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ENVIRONMENTAL ASSESSMENT

CR 273/274

FROM US 183 AND 183A TO FM 2243

WILLIAMSON COUNTY, TEXAS

CSJ: 0914-05-149

FEBRUARY 2010

(REVISED AUGUST 2010)

FEDERAL HIGHWAY ADMINISTRATION

&

TEXAS DEPARTMENT OF TRANSPORTATION

1.0 Introduction

The City of Leander (hereafter referred to as “the City”), with funding assistance from the Texas Department of Transportation (TxDOT), is proposing to develop a new location roadway (CR 273) and a roadway upgrade (CR 274) in support of a Transit-Oriented Development (TOD) district in Leander, Williamson County, Texas. The proposed project includes the extension of CR 273 north from Farm-to-Market Road (FM) 2243 to existing CR 274, and widening the existing CR 274 from US 183 east to its current terminus, then extending CR 274 east to connect with 183A (see **Figures 1a-1c**). The CR 273/274 project is referred to locally as the “Leander T” project.

For classes of actions where the significance of impacts is not clearly established, 23 CFR 771.119 indicates an environmental assessment (EA) could be prepared “...for each action that is not a categorical exclusion and does not clearly require the preparation of an environmental impact statement (EIS) or where the Administration believes an EA would assist in determining the need for an EIS”. Because the preliminary review of environmental impacts that may result from the extension of CR 273/274 indicated that there are no known significant impacts, and the final significance of impacts is not clearly established, TxDOT requested Federal Highway Administration (FHWA) concurrence on the preparation of an EA to assist in determining the need for an EIS. See Agency Coordination, **Appendix C** for the initial letter and FHWA’s response.

1.1 History of the Proposed Project

The development of the CR 273/274 roadway is a continuation of the community considering and then embracing the concept of TOD (zoning which allows for dense mixed-use development anchored by transit service). The Capital MetroRail Leander Station/Park and Ride, hereafter referred to as the “Rail Station” (see **Figure 1c**), is located in Leander and adjacent landowners plan to develop their land to support mixed uses around the station. The following chronology documents the long-standing communication with the citizens of Leander about this approach to planning.

History of the Leander TOD:

- May 2004 – The property within the triangle bounded by FM 2243, US 183, and the soon-to-be-built 183A is identified as a potential site for a TOD.
- Fall 2004 – The TOD concept is first introduced to the City.
- January 25, 2005 – The preliminary design, look, and outline of the TOD are first presented at a public meeting at Pat Bryson Municipal Hall.
- March 2, 2005 – The City holds an informal meeting to present the latest updates on the TOD project to taxpayers and homeowners living in the city’s Old Town district.
- April 14, 2005 – Leander City Council votes to amend a resolution allowing the primary landowners to annex their property into the city (a total of 1,443 acres), with the remaining land to be annexed as development continues.
- April 20 and 21, 2005 – Public hearings are held to present the TOD plan to the public.
- June 16, 2005 – The proposed code for the Leander TOD is presented to the Leander City Council.
- August 4, 2005 – Leander City Council and Planning and Zoning Commission approve the zoning ordinances and code for the proposed 2,300-acre TOD, including annexing land for the project.
- September 22, 2005 – The City formally adopted the Leander Smartcode.
- November 15, 2007 – Leander City Council takes the first steps toward building the CR 273/274 roadway.
- July 14, 2009 – Presentation of proposed CR 273/274 roadway design alternatives at a public open house held at Pat Bryson Hall.

1.2 Consistency with Local Transportation Plan

CR 273/274 from FM 2243 and from US 183 to 183A is shown on the City's 2007 Roadway Plan Revision 1 as a major arterial (see **Figure 15**). Development of the TOD is a key component of the plan. The plan calls for construction of an urban transportation grid, of which CR 273/274 is central. The roadway is included as a project to be open to traffic by 2015 in the Williamson County Long-Range Transportation Plan (Williamson County, 2009). Therefore, the City anticipates obtaining contracts for the construction of the proposed project in December 2011. The intersection of CR 274 and 183A would begin within the three months following November 28, 2010. The proposed facility is described in **Section 5.0**. Sidewalks would be constructed on public right-of-way as the roadway is built. According to the Leander Smartcode (August 2005), Section 3.6 Streetscape Requirements includes the following requirements for any proposed development: "All frontages shall include the appropriate types of sidewalk, curbing, planter, and street trees". This smartcode is an assurance by the City that pedestrian facilities adjacent to and outside the proposed project right-of way would be consistent with the plans for the TOD and the proposed roadway.

In addition to the City's plans for roadways, the Capitol Area Metropolitan Planning Organization (CAMPO) has included the proposed project in both the CAMPO 2008-2011 Transportation Improvement Program (TIP) and the CAMPO 2035 Regional Transportation Plan (RTP). Copies of applicable pages of these plans with the listing of the project are included in **Appendix C**. The proposed project will be added to the 2011-2014 TIP in November 2010. Since the project conforms to CAMPO's bicycle and pedestrian policy and it is or will be individually listed in their transportation plans, the proposed project is consistent with the 2008-2011 TIP and 2035 RTP. However, there is a typographical error in the listing of the project in the 2035 RTP.

The description of the proposed roadway in the 2035 RTP includes the statement that "(CR 273 is being constructed as a six-lane boulevard. CR 274 is being constructed as a four-lane arterial.)" The statement should read that CR 273 would be constructed as a four-lane arterial and CR 274 as a six-lane boulevard. The number of lanes and type of roadway in the description were inadvertently reversed. CAMPO has committed to correcting the typographical error through administrative process and a copy of a letter indicating their commitment to the correction is included in **Appendix C**. The 2035 RTP will be corrected to assure that the 2008-2011 TIP is consistent with the 2035 RTP. The final approval of the proposed project cannot be granted until the RTP is corrected.

2.0 Existing Facility

CR 274 (San Gabriel Parkway) exists for a limited distance from US 183 east to a point approximately halfway between US 183 and 183A, where it is currently a dead end. The roadway includes two travel lanes with no shoulders (approximately 23 feet of pavement width) within approximately 135 feet (varies) of existing right-of-way (see **Figures 3a, 3b, and 5**). CR 273 (Mel Mathis Avenue) does not currently exist north of FM 2243.

3.0 Purpose and Need

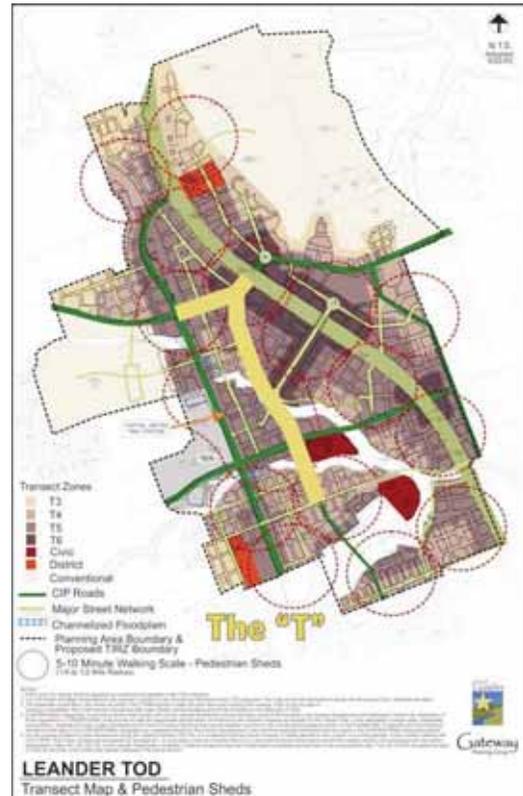
3.1 Purpose and Need of the Proposed Improvements

The purpose of this project is to support development anticipated by the City's TOD, approved and adopted by the citizens of Leander, through use of federal and state monies to pay for roadway infrastructure. The proposed roadways would provide capacity to meet anticipated traffic demand, in accordance with current design standards and criteria for providing safe roadway facilities for the traveling public. As two of the main arterials of the planned Leander TOD, the CR 273 and CR 274 roadways (locally referred to as the "Leander T") would serve to maintain traffic flow both north-south and east-west for residents and merchants in the TOD as well as customers to the TOD. The project would also join an existing section of CR 274 (West San Gabriel Parkway) located east of US 183 with a planned section of CR 274 east of 183A (also called San Gabriel Extension or CR 274/276) thereby improving east/west connectivity in northern Leander.

In addition, construction of CR 273/274 improves mobility for Capital Metro buses that can exit off US 183 into the Rail Station and can exit to CR 273/274 where lane widths safely accommodate bus service. This travel movement would provide for a single crossing of the rail and reduce turning movement of buses and other traffic entering and exiting the park and ride facility.

There is a need to provide additional access and travel capacity from areas where development is planned within the TOD to existing developed areas. As described in the Project History (see **Section 1.1**), the voters of Leander approved TOD development as their community planning goal and that goal requires roadway access. The TOD approach to land development is a more compact and walkable development pattern which, coupled with the option for commuting to and from Austin via transit, would result in fewer environmental impacts overall compared with traditional land development patterns. Air quality is one parameter that could show improvement under the TOD scenario. Improvements to and construction of CR 274 from US 183 to 183A would complete a gap between existing and platted county roadway facilities between US 183 and 183A. The following analysis of population and traffic growth supports the need for access within the TOD.

Although the project area remains largely undeveloped, residential and commercial development is occurring at a rapid rate in the City. According to Capital Market Research (2005), from 2001 to 2005 more than 2,400 multi-family and 6,000 single family homes were added in the Cedar Park/Leander area. The Leander TOD Market Analysis (Capital Market Research, 2005) showed that Austin is one of the fastest growing cities in the country with a strong economy and job growth, healthy real estate market, and projected population increase. With CR 273/274 in place, residential development in the TOD could take place with at least some future residents choosing to commute between Austin and Leander via the rail line. According to the City's website, the Leander Independent School District has grown into the largest school district in Williamson County and the fastest growing district in the state of Texas. It has a total of four high schools, six middle schools and 21 elementary schools.



Finally, federal and state monies used to support roadway infrastructure would result in a savings to the City that would allow City funds to be allocated to development of the TOD. TOD development in conjunction with the Rail Station would result in a compact design that ultimately would result in fewer environmental impacts when compared with traditional, car-dependent development patterns. In addition, use of shared use lanes with Shared Lane Marking to accommodate vehicles and bicycles concurrently demonstrates a proactive approach for developing multi-modal facilities. An on-going study by the City of Austin on the implementation of shared lanes (shared use lanes with Shared Lane Markings) and colored bicycle lanes to improve safety by controlling interactions between the two modes was recently awarded the Innovative Transportation Solutions award for 2009 by Women's Transportation Seminar International.

3.2 Project Funding

The proposed project cost for the proposed project is approximately \$9,190,600.72 (this has been updated compared to the CAMPO TIP cost estimate). The project cost would be split between local, state, and federal funds. Specifically, the City was granted Local Transportation Project Advance Funding for a Surface Transportation Program Metropolitan Mobility Project by TxDOT in an Advance Funding Agreement signed in January 2007.

4.0 Alternatives to the Proposed Action

4.1 No-Build Alternative

The No-Build Alternative would leave the existing CR 274 (San Gabriel Parkway) stubbed-out roadway as it currently is, without extending it to 183A, and would not include construction of CR 273 (Mel Mathis Avenue). This alternative would not open the land between FM 2243, US 183, and 183A for development. The No-Build Alternative would not result in the conversion of approximately 18 acres of undeveloped land to developed uses. The No-Build Alternative would not meet the purpose of supporting the City's planned development through construction of roadway infrastructure. The need to provide access would also not be met if the proposed project is not built.

4.2 Alternative Alignments

One alternative alignment (the Build Alternative) was considered for the extension of CR 274 (San Gabriel Parkway). This alternative would extend the roadway in a straight line from its current alignment east to connect to the 183A southbound frontage road. The CR 274 extension would be approximately 0.1 mile in length. Approximately 2.9 acres of right-of-way would be required for construction of the CR 274 extension beyond the end of the existing roadway, and a total of approximately 6.8 acres is needed for CR 274. This alternative fulfills the need and purpose of the proposed project.

Three alternative alignments (Build Alternatives) were considered for the proposed CR 273 (Mel Mathis Avenue) – Alternative 1, Alternative 2, and Alternative 3 (see **Figure 2**):

- Alternative 1 – This alternative curves to the west of Alternatives 2 and 3, near the Rail Station.
- Alternative 2 – This alternative is the same as Alternative 3 for the southern portion of the route, but in the northern portion it is placed farther to the east than Alternatives 1 and 3.
- Alternative 3 – This alternative is the central alternative, located between Alternatives 1 and 2.

Public Involvement

An open house public meeting was held in Leander on July 14, 2009 in order to present the proposed alternative alignments to the public and gather information which would be used in the selection of a preferred alternative route. Approximately 26 people attended the meeting, 13 of whom were members

of the public. At the meeting, exhibits depicting the proposed project alternatives were available for public viewing and representatives of TxDOT and the City were present to answer questions. One verbal comment and 15 written comments were received during the meeting and 10-day comment period. Thirteen (13) of the comments expressed support for Alternative 3, one comment expressed support for Alternative 1, and one comment was supportive of the project in general, without specifying a preference for one of the alternatives. More information regarding this meeting can be found in **Section 11.0**.

Evaluation of Alternatives

Any of the three evaluated alternatives for CR 273 would fulfill the need and purpose of the proposed project and would provide access to serve anticipated development. All three alternatives share the same termini at FM 2243 and CR 274 (San Gabriel Parkway). **Table 1** provides a comparison of the three alternatives (they vary along CR 273 only) with regard to various environmental constraints.

Table 1: CR 273 Alternatives Evaluation			
	Alternative 1	Alternative 2	Alternative 3
Length (linear feet)	5,813	5,847	5,733
Length (miles)	1.1	1.1	1.1
Roadway right-of-way required (acres)	10.7	10.7	10.5
Number of relocations/displacements	0	0	0
Floodplain crossed (linear feet)	1,232	724	823
Number of stream crossings	2	2	2
Number of ponds	1	1	1
Number of threatened or endangered species occurrences	0	0	0
Number of recorded cultural resource sites	3	1	2
Number of historic properties	0	0	0
Prime farmland (acres)	0	0	0
Wooded land (acres) (inc. drainage easements)	5.2	4.6	4.8
Number of public comments favoring alternative	1	0	13

Selection of the Preferred Alternative

Based on evaluation of potential environmental constraints, mobility and travel efficiency considerations, and public comments received from the July 2009 public meeting, Alternative 3 was selected as the Preferred Alternative (see **Figure 3**). Subsequent design revisions included clarification on right-of-way and drainage easement requirements. Drainage easements (requiring approximately 12 acres of right-of-way) were designed to serve as water conveyance. Water quality ponds would be constructed to treat water runoff to meet water quality regulatory requirements along the project. See **Section 5.0 Proposed Facility**. This refined design was assessed throughout the remaining document sections.

5.0 Proposed Facility

The proposed facility including existing and proposed right-of-way, bridges, easements, and water quality ponds is shown on **Figures 3a** and **3b**.

The proposed CR 273 (locally referred to as Mel Mathis Avenue) would include one 10-foot and one 12-foot travel lane in each direction with no median, plus eight-foot parallel parking lanes. The roadway transitions to the existing two-lane section south of FM 2243. The typical right-of-way width would be approximately 80 feet (see **Figure 4a**). Two bridges are included in the CR 273 design: the bridge over the North Fork of Brushy Creek would be 160 feet long by 70 feet wide, and the bridge over the South Fork of Brushy Creek would be 190 feet long by 70 feet wide. See **Figure 4b**. The proposed right-of-way would accommodate 10 feet of sidewalks along the length of CR 273 (see **Figure 4a**). The length of the proposed roadway is approximately 1.1 miles. Approximately 11.2 acres of new right-of-way would be required.

The proposed improvements to CR 274 (locally referred to as San Gabriel Parkway) would utilize the existing CR 274 pavement section (approximately 0.27 mile) with slight realignments to include one 11-foot and one 12-foot travel lane in each direction. The proposed right-of-way would accommodate an additional 14-foot travel lane in each direction, a 12-foot median and 17-foot angle parking with sidewalks (eight feet within the proposed right-of-way) on both sides, all within a typical 148-foot right-of-way (**Figure 5**). The proposed CR 274 roadway would be approximately 0.37 mile long between US 183 and 183A, approximately 0.1 mile of which would be new location roadway between the current terminus and 183A. Improvements to the existing CR 274 section would require approximately 6.8 acres of right-of-way, of which approximately 5.9 acres are currently owned by Williamson County. The remaining 0.9 acres of additional right-of-way would need to be acquired; this area consists of two slivers of right-of-way, one on each side of existing CR 274.

Sidewalks would be constructed on public right-of-way as the roadway is built. In addition, according to the Leander Smartcode (August 2005), Section 3.6 Streetscape Requirements includes the following requirements for any proposed development: “All frontages shall include the appropriate types of sidewalk, curbing, planter, and street trees”. Therefore, it is anticipated that additional sidewalks would be constructed outside the proposed right-of-way by private entities as the TOD develops.

The Design speed is 45 mph for CR 274 and 35 mph for CR 273. According to the Leander Smartcode, the posted speed is anticipated to be 20 mph, but would be no more than 35 mph to ensure compatibility with bicycle utilization.

The proposed project would increase access to the Rail Station both for residents of the TOD and also for persons who would be able to access the TOD via US 183 and 183A once CR 274 is built. The proposed combined additional right-of-way for CR 273 and CR 274 would be approximately 18 acres, including 12.1 acres of right-of-way to be acquired and 5.9 acres currently owned by Williamson County. The 5.9 acres was donated to Williamson County and the donation occurred in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policy Act. An additional 12 acres of drainage easements would be needed. The total area affected by right-of-way acquisition for the roadway and drainage easements would be approximately 30 acres. Where right-of-way purchase would be needed, it would be conducted in accordance with Public Law 96-146 (the Federal Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended). Right-of-way would be acquired prior to letting.

According to traffic modeling conducted for Williamson County’s regional traffic model, the CR 273 roadway from FM 2243 to CR 274 is anticipated to carry a volume of 600 vehicles per day (vpd) in 2015 and 5,100 vpd in 2035. CR 274/San Gabriel Parkway from US 183 to 183A is anticipated to carry a volume of 4,000 vpd in 2015 and 16,100 vpd in 2035. These volumes includes estimates for the level of build out of the Leander TOD that is expected to have occurred by 2015 and with additional build out occurring by 2035 (URS, 2009).

CR 273 Drainage

The street and sidewalks would drain to curb inlets located along the proposed street. The storm sewer system is designed for the 25 year storm event per the City’s criteria. All onsite water quality would be treated using water quality ponds, located near the creek crossings (see **Figure 3**). CR 273 would utilize 25-foot drainage easements adjacent to the right-of-way along the entire length of the project to capture and convey off-site drainage runoff to the creeks. These ditches would not be used as a water quality Best Management Practice (BMP) but would solely be used for offsite water conveyance.

CR 274 Drainage

All street and sidewalk drainage would be captured in curb inlets and conveyed with storm sewer pipes to water quality ponds referenced in CR 273. Offsite drainage runoff would be conveyed on existing ditches and culverts that currently outfall at the creeks.

Estimated Construction Dates

The anticipated letting date for the project would be in December 2011, and construction is estimated to last for approximately twelve months, with the project completed in 2011. It is anticipated that construction of the intersection at CR 274 and 183A would begin within three months after November 28, 2010 (fiscal year 2011). The letting contract for the remaining construction is anticipated to be in December 2011 (fiscal year 2012).

6.0 Existing Environment

6.1 Soils and Geology

Topography

The CR 273/274 project area is within the Leander, Texas U.S. Geological Survey (USGS) topographic map quadrangle. The topography of the project area is mostly level, with an elevation of 950 feet above mean sea level. Drainage flows in a southeasterly direction.

Geology

The underlying geology of the project area consists of Keys Valley Marl, part of the Fredericksburg Group of the lower Cretaceous (see **Figure 6**). Keys Valley Marl is soft and white, with a thickness of up to 50 feet (UT-BEG, 1972). Marine megafossils and other pelecypods, ammonites, gastropods, and echinoids are common.

No evidence of karst geology was observed within the project area during field investigations conducted in August-September 2009.

Soils

The proposed project lies within the Denton-Eckrant-Doss soil association (NRCS, 1983). This association consists of moderately deep, shallow, and very shallow calcareous, clayey, cobbly, and stony soils that formed in indurated fractured limestone or limy earths. Seven soil series are found within the project area; these are listed in **Table 2** and depicted on **Figure 7**.

Table 2: Project Area Soils		
Soil Series	Soil Classified as Prime Farmland?	Soil Classified as Hydric?
Brackett gravelly clay loam, 3 to 16 percent slopes (BkE)	No	No
Crawford clay, 1 to 3 percent slopes (CfB)	Yes	No
Denton silty clay, 3 to 5 percent slopes (DnC)	Yes	No
Doss silty clay, 1 to 5 percent slopes (DoC)	No	No
Eckrant cobbly clay, 1 to 8 percent slopes (EaD)	No	No
Fairlie clay, 1 to 2 percent slopes (FaB)	Yes	No
Tinn Clay, frequently flooded (Tn)	No	Yes (unnamed, hydric minor components)

Sources:

Natural Resources Conservation Service (NRCS), formerly Soil Conservation Service. 1983. Soil Survey of Williamson County, Texas.

NRCS. 2009. Web Soil Survey, version 2.1: Hydric Soils – Williamson County, Texas and Prime and Important Farmlands – Williamson County Texas. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, accessed May 1, 2009.

One of the soil types found within the project area is classified as a hydric soil (Tinn Clay, frequently flooded), and three are classified as prime farmland soils (Crawford clay, 1 to 3 percent slopes; Denton silty clay, 3 to 5 percent slopes; and Fairlie clay, 1 to 2 percent slopes).

The Farmland Protection Policy Act (FPPA), as detailed in Subtitle I of Title XV of the Agricultural and Food Act of 1981, provides protection to the following: (1) prime farmland; (2) unique farmland; and (3) farmland of local or statewide importance. The FPPA defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management (irrigation), according to acceptable farming methods. Unique farmland is farmland that is used for production of specific high value food, feed, and fiber crops. Farmland of local or statewide importance is determined by the appropriate state or local government agency or agencies. Approximately 7.3 acres of soils classified as prime farmland soils occur within the CR 273/274 right-of-way. A total of approximately 17 acres of prime farmland soils occur within the roadway right-of-way plus the temporary drainage easements for CR 273/274, which would be roadside ditches until developers propose other BMPs with their development plans. A Farmland Conversion Impact Rating form (NRCS-CPA-106) is not required because the project area is dedicated to urban use (because the TOD is within Leander city limits). Although some of the land within the project area is used for hay production, no food crops are cultivated on the site. Because the project area has been designated as an urban area for urban uses (within the city limits of Leander and within the TOD), the land is no longer considered prime or unique farmland, or of local or statewide importance as farmland.

6.2 Water Resources

Groundwater

The proposed project is located within the Edwards Aquifer Contributing Zone (see **Figure 8**). Although water runoff from the Contributing Zone does not enter the aquifer directly, following precipitation events, water runoff flows downgradient to the aquifer's Recharge Zone, where it subsequently enters the aquifer. No recharge features were observed within the project area during field investigations.

Floodplains

The project area was investigated for encroachments into the 100-year floodplain using information obtained from Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for Williamson County. Floodplains associated with the North Fork of Brushy Creek and the South Fork of Brushy Creek would be crossed by the proposed CR 273 roadway (see **Figure 9**). No floodplains would be crossed by the CR 274 section. Approximately 823 linear feet of floodplain would be crossed by CR 273.

Surface Water Quality

The project area is located within the Brazos River Basin, which drains approximately 45,573 square miles, of which approximately 43,000 square miles are within Texas (TCEQ, 2004). Principal tributaries to the Brazos River include Yegua Creek, the Bosque River, the Little River (formed by the confluence of the Leon, Lampasas, and San Gabriel Rivers), and the Navasota River (TCEQ, 2004).

The North Fork of Brushy Creek and the South Fork of Brushy Creek, which drain into the North Fork San Gabriel River, cross the project area (see **Figure 9**).

For the purposes of monitoring water quality, the Texas Commission on Environmental Quality (TCEQ) has divided the major water bodies within the Brazos River Basin into 47 discrete segments. Water runoff from the project area drains to Segment 1250 - South Fork San Gabriel River. This segment extends from

the confluence with the North Fork San Gabriel River in Williamson County to the most upstream crossing of SH 29 in Burnet County. According to the TCEQ's 2008 Section 303(d) List, Segment 1250 is not listed as threatened or impaired.

Waters of the U.S. and Wetlands

The U.S. Army Corps of Engineers (USACE) regulates impacts to jurisdictional waters, including waters of the U.S. and wetlands, under Section 404 of the Clean Water Act. The term "waters of the U.S." is defined in 33 CFR 328.3(a) and encompasses a variety of water bodies, including interstate and intrastate waters, the use, degradation, or destruction of which could affect interstate or foreign commerce, impoundments or tributaries of such waters, and the territorial seas. Wetlands are defined as areas which, due to a combination of hydrologic and soils conditions, are capable of supporting hydrophytic vegetation. Recent U.S. Supreme Court cases (*Rapanos v. United States* and *Carabell v. USACE*) have resulted in new standards for determining jurisdiction of wetlands and other waters of the U.S. As a result, a significant nexus with a traditionally navigable water must exist for a water body, including wetlands, to qualify as a water of the U.S. Wetlands and other waters of the U.S. subject to the jurisdiction of the USACE, if present in the project area, would be expected to occur primarily in the narrow strips adjacent to streams and drainages.

According to the National Wetland Inventory (NWI) map for the Leander, Texas quadrangle, no wetlands occur within the project area. Two linear water features, the North Fork of Brushy Creek and the South Fork of Brushy Creek, are depicted on the NWI map. The North Fork of Brushy Creek is shown as palustrine and seasonally flooded with emergent, persistent vegetation. The South Fork of Brushy Creek is shown as an intermittent, seasonally flooded stream.

A field assessment to identify waters of the U.S. and delineate wetlands occurring within the project area was conducted in August 2009. Two waters of the U.S., the North Fork of Brushy Creek and the South Fork of Brushy Creek, and no wetlands were identified. The North Fork of Brushy Creek exhibits an ordinary high water mark (OHWM) of approximately 10 feet at the point crossed by CR 273, and the South Fork of Brushy Creek exhibits an OHWM of approximately 19 feet at the crossing point. Both of the named drainages are ephemeral in nature, and both were completely dry during the field assessment.

Section 10 of the Rivers and Harbors Act of 1899 gives the USACE the power to regulate work in, or affecting, navigable waters of the U.S., and Section 9 of this Act (administered by the U.S. Coast Guard) prevents construction of bridges or other structures over navigable waters without Congressional approval. No navigable waters, as defined by the USACE, occur within the project area.

Section 402

The proposed project is not located within an area regulated by a Municipal Separate Storm Sewer System.

6.3 Vegetation

Regional Vegetation

The project area is located within the Cross Timbers and Prairies Ecological Region of Texas, as delineated by Gould (1975) (see **Figure 10**). The region is generally characterized by a mosaic of oak woodlands and prairies (Telfair, 1999).

According to *The Vegetation Types of Texas*, vegetation of the project area is mapped as Oak-Mesquite-Juniper Parks/Woods (McMahan, et. al, 1984). Oak-Mesquite-Juniper Parks/Woods generally occurs as associations or as a mixture of individual woody species stands on uplands in the Cross Timbers and Prairies. This vegetation type is characterized by woody species such as live oak (*Quercus virginiana*), post oak (*Q. stellata*), shin oak (*Q. sinuata*), blackjack oak (*Q. marilandica*), Texas oak (*Q. texana*), Ashe juniper

(*Juniperus ashei*), mesquite (*Prosopis glandulosa*), cedar elm (*Ulmus crassifolia*), sugarberry (*Celtis laevigata*), agarita (*Mahonia trifoliolata*), Mexican persimmon (*Diospyros texana*), Texas pricklypear (*Opuntia lindheimeri*), soapberry (*Sapindus saponaria*), and sumac (*Rhus* sp.). Typical herbaceous species include purple three-awn (*Aristida purpurea*), hairy grama (*Bouteloua hirsuta*), Texas grama (*B. texana*), sideoats grama (*B. curtipendula*), curly mesquite (*Hilaria belangeri*), and Texas wintergrass (*Stipa leucotricha*). Vegetation of the project area is generally consistent with the mapped type in wooded upland areas, although grasslands and riparian areas are also present, as discussed below.

Project Area Vegetation

Based on a field assessment in August 2009, vegetation of the project area consists of upland woodland, riparian woodland, and grassland vegetative communities. These are discussed in more detail below.

Upland woodland vegetation within the project area includes tree species such as Ashe juniper (*Juniperus ashei*), sugarberry (*Celtis laevigata*), and live oak (*Quercus virginiana*). Common vines include grapevine (*Vitis* sp.). Ashe juniper observed within the woodland was generally immature. Woodland stands within the project area are interspersed with grassland. Herbaceous species within these upland woodlands consist of many of the same species as are found in the grasslands described below, although with lower density of individuals due to the shade provided by the trees. Upland woodland within the project area has a percent cover of approximately 40 to 60 percent. Diameter at breast height for trees within the woodland ranges from approximately four to ten inches, with an average of approximately eight inches. Heights of trees range from approximately six to 25 feet. As previously mentioned, upland woodland vegetation within the project area is generally consistent with the Oak-Mesquite-Juniper Parks/Woods vegetation type as mapped in *The Vegetation Types of Texas*. Approximately 0.6 acre of this vegetation type occurs within the project area.

Grasslands within the project area are dominated by herbaceous species such as bermudagrass (*Cynodon dactylon*), silver bluestem (*Bothriochloa saccharoides*), snow on the prairie (*Euphorbia marginata*), annual sunflower (*Helianthus annuus*), Mexican petunia (*Ruellia brittoniana*), greenbrier (*Smilax bona-nox*), doveweed (*Croton texensis*), Mexican hat (*Ratibida columnifera*), and silverleaf nightshade (*Solanum eleagnifolium*). These grasslands are generally used for grazing cattle or hay production. Scattered woody shrubs, including mesquite, Ashe juniper, and lotebush (*Ziziphus obtusifolia*), are found throughout some of the grassland areas, particularly near woodland edges. Grasslands within the project area are generally consistent with the Other Native and/or Introduced Grasses vegetation type as described in *The Vegetation Types of Texas*. Approximately 22.6 acres of grassland occurs within the project area.

Riparian woodland vegetation is found in association with the North and South Forks of Brushy Creek. Common tree species include sugarberry, cedar elm (*Ulmus crassifolia*), black willow (*Salix nigra*), bois d'arc (*Maclura pomifera*), Ashe juniper, Chinese tallow (*Sapium sebiferum*), and bumelia (*Bumelia* sp.). Common vines include grapevine and greenbrier. Herbaceous species found in the riparian areas include cocklebur (*Xanthium strumarium*), giant ragweed (*Ambrosia trifida*), poison ivy (*Toxicodendron radicans*), sumpweed (*Iva* sp.), frogfruit (*Phyla nodiflora*), pennywort (*Hydrocotyle* sp.), and Mexican petunia. Riparian woodland within the project area has a percent cover of approximately 60 to 85 percent. Diameter at breast height for trees within the woodland ranges from approximately four to ten inches, with an average of approximately eight inches. Heights of trees range from approximately six to 35 feet. As discussed below, riparian vegetation is categorized as an unusual vegetation type. Approximately 4.2 acres of riparian vegetation is found within the project area.

Shrubs and small trees are also found along fencelines alongside grassland areas. Fenceline vegetation consists of woody species such as Ashe juniper, live oak, cedar elm, sugarberry, and mesquite. Fenceline vegetation is commonly found in the area; however, as discussed below, it is considered to be an unusual vegetation feature.

As stated in the TxDOT-Texas Parks and Wildlife Department (TPWD) Memorandum of Agreement (MOA), in accordance with Provision (4)(A)(i) of the Memorandum of Understanding (MOU), any unusual vegetation features and special habitat features occurring within the project area must be identified.

Unusual vegetation features may include:

- Unmaintained vegetation,
- Trees or shrubs along a fenceline adjacent to a field (fencerow vegetation),
- Riparian vegetation (particularly where fields/cropland extends up to or abuts the vegetation associated with the riparian corridor),
- Trees that are unusually larger than other trees in the area, and
- Unusual stands or islands (isolated) of vegetation.

Riparian vegetation and some fenceline vegetation are found within the project area. These are discussed above. No other unusual vegetation types occur within the project area.

Special habitat features include:

- Bottomland hardwoods,
- Caves,
- Cliffs and bluffs,
- Native prairies (particularly those with climax species of native grasses and forbs),
- Ponds (temporary and permanent, natural and man-made),
- Seeps or springs,
- Snags (dead trees) or groups of snags,
- Water bodies (creeks, streams, rivers, lakes, etc.), and
- Existing bridges with known or easily observed bird or bat colonies.

Two water bodies (North and South Forks of Brushy Creek) are found within the project area. These are discussed in **Section 6.2**. Habitat associated with the water bodies is described as riparian vegetation. No other special habitat features occur within the project area.

6.4 Wildlife

The proposed project is located within the Balconian Biotic Province, as delineated by Blair (1950). The Balconian Biotic Province is generally analogous to the Edwards Plateau in central Texas. Approximately 57 species of mammals, 53 species of reptiles, 22 species of amphibians, and 419 species of birds are known to occur in the province (Blair, 1950; Lockwood, 2001).

6.5 Migratory Birds

The terms of the Migratory Bird Treaty Act (MBTA) of 1918 apply to the proposed project. The MBTA prohibits all negative impacts to birds, young, eggs, or occupied nests in part or whole for all birds on the migratory birds list, except as authorized by federal permit. In the event that migratory birds are encountered on-site during project construction, every effort will be made to avoid adverse impacts to protected birds, active nests, eggs, and/or young. The contractor would be prepared to prevent migratory birds from building nests between February 15 and October 1.

Bald Eagles (*Haliaeetus leucocephalus*) were recently removed from the federal threatened and endangered species list effective August 8, 2007. However, they are afforded additional safeguards under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA is applicable in this case, and TxDOT will follow the National Bald Eagle Management Guidelines (May 2007).

No evidence of migratory bird activity was observed during the August 2009 field assessment.

6.6 Threatened or Endangered Species

Lists of threatened and endangered species maintained by the U.S. Fish and Wildlife Service and TPWD were consulted to determine species of potential occurrence in the vicinity of the proposed project. A total of seven federally-listed endangered species, eight state-listed threatened species, and five species which are candidates for federal listing were identified as having the potential to occur in Williamson County. **Table 3** contains a list of these species, their regulatory listing status, habitat description, and a determination of whether appropriate habitat for the species occurs in the project area.

The proposed project is located within Karst Zone 4: areas which do not contain endangered cave fauna (Veni and Martinez, 2007).

Information from TPWD's Texas Natural Diversity Database (TXNDD) was reviewed in order to assess the potential occurrences of threatened or endangered species within the project limits. The TXNDD provides known historical records for rare, threatened, and endangered species. A search of the TXNDD for the Leander and Nameless, Texas USGS quadrangles on May 6, 2009 indicated that no known elements of occurrence, including occurrences of threatened or endangered species, have been recorded within an approximate 1.5 mile radius of the proposed project area. According to the TXNDD data, no managed areas occur within or adjacent to the proposed project.

Table 3: Threatened and Endangered Species of Potential Occurrence in Williamson County

Species	Federal Status	State Status	Habitat Description	Habitat Present?	Pertinent Information
Mollusks					
False spike mussel <i>Quincuncina mitchelli</i>	NL	T	Substrates of cobble and mud, with water lilies present	No	Project area streams do not have water lilies.
Smooth pimpleback <i>Quadrula houstonensis</i>	NL	T	Small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel; tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms	No	Project area streams are intermittent and experience water level fluctuations ranging from dry to flowing, depending upon rainfall.
Texas fawnsfoot <i>Truncilla macrodon</i>	NL	T	Little known; possibly rivers and larger streams, and intolerant of impoundment; flowing rice irrigation canals; possibly sand, gravel, and perhaps sandy-mud bottoms in moderate flows	No	No rivers or larger streams or rice irrigation canals occur within the project area.
Texas pimpleback <i>Quadrula petrina</i>	NL	T	Mud, gravel, and sand substrates, generally in areas with slow flow rates	No	Project area streams are ephemeral and often dry.
Arachnids					
Bone Cave harvestman <i>Texella reyesi</i>	E	SOC	Small, blind, cave-adapted harvestman endemic to a few caves in Travis and Williamson Counties; weakly differentiated from <i>Texella reddelli</i>	No	No caves occur within the project area.

Table 3: Threatened and Endangered Species of Potential Occurrence in Williamson County					
Species	Federal Status	State Status	Habitat Description	Habitat Present?	Pertinent Information
Insects					
Coffin Cave mold beetle <i>Batrisodes texanus</i>	E	SOC	Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson Counties	No	No caves occur within the project area.
Tooth Cave ground beetle <i>Rhadine persephone</i>	E	SOC	Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson Counties	No	No caves occur within the project area.
Fishes					
Sharpnose shiner* <i>Notropis oxyrhynchus</i>	C	SOC	Endemic to Brazos River drainage and introduced into Colorado River drainage; large, turbid river with sand, gravel, and clay-mud substrate	No	No rivers occur within the project area.
Smalleye shiner* <i>Notropis buccula</i>	C	SOC	Endemic to upper Brazos River system and its tributaries; introduced into Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water	No	Project area streams are small and intermittent.
Amphibians					
Georgetown salamander <i>Eurycea naufragia</i>	C	SOC	Endemic; known from springs and waters in and around town of Georgetown in Williamson County	No	No springs occur within the project area.
Jollyville Plateau salamander <i>Eurycea tonkawae</i>	C	SOC	Known from springs and waters of some caves north of the Colorado River	No	No springs or caves occur within the project area.
Salado Springs salamander* <i>Eurycea chisholmensis</i>	C	SOC	Endemic; surface springs and subterranean waters of the Salado Springs system along Salado Creek	No	No springs or caves occur within the project area.
Reptiles					
Texas horned lizard <i>Phrynosoma cornutum</i>	NL	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive, breeds March-September	No	Project area vegetation is not sparse; soils are primarily clay; no red ants or harvester ants observed.

