},$$

$$(9) \quad \ln(Q_{it}^{MRU}) = C_0 + \rho_{R^{IHU}}^{Q^{MRU}} \ln(R_{it}^{IHU}) + \rho_{R^{IHNU}}^{Q^{MRU}} \ln(R_{it}^{IHNU}) \\ + \rho_{R^{MRU}}^{Q^{MRU}} \ln(R_{it}^{MRU}) + C_1 X_{it} + \nu_{it}.$$

In equation (7), $\rho_{R^{IHNU}}^{Q^{IHU}}$ is the urbanized area interstate VKT elasticity of nonurbanized area interstate lane kilometers. If, for example, this parameter is -0.1 , then a 10 percent increase in nonurbanized-area interstate lane kilometers results in a 1 percent decrease in urbanized-area interstate VKT. Interpretation of other coefficients is similar.

Table 11 reports estimates of equations (7)–(9). In all regressions we pool our three cross sections of HPMS data and use OLS. Panel A presents estimates of equation (7). In these regressions our dependent variable is urbanized area interstate VKT and the dependent variables of interest are the three measures of lane kilometers. We exploit cross-sectional variation and, from left to right, use progressively more exhaustive lists of controls. Panels B and C are similar to panel A, but use nonurbanized interstate VKT and major urbanized area road VKT as dependent variables.

Consistent with our earlier results, we see that VKT elasticity of own lane kilometers is close to one for all specifications in panel A and above 0.8 for all specifications in panels B and C. The largest estimated cross elasticity is 0.22 for the nonurbanized-area interstate VKT elasticity of urbanized-area major road lane kilometers, in column 1, row 3, of panel B. This estimate is not robust to the addition of controls, and is negative or indistinguishable from zero in other specifications. The estimate of the urbanized area interstate VKT elasticity of urbanized-area major road lane kilometers in column 1, row 3, of panel A is similar. Other cross elasticities are generally quite small. Our preferred regressions are reported in column 5. In this specification, all cross elasticities are negative, with magnitudes no larger than 0.1. In sum, Table 11 suggests that, while traffic diversion does occur in response to changes in the road network, the fundamental law of road congestion mainly reflects traffic creation rather than traffic diversion.

TABLE 11—VKT AS A FUNCTION OF LANE KILOMETERS
FOR DIFFERENT TYPES OF ROADS, POOLED OLS

	(1)	(2)	(3)	(4)	(5)
<i>Panel A. Dependent variable: ln VKT for interstate highways, urbanized areas within MSAs</i>					
ln (IHU lane km)	1.09*** (0.03)	1.01*** (0.03)	1.04*** (0.03)	1.03*** (0.03)	1.04*** (0.03)
ln (IHNU lane km)	-0.026 (0.031)	-0.083*** (0.025)	-0.086*** (0.024)	-0.087*** (0.024)	-0.099*** (0.023)
ln (MRU lane km)	0.22*** (0.04)	-0.13** (0.06)	-0.12** (0.06)	-0.12** (0.05)	-0.100** (0.05)
ln (population)		Y	Y	Y	Y
Geography			Y	Y	Y
Census divisions			Y	Y	Y
Socioeconomic characteristics				Y	Y
Past populations					Y
R ²	0.96	0.97	0.97	0.98	0.98
<i>Panel B. Dependent variable: ln VKT for interstate highways, outside urbanized areas within MSAs</i>					
ln (IHU lane km)	0.032 (0.037)	-0.049 (0.034)	-0.030 (0.031)	-0.030 (0.030)	-0.013 (0.032)
ln (IHNU lane km)	0.87*** (0.04)	0.81*** (0.03)	0.84*** (0.03)	0.85*** (0.02)	0.83*** (0.02)
ln (MRU lane km)	0.22*** (0.05)	-0.14** (0.05)	-0.053 (0.052)	-0.046 (0.050)	-0.013 (0.050)
R ²	0.85	0.88	0.92	0.92	0.93
<i>Panel C. Dependent variable: ln VKT for major roads, urbanized areas within MSAs</i>					
ln (IHU lane km)	0.015 (0.021)	-0.049*** (0.018)	-0.049*** (0.016)	-0.057*** (0.014)	-0.048*** (0.015)
ln (IHNU lane km)	0.042** (0.021)	-0.0038 (0.0181)	0.00063 (0.0150)	-0.0044 (0.0133)	-0.0042 (0.0133)
ln (MRU lane km)	1.09*** (0.03)	0.81*** (0.03)	0.82*** (0.03)	0.81*** (0.03)	0.82*** (0.03)
R ²	0.97	0.98	0.99	0.99	0.99

Notes: All regressions include a constant and year effects. Robust standard errors clustered by MSA in parentheses; 572 observations corresponding to 192 MSAs for each regression.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

In the online Appendix, we confirm these results in Appendix Tables 11 and 12, where we replicate the results of Table 11 in decade-by-decade OLS regressions and in first-difference regressions.

E. An Accounting Exercise

The fundamental law of road congestion requires that changes in the extent of the road network are met with proportional changes in traffic. We have suggested four possible sources for this increase in traffic: changes in trucking and commercial driving; changes in individual or household driving behavior; changes in population; and diversion of traffic. We now consider whether these four sources are sufficient to explain the fundamental law and assess their relative importance.

To begin, consider a 10 percent increase in the interstate network of an average MSA around 2000. Using our preferred estimate from column 3 of Table 6, this increase causes a 10.3 percent increase in VKT on the interstates of our hypothetical city.

In Table 1 we see that in 2003, trucks accounted for 13 percent of VKT on interstate highways in an average MSA. In Table 9, our preferred specification is column 10, where the truck VKT elasticity of interstate highways is about 2.3. This means that a 10 percent increase in the stock of roads causes about a 23 percent increase in truck VKT and a 3.0 percent increase in overall interstate VKT, about 29 percent of the total increase in VKT caused by our 10 percent increase in roads. While our preferred elasticity of 2.3 may seem high, the average of all estimates in panel A of Table 9 is 1.5. This lower value would imply that trucks represent 18 percent of the total increase in VKT. Therefore, we estimate that trucks account for between 19 and 29 percent of the total increase in interstate VKT that results from our hypothetical 10 percent increase in interstate lane kilometers.

For migration, taking the preferred estimate from Duranton and Turner (2008), our 10 percent increase in the interstate network causes about a 2.1 percent increase in population. From column 3 of Table 6, the MSA population elasticity of interstate VKT is 0.30. Together, these two elasticities suggest that a 10 percent increase in population results in about a 0.6 percent increase interstate VKT, about 6 percent of the total increase. This elasticity of 0.30 is estimated in a regression that also controls for decennial population levels between 1920 and 1970. Because decennial population levels are highly correlated, this may understate the effect of population on VKT.

Panel B of Table 5, which controls for the endogeneity of population in first-difference estimates, reports higher estimates. The estimate in column 5 is 1.02. This alternative value implies that population growth represents 21 percent the total effect of an extension in interstate lane kilometers. Therefore, we estimate that migration accounts for between 5 and 21 percent of the total increase in interstate VKT that results from our hypothetical 10 percent increase in interstate lane kilometers.

Turning to substitution across roads, we suppose that the 10 percent increase in our MSA's interstate lane kilometers network is accomplished by increasing both urbanized and nonurbanized interstates by 10 percent. Since we are considering increases to both classes of interstate highways, we need only be concerned with diversion of traffic from major urbanized-area roads. This is estimated in panel C of Table 11. In rows 1 and 2 of column 5, we see that a 10 percent increase in urbanized and nonurbanized interstate causes a decrease in major urban road VKT of 0.48 percent and 0.04 percent, respectively (and basing our calculation on column 3 or 4 would yield similar results). That is, our 10 percent increase in interstate lane kilometers diverts 0.52 percent of traffic from major urban roads. Using the levels of VKT for major urban and all interstates given in Table 1 allows us to calculate that this diversion amounts to about a 1 percent increase in interstate VKT, or about 10 percent of the total effect of our hypothetical 10 percent extension. Because many estimates in Table 11 (or in Appendix Tables 11 and 12) indicate no substitution from major urban roads toward interstates, we cannot rule out the absence of a substitution effect. Therefore, we estimate that the diversion of traffic from other classes of roads accounts for between 0 and 10 percent of the total increase in interstate VKT that results from our hypothetical 10 percent increase in interstate lane kilometers.

Calculating the contribution of changes to household behavior is more difficult. Table 10 estimates the effect of interstate lane kilometers on individual driving behavior. We take the estimate of 0.11 given by column 5 of panel B (which is very close to the corresponding estimate for alternative measures of VKT in columns 2, 3, and 6 of both panels). A 10 percent increase in interstate lane kilometers causes a 1.1 percent increase in household annual VKT. Unfortunately, our data do not allow us to apportion household driving to different road networks. A first possibility is to assume that this 1.1 percent increase in driving is proportional to current driving across all road networks. Since households represent 87 percent of interstate VKT, this 1.1 percent increase represents an increase in interstate VKT of 0.9 percent, or 9 percent of the total increase in interstate VKT caused by a 10 percent increase in lane kilometers. This is arguably an unrealistic lower bound. Alternately, suppose that the 1.1 percent increase in household driving takes place only on interstates (recall that we earlier reported that about 24 percent of VKT takes place on interstates). In this case, the increase in interstate VKT would account for 4.1 percent of the total change in VKT, or 39 percent of the effect of our expansion in lane miles. This constitutes an upper bound. Therefore, we estimate that increases in household driving account for between 9 and 39 percent of the total increase in interstate VKT that results from our hypothetical 10 percent increase in interstate lane kilometers.

To sum up, of four possible sources for the new traffic following an increase in lane kilometers of interstates, changes to individual behavior and changes in commercial driving are the most important. Migration and traffic diversion are significantly less important. We also note that if we take the upper bounds for the shares of all four sources, we account for just about the entire increase in VKT.

V. Conclusion

This paper analyzes new data describing city-level traffic in the continental US between 1983 and 2003. Our estimates of the elasticity of MSA interstate highway VKT with respect to lane kilometers are 0.86 in OLS, 1.00 in first difference, and 1.03 with IV. Because our instruments provide a plausible source of exogenous variation, we regard 1.03 as the most defensible estimate. We take this as a confirmation of the “fundamental law of highway congestion” suggested by Downs (1962), where the extension of interstate highways is met with a proportional increase in traffic for US MSAs.

We also provide suggestive evidence that this law extends beyond urban highways, a “fundamental law of road congestion.” For a broad class of major roads within the “urbanized” part of MSAs, we estimate a roadway elasticity of VKT between 0.67 and 0.89, depending on the decade in OLS. Changes in the boundaries of urban areas over time and the weakness of our instruments for this class of roads preclude reliable first-difference and IV estimates.

Beyond direct evidence, we confirm two implications of the fundamental law of road congestion: we find no evidence that public transit affects VKT, and there is convergence of traffic levels. Our results also suggest that roads are assigned to MSAs with little or no regard for the prevailing level of traffic.

We also consider the sources of new traffic elicited by extensions to the interstate network. We find that changes to individual driving behavior and increases in

trucking are most important. Migration is somewhat less important. Surprisingly, diversion of traffic from other road networks does not appear to play a large role.

These findings suggest that both road capacity expansions and extensions to public transit are not appropriate policies with which to combat traffic congestion. This leaves congestion pricing as the main candidate tool to curb traffic congestion.

DATA APPENDIX

A. Consistent MSA Definitions

MSAs are defined as aggregations of counties. We use the 1999 MSA definitions. In order to insure that our definitions are constant over time, we track changes in county boundaries back to 1920 and make adjustments to MSA definitions as required in each decade.

B. HPMS Data

We rely extensively on the Highway Performance Monitoring System (HPMS) data for 1983, 1993, and 2003, and slightly on the HPMS data for 1995 and 2001. These data are collected and maintained by the US Federal Highway Administration in cooperation with many subnational government agencies. Documentation is available in DOT (2003a, b, and 2005b).

The HPMS consists of two parts. The *universe data* are supplied for most road segments in the interstate highway system and some other major roads, and provide a description of each segment. The *sample data* provide additional information about all segments in the universe data, including an urbanized area code for segments falling in urbanized areas. For a sample of smaller urbanized area roads, the sample data also provide all data fields that occur in the universe and sample data.

In general, each segment reported in the HPMS represents a larger set of similar segments (typically of the same road), called a sample. Thus, each reported segment is associated with an expansion factor that relates the length of the segment described in the data to the length of the sample it represents. Since states are required to report information on every interstate highway segment, all interstate highway segments should have an expansion factor of one. In fact, the average expansion factor for these segments is about 1.5, so that states seem not to be in compliance with reporting requirements. For noninterstate segments, principally smaller classes of roads, reporting requirements permit expansion factors of up to 100. In fact, a small number of larger expansion factors occur, but we exclude these segments from our sample. For urbanized-area roads in the relevant classes, reporting rules require that the union of all samples be the set of all urbanized-area roads. Loosely, urbanized-area road segments are partitioned into sets of similar segments, and one segment from each set is reported in the HPMS sample data. In this sense, sample data represents all urbanized road segments subject to reporting requirements.

For the interstate highway system, the HPMS records number of lanes, length, AADT, and county. By construction, road segments do not cross county borders. For segments in urbanized areas, the HPMS also provides an urbanized area code.

TABLE 12—SUMMARY STATISTICS FOR OUR MAIN NPTS VARIABLES AND HMPS VKT FOR CORRESPONDING YEARS

Year:	1995	2001
NPTS vehicle survey (annual)		
Mean vehicle km (person)	12,436 (7,737)	12,203 (8,398)
Mean vehicle km (household)	32,546 (19,672)	30,352 (20,198)
Mean vehicle km (vehicle)	19,560 (9,355)	17,573 (9,030)
NPTS person survey (daily)		
Distance to work (km)	20.4 (21.6)	19.4 (20.2)
Minutes drive to work	22.4 (17.3)	21.3 (16.3)
Speed to work	50.9 (21.1)	49.6 (22.1)
NPTS trip survey (daily)		
Total household person-km	134.8 (119.9)	134.5 (112.0)
Total household person-minutes	147.7 (88.7)	160.9 (90.7)
Mean household km/h	48.4 (12.2)	43.9 (15.1)
Total HMPS VKT		
Interstate highways ('000 km)	2,876,074	3,484,750
Major urban roads ('000 km)	5,530,845	6,624,656
Number MSAs	228	228

Notes: Averaged over individuals or households. Means and standard deviations in parentheses.

Since MSAs are county-based units, these data allow us to calculate VKT for the urbanized and nonurbanized area interstate systems by MSA.

Within urbanized areas, the HPMS describes not only the interstate highway system, but also all roads in the following functional classes: principal arterial–other freeways and expressways; principal arterial–other; minor arterial, collector, local. There is no mandated reporting of local roads, so they make up only a small share of the HPMS data and are excluded from our analysis. Our “major roads” are defined as the union of the remaining classes. The definitions of these road classes are given in DOT (1989) and span about 20 pages. Loosely, a local road is one that is predominantly used to access addresses on that road, e.g., a residential street. Any road used principally to connect local roads (but not an interstate) falls in one of the larger classes that we consolidate into major roads.

C. NPTS data

In Table 12, we report some descriptive statistics about our two waves of the NPTS. Surprisingly, these data show that driving distances per person, household, and vehicle all declined between 1995 and 2001.

The “vehicle survey” provides a detailed description of each household motor vehicle, including the survey respondents’ report of how many kilometers it was

driven in the past 12 months. We use this information to construct an estimate of total VKT for the household during the survey year. This information is reported in the top section of Table 12. The “person survey” describes travel behavior for each household member on a typical travel day. From this, we construct household mean commute distance, time, and speed for household members who drive to work. Table 12 shows that mean commute distance decreased from 20.4 km in 1995 to 19.4 in 2001. This decrease in distance resulted in a small decrease in mean commute times despite a decline in speed. Finally, the “travel day” survey collects detailed information about each trip taken by each household member on a randomly selected travel day. These data allow the calculation of household person-kilometers of vehicle travel, along with the person-minutes required to accomplish this travel, and the average speed of this travel. Table 12 shows that total daily household person-kilometers of travel was approximately constant over the study period, but that the time required to accomplish this travel increased from 147.7 minutes to 160.9 minutes, and speed decreased from 48.4 to 43.9 km/h.

The descriptive statistics in Table 12 point at stability or a small decline in VKT per household between 1995 and 2001. For the same period, the HPMS indicates increases of around 20 percent for VKT, as reported at the bottom of Table 12. It is natural to wonder whether these two findings are contradictory. To see that they are not, note that the NPTS and the HPMS report different measures of VKT.¹⁸ The NPTS reports a per household measure of VKT on all roads. On the other hand, the HPMS reports aggregate VKT on interstates and major urban roads within MSAs. Thus, the HPMS looks at a different set of roads than the NPTS does, and the 2001–1995 difference reflects changes in commercial traffic and number of households, in addition to changes in VKT per household.

D. Instruments

Our measures of the 1947 interstate highway plan and the 1898 railroad network are taken from Duranton and Turner (2008) and are documented there. Further discussion of the 1947 highway plan is available in Michaels (2008) and Baum-Snow (2007).

While our exploration routes variable is new, Duranton and Turner (2008) experimented with a different formulation and found that it did not have much predictive ability. In this initial formulation of the exploration route data, we treated the exploration route map in exactly the same way as we did the 1947 highway plan and the 1898 railroad map. That is, all routes are treated in exactly the same way and receive exactly the same weight. In particular, this means that well-used and important routes, such as the Oregon or Santa Fe Trails, are given the same weight as less successful routes. With this said, since the exploration routes map provides a line for each expedition it describes, even if this line is very close to the line for another expedition on the same route, the map does permit us to distinguish more intensively used routes from less. In particular, if we digitize the map and count

¹⁸We rule out sampling errors. NPTS data sample a large number of households, are broadly acknowledged to be of high quality, and their correlation with census data is also high, as mentioned above. Mark Schipper and Vicki Moorhead (2000) also provide evidence that reported VKT in the NPTS is highly consistent with odometer VKT from the 1994 Residential Transportation Energy Consumption Survey. As for the HPMS, it is carefully scrutinized by the Bureau of Transportation Statistics, which uses it as the basis of its Transportation Statistics Annual Report.

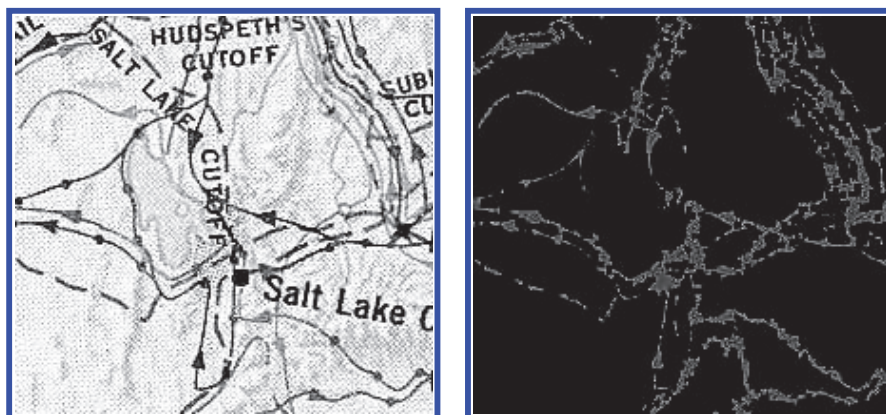


FIGURE 5. CONSTRUCTION OF AN EXPLORATION ROUTES INDEX

Notes: Right panel gives detail of original map of 1835–1850 exploration routes for a segment of the Oregon Trail near Salt Lake City (US Geological Survey 1970). Left panel shows incidence of exploration routes in same region. For this region, our measure of exploration routes is the count of grey pixels in the right panel.

all pixels assigned to any route, we have a measure of the intensity with which a region was used by explorers between 1835 and 1850. This is precisely what we did. Figure 5 illustrates.

The share of the democratic vote in the 1972 presidential election is calculated from the General Election Data for the US, 1950–1990, from the Inter-university Consortium for Political and Social Research (ICPSR).

E. Geography

Our data include five measures describing the physical geography of an MSA taken from the data used by Marcy Burchfield et al. (2006). The particular measures of physical geography that we use are: elevation range within the MSA, the ruggedness of terrain in the MSA, heating degree days, and cooling degree days and “sprawl” in 1992. Elevation range is the difference in meters between the elevation of the highest and lowest point in the MSA. Ruggedness is calculated by imposing a regular 90-meter grid on each MSA and calculating the mean difference in elevation between each cell and adjacent cells. Heating and cooling degree days are engineering measures used to assess the demand for heating and cooling. Sprawl is the measure of sprawl calculated in Burchfield et al. (2006) and measures the share of undeveloped land in the square kilometer surrounding an average structure. More detail about these variables is available in Burchfield et al. (2006) and at <http://diegopuga.org/data/sprawl/>.

F. Employment

To measure employment we use the County Business Patterns data from the US Census Bureau. These data are available annually from 1983 to 2003. We construct disaggregated employment data at the two digit-level (with 81 sectors) to investigate whether the supply of interstate highways and other major roads affects the composition of economic activity and, in particular, employment in transportation-intensive

sectors. Between 1983 and 2003, three different industrial classifications have been used in the US: the standard industrial classification (SIC) which remained unchanged at the two-digit level until 1997; the 1997 North American Industry Classification System (NAICS) from 1998 to 2002; and the 2002 NAICS for 2003. Using the same cross walk as in Duranton and Turner (2008), we perform our employment regressions using SIC categories.

G. Public Transit Infrastructure

To comply with Section 15 of the Urban Mass Transportation Act, all public transit districts in the US submit annual reports to the federal government detailing their assets and activities over the course of the year. Our data for 1984 bus service come from Table 3.6, p3–308, of DOT Urban Mass Transit Administration (1986). The Section 15 reports are available in electronic form starting in 1984. While these reports do not assign transit districts to an MSA, they contain enough geographic information, e.g., zip code, so that about 700 of the 740 transit districts that operate during 1984, 1994, or 2004 can be assigned to a non-MSA county or to an MSA.

With this correspondence constructed, we count all “large buses” in each MSA at peak service for 1984. We use this daily average number of large buses operating at peak service in 1984 to measure an MSA’s stock of public transit infrastructure. In our definition of large buses we include buses in the following Section 15 reporting classes: articulated bus; bus A (> 35 seats); bus B (25–35 seats); bus C (< 25 seats); double-deck bus; motor bus; motor bus (private); street car; trolley bus.

H. Socioeconomic Characteristics

To measure MSA socioeconomic characteristics, we use three data sources. The share of manufacturing employment is computed from the County Business Patterns for 1983, 1993, and 2003 to match the years of data for VKT and roadway. The 1980 segregation index is calculated from 1980 census tract–level data and is based on the measure of housing segregation described in equation (3), p. 836, of David M. Cutler and Glaeser (1997). Finally, the share of college educated workers, share of poor, and average earnings are computed using data from the 1980, 1990, and 2000 decennial censuses. From the education questions in these three censuses, we are able to build a consistent variable capturing the share of residents with some college education (or more) by MSA. The three censuses also contain a question about poverty, which can be aggregated in the same way. Individual earnings are also aggregated in a similar fashion with the caveat that the bands and the top code differ across censuses.

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Relationships between highway capacity and induced vehicle travel

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Abstract

The theory of induced travel demand asserts that increases in highway capacity will induce additional growth in traffic. This can occur through a variety of behavioral mechanisms including mode shifts, route shifts, redistribution of trips, generation of new trips, and long run land use changes that create new trips and longer trips. The objective of this paper is to statistically test whether this effect exists and to empirically derive elasticity relationships between lane miles of road capacity and vehicle miles of travel (VMT). An analysis of US data on lane mileage and VMT by state is conducted. The data are disaggregated by road type (interstates, arterials, and collectors) as well as by urban and rural classifications. Various econometric specifications are tested using a fixed effect cross-sectional time series model and a set of equations by road type (using Zellner's seemingly unrelated regression). Lane miles are found to generally have a statistically significant relationship with VMT of about 0.3–0.6 in the short run and between 0.7 and 1.0 in the long run. Elasticities are larger for models with more specific road types. A distributed lag model suggests a reasonable long-term lag structure. About 25% of VMT growth is estimated to be due to lane mile additions assuming historical rates of growth in road capacity. The results strongly support the hypothesis that added lane mileage can induce significant additional travel. © 2000 Elsevier Science Ltd. All rights reserved.

1. Introduction

The theory of induced growth in vehicle travel hypothesizes that increases in the carrying capacity of a specific highway corridor or road network will attract increased levels of vehicle traffic. This economic interpretation of travel demand would argue that cost does influence demand for travel. These costs include both the capital costs of a vehicle plus fuel and maintenance costs, as

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well as the relative travel time costs within a given network. Increases in highway capacity should reduce the cost of travel if relative travel times are reduced, resulting in an overall increase in demand. This phenomenon of induced demand due to capacity expansions is analyzed in this paper.

From an economic perspective this would be a trivial argument. However, the demand for transportation has historically been characterized as a derived demand; i.e., households only demand transportation in the course of carrying out other economic activities and not for the pleasure of movement in and of itself. From this assertion it follows that household demand for vehicle travel is only determined by demand for exogenous economic activities, and the cost of travel is considered virtually irrelevant. While this is obviously an extreme interpretation, the consideration of travel as a consumed economic commodity has not influenced overall US transportation policy.

The theory of induced growth in vehicle travel has been periodically cited in the literature for many years. Goodwin (1996) cites at least one report dating back to 1938 that documented evidence for this effect. Since then the discussion of induced vehicle travel has been periodically debated and generally been discounted or considered a minor effect by policy makers. The recent SACTRA (1994) report in the UK changed much of this debate and was an acknowledgement by the UK government that many road projects generate extra traffic.

In the US the debate on induced travel remains controversial. The debate is generally between the environmental community and traditional transportation decision makers. Much of the effort and debate have focused on the modeling procedures used in regional travel demand forecasting (Coombe, 1996; Mackie, 1996). These models are recognized as generally not being able to account for various induced travel effects. Minor upgrades to current modeling practice, such as recalibrating trip distribution models based on changes in travel speeds and inclusion of mode choice and route choice procedures can account for some of the increases in vehicle miles of travel (VMT). However, these modifications would not measure changes in trip generation (US DOT, 1996) or any impact of long run land use changes. Activity-based modeling approaches can also better track trip chaining behavior and the selection of non-motorized modes resulting in better model calibration than current practices (US DOT, 1995).

The Transportation Research Board (TRB) recently documented the evidence for induced travel and concluded that there is some effect but was inconclusive on whether this implied any impact on the environment, especially air quality (Transportation Research Board, 1995). This study concluded that restraining growth in highway capacity would result in minor, if any, improvements in air quality. The conclusions of the TRB committee suggest that pricing and land use policies are more effective at achieving long run impacts at improving air quality compared to a policy of restraining growth in road capacity. However, land use strategies can be undermined by the construction of new highway capacity and pricing policies are to some extent an acknowledgement that induced demand is a major problem (and is one of the responses being considered in the UK).

The debate over induced travel has largely centered around the potential increased social costs from generated traffic. Another perspective is to consider the social benefits derived from shortening trip times and allowing more people to travel when and where they want. The US Federal Highway Administration is updating their Highway Economics Requirements System to account for these effects and to measure both the net social benefits and social costs of generated traffic.

Another perspective is that roads are built with the specific intent of inducing traffic (i.e., if the road will not generate traffic, then why build it?). Highway planners who argue that the goal of building new capacity is congestion reduction are implicitly not considering these arguments. When analytical models do not fully account for induced travel effects they will show that new facilities reduce congestion.

The benefits of new capacity are, however, not necessarily associated with reductions in relative travel times or increased mobility via generated trips. Long run effects may tend to outweigh these short run benefits via changes in land use patterns. In theory, increased accessibility will be capitalized into the value of land. Therefore the benefits of capacity expansion projects will fall on current land owners who enjoy increased accessibility to their land. Whether this is beneficial to society or not is beyond the scope of this paper and the present analysis, although the results presented here imply that long run effects are likely to severely diminish any short run travel time benefits.

As this discussion implies, the implications for national transportation policy of recognizing induced demand are significant and go far beyond the implications on only air quality and other environmental costs. What are the implications for funding of highways and major roads? What should the national role in highway funding be? How is general economic growth affected by changes in highway subsidies? What are the land development impacts of changes in policy? Boarnet (1997) provides an interesting discussion of some of these issues with regard to highway financing.

The analytical work presented in this paper uses an aggregate approach to analyze the issue of how highway lane-mile additions can increase total VMT. This work is similar to the work of Hansen and Huang (1997) who used California data to statistically estimate the impact of new lane-miles on VMT. Hansen and Huang (1997) found results that suggest elasticities of VMT with respect to lane-miles of up to 0.9 in the long run. The SACTRA (1994) study suggested elasticities of up to 1.0. The analysis presented here uses aggregate state level time-series data to determine relationships to VMT. The results of this study are within the ranges of previous research with short-run elasticities of about 0.5 and long run elasticities of about 0.8.

This paper is organized as follows. First, the economics of induced demand are briefly reviewed and outlined. This is followed by a discussion of the modeling frameworks employed, the data used, and analytical results. Forecasts of induced demand effects are presented followed by a concluding section that discusses potential policy implications for both federal and state transportation policy.

2. Induced travel: theory and definitions

The underlying theory behind induced travel is based upon the simple economic theory of supply and demand. Any increase in highway capacity (supply) results in a reduction in the time cost of travel. Travel time is the major component of variable costs experienced by those using private vehicles for travel. When any good (in this case travel) is reduced in cost, demand for that good increases. The analysis presented here uses lane miles as a proxy for the cost of travel. However, other policies can also reduce travel time costs and may also induce increases in VMT.

These include, amongst others, traffic signal coordination, increased transit service, and other travel demand management policies that do not raise aggregate travel costs.

Travel supply and demand and the induced travel effect are illustrated graphically in Fig. 1. The line S1 is supply before a capacity expansion or other changes that lower the cost of travel. The line S2 is supply after the change in capacity. S2 is shifted downward to show that the same demand is met at a lower cost. The figure shows that the quantity of travel increases as the change in supply lowers the cost from P1 to P2 for a given amount of travel. Fig. 1 assumes no change in underlying demand. For example, population growth is not depicted in Fig. 1. The increase in the quantity of travel from Q1 to Q2 represents the induced travel effect.

In measuring this effect there are many confounding factors that also drive growth in VMT. Population growth and demographic effects, such as increased numbers of women in the workplace, are often cited. Fig. 2 shows how these effects can be graphically illustrated. The demand

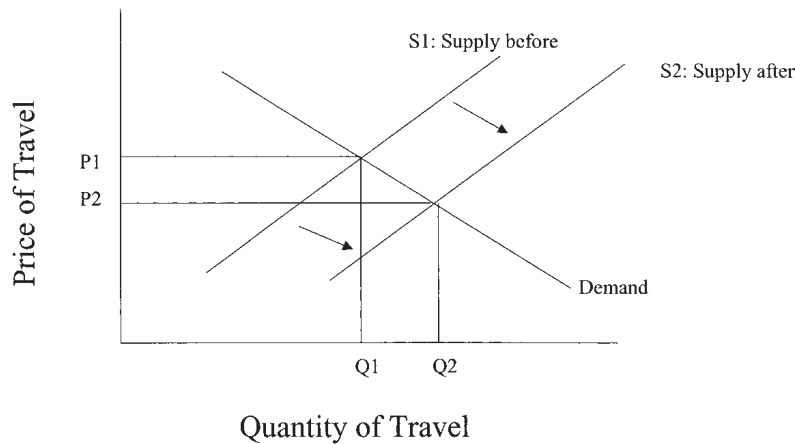


Fig. 1. Induced travel.

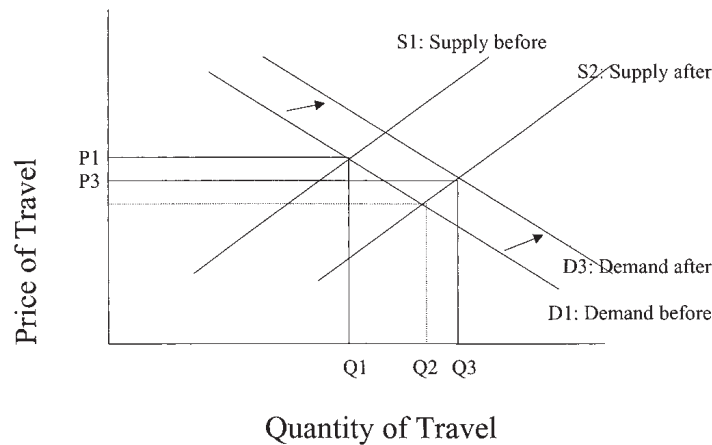


Fig. 2. Induced travel the during period of underlying growth in demand.

curve shifts outward from D1 to D2 because more travel is demanded at a given price when population increases in an area. The demand and supply curves shift simultaneously in Fig. 2, and the resulting quantity of travel increases even more than in Fig. 1 (to Q3). Empirically, it is difficult to isolate these two concurrent effects, and this is what causes some of the uncertainty about the magnitude of the induced travel effect, as distinct from the growth effect. In Fig. 2, the induced travel effect is measured along the horizontal axis as the difference between Q2 and Q1, while the effect from exogenous growth is the difference between Q3 and Q2.¹

Much of the debate over induced travel and its impact has often been confused by disagreements over its definition. For example, some would argue that only direct behavioral changes that generate new trips should be called induced travel. Others may claim that shifts between modes do not generate new trips and therefore cannot be called induced travel (despite the increase in VMT). The definition adopted here seeks clarity in these concepts by broadly defining induced VMT as any infrastructure change that results in either short run or long run increases in VMT. Hills (1996) provides a useful categorization of the various behavioral effects one can expect from highway upgrades or capacity expansions. This was used by the SACTRA (1994) study to also define induced travel very broadly.

Different behavioral effects can be expected in the short run and in the long run. Short run effects that occur include changes in travel departure times, route switches, mode switches, longer trips, and some increase in trip generation. Of these, mode switches and new trips clearly contribute to induced vehicle travel. The inability of increased capacity to reduce congestion is most visible during peak travel times and is due to travelers shifting to preferred departure times. This effect does not represent increased VMT and so would not represent induced travel.² However, shifts to the peak that free up capacity at other times of the day can result in new trips being made at those times that are now less congested. Route switching can result in either shorter or longer distances being traveled. If the net effect is more travel, this is clearly defined as induced VMT. If speeds are now faster, some additional long trips (perhaps recreational in nature or to more distant shopping centers) are likely to be taken and clearly represent induced travel.

Longer run effects are related to how land use patterns adjust to the newly available capacity and the resulting spatial allocation of activities. If speeds are higher, many residences and businesses will tend to relocate over time often resulting in longer distance trips (Gordon and Richardson, 1994).³ The concentration of retail activities in “big box” stores or auto-dependent regional shopping centers (rather than centrally located business districts) further increases VMT. These are longer run effects that can be included in the definition of induced travel since they are the result of economic changes induced by capacity additions.

¹ The relative scale of the effects in Fig. 2 do not necessarily represent actual magnitudes.

² Peak shifting that does not noticeably reduce aggregate travel times does suggest that the benefits of most projects are not accurately assessed. Rather than assessing benefits based on travel times an assessment based on the ability to travel at a preferred time should be done (Small, 1992).

³ While the work of Gordon and Richardson is generally meant to extoll the virtues of suburban land development patterns, their analysis of stability in work travel times while travel speeds increase, provides good empirical evidence for induced travel.

3. Modeling approaches and results

A variety of alternative statistical modeling approaches are presented to explore the relationships between lane miles of road capacity and vehicle miles of travel. These are aggregate econometric models of VMT and lane miles. In contrast, SACTRA (1994) used a case study approach of before and after data for a wide selection of projects. Another technique would be to use regional travel demand models or activity-based models. These use individual level disaggregate data from which models of individual behavior can be developed. While a disaggregate approach is normally used for project specific analysis, the aggregate econometric approach adopted here provides useful information on total system effects.

3.1. *VMT and induced travel modeling issues*

Many different factors affect total growth in VMT. Population growth naturally drives total VMT to higher levels. Total VMT in the US grew by 3.2% annually between 1970 and 1993 (DOE, 1995) exceeding total population growth (which was about 0.9% annually). Many other demographic factors have also been the cause of recent growth in VMT. These include, among others, increases in employment levels, increased female participation in the work force, and smaller household sizes. These are all highly correlated with population increases and therefore their impacts cannot be separated from overall trends in population growth. Population by state should serve as an adequate proxy for many of these demographic effects. Another factor influencing VMT growth is the increase in vehicle licensing rates and the saturation of vehicle ownership in the US. The 1995 Nationwide Personal Transportation Survey (US DOT, 1997a) results show that only 8 million US households do not own a motor vehicle and over 40 million households own two vehicles. This variable is not used in the analysis due to high collinearity with population. Changes in per capita income also affect total VMT (and is a significant factor as discussed in the following sections.).

The total cost of travel plays a role in demand for vehicle travel and is the basic premise of the theory of induced travel. The major factor affecting the cost of travel is the value of time associated with travel. Several studies have documented the value of travel time (Small, 1992; Waters, 1992). Goodwin (1992) reviewed elasticity estimates derived from studies based upon fuel prices. Tolls also affect total cost but are not included in the analysis due to their negligible role in the US.

Spatial reorganization of urban areas and increased concentration of many retail activities may also be increasing VMT. The 1995 NPTS shows that 77% of person-miles of travel is now for non-commute trips. Much of this increase may be related to increased decentralization and the development of more auto-dependent communities, which are endogenous to the development of new road capacity.

There is often confusion over how changes in road supply can affect behavior. For example, some might argue that reductions in transit usage have been a factor resulting in increased VMT, independent of changes in road supply. Other research, however, shows how reductions in transit service can occur because of increases in road supply (Noland, 1999). This effect, known as the Downs–Thomson paradox results when an increase in road supply makes traveling by auto preferable to transit alternatives. The transit agency then needs to either raise fares or reduce service; this results in a further decrease in transit usage and perhaps even worse congestion than

before the capacity expansion (Arnott and Small, 1994). Changes in many other apparently socio-economic trends could, in theory, be attributed to reduced transportation costs from road expansion.

One issue that cannot be completely resolved with a statistical analysis is the issue of causality. Does VMT growth cause more lane miles to be built or does capacity expansion induce VMT? The analysis presented here strongly supports the hypothesis of induced travel. The use of a fixed effects cross-sectional time series model minimizes any simultaneity bias in the data (although it does not necessarily eliminate it). An ideal technique for resolving the causality debate would be to use an instrumental variables approach. If another variable can be found that is correlated with lane miles, but is orthogonal to VMT, then this would be possible. Several variables were explored during the course of this research in an attempt to find an appropriate instrument. However, all the variables that may correlate with lane miles also tend to be correlated with VMT.⁴ Regardless of these limitations, the overall robustness of the results (presented below) using different formulations of the model, support the hypothesis of induced travel.

Many transportation professionals will argue that induced travel only demonstrates that highway planners have put the roads where people want to travel, i.e., they have made accurate forecasts. Or alternatively, induced travel provides benefits since people obviously want to travel. These benefits must be weighed against any social costs associated with the new capacity. This is beyond the scope of the current paper but is certainly a rich area for future research.

3.2. *Data*

To empirically measure induced travel effects it is necessary to separate the influences of the various factors driving VMT growth. To isolate the impact of road supply, i.e., lane miles, several models are formulated. The data are a cross-sectional time series (panel data) of the 50 US states between the years 1984 and 1996. The District of Columbia is omitted from the data set since it does not have the characteristics of a typical state and was an obvious outlier. Delaware was omitted from the simultaneous equation models since it did not have one category of road type (rural interstates). The data for VMT and lane miles for each state over the 13 year period was collected from the Highway Statistics series published by the Federal Highway Administration (for example, see US DOT, 1997b,c).

Total lane mile growth over this 13 year period has only been about 1.25% and the total route miles grew by about 0.71%. Excluding local roads, these figures are about 3.13% and 1.73%, respectively. About one quarter of new lane miles is from new roads while three quarters is expansion of existing roads. There are major differences between different road categories.⁵ Interstate and freeway lane miles have grown by about 8.98% of which about 16% is for new roads. Arterial lane miles have grown by about 11.01% of which about 32.80% is for new roads. Collector lane miles and route miles have actually declined slightly (1.64% and 1.56%, respectively),

⁴ Hansen and Huang (1997) were also unable to find an appropriate instrument in their analysis.

⁵ As defined in U.S. DOT (1997c) these are interstate highways, arterial roads (which include some controlled access highways) but are generally uncontrolled, collector facilities that collect and disperse traffic between arterials and lower grade facilities, and local roads that distribute traffic to actual destinations.

probably due to reclassification as higher or lower order roads. Despite this relatively small growth in lanes miles (due partly to the large existing network) VMT has grown at about 3.2% per year.

Other variables included in the model include state population, per capita income by state, and the cost per energy unit (million BTUs) of gasoline (US DOE, 1994).⁶ The latter was based on average rates in each state for each year adjusted to constant dollars. State population is from US DOC (1997a) and per capita income in real dollars is from US DOC (1997b). During development of the model various other demographic variables were examined. Many of these tend to have high collinearity with population, such as state driver and vehicle licensing rates. A variety of statistical approaches, discussed below, were estimated.

3.3. General modeling approach

The general modeling approach estimates models of the following form:

$$\log(\text{VMT}_{itr}) = c + \alpha_i + \sum_k \beta^k \log(X_{it}^k) + \lambda \log(\text{LM}_{itr,l}) + \varepsilon_{it}.$$

The parameters are defined as:

VMT_{itr}	VMT in state i , for year t , by road type r
c	constant term
α_i	fixed effect for state i , to be estimated
β^k	coefficients to be estimated (for demographic and other parameters)
λ	coefficient to be estimated for LM parameter
X_{it}^k	value of demographic and other variables for state, i , and time, t
$\text{LM}_{itr,l}$	proxy for cost of travel time (lane miles) by state, i , for year, t , for road type, r , lagged by l years
ε_{it}	random error term

The model is estimated with different road types as defined by U.S. DOT (1997c) and referenced above. Both VMT and lane mile data are analyzed for all road types except local roads.⁷ The data were further disaggregated by urban and rural classifications. Rural roads are defined as areas with a population below 5000, which might not strictly represent all areas usually considered rural. Some roads were obviously reclassified from rural to urban over the course of the time series.

When using lane miles as a proxy for travel cost it is necessary to lag the variable. This is needed to allow individual behavior to respond to changes in highway capacity. Hansen and Huang

⁶ Data for 1995 and 1996 were collected from the Petroleum Marketing Annual (U.S. DOE, 1997). These data do not include fuel taxes which were added from U.S. DOT (1997c).

⁷ Local roads make up the bulk of nationwide lane miles but relatively little of total VMT. Preliminary analysis including local roads showed they were not significant in inducing VMT. This is not particularly surprising since they are used primarily for access to destinations, not for major amounts of travel between destinations.

(1997) found that lags of about 2–4 years gave good results for their estimations. Another technique, discussed further below in the section on distributed lag models, is to use a model that captures both long run and short run lag effects. Long run lags should represent cumulative impacts that occur over time. Inclusion of only one lag would not capture all the impacts from multiple years.

The analysis is focused primarily on estimating the statistical significance and magnitude of the elasticity of VMT with respect to lane miles. An elasticity provides a measure of how a change in one variable (lane miles) results in a change in another response variable (VMT). For example, an elasticity of VMT with respect to lane miles of 0.5 would imply that a 1% increase in lane miles will result in a 0.5% increase in VMT. The elasticity is just the coefficient of the log of that variable, thus a logarithmic specification is used in the regression analysis. This is described simply as

$$= \frac{\partial \log(\text{VMT})}{\partial \log(\text{LM})} = \frac{\text{LM}}{\text{VMT}} \cdot \frac{\partial(\text{VMT})}{\partial(\text{LM})},$$

where λ is the elasticity and is also the estimated coefficient in the model.

Logarithmic transformations also minimize any heteroskedasticity in the cross-sectional data from combining states with large differences in size or population. The logarithmic transformation does not change the relative significance of the results compared to a linear formulation but does allow for an easier interpretation of the elasticity coefficients.

The model is specified as a “fixed effects” or dummy variable model (Judge et al., 1985). Essentially the model includes a dummy variable for each state and is estimated as an ordinary least squares (OLS) model. The inclusion of a dummy variable for each state allows unmeasured factors affecting the dependent variable that are associated with each state to be controlled for. The intercept coefficient for each state is independently fixed while the slope is estimated to be the same across states. That is, this model assumes that all states respond to lane mile increases (and changes in other exogenous variables) with the same behavior. An alternative formulation known as the random effects model would allow each state to have not only a different intercept coefficient but individual slope coefficients. Selected usage of the Hausman test rejected this as a reasonable hypothesis for this model (Judge et al., 1985).

The use of both population and lane miles as independent variables can cause a multi-collinearity problem. To correct this problem, lane miles per capita are used in the following models. This reduced the largest correlations which were for urban lane miles from high values above 0.95 to virtually no correlation. Interestingly the rural lane mile per capita variables have a higher correlation with population than when not calculated as per capita variables, but the level of correlation is still not a problem. Correlations for unlagged lane mile variables and per capita lane mile variables are shown in Table 1. The growth model discussed below further eliminates most problems with multicollinearity in the independent variables.

Alternatively, one could also estimate models with VMT per capita as the dependent variable while omitting population as an explanatory variable. The general results would not differ (see, for example, Table 8). The decision was made to regress on total VMT primarily because it allows a decomposition of population effects on total VMT growth. Many critics of the theory of induced travel attribute population growth and demographic change as being the only factors driving VMT growth. It is hoped that this analysis will resolve these criticisms of the theory.

Table 1
Correlation of lane miles with population

	Lane miles	Lane miles per capita
Total non-local lane miles	0.6607	-0.6176
Interstate lane miles	0.7941	-0.7463
Arterial lane miles	0.8007	-0.5903
Collector lane miles	0.5328	-0.5842
Urban interstate lane miles	0.9568	0.2343
Urban arterial lane miles	0.9712	0.1974
Urban collector lane miles	0.9615	-0.0806
Rural interstate lane miles	0.3883	-0.6198
Rural arterial lane miles	0.5151	-0.5857
Rural collector lane miles	0.4303	-0.5499

3.4. Model 1: aggregate data on road types

The initial model estimated sums the road types and VMT to determine whether total VMT (excluding VMT on local roads) can be explained by increases in total non-local lane miles (that is, the sum of interstate, arterial, and collector lane miles). The results, shown in Table 2, show that lane miles are a statistically significant determinant of VMT, except in the model with a 2 year lag. The elasticities are about 0.25, suggesting that a 0.25% increase in non-local VMT occurs for every 1% increase in non-local lane miles. There does not appear to be a clear trend suggesting that elasticities increase or decrease when lags are modeled, though the 2 year lag model is significant at the 90% level of confidence. The estimated coefficients take into account state specific

Table 2
Total VMT regressions^a

Lane miles are total non-local lane miles per capita	Dependent variable is log of total non-local VMT		
	(A)	(B)	(C)
LN (lane miles per capita)	0.287 (4.167)		
LN (lane miles per capita, 2 year lag)		0.166 (1.794)	
LN (lane miles per capita, 5 year lag)			0.258 (4.043)
LN (population)	1.074 (16.229)	0.989 (10.769)	1.207 (17.003)
LN (per capita income)	1.075 (27.341)	1.116 (25.805)	0.853 (17.879)
LN (cost per BTU of fuel)	-0.126 (-8.025)	-0.192 (-6.517)	-0.126 (-6.030)
Constant	-15.054 (-19.883)	-14.557 (-16.102)	-14.989 (-21.733)
R^2	0.898	0.876	0.891
N	650	550	400

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

effects which would include relative levels of congestion in different states. However, this analysis did not attempt to measure differences in induced travel effects due to relative levels of congestion (see Noland and Cowart, 1999 for an attempt to measure differences using data from metropolitan areas).

Population, per capita income, and gasoline cost all have the expected direction and are all highly significant. The population coefficient is generally about 1, suggesting that population growth translates into proportional VMT growth. The effect of growth in per capita income varies from about 0.85 to slightly over 1. The key point is that with population controlled for, and multicollinearity adjusted for, one gets a highly significant effect from the lane mile variable, suggesting that the hypothesis of induced demand cannot be rejected.

The fuel cost elasticities are low compared to other results in the literature that suggest a range of about 0.2–0.3. As will be seen in the other models discussed below, this varies between road types. The low elasticity values may reflect the fact that post-1984 data is used and gasoline prices have varied much less during this time period than before 1984. The values are also annual averages and do not reflect seasonal variability.

Disaggregation of the data into individual road types gives larger elasticities on those specific road types and shows where induced demand effects may be greatest. Table 3 presents models of interstate, arterial, and collector lane miles with the VMT for those road types as the respective dependent variables.

This model shows a stronger relationship between the various road types and VMT on those road types. All the non-lagged and 2 year lag models have statistically significant coefficients. Arterial lane miles are also significant in the 5 year lag model. One would expect interstates to generally have the highest elasticity coefficients since they would be most effective at reducing travel times. The results do not show a clear pattern between the different road types. For example, it is surprising that collector roads have a higher elasticity (0.892) than the interstate and arterial roads. This may be due to a strong relationship between new auto-dependent land development and new collector roads that serve that development.

3.5. *Model 2: simultaneous equation estimation*

Another approach takes advantage of the interrelationships between VMT on various road types to improve model estimation using contemporaneous correlation between error terms. Behaviorally, this assumes that a given amount of VMT on a specific road type will affect the amount of VMT on another road type. For example, if one assumes that individuals have a time budget for the amount of travel they undertake per day, then their allocation of VMT to different road types will be inter-related.⁸ A system of equations, one for each road type, can be estimated using Zellner's seemingly unrelated regression (see Pindyck and Rubinfeld, 1981 for a detailed derivation of the estimation procedure in matrix form).

