Draft Environmental Assessment

US 377, Dallas District

Project limits: From BUS 377 to United States Highway (US) 380

CSJ Number: 0081-06-040

Denton County, Texas

October 2020

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

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List of Abbreviations and Acronyms

ACHP	Advisory Council for Historic Preservation
ACT	Antiquities Code of Texas
ADA	American with Disabilities Act
AADT	Average Annual Daily Traffic
AOI	Area of Interest
APE	Area of Potential Effects
BMP	Best Management Practice
BUS	Business
CRTB	Cross Timbers
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIA	Community Impacts Assessment
CMP	Congestion Management Process
CO	Carbon Monoxide
CWA	Clean Water Act
CGP	Construction General Permit
EA	Environmental Assessment
EJ	Environmental Justice
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FM	Farm-to-Market
FPPA	Farmland Policy Protection Act
FONSI	Finding of No Significant Impact
GLO	General Land Office
IBWC	International Boundary & Water Commission
ISA	Initial Site Assessment
LBP	Lead-Based Paint
LF	Linear Feet
LEP	Limited English Proficiency
LPST	Leaking Petroleum Storage Tank
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standard
NCTCOG	North Central Texas Council of Governments
NEPA	National Environment Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
OHWM	Ordinary High Water Mark
PA	Programmatic Agreement
PCN	Preconstruction Notification
PM	Particulate Matter
PWC	Parks and Wildlife Code

List of Acronyms (continued)

PS&E	Plans, Specifications, and Estimates
PST	Petroleum Storage Tank
ROE	Right of Entry
ROW	Right of Way
RSA	Resource Study Area
RTHL	Recorded Texas Historic Landmark
SAL	State Archeological Landmark
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Officer
SW3P	Storm Water Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
TIP	Transportation Improvement Program
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TSS	Total Suspended Solids
TxDOT	Texas Department of Transportation
TXNDD	Texas Natural Diversity Database
US	United States
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
VPD	Vehicles per Day

1.0 Introduction

The Texas Department of Transportation (TxDOT) Dallas District Office proposes the widening of existing United States (US) 377 from Business (BUS) 377E to US 380 through the cities of Pilot Point, Aubrey, Krugerville, and Crossroads in Denton County, Texas. This would include widening approximately 13.7 miles of US 377. The proposed project would widen this section of US 377 from a 2-lane rural roadway to a 4-lane urban roadway (ultimate 6-lanes) with a raised median. See **Appendix A** for the Project Location Map.

This Environmental Assessment (EA) evaluates the social, economic, and environmental impacts of the proposed project and determines whether such impacts warrant preparation of an Environmental Impact Statement. The planning process for this project follows TxDOT and Federal Highway Administration (FHWA) environmental policies and procedures in compliance with the National Environmental Policy Act (NEPA). The EA will be made available for public review and TxDOT will consider all comments received. If TxDOT determines that there are no significant adverse effects as a result of the proposed project, a Finding of No Significant Impact (FONSI), will be prepared, signed, and be made available to the public.

2.0 Project Description

2.1 Existing Facility

The existing US 377 facility from US 380 to BUS 377E in Denton County, Texas mainly consists of a rural 2-lane roadway with 12-foot driving lanes and 10-foot shoulders. The roadway consists of a rural 2-lane roadway with a continuous two-way left turn lane in Pilot Point, Texas from BUS 377 N to Farm-to-Market (FM) 455 E, and in Aubrey, Texas/Krugerville, Texas from FM 428 to Sherry Lane/ Industrial Park. The sections of two-way left turn lanes consist of 12-foot driving lanes, a 14-foot continuous two-way left turn lane, and 4-foot shoulders. Along US 377 from BUS 377 S to FM 3524, Union Pacific Railroad runs parallel to the roadway on the west side of the facility. Along this section of roadway, there are four at grade railroad crossings: FM 455 E, St. John Road, Belew Road, and a private driveway. There are ditches along both sides of the roadway that provide surface drainage as well as culverts crossing along the existing roadway at multiple locations. Stormwater runoff within the limits is conveyed through an open ditch drainage system. The facility is intersected by seven major collectors, including: BUS 377 N, BUS 377 S, FM 455, FM 3524, FM 428, FM 424, US 380 and other minor collectors and local roads. Refer to **Appendix B** for the project photos, **Appendix C** for the Schematics, and **Appendix D** for the existing typical sections.

2.2 Proposed Facility

The proposed project consists of the reconstruction and widening of US 377 from BUS 377 E to US 380 in Denton County, Texas. Improvements would include the expansion of the current 2-lane rural roadway to a 6-lane urban roadway with a raised median to provide additional capacity and improve safety. Improvements would consist of 12-foot-wide travel lanes, 14-foot-wide outside shared-use lanes, and 5-foot sidewalks with American Disabilities Act (ADA) curb ramps in both directions through most of the project. Proposed drainage would be conveyed by curb & gutter, a storm sewer system and crossing culverts. Other improvements would include realigning the intersections of BUS 377 S at US 377, and FM 424 at US 377. The existing right of way (ROW) width would increase with the proposed project to 140 feet. The proposed project is anticipated to require 54.7 acres of additional ROW and 1.1 acres of proposed permanent drainage easements. Refer to **Appendix C** for the schematics and **Appendix D** for the proposed typical sections.

Federal regulations require that federally funded transportation projects have logical termini. 23 Code of Federal Regulations (CFR) 771.111(f)(i). Simply stated, this means that a project must have rational beginning and endpoints. Those endpoints may not be created simply to avoid proper analysis of environmental impacts.

Logical termini for the proposed improvements to US 377 are from BUS 377E to US 380. The reasons for the logical termini are as follows:

- BUS 377E – The north project limit was selected to coincide with constructing the permanent pavement improvements to the Denton County/Grayson County Line. The limit of the project's transition to existing pavement is variable and controlled by design geometry. This limit falls north of BUS 377E, north of the county line, and is controlled by the geometric transition to existing pavement. "BUS 377" was used to simplify the understanding of the logical termini without limiting the ability of the design to meet the geometric criteria to transition to existing pavement.

- US 380 – The south project limit was selected to match the US 380 interchange limits with US 377. US 380 was selected to provide a complete roadway system improvement to the next principal arterial and avoids creating a capacity bottleneck.

Federal regulations require that a project have independent utility and be a reasonable expenditure even if no other transportation improvements are made in the area. 23CFR 771.111 (f) (2). This means a project must be able to provide benefit by itself, and that the project not compel further expenditures to make the project useful. Stated another way, a project must be able to satisfy its purpose and need with no other projects being built.

Within the logical termini, US 377 is of independent utility because the proposed improvements can be accomplished without additional improvements in the proposed project area. The project limits encompass the entire length of the project in which construction would take place and account for transitions into the existing roadway. Because the project stands alone, it cannot and does not irretrievably commit federal funds for other future transportation projects.

Federal law prohibits a project from restricting consideration of alternatives for other reasonably foreseeable transportation improvements. 23 CFR 771.111(f)(3). This means that a project must not dictate or restrict any future roadway alternatives. As proposed, the US 377 project would in no way limit consideration of improvements, or alternatives for construction of such improvements, in adjoining sections of US 377. For this reason, the proposed project does not foreclose consideration of alternatives for other reasonably foreseeable transportation improvements.

The proposed action is consistent with the North Central Texas Council of Governments' (NCTCOG) financially constrained Mobility 2045 and the 2019-2022 Transportation Improvement Plan (TIP), as amended, which were initially found to conform to the Texas Commission on Environmental Quality (TCEQ) State Implementation Plan by FHWA and FTA on November 21, 2018. Copies of the Mobility Transportation Plan and TIP pages are included in **Appendix E**. All projects in the 2019-2022 TIP that are proposed for federal or state funds were initiated in a manner consistent with federal guidelines in Section 450, of Title 23 CFR and Section 613.200, Subpart B, of Title 49 CFR. The total estimated cost of the proposed project is $119.9 million and the ROW acquisition estimate is $10.6 million. Sources for the funding will be Federal (60 percent), State (30 percent), and Local (10 percent). Currently, the proposed project is not funded.

3.0 Purpose and Need

3.1 Need

The proposed project is needed because the existing US 377 within the project limits (a) fails to meet current safety design standards because the existing facility lacks ROW for pedestrians, and (b) is inadequate to meet current and future traffic volumes, resulting in congestion and reduced mobility.

3.2 Supporting Facts and/or Data

In the 2012 Update to the Pedestrian and Bicycle Linkage- Component of the Denton Mobility Plan, arterial streets carrying high volume of traffic at high speeds are a safety concern for pedestrians and bicyclists traveling along the roadway, or trying to cross the roadway. If an intersection with some type of traffic control isn't present, a raised median can enhance the safety for the pedestrian trying to cross the roadway. Nationally, approximately 4,100 pedestrians were killed and 59,000 pedestrians were injured by motor vehicle collisions in 2009, while approximately 630 bicyclists were killed and 51,000 were injured in 2009.

According to the City of Denton's Denton Plan 2030, Denton's population increased by 41 percent between 2000 and 2010, and projections predict an additional 93,951 residents by 2030. Population trends are listed in **Table 1**. Reconstruction and widening of US 377 in the northeast sector of Denton County balances the access and mobility needs of this mostly rural and low-density part of the county according to the Denton County Thoroughfare Plan.

Table 1: Denton Population Trends

Year	Population	% Change
2000	80,537	-
2010	113,382	+40.7%
2030	207,334	+82.9%

US Highway 377 is a regional arterial roadway that runs parallel to I-35W, crosses I-35E, passes through the City of Denton, and then continues northward midway between I-35 and DNT/ US 75 into Oklahoma. According to the Denton County Thoroughfare Plan, the Level of Service (LOS) on US 377 between FM 455 and FM 428 is typically considered a LOS F looking at a comparison NCTCOG model of the morning and evening peak periods in 2014 and 2035. During the evening peak hours for 2014, the LOS was considered a D/E compared to the LOS F for the evening 2035 peak hour traffic. Traffic volumes will increase along US 377 since it is one of the major roadways that provide parallel conveyance to I-35.

