



I-35 Future Transportation Corridor Planning and Environmental Linkages Study

Final Report

TxDOT, Austin District

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Introduction

The Interstate 35 (I-35) corridor is one of the state's primary freight and passenger vehicle corridors. As a system, the segments of I-35 represent important elements in a statewide network, which moves significant volumes of people and freight daily. Recognizing the statewide importance of the I-35 corridor, the Texas Transportation Commission launched My35 as a way to increase citizen participation in the transportation planning process for the I-35 corridor (see *Previous Studies, 2011 I-35 Corridor Advisory Committee Plan (My 35)* for more details). My35 consists of five planning regions, one of which is the Capital Area, that includes Hays, Travis and Williamson Counties.

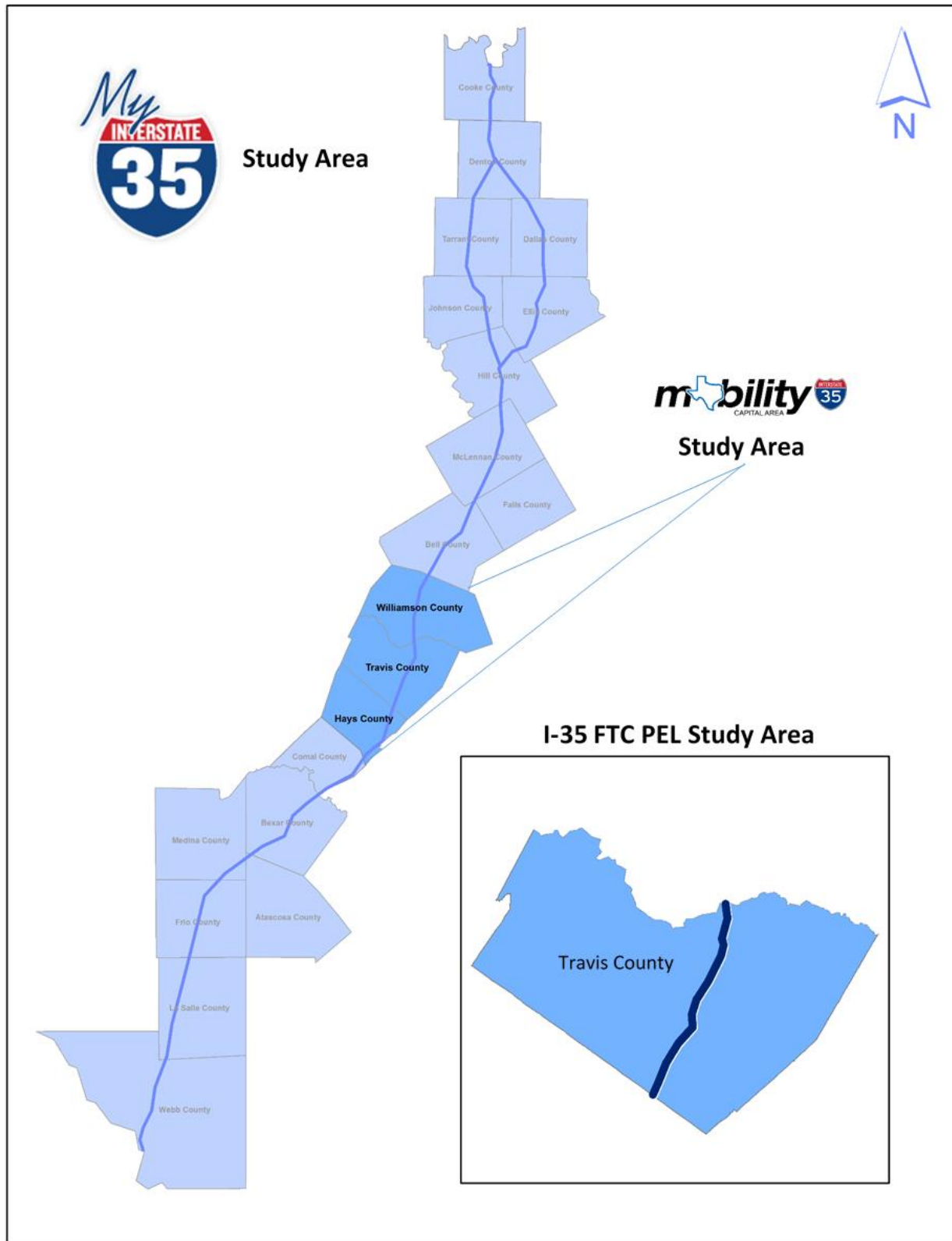
In the Capital Area, improvements to the existing I-35 facility have not kept pace with increasing population and traffic demand. Previous improvement studies and recommendations for I-35 in this region have focused primarily on large-scale, long-term solutions that have presented numerous financial, environmental, and political challenges to implementation. Many of these large-scale “ultimate” projects were extremely costly and difficult to implement due to the extensive right-of-way acquisition that would be needed, construction time required, and potential impacts to the community. Delay in implementation of these long-term solutions has resulted in severe congestion for many sections of I-35 in the Capital Area. In fact, the section of I-35 between US Highway 183 (US 183) and State Highway 71 (SH 71) is currently the second most congested roadway in the State.¹

Given this history, the City of Austin began Mobility35 efforts in August 2011 with a focus on Travis County. The city sought to develop a plan that focused on short- to mid-term strategies within the existing right-of-way to improve mobility and connectivity for all modes of transportation, including pedestrians, bicycles, autos, transit, trucks and emergency vehicles. The plans also included unprecedented engagement with transportation partners and the public.

Building upon these planning efforts and in an attempt to alleviate some of the congestion and provide better reliability for travelers on I-35 in Travis County, the Texas Department of Transportation (TxDOT) initiated the I-35 Future Transportation Corridor (FTC) Planning and Environmental Linkages (PEL) Study. The purpose of the I-35 FTC PEL Study is to develop a purpose and need, determine lane type/mode choice for the FTC, and determine segments of independent utility for future National Environmental Policy Act (NEPA) studies. **Figure 1** shows the relationship between the My35, Mobility35, and the I-35 FTC PEL study areas.

¹ TxDOT. 2014. 100 Congested Roadways. <http://www.txdot.gov/inside-txdot/projects/100-congested-roadways.html>

Figure 1. Relationship Between My35, Mobility35, and I-35 FTC PEL Study Areas



The I-35 FTC PEL Study Report describes the process and key technical findings supporting the recommended lane type alternatives that could be studied in future environmental analyses under the NEPA process. Multiple technical reports provide additional, detailed analyses or explanations of the concepts summarized in this report. The *Purpose and Need Report* provides detailed information supporting the purpose of and need for the project. The *Public Involvement and Agency Coordination Plan* and *Public Meeting Summary Reports* contain documentation of the agency coordination and public involvement efforts that have taken place throughout the I-35 FTC PEL Study. The environmental resource technical reports—including archeology, biology, hazardous materials, historic resources, land use, socioeconomics, and water resources—provide baseline environmental conditions. The *Alternatives Analysis Technical Report* documents the lane type/mode alternatives identification and evaluation process. The *Segments of Independent Utility Technical Memo* provides the description of segments of independent utility identified in the study area. **Appendix A** contains the I-35 FTC PEL Study Questionnaire.

What is a Planning and Environmental Linkages Study?

A PEL study fosters a collaborative and integrated transportation decision-making process. A PEL study is generally executed early in the transportation planning process when decision-makers consider environmental, community, and economic goals. These goals carry through to the project development and environmental review process and ultimately through design, construction, and maintenance. The goal of PEL is to create a seamless decision-making process that minimizes duplication of effort, promotes environmental stewardship, and reduces delay from planning through project implementation.

Many PEL studies can be classified as corridor or subarea studies because they are more focused than regional planning efforts typically conducted by a metropolitan planning organization (MPO), but broader than traditional project-specific environmental analyses conducted during the NEPA process. Corridor and subarea studies can be used to produce a wide range of analyses or decisions for Federal Highway Administration (FHWA) review, consideration, and possible adoption during the NEPA process for an individual transportation project, including:²

- Purpose and need or goals and objective statement(s);
- General travel corridor and/or general mode(s) definition;
- Preliminary screening of alternatives and elimination of unreasonable alternatives;
- Basic description of the environmental setting; and/or
- Preliminary identification of environmental impacts and environmental mitigation.

To be seamlessly incorporated into the NEPA process, all corridor and subarea studies utilizing the PEL study approach must adhere to certain standards and must include

² FHWA. 2008. Planning and Environmental Linkages Implementation Resource Guide.

extensive public involvement and agency coordination. The regulations for a PEL study are formalized in Title 23 Code of Federal Regulation (CFR) Part 450 (23 CFR 450) - Statewide Transportation Planning; Metropolitan Transportation Planning; Final Rule. This regulation details how results or decisions of transportation planning studies may be used as part of the overall project development process consistent with NEPA. Appendix A to 23 CFR 450 describes how information, analysis, and products from transportation planning can be incorporated into and relied upon in NEPA documents under existing laws.³ Some of the key criteria that an agency must consider in deciding whether to adopt planning-level analyses or decisions in the NEPA process include:^{4,5}

- Involvement of interested state, local, tribal, and Federal agencies;
- Public review;
- Reasonable opportunity to comment during the development of the corridor or subarea planning study;
- Documentation of relevant decisions in a form that is identifiable and available for review during the NEPA scoping process and can be appended to or referenced in the NEPA document; and
- Review by FHWA and the Federal Transit Administration (FTA), as appropriate.

FHWA has developed a PEL Questionnaire to help maximize the utility of the results from subarea or corridor plans to inform NEPA. The questionnaire is intended to act as both a guide and summary of the planning process and ease the transition from planning to NEPA analysis. The questionnaire is consistent with the planning regulations contained in 23 CFR 450 and other FHWA policies on the PEL process. The I-35 FTC PEL Study was conducted in accordance with the regulations provided in 23 CFR 450 and the completed FHWA PEL Questionnaire is found in **Appendix A**.

Focus and Benefits of the I-35 Future Transportation Corridor PEL Study

The I-35 FTC PEL Study provided opportunities to bring together transportation planning and environmental considerations early in the FTC planning process. There were three focuses for the study and three anticipated benefits.

The three focuses of the I-35 FTC PEL Study were to:

- Develop a Purpose and Need Statement;
- Determine Lane Type/Mode Choice for the FTC; and
- Determine Segments of Independent Utility.

³ Ibid.

⁴ FHWA. 2011. Guidance on Using Corridor and Subarea Planning to Inform NEPA.

⁵ AASHTO. 2008. Using the Transportation Planning Process to Support the NEPA Process.

The anticipated benefits of the I-35 FTC PEL Study were to:

- Identify projects for possible inclusion in the Capital Area Metropolitan Planning Organization (CAMPO) Regional Transportation Plan (RTP);
- Potentially expedite the NEPA process for identified projects; and
- Further progress design and operational analysis of the FTC.

Study Area

The I-35 FTC PEL Study focuses on the Travis County portion of I-35. The study limits extend approximately 28 miles along existing I-35 from SH 45 North (45N) within Round Rock, Texas, to SH 45 Southeast (45SE) outside of Buda, Texas.

Figure 2 provides a map of the study area. In the Austin area, improvements to the existing I-35 facility have not kept pace with increasing population and traffic demand. Previous improvement studies and recommendations for I-35 in this region have focused primarily on large-scale, long-term solutions that have presented numerous financial, environmental, and political challenges to implementation. Delay in implementation of these long-term solutions has resulted in severe congestion for many sections of I-35 in the Austin area.

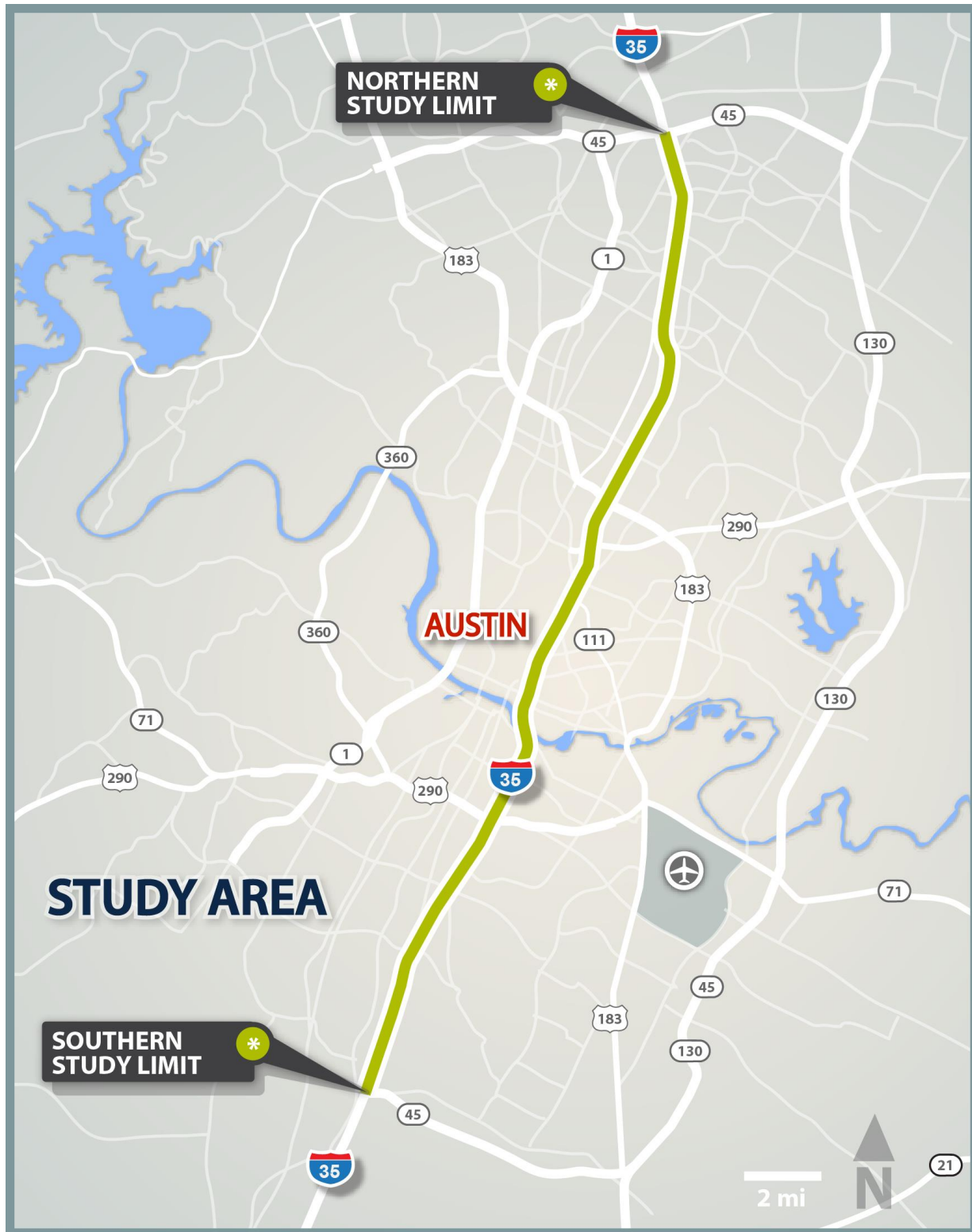
Existing Corridor Conditions

The existing I-35 facility is located within urban and suburban areas, and both commercial and residential properties are found along the study area. I-35 is an access-controlled interstate highway that typically has three mainlanes in each direction separated by a median, a continuous frontage road in each direction, and inside and outside shoulders.