⁸ Alternatively, one could analyze the impact of lane miles of one road type on VMT on another road type. For example, do more freeways generate additional VMT on arterial roads? This is a rich area for further research with this database, which has been suggested by several reviewers.

Table 3
VMT regressions by road type^a

Lane miles per capita are by road type	Dependent variable is log of VMT by road type								
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
LN (interstate lane miles per capita)	0.627 (10.129)								
LN (interstate lane miles 2 year lag, per capita)		0.549 (8.026)							
LN (interstate lane miles 5 year lag, per capita)			0.043 (0.547)						
LN (arterial lane miles, per capita)				0.632 (14.779)					
LN (arterial lane miles 2 year lag, per capita)					0.268 (5.366)				
LN (arterial lane miles 5 year lag, per capita)						0.167 (2.996)			
LN (collector lane miles, per capita)							0.892 (12.326)		
LN (collector lane miles 2 year lag, per capita)								0.542 (5.132)	
LN (collector lane miles 5 year lag, per capita)									0.149 (0.909)
LN (population)	1.376 (18.543)	1.374 (15.836)	1.123 (10.682)	1.243 (24.661)	1.069 (16.293)	1.249 (15.628)	1.180 (10.927)	0.968 (6.046)	0.569 (2.548)
LN (per capita income)	1.462 (26.969)	1.474 (23.602)	1.399 (16.357)	0.835 (19.216)	0.938 (17.766)	0.805 (12.250)	0.911 (11.846)	0.706 (7.477)	0.332 (2.276)
LN (cost per BTU of fuel)	-0.178 (-8.530)	-0.231 (-5.861)	-0.228 (-6.334)	-0.099 (-6.334)	-0.212 (-5.829)	-0.149 (-5.090)	-0.086 (-2.840)	-0.064 (-0.965)	0.018 (0.274)
Constant	-21.473 (-27.527)	-21.984 (-25.962)	-20.889 (-20.306)	-13.768 (-21.382)	-13.922 (-21.382)	-15.985 (-18.254)	-13.638 (-9.978)	-10.266 (-5.505)	-2.642 (-1.178)
R^2	0.908	0.885	0.844	0.869	0.815	0.817	0.538	0.324	0.112
N	650	550	400	650	550	400	650	550	400

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

The disturbance covariance matrix in this model is assumed to be non-diagonal because of the relationships between the equations. This technique produces lower standard errors by taking advantage of the contemporaneous correlation between the error terms. In other words, the error term associated with an equation estimated for a specific road type (e.g. urban interstates) is correlated with the error term for rural arterials. This information allows a more efficient estimator for the coefficients to be derived.

Results are shown in Table 4. Coefficient values for the lane mile parameters are generally larger and show increased statistical significance. Both the models with no lag and with the 2 year lag show that all increases in lane miles are related to an increase in VMT (all are statistically significant at the 95% confidence level). The no lag interstate lane mile coefficient shows an elasticity of 0.713, the arterial no lag model has an elasticity of 0.690, and the collector no lag model has an elasticity of 0.826. The elasticity values are smaller in the 2 year lag model. The elasticities are 0.567, 0.267 and 0.509 for interstates, arterials, and collectors, respectively. Other than for arterials, the 5 year lag model lane mile coefficients are not significant.

This model would seem to suggest the largest immediate and short-term (up to 2 years) effect from adding interstate and collector lane miles. On the other hand, while arterial lane miles seem to generate less VMT, the effect persists over a longer time period (at least up to 5 years). There may be some intuitive reasoning behind these results. First, new construction and expansion of interstates may result in large immediate effects from relatively large reductions in travel costs. Construction of collector lane miles may mirror the construction of new developments that they may serve, also generating some immediate increases in VMT. Arterials, on the other hand, may respond slower as land use patterns respond to lower travel costs on arterials. These are, of course, merely speculations as to what may be driving differences in the coefficient values, but do suggest areas where more detailed analysis could be pursued.

The other coefficients also show some interesting effects. The fuel cost coefficient is generally significant with a negative sign. It is largest for the interstate VMT models, somewhat lower for the arterial VMT models, and much lower for the collector VMT models. The longer distances travelled on interstates probably accounts for the larger elasticity of fuel costs with respect to interstate VMT. These trips may be more discretionary or have substitutes (such as shorter trips to local destinations). Collector roads, which are not used for longer distance travel show the smallest fuel cost elasticity, and may reflect the less discretionary travel involved in access to destinations.

The same elasticity difference is apparent with respect to per capita income. Per capita income generally has an elasticity greater than (or nearly equal to) 1 with respect to interstate VMT. Increases in income may result in more leisure travel (on interstates) and longer commuting distances (on interstates) as people move to more distant suburbs.

A further disaggregation of the data can be achieved by breaking out urban and rural VMT and lane miles for each road class. The simultaneous equation model for this set of six equations is shown in Table 5 with no lag and in Table 6 for a 5 year lag. The rural road categories have relatively high collinearity which may somewhat bias the results on these coefficients. The no lag model shows very large elasticities for all the lane mile variables. They range from a low of 0.325 for rural interstates up to 0.773 for rural collectors. The urban lane mile elasticities are all above 0.7. The 5 year lag model (Table 6) shows significance only for urban interstates and arterials and rural arterials. Surprisingly the rural interstate coefficient is negative, although it is below the 90%

Table 4
Seemingly unrelated regression by road type^a

Lane miles per capita are by road type	Dependent variable is log of VMT by road type								
	Model 1: no lag			Model 2: 2 year lag			Model 3: 5 year lag		
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
LN (interstate lane miles per capita)	0.713 (13.139)								
LN (arterial lane miles per capita)		0.690 (18.991)							
LN (collector lane miles per capita)			0.826 (12.177)						
LN (interstate lane miles 2 year lag, per capita)				0.567 (8.709)					
LN (arterial lane miles 2 year lag, per capita)					0.276 (5.720)				
LN (collector lane miles 2 year lag, per capita)						0.509 (5.023)			
LN (interstate lane miles 5 year lag, per capita)							0.064 (0.812)		
LN (arterial lane miles 5 year lag, per capita)								0.158 (2.848)	
LN (collector lane miles 5 year lag, per capita)									0.134 (0.816)
LN (population)	1.442 (20.423)	1.265 (25.442)	1.118 (10.613)	1.389 (16.329)	1.073 (16.402)	0.933 (5.943)	1.138 (10.834)	1.245 (15.578)	0.555 (2.486)
LN (per capita income)	1.439 (26.832)	0.832 (19.151)	0.901 (11.731)	1.467 (23.728)	0.936 (17.759)	0.706 (7.481)	1.388 (16.241)	0.807 (12.283)	0.335 (2.298)
LN (cost per BTU of fuel)	-0.174 (-8.348)	-0.097 (-5.586)	-0.086 (-2.844)	-0.229 (-5.824)	-0.212 (-5.834)	-0.065 (-0.981)	-0.225 (-6.253)	-0.149 (-5.102)	0.017 (0.265)
Constant	-17.238 (-23.135)	-13.802 (-23.988)	-13.655 (-11.007)	-21.719 (-28.951)	-13.781 (-19.811)	-10.348 (-6.172)	-20.105 (-22.446)	-15.388 (-20.165)	-3.094 (-1.525)
<i>N</i>	650	650	650	550	550	550	400	400	400

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

Table 5
Seemingly unrelated regression by road type and urban/rural area, no lag model^a

Lane miles are by road type per capita	Dependent variable is log of VMT by road type					
	Urban interstates	Urban arterials	Urban collectors	Rural interstates	Rural arterials	Rural collectors
LN (urban interstate lane miles, per capita)	0.738 (29.542)					
LN (urban arterial lane miles, per capita)		0.712 (29.225)				
LN (urban collector lane miles, per capita)			0.749 (19.196)			
LN (rural interstate lane miles, per capita)				0.325 (6.526)		
LN (rural arterial lane miles, per capita)					0.610 (16.236)	
LN (rural collector lane miles, per capita)						0.773 (10.612)
LN (population)	1.391 (22.281)	1.119 (20.475)	1.084 (8.725)	0.620 (6.958)	0.979 (15.327)	0.809 (6.440)
LN (per capita income)	1.398 (24.000)	0.731 (14.686)	1.035 (9.092)	1.639 (25.112)	1.162 (22.119)	0.732 (8.485)
LN (cost per BTU of fuel)	-0.144 (-6.314)	-0.077 (-3.823)	-0.006 (-0.135)	-0.199 (-7.635)	-0.026 (-1.261)	-0.134 (-3.934)
Constant	-20.716 (-24.401)	-10.517 (-15.274)	-13.894 (-8.979)	-14.719 (-15.141)	-14.113 (-19.523)	-8.251 (-5.528)
<i>N</i>	632	632	632	632	632	632

^aNote that state specific constants are omitted for brevity. T-stats are in parentheses.

level of significance. Overall these results demonstrate a strong induced travel effect with some differentiation between different road types that merits further investigation.

3.6. Model 3: distributed lags

The previous models suggest that the short-term elasticity of lane miles with respect to VMT is greater in the first year than for subsequent years. However, in theory, one would expect a cumulative impact where the increase in VMT adjusts over time. The previous models only estimate a single lag and do not take into account this cumulative impact.

One technique for estimating a long-term elasticity is a distributed lag model using a lagged-dependent variable (Johnston, 1984). This technique, known as partial adjustment, has been applied to shocks in the price of gasoline and its effect on consumption over time. In the short run, gasoline consumption is reduced by cancellation of some trips and shorter trips, while in the long run fuel efficiency is increased. The case of increased road capacity has some parallels in that the adjustment process is hypothesized to take place over time with both short run and long run effects. This technique is relatively simple to apply but does assume that the adjustment process from the other independent variables, population, personal income, and gasoline prices, is the same as for lane mileage. It also assumes an exponential pattern to the lag, which may be fairly realistic in this case.

Table 6
Seemingly unrelated regression by road type and urban/rural area, 5 year lag model^a

Lane miles are by road type, lagged 5 years, per capita	Dependent variable is log of VMT by road type					
	Urban interstates	Urban arterials	Urban collectors	Rural interstates	Rural arterials	Rural collectors
LN (urban interstate lane miles, lagged 5 years, per capita)	0.141 (2.099)					
LN (urban arterial lane miles, lagged 5 years, per capita)		0.097 (2.732)				
LN (urban collector lane miles, lagged 5 years, per capita)			0.004 (0.049)			
LN (rural interstate lane miles, lagged 5 years, per capita)				-0.098 (-1.842)		
LN (rural arterial lane miles, lagged 5 years, per capita)					0.336 (3.322)	
LN (rural collector lane miles, lagged 5 years, per capita)						0.117 (0.620)
LN (population)	1.795 (13.181)	1.302 (13.212)	2.274 (8.436)	0.265 (2.414)	1.124 (7.005)	-0.500 (-1.799)
LN (per capita income)	1.476 (12.320)	0.720 (8.505)	0.297 (1.286)	1.354 (14.949)	0.871 (7.484)	0.508 (2.833)
LN (cost per BTU of fuel)	-0.365 (-6.613)	-0.226 (-5.846)	-0.120 (-1.127)	-0.123 (-3.089)	-0.008 (-0.158)	-0.001 (-0.011)
Constant	-30.664 (-19.394)	-16.278 (-15.097)	-26.639 (-9.625)	-9.511 (-9.194)	-14.369 (-10.310)	8.662 (3.409)
<i>N</i>	387	387	387	387	387	387

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

The specification for the distributed lag model is

$$\log(\text{VMT}_{itr}) = \gamma \log(\text{VMT}_{i(t-1)r}) + c + \alpha_i + \sum_k \beta^k \log(X_{it}^k) + \lambda \log(\text{LM}_{itr}) + \varepsilon_{it}.$$

All variables are as defined previously. The only difference is the lagged VMT term with a coefficient γ .

Short run elasticities of lane miles with respect to VMT correspond to the coefficient on the lane mile variable, λ . Long run elasticities can be calculated as

$$\eta = \frac{\lambda}{1 - \gamma}.$$

The adjustment parameter, γ , is the coefficient on the lagged VMT variable as defined above (Johnston, 1984).

Distributed lag models were estimated with both aggregate VMT and lane mile data and with simultaneous equations disaggregated by road type. Table 7 shows two aggregate distributed lag models. One problem with including lagged VMT is that it is collinear with population and lane miles. The first model in Table 7 includes population despite this problem. The second model removes population and has VMT per capita as the dependent variable. The coefficient estimates

Table 7
Total VMT regression (distributed lag models^a)

Dependent variable	LN (non-local VMT)	LN (non-local VMT per capita)
LN (lane miles per capita)	0.119 (2.680)	0.128 (4.250)
LN (VMT lagged one year)	0.674 (27.226)	–
LN (VMT per capita lagged one year)	–	0.690 (27.928)
LN (population)	0.304 (5.851)	–
LN (per capita income)	0.376 (9.982)	0.321 (8.479)
LN (cost per BTU of fuel)	–0.048 (–4.017)	–0.049 (–4.124)
Constant	–4.316 (–6.734)	–3.995 (–8.927)
R^2	0.953	0.913
N	600	600
Short run elasticity	0.119	0.128
Long run elasticity	0.365	0.413

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

do not appear to be affected by the collinearity. The elasticities for the two estimated equations are generally similar. Long run elasticities are substantially larger than the short run elasticities as one would expect.

Tables 8 and 9 present two similar analyses using a simultaneous equation framework. Table 8 omits population as an independent variable and uses VMT per capita as the dependent variable. Table 9 includes population and VMT as the dependent variable. Lagged VMT is highly collinear with population, however the similarity of the coefficients with and without the population variable suggests that multi-collinearity is not creating a large bias in the model in Table 9. Both these models have large long run elasticities in the range 0.7–1.0 (exceeding 1.0 for collector roads). Short run elasticities are also substantial, in the range of 0.2–0.5. Short run elasticities are larger for urban road categories than for rural roads, perhaps due to more congestion in urban areas. Long run elasticities are about the same for both urban and rural roads. This would suggest that capacity increases are triggering fundamental land use changes that increase VMT in both urban and rural areas. Similar to some of the other models, collector roads again have relatively large elasticities (exceeding 1.0 for the long run elasticities). This may imply a strong relationship between adding collector roads and subsequent new development that generates new trips. Rural interstates have the smallest short run elasticities. This suggests that long distance travel does not respond as quickly to capacity increases (or that rural interstates are less congested).

Population is also a significant factor with larger coefficients in the urban equations. Per capita income is significant across equations with smaller coefficients on collector roads. This may suggest some base level of travel that is not related to income while the use of interstates and arterial roads is affected more by income levels. Gasoline price coefficients are generally small.

Table 8
Seemingly unrelated regression by road type and urban/rural area (distributed lag model, per capita VMT^a)

Lane miles are by road type per capita	Dependent variable is log of VMT per capita by road type					
	Urban interstates	Urban arterials	Urban collectors	Rural interstates	Rural arterials	Rural collectors
LN (VMT per capita, lagged one year)	0.492 (19.878)	0.379 (13.303)	0.529 (20.056)	0.675 (30.810)	0.487 (16.753)	0.653 (21.715)
LN (urban interstate lane miles, per capita)	0.427 (16.784)					
LN (urban arterial lane miles, per capita)		0.491 (17.794)				
LN (urban collector lane miles, per capita)			0.512 (14.990)			
LN (rural interstate lane miles, per capita)				0.258 (9.204)		
LN (rural arterial lane miles, per capita)					0.362 (11.382)	
LN (rural collector lane miles, per capita)						0.422 (8.774)
LN (per capita income)	0.714 (11.730)	0.474 (10.269)	0.404 (4.965)	0.464 (9.086)	0.601 (11.941)	0.272 (4.003)
LN (cost per BTU of fuel)	-0.085 (-4.245)	-0.049 (-2.403)	-0.027 (-0.685)	-0.065 (-3.609)	-0.036 (-1.847)	-0.036 (-1.181)
Constant	-7.532 (-10.402)	-5.448 (-9.818)	-4.092 (-4.369)	-4.942 (-8.864)	-7.162 (-12.165)	-3.440 (-4.915)
<i>N</i>	583	583	583	583	583	583
<i>Long run elasticities</i>						
Lane miles per capita	0.841	0.791	1.087	0.794	0.706	1.216
Personal income	1.406	0.763	0.858	1.428	1.172	0.784
Gasoline price	-0.167	-0.079	-0.057	-0.200	-0.070	-0.104

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

They are insignificant for collector roads, again suggesting that base VMT is unaffected by gasoline prices.

These results are similar to the results of Tables 5 and 6. However, the previous method that incorporated only one 5 year lag did not fully account for the cumulative impact of long-term effects as this method does. The distributed lag models also have smaller coefficient values on the demographic variables since they are short run effects. The long run elasticities for these correspond fairly closely with the estimates in Tables 5 and 6.

One criticism of distributed lag models is that they are highly unstable in providing good predictions. Almon (1989) suggests a procedure for comparing the actual values with predicted values over the sampling period. Forecasts of VMT are calculated for each year using the data for each year plus a forecasted lagged value of VMT. Fig. 3 shows a very good fit for the model in Table 9 between predicted total VMT and actual total VMT. Rural and urban collector predictions are the least stable (comparatively) but represent a minor fraction of the total VMT.

Table 9
Seemingly unrelated regression by road type and urban/rural area (distributed lag model^a)

Lane miles are by road type per capita	Dependent variable is log of VMT by road type					
	Urban interstates	Urban arterials	Urban collectors	Rural interstates	Rural arterials	Rural collectors
LN (VMT, lagged one year)	0.464 (17.981)	0.370 (12.915)	0.528 (20.251)	0.669 (30.774)	0.485 (16.658)	0.649 (21.658)
LN (urban interstate lane miles, per capita)	0.439 (17.136)					
LN (urban arterial lane miles, per capita)		0.498 (18.002)				
LN (urban collector lane miles, per capita)			0.513 (15.097)			
LN (rural interstate lane miles, per capita)				0.234 (6.473)		
LN (rural arterial lane miles, per capita)					0.369 (10.621)	
LN (rural collector lane miles, per capita)						0.407 (6.726)
LN (population)	0.625 (9.561)	0.652 (10.279)	0.690 (6.645)	0.250 (4.057)	0.509 (8.159)	0.307 (2.950)
LN (per capita income)	0.748 (12.227)	0.489 (9.788)	0.328 (3.545)	0.531 (9.858)	0.630 (11.450)	0.313 (4.387)
LN (cost per BTU of fuel)	-0.085 (-4.191)	-0.047 (-2.308)	-0.019 (-0.478)	-0.064 (-3.590)	-0.035 (-1.746)	-0.033 (-1.106)
Constant	-9.149 (-9.479)	-5.908 (-7.864)	-6.219 (-4.907)	-4.702 (-6.574)	-7.349 (-10.093)	-3.350 (-2.786)
N	583	583	583	583	583	583
<i>Long run elasticities</i>						
Lane miles per capita	0.819	0.790	1.087	0.707	0.717	1.160
Population	1.166	1.035	1.462	0.755	0.988	0.875
Personal income	1.396	0.776	0.695	1.604	1.223	0.892
Gasoline price	-0.159	-0.075	-0.040	-0.193	-0.068	-0.094

^a Note that state specific constants are omitted for brevity. T-stats are in parentheses.

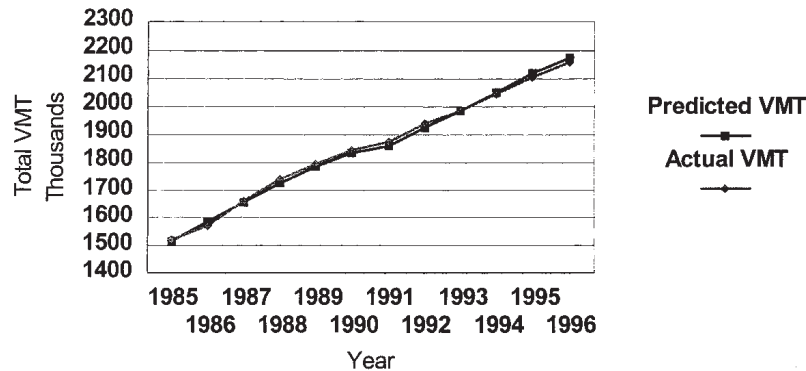


Fig. 3. Comparison of predicted and actually VMT using distributed lag model.

3.7. Model 4: growth model

A technique for eliminating the multicollinearity between the independent variables is estimation of a growth or difference model. The specification estimates the percent growth in VMT as a function of percent growth in lane miles and the other independent variables. Correlation is essentially eliminated as a problem between the lane mile and population variables. Table 10 shows the correlations between the difference in lane miles (by road type) and the population difference variables. This eliminates one potential problem with the previous model specifications. The model can be specified as the difference between logs of the variables:

Table 10
Correlations between lane mile and population growth variables

Correlation coefficients	Population growth
Growth in lane miles, urban interstates	0.1966
Growth in lane miles, urban arterials	0.1591
Growth in lane miles, urban collectors	0.1366
Growth in lane miles, rural interstates	−0.0325
Growth in lane miles, rural arterials	0.0643
Growth in lane miles, rural collectors	−0.0361

Table 11
Seemingly unrelated regression by road type and urban/rural area (growth model^a)

Dependent variable is growth in VMT by road type	Urban interstates	Urban arterials	Urban collectors	Rural interstates	Rural arterials	Rural collectors
Growth in urban interstate lane miles	0.647 (18.936)					
Growth in urban arterial lane miles		0.642 (18.083)				
Growth in urban collector lane miles			0.780 (18.916)			
Growth in rural interstate lane miles				0.560 (11.037)		
Growth in rural arterial lane miles					0.578 (10.229)	
Growth in rural collector lane miles						0.646 (7.502)
Growth in population	0.922 (2.988)	1.124 (3.436)	−0.207 (−0.353)	0.197 (0.745)	0.425 (1.307)	0.574 (1.235)
Growth in per capita income	0.569 (5.247)	0.307 (2.655)	−0.059 (−0.284)	0.591 (6.331)	0.513 (4.473)	0.196 (1.193)
Growth in cost per BTU of fuel	−0.035 (−1.811)	−0.001 (−0.051)	0.409 (1.095)	−0.013 (−0.796)	0.001 (0.042)	0.001 (0.027)
Constant	0.009 (0.658)	0.015 (1.037)	0.012 (0.467)	0.029 (2.501)	0.009 (0.625)	0.004 (0.200)
<i>N</i>	583	583	583	583	583	583

^aNote that state specific constants are omitted for brevity. T-stats are in parentheses.

$$\log(\text{VMT}_{itr}) - \log(\text{VMT}_{i(t-1)r}) = c + \alpha_i + \sum_k \beta^k \left(\log(X_{it}^k) - \log(X_{i(t-1)}^k) \right) + \lambda(\log(\text{LM}_{itr}) - \log(\text{LM}_{i(t-1)r})) + \varepsilon_{it}.$$

This corresponds to percent growth in the dependent and independent variables.

The growth model also allows the testing of changes in lane miles between different years and how that might affect current changes in VMT. This was done for lags between two and up to five years, but no significant results were found. Table 11 shows results for a fixed effect difference model estimated as a set of seemingly unrelated regressions. This is done with no lag which was the only formulation that provided a significant effect. The results are consistent with previous specifications and add support to the robustness of the relationships.

4. Importance of the induced demand effect

While the above results clearly demonstrate that induced travel is a likely outcome of capacity expansion, many critics have asserted that demographic factors are still the overwhelming factor in driving increases in VMT. For example, Heanue (1998) uses the elasticity values generated by SACTRA (1994) and Hansen (1995) and calculates that capacity expansion accounts for somewhere between 6% and 22% of VMT growth. The conclusion reached by the author is that while it is necessary to account for this in investment decisions and cost-benefit analysis the overall importance of induced demand is minor. One can certainly argue whether a factor that may cause up to 22% of VMT growth should be considered minor, but arguments of this type tend to obfuscate the issue. The key question is the relative social costs and benefits of the additional VMT.

To address this question, the relative contribution of lane mile additions to VMT growth, relative to other factors is analyzed for some of the models above. The models estimated in Table 5 (fixed effects SURE model), Table 9 (distributed lag model), and Table 11 (growth model) are forecasted out by 5 years (from 1996 to 2001) for three different scenarios. The first scenario assumes that the growth rate in demographic variables (personal income, population, and gasoline costs) and lane miles by road type follows historical trends between 1992 and 1996. A second scenario assumes growth only in lane miles and no growth in the demographic variables while the third assumes no growth in lane miles but historical growth in the demographic variables.

Results for each of the models are shown in Tables 12–14. Note that for the distributed lag model an iterative process to generate new lag values was needed to calculate the forecast value. The full results are displayed in Fig. 4 and in Table 13.

These results are quite interesting. First, it is clear that if lane mile growth is frozen, then demographic growth continues to drive increases in total VMT. The opposite is also true that if lane mile growth continues but demographic growth is frozen, VMT still continues to grow but not as much. The annualized rate of total VMT growth (assuming historical growth in both variables) ranges from 2.65% to 2.92% for the three models. With only lane mile growth it is ranges from 0.79% to 1.73% annualized VMT growth over 5 years. With just demographic growth the range is from 1.89% to 2.31% annualized VMT growth over 5 years. The difference

Table 12
Forecast using model in Table 5 (SURE model)

	VMT forecast in 2001						Total VMT	Annualized growth rate in VMT
	VMT urban interstates	VMT urban arterials	VMT urban collectors	VMT rural interstates	VMT rural arterials	VMT rural collectors		
<i>Historic growth in demographic and lane mile variables</i>								
	616,236	759,347	147,273	262,883	424,933	250,887	2,461,559	2.68%
Forecasted growth rate	3.97%	2.46%	2.89%	2.49%	2.42%	0.86%	2.68%	
<i>Demographic growth only</i>								
	583,396	717,622	138,810	263,236	421,576	253,180	2,377,820	1.97%
Forecasted growth rate	2.84%	1.31%	1.68%	2.52%	2.26%	1.04%	1.97%	
<i>Lane mile growth only</i>								
	548,074	710,181	134,396	230,600	382,622	238,341	2,244,213	0.79%
Forecasted growth rate	1.56%	1.10%	1.02%	-0.16%	0.29%	-0.17%	0.79%	

between this latter growth and the scenario with growth in all the variables can be attributed to additional capacity. Therefore, if capacity is frozen at current levels, annualized VMT growth after 5 years will be between 0.61% and 0.76% less than compared to current trends. This also indicates a fairly robust effect for the different model specifications. The distributed lag model forecast (see Table 13) shows both a short run (0.65% less in the first year) and long run effect (0.76% less after five years). For the distributed lag model about 28.7% (0.76/2.65) of total VMT growth can be attributed to growth in capacity over 5 years. In the first year induced demand accounts for 23.7% (0.65/2.74) of VMT growth in this model. For the model in Table 5 induced demand causes 21% of VMT growth and for the model in Table 11 it accounts for 26.5% of VMT growth.

The induced growth in VMT also has a substantial effect on total vehicle emissions. If we assume that 28% of the growth rate in VMT is attributable to lane miles (as estimated in the distributed lag model), this amounts roughly to about 43 million metric tons of additional annual carbon emissions in the year 2012. This is nearly half of the targeted carbon emissions reduction estimated for the US. Climate Change Action Plan of 90 million metric tons of carbon (by 2010). It is also equivalent to a policy of increasing the light duty vehicle fleet efficiency (for gasoline) by about 2.5% annually between 1999 and 2012 to over 47 miles per gallon. This would be virtually impossible to implement even with the immediate introduction of new fuel efficient vehicle technologies.⁹

This estimate of carbon emissions does not account for changes in levels of congestion and traffic flow dynamics that may also affect emissions. Emissions of criteria air pollutants (NO_x, CO,

⁹ These estimates are based on forecasts in US DOE/EIA (1998). The VMT forecasts in this report are generally considered conservative by EPA which uses a 2.3% annual growth rate rather than EIA's annual growth rate of 1.6%. Reductions in a higher growth rate would give larger emissions benefits.

Table 13
Forecasts using model in Table 9 (distributed lag model)

	VMT forecast in 2001						TOTAL VMT	Annualized growth rate in VMT
	VMT urban interstates	VMT urban arterials	VMT urban collectors	VMT rural interstates	VMT rural arterials	VMT rural collectors		
<i>Historic growth in demographic and lane mile variables</i>								
1997	530,406	691,021	131,473	237,934	387,767	242,383	2,220,984	
1998	551,137	709,297	135,652	243,543	397,726	244,491	2,281,846	2.74%
1999	571,006	727,704	140,090	249,278	407,383	246,618	2,342,078	2.69%
2000	590,887	746,539	144,768	255,143	417,009	248,749	2,403,096	2.66%
2001	611,240	765,949	149,712	261,149	426,748	250,890	2,465,688	2.65%
Forecasted growth rate	3.61%	2.61%	3.30%	2.35%	2.42%	0.87%	2.65%	
<i>Demographic growth only</i>								
1997	527,154	685,774	130,515	237,979	387,408	242,603	2,211,433	
1998	542,720	696,461	133,014	243,660	396,795	245,075	2,257,727	2.09%
1999	556,215	706,084	135,242	249,482	405,743	247,656	2,300,422	1.99%
2000	568,843	715,367	137,298	255,442	414,559	250,293	2,341,802	1.93%
2001	581,198	724,599	139,263	261,544	423,404	252,968	2,382,976	1.89%
Forecasted growth rate	2.47%	1.39%	1.64%	2.39%	2.25%	1.05%	1.89%	
<i>Lane mile growth only</i>								
1997	524,646	685,558	130,669	236,112	383,682	241,480	2,202,147	
1998	536,455	696,060	133,556	238,587	387,383	242,091	2,234,132	1.45%
1999	545,570	705,578	136,383	240,237	389,600	242,326	2,259,694	1.30%
2000	553,502	714,861	139,225	241,323	391,094	242,299	2,282,304	1.20%
2001	560,990	724,213	142,148	242,028	392,249	242,101	2,303,729	1.13%
Forecasted growth rate	1.69%	1.38%	2.13%	0.62%	0.55%	0.06%	1.13%	

Table 14
Forecasts using model in Table 11 (growth model)

	VMT forecast in 2001						Total VMT	Annualized growth rate in VMT
	VMT urban interstates	VMT urban arterials	VMT urban collectors	VMT rural interstates	VMT rural arterials	VMT rural collectors		
<i>Historic growth in demographic and lane mile variables</i>								
	605,338	770,554	153,890	276,134	423,526	261,842	2,491,285	2.92%
Forecasted growth rate	3.60%	2.76%	3.80%	3.50%	2.35%	1.73%	2.92%	
<i>Demographic growth only</i>								
	578,081	733,393	146,235	276,669	420,257	263,412	2,418,047	2.31%
Forecasted growth rate	2.65%	1.75%	2.74%	3.54%	2.19%	1.85%	2.31%	
<i>Lane mile growth only</i>								
	562,111	719,381	155,525	261,885	399,913	252,046	2,350,861	1.73%
Forecasted growth rate	2.08%	1.36%	4.02%	2.41%	1.19%	0.95%	1.73%	

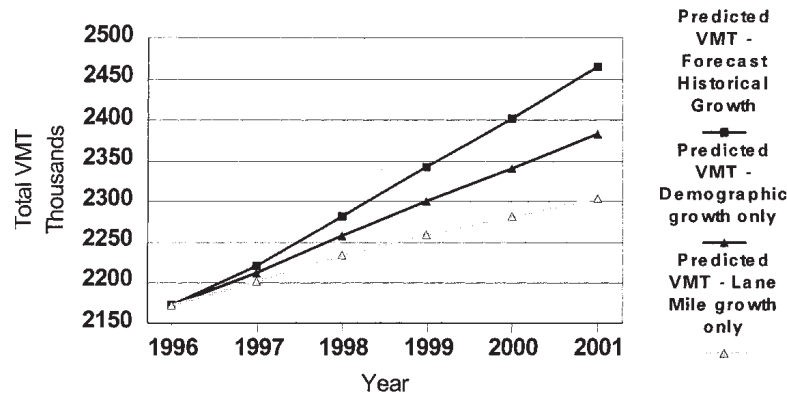


Fig. 4. Forecast of VMT with demographic and lane mile effects using distributed lag model.

and HC) tend to be more sensitive to these dynamics than carbon emissions. A more detailed analysis would look at changes in these dynamics due to exogenous growth in VMT not related to induced effects. However, it is also possible that relative traffic flow dynamics will be equally bad but with more traffic if additional capacity is built.

Overall, these results suggest that if the induced travel effect is accounting for a quarter of VMT growth, that this is a highly significant effect that needs to be measured in any defensible benefit cost analysis or travel demand modeling exercise.

5. Conclusions

The results of the analyses presented clearly demonstrate that the hypothesis of induced demand cannot be rejected. Increased capacity clearly increases vehicle miles of travel beyond any short run congestion relief that may be obtained. The methods employed all found statistically significant relationships between lane miles and VMT. While other factors, such as population growth, also drive increases in VMT, capacity additions account for about one quarter of this growth. This contribution to VMT growth has significant impacts on various environmental goals. For example, increasing US highway capacity at historical rates may result in up to 43 million metric tons of carbon emissions compared to a complete freeze on adding additional lane miles. Constructing new lane miles at half the current rate might reduce carbon emissions proportionally.

The different statistical approaches estimated gave a range of values for elasticity estimates. In general, more disaggregate data by road type led to relatively greater elasticity values for VMT. This is not a surprising result as many countervailing effects may be present in a more aggregate analysis and the simultaneous equations may be picking up diversion effects between road categories. Hansen and Huang's (1997) study found higher elasticities (up to 0.9) than the aggregate analysis presented here which may be due to the more localized data for specific California counties and metropolitan areas that they analyzed.

Another general effect is that urban roads have a greater relationship to VMT growth than smaller rural roads. This is not too surprising since these roads are probably more congested than

those in rural areas and would be currently suppressing some growth in traffic if they are congested. Also, in general, the lagged models with one lag term show less significance and smaller coefficients than the unlagged model. This is consistent with an exponential lag function as modeled with the distributed lag model. Cumulative long-term elasticities are greater than short run elasticities, as would be expected.

One surprising result is that collector roads often had a larger elasticity value than interstates and arterials. While this cannot be clearly explained it may be due to new developments that are built in conjunction with new collector road capacity.

The selection of estimation procedure can produce very different results. The use of fixed effects significantly reduced the level of significance compared to modeling without fixed effects (results are not shown). The latter specification would be inappropriate, but is commonly used by many practitioners. The ability to use simultaneous equations and fixed effects seems to provide robust results that take advantage of the statistical properties of the data.

Recognition of induced travel effects has several major policy implications. The major question is whether the induced growth in VMT is beneficial or not. There may be some benefits to providing mobility and increasing access to undeveloped land, however, this must be weighed against the environmental and social costs associated with increases in VMT, road construction, and land development. This latter is a major issue with regard to urban development and the debate over relatively more compact versus sprawling development patterns. The ability of planners to answer these questions is hampered by travel demand forecasting techniques that cannot adequately model these impacts at either the regional or project specific level (although new innovations and techniques are beginning to be used). The other implication is that building more road capacity will, in the long run, not solve congestion problems. While the results derived here do not strictly prove a causal relationship between lane miles and VMT, these results still strongly suggest that induced demand effects are real and need to be considered both by planners and policy makers at both the regional and national level.

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TxDot Highway Construction
And The
Barton Springs Salamander

U.S. Fish and Wildlife Service: Endangered Species Act, Section 7, Informal Consultation (# 2-15-97-I-317) with Federal Highway Administration and Texas Department of Transportation

Highway Construction:

US 290/SH71 (Industrial Oaks to Williamson Creek) CSJ: 0113-09-13-020

**Mopac (Loop 1) (0.3 mi. E. of Industrial Oaks to 0.3 mi. E. of Brodie Lane)
CSJ: 0113-09-051**

The purpose of this white paper is to clarify the U.S. Fish and Wildlife Service's (Service) position on the effects of the subject construction projects on the federally listed Barton Springs salamander. The Federal Highway Administration (FHWA) and Texas Department of Transportation (TxDot) have requested that the Service concur with their determination of "not likely to adversely affect the Barton Springs salamander" on the two highway improvement projects along US290/SH71. As part of the ongoing informal consultation, the Service has requested two measures that would be necessary for concurrence with this determination. First, the Service has requested that the water quality improvement structures (wet pond at Industrial Oaks and grassy swales on fly-over) be monitored to determine their effectiveness at reducing pollutant loading to the aquifer. The second request was for the purchase of land on the recharge zone of the Barton Springs segment of the Edwards Aquifer to reduce the post-project impervious cover to 20% or less.

The TxDot has agreed to monitor the water quality structures for effectiveness. The details for monitoring will be worked out jointly among the FHWA, TxDot, and the Service. The Barton Springs Edwards Aquifer Conservation District (BS/EACD), the University of Texas Center for Water Research, and the Texas Natural Resources Conservation Commission (TNRCC) may be asked to help establish design criteria for this monitoring effort.

The FHWA and TxDot have requested the Service to provide the rationale and justification for land purchase to offset the post-project impervious cover. The remainder of this paper will address the Service's rationale for asking that the long-term impacts of impervious cover be offset with recharge land purchased and preserved.

In order to understand the potential effects of increased impervious cover on the water quality of the Barton Springs Segment of the Edwards Aquifer the following discussion is provided. This discussion provides the basis for our believe that the highway projects, as currently being constructed, would have a long-term adverse affect on the Barton Springs salamander.

Groundwater Flow Patterns: Flow patterns show that water from the projects recharges the Edwards Aquifer and discharge at Barton Springs.

There is a strong scientific consensus, based on studies of groundwater flow patterns, on the general direction of flow within the Barton Springs Segment of the Edwards Aquifer. It is apparent that the water running off of the subject highway projects will contribute to the water quality at Barton Springs. The subject highway projects are located in the upper portions of the recharge zone for Williamson Creek. Slade (et. al. 1985) proposed a groundwater flow model for the Barton Springs Segment of the Edwards Aquifer. They attributed 6% of the water being discharged at Barton Springs originated in the Williamson Creek watershed.

The preliminary results from a groundwater tracing study conducted by the Barton Springs/Edwards Aquifer Conservation District and the City of Austin also gives some indication of the potential effect of the subject projects on water quality at Barton Springs (Nico Hauwert BS/EACD, personal communication). The first indication from this study is that the runoff from Williamson Creek does discharge at Barton Springs. The second indication of the potential effect is the travel time of water through the aquifer. The tracers were injected in various portions of the recharge zone. The dye tracer injected in Williamson Creek (below the subject projects) arrived at Barton Springs within 18 hours in heavy concentrations, indicating a direct flow path.

Concentrations of the tracer dye at the discharge springs rapidly dropped from high concentrations to very low concentrations. Consequently, the tracer concentrations became unmeasurable within a few days or remained in the low parts per billion ranges for the duration of the three months of monitoring (Hauwert, Johns, and Aley 1998, in progress). These results suggest that it could be difficult to detect the residue of hazardous materials released into the system using conventional grab sampling.

Not all of the highway runoff may be recharged to the aquifer because some of the water remains in the stream. However, a portion of the highway runoff from the subject projects probably reaches Barton Springs quickly and also may contribute to long-term degradation of the water quality of the aquifer. The potential for water from highway runoff to affect water quality is supported by sound scientific information.

Water Quality: Long-term degradation of the water quality at Barton Springs will result from the increase in impervious cover from these highway projects.

Increases in impervious cover and human population density are associated with large

increases in the loading rates of water-quality constituents. Within the Barton Springs Segment of the Edwards Aquifer, increases have been observed in water-quality constituents such as total suspended solids, biological oxygen demand, total organic carbon, nitrate nitrogen, ammonia nitrogen, kjeldahl nitrogen, phosphate, copper, iron, lead, zinc, fecal coliform, and fecal streptococci (City of Austin 1990). In other areas, increases in impervious cover exceeding 10% have been associated with replacement of sensitive aquatic life populations, reduction in stream biodiversity, stream warming, and channel instability (Schueler 1994).

Increases in water-quality constituents, such as total suspended solids, biological oxygen demand, total organic carbon, nitrate nitrogen, phosphorus, oil and grease, copper, iron, lead, and zinc, are also associated with greater traffic on roadways (Barrett et. al. 1995). The mean and median concentration of lead in the roadway runoff exceeded the EPA action limit in two of the three sites monitored. The increased levels of these contaminants are not limited to the first flush of the rainfall event, but appear to be continuously present in the runoff.

The water quality at Barton Springs is based on samples collected about two times a year by the U.S. Geological Survey (USGS). The samples are analyzed for a wide range of constituents but does not include some organic analysis such as oil and grease, total petroleum hydrocarbons, semi-volatiles, or phenolics (USGS 1996). The City of Austin also collects periodic water samples from Barton Springs. The City of Austin has almost continuously measured pH, conductivity, dissolved oxygen, temperature, and turbidity at the main Barton Spring since April 1994. The effect of some human impact is evidenced by the consistent presence of tetrachloroethylene measured in the late 1980's and early 1990's, as well as the presence of heavy metals, such as arsenic, cadmium, copper, lead, nickel, and zinc (City of Austin 1997).

The USGS sampled about 35 wells for inorganics and bacteria from 1978 to 1983 (Slade et al. 1986). Water quality sampling has been performed annually by the USGS at 15 wells and two springs for basic chemistry, nutrients, organic carbon, and volatile organics since 1986 (City of Austin 1997). The BS/EACD has sampled 22 wells and springs in 1990 and 1993, and sampled an additional 13 wells in 1994 for a wide range of constituents, including basic chemistry, nutrients, organic carbon, total metals, indicator bacteria, and some pesticides (Hauwert and Vickers 1994, Hauwert and Vickers 1996). Petroleum hydrocarbons, total suspended solids, and dissolved metals were analyzed in the 1993 and 1994 samples. The BS/EACD also samples about 70 wells and springs per year and analyzes these for basic constituents and indicator bacteria. The City of Austin, Texas Department of Health, and Texas Water Development Board collects or has collected additional water-quality data. TNRCC oversees the monitoring of wells associated with numerous accidental spill sites in the Barton Springs segment.

Higher concentrations of petroleum hydrocarbons, indicator bacteria, trace metals, and select pesticides were present in wells and springs of the urban northern portion,

especially along Highway 290, when compared with the rural southern portion. Elevated levels of nitrate nitrogen have been measured in a number of wells along Brodie Lane on the recharge zone. The levels of nitrate nitrogen are generally higher in wet periods than in dry periods.

Barton Springs Salamander: Water quality degradation has the potential to negatively impact the Barton Springs salamander.

The Barton Springs salamander is entirely aquatic and neotenic (it does not metamorphose into a terrestrial form and retains its bright red external gills throughout life) and depends on a constant supply of clean, flowing water from Barton Springs. The primary threat to the Barton Springs salamander is degradation of the spring water quality resulting from urban expansion over the Barton Springs watershed (including roadway, residential, commercial, and industrial development) (O' Donnell 1997).

The very restricted range of the Barton Springs salamander makes this species especially vulnerable to acute and/or chronic groundwater contamination. Since the salamander is fully aquatic, there is no possibility for escape from contamination or other threats to its habitat. A single incident (such as a contaminant spill) has the potential to eliminate the entire species and/or its prey base. Crustaceans, particularly amphipods, on which the salamander feeds are especially sensitive to water pollution (Mayer and Ellersieck 1986, Burton and Ingersoll 1994, Phipps et al. 1995).

Research indicates that amphibians, particularly their eggs and larvae, are sensitive to many pollutants, such as heavy metals; certain insecticides, organophosphates, nitrite, salts, and petroleum hydrocarbons (Harfenist et al. 1989). The health of amphibians can suffer from exposure to pollutants (Harfenist et al. 1989). Because of their semipermeable skin, the development of their eggs and larvae in water, and their position in the food web, amphibians can be exposed to waterborne and airborne pollutants in their breeding and foraging habitats. Pollutants may also change the quality and quantity of amphibian food and habitat (Bishop and Pettit 1992). Toxic effects to amphibians from pollutants may be either lethal or sublethal, including morphological and developmental aberrations, lowered reproduction and survival, and changes in behavior and certain biochemical processes.

Salamander prey items, such as *Hyallela azteca*, are also sensitive to changes in water quality. Metal-contaminated sediment toxicity studies have shown this species to be the most sensitive test organism of those tested (Ingersoll et al. 1996, Phipps et al. 1995). Most polycyclic aromatic hydrocarbons (PAHs) in aquatic ecosystems are associated with sediments, which may be ingested by benthic organisms (Eisler 1987). PAHs are a component of oil, which is made up of hydrocarbon and nonhydrocarbon compounds (Albers 1995). *Hyallela azteca* has been shown to assimilate PAHs from contaminated sediments (Eisler 1987). Sediments collected near Barton Springs

contained several PAHs that were 2.5 to 22 times above levels shown to always have a toxic effect (including survival, growth, or maturation) on *Hyalalela azteca* (City of Austin 1994 unpublished data, and Ingersoll et al. 1996).

Observations of central Texas *Eurycea* salamanders in captivity indicate that these species, including the Barton Springs salamander, are very sensitive to changes in water quality and are "quite delicate and difficult to keep alive" (Sweet in literature, 1993). Sweet also reported that captive individuals exhibit adverse reactions to plastic containers, aged tapwater, and detergent residues. The water in which these salamanders are kept also requires frequent changing (Sweet in literature 1993). Unsuccessful attempts at captive propagation of the San Marcos salamander (Janet Nelson, Southwest Texas State University, personal communication 1992) and very limited success at inducing captive spawning in the Barton Springs salamander (Ables, Coale, and Dwyer, personal communication 1996) may also be due to these species' sensitivity to environmental stress.

Conclusion

Salamanders are vulnerable to changes in water quality and the subject projects will affect the water quality at Barton Springs. While the water quality abatement structures lessen the amount of pollutants in the runoff, they are generally only 40 to 80% effective. The remaining percentage of pollutants will be discharged from the highway and contribute to water quality at Barton Springs. Due to the long-term nature (50-100 years) of these projects, discharges will have some level of impact on the Barton Springs salamander. In addition to the water quality structures being put in place, buying enough land to offset these impacts and ensure that a portion of the watershed is protected indefinitely would mitigate the impacts from the increased impervious cover. Once this purchase was completed the Service could concur with a determination of "not likely to adversely affect the salamander".

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MOPAC South project

Kathryn Jones [REDACTED]

Fri 1/7/2022 9:13 PM

To: MoPac South <mopacsouth@ctrma.org>

I am writing in regards to the proposed Mopac South Project:

The comment time should be extended since it occurred over the holidays. The information we are considering should be updated instead of "Latest News 8/08/2017".

A full Environmental Impact Statement should be prepared since this is crossing a sensitive ecological area. Remember, Barton Springs is the 'Crown Jewel of Austin' and deserves protection.

A double decker bridge will be an eyesore and have an everlasting deleterious effect on Zilker Park, Lady Bird Lake and Austin High School. I live less than .1 mile from IH 35 and Riverside—I live with the noise and pollution of it 24hr/day and it is not even a double decker! I can't imagine how much worse it would be if it were.

Other alternatives should be considered, such as HOV lanes. Since COVID, traffic patterns may have changed with more people working remotely. Other solutions should be investigated and considered.

Update the traffic modeling data and give the public an opportunity to come up with an alternative.

As one who frequently travels from MOPAC south to Cesar Chavez to downtown, any increased traffic into that route should be considered carefully.

Acquiring mitigation land to offset increases in impervious cover from the project should be a priority.

Building more roads never solves the traffic problem!

I've lived in Austin for 50 years, have been a swimmer at BSP for 40+ years, and a runner/walker on the trail since its development. These are the things that make Austin special and unique. It is getting harder to see this uniqueness in all the development to make us "Any city USA". Please don't sell us out!

Yours truly,

Kathryn S. Jones

Mopac South Project Comments

Julia Cahoon [REDACTED]

Fri 1/7/2022 10:39 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: Aaron Cahoon [REDACTED]

As residents of the City of Rollingwood for almost 40 years and Austin since 1965 we wish to comment on the current plans regarding the Mopac South Project. We agree with the positions taken and filed by the Travis County Commissioners Court and the City of Rollingwood. We also want to emphasize our opposition to any elevated lanes or ramps over Bee Caves Road, Lady Bird Lake or the adjacent areas (Zilker Park, etc.).

Respectfully,

Aaron B. Cahoon

Julia K. Cahoon

[REDACTED]

[REDACTED]

[REDACTED]

Comments Regarding MoPac South

roy waley [REDACTED]

Fri 1/7/2022 11:16 PM

To: MoPac South <mopacsouth@ctrma.org>

Dear CTRMA and Staff

The Austin Regional Group of the Sierra Club wants to thank you for your service and submit the following comments.

First. Please extend the current comment period by a minimum of 30 days to accommodate the spike in the Covid-Omicron virus and variant. This in addition to the Holiday Season most certainly has been a distraction. No more citizens will have an opportunity to more fully focus on the this very important issue.

Second. Make certain the most updated information is available to the Public. Please wait for the updated modeling data from the upcoming 2045 studies so you and the Public and thoroughly vet all alternatives. We all deserve this info.

Also note this project will be built in the recharge zone of the Barton Springs section of the Edwards Aquifer. This is critical habitat per the U.S. Fish and Wildlife Federally protected Barton Springs Salamander and Austin Blind Salamanders.

Therefor a complete and full Environmental Impact Study should be done as opposed to an Environmtnal Assessment. Again the EPA should expect this much. The oversight is changing and increasing from the previous administration.