Table 3: Threatened and Endangered Species of Potential Occurrence in Williamson County					
Species	Federal Status	State Status	Habitat Description	Habitat Present?	Pertinent Information
Timber/Canebrake rattlesnake <i>Crotalus horridus</i>	NL	T	Swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover	Yes	The species could occur in association with the North and South Forks of Brushy Creeks.
Birds					
American Peregrine Falcon* <i>Falco peregrinus antatum</i>	DL	T	Year-round resident and local breeder in west Texas; migrant across rest of state from more northern breeding areas to wintering grounds on Gulf Coast and farther south; occupies wide range of habitats during migration, including urban; stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands. At a distance nearly indistinguishable from arctic peregrine falcon (<i>F.p. tundrius</i>), which is no longer listed in Texas.	No	Potential migrant; no nesting or wintering habitat found in project area
Bald Eagle <i>Haliaeetus leucocephalus</i>	DL	T	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water	No	Potential migrant; no nesting or wintering habitat found in project area
Black-capped Vireo <i>Vireo atricapilla</i>	E	E	Oak-juniper woodlands with distinctive patchy, two-layered aspect, deciduous and broad-leaved shrubs and trees that provide insects for feeding, and foliage to ground level for nesting cover, nesting season March-late summer	No	No oak-juniper woodland with appropriate structure and nesting cover occurs within the project area.
Golden-cheeked Warbler <i>Dendroica chrysoparia</i>	E	E	Mature juniper-oak woodlands, long fine bark strips from mature Ashe juniper trees used for nest construction; nests placed in trees other than Ashe juniper; nesting season late March-early summer	No	No mature juniper-oak woodlands occur within the project area.
Whooping Crane <i>Grus americana</i>	E	E	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties	No	Potential migrant; no nesting or wintering habitat found in project area.

Table 3: Threatened and Endangered Species of Potential Occurrence in Williamson County

Species	Federal Status	State Status	Habitat Description	Habitat Present?	Pertinent Information
Mammals					
Red wolf* <i>Canis rufus</i>	E	E	Extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies	No	Species is extirpated.
Status					
E = Endangered	DL = Delisted	NL = Not listed			
T = Threatened	C = Candidate for listing	SOC = Species of Concern; not listed, but tracked by TPWD			

*These federally-listed, delisted, or candidate species are included on the TPWD list for Williamson County, but are not included on the U.S. Fish and Wildlife Service list.

Sources:

- U.S. Fish and Wildlife Service (USFWS). Endangered Species List for Williamson County, Texas. <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm>, accessed September 3, 2009.
- TPWD. Annotated County Lists of Rare Species: Williamson County (last revision 12/17/2009). <http://gis.tpwd.state.tx.us/tpwEndangeredSpecies/DesktopDefault.aspx>, accessed December 22, 2009.
- TPWD. News Release: 15 Texas Freshwater Mussels Placed on State Threatened List. November 5, 2009.

No habitat for federally-listed species was observed within the project area during field investigations. One state-listed species, the timber/canebrake rattlesnake (*Crotalus horridus*), could occur within the project area.

6.7 Socioeconomics

6.7.1 LAND USE

Land uses that would be directly affected by the proposed project are agricultural but not cultivated for food crops. See **Figure 1c**.

Community Description

The proposed project is in an undeveloped area located northeast of the currently-developed community of Leander. This is the desired development area for the growth of Leander, so a description of Leander is appropriate for characterizing the community. The City is located in southern Williamson County. The town of Bagdad was founded in the 1850s, but when the Austin and Northwestern Railroad was established one mile east of the town, businesses began moving closer to the rail and the resulting City of Leander was established in 1882. Ranching and farming, along with cedar post businesses, were prospering. The City was incorporated in 1978 and was only large enough to be counted as a census place in 1980 when its population rose to 2,179 persons (The History of the City of Leander, www.leandertx.org accessed 5/1/2009).

In terms of historical land uses, land in the area currently defined as a TOD has been undeveloped or used for hay cultivation/pasture land since before the 1930s. The NRHP-eligible East Leander Historic District (discussed in the Historic Resources Survey Report (HRSR) for this project) at the northeast quadrant of FM 2243 and US 183 has been in existence since at least the 1930s. According to a USGS quadrangle map from 1962, most of the homes and businesses in Leander were clustered around the intersection of US 183 and FM 2243. By 1987 (USGS quadrangle), there were new subdivisions being developed to the south and west. Surrounding land uses are generally rural and sparsely developed (at present) to the east of 183A.

For the past several years, Leander has been envisioning a future which includes a TOD. Leander citizens voted for TOD zoning which allows for dense mixed-use development anchored by transit service. The Rail

Station is located in Leander and adjacent landowners plan to develop their land to support mixed uses around the station. In recent years, a new HEB grocery store was built in proximity to the Rail Station, which was also recently constructed. Leander’s plan for growth includes developing residences and businesses for those who desire to live and work in Leander, along with development that allows people to live in Leander and commute to and from Austin for work. See **Figure 11** for land uses in the TOD, since this boundary constitutes the planned community boundary that is relevant to this project. According to the City’s Zoning Map, lands that would be affected by the proposed project are officially zoned as “Transit Oriented Development” land uses. This means that the land development code specific to the TOD applies to any proposed residential or commercial development project within the TOD as shown on **Figure 12 City of Leander, Texas Zoning Map**. Note that land uses in the TOD are described in the Indirect Effects analysis (**Section 8.0**). The proposed project would enhance community cohesion by allowing Leander to fulfill its desired growth plan.

6.7.2 POPULATION

Leander has grown to approximately 23,523 persons in 2007, growing more than 100 percent between 1990 and 2000 and between 2000 and 2007. See **Table 4**.

Table 4: Historical Population in Leander, TX

1980	1990	% change 80-90	2000	% change 90-00	2007	% change 00-07
2,179	3,398	56%	8,292	144%	23,523	184%

Source: www.citypopulation.de/usa.texas.html

The study area for analysis of population data is comprised of several census Blocks that are traversed by the proposed alignments; two Block Groups (BGs) that encompass a slightly larger study area, and data for the Census Tract (CT), City of Leander and Williamson County. See **Figure 13a** for census Block geography and **Figure 13b** for census BG geography in the study area. Data at the Block and BG level from the U.S. Census Bureau are only available for the year 2000. Some survey data for 2005 to 2007 are available from the American Community Survey (ACS) but these data are limited to Places (City of Leander) and are not available for smaller geographies. Race and poverty data are provided in subsequent sections for Leander. As shown in **Table 5** (Total Population, Study Area by Census Blocks), only two of the census Blocks traversed by the proposed project had any residential population in 2000 (CT 203.02 BG 1 Block 1007, and CT 203.02 BG 1 Block 1010) and the population was low. The five other Blocks crossed by the project (1009, 1011, 1019, 2004 and 2005) had zero residential population.

Table 5: Total Population, Study Area Census Blocks in Williamson County (2000)

	Block 1007, BG 1, CT 203.02	Block 1010, BG 1, CT 203.02	Block 1019, BG 1, CT 203.02	Block 1011, BG 1, CT 203.02	Block 2004, BG 2, CT 203.02	Block 2005, BG 2, CT 203.02
Total	2	10	0	0	0	0

Source: U.S. Census Bureau, 2000, Main Data Sets with Detailed Tables, Summary File 1, Table P1.

Table 6 shows larger BGs with respect to the City and Williamson County to provide a sense of the larger community that would be affected by construction of the proposed project.

Table 6: Total Population, Census Block Groups and Reference Area in Williamson County (2000)

	BG 1, CT 203.02	BG 2, CT 203.02	CT 203.02	Leander city, Texas	Williamson County, Texas
Total	869	1,429	2,298	7,596	249,967

Source: U.S. Census Bureau, 2000, Main Data Sets with Detailed Tables, Summary File 1, Table P1.

According to ACS data, the average population for Leander over the period 2005 to 2007 was 20,768 persons, nearly three times the 2000 population. The Texas State Data Center estimate of population for Williamson County in 2007 was 370,616 persons and in 2008 was 381,461 persons. This represents an increase from 249,967 persons in 2000 up 48.3 percent between 2000 and 2007 and 52.6 percent between 2000 and 2008 (TSDC, 2009).

Table 7 provides information on race/ethnicity in the project area.

Table 7: Population by Race/Ethnicity in Study Area Census Blocks and Block Groups (2000)

	Block 1007, BG 1, CT 203.02	Block 1010, BG 1, CT 203.02	BG 1, CT 203.02	BG 2, CT 203.02
Total:	2	10	869	1,429
Hispanic or Latino	0	0	78	142
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>9.0%</i>	<i>9.9%</i>
Not Hispanic or Latino	2	10	791	1,297
<i>Percent of Total</i>	<i>100.0%</i>	<i>100.0%</i>	<i>91.0%</i>	<i>90.8%</i>
White	2	10	760	1,175
<i>Percent of Total</i>	<i>100.0%</i>	<i>100.0%</i>	<i>87.5%</i>	<i>82.2%</i>
Black or African American	0	0	4	53
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.5%</i>	<i>3.7%</i>
American Indian and Alaska Native	0	0	7	4
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.8%</i>	<i>0.3%</i>
Asian	0	0	5	12
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.6%</i>	<i>0.8%</i>
Native Hawaiian and Other Pacific Islander	0	0	0	4
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.3%</i>
Some other race	0	0	0	14
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>1.0%</i>
Population of two or more races	0	0	15	25
<i>Percent of Total</i>	<i>0.0%</i>	<i>0.0%</i>	<i>1.7%</i>	<i>1.7%</i>
<i>Percent Minority</i>	<i>0%</i>	<i>0%</i>	<i>12.5%</i>	<i>17.8%</i>

Note: There is no residential population in CT 203.02 BG 1(Block 1009, 1011 and 1019), BG 2 (Blocks 2004 and 2005).

Source: U.S. Census Bureau Census 2000, Main Data Sets with Detailed Tables, Summary File 1, Table p8.

*(Total Population-White Population) / Total Population = % Minority

Note that data are not shown for project area Blocks that do not have any residential population. In CT 203.02 BG 1 Block 1007 and 1010, 100 percent of the population was White persons. BGs were more diverse than Blocks (Minority persons constituted 12 to 18 percent of the population).

Median household income data are not available at geographies smaller than the BG level. Median household income by BG and CT are shown in **Table 8**.

Table 8: Median Household Income and Percent Living Below Poverty Levels in the Project Area

	CT 203.02	BG 1, CT 203.02	BG 2, CT 203.02
Median household income in 1999	\$66,548	\$71,528	\$64,821
Persons Living Below Poverty	55	48	7
Percent of Persons Living Below Poverty Level	2.5%	5.7%	0.5%

Source: U.S. Census Bureau, 2000. Main Data Sets with Detailed Tables, Summary File 3, Tables P53 and P87.

Median household income in BGs was higher than in the CT and much higher than the U.S. Department of Health and Human Services poverty guideline for a family of four which was \$22,050 for 2009. Approximately 0.5 percent of the population in CT 203.02 BG 2 was living below poverty compared to 5.7 percent in CT 203.02 BG 1.

Data are also provided (**Table 9**) for the percentage of persons five years old and older who speak English less than very well. These persons are considered "Limited English Proficiency" (LEP).

Table 9: Language Spoken at Home (for Population 5 Years and Older)

	CT 203.02	BG 1, CT 203.02	BG 2, CT 203.02
Total Population (5 Years and Over):	2,028	800	1,228
Spanish	5.4%	4.8%	5.8%
Speak English "Very Well"	3.0%	0.6%	4.6%
Speak English "Less Than Very Well"	2.4%	4.1%	1.2%
Other Indo-European	1.3%	0.6%	1.8%
Speak English "Very Well"	0.2%	0.6%	0.0%
Speak English "Less Than Very Well"	1.1%	0.0%	1.8%
Asian/Pacific Islander	2.5%	0.0%	4.1%
Speak English "Very Well"	0.9%	0.0%	1.5%
Speak English "Less Than Very Well"	1.6%	0.0%	2.6%
Other Languages	0.0%	0.0%	0.7%
Speak English "Very Well"	0.0%	0.0%	0.7%
Speak English "Less Than Very Well"	0.0%	0.0%	0.0%

Source: U.S. Census Bureau, 2000 (Table P19).

Based on 2000 census data shown in **Table 9**, there are persons in project area BGs who speak English less than very well. TxDOT would commit to providing information in the language required if requested.

6.8 Hazardous Materials

Potential hazardous materials sites were identified by means of a database search and an initial site assessment.

A review of regulatory databases was conducted by TelAll Corporation for the project area to determine if any known sites producing, storing, and/or disposing of toxic or hazardous materials might affect the proposed project. This database search meets the American Society for Testing Materials standards for a government records review. **Table 10** lists the regulatory databases which were reviewed, as well as the search radius used for each.

Table 10: Regulatory Databases Reviewed

Database	Search Radius
National Priority List	1 mile
Comprehensive Environmental Response Compensation, and Liability Information System	0.5 mile
No Further Remedial Action Planned	0.5 mile
Resource Conservation and Recovery Information System – Treatment Storage or Disposal	1 mile
Corrective Action	1 mile
Resource Conservation and Recovery Information System – Generators	0.25 mile
Emergency Response Notification System	0.25 mile
Texas Voluntary Cleanup Program	0.5 mile
Innocent Owner/Operator Program	0.5 mile
Texas State Superfund	1 mile
TCEQ Solid Waste Facilities (TXLF)	1 mile
Unauthorized and Unpermitted Landfill Sites	0.5 mile
Leaking Underground Storage Tanks (TXLUST)	0.5 mile
Texas Underground Storage Tanks (TXUST)	0.25 mile
Texas Above Ground Storage Tanks (TXAST)	0.25 mile
Texas Spills List	0.25 mile
Brownfield	0.5 mile
Dry Cleaner	0.5 mile
Indian Reservation Underground Storage Tanks	0.25 mile

Source: TelAll Corporation. Environmental Data Search for the Site Leander T (010-002-001). May 4, 2009.

Seven petroleum storage tanks sites (TXUST and TX AST), one leaking underground storage tanks site (TXLUST), and one landfill (TXLF) were identified by the database search; these are summarized in **Table 11** and depicted on **Figure 14**.

Table 11: Potential Hazardous Materials Sites

Map ID	Site Name & Address	Type of Site	Status of Site	Distance and Direction from Proposed Project
1	Chapman Grocery (current site of Leander Inspection Station) Hwy 183 and FM 2243 Leander, TX 78626	TXLUST	LPST ID 114101: Priority 2.5 – Groundwater impact, public domestic water supply well within 0.25 miles; Status 6A – Final concurrence issued, case closed. LPST ID 096703: Priority 4A – Soil contamination only, requires full site assessment and remedial action plan; Status 6A – Final concurrence issued, case closed.	0.32 miles southwest
2	Charles H Null 205 Willis Leander, TX 78641	TXUST	Facility ID 0065040: Two tanks storing new oil have been removed from the ground, capacity not reported.	0.39 miles southwest
3	J.C. Evans Construction 301 CR 271 Leander, TX 78641	TXAST	Facility ID 0074749: One 6,000-gallon gasoline, one 8,000-gallon gasoline, and one 12,000-gallon diesel aboveground storage tanks are currently in use.	0.92 miles southeast
4	Jiffy Mart 1 207 N Hwy 183 Leander, TX 78641	TXUST	Facility ID 0022736: Two 8,000-gallon and one 4,000-gallon tanks storing gasoline are currently in use.	0.32 miles southwest
5	Leander Exxon (current site of Ace Hardware & Cashway Building Materials) 100 N Hwy 183 Leander, TX 78641	TXUST	Facility ID 0037652: Four 1,000-gallon tanks storing gasoline have been removed from the ground	0.26 miles southwest
6	Leander Grocery 307 S Hwy 183 Leander, TX 78641	TXUST	Facility ID 0014319: One 4,000-gallon diesel, one 4,000-gallon gasoline, and one 8,000-gallon gasoline storage tanks are currently in use.	0.40 miles southwest

Table 11: Potential Hazardous Materials Sites

Map ID	Site Name & Address	Type of Site	Status of Site	Distance and Direction from Proposed Project
7	Leander ISD Transportation 109 S West St Leander, TX 78641	TXUST, TXAST	Facility ID 0047924: Three 1,034-gallon gasoline storage tanks have been removed from the ground. One 8,000-gallon and one 1,350-gallon aboveground storage tank are currently out of use (contents unknown).	0.58 miles southwest
8	Speedy Stop 97/ Park Place Foods (Exxon gas station) 101 S Hwy 183 Leander, TX 78645	TXUST	Facility ID 0069335: Two 10,000-gallon and one 8,000-gallon tanks storing gasoline are currently in use. Facility ID 0011321: Three 4,000-gallon gasoline and one 8,000-gallon diesel storage tanks have been removed from the ground.	0.32 miles southwest
9	TFR Enterprises Mulching Facility 601 Leander Dr Leander, TX 78641-2026	TXLF	Site ID 100170: Permit application received 4/17/2008. Site status: active	0.59 miles southeast

Source: TelAll Corporation. Environmental Data Search for the Site Leander T (010-002-001). May 4, 2009.

A site assessment was conducted in July 2009. This assessment included a visual observation of properties located along and immediately outside of the project limits to identify the release or threatened release of petroleum products or other hazardous substances. There were no obvious indications (such as spills, stains, or leaks) of environmental impacts along or within the project limits associated with this site or any other adjacent facilities.

Based on address information provided by the database report, it appears that Site 1 is at the location of the current Leander Inspection Station. The report notes that final concurrence has been issued for both leak events that have been reported at this site.

According to the address information provided by the database report, Site 5 (Leander Exxon) is at the current location of the Ace Hardware and Cashway Building Material. The database report notes that all of the underground storage tanks have been previously removed from the ground at this site.

One additional potential hazardous materials site was identified within the study area during field investigations: an HEB gas station at the northwest corner of US 183 and Old 2243 West. Underground storage tanks are in use at the HEB gas station; however, no leak events were noted at this location in the database report. None of these hazardous materials sites are located within or immediately adjacent to the proposed project area.

6.9 Traffic Noise

The existing dominant source of noise in the vicinity of the proposed project is highway traffic. However, existing noise levels, by themselves, do not determine when noise impacts would occur. Rather, existing noise levels are only considered relative to predicted (future) noise levels. Existing and predicted noise levels are documented in **Section 7.9**.

6.10 Air Quality

The proposed CR 273/274 project area is located in Williamson County, Texas, which is currently in attainment of all National Ambient Air Quality Standards (NAAQS); therefore, the transportation conformity rule does not apply. The Austin-Round Rock area entered into an Early Action Compact (EAC) to prevent the air quality in the area from exceeding the NAAQS for ozone. The EAC successfully kept this area in attainment for the ozone standard. Since the use of an EAC expired December 31, 2007, the

Austin-Round Rock Metropolitan Statistical Area developed an Ozone (O₃) Flex Plan in coordination with TCEQ and EPA in April 2008 to reduce emissions to assure attainment of the 8-hour ozone standard.

CAMPO has included the proposed project in both the CAMPO 2008-2011 TIP and the CAMPO 2035 RTP. Copies of applicable pages of these plans with the listing of the project are included in **Appendix C**. The proposed project will be added to the 2011-2014 TIP in November 2010. Since the project conforms to CAMPO's bicycle and pedestrian policy and it is or will be individually listed in their transportation plans, the proposed project is consistent with the 2008-2011 TIP and 2035 RTP. However, there is a typographical error in the listing of the project in the 2035 RTP.

The description of the proposed roadway in the 2035 RTP includes the statement that "(CR 273 is being constructed as a six-lane boulevard. CR 274 is being constructed as a four-lane arterial.)" The statement should read that CR 273 would be constructed as a four-lane arterial and CR 274 as a six-lane boulevard. The number of lanes and type of roadway in the description were inadvertently reversed. CAMPO has committed to correcting the typographical error through administrative process and a copy of a letter indicating their commitment to the correction is included in **Appendix C – Agency Coordination**. The 2035 RTP will be corrected to assure that the 2008-2011 TIP is consistent with the 2035 RTP. The final approval of the proposed project cannot be granted until the RTP is corrected.

Traffic data for the design year (2035) is estimated to be 5,100 vpd on CR 273 and 16,100 vpd on CR 274. A prior TxDOT modeling study demonstrated that it is unlikely that a carbon monoxide standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000 vehicles per day. The AADT projections for the project do not exceed 140,000 vehicles per day; therefore a Traffic Air Quality Analysis was not required. Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the CAA. MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted into the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion product. Metal air toxics also result from engine wear or from impurities in oil or gasoline. MSATs are released in proportion to the number of vehicle miles traveled (VMT) for a given fleet mix.

Because the projected average daily traffic volume for the project area does not exceed 140,000 vpd, a quantitative analysis of MSATs is not required. Although a qualitative assessment cannot identify and measure health impacts from MSATs, it can provide a basis for identifying and comparing the potential differences among MSAT emissions, if any, from various alternatives. The qualitative assessment addressed in **Section 7.10** is derived from a study conducted by the FHWA entitled "*A Methodology for Evaluating Mobile Source Air Toxic Emissions among Transportation Project Alternatives*".

There may be localized areas where ambient concentrations of MSATs are slightly higher in any build scenario than in the no-build scenario. Dispersion studies have shown that the "roadway" air toxics start to drop off at about 328 feet (100 meters). By 1,640 feet (500 meters), most studies have found it very difficult to distinguish the roadway from background toxic concentrations in any given area. Therefore, the study area for sensitive receptors includes the areas 1,640 feet from the project area.

Sensitive receptors include those facilities most likely to contain large concentrations of the more sensitive population (hospitals, schools, licensed daycare facilities, and elder care facilities). There are no hospitals, schools, licensed daycare facilities, or elder care facilities within 1,640 feet of the project area.

6.11 Historic Properties

Regulatory Framework

The National Environmental Policy Act (NEPA) requires consideration of important historic, cultural, and natural aspects of our national heritage. Important aspects of our national heritage that may be present in the project corridor will be considered under Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. This act requires federal agencies to “take into account” the effect that an undertaking would have on “historic properties.” Historic properties are those included in or eligible for listing in the National Register of Historic Places (NRHP) and may include buildings, structures, objects, districts, cemeteries, and archeological sites. In accordance with the Advisory Council on Historic Preservation (ACHP) regulations pertaining to the protection of historic properties (36 CFR 800.4), federal agencies are required to locate, evaluate, and assess the effects that the undertaking will have on such properties. These steps shall be completed under terms of the First Amended Programmatic Agreement for Transportation Undertakings (PA-TU) between FHWA, the State Historic Preservation Officer (SHPO), the ACHP, and TxDOT.

This project also falls under the purview of the Texas Antiquities Code (TAC) as it may involve lands owned or controlled by the State of Texas or any city, county, or local municipality thereof. As the project would involve state purchase of right-of-way, or lands belonging to local municipalities and counties, under jurisdiction of the TAC, historic properties will also be considered under provisions of the MOU between the SHPO and TxDOT. The TAC allows for all such properties to be considered as State Archeological Landmarks (SALs) and requires that each be examined in terms of possible “significance.” Significance standards for the code are clearly outlined under Chapter 26 of the Texas Historical Commission’s (THC) Rules of Practice and Procedure for the TAC and closely follow those of the U.S. Secretary of the Interior’s Standards and guidelines.

Under the Technical Advisory 771 of the FHWA, historic structures/archeological sites determined eligible for listing in the NRHP by the SHPO that will be directly impacted by a FHWA-funded project are subject to evaluation under Section 4(f) of the DOT Act of 1966 (23 CFR 771.135). Section 4(f) requires that the agency show that all planning to minimize harm to any NRHP property resulting from the proposed action was considered and that all feasible or prudent alternatives to avoid adverse impacts to the NRHP property have been explored. Section 6009(a) of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users amended Section 4(f) requirements and allows the U.S. Department of Transportation to determine that certain uses of the Section 4(f) protected resource would have no adverse effect on the protected resource. *De minimis* impacts related to historic sites are defined as the determination of either “no adverse effect” or “no historic properties affected” in compliance with Section 106 of the NHPA (FHWA, 2005).

Identification of Non-Archeological Historic Properties

A review of the NRHP, the list of structural SALs, and the list of Recorded Texas Historic Landmarks (RTHL) indicates that no historically significant non-archeological historic-age resources have been previously documented within the area of potential effects (APE). It has been determined through consultation with the SHPO that the APE for non-archeological resources is limited to 300 feet beyond the edge of the proposed right-of-way. A reconnaissance survey revealed that there are eight historic-age resources (constructed prior to 1965) on three parcels located within the APE. There are no Official Texas Historical Markers located within the project APE. TxDOT historians have determined that none of the historic-age resources are NRHP-eligible.

TxDOT historians evaluated the historic-age properties in the APE and determined them not eligible for NRHP listing under any criteria. The properties do not embody the distinctive characteristics of a type, period, or method of construction. These properties are all of a common type and do not represent the work of a master or represent high artistic value. These properties are not known to be associated with a

significant historical event, nor are they associated with a person of transcendent importance. As such, TxDOT historians have determined them not eligible for listing on the NRHP. In addition, these properties lack the integrity to form an historic district, and they do not contribute to the existing historic district of Leander which is in the study area.

Per FHWA's request, a study area of a half mile is evaluated in Williamson County projects. The study area refers to the area surrounding the APE that is associated with the resources within the APE through common land use, function, or historical associations. The NRHP-eligible J. C. Bryson property is located within the study area for this project. The NRHP boundary of the property, as determined by TxDOT in consultation with SHPO, the Advisory Council for Historic Preservation (ACHP), and FHWA consists of a six-acre tract that includes the central core of the property of two acres including the house, cistern, barns, sheds, and a four acre parcel to be determined at a later date. (See Figure 3 in the historic resources survey report, on file at TxDOT district offices, for clarification) This tract is separated from the CR 273/274 project by the US 183A Turnpike and is located on the northeast side of US 183A Turnpike, approximately 300 feet from the APE of this project. The remaining approximate 218 acres of the property are not eligible for listing in the NRHP due to disassociation with the primary character-defining resources through reconfiguration of the property and change in ownership (TxDOT MOA 2008). The NRHP-eligible property boundary of the J.C. Bryson property is located well outside the APE for this project.

TxDOT has completed Section 106 consultation with the Williamson County Historical Commission (WCHC) for this project. The WCHC concurred with TxDOT's findings on 9/26/09. Please see the attachments for a copy of the letter.

6.12 Archeology

The APE for archeological resources consists of existing right-of-way, proposed right-of-way, and temporary drainage easements and encompasses a total of approximately 30 acres. A data search of the Texas Archeological Site Atlas maintained by the THC and Texas Archeological Research Laboratory (TARL) revealed several previous archeological investigations in and adjacent to the APE: a large area survey undertaken in 1985 by Coastal Environment, Inc. on behalf of the Environmental Protection Agency (EPA), a FHWA survey in 2001, two 2004 surveys by Lopez Garcia Group for the Federal Transit Administration, and a 2006 survey by Hicks & Company for TxDOT (THC, 2009). Of importance for the present study, all prehistoric and historic materials documented in previous investigations were found on the ground surface or in the upper 12 inches of soil.

Cumulatively, these surveys have documented two archeological sites, 41WM699 and 41WM1111, within the APE proposed for this project, and nine sites—41WM693, 41WM694, 41WM695, 41WM697, 41WM698, 41WM1004, 41WM1007, 41WM1114, and 41WM1116—within 3,281 feet (1,000 m) of the APE, the standard buffer zone for such searches (THC, 2009). Site 41WM699 consisted of a single lithic artifact found on the ground surface, a situation often recorded only as an “isolated find” or “locality” rather than as a formal site. Site 41WM1111 consisted of the remains of a historic-age farmstead, including an apparent four to six-room house, a small metal structure, and a windmill. According to the recorders of 41WM699 and 41WM1111, neither site warranted further investigation, nor was considered potentially eligible for NRHP listing or SAL designation.

Of the sites outside the APE but within the 3,281 foot buffer around it, 41WM693, 41WM697, and 41WM698 are possibly of prehistoric age, with minor scatters of tested chert cobbles; all were judged by the identifying researchers to be ineligible for NRHP listing or SAL designation. Sites 41WM694, 41WM695, and 41WM1116 consist of historic-age trash deposits and/or minor architectural materials and remains associated with farmsteads; as above, all are believed by the original investigators to be ineligible for NRHP listing or SAL designation. Site 41WM1114 is the Bryson farmstead, a nineteenth-

century stone house and barn with outbuildings; the site is already a Registered Texas Historical Landmark and is considered eligible for NRHP listing and SAL designation. The Bryson farmstead will not be treated further in this archeological analysis, as it would not be affected by the proposed project (TxDOT, 2008). Finally, the data forms for sites 41WM1004 and 41WM1007 are incomplete. The record for 41WM1004 includes a sketch implying that the site was most likely destroyed by the construction of FM 2243 and an HEB parking lot, but no further information is available about 41WM1007. In sum, of the sites for which full documentation is available, only one, the Bryson farmstead (41WM1114), is potentially eligible for NRHP listing or SAL designation, and extensive coordination among project stakeholders has already ensured that it would not be affected by the proposed project (TxDOT, 2008).

Project personnel conducted an intensive survey of the entire archeological resources APE in September 2009 and January 2010, per category 2 of 13 TAC 26.20 and using the definitions in 13 TAC 26.5. Field methods complied with the requirements of 13 TAC 26.20, as elaborated by the THC and the CTA. One previously documented site was revisited, one previously documented site mapped as adjacent to the APE was found partly within the APE, and one new archeological site was recorded. Per the approved scope of Texas Antiquities Permit #5387, no materials were collected.

The APE was surveyed in transects spaced 98 ft apart per THC's guidelines for linear surveys. Approximately half of the APE displayed ground surface visibilities of 40-90 percent, obviating the need for shovel tests in those areas per THC's 30 percent threshold. Fifty-nine (59) shovel test units were excavated. None yielded cultural materials.

Project archeologists attempted to revisit 41WM699 and 41WM1111, the two archeological sites previously documented within the APE. No trace of 41WM699 could be found, an expected result given that it was originally recorded based on a single lithic artifact. Site 41WM1111 was easily found, as it is a historic-age farming/ranching complex (THC, 2009). Ground-surface visibility was high, so no shovel tests were excavated. The portion of the site within the APE was found to consist of a dry stock pond and several incomplete fencelines; no structures or significant deposits of archeological materials were found in the APE. No further research related to 41WM699 or 41WM1111 is recommended.

During the field investigations, project personnel found that 41WM695, a scatter of historic-age building debris mapped as adjacent to the APE according to the THC's Sites Atlas, actually extends into the APE. Investigators observed historic-age asbestos tiles, bricks, limestone blocks, and clear glass fragments in a tree line along the edge of a field. Although extensive disturbance by livestock and cultivation was noted, several shovel tests were excavated within and around the scatter of materials; no subsurface materials were found. Overall, the site displays a low degree of integrity and does not have significant associations, design characteristics, or data potential that might contribute to NRHP or SAL eligibility. Nothing was found in this study to change the original recorder's recommendation for no further action (THC, 2009). A site revisit form has been submitted to TARL to ensure that the location of 41WM695 is accurately reflected in the Sites Atlas.

One new archeological site was discovered during the survey. Assigned state trinomial 41WM1246 by TARL, the site consists of a low-density lithic procurement area on the high-visibility surface of a plowed field. Project personnel observed several tested limestone and chert cobbles, primary flakes, and fossil mollusk shells apparently tested as tool blanks within a roughly circular area approximately 200 feet in diameter. Most of the stones observed on the surface were unmodified; modified examples were observed at an estimated density of one artifact per 500 square feet. No diagnostic artifacts or unambiguous finished tools were found. Seven shovel test units were excavated inside the site limits and two outside. None yielded cultural materials. The site is considered potentially prehistoric given that only lithic artifacts were observed, although it must be noted that many native peoples (as well as more recently arrived groups) are known to have used stone tools well into the historic period. Given the low density of culturally-modified materials at the site and its complete lack of diagnostic artifacts, no further

research at the site is recommended. The project archeologist's preliminary judgement is that the site is not eligible for NRHP listing or SAL designation.

7.0 Direct Effects of the Proposed Project

7.1 Soils

7.1.1 BUILD ALTERNATIVE

Because the project area is located within land designated for urban use, the proposed project would not result in the conversion of any prime farmland to transportation use and a Farmland Conversion Impact Rating form (NRCS-CPA-106) is not required to be completed. Coordination with the NRCS would not be required for the proposed project.

7.1.2 NO-BUILD ALTERNATIVE

Under the No-Build Alternative, no prime farmland soils would be converted to transportation use.

7.2 Water Resources

7.2.1 BUILD ALTERNATIVE

Groundwater

More than five acres of land would be converted from pervious to impervious cover. BMPs would be used to control the direct effects of this conversion; these are discussed in more detail in the Surface Water Quality discussion below.

Because the project is located within the Edwards Aquifer Contributing Zone, a Contributing Zone Plan (CZP) would be prepared for the project and submitted to the TCEQ prior to construction in order to satisfy the current Edwards Aquifer rules (30 TAC 213).

Floodplains

FEMA-designated 100-year floodplains associated with the North Fork of Brushy Creek and the South Fork of Brushy Creek would be crossed by the proposed project. The hydraulic design for this project would be in accordance with current FHWA and TxDOT design policies. The facility would permit the conveyance of the 100-year flood, inundation of the roadway being acceptable, without causing significant damage to the facility or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations and ordinances. Coordination with the local Floodplain Administrator would not be required.

Surface Water Quality

Because the proposed project does not cross and is not located within five miles upstream of an impaired stream segment, coordination with the TCEQ per Section 303(d) would not be required. The proposed project would involve more than five acres of earth disturbance. TxDOT would comply with the TCEQ's Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit. A Stormwater Pollution Prevention Plan (SW3P) would be prepared and implemented, and a construction site notice would be posted on the construction site. A Notice of Intent (NOI) would be required.

During construction, BMPs, including temporary erosion, sedimentation, and total suspended solids (TSS) water pollution controls would be implemented. All temporary erosion controls would be in compliance with the TxDOT Standard Specifications and would be in place, according to the construction plans, prior to commencement of construction-related activities. The contractor would take appropriate measures to

prevent, minimize, and control the spill of fuels, lubricants, and hazardous materials in the construction staging area. The ponds proposed for construction within the right-of-way would meet Edwards Aquifer rules for 80 percent TSS removal.

Waters of the U.S. and Wetlands

Two waters of the U.S. and no wetlands were identified within the project area. No impacts to these waters of the U.S. are anticipated, as current design plans show these to be spanned by bridges (see **Table 12**), and no bridge columns would be placed within the OHWM of either creek. No permits from the USACE would be required for either crossing.

Table 12: Waters of the U.S. within the Project Area					
Name of Waters of the U.S.	OHWM (feet)	Length of Proposed Bridge (feet)	Impacts (acres)	Permit Needed	Pre-construction Notification Required?
North Fork of Brushy Creek	10	160	0*	None	No
South Fork of Brushy Creek	19	190	0*	None	No

*This water of the U.S. would be spanned by a bridge.

No navigable waters would be impacted by the proposed project; therefore, a Section 10 permit would not be required. No Wild and Scenic River would be crossed by the project.

7.2.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in any impacts to groundwater, floodplains, surface water quality, or jurisdictional waters (wetlands and waters of the U.S.).

7.3 Vegetation

7.3.1 BUILD ALTERNATIVE

Table 13 lists impacts to each vegetation type found within the project area (includes area of right-of-way acquisition as well as temporary drainage easements).

Table 13: Vegetation Impacts	
Vegetation Type	Impacts (acres including roadway right-of-way and temporary drainage easements)
Oak-Mesquite-Juniper Parks/Woods (Upland woodland)	0.6
Unusual Vegetation (Riparian vegetation)	4.2
Other Native and/or Introduced Grasses (Grassland)	22.6
Total	27.4

As stated in the MOA, in accordance with Provision (4)(A)(ii) of the TxDOT-TPWD MOU and at the TxDOT District’s discretion, habitats to be given consideration for non-regulatory compensatory mitigation include:

- Habitat for Federal candidate species impacted by the project, if mitigation would assist in the prevention of the listing of the species,
- Rare vegetation series (S1, S2, or S3) that also locally provide habitat for a state-listed species,
- All vegetation communities listed as S1 or S2, regardless of whether or not the series in question provides habitat for a state-listed species,
- Bottomland hardwoods, native prairies, and riparian sites, and
- Any other habitat feature considered to be locally important that the TxDOT District chooses to consider.

Of the habitat types listed above, only riparian sites (4.2 acres in roadways right-of-way and drainage easements) are present within the project area. Mitigation for impacts to riparian sites within the project area is not proposed, however. Project area riparian sites are not unique and similar riparian sites are found outside of (but within proximity to) the project area.

During construction, efforts would be taken to avoid and minimize disturbance of vegetation and soils. All disturbed areas would be revegetated, according to TxDOT specifications, as soon as it becomes practicable. In accordance with Executive Order (EO) 13112 on Invasive Species, the Executive Memorandum on Beneficial Landscaping, and the 1999 FHWA guidance on invasive species, all revegetation would, to the extent practicable, use only native species. Further, BMPs would be used to control and prevent the spread of invasives.