Improvements to I-35 have been unable to keep pace with the rapid growth in population and employment in the Austin area. This growth has led to a corresponding increase in vehicular traffic on I-35, ever-increasing congestion during morning and evening peak hours and slower travel speeds. As defined in the Highway Capacity Manual⁶, Level of Service (LOS) is a qualitative measure used to analyze highways by categorizing traffic flows into letter designations that characterize the operational conditions within a traffic stream and how the conditions are perceived by the users of the facility. Six levels of service are defined using letter designations from A to F for capacity analysis, with LOS A representing the best operating conditions and LOS F the worst. Within the study area, approximately 33 percent of the northbound and 44 percent of the southbound traffic in the AM peak hours currently experience LOS E and F. During the PM peak hours, approximately 67 percent of northbound traffic and 33 percent of southbound traffic experience LOS E and F. The *Purpose and Need Report* provides additional information about the current corridor conditions and the purpose of and need for the I-35 FTC PEL Study.

⁶ 2010. Transportation Research Board of the National Academy of Sciences. Highway Capacity Manual.

Figure 2. Study Area for the FTC PEL Study



Previous Studies

By the mid-1980s, TxDOT identified the need to address congestion on I-35 through Austin. Since then, several studies have been conducted by TxDOT to explore potential mobility solutions on I-35; those studies are described in the following sections.

1987 Feasibility Study

In 1987, TxDOT hired a consultant to perform a feasibility study to determine how best to upgrade I-35 from Martin Luther King Boulevard to Ben White Boulevard. In 1988, the study was terminated because of concerns that the concepts under development would not effectively address the transportation needs and would not be accepted by the community due to the extensive use of elevated structures and the large amount of right-of-way that would be required to implement the concepts.

1989 TxDOT Austin District I-35 Major Investment Study

In 1989, TxDOT began an in-house feasibility study to determine how to upgrade I-35 and address public concerns more effectively than the 1987 study. The study limits were along I-35 from US 183 to Ben White Boulevard. With the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the study expanded into a Major Investment Study (MIS) to satisfy the requirements of ISTEA. The expanded study included all of the Austin Transportation Study (ATS) area, which included Williamson, Travis, Hays, Caldwell, and Bastrop Counties, and added High Occupancy Vehicle (HOV) lanes as a possible design feature.⁷ The I-35 MIS was included in the ATS plan adopted in December 1994. Eleven possible strategies were studied. Of the eleven strategies studied, the MIS recommended three possible strategies be carried forward for detailed engineering and environmental analysis. These three strategies were:

- Strategy 1 – No Action Alternative.
- Strategy 5-B1 – Major construction of new HOV lanes within the existing I-35 corridor, assuming construction of light rail as proposed by Capital Metro, and providing travel demand measures in the ATS area.
- Strategy 6-E – Major reconstruction of I-35 between certain limits within the ATS area, integrating transportation system mobility improvements, assuming construction of light rail as proposed by Capital Metro, and providing travel demand measures in the ATS area.

The MIS process was completed in 2004.⁸ Due to funding limitations and other hurdles to implementation, none of the major improvements identified in the MIS were advanced.

⁷ The Austin Transportation Study was the precursor to CAMPO.

⁸ 2014. TxDOT I-35 Capital Area Improvement Program (Mobility35), Corridor Implementation Plan SH 130 to Posey Road, Williamson, Travis & Hays Counties, Texas.

2011 I-35 Corridor Advisory Committee Plan (My35)

The Texas Transportation Commission established the I-35 Corridor Advisory Committee (CAC) to engage Texas citizens and develop a plan to address transportation challenges along the I-35 corridor from Oklahoma/Texas border to the Texas/Mexico border. CAC members included business professionals, environmental planners, rail advocates, professors, local officials, and residents that lived and did business in the I-35 corridor. In order to engage and better understand the needs of the public, the Texas Transportation Commission enlisted assistance from four I-35 Corridor Segment Committees (CSCs) located along the I-35 corridor to develop recommendations to improve mobility on I-35. The CAC considered the recommendations of the CSCs and developed the I-35 Corridor Advisory Committee Plan (My35 Plan) to address mobility challenges along I-35. The plan identifies and prioritizes projects and makes general recommendations for the I-35 corridor in Texas, including:

- Freight and passenger rail projects to alleviate freight demands on roadways;
- Roadway design to separate cars and trucks to increase safety;
- Managed lanes to ease congestion and provide relief to transportation funding; and
- Integrated, real-time traffic information systems that alert drivers to delays and provide alternate routes.

In the Capital Area, the My35 Plan recommended re-designating and renaming parts of I-35 to divert interstate traffic away from metropolitan areas and onto SH 130.

2011 Mobility35 Program / 2014 I-35 Capital Area Improvement Program Corridor Implementation Plan

TxDOT, in partnership with the City of Austin and other local stakeholders, initiated the ongoing Mobility35 program (also known as the I-35 Capital Area Improvement Program [CAIP] for Hays, Travis, and Williamson Counties) in 2011. Mobility35 focuses on feasible and effective short- and mid-term strategies that can be implemented to improve mobility and connectivity along and across the I-35 corridor. The program attempts to maintain consideration of long-term corridor needs while developing the short- and mid-term potential strategies. Using past I-35 studies as background, partner agencies and stakeholders are working together to develop mobility solutions that are implementable, cost-effective, and generally do not require wholesale reconstruction of the corridor or substantial additional right-of-way. Efforts for the ongoing Mobility35 program are separated into five phases including: Phase 1-Conceptual Planning; Phase 2-Implementation Plan; Phase 3-Schematic and Environmental Coordination; Phase 4-Construction Plans, Right-of-Way, and Utility Coordination; and Phase 5-Letting and Construction. The I-35 CAIP Corridor Implementation Plan for Travis County, which identifies various improvements for I-35 including the FTC as a key improvement, was originally released in 2013 and updated in 2014. Because the Implementation Plan is a living document, several iterations will be developed. The I-35 FTC

PEL Study was conducted under the Mobility35 program and falls between Phase 2 and Phase 3 of the program.

The I-35 CAIP divided the I-35 corridor through Travis County into eight segments. It suggests separate improvements for each segment. Each improvement, including the FTC, was developed to help improve mobility and relieve congestion..

General guiding considerations for the Mobility35 Program include:

- Increase capacity;
- Better manage traffic;
- Enhance safety;
- Optimize existing facility;
- Minimize need for additional right-of-way;
- Improve east/west connectivity;
- Improve compatibility with neighborhoods; and
- Enhance bicycle, pedestrian and transit options.

Adding mainlane capacity, identified specifically as the FTC, is a primary goal of Mobility35. The FTC is a proposed additional freeway lane in each direction of I-35. Although this lane would require widening the footprint of the interstate mainlanes, it would not require substantial additional right-of-way, which is a guiding consideration for Mobility35 and is a primary goal of any improvements that are recommended as part of the I-35 FTC PEL Study. The FTC would provide the single largest mobility gain for I-35, while also respecting the community input which has indicated that the potential impacts associated with improvements that would require substantial amounts of right-of-way are incompatible with community desires and the likelihood of feasible implementation. Potential lane types for the FTC include general purpose lanes, express lanes, transit-only lanes, HOV lanes or a combination of lane types. The I-35 FTC PEL Study will help determine how this lane will be used. The I-35 FTC PEL Study will also determine the purpose and need and logical segments for the FTC.

Purpose and Need

A Purpose and Need Statement is a fundamental requirement of NEPA. Clarity of purpose and confirmation of need are sound practices when developing large-scale projects requiring public expenditure.

The Purpose and Need Statement is intended to clarify the expected outcome of public expenditure and to justify that expenditure (i.e. purpose - what is to be accomplished and

need - why it is necessary). The statement is used to guide the development of alternatives, and is a fundamental element when developing criteria by which alternatives will be evaluated.

Purpose of the FTC

The purpose of the proposed FTC project is to:

- Improve operational efficiency and manage congestion;
- Provide more reliable travel times; and
- Create a more dependable and consistent route for transit, emergency responders, and other motorists.

Need for the FTC

Improvements to the I-35 corridor are needed for the following reasons:

- Current congestion levels are causing inefficient operations;
- Travel times will increase as population and employment grow; and
- Congestion-related delays prevent efficient use of I-35 by transit, emergency responders, and other motorists.

The *Purpose and Need Technical Report* provides detailed information supporting the purpose of and need for the FTC including population trends and current and projected traffic data.

Public Involvement and Agency Coordination

Public and stakeholder involvement was a fundamental part of the I-35 FTC PEL Study process. Public input was sought throughout the study process on the Purpose and Need Statement, lane type alternatives, evaluation criteria, recommended alternatives, and segments of independent utility. The *Public Involvement and Agency Coordination Plan* details the involvement strategy that was implemented for the study.

Agency and stakeholder meetings were held throughout the study. Agency meetings included representatives from TxDOT, FHWA, the City of Austin and CAMPO, and served as an opportunity for the agencies to coordinate and collaborate on the I-35 FTC PEL Study effort. TxDOT also coordinated with Capital Metro to discuss their interests in the I-35 corridor and to get input on potential transit access points. Additionally, TxDOT presented information on the I-35 FTC PEL Study to the Mobility35 Technical Steering Committee and CAMPO Policy Board at project milestones.

The study team also conducted three rounds of public meetings to provide citizens information about the study's progress and to solicit input about the purpose and need,

range of alternatives, recommended lane type alternatives, and segments of independent utility for the FTC. Each round of public meetings was held in northern, central, and southern locations along the study area for a total of nine meetings. Each meeting was compliant with the requirements of the Americans with Disabilities Act and offered accommodations for persons with special needs (such as hearing impairments or limited English proficiency) if requested. Court reporters were also available to record verbal comments during the meetings. In addition to the physical meetings, a virtual public meeting was held to supplement each round of public meetings for a total of three virtual public meetings. The virtual public meetings were accessible through the Mobility35 website.

The schedule for the public meetings was as follows:

- **June 2014:** The team presented the draft I-35 FTC PEL Study Purpose and Need Statement and the initial list of lane type alternatives.
 - (June 3) Kealing Middle School
 - (June 4) Akins High School
 - (June 5) Frank Fickett Scout Training and Service Center and Conference Center
- **September 2014:** The team presented the results from the Phase One alternatives screening process, which included comparing the alternatives to the purpose of the FTC, as described in the Alternatives section of this report. Lane type alternatives recommended for detailed analysis were also presented.
 - (September 9) Akins High School
 - (September 10) Frank Fickett Scout Training and Service Center and Conference Center
 - (September 11) Kealing Middle School
- **November 2014:** The team presented the results of the Phase Two detailed alternatives analysis evaluation and the recommended lane type alternatives and preliminary segments of independent utility, as described in the Alternatives section of this report.
 - (November 10) Kealing Middle School
 - (November 12) Akins High School
 - (November 13) Frank Fickett Scout Training and Service Center and Conference Center

The public meeting venues included locations in the north, central, and southern areas of the project limits to give the public a better opportunity to attend a meeting in their area. Additional information about the study's public meetings can be found in the *Public Meeting Summary Reports*.

Other stakeholder involvement included approximately 40 stakeholder meetings with agencies, neighborhood associations, and businesses along the corridor to discuss the Mobility35 Program and concepts under study including those for the I-35 FTC PEL Study. The study team used input from stakeholder involvement to help define the purpose of and need for the I-35 FTC, the alternatives considered and the evaluation criteria used in the I-35 FTC PEL Study alternatives analysis, and to determine segments of independent utility for any future NEPA studies of the I-35 FTC.

Affected Environment and Environmental Consequences

The consideration of environmental resources was an integral part of the I-35 FTC PEL Study. Environmental resources and issues considered in this study include the following:

- Archeology;
- Biological Resources;
- Hazardous Materials;
- Historic Resources;
- Land Use;
- Socioeconomics; and
- Water Resources.

Resource-specific technical reports were prepared that document the existing conditions for each of the seven resources listed above. Based on the environmental technical studies completed to date, there are several locations along the I-35 corridor in Travis County where environmental constraints exist. Site-specific studies based on project-specific designs would be required to determine if these constraints would be problematic for TxDOT in terms of constructing new improvements or acquiring additional ROW. The information provided in the resource-specific technical reports will serve as the environmental baseline condition for consideration in future NEPA studies. A more detailed summary of potential environmental constraints that would need to be considered in future NEPA studies is provided in **Appendix A**.

Alternatives

Detailed descriptions of the alternative concepts screening, evaluation methodology, results, and recommendations are provided in the *Alternatives Analysis Technical Report*. The following sections briefly describe the alternatives and the screening process.

