



WELCOME!

Tonight you can ...

Learn
about the PEL
process

Review
conceptual
strategies for
transportation
improvements

Evaluate
conceptual
improvement
scenarios

Provide
feedback on
scenarios and
the PEL study

Your feedback will be considered for further analysis in the next steps of study.





Studies conducted by Texas A&M Transportation Institute rank I-35 through San Antonio among the **top 50 most congested corridors in the state.**

Complex

Roadway
Network.

Multiple interchanges, exit and entrance ramps, and constrained right-of-way add to complex geometry through downtown San Antonio.

Major

Trade Route.

Heavy freight traffic mixes with increasing commuter traffic in our study area.

According to the Alamo Area Metropolitan Planning Organization, by 2035, there will be **over 600,000 more people** in the AAMPO area.

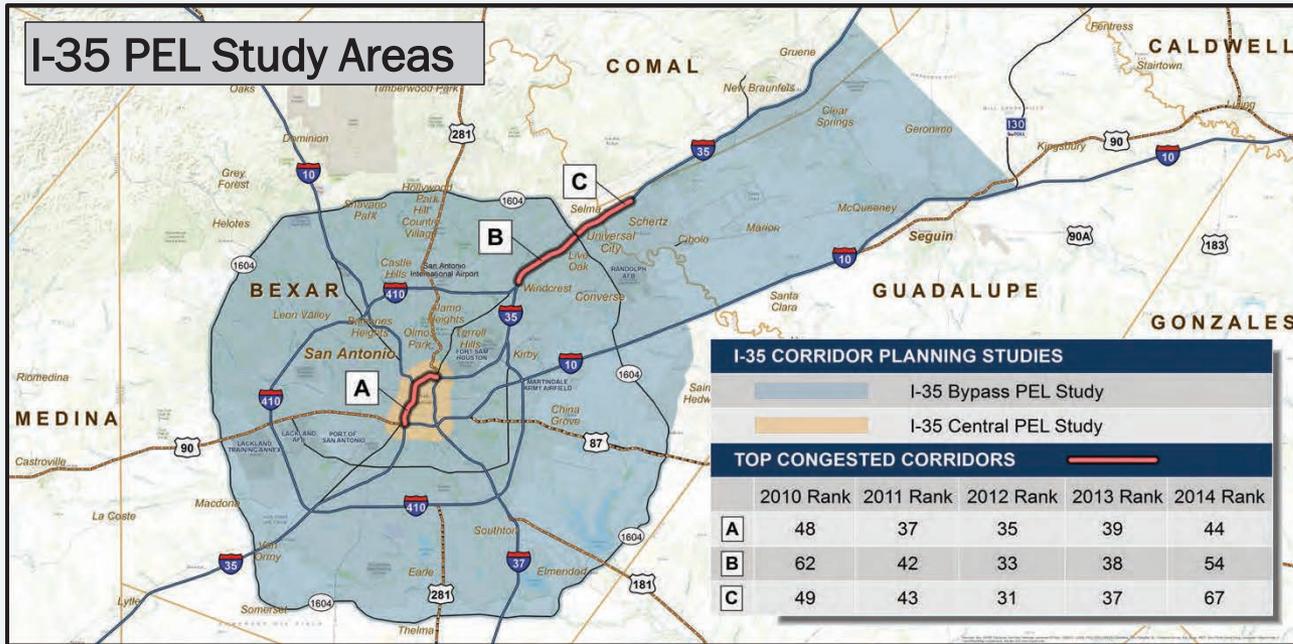




What is a Planning and Environmental Linkages Study?

A Planning and Environmental Linkages (PEL) study occurs early in the transportation project development process.

A PEL study helps identify travelers' current and future needs and travel patterns and can also identify potential projects to carry forward for further review, and possible funding for construction.





COMPLETED TASKS

- Collected study data.
- Engaged stakeholders and the public through:
 - two rounds of public workshops,
 - TxDOT and Federal Highway Administration (FHWA) conference,
 - PEL Study kickoff workshop,
 - Seguin Area Stakeholders Workshop,
 - community focus group meeting,
 - Study Advisory Committee meeting,
 - City of San Antonio stakeholder workshop, and
 - FHWA updates.
- Identified conceptual strategies to consider as potential project solutions (alternatives).
- Modeling travel demand.
- Conduct second Study Advisory Committee.

TASKS IN PROGRESS

- Conducting traffic operations studies.
- Creating draft alternatives based on conceptual strategies.
- Identifying and studying potential environmental impacts.
- Using screening and evaluation of draft alternatives to identify preliminary project alternatives to further consider.
- Conduct third round of public workshops to gather feedback on preliminary project alternatives.

NEXT STEPS

- Consider public and stakeholder input in refining preliminary project alternatives.
- Write and finalize PEL Study Report.

**PRESENT POTENTIAL PROJECT ALTERNATIVES
FOR FORMAL ENVIRONMENTAL STUDY**





Conceptual Strategies Overview

No Build Strategy

Travel Options/Transportations Systems Management/Intelligent Transportation Systems Strategy

Rail and Transit Strategies

Truck-Only Strategy

Connecting Arterial Improvements Strategy

Bottleneck Improvements Strategies for I-35 and I-410/I-10

Expansion Strategies for I-35, I-410/I-10, Loop 1604, and new location highway





TO/TSM/ITS Strategy

Travel Options (TO)

Programs which encourage people to travel at alternate times or with fewer vehicles.



Eastown.org



DART West End Station



News10.net

Transportation Systems Management (TSM)

Improves efficiency and reliability using incident management, signal coordinating, ramp metering, etc.



TTI

Inspired by:

- Public/Stakeholder Suggestions
- Major Investment Study
- Mobility 2035 Plan
- I-35 Northeast PEL

Intelligent Transportation Systems (ITS)

Advanced technologies such as real-time travel data and incident detection.



Houston TransStar Operations Center



TTI

PRELIMINARY
SUBJECT TO FURTHER STUDY





Rail/Transit Strategy

- Express Bus
- Park & Ride
- Light Rail
- Commuter Rail
- Intermodal
- Freight Improvements



viaprimo.com



Thetransportpolitic.com



Flickr.com



Squarespace.com

Inspired by:

- Public/Stakeholder Suggestions
- Mobility 2035 Plan
- My 35 Plan
- I-35 Northeast PEL



Cuhnews.com



Terragalleria.com

PRELIMINARY
SUBJECT TO FURTHER STUDY





Truck-Only Strategy

Dedicated lanes for trucks traveling long distances.

- Inspired by:
- Public/Stakeholder Suggestions
 - My 35 Plan
 - Applying Truck Lane Restrictions
 - I-35 Northeast PEL



