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SEGMENT 3 RECOMMENDATIONS

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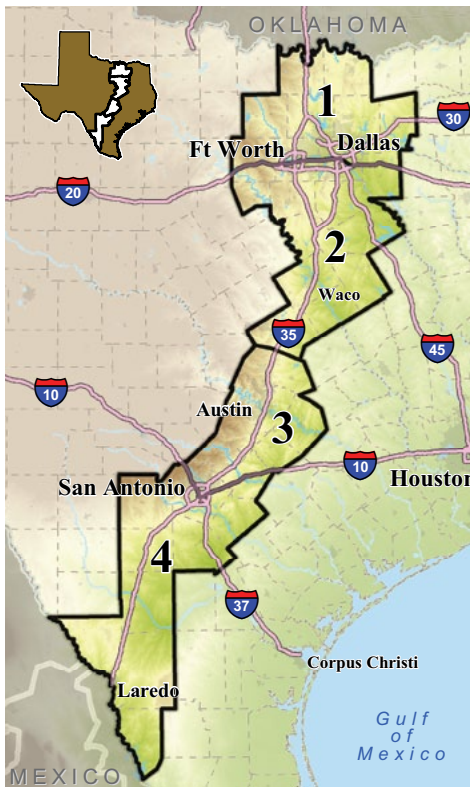
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## INTRODUCTION

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In 2007, the Texas Department of Transportation (TxDOT) recognized the need for the regular and systematic input of citizen planners to help determine the future of the I-35 corridor. In response, the I-35 Corridor Advisory Committee was created by the Texas Transportation Commission, bringing together a group of independent Texas citizens interested in the future of the corridor. These individuals, representing their regions, provide TxDOT with a citizen's view of how the corridor should be developed.

After a period of intense collaboration, the I-35 Corridor Advisory Committee issued the *Citizens' Report on the Current and Future Needs of the I-35 Corridor* in November 2008. Their report concluded that the existing capacity on I-35 was insufficient to meet future mobility demands, that additional capacity would be needed within the corridor, and that more community involvement was needed in planning the I-35 corridor. The Texas Transportation Commission agreed it was time for even more public input into the planning process, and called for a citizen-directed effort starting at the local level.



In March 2009, the Texas Transportation Commission established four I-35 Corridor Segment Committees to assist the Corridor Advisory Committee. The Corridor Segment Committees' role is to bring forth community needs and transportation priorities for discussion, to develop potential solutions and seek public input, and to develop regional recommendations for I-35. The four I-35 Corridor Segment Committees represent four geographic regions along the I-35 corridor, roughly defined as North Texas, Central Texas, Austin-San Antonio, and South Texas.

The Corridor Advisory Committee, along with a representative from each Corridor Segment Committee, will use the four Segments' recommendations to create the MY 35 Plan for the I-35 corridor. Multi-modal and comprehensive, the plan will be based on community needs and shaped by Texas citizens.

## VISION STATEMENT

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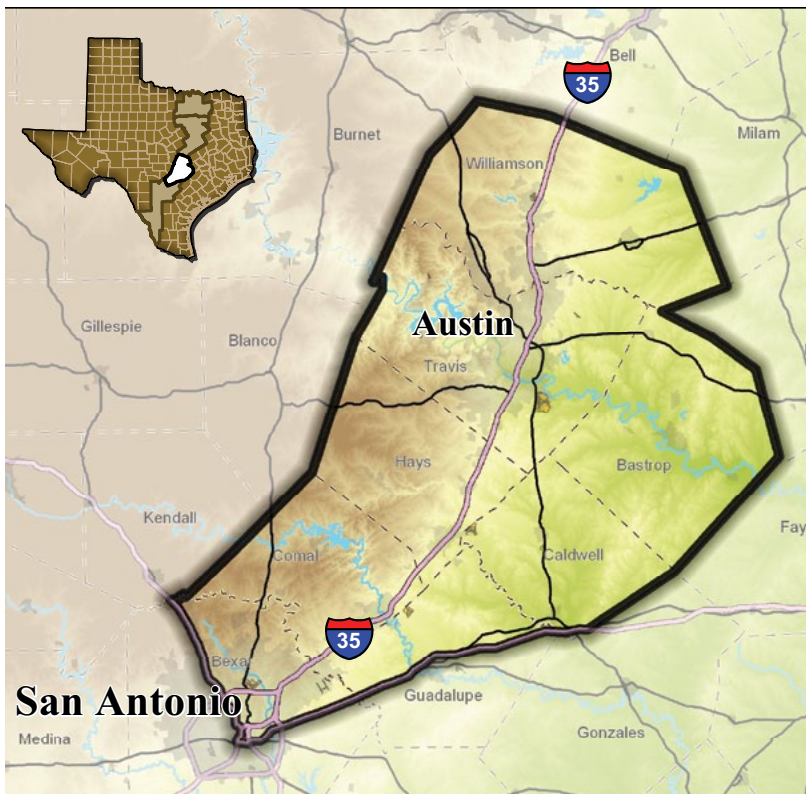
The I-35 Corridor Advisory Committee developed an overarching vision statement for the I-35 corridor based on the guiding principles in their November 2008 Citizens' Report. The vision statement reads:

*The I-35 corridor will be an adequately funded, comprehensive multi-modal transportation system in Texas that is shaped by input from stakeholders and addresses mobility needs over time, preserves and promotes economic vitality, is environmentally sensitive, safe, and supports quality of life for the citizens of Texas.*

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## SEGMENT 3

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I-35 Corridor Segment 3 boundary includes the region from the Williamson/Bell County line to Interstate 10 (I-10) in San Antonio.

## MEMBERS

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I-35 Corridor Segment Committee members include representatives from counties, metropolitan planning organizations (MPOs), cities, chambers of commerce, economic development corporations and the Texas Farm Bureau. The Segment 3 Committee members are listed below:



**Bastrop County – Rachel Clampffer**

**Bexar County - Invited but did not participate**

**Caldwell County – Neto Madrigal**

**Comal County – Tom Hornseth**

**Guadalupe County – Greg Webb**

**Hays County – Elizabeth Sumter**

**Travis County – Joe Gieselman**

**Williamson County – Bob Daigh**

**San Antonio - Bexar County MPO – William Weeper**

**City of Austin – Robert Spillar**

**City of Georgetown – Gabe Sansing**

**City of Hutto - Invited but did not participate**

**City of Lockhart – Dan Gibson**

**City of Manor – Phil Tate**

**City of New Braunfels – Shannon Mattingly**

**City of Pflugerville – Trey Fletcher**

**City of Round Rock – Thomas E. Word**

**City of Seguin – Atlee Fritz**

**Capital Area MPO - Joe Cantalupo**

**Greater San Marcos Economic Development Corporation –  
Amy Madison**

**New Braunfels Chamber of Commerce – Rod Smith**

**Texas Farm Bureau – Marilynn Dierschke**

## RECOMMENDATIONS

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The Segment 3 Committee recommendations are not financially constrained. They are recommendations developed by the Segment Committee that identify the regional transportation needs along the I-35 corridor and recommend solutions to meet those needs. The Segment 3 Committee has not studied the feasibility, right-of-way requirements or environmental constraints related to any of the proposed corridor solutions in their recommendations.

## GOALS

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The Segment 3 Committee identified needs in their region and developed the following four goals for the Segment 3 recommendations to help meet those needs:

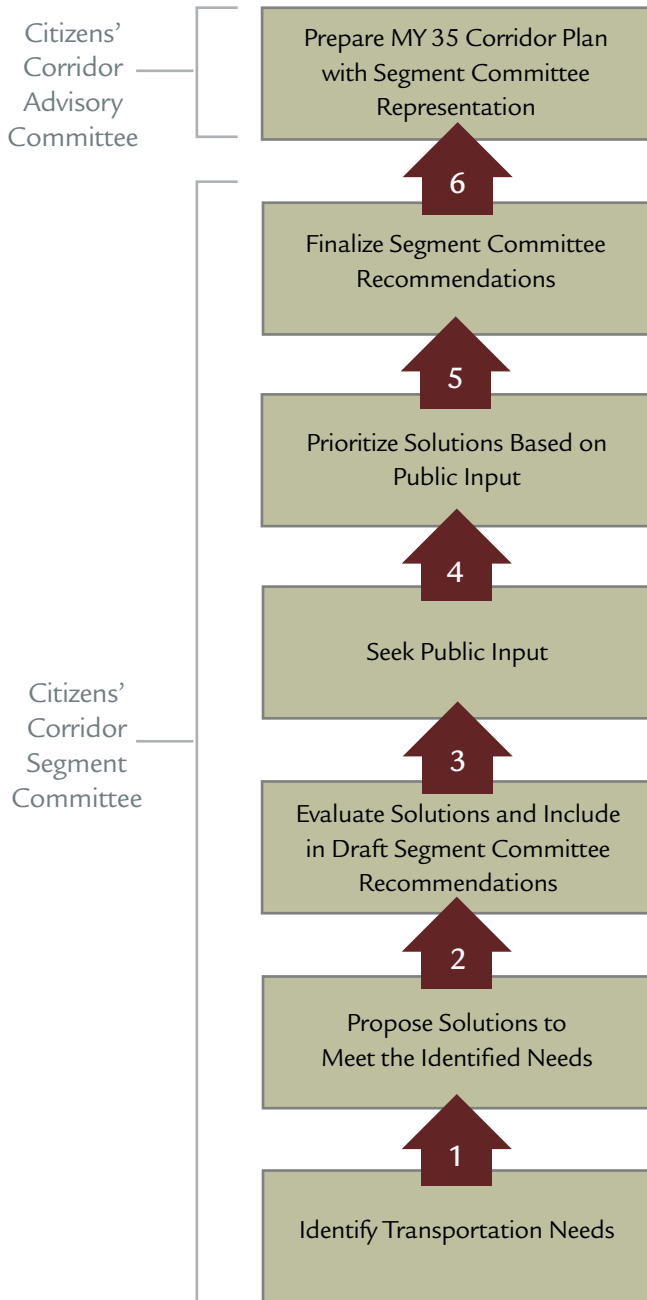
**Improve mobility within the I-35 corridor**

**Improve connectivity and access within and between various transportation modes within the corridor**

**Protect natural and agricultural resources**

**Improve safety within the I-35 corridor**

## THE DECISION-MAKING PROCESS



While the Segment 3 Committee held organizational meetings in 2009, their work on their Segment recommendations for MY 35 began in January 2010. Since then, the Committee has held monthly meetings to identify I-35 corridor needs in their region and to present and discuss potential solutions (Steps 1-3). In September 2010, the I-35 Corridor Segment 3 Committee held planning workshops to gather public input on their proposed solutions (Step 4). The Segment 3 Committee considered this input when making their final recommendations to the I-35 Corridor Advisory Committee for the corridor-wide MY 35 Plan (Steps 5 & 6). The MY 35 Planning Process is shown in the diagram. All Segment Committee meetings were open to the public.

## DETERMINING THE NEEDS WITHIN THE I-35 CORRIDOR

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The first step that the Segment 3 Committee engaged in during their planning process was to determine the needs within their segment of the I-35 corridor. In January 2010, the Committee reviewed planning data such as MPO long-range plans, regional population and demographics projections, and current and projected traffic data to determine the transportation needs along the I-35 corridor in Segment 3. The Committee also reviewed an inventory of the existing roadway and rail networks, as well as airport and intermodal facilities to determine the potential to expand existing I-35 or use other existing facilities to meet the needs of the I-35 corridor. From this review of current and projected needs as well as existing resources, the Segment 3 Committee identified the following transportation issues in their Segment of I-35 corridor:

**Lack of alternate North-South routes**

**Underutilization of existing North-South alternatives**

**Current corridor disjointed – lack of uniform approach to managing traffic**

**Insufficient real-time traffic information available to drivers**

**Limited non-roadway modal options in the I-35 corridor**

**Insufficient East-West connectivity in the corridor, especially between SH 130 and I-35**

**Safety issues on I-35**

**Bottlenecks due to inadequate roadway capacity and incomplete interchanges**

**Poor coordination between agencies and local government**

**Insufficient funding for transportation improvements**

**Issues associated with clearing of crashes and timely incident management**

**Agricultural impacts related to corridor improvements**

## DEVELOPING SOLUTIONS

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In February 2010, the Segment 3 Committee held a brainstorming session in which they developed preliminary roadway and rail solutions to meet the needs



and growing demand in the I-35 corridor in Segment 3. For this brainstorming exercise, the Committee was instructed to not limit their solutions based on funding or potential cost. The preliminary roadway and rail solutions the Committee developed were based on the review of the planning data they had completed at their January meeting and on the committee members' knowledge of specific problem areas in the I-35 corridor.

At their March 2010 meeting, the Segment 3 Committee heard a presentation from the TxDOT Rail Division on the status of state rail planning and from the Lone Star Rail District regarding regional rail efforts. Based on this additional information, they continued to refine their proposed list of roadway and rail solutions and selected projects for further analysis and evaluation. Some of the solutions the Committee proposed for further evaluation were already identified on MPO and state transportation plans, while others were new ideas the Committee developed.