Also please note that in addition to protecting a Federally designated Endangered Species the Barton Springs/Edwards Aquifer provides clean drinking water to over 60,000 homes. This is covered by the Safe Drinking Water Act.

The Barton Springs Historic District and Zilker Park District are listed on the National Register of Historic Places. Both will be adversely impacted by a project of this magnitude.

The CTRMA estimated additional 35 minutes of congestion time is poorly substantiated. For one it doesn't consider alternative transportation proposals such as the voter approved Project Connect forthcoming projections

These were primarily passed to help mitigate the impacts of Climate Change. CTRMA should be working to decrease the dependence on fossil fuels, Building expensive fossil fuel dependent oil based doesn't help reach those goals.

A key word in your title is MOBILITY. Please work to find ways to increase mobility without increasing car lanes that advancing technology will soon render obsolete.

Indeed the Times Are a Changing. Have the foresight to change with them. Change your perspective and prepare for the real future.

We have other comments also. At the very minimum we ask for an extension of he comment period.

Sincerely,
Roy Waley

Vice Chair- Conservation Committe of the Austin Regional Group of the the Sierra Club

Texas law requires all license holders to provide the Information About Brokerage Services to all prospective clients. [Click Here](#) to review the document.

Roy Waley | Realtor

Horizon Realty



[website](#) | [vCard](#) | [map](#) | [email](#)

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Double decker highway

Owen Rug [REDACTED]

Fri 1/7/2022 11:28 PM

To: MoPac South <mopacsouth@ctrma.org>

I am opposed to a double decker bridge going over Lady Bird Lake and I agree with the positions taken in the comments submitted by the Travis County Commissioners Court and the City of Rollingwood.

Sent from my iPhone

Follow-up_MoPac South Express Toll Lanes Project

zcjsph@aol.com 

Sat 1/8/2022 1:26 AM

To: MoPac South <mopacsouth@ctrma.org>

Memorandum thru Director James Bass
For Central Texas Regional Mobility Authority

Subject: Title VI Disparate Impacts Opposition to Proposed MoPac South Express Toll Lanes Project

MoPac South Project: My comments were sent via portal January 7, 2022/11:59PM, but CTRMA's webpage excluded email address MoPacSouth@ctrma.org. Cut-and-paste also excluded the images. Text and images are attached for CTRMA Board review. Thanks.~zcj

January 7, 2022

Memorandum for Central Texas Regional Mobility Authority Board of Directors (MoPacSouth@ctrma.org)

Subject: Title VI Disparate Impacts Opposition to Proposed MoPac South Express Toll Lanes Project

1. **Austin's Black History:** Time changes, but much remains the same. October 20, 1995 "The Clarksville Effect: Austin Tragedy or Neighborhood Victory?" appeared in *The Austin Chronicle* regarding Loop 1/Missouri Pacific ("MoPac") noting, in part:

The gentrification of Clarksville, or at least the displacement of its black residents, dates back to about 1904, when speculators tried to have the settlement condemned as a health hazard. At that time, blacks owned substantial property between Lamar and West Lynn, as well as almost all of the area between West Lynn and today's MoPac, where the core of Mary Baylor's Clarksville remains. These holdings steadily shrank, sometimes under pressure from covetous white speculators, often because their owners found better land elsewhere, typically a combination of both. When the city enacted its fullest Jim Crow laws in 1928 - consigning 'all facilities and conveniences [for] the Negroes' to East Austin 'as an incentive to draw the Negro population to the area' - Clarksville seemed doomed. ...

After five decades of trying, Clarksville neighborhood leaders, including Mary Baylor, had managed to procure from the city - as described back then by longtime (and current) Sweet Home *pastor Rev. W.B. Southerland - 'the neighborhood center, some playground equipment, and six stop signs.' Then came MoPac, which wiped out 64 out of 168 black-owned Clarksville homes, and displaced nearly 200 people far more efficiently than any transplanted yuppies from San Jose. When the Crosstown Expressway project - which also begat, indirectly, the recent Swede Hill brouhaha - threatened to wipe out the other half of the neighborhood, Clarksville residents took the city to court, got the neighborhood deleted from the freeway plans, and won state and federal historic designations for the neighborhood. The latter were opposed by the city's Historic Landmark Commission, whose opinions about Clarksville presaged *Eric Mitchell's recent remarks about similar areas of the Eastside - gasoline and matchbooks.¹ [Note: *Southerland passed away (May 27, 1934-August 14, 2004); Former Councilman Mitchell died in 2011.]

2. **Title VI of the Civil Rights Act of 1964 Disparate Impacts:** In 2017, Capital Metropolitan Transportation Authority ("Capital Metro") Chief Counsel Kerri Butcher attempted to withhold information about \$4M North Lamar Transit Center ("NLTC") proposed redevelopment; 7 of 9 routes were due to be unilaterally eliminated. Loop 1/MoPac-North construction delay commuter notices were posted, but there were no notices for NLTC minorities—illustrating a lack of transparency that continued throughout Service Plan 2025, rebranded Connections 2025 then Cap Remap June 3, 2018 when 52 routes changed to serve South/West/Central Austin white choice riders and Southeast/Dove Springs Hispanics with 15-minute headway—three of 5 routes created below Service Guidelines and Standards—at the expense of Northeast Austin Blacks and minorities north of US 183/NLTC.

- See April 5, 2017 Texas Attorney General Opinion/response to my open records request, in part, compelling disclosure: <https://www2.texasattorneygeneral.gov/opinions/openrecords/51paxton/orl/2017/pdf/or201707166.pdf>

Capital Metro unveiled proposed changes to its bus and rail services Aug. 22. All proposed service changes are subject to approval by the agency's board of directors and could change depending on public input and feedback from board members.

September 21, 2016
"City transit agency aims to boost frequency" By Amy Denny: *Community Impact*
<https://communityimpact.com/austin/news/2016/09/21/city-transit-agency-aims-boost-frequency-2/>

Connections 2025 (rebranded Cap Remap June 3, 2018) segregates Northeast minorities, 30-minute west transfer to The Arboretum, Northcross jobs (e.g., HEB, Walmart). Samsung to Apple MetroRapid unilaterally eliminated, too.
May 22, 2020: I asked Capital Metro's Board to restore 392 to Arboretum (3:13:55): <https://austintx.new.swagit.com/videos/62682>

\$9.9M Southeast-west

\$0 Northeast

November 3, 2017 "Cap Metro hangs hopes on Connections 2025" *The Austin Chronicle* shows sole **partial north-south frequent Route 325**. "Supporters of the plan, including Cap Metro itself, acknowledge that every policy has certain casualties." Project Manager Lawrence Deeter noted "once-an-hour" [Black] Route 233-Colony Park, but KAZI 88.7FM advertised: "More frequent, More reliable, Better connected." Before changes, #325 ran 15 min northeast-west. ~Jack Craver: <https://www.austinchronicle.com/news/2017-11-03/cap-metro-hangs-hopes-on-connections-2025/>

Pictured here is the transit system that undergirds \$7.1B Project Connect light rail approved by voters November 3, 2020 based on equity propaganda and false ballot language conflating ridership/high-capacity transit and coverage (lifeline access/local buses). Central Texas Regional Mobility Authority's proposed Loop 1 Express Lanes Project needs to transparently acknowledge the benefit to white commuters and continuation of racial segregation by Capital Metro which continues to date. ~Thanks. Zenobia C. Joseph

¹ Clark-Madison, M. (1995, October 20). The Clarksville effect: Austin tragedy or neighborhood victory? *The Austin Chronicle*. <https://www.austinchronicle.com/news/1995-10-20/529941/>

Baron Springs why. No electric vehicle. charging stations

g kentphoto 

Sat 1/8/2022 11:00 AM

To: MoPac South <mopacsouth@ctrma.org>

Volta offers free electric vehicle charging stations who are there no electric Vehicle charging station in Barton Springs

No double decker bridge over Zilker to downtown

dorrine fisher [REDACTED]

Sat 1/8/2022 11:35 AM

To: MoPac South <mopacsouth@ctrma.org>

The last thing Austin needs is building a four lane double decker roadway ruining the downtown/zilker park area!

Nevermind the environmental impact regarding Ladybird lake , Zilker Park, the natural springs!!!

The flow of traffic has decreased considerably since Covid & people working from home now , so its not needed.

Why not consider a rail way & public transportation instead , a high speed tram connection to downtown with a parking lot outside of the park area !!! To alleviate congestion downtown all together!

Dorrine Fisher

[REDACTED]
Bartonhills resident

--

Sent from Gmail Mobile

south mopac

Mary Lou Bell



Sat 1/8/2022 4:41 PM

To: MoPac South <mopacsouth@ctrma.org>

Please reconsider the plan to build a double decker highway. I am a docent at Zilker Gardens which is beloved by families and school children (many busloads of school children visit the gardens annually). The noise now is deafening and more lanes would be disastrous not to mention that the land must be preserved for parkland, not highway. That is not the Austin way. There must be other solutions. MoPac is a local thruway that goes thru neighborhoods and shouldn't be used by trucks.

Mary Lou Bell

Comments: Please extend the comment period so Our Citizens can time to send information, still too close to holidays!

mary anderson [REDACTED]

Sat 1/8/2022 12:04 AM

To: MoPac South <mopacsouth@ctrma.org>

Comments: Please extend the comment period so Our Citizens can have time to send information, It is still too close to the holidays, and the latest Covid surge has crippled our populous from having our time and ability to study and give feedback ! Below are some examples of issues that still need to be addressed:

Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.

Prepare a full Environmental Impact Statement (EIS). As proposed, the project would add 16 to 32 lane-miles of impervious cover within the Recharge Zone for the Barton Springs segment of the Edwards Aquifer. The project will have substantial adverse impacts on Barton Springs, the Edwards Aquifer, Zilker Park, Lady Bird Lake, the Hike and Bike Trail, Austin High School, the Barton Creek greenbelt, and the endangered Barton Springs and Austin blind salamanders. Given the size of the project and ecological sensitivity of the area, the project will have unavoidable and significant environmental impacts. Preparing an Environmental Assessment in pursuit of a "finding of no significant impact" demonstrates bad faith for the entire environmental review process.

Do not build a double-decker bridge over MoPac, Zilker Park, Lady Bird Lake, and Austin High School. Avoid taking any park land or encroaching on Austin High School property.

Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Thank you for your consideration of these very important issues,
and Thank you for extending the comment period.

M. M. Holder Anderson

Re: Comments: Please extend the comment period so Our Citizens can time to send information, still too close to holidays!

The _ One Who Knows [REDACTED]

Sat 1/8/2022 5:42 PM

To: MoPac South <mopacsouth@ctrma.org>; mary anderson [REDACTED]

ALSO: Oppose Plans to make US-183-North a toll road from Loyola Lane to FM-620.

On Saturday, January 8, 2022, 12:04:14 AM CST, mary anderson [REDACTED] wrote:

Comments: Please extend the comment period so Our Citizens can have time to send information,

It is still too close to the holidays, and the latest Covid surge has crippled our populous from having

our time and ability to study and give feedback ! Below are some examples of issues that still need

to be addressed:

Extend the comment period at least 30 days. The comment period fell entirely over the holidays. CTRMA's MopacSouth.com website for the project says in bold at the very top "Latest News 08/08/2017", which of course tells the reader that nothing is going on worthy of attention. Much of the remaining information on the site is also confusing. Extending the comment period and correcting the misinformation will help ensure robust and full public input.

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Fully evaluate a "no build" or "very limited build" alternative that improves traffic flow using the existing pavement, including dedicating an existing inside lane to rush hour "high occupancy vehicles" (HOVs) and public transit, utilizing ramp metering, and updating traffic modelling that recognizes a post-covid world where tele-commuting, flexible work schedules and other technological and societal changes have largely eliminated the necessity of spending more than half of a billion dollars trying to accommodate previously predicted "single occupancy vehicle peak hour demand" increases.

Update the traffic modeling data and give the public another opportunity to give input before selecting a "preferred alternative." The Open House materials indicate that the traffic data uses the 2009 model that supported the long-range 2035 CAMPO regional plan. The materials further state that it will be updated to 2045 data at a later point (presumably after the initial public comment period has ended). CTRMA should update MoPac information with current data and a functional traffic model—

and allow public comment on that analysis. The 2035 model, now more than 10 years old, was problematic then and virtually useless now.

Thank you for your consideration of these very important issues,
and Thank you for extending the comment period.

M. M. Holder Anderson

No tolls on lake!

Amanda Mendez 

Sat 1/8/2022 5:51 PM

To: MoPac South <mopacsouth@ctrma.org>

Good evening,

I am an extremely concerned citizen and when I heard this project threatened our beloved aquatic fixtures of central TEXAS... I was beside myself. I and many others enjoy and wish to preserve the outdoor luxuries many modern metropolises do not have. Thousands of people travel to Austin to witness and enjoy this tangible paradise. My family and I have lived in Austin for generations and this is a treasure we all have enjoyed. I beg you all to not go forward with this disastrous decision as it would highly impact visitation and disturb our every day lives. It would cause emotional distress to our fellow citizens, aquatic life, and animal life around the area. Please leave it alone.

Amanda m.

Resident in 78704

Sent from my iPhone

Mopac South Project

Susanne Mason [REDACTED]

Mon 1/10/2022 8:37 AM

To: MoPac South <mopacsouth@ctrma.org>

To the Central Texas Regional Mobility Authority:

I am writing to request that CTRMA extend the period for public comment on the proposed addition of Mopac lanes and highway levels over and south of Lady Bird Lake. Public comment scheduled during the 2021-2022 Holiday season and at the crest of a new COVID surge did not allow the public to study the proposal and prepare a response.

It would appear that CTRMA did this intentionally to avoid critique of what appears to be a breathtaking, frankly suffocating, proposal to build more highways into the highly sensitive environment comprising the recharge and contributing zones of the Barton Creek and the Edwards Aquifer.

Like many other citizens of Austin and Central Texas I oppose the construction of unnecessary highway miles over the aquifer because they threaten and cause direct harm to the sensitive environment, plants and animals in the recharge and contributing zones, impact water quality, and violate the collective intention of Austin citizens to protect the unique habitat and natural world of Central Texas. There is no escaping this fact.

With the increase in remote work, the growing awareness of citizens to the harms of excessive carbon outputs caused by cars, trucks, and construction, mobility must be handled with a focus on the future, not the past. As the Global Climate Crisis accelerates, the additional manufacture and use of millions/billions of metric tons of asphalt and concrete used in highway construction is an act of climate denial.

Public comment must be effectively heard, registered, and responded to before taking further steps on this proposal.

Thank you for your time and attention.

Sincerely yours,
Susanne Mason

Trust?

Phyllis Nelson [REDACTED]

Mon 11/15/2021 7:08 PM

To: MoPac South <mopacsouth@ctrma.org>

I plan to participate in the Virtual Open House re-engagement event on November 22 @ 5:00pm. However, I want to point out that my trust in any process that will impact my home and well-being involving the Texas Department of Transportation has been greatly decreased in recent months. There have been 3 large, hulking, illegally dumped piles of rock in the easement along the Mopac access road, partially blocking the emergency fire entrance to the back of the Liberty Park Condos, 1000 Liberty Park Drive, Austin, TX 78746. No one connected to the Department has taken any responsible action to deal with the situation. How can I or my neighbors feel good about major highway construction being carried out mere yards from our back doors?

Phyllis Nelson

South MoPac

Joe Falkner [REDACTED]

Mon 11/22/2021 5:37 PM

To: MoPac South <mopacsouth@ctrma.org>

I must say, I'm very, very pleased with the way the MoPac-Slaughter and the MoPac-LaCrosse projects were carried out. When you started I feared we'd lose Slaughter for months.

But we didn't.

You put a lot of thought into the project, and I sincerely appreciate it.

Happy Thanksgiving and stay safe.

Joe Falkner

Mopac

joel rubinstein [REDACTED]

Fri 11/26/2021 7:49 AM

To: MoPac South <mopacsouth@ctrma.org>

Build as many free lanes as you can fit, if you can do it without polluting Barton Springs and Barton Creek. Please, no more toll lanes. The north Mopac toll lane is bad for two main reasons. It discriminates against poor people, who can't afford its algorithm based pricing. It serves only people in the suburbs, not the people who had to suffer through the construction. You can't even exit before 183. I'm sorry but that is idiotic. What would the first south toll exit be if it was similar? 290/71, skipping 360?

Thanks for allowing me to vent.

Sincerely,

Joel Rubinstein

Sent from my iPad

Mopac South

Luke Legate [REDACTED]

Fri 11/26/2021 8:52 PM

To: MoPac South <mopacsouth@ctrma.org>

Yes please expand Mopac South. I have lived in Austin since 1992.

It's better to keep traffic moving rather than idling.

We are a large city, we need to increase capacity.

It is a safety issue with population increasing.

We can have increased lanes and build orrectly, we can reduce gridlock.

It's time for forward thinking.

We can no longer say "if we don't build it, they won't come. "

Guess what. They are still coming.

Thank you. Please expand access for people to live, go to school and work here.

Luke Legate
[REDACTED]

Virtual open house comments

blavenscraft [REDACTED]

Fri 12/3/2021 12:24 AM

To: MoPac South <mopacsouth@ctrma.org>

Cc: blavenscraft@aol.com [REDACTED]

There was no option provided between doing nothing and adding tolled Express lanes. There are other options people want to consider.

What is needed is a continuous four lane configuration. Currently, South Mopac changes back and forth from three lanes to four lanes depending on exits and entrances to Mopac. The exits and entrances cause the delay in traffic flow and need to be reworked.

Bruce Ravenscraft
[REDACTED]

Sent from my Galaxy

open house feedback

Emily G [REDACTED]

Fri 12/3/2021 9:54 AM

To: MoPac South <mopacsouth@ctrma.org>

Hello, thanks for the info in the open house. My comments are:

First off, this is taking way too long and these problems should've already been addressed, especially prior to completing the 45 toll cut through to 1626 so that now thousands more cars are on Mopac. Construction is always way behind. For example, as soon as the overpass at William Cannon was complete, something should've been started about the Slaughter intersection.

Environmental impact of the construction zone must be weighed against the environmental impact of cars sitting in traffic and city sprawl. However, all care should be taken to protect one of the city's greatest assets, the Barton Creek Greenbelt.

If we're going to have to endure the pain of this construction to add lanes, we might as well add two instead of one. Also, I am neutral on direct downtown access.

I don't see that we would need to put up the soundproofing walls on the south end like they did on the north end since there's so little housing that butts right up to Mopac on the south side. I also feel that walls like that would very negatively impact the beauty of south Austin.

Lastly, I would like to know how I can get information on what is being planned to address the bottle neck southbound at William Cannon down to Davis Lane. A 3rd merge lane was added on the northbound side but never on the southbound side. The almost continuous and very wide shoulders on both sides of the expressway would seem to easily allow a 3rd lane to be added to ease the bottleneck with very minimal construction and seemingly no environmental impact. Why has this not already been done?

Thank you,
Emily Gatlin

MoPac South Comments

Clinton Waggoner [REDACTED]

Wed 12/8/2021 11:09 AM

To: MoPac South <mopacsouth@ctrma.org>

1. I support option 2A with the addition of building 2 new bridges across Town Lake to allow extension of the current service road across the lake to and from Rollingwood Dr. This would allow local traffic that merely wants to transit to or from Bee Caves Road and Westlake to or from north of Town Lake to do so without disrupting flow of thru MoPac traffic.
2. Alternative 3 is also attractive if something could be done to lower the main lane transit times on the General Purpose Lanes.
3. Something must be done to make it safer to exit MoPac South and head to Bee Caves Road. Currently traffic must merge across multiple lanes with limited sight distance. An elevated direct connection would be best. Installation of an additional bridge across Town Lake to extend the service road could be part of the solution to this problem.

Clinton Waggoner

Comment Mopac South Virtual Meeting

pharmgrl13@aol.com [REDACTED]

Thu 12/9/2021 11:31 PM

To: MoPac South <mopacsouth@ctrma.org>

Please consider the following in the project area in and around Zilker Park. Please be sure to align and coordinate each of these with the Zilker Park Vision Plan currently underway. Zilker Park is a treasure worth preserving and improving.

- Minimize the width of the highway through Zilker Park and minimize the width of the bridge over Lady Bird Lake. These will take land from the park and be a visual barrier to the lake and park.
- Reduce noise impacts and overtaking of land in Zilker to the greatest extent possible, and contribute positively to the Zilker Botanical Garden and Austin Nature and Science Center where any negative impacts do occur.
- Thank you for including shared use paths for pedestrians and bicycles in the Zilker Park area and along Barton Springs Road under the highway. Please also prioritize superior bicycle and pedestrian connections in Zilker Park between the west side of Mopac and the east side at Stratford Drive. Please also maintain or improve the Roberta Crenshaw Pedestrian Walkway under mopac to ensure a superior pedestrian and bicycle experience across the river to the north.
- Include enough space under the highway to accommodate the potential future expansion on the Zilker Eagle mini train in conjunction with the Zilker Park Vision Plan.
- Build a Park and Ride garage near Zilker, potentially under the highway or at the old pistol range that could serve park and ride users traveling into downtown Austin during workday hours, which could double as event and weekend parking for Zilker Park. This

parking should minimize any new impervious cover, be screened or buried to minimize visual impacts, and be thoughtfully designed with feedback from the community.

Thank you very much for your consideration!

-Deana

Mopac South

Daniel McGauley [REDACTED]

Fri 12/10/2021 2:59 PM

To: MoPac South <mopacsouth@ctrma.org>

All the information on the <https://voh.mopacsouth.com/> site is great. I had a few ideas. I travel to Londonderry in the UK a lot, and I'm amazed about how quickly and cheaply I can get around town via bus there. Austin should be one of the best cities in America for efficient bus use, but right now it's pretty pathetic. It's really only designed for those who can't afford a car. A lot of people who live near me in Circle C would love to ride a bus to work if we could get anywhere near their office. I used to work on Parmer Lane and traveled every day for 2 weeks from Circle C to see how it would go. It didn't go well! I work closer to home now, but I still can't get anywhere near work on a bus, which seems really sad to me.

A few other inputs:

- Anyway to encourage use of motorcycles? Austin has a lot of them, and the more motorcycles the better the flow.
- Extend the 3rd lane near Target on South Mopac all the way to Slaughter lane. The merge of that third lane to two lines is pretty brutal at times.
- With Elon Musk moving to Austin, is there any chance we implement a pilot Boring tunnel for part of this expansion?
- Are there any options for discouraging use of Mopac for commuters coming down 360? If drivers on 360 would cut over more down to Oakhill, a lot of traffic would be spared.
- I like the idea of multiple express lanes; one lane that essentially bypasses all of mopac down to a slaughter exit from 290 (or 1st street) would be awesome.
- Any way to encourage electric scooters/segway/bikes?

Good stuff, thanks.

-Daniel McGauley

From: [Mopac South Contact Form](#)
To: [Sylvia Shelton](#); jhayter@ctrma.org; [Kenneally, Katie M](#); [Gilpin, Charlotte \(K-Friese\)](#); [Reid, Zane S](#); [Lacy, Hillary](#); [Prescott, Meridith](#); [Story, Elizabeth A](#)
Subject: MoPac South Contact Us Form [#527]
Date: Friday, December 10, 2021 12:38:04 PM

Name *	Russ Hodes
Email *	[REDACTED]
Address	<input type="checkbox"/> [REDACTED]

Message * Please move forward and FAST.

I would prefer s tunnel but mire lanes,ASAP. Its been 40 years of neglect.

We also need safer off-street “hike and bike trails” to paralell MOPAC. The new trails are appreciated, but useless and disconnected:-(

Support for the Escarpment-Meridian trail

Gemi José González [REDACTED]

Mon 12/13/2021 6:55 PM

To: MoPac South <mopacsouth@ctrma.org>

Cc: tere casas [REDACTED]

Hello, my name is Gemi Jose Gonzalez, my family lives in Meridian [REDACTED]

We are very grateful and support the project to expand the bike trail to our neighborhood.

I believe it has to do with family inclusion and connectivity. My sons and I ride through the dirt trail inside the woods, but not my wife -Teresa Casas copied- neither my daughter. So this will help a lot, will be very useful and fun.

Best,

Gemi

Sent from my iPhone

Mopac path



Mon 12/27/2021 11:45 AM

To: MoPac South <mopacsouth@ctrma.org>

Hi I live in far south west austin and bike frequently . Unfortunately where I live I have to bike along a part of 45 that is getting busier and busier as the area expands . Many individuals bike this area - it is a set up for cyclists being killed .

I support the bike/ped path that will start at Slaughter Lane and follow south Mopac to central Austin. And I would like to also ask that the paved path on SH Hwy 45 be expanded to Hwy 1826 to the Meridian neighborhood to help provide mitigation, safety and connectivity for this larger highway project.

Thank you for your time. William Bartek

Sent from my iPhone

December 14, 2021

Central Texas Regional Mobility Authority
c/o Mopac South Environmental Study
3300 Interstate 35 North
Suite 625
Austin, TX 78705

To whom it my concern:

As a 25 year resident of South Austin, I wanted to quickly provide input on the South Mopac Environmental Study.

My suggestion is straightforward based on thousands of trips on South Mopac over an extended period of time.

The advice that I'm providing is simply this: as part of the redesign of South Mopac with dedicated toll lanes, etc., eliminate the south bound on-ramp south of Bee Caves Road; just north of Barton Skyway bridge.

I call this area "the soup bowl" because the traffic patterns that develop around this portion of South Mopac never seems to improve. Rather, it stagnates and is ultimately counter-productive.

Traffic that flows from Bee Cave & Barton Springs Road can easily be re-routed and funnel to the south-bound on-ramp closer to 360 if you were to eliminate this on-ramp altogether. This particular merge lane (south of Barton Skyway; north of 360) is far more conducive to traffic patterns in this particular area.

The on-ramp that I'm proposing to eliminate causes a continuous back-up on south Mopac because the volume of traffic makes this entry a stop & go nightmare.

The entry ramp that I reference is too short and eliminates a flow lane altogether traveling south of the river.

I appreciate your consideration.

Best of luck moving forward on this project.

Thank you.

A handwritten signature in black ink, appearing to read 'Casey Gilbert', with a stylized flourish extending to the right.

Casey Gilbert

INTERACTIVE MAP COMMENTS

Additionally, visitors were given an option to submit unofficial comments on an interactive map. Thirty-nine comments were posted to the interactive map.

Interactive Map Comments

ID	Name	Feedback	POINT_X	POINT_Y
1	Lily Wilkerson	This offramp can be restriped to no longer be Exit Only, reducing a bottleneck on NB MoPac. This change can be done with only new paint and a new sign.	-97.84140198	30.21648022
2	Lansing Pugh	Consider a mobility bridge connection across MoPac here.	-97.80308439	30.24827857
3	Barton Skyway entrance	This entrance needs to be eliminated and make everybody go through 360 light because many individuals try to hop on and then have to get over three lanes to get to 360	-97.78953173	30.26313249
4	Spencer Muncey	Eliminate this entrance	-97.78966628	30.26297081
5	Dave	Re-stripe southbound Mopac from William Cannon to Davis to three lanes with 3rd lane exist only on Davis. There is plenty of room and would only require a very small investment	-97.83980806	30.21756519
6	Dave	Eliminate S bound Mopac William Canon exit. Cars should exit at 290 to get to William Cannon. Add exit to William Canon for 290 to S Mopac but only cars coming from 290.	-97.8315956	30.2262966
7	Dave	Remove first exit. It is dangerous on the frontage road. Only need second exit.	-97.81509495	30.24116837
8	Dave	Need a minimum of 4 total lanes (including 1 Toll) S Mopac over Lake Austin and Colorado River.	-97.77022159	30.27587093
9	Dave	Four lanes(1 toll) on S Mopac from Lake Austin over Colorado River.	-97.76819883	30.27873075
10	Bill	The flow from 6th to MoPac south needs to be managed better. The left lane backs up during the evening rush and frequently 2 or less cars make the left during the light cycle.	-97.76962217	30.27706111
11		Complete concrete infrastructure from William Cannon to Davis exit and re-stripe to add third lane. Already existing space for third lane with minimal infrastructure to extend the complete distance. This is one of the largest bottlenecks on Mopac south-bound and don't understand why this hasn't been done already.	-97.84021475	30.21730719
12	Jim	When will the bike/hike path be finished connecting to Lacrosse? Right now it ends in a Dead End sign.	-97.86837101	30.19800605
13	Mitch	Create new exit for Wm Cannon Drive (290 ramp needs to overpass the exit since it all converges in one place)	-97.83093216	30.22704871
14	Mitch	Please add a lane here for Mopac SB for those exiting onto 360 - it would solve all of the congestion issues facing this entire stretch south of the river	-97.80633308	30.24914618

Interactive Map Comments

ID	Name	Feedback	POINT_X	POINT_Y
15		Please honor feedback from 2013-15 that opposes direct connector ramps near Austin High	-97.76721935	30.27378845
16		Please locate any lanes connecting to Mopac and Cesar Chavez as close to the bluff as possible, to maximize green space and minimize impacts to Austin High..	-97.76460267	30.27313661
17		The Lamar Beach plan should be revived and coordinated with the MoPac South work in this area.	-97.76169515	30.27042171
18		This is an environmentally sensitive area, park, and wildlife corridor, in addition to residential areas that are sensitive to increased noise from adding more lanes of traffic.	-97.85769244	30.21187992
19		There is NO room here to add any lanes because of the nature areas, protected park, Violet Crown Trail, and residences adjacent to Mopac. Please do not ruin this section for those that live and enjoy the nature here.	-97.85903313	30.21076163
20	A. Robinson	Please consider keeping this entrance. Those living and working in the area (Bee Cave Rd) need efficient access to Mopac South. Forcing traffic to detour to 360 is not an effective solution in my view. Many vehicles using this entrance are traveling south towards Sunset Valley and Circle C areas not crossing three lanes of traffic to access 360.	-97.78936007	30.26324601
21		Consider adding third lane NB Mopac. Pre-COVID, this was such a large bottleneck that standstill traffic would stretch all the way to Davis on-ramp.	-97.8246043	30.2354721
22	irma	Close this on ramp to eliminate short merging lane.	-97.78947156	30.26318245
23		westbound w 6th street / lake austin blvd to southbound mopac is a mess because of the merge with Cesar Chavez and several other merge points. This section should be improved to provide better access to SB mopac.	-97.76810243	30.27672475
24		Remove this on ramp. there is literally one just across the light that can serve the same people. On ramps are the biggest point of traffic from no one knowing how to merge properly causing everything to back up. Having two identical on ramps literally within 100 feet of each other is ridiculous.	-97.78942606	30.26310804
25		NB, this is the biggest bottle neck currently with the highway going from 3 lanes to 2 with everyone last minute swerving over to avoid the flyover to 290. Make it 3 lanes over 290 with a dedicated lane to exit.	-97.82493059	30.23512321

Interactive Map Comments

ID	Name	Feedback	POINT_X	POINT_Y
26		We need a better solution here. Two on ramps and an off ramp back to back means everyone is crossing medians, swerving last minute, cutting everyone off, it's chaos out here during rush hour. We need to minimize on and off ramps. Maybe combine the on ramp and the flyover merge? Or eliminate the off ramp to William Cannon.	-97.82790248	30.23030303
27		The third lane ends here abruptly for no reason. There is already existing pavement that would allow this area to easily be restriped down to Slaughter Lane without widening the roads. This is an easy, cost effective, and quick fix to a major issue. Especially with the on-ramp from William Cannon, this whole stretch from 290 to Davis has way too much merging happening that causes horrible backups.	-97.83600275	30.2210606
28		Right lane is Exit-Only but continues immediately after as a third lane again. Either remove the third lane beyond the exit or restripe it to not just be exit only. Nobody ever listens to it anyway and drives right over the solid white line during rush hour. And I mean literally nobody.	-97.84177415	30.21648522
29		You can 100% add extra lanes here towards the median. the bridges are wide enough, and the median is already developed, you will not impact the natural areas around it. Additionally, there are currently absurdly wide shoulders that could be removed to allow a third lane without requiring you to pave any more roads. This area desperately needs the additional capacity, especially if additional lanes are added around William Cannon. At least down to Slaughter.	-97.85748523	30.21200541
30	Eric	All of the bridges from William Cannon to Slaughter Lane are wide enough to accommodate three lanes, but the pavement between the bridges is not. By simply widening the pavement between the bridges, you could have three lanes of capacity and vastly reduce the slow downs caused by merging. The right lane is constantly backed up when merging from having to let people in or dealing with last minute cutoffs. This means everyone from the right lane either has to stop or change into the left lane, which then slows down the left lane. With a third lane, we allow folks that do not need to exit to avoid these merging points and improving flow. I know adding lanes is not always the right solution, but here the added lanes would remove large choke points that grind everything to a halt during rush hour.	-97.84729579	30.21658405
31		This entire area already has bridges wide enough to handle a third lane. The bridges were designed for that. To reach capacity, you'd just need to add less than 10 feet of pavement to the median, which would not require large earthwork that would disrupt the Dick Nichols District Park wild areas.	-97.85796025	30.21142964

Interactive Map Comments

ID	Name	Feedback	POINT_X	POINT_Y
32	Chris R	Traffic backs up significantly in the right lane of northbound Capital of Texas Hwy where vehicles turn right onto northbound Mopac. The turn is sharp, and these vehicles must quickly merge into the left lane on the Mopac service road to get to the onramp, competing with the vehicles moving northbound through the stoplight while going steeply uphill. Large trucks must slow down significantly to make the turn, and then struggle to increase their speed uphill, creating a blockage to traffic flow. Consider (1) creating a second right turn lane from Cap of Tex Hwy onto northbound Mopac, and (2) moving the entrance ramp closer to Barton Skyway to provide more space for traffic to merge and get to speed.	-97.80367127	30.24778191
33	Chris R	Evening traffic slows down in the southbound Mopac mainlanes leading up to the left exit onto southbound Cap of Texas Hwy because visibility is poor driving uphill while Mopac curves to the left and because in the winter months the sun sets directly in southbound vehicles' line of sight. This slowdown ripples back all the way to Lady Bird Lake. Traffic moves well on the Cap of Texas exit ever since modifications were made to the office park intersection a couple blocks down the road, so that no longer causes backups. Traffic slowing down while driving uphill staring at the sun causes backups. Maybe you can come up with some imaginative options to mitigate this.	-97.80246033	30.25585161
34	Chris R	The onramp from the southbound Mopac service road onto the southbound mainlanes just south of Bee Cave Rd. is a major bottleneck because this onramp is heavily used and vehicles are forced to merge quickly. The onramp just south of this one after Barton Skyway is used much less often but has its own lane for quite a ways. Consider building out that extra lane between the two onramps so the Bee Cave onramp has its own lane for that portion, providing much more space for those vehicles to merge. This would make good use of existing infrastructure while only requiring a small lane addition.	-97.78997625	30.26289458
35	Chris R.	I do not support the extension of this toll road into South Austin. The traffic on the southern portion of Mopac is not nearly as bad as the northern portion, and can be managed effectively with smart modifications to intersections, on/offramps, and merge lanes.	-97.77250756	30.272967

Interactive Map Comments

ID	Name	Feedback	POINT_X	POINT_Y
36	Chris R.	When the Mopac north tollroad was built, this onramp had its own lane taken away to give to the toll road, which at this point is at its very end and isn't even protected. This was a disastrous change and should be reversed. The solid line on the ground separating this small end of the tollroad from the mainlanes is worn off because so many cars from the mainlanes cross it, so instead of the present scheme, have the southbound tollroad merge into the left mainlane at its end and give the onramp its own lane again. This left lane merging scheme is in play all over Houston for tollroads and HOV lanes and it works. This onramp is one of the busiest on the whole of Mopac and serves all traffic heading southbound from downtown. Please give this onramp its own lane back. The bridge over Lady Bird Lake does not need to be widened, it just needs to be used efficiently.	-97.771778	30.27398623
37	Carpool/HOV Needed	The only way to keep up with traffic growth is to reduce the number of vehicles on MoPac. The only way to reduce vehicles is to encourage carpooling. If only 10% of drivers carpool, you can eliminate 25,760 vehicles from the roadway.	-97.80298569	30.250634
38	CArpool/HOV Lane Needed	The only way to keep up with traffic growth is to reduce the number of vehicles on MoPac. The only way to reduce vehicles is to encourage carpooling. If only 10% of drivers carpool, you can eliminate 25,760 vehicles from the roadway.	-97.80453065	30.24687734
39		Consider noise mitigation for S Mopac. The beauty and harmony of this lovely park and the surrounding neighborhoods is disrupted by the constant traffic noise, which will likely only get worse.	-97.85745599	30.21113249
40		The congestion here is a nightmare at rush hour with vehicle backups at every point in the intersection. This intersection needs an on ramp where the flow isn't controlled by traffic lights with little to no ramp access.	-97.76429751	30.27845843

E. Figures

MOBILITY AUTHORITY AND TXDOT WEBPAGE NOTICES

Notices about the Virtual Public Meeting were published on both the Homepage and the Meetings and Events page of the Mobility Authority's website on October 25, 2021. The notice was published on TxDOT's Meetings and Hearings webpage on Nov. 5, 2021, and was then distributed via email to TxDOT's subscriber list for statewide meeting and hearing notifications. The following pages document the webpage updates.



CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

MOPAC SOUTH ENVIRONMENTAL STUDY

Virtual Open House



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Available through Jan. 7, 2022


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Roads & More

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	<p>★ FEATURED ROAD</p> <h3>183 Toll</h3> <p>An 8-mile toll road along US 183 from US 290 to SH 71 in east Austin.</p> <p>VIEW ROAD ></p>		<p>★ FEATURED ROAD</p> <h3>45SW Toll</h3> <p>A 3.6-mile toll road connecting State Loop 1 (MoPac) and FM 1626 in southern Travis and northern Hays county.</p> <p>VIEW ROAD ></p>
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@CTXMobility

As we begin 2022 with stage 4 risk-based COVID guidelines, we



@CTXMobility

Don't miss your chance! Now's the time to view Open House materials

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JAN 4

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MOPAC SOUTH
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PRESS & ANNOUNCEMENTS

Toll Rates Changing on Mobility Authority Corridors

The Central Texas Regional Mobility Authority (Mobility Authority) announced at the October 2021 Board meeting that new rates on 183A Toll, 290 Toll, 71 Toll Lane, 45SW Toll, 183 Toll, and the MoPac Express Lanes will take effect January 1, 2022.

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UPCOMING BOARD MEETING

2022

JAN

26

General Meeting of the Board of Directors

[More Info/Agenda](#)

[View Archives](#)



CENTRAL TEXAS REGIONAL **MOBILITY AUTHORITY**

Meetings and Events

UPCOMING MEETINGS AND EVENTS

MoPac South Virtual Open House to Launch Nov. 22, 2021

The Mobility Authority will host a virtual Open House for the MoPac South Environmental Study from Nov. 22, 2021 at 5 p.m. through Jan. 7, 2022 at 11:59 p.m. Information will be shared about the same six express lane(s) operational configuration options that were initially presented at the last Open House in 2015. Meeting materials will be available for view and download, and will include both audio and visual components.

The official public comment period will run concurrently - from Monday, Nov. 22, 2021 at 5 p.m. through Friday, Jan. 7, 2022 at 11:59 p.m. Public comments received outside this timeframe will not be included in the official public meeting record and will not receive a response.

More information will be posted on the [project website](#).

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Virtual Public Meeting – MoPac South Environmental Study

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Where: The meeting materials will be posted to yoh.MoPacSouth.com at the date and time listed below.

When: The virtual public meeting will begin Monday, Nov. 22, 2021, by 5 p.m.

Purpose: The purpose of the virtual public meeting is to receive public comment on the Central Texas Regional Mobility Authority and TxDOT's proposed plan to improve MoPac Expressway from Cesar Chavez Street to Slaughter Lane in Travis County, Texas by adding one-to-two express lanes in each direction.

The virtual meeting will consist of meeting materials for view and download, as well as both audio and visual components and an opportunity to comment. Comments must be received or postmarked on or before Friday, Jan. 7, 2022, to be a part of the official meeting record.

If you need additional information, please call (512) 342-3299 between the hours of 9 a.m. and 5 p.m. Monday through Friday to ask questions about the project and access project materials at any time during the project development process.

Description: The Mobility Authority and TxDOT are proposing to add one-to-two express lanes along approximately eight miles of the south MoPac Expressway from Cesar Chavez Street to Slaughter Lane in Austin, Travis County, Texas. The Mobility Authority and TxDOT launched the environmental study in 2013 to identify a mobility solution to this stretch of congested highway that improves mobility for drivers, transit riders, bicyclists, and pedestrians in a manner that promotes environmental stewardship and sustainability.

This virtual public meeting will share information on the same six express lane(s) operation configuration options that were initially presented for public review and comment in 2015 to re-engage the public as project efforts are resumed after an extended project hold.

Before a Recommended Preferred Alternative is identified, the Mobility Authority and TxDOT are requesting public comments.

How to Make a Comment: Please provide your comment in the following ways:

- **Online:** The comment form will be available on yoh.MoPacSouth.com beginning Monday, Nov. 22, 2021
- **Email:** MoPacSouth@ctrma.org
- **Mail:** Central Texas Regional Mobility Authority, c/o MoPac South Environmental Study, 3300 N I-H 35, Suite 625, Austin, TX 78705

Comments must be received or postmarked by **Friday, Jan. 7, 2022**, to be included in the official record of the virtual public meeting.

Special Accommodations: The virtual public meeting will be conducted in English. If you need an interpreter or document translator because English is not your primary language or you have difficulty communicating effectively in English, one will be provided to you. If you have a disability and need assistance, special arrangements can be made to accommodate most needs. If you need interpretation or translation services or you are a person with a disability who requires an accommodation to attend and participate in the virtual public meeting, please contact the MoPac South project Team at (512) 342-3299 no later than 4 p.m. CT, Nov. 17, 2021. Please be aware that advance notice is required as some services and accommodations may require time to arrange.

Se Habla Español: Para más detalles e información acerca del proyecto en español por favor comuníquese con uno de los miembros del equipo al 512.878.2246 y le atenderemos con gusto.

Memorandum of Understanding: The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated Dec. 9, 2019, and executed by the Federal Highway Administration and TxDOT.

Downloads:

- [Notice](#)

Contact: TxDOT Austin District
P.O. Box 15426
Austin, TX 78761
[Email](#)

Posted: Nov. 5, 2021

From: [TxDOT](#)
To: [Kenneally, Katie M](#)
Subject: TxDOT Statewide Public Hearings, Meetings and Notices Update
Date: Saturday, November 6, 2021 12:00:51 AM



[Virtual Public Meeting – MoPac South Environmental Study](#)

Location: Austin

Date: 11/22/21

Purpose: The purpose of the virtual public meeting is to receive public comment on the Central Texas Regional Mobility Authority (Mobility Authority) and TxDOT's proposed plan to improve MoPac (Loop 1) Expressway from Cesar Chavez Street to Slaughter Lane in Travis County, Texas by adding one-to-two express lane(s) in each direction.

Visit [TxDOT.gov](#) for a complete list of [upcoming hearings and meetings](#).



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(800) 558-9368 • AskTxDOT@txdot.gov



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VIRTUAL PUBLIC MEETING DOCUMENTATION

Screen captures of the virtual public meeting are included on the next pages.



Deadline for Comments: JAN. 7, 2022 at 11:59 PM

Welcome to the MoPac South Virtual Public Meeting

01 Welcome

02 The Problem We're
Trying to Solve

03 The Process We Follow

04 Alternatives
Considered

05 The Express Lane(s)
Alternative

06 2015 Video Renderings

07 Environmental
Considerations

08 Project Benefits

09 Interactive Map

10 Submit a Comment

11 Resources

12 Ver la información en
español

Thank you for your interest and participation.

PLEASE SIGN IN FIRST

The Central Texas Regional Mobility Authority (Mobility Authority) and the Texas Department of Transportation (TxDOT) invite you to review and comment on the materials, exhibits, and information provided in the **MoPac South Environmental Study Virtual Public Meeting** through Jan. 7, 2022. This public meeting is being held virtually in lieu of a traditional, in-person public meeting due to COVID-19.

As we resume the environmental study, this meeting will help re-engage the public on where we left off after the November 2015 open house. We plan to provide updated analyses and the Recommended Preferred Alternative at a public meeting in 2022.

Se Habla Español: [Ver la información en español aquí.](#) Para más detalles e información acerca del proyecto en español por favor comuníquese con uno de los miembros del equipo al 512-878-2246 y le atenderemos con gusto.

What to Do While You're Here

- Watch our welcome video
- Click through the numbered tabs to experience the virtual public meeting
- Submit an **official comment** with your feedback

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Full Set of Exhibits

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MoPac South Open House Welcome Video



Virtual Public Meeting Purpose

The purpose of the MoPac South Environmental Study virtual public meeting is to provide an opportunity for the public to review and comment on:

- Project goals and objectives
- Mobility, connectivity, and safety concerns
- Express lane(s) operational configuration options
- Environmental constraints

Need assistance? *If you have any questions, have technical difficulties, or if you are a person with a disability who requires an accommodation to participate in the virtual public meeting, please contact us at [\(512\) 342-3299](tel:5123423299).*

About the Mobility Authority

Learn more about the Central Texas Regional Mobility Authority and what we do.

Who is the Mobility Authority?

Who We Are:

Independent government agency created in 2002, governed by a seven-member board of directors.

What We Do:

Enhance quality of life and economic vitality by improving the regional transportation system in Travis and Williamson counties.

Corridors we Manage:



Projects under Construction:



Our Partners:



FOUNDING COUNTIES:



MoPac South Environmental Study Open House #5 - Nov. 2021

Who is the
Mobility
Authority?

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02 The Problem
We're Trying to
Solve



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The Problem We're Trying to Solve

01 Welcome

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[What is the Environmental Study?](#)

[Purpose & Need](#)

[Population & Jobs Forecast](#)

[Travel Time Comparison](#)

[Demand for MoPac South](#)

[Project History](#)

[Next Steps](#)

What is the MoPac South Environmental Study?

The MoPac Expressway south of Cesar Chavez Street is a vital artery, providing a critical link to downtown Austin and other major highways such as US 290 and Loop 360. Ranked among the top **20 most congested corridors** in the state, it attracts up to 179,000 vehicles per day. Expanding population and development have led to increased traffic congestion, negatively impacting mobility and quality of life. If nothing is done to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035.

An Environmental Study is being conducted per the National Environmental Policy Act of 1969 (NEPA) to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists, and pedestrians in a manner that promotes environmental stewardship and sustainability.

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What is the MoPac South Environmental Study?

The MoPac Expressway south of Cesar Chavez Street is a vital artery, providing a critical link from southwest Travis and Hays counties to downtown Austin.

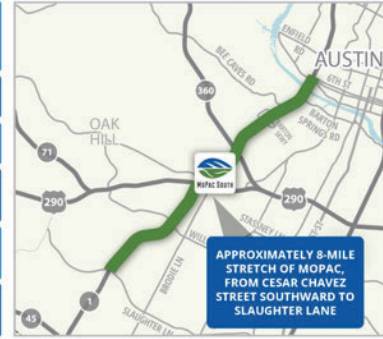
MoPac is ranked among the top 20 most congested corridors in the state.*

The corridor attracts up to 179,000 cars and trucks per day.**

Expanding population and development have led to increased traffic congestion, negatively impacting mobility and quality of life.

If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035.***

The Environmental Assessment (EA) is being conducted per the National Environmental Policy Act of 1969 (NEPA).



*Texas Transportation Institute, 2020
**2019 STARS 2 - TxDOT Traffic Count Database
***CAMPO 2035 Travel Demand Model

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What is the MoPac South Environmental Study?

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Project Purpose & Need

The purpose and need statement identifies the problems we are trying to address and helps guide decision-making. The established purpose and need statement for MoPac South was informed by stakeholder feedback. Currently, we are seeking input on the project goals and objectives.

Purpose & Need



PROJECT PURPOSE *(What we are trying to do)*

- Provide an opportunity for reliable travel times
- Improve operational efficiency
- Create a dependable and consistent route for transit
- Facilitate reliable emergency response



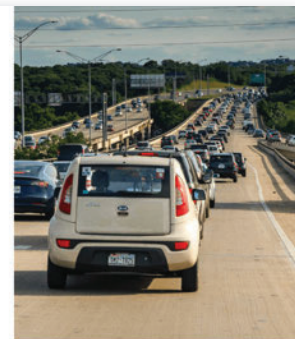
PROJECT NEED *(What problems need to be addressed)*

- Current and forecasted congestion levels are creating unreliable travel times
- Under the No-Build Alternative (Do Nothing), it could take an additional 35 minutes to travel between Cesar Chavez Street and Slaughter Lane by 2035
- Emergency response times are impacted by traffic congestion



PROJECT GOALS AND OBJECTIVES

- Provide consistency with local and regional plans
- Reduce congestion delays and provide travel time savings for all roadway users
- Be constructible while minimizing impacts to the natural and human environment
- Avoid and minimize impacts to water quality
- Deliver relief in a timely manner
- Facilitate congestion management
 - Increase opportunities for transit and ridesharing
 - Increase opportunities for pedestrians and bicyclists



MoPac South Environmental Study Open House #5 - Nov. 2021

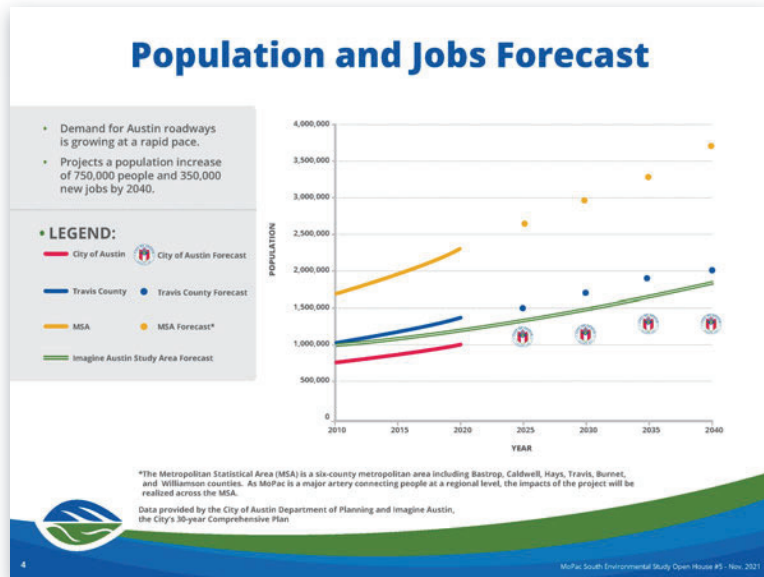
Purpose and Need

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Population and Jobs Forecast

Traffic demand is growing at a rapid pace. Learn more about the population and jobs forecast for the **Imagine Austin** study area.



