



WELCOME

I-35 Corridor

Planning Studies





Two Studies- One Open House

- **I-35 Central PEL**

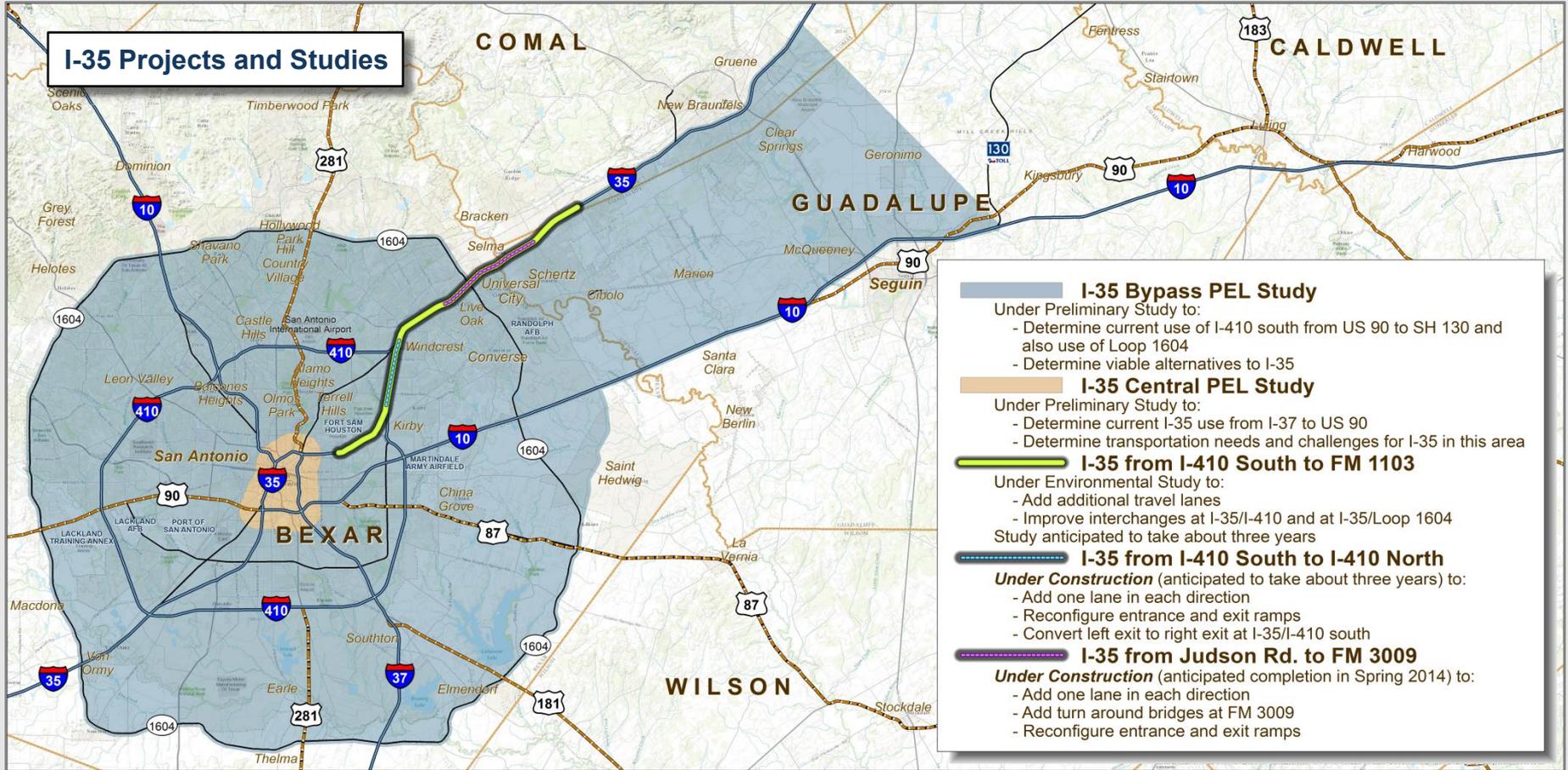
Downtown San Antonio with approximately one mile outside of I-10/US 90, I-35, and I-37/US 281

- **I-35 Bypass PEL**

Exploring alternative routes to I-35 Central in an effort to improve regional mobility



I-35 Projects and Studies



I-35 Bypass PEL Study

Under Preliminary Study to:

- Determine current use of I-410 south from US 90 to SH 130 and also use of Loop 1604
- Determine viable alternatives to I-35

I-35 Central PEL Study

Under Preliminary Study to:

- Determine current I-35 use from I-37 to US 90
- Determine transportation needs and challenges for I-35 in this area

I-35 from I-410 South to FM 1103

Under Environmental Study to:

- Add additional travel lanes
- Improve interchanges at I-35/I-410 and at I-35/Loop 1604

Study anticipated to take about three years

I-35 from I-410 South to I-410 North

Under Construction (anticipated to take about three years) to:

- Add one lane in each direction
- Reconfigure entrance and exit ramps
- Convert left exit to right exit at I-35/I-410 south

I-35 from Judson Rd. to FM 3009

Under Construction (anticipated completion in Spring 2014) to:

- Add one lane in each direction
- Add turn around bridges at FM 3009
- Reconfigure entrance and exit ramps





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”.** 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.

Note: Summaries are available for studies with the orange arrow. If you know of any additional studies we should review, please identify them on your comment card.





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.

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.



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.



"Mobility 2035" (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

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.

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 (Northeast Corridor) Study (2013)

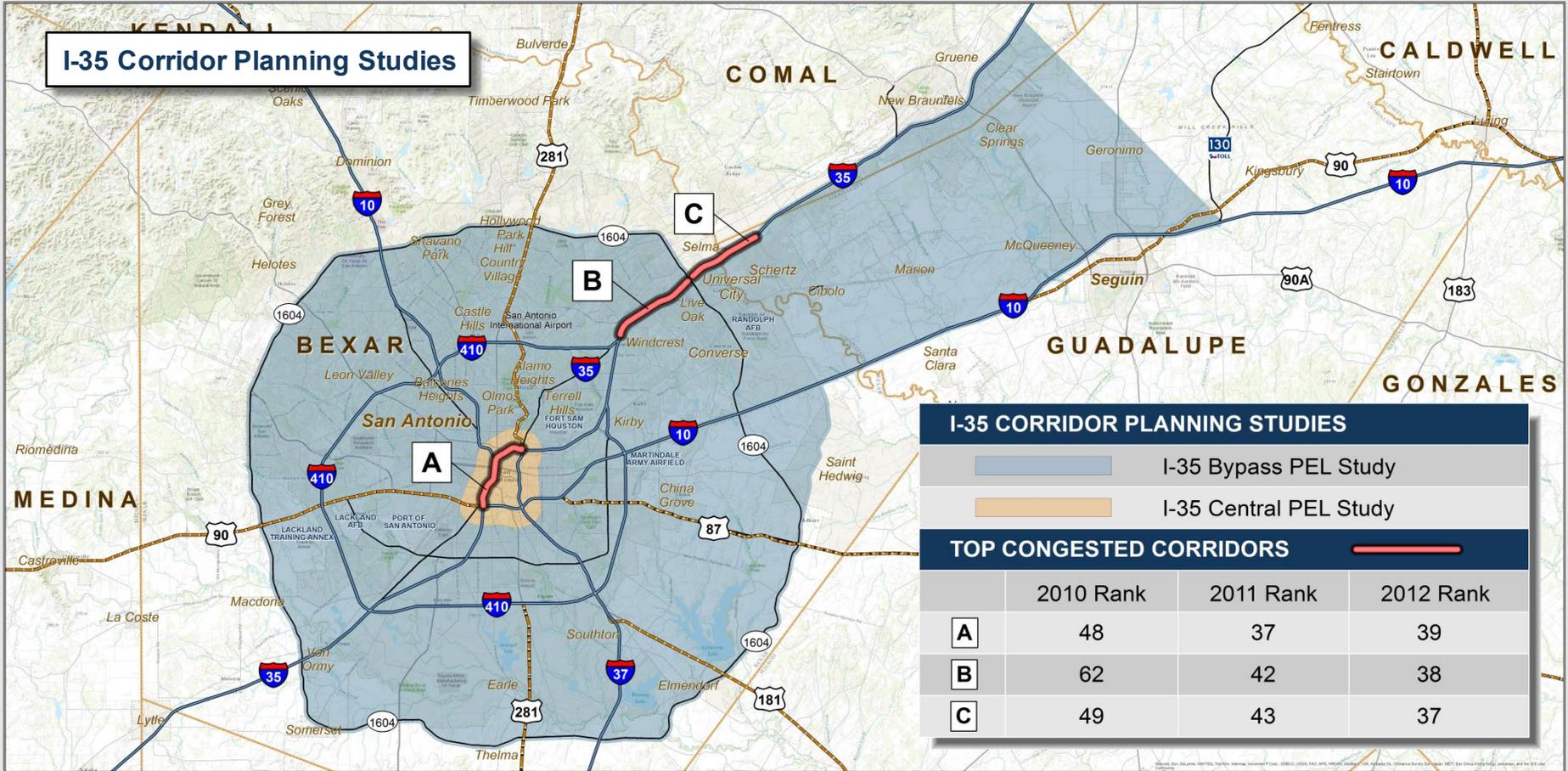
The Northeast Corridor Study was a collaborative effort between TxDOT and Alamo RMA and was completed in March 2013. The study area extends northeast of San Antonio at FM 1103/Hubertus Road in Schertz along I-35 toward downtown San Antonio. The issues addressed included increasing traffic demand and 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.





I-35 Corridor Planning Studies



I-35 CORRIDOR PLANNING STUDIES

- I-35 Bypass PEL Study
- I-35 Central PEL Study

TOP CONGESTED CORRIDORS

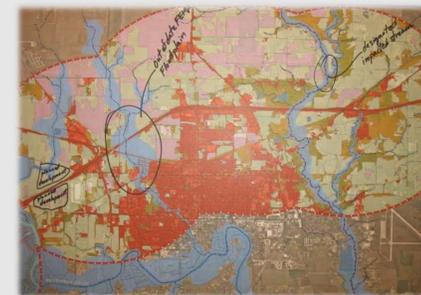
	2010 Rank	2011 Rank	2012 Rank
A	48	37	39
B	62	42	38
C	49	43	37





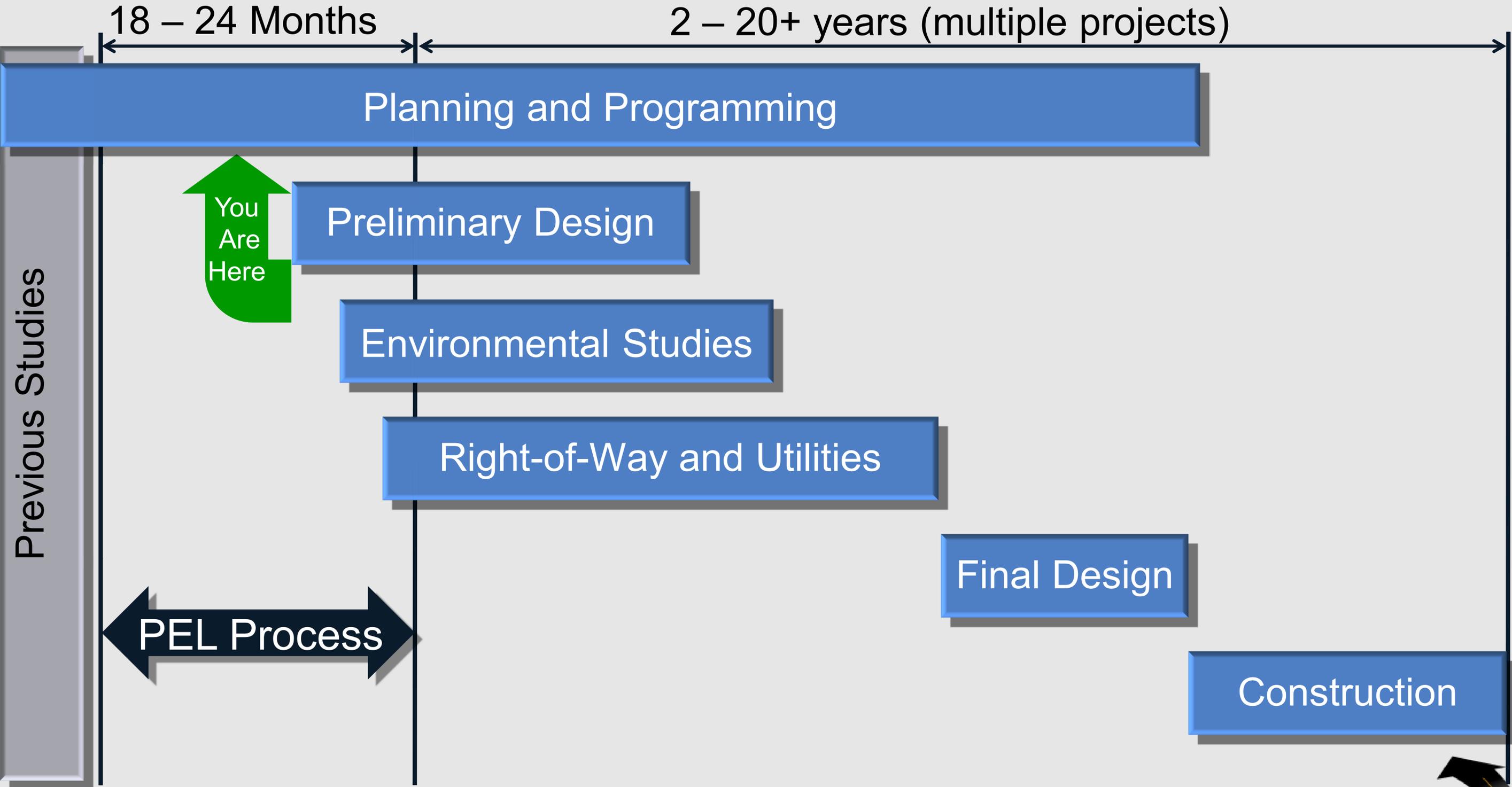
What is a PEL?