7.3.2 NO BUILD ALTERNATIVE

The No-Build Alternative would not result in any removal of, or impacts to, vegetation.

7.4 Wildlife

7.4.1 BUILD ALTERNATIVE

Within the proposed right-of-way, habitat for wildlife species would be converted for transportation use. Any required clearing or other construction-related activities may directly impact animals that reside on and adjacent to the project right-of-way. Operations normally associated with construction could destroy existing habitat and displace wildlife populating the project area. Some impact from construction equipment could be expected for species that are in the area and are not mobile.

No Essential Fish Habitat is present within the study area, and no impacts would occur.

7.4.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in any direct impacts to project area wildlife.

7.5 Migratory Birds

7.5.1 BUILD ALTERNATIVE

Harm to migratory birds, their nests, eggs, or young would be avoided. Clearing of vegetation would take place outside of the breeding season (March through August) as much as practicable to avoid impacts to nesting birds.

7.5.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in impacts to migratory birds.

7.6 Threatened and Endangered Species

7.6.1 BUILD ALTERNATIVE

No federally-listed species or their habitats were observed within the project area during field investigations; therefore, the proposed project would have no effect on federally-listed species.

One state-listed species, the threatened timber/canebrake rattlesnake, could occur within the project area and may be impacted by the proposed project. State law prohibits direct harm to state-listed species. If any individuals of state-listed species are observed within the project area during construction, care would be taken to avoid harming them.

7.6.2 NO-BUILD ALTERNATIVE

Under the No-Build alternative, no effects to federally listed species or impacts to state listed species would occur.

7.7 Socioeconomics

7.7.1 BUILD ALTERNATIVE

Land Use

Approximately 30 acres of existing land uses would be converted to transportation use as a result of construction of the proposed project.

Community Cohesion

As previously discussed, the project area is zoned for a TOD as supported by the voting population of Leander. Although construction of CR 273/274 would change the existing rural character of the project area by providing a roadway for development access, the proposed project would allow Leander to develop in the way that the people of that community have envisioned. Therefore, impacts to community cohesion would be considered positive because the goal of the community is to have mixed-use development with a diversity of housing sizes and types, plus pedestrian and bicycle friendly roadway facilities. Any development that occurs along CR 273/274 has to adhere to the Leander Smartcode which requires appropriate types of sidewalk, curbing, planter, and street trees. Therefore, impacts of the project on community cohesion would be considered primarily positive.

Environmental Justice

EO 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" requires each Federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations." The FHWA has identified three fundamental principles of environmental justice:

- (1) *To avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations;*
- (2) *To ensure full and fair participation by all potentially affected communities in the transportation decision-making process;*
- (3) *To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.*

Disproportionately high and adverse human health or environmental effects are defined by FHWA as adverse effects that: (1) are predominantly borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and are appreciably more severe or greater in magnitude than the adverse effects that will be suffered by the non-minority population and/or non-low-income population.

Based on race/ethnicity data at the Block level and on income/poverty data at the BG level, the project area in general would not be considered an environmental justice community of concern. Because the project does not require relocations or displacements and causes no impacts to sensitive noise or air receptors, no adverse impacts would occur as a result of this project. Therefore, no disproportionate, adverse effects would occur from the proposed project and no further environmental justice analysis is required.

Relocations and Displacements

No relocations or displacements would be required by the proposed alternative.

Access

Because the proposed project is a new location roadway (and an extension of a stubbed-out roadway), changes in access would involve new access points that would affect all existing populations equally. Area residents would have new access to residences and businesses in the TOD once it is developed. Bicycles would share the roadways which would be marked with approved shared use lanes with Shared Lane Marking indicators and sidewalks would be built along public right-of-way, in addition to Leander Smartcode requirements that developers construct appropriate sidewalks as part of street frontage.

Limited English Proficiency

EO 13166 “Improving Access to Services for Persons with Limited English Proficiency” requires agencies to examine the services they provide, identify any need for services to those with LEP, and develop and implement a system to provide those services so that LEP persons can have meaningful access to them. As discussed in **Section 6.7.2**, there are LEP populations in the area. The field visit revealed no notable signs in languages other than English. To ensure a fair and equal opportunity to participate in the public process, Open House notices indicated that Spanish-speaking project staff would be in attendance at the meeting. No requests for translators were made prior to the meeting, and no requests for translation services were made at the Open House on July 14th, 2009. Every effort to provide project information in languages requested – in addition to opportunities to make such requests – would be made by TxDOT. For more information, see **Section 11.0 Public Involvement**.

7.7.2 NO BUILD ALTERNATIVE

Under the No-Build Alternative, existing land uses would not be changed. No relocations or displacements would occur as a result of the No-Build Alternative. No disproportionate, adverse effects on low-income or minority populations would occur as a result of the No-Build Alternative. The No-Build Alternative would not require public meetings or outreach directed toward non-English speaking populations. No impacts to LEP populations would occur as a result of the No-Build Alternative.

7.8 Hazardous Materials

7.8.1 BUILD ALTERNATIVE

None of the potential hazardous materials sites identified in the database search or the site assessment occur within or immediately adjacent to the project area and therefore none would be impacted by construction activities. Site 5 (the nearest recorded site) is located at the southeast corner of the intersection of US 183 and FM 2243, but would not be impacted by the proposed project.

Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal and state regulations per TxDOT Standard Specifications. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. The use of construction equipment within sensitive areas would be minimized or eliminated entirely. All construction materials used for this project would be removed as soon as work schedules permit.

7.8.2 NO-BUILD ALTERNATIVE

Under the No-Build Alternative, no impacts to potential hazardous materials sites would occur.

7.9 Traffic Noise

7.9.1 BUILD ALTERNATIVE

This analysis was accomplished in accordance with TxDOT's (FHWA approved) Guidelines for Analysis and Abatement of Highway Traffic Noise.

Sound from highway traffic is generated primarily from a vehicle's tires, engine and exhaust. It is commonly measured in decibels and is expressed as "dB."

Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as "dBA."

Also, because traffic sound levels are never constant due to the changing number, type and speed of vehicles, a single value is used to represent the average or equivalent sound level and is expressed as "Leq."

The traffic noise analysis typically includes the following elements:

- Identification of land use activity areas that might be impacted by traffic noise;
- Determination of existing noise levels;
- Prediction of future noise levels;
- Identification of possible noise impacts; and
- Consideration and evaluation of measures to reduce noise impacts.

The FHWA has established the Noise Abatement Criteria listed in **Table 14** for various land use activity areas that are used as one of two means to determine when a traffic noise impact would occur.

Table 14: FHWA Noise Abatement Criteria

Activity Category	dBA Leq	Description of Land Use Activity Areas
A	57 (exterior)	Lands on which serenity and quiet are of extra-ordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (exterior)	Developed lands, properties or activities not included in categories A or B above.
D	--	Undeveloped lands.
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

NOTE: Primary consideration is given to exterior areas (Category A, B or C) where frequent human activity occurs. However, interior areas (Category E) are used if exterior areas are physically shielded from the roadway, or if there is little or no human activity in exterior areas adjacent to the roadway.

All land use activity areas adjacent to the proposed project are currently undeveloped land. Therefore, the project would not result in any noise impacts. However, to avoid noise impacts that may result from future development of properties adjacent to the proposed project, local officials responsible for land use control programs should ensure, to the maximum extent possible, that no new activities are planned or constructed along or within the following predicted (2035) noise impact contours (see **Table 15** and **Figure 19**).

Table 15: Year 2035 Predicted Noise Impact Contours

Undeveloped Area	Land Use	Impact Contour	Distance From Right-of-way
CR 273	Residential	66 dBA	20 feet
CR 273	Commercial	71 dBA	within right-of-way
CR 274/San Gabriel Pkwy	Residential	66 dBA	15 feet
CR 274/San Gabriel Pkwy	Commercial	71 dBA	within right-of-way

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. However, construction normally occurs during daylight hours when occasional loud noises are more tolerable. Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

A copy of this traffic noise analysis would be made available to local officials to assist in future land use planning. On the date of approval of this document (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing noise abatement for new development adjacent to the project.

7.9.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in any traffic noise impacts.

7.10 Air Analysis

7.10.1 BUILD ALTERNATIVE

The proposed project is located in Williamson County, Texas which is currently in attainment of all NAAQS, and the Austin Area Early Action Compact of the State Implementation Plan. Therefore, transportation conformity rules do not apply to the proposed project.

Traffic Air Quality Analysis (TAQA)

The proposed project would construct new location roadways and is expected to have a design year (2035) average annual daily traffic volume of approximately 5,100 vehicle trips per day for CR 273 and approximately 16,100 vehicle trips per day for CR 274. This volume of traffic is well below the 140,000 vehicle trips per day threshold requiring a TAQA statement. Since the traffic projections for the proposed project do not exceed 140,000 vehicle trips per day, the project is exempt from a TAQA statement because a prior TxDOT modeling study demonstrated that it is unlikely that a carbon monoxide standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000 vehicles per day.

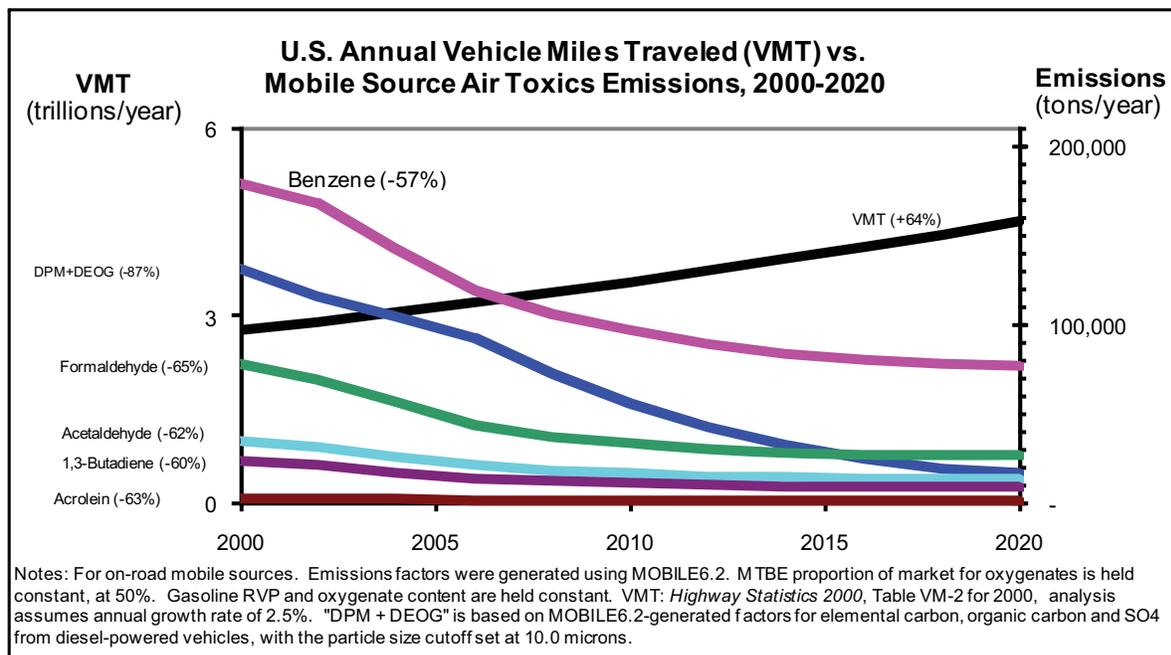
Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, the EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

MSATs are a subset of the 188 air toxics defined by the Clean Air Act (CAA). The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead federal agency for administering the CAA and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources (66 FR 17229, March 29, 2001). This rule was issued under the authority

in Section 202 of the CAA. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline program, its national low emission vehicle standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs would reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and would reduce on-highway diesel particulate matter (PM) emissions by 87 percent, as shown in the following graph:



In an ongoing review of MSATs, the EPA finalized additional rules under authority of CAA Section 202(I) to further reduce MSAT emissions that are not reflected in the above graph. The EPA issued Final Rules on Control of Hazardous Air Pollutants from Mobile Sources (72 FR 8427, February 26, 2007) under Title 40 Code of Federal Regulations Parts 59, 80, 85 and 86. The rule changes were effective April 27, 2007. As a result of this review, EPA adopted the following new requirements to significantly lower emissions of benzene and the other MSATs by: (1) lowering the benzene content in gasoline; (2) reducing non-methane hydrocarbon (NMHC) exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees Fahrenheit); and (3) reducing evaporative emissions that permeate through portable fuel containers.

Beginning in 2011, petroleum refiners must meet an annual average gasoline benzene content standard of 0.62 percent by volume, for both reformulated and conventional gasolines, nationwide. The national benzene content of gasoline in 2007 is about 1.0 percent by volume. EPA standards to reduce NMHC exhaust emissions from new gasoline-fueled vehicles will become effective in phases. Standards for light-duty vehicles and trucks (less than or equal to 6,000 pounds [lbs]) become effective during the period of 2010 to 2013, and standards for heavy light-duty trucks (6,000 to 8,000 lbs) and medium-duty passenger vehicles (up to 10,000 lbs) become effective during the period of 2012 to 2015. Evaporative requirements for portable gas containers become effective with containers manufactured in 2009. Evaporative emissions must be limited to 0.3 grams of hydrocarbons per gallon per day.

EPA has also adopted more stringent evaporative emission standards (equivalent to current California standards) for new passenger vehicles. The new standards become effective in 2009 for light vehicles and in 2010 for heavy vehicles. In addition to the reductions from the 2001 rule, the new rules will significantly reduce annual national MSAT emissions. For example, EPA estimates that emissions in the year 2030, when compared to emissions in the base year prior to the rule, will show a reduction of 330,000 tons of MSATs (including 61,000 tons of benzene), reductions of more than 1,000,000 tons of volatile organic compounds, and reductions of more than 19,000 tons of PM_{2.5}.

PROJECT-SPECIFIC MSAT INFORMATION

Numerous technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project (see “Unavailable Information for Project Specific MSAT Impact Analysis” at the end of this section for more information). In Chapter 3 of its Regulatory Impact Analysis (RIA) for the 2007 MSAT rules, EPA states that there are a number of additional significant uncertainties associated with the air quality, exposure and risk modeling. The modeling also has certain key limitations such as the results are most accurate for large geographic areas, exposure modeling does not fully reflect variation among individuals, and non-inhalation exposure pathways and indoor sources are not taken into account. Chapter 3 of the RIA is found at: <http://www.epa.gov/otaq/regs/toxics/fr-ria-sections.htm>.

However, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative assessment cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA, entitled A Methodology for Evaluating Mobile Air Toxic Emissions among Transportation Project Alternatives, found at: www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.html.

The VMT estimated for the proposed project is slightly higher than that for the no-build alternative, because the project would construct two new location roadways, attracting rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the proposed project within the project area. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds (the EPA MOBILE6 emissions model predicts that emissions of all priority MSATs, except for diesel PM, decrease as speed increases). The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Because the estimated VMT under all alternatives is nearly the same, it is expected that there would be no appreciable difference in overall MSAT emissions between the various alternatives. Also, regardless of the alternative chosen, emissions would likely be lower than present levels in the design year as a result of the EPA’s national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The proposed new roadways would have the effect of moving some traffic closer to nearby existing homes and businesses. Therefore, there may be localized areas where ambient concentrations of MSATs could be higher under the proposed project than under the no-build alternative. However, as discussed previously, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In sum, if the proposed project is constructed and new roadways are placed closer to receptors, the localized level of MSAT emissions for the proposed project could be higher relative to the No-Build Alternative. However, these increases could be offset by increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). On a regional basis, the EPA's vehicle and fuel regulations coupled with fleet turnover will cause region-wide MSAT levels to be significantly lower than today in almost all cases.

SENSITIVE RECEPTOR ASSESSMENT

There are no hospitals, schools, licensed day care facilities, or elder care facilities within 1,640 feet of the project area.

UNAVAILABLE INFORMATION FOR PROJECT SPECIFIC MSAT IMPACT ANALYSIS

This document includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools and lack of health-based MSAT standards do not enable the prediction of project-specific health impacts of the emission changes associated with the alternatives in this project. Due to these limitations, the following discussion is included in accordance with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Information that is Unavailable or Incomplete

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

1. Emissions: The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE6.2 is a trip-based model; emission factors are projected based on a typical trip of 7.5 miles and on average speeds for this typical trip. This means that MOBILE6.2 does not have the ability to predict emission factors for a specific vehicle operating conditions at a specific location at a specific time. Because of this limitation, MOBILE6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects and cannot adequately capture emissions effects of smaller projects. For PM, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE6.2 for both PM and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations. However, MOBILE6.2 is currently the only available tool for use by FHWA and TxDOT, and may function adequately for larger-scale projects for comparison of alternatives.

2. Dispersion: The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum

concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

3. **Exposure Levels and Health Effects:** Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupported assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs

Research into the health impacts of MSATs is ongoing. For different emission types there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris/>. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- **Acrolein:** The potential carcinogenicity of acrolein cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.

- **Diesel Exhaust (DE)** is likely to be carcinogenic to humans by inhalation from environmental exposures. DE as reviewed in this document is the combination of diesel PM and DE organic gases. DE also represents chronic respiratory effects, possibly the primary non-cancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes, particularly respiratory problems. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable a more comprehensive evaluation of the health impacts specific to this project to be performed.

In the preamble to the 2007 MSAT rule, EPA summarized recent studies with the following statement: “Significant scientific uncertainties remain in our understanding of the relationship between adverse health effects and near-road exposure, including the exposures of greatest concern, the importance of chronic versus acute exposures, the role of fuel type (e.g., diesel or gasoline) and composition (e.g., % aromatics), relevant traffic patterns, the role of co-stressors including noise and socioeconomic status, and the role of differential susceptibility within the “exposed” populations.” (Volume 73 Federal Register Page 8441 (February 26, 2007) Control of Hazardous Air Pollutants from Mobile Sources).

Relevance of Unavailable or Incomplete Information

While available tools do allow reasonable prediction of relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects. Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have “significant adverse impacts on the human environment”.

In this document, a qualitative assessment has been provided relative to the various alternatives of MSAT emissions and has acknowledged that the proposed project may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

7.10.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in any air quality impacts.

7.11 Historic Properties

7.11.1 BUILD ALTERNATIVE

Criteria for Determining Impacts

Section 106, which is part of the NHPA, requires that the agency show that project planners and engineers have “taken into account” the effects the project may have on NRHP properties and that a reasonable effort has been made to preserve the resource through avoidance or other means to minimize adverse

impacts to the property and/or the historic-age resource. The criteria for assessing effect are prescribed in 36 CFR 800.9. The law states: “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” Examples of adverse effects on historic properties include, but are not limited to:

- Physical destruction or damage to all or part of the property;
- Change of the character of the property’s use or of physical features within the property’s setting that contributes to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features.

Impacts on Non-archeological Historic Properties

Pursuant to Stipulation VI "Undertakings with Potential to Affect Historic Resources" of the First Amended PA-TU between FHWA, the SHPO, the Advisory Council on Historic Preservation, and TxDOT and the MOU, TxDOT Historians have determined that no historic properties are present and that individual project coordination with SHPO is not required.

7.11.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in any impact to historic structures.

7.12 Archeology

7.12.1 BUILD ALTERNATIVE

The Build Alternative would not result in impacts to NRHP archeological resources. A separate report describing the archeological fieldwork undertaken for this project was submitted to the City, TxDOT, and THC per the approved scope of Texas Antiquities Permit #5387. TxDOT concurred with the archeologist’s recommendation for no further work regarding 41WM695, 41WM699, 41WM1111, and 41WM1246 on 1/12/10. THC concurred with this recommendation on 1/15/10. See **Appendix C, Agency Coordination**, for further detail.

7.12.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would not result in impacts to archeological or any other cultural resource sites.

8.0 Indirect Effects of the Proposed Project

The preceding sections of this document have described the proposed project and its direct effects on the environment. The CEQ defines direct effects as those effects that are “*caused by the action and occur at the same time and place*” (40 CFR §1508.8). Direct effects are predictable and are a direct result of the project.

In addition to direct effects, major transportation projects may also have indirect effects on land use and the environment. This section describes the potential indirect effects of the proposed project, utilizing guidance from the 2002 NCHRP (National Cooperative Highway Research Program) Report entitled *NCHRP Report 466: Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (NCHRP, 2002) and from the NCHRP Project 25-25 Task 22 report entitled *Forecasting Indirect Land Use Effects of Transportation Projects* (NCHRP, 2007).

In June 2009, TxDOT issued a document entitled “Guidance on Preparing Indirect and Cumulative Impact Analyses”. This guidance document explains how to conduct an Indirect and Cumulative Impact Assessment for transportation projects. It discusses much of the NCHRP guidance that is referenced in this section, and both sources provide the framework for this analysis. Hereafter, TxDOT’s guidance will be referred to as “TxDOT ICI Guidance”.

As defined by the CEQ, indirect effects are “caused by an action and occur later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems” (40CFR §1508.8). NCHRP Report 466 describes three categories of indirect effects:

- Encroachment-alteration effects – the alteration of the behavior and functioning of the affected environment caused by project encroachment on the environment;
- Induced growth effects – project-influenced development effects (this second category is referred to as “access alteration effects” in the TxDOT ICI Guidance); and
- Effects related to project influenced development effects – the effects of change in land use on the human and natural environment.

Probability is important in providing a distinction between direct and indirect effects because direct effects are generally inevitable, while indirect effects are merely probable. The term “reasonably foreseeable” means that effects are “sufficiently likely to occur that a person of ordinary prudence would take them into account in making a decision” (NCHRP, 2002); such effects are probable, not just possible. Further, NCHRP Report 466 states that “effects that can be classified as possible but not probable may be excluded from consideration” (NCHRP, 2002).

The indirect effects analysis for the proposed project generally follows the eight-step process recommended in NCHRP Report 466 (NCHRP, 2002). However, because Steps 6 (analysis of indirect effects) and 7 (evaluation of results), as described within NCHRP Report 466, are closely related, these two steps are combined for the following analysis. Therefore, the analysis of indirect effects for the proposed project will follow the steps outlined here: (1) initial scoping for the indirect effects analysis and determination of an indirect effects study area; (2) identification of study area goals and trends; (3) inventory of notable features within the study area; (4) identification of impact-causing activities of the proposed action and alternatives; (5) identification of potentially substantial effects for analysis; (6) analysis of indirect effects and evaluation of the results of the analysis; and (7) assessment of the consequences and development of appropriate mitigation and enhancement strategies.

STEP 1: SCOPING

The primary objective of the scoping process is to determine the level of effort and general approach needed to complete the study (NCHRP, 2002; NCHRP, 2007). The location and extent of the study area for the indirect effects analysis will be determined based on project characteristics such as the project type, design features, purpose, project setting, and data available, among others. In order to distinguish it from the study areas considered for the analysis of direct effects of the project, the study area for the indirect effects analysis will be referred to as the Area of Influence (AOI). The AOI for indirect effects for the proposed project is depicted on **Figure 16** and discussed in the following paragraphs.

In 2004, the property within the triangle of undeveloped land bounded by FM 2243, US 183, and 183A was identified as a potential site for a Transit Oriented Development (TOD). Since that time, the City has approved zoning ordinances and code for a somewhat larger area which is the proposed 2,300-acre TOD. The City has annexed land to delineate the full TOD.

The adopted TOD necessitates CR 273/274. The proposed CR 273/274 roadway is an integral part of the TOD plan, as it would create access to the currently undeveloped land bounded by 183A to the east,

US 183 to the west, and FM 2243 to the south. The 2,300-acre area encompassed by the TOD includes primarily undeveloped land, some of which is currently under agricultural use as pastureland or for hay cultivation. It also includes the East Leander Historic District, a commercial strip of development along US 183, and scattered industrial development along FM 2243. The Rail Station is a key component of the TOD. According to the City's Urban Design Officer, the anticipated build-out year for the TOD is approximately 25 years in the future from 2009, or approximately 2034.

As described in the chronology in **Section 1.1 History of the Project**, Leander stakeholders began discussing the potential TOD area in 2004 and a series of public meetings took place over the next two years. The Leander City Council and Planning and Zoning Commission approved the zoning ordinances and code for the TOD in August of 2005. The City formally adopted the Smartcode on September 22, 2005. As will be discussed in this section, the area bounded by FM 2243, US 183, and 183A is the area most likely to be affected by construction of CR 273/274.

Lands outside of the TOD would be generally served by other roadways, and would be subject to different zoning ordinances and codes than those set forth by the City for the TOD. Nonetheless, because construction of CR 274 between US 183 and 183A would complete that roadway, some of the area east of 183A would be more attractive to development. The proposed East San Gabriel Parkway to Ronald Reagan Boulevard would be the primary driver of development east of 183A, but completion of the CR 274 part of the Leander T provides access to the Rail Station. (Note that East San Gabriel Parkway/CR 274 east of US 183 was formerly called CR 276 and some maps still show that.) The proposed CR 274 from CR 270 to Ronald Reagan Boulevard is included in CAMPO's Mobility 2030 Plan, but an estimate of when it would be funded is not provided. The development of developable lands east of 183A might be influenced by the proposed project because of the access provided to the rail station. This is a development driver; therefore, the AOI for the proposed project includes land within the boundaries of the 2,300-acre TOD, as illustrated in **Figure 16**, in addition to the 2,505 acre area east of 183A and bounded by the South Fork of the San Gabriel River, Ronald Reagan Boulevard, and FM 2243 (outside of the TOD area). The AOI totals approximately 4,805 acres.

STEP 2: IDENTIFY STUDY AREA'S GOALS AND TRENDS

The purpose of this step is to describe the general trends and goals of the AOI, including community planning goals, demographic and development trends, factors influencing growth, and areas of environmental or social sensitivity. Information contributing to this description comes from local planning documents, local and/or regional trend data collected for the proposed project area, and communications with local planners.

Goals

The CAMPO Mobility 2030 Plan (and the upcoming 2035 update) defines transportation systems and services in the area containing the boundaries of the AOI. The Mobility 2030 Plan addresses regional transportation needs that are identified through forecasting current and future travel demand, developing and evaluating system alternatives and selecting those options which best meet the mobility needs of the region. The proposed facility is included in this plan.

The Williamson County Multi-Corridor Transportation Plan was developed in 1999 and sets forth recommendations for construction of or improvements to individual roadways identified as needed to strengthen the County's existing north-south and east-west travel network corridors (Williamson County Commissioners Court, 1999). The plan was recently revised, and the updated plan was issued in October 2009. Williamson County's goals include the support of multimodal transit options, the creation of bike/pedestrian trails and the reduction of bottlenecks and congestion (Williamson County Commissioners Court, 2009). Since the original plan was approved, there have been road bonds issued in 2000 and 2006 and many of the projects in the plan have been completed (www.roadbond.org). The proposed

project is included in the plan as a project to be open to traffic by 2015. The 2009 plan update also includes a variety of projects anticipated to be developed between 2016 and 2035.

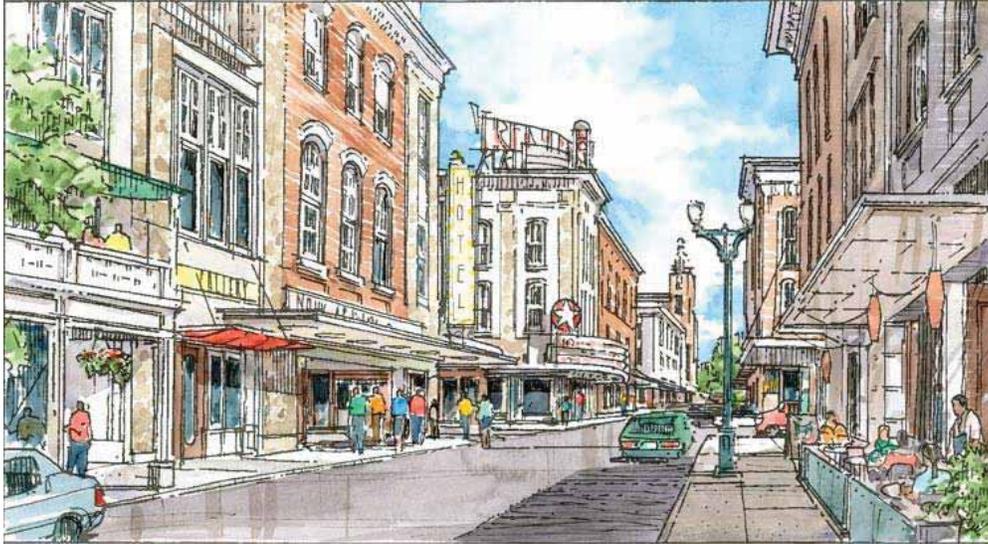
The goals of the AOI are primarily influenced by the TOD and therefore, a key part of the roadway infrastructure needed for the TOD would be accomplished by the construction of the proposed project.

Leander's Roadway Plan (2007 Plan Revision 1) shows the proposed CR 273/274 project as a major arterial. See **Figure 15, Leander Roadway Plan**. On September 22, 2005, the City adopted the Leander Smartcode, which provides standards for zoning and subdivisions within the boundaries of the TOD. This code is in accordance with the City's Comprehensive Plan and city ordinances and sets forth a series of goals for the TOD, as described in detail below.

Within the TOD, general goals stated in the Leander Smartcode include:

- Retaining the natural infrastructure and visual character of the area,
- Encouraging infill and redevelopment in parity with new communities,
- Structuring and integrating development contiguous to urban areas into the existing urban pattern,
- Respecting historical precedents,
- Planning transportation corridors in coordination with land use,
- Using green corridors and floodplain areas to define and connect neighborhoods and the surrounding urban areas, and
- Including a framework of transit, pedestrian, and bicycle systems that provide alternatives to automobile transportation.

The primary goal of the TOD is to cluster development such that neighborhoods and regional centers are compact, pedestrian-oriented, and mixed-use. The code emphasizes the creation of a cohesive community through design and accessibility. For example, civic, institutional, and commercial activities are to be embedded in town centers and neighborhood centers rather than spread out on the fringe within single-use complexes. Open spaces, including parks, squares, and playgrounds would also be distributed within neighborhoods and town centers. In addition, transit stops and schools would be located such that they are easy to reach via walking or bicycling. Design of buildings, streets, and landscapes would be incorporated in a way that would reinforce safe environments, preserve accessibility, and reinforce community identity. Sidewalks would be constructed on public right-of-way as the roadway is built. In addition, according to the Leander Smartcode (August 2005), Section 3.6 Streetscape Requirements includes the following requirements for any proposed development: "All frontages shall include the appropriate types of sidewalk, curbing, planter, and street trees". Therefore, it is anticipated that additional sidewalks will be built by private entities as the TOD develops. Although the TOD preceded the roadway, CR 273/274, as described in this EA, would support the plans of the TOD. Although the TOD would develop even in the absence of this project, construction of CR 273/274 would enhance the rate of this development by providing the key element of transportation infrastructure. Many planning studies were undertaken in the development of the TOD, including Leander Charette Book (May 2005) which provided graphic images of what a TOD development might look like including the depiction of Thoroughfare Standards below:



Existing primary destinations within the AOI include the Rail Station, the East Leander Historic District, shopping destinations along US 183, and the First Baptist Church of Leander. These destinations are all located within the boundaries of the TOD. The development of the TOD would fulfill the City's goal to provide access to these primary destinations. Access to the Rail Station, East Leander Historic District, and shopping destinations is currently provided by US 183, and access to the church is provided by FM 2243. The future development of additional roadways within the TOD could provide additional access to these destinations. For example, it is anticipated that a road could be constructed which would connect the proposed CR 273 to the Rail Station.

Trends

The Leander TOD, located within Williamson County, is within the Austin Metropolitan Statistical Area (MSA), which includes Bastrop, Caldwell, Hays, Travis, and Williamson Counties. As documented in the Leander TOD Market Analysis (Capital Market Research, 2005), Austin is one of the fastest growing cities in the country, with a strong economy and job growth, healthy real estate market, and projected population increase. As a result of Austin's growth, the surrounding counties included in the MSA have also experienced growth, particularly in housing. Since 1856, the growth pattern in the area surrounding Austin has tended toward the northwestern portion of the MSA (Capital Market Research, 2005). Within Williamson County, the majority of the growth has taken place in the south-southwest portion of the county (Williamson County Commissioners Court, 1999), which includes the AOI. Because of the growth, this portion of the county experiences congestion.

Rural land values are evaluated by the Texas Chapter of the American Society of Farm Managers and Rural Appraisers (ASFMRA) for a nine-county area surrounding the Austin MSA; this area includes Williamson County. According to information regarding Texas rural land value trends for 2008, land values in the region are highest within the City of Austin and tend to decrease further away from the city center. Further, land values to the west tend to be higher than those to the east of Austin. Due to general nationwide economic trends during the latter portion of 2008 and 2009, the real estate market in the nine-county area has shown some weakness, particularly regarding development tracts and urban fringe properties (Texas Chapter ASFMRA, 2008). According to data from the Texas A&M University Real Estate Center (2008), median price per acre for land within a six-county area around Austin (including Bastrop, Caldwell, Hays, Lee, Milam, Travis, and Williamson Counties) increased from 1994 to 2007. However, from 2007 to 2008, there was a decrease of 10 percent in the land value.

As discussed in the market analysis prepared for the TOD, communities such as Leander, located northwest of Austin, may be likely to experience continued growth. From 1990-2004, there was an increase of 83.8 percent for single-family housing starts within Williamson County. Single-family housing demand is projected to average 9,497 units per year from 2004-2013. From 2001-2005, more than 2,400 multi-family and 6,000 single family homes have been added in the Cedar Park/Leander area, most of which consist of conventional small lot single-family subdivisions and garden-style apartment communities. Although single-family homes tend to be preferred over other housing types, there is a growing demand for condominiums and townhouses (Capital Market Research, 2005). Since the TOD was adopted, several development plans have been designed and some have been proposed to and approved by the Leander Planning and Zoning Commission, which tracks developments in review on their website. Capital Metro has completed construction of the Rail Station within the AOI and the rail line opened in March 2010 to transport train riders and commuters to and from central Austin. The trend in the AOI is development according to the TOD and Leander Smartcode.

Currently (in 2009), the nationwide economic situation is somewhat depressed compared to the period when the Market Analysis was conducted (in 2005); however, growth continues to occur in the Austin area. Second quarter employment in Williamson County increased by 21.9 percent, from 100,404 jobs in 2005 to 122,384 jobs in 2008. The planned development in the TOD includes an estimated 30,000 persons, two million square feet of retail, four million square feet of office, and 1.5 million square feet of manufacturing/assembly at build out (in approximately 2034) (Pers. Comm. Leander Urban Design Officer, 2009).

The proposed project would support the goals and trends of the AOI by opening undeveloped land within the TOD for development, which would help accommodate growth in the area, provide access to various types of services and properties within the TOD, and would benefit the economy of Leander through development of the TOD.

STEP 3: INVENTORY STUDY AREA'S NOTABLE FEATURES

NCHRP Report 466 defines the term "notable features" as specific, valued, vulnerable, or unique elements of the environment, which may include:

- Sensitive species and habitats – ecologically valuable species and habitat, as well as those that are vulnerable to impact;
- Valued environmental components;
- Valued landscape components – those with relative uniqueness, long recovery times after disturbance, and unusual landscape features; and
- Vulnerable elements of the population – includes the elderly, children, disabled persons, and members of low-income or minority groups (NCHRP, 2002).

A number of information sources were used to determine notable features present within the AOI, including constraints mapping performed for the proposed project, planning studies and stakeholder involvement, and the direct effects of the project.