3.3 Purpose

The purpose of the proposed project is to reduce traffic congestion on the existing roadways; to improve operations of the roadway; to increase mobility (including pedestrian and bicycle accommodations); and, to provide improved connectivity to the area.

4.0 Alternatives

This section discusses the following alternatives (1) Build Alternative, (2) No-Build Alternative, and (3) Preliminary Alternatives Considered but Eliminated from Further Consideration.

4.1 Build Alternative

Approximately 54.7 acres of new ROW and 1.1 acres of proposed permanent drainage easements would be required for the Build Alternative. The Build Alternative would meet the proposed project's purpose and need by providing a north-south roadway to meet traffic demand and connect local traffic to other roadways. These proposed improvements would allow the roadway to meet current design standards.

The major design features of the proposed project include:

- The construction of two additional lanes in each direction of US 377 with curb and gutter and a raised center median. The proposed design would include 14-foot wide outside lanes designed as a shared-use lane for vehicles and bicycles. The construction would also include five-foot wide sidewalks throughout the length of the project.

- The Build Alternative meets applicable vertical design criteria. It provides desirable sight distance as well as desirable geometry along the length of the proposed project.

The proposed project is consistent with local and regional land use and transportation plans and policies in the area. It would improve mobility and provide improved system connectivity in the proposed project area. US 377 improvements would increase the capacity and driver delay would decrease. Safety for pedestrians would benefit by adding sidewalks and pedestrian ramps at intersections, and by adding left and right turn lanes for vehicles.

4.2 No-Build Alternative

Under the No-Build Alternative, the proposed US 377 project would not be constructed. The No-Build Alternative would not require the conversion of approximately 54.7 acres of new ROW and 1.1 acres of easements from existing land uses to transportation use (ROW) nor would other project-related impacts occur. The No-Build Alternative would not aid in traffic demand and local traffic management. Consequently, the anticipated mobility benefits of the proposed project would not be realized. For this reason, the No-Build Alternative does not meet the need and purpose for the proposed improvements and is not the recommended alternative. However, the No-Build Alternative was carried forward for further analysis.

4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration

To ensure the proposed US 377 alignment promotes safety and mobility and minimizes impacts to adjacent properties and businesses, three options were evaluated. These were:

- Acquiring all ROW on the right side of US 377.
- Acquiring some ROW on both sides of US 377.
- Acquiring all ROW from the left of US 377.

The broad scale approach to widen the roadway was adjusted in specific localized areas to further reduce impacts to properties and businesses.

5.0 Affected Environment and Environmental Consequences

In support of this EA, the following technical documentation was prepared:

- Air Quality Technical Report
- Archeological Background Study
- Report for Archeological Survey
- Surface Water Analysis Form
- Tier 1 Site Assessment
- Species Analysis Form
- Species Analysis Spread Sheet
- Community Impacts Assessment Technical Report Form
- Hazardous Materials Initial Site Assessment
- Project Coordination Request for Historical Studies Project
- Historic Resources Survey Report
- Indirect and Cumulative Impacts Analysis
- Traffic Noise Analysis Technical Report
- Waters of the U.S. Delineation Report

The technical reports and documents may be inspected and copied upon request at the TxDOT Dallas District Office, 4777 E. Highway 80, Mesquite, Texas 75150.

The following sub-sections identify the environmental consequence of the Build and No-Build Alternative on each resource.

5.1 Right-of-Way/Displacements

Build Alternative: The Build Alternative would require the acquisition of approximately 54.7 acres of new ROW and 1.1 acres of permanent drainage easements (**Appendix C**). The proposed project would potentially result in eight displacements from seven properties. Two of the seven properties are residential properties with building impacts. The remaining five properties are commercial properties with building impacts. One of the commercial properties consists of two businesses. The total area of additional ROW and easements needed for the proposed project is 55.8 acres.

The ROW acquisition would be limited to those properties required for roadway construction. Encroachment-alteration effects could include the loss of developable land for light industrial use.

The following are the avoidance, minimization, or compensatory mitigation features or mitigations conducted/analyzed for the Build Alternative:

- Potential displacements were minimized by avoiding impacts to structures where possible and using available vacant or open land where practicable. Constraints were mapped and used in the planning process to avoid important resources such as places of worship, public facilities, and other various resources.

- ROW acquisition would be conducted in accordance with the Federal Uniform Relocation and Real Property Acquisition Policy Act of 1970 (Uniform Act).

No-Build Alternative: Under the No-Build Alternative, no project-related ROW would be acquired.

5.2 Land Use

Currently, the project area is located in a rural/suburban setting, with large amount of newly built high-density residential neighborhoods and service establishments. Developed and undeveloped

lands are present within the proposed project area. Developed lands include single-family residences, retail, commercial, public facilities, and places of worship (**Figure 1** in **Appendix F**). Undeveloped lands comprise of vacant (not utilized), agriculture (ranch and pasture), fenced row vegetation, streams, and ponds. Active agricultural lands exist adjacent to the proposed project. Vegetation in the project vicinity consists primarily of maintained urban grasses, landscaping, and agriculture (crops). Some woodland and mixed shrub areas are also present near the streams. Land use changes would result in Agriculture; Crosstimbers Woodland and Forest; Disturbed Prairie; Open Water; Riparian; and Tallgrass Prairie, Grassland ecological systems being converted to Urban. **Appendix C** shows the proposed project corridor.

The proposed project crosses 18 streams comprising of 13 unnamed tributaries to Pecan Creek, Running Branch, and four unnamed tributaries to Cantrell Slough. Review of Federal Emergency Management Act (FEMA) Flood Insurance Map (FIRM) Panels 48121C0115G, 48121C0255G, 48121C0265G, 48121C0405G, 48121C0385G (effective 4/18/2011) indicate that the majority of the project area is outside the 100-year floodplain. The sections of the proposed project that cross tributaries to Pecan Creek (Crossings 3, 5, 12, and 14) are situated within Zone A (areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply). Stream crossings and the 100-year floodplain are identified on **Figure 4** in **Appendix F**.

Build Alternative: The land use changes associated with the proposed project do not conflict with the goals of the Cities of Pilot Point, Aubrey, Krugerville and Crossroads Comprehensive *Plan,* would not delay or interfere with any other planned improvements, and are consistent with applicable laws; therefore, no mitigation is warranted.

No-Build Alternative: Under the No-Build Alternative, the additional ROW and easements would not be obtained and there would be no land use impacts from the proposed project.

5.3 Farmlands

Observations made during the site reconnaissance on April 29, 2020; May 6, 13, and 26, 2020; and June 11, 2020 revealed that active agricultural lands exist adjacent to the proposed project.

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey and the U.S. Census Bureau map of urbanized areas were used to determine the soil types present within the proposed project area. Soils determined to be within the existing and proposed ROW, and proposed easements are listed in **Table 2** (see **Figure 2** in **Appendix F**).

Table 2: Soil Types within the Proposed Project Area

Map Unit Name	Farmland Classification
Burleson clay, 0 to 1 percent slopes	All areas are prime farmland
Callisburg fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland
Callisburg fine sandy loam, 3 to 5 percent slopes	All areas are prime farmland
Crockett fine sandy loam, 1 to 3 percent slopes	Not prime farmland
Gasil fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland
Gasil fine sandy loam, 3 to 8 percent slopes	Not prime farmland

Justin-Urban land complex, 0 to 3 percent slopes	Not prime farmland
Konsil fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland
Konsil fine sandy loam, 3 to 8 percent slopes	Not prime farmland
Navo clay loam, 1 to 3 percent slopes	Not prime farmland
Navo clay loam, 3 to 5 percent slopes	Not prime farmland
Silstid loamy fine sand, 1 to 5 percent slopes	Not prime farmland
Wilson clay loam, 0 to 1 percent slopes	Not prime farmland
Wilson clay loam, 1 to 3 percent slopes	Not prime farmland

Source: NRCS Web Soil Survey, https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (accessed 6/17/20).

Build Alternative: The Farmland Conversion Impact Rating for Corridor Type Projects was completed on May 14, 2020 and scored 45 (0 on Part IV) for Denton County. Coordination with the NRCS is not required.

Farmland impacts would be limited to areas directly adjacent to the existing US 377 project corridor and would not result in the division or separation of existing agricultural land. Farmlands would continue to function as they do under existing conditions; therefore, encroachment-alteration effects stemming from farmland impacts are not anticipated as a result of the Build Alternative.

It is not possible to fully mitigate for the loss of agricultural acreage without bringing non-farmed land into production.

No-Build Alternative: Under the Build Alternative, the additional ROW would not be obtained and there would be no US 377 related farmland impacts.

5.4 Utility Relocation

It is reasonably foreseeable that utilities will have to be relocated as a result of this project. The impacts resulting from removal of any utilities from within existing highway ROW have been considered as part of the project impacts under each of the resource area subheadings within this environmental assessment. Additionally, if utilities will be re-located within highway ROW, then the impacts resulting from re-installation of the utilities within highway ROW has also been considered as part of the project impacts under each of the resource area subheadings within this environmental assessment. To the extent that the owner of any displaced utility determines to reinstall the displaced utility at a location outside of highway ROW, such location will be determined by the owner of the utility subject to the rules and policies governing the utility relocation process.

Build Alternative:
Required utility adjustments would occur prior to or during construction of the proposed project. Efforts would be made to minimize construction-related delays and to ensure emergency responders are aware of road conditions and lane closures. Given that both issues are limited to the construction phase and would be confined to the project area, encroachment-alteration effects are not applicable. The adjustments and relocation of any utilities would be managed so that no substantial interruptions would occur.

No-Build Alternative: Under the No-Build Alternative there would be no project-related impacts to utilities.