Transportation.org



Moreproductivetucks.com



Usatoday.com



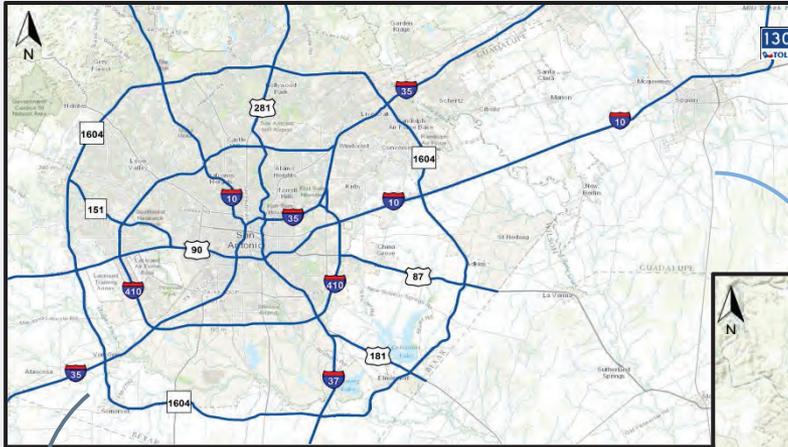
Managed Lanes Handbook, TTI

PRELIMINARY
SUBJECT TO FURTHER STUDY

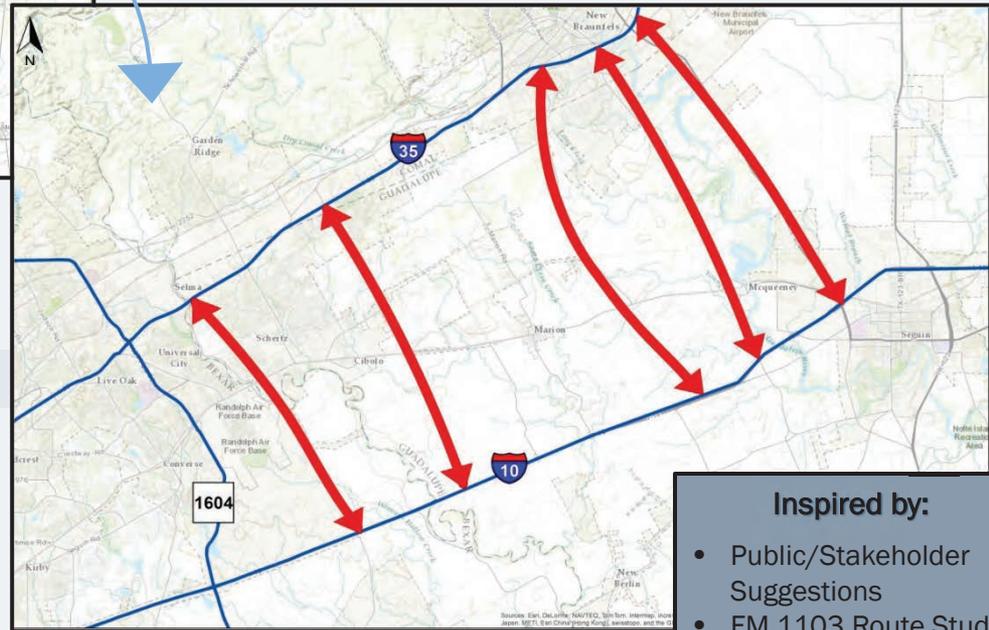




Connecting Arterial Improvements Strategy



Strategy to improve arterial roads connecting I-10 to I-35 northeast of San Antonio and I-35 to Loop 1604 in southwest San Antonio.



Inspired by:

- Public/Stakeholder Suggestions
- FM 1103 Route Study

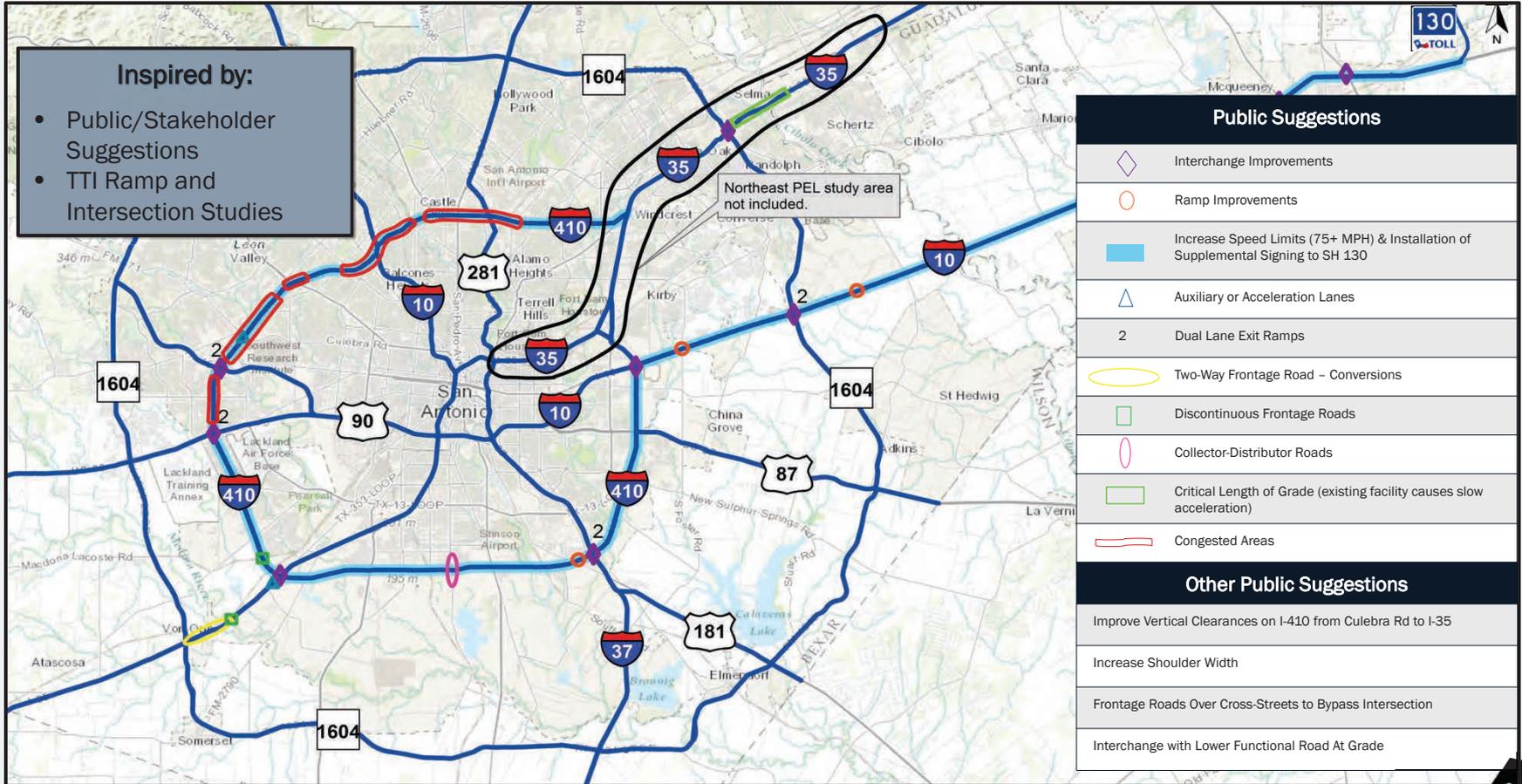
PRELIMINARY
SUBJECT TO FURTHER STUDY





Bottleneck Improvements Strategy

Improvements needed to reduce localized congestion.