Notable features present within the study area include:

- Surface and Groundwater – Both the North and South Forks of Brushy Creek are crossed by the proposed project (see **Figure 17**). The South Fork of the San Gabriel River forms the northern boundary of the AOI (see **Figure 17**). The North and South Forks of Brushy Creek are ephemeral to intermittent creeks which converge to the east of the project area and ultimately flow to the South Fork of the San Gabriel River. The proposed project is located in a semi-arid area, and the creeks and river provide an important source of water for area wildlife following rain events. The AOI for the project is located within the Edwards Aquifer Contributing Zone (see **Figure 8**).
- Historic Resources – Field surveys were conducted within the APE and database and file searches were conducted for the remaining AOI. As discussed in **Section 6.11**, there are no NRHP-eligible non-archeological historic resources in the project APE. As summarized in the HRSR for the proposed project (CP&Y, 2009), numerous surveys have been conducted within the AOI and the presence of NRHP non-archeological historic properties is well documented. There are two NRHP-eligible non-archeological properties within the AOI (see **Figure 16**): the East Leander Historic District located at the northeast corner of the intersection of US 183 and FM 2243, and the NRHP-eligible Bryson Farmstead located northeast of the proposed intersection of CR 274 and 183A (Note: although the Bryson Farmstead is associated with an archeological trinomial, 41WM1114, the property's NRHP eligibility is based on its non-archeological traits).
- Land Use and Community Character – This undeveloped portion of Leander has traditionally been rural in nature and on the outskirts of central Leander. With the completion of 183A in the recent past and the planned addition of mainlanes, the rural character is rapidly changing. Land uses along US 183 include a neighborhood consisting of single-family residences located at the northeast corner of the US 183/FM 2243 intersection (see HRSR discussion of East Leander Historic District, which was recommended as NRHP-eligible by TxDOT ENV and accepted by THC), the Rail Station located along US 183 just north of Old 2243 West (which runs in front of the HEB store heading west from US 183), and the associated railroad tracks paralleling US 183. At the northwest corner of the 183A/FM 2243 intersection are two commercial retail businesses (Fabcon Park and Sell RV and Boat Storage and Floyd Cantwell Used Cars and Parts), the First Baptist Church of Leander, and a Pedernales Electric Cooperative electric power substation. There is one single-family residence near Brushy Creek approximately halfway between the proposed road and 183A. A second residence is located near the Rail Station, but it was documented as unoccupied by project historians. Land uses along US 183 are generally commercial, consisting of retail and service-oriented businesses, service stations, banks, and concrete plants. South of FM 2243, the City's wastewater treatment plant and a Natural Resources Conservation Service (NRCS) flood control structure are located between 183A and CR 273. Existing land uses are depicted on **Figure 11**. Development continues south and west of US 183 and FM 2243, but the TOD plan would introduce more of Leander's residential and mixed use development to the area bounded by US 183, FM 2243, and 183A and beyond. A discussion of developable land within the AOI is provided in Step 5 of this analysis. Although no prime farmlands are located within the TOD (which is dedicated to urban use), prime farmlands may occur in the portion of the AOI outside of the TOD. Development in this area could therefore impact some prime farmland soils.
- Threatened or Endangered Species Habitat - A portion of the AOI is mapped as having a high probability of occurrence of endangered cave species (USFWS, 2007) (see **Figure 6**). The Williamson County Regional Habitat Conservation Plan (RHCP) contains maps showing known occurrences and mapped areas of potential habitat for listed species throughout the county (Williamson County Conservation Foundation, 2008). According to the RHCP, the AOI does not contain any Black-capped Vireo occurrences or potential habitat for the species; therefore, the species would not be anticipated

to occur within the AOI and no indirect effects to the species would occur as a result of the project. The RHCP does depict areas of potential Golden-cheeked Warbler habitat within the AOI (see **Figure 18**). The majority of the potential Golden-cheeked Warbler habitat is located in the northern part of the AOI along the South Fork of the San Gabriel River. Known occurrences of the species have occurred in this area. A small patch (approximately 31 acres in size) of potential Golden-cheeked Warbler habitat also occurs in the southern portion of the AOI, to the east of the proposed project (see **Figure 18**). However, Golden-cheeked Warblers generally do not utilize habitat patches smaller than 56 acres in size (Arnold, et al., 1996); because the small patch is less than 56 acres, warblers would not be anticipated to utilize it for nesting. Some of the land indicated as potential habitat by the RHCP is located within the floodplain associated with the South Fork of the San Gabriel River (and thus not subject to development), some is located in areas that have already been developed, and some is located in undeveloped areas (see **Figures 17** and **18**). No other potential habitat for federally-listed threatened or endangered species, other than the cave species and Golden-cheeked Warbler, occurs within the AOI. One state-listed species, the state-listed threatened timber/canebrake rattlesnake, could occur within the project area along riparian zones with dense ground cover (North and South Forks of Brushy Creek). These creeks are located in floodplain areas where development is less likely to occur (see **Figure 17**). There is no potential habitat for the timber/canebrake rattlesnake within developable lands in the AOI. There are no known occurrences of state-listed threatened or endangered species or potential habitat for these species within developable lands in the AOI.

- Archeological Resources - Twenty-seven (27) previously documented archeological sites have been identified within the 4,805-acre AOI (THC, 2009). Two of the sites are non-archeological resources, 14 have been recommended as ineligible, and the eligibility status of the remaining 11 sites is unknown.

STEP 4: IDENTIFY IMPACT-CAUSING ACTIVITIES OF THE PROPOSED ACTION AND ALTERNATIVES

In this step, the various aspects of project design, construction, and operation that may result in impacts to the environment are described. NCHRP Report 466 provides a Project Impact-causing Activities Checklist (NCHRP, 2002), which was used as a guide to identify actions/activities that the project would entail. There are 10 general categories of project impact-causing activities, each of which is reviewed in **Table 16**.

Table 16: Impact-Causing Activities		
Type of Activity	Project Specific Activity	Relevant Details
	Removal of vegetation and wildlife habitat	Approximately 27.4 acres of vegetation would be removed for roadway right-of-way or modified for temporary drainage easements.
Modification of Regime	Alteration of stormwater quality due to flow off impervious cover instead of overland	The access-alteration activity is the connection of US 183 with 183A via the proposed CR 274 extension, connection of West San Gabriel Parkway with the approved extension of San Gabriel Parkway east of 183A, connection of CR 274 with FM 2243 via CR 273, and providing potential driveway access to vacant lands along the proposed CR 273 and CR 274. BMPs would be put in place.
Land Transformation and Construction	Noise	Noise and vibration would result from construction equipment trenching, excavation, backfilling, grading, and pavement laying activities.

Table 16: Impact-Causing Activities		
Type of Activity	Project Specific Activity	Relevant Details
Resource Extraction	Excavation	Surface and subsurface excavation would be required throughout the project limits for construction of the new roadway.
Processing	Storage of construction materials including aggregate, concrete pipes, traffic control barricades, steel rebar, road signs, etc., temporary construction office trailers equipped with temporary utility service including some means of sanitary waste disposal	Material storage areas and construction office trailers are commonly located within the project right-of-way during construction.
Land Alteration	Erodible materials exposed to surface runoff	Erosion Control and Sedimentation Control BMPs would be implemented and maintained until construction is complete. Upon completion of the project, Post-Construction TSS Control BMPs would be implemented.
	Landscaping	Landscaping in accordance with EO 13112 on Invasive Species and Executive Memorandum on Beneficial Landscaping
Resource Renewal	None anticipated.	N/A
Changes in Traffic	None anticipated (no current travel patterns established within the proposed area of project construction).	N/A
Waste Emplacement and Treatment	Disposal of vegetation removed for construction	Vegetation removed for construction would be either burned on-site, mulched, or hauled to a landfill for disposal.
Chemical Treatment	Fertilization	When used, fertilizers are generally only used during the revegetative phase of the project, after which the use of fertilizers is discontinued.
	Deicing	TxDOT typically uses inert sand materials for ice control, and these are applied only on bridges and pavement over culverts.
Access Alteration	Access created by construction of new roadway	Undeveloped land opened for development under Leander TOD plan.

STEP 5: IDENTIFY POTENTIALLY SUBSTANTIAL INDIRECT EFFECTS FOR ANALYSIS

The objective of this step is to compare the list of impact-causing activities identified in Step 4 with the goals identified in Step 2 and the notable features identified in Step 3. The impact-causing activities listed in **Table 16** under Step 4 are relevant to two of the three types of indirect effects: encroachment-alteration and access-alteration.

Encroachment-alteration effects (ecological) – Encroachment-alteration effects would occur with regard to water quality. Alteration of stormwater quality would occur because stormwater from the project would flow offsite into the north and south forks of Brushy Creek, a notable feature. Encroachment-alteration effects regarding water quality are analyzed in Step 6.

Encroachment-alteration effects (socioeconomic) –It is anticipated by the community that construction of the proposed project and development of the TOD would cause changes to current land values, including increasing values for developed uses, removing land from agricultural use (not food crops), increasing anticipated property tax income and would generally have a positive effect on the tax base for the city. There are no displacements required by the project and there is only sparse development in most portions of the AOI. First Baptist Church of Leander along FM 2243 may gain additional parishioners if the

development in the AOI moves forward and new residential areas are created. Changes in traffic anticipated as a result of the proposed project include increased traffic on FM 2243 east of US 183 to CR 273/274 and increased traffic to/from the Rail Station especially once all of CR 274 is built. Socioeconomic indirect effects are generally considered to be beneficial and are not anticipated to be substantial, however; therefore, socioeconomic encroachment-alteration effects will not be analyzed in detail in Step 6; rather, changes in land use/change in rural character (as discussed below) will be carried forward for further analysis and socioeconomic considerations will be an aspect of that analysis.

The AOI is located within Williamson County, which is part of the Austin-Round Rock Ozone Flex Area. The AOI is currently in attainment for all NAAQS pollutants; please refer to **Section 6.10**. No change in attainment status is anticipated within the AOI as the result of emissions associated with the proposed project. Based on the results of Steps 1 through 4 that evaluated the possible project-related actions that can indirectly impact air, it was determined that the proposed project would not be anticipated to cause indirect air quality impacts in the AOI. Indirect air quality impacts from MSATs are unquantifiable due to existing limitations to determine pollutant emissions, dispersion, and impacts to human health. Emissions would likely be lower than present levels in future years as a result of the EPA’s national control regulations (i.e., new light-duty and heavy duty on road fuel and vehicle rules, the use of low sulfur diesel fuel). Even with an increase in VMT and possible temporary emission increases related to construction activities, the EPA’s vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions of on road emissions, MSATs, and the ozone precursors VOC and NOx. As the proposed project is not anticipated to result in indirect air quality impacts, further discussion in Steps 6 and 7 below is not necessary.

Access alteration effects/project-influenced effects – The historically rural character of land uses in the project area would change due to access alteration from construction of the planned roadway. The rural character of the community would change from its current undeveloped state to a mixed-use development or urban character oriented around the Rail Station. To determine the potential for induced growth, existing land uses within the AOI were quantified. See **Figure 17, Land Available for Project-Influenced Development** and **Table 17**. Within the 4,805 acres of the AOI, approximately 1,757 acres are already developed. Approximately 404 acres are within the floodplain, and 255 acres are devoted to transportation uses. Subtracting out areas not available for development within the 4,805 acre AOI results in approximately 2,389 acres that could potentially be developed.

Existing Land Uses:	Acres
Total Area within AOI	4,805
Developed	1,757
Floodplain	404
Transportation Uses	255
Available for Development within AOI	2,389

Much of this acreage is located outside of the specific project boundaries of FM 2243, US 183, and 183A and also outside of the TOD area. Within the 2,300-acre TOD, approximately 1,686 acres are available for development. Within the limits of the project boundaries, in the areas most likely to develop as a result of construction of CR 273/274, approximately 443 acres are available for development. Existing undeveloped land uses could convert to developed uses once the roadway is built. The 2,389 acres is a maximum acreage for development in the AOI. Indirect effects of induced growth in the undeveloped areas within the AOI are analyzed in Step 6.

No complementary development, such as highway-oriented businesses, would be anticipated to develop as a result of this project. Rather, development within the TOD is anticipated to take the form of a high-

density, mixed-use, pedestrian-friendly cohesive neighborhood anchored by a transit station (the Rail Station). Although the CR 273/274 roadways would provide access for development of the area in line with the City's vision, this type of development is complementary to the transit station rather than to the roadway; therefore, complementary development will not be further examined in this document.

Prime farmland soils within the AOI could be impacted by induced development. It is important to note, however, that very little cultivated land occurs within the AOI, and impacts to actively farmed lands are unlikely. Indirect effects on farmland are not anticipated to be substantial; therefore, farmland is not further discussed in this analysis.

For the most part, the proposed roadway would not alter existing travel patterns in an established community because much of the area in the AOI, and specifically the area bounded by US 183, 183A, and FM 2243 is largely undeveloped. Once the rail line becomes operational (March 2010), there could be some increase in traffic along FM 2243 between US 183 and 183A above current traffic levels as people travel to and from the Rail Station; however, this would not result from construction of the CR 273/274 project. In addition, traffic might increase on 183A north of CR 274 because access to the Rail Station on US 183 would be provided via CR 274. Once San Gabriel is completed across to 183A from US 183, traffic would be expected to increase along that east/west arterial and ultimately to continue farther east to Reagan Boulevard after the county's East San Gabriel Parkway is completed.

Existing residences, businesses, the electric substation, and the one church on the north side of FM 2243 are not expected to experience substantial changes in access. The purpose of constructing the proposed roadway is to open access to the currently undeveloped land within the TOD. Development of the TOD would occur after the CR 273/274 roadway is constructed but planning is well underway. The anchor property for the TOD is the Rail Station, already constructed and serving the rail line as of March 2010. Dense, mixed-use development is anticipated to occur along the proposed roadway and is accounted for by the City's adoption of the TOD and Leander Smartcode, and several developments have been in the platting process in anticipation of the Rail Station. This development helps fulfill the goals of the TOD. Effects related to changes in access will be analyzed in Step 6.

Habitat for the state-listed threatened timber/canebrake rattlesnake, the federally-listed Golden-cheeked Warbler, and federally-listed karst invertebrates could occur within the AOI; induced growth within the AOI could potentially impact these species or their habitats. However, because the state-listed threatened timber/canebrake rattlesnake prefers riparian habitat located within floodplain areas which are unlikely to be developed, no substantial indirect impacts to this species are anticipated. As previously discussed in Step 3, potential habitat for the Golden-cheeked Warbler and karst invertebrates occurs within the AOI. Induced growth could result in the loss of some habitat for these species; therefore, the effects of induced growth on these species will be examined in more detail in Step 6.

Induced growth would have some effect on water resources because increased development would result in increased impervious cover, which would in turn have an effect on water quality of North and South Forks of Brushy Creek. This will be analyzed in Step 6.

Potential indirect impacts to historic resources include changes in the setting caused by the introduction of a roadway where none previously existed, changes to the utility of a property, or changes in the functionality of a property. One NRHP-eligible site (the Bryson Farmstead) and one Section 4(f) property (the East Leander Historic District) are known to occur within the AOI. Indirect impacts on historic properties could be caused by induced growth, as historic properties may be damaged or removed to make way for new development. Indirect effects to historic resources, including the Bryson Farmstead and East Leander Historic District, are discussed in Step 6.

Potential indirect impacts to archeological properties could result from induced development within the AOI. Using survey area coverage data available on the Texas Archeological Sites Atlas, it appears that approximately 20 percent of the AOI has been covered by formal, permitted archeological surveys. Such surveys are required only when a development project has a public funding component. Surveys have identified 27 documented archeological sites within the AOI. Indirect effects to archeological resources are discussed in Step 6.

STEP 6: ANALYZE INDIRECT EFFECTS AND EVALUATE RESULTS

Encroachment-alteration effects (ecological) - The indirect effect of altering the stormwater would not be potentially substantial due to the use of water quality ponds. In addition, the TCEQ's Edwards Aquifer rules requiring implementation of a CZP are considered to create non-degradation of water quality for this notable feature. Furthermore, the goal within the AOI is to create the roadway infrastructure to provide access to lands within the AOI.

Access alteration effects/project-influenced effects – As discussed in several areas of this document, the vision that the people of Leander and their planning professionals have for the project area is a TOD and the anchor point of the development, the Rail Station, has been built. Therefore, although the rural character of the area would change under a TOD, it is the desire of the community to grow in this planned fashion. There is some increased potential for development east of 183A out to Ronald Reagan Boulevard. This area is outside the TOD and not subject to the same development requirements. With the connection of CR 274 to US 183, subdivision development may be more attractive for people interested in commuting via rail. It should be noted that plans exist within the TOD boundary itself for a wide variety of housing developments with closer proximity to the Rail Station. Developments along East San Gabriel Parkway to Ronald Reagan, once built, would likely be of a less compact urban design, being outside the TOD. The rail lined opened in March 2010.

Although the project area is currently largely undeveloped, with the exception of existing developments along FM 2243 and US 183, the proposed construction of CR 273/274 is not a new idea which would cause developers to come forward and propose developments in the area after the project is introduced in the community. Rather, Leander citizens and planners have been working on the TOD since 2005 and have annexed this land into the city limit and adopted the Leander Smartcode to guide development. Construction of the roadway is an element in that plan. Although the TOD provides the purpose and need for the proposed project, the project is anticipated to increase the rate of development within the TOD, resulting in the TOD potentially being completely developed by 2034. However, it should be noted that the project is not anticipated to be the reason for development within the TOD. The TOD would likely develop with or without the proposed project, although the rate of development would likely be slower without construction of the project. However, the Rail Station on US 183 has already been constructed and rail service is anticipated to open in 2010. The construction of CR 273/274 would have a low potential to influence development beyond the TOD boundaries especially since construction of East San Gabriel Parkway east of 183A would be a stronger influence on development patterns in that area and north and south to the nearest rivers. Induced development would not be a substantial effect, as it does not conflict with the AOI's goals; rather, it would fulfill the City's goals of developing the TOD. Therefore, induced development is not a substantial effect.

Changes in travel patterns could occur within the AOI as a result of the proposed project and also as a result of the opening rail line, which occurred in March 2010. Although the rail line's inducement of travel pattern changes is not a result of the proposed project, some of this increased traffic would utilize the project, particularly CR 274 between US 183 and 183A. However, because the proposed project is currently surrounded by mostly undeveloped land and a direct connection from the Rail Station to the CR 273/274 project is not currently planned, traffic changes resulting from the proposed project would not be substantial.

Changes in access could occur within the AOI as a result of the proposed project. In this case, roadway infrastructure does not influence development patterns alone. Utility service for the planned development is not currently in place but the area is included in Leander's water Certificate of Convenience and Necessity. Utility service is anticipated to be installed by the following providers: water and wastewater services would be provided by the City, electric service would be provided by Pedernales Electric Cooperative, natural gas service would be provided by Texas Union Gas, and telephone service would be provided by SBC. Given that new access would be provided to undeveloped land in the AOI, indirect effects would result; however, these effects are not anticipated to be substantial and would be controlled by local development codes and ordinances as well as the availability of utilities and other infrastructure.

If development would occur in areas of potential habitat for the federally-listed endangered Golden-cheeked Warbler or endangered cave species, the developer would be tasked with determining whether any effects to the species would occur. Examination of aerial imagery by qualified biologists shows that, to date, most of the subdivisions and other developments appear to have been placed so that areas with high and low probability of occurrence of endangered cave species would be avoided; development is present only in areas with no probability of occurrence of these species (see **Figures 6 and 17**). Potential impacts to any federally-listed threatened or endangered species, including the Golden-cheeked Warbler and endangered cave species would be subject to the Endangered Species Act (ESA).

Increased development would result in increased impervious cover which would in turn have an effect on water quality of North and South Forks of Brushy Creek; however, because the TCEQ and Leander Smartcode regulations require developers to plan for and treat stormwater, induced growth effects would not be potentially substantial.

The proposed project would not alter the relationship between the East Leander Historic District and the roads that currently serve it, nor would it cause changes in the utility or functionality of the contributing elements of the district because the residences would still function as residences. It is also unlikely that induced growth would endanger the East Leander Historic District, as such development would primarily occur on the undeveloped lands within the TOD. In the case of Bryson Farmstead NRHP-eligible property, the impacts of the proposed roadway and its intersection with 183A have been previously considered and mitigated as documented in the *Memorandum of Agreement (MOA) among Federal Highway Administration, Advisory Council on Historic Preservation, and Texas State Historic Preservation Officer addressing the Post-review Discovery of Adverse Effects to an Historic Site, the J. C. Bryson Farmstead, caused by the Construction of 183A Turnpike and its Intersection with Proposed County Road 274 in Leander, Williamson County, Texas* (TxDOT, 2008). The CR 273/274 project does not introduce any new induced development beyond what was known at the time that the MOA was negotiated. In addition, the potential impacts of development to the NRHP property have already been mitigated through the mitigation measures in the MOA. The CR 273/274 project would not pose any new or increased indirect impacts on the NRHP-eligible Bryson Farmstead. The proposed project would not have substantial indirect effects on historic resources.

Indirect impacts on archeological resources may occur as a result of residential, commercial, industrial, and public-sector development. Archeological sites are usually most dramatically and immediately affected by activities such as clearing, grading, and excavation prior to the construction or modification of structures, streets, and utilities. Indirect impacts may also occur as a result of accelerated erosion driven by drainage modifications such as channelization of existing waterways or the addition of impermeable cover. Drainage-related impacts may not be fully accounted for even within projects subject to cultural-resources compliance requirements, since the area of potential effects (APE) for an archeological field study mandated by federal or state regulations is typically restricted to the footprint of the specific project under review, or perhaps the footprint plus a minimal buffer. Any future development projects that include a public funding component would require archeological survey and - assuming full regulatory compliance

- no impacts to archeological sites would occur without the required documentation and, if necessary, testing and mitigation. Indirect effects on archeological resources within the AOI would not be substantial.

STEP 7: ASSESS CONSEQUENCES AND DEVELOP MITIGATION (AS APPROPRIATE)

Although land uses would change from existing uses to developed uses within the TOD, including a maximum of 443 acres within the area bounded by US 183, 183A, and FM 2243 and up to 2,389 acres within the whole AOI, all development projects would have to comply with the Leander Smartcode and the provisions therein that intend to help balance the built environment with the needs of the natural environment. The build out is anticipated to take place between 2009 and 2034 (25 years in the future). Many factors, including general economic conditions, transportation congestion challenges that motivate more people to commute using train service, provision of other infrastructure, and other factors drive when and how development occurs. In the TOD, though, the Leander Smartcode is in place and all development must occur in compliance with that code and other city, state, and local regulations. In the remainder of the AOI, Williamson County subdivision regulations apply.

Existing regulatory processes would provide controls to avoid potential adverse impacts to endangered species habitat within the AOI. Any impacts to potential habitat for federally-listed species within the AOI would be subject to U.S. Fish and Wildlife Service regulations. The Williamson County Regional Habitat Conservation Plan (RHCP) is structured such that recovery of listed species is enhanced via a fee-based permit process. Developers' participation in the RHCP is supporting the recovery of the listed species.

With regard to potential effects on water quality and habitat, there are some regulations in place to minimize impacts to the resource. A TCEQ Edwards Aquifer CZP would be established for the roadway itself and SW3Ps would be required for CR 273/274 and for the types of developments proposed in the TOD. USACE Section 404 provisions of the Clean Water Act govern activities that would affect waters of the U.S. regardless of who proposes the development activity. Environmental considerations are also included in the Leander Smartcode. Section 3.5 of the Leander Smartcode specifically addresses environmental requirements, including but not limited to protection from floodplain encroachment; preservation of riparian zones and greenbelts; stormwater management requirements including grassy swales and ponds in some cases; and provisions for addressing conflicts between the natural and urban environments depending on which type of development is proposed in the TOD. Individual developers would be responsible for complying with these regulations.

Projects involving public funding would be evaluated in accordance with the NHPA, and NRHP-eligible historic resources would be protected and mitigated if necessary. Archeological resources on private land would not have regulatory protection. Any future development projects that include a public funding component would require archeological survey, and - assuming full regulatory compliance - no impacts to archeological sites would occur without the required documentation and, if necessary, testing and mitigation.

The indirect effects that have been described in this section do not conflict with study area goals; are not expected to worsen the condition or a sensitive or vulnerable notable feature; would not delay or interfere with planned improvement of a notable feature; would not eliminate a valued or unique notable feature; and are not inconsistent with applicable laws.

9.0 Cumulative Effects of the Proposed Project

Cumulative effects are defined as effects "on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can

result from individually minor but collectively significant actions taking place over a period of time.” (NEPA, Section 1508.7, 1978). According to TxDOT’s 2009 Guidance on Preparing Cumulative Impact Analyses, “NEPA analyses must include useful evaluation of the cumulative impacts of the past, present, and future projects”.

In accordance with TxDOT’s 2009 Guidance, the analysis of cumulative effects addresses the following: (1) identification of resources; (2) definition of the study area for each resource; (3) description of the current health and historical context of each resource; (4) identification of direct and indirect impacts that may contribute to cumulative impacts; (5) identification of other reasonably foreseeable future actions that may affect resources; (6) assessment of potential cumulative impacts to each resource; (7) presentation of the results of the analysis; and (8) discussion of mitigation issues for adverse impacts. The cumulative effects analysis for the proposed project follows the eight-step process recommended above.

STEP 1: IDENTIFICATION OF RESOURCES

According to TxDOT guidance (2009), if a project does not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on that resource. **Table 18** describes direct and indirect effects for each resource category and whether the resource is in poor or declining health or at risk. This analysis focuses on those resources substantially impacted by the project or those that are currently in poor or declining health or at risk even if project impacts (either direct or indirect) are relatively small; only those resources meeting these criteria are brought forward for further analysis of cumulative effects.

Table 18: Determination of Resources Included in the Cumulative Effects Analysis				
Resource	Direct Effects	Indirect Effects	Resource in Poor/Declining Health?	Resource at Risk?
Land use and community character	Approximately 30 acres of existing uses would be converted to roadway right-of-way including temporary drainage easements; community cohesion impacts would be positive; effects not substantial	Rural character of AOI would change due to induced development; project would likely increase rate of developer within AOI; changes in land values and increase in property tax income as area develops; changes in traffic once additional roads constructed; effects not substantial	No	No
Farmland	None (TOD committed to urban use)	Induced development could impact some prime farmland soils; impacts to actively farmed lands are unlikely; NRCS oversees prime farmlands; effects not substantial	No	No
Water Resources	Project located within Edwards Aquifer Contributing Zone; North and South Forks of Brushy Creek and associated 100-year floodplain crossed; no impacts to waters of the U.S. (creeks would be spanned); no wetlands impacted; effects not substantial	Increased impervious cover resulting from development could affect water quality, but TCEQ and Leander Smartcode regulations would reduce impacts; effects not substantial	No	No

Table 18: Determination of Resources Included in the Cumulative Effects Analysis				
Resource	Direct Effects	Indirect Effects	Resource in Poor/Declining Health?	Resource at Risk?
Vegetation and Wildlife Habitat	27.4 acres of vegetation that provide habitat for local wildlife species removed or modified; no rare vegetation impacted; effects not substantial	None (although some vegetation could be removed for induced development, the amount cannot be quantified and individual developers would be responsible for impacts)	No	No
Threatened or Endangered Species	No effect to federally-listed species; no impact to state-listed timber/canebrake rattlesnake	No effect to federally-listed threatened or endangered species; no impact to state-listed timber/canebrake rattlesnake	Yes	Yes
Socioeconomics	None (no displacements or relocations required; no environmental justice communities impacted)	Development would result in primarily positive economic impacts to the community; indirect effects are expected to be primarily positive; socioeconomics are considered part of land use and community character; effects not substantial	No	No
Air Quality	None	None	No	No
Historic Properties	None	Induced development would not affect the Bryson Farmstead nor would it alter the relationship between existing roadways and East Leander Historic District; effects not substantial	No	No
Archeology	Three previously documented archeological sites and one newly recorded site affected; all are considered ineligible for NRHP listing and none are subject to recommendations for further research; effects not substantial	Induced development could impact archeological sites; 27 recorded sites have been identified within AOI; publicly funded projects would require survey and possibly mitigation for impacts to sites; effects not substantial	No	No

The following resource is brought forward for further analysis of cumulative effects: land use and community character. Although the direct and indirect impacts of the proposed project are not substantial, and the resource is generally not viewed as being in poor/declining health or at risk, there remains the possibility for cumulative impacts to occur as a result of development induced by the combined effects of this project and other reasonably foreseeable projects; therefore, an analysis of cumulative effects on land use is warranted.

STEP 2: DEFINITION OF STUDY AREA FOR EACH RESOURCE

The Resource Study Area (RSA) for the resource was chosen based on the direct effects and on the indirect effects stemming from changes in land use occurring around the proposed project as well as other known projects that could contribute to cumulative effects. The RSA was reviewed from both geographical and temporal perspectives.

The timeframe in which effects to the resource was considered for this analysis was 2004 to 2034. The year 2004 was chosen for the beginning of the timeframe because planning for the Leander TOD began

at that time, when the property within the triangle of undeveloped land bounded by FM 2243, US 183, and 183A was identified as a potential site for a TOD. The year 2034 is 25 years in the future from 2009 and was chosen for the end of the timeframe because it is the date of anticipated build-out for the Leander TOD (Pers. Comm. Leander Urban Design Officer, 2009).

The geographic area considered for land use and community character coincides with the AOI described for the indirect effects analysis, which includes the TOD boundary (see **Figure 16**).

STEP 3: DESCRIPTION OF CURRENT HEALTH AND HISTORICAL CONTEXT OF RESOURCES

Land use in the project area was historically rural, used as pastureland or for hay cultivation, or undeveloped. Currently, much of the area is used for pastureland or hay. The East Leander Historic District at US 183 and FM 2243 represents an historical development anchored by construction of the rail in the 1880s. Most of the 'old town' Leander exists west of US 183 and the town is determined to preserve some of the historic character. Existing land uses along FM 2243 are residential, commercial, utility, and community facility (one church). Since 2004, the City has been developing a TOD plan and has adopted the Leander Smartcode to govern development within the 2,300 acre TOD boundary. As discussed in previous sections, the citizens and planners of Leander acknowledge the rural characteristics of the past but have embraced a particular development vision for their community based on the TOD plan. The Rail Station has been built, the rail line began service in March 2010, and Leander expects CR 273/274 to be constructed in order to facilitate development in their community according to the principles of the TOD. Land within the AOI outside of the TOD is in Williamson County and governed by County subdivision regulations. An extension of East San Gabriel Parkway is planned for construction between 183A and Ronald Reagan Boulevard.

STEP 4: IDENTIFICATION OF DIRECT AND INDIRECT IMPACTS THAT MAY CONTRIBUTE TO CUMULATIVE IMPACTS

Direct and indirect impacts were discussed in detail in previous sections. Direct and indirect impacts that may contribute to cumulative impacts are summarized by resource in **Table 18**.

STEP 5: OTHER PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

Due in part to its proximity to the Austin area, and also due to Leander's foresight and determination to develop according to TOD principles, Leander is a growing community. Multiple infrastructure projects have been completed, are underway, or are in the planning stages. A brief summary of some of those projects occurs in this section. In 2006, Williamson County voters passed a \$228 million road bond package for road improvements. The Williamson County Commissioners Court currently is in the process of updating the county's Multi-Corridor Transportation Plan in order to "plan and prioritize needed safety and mobility improvements to keep pace with the county's continuous high growth." Status information for projects undertaken as part of the Williamson County Road Bond program can be found at <http://www.roadbond.org/>.

Leander TOD

In 2004, the property within the triangle of undeveloped land bounded by FM 2243, US 183, and 183A was identified as a potential site for a Transit Oriented Development (TOD). A series of public meetings and hearings presented the TOD concept to the public in early 2005, and the Leander City Council voted to annex 1,443 acres of land for the purposes of inclusion to the TOD, with the understanding that an additional 857 acres would be annexed as development of the plan progressed. On August 4, 2005, the City's Planning and Zoning Commission approved zoning ordinances and code for the proposed 2,300-acre TOD, including the annexation of land for the TOD project. The full boundaries of the TOD extend beyond US 183 and 183A and are shown on **Figure 11, Existing Land Use**.

The Leander TOD area, of which the proposed CR 273/274 project is a key element, is anticipated to develop into a mixed-use community. The Rail Station has already been constructed and rail service began in March 2010. Types of development anticipated to occur within the TOD include residential, commercial, and community facilities. Residential development would primarily be multi-family residential units, such as apartments, townhomes, and duplexes. Commercial development would consist largely of retail and office space. Community facilities would include schools, parks, and municipal buildings. Development along the proposed CR 273/274 roadway and within the TOD area as a whole would be in accordance with the zoning ordinances and codes set forth specifically for the TOD by the City in the Leander Smartcode.

183A

The Final Environmental Impact Statement (FEIS) document for the 183A project covers roadway construction extending from US 183 at RM 620, north to existing US 183 approximately three miles north of Leander. A Record of Decision was issued for the FEIS on July 19, 2001.

Modifications to the project design, including the addition of 23.9 acres of permanent easements, prompted a FEIS re-evaluation, which was approved by FHWA in October 2006. A second FEIS re-evaluation was initiated in 2007 to assess impacts resulting from a proposed intersection with the San Gabriel Extension, which is an approved Williamson County Road Bond Project heading east from 183A, and to assess potential impacts to a late-discovery historic resource that was not previously disclosed in the FEIS, the Bryson Farmstead. Potential impacts were avoided through an agreement that preserves approximately two acres containing the farmstead's historic structures plus an additional four acres which is still to be delineated, guarantees the structures will not be demolished, and provides preservation for the structures in perpetuity. The re-evaluation was approved by FHWA in January 2009. Design documents are underway to construct the mainlanes within the existing 183A footprint.

A third re-evaluation focusing on the proposed construction of a grade-separated intersection at 183A and CR 269 (Reveille Boulevard) was approved on March 1, 2010. Construction is anticipated in 2010 according to the Leander Chamber of Commerce.

San Gabriel Parkway

San Gabriel Parkway (CR 274 and formerly CR 276) extends east of 183A. San Gabriel Parkway Phase II extends east to CR 270 under the Williamson County Road Bond program. The road has been designed to extend farther east to Ronald Reagan Boulevard. The proposed CR 274 from CR 270 to Ronald Reagan Boulevard is included in CAMPO's Mobility 2030 Plan, but an estimate of when it would be funded is not provided.

Commuter Rail

The downtown/northwest commuter rail service line is a 32 mile commuter rail urban service which uses existing Capital Metro rail tracks. The Rail Station adjacent to the proposed project is the northernmost stop along this rail line. The line has been constructed, and limited service started in March 2010.

CR 272/Crystal Falls Parkway

The CR 272/Crystal Falls Parkway project consists of intersection and signal improvements from US 183 to Parmer Lane. A rail crossing upgrade is also planned.

Bagdad Road

The Bagdad Road project consists of the installation of new sidewalks from Crystal Falls Parkway to Leander High School. This project is currently underway.

FM 1431 Improvements

In 2009, funds were awarded by CAMPO for improvements to FM 1431 between 183A and Cottonwood Creek Trail.

US 183 San Gabriel River to SH 29

Proposed road improvements being pursued by Williamson County under the State pass-through financing program include construction of a new bridge over the South San Gabriel River and construction of a four-lane arterial roadway (and right-of-way acquisition adequate to expand the 183A toll road north to SH 29 at some point in the future), with a planned completion date of 2011 according to the Leander Chamber of Commerce.

Lakeline Boulevard

Lakeline Boulevard exists from RM 620 to Crystal Fall Parkway, and an extension has been considered in Leander's transportation plans. The plan considers an eventual extension with San Gabriel Parkway.

Ronald Reagan Boulevard

Ronald Reagan Boulevard connects to SH 195 northwest of Georgetown, but is planned to eventually connect to IH 35. Once Ronald Reagan Boulevard connects to IH 35, it is "anticipated to increase traffic flow up 183A, across San Gabriel and FM 2243 and on to Reagan" according to the Leander Comprehensive Plan Update.

STEP 6: ASSESSMENT OF POTENTIAL CUMULATIVE IMPACTS

Together, all of the past, present, and reasonably foreseeable projects will have the effect of continued land use development and change from the rural/suburban character of the past to more of an urban environment. In particular, land uses are being characterized as mixed-use development concentrated around a key transit node - the Rail Station. There is a history of public involvement since 2004 focused on introduction, development of, and adoption of the TOD plan and zoning, along with the Leander Smartcode which attempts to balance a developing urban environment in balance with the natural environment. Dense mixed-use development especially along commuter rail lines is considered to be socially and environmentally efficient compared to traditional suburban development patterns when population is expected to increase. The extension of East San Gabriel Parkway would, in conjunction with the proposed project, result in induced growth in the eastern portion of the RSA. Induced growth in the eastern portion of the RSA could also result in increased traffic on the CR 274 project described in this EA, as a result of travel to and from the Rail Station. Property values would be expected to increase as a result of development within the RSA, and the tax base for funding public services in Leander would expect to increase. This analysis recognizes that increased property taxes can pose a financial burden on lower-income persons. The projects described above collectively improve circulation throughout the land use RSA and facilitate planned development. In conclusion, the anticipated change in land use and community character in Leander, especially within the TOD, is not considered to constitute substantial cumulative adverse effects.

STEP 7: RESULTS OF ANALYSIS

As described in Step 6, the results of this cumulative effects analysis led to the conclusion that potential cumulative effects to land use/community character would not result in substantial cumulative effects particularly given regulatory protection mechanisms that are currently in place.

STEP 8: DISCUSSION OF REGULATORY ISSUES AND MITIGATION

The Leander Smartcode, along with the City of Leander's zoning and subdivision regulations are in place to regulate any proposed development that would take place within the RSA. With these protections in place, cumulative effects of past, present, and reasonably foreseeable projects including construction of

1.1 miles of CR 273 and improvements to, and extension of, CR 274 for a total of 0.37 miles would not be substantial.

10.0 Environmental Permits, Issues, and Commitments

The City of Leander, in construction of the “T”, commits to constructing adequate pedestrian facilities. Continuous sidewalks that meet the federal minimum standard would be built as the roadway project is developed. Under the Leander Smartcode, the City of Leander requires developers to build appropriate sidewalks. The Leander Smartcode (August 2005), Section 3.6 Streetscape Requirements includes the following requirements for any proposed development: “All frontages shall include the appropriate types of sidewalk, curbing, planter, and street trees”. Therefore, it is anticipated that additional sidewalks will be built by private entities as the TOD develops.

Cyclists would be accommodated in shared use lanes with Shared Lane Marking as defined in the Manual on Uniform Traffic Control Devices (adopted December 2009). Cyclists would be using the same lane of traffic as vehicles, and lanes would be marked as shared use lanes with Shared Lane Marking.

Because the project is located within the Edwards Aquifer Contributing Zone, a CZP would be prepared for the project and submitted to the TCEQ, according to standards to satisfy the current Edwards Aquifer rules (30 TAC 213).

No USACE permits would be required as both waters of the U.S. within the project area would be spanned by bridges, and no impacts would occur.

The proposed project would involve more than five acres of earth disturbance. TxDOT would comply with the TCEQ’s TPDES Construction General Permit. A SW3P would be prepared and implemented, and a construction site notice would be posted on the construction site. A NOI would be required.

During construction, BMPs, including temporary erosion, sedimentation, and water pollution controls would be implemented. All temporary erosion controls would be in compliance with the TxDOT Standard Specifications and would be in place, according to the construction plans, prior to commencement of construction-related activities. The contractor would take appropriate measures to prevent, minimize, and control the spill of fuels, lubricants, and hazardous materials in the construction staging area.

During construction, efforts would be taken to avoid and minimize disturbance of vegetation and soils. All disturbed areas would be revegated, according to TxDOT specifications, as soon as it becomes practicable. In accordance with EO 13112 on Invasive Species, the Executive Memorandum on Beneficial Landscaping, and the 1999 FHWA guidance on invasive species, all revegetation would, to the extent practicable, use only native species. Further, BMPs would be used to control and prevent the spread of invasives.