5.5 Bicycle and Pedestrian Facilities

Build Alternative: Bicycle and pedestrian facilities would be constructed as part of the proposed project in accordance with:

TxDOT's policy for bicycle and pedestrian accommodation and federal policy statement on Bicycle and Pedestrian Accommodations Regulations and Recommendations by the U.S. Department of Transportation signed on March 11, 2010.

- Bicycle traffic would be accommodated with 14-foot wide outside shared-use lanes with two-foot wide outside curb offsets. Six-foot wide ADA-compliant sidewalks would be included along the entire project limit (**Appendix C – Schematics** and **Appendix D – Typical Sections**).

- There is the potential for the proposed project area to experience changes in the mode(s) of transportation utilized by area residents and changes in traffic volumes. The introduction of new bike/pedestrian facilities in the immediate area may encourage people to pursue alternative modes of transportation. With improved access to bike/pedestrian facilities, people may have more desire to visit or use local services and facilities.

The addition of bicycle and pedestrian facilities is a positive benefit; therefore, mitigation is not warranted.

No-Build Alternative: Under the No-Build Alternative, bicycle and pedestrian facilities would not be constructed.

5.6 Community Impacts

Build Alternative: A detailed discussion of the community impacts can be found in the *Community Impacts Assessment Technical Report Form* for the proposed project.

The proposed project is anticipated to reduce travel times through added travel lanes by widening the project to four lanes with added turn lanes at median breaks. The inclusion of raised medians would require motorists to make U-turns at median breaks to access certain locations where median breaks are not available, potentially reducing travel times, though general improvements are anticipated to offset these delays. Access would be improved for non-motorists, through the inclusion of shared use paths and sidewalks across the entire project. Raised medians and shared use paths would improve safety for motorists, bicyclists and pedestrians.

Minimal adverse impacts to community cohesion would occur as the proposed project is on an existing roadway, and displacements are not widespread. Proposed median break locations may impact the cohesion of homes and retail along the project corridor, but these median breaks are subject to change during the Plans, Specifications, and Estimates (PS&E) phase of the project. The safety provided by raised medians would help to offset potential impacts of median break locations, overall improving community cohesion and access. Congestion for regional travelers and local workers in the area would be improved as would the delivery of goods to the various economic centers along this corridor.

No-Build Alternative: Under the No-Build Alternative, there would be no impacts to the community associated with the proposed project.

Environmental Justice

Refer to the *Community Impacts Assessment Technical Report Form* for the locations of the Environmental Justice (EJ) blocks low income, (minority population greater than 50%) and the census data obtained from the American FactFinder.

EJ populations occur within the Community Impact Assessment (CIA) study area. There are 61 out of 758 census blocks within the CIA study area that contain 50% or more minorities. Only six EJ census blocks are adjacent to the project. There are no EJ census block groups encompassing the CIA study area. No adverse impacts to EJ populations are anticipated. There are six EJ census blocks adjacent to the project out of 758 and two of the eight displacements occur in them. Any impacts would be equally shared between EJ populations and non-EJ populations (See **Figure 3** in **Appendix F**).

The 2020 Department of Health and Human Services (DHHS) poverty level for a family of four is $26,200.00. No geographies show a median household income below the DHHS poverty level. Median income in the study area within census block groups ranges from $30,213 to $109,345. and within census tracts ranges from $67,472 to $ 105,539 (See **Figure 3** in **Appendix F**).

Build Alternative: The proposed project would be consistent with Executive Order (EO) 12898.

Disproportionately high and adverse impacts on any minority or low-income populations are not anticipated; therefore, mitigation measures for EJ populations were not considered. There are six EJ census blocks adjacent to the project out of 758 and two of eight displacements occur in them. Any impacts would be equally shared between EJ populations and non-EJ populations. Any adverse impacts would be equally shared between EJ populations and non-EJ populations.

No-Build Alternative: Under the No-Build Alternative, there would be no impact, adverse or beneficial, to EJ populations.

Limited English Proficiency

A detailed discussion of the Limited English Proficiency (LEP) can be found in the *Community Impacts Assessment Technical Report Form* for the proposed project.

Based on census data for LEP populations, the total recorded population (age 5 years and over) for the CIA study area is 28,281. Of the 28,281 people, 1,071 or 3.8 percent are LEP. The languages that LEP persons likely speak in the CIA study area are predominantly Spanish, but also include Asian and Pacific Island and Indo-European languages (See **Figure 3** in **Appendix F**).

The total recorded population (age 5 years and over) for the census block groups encompassing the CIA study area is 28,281. Of this population (3.8%), speak English "less than very well". Of those that speak English "less than very well", 931 (3.3%) speak Spanish; 33 (0.1%) speak Asian and Pacific Island languages; 107 (0.4%) speak other Indo-European languages; and (0.0%) speak other languages.

One Spanish church was found (ID 11, Iglesia Jesucristo Rey De Reyes), and a business adjacent to US 377, Now You're Talkin' Vamos Hablar, a speech therapy office, also indicated Spanish language accommodation. No other signs of languages other than English were observed within the study area during the windshield surveys conducted in April, May, and June 2020 (see **Appendix B**).

Build Alternative: Reasonable steps have been and would continue to be taken to ensure LEP persons have meaningful access to the programs, services, and information TxDOT provides. Persons who have

special communication or accommodation needs, or need an interpreter, have been, and will continue to be encouraged to contact the TxDOT Dallas District Public Information Office for assistance. Therefore, the requirements of EO 13166, pertaining to LEP, appear to be satisfied.

LEP populations would realize the same benefits as non-LEP populations: reduced congestion and improved mobility. The improved mobility and reduced congestion would allow for more efficient travel through the surrounding area. No adverse encroachment-alteration effects LEP populations are anticipated.

The legal notice for the April 28, 2020 virtual public meeting was published in the Spanish language newspaper, *Al Día*, as well as two English language newspapers. Due to the COVID 19 pandemic, TxDOT created a virtual public meeting presentation, available for viewing from April 28, 2020 through May 13, 2020. Accommodations for LEP persons during public involvement have included, and would continue to include, providing bilingual (English/Spanish) public notices, placing public notice display ads in English and Spanish newspapers, and having Spanish-speaking staff present at public involvement events. In addition, the public involvement notices state that accommodations for other non-English languages would be provided if requested ahead of the meeting.

The previously discussed accommodations would be repeated for the public hearing.

No-Build Alternative: Under the No-Build Alternative, there would be no impacts to LEP populations as a result of the implementation of the proposed project.

5.7 Visual/Aesthetics Impacts

Build Alternative: US 377 is an existing undivided two–lane roadway with one-foot wide shoulders and no bicycle/pedestrian facilities. Vegetation in the ROW consists primarily of maintained grasses with minimal tree cover at some of the stream crossings Aesthetic enhancement of the existing roadway is minimal. The Build Alternative would have minimal effect on the overall aesthetic quality along the project area. Visual impacts resulting from the Build Alternative would include roadway widening. Because this is a change from the existing condition, the viewsheds of existing residences and business facilities would be directly impacted. However, these impacts would not be considered as being detrimental to business operations. Landscaping would not be included as a part of the proposed project.

The proposed project may incorporate safety lighting, which could be considered as a positive effect for visual and aesthetic qualities for the proposed pedestrian and bicycle accommodations. During final design, the design of light fixtures would be completed. Local, state, and federal requirements would be reviewed during design and designation of additional lighting required for this project. The roadway lighting system could consist of low-impact, downward directional lighting to minimize impacts to adjacent properties.

Where reasonable and feasible, mitigation measures that would result in beneficial visual and aesthetic impacts may be programmed for this project. These measures may include aesthetic enhancements, such as lighting, and/or decorative details. Aesthetics treatments would be developed during final design and incorporated into the project design as appropriate.

No-Build Alternative: The No-Build Alternative would not result in US 377 project-related visual impacts along the existing corridor as the proposed improvements would not be constructed.

5.8 Cultural Resources

Evaluation of impacts to cultural resources has been conducted under Section 106 of the National Historic Preservation Act in accordance with the Programmatic Agreement among FHWA, TxDOT, the Texas State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) Regarding the Implementation of Transportation Undertakings.

Cultural resources are structures, buildings, archeological sites, districts (a collection of related structures, buildings, and/or archeological sites), cemeteries and objects. Both federal and state laws require consideration of cultural resources during project planning. At the federal level, NEPA and the National Historic Preservation Act (NHPA) of 1966, among others, apply to transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas (ACT) apply to these projects. Compliance with these laws often requires consultation with the Texas Historical Commission (THC)/SHPO and/or federally recognized tribes to determine the project's effects on cultural resources. Review and coordination of this project followed approved procedures for compliance with federal and state laws.

5.8.1 Archeology

The purpose of the archeological investigation is to conduct an inventory or determine the presence/absence of archeological resources (36 Code of Federal Regulations 800.4) and to evaluate identified resources for their eligibility for inclusion on the National Register of Historic Places (NRHP), per Section 106 (36 CFR 800) of the NHPA of 1966, as amended, or as a designated state archeological landmark (SAL) under the ACT (13 Texas Administrative Code 26.12).

The survey Area of Potential Effects (APE) for this project measured approximately 35.56 acres of proposed ROW. Work consisted of visual inspection of the entire project area and included the excavation of 64 shovel tests in proposed ROW recommended for survey where right of entry (ROE) was granted and in areas of existing ROW. Surveyed areas with ROE consisted of 7.22 acres, with denied ROE access to recommended survey areas totaling 28.84 acres. Several parcels denied ROE were visually assessed from existing ROW and from adjacent parcels where ROE was granted to determine that no survey was necessary (16.56 acres). Fieldwork was conducted between June 1 to 3, 2020. Shovel testing recovered artifacts at one location, resulting in a single newly recorded archeological site. Site 41DN622 is an early to mid-twentieth century house site which is recommended not eligible for listing in the NRHP or designation as a SAL. A draft report of investigations was submitted to TxDOT in June 2020.