#### EVALUATING PROPOSED SOLUTIONS

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Once the Segment 3 Committee selected preliminary roadway solutions for further consideration, they evaluated those solutions using the I-35 Corridor Traffic Model. The I-35 Corridor Traffic Model, which is a travel demand model, helps planners identify future problem areas on the roadway network. Based on the results of the modeling effort, the Segment 3 Committee continued to refine their list of proposed roadway and rail solutions. Because of the overlap in geographic area between Corridor Segments 3 and 4 in the San Antonio metropolitan area, and the complexities of traffic issues in this area, the Segment 3 and 4 Committees held a joint meeting in June 2010. The joint meeting focused on evaluating possible solutions to resolve the future mobility issues in the San Antonio metropolitan area. At this joint meeting, the two Committees decided to modify the limits of some solutions in the San Antonio area and adopt improvements to I-35 from MPO plans.

The Segment 3 Committee continued to refine their solutions in July 2010, and started preparing for the public involvement component of the MY 35 planning effort in August 2010.

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## RECOMMENDATIONS

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Following the completion of their public workshops, the Segment 3 Committee met in October 2010 to finalize their solutions. At this meeting, the Segment 3 Committee developed general recommendations, suggested operational improvements, recommended a high priority study for an I-35/SH 45SE/SH 130 Alternative, and identified a list of priority roadway and rail projects.

The entire section of the I-35 corridor in Segment 3, which extends from Austin to San Antonio, is urbanized and is functionally growing into one continuous urban area. The Committee was interested in a mix of modal as well as operational solutions to typical highway expansion, and recognized early on that the best they could hope for is to manage congestion on I-35. They focused on how SH 130 and the proposed rail projects in the corridor could help manage the future congestion on I-35.

The Segment 3 Committee prioritized their roadway and rail solutions into near-term (5-10 years), mid-term (10-20 years), or long-term (20 + years) projects. The Committee considered the following in prioritizing their solutions:

**Ability of the solution to improve traffic conditions on I-35**

**Current status of the project (already planned and funded or not yet developed)**

**Public input**

### GENERAL RECOMMENDATIONS

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#### RECOMMENDATION:

Implement the removal of tolls from SH 130 and SH 45SE and rename I-35. Transform existing I-35 from SH 195 to Buda to a state highway that contains as a minimum one dynamically priced managed lane and two non tolled lanes in each direction.

The Segment 3 Committee also developed the following six general recommendations for the I-35 Corridor Advisory Committee to consider in the MY 35 Plan:

**Minimize displacements of business/industry and impacts to farmland through project engineering and design**

**Consider common rights of way for rail and highway/multi-modal alignments, where feasible**

**Coordinate transportation planning with other infrastructure and land use planning**

## PUBLIC INVOLVEMENT

In September 2010, the Segment 3 Committee held eight public planning workshops to get input from the general public on the Committee’s proposed roadway and rail solutions for their segment of the I-35 corridor. Three of these workshops were joint meetings with the Segment 4 Committee where projects proposed by both Committees were presented to the public.

I-35 Corridor Segment 3 Planning Workshop Summary			
Workshop Date	City	Location	Public Attendance
September 20, 2010	Round Rock, TX	Allen R. Baca Center	18
September 21, 2010	New Braunfels, TX	New Braunfels Civic Center	28
September 22, 2010	Austin, TX	TxDOT Austin District	10
September 23, 2010	Manor, TX	Manor High School	29
September 23, 2010	San Antonio, TX*	VIA Metropolitan Transit	18
September 27, 2010	San Marcos, TX	San Marcos Activity Center	40
September 28, 2010	Live Oak, TX*	Live Oak Civic Center	24
September 29, 2010	Seguin, TX*	Seguin-Guadalupe County Coliseum	18

\*These workshops were joint-workshops of Segment Committees 3 and 4



The planning workshops were advertised at [www.MY35.org](http://www.MY35.org), via social media sites (Facebook, Twitter), through newspaper legal notifications, press releases, flyers, and in announcements on the radio in the Segment 3 planning area. The workshops provided an opportunity for the public to review the Committee’s proposed solutions, ask questions of committee members, and learn more about the MY 35 planning process in an open house format. The public was invited to complete a questionnaire to give feedback on the Segment 3 Committee’s proposed roadway and rail solutions. The questionnaire and all workshop materials were also available at [www.MY35.org](http://www.MY35.org) beginning on September 7, 2010. The questionnaire and other comments on the Segment Committee’s recommendations could be submitted online or through the mail until October 6, 2010. The Segment 3 Committee received a total of 370 completed questionnaires during the public workshop comment period.

**Ensure that local governments are involved in the planning process**

**Consider additional incident management methods to improve mobility and congestion in an effort to mitigate emissions**

**Implement the removal of tolls from SH 130 and SH 45SE and rename I-35, and transform existing I-35 from SH 195 to Buda to a state highway that contains as a minimum one dynamically priced managed lane and two non tolled lanes in each direction**

### OPERATIONAL IMPROVEMENT RECOMMENDATIONS

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The Segment 3 Committee also developed the following six operational improvement recommendations for the I-35 Corridor Advisory Committee to consider in the MY 35 Plan:

**Improve incident management and related agency coordination so that accidents and disabled vehicles can be cleared more quickly and delays can be minimized**

**Incentivize the use of SH 130 for all truck trips that are not destined for the cities between Georgetown and Seguin (i.e., encourage trucks to use SH 130 to travel around the congested areas by providing discounted toll fees)**

**Reduce tolls on alternative routes to I-35 during times when I-35 is the most congested**

**Use and improve upon technology, such as electronic signs, to provide updated traffic information, alternative routes, and other traffic management solutions to travelers on I-35**

**Impose access limitations (e.g., closing specific exit/entrance ramps) on I-35 in urban areas to reduce congestion**

**Offer new tolled lanes and use congestion pricing (i.e., the toll price fluctuates based on the road's congestion levels) on new or existing toll lanes as an option to manage congestion**

### PROJECT RECOMMENDATIONS

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The final list of prioritized multi-modal solutions that the Segment 3 Committee recommends to the I-35 Corridor Advisory Committee for inclusion in the MY 35 Plan are listed below as near-term, mid-term, and long-term solutions. Project information sheets and maps showing conceptual project locations for the projects listed below are included in the appendix.

### NEAR-TERM PROJECTS (5 TO 10 YEARS)

The Committee ranked the near-term projects in order of priority from 1 to 7 (see numbers in parentheses).

- I-35/SH 45SE/SH 130 Alternative (1)**
- I-35 Continuous Frontage Roads (2)**
- I-35 Ramp Modifications from US 290 to Ben White (SH 71) (3)**
- I-35/Loop 1604 and I-35/I-410 Interchange Improvements (4)**
- Loop 1604 Improvements (5)**
- US 183 Improvements from US 290 E to SH 71 (6)**
- SH 71 Connector from I-35 to SH 130 (7)**

### MID-TERM PROJECTS (10 TO 20 YEARS)

- I-35 Improvements from Williamson/Bell County Line to I-10**
- I-35 HOV/Toll Lane from SH 45SE to I-10**
- I-10 Improvements**
- SH 21/SH 80/New Braunfels Connectors from I-35 to SH 130**
- US 183 Improvements from SH 71 to SH 45SE**

#### **Rail:**

- Passenger Rail from Laredo to Dallas/Ft. Worth Metroplex**
- Passenger Rail from Austin to Elgin**
- New Freight Rail Construction**

### LONG-TERM PROJECTS (20+ YEARS)

- New Braunfels Outer Loop**
- San Marcos Outer Loop**

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## CONCLUSION

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Taken together as a group, recommendations from the Committees for Corridor Segments 1, 2, 3 and 4 provide a citizens' perspective on transportation needs along the I-35 corridor. Synthesizing these four sets of project and policy recommendations, the I-35 Corridor Advisory Committee will work to create the MY 35 Plan, a comprehensive statewide vision for the I-35 corridor.

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## APPENDIX

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## I-35/SH 45SE/SH 130 ALTERNATIVE

### PROJECT PURPOSE

The purpose of the proposed project is to improve mobility on Interstate 35 (I-35).

### EXISTING FACILITY

The existing I-35 facility from U.S. Highway (US) 195 north of Georgetown to State Highway 45 Southeast (SH 45SE) northeast of Buda varies from six to eight lanes. The existing SH 130 facility from I-35 to SH 45SE in Mustang Ridge is four tolled lanes, and an extension of the four tolled lanes is planned from Mustang Ridge to I-10 northeast of Seguin. The existing SH 45SE facility from I-35 to SH 130 is also four tolled lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

The Segment 3 Committee's recommendation involves the following actions:

**Converting one general purpose lane on I-35 in each direction to a minimum one dynamically priced managed lane and two non-tolled lanes in each direction from US 195 to SH 45SE and re-designating the facility from an Interstate to Business Route I-35**

**Widening SH 130 to six lanes from US 195 north of Georgetown to SH 45SE in Mustang Ridge, removing the tolls, and re-designating this portion of SH 130 to I-35**

**Widening SH 45SE to six lanes from Mustang Ridge to northeast of Buda to I-35, removing the tolls, and re-designating SH 45SE to I-35**

**Widening SH 130 to six lanes from Mustang Ridge to I-10 in Seguin and removing the tolls (this portion would remain designated as SH 130)**

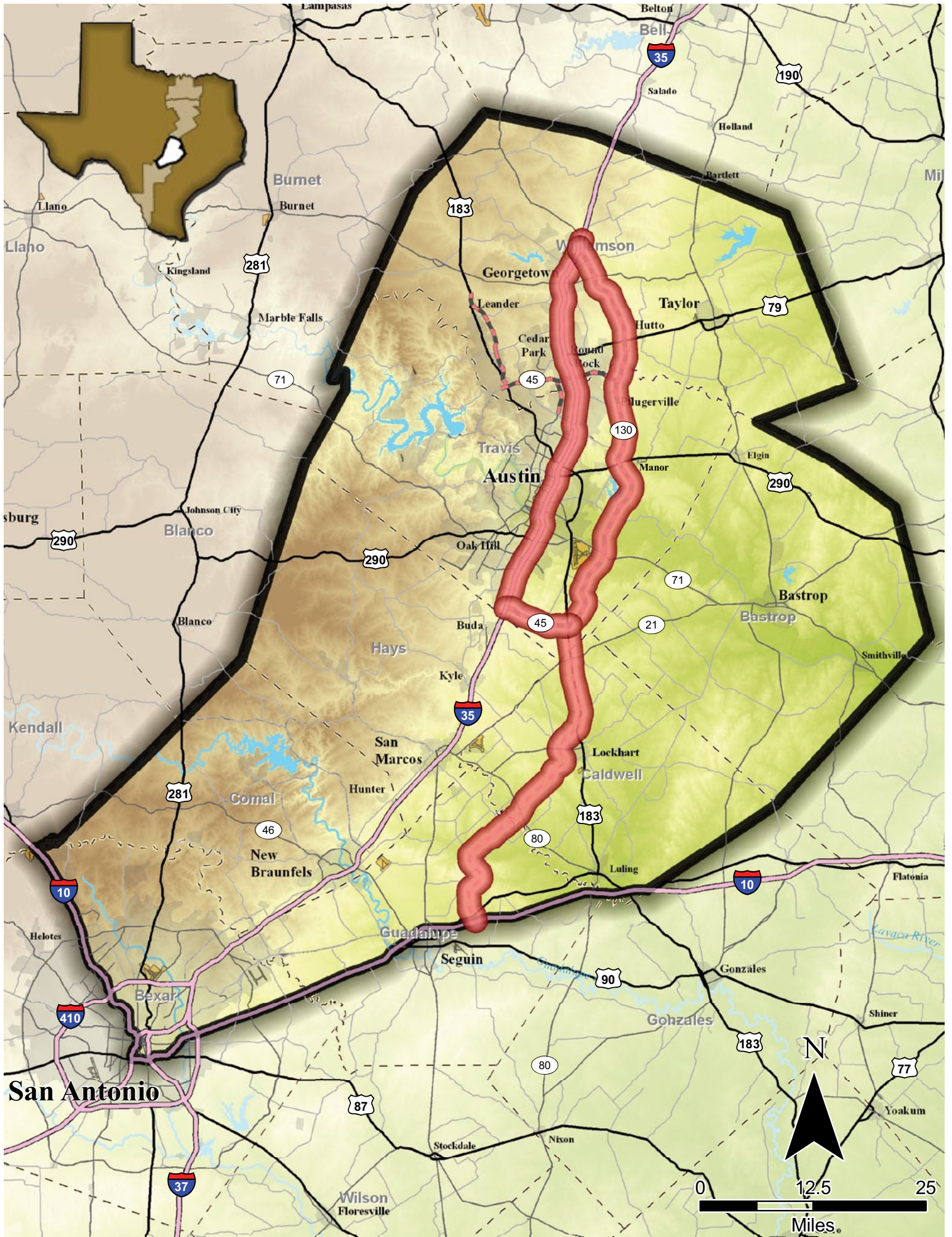
**Note: Any Interstate re-designation would require the approval of the Federal Highway Administration**

These actions are recommended as a near-term project.