Clearing of vegetation would take place outside of the migratory bird breeding season (March to August) as much as practicable to avoid impacts to nesting birds.

If any individuals of state-listed species, including the timber/canebrake rattlesnake, are observed within the project area during construction, care should be taken to avoid harming them.

Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal and state regulations per TxDOT Standard Specifications. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. The use of construction equipment within sensitive

areas would be minimized or eliminated entirely. All construction materials used for this project would be removed as soon as work schedules permit.

11.0 Summary of Public Involvement

Public Meetings Related to TOD Planning

A series of public involvement opportunities were held prior to the City's adoption of the TOD plan. These included a public meeting held at Pat Bryson Municipal Hall on January 25, 2005 to present the preliminary design, look, and outline of the TOD; an informal meeting held on March 2, 2005 to present the latest updates on the TOD project to taxpayers and homeowners living in the city's Old Town district; and public hearings held on April 20 and 21, 2005 to present the TOD plan to the public.

Meetings with Affected Property Owners (MAPOs) were held just prior to the 2009 public meeting and notices were hand-delivered to landowners at these MAPOs.

July 14, 2009 Public Meeting

An open house public meeting was held from 6:00 to 8:00 p.m. on July 14, 2009 at Pat Bryson Hall in Leander. The purpose of the meeting was to present the proposed alternative alignments to the public and gather information which would be used in the selection of a preferred alternative route. The meeting was advertised in the *Austin American-Statesman* and the *Hill Country News*. Notices were also sent to affected landowners. Copies of the notice are found in **Appendix D**.

Approximately 26 people attended the meeting, 13 of whom were members of the public. At the meeting, exhibits depicting the proposed project alternatives were available for public viewing and representatives of TxDOT and the City were present to answer questions. Handouts describing the proposed project, which included maps of the project and blank comment forms, were distributed to those attending the meeting (see **Appendix D**).

Written comments were accepted at the meeting and for 10 days following the meeting. Verbal comments were also accepted; a court reporter was available at the meeting to record verbal comments. One verbal comment and 15 written comments were received during the meeting and 10-day comment period. Thirteen (13) of the comments expressed support for Alternative 3, one comment expressed support for Alternative 1, and one comment was supportive of the project in general, without specifying a preference for one of the alternatives. One commenter requested that either a traffic signal at CR 273 and FM 2243 be considered or the speed limit be reduced along FM 2243 for safety purposes.

12.0 Conclusions

The proposed project examined in this EA was determined not to have substantial effects on the environment; therefore, a Finding of No Significant Impact is anticipated for the proposed project.

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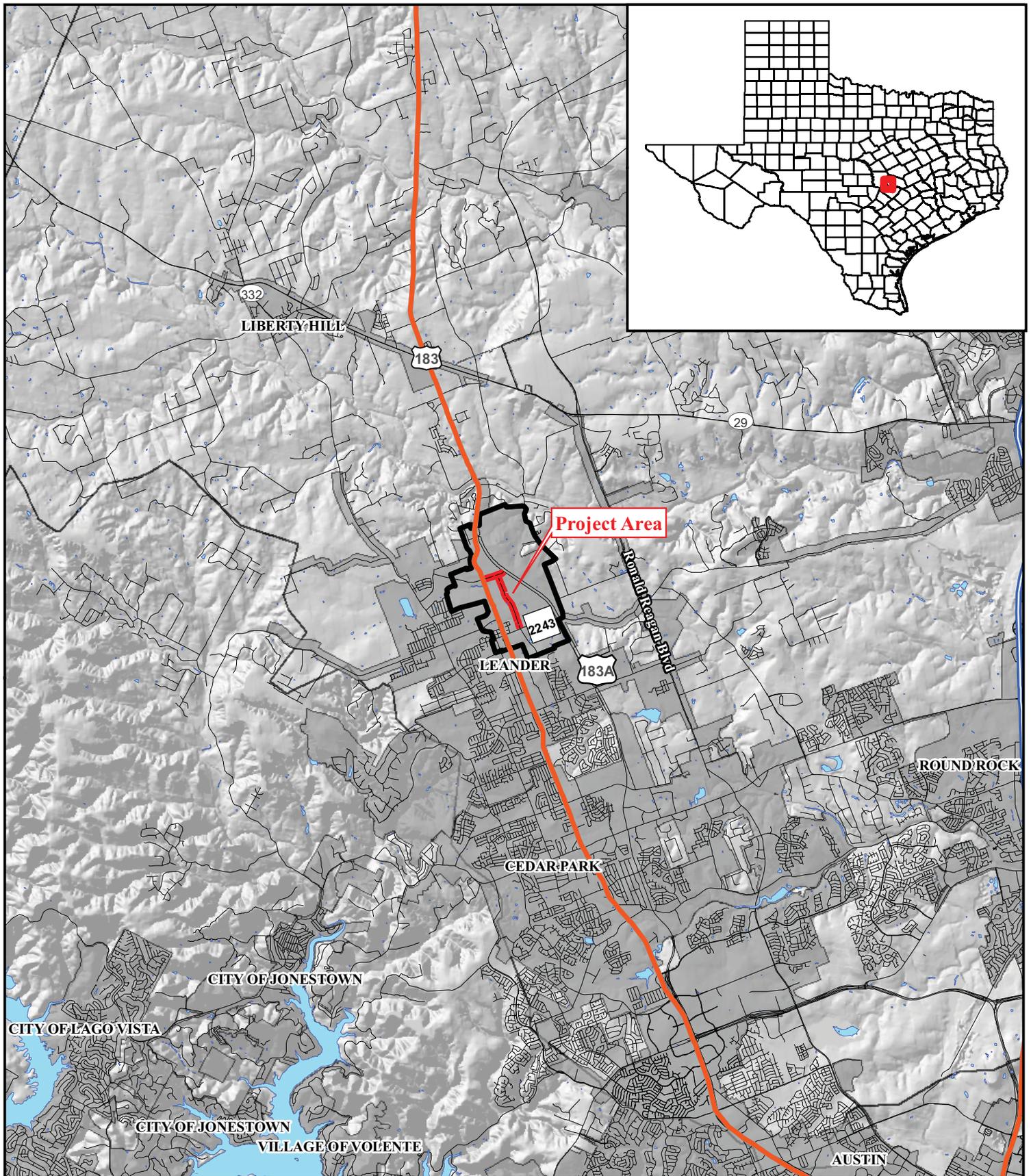
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LIST OF ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
AOI	Area of Influence
APE	Area of Potential Effects
ASFMRA	American Society of Farm Managers and Rural Appraisers
BG	Block Group
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practice
CAA	Clean Air Act
CAMPO	Capital Area Metropolitan Planning Organization
CEQ	Council on Environmental Quality
CT	Census Tract
CTA	Council of Texas Archeologists
CZP	Contributing Zone Plan
DE	Diesel Exhaust
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Farm-to-Market Road
FPPA	Farmland Protection Policy Act
HRSR	Historic Resources Survey Report
IRIS	Integrated Risk Information System
LEP	Limited English Proficiency
MAPO	Meetings with Affected Property Owners
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSA	Metropolitan Statistical Area
MSAT	Mobile Source Air Toxics
MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards
NATA	National Air Toxics Assessment
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NMHC	Non-methane Hydrocarbon
NOI	Notice of Intent
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OHWM	Ordinary High Water Mark
PA-TU	First Amended Programmatic Agreement for Transportation Undertakings
PM	Particulate Matter
RHCP	Regional Habitat Conservation Plan
RSA	Resource Study Area
RTP	Regional Transportation Plan
SAL	State Archeological Landmark

SHPO	State Historic Preservation Officer
SW3P	Stormwater Pollution Prevention Plan
TAC	Texas Antiquities Code
TAQA	Traffic Air Quality Analysis
TARL	Texas Archeological Research Laboratory
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
TIP	Transportation Improvement Plan
TOD	Transit-Oriented Development
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TSS	Total Suspended Solids
TXAST	Texas Above Ground Storage Tanks
TxDOT	Texas Department of Transportation
TXLF	TCEQ Solid Waste Facilities
TXLUST	Leaking Underground Storage Tanks
TXNDD	Texas Natural Diversity Database
TXUST	Texas Underground Storage Tanks
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
VMT	Vehicle Miles Traveled
vpd	Vehicles Per Day

APPENDIX A – EXHIBITS



 Proposed CR 273/274

 City Limits

 TOD

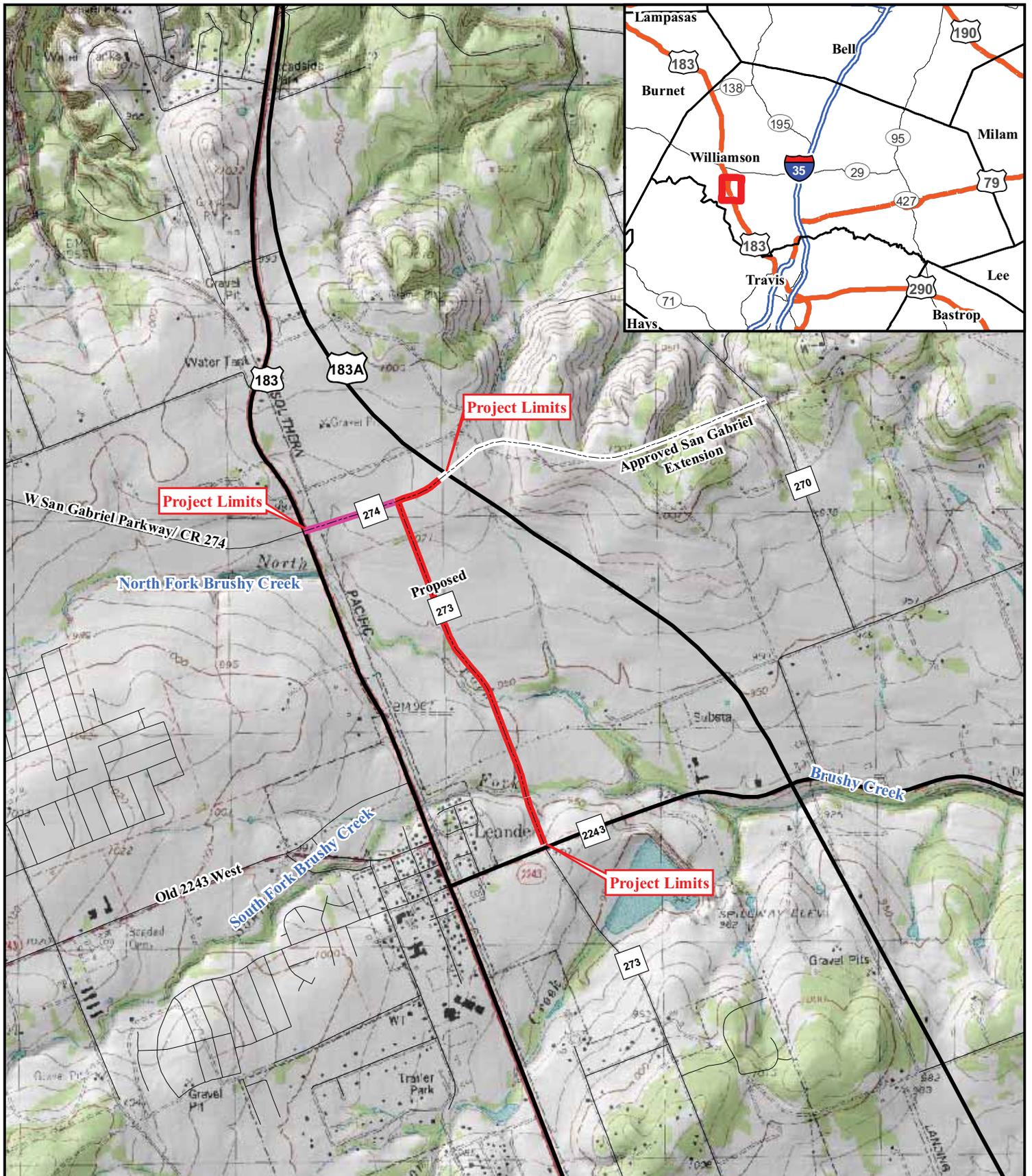


Source: CAPCOG 2009

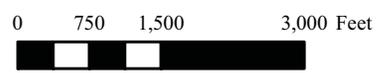
**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 1a Project Location (Road Base)



- Preferred Alternative
- Existing CR 274 to be widened



Source: TNRIS DRG Mosaic
Leander 1987 (3097-321)

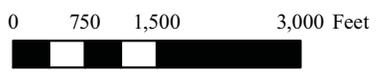
**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 1b Project Location (Topo Base)



- Preferred Alternative
- Existing CR 274 to be widened
- NRHP Listed Eligible District
- Transit Oriented Development Zoning Boundary

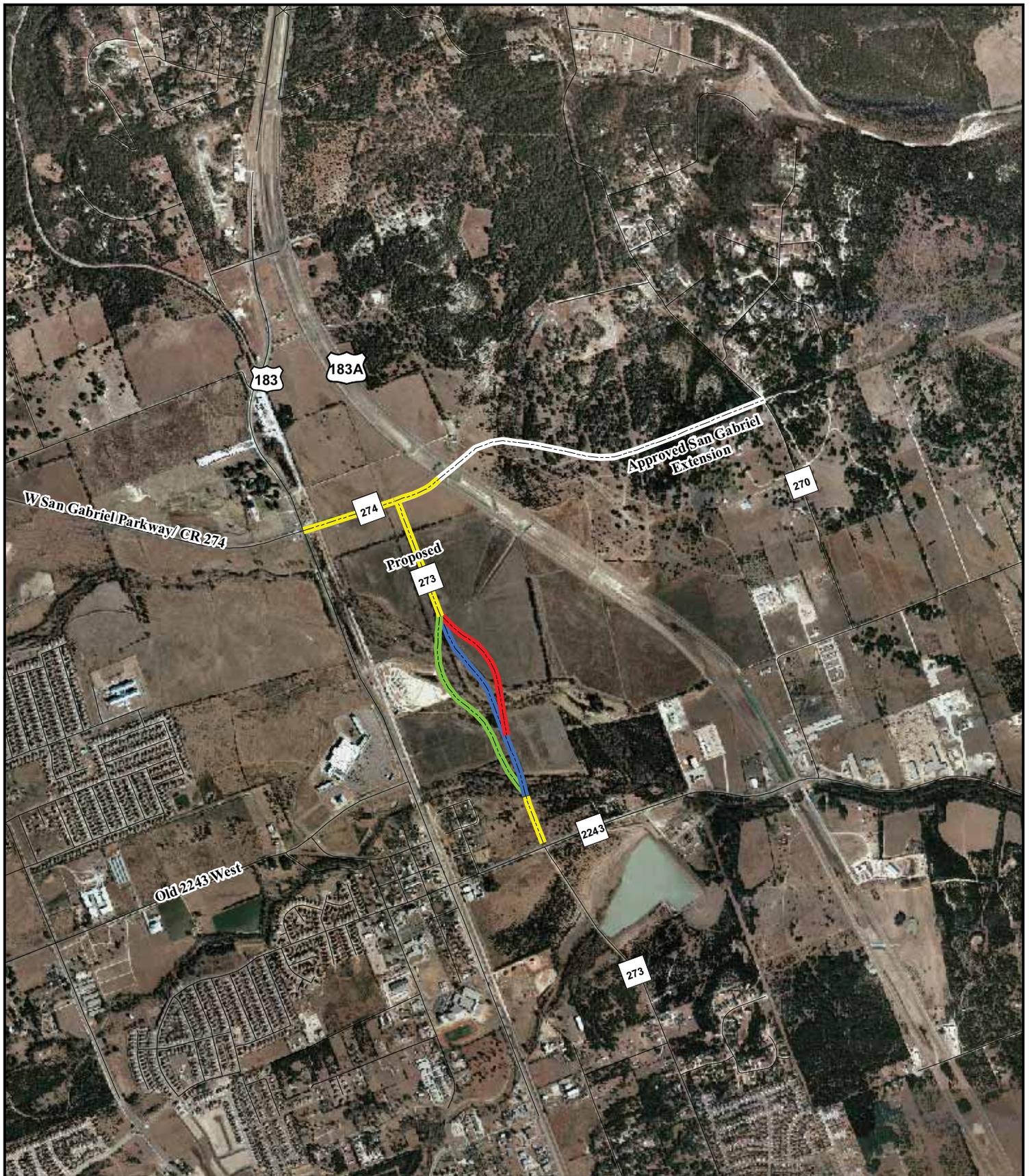


Source: CAPCOG 18" 2008

CR 273/274 from US 183 and 183A to FM 2243 in Williamson County

CSJ:0914-05-149

Figure 1c Project Location (Aerial Base)



- Alternative 1
- Alternative 2
- Alternative 3
- Proposed ROW



0 750 1,500 3,000 Feet

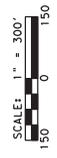


Source: CAPCOG 18" 2008

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 2 Alignment Alternatives



LEGEND

- EXIST. R.O.W.
- PROP. R.O.W.
- PROPERTY LINE
- DRAINAGE EASEMENT
- PROPOSED PAVEMENT
- EXISTING PAVEMENT
- PROPOSED SIDEWALK

CR 273/ CR 274
 FIGURE 3A
 PROJECT SCHEMATIC
 PAGE 1 OF 2

SCALE: 1" = 300'
 DATE: JANUARY 2010





SCALE: 1" = 300'
150 0 150

LEGEND

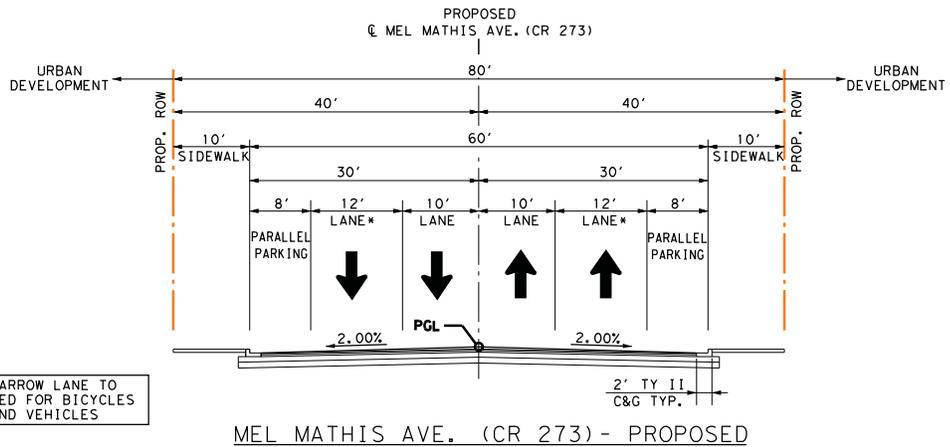
- EXIST. R.O.W.
- PROP. R.O.W.
- PROPERTY LINE
- DRAINAGE EASEMENT
- PROPOSED PAVEMENT
- EXISTING PAVEMENT
- PROPOSED SIDEWALK

CR 273/ CR 274
FIGURE 3B
PROJECT SCHEMATIC
PAGE 2 OF 2

SCALE: 1" = 300'
DATE: JANUARY 2010



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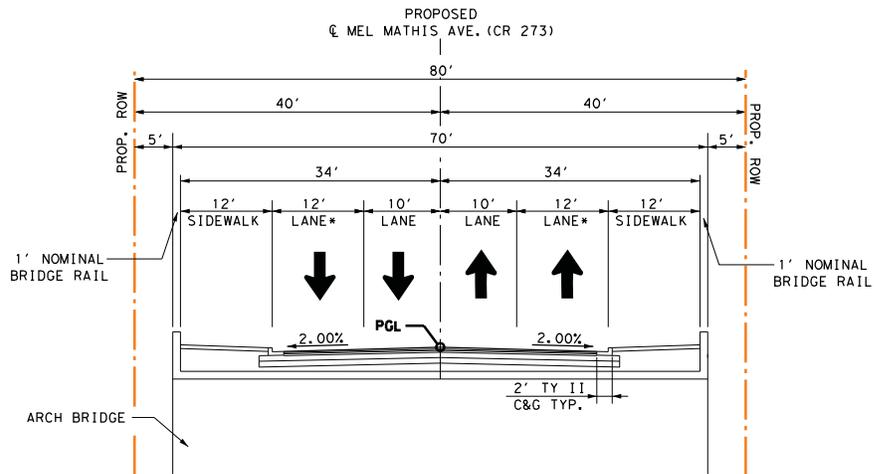


*SHARROW LANE TO BE USED FOR BICYCLES AND VEHICLES

CR 273
 TYPICAL SECTIONS
 FIGURE 4A

KLOTZ PROJ. No: 0950.001.000		EXHIBIT
SCALE:	N. T. S.	
DATE:	JANUARY 2010	

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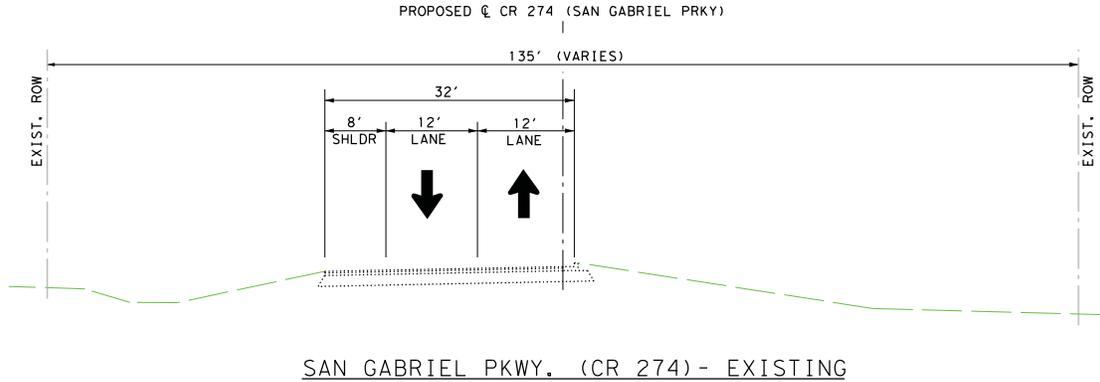


MEL MATHIS AVE. (CR 273)-
PROPOSED BRIDGE

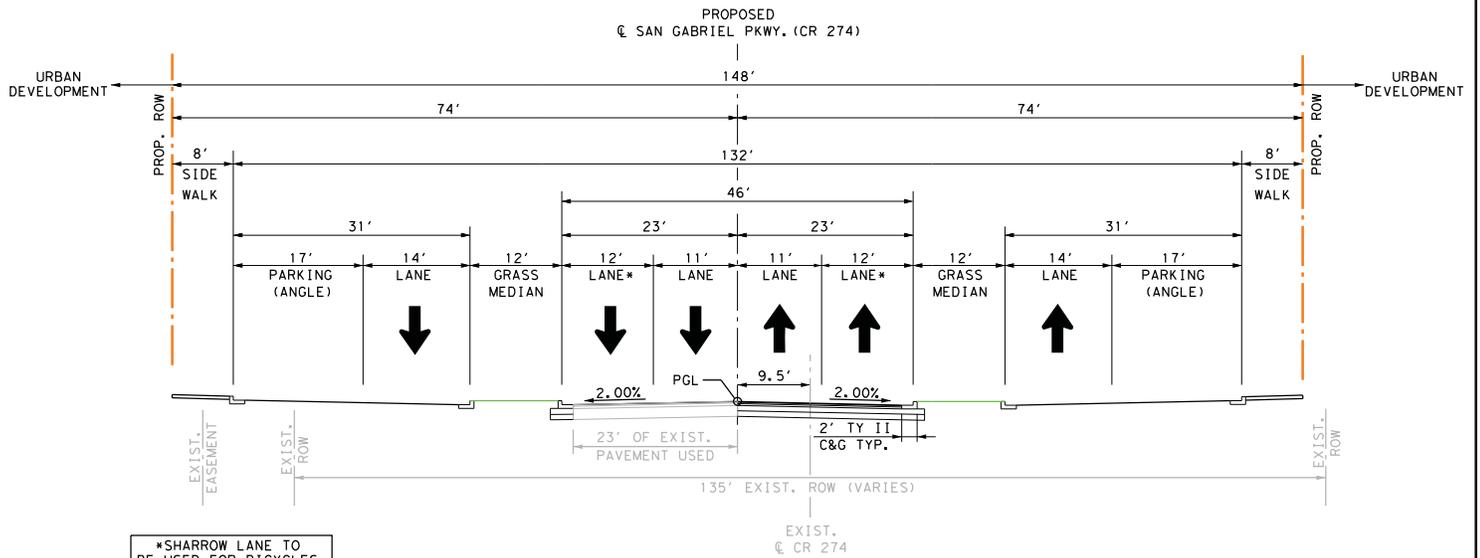
*SHARROW LANE TO BE USED FOR BICYCLES AND VEHICLES

CR 273 - BRIDGE TYPICAL SECTIONS FIGURE 4B		EXHIBIT
KLOTZ PROJ. No:	0950.001.000	
SCALE:	N. T. S.	
DATE:	JANUARY 2010	

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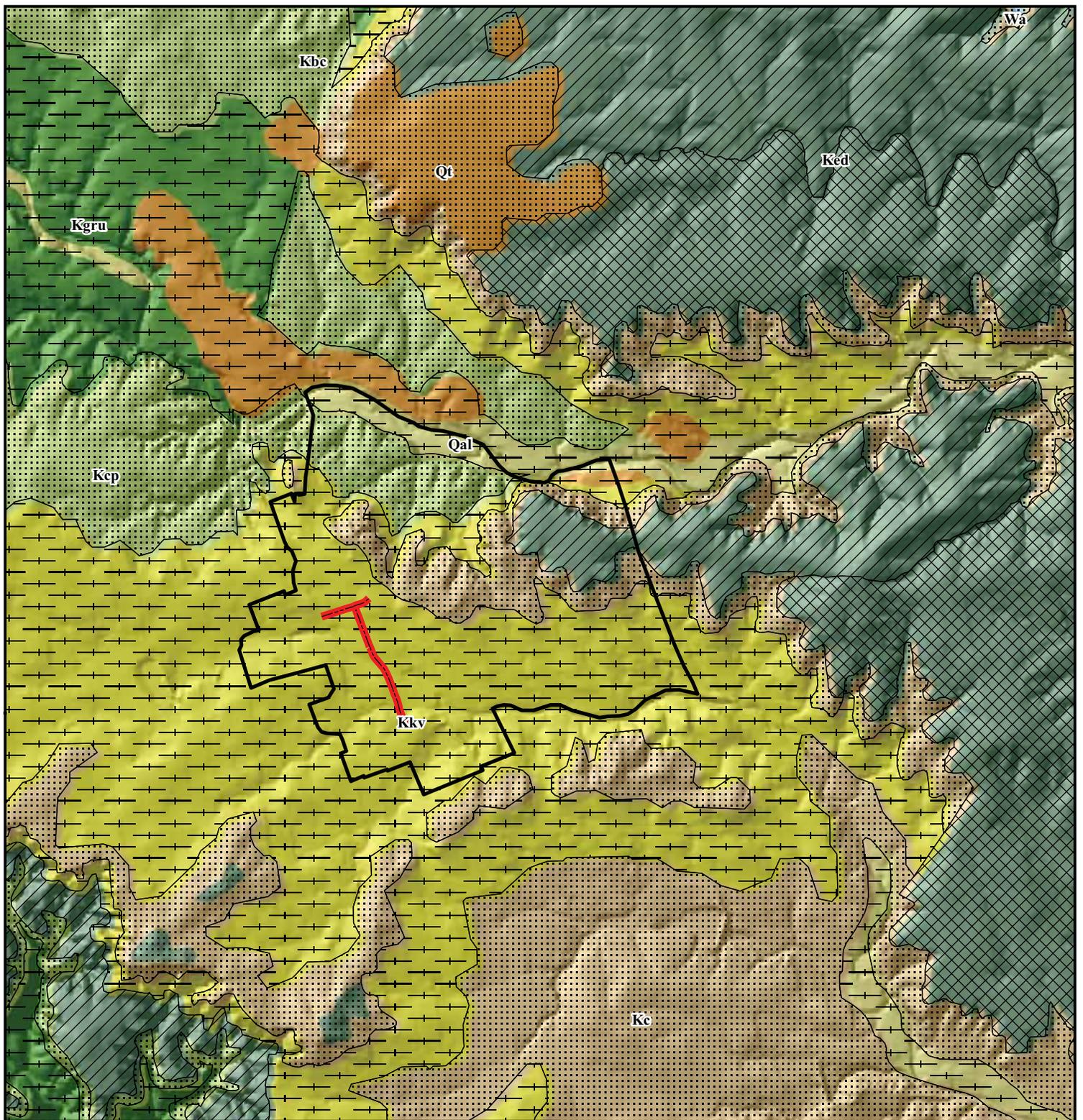
SAN GABRIEL PKWY. (CR 274) - EXISTING



*SHARROW LANE TO BE USED FOR BICYCLES AND VEHICLES

SAN GABRIEL PKWY. (CR 274) - PROPOSED

<p>CR 274 TYPICAL SECTIONS FIGURE 5</p>		<p>EXHIBIT</p>
<p>KLOTZ PROJ. No: 0950.001.000</p>		
<p>SCALE: N. T. S.</p>		
<p>DATE: JANUARY 2010</p>		



Preferred Alternative (Red line)

AOI (Black outline)

BEG Geologic Units

- Kbc: Bee Cave Marl
- Kc: Comanche Peak Limestone
- Kcp: Cedar Park Limestone
- Ked: Edwards Limestone
- Kgru: Upper Glen Rose Limestone
- Kkv: Keys Valley Marl
- Qal: Alluvium
- Qt: Terrace

Karst Zone

- High Probability E.C.S. (Diagonal lines)
- Known E.C.S. (Cross-hatch pattern)
- Low Probability E.C.S. (Dotted pattern)
- No E.C.S. (White with black border)

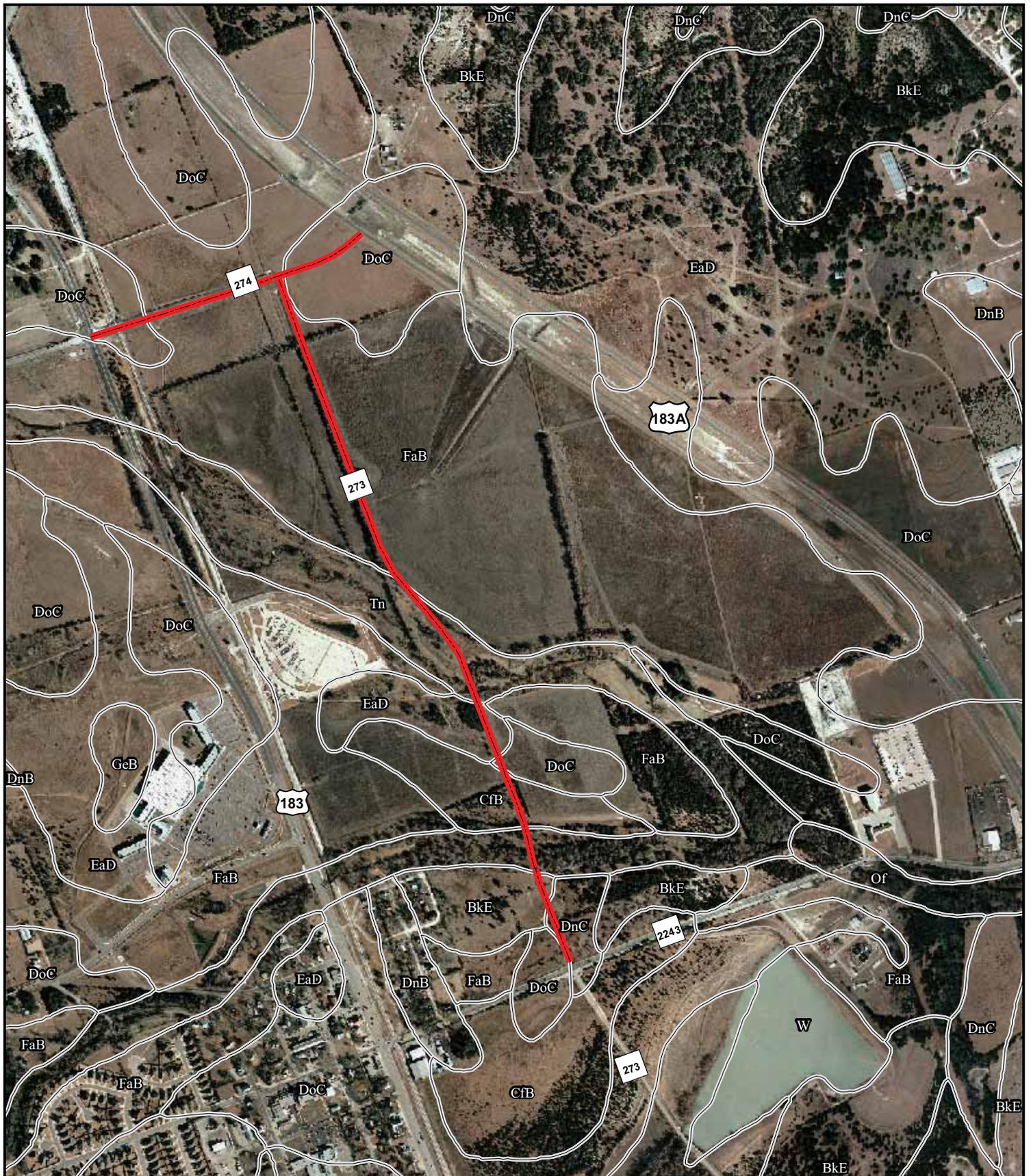
0 2,450 4,900 9,800 Feet

Source: USGS (2007); US Fish and Wildlife Service (2007)

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 6 Geology and Karst Zones



 Preferred Alternative

 Soil Series



0 375 750 1,500 Feet

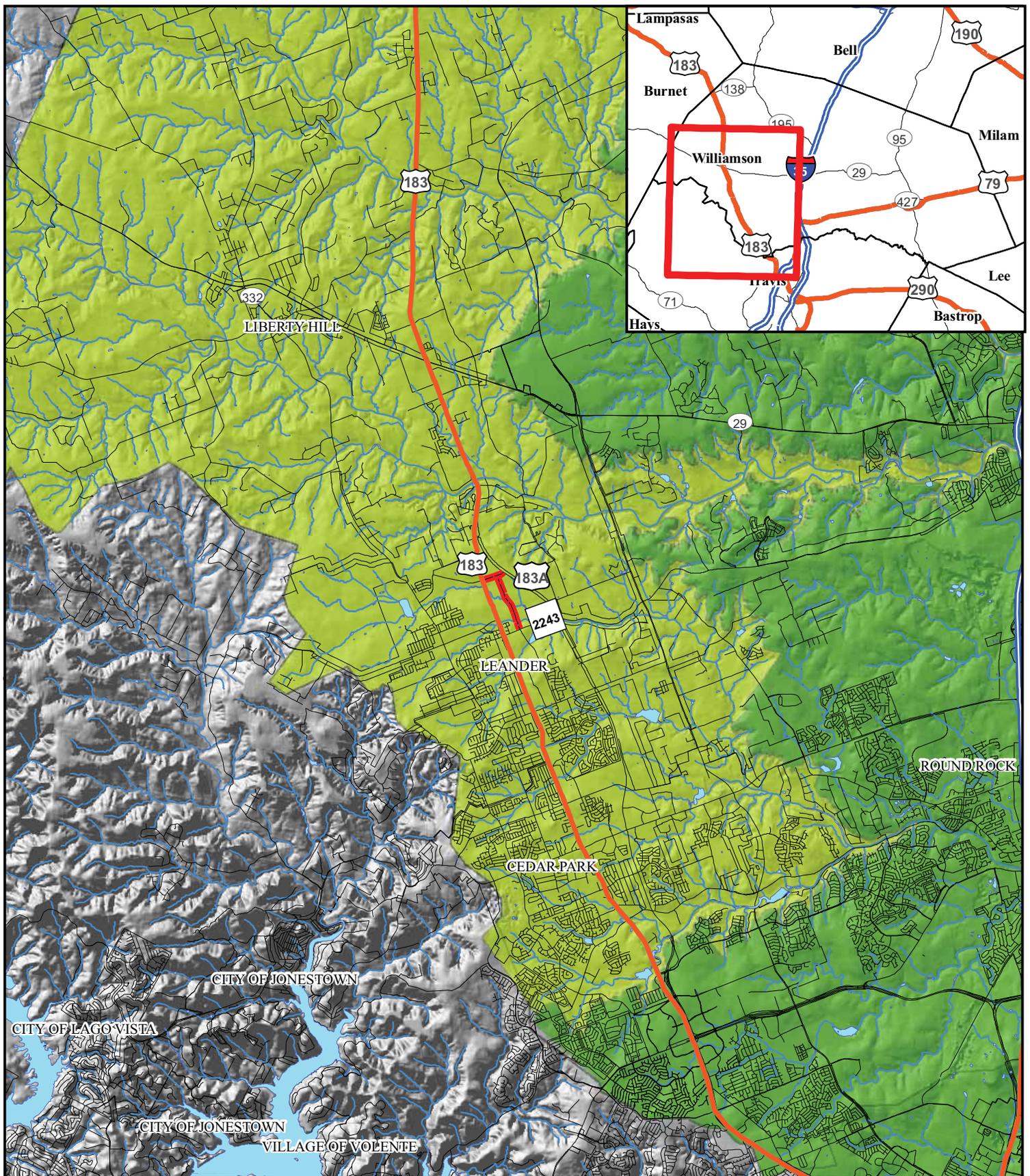


Source: NRCS Soil Data Mart 2007

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 7 Soils



- Preferred Alternative
- Edwards Aquifer Contributing Zone
- Edwards Aquifer Recharge Zone