Prior to fieldwork, the THC's Archeological Sites Atlas was consulted to identify previous work, documented, and potential archeological sites within and surrounding the APE. Research focused on the identification of archeological sites, sites listed as SALs, Recorded Texas Historic Landmarks, sites listed on the NRHP, cemeteries, and previously conducted archeological surveys within one kilometer (0.62 mile) of the APE.

Background research for this project consisted of an online-records search through the THC Archeological Sites Atlas (Atlas 2020) and a review of historical maps and aerial photographs. The search identified five previously conducted archeological surveys, one documented archeological site, and five cemeteries. Of the five previous archeological surveys within a kilometer of the APE, four overlap portions of the APE. A 2017 Cox McLain survey on behalf of the Brazos Electric Power Cooperative, Inc. overlaps roughly one kilometer of the APE along FM 424 and its intersection with US 377. A 1982 Environmental Protection Agency (EPA) survey overlaps the APE for about one kilometer in Krugerville, and another intersects the APE at the northeastern end of Pilot Point. Finally, another EPA survey conducted in 1976 intersects the APE in Aubrey north of the intersection of US 377 and

Spring Hill Road. No sites were recorded during these surveys. The remainder of the APE has not been previously surveyed.

The proposed project would have direct effects resulting from ground-disturbing construction activities within the APE. Given the results of the identification efforts, TxDOT proposes that the project will have no effect on archeological historic properties as the APE does not contain sites that are eligible for inclusion in the NRHP or that warrant formal designation as SALs.

The project is compliant with Section 106 of the NHPA of 1966 (and subsequent amendments) and the ACT. Section 106 coordination will be conducted in accordance with the terms and conditions of the First Amended Programmatic Agreement (PA) among the FHWA, the THC, the ACHP, and TxDOT, as well as the Memorandum of Understanding (MOU) between TxDOT and the THC.

A TxDOT archeologist has reviewed the report and concurs with the results. The SHPO concurred with this assessment in a letter signed and dated July 15, 2020 (**Appendix G**). The identification efforts and analysis of effects completed to date are adequate. No further work or consultation is required within the evaluated portions of the APE. Once access is obtained to areas for which access has been denied, TxDOT will complete required investigations and consultation prior to construction. In the event that unanticipated archeological deposits are encountered during construction, work in the immediate area will cease and TxDOT archeological staff will be contacted to initiate post-review discovery procedures under the provisions of the PA and MOU.

Build Alternative: It is not anticipated that the proposed project would result in direct impacts to known archeological resources. In the unlikely event that cultural resources are discovered during construction of the proposed project, TxDOT would immediately initiate cultural resource discovery procedures. All work in the vicinity of the discovery would cease until a specialist from TxDOT and/or the THC could arrive on site and assess the discovery's significance and the need, if any, for additional investigation.

Consultation with federally-recognized Native American tribes was concluded on July 1, 2020. No objections or expressions of concern were received. See **Appendix G** for the tribal coordination documentation.

Potential impacts to archeological resources would be limited to the construction phase of the project and confined to the existing and proposed ROW/easements; thus, encroachment-alteration effects would not occur.

Once access is obtained to areas for which access has been denied, TxDOT will make a determination if mitigation would be required. It is not anticipated that the proposed project would result in direct impacts to known archeological resources.

No-Build Alternative: As construction of the proposed project would not occur, there would be no project-related impacts on archaeological resources associated with the No-Build Alternative.

5.8.2 Historic Properties

TxDOT-certified historians surveyed the project APE on May 21 and 22, 2020. It was determined through consultation with the SHPO that the APE for the proposed project is 150 feet beyond the proposed ROW boundaries for existing alignment and within the ROW for areas with no new ROW. The APE includes all parcels of land that are partially or wholly contained within the limits of the APE. The reconnaissance survey of historic-age resources (defined here as all resources built in or before 1975) resulted in the identification of 40 properties with historic-age resources within the project APE. These

resources primarily consisted of domestic/residential (19 buildings), commerce (10 buildings), and agricultural (11 buildings). The majority dated to the latter end of the historic period (1950-1975). Applying the Criteria for Evaluation and the aspects of integrity, project historians recommended that none of the surveyed historic-age properties are eligible for NRHP listing. Survey results and eligibility recommendations have been reviewed by TxDOT historians, and findings have been coordinated with the SHPO/THC. No finding of impacts to historic properties has been determined. See the *Historical Resources Survey Report* for US 377 for detailed information.

Build Alternative: On July 29, 2020, TxDOT historians determined that there are no historic, non-archeological properties in the APE. Individual project coordination with SHPO is not required **(Appendix G).**

No-Build Alternative: No changes to existing conditions would occur in the No-Build Alternative scenario; therefore, no impacts to historic properties would be anticipated with the No-Build Alternative.

5.9 Protected Lands

Section 4(f) protects publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State or local significance, and any land from an historic site of national, State, or local significance. There are no section 4(f) properties present in the project area.

The proposed project would not use any lands protected by Section 6(f) of the Land and Water Conservation Fund Act or Parks and Wildlife Code (PWC) Chapter 26 lands. There are no Section 6(f) resources in the project area.

Chapter 26 of the Texas PWC protects the taking of public land designated and used prior to the arrangement of the project as a park, recreation area, scientific area, wildlife refuge, or historic site. There are no Chapter 26 properties present in the project area.

No-Build Alternative: As construction of the proposed US 377 project would not occur, there would be no project-related impacts on Section 4(f), Section (6)f, and PWC Chapter 26 properties associated with the No-Build Alternative.

5.10 Water Resources

5.10.1 Clean Water Act Section 404

This project will involve regulated activity in jurisdictional waters and therefore will require authorization under Section 404 of the Clean Water Act (CWA). The following table shows the waters that are anticipated to be jurisdictional waters in which regulated activity is anticipated to take place. It also indicates whether the impacts are anticipated to be authorized under Section 404 by a non-reporting nationwide permit (i.e., no pre-construction notification required), or if it is anticipated that a nationwide permit with pre-construction notification, individual permit, letter of permission, or regional general permit will be required.

The proposed project has 18 crossing comprising of the tributaries to Pecan Creek, Running Branch, and tributaries to Cantrell Slough. **Table 3** lists the Waters of the U.S. in the proposed project area, amount of impacts to the water bodies that would result from implementation of the proposed project, and the applicable U.S. Army Corps of Engineers (USACE) permit.

Table 3: Impacts to Waters of the U.S.

Crossing No.	Name of Water Body or other location indicator	Approx. OHWM (feet)	Existing Structure	Proposed Work or Structure	Permanent Fill		Temporary Fill		NWP	PCN (Y/N)
					Open Waters (acres and linear feet)	Wetlands or other Special Aquatic Sites (acres)	Open Waters (acres and linear feet)	Wetlands or other Special Aquatic Sites (acres)		
1	Ephemeral tributary to Pecan Creek	10	Culvert	None	0.01 ac 24 LF	0	0	0	14	N
2	Intermittent tributary to Pecan Creek	8	Culvert	Culvert replacement	0.02 ac 66 LF	0	0.04 ac 88 LF	0	14	N
3	Intermittent tributary to Pecan Creek	9	Culvert	Culvert replacement	0.04 ac 87 LF	0	0.04 ac 76 LF	0	14	N
4	Ephemeral tributary to Pecan Creek	6	Culvert	Culvert replacement	0.02 ac 52 LF	0	0.03 ac 97 LF	0	14	N
5	Ephemeral tributary to Pecan Creek	5	Culvert	Culvert replacement	0.02 ac 110 LF	0	0.05 ac 97 F	0	14	N
6	Ephemeral tributary to Pecan Creek	6	culvert	Culvert replacement	0.01 ac 45 LF	0	0.01 ac 96 LF	0	14	N
7	Ephemeral tributary to Pecan Creek	4	Culvert	Culvert replacement	0.01 ac 86 LF	0	0	0	14	N
8	Intermittent tributary to Pecan Creek	5	Culvert	Culvert replacement	0.02 ac 93 LF	0	0.05 ac 114 LF	0	14	N
9	Ephemeral tributary to Pecan Creek	5	Culvert	Culvert replacement	0.01 ac 79 LF	0	0	0	14	N
10	Ephemeral tributary to Pecan Creek	6	Culvert	Culvert replacement	0.01 ac 32 LF	0	0	0	14	N
11	Intermittent tributary to Pecan Creek	6	Culvert	Culvert replacement	0.01 ac 62 LF	0	0.01 ac 78 LF	0	14	N
12A	Ephemeral tributary to Pecan Creek	1	Culvert	Culvert replacement	0.01 ac 44 LF	0	0	0	14	N
12B	Ephemeral tributary to Pecan Creek	4	Culvert	Culvert replacement	0.01 ac 66 LF	0	0	0	14	N

Table 3: Impacts to Waters of the U.S.

Crossing No.	Name of Water Body or other location indicator	Approx. OHWM (feet)	Existing Structure	Proposed Work or Structure	Permanent Fill		Temporary Fill		NWP	PCN (Y/N)
					Open Waters (acres and linear feet)	Wetlands or other Special Aquatic Sites (acres)	Open Waters (acres and linear feet)	Wetlands or other Special Aquatic Sites (acres)		
13	Running Branch (intermittent)	4	Culvert	Culvert replacement	0.01 ac 42 LF	0	0.03 ac 82 LF	0	14	N
14	Intermittent tributary to Pecan Creek	15	Culvert	Culvert replacement	0.04 ac 87 LF	0	0.05 ac 92 LF	0	14	N
15	Ephemeral tributary to Cantrell Slough	4	Culvert	Culvert replacement	0	0	0	0	14	N
16	Ephemeral tributary to Cantrell Slough	4	Culvert	Culvert replacement	0.01 ac 145 LF	0	0.01 ac 72 LF	0	14	N
17	Ephemeral tributary to Cantrell Slough	8	Culvert	Culvert replacement	0.04 ac 176 LF	0	0	0	14	N
18	Ephemeral tributary to Cantrell Slough	4	Culvert	Culvert replacement	0.002 ac 23 LF	0	0.001 ac 9 LF	0	14	N

ac – acre
LF – Linear Feet
OWHM – Ordinary High Water Mark
NWP – Nationwide Permit
PCN – Preconstruction Notification

Impacts to Waters of the U.S. within the proposed project limits would result from the widening of the roadway, which include culvert replacement and paved roadway construction (see **Table 3** and **Figure 4** in **Appendix F**). See the *Waters of the U.S. Delineation Report* for detailed information and figures.