- A Planning and Environmental Linkages (PEL) study is a high level, early stage planning study.
- More focused than statewide, regional, or system level planning studies
 - More general than project-specific studies
 - Define study area including the general travel corridor and general mode(s) of transportation
 - Identify transportation problems
 - Define need, purpose, and goals for potential improvements
 - Develop potential solutions and alternatives
 - Screen solutions and alternatives
 - Identify and describe existing environmental setting and socioeconomic indicators, such as businesses, neighborhoods, parks, and utilities and also a description of socioeconomic conditions
 - Identify preliminary environmental impacts and environmental mitigation solutions





Project Development Process





TEXAS DEPARTMENT OF TRANSPORTATION

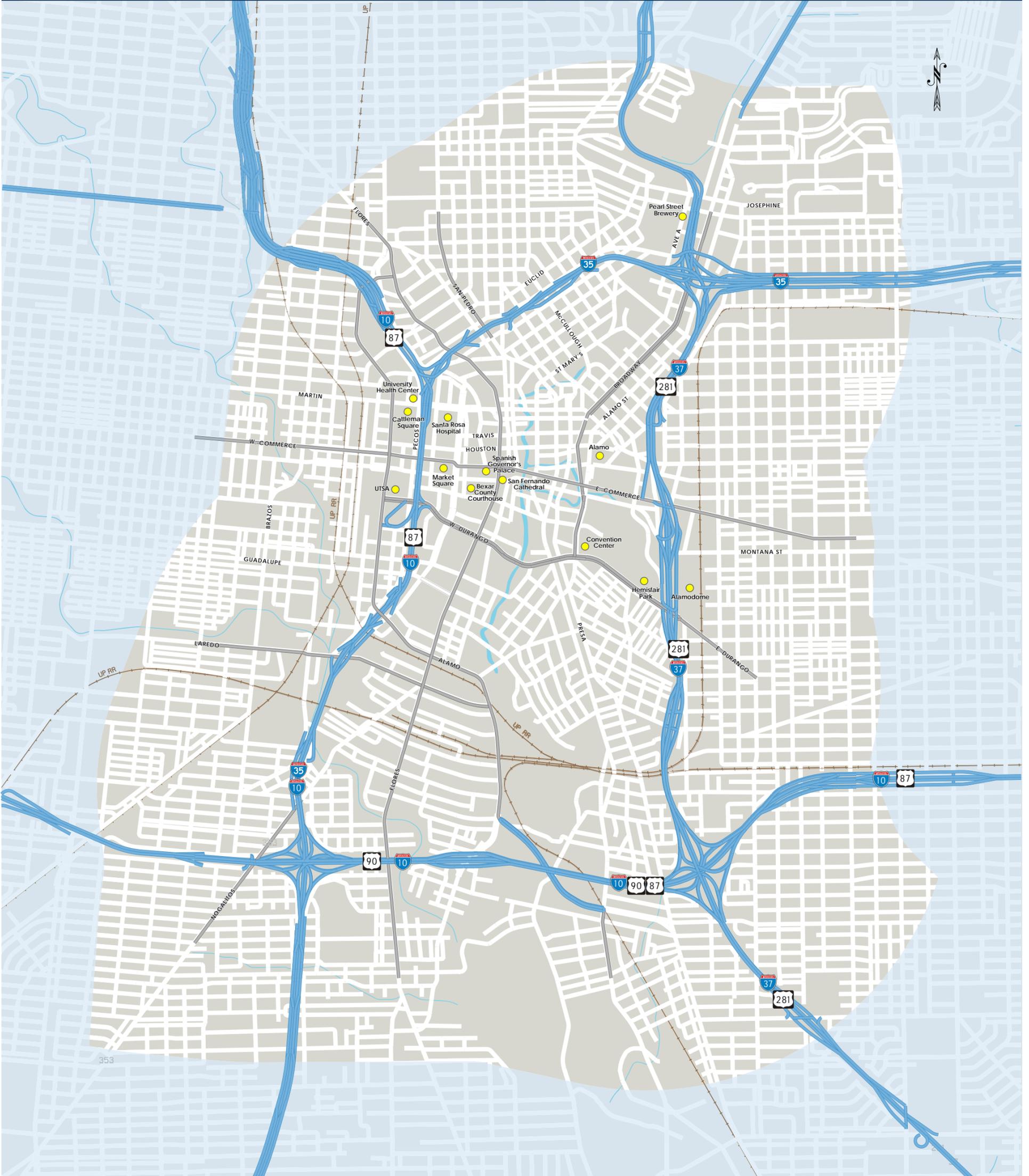
**I-35 CENTRAL
PLANNING AND ENVIRONMENTAL LINKAGES
STUDY**



TEXAS DEPARTMENT OF TRANSPORTATION

STUDY AREA

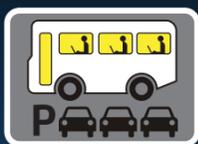
I-35 CENTRAL PLANNING AND ENVIRONMENTAL LINKAGES (PEL) STUDY



ITS



Real Time Travel Info



Park & Ride



Telecommute



Off-Peak Travel



Ride Share

Travel Smarter.
Reduce Traffic.



TEXAS DEPARTMENT OF TRANSPORTATION

I-35 PEL Historic Resources

Study Area
 National Register Property
 Historical Marker
 National Register District
 City Historic Landmark Site
 Cemetery
 City Historic District
 National Register District

Scale: 0 0.5 Miles / 0 0.5 Miles / 0 0.5 Miles
 North Arrow



1 Alamo Methodist Church	13 Calcasieu Building	24 Franklin, Thomas H., House	36 Robert E. Lee Hotel	48 Pershing House	60 Spanish Governor's Palace
2 Alamo National Bank	14 Carver, George Washington, Library and Auditorium	25 Garcia-Garza House	37 Majestic Theatre	49 Prospect Hill Missionary Baptist Church	61 St. Mark's Episcopal Church
3 Alamo National Bank Building	15 Central Trust Company Building	26 Goad Motor Company Building	38 Maverick-Carter	50 Saint Anthony Hotel	62 Staacke Brothers Building
4 The Alamo	16 Church of Nuestra Senora de la Candelaria y Guadalupe / San Fernando Cathedral	27 Guenther, Carl Hilmar, House	39 Navarick-Carter House	51 San Antonio Casino Club Building	63 Stevens Building
5 Aztec Theater	17 City of San Antonio Municipal Auditorium	28 Gunter Hotel	40 Meerscheidt, Otto, House	52 San Antonio Drug Company	64 The Toltec
6 Barnes-Laird House	18 City Public Service Company Building	29 Half, A. H., House	41 Menger Soap Works	53 San Antonio Loan and Trust Building	65 Thiele House and Thiele Cottage
7 Barr Building	19 Clegg, L. B., House	30 The Havana	42 Merchants Ice and Cold Storage Company	54 San Antonio US Post Office and Courthouse	66 Uhl, Gustav, House and Store
8 Bexar County Courthouse	20 Elmdorf, Emil, House	31 Hays Street Bridge	43 Morrison, William J., Jr., House	55 San Antonio Water Works Pump Station No. 2	67 Ursuline Academy
9 Bonham, James Butler, Elementary School	21 The Fairmount Hotel	32 Heidgen, Joanna and Anna, House	44 Navarro, Jose Antonio, Elementary School	56 Schroeder-Yturri House	68 Vogel Belt Complex
10 Brady Building--Empire Theater	22 First National Bank of San Antonio	33 Heimann Building / West End Drug Store	45 Navarro, Jose Antonio, House Complex	57 Scottish Rite Cathedral	69 Wright, L. T., House
11 Builders Exchange Building	23 Fourth Ward School	34 International & Great Northern Railroad Passenger Station	46 Old Lone Star Brewery	58 Smith--Young Tower	70 Ximenes Chapel
12 Burns Building		35 Jacala Restaurant	47 Old Lone Star Brewery (Boundary Increase)	59 Southern Pacific Railroad Passenger Station	71 Yturri--Edmunds House

HISTORIC RESOURCES



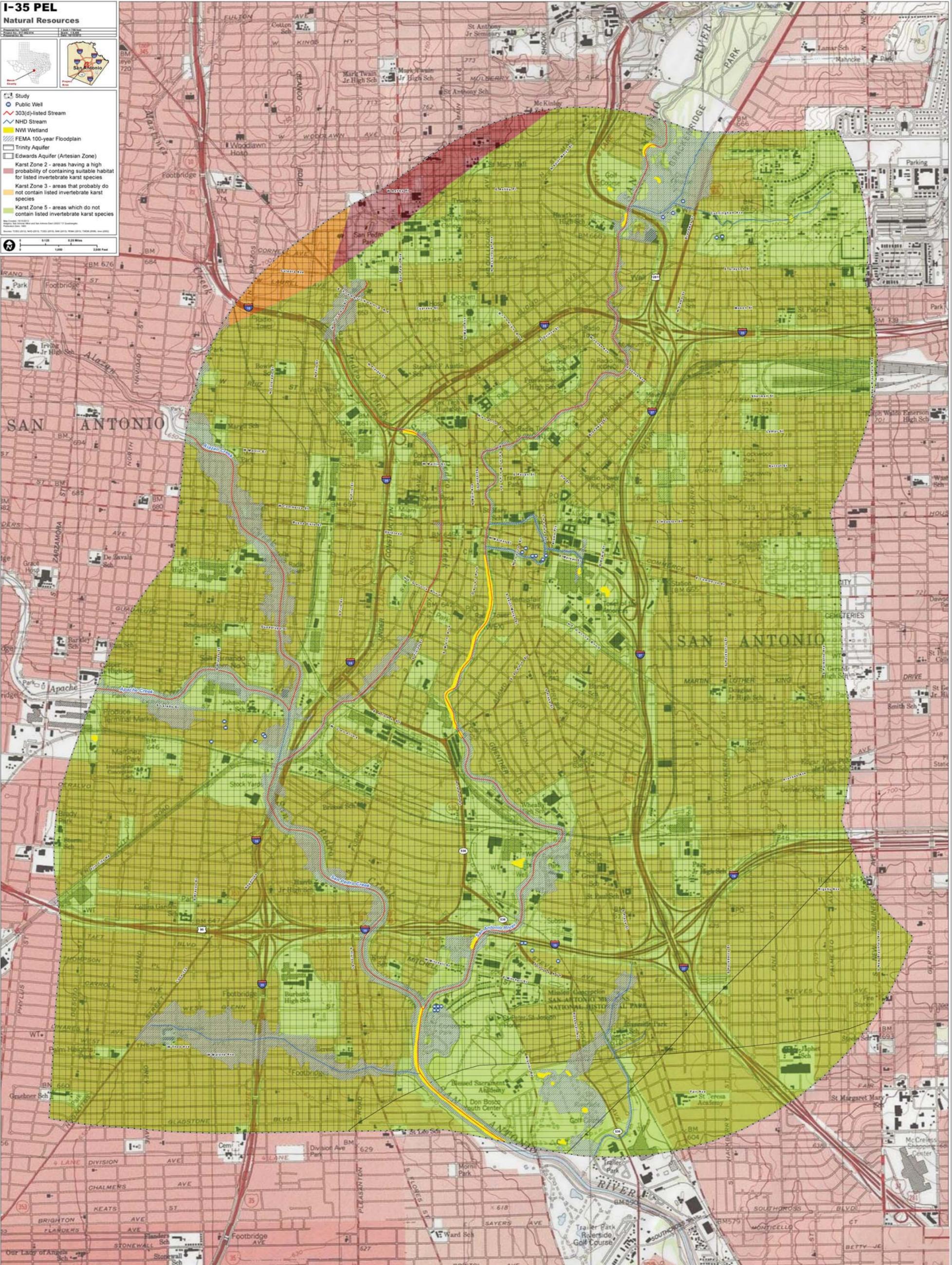
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I-35 PEL
Natural Resources

Source: 2002
Scale: 1:50,000

- Study
- Public Well
- 303(d)-listed Stream
- NHD Stream
- NWI Wetland
- FEMA 100-year Floodplain
- Trinity Aquifer
- Edwards Aquifer (Artesian Zone)
- Karst Zone 2 - areas having a high probability of containing suitable habitat for listed invertebrate karst species
- Karst Zone 3 - areas that probably do not contain listed invertebrate karst species
- Karst Zone 5 - areas which do not contain listed invertebrate karst species