Population and
Jobs Forecast

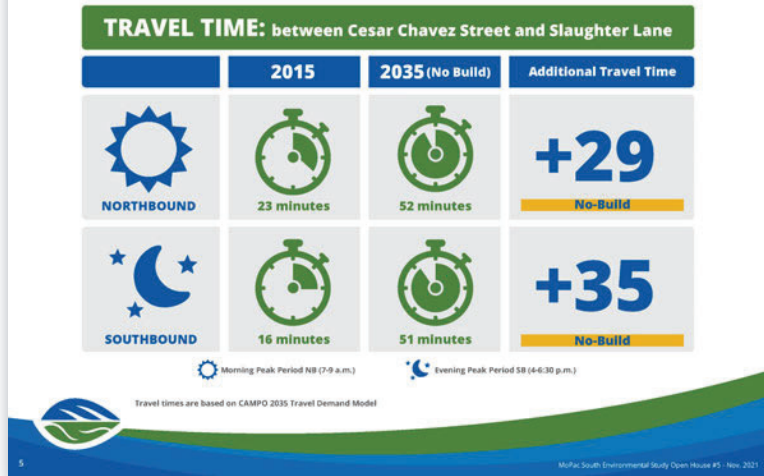
 Enlarge

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Travel Time Comparison

If we do nothing to address congestion, travel times are projected to increase by **35 minutes** by 2035 for drivers traveling between Cesar Chavez Street and Slaughter Lane.

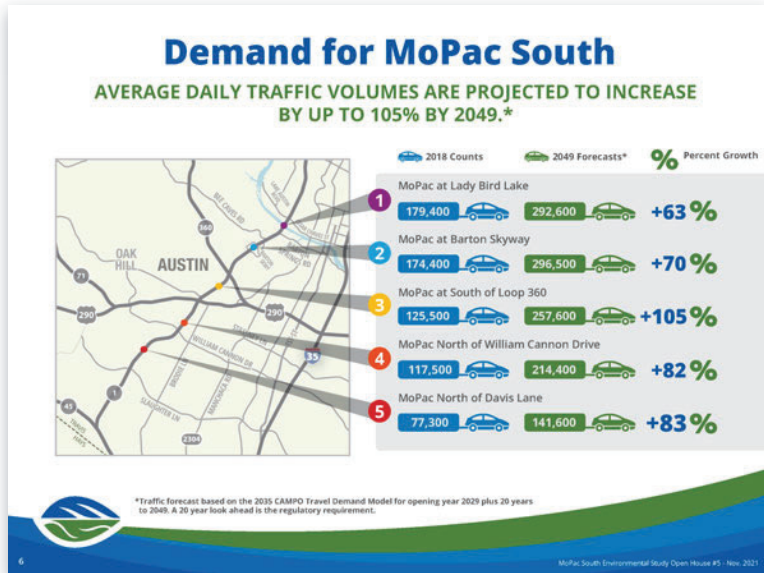
Travel Time Comparison



Travel Time Comparison [Enlarge](#) [Download](#)

Demand for MoPac South

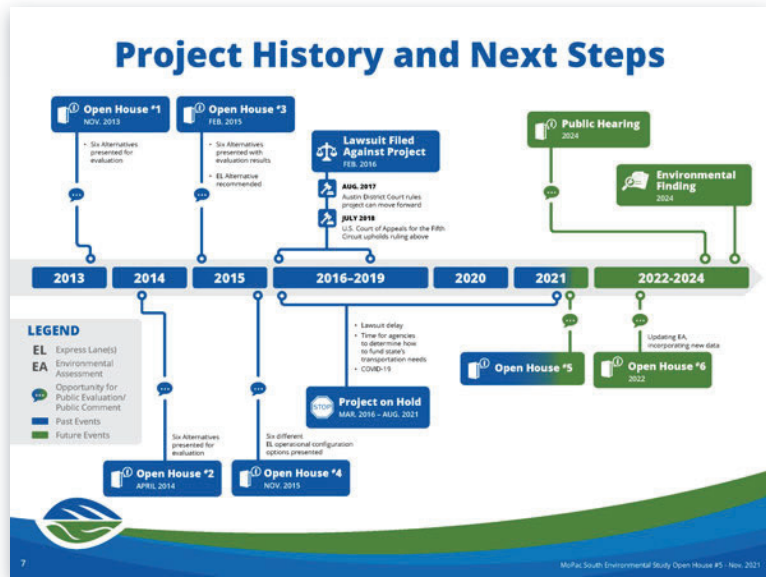
Average daily traffic volumes are projected to increase up to 105% by 2049.



Demand for MoPac South [Enlarge](#) [Download](#)

Project History & Next Steps

In 2013, the Mobility Authority and TxDOT initiated an Environmental Study to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists, and pedestrians in a manner that promotes environmental stewardship and sustainability. We are currently at Open House #5. We anticipate identifying a **Recommended Preferred Alternative** to share for public review and comment at Open House #6 in 2022.



Project Timeline [Enlarge](#) [Download](#)

Next Steps

Learn more about the next steps in the project development process for MoPac South.



Next Steps

Enlarge

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Submit an Official Comment



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01 Welcome to the MoPac South Virtual Public Meeting



03 The Process We Follow



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The Process We Follow

- 01 Welcome
- 02 The Problem We're Trying to Solve
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- 04 Alternatives Considered
- 05 The Express Lane(s) Alternative
- 06 2015 Video Renderings
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- 08 Project Benefits
- 09 Interactive Map
- 10 Submit a Comment
- 11 Resources
- 12 Ver la información en español

What is NEPA?

Project Development Process

MoPac South & NEPA

Long Range Transportation Planning

CAMPO 2045

The Mobility Authority and TxDOT are implementing an Environmental Assessment (EA) for MoPac South per the National Environmental Policy Act (NEPA) of 1969.

What is the National Environmental Policy Act?

Learn more about the federal law we follow to ensure informed decision-making.

What is the National Environmental Policy Act (NEPA)?



NEPA is a federal law and is required when a project receives any federal funding or approval

Establishes procedures followed by agencies in making decisions, but does not dictate the outcome

Considers potential impacts of actions on the social, economic, and physical environment

Requires public outreach to improve project outcomes

Ensures informed decisions by forecasting, documenting, and disclosing what happens if a course of action is taken



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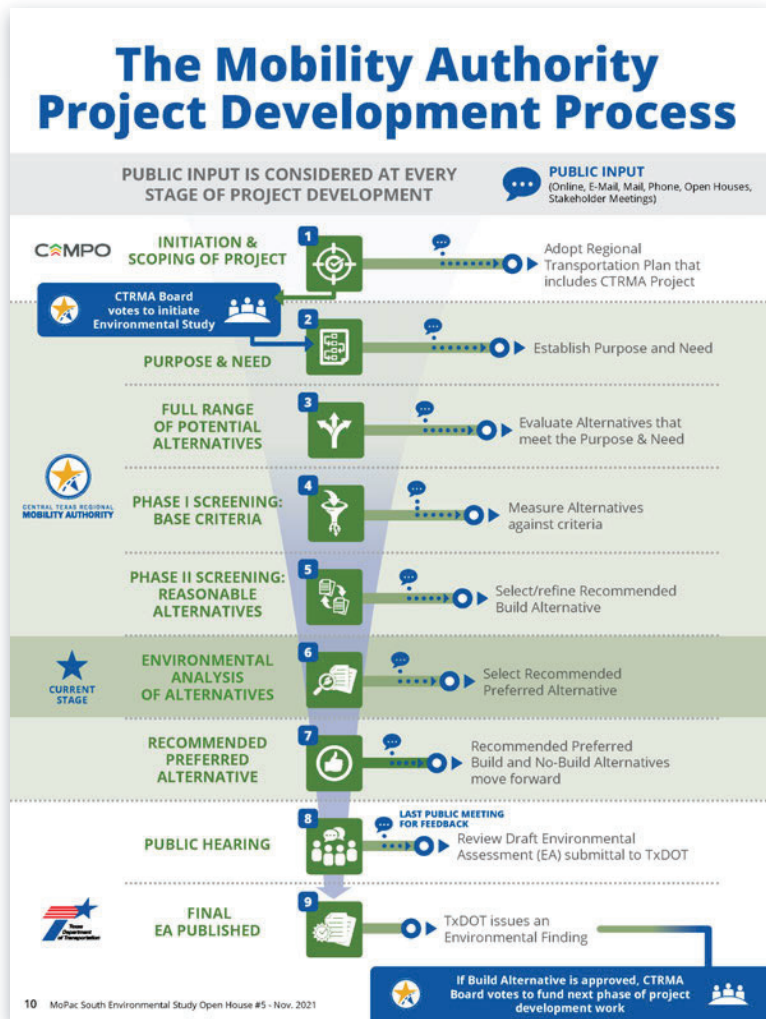
What is the National Environmental Policy Act (NEPA)?

Enlarge

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Mobility Authority Project Development Process

NEPA requires that agencies consider public input as part of the environmental study. The Mobility Authority goes above and beyond the requirements of NEPA for public input, and solicits community feedback at every stage of project development. In the exhibit below, learn the project development process we follow from initiation and scoping through environmental finding, and how that process has been applied to the MoPac South Environmental Study.



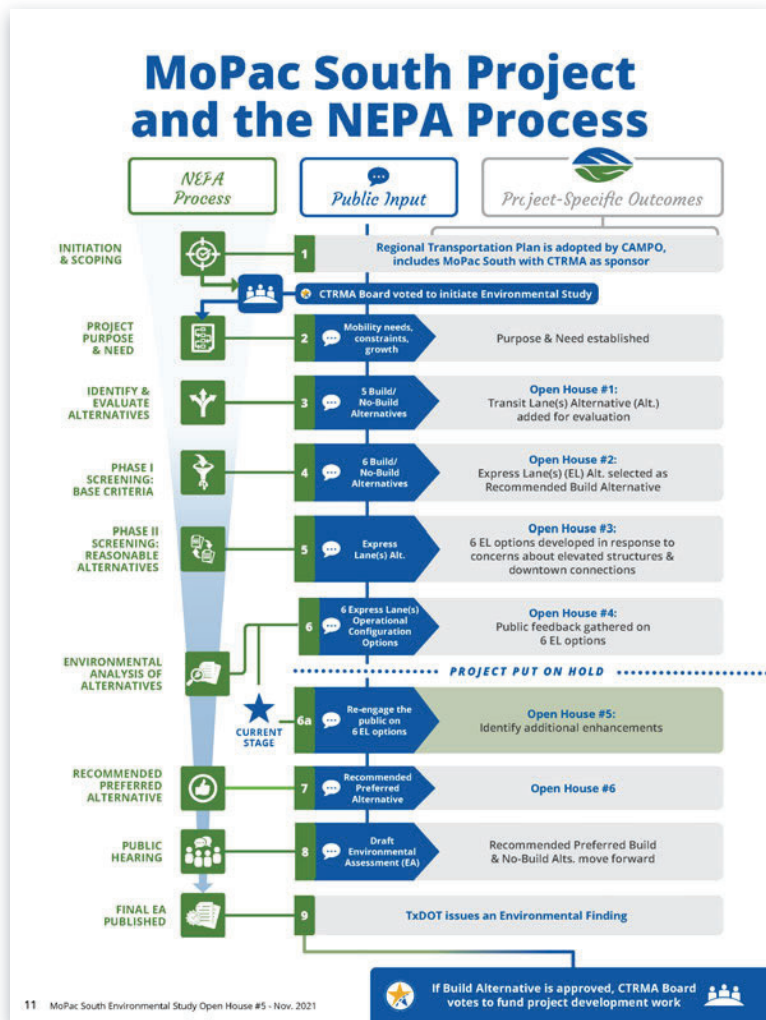
Project Development

Enlarge

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MoPac South Project and the NEPA Process

Learn how the Mobility Authority has implemented the NEPA process on the MoPac South Environmental Study.



MoPac South Project and the NEPA Process

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Long-Range Transportation Planning

The Mobility Authority does not determine which roads to build. **The Capital Area Metropolitan Planning Organization (CAMPO)**, a federally mandated regional

planning agency, develops a long-range transportation plan for the region, prioritizes projects, estimates the cost per project, and determines the most viable funding options on a case-by-case basis. All Mobility Authority projects – including the MoPac South Environmental Study – begin as recommendations in the CAMPO plan. These projects are usually long-term projects, which can be done more quickly through a tolled option.

In 2016, just before the MoPac South Environmental Study was put on hold, CAMPO 2035 was the most current Regional Transportation Plan, and therefore, the baseline against which most project data has been measured. Now that CAMPO 2045 is available, our data and analyses will need to be updated to reflect the updated information available. We look forward to gathering and sharing that information at the next open house in 2022.

Long Range Transportation Planning

WE'RE UPDATING TO CAMPO 2045

- ✓ CAMPO's Regional Transportation Plan (RTP) is the blueprint that guides the planning, design, and funding of infrastructure projects
- ✓ RTP is updated every 5 years to:
 - Confirm validity
 - Ensure consistency with current and forecasted transportation conditions and trends
 - Balance needs with available resources
- ✓ The update extends the plan 25 years into the future and includes all regionally significant road and transit projects expected to be implemented during that time.

Long Range Transportation Planning

[👁 Enlarge](#) [⬇ Download](#)

Why We're Updating to CAMPO 2045

The MoPac South Project team will begin updating our technical analyses according to the CAMPO 2045 Travel Demand Model.

We Are Updating to CAMPO 2045

Reflects projected changes to travel behavior and effects of development and transportation facilities completed since the CAMPO 2035 model		Considers future developments and future roadway and transit improvements
Incorporates revised demographics		Insights further refine proposed project design

MoPac South data will be re-evaluated against the CAMPO 2045 Travel Demand Model to identify the Recommended Preferred Alternative.

Project data is required to be evaluated against the most recent Regional Transportation Plan, which is CAMPO 2045.

13 MoPac South Environmental Study Open House #5 - Nov. 2021

Why We're Updating to CAMPO 2045	Enlarge	Download
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	02 The Problem We're Trying to Solve	04 Alternatives Considered	
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Alternatives Considered

- 01 Welcome
- 02 The Problem We're Trying to Solve
- 03 The Process We Follow
- 04 Alternatives Considered**
- 05 The Express Lane(s) Alternative
- 06 2015 Video Renderings
- 07 Environmental Considerations
- 08 Project Benefits
- 09 Interactive Map
- 10 Submit a Comment
- 11 Resources
- 12 Ver la información en español

Alternatives Considered

Recommended Build Alternative

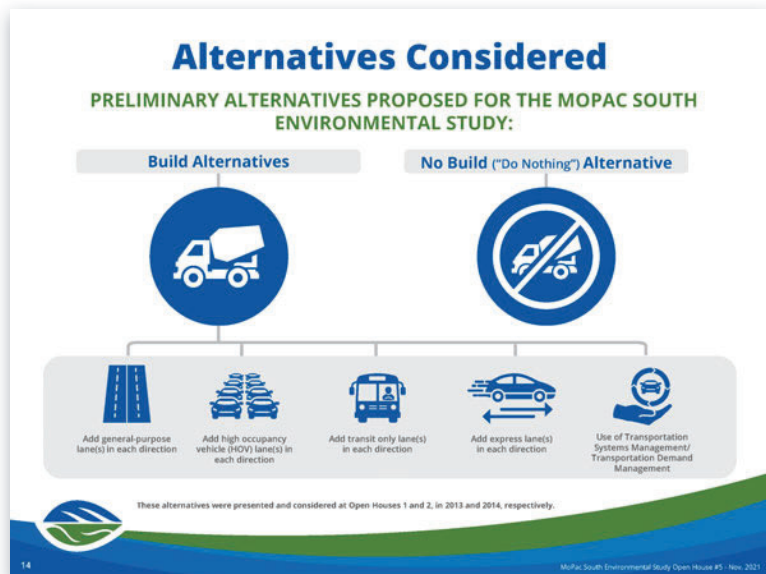
Express Lane(s) Options

Evaluation Criteria

Public Input

Alternatives Considered

The Environmental Study considers a full range of Alternatives, including the No Build or “Do Nothing” Alternative, and analyzes them against the Project’s purpose and need to determine which ones to carry forward for additional evaluation.



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Alternatives
Considered

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Recommended Build Alternative

The Express Lane(s) Alternative was identified as the Recommended Build Alternative after **Open House #2** in 2014 because it best meets the Project's purpose and need. It is being carried forward for further evaluation against the No Build Alternative.

Recommended Build Alternative

Why Express Lane(s)?*

- 1 RELIABILITY**
OFFERS RELIABLE TRAVEL TIMES
- 2 PEAK TRAVEL**
PROVIDES SHORTEST PEAK PERIOD TRAVEL TIME FOR ALL VEHICLES
- 3 TIME SAVINGS**
PROVIDES TIME SAVINGS FOR ALL USERS
- 4 ENVIRONMENT**
MINIMIZES IMPACTS TO THE ENVIRONMENT
- 5 RELIEF**
DELIVERS RELIEF IN A TIMELY MANNER
- 6 TRANSIT**
INCREASES OPPORTUNITIES FOR TRANSIT AND RIDESHARING
- 7 BIKE/PED**
INCLUDES NEW BICYCLE AND PEDESTRIAN FACILITIES

Express Lane(s) Alternative was identified as the Recommended Build Alternative at Open House #2 in 2014.
*In accordance with the National Environmental Policy Act, the No Build Alternative will continue to move forward as a baseline for comparison.

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Recommended
Build Alternative

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Express Lane(s) Operational Configuration Options

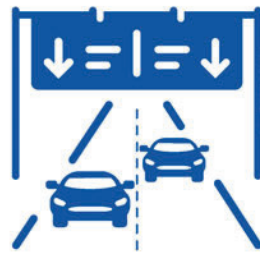
The Express Lane(s) Alternative is being carried forward for further evaluation against the No Build Alternative.

Six express lane(s) operational configuration options, or six different variations of the Express Lane(s) Alternative are currently under consideration. The key differences are the number of express lanes (one or two), and how the ramps are configured at Lady Bird Lake.

More information about the express lane(s) operational configuration options is available on the [next page](#).

Express Lane(s) Operational Configuration Options

SIX VARIATIONS OF THE EXPRESS LANE(S) ALTERNATIVE ARE UNDER EVALUATION. THE KEY DIFFERENCES ARE HOW THE RAMPS ARE CONFIGURED NEAR LADY BIRD LAKE.



- 1A. One Express Lane with Downtown Direct Connection
- 1B. One Express Lane without Downtown Direct Connection
- 2A. Two Express Lanes with Downtown Direct Connection
- 2B. Two Express Lanes without Downtown Direct Connection
- 2C. Two Express Lanes with Elevated Ramps near Barton Skyway
- 3. City of Austin Proposal



16

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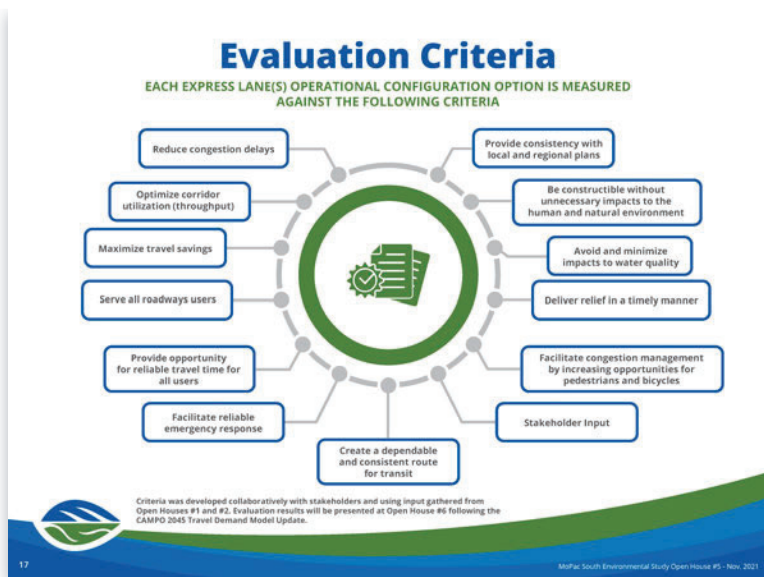
Express Lane(s)
Operational
Configuration
Options

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Evaluation Criteria

The six express lane(s) operational configuration options will be evaluated against a set of criteria and assigned an operational performance score. The criteria were developed collaboratively with stakeholders using input gathered at Open Houses #1 and #2. These scores, combined with public input, will determine which option moves forward as the Recommended Preferred Alternative. Evaluation results will be presented at Open House #6 in 2022 following the CAMPO 2045 Travel Demand Model update.



Evaluation Criteria

[Enlarge](#)

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Public Input is Shaping MoPac South

We've received a great deal of public input to date, and learned what the community values most in a mobility solution for MoPac South. From the many comments received, we know the public values downtown connectivity options, no increased elevations over Lady Bird Lake, and no direct connector ramps near Austin High School. To view all the comments received at previous project events, view the summary reports [here](#).

Public Input is Shaping MoPac South

Community input has been a valuable part of the development process for Mopac South, with adjustments made based on public input, including:

- Potential to add new direct connection at US 290
- Added new collector distributor road from Barton Skyway to Loop 360
- Added south to north Texas Turnaround at Barton Skyway
- Lengthen turn lane leading to Texas Turnaround at Loop 360
- Reconfigured Bee Cave Road/RM 2244 southbound exit ramp
- Ramp improvements at William Cannon Drive
- Added third southbound general-purpose lane south of William Cannon Drive

We know the public values:

- Downtown connectivity options
- No increased elevations over Lady Bird Lake
- No direct connector ramps near Austin High School

Each express lane(s) operational configuration option will be analyzed against a set of criteria developed based on this feedback, and the CAMPO 2045 Travel Demand Model. These operational performance scores, combined with public input, will determine the Recommend Preferred Alternative.

18 MoPac South Environmental Study Open House #5 - Nov. 2021

Public Input is

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03 The Process We
Follow

05 The Express
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The Express Lane(s) Alternative

- 01 Welcome
- 02 The Problem We're Trying to Solve
- 03 The Process We Follow
- 04 Alternatives Considered
- 05 The Express Lane(s) Alternative**
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- 07 Environmental Considerations
- 08 Project Benefits
- 09 Interactive Map
- 10 Submit a Comment
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Express Lane(s) Options

1A: One Express Lane

1B: One Express Lane

2A: Two Express Lanes

2B: Two Express Lanes

2C: Two Express Lanes

3: City of Austin Proposal

Express Lane(s) Operational Configuration Options

The Express Lane(s) Alternative is being carried forward as the Recommended Build Alternative for further evaluation against the No Build Alternative.

Six express lane(s) operational configuration options, or six different variations of the Recommended Build Alternative are currently under consideration. Each operational configuration option has a similar design between south of Barton Skyway and Slaughter Lane. The options differ in number of express lanes (one or two), and how the ramps are configured at Lady Bird Lake. Learn more about the options below.

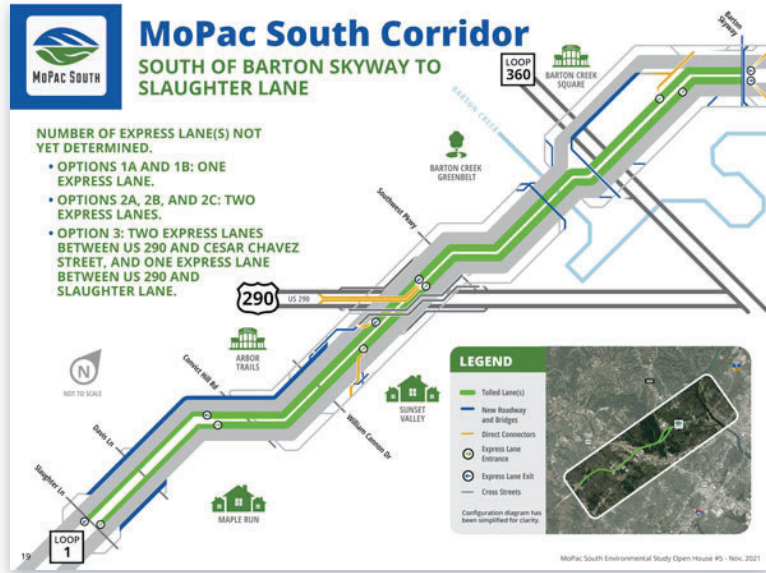
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Please view the diagrams below of each operational configuration option. For additional visual representation of proposed project elements, including elevations and roadway and bridge widths, view the video renderings on the **next page** of this site.

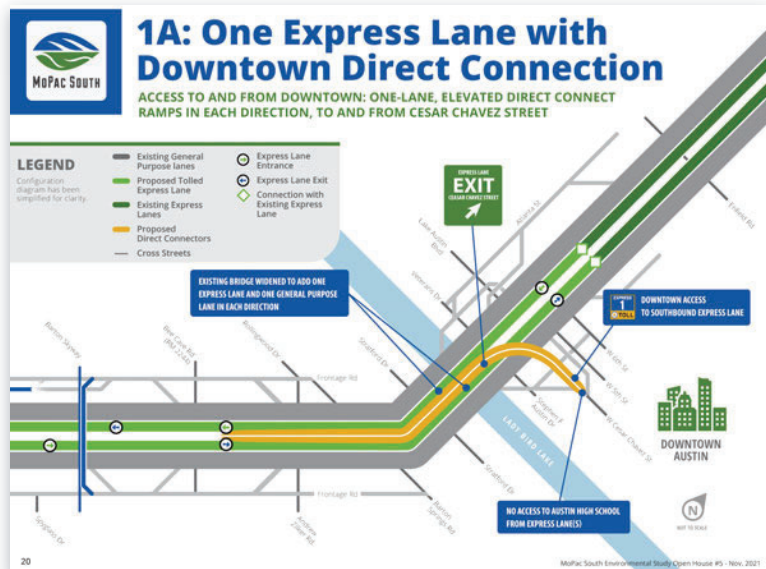


MoPac South Corridor Map

Enlarge

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1A: One Express Lane with Downtown Connection



1A: One Express

Enlarge

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Lane with
Downtown
Connection

1A: 2035 Travel
Times

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1B: One Express Lane without Downtown Direct Connection



1B: One Express
Lane without
Downtown Direct
Connection

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1B: 2035 Travel
Times

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2A: Two Express lanes with Downtown Direct Connection



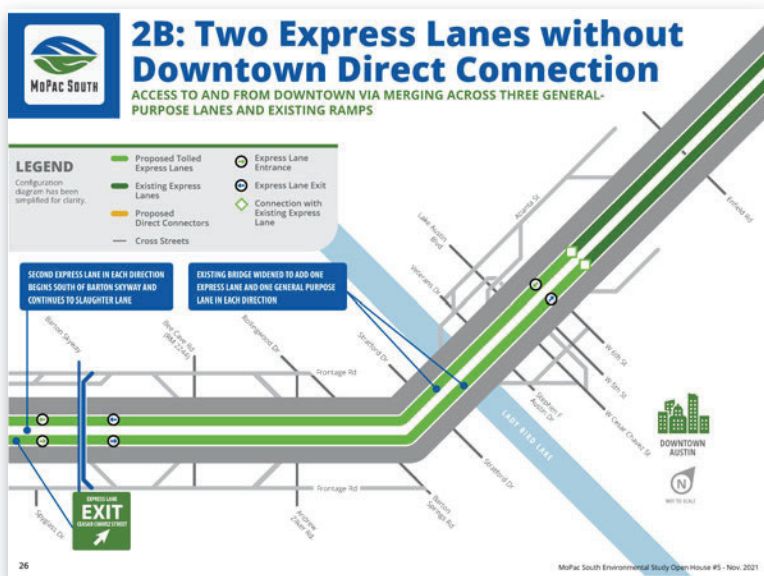
2A: Two Express lanes with Downtown Direct Connection

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2A: 2035 Travel Times

[Enlarge](#) [Download](#)

2B: Two Express Lanes without Downtown Direct Connection



2B: Two Express Lanes without

[Enlarge](#) [Download](#)

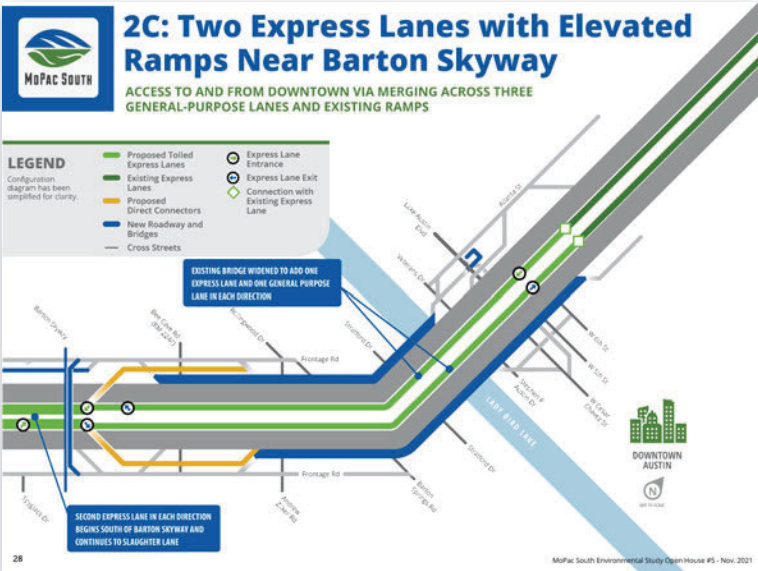
Downtown Direct Connection

2B: 2035 Travel Times

[👁 Enlarge](#)

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2C: Two Express Lanes with Elevated Ramps Near Barton Skyway



2C: Two Express Lanes with Elevated Ramps Near Barton Skyway

[👁 Enlarge](#)

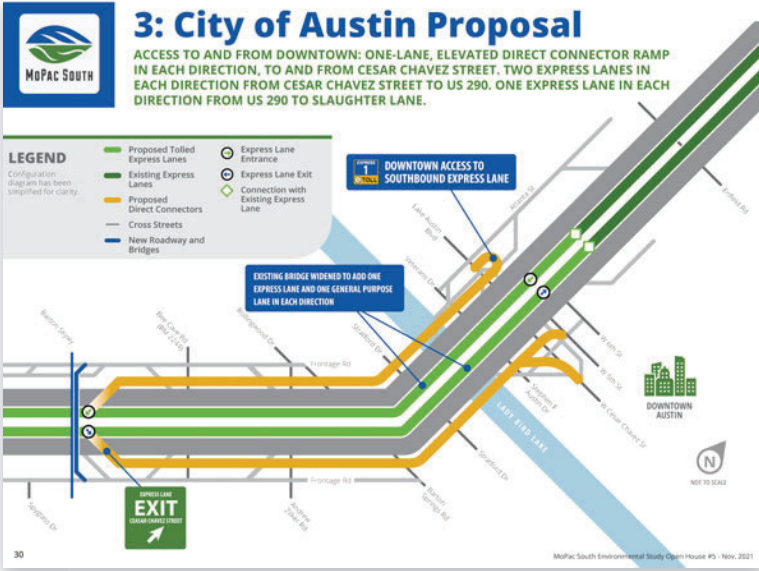
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2C: 2035 Travel Times

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3: City of Austin Proposal



3: City of Austin Proposal

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3: 2035 Travel Times


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[04 Alternatives Considered](#)

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2015 Video Renderings

- 01 Welcome
- 02 The Problem We're Trying to Solve
- 03 The Process We Follow
- 04 Alternatives Considered
- 05 The Express Lane(s) Alternative
- 06 2015 Video Renderings**
- 07 Environmental Considerations
- 08 Project Benefits
- 09 Interactive Map
- 10 Submit a Comment
- 11 Resources
- 12 Ver la información en español

1A: One Express Lane

1B: One Express Lane

2A: Two Express Lanes

2B: Two Express Lanes

2C: Two Express Lanes

2015 Video Renderings

Please note the following videos were developed in 2015 for Open House #4 and have not been updated since. They are intended to provide a visual representation of proposed project elements, including elevations and roadway and bridge widths, for the different operational configuration options.

These videos **do not** reflect changes to project staff or changes to the regional transportation landscape since 2015, such as the completion of the MoPac Improvement Project between Cesar Chavez Street and Parmer Lane, which was completed in 2017. All six operational configurations would provide connections to the existing MoPac Express Lane.

1A. Video explanation of the One Express Lane + Downtown Direct Connection operational configuration option.

MoPac South Environmental Study: One Express...

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1B. Video explanation of the One Express Lane without Downtown Direct Connection operational configuration option.

MoPac South Environmental Study: One Express...

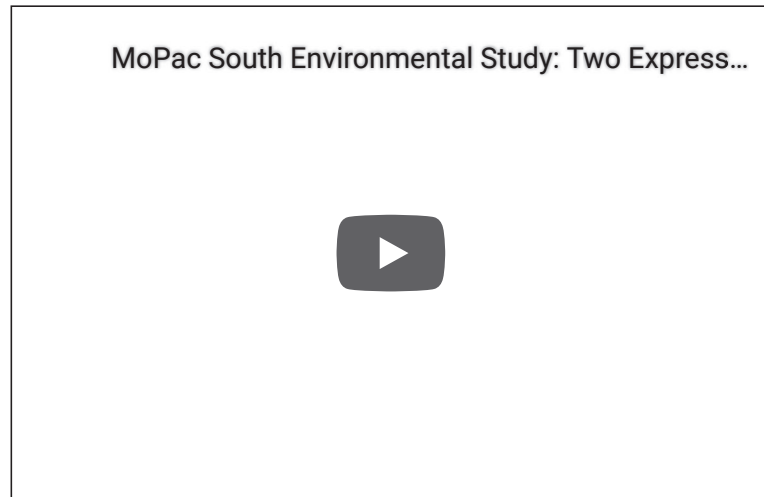


2A. Video explanation of the Two Express Lanes + Downtown Direct Connection operational configuration option.

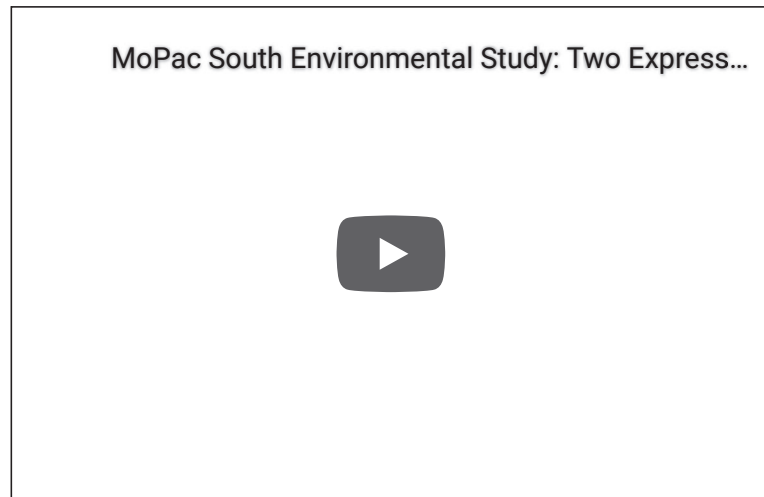
MoPac South Environmental Study: Two Express...



2B. Video explanation of the Two Express Lanes without Downtown Direct Connection operational configuration option.



2C. Video explanation of the Two Express Lanes + Elevated Ramps near Barton Skyway/Bee Cave Road operational configuration option.



Submit an Official Comment

Deadline for Comments: JAN. 7, 2022 at 11:59 PM

A blue rectangular button with a green-to-blue gradient. It contains the text "Submit an Official Comment" in white, a smaller line of text "Deadline for Comments: JAN. 7, 2022 at 11:59 PM", and a white circular icon with a downward-pointing arrow.



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Environmental Considerations

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Environmental Evaluations

Archeological & Historic Resources

Water Quality

Water Resources

Threatened & Endangered Species

Traffic Noise Evaluation

Traffic Noise & Abatement

The Environmental Study being conducted on this project is an Environmental Assessment (EA) per the National Environmental Policy Act of 1969 (NEPA). An EA is a public document that includes an analysis of a full range of alternatives (including a "No Build" Alternative) and an assessment of potential impacts to the human and natural environment.

The Texas Department of Transportation (TxDOT) Environmental Affairs Division is responsible for evaluating the EA and issuing an environmental finding. If TxDOT determines that the action will not have significant environmental impacts, the agency will issue a "Finding of No Significant Impact" (FONSI). A FONSI is a document that presents the reasons why the agency has concluded there are no significant environmental impacts projected. If the EA determines that the environmental impacts will be significant, an Environmental Impact Statement (EIS), a more extensive level of environmental review, will be required.

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Public involvement is a critical element of the environmental process. Other environmental considerations include the following, and a [map showing the environmental constraints](#) can be found on the project website.

Environmental Evaluations

Detailed technical reports will be completed as part of the MoPac South Environmental Study.



Environmental Evaluations

👁 Enlarge

📄 Download

Archeological & Historic Resources

Austin's precious archeological and historic resources will be studied.




Archeological & Historic Resources

Section 106 of the National Historic Preservation Act (NHPA)

- Considers effects on Historic Properties including, Historic (45+ Years) and Archeological Resources in Area of Potential Effects (APE):
 - Identification of Cultural Resources and Historic Properties
 - Determine Effect on Historic Properties
 - Minimize Impact to Historic Properties
- Studies will address these types of effects within the APE:
 - Direct (Disturbance)
 - Indirect (Viewshed, Noise, Vibration)


Known Cultural Resources in APE

- Zilker Park Historic District
- Deep Eddy Historic District
- Charles Johnson Homestead
- Archeological Sites



33 MOPAC South Environmental Study Open House #5 - Nov. 2021

Archeological & Historic Resources

 [Enlarge](#)  [Download](#)

Water Quality Protections

The project team will evaluate and implement water quality protections for the sensitive Edwards Aquifer Recharge Zone.

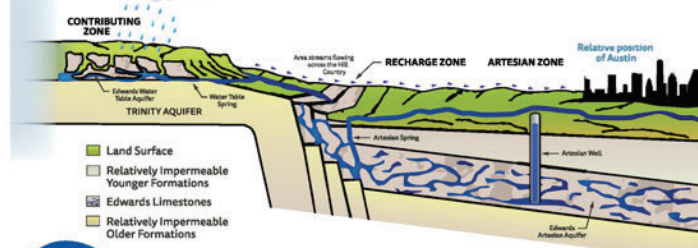


Water Quality Protections

- Edwards Aquifer is a drinking water source for South Central Texas.
 - Fractures, caves, sinking streams, and sinkholes act as conduits to the aquifer.
 - Karst is a type of landscape formed by the dissolution of rocks.
 - Several diverse fauna rely upon the Aquifer.
- Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Requirements:
 - Minimize erosion and sedimentation
 - Develop an Edwards Aquifer Protection Plan for contaminants
 - Potential water quality treatment measures:
 - Permeable Friction Course (PFC) Pavement
 - Water quality ponds
 - Vegetative controls
 - Hazardous materials traps

Due to the environmentally sensitive nature of the Edwards Aquifer Recharge Zone, the Mobility Authority exceeded the environmental protection requirements for construction of the 45SW Toll Road, resulting in 98% removal of the increase in Total Suspended Solids.

WHAT IS THE EDWARDS AQUIFER RECHARGE ZONE?



34

MoPac South Environmental Study Open House #5 - Nov. 2021

Water Quality Protections

 [Enlarge](#)

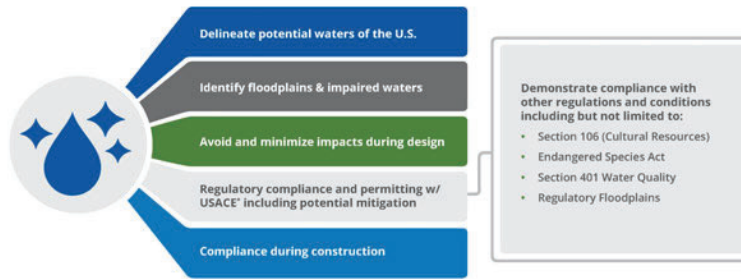
 [Download](#)

Water Resources

The project will comply with the Clean Water Act, as well as the Edwards Aquifer Rules.

Water Resources

IN ADDITION TO THE EDWARDS AQUIFER RULES, THE PROJECT WILL ALSO COMPLY WITH THE CLEAN WATER ACT.



United States Army Corps of Engineers

35

MuFac South Environmental Study Open House #5 - Nov. 2021

Water Resources

👁 Enlarge

📄 Download

Threatened & Endangered Species

A variety of threatened and endangered species will be studied as part of the Environmental Assessment.

Threatened and Endangered Species

SPECIES OF INTEREST INCLUDE, BUT ARE NOT LIMITED TO:



Golden-Cheeked Warbler
*Setophaga chrysoparia*¹



Barton Springs Salamander
*Eurycea sosorum*²



Tooth Cave Ground Beetle
*Rhodine persephone*³

Environmental Efforts

- Potential Habitat Assessments including Presence-Absence Surveys
- 5 years of Golden-cheeked Warbler Surveys without presence
- Minimizing impacts during design process
- Incorporating conservation and recovery measures
- Preparing a Biological Assessment for consultation with the USFWS
- Consulting with resource agencies, U.S. Fish and Wildlife Service (USFWS) and Texas Parks and Wildlife Department (TPWD).

Karst Zones

SOME THREATENED AND ENDANGERED SPECIES ARE FOUND IN KARST ZONES

- What are karst zones?
 - Zone 1: Areas known to contain endangered cave fauna
 - Zone 2: Areas having a high probability of suitable habitat for endangered cave fauna
 - Zone 3: Areas that probably do not contain endangered cave fauna
- These are established by U.S. Fish and Wildlife.



¹Audubon.org

²U.S. Fish & Wildlife

³Communityimpact.com

36

MuFac South Environmental Study Open House #5 - Nov. 2021

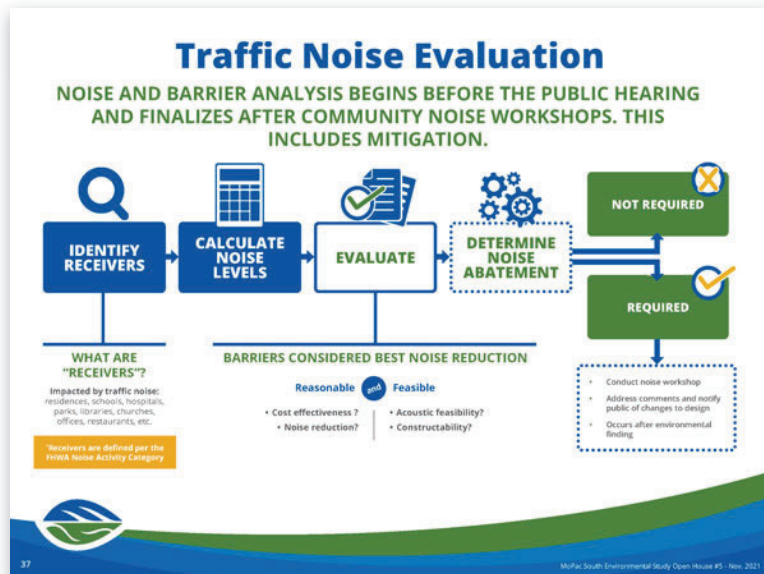
Threatened and Endangered Species

👁 Enlarge

📄 Download

Traffic Noise Evaluation

A traffic noise evaluation will identify the places that could be impacted by traffic noise and may benefit from reduced noise levels through abatement measures, such as sound walls. We follow the federally-required process to determine whether sound walls are reasonable and feasible.

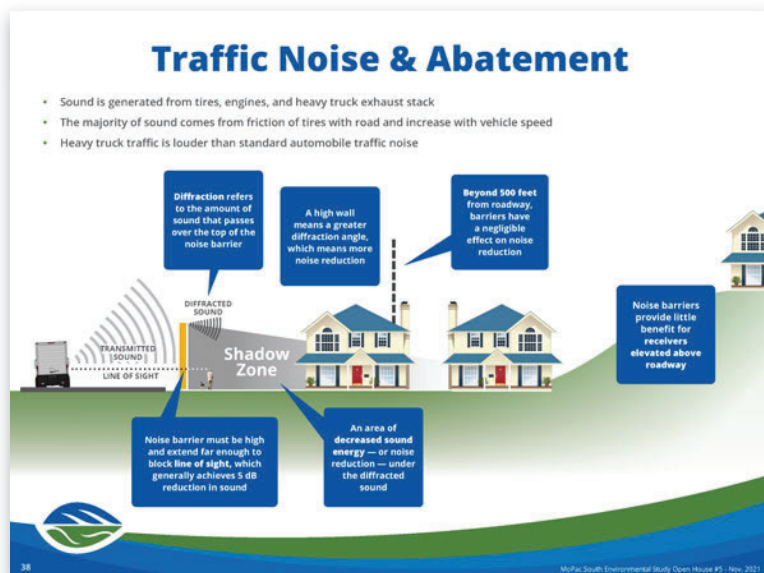


Traffic Noise Evaluation

[👁 Enlarge](#)
[📄 Download](#)

Traffic Noise & Abatement

Learn more about how highway traffic noise can impact receivers and when noise abatement measures, such as sound walls, are implemented.



Highway Traffic
Noise and
Abatement

 Enlarge

 Download

Need more information on how we study and evaluate traffic noise? Download the Noise Fact Sheet below for more details.

Noise Fact Sheet

 Download

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06 2015 Video Renderings

08 Project Benefits



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exhibits so you can
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Project Benefits

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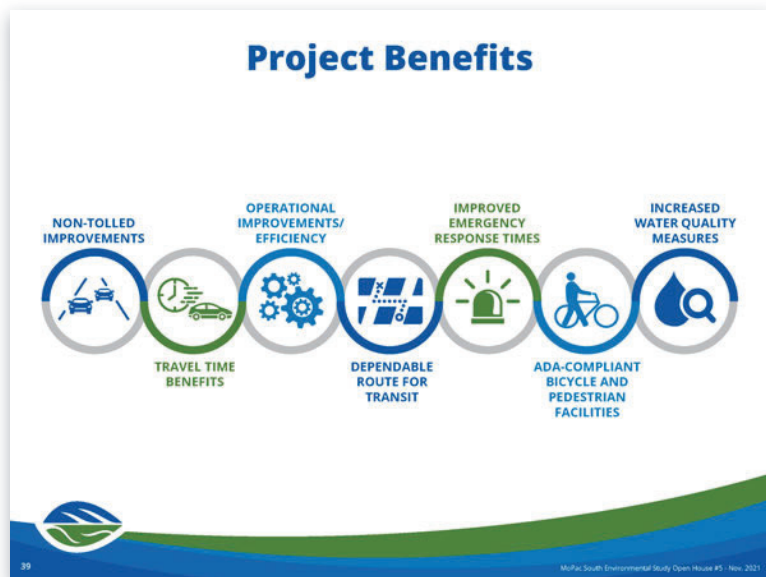
Project Benefits

Bike and Pedestrian Improvements

Non-Tolled Improvements

Project Benefits

The proposed express lane(s) include a wide range of benefits for the community – both tolled and non-tolled, and for users of all modes of travel.



Project Benefits

Enlarge

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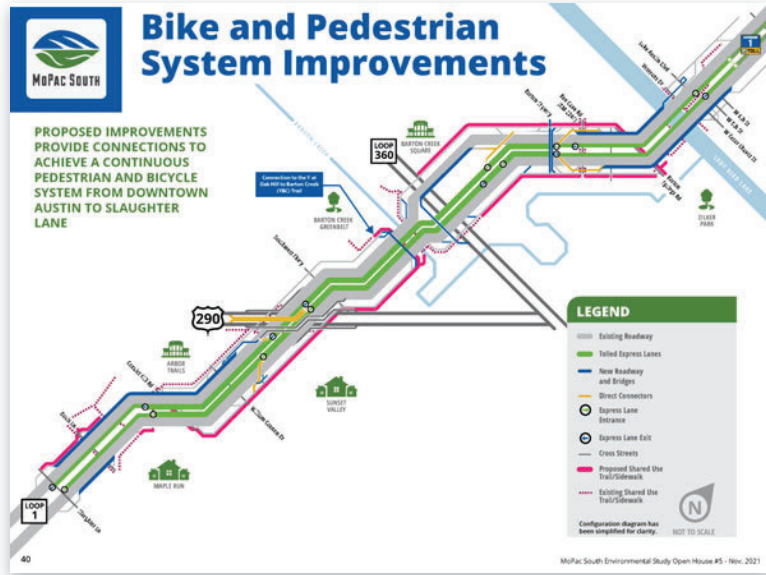
Bike and Pedestrian Improvements

NAME *

EMAIL *

SUBMIT

The proposed project includes connections to achieve a continuous pedestrian and bicycle system from downtown Austin all the way to Slaughter Lane.