Lane Type Alternatives

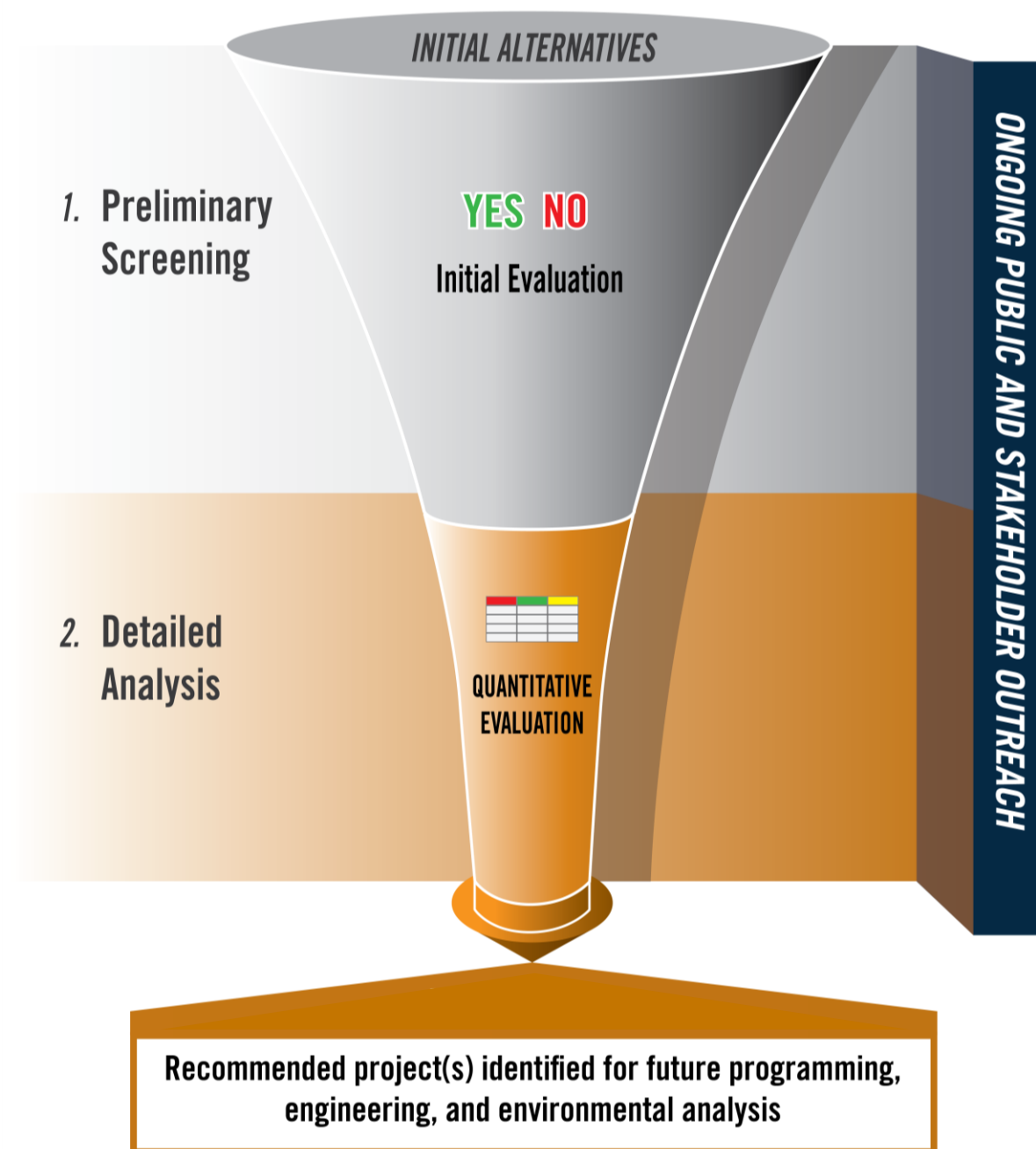
The I-35 FTC PEL Study developed and analyzed potential lane type alternatives for the FTC. These alternatives helped determine how the FTC would function on I-35 through the study area. Below is the initial list of lane type alternatives.

- **No Build:** The FTC is not built but future conditions include the preservation of the existing transportation network and any programmed transportation improvements that were in the approved CAMPO 2035 RTP.
- **Managed (express toll) lane:** Lane with use restrictions that could include tolls and/or occupancy or vehicle type that would be accessed similarly to the current I-35 mainlanes.
- **Managed (express toll) lane with transit focus:** Lane with use restrictions that could include tolls, occupancy, and/or vehicle types with access designed specifically for restricted vehicles and enhancing transit services.
- **Managed (transit-only) lane:** Lane used only for transit vehicles.
- **Managed (freight-only) lane:** Lane used for commercial trucks and freight trucks.
- **Managed (High Occupancy Vehicle) lane with transit focus:** Lanes dedicated to vehicles with two or more passengers and transit vehicles.
- **Rail lane:** Tracks and a rail line for a passenger rail system in lieu of an additional vehicle lane.
- **Managed (through) lane:** Lane from SH 45N to SH 45SE with no entrance or exit points in between.
- **General purpose lane:** Lane for all I-35 motorists with no restrictions.

Lane Type Alternatives Evaluation Process

To determine the feasibility of each alternative lane type on the I-35 FTC, , the study team used several different evaluation criteria in a two-phased evaluation process. The first phase evaluated the alternatives against the purpose of and need for the FTC and the second phase included a detailed analysis of the alternatives using specific evaluation criteria. **Figure 3** provides a graphic representation of the evaluation process.

Figure 3. Two Phase Alternatives Process



Phase One: Preliminary Screening

The initial evaluation of the alternatives for the FTC included evaluating the alternatives against the purpose of and need for the FTC. Of the eight lane type alternatives, the general purpose lane, rail, managed (freight only) lane, and managed (through) lane options for the FTC failed to pass the Phase One Preliminary Screening. These alternatives did not move forward to the detailed analysis phase. The No Build alternative also does not meet the purpose of and need for the FTC, but would be carried forward into future NEPA studies. The results of Phase One are depicted in **Table 1**. More detailed information about the Phase One screening results is found in the *Alternatives Analysis Technical Report*.

Table 1. Phase One Screening Results

		ALTERNATIVES							
		Rail	General Purpose	Managed Lanes					
				Freight Only	Through	Transit Only	Express Toll	Express Toll with Transit Focus	HOV + Transit
PURPOSE OF THE FTC	Improve operational efficiency and manage congestion	✓	✓	✓	✓	✓	✓	✓	✓
	Provide more reliable travel times	✓		✓	✓	✓	✓	✓	✓
	Create a dependable and consistent route for transit, emergency responders, and other motorists					✓	✓	✓	✓

Phase Two: Detailed Analysis

Phase Two of the alternatives evaluation process involved detailed analyses of the remaining alternatives. The remaining alternatives were evaluated using average speed, travel time, LOS, and Passenger Miles Traveled (PMT). **Figures 4 through 7** show the results of these criteria. As indicated, a Managed Lane FTC would increase average speeds through the corridor while providing an improved LOS compared to the other alternatives. The higher average speed combined with an improved LOS simply allows for more passengers traveling in vehicles to pass through the corridor during the peak period as compared to the other alternatives during the same time period. This increase in passenger travel is typically measured by passenger miles traveled or PMT and represents the amount of throughput for

each alternative. Generally, an increase in PMT indicates that a decrease in congestion has occurred. The result of the Phase Two analyses was that the managed (express toll) lane and managed (express toll) lane with transit focus were recommended to move forward to the NEPA process. The *Alternatives Analysis Technical Report* contains more detailed information about the Phase Two screening results.