0 1.25 2.5 5 Miles

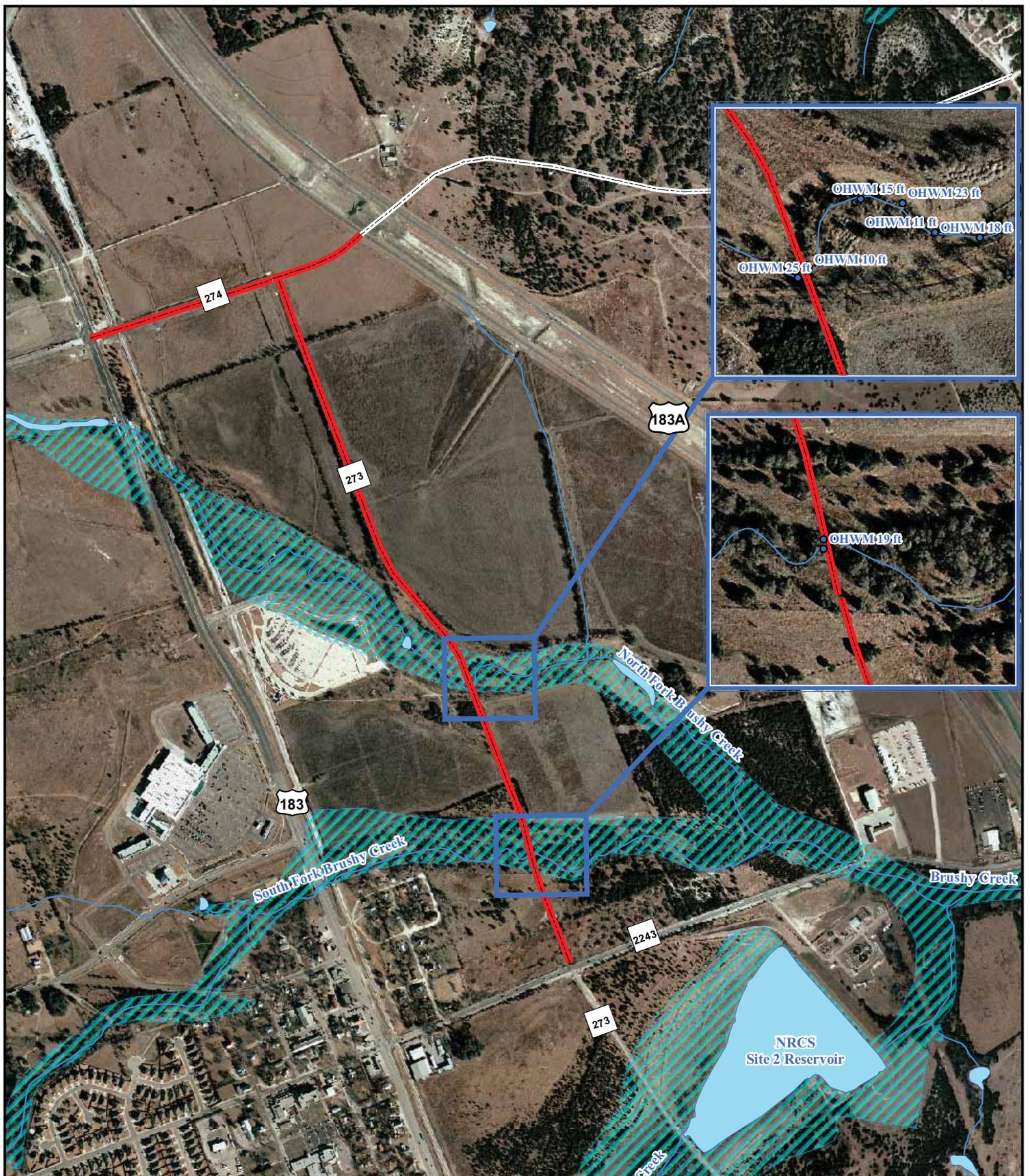


Source: TCEQ 2009

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 8 Edwards Aquifer Zones



- Ordinary High Water Mark (See Insets)
- Preferred Alternative
- - - Approved San Gabriel Extension
- Water Body
- 100-Year Floodplain



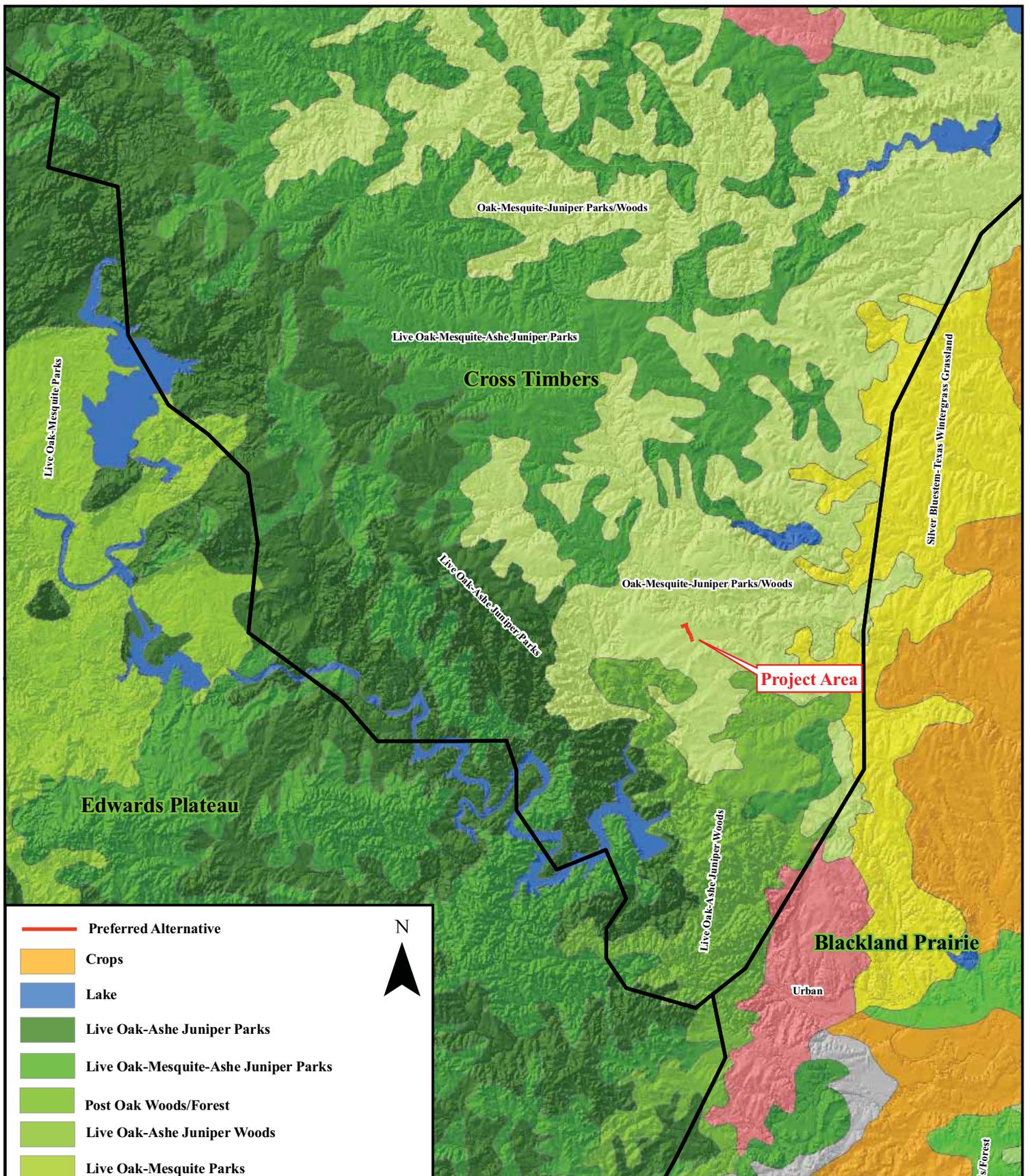
0 375 750 1,500 Feet

Source: CAPCOG 2009, TNRIS 2009

CR 273/274 from US 183 and 183A to FM 2243 in Williamson County

CSJ:0914-05-149

Figure 9 Water Resources



Legend

- Preferred Alternative
- Crops
- Lake
- Live Oak-Ashe Juniper Parks
- Live Oak-Mesquite-Ashe Juniper Parks
- Post Oak Woods/Forest
- Live Oak-Ashe Juniper Woods
- Live Oak-Mesquite Parks
- Post Oak Woods, Forest and Grassland Mosaic
- Oak-Mesquite-Juniper Parks/Woods
- Silver Bluestem-Texas Wintergrass Grassland
- Urban
- Other

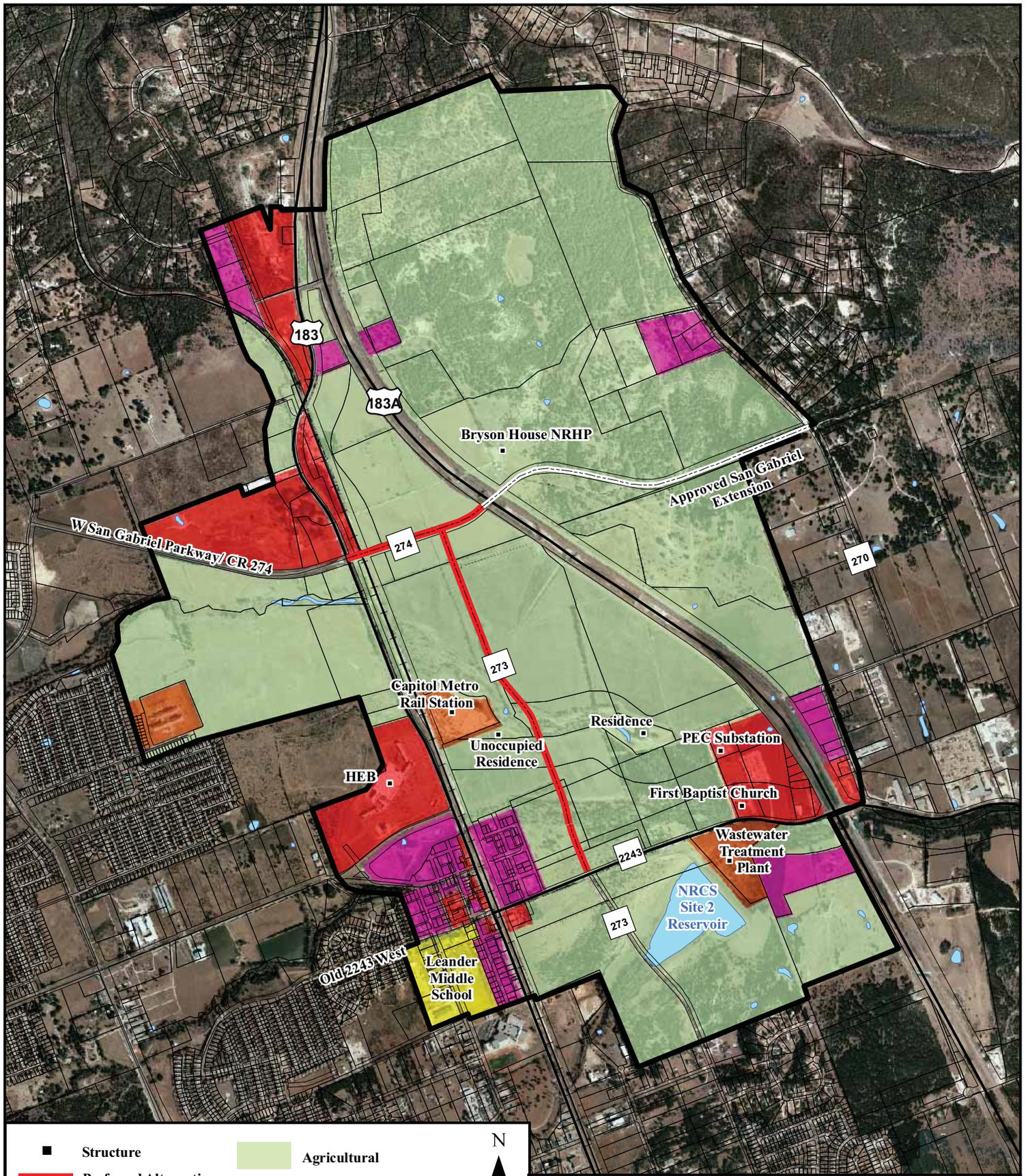
0 2.5 5 10 Miles

Source: Texas Parks and Wildlife 2003

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 10 Ecoregions and Vegetation Type



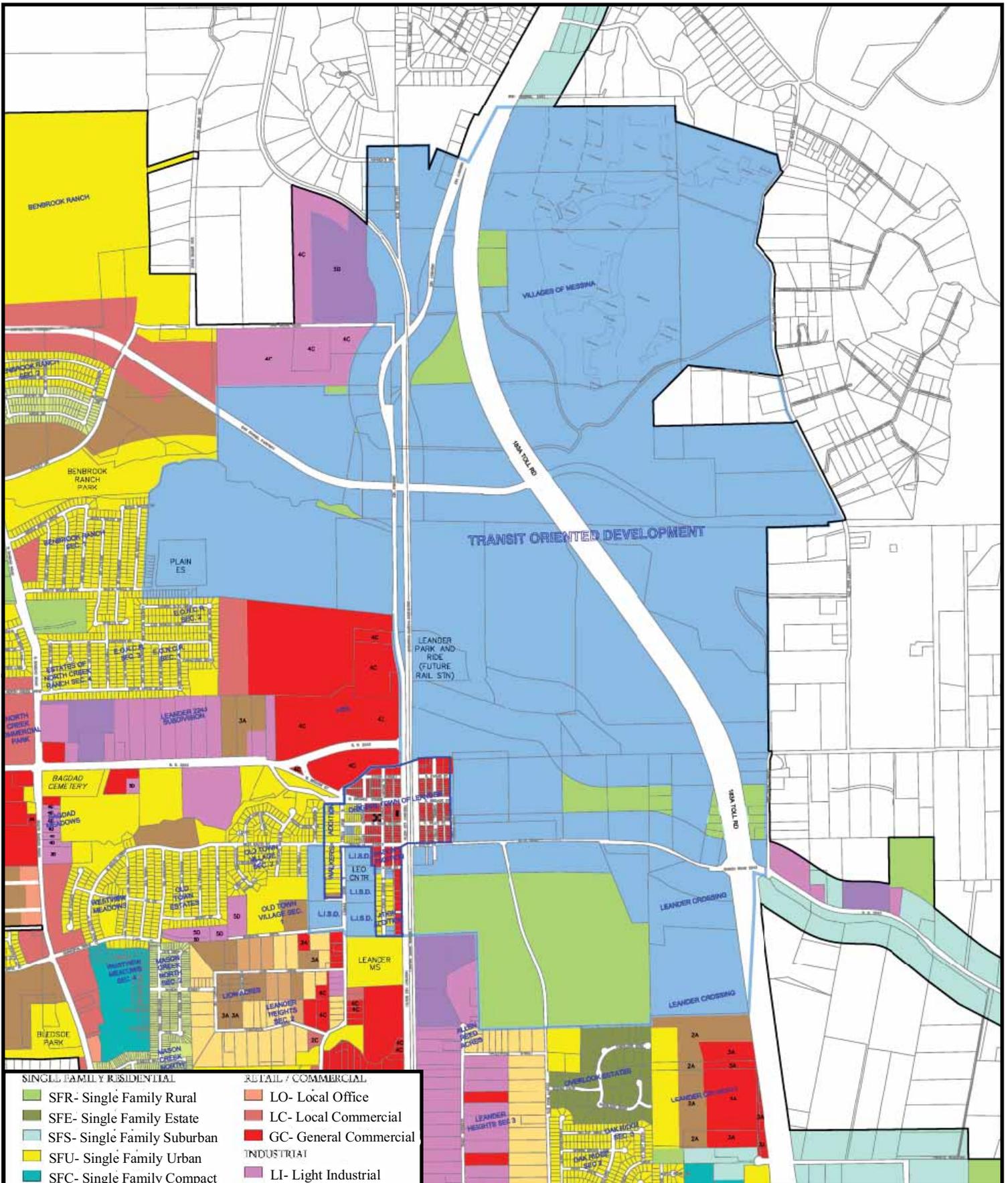
■ Structure	■ Agricultural	N ▲
— Preferred Alternative	■ Commercial	
□ Parcel	■ Government	0 750 1,500 3,000 Feet
■ School	■ Residential	
□ TOD		

CR 273/274 from US 183 and 183A to FM 2243 in Williamson County

CSJ:0914-05-149

Figure 11 Existing Land Use

Source: CAPCOG 18" 2008

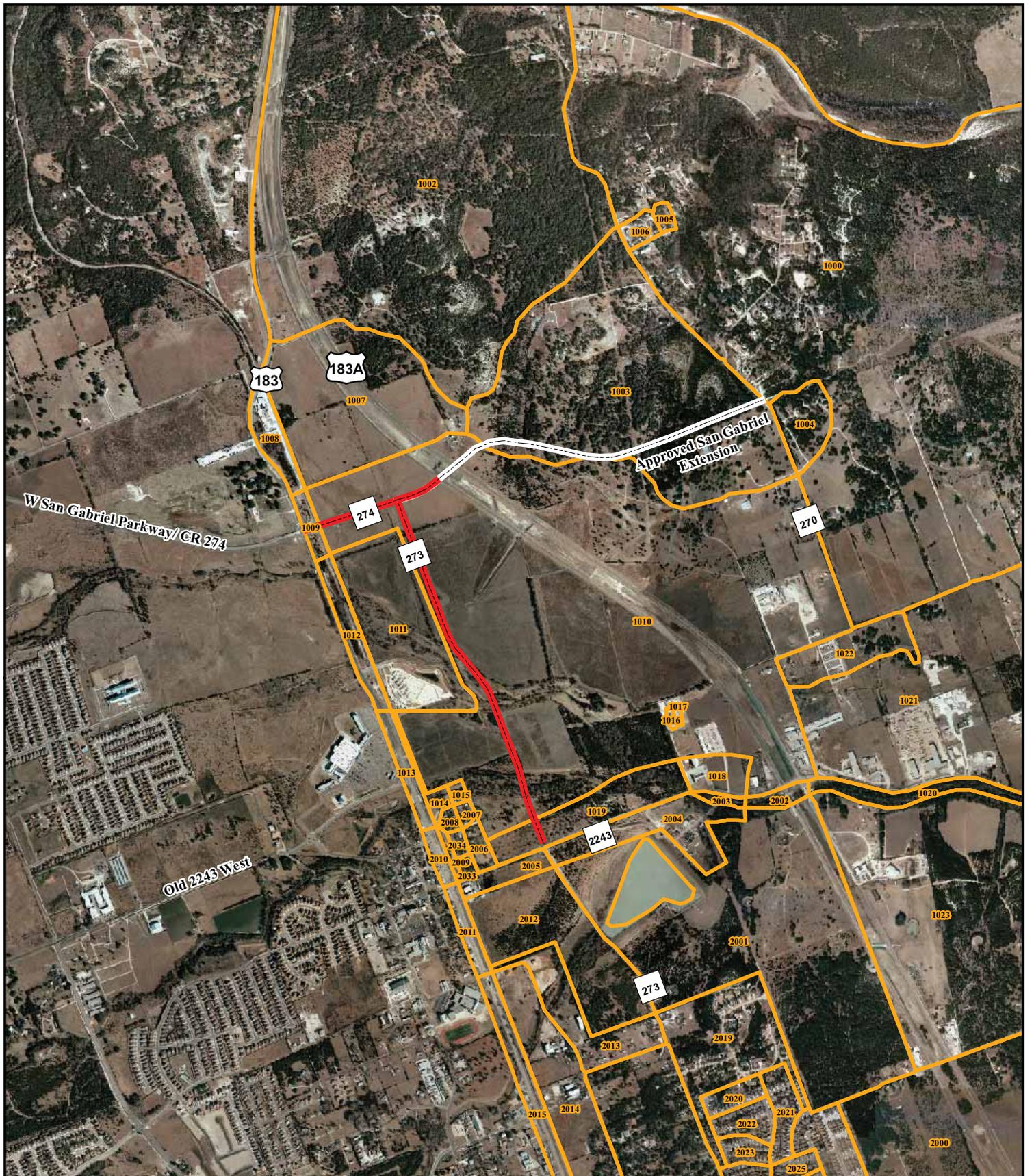


SFR- Single Family Rural	LO- Local Office
SFE- Single Family Estate	LC- Local Commercial
SFS- Single Family Suburban	GC- General Commercial
SFU- Single Family Urban	LI- Light Industrial
SFC- Single Family Compact	HI- Heavy Industrial
SFL- Single Family Limited	Unit-Development
SFT- Single Family Townhouse	ANNEXATION AREA
SFU/MH- Single Family Urban /Manufactured Home	
TF- Two Family	
MF- Multi-Family	

CR 273/274 from US 183 and 183A to FM 2243 in Williamson County

CSJ:0914-05-149

Figure 12 City of Leander Zoning Map



 Preferred Alternative

 Census Block (2000)



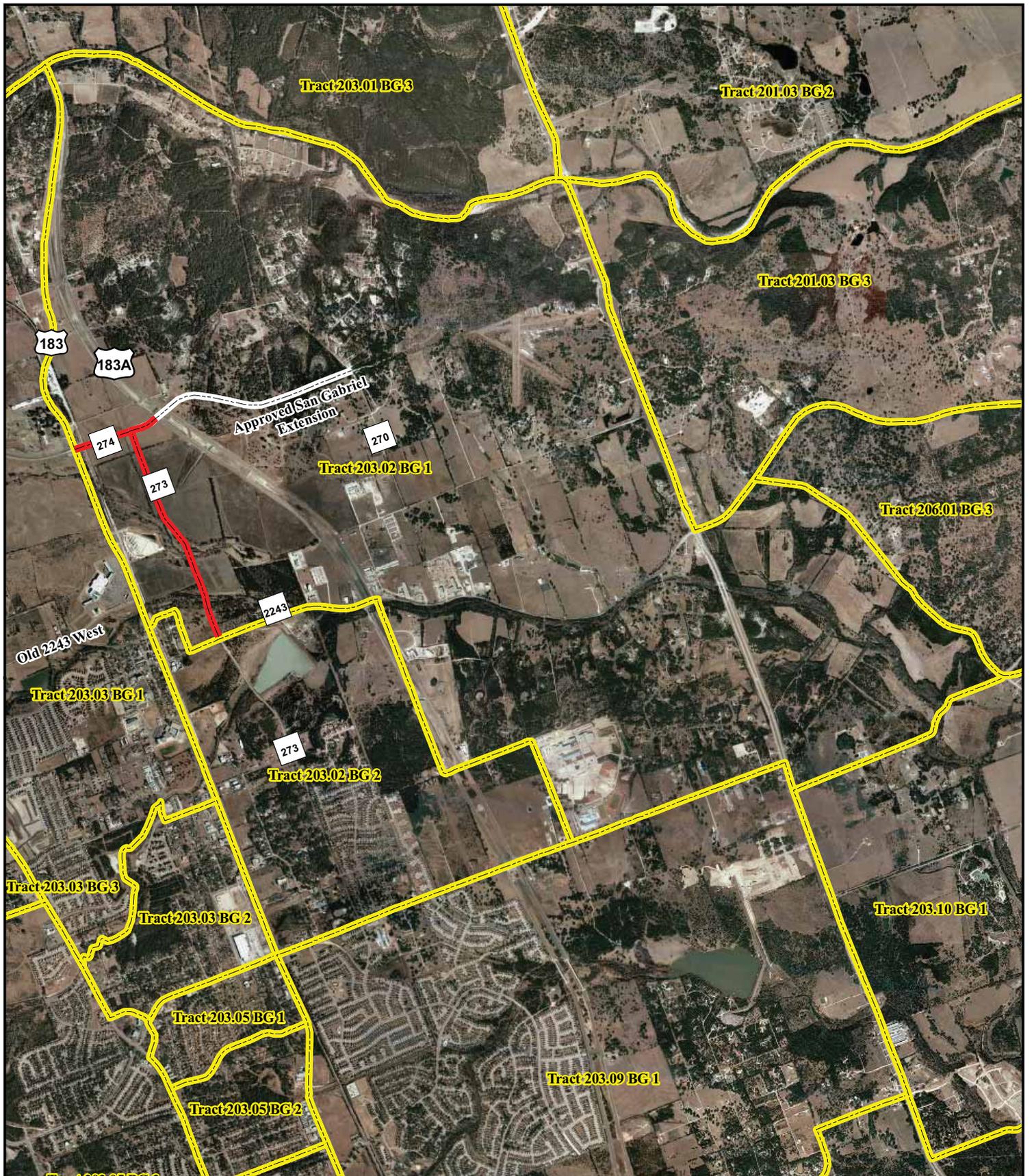
Source: US Census Bureau 2000;
ESRI 2009



**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 13a Census Blocks



- Preferred Alternative
- Census Block Group (2000)



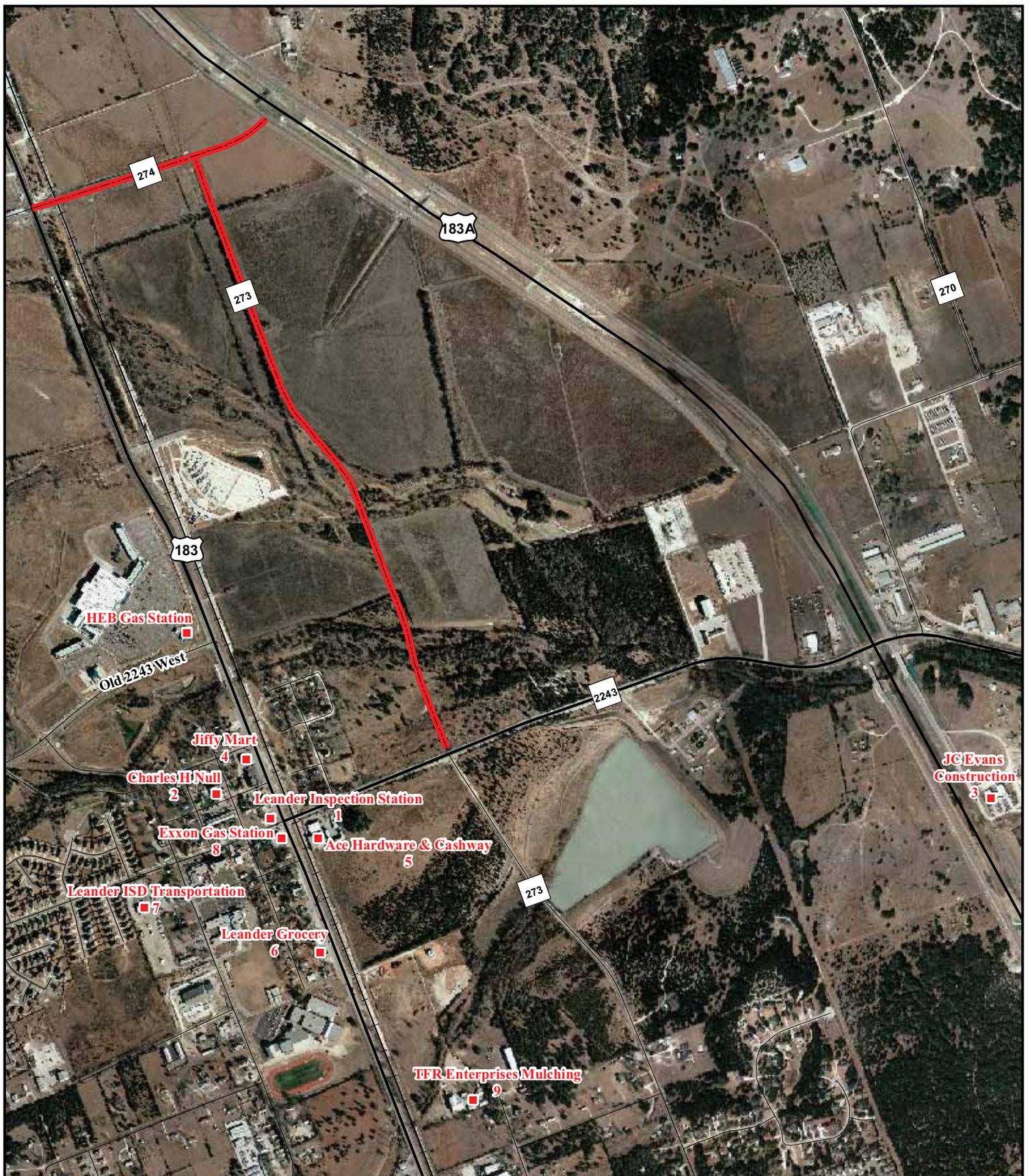
Source: US Census Bureau 2000;
ESRI 2009



**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

Figure 13b Census Block Groups



- Potential Hazardous Materials Site
- - - - - Preferred Alternative

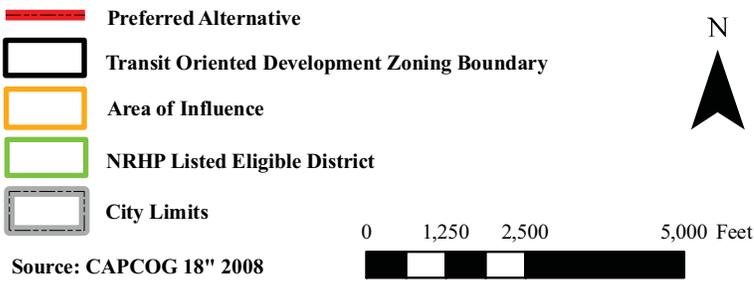
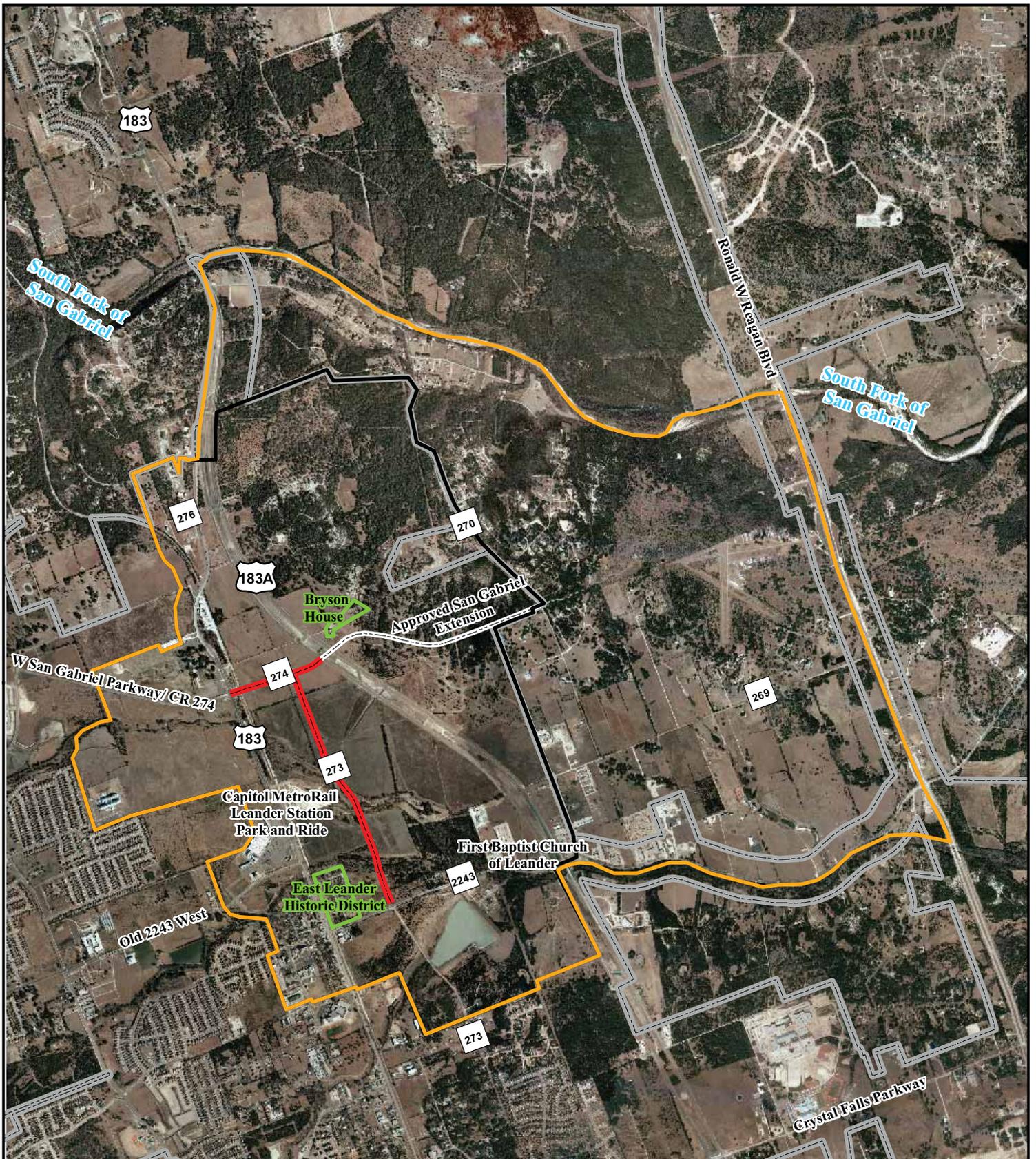


0 375 750 1,500 Feet

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

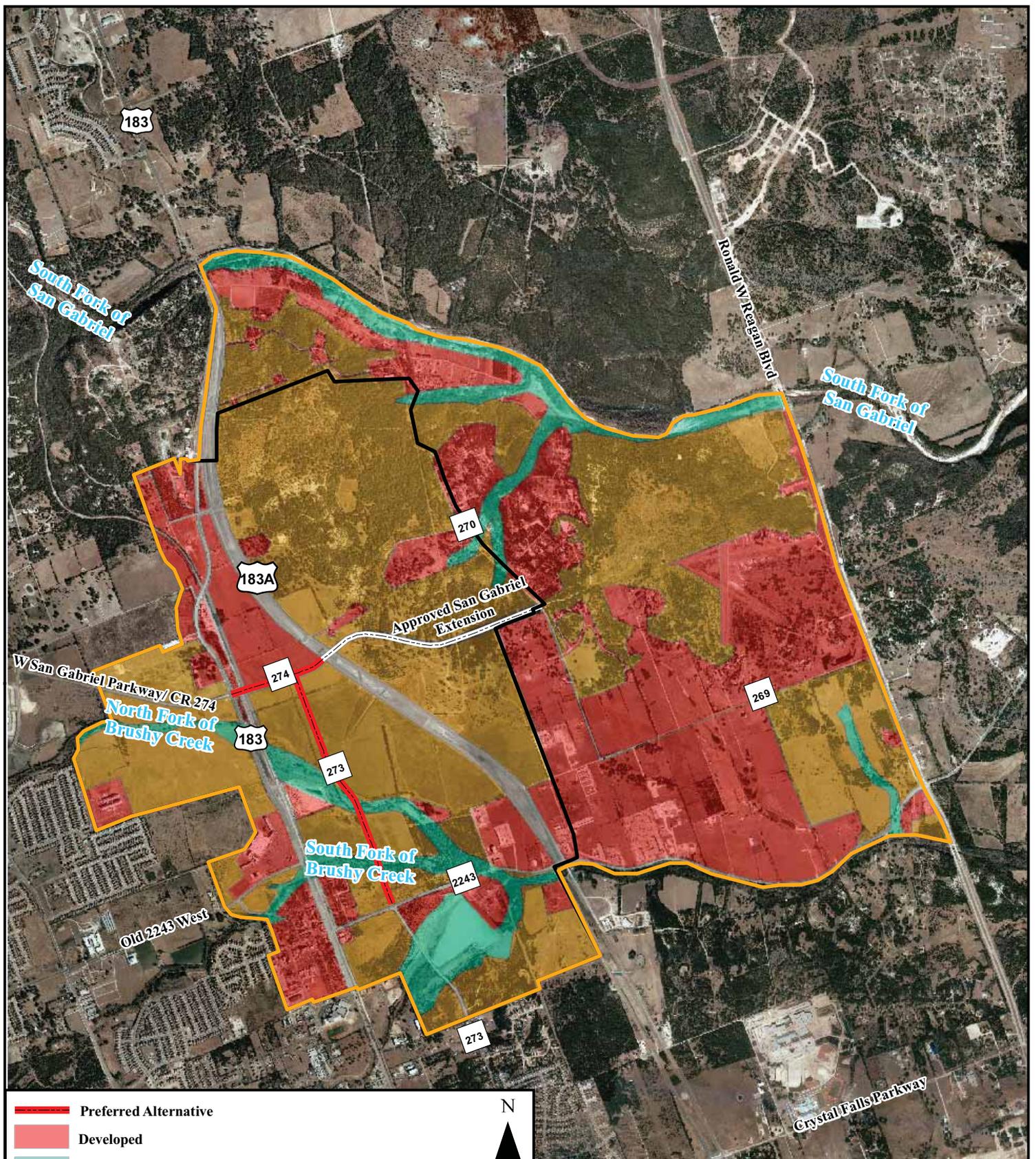
Figure 14 Potential Hazardous Materials Sites