Bike and Pedestrian Improvements [Enlarge](#) [Download](#)

Non-Tolled Improvements

The project proposes improvements that would benefit all drivers - whether traveling in the tolled express lane(s) or the non-tolled general-purpose lanes.



Non-Tolled Improvements

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07 Environmental
Considerations

09 Interactive Map



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Interactive Map

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- 02 The Problem We're Trying to Solve
- 03 The Process We Follow
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- 06 2015 Video Renderings
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Access the online interactive map by clicking the button below. Share your feedback and view feedback left by others.

Please note that feedback provided will be documented in the public meeting summary, but is outside the formal NEPA process, and will not receive a response. The Mobility Authority reserves the right to moderate feedback, and submissions will not be immediately visible on the map. Any feedback that includes profane, threatening, or abusive language; any personally identifiable information; or is not germane to the map, the project, or the project area; will not be shown on the map.

[VIEW THE INTERACTIVE MAP](#)

Detailed Directions for Leaving Feedback

STEP ONE: To access the online interactive map, click on the button above.

STEP TWO: To leave feedback:

- Click "submit feedback" on the bottom right side in green.
- A form will appear. Enter your name in the "Name" field (optional), and enter your feedback in the "Feedback" field. Location may be entered either by clicking a point on the map or by entering the address in the location field. Do not include any personal information.
- Click the "Report It" button to submit your feedback. A message stating "Thank you. Your feedback has been received." will appear at the top of the feedback form once you have submitted.
- Repeat these steps to leave additional feedback.

STEP THREE: To review the map:

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NAME *

EMAIL *

SUBMIT

- Review the Terms and Instructions pop-up window using the scroll bar.
- Click the X in the top right corner of the pop-up window to close the window.
- Click and drag to move around the map and use the "+" and "-" buttons at the top left of the map to zoom in and out, view locations, streets, and other participants' comments.
- Click on the base map gallery button on the left side of the screen to change the background to aerial imagery, streets, topographic, or other map background options.
- Click on the legend button on the left side of the screen to view a map legend.

Please note all feedback is subject to review prior to being shown on the map. Any feedback violating the terms above will not be visible.

Feedback received through this method will be included in the virtual public meeting report, but will not receive a response in the meeting's official comment/response matrix. If you would like to receive a formal response, submit an official comment as noted on [this page](#) or below.

Submit an Official Comment



Deadline for Comments: JAN. 7, 2022 at 11:59 PM



08 Project Benefits

10 Submit a Comment



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problem - one click is all

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Official comments will be received and accepted by the project team in the following ways:



ONLINE

Through the comment form below, or the form linked at the bottom of each page.



E-MAIL

Send your comment by email to MoPacSouth@ctrma.org



MAIL

CTRMA, c/o MoPac South Env. Study, 3300 N. I-35, Suite 625, Austin, TX 78705

Your comments must be postmarked or received by Jan. 7, 2022, at 11:59 p.m. to be included in the official record of this virtual public meeting. Comments sent via other methods or past the date noted above will not be included. Comments submitted via e-mail or online will receive a confirmation of receipt. No receipt will be provided for comments submitted via mail.

Submit an Official Comment

Deadline for Comments: Jan. 7, 2022, at 11:59 p.m.

NAME *

PHONE

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NAME *

EMAIL *

SUBMIT

EMAIL *

CONFIRM EMAIL *

ADDRESS

ADDRESS 2

CITY

STATE

ZIP CODE *

COMMENT *

Upload File (pdf, doc, xlsx only. Max 3MB)

Optional

[UPLOAD](#) 

NO FILE UPLOADED

**Per Texas Transportation Code, §201.811(a)
(5): check each of the following boxes that
apply to you:**

- I am employed by TxDOT
- I do business with TxDOT
- I could benefit monetarily from the project
or other item about which I am commenting

Newsletter

- Sign up for our MoPac South newsletter
- Sign up for Mobility Authority Expressway
News

SUBMIT

Share your input on:

- Project goals and objectives
- Mobility, connectivity, and safety concerns on south
MoPac from Cesar Chavez Street to Slaughter Lane

- Express Lane(s) options for downtown connectivity
- Environmental constraints
- Anything else you'd like to share

We Want Your Feedback!

Help us improve future virtual public meetings by taking our short survey to let us know about your experience.

TAKE THE SURVEY

Please note: this brief survey is NOT an official comment collector option.



09 Interactive Map

11 Resources



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Resources

- 01 Welcome
- 02 The Problem We're Trying to Solve
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- 04 Alternatives Considered
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- 07 Environmental Considerations
- 08 Project Benefits
- 09 Interactive Map
- 10 Submit a Comment
- 11 Resources
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Contact us **online** (inquiries only, no official comments)



Contact us by phone **(512) 342-3299**

Need More Information?

Have a question, or want to speak to a member of the project team before you submit your official comment? E-mail us via the contact form on the MoPacSouth.com website. There, you can also find **FAQs**, information on **past events**, and more.

[Full set of Open House Exhibits](#)

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10 [Submit a Comment](#)

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SUBMIT

Ver la información en español

Bienvenidos al Encuentro Público Virtual de MOPAC Sur

Gracias por su interés y participación

La Mobility Authority y TxDOT lo invitan a revisar y comentar sobre los materiales, exhibiciones e información proporcionada en el **Encuentro Público Virtual del Estudio Ambiental de MoPac South** hasta el 7 de enero de 2022. Esta reunión pública se llevará a cabo virtualmente en lugar de una reunión pública tradicional en persona debido a COVID-19.

A medida que reanudamos el estudio ambiental, esta reunión ayudará a volver a involucrar al público donde lo dejamos después de la casa abierta de noviembre de 2015. Planeamos proporcionar análisis actualizados y el Alternativa Preferida Recomendada en una reunión pública en 2022.

Se Habla Español: Para más detalles e información acerca del proyecto en español por favor comuníquese con uno de los miembros del equipo al [512-878-2246](tel:512-878-2246) y le atenderemos con gusto.

Qué Hacer Mientras Está Aquí

- Consulte estos materiales
- Comparta su opinión. Por favor someter o envíe sus comentarios por correo postal antes del 7 de enero de 2022.

Paquete de Bienvenida

Download

Paquete de Información

Download

Mapas

Download

Propósito del Encuentro Público Virtual

El propósito del Encuentro Público Virtual del Estudio Ambiental de MoPac South es brindar una oportunidad para que el público revise y comente sobre:

- Metas y objetivos del proyecto
- Problemas de movilidad, conectividad y seguridad

- Opciones de configuración operativa de carril (s) expreso
- Limitaciones ambientales

¿Necesita ayuda? Si tiene alguna pregunta, tiene dificultades técnicas, o si es una persona con una discapacidad que requiere un alojamiento para participar en el encuentro público virtual, por favor contáctenos al [512-342-3299](tel:512-342-3299).

Acerca de la Mobility Authority

La Central Texas Regional Mobility Authority es una agencia gubernamental local e independiente creada en 2002 para mejorar el sistema de transporte regional en los condados de Travis y Williamson. La Mobility Authority implementa opciones de transporte innovadoras y sostenibles para mejorar la calidad de vida y la vitalidad económica en el centro de Texas. La Mobility Authority posee y opera 183A Toll, 290 Toll, 71 Toll Lane, MoPac Express Lane, 45SW Toll y 183 Toll. Para obtener más información, visite MobilityAuthority.com

Envíe un Comentario Oficial

Fecha límite para comentarios: 7 de enero de 2022 a las 11:59 p.m.

COMPARTA SU OPINIÓN



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CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

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ONLINE COMMENT FORM DOCUMENTATION

Documentation of the online comment form, which was made available for the virtual public meeting, is included below.



Deadline for Comments: JAN. 7, 2022 at 11:59 PM

Submit a Comment

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Official comments will be received and accepted by the project team in the following ways:



ONLINE

Through the comment form below, or the form linked at the bottom of each page.



E-MAIL

Send your comment by email to MoPacSouth@ctrma.org



MAIL

CTRMA, c/o MoPac South Env. Study, 3300 N. I-35, Suite 625, Austin, TX 78705

Your comments must be postmarked or received by Jan. 7, 2022, at 11:59 p.m. to be included in the official record of this virtual public meeting. Comments sent via other methods or past the date noted above will not be included. Comments submitted via e-mail or online will receive a confirmation of receipt. No receipt will be provided for comments submitted via mail.

Submit an Official Comment

Deadline for Comments: Jan. 7, 2022, at 11:59 p.m.

NAME *

PHONE

Sign Up
for Email Updates

NAME *

EMAIL *

SUBMIT

EMAIL *

CONFIRM EMAIL *

ADDRESS

ADDRESS 2

CITY

STATE

ZIP CODE *

COMMENT *

Upload File (pdf, doc, xlsx only. Max 3MB)

Optional

[UPLOAD](#) 

NO FILE UPLOADED

**Per Texas Transportation Code, §201.811(a)
(5): check each of the following boxes that
apply to you:**

- I am employed by TxDOT
- I do business with TxDOT
- I could benefit monetarily from the project
or other item about which I am commenting

Newsletter

- Sign up for our MoPac South newsletter
- Sign up for Mobility Authority Expressway
News

SUBMIT

Share your input on:

- Project goals and objectives
- Mobility, connectivity, and safety concerns on south
MoPac from Cesar Chavez Street to Slaughter Lane

- Express Lane(s) options for downtown connectivity
- Environmental constraints
- Anything else you'd like to share

We Want Your Feedback!

Help us improve future virtual public meetings by taking our short survey to let us know about your experience.

TAKE THE SURVEY

Please note: this brief survey is NOT an official comment collector option.



09 Interactive Map

11 Resources



@MopacSouth

REMINDER: Open House #5 closes this Friday, 1/7 - don't miss your chance to submit comments.
<https://t.co/Bf3u9suG0G>
<https://t.co/7HYIWSDRNY>

Jan 03



@MopacSouth

Don't have time to explore the MoPac South Open House? No problem - one click is all it takes to download the exhibits so you can review the information how you like.

<https://t.co/rmlbfcOwop>
<https://t.co/vyCF5z8lZB>

Dec 14



Thank you for your interest and participation in the MoPac South Environmental Study. If you have any



CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

technical difficulties with this site, please

call 512-342-3299.

Copyright © CTRMA 2022 | **MoPac South Main Site**

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019 and executed by FHWA and TxDOT.

Site by MONKEE-BOY

HANDOUTS AND EXHIBITS

The following handouts and exhibits were provided:

- Virtual meeting instructions
- Project fact sheet
- Exhibit boards
- Noise Fact Sheet
- Spanish meeting instructions
- Spanish exhibits



MoPac South



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

Thank you for joining us for this virtual experience

The MoPac South Environmental Study Open House is being held virtually in lieu of a traditional, in-person public meeting due to COVID-19. **Follow this guide to engage with us online via the Virtual Open House.**

#1



**Experience the Virtual Open House at
voh.MopacSouth.com**

#2



View and/or download the project materials

#3



Share your input:

The Mobility Authority would like your input on:

- Project goals and objectives
- Mobility, connectivity, and safety concerns on south MoPac from Cesar Chavez Street to Slaughter Lane
- Express lane(s) operational configuration options
- Environmental constraints
- Anything else you'd like to share

#4



How to Comment:

- **Online:** voh.MoPacSouth.com
- **E-Mail:** MoPacSouth@ctrma.org
- **Mail:**
Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N. I-H 35, Suite 625
Austin, TX 78705

Please submit or postmark comments by Jan. 7, 2022

*If you have any questions or need special accommodations,
please contact us at (512) 342-3299.*



MoPac South



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY



Public Input

Providing the public with opportunities to share feedback is a critical element of the environmental study process, and part of the Mobility Authority mission. This input, combined with technical analysis, allows the project team to identify the best option for meeting the project's Purpose and Need. The list below shows how community input has helped to shape the design of the Express Lane(s) Alternative to date.

- Potential to add new direct connection at US 290
- Added new bypass lane from Barton Skyway to Loop 360
- Added south to north Texas Turnaround at Barton Skyway
- Lengthened Texas Turnaround at Loop 360 to increase capacity
- Reconfigured RM 2244 southbound exit ramp
- Ramp improvements at William Cannon Drive
- Added third southbound general-purpose lane south of William Cannon Drive



We know the public values:

- Downtown connectivity options
- No increased elevations over Lady Bird Lake
- No direct connector ramps near Austin High School
- Improved mobility for all transportation modes

Each Express lane(s) option will be analyzed against a set of criteria developed based on public input and the CAMPO 2045 Travel Demand Model. These operational performance scores, combined with public input, will determine the Recommend Preferred Alternative.

To view previous comments submitted at past public engagement events, visit www.MoPacSouth.com



MoPac South



CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

MOPAC SOUTH ENVIRONMENTAL STUDY

WHAT PROBLEM ARE WE TRYING TO SOLVE?

The MoPac Expressway south of Cesar Chavez Street is a vital artery in Austin for commuters, neighbors, and visitors. This corridor provides a critical link to downtown Austin and other major highways such as US 290 and Loop 360. Consistently ranked among the top 20 most congested roadways in Texas,* it attracts up to 179,000 cars and trucks per day.** Over time, expanding population, as well as residential, retail and commercial development in the corridor, has led to increased traffic congestion. This negatively impacts mobility and quality of life for the traveling public and adjacent neighborhoods.

If we do nothing to address congestion, drivers could **spend an additional 35 minutes** traveling the corridor by 2035.



PROJECT PURPOSE: WHAT ARE WE TRYING TO DO?

- Provide reliable travel times
- Create a dependable route for transit
- Facilitate reliable emergency response



PROJECT NEED: WHAT PROBLEMS ARE WE TRYING TO ADDRESS?

- Current and forecasted population, traffic, and employment growth are increasing congestion and travel delays
- Emergency response times are impacted by traffic congestion



OUR PROPOSED SOLUTION

The Mobility Authority and partners launched an environmental study in 2013 to analyze the corridor and determine the best approach to managing congestion. The study identified a full range of alternatives, including Express Lane(s), High Occupancy Vehicles Lanes (HOV), Transit Only Lanes, additional General-Purpose Lanes, and Transportation Demand Management Alternatives. Thorough evaluation determined that the Express Lane(s) Alternative was the *Recommended Build Alternative* because it best met the **purpose** and **need** of the study, offering the following benefits:

- Reliable travel times
- Shortest peak period travel times
- More travel time savings than other Alternatives
- Avoids unnecessary environmental impacts
- Creates opportunities for transit and ridesharing; bicycle and pedestrian facilities

*Texas A&M Transportation Institute, 2020, Texas' Most Congested Roadways

**Based on CAMPO 2035 Travel Demand Model



MoPac South



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MOBILITY AUTHORITY



PROJECT GOALS AND OBJECTIVES

- Facilitate congestion management
- Provide consistency with local and regional plans
- Reduce congestion and provide travel time savings and trip reliability for all roadway users
- Be constructible without unnecessary impacts to the natural and human environment
- Avoid and minimize impacts to water quality
- Increase opportunities for transit, ridesharing, pedestrians and bicyclists



THE PROCESS

The project team will resume efforts to determine the best express lane(s) operational configuration options. Public engagement events will occur and we anticipate presenting the Recommended Preferred Alternative in 2023.

The **No Build** (“Do Nothing”) Alternative will be carried forward along with the **Express Lane(s) Alternative**.



PUBLIC ENGAGEMENT

Open House #1: November 2013

Six Alternatives presented for further evaluation

Open House #2: April 2014

Six Alternatives presented for further evaluation

Open House #3: February 2015

Six Alternatives presented with results of evaluation matrix and *Express Lane(s) Alternative* recommended for further evaluation

Open House #4: November 2015

Six different express lane(s) operational configuration options presented for public evaluation and comment

Open House #5: 2021

Express lane(s) operational configuration options presented for additional input



NEXT STEPS

- **Open House #6:** 2022
- **Public Hearing:** 2024



EXPRESS LANE(S) ALTERNATIVE BENEFITS

- Tolled and non-tolled improvements
- Auxiliary pavement to improve operational efficiency of general-purpose lanes at entrance and exit ramps and interchanges
- Repaved general-purpose lanes
- Added collector distributor lanes, Texas U-Turns, widened bridges
- Travel time savings
- Operational efficiency improvements
- Dependable transit route
- Improved emergency response times



Stay Informed and Get Involved!

Share your input at [MoPacSouth.com](https://www.MoPacSouth.com)

Questions? Contact us at (512) 342-3299 or submit an email at [MoPacSouth.com/contact/](https://www.MoPacSouth.com/contact/)

Who is the Mobility Authority?

Who We Are:

Independent government agency created in 2002, governed by a seven-member board of directors.

What We Do:

Enhance quality of life and economic vitality by improving the regional transportation system in Travis and Williamson counties.

Corridors we Manage:



Projects under Construction:



Our Partners:



FOUNDING COUNTIES:



What is the MoPac South Environmental Study?

The MoPac Expressway south of Cesar Chavez Street is a vital artery, providing a critical link from southwest Travis and Hays counties to downtown Austin.

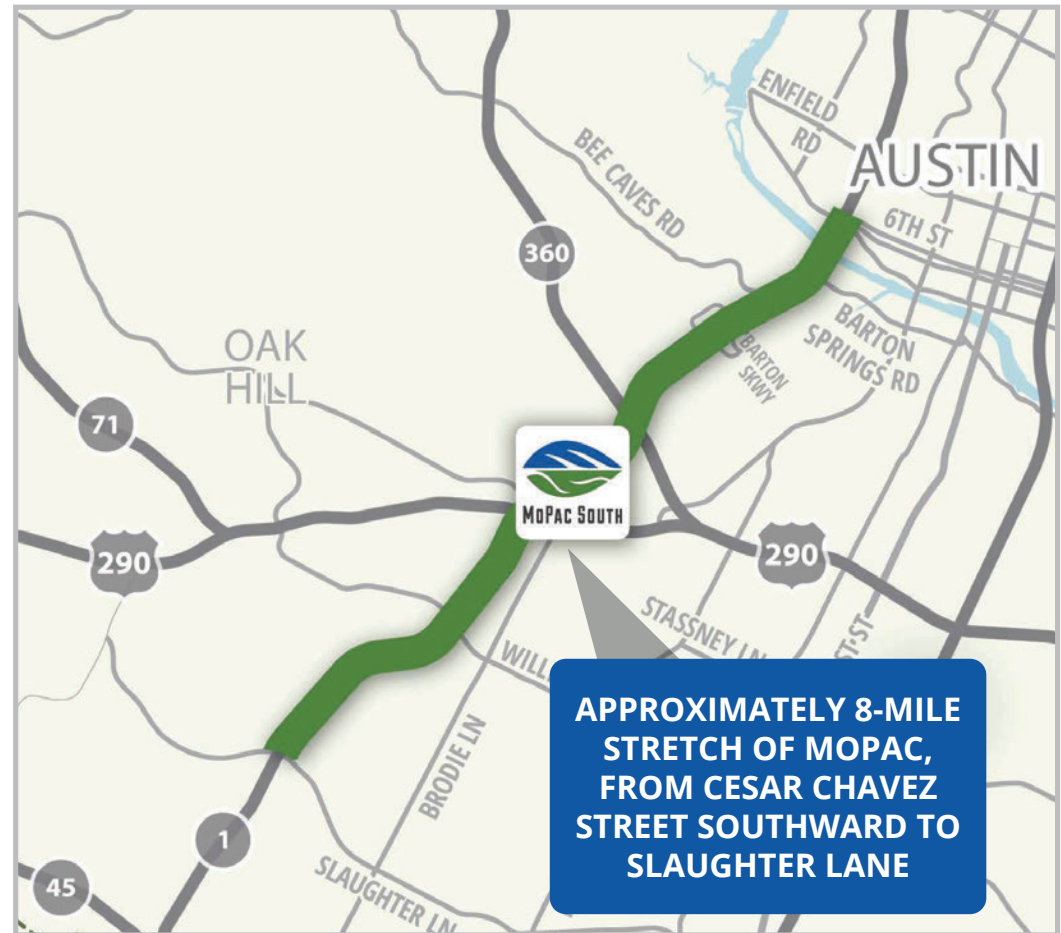
MoPac is ranked among the top 20 most congested corridors in the state.*

The corridor attracts up to 179,000 cars and trucks per day.**

Expanding population and development have led to increased traffic congestion, negatively impacting mobility and quality of life.

If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035.***

The Environmental Assessment (EA) is being conducted per the National Environmental Policy Act of 1969 (NEPA).



*Texas Transportation Institute, 2020
**2019 STARS 2 - TxDOT Traffic Count Database
***CAMPO 2035 Travel Demand Model

Purpose & Need



PROJECT PURPOSE *(What we are trying to do)*

- Provide an opportunity for reliable travel times
- Improve operational efficiency
- Create a dependable and consistent route for transit
- Facilitate reliable emergency response



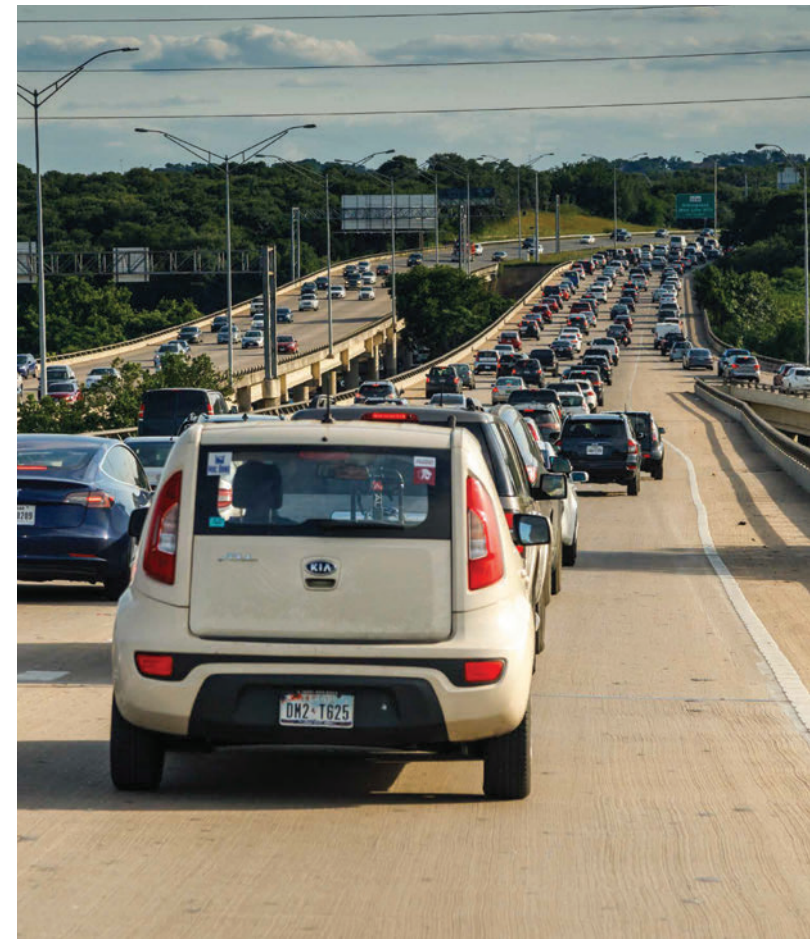
PROJECT NEED *(What problems need to be addressed)*

- Current and forecasted congestion levels are creating unreliable travel times
- Under the No-Build Alternative (Do Nothing), it could take an additional 35 minutes to travel between Cesar Chavez Street and Slaughter Lane by 2035
- Emergency response times are impacted by traffic congestion



PROJECT GOALS AND OBJECTIVES








- Provide consistency with local and regional plans
- Reduce congestion delays and provide travel time savings for all roadway users
- Be constructible while minimizing impacts to the natural and human environment
- Avoid and minimize impacts to water quality
- Deliver relief in a timely manner
- Facilitate congestion management
 - Increase opportunities for transit and ridesharing
 - Increase opportunities for pedestrians and bicyclists

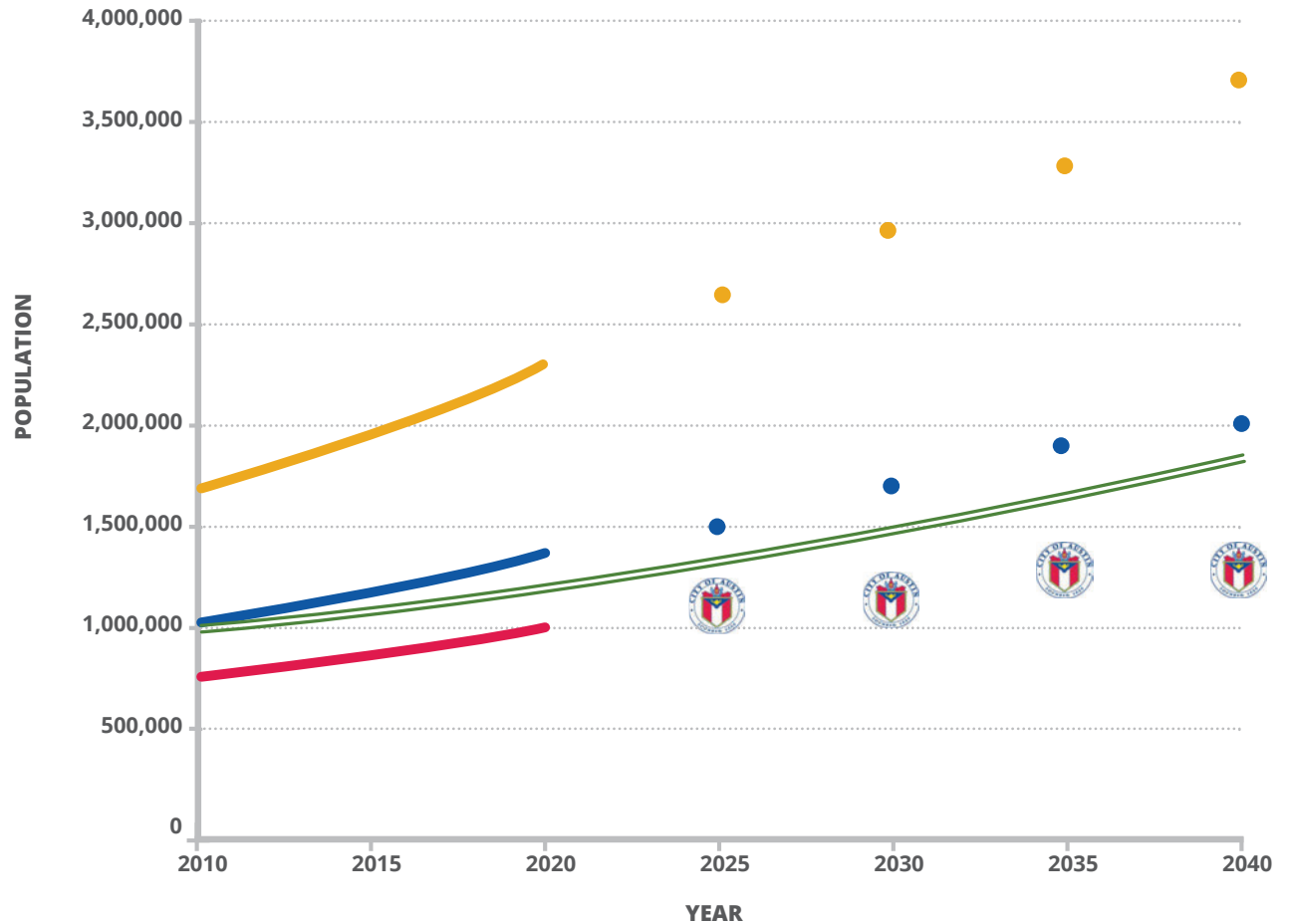


Population and Jobs Forecast

- Demand for Austin roadways is growing at a rapid pace.
- Projects a population increase of 750,000 people and 350,000 new jobs by 2040.

LEGEND:

-  City of Austin
  City of Austin Forecast
-  Travis County
  Travis County Forecast
-  MSA
  MSA Forecast*
-  Imagine Austin Study Area Forecast



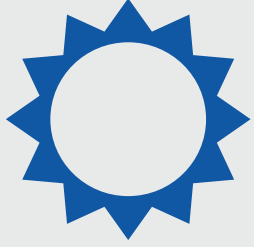





*The Metropolitan Statistical Area (MSA) is a six-county metropolitan area including Bastrop, Caldwell, Hays, Travis, Burnet, and Williamson counties. As MoPac is a major artery connecting people at a regional level, the impacts of the project will be realized across the MSA.

Data provided by the City of Austin Department of Planning and Imagine Austin, the City's 30-year Comprehensive Plan



Travel Time Comparison

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	2015	2035 (No Build)	Additional Travel Time
 NORTHBOUND	 23 minutes	 52 minutes	+29 No-Build
 SOUTHBOUND	 16 minutes	 51 minutes	+35 No-Build

 Morning Peak Period NB (7-9 a.m.)

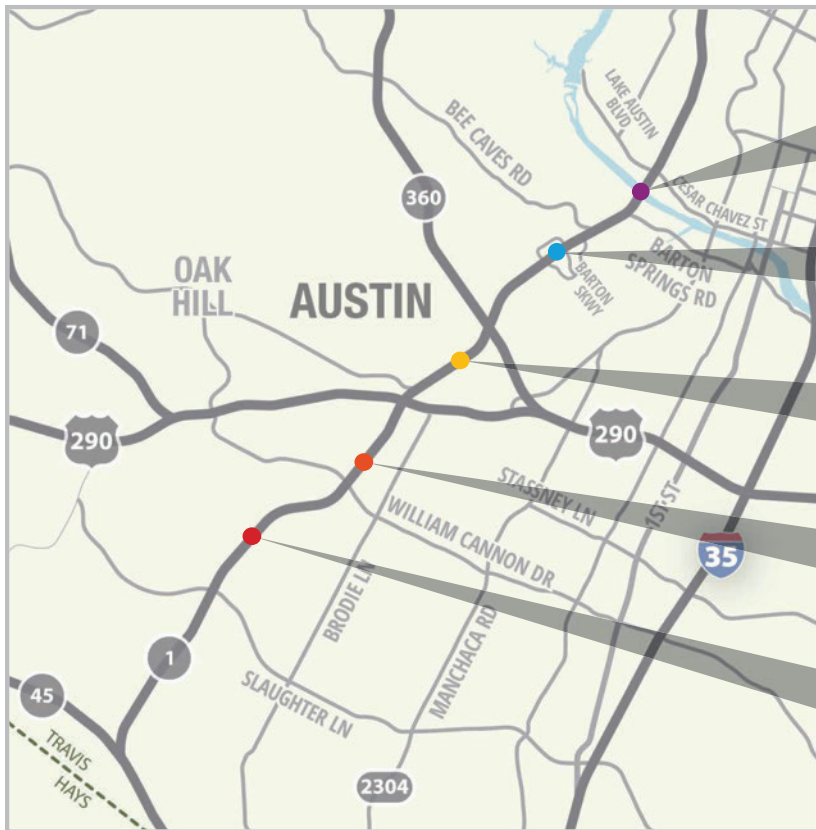
 Evening Peak Period SB (4-6:30 p.m.)














Travel times are based on CAMPO 2035 Travel Demand Model



Demand for MoPac South

AVERAGE DAILY TRAFFIC VOLUMES ARE PROJECTED TO INCREASE BY UP TO 105% BY 2049.*

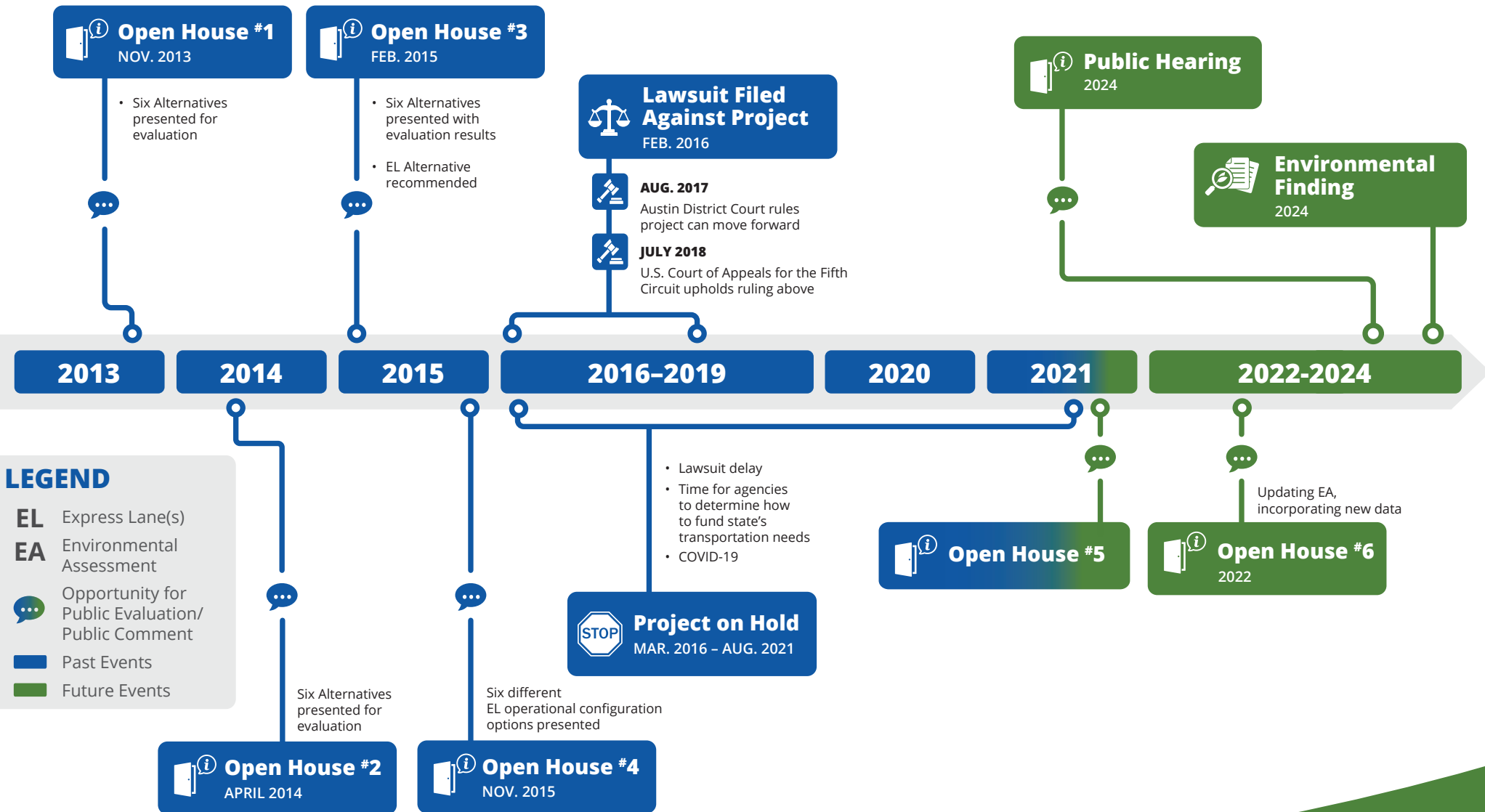


	 2018 Counts	 2049 Forecasts*	 Percent Growth
1 MoPac at Lady Bird Lake	179,400 	292,600 	+63%
2 MoPac at Barton Skyway	174,400 	296,500 	+70%
3 MoPac at South of Loop 360	125,500 	257,600 	+105%
4 MoPac North of William Cannon Drive	117,500 	214,400 	+82%
5 MoPac North of Davis Lane	77,300 	141,600 	+83%

*Traffic forecast based on the 2035 CAMPO Travel Demand Model for opening year 2029 plus 20 years to 2049. A 20 year look ahead is the regulatory requirement.



Project History and Next Steps



Next Steps

Open House #6 2022



Present Recommended Preferred Alternative for public input based on CAMPO 2045 Plan

Public Hearing 2024



- Present Preferred Alternative for public input
- Submit Draft Environmental Assessment Document

Finalize Environmental Studies 2024



- Submit Final Environmental Assessment Document
- Environmental Finding


Construction 2025*



*If approved for construction; contingent upon funding and environmental clearance



What is the National Environmental Policy Act (NEPA)?



NEPA is a federal law and is required when a project receives any federal funding or approval

Establishes procedures followed by agencies in making decisions, but does not dictate the outcome

Considers potential impacts of actions on the social, economic, and physical environment

Requires public outreach to improve project outcomes

Ensures informed decisions by forecasting, documenting, and disclosing what happens if a course of action is taken



The Mobility Authority Project Development Process

PUBLIC INPUT IS CONSIDERED AT EVERY STAGE OF PROJECT DEVELOPMENT



PUBLIC INPUT

(Online, E-Mail, Mail, Phone, Open Houses, Stakeholder Meetings)



INITIATION & SCOPING OF PROJECT



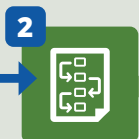
1



Adopt Regional Transportation Plan that includes CTRMA Project

CTRMA Board votes to initiate Environmental Study

PURPOSE & NEED



2



Establish Purpose and Need

FULL RANGE OF POTENTIAL ALTERNATIVES



3

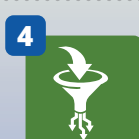


Evaluate Alternatives that meet the Purpose & Need



CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

PHASE I SCREENING: BASE CRITERIA

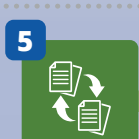


4

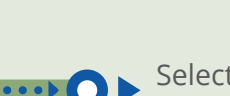


Measure Alternatives against criteria

PHASE II SCREENING: REASONABLE ALTERNATIVES



5

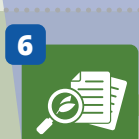


Select/refine Recommended Build Alternative

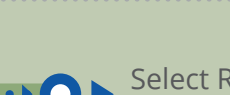


CURRENT STAGE

ENVIRONMENTAL ANALYSIS OF ALTERNATIVES



6



Select Recommended Preferred Alternative

RECOMMENDED PREFERRED ALTERNATIVE



7



Recommended Preferred Build and No-Build Alternatives move forward

PUBLIC HEARING



8

LAST PUBLIC MEETING FOR FEEDBACK

Review Draft Environmental Assessment (EA) submittal to TxDOT

FINAL EA PUBLISHED



9

TxDOT issues an Environmental Finding



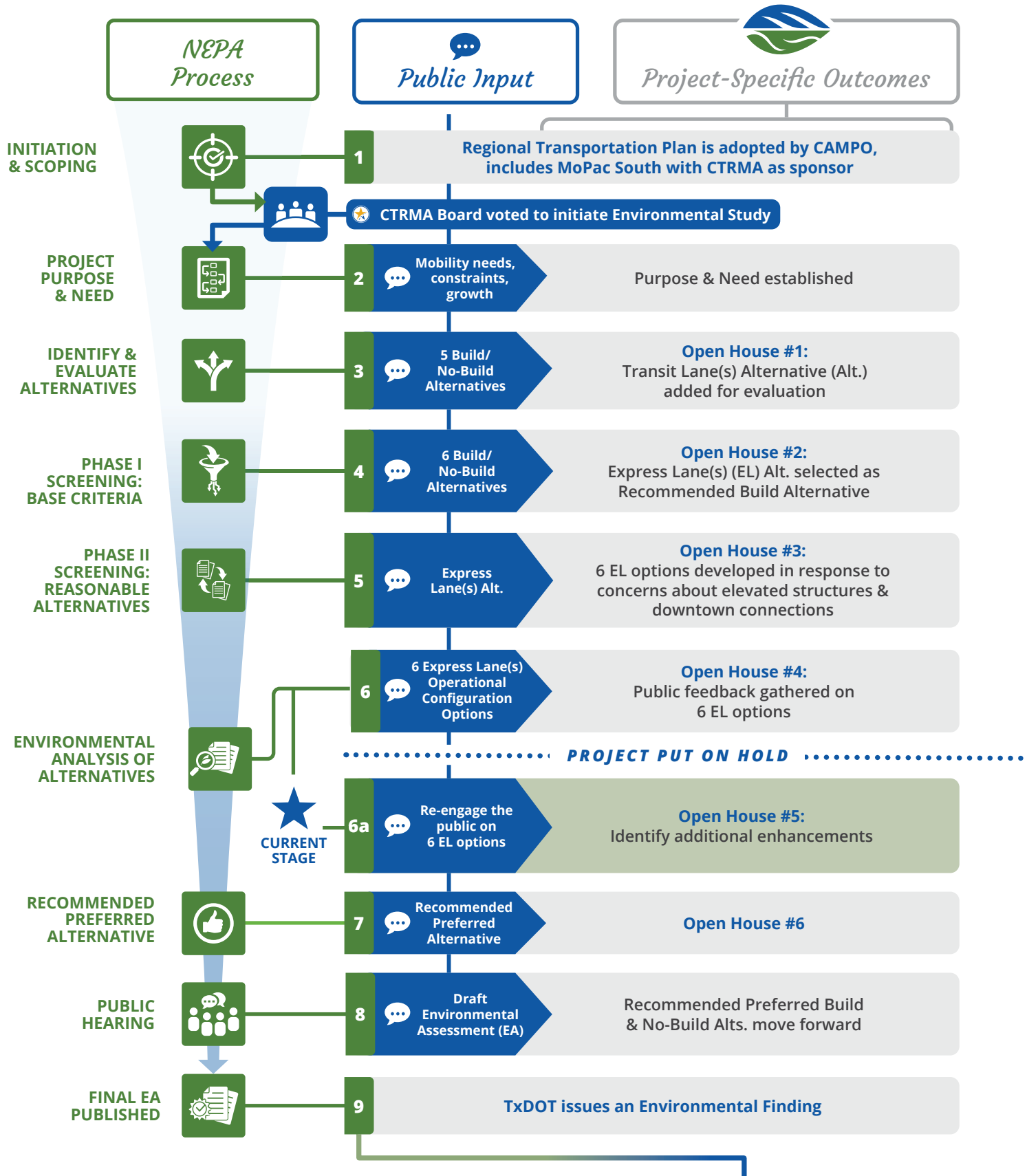
Texas Department of Transportation



If Build Alternative is approved, CTRMA Board votes to fund next phase of project development work



MoPac South Project and the NEPA Process



Long Range Transportation Planning

WE'RE UPDATING TO CAMPO 2045



CAMPO's Regional Transportation Plan (RTP) is the blueprint that guides the planning, design, and funding of infrastructure projects



RTP is updated every 5 years to:

- Confirm validity
- Ensure consistency with current and forecasted transportation conditions and trends
- Balance needs with available resources



The update extends the plan 25 years into the future and includes all regionally significant road and transit projects expected to be implemented during that time.



We Are Updating to CAMPO 2045

Reflects projected changes to travel behavior and effects of development and transportation facilities completed since the CAMPO 2035 model



Considers future developments and future roadway and transit improvements



Incorporates revised demographics



Insights further refine proposed project design



MoPac South data will be re-evaluated against the CAMPO 2045 Travel Demand Model to identify the Recommended Preferred Alternative.



Project data is required to be evaluated against the most recent Regional Transportation Plan, which is CAMPO 2045

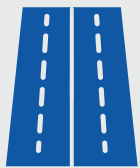
Alternatives Considered

PRELIMINARY ALTERNATIVES PROPOSED FOR THE MOPAC SOUTH ENVIRONMENTAL STUDY:

Build Alternatives



No Build ("Do Nothing") Alternative



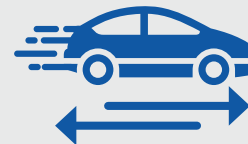
Add general-purpose lane(s) in each direction



Add high occupancy vehicle (HOV) lane(s) in each direction



Add transit only lane(s) in each direction



Add express lane(s) in each direction



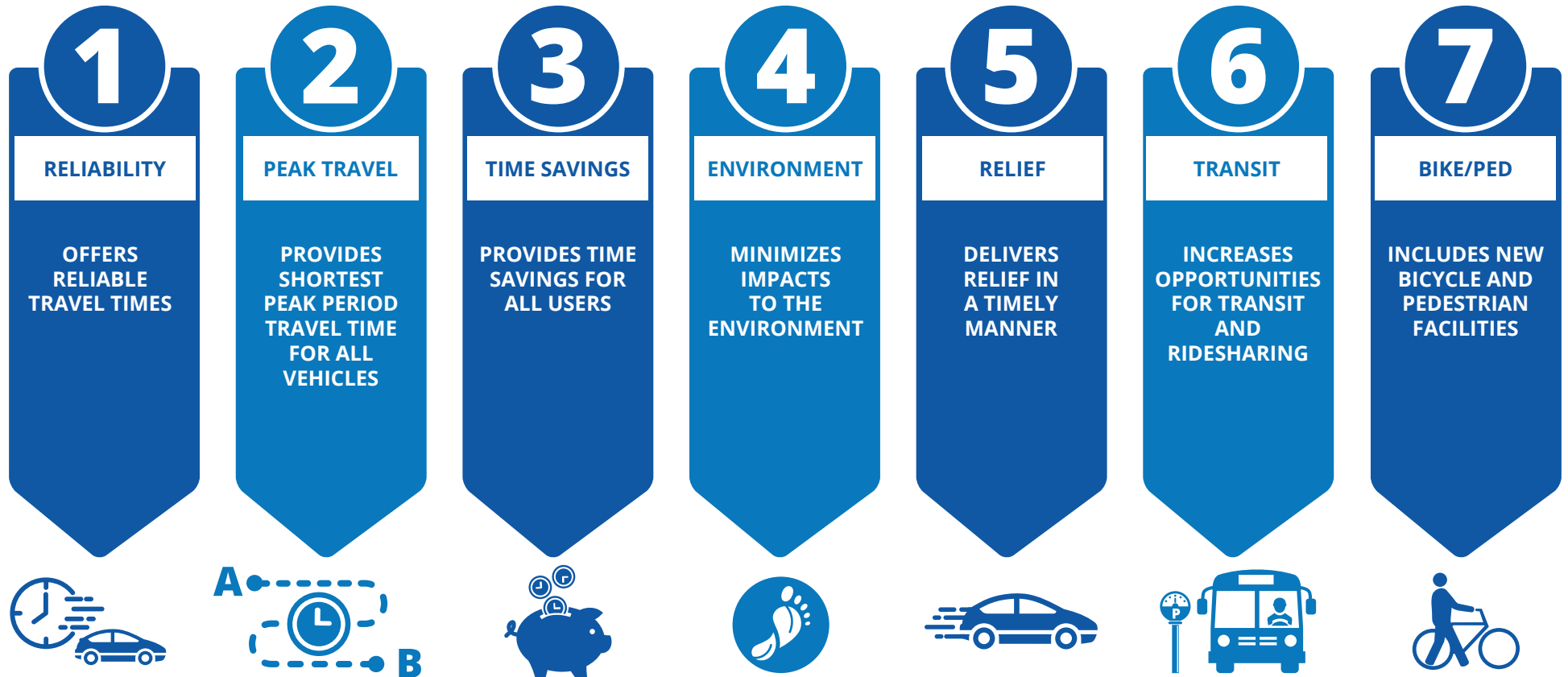
Use of Transportation Systems Management/Transportation Demand Management

These alternatives were presented and considered at Open Houses 1 and 2, in 2013 and 2014, respectively.



Recommended Build Alternative

Why Express Lane(s)?*



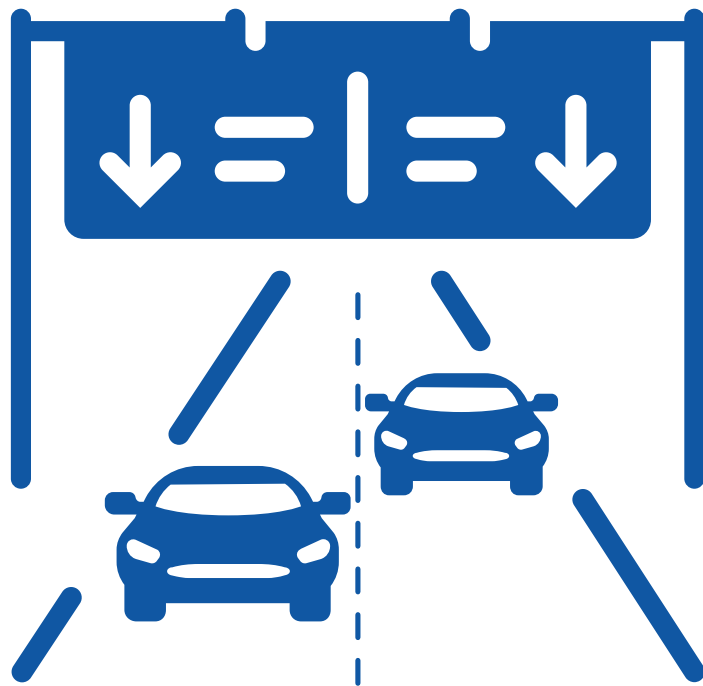
Express Lane(s) Alternative was identified as the Recommended Build Alternative at Open House #2 in 2014.

*In accordance with the National Environmental Policy Act, the No Build Alternative will continue to move forward as a baseline for comparison.



Express Lane(s) Operational Configuration Options

SIX VARIATIONS OF THE EXPRESS LANE(S) ALTERNATIVE ARE UNDER EVALUATION. THE KEY DIFFERENCES ARE HOW THE RAMPS ARE CONFIGURED NEAR LADY BIRD LAKE.



1A.

One Express Lane with Downtown Direct Connection

1B.

One Express Lane without Downtown Direct Connection

2A.

Two Express Lanes with Downtown Direct Connection

2B.

Two Express Lanes without Downtown Direct Connection

2C.