Figure 4. Average Speed Results

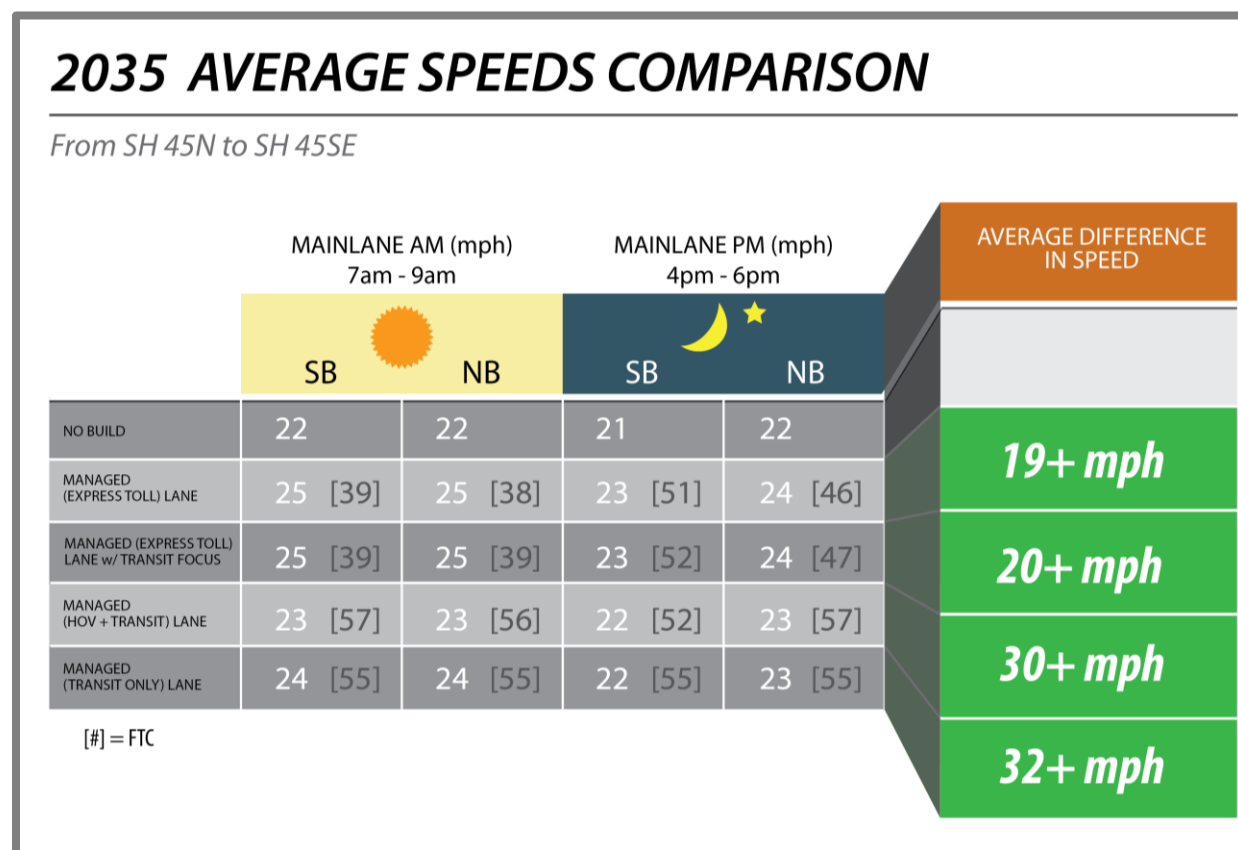


Figure 5. Average Travel Time Results

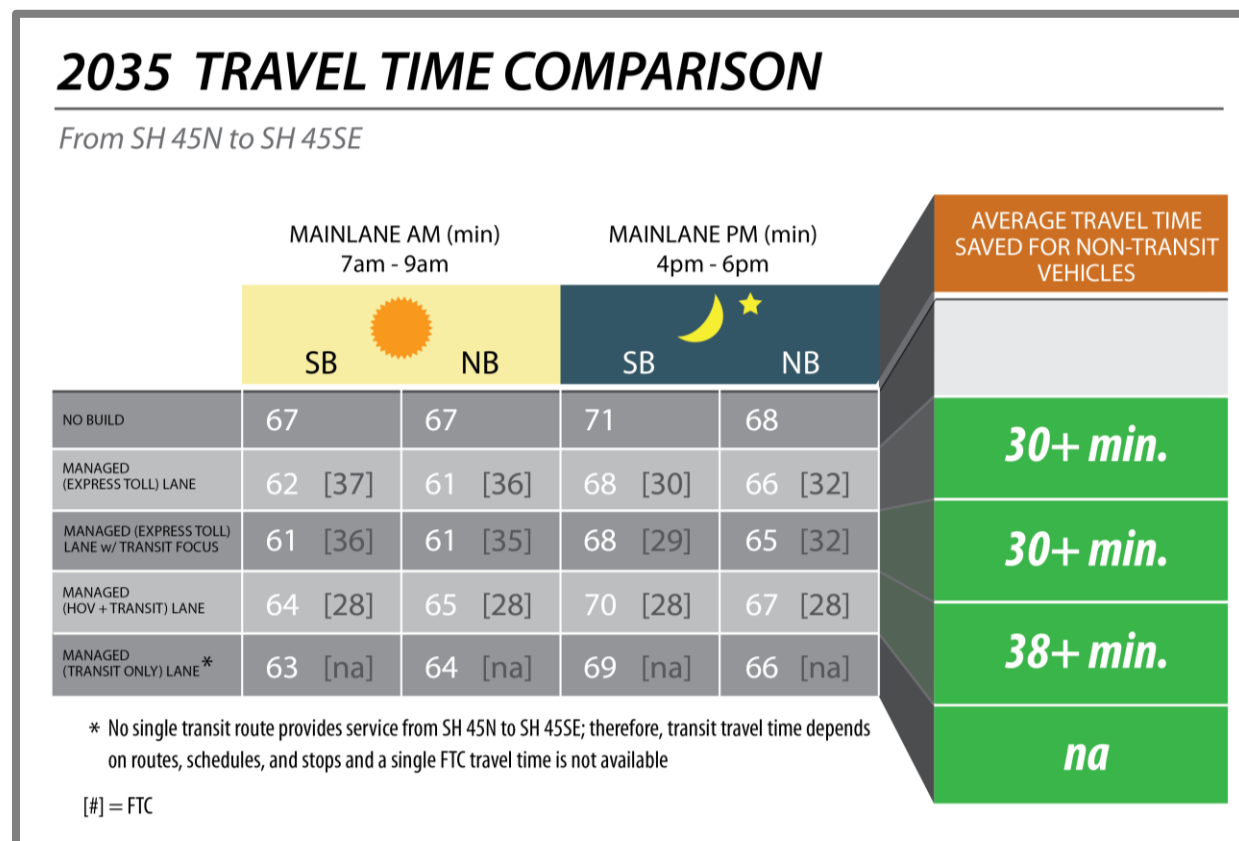


Figure 6. Level of Service Results

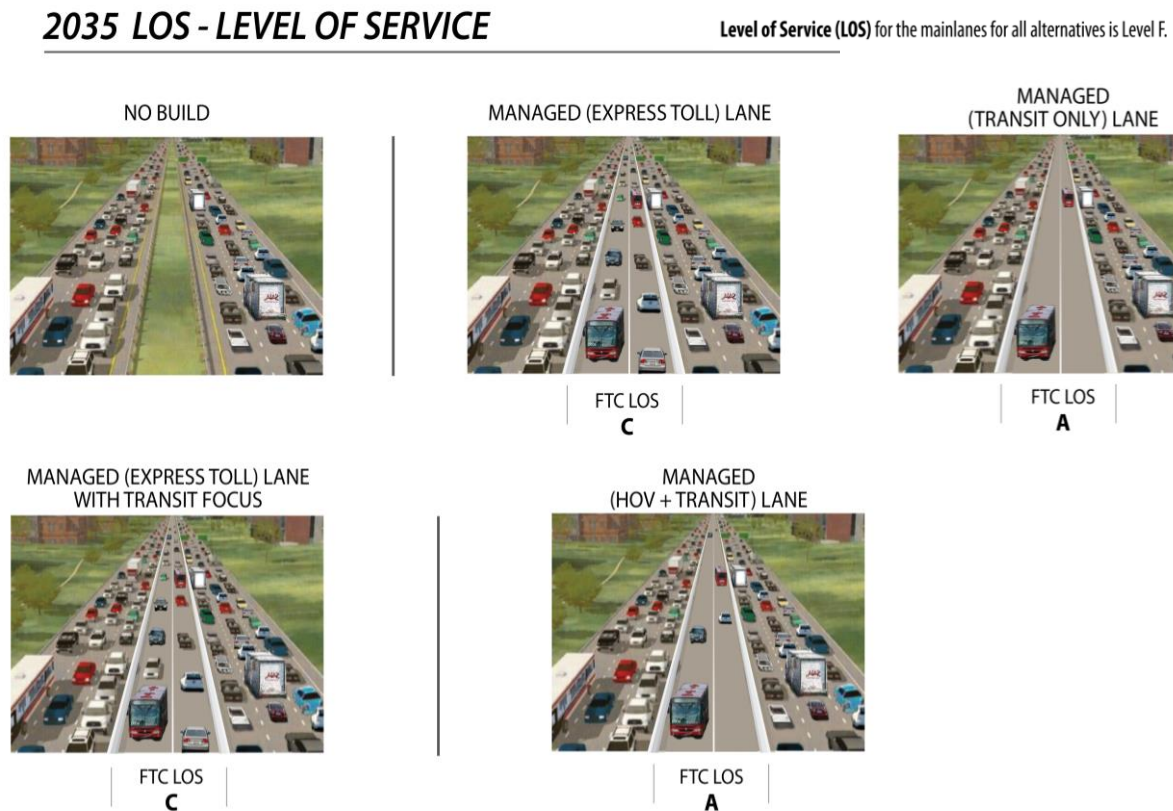
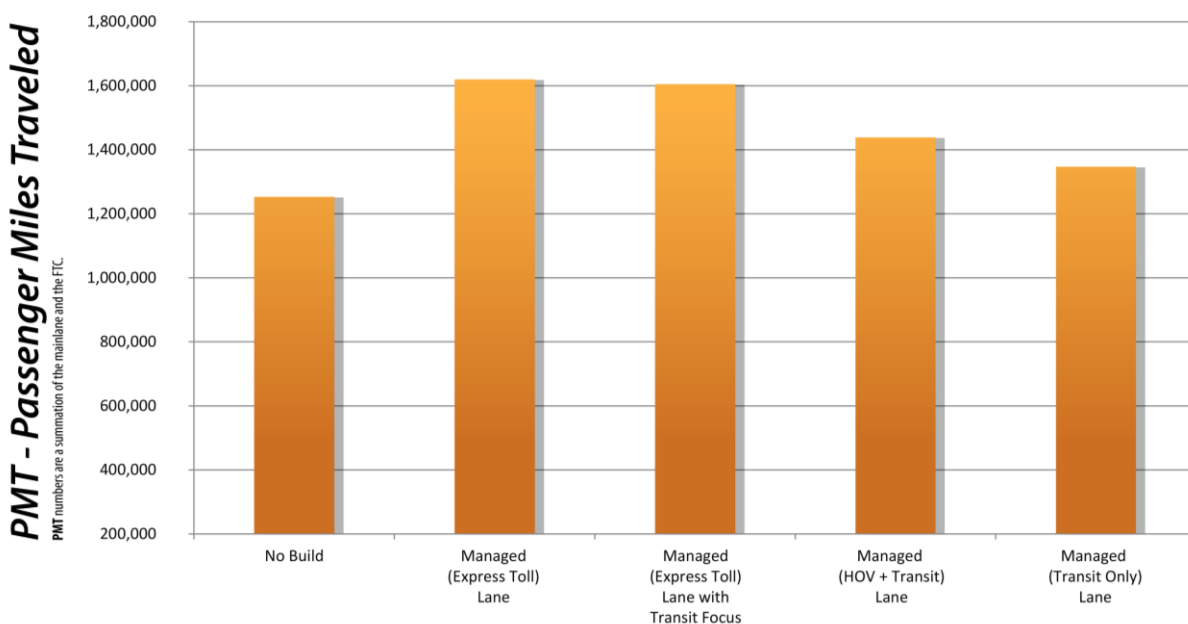


Figure 7. Passenger Miles Traveled Results

2035 PMT - PASSENGER MILES TRAVELED IN ALL PEAK HOURS

Total Passenger Miles Traveled in the FTC and Mainlanes From SH 45N to SH 45SE



Segments of Independent Utility

Three preliminary segments of independent utility (SIU) were identified for the FTC. These SIUs are consistent with FHWA guidelines (Title 23 CFR section 771.111(f)) because they:

- Connect logical termini and are of sufficient length to address environmental matters on a broad scope;
- Have independent utility or independent significance, i.e., are usable and are a reasonable expenditure even if no additional transportation improvements in the area are made; and
- Do not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The three preliminary SIUs limits are identified as:

- SH 45N to US 183;
- US 183 to Riverside Drive; and
- Riverside Drive to SH 45SE.

The details of the SIUs are included in the *Segments of Independent Utility Technical Memo*. Each of the SIUs serves independent transportation purposes and provides transportation benefits for each section of the corridor.

Recommendations

Based on the results of the PEL Study, the following recommendations are made:

1. The Managed (Express Toll) Lane or Managed (Express Toll) Lane with Transit Focus should be included in the CAMPO 2040 RTP;
2. The purpose and need, defined through the PEL and vetted through public outreach, be adopted for the purposes of future NEPA analysis;
3. The two managed lane alternatives (identified in recommendation one) be further evaluated in future NEPA studies along with the No Build alternative. Collectively, these three alternatives would entail the range of alternatives on which the NEPA alternatives analysis will focus; and
4. The FTC be developed in three SIUs (SH 45N to US 183, US 183 to Riverside Drive, and Riverside Drive to SH 45SE) with each segment subject to a project-specific NEPA evaluation.

Appendix A – Planning and Environmental Linkages Questionnaire



I-35 Future Transportation Corridor Planning and Environmental Linkages Study

Final PEL Questionnaire

TxDOT, Austin District

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Appendix A: Study Team and Agency Team Members

1.0 Study Overview

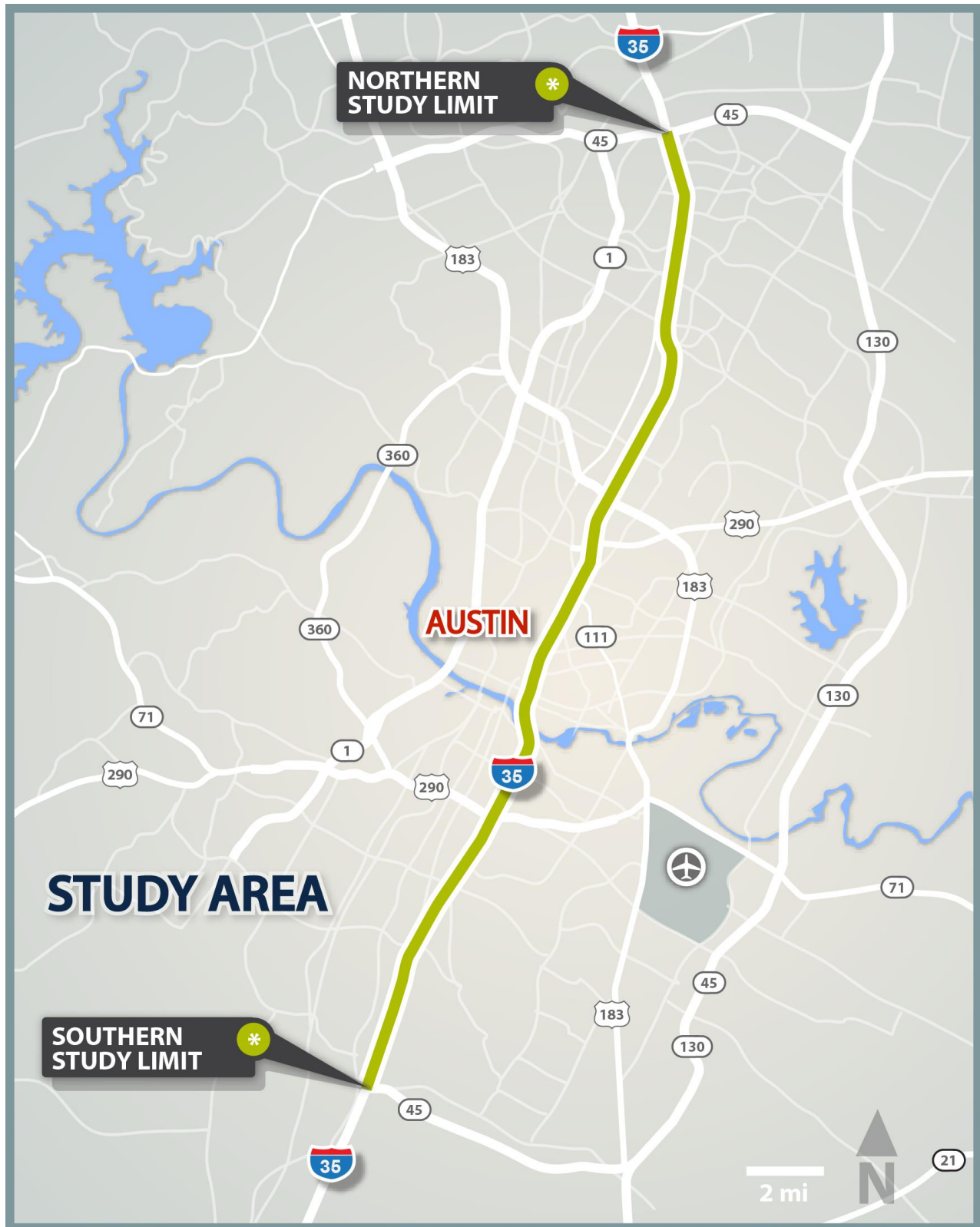
In the Capital Area, improvements to the existing Interstate 35 (I-35) facility have not kept pace with increasing population and traffic demand. Previous improvement studies and recommendations for I-35 in this region have focused primarily on large-scale, long-term solutions that have presented numerous financial, environmental, and political challenges to implementation. Delay in implementation of these long-term solutions has resulted in severe congestion for many sections of I-35 in the Capital Area. In fact, the section of I-35 between US Highway 183 (US 183) and State Highway 71 (SH 71) is currently the second most congested roadway in the State.¹

To alleviate some of the congestion and provide better reliability for travelers on I-35 in Travis County, the Texas Department of Transportation (TxDOT) initiated the I-35 Future Transportation Corridor (FTC) Planning and Environmental Linkages (PEL) Study. The objective of this study is to: (1) define the purpose of and need for one new mainlane in each direction within the existing I-35 right-of-way (ROW); (2) identify the lane type and mode choice for the new mainlanes; and (3) identify segments of independent utility (SIUs) within the Travis County section of I-35. The results of this study will be used to recommend projects for inclusion in the Capital Area Metropolitan Planning Organization (CAMPO) Regional Transportation Plan (RTP); inform and, potentially, shorten the time it takes for future National Environmental Policy Act (NEPA) studies conducted for specific FTC projects; and further progress design and operational analysis of the FTC.

Specifically, the I-35 FTC PEL Study focuses on the Travis County portion of I-35. As depicted in **Figure 1**, the study limits extend 28 miles along existing I-35 from State Highway 45 North (SH 45N) just within the southern city limits of Round Rock, Texas, to State Highway 45 Southeast (SH 45SE) located just north of Buda, Texas.

¹TxDOT. 2014. 100 Congested Roadways. <http://www.txdot.gov/inside-txdot/projects/100-congested-roadways.html>

Figure 1. Study Area for the FTC PEL Study



2.0 Purpose of the Federal Highway Administration PEL Questionnaire

The Federal Highway Administration (FHWA) developed a questionnaire to serve as a guide for PEL studies. The questionnaire is intended to act as a summary of the planning process and ease the transition from planning to NEPA analysis. The questionnaire is consistent with 23 Code of Federal Regulations (CFR) Part 450 and FHWA policies regarding the PEL process.

3.0 Responses to the PEL Questionnaire

This section provides the responses to the PEL questionnaire for the I-35 FTC PEL Study. The responses below provide a comprehensive statement on how the I-35 FTC PEL Study developed lane type alternatives for the identified needs of the corridor and facilitated the analysis of each identified alternative for the NEPA process.

3.1 Background

(a) *Who is the sponsor of the PEL study? (State DOT, local agency, or other)?*

The I-35 FTC PEL Study is a collaborative effort between TxDOT, the City of Austin, and CAMPO.