Scale: 0 0.125 0.25 0.5 Miles
0 0.25 0.5 1.0 Kilometers



NATURAL RESOURCES



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I-35 PEL Human Environment

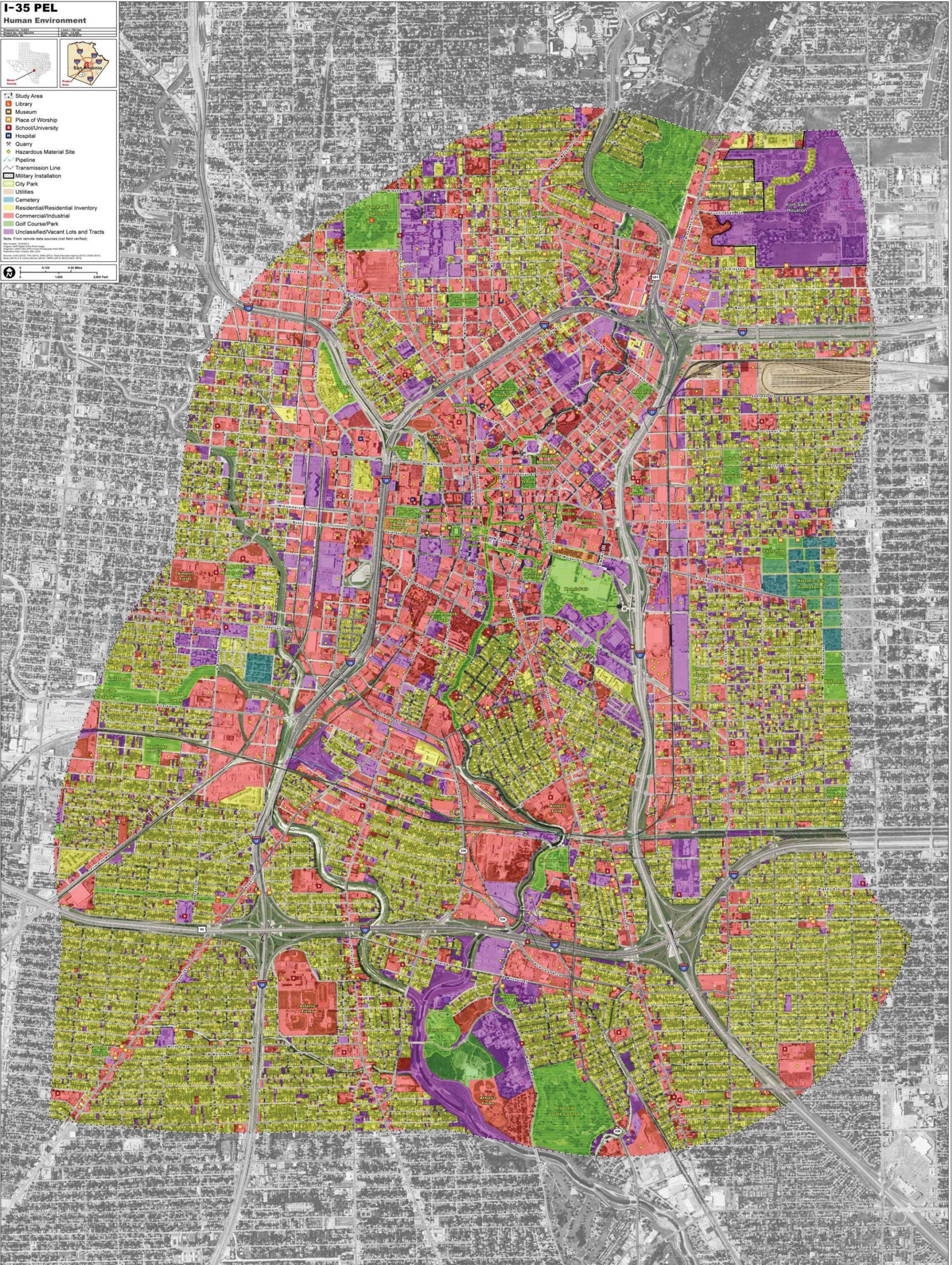
Revised: 2007
Scale: 1:25,000



- Study Area
- Library
- Museum
- Place of Worship
- School/University
- Hospital
- Quarry
- Hazardous Material Site
- Pipeline
- Transmission Line
- Military Installation
- City Park
- Utilities
- Cemetery
- Residential/Residential Inventory
- Commercial/Industrial
- Golf Course/Park
- Unclassified/Vacant Lots and Tracts

Note: From remote data sources (not field verified)

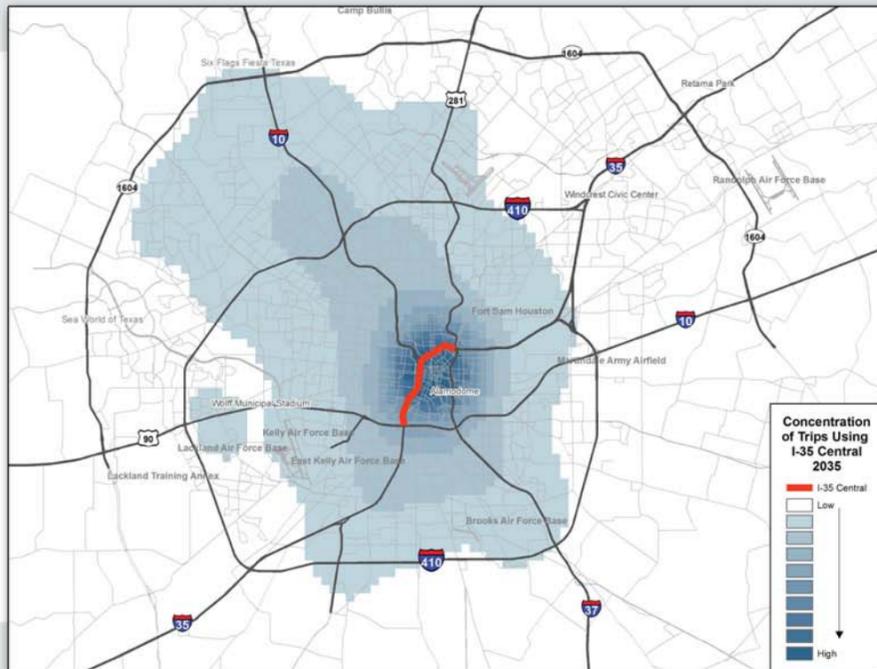
Map Scale: 0 0.25 0.50 Miles
0 1,000 2,000 Feet



HUMAN ENVIRONMENT

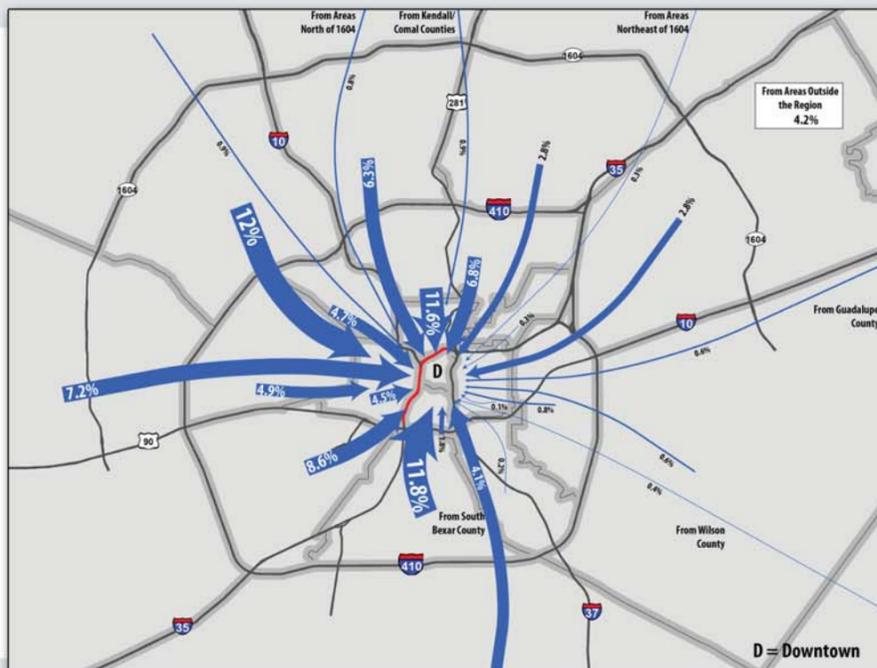


Where is I-35 Central Traffic Going?



Concentration of trips that use I-35 Central (Year 2035)

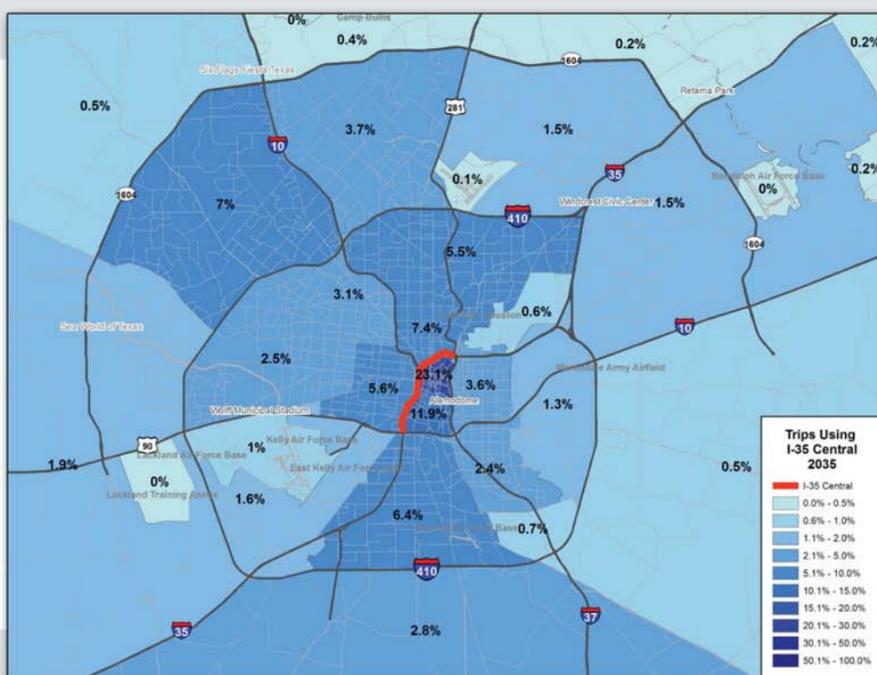
Highest proportion of trips originate and are destined around the downtown and along I-10 West.



Percent of trips going downtown that use I-35 Central (Year 2035)

Proportion of Downtown Destined Trips that use I-35 between I-37 and US 90.

25% of trips from areas directly north and south
 25% of trips from areas along I-10 West
 25% of trips from areas along US 90 West



Number of trips that use I-35 Central by Region Sector (Year 2035)

Proportion of trips that use I-35 Central.

Largest proportion of trips generated in the region are on the west side.



What Happens if Nothing is Done?



Highest concentration of congestion on surrounding freeways.

Most severe congestion along I-35 and I-10 approaching from the northwest.

Cross street congestion in close proximity to freeways:

- Alamo Street
- Buena Vista Street
- Cesar Chavez Blvd.
- Martin Street
- San Pedro Avenue



I-35 PEL

CONCEPTUAL STRATEGIES

No Build

No improvements are made in this scenario.

Travel Options

*Travel Options offer just that: **options**- to drivers that can help to reduce traffic on our roads. Think Ride Sharing, Off-Peak Travel, or ITS, to name a few.*

Connecting Arterial Improvements

Improved Signal Timing and Intersection Upgrades

Capacity is increased by building elevated sections above existing roadway, or by tunneling under.

Added Capacity/Expansion of I-35

Truck-Only Lanes

Operational Improvements

Re-designation of I-35

An option that will 're-designate' I-35 from a primary through-route for traffic, making it more of a local/business route for commuters and Central San Antonio-bound traffic.

RAIL

Multi-modal connectivity

HOV/TRANSIT



TRAVEL OPTIONS



There are many minor improvements, generally within the existing right-of-way, that can enable the existing system to operate more efficiently and safely.

Transportation System Management

Improved Signing

Advance guide signing can help separate local traffic from through traffic.



Other improvements might include:

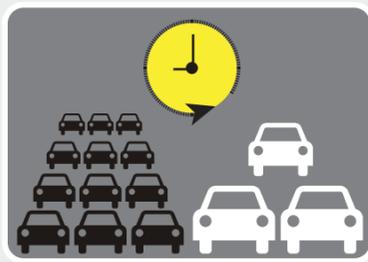
Ramp Modifications

Geometric Improvements

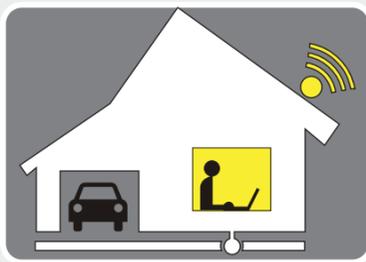
Auxiliary Lane Additions

Traffic Demand Management

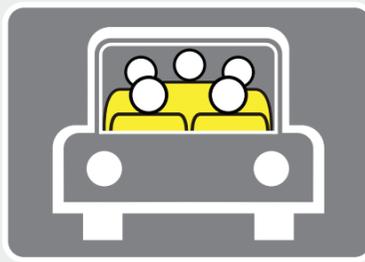
Traffic Demand Management is the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles, or to redistribute this demand in space and time.