Two Express Lanes with Elevated Ramps near Barton Skyway

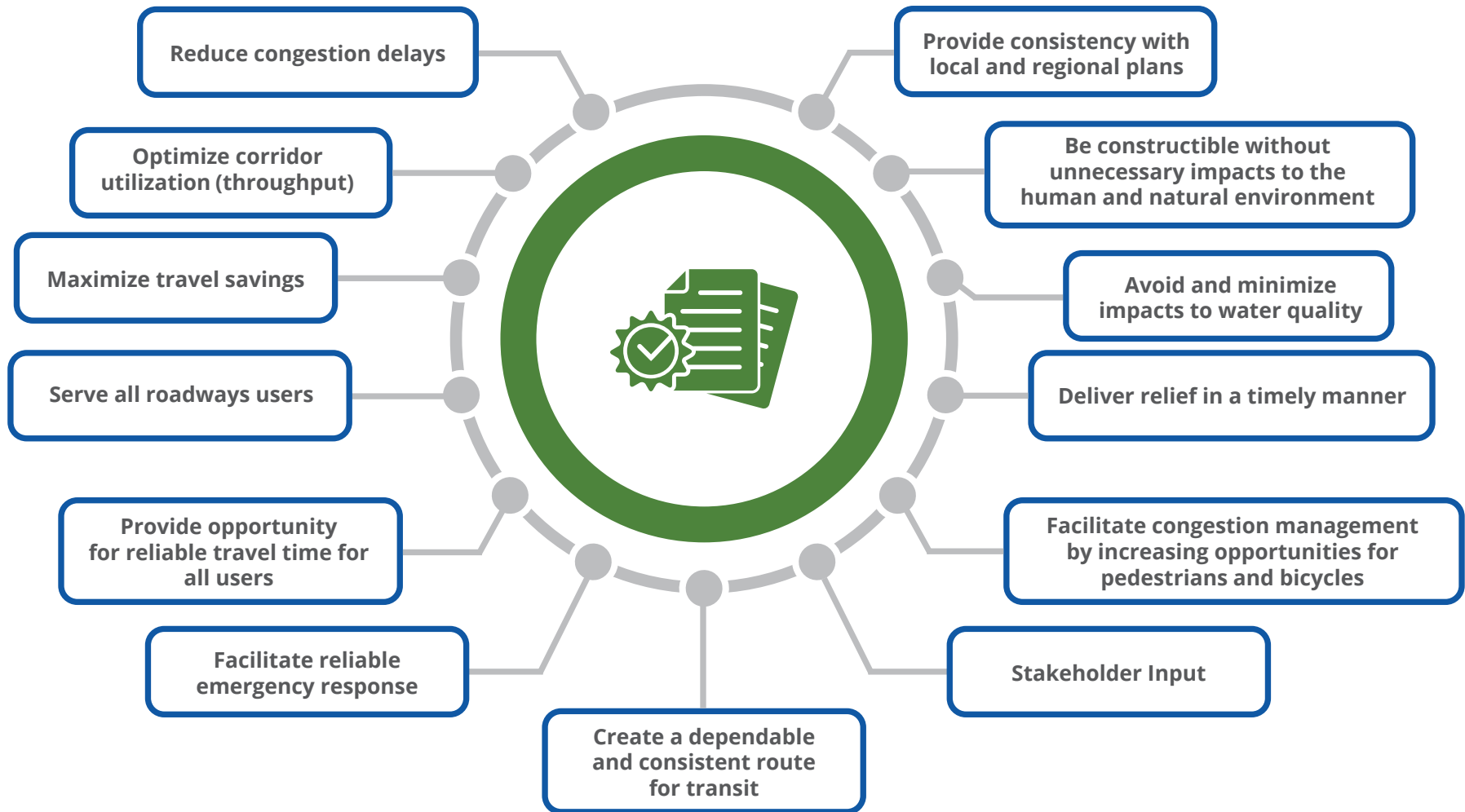
3.

City of Austin Proposal



Evaluation Criteria

EACH EXPRESS LANE(S) OPERATIONAL CONFIGURATION OPTION IS MEASURED AGAINST THE FOLLOWING CRITERIA



Criteria was developed collaboratively with stakeholders and using input gathered from Open Houses #1 and #2. Evaluation results will be presented at Open House #6 following the CAMPO 2045 Travel Demand Model Update.



Public Input is Shaping MoPac South



Community input has been a valuable part of the development process for Mopac South, with adjustments made based on public input, including:

- Potential to add new direct connection at US 290
- Added new collector distributor road from Barton Skyway to Loop 360
- Added south to north Texas Turnaround at Barton Skyway
- Lengthen turn lane leading to Texas Turnaround at Loop 360
- Reconfigured Bee Cave Road/RM 2244 southbound exit ramp
- Ramp improvements at William Cannon Drive
- Added third southbound general-purpose lane south of William Cannon Drive



We know the public values:

- Downtown connectivity options
- No increased elevations over Lady Bird Lake
- No direct connector ramps near Austin High School

Each express lane(s) operational configuration option will be analyzed against a set of criteria developed based on this feedback, and the CAMPO 2045 Travel Demand Model. These operational performance scores, combined with public input, will determine the Recommend Preferred Alternative.



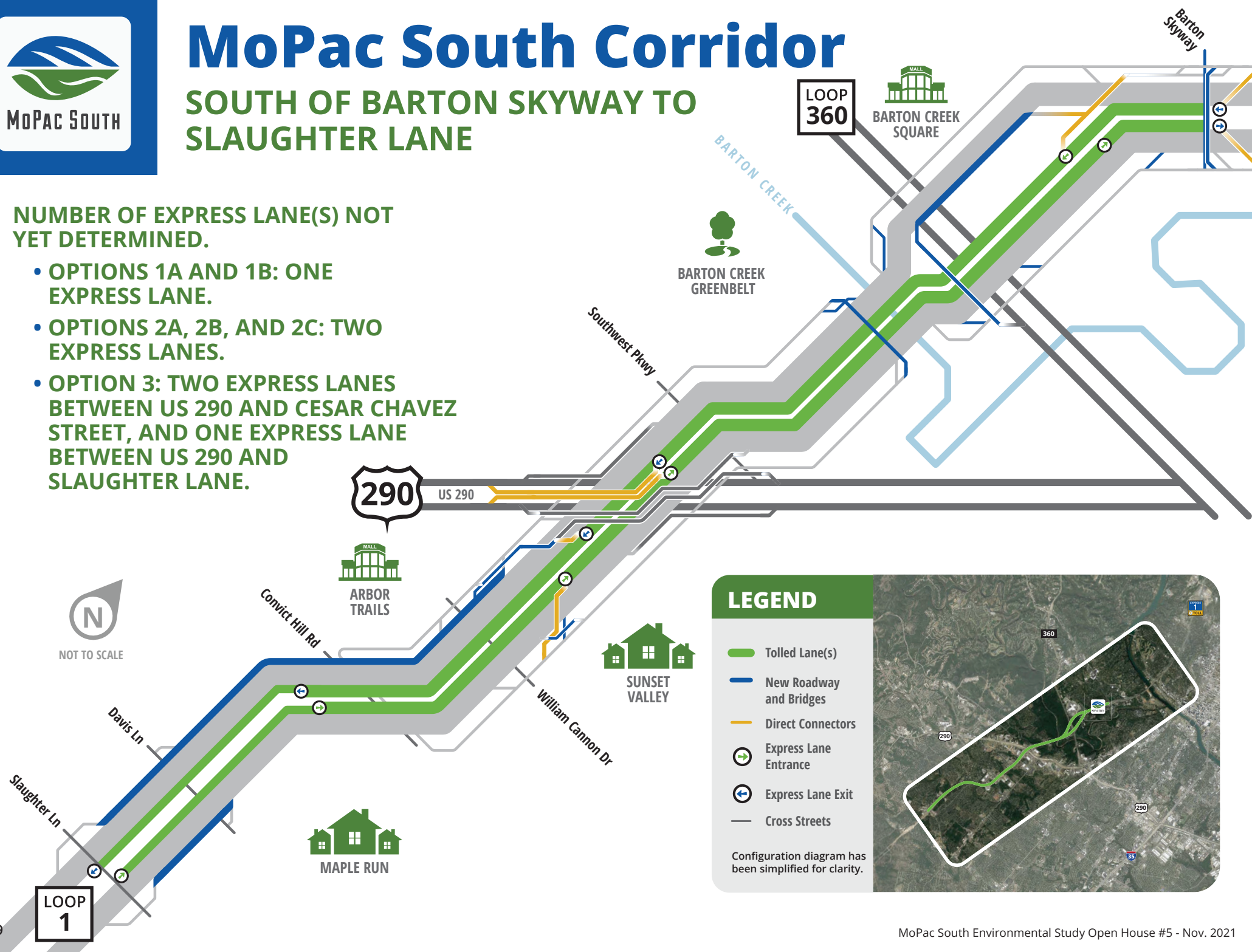


MoPac South Corridor

SOUTH OF BARTON SKYWAY TO SLAUGHTER LANE

NUMBER OF EXPRESS LANE(S) NOT YET DETERMINED.

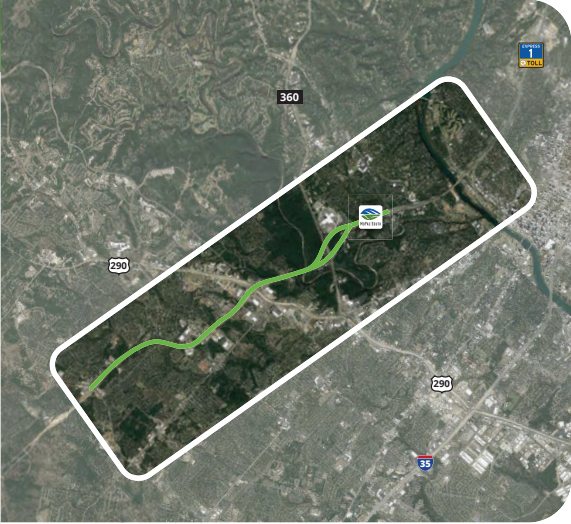
- OPTIONS 1A AND 1B: ONE EXPRESS LANE.
- OPTIONS 2A, 2B, AND 2C: TWO EXPRESS LANES.
- OPTION 3: TWO EXPRESS LANES BETWEEN US 290 AND CESAR CHAVEZ STREET, AND ONE EXPRESS LANE BETWEEN US 290 AND SLAUGHTER LANE.



LEGEND

- Tolled Lane(s)
- New Roadway and Bridges
- Direct Connectors
- ⊙ Express Lane Entrance
- ⊙ Express Lane Exit
- Cross Streets

Configuration diagram has been simplified for clarity.





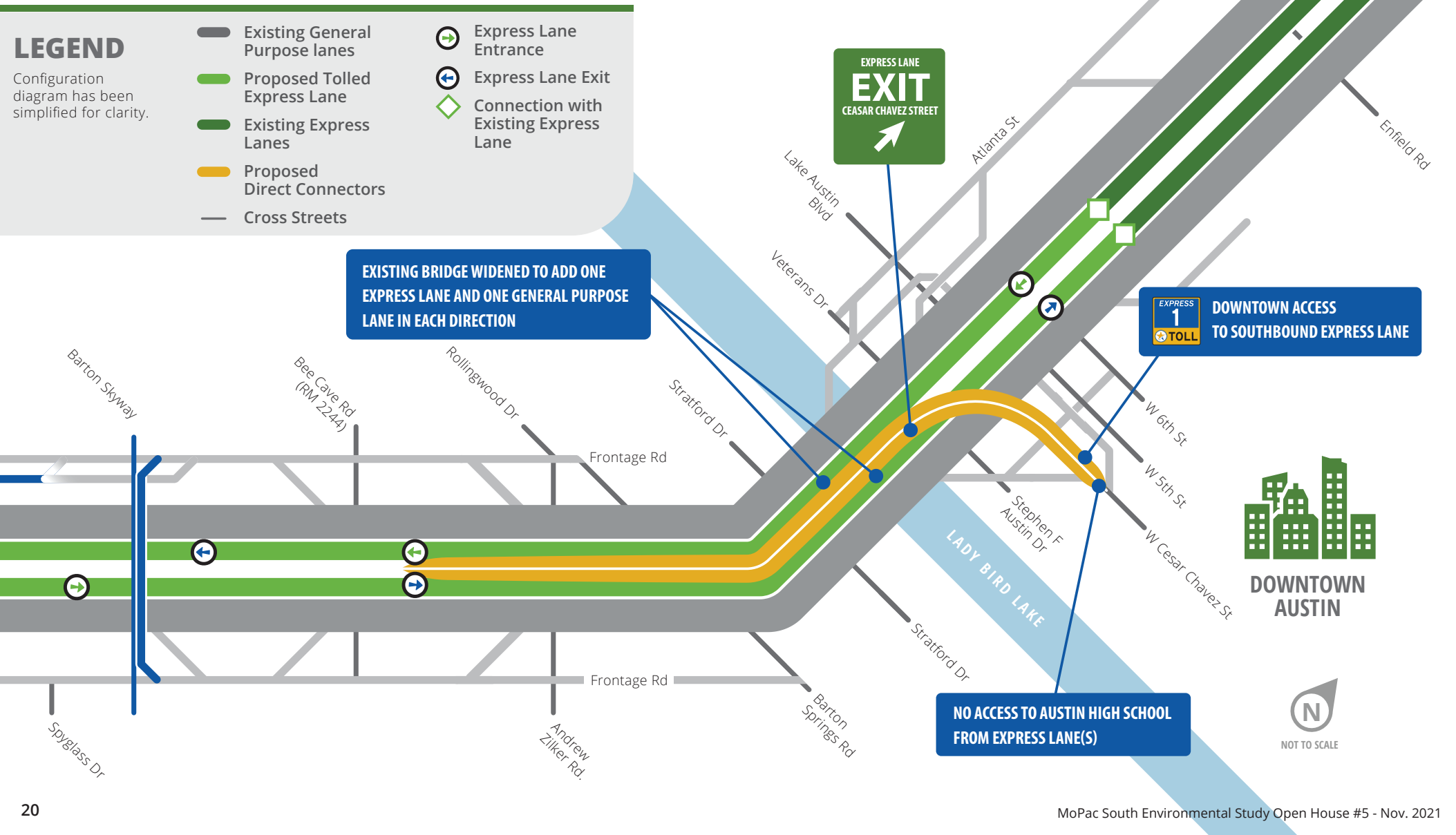
1A: One Express Lane with Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECT RAMP IN EACH DIRECTION, TO AND FROM CESAR CHAVEZ STREET

LEGEND

Configuration diagram has been simplified for clarity.











- Existing General Purpose lanes
- Proposed Tolloed Express Lane
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane



1A: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 38 minutes	 36 minutes
2035 EXPRESS LANES	 10 minutes	 10 minutes



Morning Peak Period NB (7-9 a.m.)



Evening Peak Period SB (4-6:30 p.m.)





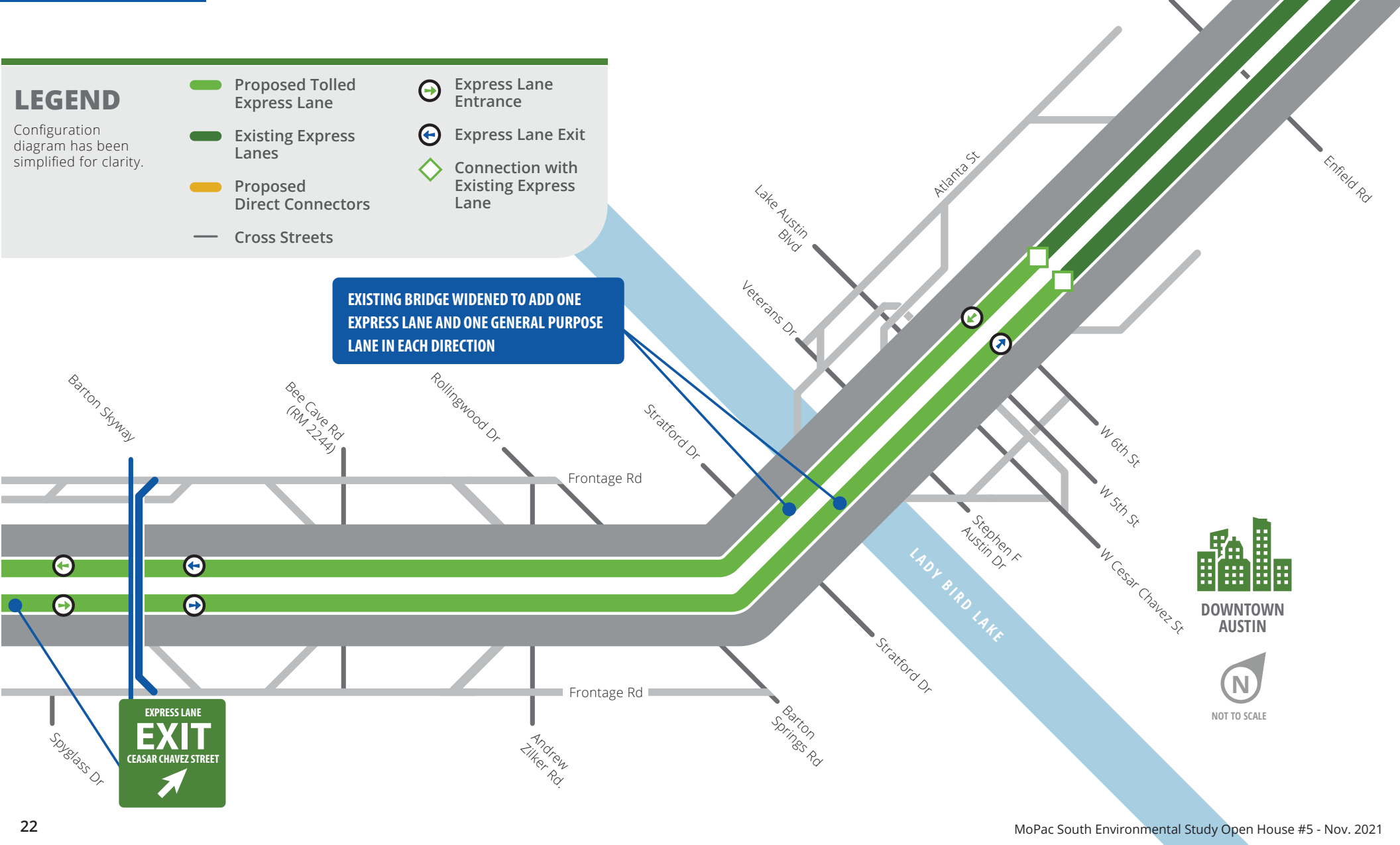
1B: One Express Lane without Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN VIA MERGING ACROSS THREE GENERAL-PURPOSE LANES AND EXISTING RAMPS

LEGEND

Configuration diagram has been simplified for clarity.











- Proposed Tolloed Express Lane
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane



1B: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 40 minutes	 42 minutes
2035 EXPRESS LANES	 14 minutes	 20 minutes



Morning Peak Period NB (7-9 a.m.)



Evening Peak Period SB (4-6:30 p.m.)





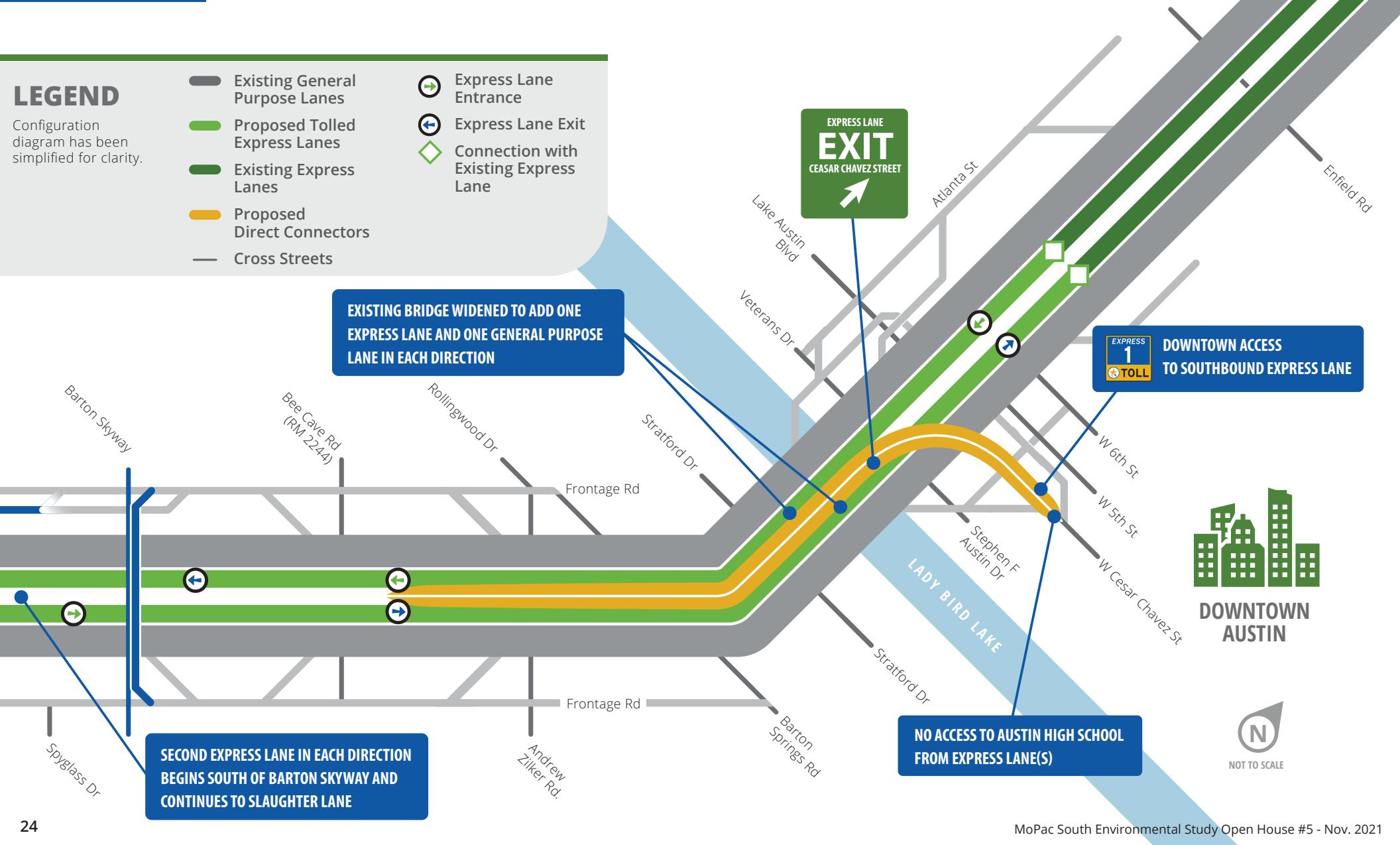
2A: Two Express Lanes with Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECTOR RAMP IN EACH DIRECTION, TO AND FROM CESAR CHAVEZ STREET

LEGEND

Configuration diagram has been simplified for clarity.

- Existing General Purpose Lanes
- Proposed Tolloed Express Lanes
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane



EXISTING BRIDGE WIDENED TO ADD ONE EXPRESS LANE AND ONE GENERAL PURPOSE LANE IN EACH DIRECTION

EXPRESS 1 TOLL
DOWNTOWN ACCESS TO SOUTHBOUND EXPRESS LANE

SECOND EXPRESS LANE IN EACH DIRECTION BEGINS SOUTH OF BARTON SKYWAY AND CONTINUES TO SLAUGHTER LANE

NO ACCESS TO AUSTIN HIGH SCHOOL FROM EXPRESS LANE(S)













DOWNTOWN AUSTIN



2A: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 32 minutes	 29 minutes
2035 EXPRESS LANES	 9 minutes	 9 minutes



Morning Peak Period NB (7-9 a.m.)



Evening Peak Period SB (4-6:30 p.m.)



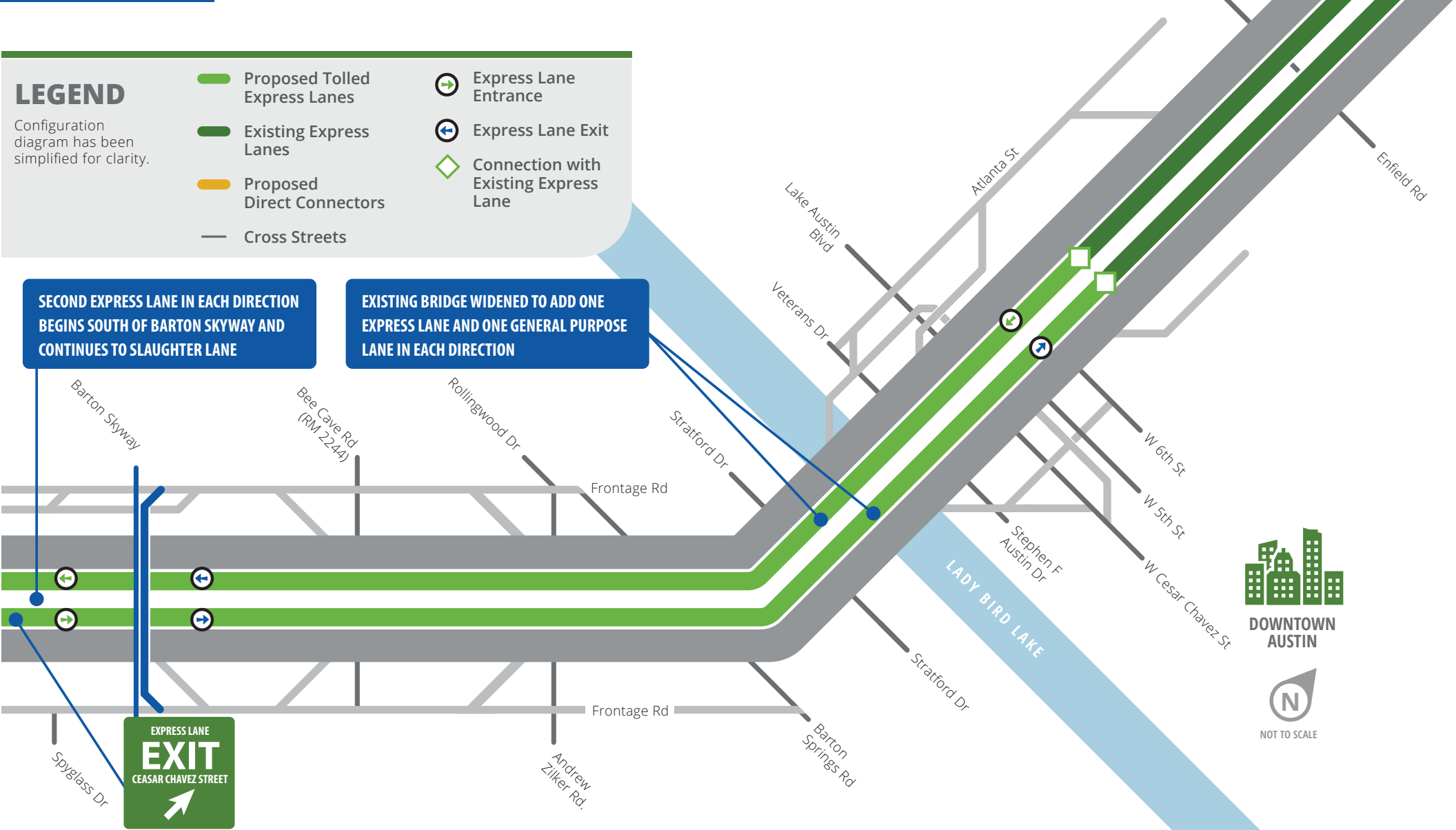


2B: Two Express Lanes without Downtown Direct Connection

ACCESS TO AND FROM DOWNTOWN VIA MERGING ACROSS THREE GENERAL-PURPOSE LANES AND EXISTING RAMPS

LEGEND
Configuration diagram has been simplified for clarity.











- Proposed Tolled Express Lanes
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane



2B: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 32 minutes	 36 minutes
2035 EXPRESS LANES	 13 minutes	 13 minutes



Morning Peak Period NB (7-9 a.m.)



Evening Peak Period SB (4-6:30 p.m.)





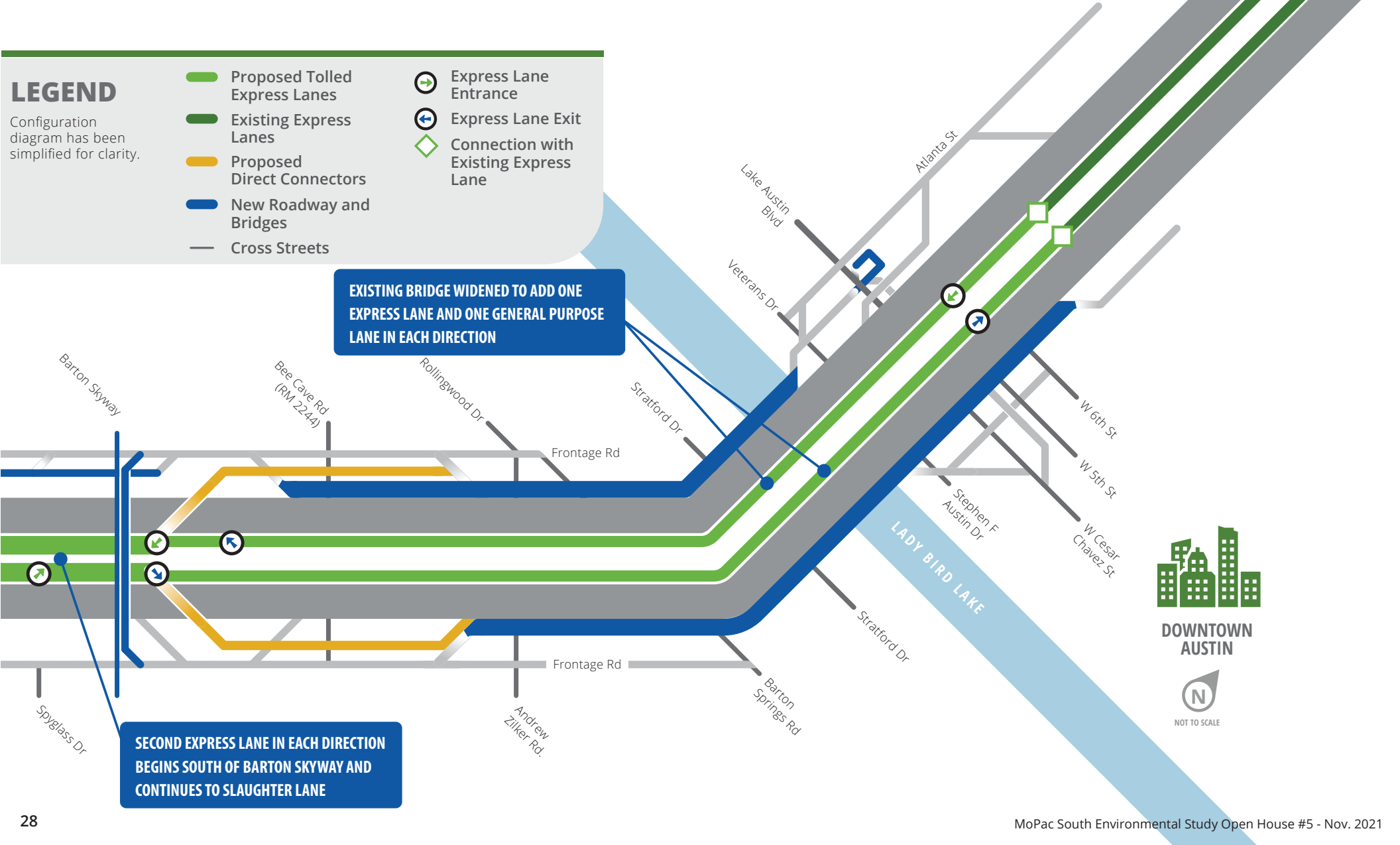
2C: Two Express Lanes with Elevated Ramps Near Barton Skyway

ACCESS TO AND FROM DOWNTOWN VIA MERGING ACROSS THREE GENERAL-PURPOSE LANES AND EXISTING RAMPS

LEGEND

Configuration diagram has been simplified for clarity.











- Proposed Tolled Express Lanes
- Existing Express Lanes
- Proposed Direct Connectors
- New Roadway and Bridges
- Cross Streets
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane



2C: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 33 minutes	 31 minutes
2035 EXPRESS LANES	 9 minutes	 9 minutes



Morning Peak Period NB (7-9 a.m.)



Evening Peak Period SB (4-6:30 p.m.)





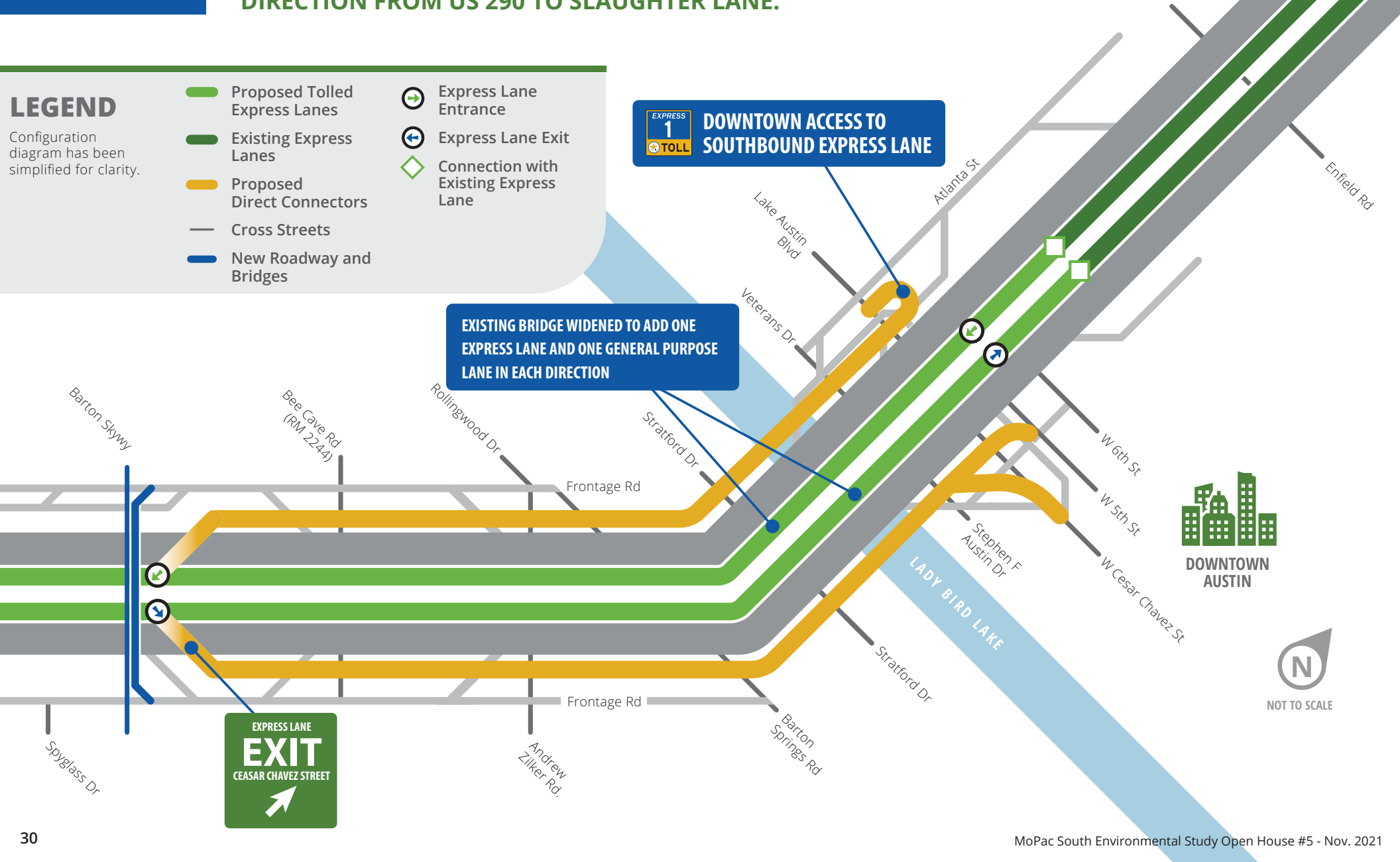
3: City of Austin Proposal

ACCESS TO AND FROM DOWNTOWN: ONE-LANE, ELEVATED DIRECT CONNECTOR RAMP IN EACH DIRECTION, TO AND FROM CESAR CHAVEZ STREET. TWO EXPRESS LANES IN EACH DIRECTION FROM CESAR CHAVEZ STREET TO US 290. ONE EXPRESS LANE IN EACH DIRECTION FROM US 290 TO SLAUGHTER LANE.

LEGEND

Configuration diagram has been simplified for clarity.

- Proposed Tolled Express Lanes
- Existing Express Lanes
- Proposed Direct Connectors
- Cross Streets
- New Roadway and Bridges
- Express Lane Entrance
- Express Lane Exit
- Connection with Existing Express Lane



EXISTING BRIDGE WIDENED TO ADD ONE EXPRESS LANE AND ONE GENERAL PURPOSE LANE IN EACH DIRECTION











EXPRESS 1 TOLL DOWNTOWN ACCESS TO SOUTHBOUND EXPRESS LANE

EXPRESS LANE EXIT CESAR CHAVEZ STREET

3: 2035 Travel Times

BASED ON CAMPO 2035 TRAVEL DEMAND MODEL; WILL BE UPDATED TO CAMPO 2045 PLAN

TRAVEL TIME: between Cesar Chavez Street and Slaughter Lane

	 NORTHBOUND	 SOUTHBOUND
2015	 23 minutes	 16 minutes
2035 NO BUILD	 52 minutes	 51 minutes
2035 GENERAL PURPOSE LANES	 41 minutes	 37 minutes
2035 EXPRESS LANES	 11 minutes	 11 minutes



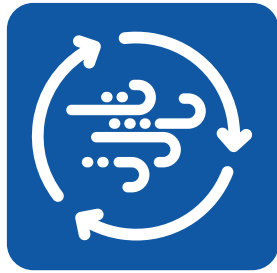
Morning Peak Period NB (7-9 a.m.)



Evening Peak Period SB (4-6:30 p.m.)



Environmental Evaluations



Air Quality



Traffic Noise



*Hazardous
Materials*



*Cultural
Resources*



*Biological
Resources*



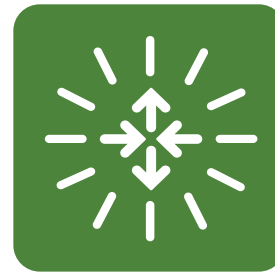
*Land Use
and Parkland*



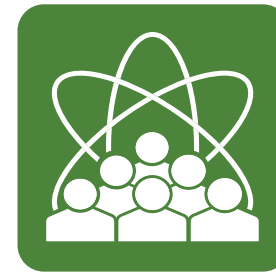
*Ecological
Resources*



*Water Quality &
Water Resources*



*Indirect and
Cumulative Impacts*



*Social and
Community
Impacts*



*Environmental
Justice*



Archeological & Historic Resources

Section 106 of the National Historic Preservation Act (NHPA)

- Considers effects on Historic Properties including, Historic (45+ Years) and Archeological Resources in Area of Potential Effects (APE):
 - Identification of Cultural Resources and Historic Properties
 - Determine Effect on Historic Properties
 - Minimize Impact to Historic Properties
- Studies will address these types of effects within the APE:
 - Direct (Disturbance)
 - Indirect (Viewshed, Noise, Vibration)

Known Cultural Resources in APE

- Zilker Park Historic District
- Deep Eddy Historic District
- Charles Johnson Homestead
- Archeological Sites





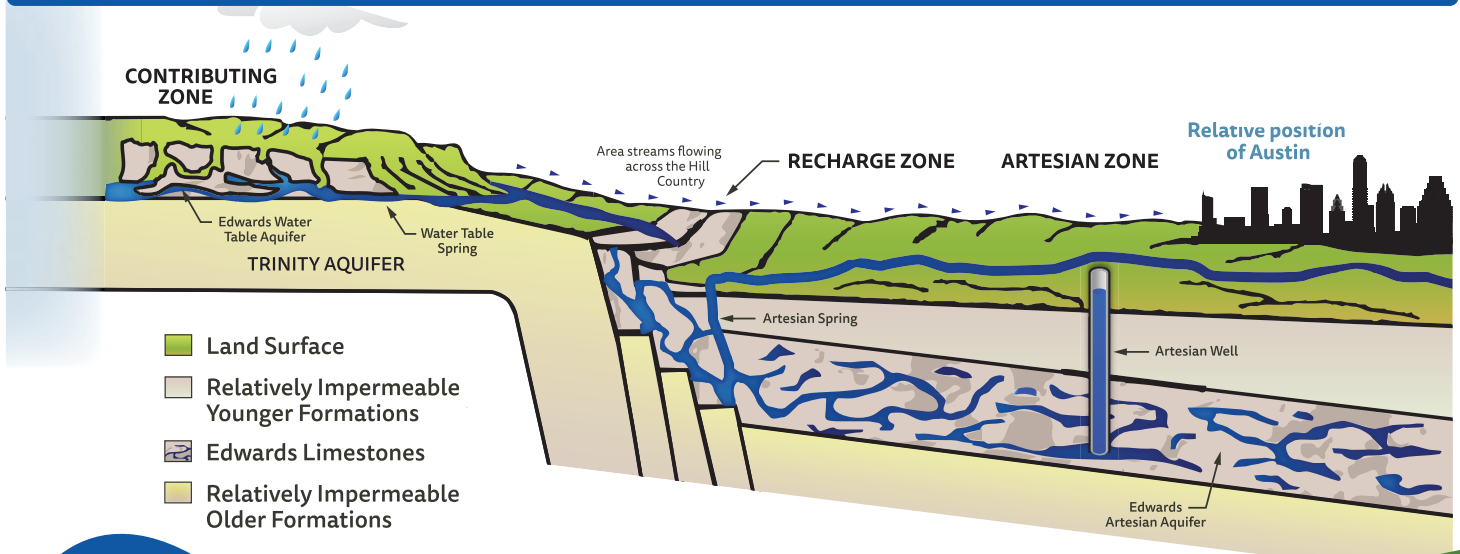
Water Quality Protections

- Edwards Aquifer is a drinking water source for South Central Texas.
- Fractures, caves, sinking streams, and sinkholes act as conduits to the aquifer.
- Karst is a type of landscape formed by the dissolution of rocks.
- Several diverse fauna rely upon the Aquifer.

- Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer Protection Program Requirements:
 - Minimize erosion and sedimentation
 - Develop an Edwards Aquifer Protection Plan for contaminants
- Potential water quality treatment measures:
 - Permeable Friction Course (PFC) Pavement
 - Water quality ponds
 - Vegetative controls
 - Hazardous materials traps

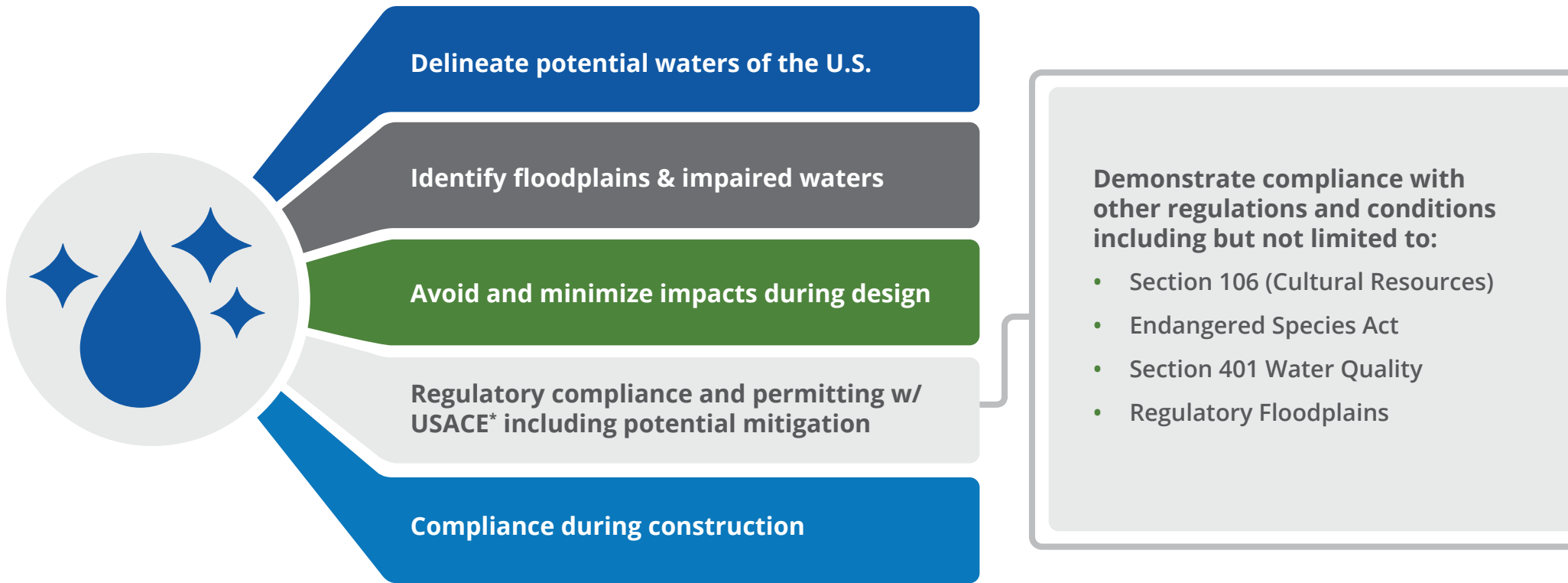
Due to the environmentally sensitive nature of the Edwards Aquifer Recharge Zone, the Mobility Authority exceeded the environmental protection requirements for construction of the 45SW Toll Road, resulting in 98% removal of the increase in Total Suspended Solids.

WHAT IS THE EDWARDS AQUIFER RECHARGE ZONE?



Water Resources

IN ADDITION TO THE EDWARDS AQUIFER RULES, THE PROJECT WILL ALSO COMPLY WITH THE CLEAN WATER ACT.



*United States Army Corps of Engineers

Threatened and Endangered Species

SPECIES OF INTEREST INCLUDE, BUT ARE NOT LIMITED TO:



Golden-Cheeked Warbler
*Setophaga chrysoparia*¹



Barton Springs Salamander
*Eurycea sosorum*²



Tooth Cave Ground Beetle
*Rhadine persephone*³

Environmental Efforts

- Potential Habitat Assessments including Presence-Absence Surveys
- 5 years of Golden-cheeked Warbler Surveys without presence
- Minimizing impacts during design process
- Incorporating conservation and recovery measures
- Preparing a Biological Assessment for consultation with the USFWS
- Consulting with resource agencies, U.S. Fish and Wildlife Service (USFWS) and Texas Parks and Wildlife Department (TPWD).

Karst Zones

SOME THREATENED AND ENDANGERED SPECIES ARE FOUND IN KARST ZONES

- **What are karst zones?**
 - Zone 1: Areas known to contain endangered cave fauna
 - Zone 2: Areas having a high probability of suitable habitat for endangered cave fauna
 - Zone 3: Areas that probably do not contain endangered cave fauna
- **These are established by U.S. Fish and Wildlife.**



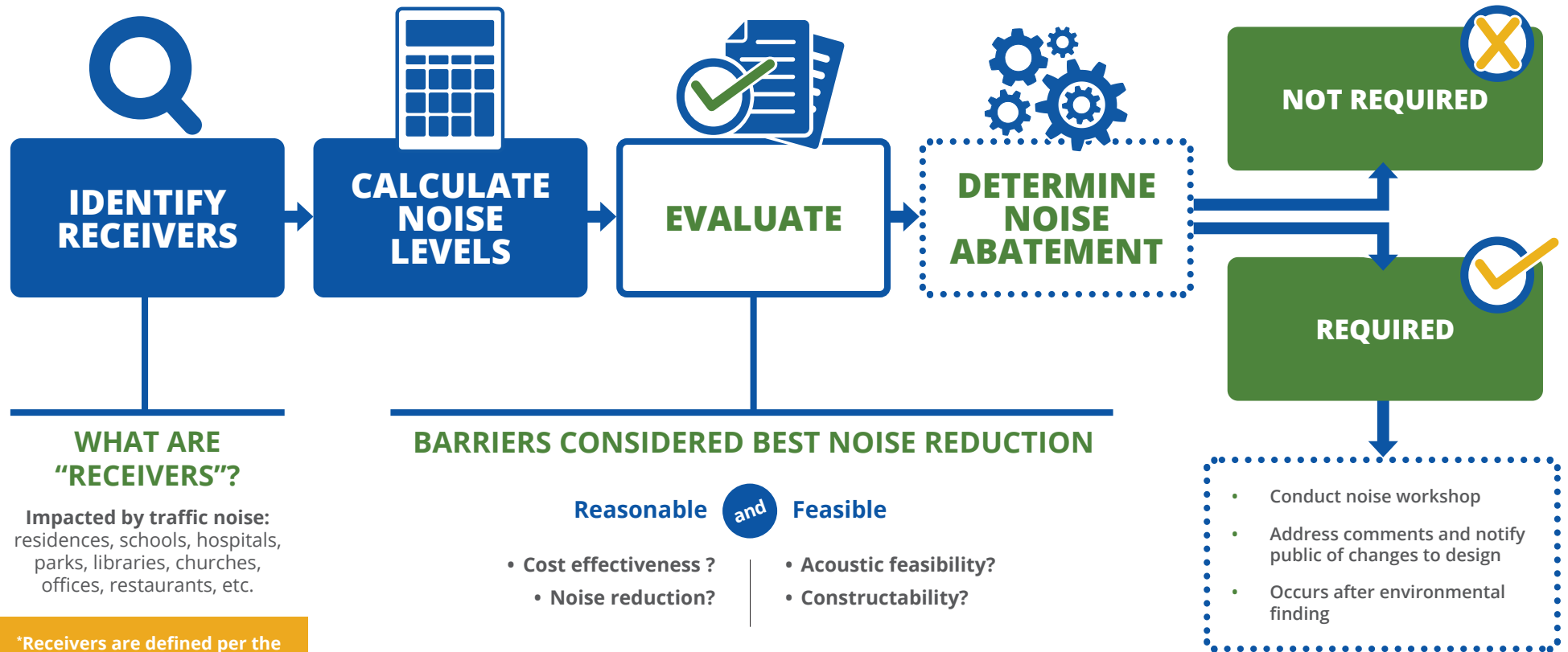
¹Audubon.org

²U.S. Fish & Wildlife

³CommunityImpact.com

Traffic Noise Evaluation

NOISE AND BARRIER ANALYSIS BEGINS BEFORE THE PUBLIC HEARING AND FINALIZES AFTER COMMUNITY NOISE WORKSHOPS. THIS INCLUDES MITIGATION.