(b) *What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan or transportation improvement program years)?*

This study is known as the I-35 Future Transportation Corridor (FTC) Planning and Environmental Linkages (PEL) Study. CAMPO's 2035 RTP, in conjunction with Mobility35's I-35 Capital Area Improvement Program Corridor Implementation Plan for Travis County, provided baseline information for the study. Upon completion of the I-35 FTC PEL Study, projects will be identified for inclusion in CAMPO's 2040 RTP.

(c) *Who was included on the study team (Name and title of agency representatives, consultants, etc.)?*

The study team consists of TxDOT, the City of Austin, CAMPO, and FHWA. The I-35 FTC PEL Study consultant team was led by Michael Baker International, and included Alliance Transportation Group, Inc. and Hicks & Company. Oversight was provided by HNTB Corporation. A listing of key staff that participated in the study and a list of agency team members are found in **Appendix A**.

(d) *Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width,*

access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.)

The I-35 FTC PEL Study limits include 28 miles between SH 45N to SH 45SE as shown in **Figure 1**. The existing I-35 facility is located within urban and suburban areas, and both commercial and residential properties are found along the study area. I-35 is an access-controlled interstate highway that typically has three mainlanes in each direction separated by a median, a continuous frontage road in each direction, and typically consists of inside and outside shoulders.

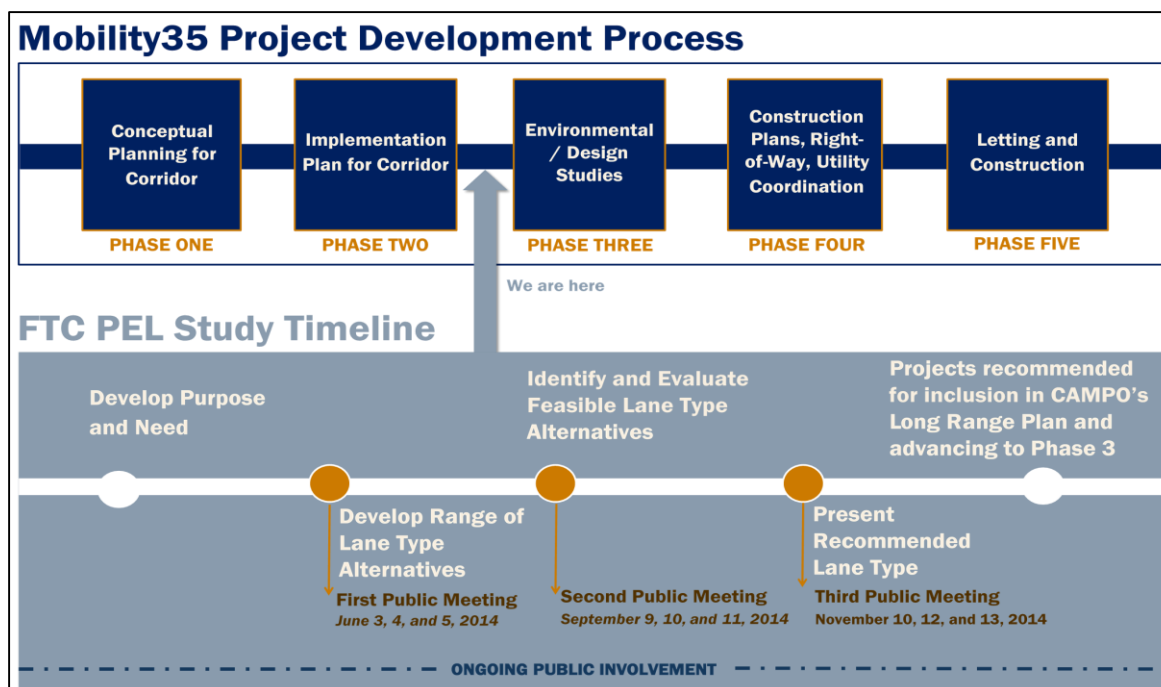
(e) *Provide a brief chronology of the planning activities including the year(s) the studies were completed.*

Previous planning activities within the study area are listed below.

- 1987 Feasibility Study (terminated 1988)
- TxDOT Austin District I-35 Major Investment Study (completed 1994)
- I-35 Corridor Advisory Committee Plan (My 35) (completed 2011, updated 2012)
- I-35 Corridor Segment 3 Committee Recommendations (2010)
- Mobility35 / I-35 Capital Area Improvement Plan (completed 2013, updated 2014)

The I-35 FTC PEL Study was initiated in Spring 2014. A timeline of major I-35 FTC PEL Study activities and milestones is found in **Figure 2**.

Figure 2. I-35 FTC PEL Study Timeline



- (f) Are there recent, current or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?

Planning Studies

- The Lone Star Rail District (LSRD) is planning commuter rail service and a freight rail bypass project between Austin and San Antonio. The corridor being studied is parallel to the I-35 corridor but does not intersect it within the I-35 FTC PEL Study Area. In October 2014, the LSRD initiated the federal environmental process by publishing a Notice of Intent to prepare an Environmental Impact Statement in the *Federal Register*.
- The Mobility35 program is planning projects for I-35 through the I-35 Capital Area Improvement Program Corridor Implementation Plans for Williamson and Hays Counties. Plans for the counties are anticipated to be released in Fall 2015.
- Project Connect is a partnership between Central Texas transportation agencies aimed at implementing the high-capacity transit component of the CAMPO 2035 RTP. The CAMPO RTP was adopted by regional government representatives in 2010, after a nine-month public outreach process involving policy makers and community stakeholders. The initial Project Connect partnership includes the City of Austin, Capital Metro, the LSRD and CAMPO. The purpose of Project Connect is to build consensus on regional high-capacity transit and answer the following questions: SYSTEM: How will high-capacity transit components in the CAMPO 2035 RTP work as a system? ORGANIZATION: How will our region organize to develop and operate the system? FUNDING: How will we pay for the system over the long term? The Project Connect study is expected to produce a final report that will provide answers to the three questions posed above, and a high-capacity

transit system vision map showing where MetroRail, Regional Rail, Urban Rail, Bus Rapid Transit and Express Bus on Express Lanes services will potentially be developed for the Central Texas area.

Projects

- Anticipated projects for I-35 in Travis County are listed in **Table 1** below. The projects are part of the Mobility35 program.

Table 1. Travis County Anticipated Projects for I-35

Project	Limits	Current Phase	Funding Source	Estimated Construction Cost	Upcoming Milestone
Future Transportation Corridor Planning & Environmental Linkages Study	SH 45N to SH 45SE	2	TxDOT, City of Austin and State of Texas (Rider 42)	N/A	Stand-alone projects will be recommended for inclusion in the CAMPO Long Range Plan and advanced into environmental/design studies
Northbound Collector-Distributor (C-D) Road	Howard Lane to Parmer Lane	5	TxDOT and private	\$3M	Construction completion anticipated 2015
Direct Connectors	I-35 at US 183	3	TxDOT funding Phase 3 Construction not currently funded	\$105M	Public Open Houses anticipated early 2015
Mainlane, Frontage Road & Intersection Operational Improvements	US 290 to US 183	3	TxDOT funding Phase 3 Construction not currently funded	\$65M	Public Open Houses anticipated early 2015
Southbound Frontage Road & Intersection Operational Improvements	I-35 at 51st St.	3	TxDOT and City of Austin funding Phase 3 Construction not currently funded	\$13M	Analyze feedback from February Open House
Northbound Frontage Road & Intersection Operational Improvements	I-35 at 53rd St.	5	2010 Transportation Bond - primary source for construction	\$3M	Construction completion anticipated by the end of 2015

Initial Concept Development	I-35 through the Decks	2	TxDOT funding Phase 2 Construction not currently funded	N/A	Ongoing neighborhood and stakeholder outreach
Initial Concept Development	I-35 through Downtown	2	TxDOT funding Phase 2 Construction not currently funded	N/A	Ongoing neighborhood and stakeholder outreach
Mainlane, Frontage Road & Intersection Operational Improvements	I-35 at Riverside Drive	3	TxDOT funding Phase 3 Construction not currently funded	\$84M	Public Open Houses anticipated 2015
Mainlane, Frontage Road & Intersection Operational Improvements	I-35 at Oltorf Street	3 & 4	TxDOT funding Phase 3, 4 Construction not currently funded	\$39M	Final design underway
Mainlane, Frontage Road & Intersection Operational Improvements	I-35 at William Cannon Drive and Stassney Lane	3 & 4	TxDOT funding Phase 3, 4 Construction not currently funded	\$61M	Final design underway

3.2 Methodology Used

(a) What was the scope of the PEL study and the reason for completing it?

The scope of the I-35 FTC PEL Study was to:

- Define the purpose of and need for one new mainlane in each direction within the existing I-35 ROW;
- Identify the lane type and mode choice for the new mainlanes; and
- Identify segments of independent utility (SIUs) within the Travis County section of I-35.

The reason for completing the I-35 FTC PEL Study was to document the decision-making process, thereby linking planning to NEPA and streamlining the overall project development process.

(b) Did you use NEPA-like language? Why or why not?

Yes, NEPA terminology was used throughout the I-35 FTC PEL Study to link NEPA and planning.

(c) *What were the actual terms used and how did you define them? Provide examples or list.*

- Study Area: “As depicted in Figure 1. Study Area for the FTC PEL Study, the study limits extend 28 miles along existing I-35 from State Highway 45 North (SH 45 N) just within the southern city limits of Round Rock, Texas, to State Highway 45 Southeast (SH 45 SE) located just north of Buda, Texas.” (I-35 FTC PEL Study Alternatives Technical Report)
- Purpose and Need: “The purpose of the meeting is to discuss the preliminary purpose of and need for additional capacity on I-35 within the study limits, to present a range of potential lane types for the proposed added capacity and to gather public input.” (I-35 FTC PEL Study June Public Meeting Media Advisory)
- Alternatives: “All interested citizens are invited to attend these meetings and to express their views on the lane alternatives being considered.” (I-35 FTC PEL Study September Public Meeting)
- Environmental Justice: “EO 12898 requires each federal agency to ‘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.’” (I-35 FTC PEL Study Socioeconomics Technical Report)
- Limited English Proficiency (LEP): “According to 2002 LEP guidance issued by the Department of Justice, LEP persons are defined as those ‘who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English.’” (I-35 FTC PEL Study Socioeconomics Technical Report)
- Affected Environment: “Existing environment within the Study Area.” (I-35 FTC PEL Study Report)
- Segments of Independent Utility: “Consistent with these principles, the project team has identified three preliminary segments of independent utility for the I-35 FTC PEL Study which represent a planning-level assessment of where the limits of independent transportation projects could be proposed by future studies to address distinct transportation issues...” (I-35 FTC PEL Study Segments of Independent Utility Technical Memo)

(d) *How do you see these terms being used in NEPA documents?*

The terms used in the I-35 FTC PEL Study are consistent with those used in the NEPA process and should be easily incorporated into future NEPA documents. Further, the I-35 FTC PEL Study used a NEPA-like process by involving the public with the purpose and need

statement, lane alternatives, and evaluation criteria. FHWA and CAMPO were also involved throughout the study process.

- (e) *What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.*

Meetings with the study team and the public were organized around the three key PEL decision points: Purpose and need, lane type alternatives, and segments of independent utility. Coordination points occurred monthly with the agency team and at three public meetings for the public. Below is the public meeting schedule for the study. The public meeting venues included locations in the north, central, and southern areas of the project limits to give the public a better opportunity to attend a meeting in their area.

- June 2014: The team presented the draft I-35 FTC PEL Study purpose and need statement and the initial list of lane type alternatives.
 - (June 3) Kealing Middle School, 1607 Pennsylvania Avenue, Austin, TX 78702
 - (June 4) Akins High School, 10701 First Street, Austin, TX 78701
 - (June 5) Frank Fickett Scout Training and Service Center and Conference Center, 12500 North I-35, Austin, TX 78753
- September 2014: The team presented the results from the Phase One alternatives screening process, which included comparing the alternatives to the purpose of the FTC. Lane type alternatives recommended for detailed analysis were also presented.
 - (September 9) Akins High School
 - (September 10) Frank Fickett Center
 - (September 11) Kealing Middle School
- November 2014: The team presented the results of the Phase Two detailed alternatives analysis evaluation and the recommended lane type alternatives.
 - (November 10) Kealing Middle School
 - (November 12) Akins High School
 - (November 13) Frank Fickett Center

Monthly agency team coordination meetings provided key decision-makers, including TxDOT, the City of Austin, FHWA, and CAMPO, with an opportunity to discuss and comment on study information. Below is a list of coordination points throughout the study.

- Agency Kickoff Meeting
 - March 25, 2014: Study team members were introduced to one another and the project.
- Monthly Agency Coordination Meetings
 - April 23, 2014: Introduction of the study, Purpose and Need Statement, environmental technical reports, and public involvement schedule.
 - May 28, 2014: Discussion of the Purpose and Need Statement, Public Involvement and Agency Coordination Plan, and traffic analysis.
 - June 25, 2014: Discussion of lane type alternatives analysis, first public meeting materials, stakeholder meetings, Purpose and Need Statement, and schedule progress and potential adjustments.
 - July 23, 2014: Discussion of the Phase One alternatives screening results, second public meeting materials review, stakeholder outreach and meetings, and final Purpose and Need document.
 - August 26, 2014: Discussion and review of second public meeting materials, stakeholder outreach and meetings, and final Purpose and Need document.
 - September 24, 2014: Discussion of second public meetings, Phase Two alternatives screening criteria, and potential segments of independent utility.
 - October 22, 2014: Discussion of third public meeting materials including Phase Two alternatives screening criteria, and potential segments of independent utility.
 - October 29, 2014: Review of third public meeting materials.
- Traffic Analysis Agency Coordination Meeting
 - May 8, 2014: Discussed methodology for traffic analysis.
- Capital Metro Coordination Meeting
 - June 11, 2014: Discussed potential Capital Metro use of the FTC including transit access points and Park and Ride facilities.