Off-Peak Travel



Telecommuting



Ride Sharing

Downtown employer-based programs may include Commute Programs, In-House Ride-Matching, Transit Pass Subsidies, or Alternative Work Hours.

Intelligent Transportation Systems (ITS) focuses on advanced technologies that enable drivers to operate vehicles with greater knowledge about existing traffic conditions, e.g., during lane closures or unplanned incidents.

Intelligent Transportation Systems



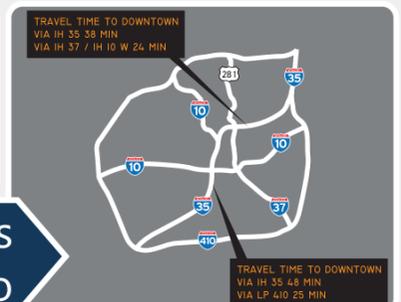
Cameras monitor traffic conditions



Built-in navigation system alerts



Advance Message Signs and Real Time Travel Info





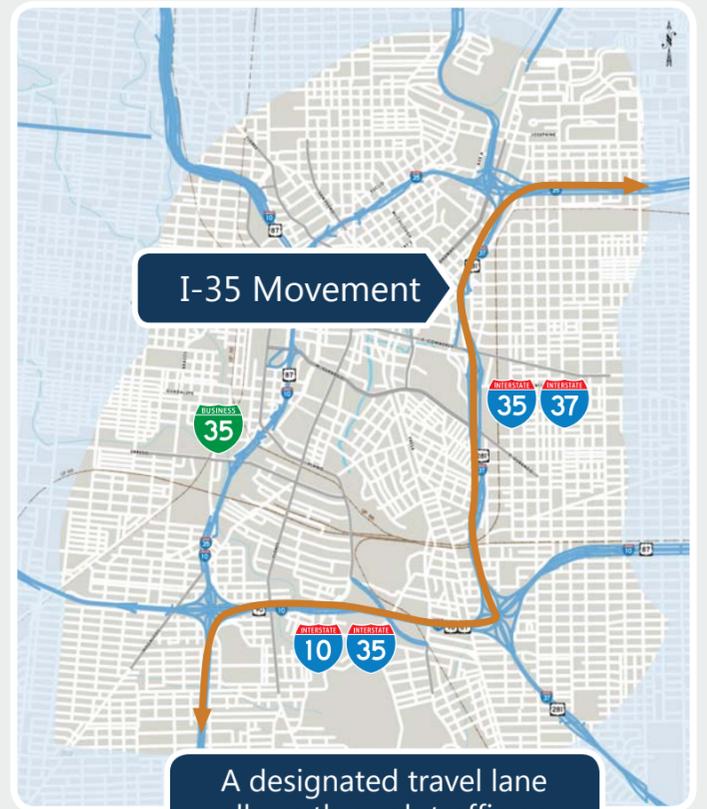
ReDESIGNATION



With the changes to land use and overall corridor function, the I-35 corridor could be 're-designated' as a local or business route rather than a corridor used as a through-route. Through the improvements identified in this study, I-35 Central may evolve from a "through" facility to a "local or alternate" facility.

How does a "Re-Designation" Alternative work?

- 1 Re-designate I-37 (north of I-10 to I-35) 
- 2 Create a dual I-10 and I-35 designation for east-west traffic south of downtown 
- 3 Separate local traffic from through movements 
- 4 Improve interchanges to accommodate continuous movement at higher speed 



These alternatives can result in improvements in corridor operation.

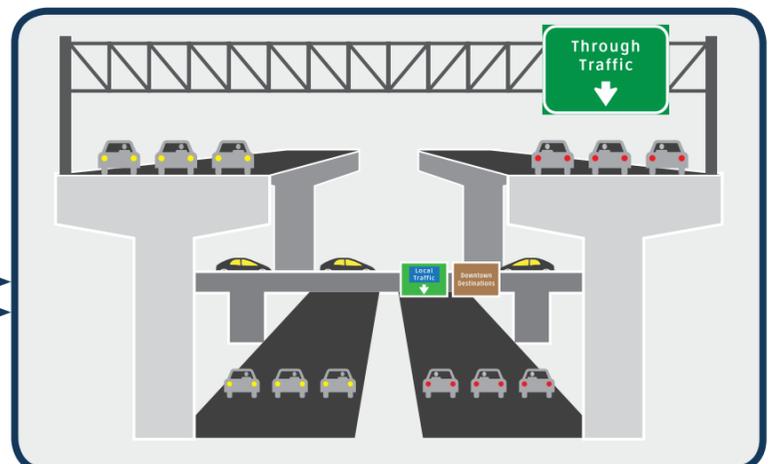
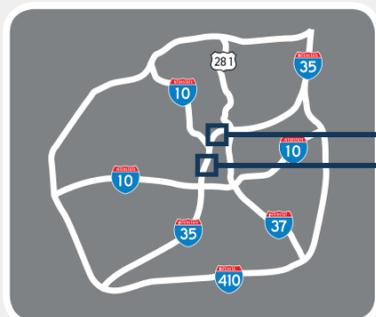
Reduce travel time through San Antonio

Continuous I-35 and I-10 movements with appropriate access

Minimize weaving segments

Upper & Lower Decks

Further separate traffic by directing through traffic to the upper deck and local traffic to the lower deck.

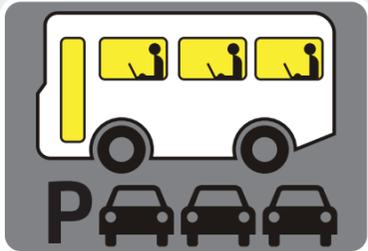




HOV/TRANSIT

Park & Ride

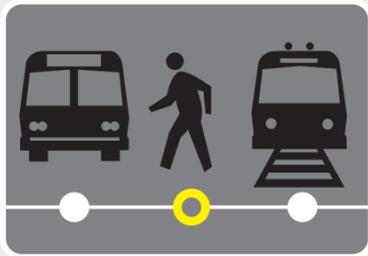
Park & Ride (or incentive parking) facilities provide connections to public transit that allow commuters and other people headed downtown to leave their vehicles and transfer to a bus or carpool for the remainder of the journey.



8 Number of Park & Rides currently available to San Antonio Commuters.

Park & Rides are used by commuters going to work, by other riders transferring from one route to another, and for special event services.

- | | |
|----------------|------------|
| Crossroads | University |
| Ellis Alley | Parkhills |
| Elmendorf | Blossom |
| Randolph Blvd. | SeaWorld |



Transit Centers

Transit Centers often offer enclosed waiting areas with restrooms, vending machines and staff to assist riders. Customers using transit systems converge at these 'hubs' to take advantage of route-to-route transfers and access to more destinations.

Bicycle storage and enhanced transit information such as real-time departure signs are also usually found at Transit Centers.

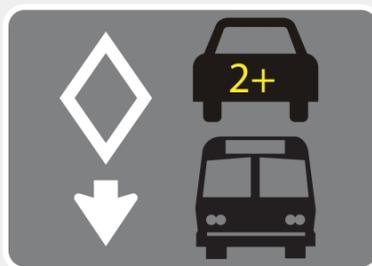
- | |
|----------------------------|
| Ingram |
| Kel-Lac |
| Madla Transit Center |
| South Texas Medical Center |
| Northstar Transit Center |

5 Number of Transit Centers currently available to San Antonio Commuters.

A combination of possible HOV lanes could feed downtown San Antonio, thereby decreasing travel times on multiple routes and offering a more reliable trip time downtown.

HOV/Managed Lanes

A managed lane, or high-occupancy vehicle (HOV) lane, is a restricted traffic lane reserved at peak travel times or longer for exclusive use of vehicles with two or more passengers. *Managed/HOV lanes may also be called carpool or transit lanes.*





Evaluating the Strategies

Goals and Objectives

The “**Evaluation Criteria**” shown here will be used to help determine **the next steps** in the I-35 PEL Study.

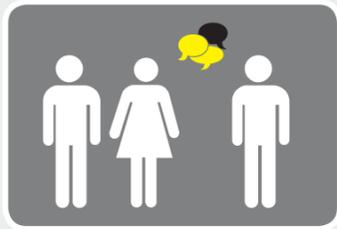
Safety



Does the alternative **reduce crashes** on I-35?

Public Support

What level of **public support** is the alternative likely to have?



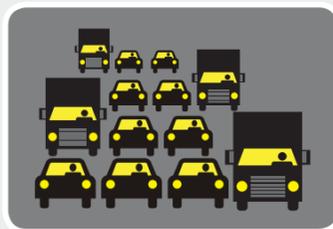
Economic



Does the alternative **support economic development**?

Mobility

Does the alternative **reduce congestion** on I-35 through the study area?



Alternate Routes

Does the alternative... encourage use of other routes?

Vehicle Miles Traveled (vmt)

reduce vehicle miles traveled?

Vehicle Hours Traveled (vht)

reduce travel time?

Environmental Impacts

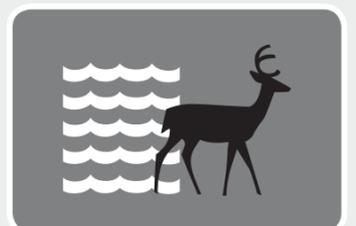
What are the potential **environmental impacts** of the alternative?

Land Use

Cultural Resources

Wetland/Water Resources

Vegetation and Wildlife Habitats

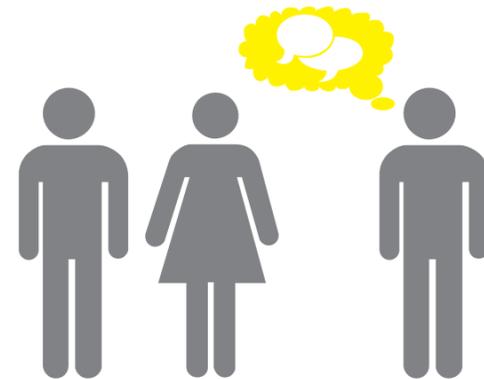




What Comes Next?

Consider

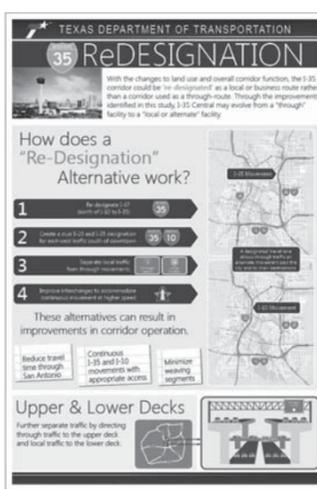
community input from tonight's public meeting.



Continue collecting and considering community input throughout the study.

Conduct

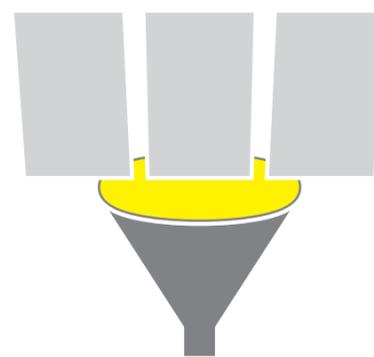
an initial screening of alternatives.



Refine

the alternatives.

Continue screening refined alternatives.



Consider

viable alternatives to move forward for further study.