The need for an individual permit under Section 404 is not anticipated. If it is later determined that an individual permit under Section 404 is needed, compliance with EPA's Section 404(b)(1) Guidelines will be confirmed prior to submittal of the individual permit application.

Crossings 1 through 18 would be impacted by replacement of culverts from the roadway pavement expansion. These crossings would utilize Nationwide Permit (NWP) 14 – *Linear Transportation Projects*. Each of the 18 crossings have been identified as single and complete projects.

Appropriate measures would be taken to maintain normal downstream flows and minimize flooding. Temporary fills would consist of clean materials and be placed in a manner that would not be eroded by expected high flows. Temporary fills would be removed in their entirety and the affected area returned to preconstruction elevations, and revegetated as appropriate. If the project involves stream modification, stream channel modifications, including bank stabilization, would be limited to the minimum necessary to construct or protect the structure and the immediate vicinity of the project. The activity would comply with all general and regional conditions applicable to NWP 14.

The activities at water crossings 1 through 18 have been identified as single and complete projects as defined in the NWPs because each crossing occurs at a separate and distant location and would therefore be permitted under the same NWP 14.

The proposed project would comply with EPA Section 404(b)(1) Guidelines 40 CFR Part 230, allowing the discharge of dredged or fill material only if there is no practicable alternative that would have less adverse effects on the aquatic ecosystem. Since the proposed project would consist of extending an existing facility, and there are no other practicable build alternatives, the discharge of dredged or fill material into Waters of the U.S. is permissible.

Build Alternative: **Table 3** lists the Waters of the U.S. in the proposed project area, and amount of impacts to the water bodies that would result from implementation of the proposed project. A PCN would be not required for this project.

The potential for project-related encroachment-alteration effects on Waters of the U.S. would be mitigated through permanent (post-construction) Best Management Practices (BMPs) as described below. To minimize the potential for adverse impacts, BMPs would be regularly inspected and proactively maintained.

No-Build Alternative: As construction of the proposed project would not occur, there would be no project-related impacts on Waters of the U.S. associated with the No-Build Alternative.

5.10.2 Clean Water Act Section 401

For a project that will use a NWP under Section 404 or Section 10, regardless of whether the NWP is non-reporting (i.e., assumed) or reporting (i.e., requires submittal of a PCN), TxDOT complies with Section 401 of the CWA by implementing TCEQ's conditions for NWPs. For projects that require authorization under Section 404 or Section 10 beyond a NWP, TxDOT complies with Section 401 of the CWA by including a Tier I or Tier II checklist (depending upon the amount of disturbance/impact) in the individual permit, letter of permission, or regional general permit application that is submitted to the USACE, and then complying with the conditions of the Tier I or Tier II checklist.

General Condition 25 of the NWP Program requires applicants using NWP 14 to comply with Section 401 of the CWA. Compliance with Section 401 requires the use of BMPs to manage water quality on construction sites. General Condition 12 also requires applicants using NWP 14 to use appropriate soil erosion and sedimentation controls.

Build Alternative: The Storm Water Pollution Prevention Plan (SW3P) would include at least one BMP from the 401 Water Quality Certification Conditions for NWPs as published by the TCEQ. These BMPs would address each of the following categories:

- Category I Erosion Control would be addressed by using temporary vegetation, permanent seeding/sodding, and stone outlet structures such as stone riprap.

- Category II Sedimentation Control would be addressed by installing silt fence, rock berms, and mulch filter socks.

- Category III Post-Construction Total Suspended Solids (TSS) control would be addressed by installing rock riprap filters at the downstream end of the storm sewer system before entering the creeks.

- Other approved methods would be substituted if necessary, using one of the BMPs from the identical category.

The potential for project-related encroachment-alteration effects on water quality would be mitigated through permanent (post-construction) BMPs as described above. To minimize the potential for adverse impacts, BMPs would be regularly inspected and proactively maintained.

BMPs would be implemented to ensure that water quality impacts would not be significant; therefore, mitigation is not considered.

No-Build Alternative: As construction of the proposed project would not occur, there would be no project-related impacts on Waters of the U.S. associated with the No-Build Alternative.

5.10.3 Executive Order 11990 Wetlands

Build Alternative: Pursuant to EO 11990 (Protection of Wetlands) and Section 404 of the CWA, field reconnaissance was conducted to identify Waters of the U.S., including wetlands, within the proposed project limits on May 13 and June 11, 2020. Results of the reconnaissance did not identify wetlands within the project limits.

No-Build Alternative: As construction of the proposed project would not occur, there would be no project-related impacts on wetlands associated with the No-Build Alternative.

5.10.4 Rivers and Harbors Act

This project does not involve work in or over a navigable Water of the U.S.; therefore, Section 10 of the Rivers and Harbors Act does not apply. Likewise, a navigational clearance under the General Bridge Act of 1946, and Section 9 of the Rivers and Harbors Act (administered by the U.S. Coast Guard [USCG]) is not applicable. Coordination with the USCG (for Section 9 and the General Bridge Act) and the USACE (for Section 10) would not be required.

5.10.5 Clean Water Act Section 303(d)

The proposed project is located within five linear miles (not stream miles) of, is within the watershed of, and drains to, an impaired assessment unit under Section 303(d) of the federal CWA (see **Table 4**).

Table 4: Section 303(d)

Watershed	Segment Name	Segment Number	Assessment Unit Number
Elm Fork Trinity River-Little Elm Reservoir	Clear Creek	0823C	0823C_01

Source: TCEQ , 2020 Texas 303(d) List, https://www.tceq.texas.gov/assets/public/waterquality/swqm/assess/20txir/2020_303d.pdf (accessed 5/27/20).

To date, TCEQ has not identified (through either a total maximum daily load or the review of projects under the TCEQ MOU) a need to implement control measures beyond those required by the construction general permit (CGP) on road construction projects. Therefore, compliance with the

project's CGP, along with coordination under the TCEQ MOU for certain transportation projects, collectively meets the need to address impaired waters during the environmental review process. As required by the CGP, the project and associated activities will be implemented, operated, and maintained using best management practices to control the discharge of pollutants from the project site.

5.10.6 Clean Water Act Section 402

Build Alternative: Since Texas Pollutant Discharge Elimination System (TPDES) CGP authorization and compliance (and the associated documentation) occur outside of the environmental clearance process, compliance is ensured by the policies and procedures that govern the design and construction phases of the projects. The Project Development Process Manual and the PS&E Preparation Manual require an SW3P be included in the plans of all projects that disturb one or more acres. The Construction Contract Administration Manual requires that the appropriate CGP authorization documents (Notice of Intent [NOI] or site notice) be completed, posted, and submitted, when required by the CGP, to TCEQ and the Municipal Separate Storm Sewer System (MS4) operator. It also requires that projects be inspected to ensure compliance with the CGP.

The PS&E Preparation Manual requires that all projects include Standard Specification Item 506 (Temporary Erosion, Sedimentation, and Environmental Controls), and the "Required Specification Checklists" require Special Provision 506-003 on all projects that need authorization under the CGP. These documents require the project contractor to comply with the CGP and SW3P and complete the appropriate authorization documents.

The proposed project is located outside the TxDOT's MS4 boundary area. The proposed project is located within the cities of Aubrey, Cross Roads, Krugerville, and Pilot Point and Denton County Extraterrestrial Jurisdiction and would comply with applicable MS4 requirements.

No-Build Alternative: This alternative would not alter the amount of runoff generated within the proposed project area.

5.10.7 Floodplains

Denton County and the cities of Aubrey, Cross Roads, Krugerville, and Pilot Point are participants in the National Flood Insurance Program. The study area is located on FIRM Panel Numbers 48121C0115G, 48121C0255G, 48121C0265G, 48121C0405G, 48121C0385G (effective 4/18/2011) (see **Figure 4** in **Appendix F**).

Build Alternative: A review of FEMA FIRMs indicate that the majority of the project area is outside the 100-year floodplain. The sections of the proposed project that cross tributaries to Pecan Creek (Crossings 3, 5, 12 and 14) are situated within Zone A (areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies). Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. This project is subject to and will comply with federal EO 11988 on Floodplain Management. The department implements this EO on a programmatic basis through its Hydraulic Design Manual. Design of this project will be conducted in accordance with the department's Hydraulic Design Manual. Adherence to the TxDOT Hydraulic Design Manual ensures that this project will not result in a "significant encroachment" as defined by FHWA's rules implementing EO 11988 at 23CFR 650.105(q).

No-Build Alternative: This alternative would not alter the existing level of roadway encroachments into floodplains.

5.10.8 Wild and Scenic Rivers

The proposed project would not impact any present, proposed, or potential unit of the National Wild and Scenic Rivers System.

5.10.9 Coastal Barrier Resources

The Coastal Barrier Resources Act (CBRA) does not apply.

5.10.10 Coastal Zone Management

The proposed project is not located within the Texas Coastal Management Plan (TCMP) boundary. Therefore, a consistency determination is not required.

5.10.11 Edwards Aquifer

The TCEQ Edwards Aquifer Rules and the EPA Edwards Aquifer MOU do not apply.