(f) *How should the PEL information be presented in NEPA?*

The information produced and decisions made in the PEL study can serve as a starting point for more detailed, project-specific analyses in NEPA. The purpose of and need for the FTC established as a result of the PEL study will be used for subsequent project-specific NEPA documents pertinent to individual segments of the FTC. The PEL does not limit the range of reasonable alternatives that may be considered in NEPA but rather provides recommended alternatives. Therefore, the recommended alternatives and those included in the CAMPO

RTP will be considered subsequent in NEPA analyses of FTC projects. Other reasonable alternatives not consistent with the CAMPO RTP may be considered under NEPA as required. Future NEPA studies will focus on FTC projects with independent utility and project limits matching the segments of independent utility determined through the PEL process. The technical environmental reports produced during the I-35 FTC PEL Study will be incorporated in future NEPA documents as appendices, referenced in the text, included as part of the project record, and serve as part of the history of the decision-making process. The Public Meeting Summary Reports generated from the public and stakeholder outreach activities will provide context for the public's role in the decision-making process and will also be incorporated by reference into future NEPA studies.

3.3 Agency Coordination

- (a) *Provide a synopsis of coordination with federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.*

In the beginning of the I-35 FTC PEL Study, the study team developed a Public Involvement and Agency Coordination Plan to determine a strategy for coordination with the public and pertinent agencies. Two letters were sent to local elected officials who represent study area constituents in Travis County, as well as Hays County, Williamson County, and the cities of Pflugerville, Buda, Georgetown, Kyle, Round Rock, San Marcos, and Austin. The letters introduced the I-35 FTC PEL Study, provided updates on the study, and encouraged officials to attend public meetings. The I-35 FTC PEL Study team provided Federal, state, and local agencies with the opportunity to provide feedback on the study. Agencies involved in the I-35 FTC PEL Study included TxDOT, FHWA, CAMPO, and the City of Austin. Coordination with Capital Metro also occurred during the study. **Section 3.2.e** includes a list of key agency coordination points throughout the study and **Appendix A** provides a list of participating agencies.

- (b) *What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?*

The City of Austin's Transportation Department, CAMPO, Capital Metro, FHWA, and TxDOT were involved with the I-35 FTC PEL Study.

- (c) *What steps will need to be taken with each agency during NEPA scoping?*

Each agency will be provided with a copy of the *I-35 FTC PEL Study Report* at the conclusion of the study. The NEPA scoping would be done in consideration of the recommendation of the I-35 FTC PEL Study. During the NEPA process, agencies would be reengaged in accordance with their regulatory jurisdiction.

3.4 Public Coordination

(a) *Provide a synopsis of your coordination efforts with the public and stakeholders.*

The study team developed a Public Involvement and Agency Coordination Plan to determine a strategy for coordination with the public and pertinent agencies. The public involvement strategy included utilizing local and social media, postings on the Mobility35 and TxDOT websites, emails to the Mobility35 mailing list, correspondence to local officials, and frequent agency and stakeholder outreach.

Three rounds of public meetings (nine meetings total) were held as part of the I-35 FTC PEL Study to provide the public with an opportunity to review exhibits and materials related to the project; talk to project staff; and to provide comments. All public outreach was advertised in a manner consistent with NEPA public meetings. Meetings were advertised through legal notices, media releases, email blasts, and the I-35 FTC PEL Study website and social media pages. In addition to the physical public meetings, there were three virtual public meetings to allow those unable to attend physical meetings to view the meeting materials online. The results of the public meetings are found in the I-35 FTC PEL Study Public Meeting Summary Reports.

3.5 Purpose and Need for the PEL Study

(a) *What was the scope of the PEL study and the reason for completing it?*

The scope of the I-35 FTC PEL Study was to:

- Define the purpose of and need for one new mainlane in each direction within the existing I-35 ROW;
- Identify the lane type and mode choice for the new mainlanes; and
- Identify segments of independent utility (SIUs) within the Travis County section of I-35.

TxDOT completed the PEL study for the following reasons:

- To provide an opportunity for the public to provide input into the early planning phase of the FTC.
- To collaborate with other agencies on I-35 improvements and how those improvements can enhance other on-going transportation initiatives in the City of Austin and Travis County.
- To identify any potential environmental issues associated with developing FTC projects in the future.

- To link the planning and NEPA processes through public involvement, agency collaboration, and creating planning products that can be used to streamline subsequent NEPA studies.

(b) *Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.*

The purpose of the proposed FTC project is to:

- Improve operational efficiency and manage congestion;
- Provide more reliable travel times; and
- Create a more dependable and consistent route for transit, emergency responders, and other motorists.

Improvements to the I-35 corridor are needed for the following reasons:

- Current congestion levels are causing inefficient operations;
- Travel times will increase as population and employment grow; and
- Congestion-related delays prevent efficient use of I-35 by transit, emergency responders, and other motorists.

(c) *What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?*

The Purpose and Need Statement was developed in accordance with Appendix A to 23 CFR 450, which details how information, analyses, and products from transportation planning can be incorporated into the project-level NEPA process. The I-35 FTC PEL Study's Purpose and Need Statement was a collaborative effort using public involvement and agency coordination in its development. In addition, detailed data and analyses were used for population trends and projections, major traffic generators, historic and future traffic projections, and roadway design and safety conditions, all of which support the need for improvements along the I-35 corridor within the study area. The Purpose and Need Statement will be used as a framework for identifying individual project-level purpose and need statements and validating project-level alternatives during the NEPA decision-making process.

3.6 Range of Alternatives

Planning teams need to be cautious during the alternative screening process; alternative screening should focus on purpose and need/corridor vision, fatal flaw analysis and possibly mode selection. This may help minimize problems during discussions with resource agencies.

Alternatives that have fatal flaws or do not meet the purpose and need/corridor vision cannot be considered viable alternatives, even if they reduce impacts to a particular resource. Detail the range of alternatives considered, screening criteria and screening process.

(a) *What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.)*

Below are the nine alternatives, including No Build, that were reviewed during the I-35 FTC PEL Study process. Each of the alternatives below include the base improvements outlined in the I-35 Capital Area Improvement Program (Mobility35) Corridor Implementation Plan for Travis County.

- **Managed (express toll) lane:** Lane with use restrictions that could include tolls and/or occupancy or vehicle type that would be accessed similarly to the current I-35 mainlanes.
- **Managed (express toll) lane with transit focus:** Lane with use restrictions that could include tolls, occupancy, and/or vehicle types with access designed specifically for restricted vehicles and enhancing transit services.
- **Managed (transit-only) lane:** Lane used only for transit vehicles.
- **Managed (freight-only) lane:** Lane used for commercial trucks and freight trucks.
- **Managed (High Occupancy Vehicle) lane with transit focus:** Lanes dedicated to vehicles with two or more passengers and transit vehicles.
- **Rail lane:** Tracks and a rail line for a passenger rail system in lieu of an additional vehicle lane.
- **Managed (through) lane:** Lane from SH 45N to SH 45SE with no entrance or exit points in between.
- **General purpose lane:** Lane for all I-35 motorists with no restrictions.
- **No Build:** The FTC is not built but future conditions include the preservation of the existing transportation network and any programmed transportation improvements.

Detailed information about the alternatives and the alternative evaluation process is found in the *Alternatives Analysis Technical Report*.

(b) *How did you select the screening criteria and screening process?*

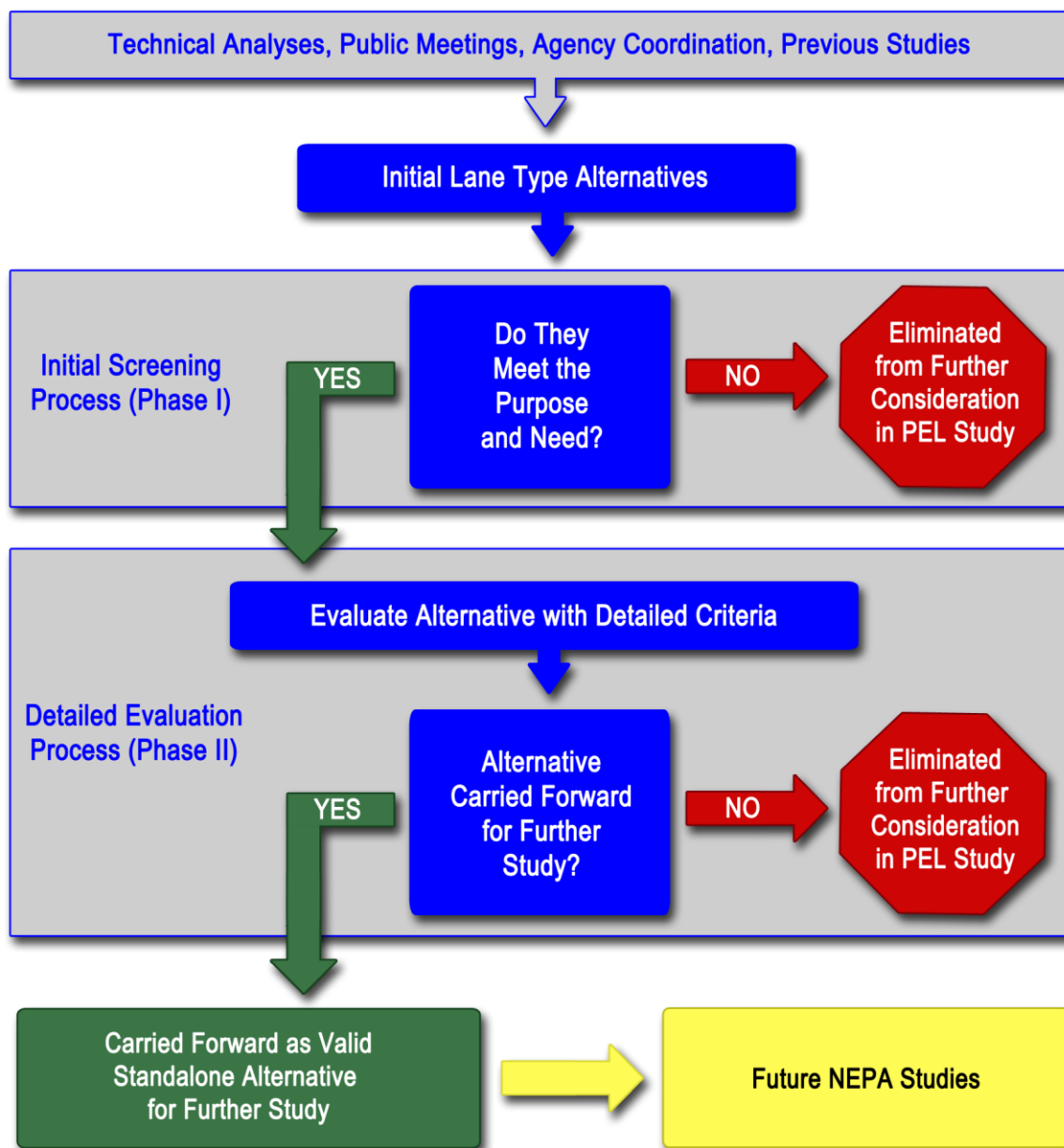
The I-35 FTC PEL Study had a two-phase screening process depicted in **Figure 3**. Lane type alternatives that met the purpose and need advanced to the second phase.

Evaluation criteria for the second phase were determined to characterize and provide a distinction between lane type alternatives. Public involvement efforts and input from other agencies also helped to determine what evaluation criteria were used in the study. The initial list of criteria used to compare the alternatives for the Phase Two included:

- Environmental
 - Right-of-way (ROW)
 - Land Use of Affected Parcels
 - Vehicle Emissions
 - Impervious Surface
- Mobility
 - Average Speed
 - Travel Time
 - Vehicle miles traveled (VMT)
 - Vehicle hours traveled (VHT)
 - Passenger miles traveled (PMT)
 - Passenger hours traveled (PHT)
 - Reliability
- Feasibility
 - New Pavement Area
 - Structure
 - Utility Conflicts
 - Total Cost

After reviewing the results of the initial list of criteria, the study team, in conjunction with the participating agencies, determined that the environmental and feasibility categories did not have a discernable difference in the results. Therefore, only average speed, travel time, and passenger miles traveled were used as evaluation criteria. The remaining criteria could be used in subsequent studies.

Figure 3. I-35 FTC PEL Study Screening Process



- (c) For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s). (During the initial screenings, this generally will focus on fatal flaws)

The lane type alternatives evaluation process involved two phases. The first phase evaluated the alternatives against the purpose of the FTC and the second phase included a detailed analysis of the alternatives using detailed criteria. Of the eight lane types alternatives, the general purpose lane, rail, managed (freight only) lane, and managed (through) lane options for the FTC failed to meet the purpose of the FTC. **Table 2** provides a

broad overview on how the alternatives performed during the initial screening phase. The managed (freight only) was not chosen because other motorists would not benefit from the lane, and it would not provide a reliable alternatives to the other motorists. The rail lane was eliminated because it would not provide a reliable lane for emergency vehicles. The general purpose lane did not meet the purpose and need because would not provide more reliable travel times due to the overloaded system utilizing the added capacity and transit and emergency vehicles would not be able to rely on the corridor as a consistent route. The managed (through) lane would not benefit the majority of motorists and would limit emergency vehicle and transit use. Although the No Build alternative would not meet the study purpose and need, it was carried forward through the Phase Two analysis as a benchmark for comparison against the other alternatives.

Table 2. Overview of Phase One Alternatives Screening Results

		ALTERNATIVES							
		Rail	General Purpose	Managed Lanes					
				Freight Only	Through	Transit Only	Express Toll	Express Toll with Transit Focus	HOV + Transit
PURPOSE OF THE FTC	Improve operational efficiency and manage congestion	✓	✓	✓	✓	✓	✓	✓	✓
	Provide more reliable travel times	✓		✓	✓	✓	✓	✓	✓
	Create a dependable and consistent route for transit, emergency responders, and other motorists					✓	✓	✓	✓

Phase Two of the alternatives evaluation process involved a detailed analysis of the remaining alternatives. The evaluation criteria were divided into three categories: environmental, mobility, and engineering feasibility. **Tables 3 through 6** provide information on the Phase Two evaluation criteria and how the remaining alternatives performed. Only

average speed, travel time, and passenger miles traveled were used as evaluation criteria in the PEL study.