### CONCEPTUAL PROJECT COST ESTIMATE

An estimated cost cannot be determined at this time.





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## I-35 CONTINUOUS FRONTAGE ROADS

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### PROJECT PURPOSE

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The purpose of the proposed project is to increase safety and improve mobility on Interstate 35 (I-35) from Williamson to Bexar County.

### EXISTING FACILITY

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The existing I-35 facility from Williamson to Bexar County has frontage roads, except for two segments in the Georgetown area and two segments in the Buda/Kyle area.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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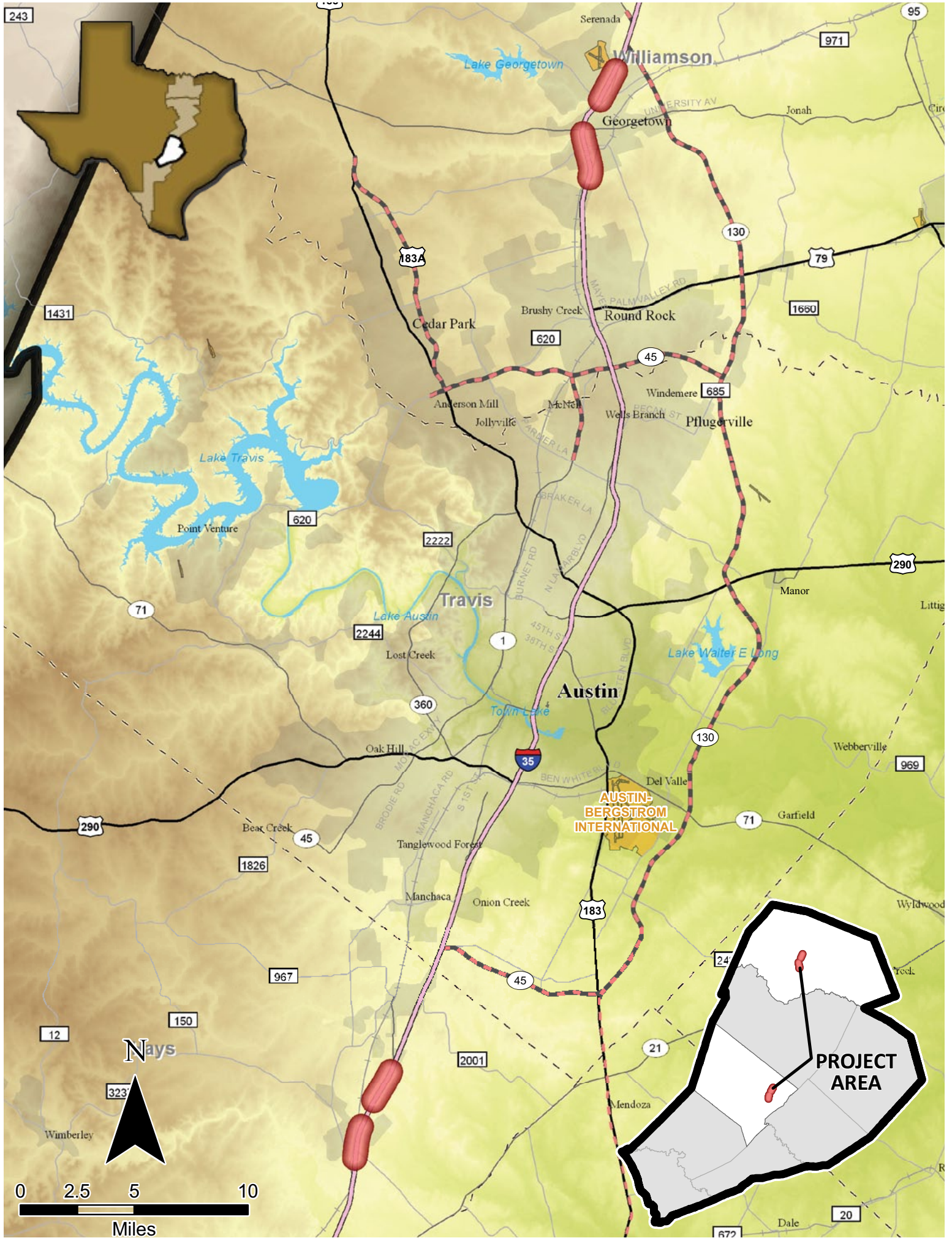
The Segment 3 Committee recommends constructing continuous frontage roads along I-35 from Williamson to Bexar County as a near-term project. The total length of frontage road construction is approximately six miles.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual project is between \$50 million and \$100 million, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





AUSTIN-BERGSTROM INTERNATIONAL

PROJECT AREA

Nays



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## I-35 RAMP MODIFICATIONS FROM US 290 TO BEN WHITE (SH 71)

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### PROJECT PURPOSE

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The purpose of the proposed Interstate 35 (I-35) ramp modifications project is to increase safety and improve mobility on I-35 from U.S. Highway 290 East (US 290 E) to Ben White (State Highway 71).

### EXISTING FACILITY

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The existing I-35 facility from US 290 E north of downtown Austin to Ben White (SH 71) south of downtown Austin varies from six to eight lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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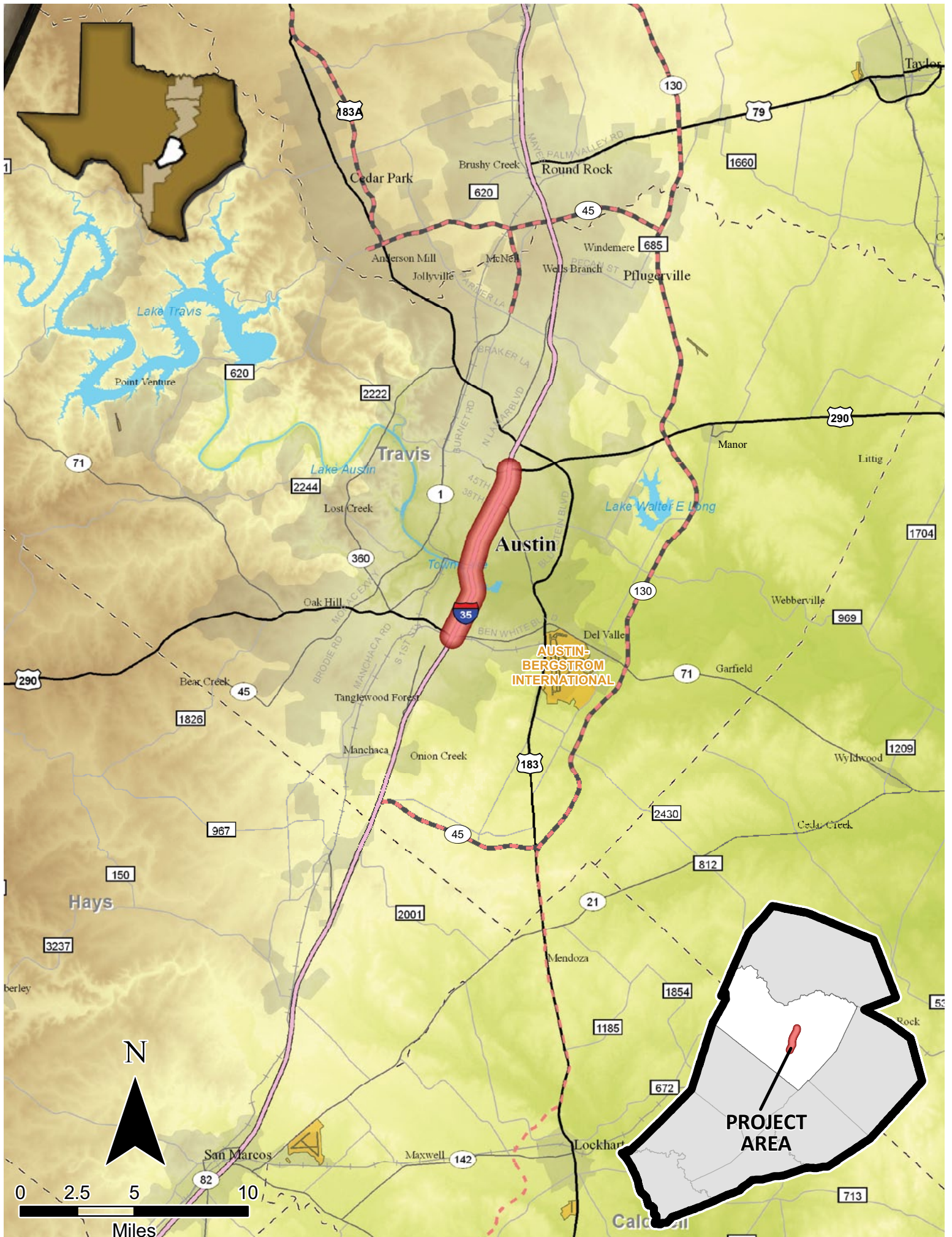
The Segment 3 Committee recommends modifying access ramps along I-35 to improve traffic flow on I-35 main lanes and frontage roads for a distance of approximately eight miles as a near-term project.

### CONCEPTUAL PROJECT COST ESTIMATE

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An estimated cost cannot be determined at this time. Further study is necessary to identify demand management needs at each access ramp.





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## I-35/LOOP 1604 AND I-35/I-410 INTERCHANGE IMPROVEMENTS

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### PROJECT PURPOSE

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The purpose of the proposed Interstate 35 (I-35) interchange projects is to improve mobility on I-35 at I-410 and State Highway Loop 1604 (Loop 1604).

### EXISTING FACILITY

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The existing I-35 interchanges at I-410 and Loop 1604 are on the north side of San Antonio.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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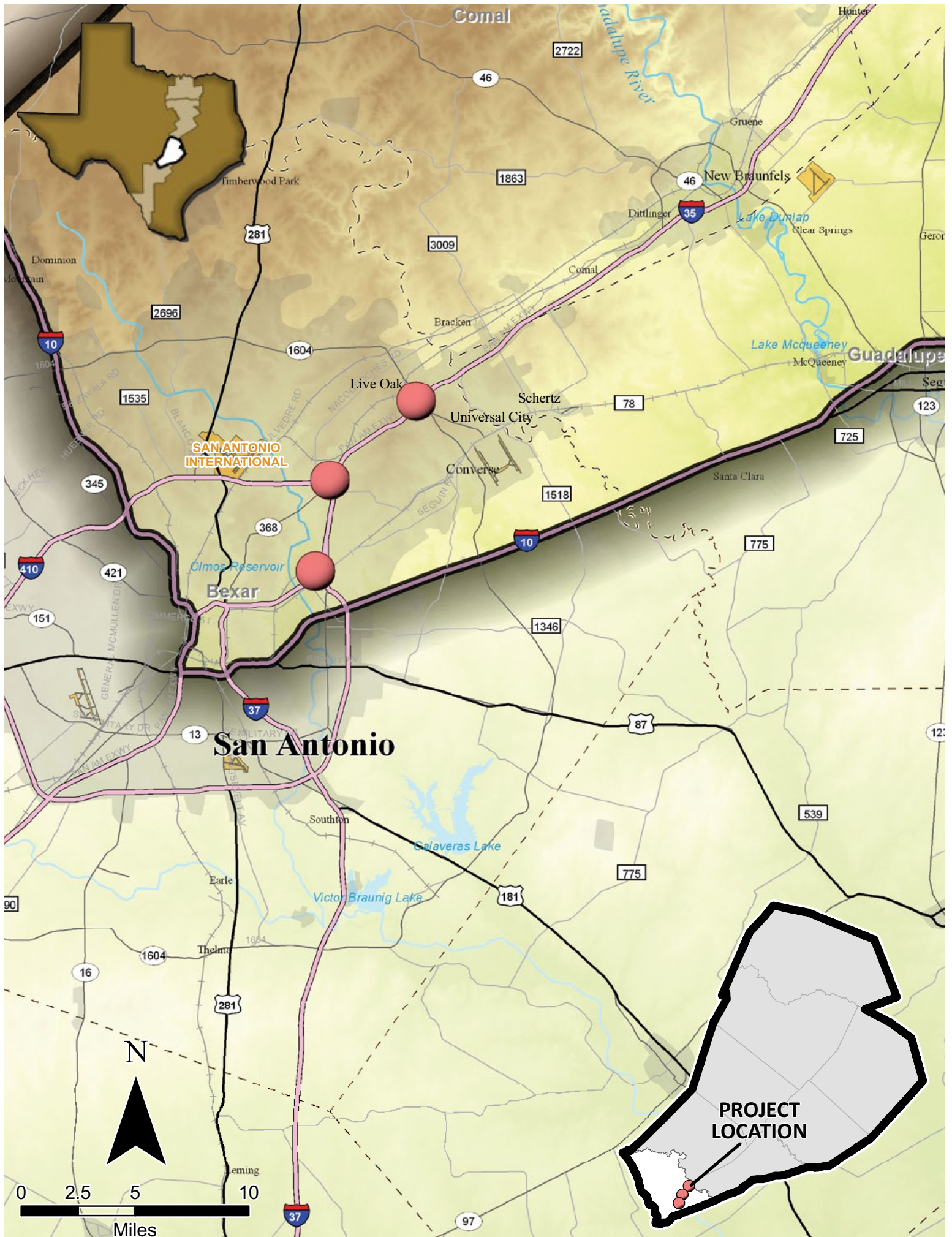
The Segment 3 Committee recommends improving two I-35/I-410 interchanges and the I-35/Loop 1604 interchange in north San Antonio as a near-term project.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual projects is between \$600 million and \$900 million, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





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## LOOP 1604 IMPROVEMENTS

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### PROJECT PURPOSE

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The purpose of the proposed State Highway Loop 1604 South (Loop 1604 S) project is to increase capacity on Loop 1604 and improve connectivity to Interstate 35 Northeast (I-35 NE).