CR 273/274 from US 183 and 183A to FM 2243 in Williamson County

CSJ:0914-05-149

Figure 16 Area of Influence for Indirect Effects



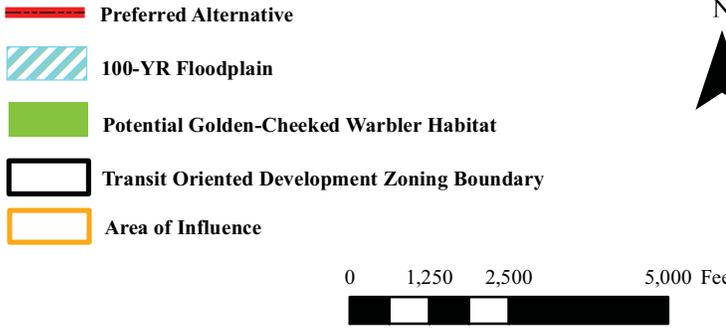
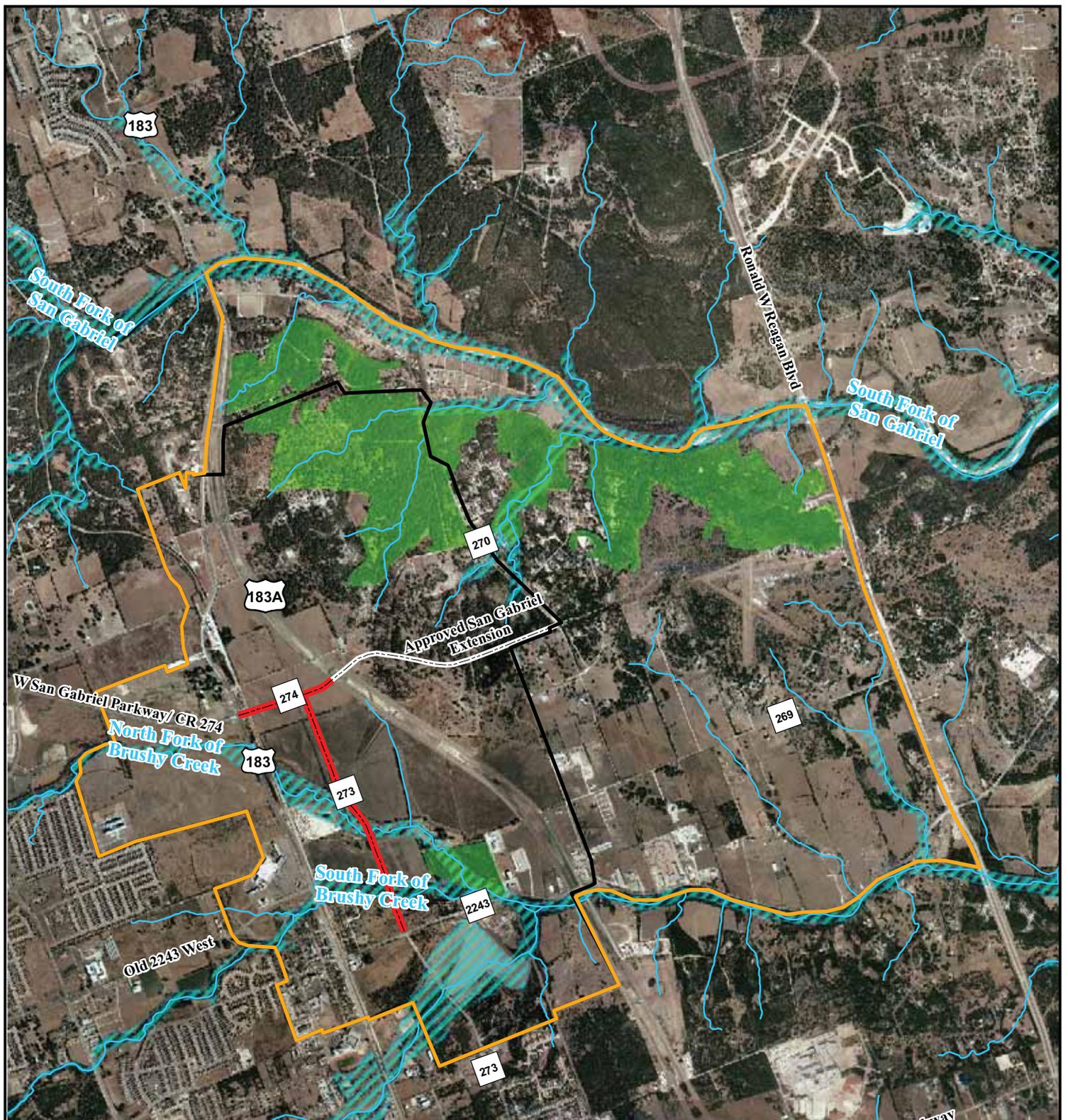
- Preferred Alternative
- Developed
- Floodplain
- Available For Development
- Transportation
- Transit Oriented Development Zoning Boundary
- Area of Influence



**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County**

CSJ:0914-05-149

**Figure 17 Land Available for
Project-Influenced Development**



Source: CAPCOG 18" Aerial 2008; Williamson County RHCP 2008

CR 273/274 from US 183 and 183A to FM 2243 in Williamson County

CSJ:0914-05-149

Figure 18 Potential Habitat for the Golden-Cheeked Warbler within the AOI



LEGEND

- PROP. R.O.W.
- 66 dBA RESIDENTIAL NOISE CONTOUR
- CREEK CENTERLINE
- CR 274 R.O.W. WIDTH 148'
- CR 273 R.O.W. WIDTH 80'



**FIGURE 19:
PREDICTED NOISE
IMPACT CONTOURS**

Scale	Sheet No.
None	1 of 1



APPENDIX B – PROJECT AREA PHOTOGRAPHS



PHOTO 1 EXISTING CR 274, VIEWING WEST



PHOTO 2 VIEWING EAST AT SITE OF PROPOSED CR 274 EXTENSION, FROM EXISTING CR 274 TERMINUS



PHOTO 3 VIEWING SOUTH AT SITE OF PROPOSED CR 273, FROM EXISTING CR 274



PHOTO 4 NORTH FORK OF BRUSHY CREEK



PHOTO 5 SOUTH FORK OF BRUSHY CREEK



PHOTO 6 CENTERLINE OF PREFERRED ALTERNATIVE, VIEWING NORTH FROM THE NORTH FORK OF BRUSHY CREEK



PHOTO 7 GRASSLAND VEGETATION, WITH UPLAND WOODLAND IN THE BACKGROUND



PHOTO 8 RIPARIAN WOODLAND VEGETATION ALONG THE NORTH FORK OF BRUSHY CREEK

APPENDIX C – AGENCY COORDINATION



*Shelley
file*

Texas Department of Transportation

DEWITT C. GREER STATE HIGHWAY BLDG. • 125 E. 11TH STREET • AUSTIN, TEXAS 78701-2483 • (512) 463-8585

September 2, 2009

T.X.D.O.T.
RECEIVED

STP 2007 (721) MM

SEP 08 2009

Request for Environmental Classification
CSJ: 0914-05-149
Williamson County

DISTRICT 14 - MAIL ROOM
AUSTIN, TX

CR 273/274: from US 183 and 183A to FM 2243

Ms. Janice W. Brown
Division Administrator
Federal Highway Administration, Texas Division
300 East 8th Street, Suite 826
Austin, Texas 78701

Dear Ms. Brown:

The City of Leander, with funding assistance from Texas Department of Transportation (TxDOT), is proposing to develop new location roadways in the City of Leander, Texas in Williamson County. The proposed project includes the extension of CR 273 and CR 274. A project location map is attached.

CR 273 (Mel Mathis Avenue) would be a four-lane undivided roadway from FM 2243 to the existing terminus of CR 274 located approximately 700 feet east of US 183. The project length for CR 273 is 6,000 feet. CR 274 (San Gabriel Parkway) would be a four-lane divided roadway from its existing terminus to 183A. The project length for CR 274 is 2,980 feet. Additionally, the existing CR 274 that extends from US 183 to approximately 700 feet east of US 183 would be improved from a two-lane to an undivided four-lane facility. The proposed work, referred to locally as "Leander T", would not only complete the connection between US 183 and US 183A but would also join an existing section of CR 274 (West San Gabriel Parkway) located west of US 183 with a planned section of CR 274 east of 183A thereby improving east/west connectivity in northern Leander.

Under 23 CFR 771.115(a)(2) Class I [Environmental Impact Statement (EIS)], a highway project of four or more lanes on new location is a part of a class of actions that normally require an EIS. However, the proposed extension of CR 273/274 would occur where no known significant impacts are expected to result from the proposed project.

For classes of actions where the significance of impacts is not clearly established, 23 CFR 771.119 indicates an environmental assessment (EA) could be prepared "...for each action that is not a categorical exclusion (CE) and does not clearly require the preparation of an

environmental impact statement (EIS) or where the Administration believes an EA would assist in determining the need for an EIS". Because the preliminary review of environmental impacts that may result from the extension of CR 273/274 indicates that there are no known significant impacts, and the significance of impacts is therefore not clearly established, TxDOT requests Federal Highway Administration (FHWA) determination that the preparation of an EA is warranted to assist in determining the need for an EIS.

The following preliminary review of environmental impacts has been provided by the City of Leander's consultants and the TxDOT Austin District.

Project Planning: The proposed project is included in the Capital Area Metropolitan Planning Organization's (CAMPO's) 2008-2011 Transportation Improvement Plan (TIP). The TIP, adopted February 12, 2007, includes the extension of CR 273/274 with accommodation for pedestrians and cyclists.

The purpose for the proposed project is to support development anticipated by the City of Leander's Transit Oriented Development District (TOD), approved and adopted by the citizens of Leander. There is a need to provide additional access and travel capacity from areas where development is planned within in the TOD to existing developed areas.

Although the project area remains largely undeveloped, residential and commercial development is occurring at a rapid rate in the City of Leander. In 2004, the property within the triangle of undeveloped land bounded by US 183, 183A and FM 2243 was identified as a potential site for a TOD. Since that time, the City of Leander has approved zoning ordinances and code for the proposed 2,300-acre TOD and has annexed this currently undeveloped land for the project. The proposed Leander T roadway is an integral part of the TOD plan, as it would create access from the currently undeveloped land within the TOD to US 183, 183A and FM 2243. In addition to the undeveloped land, the TOD includes the Old Town Center of Leander (southwest of the project), a commercial strip of development along US 183, and scattered industrial development along FM 2243. The Capital Metro Leander Rail Station is also included in the TOD. In 2005, the City of Leander adopted the Leander Smartcode, which provides standards for zoning and subdivisions within the boundaries of the TOD. This code is in accordance with the City of Leander's Comprehensive Plan and city ordinances and sets forth a series of goals for the TOD, which emphasizes the creation of a cohesive community through design and accessibility. The primary goal of the TOD is to cluster development such that neighborhoods and regional centers are compact, pedestrian-oriented, and mixed-use. The proposed roadways would provide capacity to meet anticipated traffic demand, in accordance with current design standards and criteria for providing safe roadway facilities for the traveling public within the planned TOD.

For CR 273, the proposed project includes one ten-foot and one 12-foot travel lane in each direction with no median, with 8-foot shoulders that could serve as parallel parking in the future. The typical right-of-way width would be approximately 80 feet. The right-of-way accommodates 22-foot sidewalks along the length of CR 273 and riding bicycles on the sidewalk is not prohibited in the TOD. The roadway would be bicycle-friendly due to low posted speed limits.

The existing CR 274 is a two-lane roadway with one 12-foot lane in each direction and a 10-foot shoulder within approximately 135 feet of right-of-way width. The proposed CR 274 would

utilize the existing pavement with slight realignments to include one 11-foot and one 12-foot travel lane in each direction. The right-of-way accommodates an additional 14-foot travel lane in each direction, a 12-foot median and 17-foot angled parking with 16-foot sidewalks (only 8-feet within the proposed right-of-way) on both sides, all within a typical 148-foot right-of-way.

In total, the existing Williamson County owned right-of-way is approximately 5.9 acres. The remaining right-of-way is expected to be donated. The proposed right-of-way is approximately 28 acres and includes 12 acres of temporary drainage easements. The temporary drainage easements are designed to capture runoff from the adjacent undeveloped properties to protect the roadway until TOD developments occur, at which time the developers will be responsible for their own drainage design.

Potential Environmental Issues:

Preliminary environmental investigations have been completed for the proposed project. Due diligence to complete these investigations was fulfilled by qualified biologists, geologists, archeologists, historians, and environmental specialists. Specifically, a review of the Texas Natural Diversity Database indicates that no threatened or endangered species are known to occur within the project area and a review of the National Register of Historic Places (NRHP), the list of State Archeological Landmarks (SAL), and the list of Recorded Texas Historic Landmarks (RTHL) indicates no historically significant resources have been previously documented within the area of potential effects.

In general, no significant impacts to the human environment that cannot be mitigated (i.e. avoided, minimized or compensated for) have been identified as a result of preliminary environmental investigations and constraints analysis. Specifically, no residential or commercial displacements would result from the proposed project; there are no archeological sites or historic properties eligible for the NRHP within the project area of potential effect. Furthermore, no significant adverse effects would occur to air quality, noise receivers, prime farmlands, parklands or other properties protected under Section 4(f) of the Department of Transportation Act as a result of the construction of the proposed project. The proposed project is within the Edwards Aquifer Contributing Zone and a Contributing Zone Plan (CZP) would be completed prior to construction. The Texas Commission on Environmental Quality considers the CZP to be sufficient for mitigation of aquifer impacts; therefore, there would be no significant direct impacts to water quality as a result of the project. Furthermore, the indirect and cumulative effects due to run off would also be considered mitigated because a CZP is required for any construction activity within the Edwards Aquifer Contributing Zone.

The proposed improvements would include crossings of the north and south forks of Brushy Creek and the direct impacts to the creek would be permitted using a nationwide permit. The permitted action by the United States Army Corps of Engineers is considered mitigation for the impacts to waters of the U.S.

The project area was surveyed for the presence of potential habitat for federal and state listed candidate, threatened or endangered species. The surveys resulted in the conclusion that no potential habitat for federal or state candidate, threatened or endangered species occurs within the project area. Therefore, there would be no effect to federal listed species and there would be no take of state listed species.

No induced development is anticipated because the vacant land is within areas already planned for development and the proposed project is needed to complete the development plans. The access provided by the project would not induce growth to lands outside the TOD since access is only provided within the limits of the voter-approved TOD.

All of these issues, and others, will be examined in detail and the findings documented in the environmental document; however, there are no known significant impacts that would result from the proposed project.

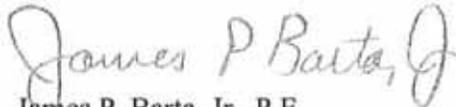
Public Involvement: An open house was held on July 14, 2009 at Pat Bryson Hall in Leander, Texas to present three proposed project alignments of CR 273, the extension of CR 274 and proposed improvements to the existing CR 274 to the public. Twenty-six people attended, including nine members of the consultant team, three TxDOT staff persons, and one City of Leander representative. A total of one verbal and 15 written comments were received. All of the comments received at the meeting and during the 10-day comment period that followed were in favor of the project, and most were in favor of Alternative 3 for CR 273 alignment (13 comments). A public hearing would be held if warranted.

Controversy: No controversy was presented at the open house and no unresolved conflict is anticipated to result from the proposed project.

Resource Agency Involvement: As appropriate, coordination with resource agencies such as the Texas Commission on Environmental Quality, U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, the Texas Historical Commission, Native American Indian Tribes, and U.S. Army Corps of Engineers would occur throughout the planning process.

Based on the above project information and justification, your determination for classification is requested. If you have any questions or required additional information, please contact Julia Ragsdale at 512-416-2612.

Sincerely,

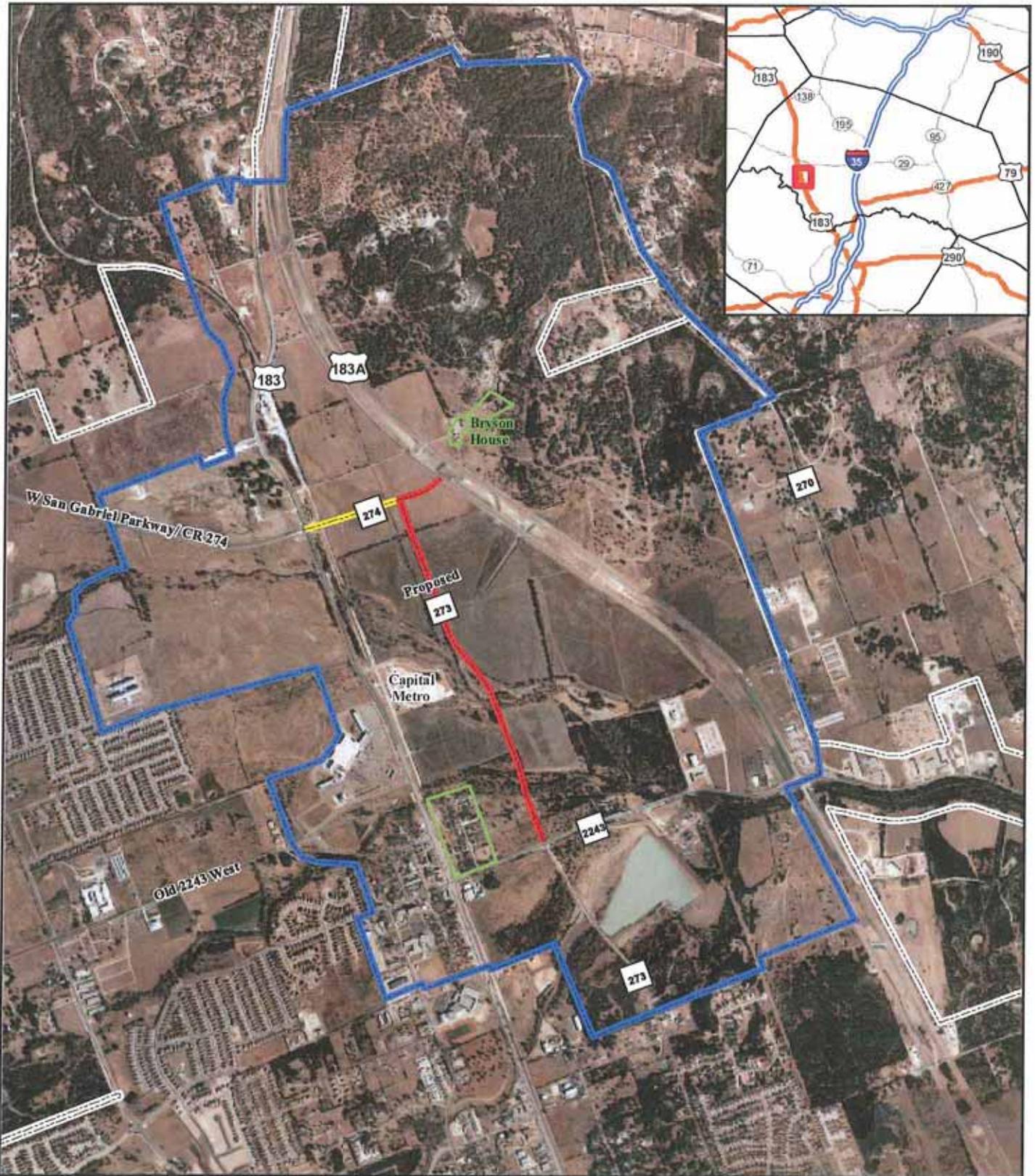


James P. Barta, Jr., P.E.
Director, Project Management Section
Environmental Affairs Division

Attachments

bc: Austin District, JKW

Reference: ENV 850



- Proposed Alignment
- CR 274 Widening
- NRHP Listed Eligible District
- TOD
- City Limits



Source: CAPCOG 18" 2008

**CR 273/274 from US 183 and 183A
to FM 2243 in Williamson County
CSJ:0914-05-149**



U.S. Department
of Transportation
**Federal Highway
Administration**

Texas Division

October 9, 2009

300 E. 8th Street, Room 826
Austin, TX 78701-3255
Tel (512) 536-5901
Fax (512) 536-5990
texas.fhwa@dot.gov

In Reply Refer To:
HA-TX

Mr. James P. Barta, Jr., P.E.
Director, Project Management Section
Environmental Affairs Division
Texas Department of Transportation
125 E. 11th Street
Austin, Texas 78701

Re: Request for Environmental Classification
Williamson County, CR 273 and CR 274
From US 183 and 183A to FM 2243

Dear Mr. Barta:

The Federal Highway Administration (FHWA) has reviewed the Texas Department of Transportation (TxDOT) – Austin District (AUS) request dated September 2, 2009, to determine the appropriate environmental document for the County Road 273 (from County Road 274 to FM 2243) and County Road 274 (from US 183 to 183A Turnpike) (CR 273/274) projects. FHWA has decided that TxDOT may proceed with the preparation of an Environmental Assessment (EA). In accordance with 23 CFR 771.119, when the EA is submitted for our approval, FHWA will make the determination as to whether to issue a Finding of No Significant Impact (FONSI) or require that an Environmental Impact Statement (EIS) be prepared due to the identification of potential significant environmental impacts in the EA.

FHWA's decision is based on the Austin District's request for classification dated September 2, 2009, in which potential environmental issues were identified.

The CR 273/274 projects would involve constructing approximately 1.7 miles of a new, four-lane undivided roadway. The ultimate configuration of CR 273/274 projects will be a four-lane undivided arterial (two lanes in each direction) with parking and wide sidewalks. However, the right-of-way (ROW) is proposed to be 80 feet wide for CR 273 and 148 feet wide for CR 274. Neither of these proposed ROW width's can accommodate the footprint of the ultimate facility. The roadway elements proposed for CR 273 indicate a minimum ROW width of 104 feet is required and for CR 274, a minimum of 164 feet is required. Further explanation must be provided to FHWA prior to the submission of any draft environmental



document as we can't authorize the use of Federal funds for the construction of projects outside of an acquired ROW. This submission request may affect this determination.

Environmental studies conducted so far have not found any significant impacts. The proposed project will require the acquisition of approximately 28 acres of right-of-way, including 12 acres of temporary drainage easements. However, this estimate appears to be too low to account for the entire scope of the project (as noted above) and may need to be revised. But, relocations are not anticipated in either case as the project area is currently undeveloped. No historic-aged structures are located in the project area. The project is within the Edwards Aquifer contributing zone and a Contributing Zone Plan (CZP) will be completed prior to construction. The area does not contain any known, suitable habitat for federally or state listed endangered species. The proposed improvements would include the crossing of the north and south forks of Brushy Creek. The impacts to the creek will require further study, but an US Army Corps of Engineers Nationwide Permit is expected. An open house was held on July 14, 2009. All of the received on the proposed project were in favor of the project.

The proposed improvements to CR 274 have been approved through the federally required local planning process and are included in the region's long range plan (as a MAD 4, not the MAU 4 proposed), the Capitol Area Metropolitan Planning Organization's (CAMPO) Mobility 2030 Plan. The proposed improvements for CR 273 are not shown in the CAMPO Mobility 2030 Plan and will, depending on the project schedule, need to be amended into the 2030 Plan or included in the new 2035 Plan prior to final action on this environmental document. The project is included in the CAMPO 2008-2011 Transportation Improvement Program (TIP). The project is also included in the City of Leander's 2300 acre Transportation Oriented Development District (TOD), approved and adopted by the citizens of Leander. The primary goal of the TOD is to cluster development such that neighborhoods and regional centers are compact, pedestrian-oriented, and mixed use. The Capital Metro Leander Rail Station is included within the TOD.

The preparation of an EA for the proposed project will assist FHWA and TxDOT in determining whether an EIS must be prepared. The EA will enable us to ascertain whether there are any significant impacts on the environment. Again, should significant environmental impacts be identified during the environmental process, FHWA will require that an Environmental Impact Statement (EIS) be prepared in accordance with 23 CFR 771.119.

Should you have any questions regarding this determination, please contact me at 536-5959. We look forward to working with TxDOT on this proposed project.

Sincerely,

A handwritten signature in black ink that reads "Ted West PE". The signature is written in a cursive, slightly slanted style.

Ted West, P.E.
Urban Programs Engineer



**CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
FY 2008-2011 TRANSPORTATION IMPROVEMENT PROGRAM
2008 Projects**

Project Sponsor	Project Name	County	Phase	CSJ#	MPO Proj ID No.	Year of Expenditure Cost
City of Leander	Bagdad Road (S) (Sidewalk)	Williamson	4	0914-04-172		\$421,700
Work Description: Design & Install 6' Wide Sidewalk On Both Sides, Complete Gap to High School (09 MI) Limits: Crystal Falls Pkwy to Leander Hs Bike/Ped Accom: See Project Description Amendment: Additional Explanatory Notes:						
Total Project Cost Information (uses TxDOT %s):		Type of Work		Bicycle Pedestrian Projects		
		YOE Cost Breakdown:		TxDOT Funding Category:		
1.Design	\$20,663	Federal Funding	\$337,360	7		\$337,360
2. ROW Purchase	\$0	State Funding	\$0	Local		\$122,293
3. Construction Engineerin	\$37,953	County Funding	\$122,293	Project History:		
4. Construction Cost	\$421,700	City Funding	\$0			
5. Contingencies	\$36,772	Other Local Funding:	\$0			
6. Indirect Costs	\$27,579	Bond Financing:				
Total Project Cost:	\$561,957	YOE Cost:	\$421,700			

Project Sponsor	Project Name	County	Phase	CSJ#	MPO Proj ID No.	Year of Expenditure Cost
City of Leander	CR 273/274 "T"	Williamson	4			\$6,910,000
Work Description: The CR 273/274 "T" is a new facility and is the critical transportation spine pulling together all modes of transportation and land uses within the Leander TOD 2000-acre master plan Limits: US 183 and 183A to existing FM 2243 Bike/Ped Accom: CR 273 and CR 274 will be constructed so that these streets facilitate comprehensive mobility, access and destinations for pedestrians and cyclists Amendment: Additional Explanatory Notes:						
Total Project Cost Information (uses TxDOT %s):		Type of Work		Roadway Projects		
		YOE Cost Breakdown:		TxDOT Funding Category:		
1.Design	\$338,590	Federal Funding	\$4,030,000	7		\$4,030,000
2. ROW Purchase	\$0	State Funding	\$0	Local		\$2,880,000
3. Construction Engineerin	\$621,900	County Funding	\$2,880,000	Project History:		
4. Construction Cost	\$6,910,000	City Funding	\$0			
5. Contingencies	\$552,800	Other Local Funding:	\$0			
6. Indirect Costs	\$414,600	Bond Financing:				
Total Project Cost:	\$8,499,300	YOE Cost:	\$6,910,000			

TEXAS HISTORICAL COMMISSION
real places telling real stories

September 15, 2009

Mr. Chris Dayton
Cox/McLain Environmental Consulting, inc.
4131 Spicewood Springs Road, Building A., Suite 4
Austin, TX 78759

Re: Project review under the Antiquities Code of Texas
Leander T project - CR 273 & CR 274, Williamson County
Texas Antiquities Permit Application #5387

Dear Colleague:

Thank you for your Antiquities Permit Application for the above referenced project. This letter presents the final copy of the permit application from the Chief Deputy Executive Director of the Texas Historical Commission, the state agency responsible for administering the Antiquities Code of Texas.

Please keep this copy for your records. Additionally, please note that the Antiquities Permit investigations require production of 20 copies of the final report, abstract form, tagged PDF CD and verification that any artifacts recovered and records produced during the investigations are curated at the repository listed in the permit.

If you have any questions concerning this permit or if we can be of further assistance, please contact Lillie Thompson at 512/463-1858. The reviewer for this project is Mark Denton, 512/463-6096.

Sincerely,



for
Mark Wolfe
Chief Deputy Executive Director

MW/lft

Enclosure

Cc: Scott Pletka, Ph.D., TxDOT
Pix Howell, City of Leander



State of Texas
TEXAS ANTIQUITIES COMMITTEE

ARCHEOLOGY PERMIT # 5387

This permit is issued by the Texas Historical Commission, hereafter referred to as the Commission, represented herein by and through its duly authorized and empowered representatives. The Commission, under authority of the Texas Natural Resources Code, Title 9, Chapter 191, and subject to the conditions hereinafter set forth, grants this permit for:

Intensive Survey

To be performed on a potential or designated landmark or other public land known

Title: Leander T project - CR 273 & CR 274

County: Williamson

Location: NE Leander, Williamson County, Texas; between US 183 and 183A

Owned or Controlled by: (hereafter known as the Permittee):

City of Leander
200 W. Willis Street
Leander, TX 78746

Sponsored by (hereafter known as the Sponsor)

Texas Department of Transportation
4131 Spicewood Springs Road, Building A, Suite 4
Austin, TX 78759

The Principal Investigator/Investigation Firm representing the Owner or Sponsor is:

Chris Dayton
Cox/McLain Environmental Consulting, Inc.
4131 Spicewood Springs Road, Building A, Suite 4
Austin, TX 78759

This permit is to be in effect for a period of:

3 Years and 0 Months

and Will Expire on:

08/31/2012

During the preservation, analysis, and preparation of a final report or until further notice by the Commission, artifacts, field notes, and other data gathered during the investigation will be kept temporarily at:

Cox/McLain Environmental Consulting, Austin, Tx

Upon completion of the final permit report, the same artifacts, field notes, and other data will be placed in a permanent curatorial repository at:

Texas Archeological Research Lab.

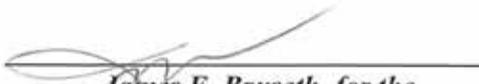
Scope of Work under this permit shall consist of:

Pedestrian survey with shovel testing. For details, see scope of work submitted with permit application.

This permit is granted on the following terms and conditions:

- 1) *This project must be carried out in such a manner that the maximum amount of historic, scientific, archeological, and educational information will be recovered and preserved and must include the scientific, techniques for recovery, recording, preservation and analysis commonly used in archeological investigations.*
- 2) *The Principal Investigator/Investigation Firm, serving for the Owner/Permittee and/or the Project Sponsor, is responsible for insuring that specimens, samples, artifacts, materials and records that are collected as a result of this permit are appropriately cleaned, and cataloged for curation. These tasks will be accomplished at no charge to the Commission, and all specimens, artifacts, materials, samples, and original field notes, maps, drawings, and photographs resulting from the investigations remain the property of the State of Texas, or its political subdivision, and must be curated at an appropriate repository. Verification of curation by the repository is also required, and duplicate copies of any requested records shall be furnished to the Commission before any permit will be considered complete.*
- 3) *The Principal Investigator/Investigation Firm serving for the Owner/Permittee, and/or the Project Sponsor is responsible for the publication of results of the investigations in a thorough technical report containing relevant descriptions, maps, documents, drawings, and photographs. A draft copy of the report must be submitted to the Commission for review and approval. Any changes to the draft report requested by the Commission must be made or addressed in the report, or under separate written response to the Commission. Once a draft has been approved by Commission, twenty (20) copies of the final report shall be furnished to the Commission.*
- 4) *If the Owner/Permittee, Project Sponsor or Principal Investigator/Investigation Firm fails to comply with any of the Commission's Rules of Practice and Procedure or with any of the specific terms of this permit, or fails to properly conduct or complete this project within the allotted time, the permit will fall into default status and/or the Commission may cancel the permit until such time that the terms of the permit are properly completed. Notification of Cancellation shall be sent to the Owner/Permittee and the Principal Investigator/Investigation Firm, and all work associated with the permit must then stop immediately upon receipt of the notice. Notification of Default status shall be sent to the Principal Investigator/Investigation Firm, and the Principal Investigator will not be eligible to be issued any new permits until such time that the conditions of this permit are complete.*
- 5) *The Owner/Permittee, Project Sponsor, and Principal Investigator/Investigation Firm, in the conduct of the activities hereby authorizes, must comply with all laws, ordinances and regulations of the State of Texas and of its political subdivisions including, but not limited to, the Antiquities Code of Texas; they must conduct the investigation in such a manner as to afford protection to the rights of any and all lessees or easement holders or other persons having an interest in the property and they must return the property to its original condition insofar as possible, to leaves it in a state which will not create hazard to life nor contribute to the deterioration of the site or adjacent lands by natural forces.*
- 6) *Any duly authorized and empowered representative of the Commission may, at any time, visit the site to inspect the fieldwork as well as the field records, materials, and specimens being recovered.*
- 7) *For reasons of site security associated with nautical historical resources, the Project Sponsor (if not the Owner/Permittee), Principal Investigator, and Investigation Firm shall not issue any press releases, or divulge to the news media, either directly or indirectly, information regarding the specific location of, other information that might endanger those resources, or their associated artifacts without first consulting with the Commission, and the State agency or political subdivision of the State that owns or controls the land where the resource has been discovered.*
- 8) *This permit may not be assigned by the Principal Investigator/Investigation Firm, Owner/Permittee, or Project Sponsor in whole, or in part to any other individual, organization, or corporation not specifically mentioned in this permit without the written consent of the Commission.*
- 9) *Hold Harmless: The Owner/Permittee hereby expressly releases the State and agrees that Owner/Permittee will hold harmless, indemnify, and defend (including reasonable attorney's fees and cost of litigation) the State, its officers, agents, and employees in their official and/or individual capacities from every liability, loss, or claim for damages to persons or property, direct or indirect of whatsoever nature arising out of, or in any way connected with, any of the activities covered under this permit. The provisions of this paragraph are solely for the benefit of the State and the Texas Historical Commission and are not intended to create or grant any rights, contractual or otherwise, to any other person or entity.*
- 10) *Addendum: The Owner/Permittee, Project Sponsor and Principal Investigator/Investigation Firm must abide by any addenda hereto attached.*

Upon a finding that it is in the best interest of the State, this permit is issued on 08/31/2009.


*James E. Bruseth, for the
Texas Historical Commission*



Texas Department of Transportation

DEWITT C. GREER STATE HIGHWAY BLDG. • 125 E. 11TH STREET • AUSTIN, TEXAS 78701-2483 • (512) 463-8585

January 12, 2010

RE: Section 106/Antiquities Code of Texas: Transmittal of the Cox/McClain Environmental Consultants Interim Report for Intensive Archeological Survey of CR 273/274 in Williamson County, Austin District, CSJ: 0914-05-149: Texas Antiquities Permit No. 5387

James E. Bruseth, Ph.D.
Division of Archeology, Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

Dear Dr. Bruseth:

In accord with the First Amended Programmatic Agreement among the Federal Highway Administration, the Texas Department of Transportation, the Texas State Historic Preservation Officer (TSHPO), and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings (PA-TU), as well as the Memorandum of Understanding (MOU) between the Texas State Historic Preservation Officer and TxDOT, we are conducting Section 106 and Antiquities Code of Texas consultation for the proposed undertaking.

This undertaking entails improving sections of CR 273 and CR 274 in Williamson County. The TSHPO issued Texas Antiquities Permit No. 5387 to Cox/McClain Environmental Consultants (CMEC) to conduct an intensive archeological survey of the undertaking's area of potential effects (APE).

CMEC recently conducted an intensive archeological survey within the APE. The CMEC survey resulted in the identification of four archeological sites. 41WM695 is a scatter of historical debris, 41WM699 is an isolated find of one prehistoric lithic artifact, 41WM1111 is a historic aged farmstead, and 41WM1246 is a newly recorded prehistoric lithic scatter. The investigators have recommended that the portions of 41WM695, 41WM 699, 41WM1111, and 41WM1246 located within the APE do not contribute to these sites eligibility for listing on the National Register of Historic Places and do not warrant designation as State Archeological Landmarks. CMEC has recommended that no further work is warranted for the undertaking. TxDOT has reviewed the CMEC report and agree with the investigators' findings. A copy of the related archeological interim report is attached for your review.

TxDOT recommends and seeks TSHPO concurrence that the inventory of the undertaking is complete, for a finding of "no historic properties affected", no State Archeological Landmarks would be impacted, and no further work or TSHPO consultation is required. Please signify your concurrence by signing on the line provided below.

In the event that archeological materials are discovered during construction, construction in the immediate area shall cease, and the State Historic Preservation Officer will be contacted to initiate accidental discovery procedures in accordance of the terms of the Programmatic Agreement among the Texas Historical Commission, the Federal Highway Administration, and the Texas Department of Transportation. If you have any questions, please contact me at 416-2640. Thank you for your consideration in this matter.

Sincerely,

Jon Budd, TxDOT Staff Archeologist

Date: 1-15-10

Concurrence by:
For Mark Wolfe, State Historic Preservation Officer and Executive Director

Attachments

cc w/o attachments: Austin District, ATTN: M. Walker, ENV-JAR, JHB
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INTENSIVE ARCHEOLOGICAL SURVEY FOR
EXTENSION/WIDENING OF CR 273/274
FROM US 183 AND 183A TO FM 2243
WILLIAMSON COUNTY, TEXAS
(CSJ: 0914-05-149)
[DRAFT]

Prepared by
Chris Dayton, PhD, RPA (Principal Investigator)
Cox | McLain Environmental Consulting, Inc.
4131 Spicewood Springs Road
Building A, Suite 4
Austin, TX 78759

Under contract to
Klotz Associates, Inc.
901 South Mopac Expressway
Building 5, Suite 220
Austin, TX 78746

For
The City of Leander
200 West Willis
Leander, TX 78641

And
The Texas Department of Transportation, Austin District
7901 North IH 35
Austin, TX 78753

Under
Texas Antiquities Permit 5387

Cox | McLain Environmental Consulting, Inc. Archeological Report 001
(CMEC-AR-001)



COX | McLAIN
Environmental Consulting

6 January 2010

DRAFT REPORT ACCEPTABLE
by <u><i>Mark Wolfe</i></u>
for Mark Wolfe Executive Director, THC
Date <u>1-15-10</u>
Track# _____



July 21, 2010

Mr. Carlos Lopez, P.E.
District Engineer
Texas Department of Transportation - Austin District
P.O. Drawer 15426
Austin, TX 78761 – 5426

Dear Mr. Lopez:

On May 24th, the CAMPO Transportation Policy Board adopted the CAMPO 2035 *Regional Transportation Plan*. One of the projects included was the “Leander T” which is also referred to as CR 273/274 and can be found on Page 74 of the March 2010 Draft Plan document (we have yet to receive, from the printer, finalized copies of the Plan as it was adopted).