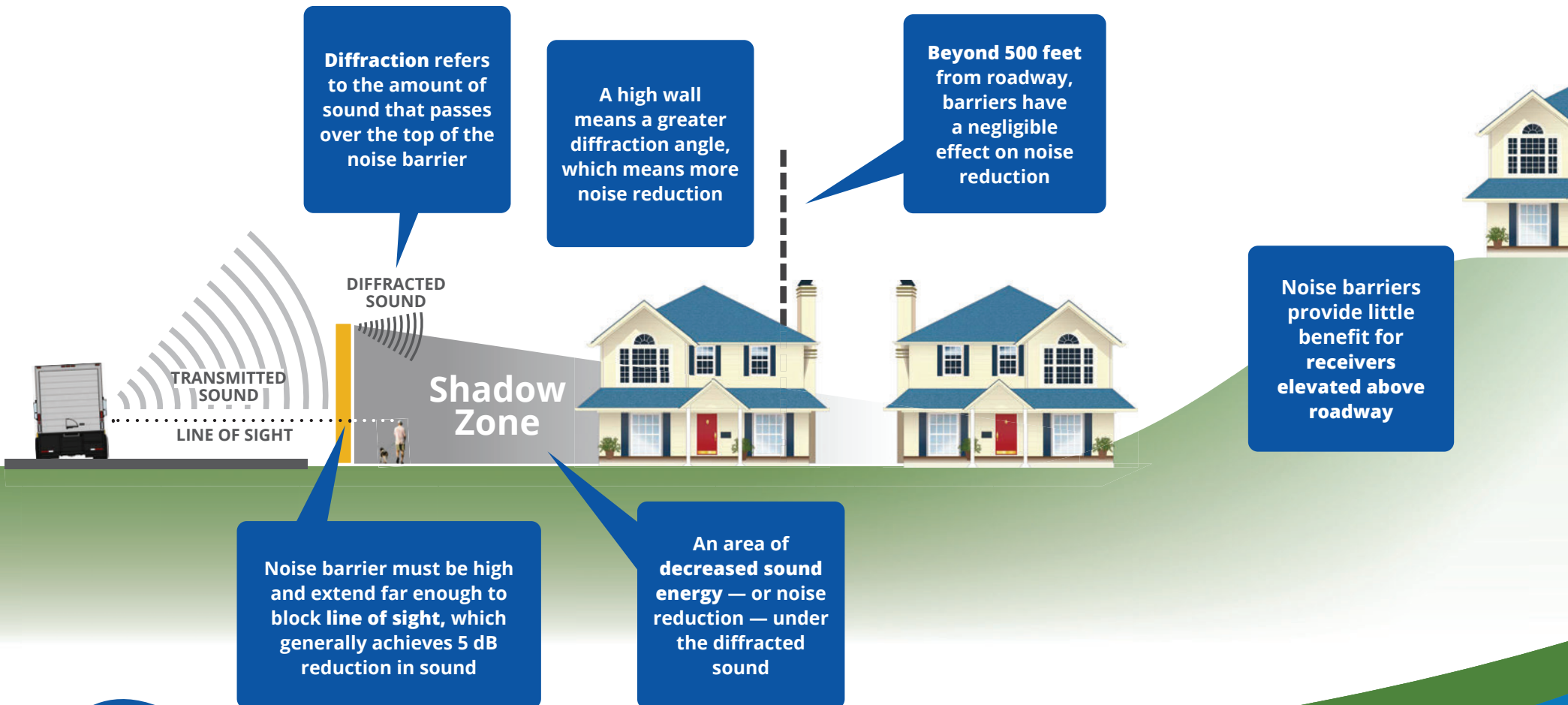


*Receivers are defined per the FHWA Noise Activity Category

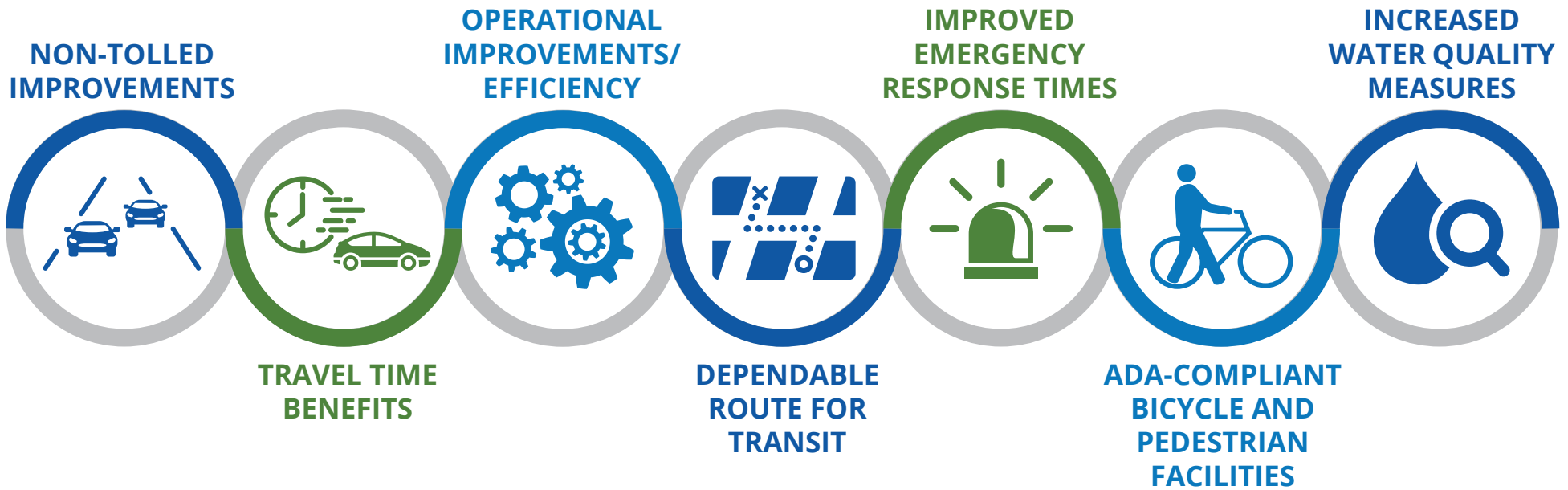


Traffic Noise & Abatement

- Sound is generated from tires, engines, and heavy truck exhaust stack
- The majority of sound comes from friction of tires with road and increase with vehicle speed
- Heavy truck traffic is louder than standard automobile traffic noise



Project Benefits

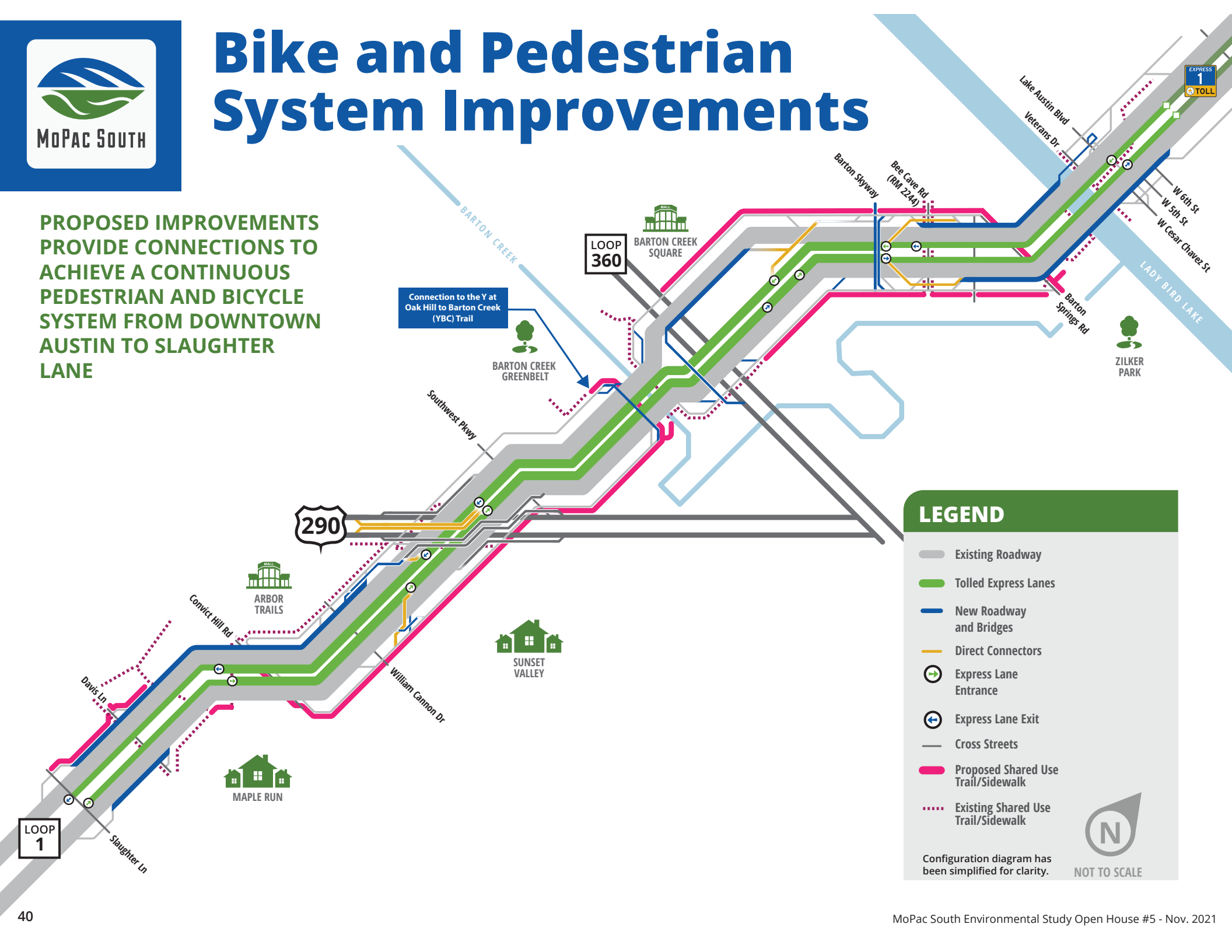




MoPac South

Bike and Pedestrian System Improvements

PROPOSED IMPROVEMENTS PROVIDE CONNECTIONS TO ACHIEVE A CONTINUOUS PEDESTRIAN AND BICYCLE SYSTEM FROM DOWNTOWN AUSTIN TO SLAUGHTER LANE



LEGEND

- Existing Roadway
- Tolled Express Lanes
- New Roadway and Bridges
- Direct Connectors
- Express Lane Entrance
- Express Lane Exit
- Cross Streets
- Proposed Shared Use Trail/Sidewalk
- Existing Shared Use Trail/Sidewalk

Configuration diagram has been simplified for clarity.

NOT TO SCALE

Non-Tolled Improvements

First Street and Cesar Chavez Street entrance ramps to southbound MoPac

Widens existing bridge over Lady Bird Lake to five non-tolled general-purpose lanes in both directions

South-to-north non-signalized U-turn at Barton Skyway

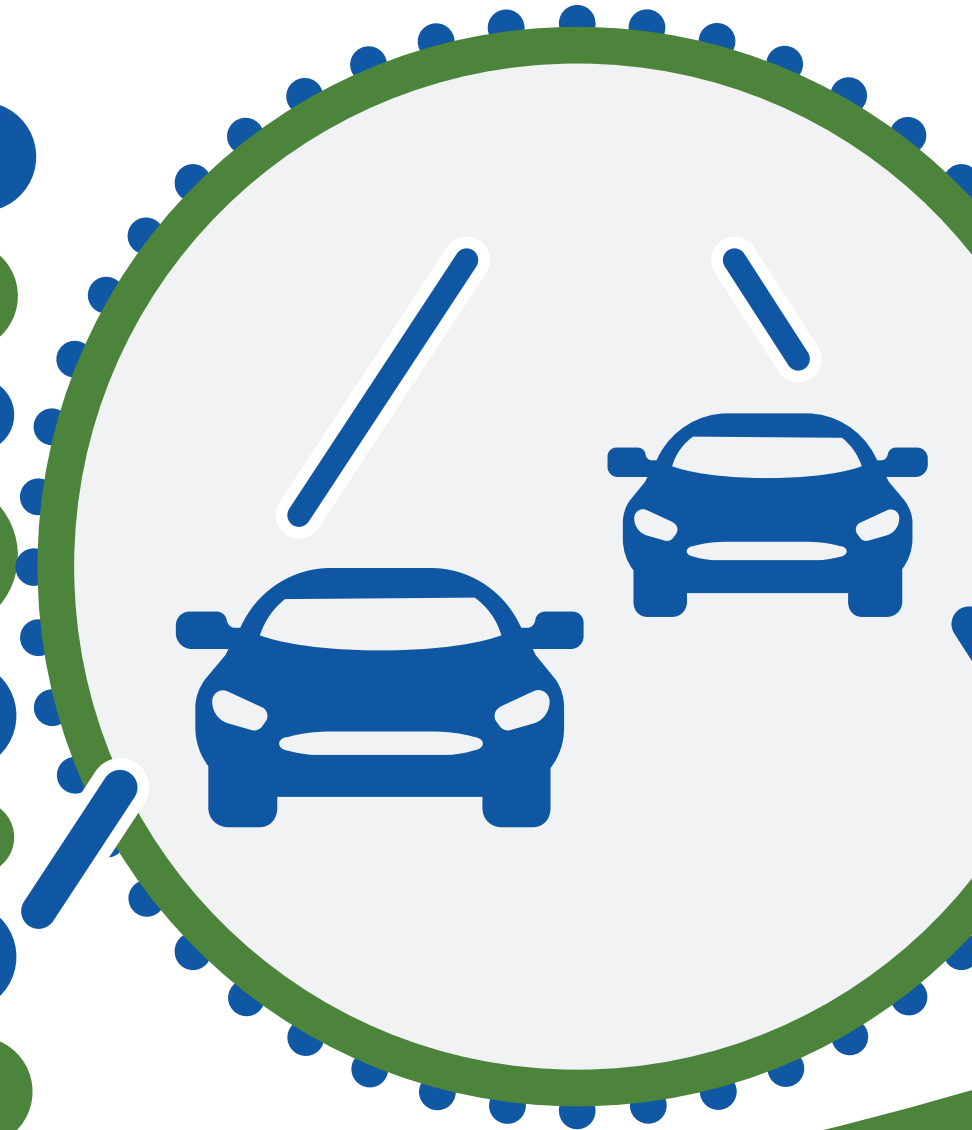
Southbound non-tolled collector distributor for Bee Cave Road and Barton Skyway entrance to southbound MoPac to bypass signals

Additional southbound non-tolled general-purpose lane south of William Cannon Drive

Repaved general-purpose lanes throughout corridor

Shift the southbound Bee Caves exit ramp further north to allow for safer weaving for westbound Bee Caves traffic

Ramp operational improvements on the northbound frontage road north of William Cannon



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Comment*



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Official Comments Submittal

TO BE INCLUDED IN THE OFFICIAL RECORD FOR THE OPEN HOUSE,
COMMENTS MUST BE RECEIVED BY JANUARY 7, 2022.

You may submit in many ways:



Email

MoPacSouth@ctrma.org



Online

voh.MoPacSouth.com



Mail

Central Texas Regional
Mobility Authority

c/o MoPac South
Environmental Study
3300 North I-35, Suite 625
Austin, Texas 78705

Comments submitted outside the official comment period or via other channels than those listed above will not be considered part of the record for this open house.





MOPAC SOUTH ENVIRONMENTAL STUDY NOISE FACT SHEET



PROJECT OVERVIEW

The MoPac Expressway south of Cesar Chavez Street is consistently ranked as one of the most congested roadways in Texas*, attracting up to 179,000 vehicles per day. Expanding population, as well as residential, retail and commercial development are negatively impacting mobility. If we do nothing to address congestion, drivers could spend an additional 35 minutes traveling the corridor by 2035. The Central Texas Regional Mobility Authority (Mobility Authority) is conducting an environmental study to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner that promotes environmental stewardship and sustainability.

Currently, the Mobility Authority is looking at adding express lane(s) to the existing corridor, as well as other operational, mobility, and safety improvements. We understand there are concerns about traffic noise due to the potential for these proposed improvements to carry higher volumes of traffic. As part of the environmental study, the Mobility Authority is required by the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA) to prepare and document a Traffic Noise Analysis.

WHAT IS A TRAFFIC NOISE ANALYSIS?

To analyze traffic noise along the corridor, the MoPac South study team will:

- Identify land use activity areas that may be impacted by traffic noise
- Determine existing noise levels
- Predict noise levels 20 years in the future
- Identify possible noise impacts if the proposed improvements are built
- Examine and evaluate ways to reduce noise impacts which may include measures such as sound walls

HOW DO WE MEASURE TRAFFIC NOISE?

The sound produced by highway traffic comes mainly from tires, engines and heavy truck exhaust stacks. Traffic noise is measured by our noise experts in decibels or “dB.” Its volume depends on the number and speed of vehicles, the slope of the nearby terrain, weather patterns, obstructions (e.g., buildings), and the distance between the highway and listener.

The Mobility Authority is conducting an environmental study to identify a solution that improves safety and mobility for drivers, transit riders, bicyclists and pedestrians in a manner that promotes environmental stewardship and sustainability.

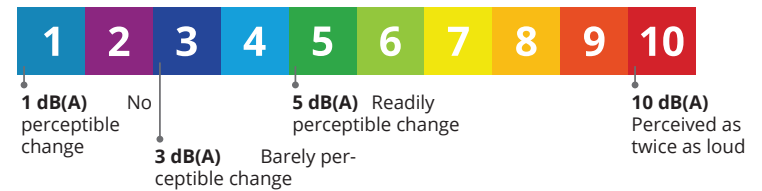
*2019 STARS 2 - TxDOT Traffic Count Database



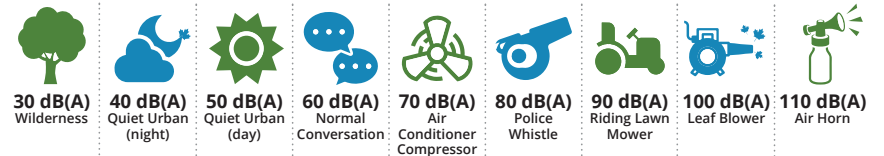
There are three additional considerations in how we measure traffic noise:

- 1) Not all sound can be heard by the human ear. When sound levels are measured, our sound meter equipment adjusts the high and low frequencies of traffic noise to match the way the average person hears them. This adjustment is called A-weighting and is expressed as “dBA.”
- 2) Traffic noise levels are never constant due to the changing number, type and speed of vehicles. Therefore, a single value is used to represent the average or equivalent sound level or “Leq.”
- 3) The human ear can detect the comparative differences in sound levels. For example, a 5 dB(A) increase is a readily perceptible change and a 10 dB(A) increase is perceived as twice as loud.

SOUND LEVEL CHANGE VS. LOUDNESS



COMMON OUTDOOR SOUND/NOISE LEVELS





HOW DO YOU CONSIDER THE PEOPLE AND PLACES WHO COULD BE IMPACTED BY TRAFFIC NOISE?

In the study, we identify the places that could be impacted by traffic noise and may benefit from reduced noise levels, and we do this by identifying “receptors” and “receivers.”

A receptor is a noise sensitive location. A receiver is a representative location of one or more of these noise-sensitive area(s). A receiver may represent multiple receptors.

We use the Federal Highway Authority’s (FHWA) Noise Abatement Criteria (NAC), shown in Table 1 below, to identify the dB(A) threshold for specific areas.

Table 1: Noise Abatement Criteria Table

Description of Land Use Activity Areas	FHWA (dB(A) Leq)
Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose	57 (exterior)
Residential	67 (exterior)
Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings	67 (exterior)
Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios	52 (interior)
Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in the areas mentioned above or below	72 (exterior)
Agricultural, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing	---
Undeveloped lands that are not permitted	---

WHAT CONSTITUTES A TRAFFIC NOISE IMPACT?

The study team determines that a noise impact occurs when predicted noise levels are: 1 dB(A) below, equal to, or above the threshold for a specific activity area.

Here are two examples for a residence:

- 1) An impact occurs at a person’s residence at 66 dB(A) or above, or more than 10 dB(A) higher than existing levels in any activity area.
- 2) An impact occurs at a person’s residence when the existing level is 54 dB(A) and the predicted level is 65 dB(A)—an 11 dB(A) increase.

In either example, noise abatement measures would be considered.

WHAT ARE POTENTIAL MEASURES TO REDUCE NOISE IMPACTS?

A noise abatement measure is any action taken to reduce the impact of noise from highway traffic on an activity area. The traffic noise abatement measure used most often are noise barriers, which we also call sound walls. These are structures built between the noise source (e.g., the highway) and the impacted activity area to reduce noise levels.

Sound walls will be evaluated along the MoPac South corridor to determine whether they are warranted and whether they would be a reasonable and feasible method to reduce noise for receivers.

When is a sound wall considered reasonable and feasible?

To be considered reasonable, a sound wall must:

- 1) Reduce traffic noise by 7 dB(A) for at least one receptor
- 2) Be cost effective
- 3) Consider input from affected residents and adjacent property owners

To be considered feasible, a sound wall must:

- 1) Not be anticipated to pose any major design, construction, maintenance, or safety problems
- 2) Provide a noise reduction of 5 dB(A) reduction in the levels of traffic noise projected for the road’s design year (typically 20 years after the road is built) for greater than 50% of the first-row impacted receptors
- 3) Benefit a minimum of two impacted receptors

In addition, for a sound wall to be considered feasible, there must be no other traffic related noise sources in the area that would negate the ability of a traffic noise abatement measure to achieve a substantial reduction in noise levels.

In other words, just because a sound wall could be considered due to a traffic noise increase, that does not guarantee that it will be deemed reasonable and/or feasible to construct.

WHAT HAPPENS NEXT FOR MOPAC SOUTH?

Traffic noise evaluation and noise barrier analysis will begin before the public hearing. We anticipate the public hearing occurring mid-2023. Potential traffic noise impacts for the proposed roadway improvements (the Build Alternative) will be evaluated. The results will be released with the Draft Environmental Assessment as part of the public hearing. This traffic noise evaluation and noise barrier analysis process concludes after the public hearing and any required sound wall workshops with potentially impacted adjacent property owners.

If sound walls are recommended, the study will propose the location, height, and length for maximum benefit to surrounding neighbors. Input from directly adjacent property owners would be considered in the decision-making process for potential sound walls.

The Mobility Authority constructed sound walls on certain sections of the MoPac Expressway north of Cesar Chavez Street. If sound walls are warranted on MoPac South, they would likely be similar in appearance.



MoPac South



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

Gracias por acompañarnos en esta experiencia virtual

La Casa Abierta del Estudio Ambiental de MoPac Sur se lleva a cabo virtualmente en lugar de una reunión pública tradicional en persona debido al COVID-19.

Siga esta guía para interactuar con nosotros en línea a través de la jornada de puertas abiertas virtual.

#1



**Experimente la jornada de puertas abiertas virtual
voh.MopacSouth.com**

#2



Ver y/o descargue los materiales del proyecto

#3



Comparta su opinión:

La Autoridad de Movilidad desea recibir su opinión sobre:

- Metas y objetivos del proyecto
- Problemas de movilidad, conectividad y seguridad en el sur de MoPac desde Cesar Chavez Street hasta Slaughter Lane
- Opciones de configuración operativa de carril (s) expreso
- Limitaciones ambientales
- Cualquier otra cosa que te gustaría compartir

#4



Cómo comentar:

- En línea: voh.MoPacSouth.com
- Correo electrónico: MoPacSouth@ctrma.org
- Correo:
Central Texas Regional Mobility Authority
c/o MoPac South Environmental Study
3300 N. I-H 35, Suite 625
Austin, TX 78705

Por favor someter o envíe sus comentarios por correo postal antes del 7 de enero de 2022.

Si tiene alguna pregunta o necesita adaptaciones especiales, comuníquese con nosotros al (512) 342-3299



MoPac South



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY



Aporte público

Brindar al público oportunidades para compartir comentarios es un elemento crítico del proceso de estudio ambiental y parte de la misión de la Autoridad de Movilidad. Esta información, combinada con el análisis técnico, permite al equipo del proyecto identificar la mejor opción para cumplir con el Propósito y la Necesidad del proyecto. La lista a continuación muestra cómo la opinión de la comunidad ha ayudado a dar forma al diseño de la Alternativa Carril (s) Expreso hasta la fecha.

- Posibilidad de agregar una nueva conexión directa en US 290
- Se agregó un nuevo carril de derivación desde Barton Skyway a Loop 360
- Cambio de giro de sur a norte de Texas agregado en Barton Skyway
- Extensión de Texas Turnaround en Loop 360 para aumentar la capacidad
- Rampa de salida de la RM 2244 en dirección sur reconfigurada
- Mejoras en la rampa en William Cannon Drive
- Se agregó el tercer carril de uso general en dirección sur al sur de William Cannon Drive



Conocemos los valores públicos:

- Opciones de conectividad del centro
- No hay mayores elevaciones sobre el Lago Lady Bird
- No hay rampas de conexión directa cerca de Austin High School
- Movilidad mejorada para todos los modos de transporte

Cada opción de carril expreso (2) se analizará en función de un conjunto de criterios desarrollados en función de la opinión del público y el Modelo de Demanda de Viajes de CAMPO 2045. Estos puntajes de desempeño operativo, combinados con los comentarios del público, determinarán la Alternativa Preferida Recomendada.

Para ver los comentarios anteriores enviados en eventos anteriores de participación pública, visite www.MoPacSouth.com



MoPac South



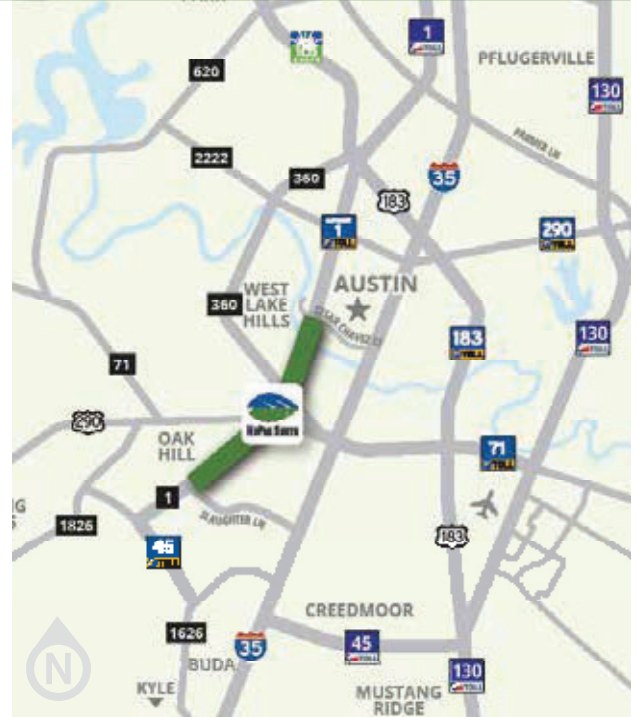
CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

ESTUDIO AMBIENTAL DEL MOPAC SUR

¿QUÉ PROBLEMA INTENTAMOS RESOLVER?

La autopista MoPac al sur de la calle Cesar Chavez es una arteria vital en Austin para los viajeros, vecinos y visitantes. Este corredor proporciona un enlace crítico con el centro de Austin y otras carreteras importantes como la US 290 y Loop 360. Constantemente clasificada entre las 20 carreteras más congestionadas de Texas *, atrae hasta 179,000 automóviles y camiones por día. ** Con el tiempo, la expansión de la población, así como el desarrollo residencial, minorista y comercial en el corredor, ha provocado un aumento de la congestión del tráfico. Esto impacta negativamente la movilidad y la calidad de vida del público viajero y los vecindarios adyacentes.

Si no se hace nada para abordar la congestión, los conductores podrían **gastar un 35 minutos adicionales** viajando por el pasillo por 2035.



PROPÓSITO DEL PROYECTO: ¿QUÉ ESTAMOS INTENTANDO HACER?

- Proporcionar tiempos de viaje fiables
- Cree una ruta confiable para el tránsito
- Facilitar una respuesta de emergencia confiable



NECESIDAD DEL PROYECTO: ¿QUÉ PROBLEMAS INTENTAMOS ABORDAR?

- El crecimiento actual y previsto de la población, el tráfico y el empleo están aumentando la congestión y los retrasos en los viajes.
- Los tiempos de respuesta ante emergencias se ven afectados por la congestión del tráfico



LA SOLUCIÓN PROPUESTA

La Autoridad de Movilidad y sus socios lanzaron un estudio ambiental en 2013 para analizar el corredor y determinar el mejor enfoque para una variedad de alternativas, incluidas Carril (s)Expreso, Carriles para Vehículos de Alta Ocupación (HOV), Carriles Solo de Tránsito, carriles adicionales para Uso General y Alternativas de Gestión de la Demanda de Transporte. Una evaluación exhaustiva determinó que la Alternativa Carril (s) Expreso era **la alternativa de construcción recomendada porque cumplía mejor con el propósito y la necesidad:**

- Tiempos de viaje fiables
- Tiempos de viaje más cortos en períodos pico
- Más ahorro de tiempo de viaje que otras Alternativas
- Evita impactos ambientales innecesarios
- Crea oportunidades para el transporte público y el transporte compartido; instalaciones para bicicletas y peatones

*Texas A&M Transportation Institute, 2020, Texas' Most Congested Roadways

**Based on CAMPO 2035 Travel Demand Model



MoPac South



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METAS Y OBJETIVOS DEL PROYECTO

- Facilitar la gestión de la congestión
- Proporcionar coherencia con los planes locales y regionales
- Reduzca la congestión y proporcione ahorros de tiempo de viaje y confiabilidad de viaje para todos los usuarios de la carretera
- Ser constructivo sin impactos innecesarios al medio ambiente natural y humano
- Evitar y minimizar los impactos en la calidad del agua
- Aumentar las oportunidades para el transporte público, viajes compartidos, peatones y ciclistas



EL PROCESO

El equipo del proyecto reanudará los esfuerzos para determinar las mejores opciones de configuración operativa de carril(s) expreso. Se llevarán a cabo eventos de participación pública y anticipamos presentar la Alternativa Preferida Recomendada en 2023.

La Alternativa de No Construir ("No Hacer Nada") se llevará a cabo junto con la Alternativa Carril(s) Expreso.



BENEFICIOS ALTERNATIVOS DE CARRIL(S) EXPRESO

- Mejoras con peaje y sin peaje
- Pavimento auxiliar para mejorar la eficiencia operativa de carriles de uso general en rampas e intercambios de entrada y salida
- Carriles repavimentados de uso general
- Se agregaron carriles de distribución de colectores, giros en U de Texas, puentes ensanchados
- Ahorro de tiempo de viaje
- Mejoras en la eficiencia operativa
- Ruta de tránsito confiable
- Tiempos de respuesta de emergencia mejorados



PARTICIPACIÓN PÚBLICA

Casa Abierta n.º1: noviembre de 2013

Seis alternativas presentadas para evaluación adicional

Casa Abierta n.º 2: abril de 2014

Seis alternativas presentadas para evaluación adicional

Casa Abierta n.º3: febrero de 2015

Seis alternativas presentadas con los resultados de la matriz de evaluación y *la Alternativa Carril(s) Expresos* recomendada para una evaluación adicional

Casa Abierta n.º 4: noviembre de 2015

Seis opciones de configuración operativa de carril(s) expreso diferentes presentadas para evaluación y comentarios públicos

Casa Abierta n.º 5: 2021

Opciones de configuración operativa de carril(s) expreso presentadas para información adicional



NEXT STEPS

- Casa Abierta n.º 6: 2022
- Audiencia Pública: 2024



Mantente informado y ¡Involucrarse!

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ESTUDIO AMBIENTAL DEL MOPAC SOUTH

Central Texas Regional Mobility Authority



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY



MoPac South - El Problema de la Movilidad

• Planteamiento del Problema:

- El corredor MoPac Sur está clasificado como una de las carreteras **más congestionadas** de Texas. *
- Atrae hasta **179.000 automóviles y camiones** por día.
- El aumento de la congestión del tráfico **afecta negativamente la movilidad** y la calidad de vida.
- Si no hacemos nada para abordar la congestión, los conductores podrían pasar **35 minutos adicionales** viajando el corredor para 2035.



* Texas A&M Transportation Institute, 2020



- **La Solución de Movilidad:**

- Estudio ambiental de MoPac Sur lanzado en 2013 para determinar el **mejor enfoque para satisfacer las necesidades de movilidad**
- El estudio identificó y evaluó una **gama completa de alternativas**
- Alternativa de carriles expresos identificada como **Alternativa de Construcción Recomendada**
 - Se están considerando 6 opciones de configuración operativa de Carril (s) Expreso
- **Alternativa Preferida Recomendada** sera identificada y compartida en la Casa Abiertas n.º6



MoPac South - Propósito y Necesidad



- **Propósito del Proyecto: ¿Qué estamos tratando de hacer?**

- Proporcione tiempos de viaje confiables
- Crear una ruta confiable para el tránsito
- Facilite una respuesta de emergencia confiable



- **Necesidad del Proyecto: ¿Qué problemas estamos tratando de abordar?**

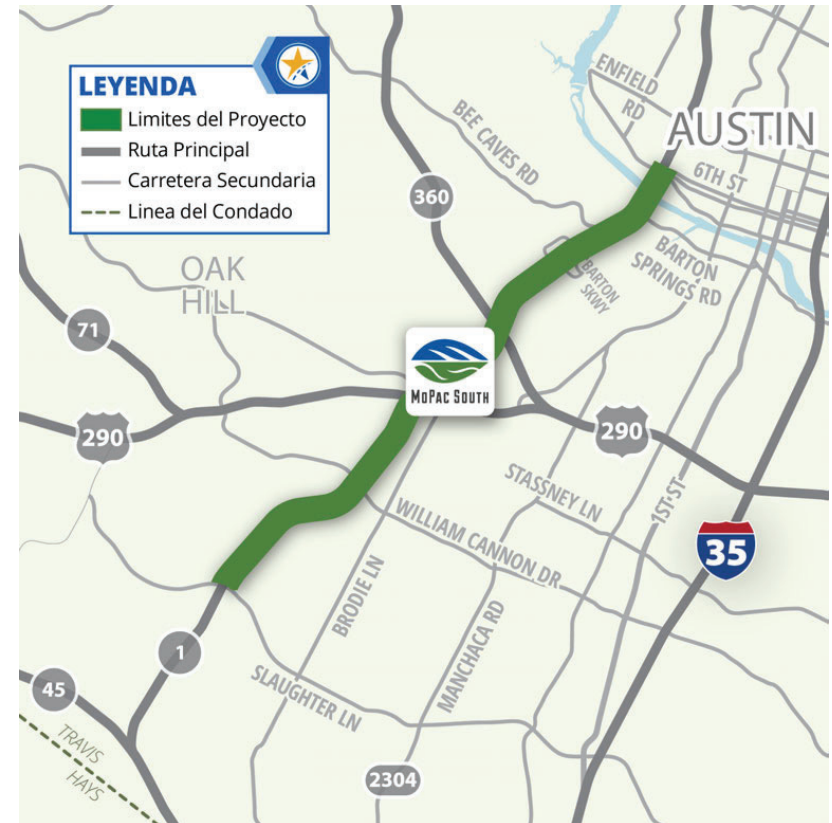
- Los niveles de congestión actuales y previstos están creando tiempos de viaje poco fiables
- El crecimiento previsto de la población, el tráfico y el empleo está aumentando la congestión y los retrasos en los viajes
- Los tiempos de respuesta de emergencia se ven afectados por la congestión del tráfico



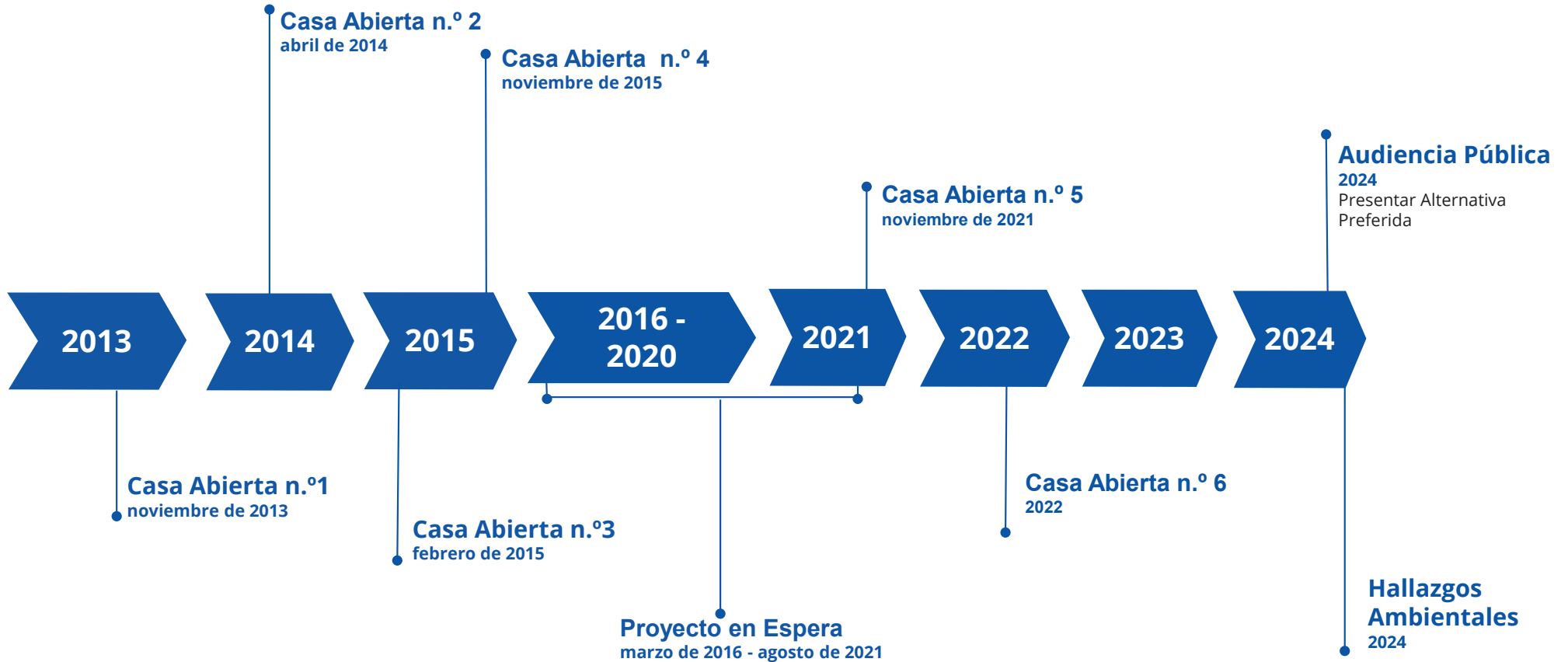
Resumen del Estudio Ambiental



- **Descripción del Proyecto:** Propuesta para agregar uno o dos carriles expresos en cada sentido
- **Límites:** Calle Cesar Chavez a Slaughter Lane
- **Longitud:** Aproximadamente 8 millas
- **Estado del Proyecto:** Estudio Ambiental
- **Próximos Pasos:** Actualizar el modelo de demanda de viajes para los datos de CAMPO 2045



Historial del Proyecto y Próximos Pasos





- **La Opinión Pública y el análisis técnico determinan la Alternativa Preferida Recomendada**
- **Four Open Houses and Virtual Open Houses**
 - Casa Abierta n.º1: 7 de noviembre de 2013
 - Casa Abierta n.º2: 29 de abril de 2014
 - Casa Abierta n.º3: 26 de febrero de 2015
 - Casa Abierta n.º4: 10 de noviembre de 2015

Alternativas Consideradas

- No Construir (“No Hacer Nada”)
- Agregue Carril (s) de Uso General en cada dirección
- Agregar carril (s) para Vehículos de Alta Ocupación (HOV) en cada dirección
- Agregar Carril (s) Solo de Tránsito en cada dirección
- Agregue Carril (s) Expreso en cada dirección
- Gestión de Sistemas de Transporte (TSM)/
Gestión de la Demanda de Transporte (TDM)

Alternativa de Construcción Recomendada



- **Alternativa de Carril Expreso identificada como Alternativa de Construcción Recomendada**
 - Ofrece tiempos de viaje **fiables**
 - Tiempos de viaje más cortos durante el **período pico**
 - Más **ahorro de tiempo** de viaje que otras Alternativas
 - **Minimiza los impactos** ambientales innecesarios
 - Oportunidades de **tránsito y viajes compartidos**; instalaciones para bicicletas / peatones
- **La Alternativa Sin Construcción también se llevará a cabo**



Opciones de Configuración Operativa



- **Bajo la Alternativa Carril (s) Expreso, se identificaron seis opciones de configuración operativa diferentes para su consideración y se compartieron con el público en la Casa Abierta # 4 (noviembre de 2015), y nuevamente en la Casa Abierta # 5 (noviembre de 2021)**
 - 1A.** Un Carril Expreso + Conexión Directa al Centro
 - 1B.** Un carril Expreso sin Conexión Directa al Centro
 - 2A.** Dos carriles Expresos + Conexión Directa al Centro
 - 2B.** Dos carriles Expresos sin Conexión Directa al Centro
 - 2C.** Dos carriles Expresos + Rampas Elevadas cerca de Barton Skyway
 - 3.** Propuesta de la Ciudad de Austin

Criterios de Evaluación

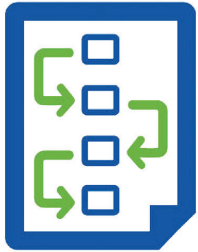
- Cada configuración operativa se volverá a evaluar utilizando el Modelo de Demanda de Viajes de CAMPO 2045 .
- Criterios de Evaluación:
 - Reducir los retrasos por congestión
 - Optimizar el rendimiento
 - Maximice el **ahorro de tiempo de viaje**
 - Sirve a **todos los usuarios de las carreteras** (carriles expresos asequibles, ahorro de tiempo de viaje, acceso a las salidas del centro)
 - Tiempos de viaje **fiabes**, ruta de tránsito **confiable**, respuesta de emergencia **confiable**
- Los resultados de la evaluación, combinados con las opiniones del público, determinarán la Alternativa Preferida Recomendada.

Beneficios del Proyecto

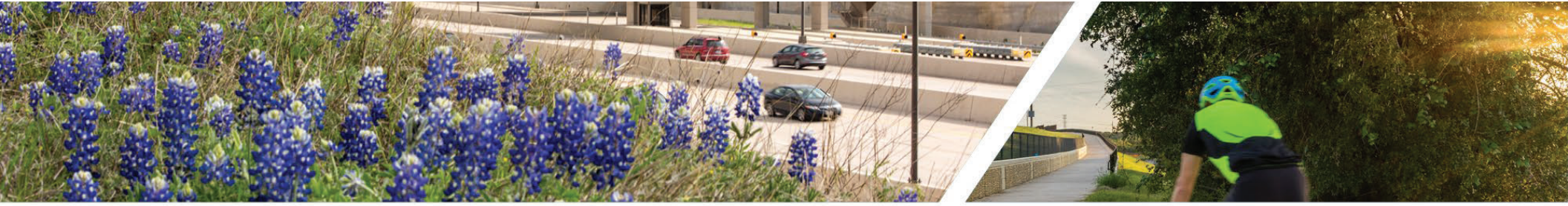


- **Mejoras con peaje y sin peaje**
- **Ahorro de tiempo de viaje**
- **Mejoras en la eficiencia operativa**
- **Aumento de las medidas de calidad del agua**
- **Ruta de tránsito confinable**
 - Tiempos de respuesta de emergencia mejorados
 - Instalaciones para peatones y bicicletas que **cumplen con la ADA**

Próximos Pasos



- **Casa Abierta n.º6**
 - Presentar la Alternativa Preferida Recomendada para la opinión pública según el Plan CAMPO 2045
- **Audiencia Pública**
 - Presentar la *Alternativa Preferida* para la opinión pública
- **Finalizar Documento Medioambiental**
 - Recibir Hallazgo Ambiental



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

Gracias

www.MobilityAuthority.com

Lo que le impulsa, nos impulsa

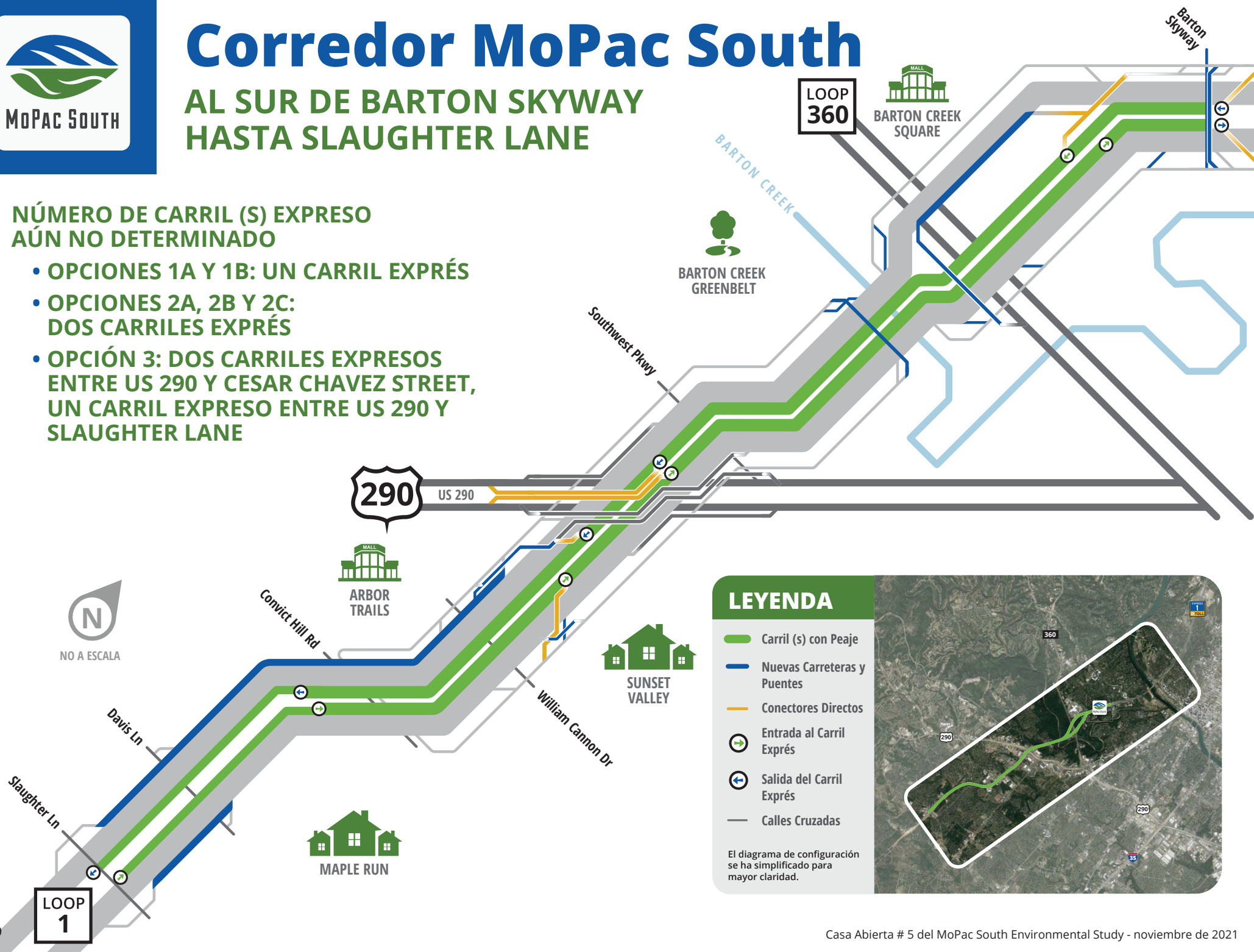


Corredor MoPac South

AL SUR DE BARTON SKYWAY HASTA SLAUGHTER LANE

NÚMERO DE CARRIL (S) EXPRESO
AÚN NO DETERMINADO

- OPCIONES 1A Y 1B: UN CARRIL EXPRES
- OPCIONES 2A, 2B Y 2C: DOS CARRILES EXPRES
- OPCIÓN 3: DOS CARRILES EXPRESOS ENTRE US 290 Y CESAR CHAVEZ STREET, UN CARRIL EXPRESO ENTRE US 290 Y SLAUGHTER LANE



LEYENDA

- Carril (s) con Peaje
- Nuevas Carreteras y Puentes
- Conectores Directos
- ⊕ Entrada al Carril Expres
- ⊖ Salida del Carril Expres
- Calles Cruzadas

El diagrama de configuración se ha simplificado para mayor claridad.