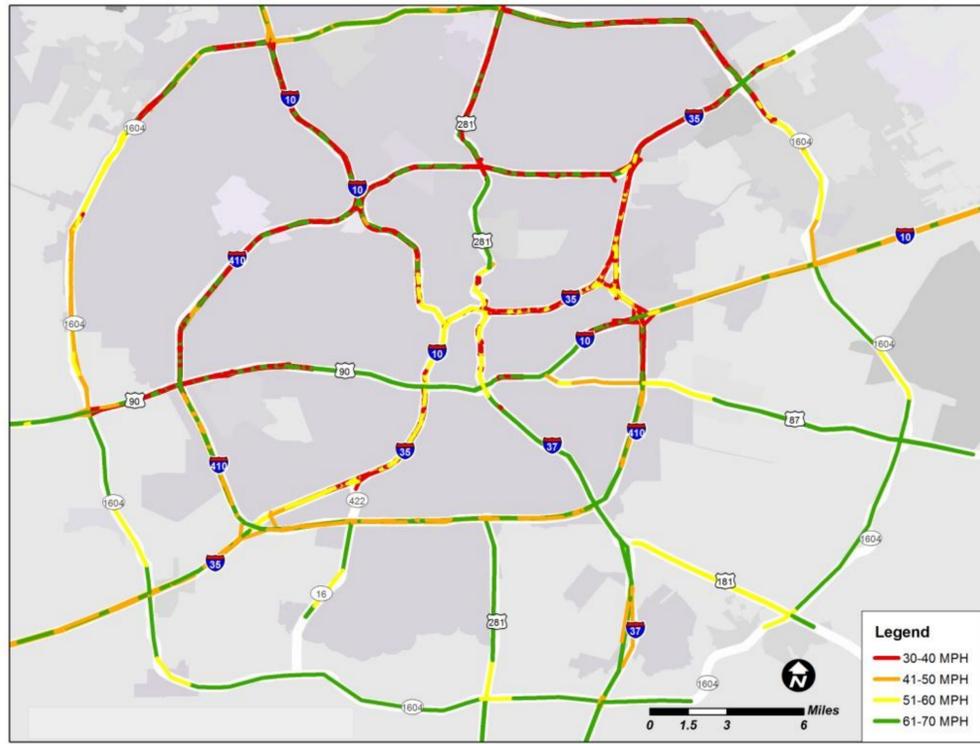


TEXAS DEPARTMENT OF TRANSPORTATION

**I-35 BYPASS
PLANNING AND ENVIRONMENTAL LINKAGES
STUDY**

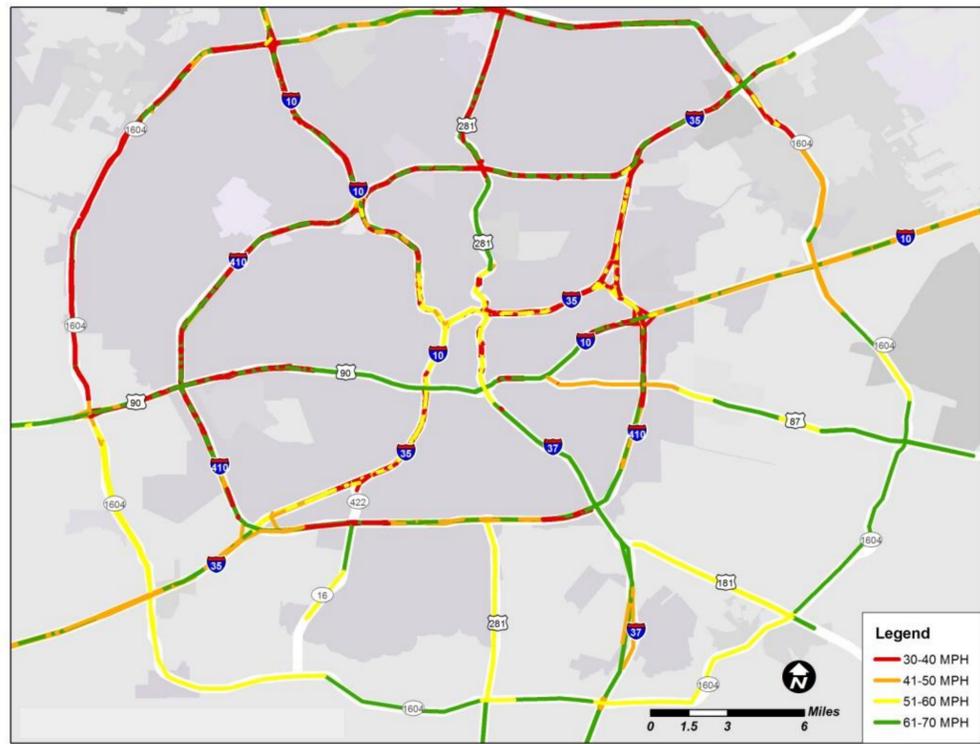
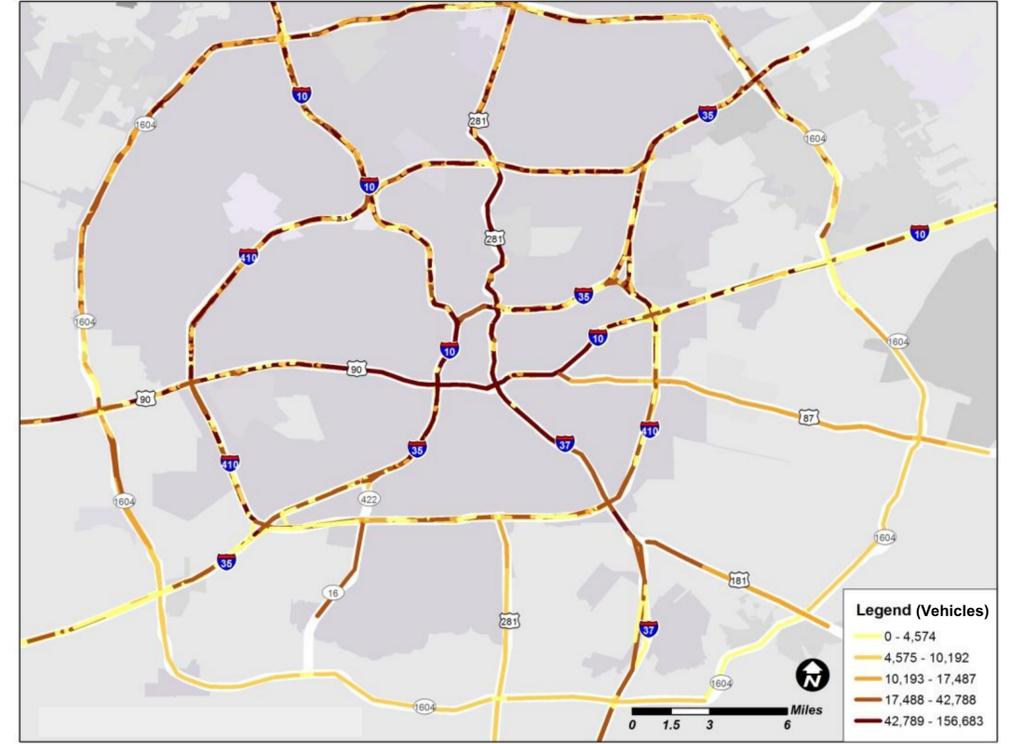


TEXAS DEPARTMENT OF TRANSPORTATION



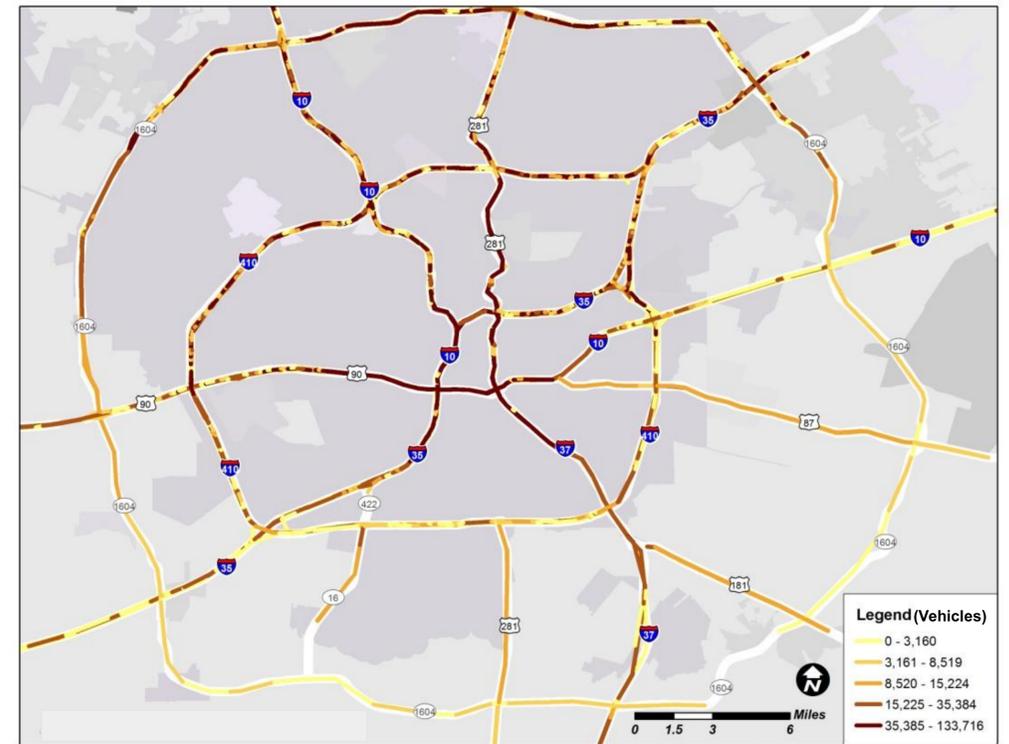
2011 Base AM Speeds

2011 Base 24 Hour Volumes



No Build 2035 AM Speeds

No Build 2035 24 Hour Volume



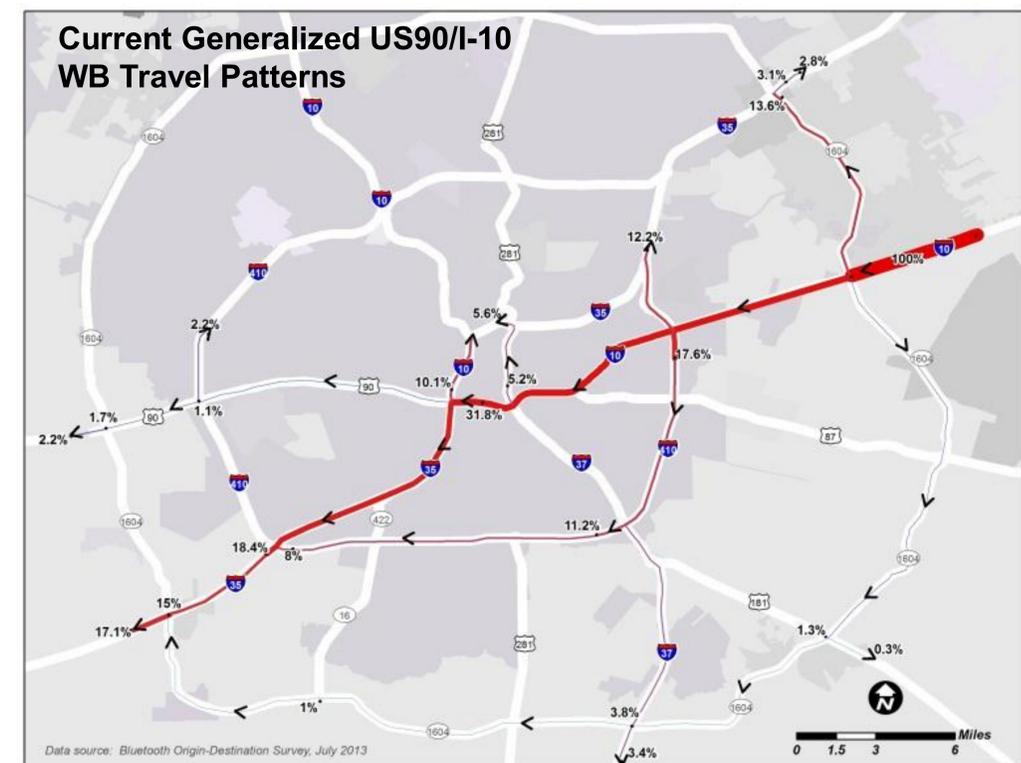
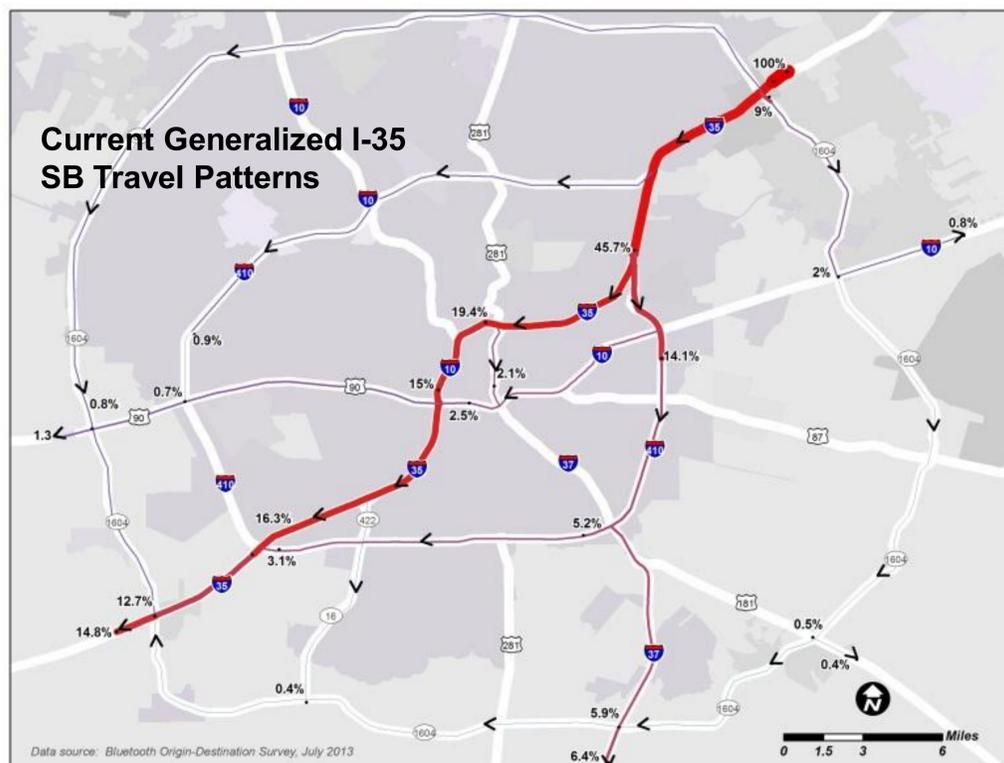
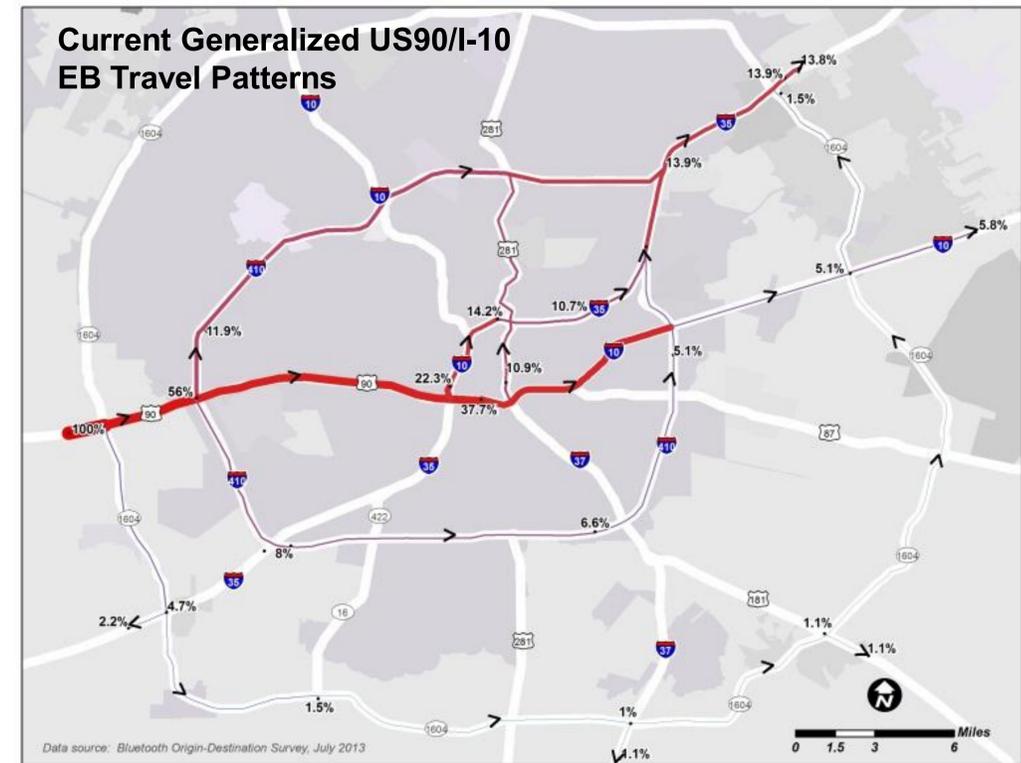
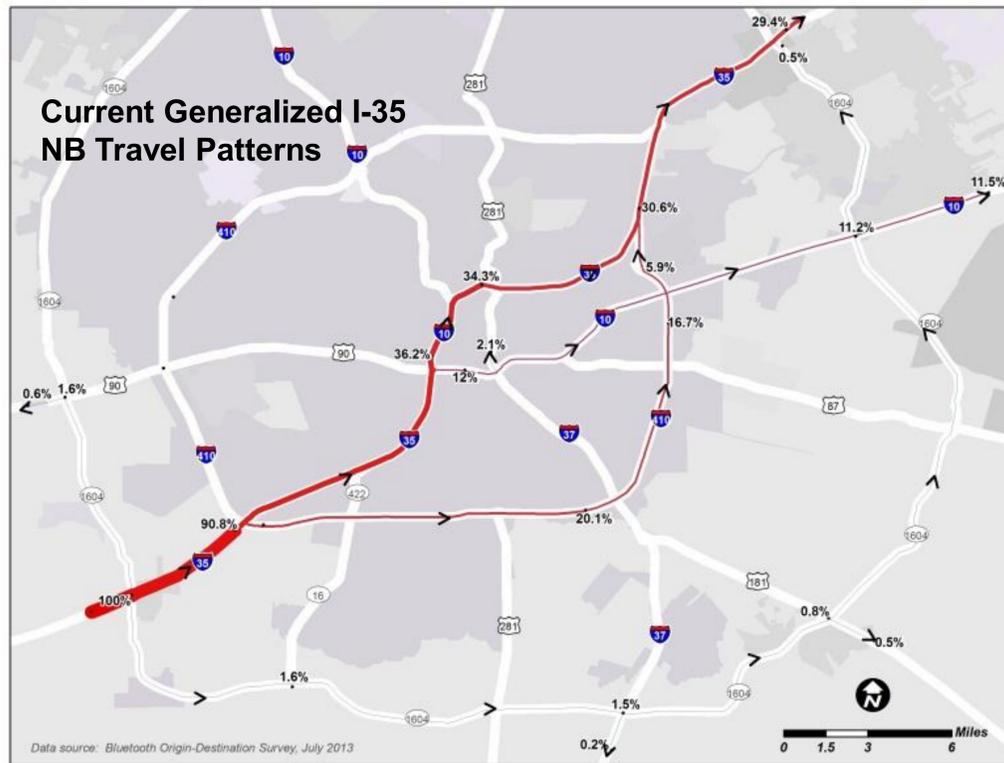
Source: I-35 North PEL Model