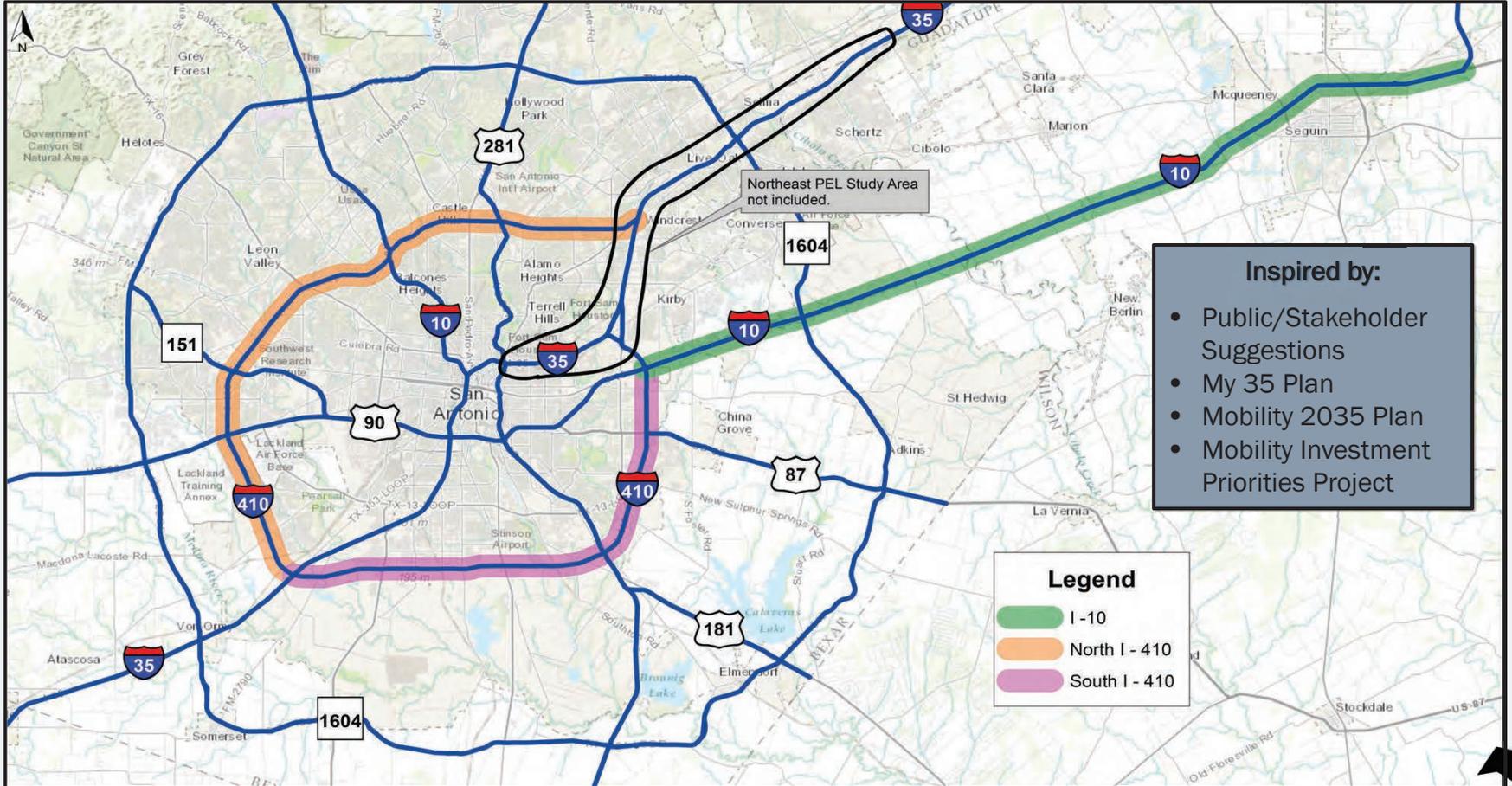


PRELIMINARY
SUBJECT TO FURTHER STUDY





Expansion of Parallel I-410/I-10 Facility Strategy Strategy to add lanes to I-410 and I-10



Inspired by:

- Public/Stakeholder Suggestions
- My 35 Plan
- Mobility 2035 Plan
- Mobility Investment Priorities Project

Legend

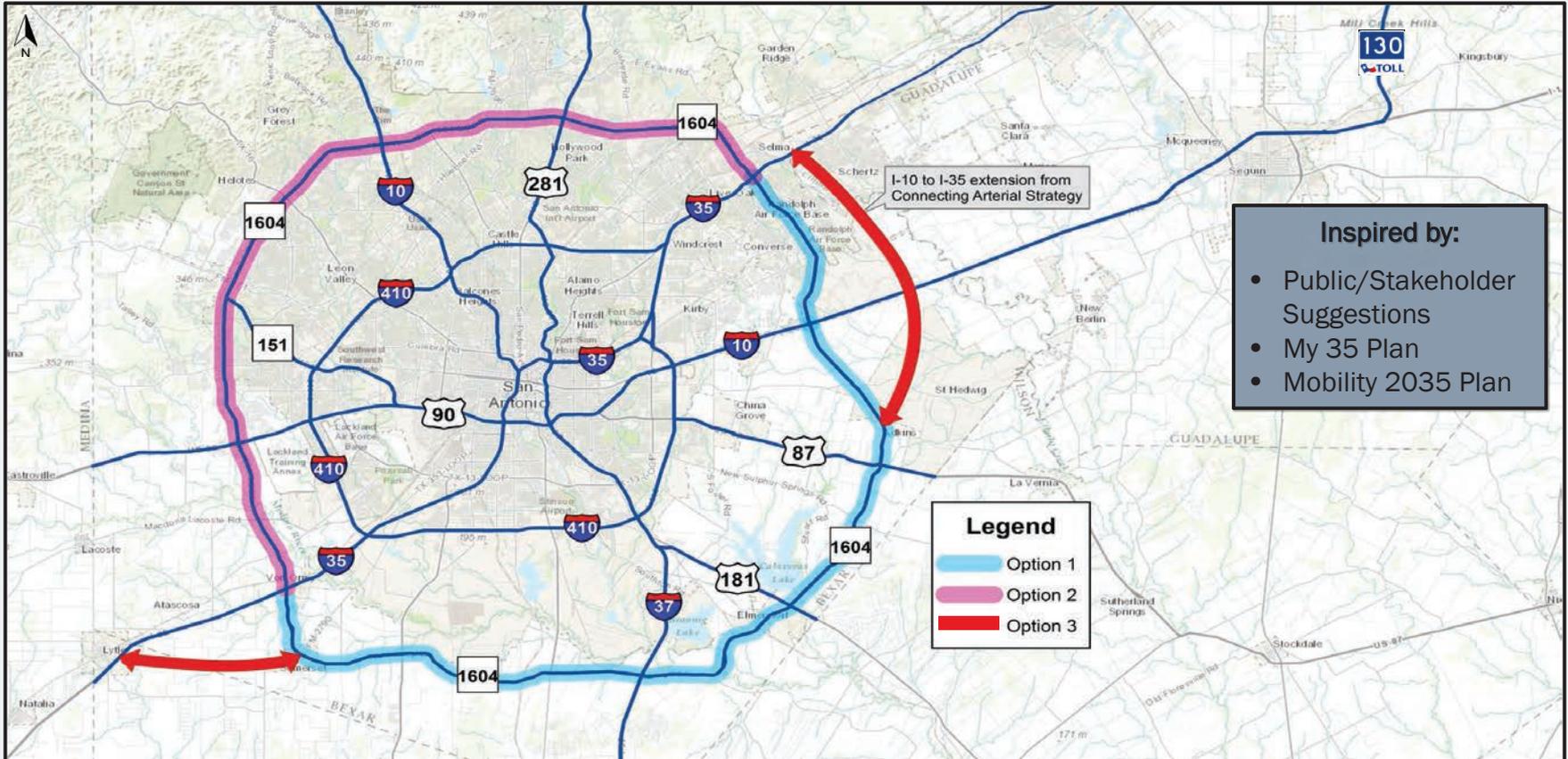
- █ I-10
- █ North I - 410
- █ South I - 410

PRELIMINARY
SUBJECT TO FURTHER STUDY





Expansion of Loop 1604/New Location Highway Strategy Strategy to expand 1604 and add a new highway



PRELIMINARY
SUBJECT TO FURTHER STUDY





What are Strategy Scenarios?

Scenarios match up and combine conceptual strategies that could be implemented together.

One example of combining strategies would be a scenario of rail, truck/ ITS, and transit strategies.

Why Strategy Scenarios?

Many of the conceptual strategies are complimentary, and work best when done together.

Using a combination of strategies versus a stand alone strategy can have greater improvements to congestion and traffic management.

Scenarios can build on one another and be done as funding becomes available.



PRELIMINARY
SUBJECT TO FURTHER STUDY





Strategy Scenarios Overview

A combination of strategies have been identified to further study in a formal environmental (NEPA) study. These combined scenarios include:

Scenario	Description
Scenario 0 - Current Plan	Implement Mobility 2035 Metropolitan Transportation Plan. No additional projects.
Scenario 1 - Travel Options	Combination of TO/TSM/ITS, Rail-Only, and Transit-Only strategies.
Scenario 2 - Arterials	Connecting Arterial Improvements strategy.
Scenario 3 - Interchanges	Major interchange improvements (derived from Bottleneck Improvements on I-10/I-410 strategy).
Scenario 4 - Access Upgrades	Ramp and acceleration lane improvements (derived from Bottleneck Improvements on I-10/I-410 strategy).
Scenario 5 - Strategic Scenario	Maximum mobility improvement possible with minimal added capacity. Combination of operational, modal, and management strategies from Scenarios 1, 2, 3, & 4.
Scenario 6 - I-410 East & I-10 East	Added capacity in I-410 & I-10 area in south and east San Antonio.
Scenario 6B - I-10, I-37, & I-410	Added capacity on I-10, I-37, & I-410 in the core of San Antonio.
Scenario 7 - I-410 West	Added capacity in I-410 area in west and north San Antonio.
Scenario 8 - Loop 1604 East	Added capacity in the Loop 1604 area in south and east San Antonio.
Scenario 9 - Loop 1604 West	Added capacity in the Loop 1604 area in west and north San Antonio.
Scenario 10 - Comprehensive Scenario	Comprised of all previous scenarios. Added capacity on both sides of both circumferential corridors in San Antonio area.