5.10.12 International Boundary and Water Commission (IBWC)

This proposed project does not cross or encroach upon the floodway of the IBWC ROW or an IBWC flood control project.

5.10.13 Drinking Water Systems

In accordance with TxDOT's Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges (Item 103, Disposal of Wells), any drinking water wells would need to be properly removed and disposed of during construction of the project.

5.11 Biological Resources

5.11.1 Texas Parks and Wildlife Coordination

The *TxDOT Species Analysis Spreadsheet, Species Analysis Form, Tier 1 Site Assessment Form*, and supporting documents were completed for the proposed project. It was determined that coordination with the Texas Parks and Wildlife Department (TPWD) was required per the 2013 TPWD-TxDOT MOU because:

1) The proposed project may impact at least 0.10 acre of riparian vegetation, and
2) The proposed project disturbs habitat in an area equal to or greater than the area of disturbance indicated in the Threshold Table PA.
3) The project is within the range of and there is suitable habitat for state threatened species and SGCN as identified by the TPWD County list of Rare and Protected Species that do not have species-specific BMPs as identified in the BMP Programmatic Agreement (2017 Revision).

Items in numbers 1 and 2 are discussed in **Section 5.11.2** and the item in number 3 is discussed in Section **5.11.11**.

Early coordination with TPWD was initiated on August 18, 2020 and completed on September 17, 2020. See **Appendix G** for the coordination documentation. Documentation of the *Biological Resources Technical Report* is maintained in the project file at the TxDOT Dallas District Office.

5.11.2 Impacts on Vegetation

Build Alternative: The proposed project would directly impact the following MOU Type habitats: Agriculture (3.4 acres), Crosstimbers Woodland and Forest (3.2 acres); Disturbed Prairie (20.2 acres); Riparian (2.4 acres); and Urban (277.5 acres). The vegetation impacted by the proposed project fits into the Cross Timbers (CRTB) Ecoregion described in the Threshold PA Under the 2013 MOU,

2017 Revision (Threshold PA). The approximately 3.2 acres of impact to Crosstimbers Woodland and Forest MOU Type habitat disturbance exceeds the 2-acre threshold described in the Threshold PA. The 20.21 acres of impacts to Disturbed Prairie MOU type exceeds the 3-acre threshold described in the Threshold PA. Refer to the Vegetation Map (See **Figure 5** in **Appendix F**).

The Texas Natural Diversity Database (TXNDD) data obtained from TPWD on May 18, 2020, was reviewed along with the TPWD RTEST list for Denton County, dated June 26, 2020. The TXNDD radii were 1.5 miles and 10 miles from the project area search revealed element of occurrence records within 1.5 and 10 miles of the proposed project. One record for the Bald Eagle (*Haliateeus leucophalus*) occurred within 1.5 miles. One record of the Bald Eagle, Texas heelsplitter (*Potamilus amphibichaenus*), Texas gartersnake (*Thamnophis sirtalis annectens*), and one record for the Little bluestem-indiangrass series (*Schizachyrium scoparium - Sorghastrum nutans series*). These species and this plant community are located outside of the project area and would not be impacted by the proposed project.

According to the MOU with TPWD, important remnant vegetation includes communities listed as suitable habitat and within the range of Species of Greatest Conservation Need (SGCN). Important remnant vegetation includes 1) rare vegetation communities and 2) those that are suitable habitat for SGCN. A shaded area for the Bald Eagle lies within the 1.5-mile radius but would not be impacted by the proposed project. The other specific species and plant community detections are located outside of the project area and would not be impacted by the proposed project. To address important remnant vegetation's second component, general habitat types of those SGCNs that may be impacted by the proposed project include agriculture, grassland, woodland, riparian, and urban. These habitat types are located immediately adjacent to the existing US 377 corridor, and each includes an edge component. Developed habitat is located throughout the project area. Impacts to these habitats were quantified based on the MOU type that best fits vegetation present in the given habitat, by using EMST correcting for discrepancies using actual observed vegetation types. None of these areas that include habitat for SGCNs are considered rare or remnant vegetation communities.

Potential impacts to vegetation would be confined to the existing and proposed ROW and easements; thus, encroachment-alteration effects would not occur.

Impacts to vegetation would be avoided or minimized by limiting disturbance to only that which is necessary to construct the proposed project. The removal of native vegetation, particularly mature native trees and shrubs, would be avoided to the greatest extent practicable. Seeding and replanting with TxDOT-approved seed mixes containing native species would be used in the re-vegetation of disturbed areas.

No-Build Alternative: If the No-Build Alternative were implemented, the proposed project would not be constructed. No effects to vegetation related to the construction of the proposed project would occur. Existing land use and activities, including routine mowing, would continue to periodically affect vegetation communities.

5.11.3 Executive Order 13112 on Invasive Species

This project is subject to and would comply with EO 13112 on Invasive Species. The department implements the EO on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual. Accordingly, seeding and replanting with TxDOT-approved seed mixes containing native species would be done where possible. Soil disturbance would be minimized in the right of way in order to minimized invasive species establishment.

5.11.4 Executive Memorandum on Environmentally and Economically Beneficial Landscaping

This project is subject to and would comply with the federal Executive Memorandum on Environmentally and Economically Beneficial Landscaping, effective April 26, 1994. The department implements this Executive Memorandum on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual. Seeding and replanting of disturbed areas with TxDOT-approved seed mixes that are in compliance with Executive Memorandum on Beneficial Landscaping would be done where possible.

5.11.5 Impacts to Wildlife

The proposed project is located in Denton County. Developed and undeveloped lands are present within the proposed project area. Developed land includes single-family residences, retail, commercial, public facilities, and places of worship. Undeveloped lands comprise vacant (not utilized), agriculture (ranch and pasture), woodlands, fence row vegetation, streams, and ponds. Wildlife species expected to inhabit the proposed project area are likely adapted to both a rural environment as well as an urban, developed environment. Mammalian species that likely inhabit the area include the coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and eastern fox squirrel (*Sciurus niger*). Amphibian and reptilian species would also utilize the different available habitats. The species would include various snakes, turtles, lizards, and frogs native to north-central Texas. Examples would be the Texas rat snake (*Elaphe obsolete lindheimen*), red-eared slider (*Trachemys scripta*), western ribbon snake (*Thamnophis proximus*), and the northern cricket frog (*Acris crepitans*). Various waterfowl species could utilize the aquatic habitat.

The presence of the following wildlife species was observed during field reconnaissance: raccoon tracks, crayfish toads, turtles, and frogs.

There is suitable habitat present within the proposed project area for SGCN species as discussed in Section 5.11.11

Build Alternative: Substantial impacts to wildlife are not anticipated. The proposed project is the widening of an existing roadway and, therefore, is not newly bisecting continuous wildlife habitat. Terrestrial wildlife that does cross US 377 would have to travel a greater distance when crossing the widened roadway upon project completion. This would result in their being exposed to predators, people, domestic pets, vehicles, etc. for a greater amount of time. Wildlife that does currently inhabit adjacent urban development and existing roadway structures (culverts, utility poles, etc.) would be temporarily impacted due to potential structural displacements/relocations and roadway structure reconstruction and relocation. It is likely that the impacted wildlife would recolonize the available habitat once construction of the proposed project is complete.

No-Build Alternative: Under the No-Build Alternative, the proposed project would not be constructed; thus, there would be no project-related impacts to wildlife.

5.11.6 Migratory Bird Protections

This project would comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and Texas Wildlife Code Title 5, Subtitle B, Chapter 64, Birds. It is the department's policy to avoid removal and destruction of active bird nests except through federal or state approved options and FHWA policy. In addition, it is the department's policy to, where appropriate and practicable:

- Use measures to prevent or discourage birds from building nests on Man-made structures within portions of the project area planned for construction, and

- Schedule construction activities outside the typical nesting season.

5.11.7 Fish and Wildlife Coordination Act

All impacts to Waters of the U.S. would be authorized by NWP 14 with no PCN. The Fish and Wildlife Coordination Act does not apply to this project.

5.11.8 Bald and Golden Eagle Protection Act of 2007

This project is not within 660 feet of an active or an inactive Bald or Golden Eagle nest. Therefore, no coordination with USFWS is required.

5.11.9 Magnuson-Stevens Fishery Conservation Management Act

There are no tidally influenced waters in Denton County and the proposed project would not affect essential fish habitat. The Essential Fish Habitat/Magnuson-Stevens Fishery Conservation and Management Act does not apply.

5.11.10 Marine Mammal Protection Act

The project area does not contain suitable habitat for marine mammals.

5.11.11 Threatened, Endangered, and Candidate Species

Build Alternative: The TXNDD data obtained from TPWD on May 18, 2020 was reviewed along with the U.S. Fish and Wildlife Service (USFWS) Official Species List, dated May 14, 2020. The TXNDD radius search was 1.5 and 10 miles from the proposed project. Element occurrences for the Bald Eagle (*Haliaeetus leucocephalus*), a SGCN, was recorded within the 1.5 and 10-mile radius of the proposed project. The Texas heelsplitter (*Potamilus amphichaenus*), a state threatened species, and the Texas garter snake (*Thamnophis sirtalis annectens*), a SGCN species, were recorded within the 10-mile radius of the proposed project. No managed areas within 1.5 miles of the proposed project area were recorded. Suitable habitat was also observed within the proposed project SGCN (as identified on TPWDs Annotated County of Rare Species for Denton County on July 20, 2020). Based on field investigations conducted on April 29, 2020; May 6, 13, and 26, 2020; and June 11, 2020 and as detailed in the *Species Analysis Spreadsheet* and *Species Analysis Form* the following were identified:

- <u>Endangered Species Act</u>

The 1973 Endangered Species Act (ESA) provides a means for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend, and to provide a program for endangered and threatened species conservation. Section 7 of the ESA requires Federal agencies to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat. According to the USFWS Official Species List, dated May 14, 2020, the following federally protected species may occur or could potentially be affected by the proposed project: Least Tern (*Sterna antillarum*), Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Whooping Crane (*Grus americana*).