### EXISTING FACILITY

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The existing Loop 1604 S facility from I-35 NE in Live Oak to I-10 East (E) south of Converse varies from two to four lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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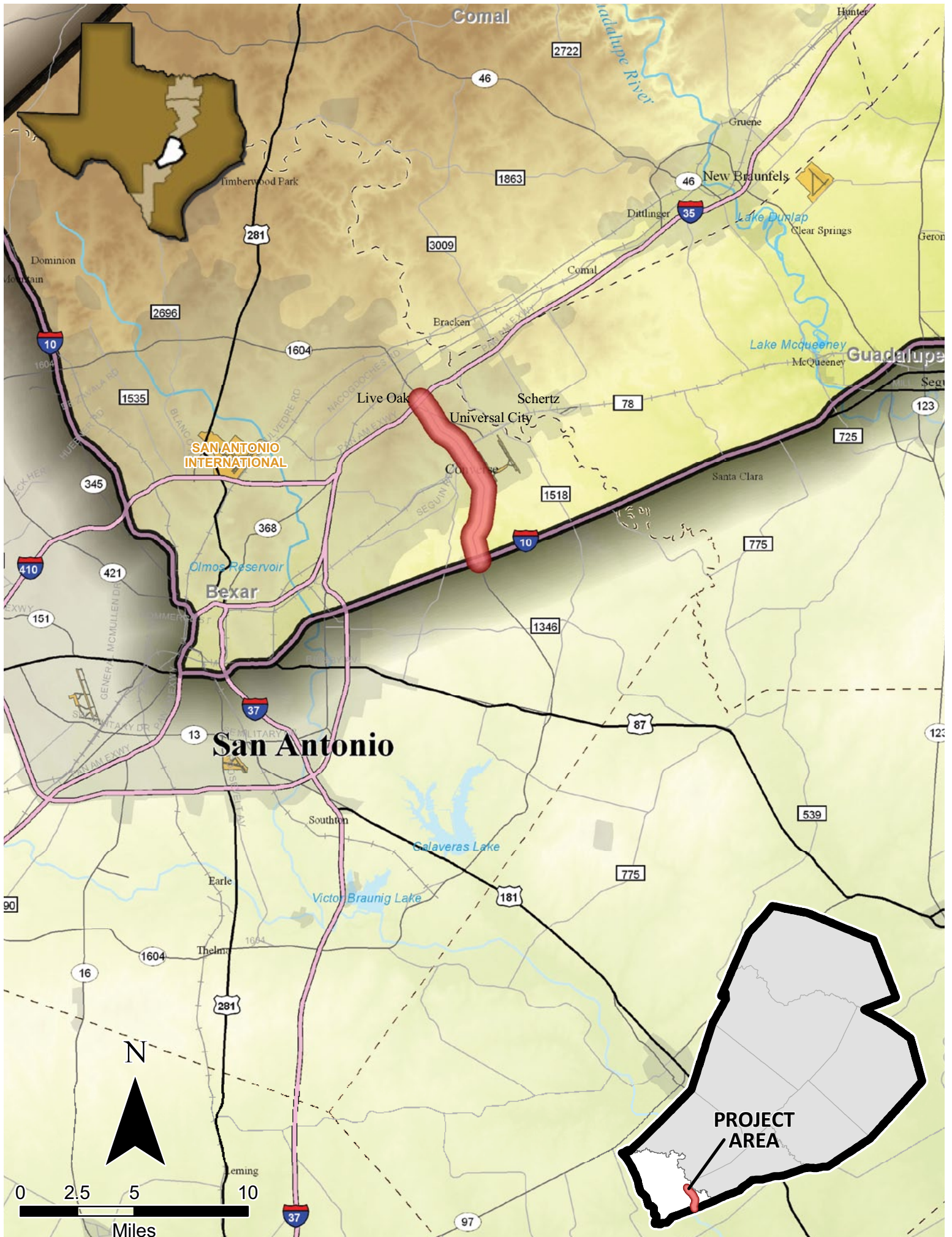
The Segment 3 Committee recommends upgrading Loop 1604 S to a six-lane controlled access facility from I-35 NE in Live Oak to I-10 E south of Converse for a distance of approximately eight miles as a near-term project.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual project is between \$300 million and \$400 million, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





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## US 183 IMPROVEMENTS FROM US 290 E TO SH 71

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### PROJECT PURPOSE

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The purpose of the proposed U.S. Highway (US) 183 project is to improve system connectivity with the Interstate 35 (I-35) corridor.

### EXISTING FACILITY

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The existing US 183 facility from US 290 E northeast of downtown Austin to State Highway (SH) 71 southeast of downtown Austin is four lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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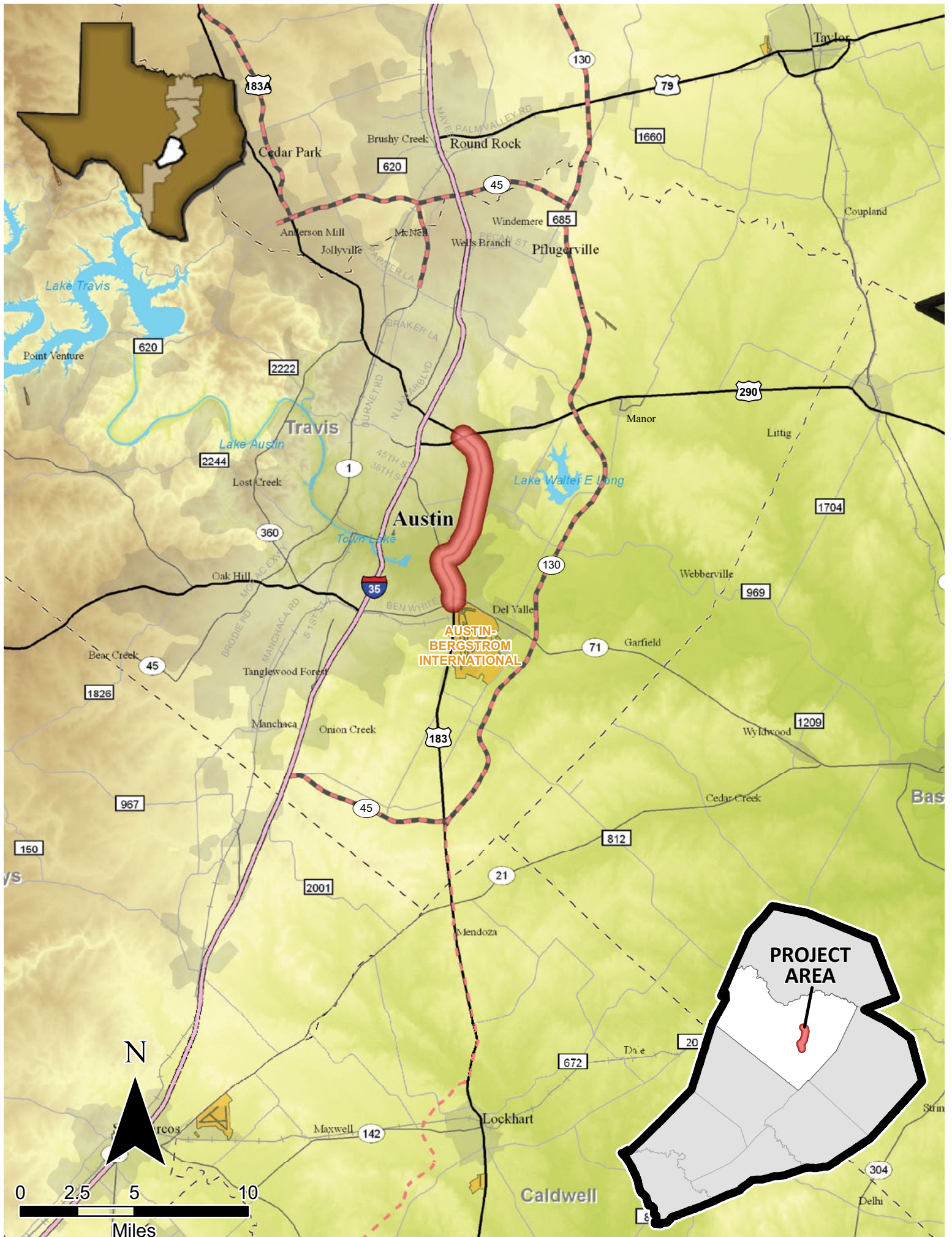
The Segment 3 Committee recommends upgrading US 183 to a four-lane, full freeway from US 290 E northeast of downtown Austin to SH 71 southeast of downtown Austin for a distance of approximately eight miles as a near-term project. A portion of the project area exists as a four-lane controlled access facility reducing the project area to a distance of approximately seven miles.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual project is between \$200 million and \$300 million, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





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## SH 71 CONNECTOR FROM I-35 TO SH 130

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### PROJECT PURPOSE

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The purpose of the proposed State Highway (SH) 71 connector project is to provide improved roadway connections between Interstate 35 (I-35) and SH 130.

### EXISTING FACILITY

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The existing SH 71 facility from just west of Riverside Drive in Austin to SH 130 east of Del Valle varies from four to eight lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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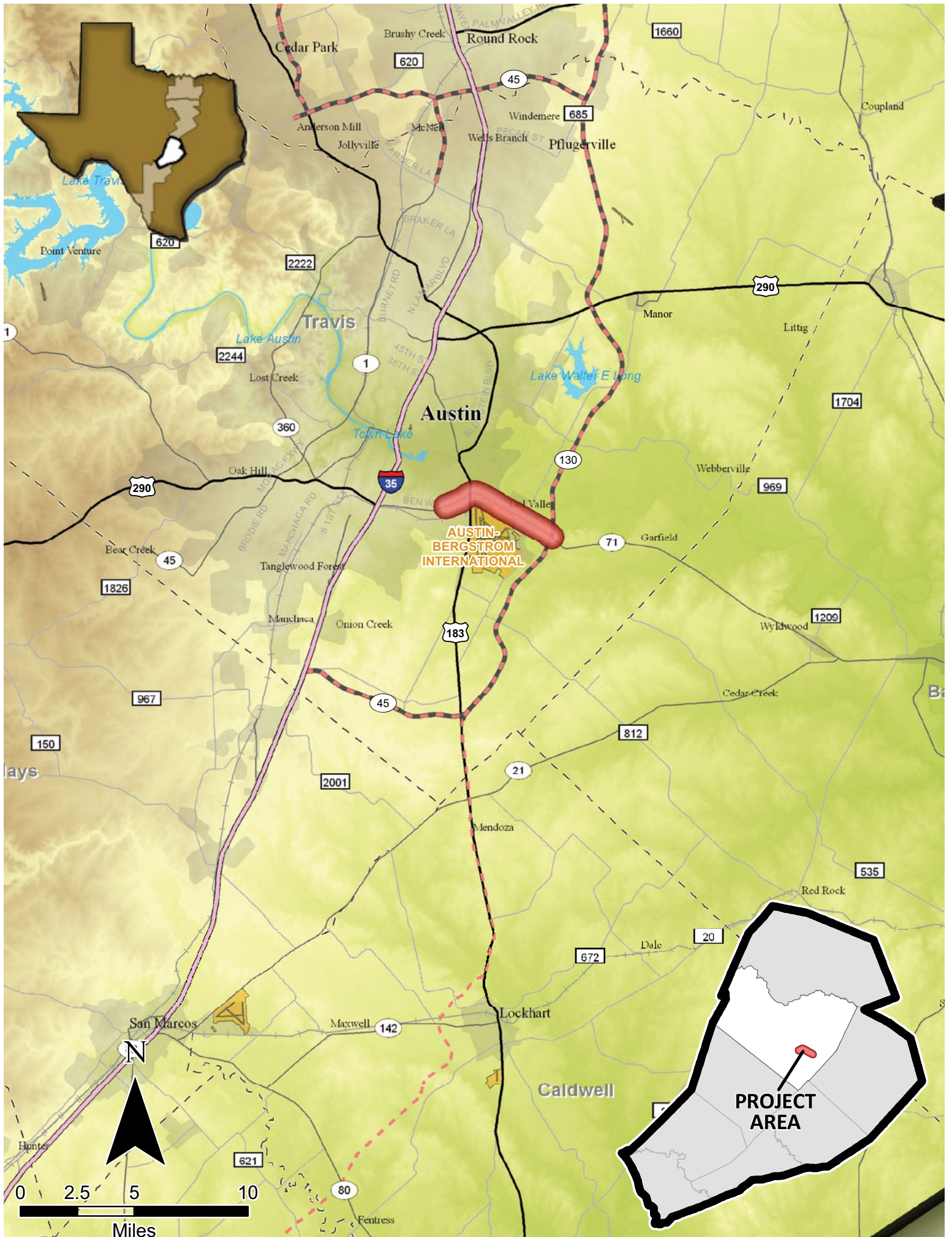
The Segment 3 Committee recommends upgrading SH 71 to a controlled-access facility from just west of Riverside Drive to SH 130 east of Del Valle for a distance of approximately 5.5 miles as a near-term project. Portions of the project area exist as controlled-access facilities reducing the project improvements to a distance of approximately 4.5 miles. SH 71 from I-35 to Bastrop has been identified by the Capital Area Metropolitan Planning Organization (CAMPO) as a highly congested corridor in 2010 and 2035 and is currently under study.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual project is between \$150 million and \$200 million, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





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## I-35 IMPROVEMENTS FROM WILLIAMSON/BELL COUNTY LINE TO I-10

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### PROJECT PURPOSE

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The purpose of the proposed project is to increase capacity and improve mobility on Interstate 35 (I-35) from the Williamson/Bell County line to I-10 in San Antonio.