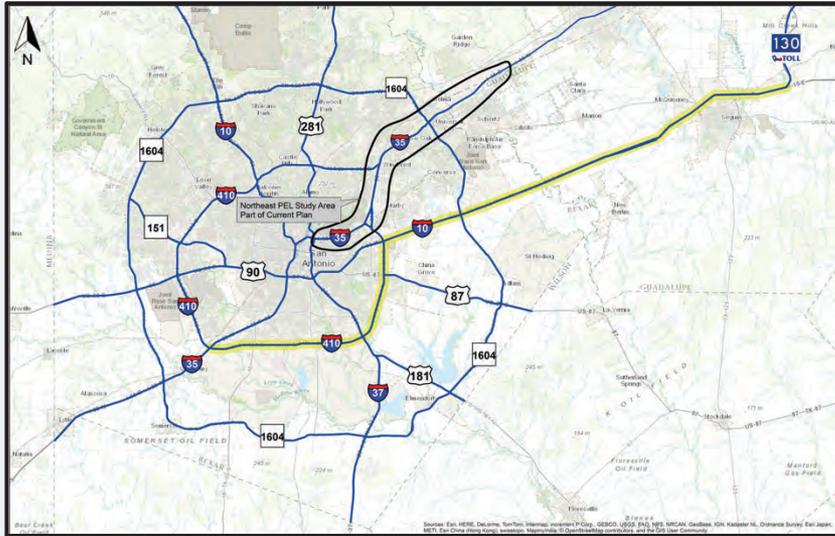
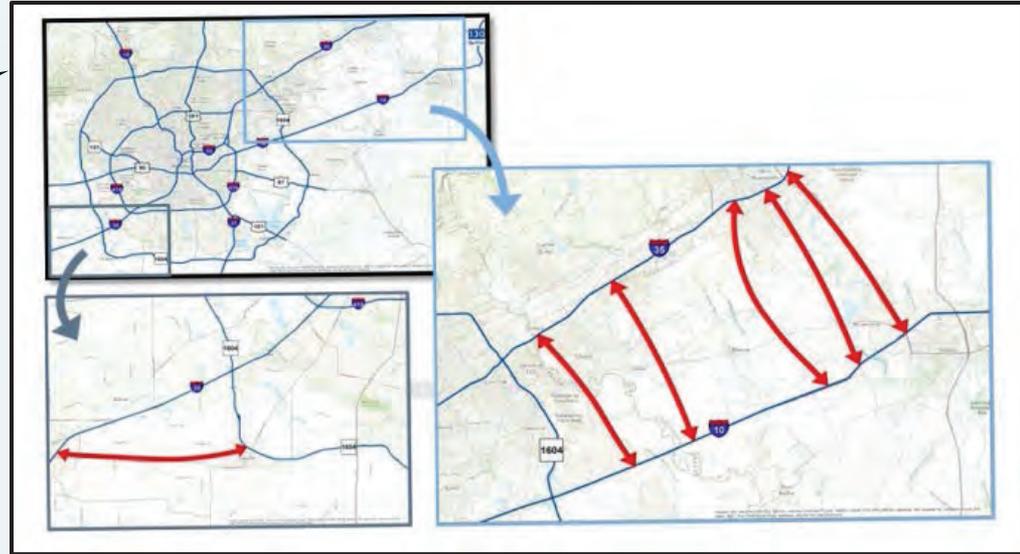
PRELIMINARY
SUBJECT TO FURTHER STUDY





Scenario 2 – Arterials

Connecting arterial improvements scenario



Scenario 6 – I-410 & I-10 East
Added capacity in I-410 & I-10 area in south and east San Antonio

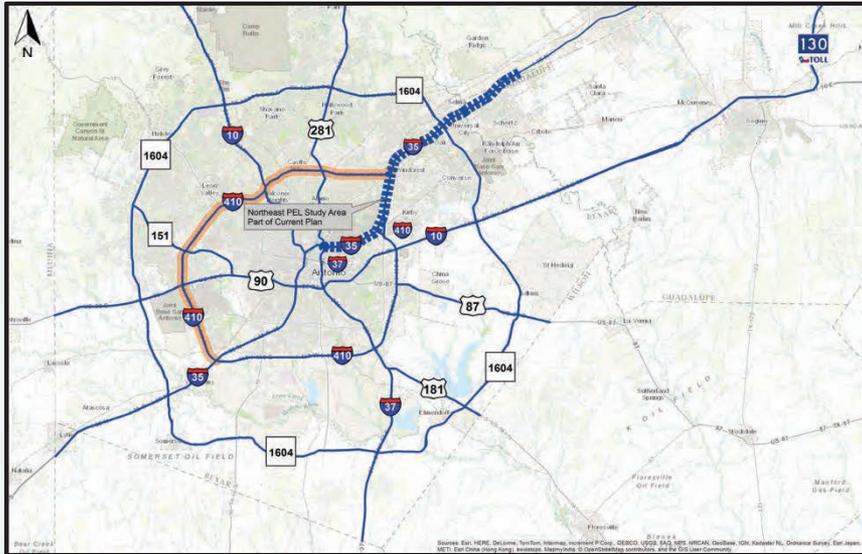
PRELIMINARY
SUBJECT TO FURTHER STUDY





Scenario 6B – I-10 , I-37 & I-410

Added capacity on I-10, I-37, and I-410 in the core of San Antonio



Scenario 7 – I-410 West

Added capacity in I-410 area in west and north San Antonio

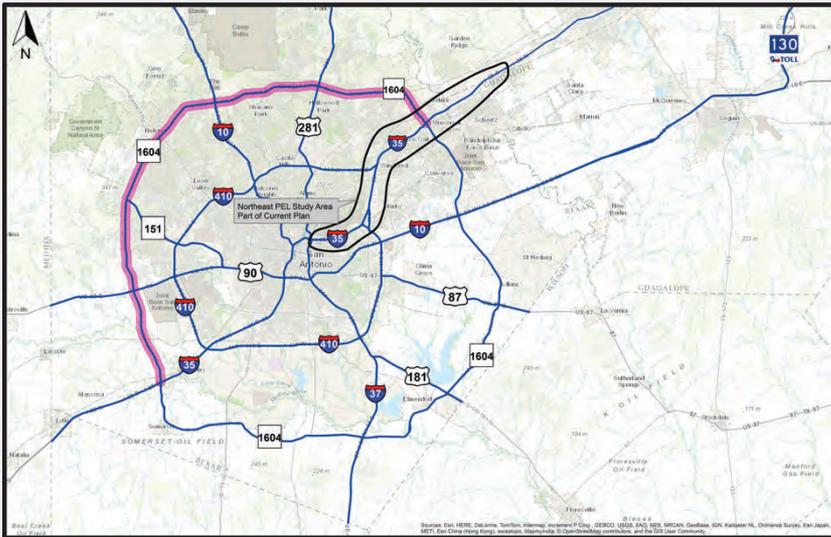
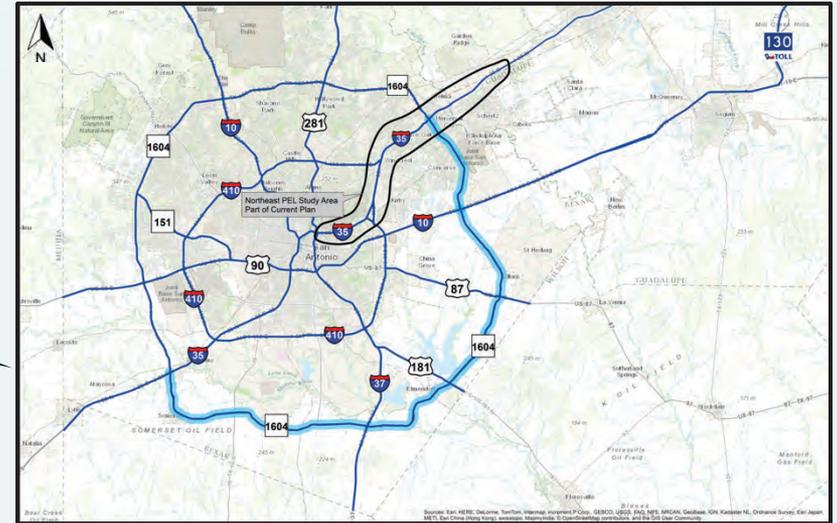
PRELIMINARY
SUBJECT TO FURTHER STUDY





Scenario 8 – Loop 1604 East

Added capacity in the Loop 1604 area in south and east San Antonio



Scenario 9 – Loop 1604 West

Added capacity in the Loop 1604 area in west and north San Antonio

PRELIMINARY
SUBJECT TO FURTHER STUDY





The I-35 Bypass PEL used data and research to evaluate:

- Community and Environment
- Economic Development
- Safety
- I-35 Mobility

Each scenario was evaluated on these four topics to assess how they measure up in each category.