The Official Species List states that Least Tern, Piping Plover, and Red Knot only need consideration for wind energy projects. For the Piping Plover and Red Knot, there is no suitable habitat present within the action area, such as beaches, sand, algal, or tidal flats, or sparsely vegetated shores and islands of shallow lakes, ponds, rivers, and impoundments. Effects to the Least Tern are not anticipated because there is no suitable habitat present within the action area, such as sand and gravel bars within braided streams and rivers. Nor are there perennial waters

with small fish and crustaceans for feeding. Therefore, TxDOT has determined that the proposed project would have no effect on Least Tern, Piping Plover, or Red Knot. For the Whooping Crane, the action area includes ponds and agricultural fields. However, it is not suitable migratory or foraging habitat because the agricultural fields are not the preferred flooded grain fields and the species rely on tidal ponds for feeding and roosting habitat. Therefore, TxDOT has determined that the proposed project would have no effect on Whooping Crane. USFWS designated Critical Habitat is not present within the proposed project action area.

- State-Listed Species

No state-listed threatened or endangered species or their suitable habitats were observed within the proposed project area.

- Species of Greatest Conservation Need

Suitable habitat was observed within the proposed project for the following SGCN: Woodhouse's toad (*Anaxyrus woodhousii*), Strecker's chorus frog (*Pseudacris streckeri*), Western Burrowing Owl (*Athene cunicularia hypugaea*), thirteen-lined squirrel (*Ictidomys tridecemilineatus*), long-tailed weasel (*Mustela frenata*), eastern spotted skunk (*Spilogale putorius*), western hog-nosed skunk (*Conepatus leuconotous*), eastern box turtle (*Terrapene carolina*), western box turtle (*Terrapene ornata*), slender glass lizard (*Ophisaurus attenuatus*), Texas garter snake (*Thamnophis sirtalis annectens*), and Glen Rose yucca (*Yucca necopina*). The list of species that do not have species-specific BMPs included in the BMP PA include the following: Woodhouse's toad, Strecker's chorus frog, thirteen-lined squirrel, long-tailed weasel, eastern spotted skunk, western hog-nosed skunk, eastern box turtle, western box turtle, slender glass lizard, and Glen Rose yucca. TPWD coordination would be required and their BMPs would be developed during the coordination process. Refer to **Appendix G** for the coordination documentation and to **Section 8** for BMPs or mitigation strategies that will be used to avoid or minimize impacts to these SGCN.

No-Build Alternative: Under the No-Build Alternative, the proposed project would not be constructed; thus, there would be no effects to federally and state- listed threatened, endangered, or candidate species and SGCNs.

5.12 Air Quality

For information regarding air quality refer to the Air Quality Technical Report available at the TxDOT Dallas District office.

Build Alternative:
Transportation Conformity
This project is located within an area that has been designated by the EPA as a serious and marginal nonattainment area for the 2008 and 2015 ozone National Ambient Air Quality Standards (NAAQS) respectively; therefore, transportation conformity rules apply. Conformity for older standards is satisfied by conformity to the more stringent 2008 and 2015 ozone NAAQS.

The proposed project is consistent with the NCTCOG's financially constrained Mobility 2045 and the 2019-2022 TIP, as amended, which were initially found to conform to the TCEQ State Implementation Plan (SIP) by FHWA and FTA on November 21, 2018. Copies of the Mobility Transportation Plan (MTP) and TIP pages are included in **Appendix E**. All projects in the 2019-2022 TIP that are proposed for federal or state funds were initiated in a manner consistent with federal guidelines in Section 450, of Title 23 CFR and Section 613.200, Subpart B, of Title 49 CFR. The total estimated cost of the proposed project is $119.9 million and the ROW acquisition estimate is $10.6 million. Sources for the funding will be Federal (60 percent), State (30 percent), and Local (10 percent). Currently, the proposed project is not funded.

Traffic Air Quality Analysis
Traffic data for the estimated time of completion year 2028 and design year 2045 is 21,800 vehicles per day (vpd) and 28,5000 vpd, respectively. A prior TxDOT modeling study and previous analyses of similar projects demonstrated that it is unlikely that the CO standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000. The AADT projections for the project do not exceed 140,000 vpd; therefore, a TAQA was not required.

Mobile Source Air Toxics
A qualitative mobile source air toxics (MSAT) assessment has been conducted relative to the Build and No-Build Alternative. As documented in the technical report, all project alternatives may result in increased exposure to MSAT emissions in certain locations although the concentrations and duration of exposure are uncertain. Because of this uncertainty, the health effects from these emissions cannot be estimated. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Congestion Management Process
The proposed project is adding single-occupant vehicle capacity, is a project with FHWA/FTA involvement, and is within the Dallas Fort-Worth Transportation Management Area; therefore, a Congestion Management Process (CMP) analysis is required. The proposed project is within the Dallas-Fort Worth Transportation Management Area. The project-level CMP analysis in on file and available for review at the NCTCOG and is included as an appendix in the Air Quality Technical Report.

Committed congestion reduction strategies and operational improvements within the study boundary would consist of addition of mainlanes, shared use lanes; sidewalks and the realignment of the BU 377 S at US 377 and FM 424 at US 377 intersection. Individual projects are listed in **Table** 5.

Table 5: CMP Projects

Location	Type	Implementation Date
US 377 from US 380 to BUS 377E	Addition of Lanes	2045

Source: NCTCOG Transportation Improvement Program Information System (TIPINS). Accessed May 26, 2020.

Construction Air Emissions
During the construction phase of this project, temporary increases in PM and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel particulate matter from diesel powered construction equipment and vehicles.

The potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. The Texas Emissions Reduction Plan (TERP) provides financial incentives to reduce emissions from vehicles and equipment. TxDOT encourages construction contractors to use this and other local and federal incentive programs to the fullest extent possible to minimize diesel emissions. Information about the TERP program can be found at: https://www.tceq.texas.gov/airquality/terp.

However, considering the temporary and transient nature of construction-related emissions, the use of fugitive dust control measures, the encouragement of the use of TERP, and compliance with applicable regulatory requirements, it is not anticipated that emissions from construction of this project will have any significant impact on air quality in the area.

No-Build Alternative: This alternative would result in gradually increasing vehicle miles travelled as traffic volumes increase and traffic congestion worsens within the existing roadway system over time. Actual and predicted trends in both criteria pollutant and MSAT emissions would be expected to continue in the future, regardless of the alternative chosen.

5.13 Hazardous Materials

A Hazardous Materials Initial Site Assessment (ISA) was completed and approved on June 6, 2020 to summarize potential hazardous materials within and adjacent to the project corridor. The ISA included a site reconnaissance and environmental regulatory database search for the project area. The ISA was completed to identify sites or facilities that might pose a potential for hazardous materials impacts to the proposed project. The ISA is maintained in the TxDOT Dallas District project files.

Build Alternative: Based on an evaluation of the sites identified in the environmental regulatory database search, a brief summary of regulated sites of concern within the proposed project limits is provided in **Table 6.** The site locations are shown on the Hazardous Materials Site Location Map (see **Figure 6** in **Appendix F**).

Table 6: Summary of Regulated Sites of Concern

Map ID*	Site Information	Database	Location Relative to Project
11	Sunny Mart 1293 S. Highway 377, Ste. 100 Pilot Point, TX 76258 (Formerly Hampton's Kwik Mart)	LPST Facility ID: 104190 PST Facility IDs: 6801, 9459 Risk Level: Moderate.	Proposed full displacement would be required from this facility. It is located adjacent to the proposed project, east of US 377 and south of Business US 377. The site is an active gas station. Proposed work activity for this area includes widening US 377 and realigning Business US 377. Based on proposed full displacement including the tank hold, pump islands, and canopy, the age of the tanks, and release history, this site is considered a moderate environmental risk to the project.
12	Jerry's Beverage City 1225 N. Highway 377 Pilot Point, TX 76258	LPST Facility ID: 118167 PST Facility ID: 66000 GWCC ID: 118167 Risk Level: Moderate.	ROW acquisition is required for this site. It is adjacent to the proposed project, located at the southeast concern of US 377 at Production Road. The site is an active gas station. Based on the proposed ROW acquisition from the site, the location of the tank hold in relation to proposed ROW, the nature of the regulatory violation, and the former release, this site is considered a moderate environmental risk to the project.
16	Edgar's Shell 100 N. Highway 377 Krugerville, TX 76227 Photo: 5	LPST Facility ID: 116956 PST Facility ID: 6314 GWCC ID: 116956 Risk Level: Moderate.	ROW acquisition is required for this site. It is adjacent to the proposed project, located at the northwest corner of US 377 at Baseline Road. The site is an active gas station. Based on the proposed ROW acquisition from the site, the location of the tank hold in relation to proposed ROW, and the former release, this site is considered a moderate environmental risk to the project.
19	Gunsmoke Grill (TCEQ: Clampitt Country Store) 5065 US Highway 377 Krugerville, TX 76227	PST Facility ID: Not available Risk Level: Moderate.	ROW acquisition is required from this site for the widening of US 377. This site, currently a vacant lot situated approximately 220 feet south of Fieldcrest Drive and adjacent west of US 377, was a former gas station facility. Based on ROW acquisition, no information on tank removal, and unknown location of the former tank hold, this site is considered a moderate environmental risk to the project.