### EXISTING FACILITY

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The existing I-35 facility from the Williamson/Bell County line to I-10 in San Antonio varies from four to ten lanes; most of the facility, approximately 95 miles, is six lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

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The Segment 3 Committee recommends widening I-35 from the Williamson/Bell County line to I-10 in San Antonio to a minimum eight-lane controlled access facility for a distance of approximately 124 miles as a mid-term project.

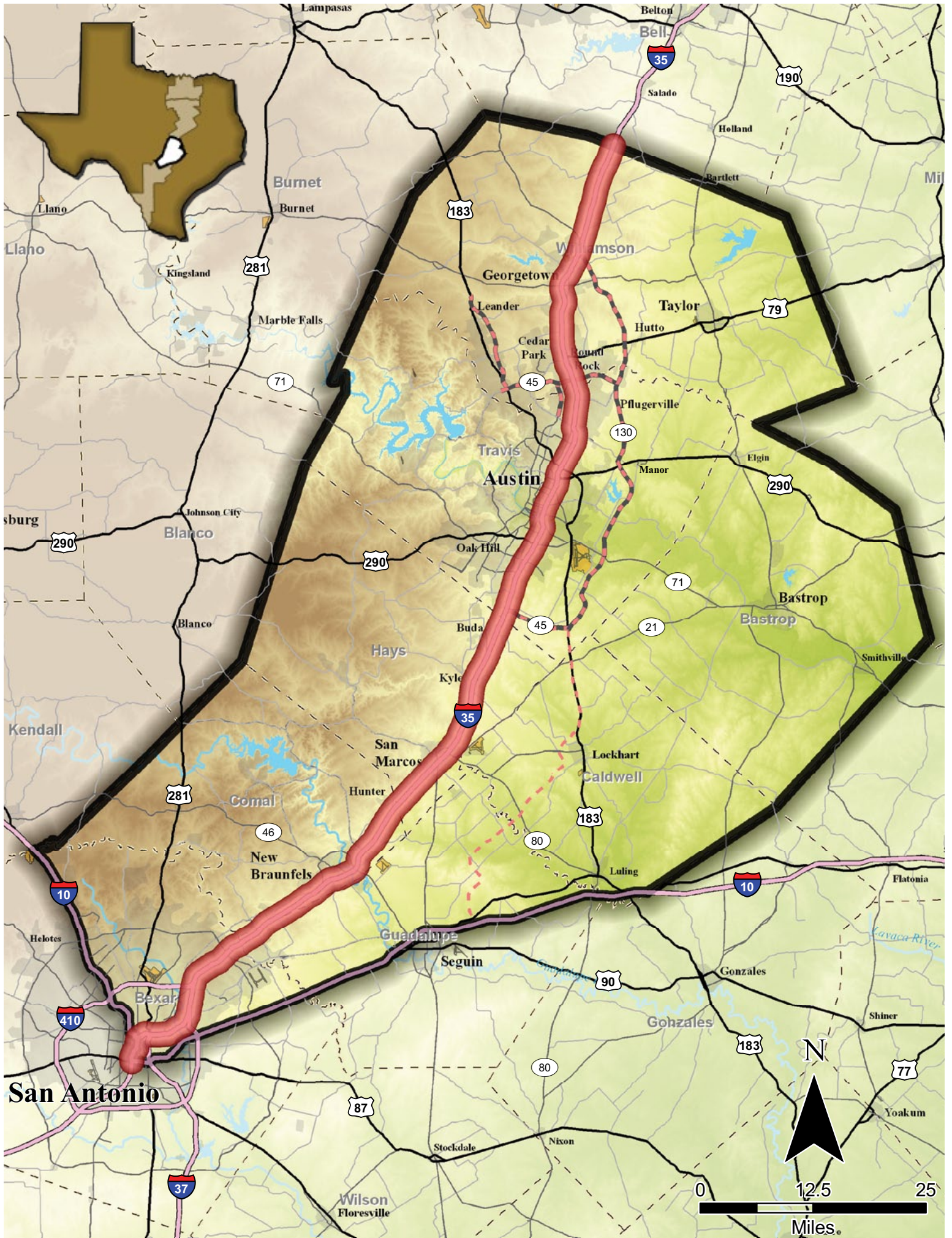
If no improvements are made to I-35 traffic demand would leave State Highway (SH) 130 as the alternative option.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual project is between \$2.7 billion and \$3.85 billion, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





## I-35 HOV/TOLL LANE FROM SH 45SE TO I-10

### PROJECT PURPOSE

The purpose of the proposed Interstate 35 (I-35) high-occupancy vehicle (HOV)/toll lane project is to increase capacity and improve mobility on I-35 from State Highway 45 Southeast (SH 45SE) to I-10.

### EXISTING FACILITY

The existing I-35 facility from SH 45SE northeast of Buda to I-10 in San Antonio varies from four to eight lanes; most of the facility, approximately 47 miles, is six lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

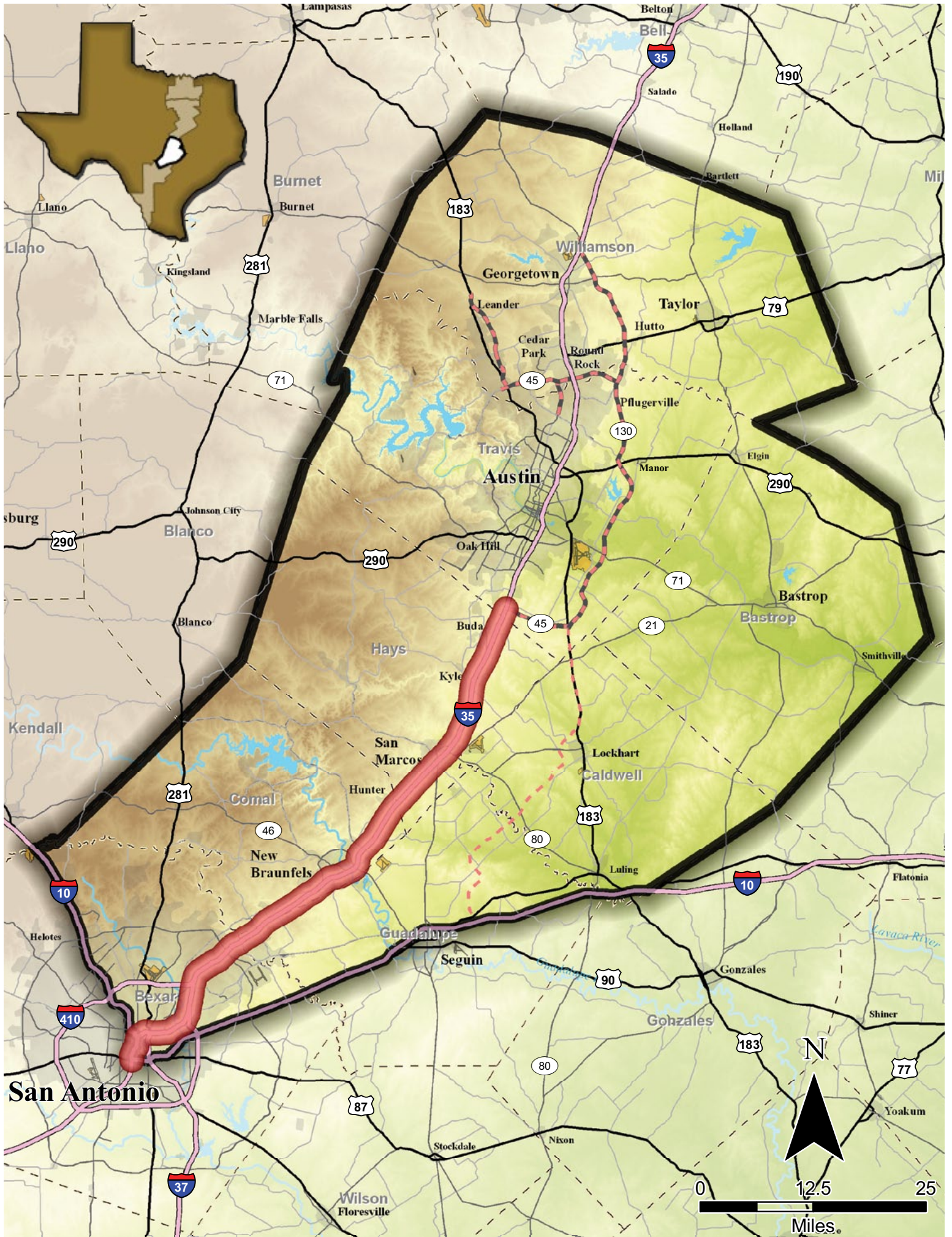
The Segment 3 Committee recommends adding an HOV/toll lane in each direction from SH 45SE northeast of Buda to I-10 in San Antonio for a distance of approximately 69 miles as a mid-term project.

If no improvements are made to I-35 traffic demand would leave SH 130 as the alternative option.

### CONCEPTUAL PROJECT COST ESTIMATE

The estimated cost for the conceptual project is between \$6.2 billion and \$8.85 billion, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





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## I-10 IMPROVEMENTS

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### PROJECT PURPOSE

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The purpose of the proposed Interstate 10 East (I-10 E) project is to improve regional mobility and connectivity with I-35.