Table 3. Environmental Screening Results

Scenario	ROW (Acre)	Land Use	Emissions (CO2) (Million g)	Impervious Surface (Square Feet)
No Build	0	N/A	71,186	0
Managed Lane	21.34	Same	70,535	13,987,000
ML Transit Access	27.56	Same	70,375	14,687,000
Transit Only	27.56	Same	70,510	14,687,000
HOV 2+	27.56	Same	71,126	14,687,000

Table 4. Feasibility Screening Results

Scenario	New Pavement (Square Feet)	Structures (Square Feet)	Utility Conflicts (Number)	Total Cost (Dollars)
No Build	0	0	0	0
Managed Lane	31.4M	2.42M	342	\$851M
ML Transit Access	35.8M	2.96M	356	\$1.071B
Transit Only	35.8M	2.96M	356	\$1.071B
HOV 2+	35.8M	2.96M	356	\$1.012B

Table 5. AM Peak Corridor Mobility Screening Results

	Scenario	Average Speed (mph) (managed lane)	Travel Time (min.) (managed lane)	PMT (managed Lane)	PHT (managed lane)	LOS (managed lane)
Northbound	No Build	22.26	67.19	309,941	13,926	F
	Managed Lane	24.79 (37.58)	61.12 (36.47)	316,630 (71,301)	12,775 (1,897)	F (B)
	ML Transit Access	24.95 (39.29)	60.67 (35.47)	316,505 (69,073)	12,687 (1,758)	F (C)
	Transit Only	23.70 (55.00)	63.51 (NA)*	333,058 (1,127)	14,052 (27)	F (A)
	HOV 2+	23.12 (56.25)	65.08 (27.64)	340,800 (11,883)	14,743 (211)	F (A)
Southbound	No Build	21.72	67.22	327,870	15,095	F
	Managed Lane	24.54 (38.79)	61.76 (36.68)	344,546 (84,902)	14,039 (2,189)	F (C)
	ML Transit Access	24.71 (39.30)	61.32 (36.15)	342,817 (80,645)	13,875 (2,052)	F (C)
	Transit Only	23.93 (55.00)	62.92 (NA)*	355,113 (1,454)	14,842 (37)	F (A)
	HOV 2+	23.46 (56.79)	64.21 (27.56)	361,772 (12,457)	15,421 (219)	F (A)

Table 6. PM Peak Corridor Mobility Screening Results

	Scenario	Average Speed (mph) (managed lane)	Travel Time (min.) Main Lane (managed lane)	PMT (managed lane)	PHT (managed lane)	LOS (managed lane)
Northbound	No Build	21.95	68.40	308,490	14,051	F
	Managed Lane	23.60 (46.34)	65.59 (32.02)	318,278 (87,545)	13,488 (1,889)	F (C)
	ML Transit Access	23.76 (47.13)	65.09 (31.53)	316,308 (85,605)	13,313 (1,816)	F (C)
	Transit Only	23.27 (55.00)	65.89 (NA)*	320,491 (1,454)	13,772 (37)	F (A)
	HOV 2+	22.95 (56.58)	66.89 (27.63)	327,697 (22,513)	14,279 (398)	F (A)
Southbound	No Build	21.47	71.27	306,602	14,277	F
	Managed Lane	22.70 (50.59)	68.07 (29.99)	326,440 (70,170)	14,381 (1,387)	F (C)
	ML Transit Access	22.83 (51.90)	67.71 (29.48)	325,652 (68,620)	14,264 (1,322)	F (C)
	Transit Only	22.27 (55.00)	69.11 (NA)*	332,951 (1,127)	14,952 (27)	F (A)
	HOV 2+	21.97 (51.79)	70.18 (27.92)	341,960 (19,793)	15,568 (382)	F (A)

As **Table 5** and **Table 6** illustrate, a Managed Lane FTC would increase speed, decrease travel time, and provide a better LOS compared to the I-35 mainlanes. In addition, the alternatives increase speed and decrease travel times in the I-35 mainlanes when compared to the No Build Alternative. All alternatives provide a consistent route for transit, emergency responders, and other FTC users.

The second phase of screening, along with public and agency input, determined the recommended lane type alternatives for the I-35 FTC PEL Study.

(d) *Which alternatives should be brought forward into NEPA and why?*

Based on the results of the lane type alternatives evaluation process, the managed (express toll) lane and the managed (express toll) lane with transit focus will move forward to Phase 3 of the Mobility35 program, which entails environmental and schematic work. These

alternatives were chosen because they meet the Purpose and Need Statement and provide the best additional travel option for users. FTC users would have the option of paying a toll to avoid congestion in the mainlanes, or, potentially, utilize transit services to avoid driving. Providing the option for potential transit access and utilization maximizes the benefits of the FTC and should be considered in subsequent planning stages.

(e) *Did the public, stakeholders, and agencies have an opportunity to comment during this process?*

The public, stakeholders, and agencies provided input at every decision point of the project including choosing lane type alternatives, evaluation criteria, and comments on alternatives screening during the three rounds of public meetings and agency meetings. The final public meeting allowed stakeholders to comment on the alternative recommended for future study under NEPA.

(f) *Were there unresolved issues with the public, stakeholders and/or agencies?*

There were no unresolved issues after the last round of public involvement was complete. However, the public was made aware that issues of funding were beyond the scope of the I-35 FTC PEL Study.

3.7 Planning Assumptions and Analytical Methods

(a) *What is the forecast year used in the PEL study?*

2035 is the forecast year for the I-35 PEL Study, which is consistent with the horizon-year forecasts produced by CAMPO as adopted in the 2035 RTP.

(b) *What method was used for forecasting traffic volumes?*

The approved 2035 CAMPO Regional Travel Demand Model (TDM), which covers Bastrop, Caldwell, Hays, Travis, and Williamson Counties, was used for this study. This model is the currently approved 24-hour travel demand model that can output data to post-processing routines to evaluate peak travel characteristics. TxDOT Transportation Planning and Programming Division (TPP), TxDOT Austin District, and the I-35 FTC PEL Study Team collaborated to choose the study model after deliberation among three available versions of the CAMPO TDM, including: the 2035 CAMPO TDM, the Interim 2035 CAMPO TDM, and the 2040 CAMPO TDM. The primary reason for choosing the 2035 CAMPO TDM was that the Interim and 2040 CAMPO TDMs had not been released for use and to conform to the timeline and milestones for the I-35 FTC PEL Study.

The 2035 CAMPO TDM is a traditional four-step model with several advanced features. It is an update of the model CAMPO developed in 1997 that was recalibrated for demographic

and travel patterns observed in 2005. The geography of the model was also expanded to include the entirety of Bastrop, Caldwell, Hays, Travis, and Williamson Counties. It exists as a standard TransCAD drop-down menu, uses TransCAD 5.0 r3 build 1815, and is pre-loaded to include demographic information and transportation networks for the years 2005, 2008, 2010, 2015, 2025 and 2035. The model has the ability to analyze 17 different trip purposes. These purposes include trip generation, trip distribution, mode choice, route assignment, and demographic inputs. Model limitation, calibration and validation, and sensitivity testing are discussed in detail in the *Alternatives Analysis Technical Report*.

(c) *Are the planning assumptions and the corridor vision/purpose and need statement consistent with the long-range transportation plan?*

The I-35 FTC PEL Study Purpose and Need Statement is consistent with, and in many cases directly supports, the corridor vision and goals from the CAMPO 2035 RTP. This consistency is illustrated in **Table 7**.

Table 7. I-35 FTC PEL Study's Consistency with the 2035 CAMPO RTP

2035 CAMPO MTP Goal/Vision	I-35 FTC PEL Study Purpose and Need
Vision	
Develop a comprehensive multimodal regional transportation system that safely and efficiently addresses mobility needs over time, is economically and environmentally sustainable, and supports regional quality of life.	<p>The purpose of the proposed FTC project is to:</p> <ul style="list-style-type: none"> ▪ Improve operational efficiency and manage congestion; ▪ Provide more reliable travel times; and ▪ Create a more dependable and consistent route for transit, emergency responders, and other motorists.
Goals	
Safety: Increase the safety of the transportation system.	<ul style="list-style-type: none"> ▪ The purpose of the proposed FTC project is to: <ul style="list-style-type: none"> – Improve operational efficiency and manage congestion; – Provide more reliable travel times; and – Create a more dependable and consistent route for transit, emergency responders, and other motorists. ▪ By incorporating aspects into the project that make transit or ridesharing an attractive modal choice, a reduction in congestion can be realized and can improve the traffic stream for all users. ▪ Due to projected population and employment growth, the entire corridor is anticipated to experience decreasing Level of Service and increasing traffic. Without addressing the congestion problem through improvements and the FTC, the corridor will worsen. ▪ The FTC is an additional lane in both directions in the center portion of the existing corridor to minimize the need for additional ROW.
Mobility and Access: Maintain and enhance mobility and access of goods and people within the region.	
Connectivity: Improve connectivity within and between the various transportation modes for goods and for people of all ages and abilities.	
Efficiency: Improve the efficiency and performance of the transportation system.	
System Preservation: Ensure that the transportation system can be maintained and operated over time.	
Economy: Maximize the economic competitiveness of the region.	
Land Use and Economic Development: Support economic development and efficient use of land.	
Cost Effectiveness: Maximize the affordability of the transportation system.	
Air Quality, Climate Protection, and Energy: Minimize air pollution, greenhouse gas emissions and energy consumption related to the transportation system.	
Environment, Noise, and Neighborhood Character: Minimize negative impacts to environmental resources, noise, and neighborhood character.	
Social Equity: Ensure that the benefits and impacts of the transportation system are equitably distributed regardless of income, age, race, or ethnicity.	
Security: Increase the security of the transportation system and the region.	

- (d) *What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs and network expansion?*

Future year policy and/or data assumptions used in the PEL Study are based on the assumptions and data used in the adopted fiscally-constrained CAMPO 2035 RTP, with a few assumptions related to transportation costs modified by the project team to more accurately model travel behavior on the FTC.

Land use and economic development assumptions relied on the adopted CAMPO 2035 demographic forecasts for population, households and employment by type that were used in development of the CAMPO 2035 RTP. The CAMPO demographic forecasts use county control totals based on population projections produced by the Texas State Data Center (SDC) using an average between the SDC “high-growth” scenario and “moderate growth” scenario. The county control totals were then allocated to the Traffic Analysis Zone (TAZ) level by a CAMPO Demographics Committee through an iterative process of statistical analysis, stakeholder workshops and public forums.

Assumptions related to transportation costs included toll and value of time functions associated with the 2035 CAMPO travel demand model. Results from sensitivity testing conducted by the modeling team indicated that the model’s values of time for personal vehicles and trucks were reasonable and consistent with values reported in other studies in Central Texas. Based on this sensitivity testing, CAMPO’s default toll rates were modified to more accurately model the effects of variable pricing on travel behavior on the FTC for the managed lane alternatives.

In terms of network expansion assumptions, each scenario included all projects in the CAMPO region that are included in the fiscally constrained 2035 RTP. The No Build Scenario left CAMPO’s current model network unaltered (i.e. no additional capacity-changing projects or other operational changes beyond those proposed in the 2035 RTP were added). Any additions in highway capacity, transit service or base improvements such as ramp and intersection modifications to support the FTC were considered part of and included in the build scenarios. These base improvements are detailed further in the *Traffic Analysis Report*, which is included as an appendix to the *Alternatives Analysis Technical Report*.

3.8 Environmental Resources Reviewed

For each resource or group of resources reviewed, provide the following:

- (a) *In the PEL study, at what level of detail was the resource reviewed and what was the method of review?*

The I-35 FTC PEL Study identified and documented baseline environmental information in resource-specific technical reports. Resources were reviewed using existing datasets, studies, and plans, as well as windshield surveys. All listed resources were reviewed following the most up-to-date guidelines available at the time of research.

- Archeology:
 - Database searches were conducted to identify historic-age resources, cemeteries, State Antiquities Landmarks (SALs), and heritage farms within 300 feet of the existing ROW, the Area of Potential Effect (APE) of the study area. A technical report with detailed evaluation of the identified resources and the historic context of the area was drafted in accordance with the Programmatic Agreement between FHWA, the State Historic Preservation Officer, the Advisory Council on Historic Preservation, and TxDOT. A preliminary likelihood of the occurrence of undiscovered archeological resources in the study area was determined.
- Biology
 - A biological assessment pertaining to land use, natural settings, vegetation, wildlife, and farmland were researched within the study area. Information was gathered in a technical report using database searches. Future coordination efforts with the Texas Parks and Wildlife Department were also outlined.
- Hazardous Materials:
 - A comprehensive list of Federal and state hazardous materials records databases with readily available data was presented, along with the results of a current internet search of these databases, showing hazardous materials sites occurrence in the study area. Field verification of database search results was not performed. NEPA-level hazardous materials assessment procedures and documentation requirements were also presented.
- History
 - Baseline-level potential historic resources were identified throughout the study area through research of existing databases, previous studies, and a historic resources literature review. No historic resource surveys or field investigations were conducted for this assessment.
- Land Use
 - Existing and future land uses were identified in the study area. Data sources used in the development of the existing land use inventory included existing and future land use maps and databases from the City of Austin (COA), COA zoning information, and aerial photography. Additional information regarding a particular portion of the study area was obtained through desktop-level verification of

existing land uses. Local land use plans, policies, and initiatives were collected from publications by various COA departments, CAMPO, Capital Metro, and other local entities, as appropriate.