2011 Base Traffic Conditions – AM Speeds and 24 Hour Volumes
 No Build 2035 Traffic Conditions – AM Speeds and 24 Hour Volumes





TEXAS DEPARTMENT OF TRANSPORTATION

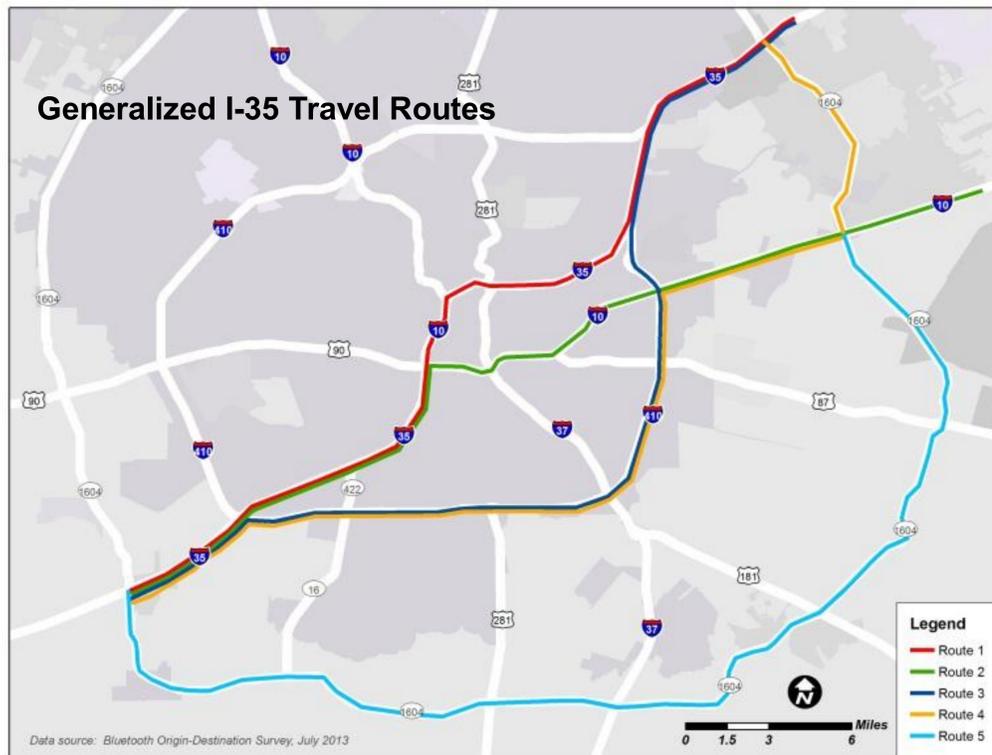


Current Generalized Travel Patterns: I-35, US 90 & I-10





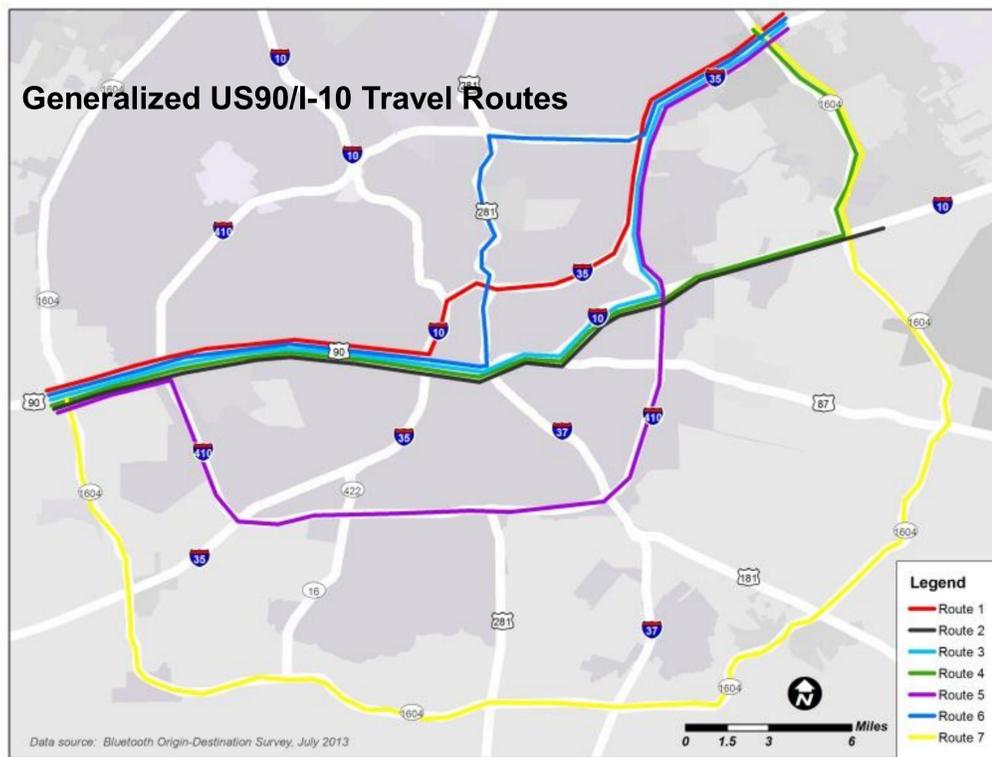
TEXAS DEPARTMENT OF TRANSPORTATION



Generalized I-35 Travel Routes

Route	Northbound/Eastbound						Distance (miles)	Southbound/Westbound					
	Ave. Travel Time (minutes)			Average Speed (MPH)				Ave. Travel Time (minutes)			Average Speed (MPH)		
	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak		Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak
1	34.19	35.65	40.05	55.6	53.3	47.5	31.7	32.64	37.87	38.22	58.3	50.2	49.8
2	30.56	30.16	31.62	54.2	54.9	52.4	27.6	27.61	26.80	31.12	60.0	61.8	53.2
3	39.02	40.92	44.46	54.9	52.3	48.2	35.7	33.45	39.43	38.74	64.0	54.3	55.3
4	41.13	38.65	42.72	55.1	58.7	53.1	37.8	40.42	40.64	42.43	56.1	55.8	53.5
5	56.13	59.36	53.67	46.2	43.7	48.3	43.2	55.74	53.59	52.66	46.5	48.4	49.2

Note: AM Peak (6:30AM-9AM); PM Peak (3:30PM-6PM)



Generalized US-90 & I-10 Travel Routes

Route	Eastbound						Distance (miles)	Westbound					
	Ave. Travel Time (minutes)			Average Speed (MPH)				Ave. Travel Time (minutes)			Average Speed (MPH)		
	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak		Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak
1	35.38	36.60	39.96	54.2	52.4	48.0	32.0	34.30	39.59	36.64	55.9	48.4	52.3
2	33.32	35.07	32.34	57.6	54.7	59.4	32.0	32.44	31.22	34.12	59.2	61.5	56.3
3	38.82	40.44	41.12	52.2	50.1	49.3	33.8	37.52	42.50	37.22	54.0	47.7	54.4
4	40.61	41.84	40.96	54.5	52.9	54.0	36.9	40.51	40.11	42.91	54.6	55.1	51.5
5	43.06	43.26	47.80	58.7	58.5	52.9	42.2	42.30	48.08	42.13	59.8	52.6	60.0
6	39.29	41.04	43.07	54.8	52.5	50.0	35.9	39.02	44.62	39.26	55.2	48.3	54.9
7	75.91	68.89	77.10	48.3	53.2	47.5	61.1	76.88	78.91	81.18	47.7	46.4	45.1