### EXISTING FACILITY

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The existing I-10 E facility from I-35 in downtown San Antonio to State Highway (SH) 130 northeast of Seguin is four lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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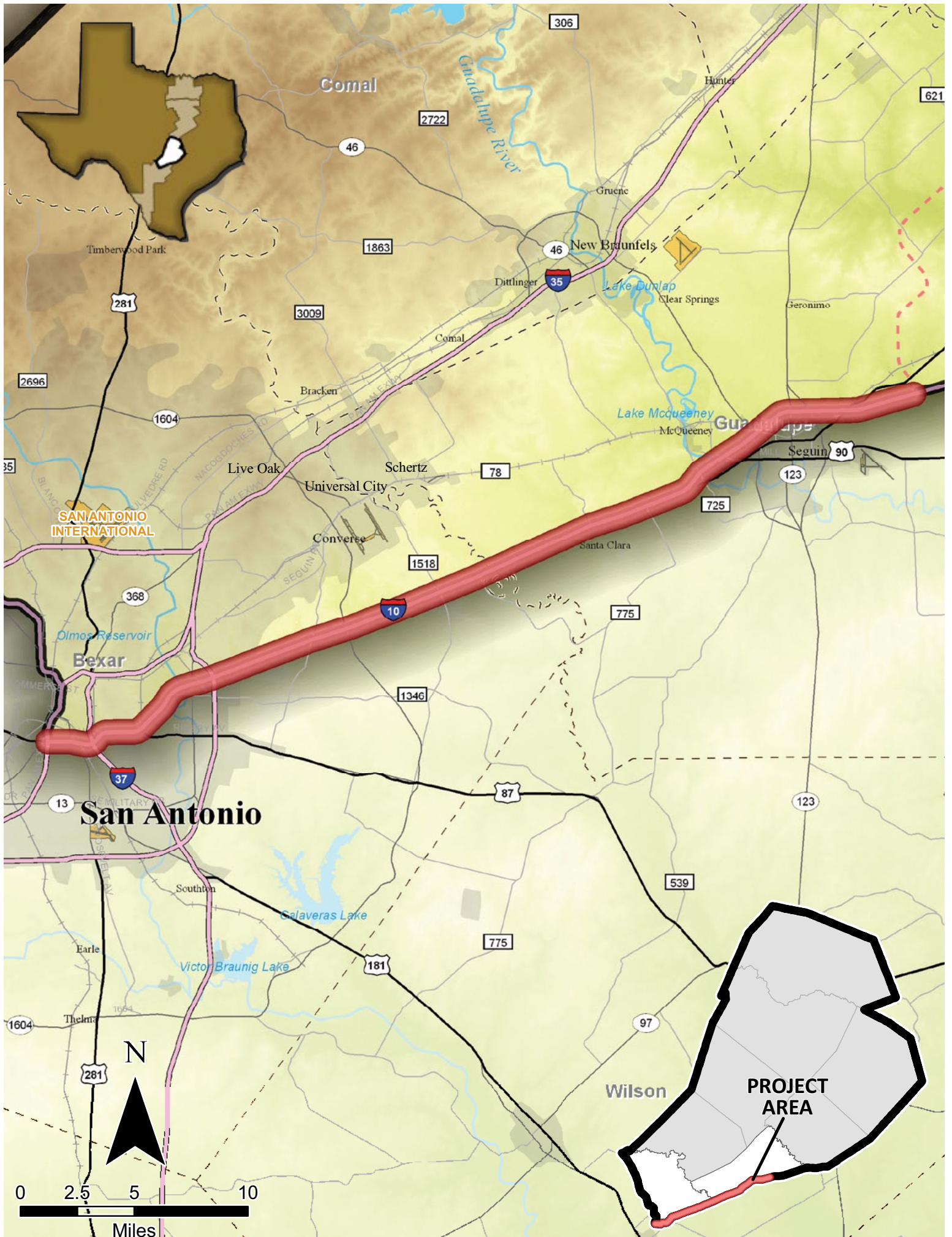
The Segment 3 Committee recommends widening I-10 E from I-35 in downtown San Antonio to SH 130 northeast of Seguin to six lanes for a distance of approximately 42 miles as a mid-term project.

### CONCEPTUAL PROJECT COST ESTIMATE

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The estimated cost for the conceptual project is between \$950 million and \$1.4 billion, including design and construction. This cost, in 2010 dollars, does not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.





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SAN ANTONIO INTERNATIONAL

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Miles

Guadalupe River

Gruene

New Braunfels

Dittlinger

Comal

Bracken

Live Oak

Universal City

Converse

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Santa Clara

775

1346

87

123

725

123

90

Lake McQueeney

McQueeney

Guadalupe

Olmos Reservoir

Bexar

Salaveras Lake

Victor Braunig Lake

539

775

181

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Wilson

PROJECT AREA

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## SH 21/SH 80/NEW BRAUNFELS CONNECTORS FROM I-35 TO SH 130

### PROJECT PURPOSE

The purpose of the proposed connector project is to provide improved roadway connections between Interstate 35 (I-35) and State Highway (SH) 130.

### EXISTING FACILITY

The existing SH 21 facility from SH 80 east of San Marcos to SH 130 north of Mendoza varies from two to four lanes; most of the facility, approximately 13 miles, is two lanes. The existing SH 80 facility from I-35 east of San Marcos to SH 130 north of Fentress is four lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

The Segment 3 Committee recommends:

**Upgrading SH 21 to a four-lane controlled access facility from SH 80 east of San Marcos to SH 130 north of Mendoza for a distance of approximately 17 miles (SH 21 from San Marcos to Bastrop has been identified by the Capital Area Metropolitan Planning Organization (CAMPO) as a highly congested corridor in 2010 and 2035 and is currently under study)**

**Upgrading SH 80 to a four-lane controlled access facility from I-35 east of San Marcos to SH 130 north of Fentress for a distance of approximately 11 miles**

**Constructing a new four-lane controlled access facility from I-35 in New Braunfels to SH 130 north of Kingsbury**

These connector improvements are recommended as a mid-term project.

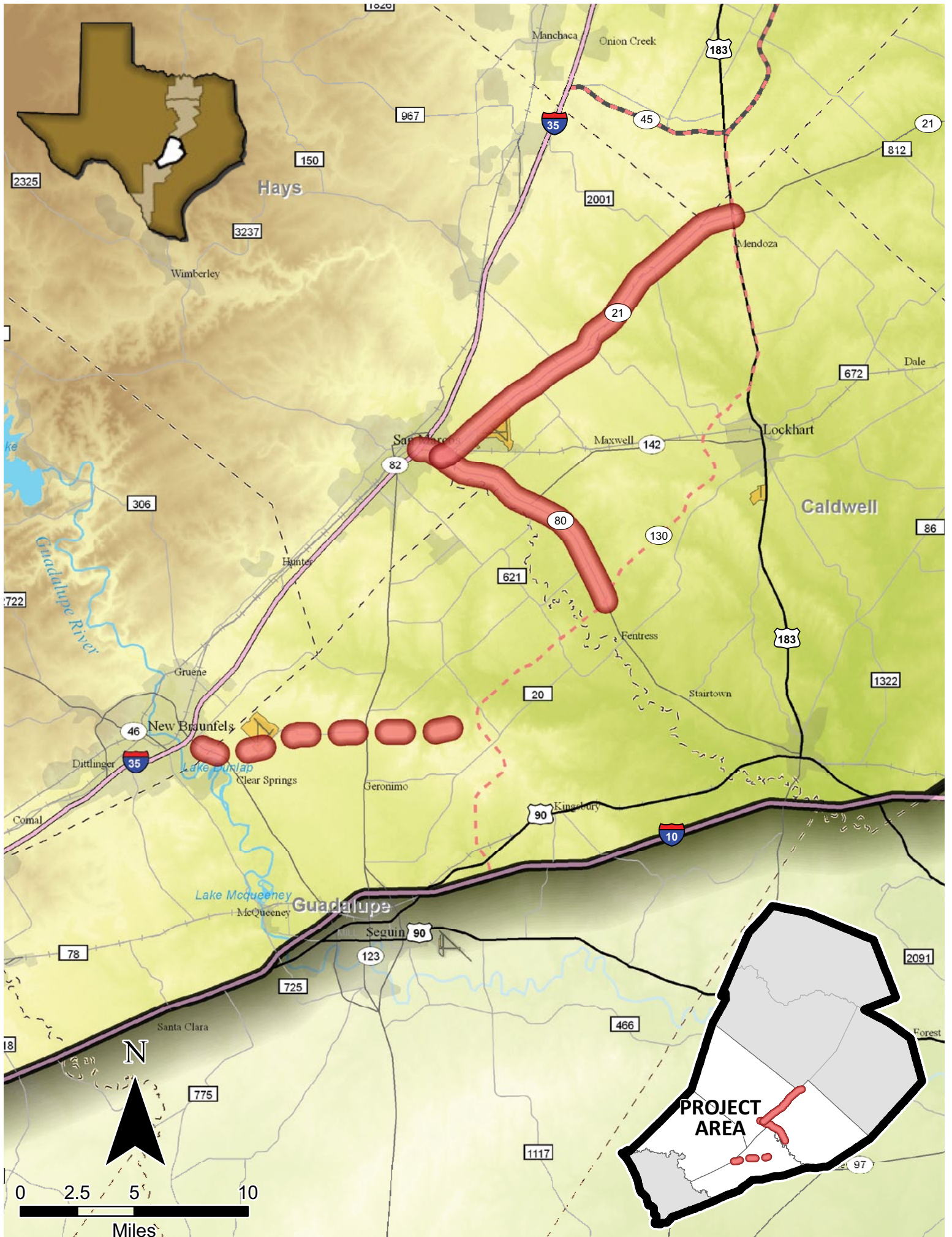
### CONCEPTUAL PROJECT COST ESTIMATE

The estimated cost for the SH 21 conceptual project is between \$450 million and \$700 million, including design and construction. The estimated cost for the SH 80 conceptual project is between \$300 million and \$450 million, including design and construction. These costs, in 2010 dollars, do not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.

An estimated cost cannot be determined for the New Braunfels Connector at this time because a project alignment has not been determined. If the project proceeds, detailed environmental and engineering studies as well as additional public involvement would need to be conducted to determine potential project costs.

\*Corridor Segment 3 Committee recommends this project be studied within five years. Additionally, a short-term safety study for SH 21 is recommended prior to the complete study of these connectors.





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## US 183 IMPROVEMENTS FROM SH 71 TO SH 45SE

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### PROJECT PURPOSE

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The purpose of the U.S. Highway (US) 183 project is to improve system connectivity within the Interstate 35 (I-35) corridor.

### EXISTING FACILITY

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The existing US 183 facility from State Highway (SH) 71 southeast of downtown Austin to SH 45SE in Mustang Ridge is four lanes.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

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The Segment 3 Committee recommends upgrading US 183 to a four-lane, full freeway from SH 71 southeast of downtown Austin to SH 45SE in Mustang Ridge for a distance of approximately ten miles as a mid-term project. In addition, the I-35 Corridor Segment 3 Committee recommends the study of upgrading this project area to a six-lane, full freeway.

### CONCEPTUAL PROJECT COST ESTIMATE

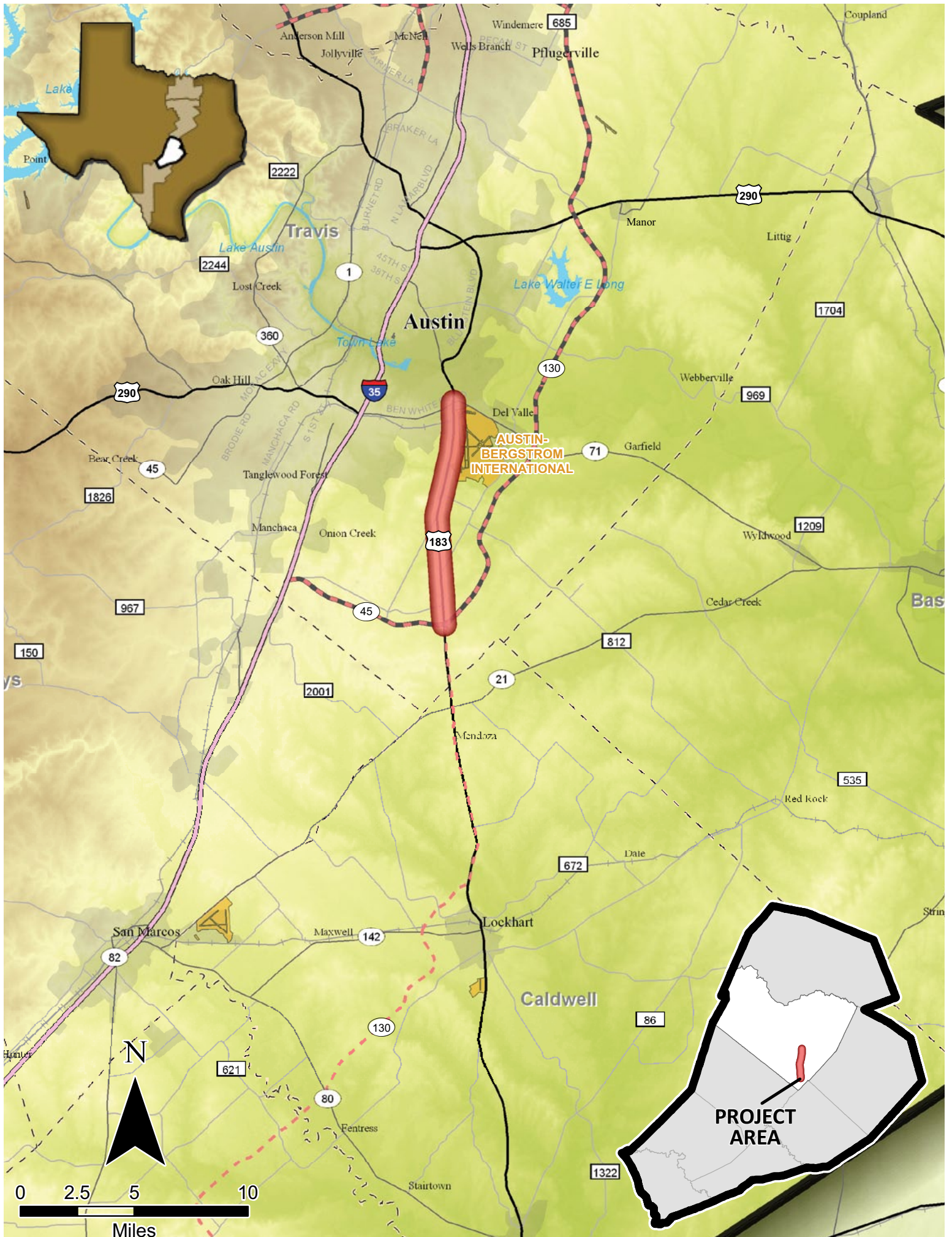
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The estimated cost for upgrading to a four-lane, full freeway is between \$250 million and \$400 million, including design and construction. The estimated cost for upgrading to a six-lane, full freeway is between \$350 million and \$500 million, including design and construction. These costs, in 2010 dollars, do not include the purchase of right-of-way. The estimated project costs could increase due to right-of-way purchases and potential impacts to properties.