A detailed cost analysis was not done for the scenarios. As the complexity of the scenario increases (e.g. adding lanes, building a new highway, transit, or rail facilities) costs also increase.





TEXAS DEPARTMENT OF TRANSPORTATION

ISSUES STUDIED

Scenario 1

Scenario 2

Scenario 3

Scenario 4

Scenario 5

Scenario 6

Scenario 6B

Scenario 7

Scenario 8

Scenario 9

Scenario 10

No Build

ENVIRONMENTAL

IMPACTS TO KARST INVERTEBRATE HABITAT ZONES 1 THRU 4

IMPACTS TO EDWARDS AQUIFER RECHARGE ZONE

IMPACTS TO T&E HABITAT (DOES NOT INCLUDE KARST INVERTEBRATE HABITAT)

IMPACTS TO 100-YEAR FLOODPLAINS

IMPACTS TO STREAMS, CREEKS, AND RIVERS

IMPACTS TO NATIONAL WETLAND INVENTORY WETLANDS

IMPACTS TO PONDS/LAKES

Too early to evaluate potential environmental impacts for this Scenario.

MED	MED	MED	MED	LOW	LOW	HIGH	MED	HIGH	HIGH
LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH
LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH
MED	MED	MED	HIGH	MED	MED	MED	HIGH	MED	HIGH
LOW	MED	MED	HIGH	MED	MED	MED	MED	MED	HIGH
LOW	LOW	MED	MED	HIGH	MED	LOW	MED	HIGH	HIGH
LOW	LOW	MED	MED	MED	LOW	LOW	HIGH	MED	HIGH

No build considers current transportation improvement plans and is the baseline against which all scenarios are compared.

LEGEND:

HIGH

LEAST DESIRABLE

MED

MORE DESIRABLE

LOW

MOST DESIRABLE

• MEASURES ARE AT LOCATIONS OF IMPROVEMENTS (LOW, MED, AND HIGH) AND ARE WEIGHED RELATIVE TO EACH OTHER





ISSUES STUDIED

Scenario 1

Scenario 2

Scenario 3

Scenario 4

Scenario 5

Scenario 6

Scenario 6B

Scenario 7

Scenario 8

Scenario 9

Scenario 10

No Build

ENVIRONMENTAL

IMPACTS TO CULTURAL RESOURCES (HISTORIC AND ARCHEOLOGICAL)

IMPACTS TO SCHOOLS, FAITH-BASED ORGANIZATIONS, CEMETERIES AND OTHER PUBLIC FACILITIES

IMPACTS TO PARKS, RECREATIONAL, REFUGES AND OTHER 4(F) PROPERTIES

IMPACTS DUE TO POTENTIAL COMMERCIAL/ NON-COMMERCIAL DISPLACEMENTS

IMPACTS DUE TO POTENTIAL RESIDENTIAL DISPLACEMENTS

IMPACTS TO MINORITY, LOW INCOME, OR LIMITED ENGLISH PROFICIENCY BLOCK GROUP

Too early to evaluate potential environmental impacts for this Scenario.

MED	LOW	LOW	MED	LOW	LOW	LOW	LOW	LOW	MED	HIGH
MED	LOW	LOW	MED	LOW	MED	HIGH	MED	MED	MED	HIGH
MED	LOW	LOW	MED	LOW	LOW	MED	LOW	LOW	LOW	HIGH
MED	LOW	LOW	MED	LOW	MED	HIGH	MED	LOW	LOW	HIGH
MED	LOW	LOW	MED	LOW	MED	HIGH	HIGH	MED	MED	HIGH
LOW	MED	MED	HIGH	MED	HIGH	MED	MED	MED	MED	HIGH

No build considers current transportation improvement plans and is the baseline against which all scenarios are compared.

LEGEND:



- MEASURES ARE AT LOCATIONS OF IMPROVEMENTS (LOW, MED, AND HIGH) AND ARE WEIGHED RELATIVE TO EACH OTHER





ISSUES STUDIED

Scenario 1

Scenario 2

Scenario 3

Scenario 4

Scenario 5

Scenario 6

Scenario 6B

Scenario 7

Scenario 8

Scenario 9

Scenario 10

No Build

ENVIRONMENTAL

IMPACTS TO AGRICULTURAL (FARMLAND/RANGELAND)

IMPACTS TO MILITARY

IMPACTS TO QUARRIES

IMPACTS TO RAILROAD RIGHT-OF-WAY

IMPACTS TO UNDEVELOPED LAND

Too early to evaluate potential environmental impacts for this Scenario.

MED	LOW	LOW	MED	LOW	LOW	LOW	LOW	HIGH	MED	HIGH
MED	LOW	LOW	MED	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH
LOW	LOW	MED	MED							
LOW	LOW	HIGH	HIGH							
LOW	HIGH	MED	MED	HIGH						

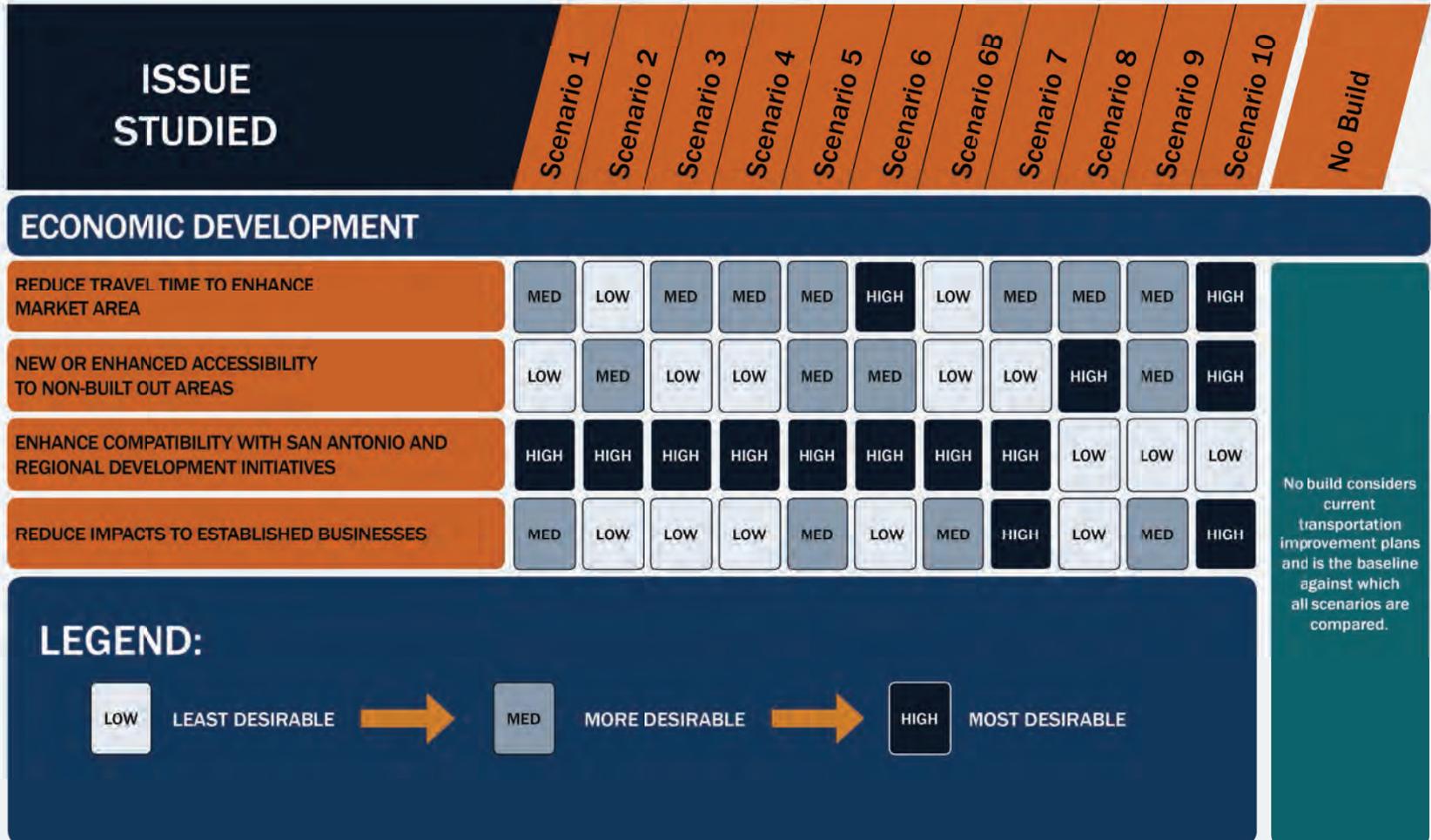
No build considers current transportation improvement plans and is the baseline against which all scenarios are compared.