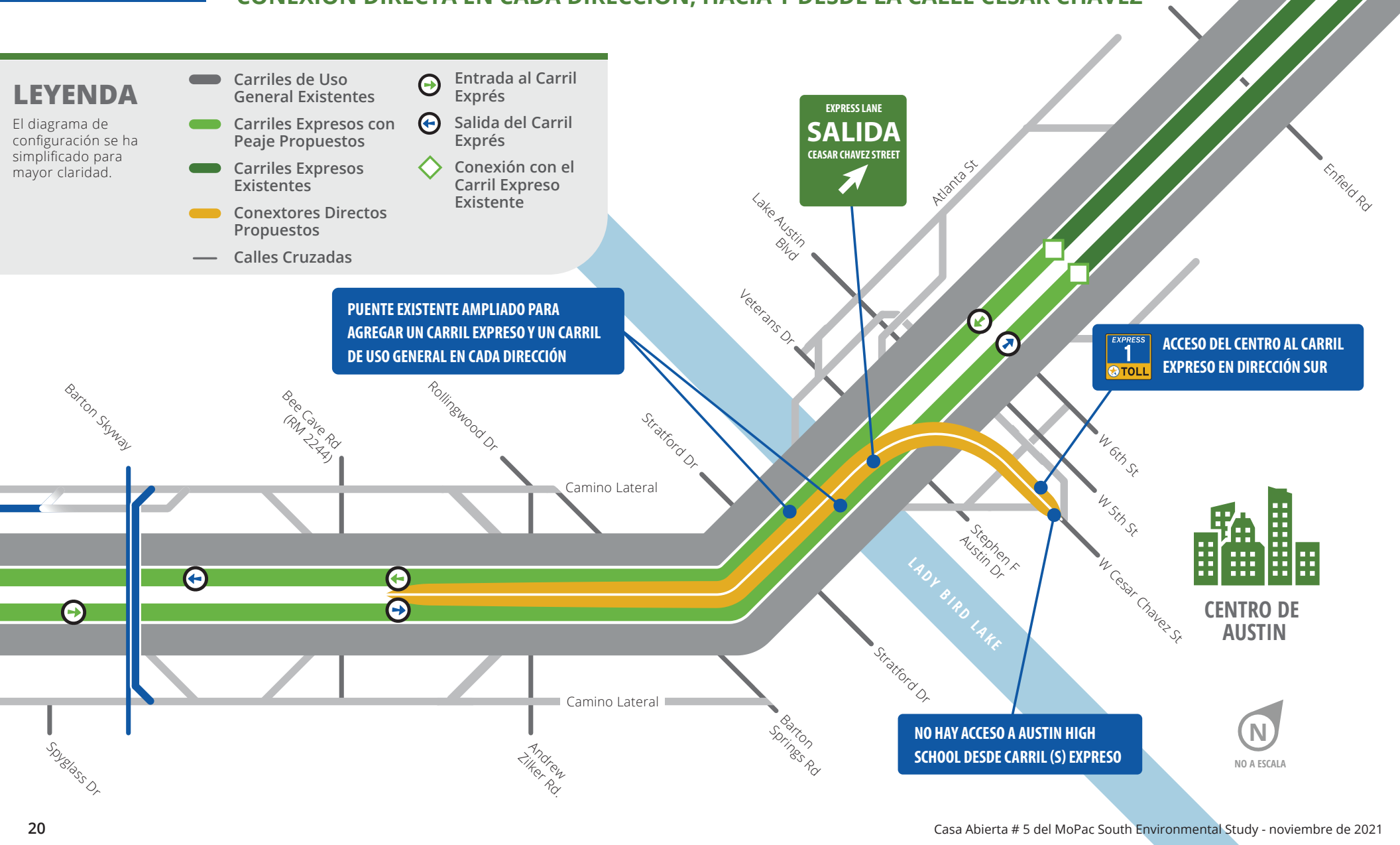
1A: Un Carril Expreso con Conexión Directa al Centro

ACCESO HACIA Y DESDE EL CENTRO DE LA CIUDAD: UN-CARRIL, RAMPAS ELEVADAS DE CONEXIÓN DIRECTA EN CADA DIRECCIÓN, HACIA Y DESDE LA CALLE CESAR CHAVEZ

LEYENDA

El diagrama de configuración se ha simplificado para mayor claridad.

- Carriles de Uso General Existentes
- Carriles Expresos con Peaje Propuestos
- Carriles Expresos Existentes
- Conectores Directos Propuestos
- Calles Cruzadas
- Entrada al Carril Exprés
- Salida del Carril Exprés
- Conexión con el Carril Expreso Existente





1B: Un Carril Expreso sin Conexión Directa al Centro

ACCESO HACIA Y DESDE EL CENTRO DE LA CIUDAD A TRAVÉS DE LA FUSIÓN A TRAVÉS DE TRES CARRILES DE USO GENERAL Y RAMPAS EXISTENTES

LEYENDA

El diagrama de configuración se ha simplificado para mayor claridad.

- Carriles Expresos con Peaje Propuestos
- Carriles Expresos Existentes
- Conexores Directos Propuestos
- Calles Cruzadas
- Entrada al Carril Exprés
- Salida del Carril Exprés
- Conexión con el Carril Expreso Existente

PUENTE EXISTENTE AMPLIADO PARA AGREGAR UN CARRIL EXPRESO Y UN CARRIL DE USO GENERAL EN CADA DIRECCIÓN



CENTRO DE AUSTIN



NO A ESCALA



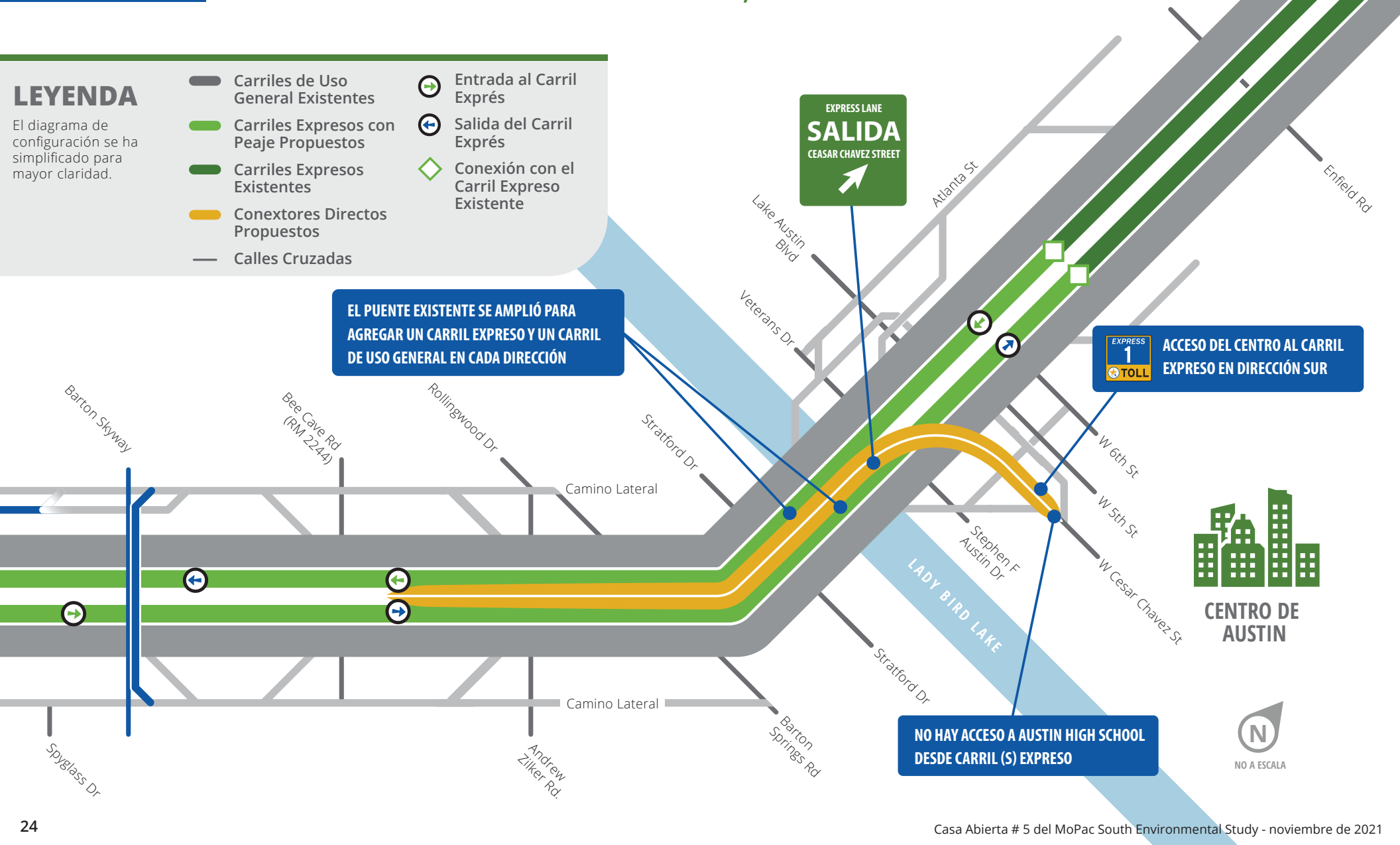
2A: Dos Carriles Expresos con Conexión Directa al Centro

ACCESO HACIA Y DESDE EL CENTRO DE LA CIUDAD: RAMPA DE CONEXIÓN DIRECTA ELEVADA DE UN CARRIL EN CADA DIRECCIÓN, HACIA Y DESDE LA CALLE CESAR CHAVEZ

LEYENDA

El diagrama de configuración se ha simplificado para mayor claridad.

- Carriles de Uso General Existentes
- Carriles Expresos con Peaje Propuestos
- Carriles Expresos Existentes
- Conexores Directos Propuestos
- Calles Cruzadas
- Entrada al Carril Exprés
- Salida del Carril Exprés
- Conexión con el Carril Expreso Existente



EL PUENTE EXISTENTE SE AMPLIÓ PARA AGREGAR UN CARRIL EXPRESO Y UN CARRIL DE USO GENERAL EN CADA DIRECCIÓN

EXPRESS LANE
SALIDA
CESAR CHAVEZ STREET

EXPRESS 1 TOLL ACCESO DEL CENTRO AL CARRIL EXPRESO EN DIRECCIÓN SUR

NO HAY ACCESO A AUSTIN HIGH SCHOOL DESDE CARRIL (S) EXPRESO



2B: Dos Carriles Expresos sin Conexión Directa al Centro

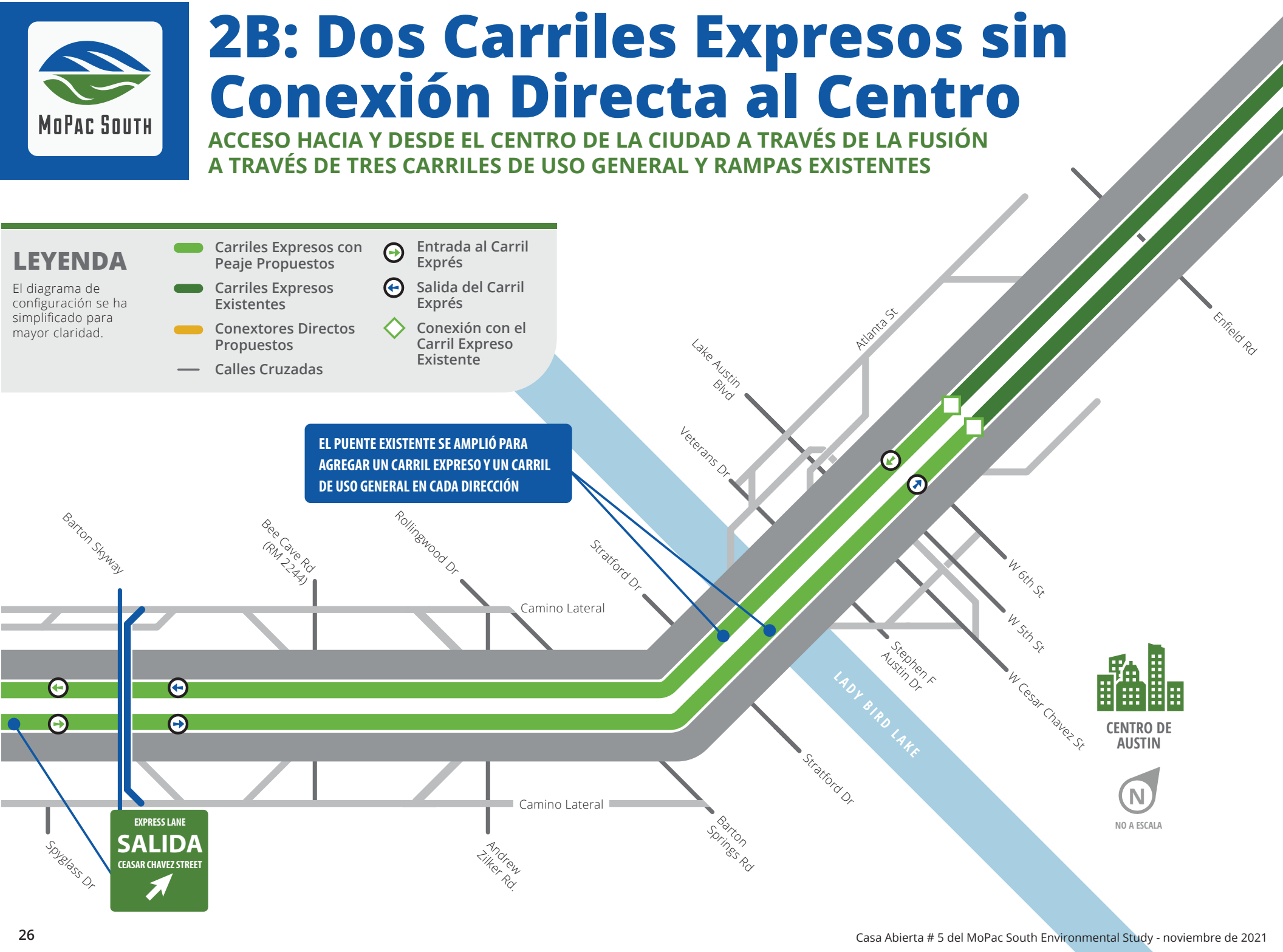
ACCESO HACIA Y DESDE EL CENTRO DE LA CIUDAD A TRAVÉS DE LA FUSIÓN A TRAVÉS DE TRES CARRILES DE USO GENERAL Y RAMPAS EXISTENTES

LEYENDA

El diagrama de configuración se ha simplificado para mayor claridad.

- Carriles Expresos con Peaje Propuestos
- Carriles Expresos Existentes
- Conexores Directos Propuestos
- Calles Cruzadas
- Entrada al Carril Expres
- Salida del Carril Expres
- Conexión con el Carril Expres Existente

EL PUENTE EXISTENTE SE AMPLIÓ PARA AGREGAR UN CARRIL EXPRESO Y UN CARRIL DE USO GENERAL EN CADA DIRECCIÓN



CENTRO DE AUSTIN



NO A ESCALA



2C: Dos carriles expresos con rampas elevadas cerca de Barton Skyway

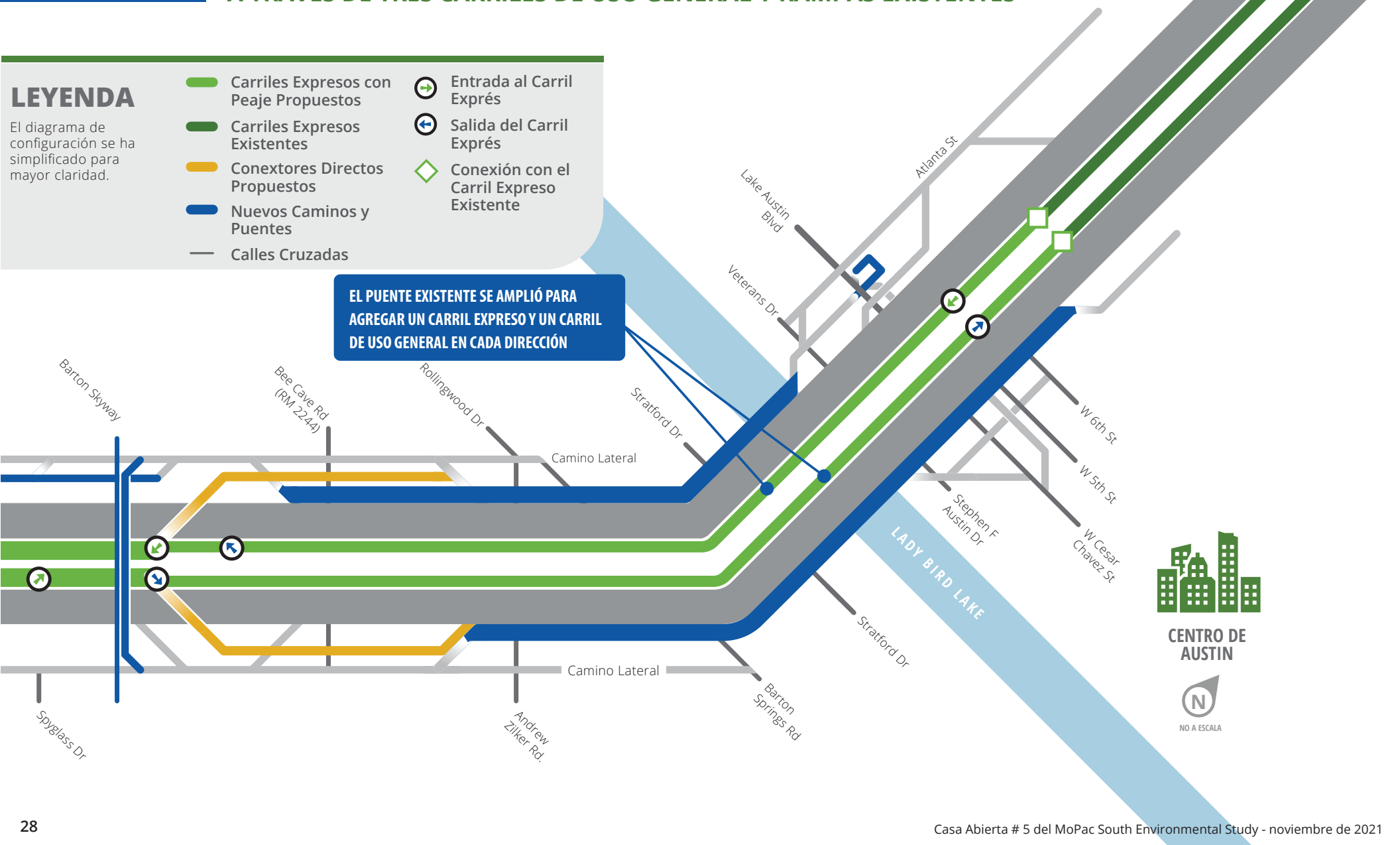
ACCESO HACIA Y DESDE EL CENTRO DE LA CIUDAD A TRAVÉS DE LA FUSIÓN A TRAVÉS DE TRES CARRILES DE USO GENERAL Y RAMPAS EXISTENTES

LEYENDA

El diagrama de configuración se ha simplificado para mayor claridad.

- Carriles Expresos con Peaje Propuestos
- Carriles Expresos Existentes
- Conexores Directos Propuestos
- Nuevos Caminos y Puentes
- Calles Cruzadas
- Entrada al Carril Exprés
- Salida del Carril Exprés
- Conexión con el Carril Expreso Existente

EL PUENTE EXISTENTE SE AMPLIÓ PARA AGREGAR UN CARRIL EXPRESO Y UN CARRIL DE USO GENERAL EN CADA DIRECCIÓN





3: Propuesta de la Ciudad de Austin

ACCESO HACIA Y DESDE EL CENTRO DE LA CIUDAD: UN-CARRIL, RAMPA DE CONEXIÓN DIRECTA ELEVADA EN CADA DIRECCIÓN, HACIA Y DESDE LA CALLE CESAR CHAVEZ. DOS CARRILES EXPRESOS EN CADA DIRECCIÓN DESDE LA CALLE CESAR CHAVEZ HASTA US 290. UN CARRIL EXPRESO EN CADA DIRECCIÓN DESDE US 290 HASTA SLAUGHTER LANE.

LEYENDA

El diagrama de configuración se ha simplificado para mayor claridad.

- Carriles Expresos con Peaje Propuestos
- Carriles Expresos Existentes
- Conexores Directos Propuestos
- Calles Cruzadas
- Nuevos Caminos y Puentes
- Entrada al Carril Expres
- Salida del Carril Expres
- Conexión con el Carril Expreso Existent

EXPRESS 1 TOLL
ACCESO DEL CENTRO AL CARRIL EXPRESO EN DIRECCIÓN SUR

EL PUENTE EXISTENTE SE AMPLIÓ PARA AGREGAR UN CARRIL EXPRESO Y UN CARRIL DE USO GENERAL EN CADA DIRECCIÓN

EXPRESS LANE
SALIDA
CESAR CHAVEZ STREET



CENTRO DE AUSTIN



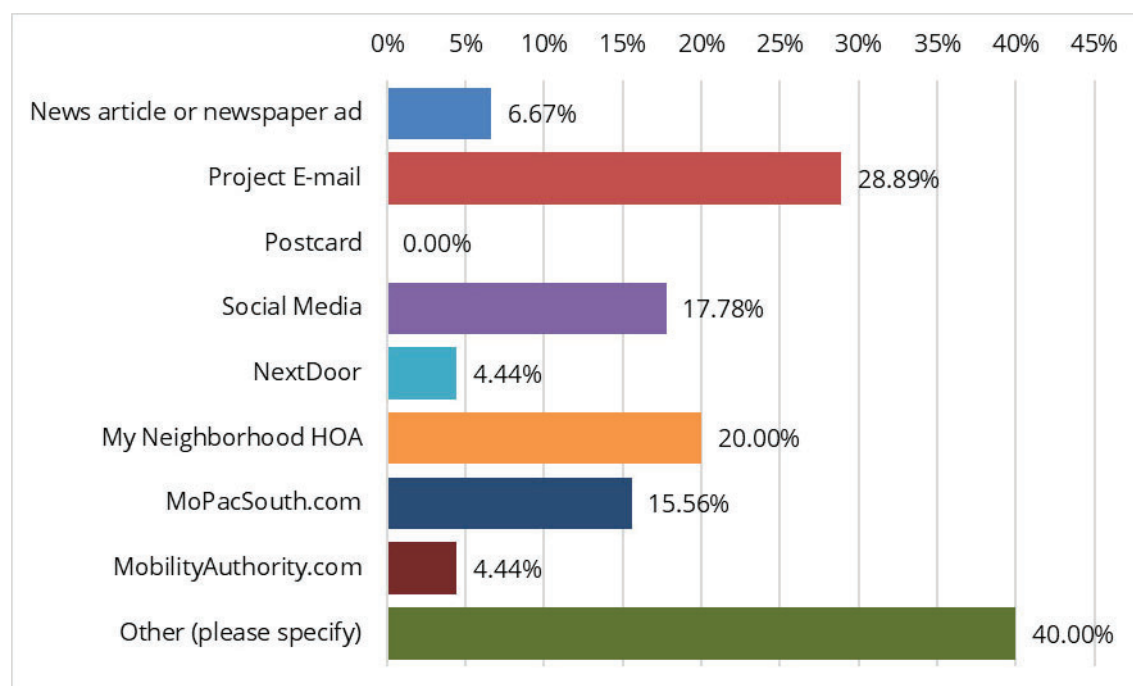
SURVEY

During the Virtual Public Meeting, participants were asked to complete a survey about their experience with the meeting. Forty-seven participants completed the survey. Of those participants, 44.4% stated that this was their first public meeting and 73.3% of participants stated that it was their first public meeting for the MoPac South Project.

Participants rated the user-friendliness of the material a 5.94/10 and the content a 5.66/10.

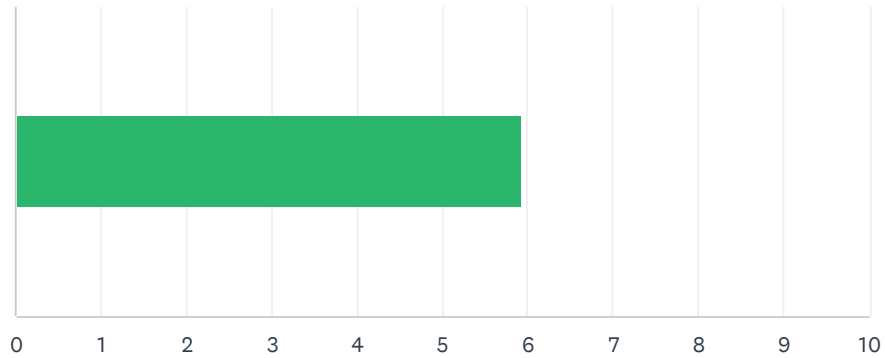
Thirty-four percent of participants indicated they found what they were looking for, 47% said they somewhat found what they were looking for and 19% did not find what they were looking for.

The majority of participants heard about the public meeting through an outside source or an email sent to subscribers of the MoPac South Project Newsletter or Mobility Authority Expressway News newsletter. Outside sources included the City Council, a friend or neighbor, the Save Our Springs Coalition, and the radio. Participants that heard about the public meeting from their neighborhood Homeowners Association lived in Rollingwood, Treemont, Meridian, Tarrytown, Zilker, Circle C, and Dripping Springs.



Q1 On a scale of 1 to 10, with 1 being worst and 10 being best, how user-friendly was the virtual open house?

Answered: 47 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	6	279	47
Total Respondents: 47			

#		DATE
1	9	1/7/2022 11:42 PM
2	6	1/7/2022 10:08 PM
3	7	1/7/2022 8:33 PM
4	2	1/7/2022 5:59 PM
5	6	1/7/2022 5:13 PM
6	8	1/7/2022 4:37 PM
7	4	1/7/2022 4:20 PM
8	1	1/7/2022 3:07 PM
9	5	1/7/2022 2:37 PM
10	8	1/7/2022 1:51 PM
11	5	1/7/2022 1:39 PM
12	6	1/7/2022 1:39 PM
13	3	1/7/2022 1:06 PM
14	6	1/7/2022 11:53 AM
15	7	1/7/2022 10:25 AM
16	1	1/7/2022 8:55 AM
17	8	1/6/2022 9:44 PM
18	2	1/6/2022 8:31 PM
19	4	1/6/2022 7:46 PM

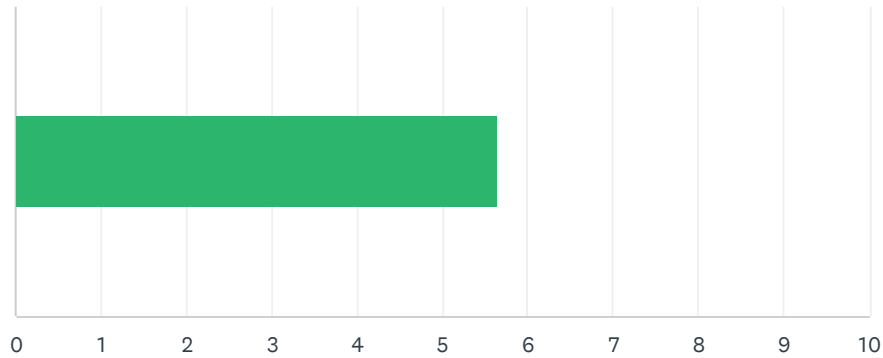
MoPac South Virtual Open House Feedback

SurveyMonkey

20	4	1/6/2022 5:28 PM
21	10	1/6/2022 5:25 PM
22	8	1/5/2022 1:47 PM
23	9	1/5/2022 8:07 AM
24	1	1/4/2022 5:19 PM
25	5	1/2/2022 11:50 AM
26	1	12/29/2021 9:07 PM
27	8	12/20/2021 4:55 PM
28	9	12/20/2021 3:45 PM
29	6	12/15/2021 2:52 PM
30	1	12/13/2021 7:08 PM
31	8	12/13/2021 4:01 PM
32	8	12/10/2021 10:22 PM
33	5	12/8/2021 5:33 PM
34	7	12/8/2021 3:36 PM
35	10	12/8/2021 1:21 PM
36	9	12/8/2021 12:29 PM
37	3	12/8/2021 12:09 PM
38	8	12/7/2021 6:20 PM
39	10	12/3/2021 11:14 AM
40	1	12/3/2021 12:27 AM
41	10	12/1/2021 3:26 PM
42	5	12/1/2021 10:04 AM
43	3	12/1/2021 7:30 AM
44	10	11/30/2021 12:26 PM
45	6	11/27/2021 10:11 AM
46	10	11/22/2021 10:45 PM
47	6	11/22/2021 5:09 PM

Q2 On a scale of 1 to 10, with 1 being worst and 10 being best, how would you rate the content provided in the virtual open house?

Answered: 47 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	6	266	47
Total Respondents: 47			

#		DATE
1	9	1/7/2022 11:42 PM
2	5	1/7/2022 10:08 PM
3	6	1/7/2022 8:33 PM
4	3	1/7/2022 5:59 PM
5	7	1/7/2022 5:13 PM
6	6	1/7/2022 4:37 PM
7	3	1/7/2022 4:20 PM
8	1	1/7/2022 3:07 PM
9	5	1/7/2022 2:37 PM
10	8	1/7/2022 1:51 PM
11	2	1/7/2022 1:39 PM
12	7	1/7/2022 1:39 PM
13	3	1/7/2022 1:06 PM
14	6	1/7/2022 11:53 AM
15	8	1/7/2022 10:25 AM
16	1	1/7/2022 8:55 AM
17	8	1/6/2022 9:44 PM
18	2	1/6/2022 8:31 PM
19	4	1/6/2022 7:46 PM

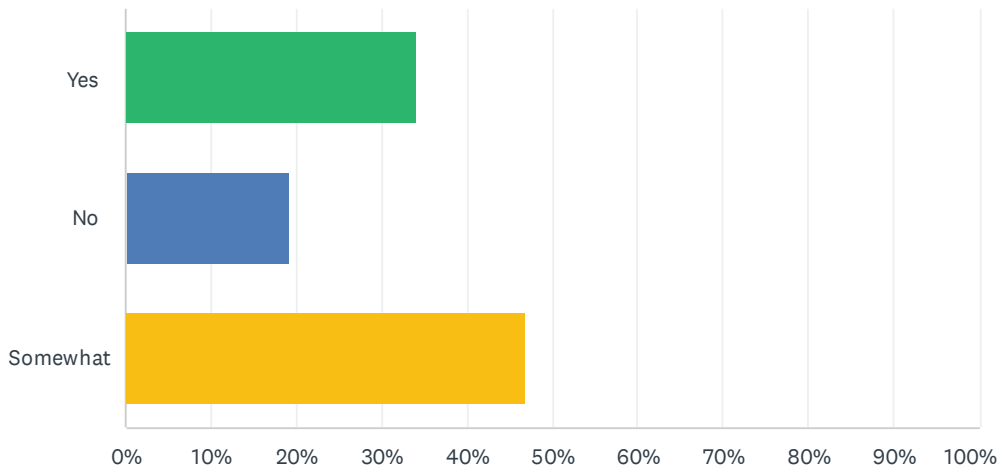
MoPac South Virtual Open House Feedback

SurveyMonkey

20	3	1/6/2022 5:28 PM
21	10	1/6/2022 5:25 PM
22	1	1/5/2022 1:47 PM
23	9	1/5/2022 8:07 AM
24	1	1/4/2022 5:19 PM
25	7	1/2/2022 11:50 AM
26	1	12/29/2021 9:07 PM
27	5	12/20/2021 4:55 PM
28	9	12/20/2021 3:45 PM
29	7	12/15/2021 2:52 PM
30	6	12/13/2021 7:08 PM
31	7	12/13/2021 4:01 PM
32	5	12/10/2021 10:22 PM
33	5	12/8/2021 5:33 PM
34	7	12/8/2021 3:36 PM
35	10	12/8/2021 1:21 PM
36	10	12/8/2021 12:29 PM
37	3	12/8/2021 12:09 PM
38	8	12/7/2021 6:20 PM
39	10	12/3/2021 11:14 AM
40	1	12/3/2021 12:27 AM
41	9	12/1/2021 3:26 PM
42	5	12/1/2021 10:04 AM
43	3	12/1/2021 7:30 AM
44	10	11/30/2021 12:26 PM
45	7	11/27/2021 10:11 AM
46	10	11/22/2021 10:45 PM
47	3	11/22/2021 5:09 PM

Q3 Did you find the information you were looking for?

Answered: 47 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	34.04%	16
No	19.15%	9
Somewhat	46.81%	22
TOTAL		47

Q4 What information were you looking for that you did not find on our virtual open house?

Answered: 27 Skipped: 20

#	RESPONSES	DATE
1	More information about the RM2244 intersection issues.	1/7/2022 11:42 PM
2	Very difficult to understand the elevations of the proposed roadways without better graphics.	1/7/2022 10:09 PM
3	More up to date info and better representations of the options provided. More information about feedback already received.	1/7/2022 8:33 PM
4	objective, quantified analysis of the traffic and proposed solutions, not a slick sales job	1/7/2022 6:00 PM
5	Any information about the plans for Mopac South	1/7/2022 4:38 PM
6	Current environmental studies. Clear illustrations of proposed elevations. A one dimensional overhead view of Mopac does not give a clear impression of the proposed alternatives. Use 3D software to more accurately demonstrate bridges and connectors.	1/7/2022 4:23 PM
7	Open house during the holidays looks like your not wanting anyone to notice you manage In project. Humm, am I right?	1/7/2022 3:08 PM
8	Outside the box kind of thinking by project leaders.	1/7/2022 1:51 PM
9	What the plans were to preserve Zilker Park and Rollingwood neighborhood from noise and excess traffic	1/7/2022 1:40 PM
10	Information about transit alternatives, changing commuting patterns and demographics and generally any information that is not road building focused.	1/7/2022 1:40 PM
11	I cannot understand the graphics for the design alternatives; cross sections would be much clearer. Also, these materials are outdated and don't reflect more recent projects. I quote from a recent letter about this project from Travis County Commissioners Court: Asking the public to comment on outdated materials confuses the public and complicates the environmental study process. It is problematic since the CTRMA stated that the recommended preferred alternative will be selected based on public input and scores using new data. At this time, the public has no opportunity to provide input on the alternatives based on the new data. There is no benefit from collecting public input based on old data that creates faulty assumptions. The current virtual open house public input is largely irrelevant and should not be used to advance the environmental study process. We strongly urge the CTRMA to repeat this virtual open house public engagement opportunity with updated data and information for all alternatives when it is available, before a preferred alternative is recommended. This will ensure that the public has the best information available when providing input. It also will provide the CTRMA with useful, informed public input to consider when selecting the preferred alternative, rather than public input based on alternatives analyses done several years ago.	1/7/2022 1:09 PM
12	Access to comment section was impossible. I wrote up a comment, hit submit and it said the page didn't exist. What BS!	1/7/2022 8:56 AM
13	Rationale for creating tolled lanes.	1/6/2022 9:45 PM
14	How this will integrate into future transportation technologies and platforms.	1/6/2022 8:31 PM
15	More details and ability to ask questions	1/6/2022 7:47 PM
16	Impacts of local economy with new traffic flow, impacts on sound quality, long term trends to reduction in commercial real estate use downtown, impacts of Tesla, Appple, Silicon Valley startups not being downtown, are traffic flow pattern funds being used correctly given the new growth pockets in Austin	1/6/2022 5:31 PM
17	Environmental and traffic analysis	1/4/2022 5:20 PM

18	Actual use of space	12/29/2021 9:08 PM
19	More detailed drawings on where the new roadway will go and how it will connect with the Oak Hill Parkway. I think we also need a flyover connect to Southwest Parkway and another to RM2244.	12/13/2021 4:03 PM
20	How this project will fix the problems created by installing north tolled lanes	12/10/2021 10:23 PM
21	The amount of information was overwhelming. It needs to be simplified for the majority of users with links to more comprehensive information.	12/8/2021 3:37 PM
22	Better explanation of what is proposed, your presentation misses the mark.	12/8/2021 12:10 PM
23	What to do about the noise factor for neighborhoods that will be affected.	12/7/2021 6:21 PM
24	Non rolled options	12/3/2021 12:27 AM
25	How the project will work to prevent predatory billing practices from the company running the toll lanes.	12/1/2021 10:05 AM
26	I had a hard time understanding the maps	11/27/2021 10:12 AM
27	Why on *earth* was rail-based transit not 'an alternative to express lanes'?	11/22/2021 5:09 PM

Q5 What suggestions do you have to make the virtual open house better for the future?

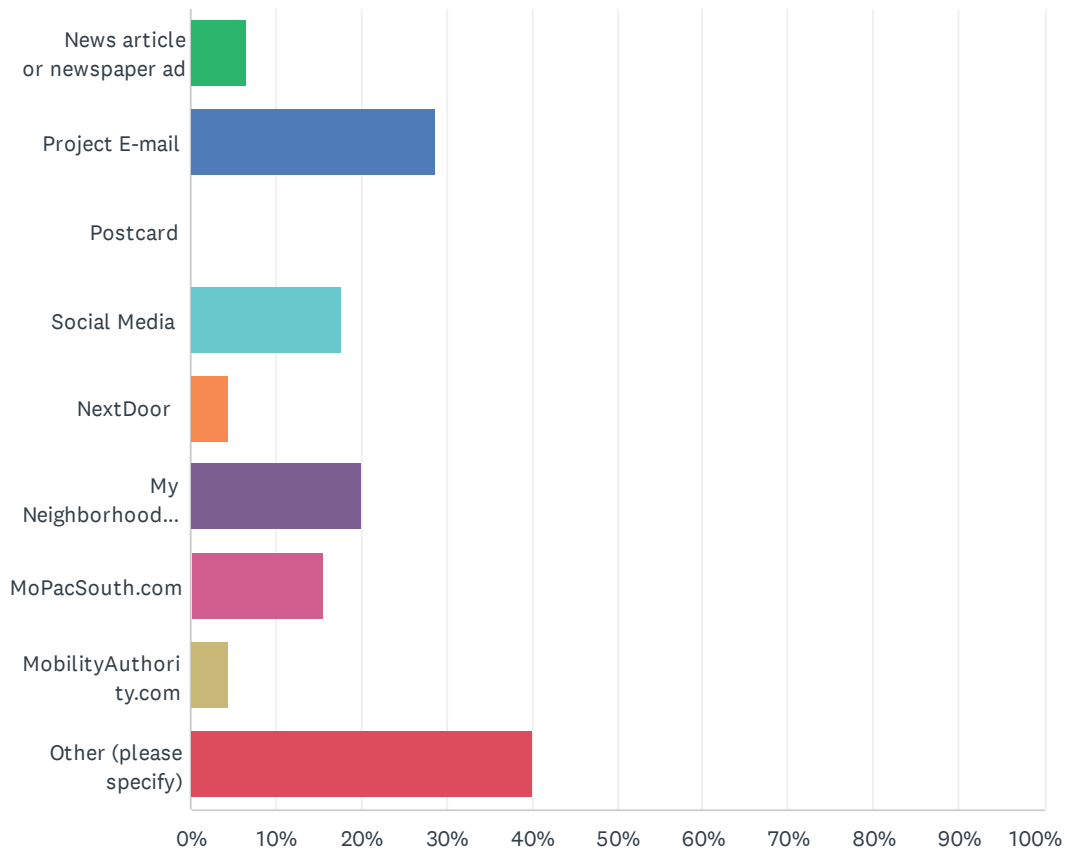
Answered: 23 Skipped: 24

#	RESPONSES	DATE
1	The information presented seems to be geared towards pushing a particular point of view, rather than informing us.	1/7/2022 5:14 PM
2	First off: make the comment period longer, and move it away from the holidays. I, like most people, am a busy person, and the Christmas Holidays are the busiest time of the year. Confining the opportunity for feedback to this period is a abortion of Democracy. 2. Attach the virtyual open house directly to a description of the project under discussion. 3. Provide an opportunity to see other people's comments.	1/7/2022 4:42 PM
3	Realistic renderings of the proposed alternatives, not just an overhead map. Use 3D software. Make it easier for the public to FIND the illustrations.	1/7/2022 4:24 PM
4	No Managed Ln's period !	1/7/2022 3:09 PM
5	More visualizations	1/7/2022 2:38 PM
6	Most up-to-date traffic mapping; list of all people involved in design and decision-making	1/7/2022 1:52 PM
7	It was super dense, hard to full process and had too many word / pictures / graphics. This makes it very inaccessible to significant parts of the Austin community including those that are non-English speaking.	1/7/2022 1:44 PM
8	- Use cross sections for diagrams - Have virtual sessions for people to speak and make chat comments	1/7/2022 1:11 PM
9	Easier access to comment section	1/7/2022 8:57 AM
10	Zoom virtual meeting	1/6/2022 7:47 PM
11	More long term economy studies, local economy studies	1/6/2022 5:32 PM
12	Offer a plan that has less impact on neighborhoods.	1/6/2022 5:27 PM
13	Community input periods should be a MINIMUM of 90 days. 30 days is not long enough for community groups (who generally meet only once a month) to meet, digest the information provided, come up with and submit comprehensive feedback. Community input periods should also not be held over the holiday season, as people are rarely working full time and are having to split their time between family and work. Having a public input period over the holidays makes it much more difficult for both transportation professionals and lay people to digest this information and provide feedback. I also heard VERY few announcements that this project was live, and mostly only from other people working in transportation. I don't think that nearly enough publicity was done to alert non-professionals about this public input period, and I think it should have been 90 days and NOT over the holiday season.	1/5/2022 1:50 PM
14	Use the space correctly not to decorate MoPac but to make it functional	12/29/2021 9:09 PM
15	maybe shorten/simplify the info even more - remember that most folks have limited attention spans :)	12/15/2021 2:54 PM
16	More detailed maps with elevations drawings or videos like that used in the Oak Hill Parkway.	12/13/2021 4:04 PM
17	see #4	12/8/2021 3:37 PM
18	Maybe make it where you can click for more information	12/8/2021 12:11 PM
19	Have someone to speak with or give a presentation.	12/7/2021 6:22 PM
20	Provide Mopac South options people actually want	12/3/2021 12:28 AM

21	n/a	11/30/2021 12:27 PM
22	Simpler maps showing just the key features	11/27/2021 10:14 AM
23	It sounds like the creators of this project are fully convinced that it's the greatest thing since the invention of the highway, when it in fact has serious downsides that don't seem to be mentioned. A bit more humility and a bit less of a biased perspective would be better.	11/22/2021 5:10 PM

Q6 How did you hear about the open house?

Answered: 45 Skipped: 2



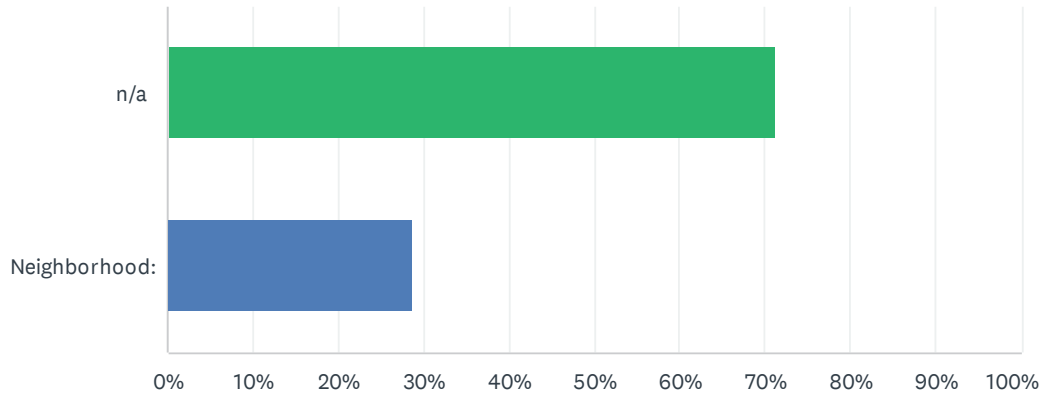
ANSWER CHOICES	RESPONSES
News article or newspaper ad	6.67% 3
Project E-mail	28.89% 13
Postcard	0.00% 0
Social Media	17.78% 8
NextDoor	4.44% 2
My Neighborhood HOA	20.00% 9
MoPacSouth.com	15.56% 7
MobilityAuthority.com	4.44% 2
Other (please specify)	40.00% 18
Total Respondents: 45	

#	OTHER (PLEASE SPECIFY)	DATE
1	Mobile sign just before RM2244 exit on MoPac southbound.	1/7/2022 11:44 PM

2	sign posted on MoPac	1/7/2022 10:10 PM
3	City Council	1/7/2022 8:34 PM
4	neighbor and signs on Mopac	1/7/2022 6:01 PM
5	a friend	1/7/2022 5:14 PM
6	Save Our Springs coalition.	1/7/2022 4:42 PM
7	Someone told me about it	1/7/2022 1:11 PM
8	Radio	1/7/2022 8:57 AM
9	I have been involved since the beginning of the open houses	1/6/2022 7:47 PM
10	Email from a transportation professional asking for others to get involved in this project. Despite working in the field of highway expansions, this project open house was not advertised to me.	1/5/2022 1:50 PM
11	The roadway sign on MoPac you can't miss it because of the heavy traffic	12/29/2021 9:09 PM
12	signage on road	12/15/2021 2:54 PM
13	Flashing sign on MoPac south. Thanks for doing this!!	12/8/2021 12:30 PM
14	lighted sign on MoPac	12/3/2021 11:14 AM
15	Austin American Statesman	12/3/2021 12:28 AM
16	Not sure this is covered in the other options, but I saw mopacsouth.com on one of your temporary lit side-of-the-road signs this morning going north before the William Cannon exit	12/1/2021 3:28 PM
17	big signs on the side of mopac	12/1/2021 10:05 AM
18	road side electronic sign	11/27/2021 10:14 AM

Q7 If you heard about the Open House through NextDoor or your neighborhood HOA, what neighborhood do you live in?

Answered: 45 Skipped: 2

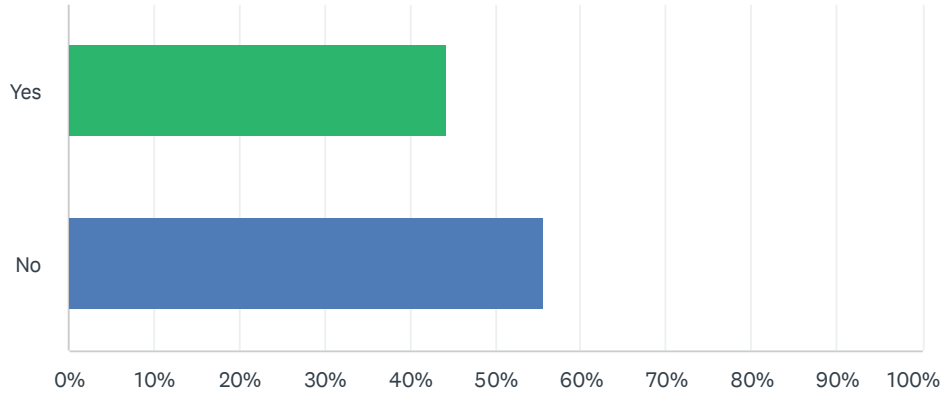


ANSWER CHOICES	RESPONSES	
n/a	71.11%	32
Neighborhood:	28.89%	13
TOTAL		45

#	NEIGHBORHOOD:	DATE
1	City of Rollingwood	1/7/2022 11:44 PM
2	Rollingwood	1/7/2022 8:34 PM
3	Tarrytown / Deep Eddy	1/7/2022 4:24 PM
4	a	1/7/2022 3:09 PM
5	Zilker	1/7/2022 1:44 PM
6	Rollingwood neighbor	1/7/2022 1:41 PM
7	Treemont	1/6/2022 8:32 PM
8	Rollingwood	1/6/2022 5:27 PM
9	Circle C	1/5/2022 8:08 AM
10	Meridian	12/20/2021 4:57 PM
11	Meridian	12/13/2021 7:09 PM
12	Liberty Park Condominiums and Treemont	12/7/2021 6:22 PM
13	Dripping Springs	11/22/2021 10:45 PM

Q8 Is this your first experience participating in a Mobility Authority- or TxDOT-hosted open house for a transportation project?

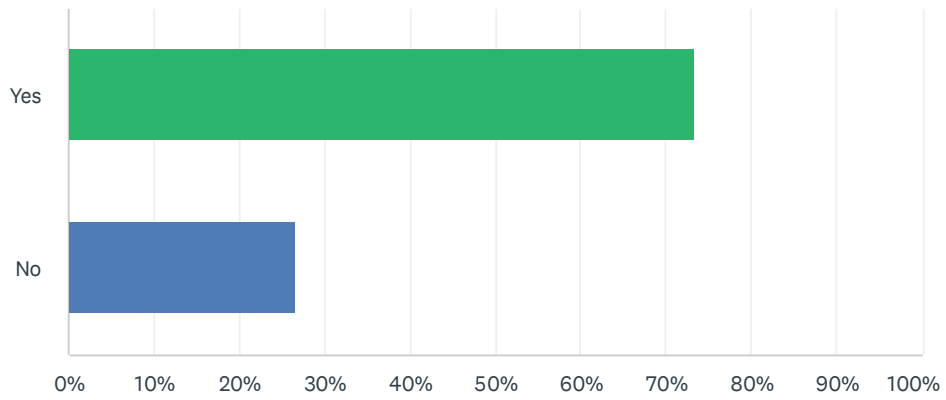
Answered: 45 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	44.44%	20
No	55.56%	25
TOTAL		45

Q9 Is this your first MoPac South open house?

Answered: 45 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	73.33%	33
No	26.67%	12
TOTAL		45