- Socioeconomics:
 - Data collected from the U.S. Census Bureau include: population estimates, race and ethnicity, age, English proficiency, median household income, poverty status, housing tenure, median rental rates and median property value. Census data for the housing trend analysis was from key points and conclusions in the COA's 2014 Comprehensive Market Study as well as the 2013 Homestead Preservation Report. Data regarding historic population trends was gathered from COA Planning Department reports, the Texas State Historical Association and the Historic Round Rock Collection. Population projections were collected from the Texas Water Development Board (TWDB) website. Finally, data sources for the community resources section of this analysis included official neighborhood plans from the COA, neighborhood association and utility district websites and future land use maps, as well as recent aerial and street-level photography from Google Earth.
- Water Resources
 - Surface and groundwater resources were identified using previous studies conducted for the I-35 corridor (including the I-35 Mobility35 Environmental Technical Report [ETR]), recent aerial photography (2011), U.S. Geologic Survey (USGS) topographic maps, Texas Commission on Environmental Quality (TCEQ) Edwards Aquifer maps, National Wetland Inventory (NWI) maps, National Hydrologic Dataset (NHD) maps, the U.S. Department of Agriculture (USDA) soil survey for Travis County, the U.S. Army Corps of Engineers (USACE) List of Navigable Waters of the United States, Federal Emergency Management Agency (FEMA) floodplain maps, and various COA and Travis County databases.

(b) *Is this resource present in the area and what is the existing environmental condition for this resource?*

The listed resources have been described, including regulatory context, in resource-specific technical reports as is appropriate for a corridor-level study. The information below briefly summarizes existing conditions for the resources.

- Archeology:
 - A total of 34 archeological surveys have been previously conducted within the study area, 23 of which are aerial surveys and 11 of which are linear surveys. According to the Atlas, there are 28 previously recorded archeological sites located within the study area. Of these, two sites are listed on the National

Register of Historic Places (NRHP) and as SALs, one site was noted as being potentially NRHP/SAL eligible, and four sites were determined NRHP/SAL ineligible. The eligibility status of the remaining 21 sites is currently undetermined.

- Cemeteries: There are five cemeteries within the study area, two of which have been designated as SALs and/or are listed on the NRHP: the Walnut Creek Cemetery and the Oakwood Cemetery.
- Unsurveyed areas: The vast majority of the study area is within a highly developed portion of the I-35 corridor; however, according to the Atlas, only moderate percentages of each segment have been previously surveyed. To maximize future planning and coordination efforts, a baseline probability model was developed for the previously unsurveyed areas of each of the eight segments of the study area.

■ **Biology**

- Ecoregion: The general study area occurs in the Blackland Prairies Ecoregion of Texas.
- Vegetation: In accordance with the 2013 TxDOT-TPWD Memorandum of Understanding (MOU), the Ecological Mapping Systems of Texas (EMST) GIS database (TxDOT 2014) was utilized to assess vegetation within the general study area. Several types of vegetation were found throughout the study area. Unusual vegetation features were identified within the general study area throughout all eight segments. These features include unmaintained vegetation, fencerow vegetation, riparian vegetation, trees that are ecologically significant or locally important, and isolated stands of vegetation.
- Species: The general study area occurs in an ecotonal transition zone of the Balconian and Texan biotic provinces. Vertebrate species known to occur within Williamson, Travis, and Hays Counties include 55 mammals, 37 snakes, 19 lizards, 13 turtles, 22 frogs and toads, and 11 salamanders. Additionally, 327 species of birds have been documented to occur within the Blackland Prairie Ecoregion. There are 79 endangered, threatened, and rare species that may be potentially found within the three-county area.
- Farmland Protection Policy Act (FPPA): Portions of the study area fall within the U.S. Census Bureau 2010 Urbanized Area for Austin; therefore, future projects within these segments would be exempt from the provisions of the FPPA during the NEPA process. Soils considered to be prime farmland occur within the southern portion of the study area.

■ **Hazardous Materials:**

- The following were identified within the study area: 21 reported spills, 74 petroleum storage tanks for which there is no documentation of removal from the

site, 78 leaking petroleum storage tanks, 105 Austin Historical Underground Storage Tanks, and four other types of sites. No oil wells were identified within the study area. Four natural gas transmission lines, a non-highly volatile liquid line, and one crude oil transmission line were discovered in the study area.

- History
 - A total of 134 historic resources were identified throughout the study area. These resources included residential and commercial properties and cemeteries that were COA Historic Landmarks, contributing to an eligible historic district, potentially historic, or recommended for further survey.
- Land Use
 - Urban development within the general study area is primarily commercial, with residential neighborhoods located both east and west of I-35. Development is concentrated within the urban core and becomes less dense in the northern and southern portions of the corridor. Portions of the southern end of the general study area remain partially rural, with some undeveloped tracts adjacent to I-35.
- Socioeconomics:
 - With the exception of the urban core, all other areas within the study area have minority populations that exceed 50 percent. The dominant minority group in the data collection area is Hispanic or Latino, which makes up approximately half of the entire study area population. The data collection area in each segment contains some residents below the poverty line, with percentages ranging from 13 to 31 percent. Population forecasts for geographies in the region surrounding the study area predict continued growth for the cities of Austin and Round Rock as well as Travis County through 2070.
- Water Resources
 - Surface Water: The study area lies predominantly within the Colorado River drainage basin, with the northern end of the study area extending into the Brazos River drainage basin. One stream reach, Onion Creek, is identified by TPWD as having unique ecological value within the study area. Potential wetland features were identified parts of the study area. Search concluded that three 303(d) impaired assessment units intersect or are downstream of the study area. Approximately 287 acres of floodplain are found within the study area.
 - Groundwater: Portions of the subcrop of the Edwards Aquifer and Trinity Aquifer underlie the study area. Northern portions of the study area are located within the Edwards Aquifer Transition Zone; therefore, the Edwards Aquifer Rules would apply to future projects in these segments. A total of five springs were documented within the study area. A total of 19 water wells are found within or adjacent to the study area.

- (c) *What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?*

The resource-specific technical reports identify issues that may need to be further examined in NEPA, as warranted, depending on project-level impacts identified during the NEPA phase of project development. The following includes protocol for resource categories determined during NEPA to be potentially impacted by a proposed alternative. A brief summary is provided below:

- Archeology
 - Any future projects within the corridor will require coordination with the appropriate agencies and could potentially require field investigations once a project-specific area of potential effects is established.
- Biology
 - Future transportation projects within the I-35 corridor would require field investigations and coordination with the appropriate agencies, as necessary. Completion of a Biological Evaluation form, including a Tier I Site Assessment, would be required during the NEPA compliance process of future projects
- Hazardous Materials
 - Phase I assessment to ASTM standards would be conducted on a preferred alternative during NEPA. Phase II site investigations could be required, depending on the results of the Phase I database search, project design, and locations of proposed ROW location. Any mitigation requirements for hazardous materials sites would be discussed.
- History
 - Any effects (direct and indirect) to historic resources identified and evaluated in the PEL Study and during the NEPA study (including any ROW proposed for acquisition) would be summarized in a Historic Resources Survey Report (HRSR); coordination with the State Historic Preservation Officer (SHPO) in accordance with the MOU regarding HRSR findings would be undertaken. As warranted, project design would be modified to avoid adverse impacts to historic resources.
- Land Use
 - Any direct effects to businesses or residences (takes) and associated displacement assistance under the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 would need consideration during a NEPA-level study. Any indirect effects stemming from access alteration due to the project with associated land use and development effects (induced development; alteration of land development patterns) would

also be considered to ensure future projects are compatible with the prospective CAMPO regional growth scenario (TOD/Infill). The consistency of the proposed projects with other local city planning would also need to be ensured throughout the NEPA process.

- Socioeconomics

- Any impacts to low income and minority populations would need to be assessed in accordance with EO 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* and mitigation would be provided if warranted. Findings from the system level toll analyses for toll impacts to environmental justice (EJ) populations included in the 2035 RTP would be presented, and a project level toll analysis and any associated impacts to EJ populations would be included in the NEPA study. The NEPA study would also include measures to ensure the opportunity for participation and input of LEP persons in the project development process.

- Water Resources

- Surface Water: A NEPA-level study would need to consider impacts to jurisdictional streams and wetlands, including permit and potential mitigation requirements. Design requirements to prevent floodplain impacts would also need to be considered, along with appropriate coordination requirements with local FEMA floodplain officials.
- Groundwater: Potential indirect impacts to Edwards Aquifer recharge zone from project-induced development north/west of the project area would need to be considered. Location and proper plugging of abandoned or acquired water wells would also need to be considered.

(d) *How will the data provided need to be supplemented during NEPA?*

The data collected at the corridor-level in the I-35 FTC PEL Study will serve as starting point for NEPA analysis, but may need to be refined to a greater level of specificity for project-level alternatives. A brief summary of data that may need to be supplemented in NEPA includes:

- Archeology

- NRHP and SAL databases will need to be reviewed during the NEPA process to ensure no additional resources were added since the PEL study. Future assessments of potential impacts to archeological sites should consider the most up-to-date research paradigms when determining the relative significance of a particular site. Coordination with the Texas Historical Commission (THC), TxDOT, and/or other consulting parties will also be necessary.

- **Biology**
 - Databases, such as EMST, would be re-checked to ensure that any listing changes occurring since the PEL study are captured. A site visit would be conducted to document any occurrence of listed species, Natural Resource Conservation Service (NRCS) soil types, and parklands.
- **Hazardous Materials**
 - The Phase I database search would be updated to capture any hazmat issues occurring since the PEL Study. Additional Phase I environmental site assessment activities would include field verification of sites identified in the database searches; review of additional environmental record sources such as topographic maps; review of reasonably ascertainable historical land use research sources such as Sanborn maps; landowner/government official interviews; and Phase I survey documentation such as the TxDOT Initial Site Assessment form.
- **History**
 - A field historical-age resource and archeological survey would be conducted for the APE and any additional ROW acquired for the proposed project. Field identification of cemetery locations and boundaries would be performed to determine potential impacts. The listing of historic resources compiled in the PEL study would be updated to include resources which had become NRHP-listed or eligible since the PEL study. Qualified historians would draft an HRSR and undertake formal consultation with the SHPO regarding potential impacts to historic resources from the preferred alternative and appropriate mitigation.
- **Land Use**
 - Appropriate agencies would be contacted for the most recent versions of land use planning documents and would be obtained, if available, to ensure inclusion of data compiled since the PEL Study. Additional windshield surveys would be conducted to document recent land use changes since the PEL study.
- **Socioeconomic**
 - Population trends and demographic data would be reviewed to ensure the most up-to-date information is included in the NEPA analysis. Future projects would also include more reviewed Census data, typically to the Census Block, as available.
- **Water Resources**
 - **Surface Water:** Determinations and delineations would be performed for streams and wetlands and impacts quantified for the preferred alternative. The most recent impairment status (updated annually) of affected stream segments (within

- five miles downstream of project) would also be checked. Appropriate USACE coordination with respect to permitting would be conducted.
- Groundwater: The location of any water wells within the study area and the associated aquifer would be determined, in the event such wells might require plugging in conjunction with the proposed project.

3.9 Environmental Resources Not Reviewed

- (a) *List environmental resources you are aware of that were not reviewed in the PEL study and why? Indicate whether or not they will need to be reviewed in NEPA and explain why.*

The list of resources reviewed in the PEL study is comprehensive, and is consistent with resources typically considered in a NEPA analysis. The level of analysis detail would be greater in a NEPA study for all resources. Resources which would receive more detailed analysis in NEPA are listed below, along with explanatory notes.

- Air Quality / Area Emissions
 - This resource was not examined during the PEL study because TxDOT Transportation Planning and Programming (TPP) traffic forecast numbers are required for required air quality analysis. The NEPA study would report any updated attainment status for National Ambient Air Quality Standards, to determine if transportation conformity rules would apply. Traffic Air Quality Analysis for carbon monoxide will be included if modeled projected traffic is >140,000 vehicles per day (vpd).
- Noise Analysis
 - This issue was not examined during the PEL study because exact final design alignments and TxDOT TPP traffic forecasts are required for Traffic Noise Model (TNM) analysis. For NEPA analysis, modeled receiver locations would need to be determined. Existing ambient noise levels would need to be recorded as appropriate in the field. Existing and projected future traffic data would be obtained from TxDOT TPP for use in TNM traffic noise analysis modeling. Areas where noise abatement would potentially be feasible would be identified.

3.10 Cumulative Impacts

- (a) *Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where it can be found.*

Cumulative impacts were not considered in the I-35 FTC PEL Study. The schematic design and project details necessary to adequately assess cumulative impacts of proposed

alternatives were not available at the PEL-level of analysis and will be appropriately studied during the NEPA process.

3.11 Mitigation

- (a) *Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.*

The 2035 CAMPO RTP presents environmental issues and mitigation strategies regarding impacts to water quality, floodplains, wildlife habitat, agricultural land, the Edwards Aquifer, environmental justice, and threatened and endangered species. These strategies emphasize avoidance through project alignment and design, as well as a regional approach to land preservation, generally consisting of in-kind preservation of resources unavoidably impacted by a project. The I-35 FTC PEL Study addresses many of the concerns under NEPA, and the strategies discussed are consistent with those proposed in the RTP. Planning-level decisions regarding mitigation strategies includes activities and concepts that may be adopted or incorporated into NEPA.

3.12 Availability of Information to the Public

- (a) *What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products that can be used or provided to agencies or the public during the NEPA scoping process?*

The NEPA document will be informed by a full spectrum of planning decisions derived from the PEL process. The *I-35 FTC PEL Study Report* and all supporting PEL decision documents will be incorporated into the NEPA process by reference and become part of the administrative record and history of the decision-making process. Further, the *I-35 FTC PEL Study Report*, including associated technical reports, will be integrated into the NEPA process and made available to the public, agency team members, stakeholders, and agencies that were involved during the *I-35 FTC PEL Study*. Additionally, the *I-35 FTC PEL Study Report* will be available on the Mobility35 website.

3.13 Foreseen Future Issues

- (a) *Are there any other issues a future project team should be aware of? Examples include: controversy, utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.*

Tolling, particularly affordability, could be a controversial issue for future project team(s). Specific financing options for the proposed action, including tolling were not part of the PEL scope; therefore, public comment on these issues would need to be sought during the NEPA process.

Design of the proposed action was not part of the PEL scope; therefore, public comment on specific project design features, including the need for additional ROW, is still an outstanding issue and would be addressed in the NEPA process.

Appendix A

The following sections list the Study Team and Agency Team Members.

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