LEGEND:



- MEASURES ARE AT LOCATIONS OF IMPROVEMENTS (LOW, MED, AND HIGH) AND ARE WEIGHED RELATIVE TO EACH OTHER







ISSUES STUDIED

Scenario 1

Scenario 2

Scenario 3

Scenario 4

Scenario 5

Scenario 6

Scenario 6B

Scenario 7

Scenario 8

Scenario 9

Scenario 10

No Build

SAFETY

REDUCE ACCIDENT POTENTIAL BY IMPROVING OPERATIONS

MED

LOW

MED

MED

HIGH

HIGH

MED

MED

HIGH

MED

HIGH

ENHANCE DRIVER EXPECTANCY (SIGNING, STRIPING, ROUTE CONTINUITY, ETC.)

MED

LOW

MED

LOW

MED

HIGH

MED

MED

HIGH

MED

HIGH

REDUCE PUBLIC SAFETY DELAYS (POLICE, FIRE, EMS)

LOW

LOW

MED

LOW

MED

HIGH

MED

MED

HIGH

MED

HIGH

No build considers current transportation improvement plans and is the baseline against which all scenarios are compared.

LEGEND:

LOW

LEAST DESIRABLE



MED

MORE DESIRABLE



HIGH

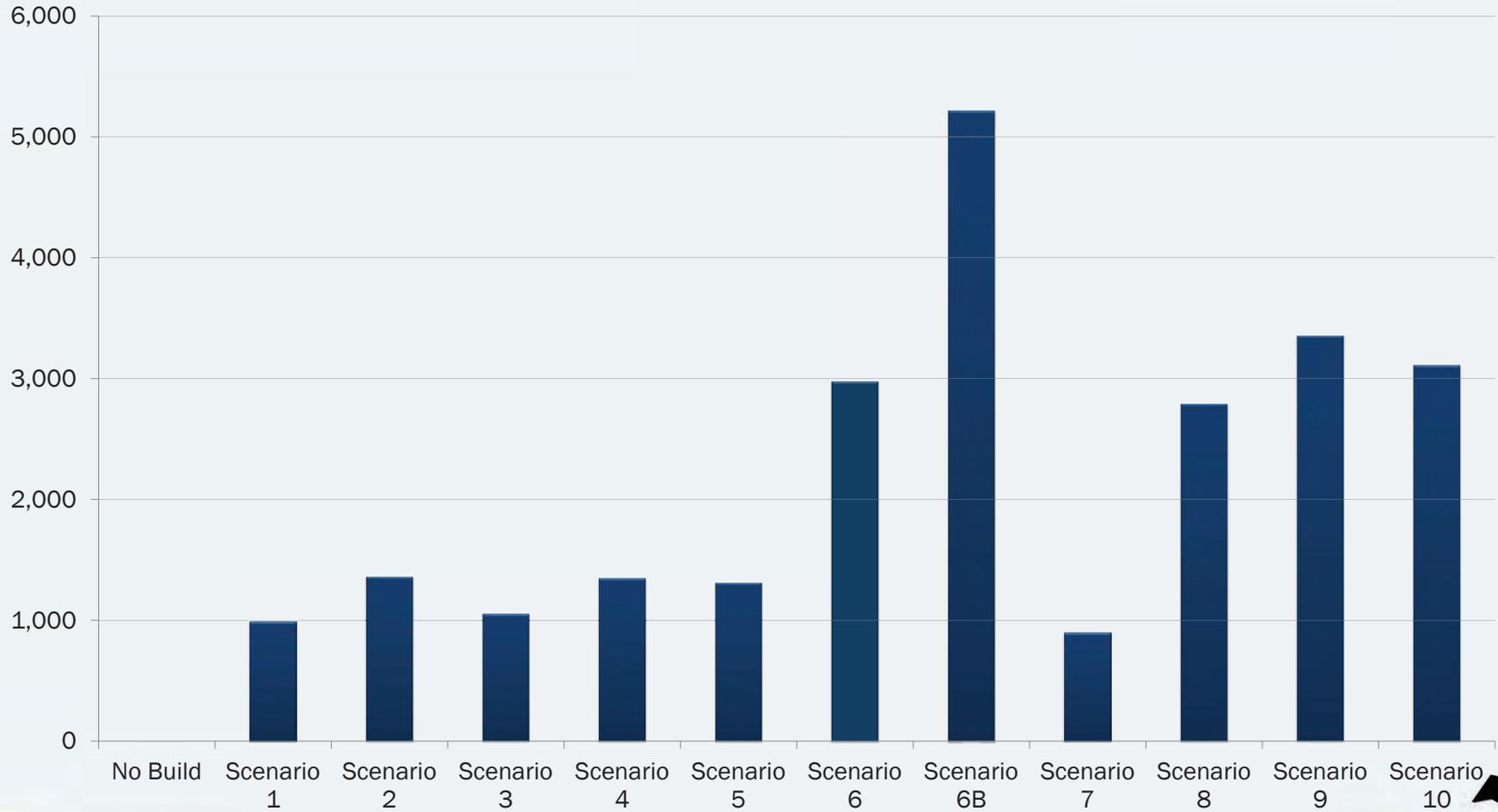
MOST DESIRABLE

- MEASURES ARE AT LOCATIONS OF IMPROVEMENTS (LOW, MED, AND HIGH) AND ARE WEIGHED RELATIVE TO EACH OTHER



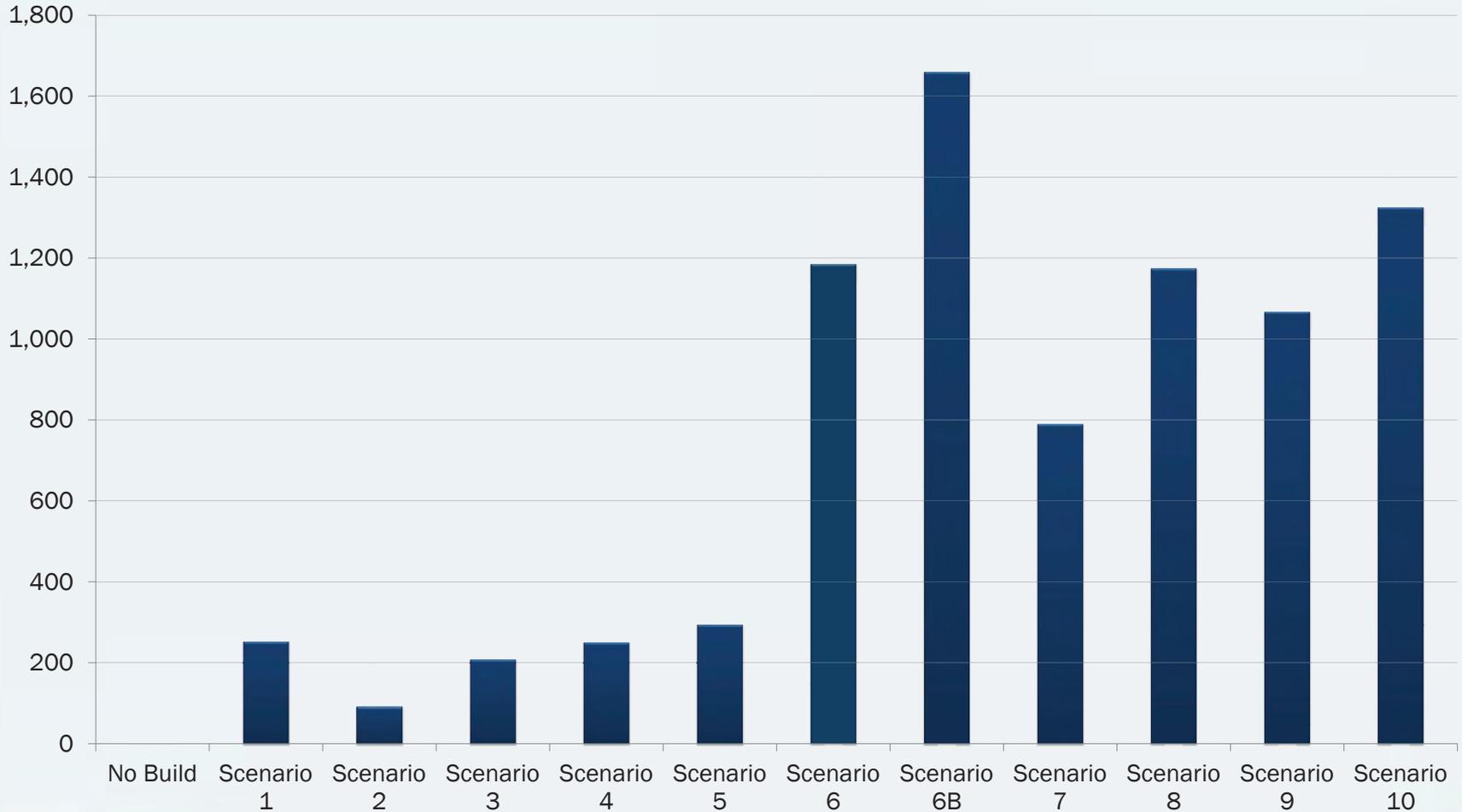


Reduction in Number of Vehicles on I-35



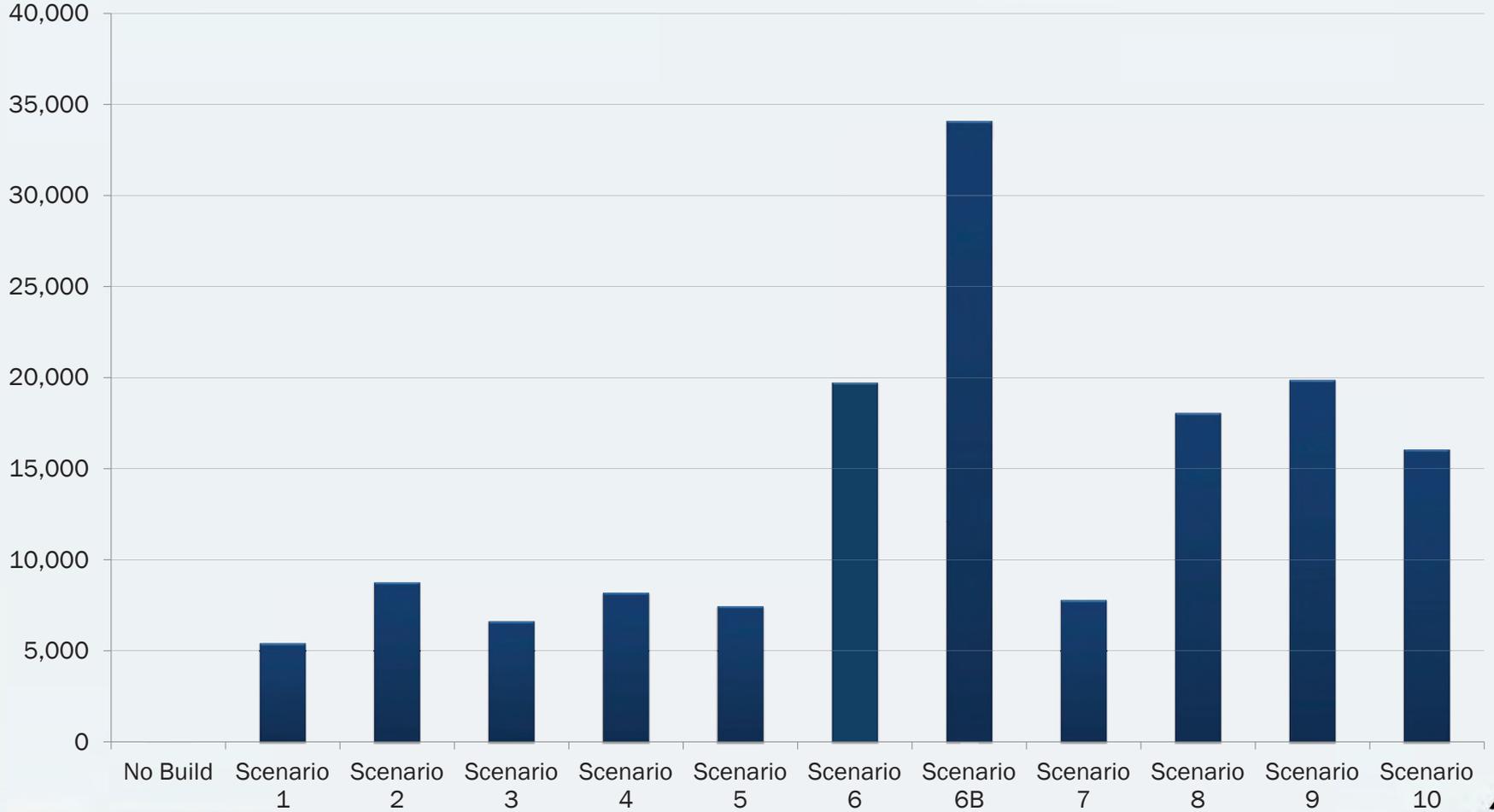


Reduction in Number of Vehicle Hours Traveled



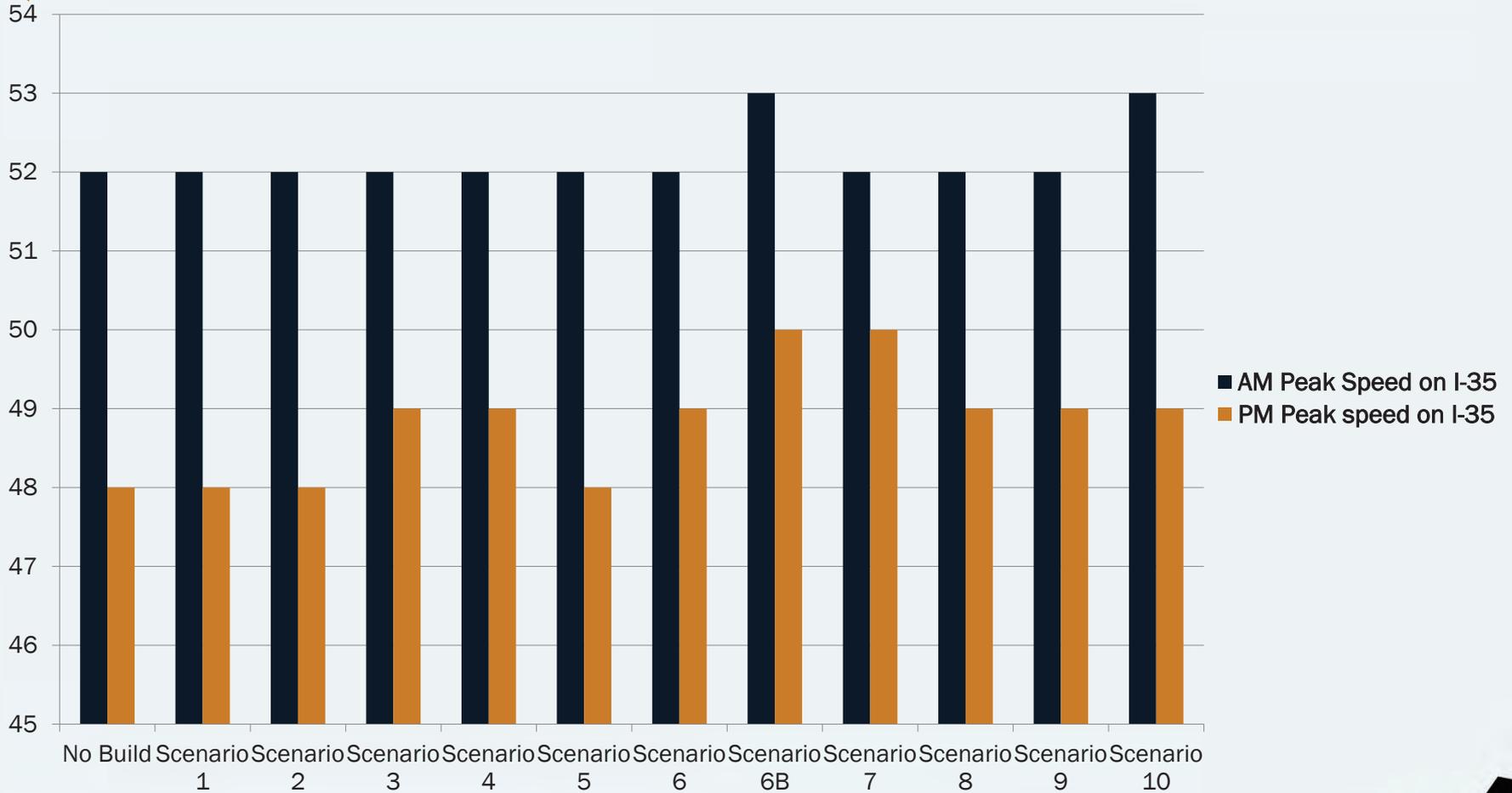


Reduction of Vehicle Miles Traveled





AM/PM Peak Speed





Where do we go from here?