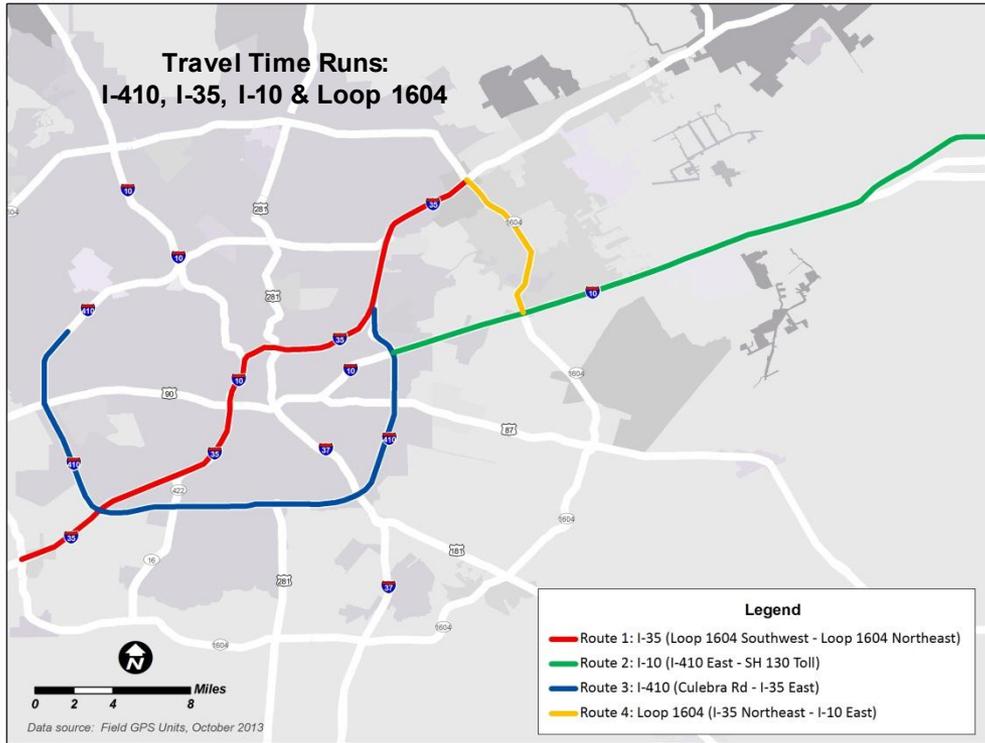
Note: AM Peak (6:30AM-9AM); PM Peak (3:30PM-6PM)

Current Generalized Travel Time Runs: I-35, US 90 & I-10





TEXAS DEPARTMENT OF TRANSPORTATION



Route 1: I-35 (Loop 1604 Northeast - Loop 1604 Southwest)							
Average Speed (MPH)							
Segment		SB			NB		
		AM	MD	PM	AM	MD	PM
Loop 1604	Judson Rd	27.3	60.7	58.4	62.0	61.1	46.1
Judson Rd	O'Connor Rd	33.2	67.9	61.9	60.4	58.3	51.9
O'Connor Rd	N Weidner Rd	37.8	67.1	64.5	61.8	62.2	58.0
N Weidner Rd	Thousand Oaks Rd	47.2	68.5	63.4	61.1	62.2	50.9
Thousand Oaks Rd	I-410	45.4	64.6	62.8	61.3	62.7	47.5
I-410	FM 1976	33.5	63.5	62.1	58.6	63.8	41.1
FM 1976	Eisenhauer Rd	44.4	64.9	24.4	60.0	60.2	58.8
Eisenhauer Rd	Rittiman Rd	53.0	66.0	32.4	60.3	62.3	46.3
Rittiman Rd	Binz-Engleman Rd	60.4	62.1	63.6	62.4	63.1	26.0
Binz-Engleman Rd	AT&T Center Pkwy	55.4	61.6	53.9	62.7	61.3	60.6
AT&T Center Pkwy	Walters St	60.8	61.4	59.6	64.2	60.4	61.4
Walters St	US 281	61.3	61.8	54.7	63.2	62.0	61.1
US 281	St Mary's	53.8	59.0	38.8	50.0	60.6	53.0
St Mary's	San Pedro Ave	58.6	58.0	37.0	61.0	59.2	53.3
San Pedro Ave	I-10	59.4	55.0	18.0	52.4	57.2	57.5
I-10	Houston St	58.0	57.5	32.3	61.9	62.5	60.5
Houston St	Cesar E. Chavez Blvd	65.3	62.8	34.5	62.5	63.3	53.1
Cesar E. Chavez Blvd	Alamo St	64.3	61.7	45.7	52.6	57.8	51.2
Alamo St	Laredo St	56.3	59.1	40.1	54.3	57.2	55.6
Laredo St	San Marcos	56.4	59.9	48.6	38.6	61.4	56.5
San Marcos	US 90	60.2	60.3	56.0	31.9	62.0	59.2
US 90	Malone	65.9	63.1	59.8	43.2	59.6	58.2
Malone	Division Ave	66.0	63.9	61.5	36.0	63.5	62.2
Division Ave	Southcross Blvd	64.7	62.0	61.9	31.1	61.8	62.5
Southcross Blvd	SW Military Dr	64.2	60.4	62.5	58.0	61.0	62.7
SW Military Dr	I-35 Access Rd	67.0	61.2	62.0	64.5	62.0	64.0
I-35 Access Rd	Somerset Rd	68.1	67.1	63.9	65.1	64.0	65.4
Somerset Rd	Cassin Ln	70.2	67.7	65.6	68.7	67.9	66.4
Cassin Ln	I-410	69.1	66.3	63.3	68.1	68.3	67.1
I-410	Fischer Rd	71.0	68.6	67.8	60.7	64.1	66.2
Fischer Rd	I-35 Access Rd	70.3	68.4	68.2	62.9	64.0	66.1
I-35 Access Rd	Loop 1604	68.8	67.8	65.6	66.6	52.7	67.9
Total		54.0	63.6	52.3	57.7	61.9	53.7

Generalized I-35 Travel Routes

Route	Northbound/Eastbound						Distance (miles)	Southbound/Westbound					
	Ave. Travel Time (minutes)			Ave. Speed (MPH)				Ave. Travel Time (minutes)			Ave. Speed (MPH)		
	AM Peak	Mid-Day	PM Peak	AM Peak	Mid-Day	PM Peak		AM Peak	Mid-Day	PM Peak	AM Peak	Mid-Day	PM Peak
1	32.6	30.4	35.0	57.7	61.9	53.7	31.3	34.8	29.5	35.9	54.0	63.6	52.3
2	27.0	28.4	27.5	73.1	69.5	71.9	32.9	27.7	27.8	26.5	71.3	71.0	74.5
3	31.5	29.6	32.0	62.3	66.3	61.3	32.7	42.9	29.6	30.8	45.7	66.4	63.7
4	9.1	9.1	9.9	53.5	53.7	49.3	8.1	9.7	8.7	9.4	50.2	55.8	51.9

Note: AM Peak (6:00AM-9AM); MD (9AM-3:30PM); PM(3:30-7PM)

Current Travel Time Runs: I-410, I-35, I-10 & Loop 1604
October 2013 – Using Handheld GPS Devices





Conceptual Strategies

- No Build Strategy
- Travel Options/Transportations Systems Management/Intelligent Transportation Systems Strategy
- Rail Strategy
- Transit Strategy
- Truck-Only Strategy
- Connecting Arterial Improvements Strategy
- Bottleneck Improvements of I-35 Strategy (I-35 Central PEL)
- Bottleneck Improvements of Parallel I-410/I-10 Facility Strategy
- Expansion of I-35 Strategy (I-35 Central PEL)
- Expansion of Parallel I-410/I-10 Facility Strategy (General Purpose/HOV/Manages lanes)
- New Designation Highway Strategy





TO/TSM/ITS Strategy

Travel Options (TO)

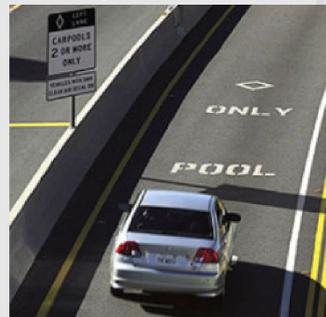
Programs which encourage people to travel at alternate times or with fewer vehicles.



Eastown.org



DART West End Station



News10.net



Houstonfreeways.com

Transportation Systems Management (TSM)

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



Missouri Department of Transportation



TTI



Telegraph.co.uk

Inspired by:

- Public/Stakeholder Suggestion
- Major Investment Study
- Mobility 2035
- 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

Inspired by:

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



viaprimo.com



Squarespace.com



Thetransportpolitic.com



Cuhnews.com



Railwaypro.com



Terragalleria.com



Flickr.com



Hdrinc.com

PRELIMINARY
SUBJECT TO FURTHER STUDY





Truck-Only Strategy

Dedicated lanes for trucks traveling long distances.



Transportation.org



Managed Lanes Handbook, TTI



Moreproductivetrucks.com

Inspired by:

- Public/Stakeholder Suggestion
- My 35 Plan
- Applying Truck Lane Restrictions
- I-35 Northeast PEL



Usatoday.com



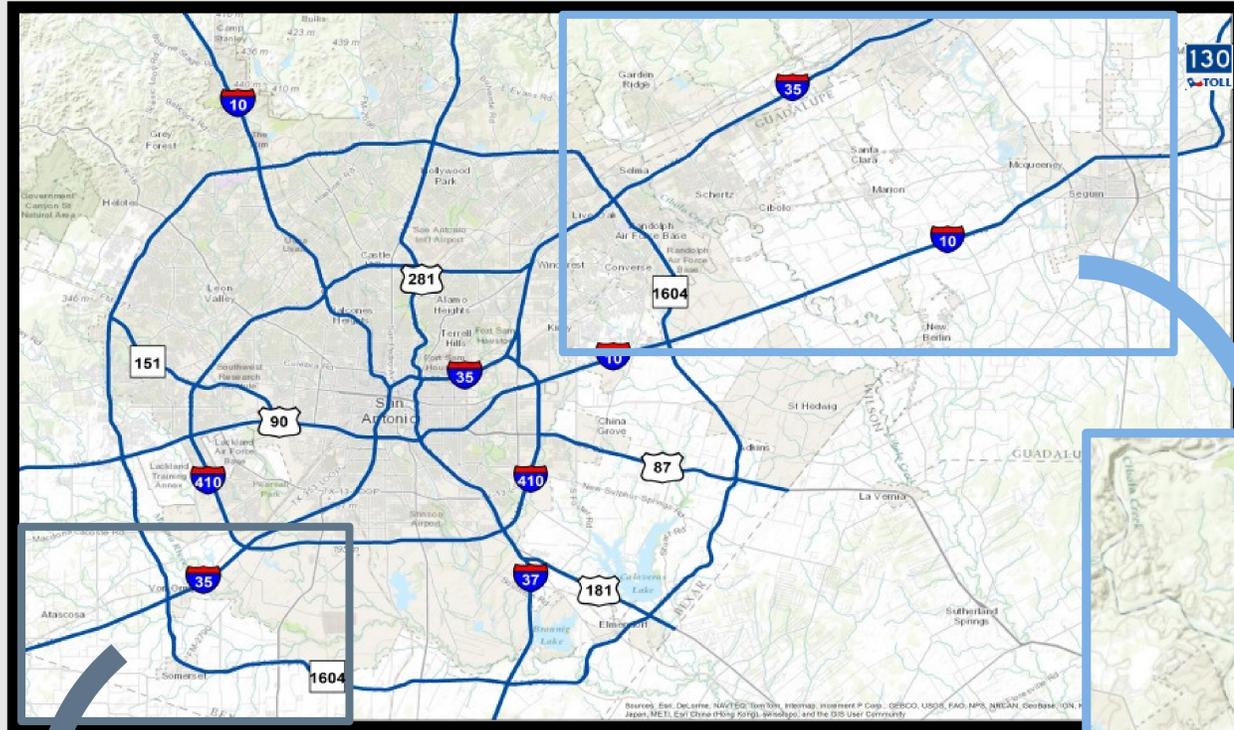
Managed Lanes Handbook, TTI

PRELIMINARY
SUBJECT TO FURTHER STUDY



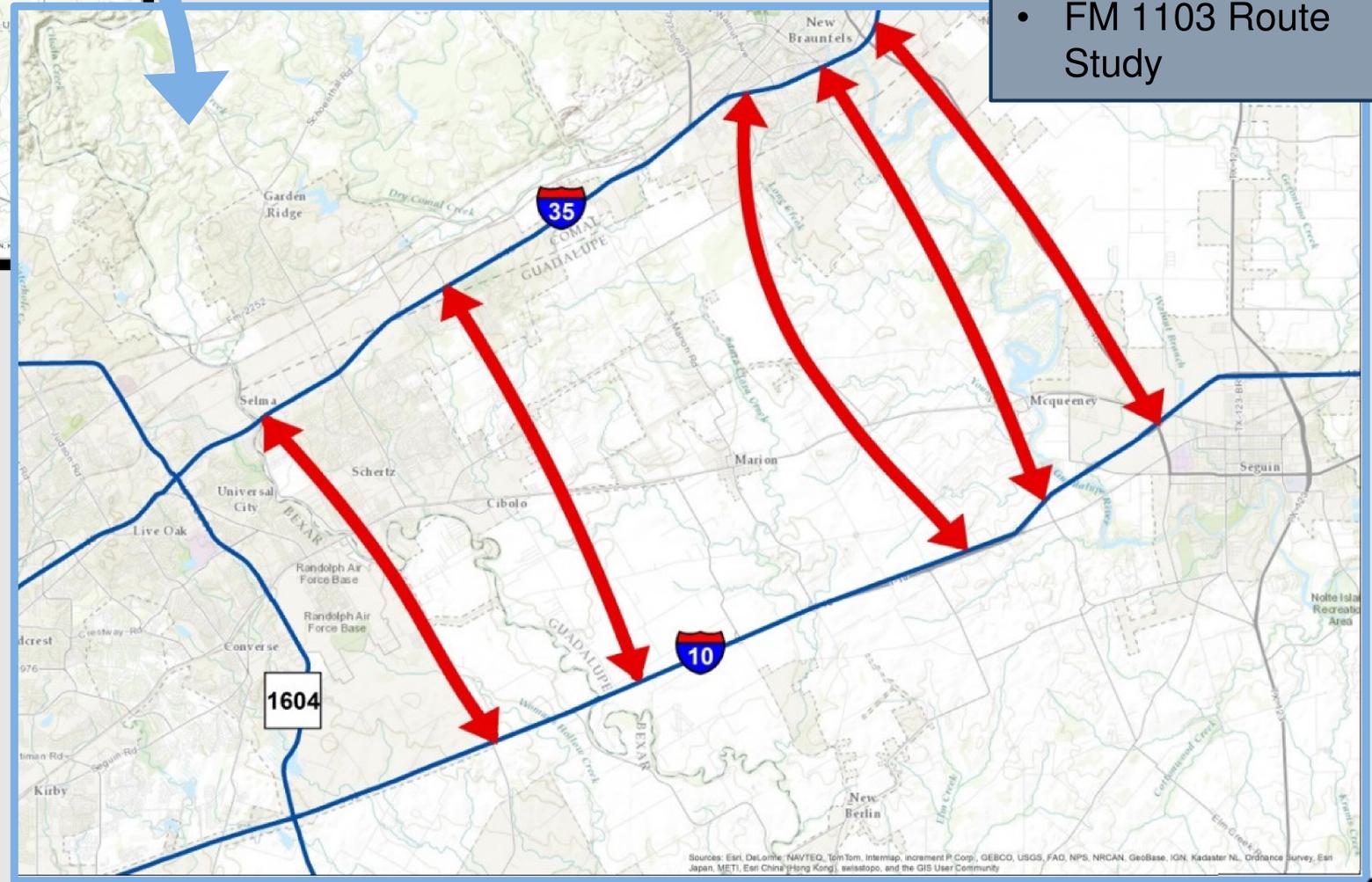


Connecting Arterial Improvements Strategy



Alternative for possible improvement of 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 Suggestion
 - FM 1103 Route Study