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\*Corridor Segment 3 Committee recommends this project be studied within five years.





## PASSENGER RAIL FROM LAREDO TO DALLAS/FT. WORTH METROPLEX

### PROJECT PURPOSE

The purpose of the proposed regional passenger rail project is to provide an alternate mode of transportation that will remove traffic from the other transportation systems along the Interstate 35 (I-35) corridor between Laredo, San Antonio, Austin and Dallas.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

The Segment 3 Committee recommends a regional passenger rail system that connects the major metropolitan areas of Laredo, San Antonio, Austin and Dallas as a mid-term project. The proposed project will include grade separation improvements at rail crossings within the I-35 Corridor to improve mobility and safety.

### CONCEPTUAL PROJECT COST ESTIMATE

An estimated cost cannot be determined without a proposed alignment.

For reference, the core line of the “Texas T-Bone” High Speed Rail (HSR) system proposed by the Texas High-Speed Rail and Transportation Corporation is estimated to cost from \$30 - \$50 million per mile. The I-35 corridor from San Antonio to Dallas is within the Texas T-Bone HSR project area. TxDOT recently received \$5.6 million in federal High Speed and Intercity Passenger Rail planning funds to conduct a feasibility study of passenger rail service from Oklahoma City to the Dallas/Fort Worth Metroplex, with a possible extension to South Texas.

\*Corridor Segment 3 Committee recommends this project be studied within five years.





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## PASSENGER RAIL FROM AUSTIN TO ELGIN

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### PROJECT PURPOSE

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The purpose of the proposed commuter rail project is to provide an alternate mode of transportation that will remove traffic from the other transportation systems along the Interstate 35 (I-35) corridor.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

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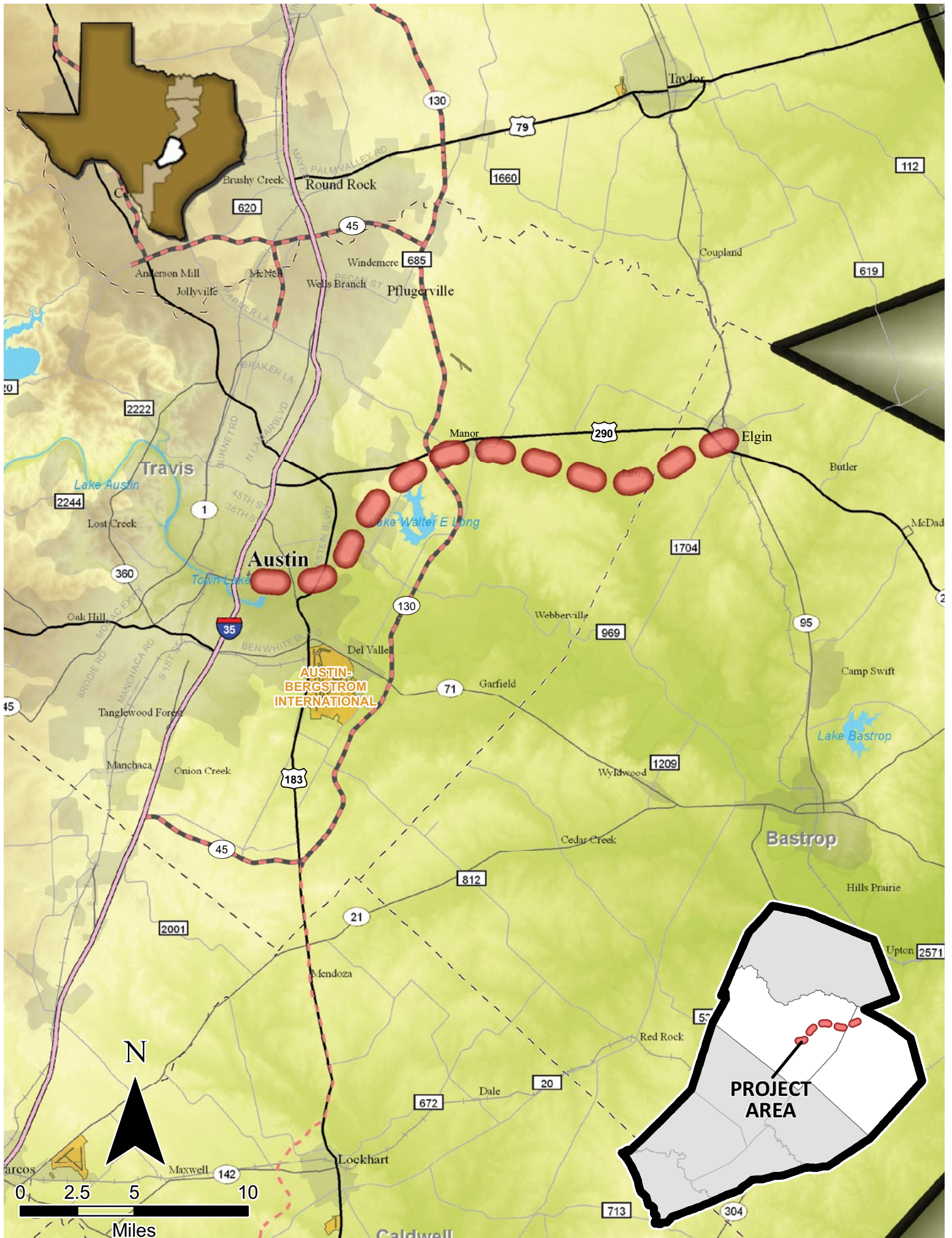
The Segment 3 Committee recommends a commuter rail system that connects Austin to Elgin as a mid-term project.

### CONCEPTUAL PROJECT COST ESTIMATE

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According to the *CAMPO 2035 Regional Transportation Plan*, adopted May 24, 2010, the proposed Elgin Rail project cost is \$327 million from downtown Austin to Elgin.





## NEW FREIGHT RAIL CONSTRUCTION

### PROJECT PURPOSE

The two purposes of the proposed freight rail relocation project are to:

**Provide an alternate freight route to allow commuter rail travel along the Interstate 35 (I-35) corridor**

**Improve freight rail operations throughout the state**

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE\*

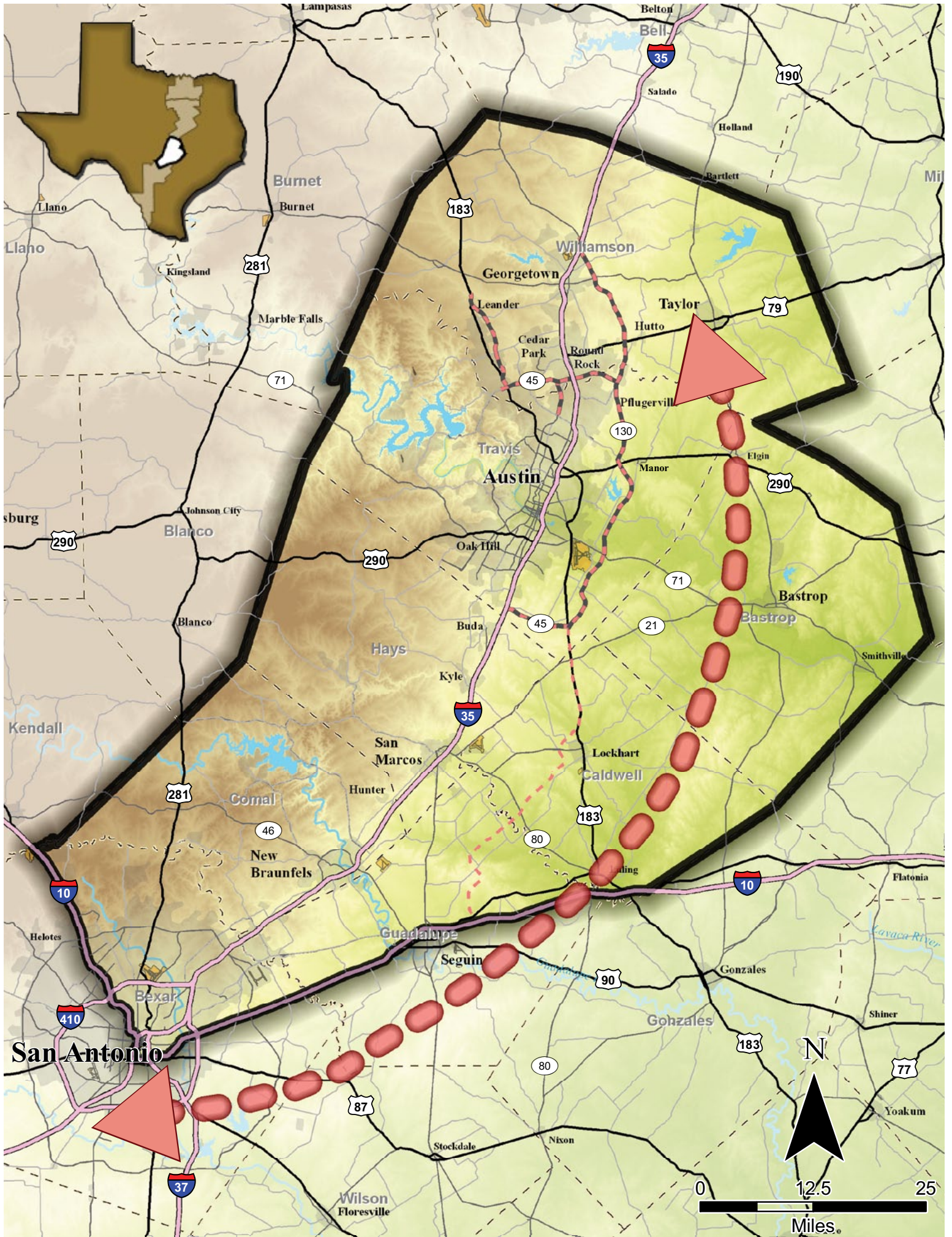
The Segment 3 Committee recommends the construction of a new freight rail line to the east of I-35 from San Antonio to Taylor to allow some Union Pacific trains to move off of the existing Union Pacific rail line (west of I-35), allow the possibility of passenger rail service on the existing line, increase freight capacity, and enhance safety. This improvement is recommended as a mid-term project. Any new construction would make every reasonable effort to avoid productive agricultural lands. It should be noted that the Texas Rail Relocation Fund, created by constitutional amendment in 2005, still remains unfunded.

### CONCEPTUAL PROJECT COST ESTIMATE

According to TxDOT's *Central Texas Rail Relocation Study* (July 2008) and TxDOT's *San Antonio Region Freight Study* (July 2008), the estimated freight rail relocation cost is over \$2.4 billion (2007 dollars).

\*Corridor Segment 3 Committee recommends this project be studied within five years.





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## NEW BRAUNFELS OUTER LOOP

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### PROJECT PURPOSE

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The purpose of the proposed New Braunfels Outer Loop project is to improve system connectivity with Interstate 35 (I-35) in the New Braunfels area.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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The Segment 3 Committee recommends constructing a four-lane loop around the City of New Braunfels as a long-term project. TxDOT's *New Braunfels Outer Loop Study Report*, August 2008, recommends a preferred corridor that is approximately 40 miles in length.