Gather
Community
Feedback

Complete
Evaluation
of
Strategies

Develop
Final PEL
Study
Report

We're almost there!



Previous Studies

 ***Northeast (IH 35) Major Investment Study.*** San Antonio-Bexar County Metropolitan Planning Organization. October 1996.

 *Interstate Access Justification Analysis Interstate 35 from Zarzamora to Theo/Malone.* Texas Transportation Institute. April 2004.

 *San Antonio Northeast Corridor (IH 35): Value Priced Express Lanes Traffic Estimate.* Texas Transportation Institute. September 2005.

 ***FM 1103 Route Study.*** Texas Department of Transportation. November 2007.

 ***Loop 410-US 90 Interchange Analyses.*** Texas Department of Transportation. November 2008.

 ***“Mobility 2035” Plan.*** San Antonio-Bexar County Metropolitan Planning Organization. December 2009.

 *Freight Rail Corridors Reuse Study.* Texas Department of Transportation. 2010.

 ***SA 2020.*** 2010.

 *Loop 410 and SH 151 Interchange – Direct Connector Improvement Prioritization.* Texas Department of Transportation and Texas Transportation Institute. June 2011.

 ***My 35 Plan.*** I-35 Corridor Advisory Committee. August 2011.

 ***Mobility Investment Priorities Project: Early Recommendations Report.*** Texas Transportation Institute. February 2012.

 ***100 Most Congested Roadway Segments in Texas.*** Texas Department of Transportation. December 2012.

 *Applying Truck Lane Restriction Criteria to Freeways in San Antonio.* Texas Transportation Institute and Texas Department of Transportation. January 2013.

 ***IH 35 PEL (Northeast Corridor) Study.*** Texas Department of Transportation and Alamo Regional Mobility Authority. March 2013.

Summary of Previous Studies

Northeast I-35 Corridor 1996 Major Investment Study

The MIS was performed by TxDOT and VIA Metropolitan Transit and was sponsored by the SA-BC MPO. The study area extended along I-35 from I-37 to Loop 1604 and also included the section of road on I-410 that connects I-35 to I-10. It was determined that the available capacity of the corridor has been exceeded by travel demands resulting in congestion that delays travel, delivery of goods, and increases the likelihood of accidents.

The Locally Preferred Alternative involved major capacity improvements including six general purpose lanes and four barrier-separated lanes: an express lane and an HOV lane in each direction. Since the study, only minor operational improvements have been implemented due to funding limitations.

Loop 410 – US 90 Interchange Analyses (2008)

Analysis of this interchange was conducted by TTI in November 2008. The study explores various interchange improvements to alleviate congestion. The recommendations were to reverse the yielding situation allowing ramp traffic to access frontage roads without yielding and adding yield signs to frontage road traffic. Also, it was concluded that the option to construct a direct connector from US 90 E to Loop 410 N should be further considered.



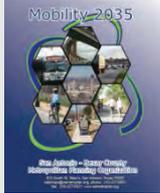
FM 1103 Route Study (2007)

The study was conducted by RJ RIVERA ASSOCIATES, Inc. in November 2007. The purpose was to determine the need and feasibility of improving the existing FM 1103 between IH-35 and FM 78 along with the extension of FM 1103 to IH-10. The recommendation was to widen the existing roadway and to extend FM 1103 west of Tolle Road before connecting with Stolte Road.



Summary of Previous Studies

“Mobility 2035” Plan (2009)



“Mobility 2035”, adopted December 2009, serves as the basic framework for the SA-BC MPO regional transportation planning efforts for the next twenty-five years. The Plan lists added capacity roadway projects expected to be operational between 2015 and 2035.

Projects directly affecting the IH-35 Bypass PEL Study Area include:

- Loop 1604 – FM 78 to Graytown Road
- Loop 1604 – FM 1535 (NW Military Highway) to I-10 E
- I-35 – US 281/I-37 near downtown to the county line

Congestion is expected to increase despite investments due to the increased need for improvements and limited funding.

SA 2020 (2010)

SA 2020 is a list of goals created by the people of San Antonio based on a collective community vision. The mission is to transform San Antonio by the year 2020 in eleven vision areas. The vision for the transportation system is to be “recognized as a model of efficiency and environmental sustainability”.

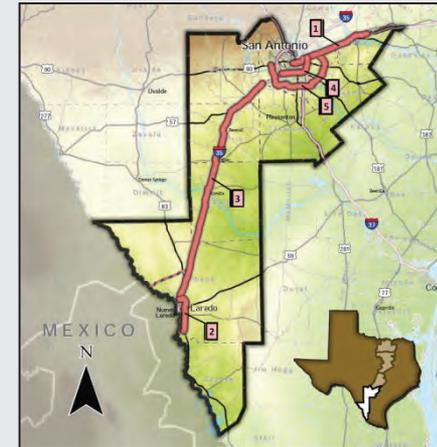
Goals include:

- Tripling public transportation ridership,
- 100% compliance with EPA standards for pollution emissions,
- Decreasing the number of accidents by 50%,
- Decreasing the travel time index,
- Increasing the number of complete streets, and
- Increasing new developments and infill projects.

My 35 Plan (2011)

The My 35 Plan efforts were developed by the I-35 Corridor Advisory Committee and four I-35 Segment Committees. These committees were formed by the Texas Transportation Commission to identify and propose improvements along the I-35 corridor using the concept of citizen planning committees.

Near-term recommendations within the study area include improvements along I-35 in northern San Antonio at the Loop 1604 interchange and the two I-410 interchanges, on the study area along I-410, I-10 and Loop 1604, and Loop 1604 South from US 90 to I-10. Long-term recommendations include passenger rail and improved freight rail between Laredo and Dallas/Fort Worth, the widening of I-35 from Williamson/Bell County line to I-10 in San Antonio, and the widening of I-35 from US 90 in San Antonio to the Atascosa County line.



Summary of Previous Studies

Mobility Investment Priorities Project – Early Recommendation Report (2012)

San Antonio is one of the four largest metropolitan areas in Texas that rank among the 15 fastest growing congested areas in the U.S. To ensure the areas are improved, TTI serves as the facilitator and coordinator of studies.

In 2010 the I-35 corridor ranked 48th and 49th in the “100 Most Congested Roadway Segments in Texas”. Using this information, TTI recommended the identification of alternative improvements to sections of I-410 southeast and southwest, I-10 east, and Loop 1604 northeast to be used as alternative routes to I-35. This serves as inspiration and justification of the I-35 Bypass PEL.



100 Most Congested Roadway Segments in Texas (2012)

TTI annually ranks the most congested corridors in Texas. This ranking reinforces the findings in previous studies concerning the congestion of I-35. The figure below shows the change in rank of the I-35 corridor.



IH-35 PEL (Northeast Corridor) Study (2013)

The Northeast Corridor Study was a collaborative effort between TxDOT and Alamo RMA and was completed in March 2013. The study area extends northeast of San Antonio at FM 1103/Hubertus Road in Schertz along I-35 toward downtown San Antonio. The issues addressed included increasing traffic demand and congestion, inadequate roadway capacity, safety and operational concerns and integration of I-35 with existing and planned transportation modes.

Alternatives for the area were screened and divided into two categories: adding roadway capacity to existing I-35 facility and adding capacity away from the existing I-35 facility. After evaluating the two categories the recommendation was made to add roadway capacity to the existing I-35 facility.