**PRELIMINARY
SUBJECT TO FURTHER STUDY**

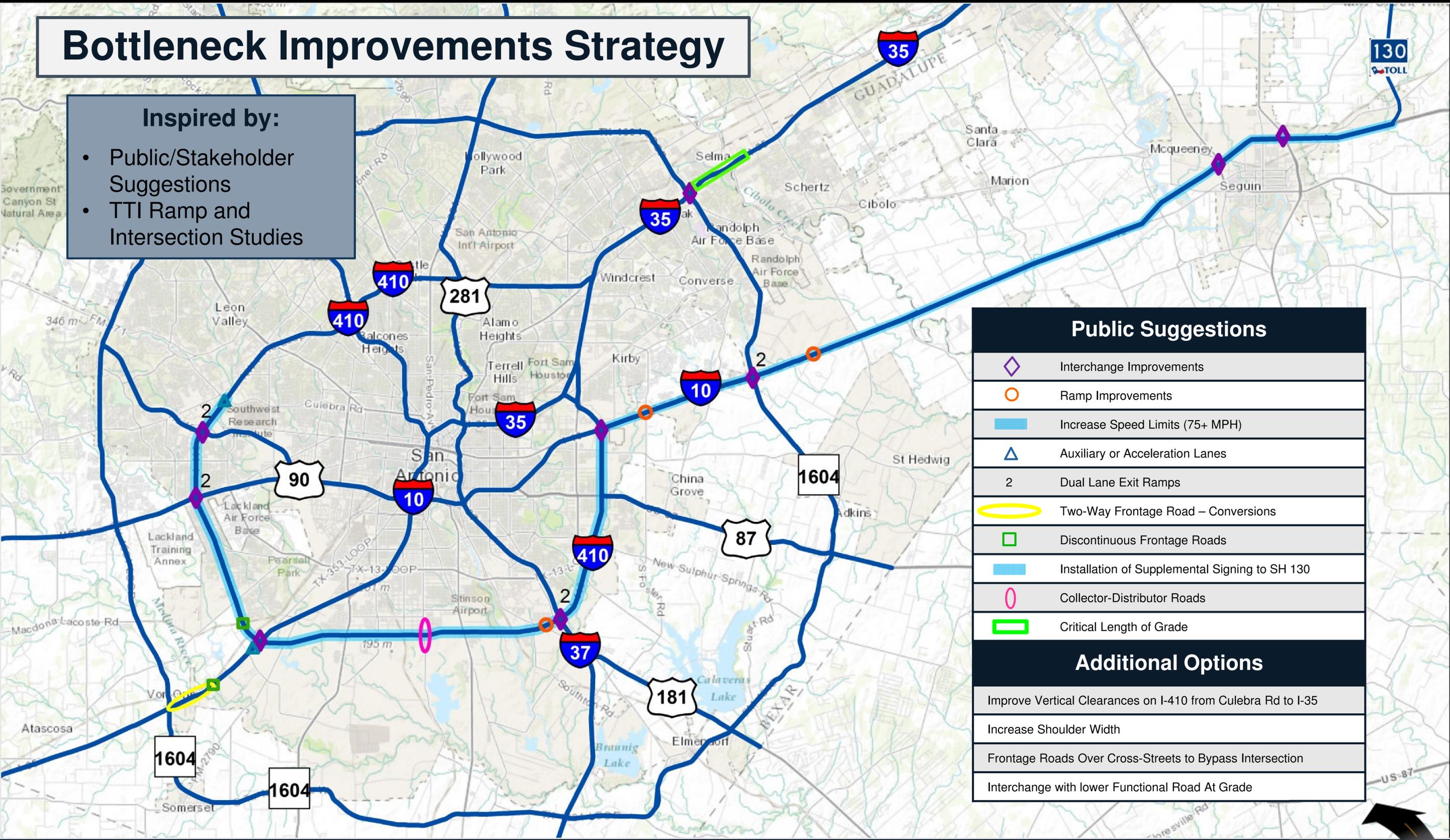




Bottleneck Improvements Strategy

Inspired by:

- Public/Stakeholder Suggestions
- TTI Ramp and Intersection Studies



Public Suggestions

	Interchange Improvements
	Ramp Improvements
	Increase Speed Limits (75+ MPH)
	Auxiliary or Acceleration Lanes
	Dual Lane Exit Ramps
	Two-Way Frontage Road – Conversions
	Discontinuous Frontage Roads
	Installation of Supplemental Signing to SH 130
	Collector-Distributor Roads
	Critical Length of Grade

Additional Options

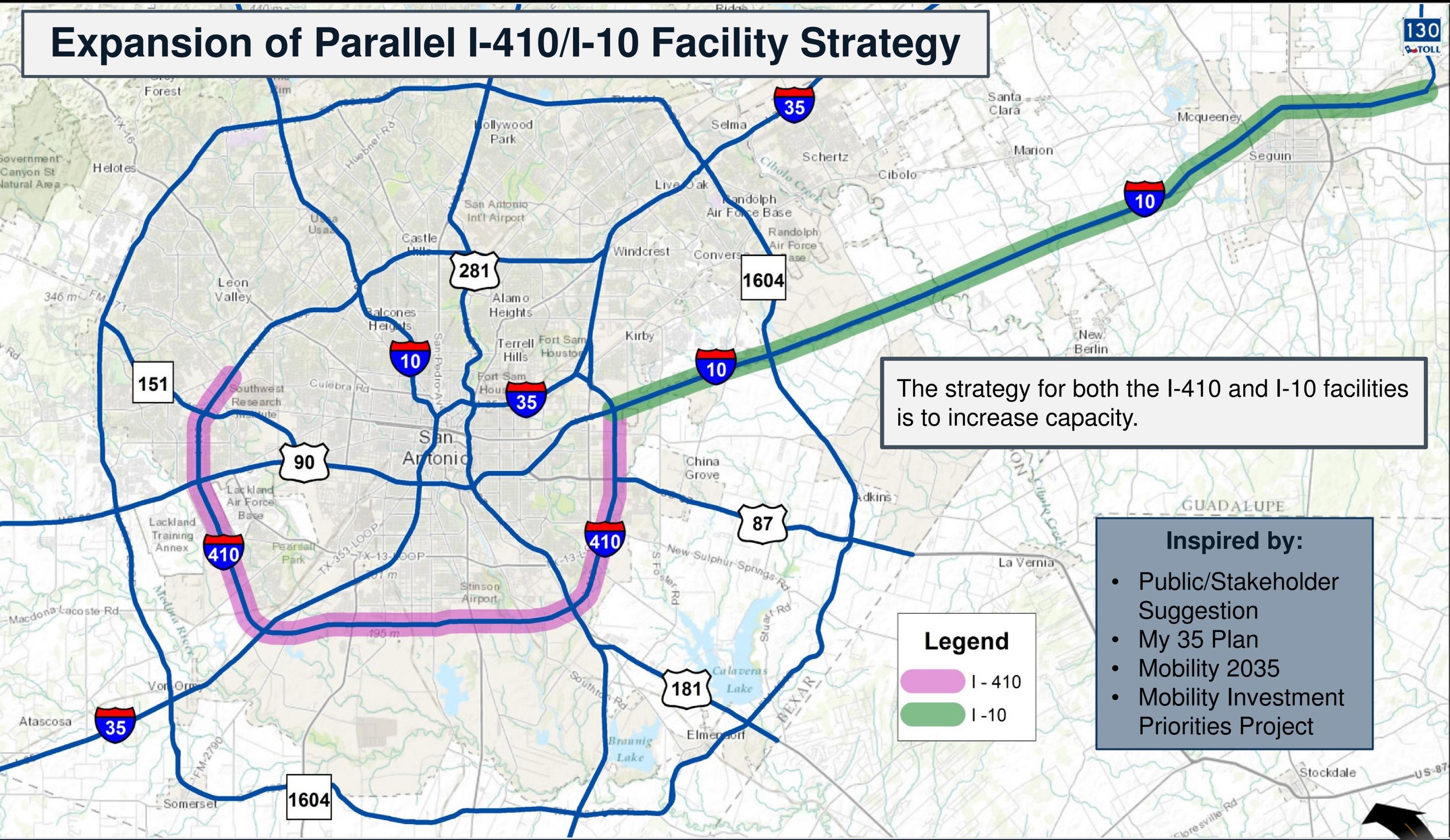
Improve Vertical Clearances on I-410 from Culebra Rd to I-35
Increase Shoulder Width
Frontage Roads Over Cross-Streets to Bypass Intersection
Interchange with lower Functional Road At Grade

PRELIMINARY
SUBJECT TO FURTHER STUDY





Expansion of Parallel I-410/I-10 Facility Strategy



The strategy for both the I-410 and I-10 facilities is to increase capacity.

- Inspired by:**
- Public/Stakeholder Suggestion
 - My 35 Plan
 - Mobility 2035
 - Mobility Investment Priorities Project

Legend

- I - 410
- I - 10

PRELIMINARY
SUBJECT TO FURTHER STUDY

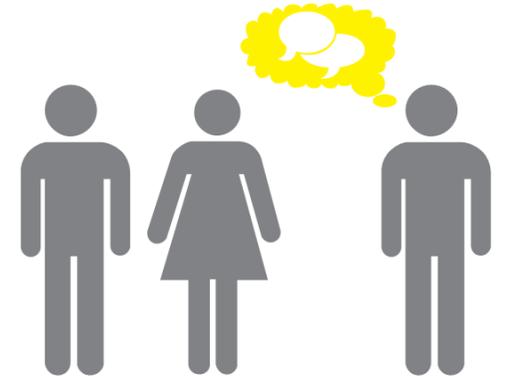




What Comes Next?

Consider

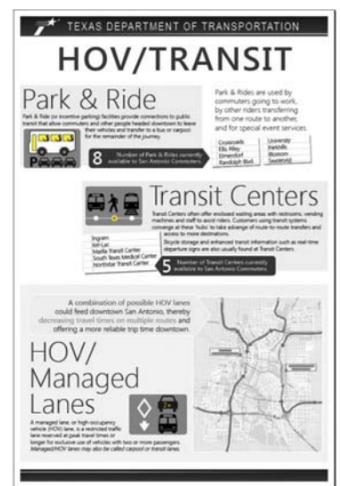
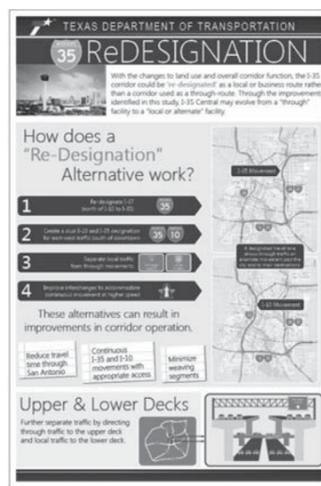
community input from tonight's public meeting.



Continue collecting and considering community input throughout the study.

Conduct

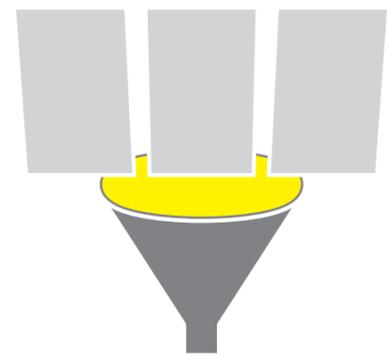
an initial screening of alternatives.



Refine

the alternatives.

Continue screening refined alternatives.



Consider

viable alternatives to move forward for further study.