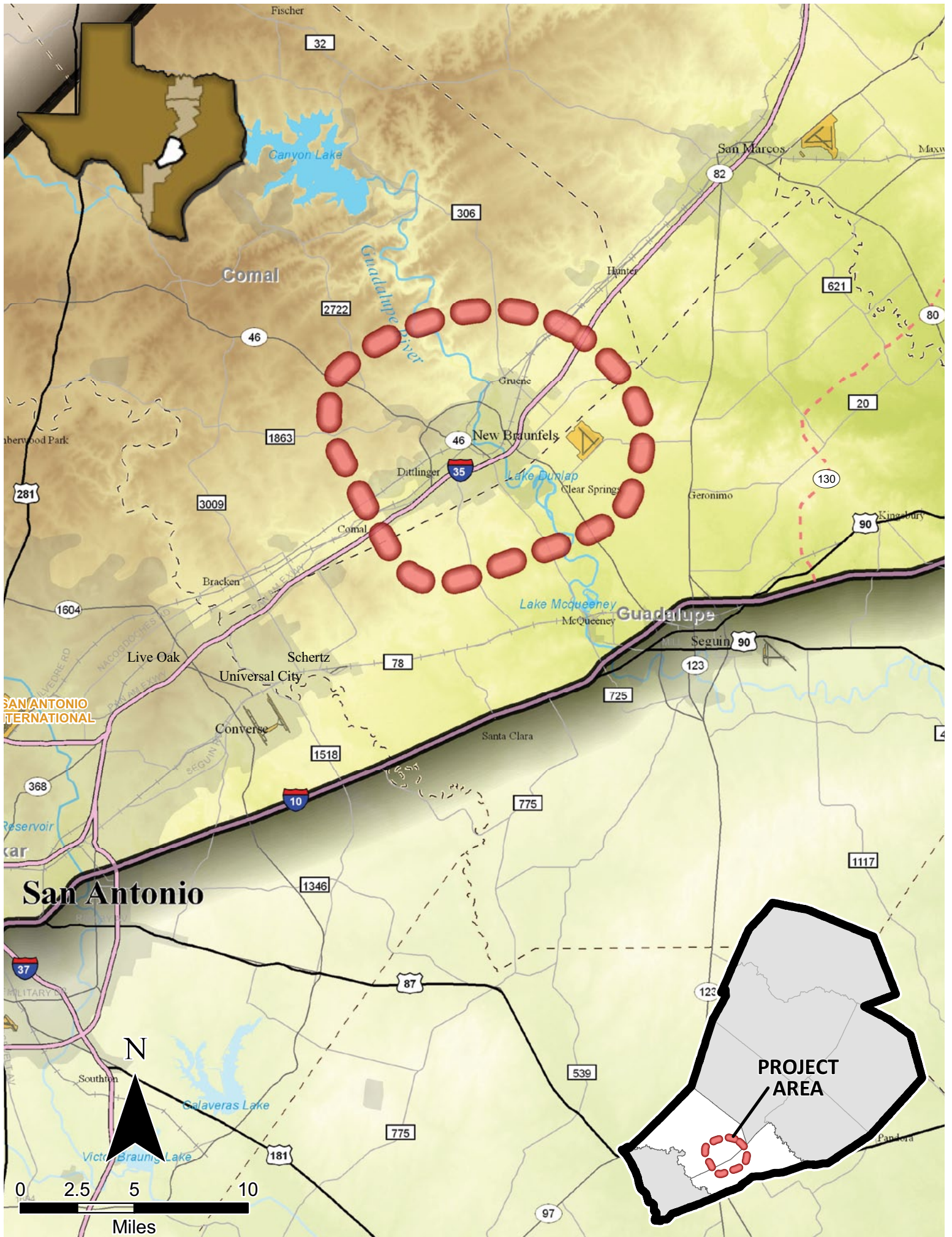
The Outer Loop is a proposed future bypass route around the City of New Braunfels. As currently envisioned, the New Braunfels Outer Loop will include improvements to existing roadways and the construction of new location facilities.

### CONCEPTUAL PROJECT COST ESTIMATE

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An estimated cost cannot be determined at this time. TxDOT's *New Braunfels Outer Loop Study Report*, August 2008, notes that "costs will be determined during future planning and environmental studies." The identified study area currently ranges in width from 1.6 miles to 3.2 miles.





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## SAN MARCOS OUTER LOOP

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### PROJECT PURPOSE

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The purpose of the proposed San Marcos Outer Loop project is to improve system connectivity with Interstate 35 (I-35) in the San Marcos area.

### PROJECT PROPOSED BY THE SEGMENT 3 COMMITTEE

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The Segment 3 Committee recommends constructing a four-lane loop around the City of San Marcos as a long-term project. The *San Marcos Transportation Master Plan*, July 2004, recommends a preferred corridor that is approximately 20 miles in length.

The Outer Loop, Farm to Market Road (FM) 110, is a proposed future bypass route around the City of San Marcos. As currently envisioned, the San Marcos Outer Loop will include improvements to existing roadways and the construction of new location facilities.

### CONCEPTUAL PROJECT COST ESTIMATE

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According to the *San Marcos Transportation Master Plan*, July 2004, the project is estimated to cost approximately \$264 million.

The first two phases of the Outer Loop (FM 110) are listed in the *CAMPO FY 2008-2011 Transportation Improvement Program*, adopted February 12, 2007. The estimated cost of FM 110 from I-35/McCarty Road to SH 123 is approximately \$34 million.





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# GLOSSARY

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**Access ramps** – A short section of road which allows vehicles to enter or exit a freeway or expressway.

**At-grade intersection** – A junction at which two or more transportation axes cross at the same level, or grade. Typically, this term refers to areas where roadways and railroads join or cross at the same level.

**Auxiliary lanes** – An additional lane on a freeway or expressway to connect an on-ramp and an off-ramp.

**Bypass route** – A road or highway that avoids or “bypasses” a built-up area, town, or village, to let through traffic flow without interference from local traffic, to reduce congestion in the built-up area, and to improve road safety.

**Collector-distributor lanes** – A one-way road next to a freeway that is used for some or all of the ramps that would otherwise merge into or split from the main lanes of the freeway. It is similar to a frontage road, and related to the more complex express-collector systems used in many large cities, but is built to freeway standards. Collector-distributor lanes are used to eliminate or move weaving from the main lanes of a freeway, particularly at cloverleaf interchanges.

**Commuter rail** – Commuter rail, also called suburban rail, is a passenger rail transport service between a city center, and outer suburbs and commuter towns or other locations that draw large numbers of commuters.

**Comprehensive development agreement (CDA)** - A comprehensive development agreement is the tool the Texas Legislature authorized to enable private participation in development by sharing the risks and responsibilities of design and construction. In some cases, financing and private investment in the transportation system can be included in the process. It provides a competitive selection process for developing regional projects or much larger undertakings. In addition, this contracting tool can streamline the time needed to deliver the project because multiple tasks can be under way simultaneously.

**Concurrent managed lanes** – Concurrent-flow lanes operate in the same direction of travel as the adjacent lanes, and typically, one lane is provided in each direction. Where possible, full inside median shoulders and a buffer separation with the general purpose lanes is included. These lanes may be physically separated from adjacent lanes, or not separated.



**Connecting facility** – A transportation facility designed to provide service from population centers to a primary roadway facility.

**Continuous frontage roads** – Parallel roadway providing access both between and through freeway interchanges. For freeways, continuous frontage roads provide the operational flexibility required to manage freeway saturation and improve incident management.

**Controlled access facility** – A type of roadway whereby traffic can only enter and exit at specific designated locations (typically entrance and exit ramps). Controlled access roads are generally referred to as freeways or expressways.

**Corridor** – A combination of discrete, adjacent surface transportation networks (e.g., freeway, arterial roads, rail networks) that link the same major origins and destinations.

**Discontinuous frontage roads** – Parallel roadway to a freeway lacking complete access between a set of interchanges.

**Dynamically priced managed lane** – A pricing strategy for operating managed toll lanes. The tolls vary dynamically in response to real-time traffic conditions in order to provide a superior free-flow travel service to the users of the toll lanes while maximizing the freeway's throughput.

**Fully directional interchanges/direct connectors** – Interchanges that use direct or semi-direct connections for one or more left-turn movements are called “directional” interchanges. When all turning movements travel on direct or semi-direct ramps or direct connections, the interchange is referred to as “fully directional”. These connections are used for important turning movements instead of loops to reduce travel distance, increase speed and capacity, reduce weaving and avoid loss of direction in traversing a loop. “Fully directional” interchanges are usually justified at the intersection of two freeways.

**General purpose lanes** – Lanes on a freeway or expressway that are open to all motor vehicles.

**Grade separation** – The process of aligning a junction of two or more transportation axes at different heights (grades) so that they will not disrupt the traffic flow on other transportation routes when they cross each other.

**High occupancy vehicle (HOV) lanes** – A system of exclusive lanes signed and striped for use by vehicles with multiple occupants (two or more or three or more persons).

**High occupancy toll (HOT) lanes** – A road pricing scheme that gives motorists in single-occupant vehicles access to high-occupancy vehicle (HOV) lanes.

**High-speed rail** – A type of passenger rail transport that operates significantly faster than the normal speed of rail traffic. In the United States, high-speed rail is defined as having a speed above 110 mph by the United States Federal Railroad Administration.

**Intermodal** – The use of two or more modes of transportation to complete the movement of a shipment of freight or a passenger trip from origin to destination.

**Level of service (LOS)** – A qualitative rating of the performance of a segment of highway. The performance is based on a target flow speed and vehicle flow rate. LOS is a “grade” of how well the highway segment achieved the target flow speed and flow rate. LOS measures typically range from “A”, representing optimal free-flow operating conditions, through “F”, representing breakdown in vehicle flow and volatile operating conditions.

**Managed lanes** – Highway facilities or a set of lanes where operational strategies are proactively implemented and managed in response to changing conditions.

**Metropolitan planning organization (MPO)** – A federally-mandated and federally-funded transportation policy-making organization in the United States that is made up of representatives from local government and governmental transportation authorities. Federal legislation required the formation of an MPO for any urbanized area with a population greater than 50,000. Federal funding for transportation projects and programs are channeled through this planning process.

**Multi-modal** – Multiple modes and/or providers of transportation within a select corridor or location.

**New location facilities** – The construction of new transportation infrastructure requiring the acquisition of new rights of way.

**Parallel facility** – A facility which may serve as an alternate route to a primary facility serving similar origins and destinations.

**Passenger rail** – A means of conveyance of passengers by way of wheeled vehicles running on rail tracks. In contrast to road transport, where vehicles merely run on a prepared surface, rail vehicles are also directionally guided by the tracks they run on.

**Peak period** – The observed duration of time during a typical day when traffic demand is at its highest. This typically coincides with a.m. and p.m. commute times and may vary based on geographical location.

**Planned projects** – Projects contained in the fiscally-constrained portions of current long-range transportation plans (e.g., MPO Metropolitan Transportation Plans [MTP's], Texas Statewide Transportation Improvement Program [STIP], Texas Unified Transportation Program [UTP]).

**Proposed alignment** – The design of a highway consists of a horizontal alignment, vertical alignment and cross-sectional elements. The horizontal alignment of a highway defines its location and orientation in plan view. The vertical alignment of a highway deals with its shape in profile. The cross-sectional elements include number of lanes and widths of lanes, shoulders, and medians and their spacing.

**Public-private partnerships** – Agreement between government and the private sector regarding the provision of public services or infrastructure.

**Reversible managed lanes** – Highway facilities or a set of lanes where operational strategies are proactively implemented and managed in response to changing conditions. In addition, the directional flow of traffic changes by time of day based on peak demand.

**Right of way (ROW)** – A strip of land that is granted, through an easement or other mechanism, for transportation purposes, such as for a trail, driveway, rail line, or highway. A right of way is reserved for the purposes of maintenance or expansion of existing services with the right of way.

**Roadway upgrades** – Improving the access-control or functional classification of a transportation facility.

**Roadway widening** – Increasing the capacity of a transportation facility, typically by adding additional travel lanes.



**Segment study area** – The respective segment boundaries for the four I-35 Corridor Segment Committees. The Segment 1 study area extends from the Texas/Oklahoma border to Interstate 20 in the Dallas-Fort Worth Metroplex; Segment 2 extends from Interstate 20 to the Williamson/Bell County line; Segment 3 extends from the Williamson/Bell County line to Interstate 10 in San Antonio; Segment 4 extends from Interstate 10 to the Texas/Mexico border.

**System connectivity** – Connectivity refers to the density of connections in a path or road network and the directness of links. A well-connected road or path network has many short links, numerous intersections, and minimal dead-ends (cul-de-sacs). As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations, creating a more accessible and resilient system. Connectivity can apply both internally (streets within that area) and externally (connections with arterials and other neighborhoods).

**Target flow rate** – Target flow rate is one of two quantitative factors that are used to assign a Level of Service (LOS) category to a section of highway facility. Each level of service category is defined by a flow rate (number of vehicles per hour per lane), and a flow speed (the speed at which vehicles travel). Target flow rate is the upper limit of the desired LOS category under a given target flow speed.

**Target flow speed** – Target flow speed is one of two quantitative factors that are used to assign a Level of Service (LOS) category to a section of highway facility. Each level of service category is defined by a flow speed (average speed of vehicles traveling through a given point), and a flow rate (the number of vehicles per hour per lane). Target flow speed is the upper limit of the desired LOS category under a given target flow rate.

**Transportation facility** – Something that is built, installed, or established to serve a particular transportation purpose. A transportation facility is typically a sub-component of a larger transportation system, i.e. a bus stop along a transit route, a new roadway within a roadway network.

**Travel demand modeling** – Travel demand modeling includes elements such as roadway and transit networks, and population and employment data to calculate the expected demand for transportation facilities. Within the model, mathematical equations are used to represent each individual's decision making process of: "Why", "When", "Where", and "How" to make the trip, and "What" route to follow to complete the trip. The model results for these individual choices are combined so that the aggregate impacts of roadway vehicle volumes and transit route ridership.

**Vehicle miles traveled (VMT)** – The sum of the total miles traveled by each individual vehicle traveling over a specified length of a facility or group of facilities, e.g., 10 cars traveling 10 miles = 100 Vehicle Miles of Travel (10 vehicles x 10 miles).

**Year of expenditure dollars** – Today's construction dollar amount escalated per year to the year of anticipation of spending. The escalation rate can be based on an assumed inflation rate.







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