BACKGROUND

On June 5, 2006, CAMPO awarded funding to the Leander “T” (CR 273/ CR 274) through a call for projects under the STP MM program. The application submitted by the City of Leander under that call for projects included text and diagrams indicating that CR 274 was being designed as a 6-lane boulevard and CR 273 as a 4-lane arterial (see Attachment A). The Leander “T” was included as a project in the FYs 2006-2008 Transportation Improvement Program (TIP) and subsequent TIPs with the following project description: “The CR 273/274 “T” is a new facility and is the critical transportation spine pulling together all modes of transportation and land uses within the Leander TOD 2000-acre master plan.”

On November 9, 2009, the CAMPO Transportation Policy Board approved a motion directing staff and the Technical Advisory Committee to consider those projects in the CAMPO Transportation Improvement Program that are currently unlet as a starting point for developing the draft CAMPO 2035 *Regional Transportation Plan*. Based on that motion, staff included the Leander T (CR 273/ CR 274) as a project in the draft *Plan*. The project description included in the draft CAMPO 2035 *Plan* for the project reads:

The CR 273/274 “T” is a new facility and is the critical transportation spine pulling together all modes of transportation and land uses within the Leander TOD 2000-acre master plan. (CR 273 is being constructed as a 6 lane boulevard. CR 274 is being constructed as a 4 lane arterial.)

The parenthetical text was added to the draft project description in an effort to clarify the scope of the project, and was intended to represent the cross-sections which had been approved when the project was awarded STP MM funding in 2006. The county road

designations included in the parenthetical text were erroneously reversed.

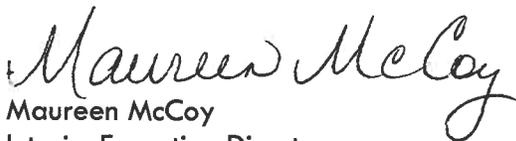
On May 24, 2010, the Transportation Policy Board adopted the CAMPO 2035 *Regional Transportation Plan* with modifications. The approved modifications included the following:

- **Modification #27:** Make minor modifications throughout the Plan and Appendices to correct typos, improve clarity and consistency, provide a summary of Round 3 Public Involvement, and reflect the performance results of modeling the as-adopted transportation system.
- **Modification #92:** Make minor modifications for clarity throughout project list and standardize project descriptions to provide equivalent level of detail, unless unique circumstances call for special language or footnote.

Based on these modifications, staff intends to correct the typo that was included in the project description for the Leander "T", and the as adopted version of the CAMPO 2035 Regional Transportation Plan report will include the following project description for the Leander T: "The CR 273/274 "T" is a new facility and is the critical transportation spine pulling together all modes of transportation and land uses within the Leander TOD 2000-acre master plan. (CR 274 is being constructed as a 6 lane boulevard. CR 273 is being constructed as a 4 lane arterial.)"

We hope that this explanation assists with the understanding of the sequence of events that has led to the current situation. Please call me at 974-2275 if you have questions about the above or other CAMPO issues.

Sincerely,



Maureen McCoy
Interim Executive Director

c: Mr. Pix Howell, City of Leander

CR 273/274 "T" Cross-Sections Leander TOD Transect Plan and Code

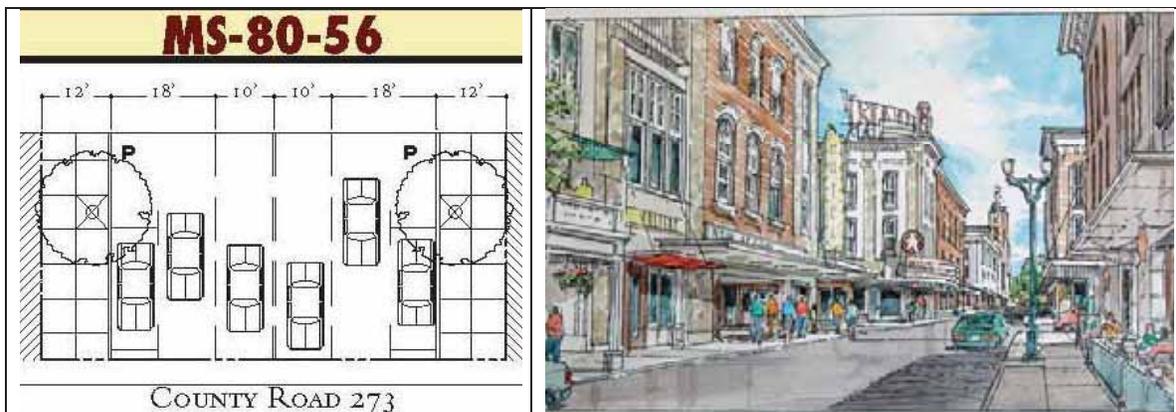
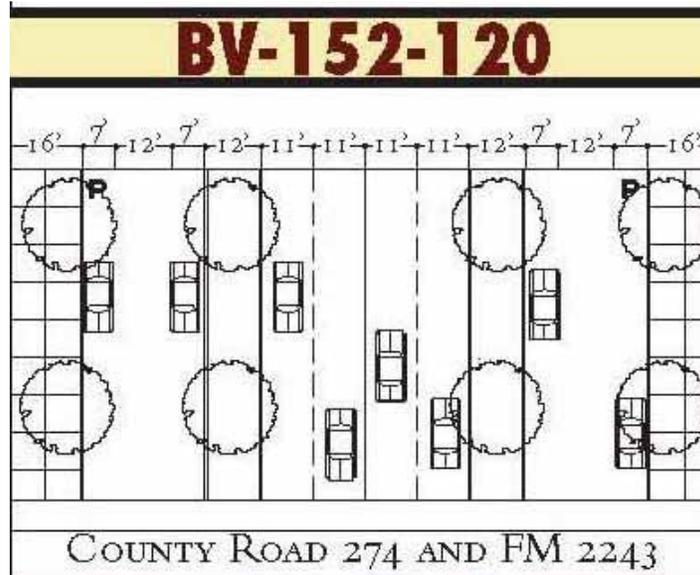


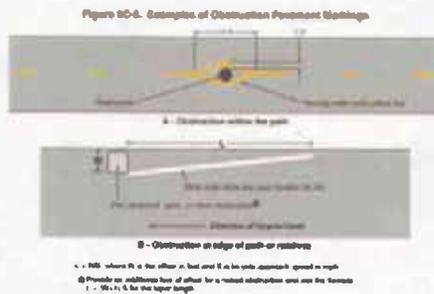
Exhibit B

Section 9C.06 Pavement Markings for Obstructions

Guidance:

01 In roadway situations where it is not practical to eliminate a drain grate or other roadway obstruction that is inappropriate for bicycle travel, white markings applied as shown in [Figure 9C-8](#) should be used to guide bicyclists around the condition.

Figure 9C-8 Examples of Obstruction Pavement Marking



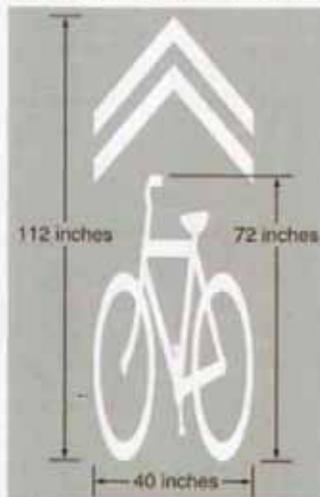
Section 9C.07 Shared Lane Marking

Option:

01 The Shared Lane Marking shown in [Figure 9C-9](#) may be used to:

Figure 9C-9 Shared Lane Marking

Figure 9C-9. Shared Lane Marking



- Assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a bicyclist's impacting the open door of a parked vehicle,
- Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane,
- Alert road users of the lateral location bicyclists are likely to occupy within the traveled way,
- Encourage safe passing of bicyclists by motorists, and
- Reduce the incidence of wrong-way bicycling.

Guidance:

02 *The Shared Lane Marking should not be placed on roadways that have a speed limit above 35 mph.*

Standard:

03 **Shared Lane Markings shall not be used on shoulders or in designated bicycle lanes.**

Guidance:

04 *If used in a shared lane with on-street parallel parking, Shared Lane Markings should be placed so that the centers of the markings are at least 11 feet from the face of the curb, or from the edge of the pavement where there is no curb.*

05 *If used on a street without on-street parking that has an outside travel lane that is less than 14 feet wide, the centers of the Shared Lane Markings should be at least 4 feet from the face of the curb, or from the edge of the pavement where there is no curb.*

06 *If used, the Shared Lane Marking should be placed immediately after an intersection and spaced at intervals not greater than 250 feet thereafter.*

Option:

07 [Section 9B.06](#) describes a Bicycles May Use Full Lane sign that may be used in addition to or instead of the Shared Lane Marking to inform road users that bicyclists might occupy the travel lane.

[Back to Top](#)





**CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
FY 2008-2011 TRANSPORTATION IMPROVEMENT PROGRAM
2008 Projects**

Project Sponsor	Project Name	County	Phase	CSJ#	MPO Proj ID No.	Year of Expenditure Cost
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Work Description: Design & Install 6' Wide Sidewalk On Both Sides, Complete Gap to High School (09 Mi)						
Limits: Crystal Falls Pkwy to Leander Hs						
Bike/Ped Accom: See Project Description						
Amendment:						
Additional Explanatory Notes:						

Total Project Cost Information (uses TxDOT %s):		Type of Work	Bicycle Pedestrian Projects	TxDOT Funding Category:	
1.Design	\$20,663	YOE Cost Breakdown:		7	\$337,360
2. ROW Purchase	\$0	Federal Funding	\$337,360	Local	\$122,293
3. Construction Engineerin	\$37,953	State Funding	\$0	Project History:	
4. Construction Cost	\$421,700	County Funding	\$122,293		
5. Contingencies:	\$36,772	City Funding	\$0		
6. Indirect Costs:	\$27,579	Other Local Funding:	\$0		
		Bond Financing:			
Total Project Cost:	\$561,957	YOE Cost:	\$421,700		

Project Sponsor	Project Name	County	Phase	CSJ#	MPO Proj ID No.	Year of Expenditure Cost
City of Leander	CR 273/274 "T"	Williamson	4			\$6,910,000
Work Description: The CR 273/274 "T" is a new facility and is the critical transportation spine pulling together all modes of transportation and land uses within the Leander TOD 2000-acre master plan						
Limits: US 183 and 183A to existing FM 2243						
Bike/Ped Accom: CR 273 and CR 274 will be constructed so that those streets facilitate comprehensive mobility, access and destinations for pedestrians and cyclists						
Amendment:						
Additional Explanatory Notes:						

Total Project Cost Information (uses TxDOT %s):		Type of Work	Roadway Projects	TxDOT Funding Category:	
1.Design	\$338,590	YOE Cost Breakdown:		7	\$4,030,000
2. ROW Purchase	\$0	Federal Funding	\$4,030,000	Local	\$2,880,000
3. Construction Engineerin	\$621,900	State Funding	\$0	Project History:	
4. Construction Cost	\$6,910,000	County Funding	\$2,880,000		
5. Contingencies:	\$552,800	City Funding	\$0		
6. Indirect Costs:	\$414,600	Other Local Funding:	\$0		
		Bond Financing:			
Total Project Cost:	\$8,499,300	YOE Cost:	\$6,910,000		

Priority	ID	Project Type	Sponsor	Project	Link/Location	Est. Year	Open Year	YOE Cost (Millions)	Description
Short Term	443	Expand Arterial	Williamson County	CR 138	SH 130 - CR 137	2012	2014	9.1	Widen from 2 lanes to 4 lanes with median
Short Term	167	Expand Arterial	Phlogerville/Trenton	CR 138 (Kent School Rd)	SH 130 to Hodde Lane / Wells Lane	2015	2017	20.3	WAD4 with bike lane and sidewalk
Short Term	428	Expand Arterial	Williamson County/Georgetown	CR 143	SH 195 - IH 35	2016	2020	7.44	Widen from 2 lanes to 4 lanes
Long Term	508	Expand Arterial	Williamson County	CR 152	SH 971 - SH 130	2028	2030	7.0	Widen from 2 lanes to 4 lanes with median
Short Term	98	New Arterial	Williamson County	CR 175 Extension - Phoxa 28	SH 2243 - CR 179	2015	2017	9.0	Reconstruction of a two-lane roadway to a four-lane divided section with a raised median.
Short Term	430	Expand Arterial	Williamson County	CR 176	Sam Bass Rd - BA 2243	2018	2020	8.5	Widen from 2 lanes to 2 lanes with median
Short Term	641	Expand Arterial	Williamson County	CR 177/Crystal Falls Pkwy	Ronald W. Reagon Blvd - CR 175	2018	2020	5.1	Widen from 2 lanes to 4 lanes
Short Term	444	Expand Arterial	Georgetown/Wilson County	CR 190/Airport Rd	SH 35 - SH 195	2013	2015	13.5	Widen 2 lanes to 4 lanes
Long Term	509	Expand Arterial	Williamson County	CR 200	CR 202 - SH 29	2030	2035	34.0	Widen from 2 lanes to 4 lanes
Short Term	445	New Arterial	Williamson County	CR 202	CR 207 - US 183	2013	2015	13.6	Construct 2-lane road on a new location
Long Term	510	Expand Arterial	Williamson County	CR 202	CR 200 - US 183	2030	2035	29.4	Widen from 2 lanes to 4 lanes
Short Term	438	Expand Arterial	Williamson County	CR 214	Rolling Hills Rd - Son Gabriel Ranch Rd	2013	2015	2.0	Reconstruct 2-lane road
Long Term	511	Expand Arterial	Williamson County	CR 214	SH 29 - US 183	2030	2035	29.3	Widen from 2 lanes to 4 lanes
Short Term	97	New Arterial	Williamson County	CR 214, Phoxa 28	Son Gabriel Ranch Rd to US 183	2015	2017	5.0	Construct 4 lane divided arterial
Short Term	643	Expand Arterial	Williamson County	CR 236	US 183 - CR 207	2018	2020	25.4	Widen from 2 lanes to 4 lanes
Short Term	643	Expand Arterial	Jarrell/Williamson County	CR 237	Ronald Reagon Blvd - CR 216	2015	2017	9.1	Reconstruct 2 lanes to 4 lanes with median
Short Term	644	New Arterial	Jarrell/Williamson County	CR 237 Extension	CR 216 - BA 487 on CR 305	2015	2017	7.4	Construct 4 lanes on a new location
Long Term	512	Expand Arterial	Williamson County	CR 254	US 183 - BA 2338	2038	2038	11.0	Widen from 2 lanes to 4 lanes
TIP	67	Expand Arterial	lander	CR 272/Crystal Falls Parkway Phase 1	US 183 to 183A	2010	2012	4.0	Intersection, signal improvements and railroad crossing upgrade on E Crystal Falls Parkway signal improvements on CR 273, WAD4 from US 183 to 183A
TIP	79	New Arterial	lander	CR 273 / 274 TT	US 183 and 183A to existing SH 2243	2011	2013	6.9	The CR 273/274 TT is a new facility and is the critical transportation spine linking together all modes of transportation and land uses within the Lander TOD 2000-acre master plan. CR 273 is being constructed as a 4 lane boulevard. CR 274 is being constructed as a 4 lane arterial.
Medium Term	645	Expand Arterial	lander/Williamson County	CR 273/Neil Meigs Ave	CR 272 - BA 2243	2023	2025	6.6	Widen from 2 lanes to 4 lanes
Short Term	647	Expand Arterial	Jarrell/Williamson County	CR 303 Extension	SH 1100 to 7.5 mi N of SH 487	2015	2017	10.3	Widen from 2 lanes to 2 lanes with median
Short Term	646	New Arterial	Jarrell/Williamson County	CR 303 Extension	SH 1100-Ronald Reagon	2015	2017	2.2	Construct 2 lanes with median on a new location



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Open until filled; \$13.19/hr
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Open until filled; \$12.56/hr
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Open until filled; \$13.87/hr
CORRECTIONAL OFFICER (JAILER) – Sheriff's Dept.
Open until filled; \$32,775/yr
CRISIS COUNSELOR – Sheriff's Dept.
Open until filled; \$40,052/yr
CRISIS INTERVENTION DEPUTY – Sheriff's Dept.
Open until filled; \$20.18/hr
DEPUTY CONSTABLE – Constable, PCT 3 – Georgetown
Open until filled; \$44,877/yr
DEPUTY SHERIFF (BAILIFF/JAIL) – Sheriff's Dept.
Open until filled; \$37,045.12/yr
DETENTION OFFICER – Juvenile Services
Closes July 9, 2009; \$15.31/hr
DIRECTOR OF HUMAN RESOURCES – Human Resources
Closes July 8, 2009; \$ DOQ
DISPATCHER I – 911 Communications
Closes July 17, 2009; \$15.31/hr
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LVN NURSE (PART-TIME) – Juvenile Services
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MEDIC – Sheriff's Dept.
Open until filled; \$39,171/yr
MENTAL HEALTH SPECIALIST – Mobile Outreach Team
Open until filled; \$38,792/yr
MOTOR VEHICLE DEPUTY PT (CEDAR PARK) – Tax Assessor
Open until filled; \$11.00/hr
MOTOR VEHICLE DEPUTY PT (GEORGETOWN) – Tax Assessor
Open until filled; \$11.00/hr
MOTOR VEHICLE DEPUTY (GEORGETOWN) – Tax Assessor
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PARAMEDIC – EMS
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PATROL DEPUTY – Sheriff's Dept.
Open until filled; \$20.18/hr
WAREHOUSE ASSISTANT – Fleet Services
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For job qualifications and to obtain an application, please call 512-943-1533 or visit our website at www.wilco.org/hr ; Human Resources Department, 301 SouthEast Inner Loop, Suite 108, Georgetown, TX 78626 = EOE/ADA

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**960
PUBLIC NOTICES**

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Service, Inc.
13300-B Wire Rd.
Leander, TX 78641
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2009 Trailer/None
Vin#
No Vin
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Make & Model
2009 Trailer/Utility
Vin#
No Vin
L.P.#
No Plate
Make & Model

**OUTREACH
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to care for the elderly and disabled in
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NOTICE OF OPEN HOUSE
LEANDER "T" (CSJ # 0914-05-149)
CR 273 (Mel Mathis Avenue) From
RM 2243 to CR 274

CR 274 (San Gabriel Parkway) From
US 183 to US 183A SB Frontage Road

On July 14, 2009, the City of Leander in coordination with the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA) will conduct an Open House for a proposed project in Leander, Texas. The Open House will be held from 6:00 to 8:00 p.m. at Pat Bryson Hall, 201 N. Brushy St., in Leander 78641. During the Open House, staff members will be available to answer questions from the public; however, no presentation will be given.

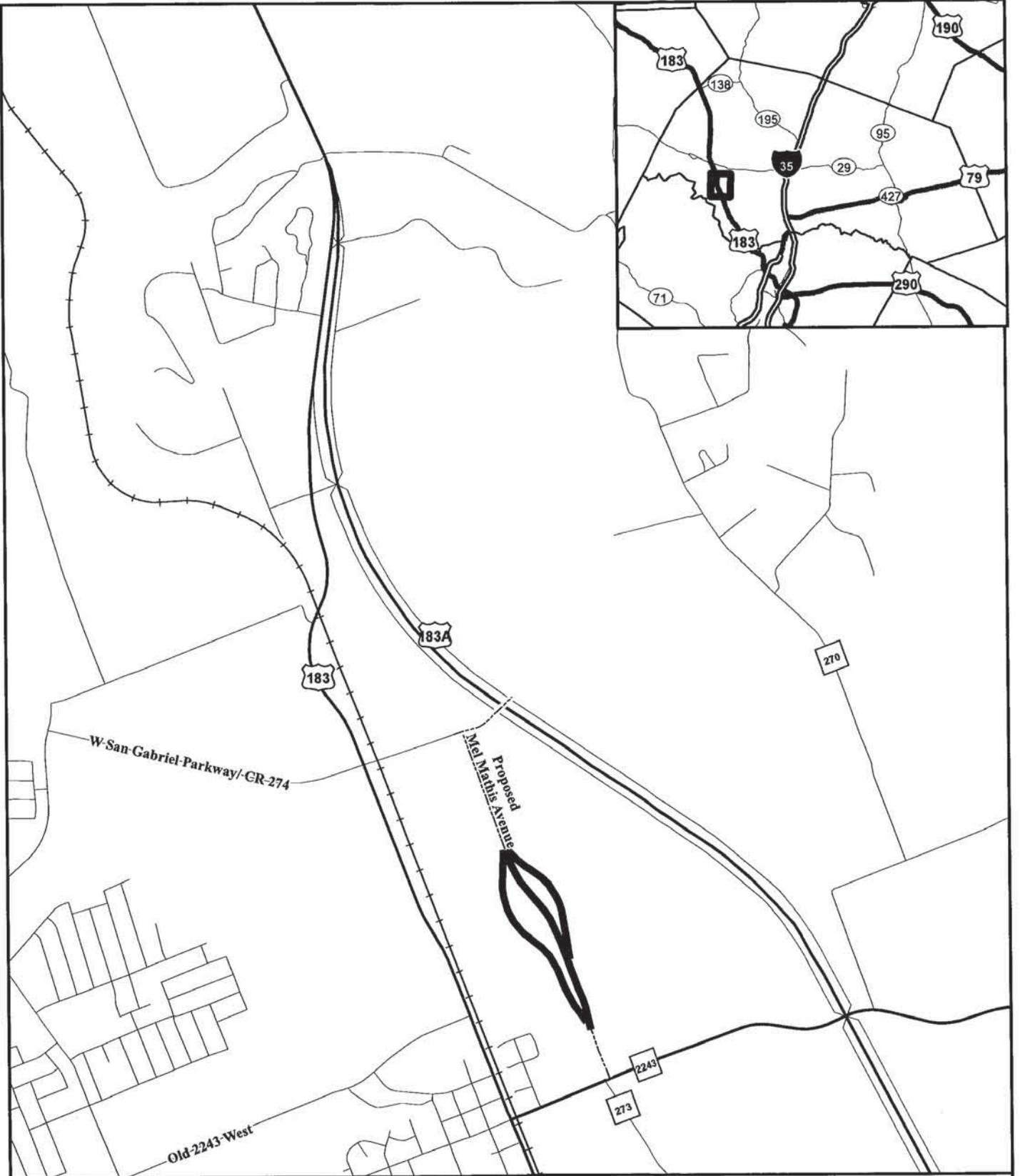
The ultimate proposed project includes construction of approximately 6,000 feet of new location north/south roadway between RM 2243 and CR 274, and approximately 2,200 feet of east/west improvements to existing CR 274 (San Gabriel Parkway) plus extension of that roadway to complete a connection between US 183 and US 183A. The purpose of this project is to support development anticipated by the City of Leander's Transit Oriented Development District (TOD), approved and adopted by the citizens of Leander. The proposed roadways would provide capacity to meet anticipated traffic demand, in accordance with current design standards and criteria for providing safe roadway facilities for the traveling public.

For Mel Mathis Avenue (CR 273), the proposed project includes one ten-foot and one 12-foot travel lane in each direction plus an eight-foot shoulder in each direction. A proposed 22-foot sidewalk would be constructed in the future in each direction. The proposed right-of-way width would be approximately 80 feet plus 25-feet on either side for a temporary drainage easement. For San Gabriel Parkway (CR 274), the proposed project includes one 11-foot and one 12-foot travel lane in each direction, with accommodation in each direction for a future 12-foot median, a 14-foot travel lane, and 17-foot angle parking with 16-foot sidewalks in each direction within approximately 148 of right-of-way. This proposed project would require approximately 16 acres of right-of-way including approximately 11-12 acres of new right-of-way depending on the alternative. No displacements are anticipated.

The purpose of the Open House is to distribute project information to the public and to obtain public input to be considered during the development of the project. Exhibits showing aerial photography, the proposed alternatives, environmental constraints, and preliminary schematics will be presented at the Open House. Preliminary maps and displays of the proposed project will be on display at the Open House, and will be available for review prior to the Open House at the City of Leander Administrative Office 200 W. Willis St., Leander, TX 78641. A formal presentation will not be made during the Open House, but project team members will be available to answer questions.

The Open House will be conducted in English. Persons interested in attending who have special communication or accommodation needs are encouraged to contact Debbie Halle, City Secretary at (512) 528-2743 at least one week prior to the Open House. Spanish translation will be available at the Open House. Any requests for other language interpreters or other special communication needs should also be made at least one week prior to the Open House. TxDOT will make every reasonable effort to accommodate these needs.

Verbal and written comments regarding the proposed project are requested and may be presented either at the Open House or in writing after the Open House. Written comments not submitted during the Open House must be received on or before Friday July 24, 2009, in order to be included in the Open House record. Written statements may be mailed to the Austin District Environmental Coordinator, TxDOT, P.O. Box 15426, Austin, TX 78761-5426 or faxed to (512) 832-7157 at any time on or before July 24, 2009.



**Proposed Mel Mathis Avenue
Leander, Texas**

— Alternative 1
 — Alternative 2
 - - - Alternative 3
 ····· Proposed ROW

0 250 500 1,000 Meters



July 14, 2009

CSJ: 0914-05-149

Leander "T"

CR 273 (Mel Mathis Avenue): from RM 2243 to CR 274

CR 274 (San Gabriel Parkway): from US 183 to US 183A SB Frontage Road

Williamson County

Dear Citizen:

On behalf of the Texas Department of Transportation (TxDOT) and the City of Leander, we want to welcome you to tonight's Open House concerning the proposed Leander "T", which would consist of the construction of CR 273 (Mel Mathis Avenue) from RM 2243 to CR 274 and the construction of CR 274 (San Gabriel Parkway) from US 183 to the US 183A SB Frontage Road. Information regarding the Leander "T" is attached.

The open house is being held from 6:00 p.m. - 8:00 p.m. During this time, displays of the proposed improvements and other project information are available for review. TxDOT staff, City of Leander representatives, and project team members are available to answer any questions you may have.

If you wish to present verbal comments during the Open House, please see the court reporter. Comments may also be presented in writing. For your convenience, a comment form is included in this information packet. Written comments not submitted during the Open House should be mailed to: Debbie Haile, Leander City Secretary, 200 W. Willis Street, Leander, TX 78646 or faxed to (512) 259-1605. Written comments must be received on or before Friday, July 24, 2009, in order to be included in the Open House record.

All verbal and written comments received at the Open House, as well as written comments received by July 24, 2009, will be taken into consideration during future project development.

Thank you for attending tonight's Open House. Public involvement is a vital part of the TxDOT project development process, and we sincerely appreciate your participation. If you have any questions after tonight's Open House, please call Debbie Haile, Leander City Secretary at (512) 528-2743.

PROJECT OVERVIEW

**Leander "T" (CSJ #0914-05-149)
CR 273 (Mel Mathis Avenue) from RM 2243 to CR 274
CR 274 (San Gabriel Parkway) from US 183 to US 183A SB Frontage Road
Williamson County, Texas**

The Texas Department of Transportation and the City of Leander are in the process of developing a new location roadway project in the City of Leander, Texas in Williamson County. Attached is a project location map. The proposed project includes the construction of two roads: CR 273 (Mel Mathis Avenue) and CR 274 (San Gabriel Parkway). The ultimate proposed project includes construction of approximately 6,000 feet of new location north/south roadway between RM 2243 and CR 274, and approximately 2,200 feet of east/west improvements to existing CR 274 (San Gabriel Parkway) plus extension of that roadway to complete a connection between US 183 and US 183A. This proposed project would require approximately 16 total acres of right-of-way, including approximately 11 to 12 acres of new right-of-way depending on the alternative. No displacements are anticipated.

The purpose for the proposed project is to support development anticipated by the City of Leander's Transit Oriented Development District (TOD), approved and adopted by the citizens of Leander. The proposed roadways would provide capacity to meet anticipated traffic demand, in accordance with current design standards and criteria for providing safe roadway facilities for the traveling public.

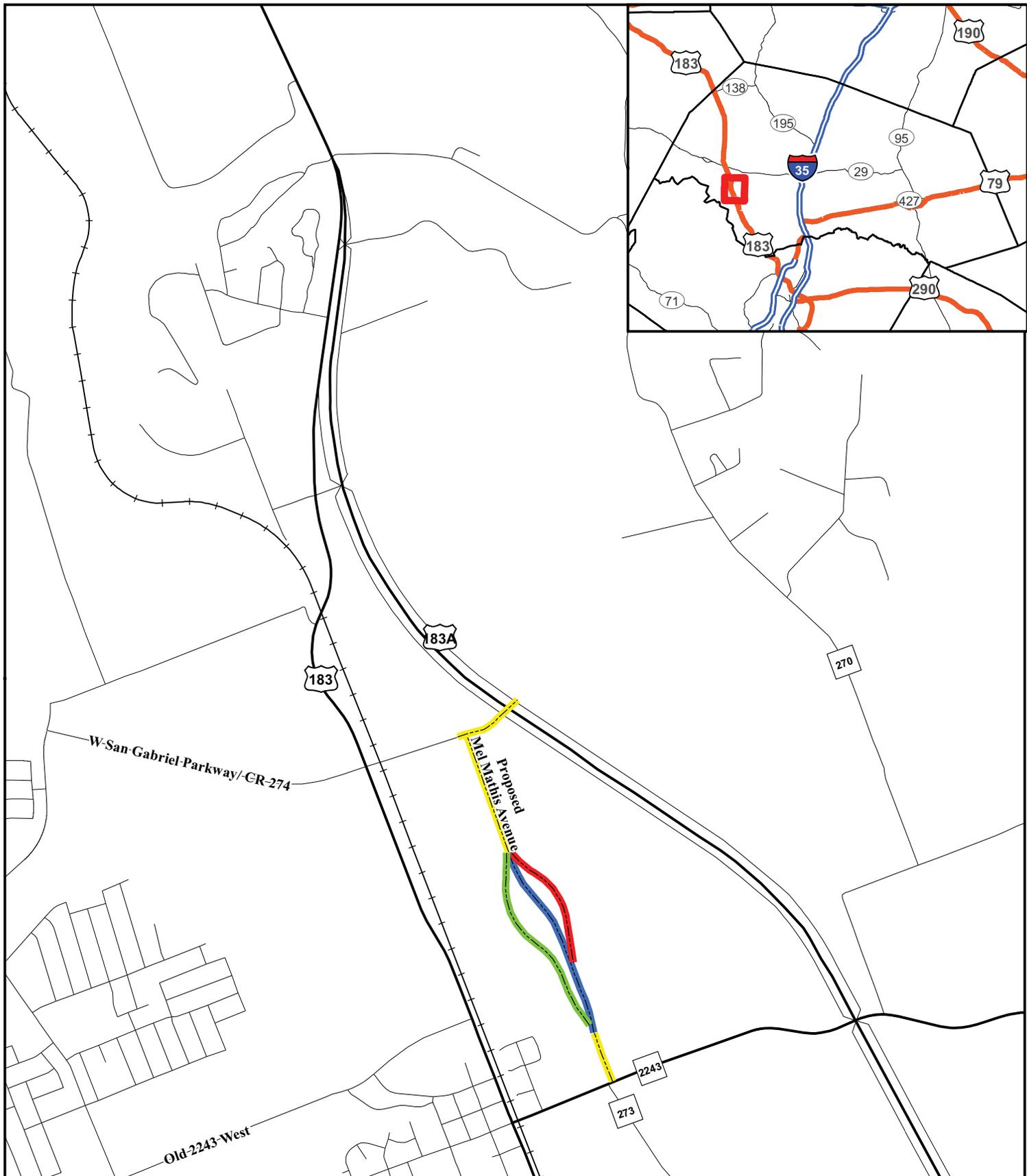
For CR 273 (Mel Mathis Avenue), the proposed project includes one ten-foot and one 12-foot travel lane in each direction plus an eight-foot shoulder in each direction. A proposed 22-foot sidewalk would be constructed in the future in each direction. The proposed right-of-way width would be approximately 80 feet plus 25 feet on either side for a temporary drainage easement.

For CR 274 (San Gabriel Parkway), the proposed project includes one 11-foot and one 12-foot travel lane in each direction, with accommodation in each direction for a future 12-foot median, a 14-foot travel lane, and 17-foot angle parking with 16-foot sidewalks in each direction within approximately 148 feet of right-of-way.

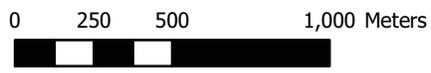
The purpose of tonight's Open House is to distribute project information to the public and to obtain public input to be considered during the development of the project. Exhibits showing aerial photography, the proposed alternatives, environmental constraints, and preliminary schematics are available for viewing. Preliminary maps and displays of the proposed project will also be on display.

After tonight's Open House, all comments will be considered as we continue to develop the project. Additionally, during continued project development, the improvements would be evaluated based on a combination of the design criteria and constraints, environmental constraints, construction feasibility, and other factors.





- - - Alternative 1
- - - Alternative 2
- - - Alternative 3
- - - Proposed ROW



Proposed Mel Mathis Avenue Leander, Texas

History of the Leander Transit-Oriented Development (TOD):

- **May 2004** – The property within the triangle bounded by RM 2243, US 183, and the soon-to-be-built US 183A is identified as a potential site for a TOD.
- **Fall 2004** – The TOD concept is first introduced to the City of Leander.
- **January 25, 2005** – The preliminary design, look, and outline of the TOD are first presented at a public meeting at Pat Bryson Municipal Hall.
- **March 2, 2005** – The City of Leander holds an informal meeting to present the latest updates on the TOD project to taxpayers and homeowners living in the city's Old Town district.
- **April 14, 2005** – Leander City Council votes to amend a resolution allowing the primary landowners to annex their property into the city (a total of 1,443 acres), with the remaining land to be annexed as development continues.
- **April 20&21, 2005** – Public hearings are held to present the TOD plan to the public.
- **June 16, 2005** – The proposed code for the Leander TOD is presented to the Leander City Council.
- **August 4, 2005** – Leander City Council and Planning and Zoning Commission approve the zoning ordinances and code for the proposed 2,300-acre TOD, including annexing land for the project.
- **November 15, 2007** – Leander City Council takes the first steps toward building the Leander T roadway.
- **July 14, 2009** – Presentation of proposed Leander "T" roadway design alternatives at a public open house held at Pat Bryson Hall.

Photos from July 14, 2009 Public Meeting for Proposed Leander "T" Roadway





PUBLIC MEETING

TXDOT AND FEDERAL HIGHWAY ADMINISTRATION

OPEN HOUSE

JULY 14, 2009

BE IT REMEMBERED that the above-entitled meeting came on the 14th day of July, 2009, from 6:36 p.m. to 6:38 p.m. at the Pat Bryson Hall, 201 North Brushy Street, Leander, Texas 78641, and the following proceedings were reported by me, Lauren Morrison, Certified Shorthand Reporter in and for the State of Texas.

1 MR. CHUCK SHINE: Welcome, thank you for
2 coming. This is an open house for the Leander "T"
3 project. There will be no formal presentation, but
4 Klotz Associates, CMEC, and TxDOT are here to answer
5 questions and take your comments. There's a court
6 reporter here to take verbal comments if you -- if you
7 don't want to write down -- if you want to write down
8 your comment -- or I'm sorry. If you don't want to
9 write down your comments, or you don't want to tell us,
10 you can record it here officially. There's a comment
11 form at the back of your packet as you came in here.
12 Okay. We -- we ask that you fill out the form tonight,
13 or mail it back in by July 24th. If I miss anything,
14 let me know. Let us know if you need a Spanish
15 translator. We have -- Cres Guzman is here to help you
16 out if you need one of those.

17 We're holding this meeting to comply with
18 the requirements of the National Environmental Policy
19 Act that's in Section 106 of the National Historic
20 Preservation Act. Let me know if you want -- let anyone
21 of the folks here -- raise your hand if you're here to
22 answer questions for Klotz or TxDOT. We're all here to
23 answer questions and show you the exhibits and the maps
24 and everything. So thank you again for coming out. We
25 also have refreshments over there; cookies and water and

1 stuff. Again, thanks.

2

3 ***** PUBLIC COMMENTS *****

4

5 MS. SHARON STEGALL: My address is 106
6 West Willis Street, Leander 78641. And I just wanted,
7 to formally, say that I support Option 3. Also, I'm
8 really excited about all of the improvements that are
9 being done to the roadways here. It's so timely, and
10 it's so great to see infrastructure and roads be put in
11 place prior to fully developed areas so we don't
12 experience the traffic congestion and the mistakes that
13 we saw made further in to the Cedar Park and 620 areas.
14 You guys are thinking so, you know, ahead of the curve
15 and that's just great. We're going to be so -- we're so
16 prepared for everything that's about to come. So,
17 kudos. Great job guys. Glad you had this public
18 hearing. Thank you.

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REPORTER'S CERTIFICATION

I, Lauren Morrison, Certified Shorthand Reporter in and for the State of Texas, certify that I have transcribed this meeting to the best of my ability.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to the action in which this proceeding was taken, and further that I am not financially or otherwise interested in the outcome of the action.

Certified to by me on this 14th day of July, 2009.

Lauren Morrison

LAUREN MORRISON, TEXAS CSR 890
Expiration: 12/31/2011
AcuScribe
1601 Rio Grande, Suite 443
Austin, Texas 78701
512-499-0277



Leander "T" July 14, 2009 Public Meeting - Summary of Comments

Topic	Number of Comments Received
Supports the proposed project (does not specify preferred alternative)	1
Supports Alternative 1	1
Supports Alternative 3	13
Requests stoplight be installed at FM 2243 and CR 273 or that speed limit on FM 2243 be reduced to 35 mph	1

Total Comments Received = 15 (some respondents commented on multiple topics)