Table 6: Summary of Regulated Sites of Concern

Map ID*	Site Information	Database	Location Relative to Project
26	Stephen's Fuel Center 442 S. Highway 377 Pilot Point, TX 76258	LPST Facility ID: 118754 PST Facility ID: 78317 Risk Level: Moderate.	ROW acquisition is not required for this site. It is adjacent to the proposed project, located west of US 377 and south of E. Liberty Street (FM 1192). The site is an active gas station. Proposed improvements adjacent to this facility include widening of US 377. Although ROW is not proposed from this facility, based on the recent LPST activity that included groundwater impact and free product recovery, this facility is considered a moderate environmental risk to the project.
26	Stephen's Supermarket 444 S. Highway 377 Pilot Point, TX 76258	GWCC IDs: 118754, 1973154245, 941 IOP ID: 0941 Risk Level: Moderate.	ROW acquisition is not required for this site. It is adjacent to the proposed project. This site is a grocery store. IOP information states 1.543 acres has groundwater impact of TPH and tetrachloroethylene. The source of contamination is listed as Moore Cleaners (Map ID 30). Proposed improvements adjacent to this property include widening of US 377. Although ROW is not proposed from this property, based on the extent of groundwater impact from the dry cleaner, this site is considered a moderate environmental risk to the project.
28	Chaparral Plaza 704 S. Highway 377 Aubrey, TX 76227	LPST Facility ID: 115586 PST Facility IDs: 30119, 61370 Risk Level: Moderate.	ROW acquisition is required for this site. It is adjacent to the proposed project, located at the southwest corner of US 377 at Spring Hill Road (FM 428). The site is an active gas station. A monitor well was observed on the site approximately 15 feet east of the tank hold. Proposed work activity for this area includes widening US 377 and intersection improvements at Spring Hill Road. Based on the proximity of the tank hold to existing ROW, the age of the tanks, and release history with an active enforcement order, this site is considered a moderate environmental risk to the project.
30	Moore Cleaners & Laundry 424 N. Highway 377 Pilot Point, TX 76258	DCRPS: DC0307 DCR: RN104062245 RCRAGR06: TXD144418761 Risk Level: Moderate.	The facility is currently an active drycleaner in a shopping center property that is adjacent to the proposed project. Although this site has only just begun the release assessment, contaminants have been identified as migrating based on the IOP at the adjacent Stephen's Supermarket (Map ID 26). Proposed work activity for this area includes widening US 377. Based on the active status of the site and known contaminant migration, the site is considered a moderate environmental risk to the project.
N/A	Former Trade Post/ Abandoned Service Station 5335 US 377 Krugerville, TX 76227	LPST Facility ID110061 Risk Level: Moderate.	The site was listed as an Unlocatable site on the regulatory database report. Comparing PST dates to historic aerials, Denton CAD information, and current properties in Krugerville along US 377, the former gas station facility was identified at address 5335 US 377, which was observed to be an abandoned gas/service station type building. The site formerly utilized PSTs and has a reported release that impacted groundwater and had free product recovery. No ROW is proposed from this property. Proposed work activity adjacent to this site is widening of US 377. Based on the LPST information, this site is considered a moderate environmental risk to the project.

DCRPS – Dry Cleaner Remediation Program Sites

Table 6: Summary of Regulated Sites of Concern

Map ID*	Site Information	Database	Location Relative to Project

GWCC – Groundwater Contamination Cases
IOP – Innocent Owner/Operator Database
LPST – Leaking PST
PST - Petroleum Storage Tanks
RCRAGR06 – Resource Conservation & Recovery Act – Generator
*Map ID numbers correspond to those used in the ISA.

Sources: GeoSearch (April 8, 2020) and Site Surveys (April 29 and May 26, 2020).

The proposed project would also include the demolition of buildings and bridges. Asbestos-containing materials and lead-containing paint (LCP) may be present in the structures. Asbestos and LCP inspections, notification, and removal, as applicable, would be addressed prior to demolition in accordance with regulatory requirements. Detailed information about the hazardous materials evaluation conducted for the project can be found in the ISA available for review at the TxDOT Dallas District office.

No-Build Alternative: Under the No-Build Alternative, the proposed project would not be constructed; thus, project-related hazardous materials impacts would not occur.

5.14 Traffic Noise

A traffic noise analysis was prepared in accordance with TxDOT's (FHWA-approved) *Traffic Noise Policy* (2019). The *Traffic Noise Analysis Report* (2020), which includes details about the analysis, is available for public review at the TxDOT Dallas District office.

Build Alternative: Existing and predicted traffic noise levels were modeled at representative land use activity areas (receptors) adjacent to the project that might be impacted by traffic noise and would potentially benefit from feasible and reasonable noise abatement.

Modeled noise-sensitive locations were primarily residential, but also included a lodge (pool), restaurants, middle schools (bleachers), churches, and a cemetery. The traffic noise analysis determined that out of 48 representative receptors, 13 were predicted to have noise levels that approach or exceed the FHWA noise abatement criteria or that substantially exceed the existing noise levels; therefore, the proposed project would result in traffic noise impacts (see **Figure 7** in **Appendix F**).

Noise abatement measures were considered and analyzed for each impacted receptor location. Abatement measures, typically noise barriers, must provide a minimum noise reduction, or benefit, at or above the threshold of 5 dB(A). A barrier is not acoustically feasible unless it reduces noise levels by at least 5 dB(A) at greater than 50% of first-row impacted receptors and benefits a minimum of two impacted receptors. To be reasonable, the barrier must not exceed the cost reasonableness allowance of 1,500 square feet per benefited receptor and must meet the noise reduction design goal of 7 dB(A) for at least one receptor.

Noise barriers were not reasonable and feasible for the impacted representative receivers, and abatement is not proposed for those locations. Additional details regarding the barrier analysis can be found in the *Traffic Noise Analysis Report* (2020).

To avoid noise impacts that may result from future development of properties adjacent to the project, local officials responsible for land use control programs must ensure, to the maximum extent

possible, that no new activities are planned or constructed along or within the following predicted (2045) noise impact contours (**Table 7**).

Table 7: Proposed Noise Contours

	Land Use NAC Category	Impact Contour	Distance from Right of Way
Denton/Grayson County Line to Chestnut Street	B & C	66 dB(A)	115 feet
	E	71 dB(A)	40 feet
Chestnut Street to FM 424	B & C	66 dB(A)	140 feet
	E	71 dB(A)	55 feet
FM 424 to US 380	B & C	66 dB(A)	85 feet
	E	71 dB(A)	20 feet

A copy of this traffic noise analysis will be 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.

No-Build Alternative: Under the No Build Alternative, the proposed project would not be constructed. If the No Build Alternative were implemented, traffic noise levels would be expected to increase with an associated future increase in traffic volumes.

5.15 Induced Growth

The Council on Environmental Quality (CEQ) defines indirect effects as those caused by the action and occur later in time or farther removed in distance than direct effects but are still reasonably foreseeable. Indirect impacts 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 (40 CFR Section 1508.8).

Build Alternative: An analysis of indirect impacts followed the processes outlined in TxDOT's Indirect Impacts Analysis Guidance (January 2019). Refer to the US 377 *Indirect and Cumulative Impacts Analysis* Technical Report for a detailed discussion of the indirect effects analysis.

The Area of Influence (AOI) encompasses approximately 62,601.4 acres. A map of the AOI is provided as **Figure 8 in Appendix F**.

Based on the information from the planning departments of the City of Aubrey, Town of Cross Roads, City of Krugerville, City of Pilot Point, Town of Providence Village, and City of Little Elm, as well as planning documents, land use and zoning maps, thoroughfare plans, and population, employment and housing trend data, there is potential for accelerated or induced growth on the approximately 194.2 acres of adjacent land from the proposed project.

The accelerated growth associated with the proposed project does not conflict with study area goals, would not delay or interfere with the planned improvement of a resource, and is not inconsistent with any applicable laws; therefore, mitigation for the impacts to Waters of the U.S., floodplains, and socio-economic/community resources is not warranted. All developers, public and private, would be subject

to the Clean Water Act, ESA, and MBTA; however, private developers would not be subject to Section 106 of the National Historic Preservation Act. There are no known mitigative responsibilities for private developers in Texas for impacts to Agriculture; Disturbed Prairie; Post Oak Savanna; Riparian; or Tallgrass Prairie, Grassland vegetation. Private developers would not be subject to the Farmland Policy Protection Act (FPPA) for impacts to prime farmland soils and farmland soils of statewide importance. Land development activities would be regulated by the local municipalities. The mitigation of potential development within the AOI considered for this assessment would be the responsibility of the agencies with the authority to implement such controls. This authority rests with the municipal governments, and, to a lesser extent, Denton County.

All of the municipalities experiencing accelerated growth from the US 377 widening have development ordinances that regulate the types of construction and landscape plantings mandated by development codes. For example, the City of Pilot Point's Tree Ordinance places the consideration of trees and how they will be preserved or mitigated at the beginning of the development process. Section 3.08 of the Town of Cross Roads outlines the qualification for and projection of trees before and during construction of development.

Overall, the expected project induced growth would be compatible with zoning requirements, city planning documents, and project area goals.

No-Build Alternative: This alternative would not result in induced growth.

5.16 Cumulative Impacts

The CEQ defines cumulative impacts as those 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 (40 CFR §1508.7). As such, it may be difficult to understand the role that a proposed action may have in contributing to the overall or cumulative impacts to an area or resource.

Build Alternative: An analysis of cumulative impacts followed the processes outlined in TxDOT's Cumulative Impacts Analysis Guidelines (January 2019). Refer to the US 377 *Indirect and Cumulative Impacts Analysis* Technical Report for a detailed discussion of the cumulative impact analysis.

The Resource Study Area (RSA) captures the Cities and Towns of Aubrey, Cross Roads, Krugerville, Little Elm, Oak Point, Pilot Point, Providence Village, and unincorporated areas of Denton County. The RSA totals approximately 92,802.1 acres. A map of the RSA is provided as **Figure 9** in **Appendix F**.

The cumulative impacts on non-urban vegetation and wildlife habitat resulting from the approximately 34.1 acres of direct impacts, 150.9 acres from accelerated growth impacts, and 61,025.4 acres of impacts from the previously described other past, present, and reasonably foreseeable actions would total approximately 61,210.4 acres. The cumulative impacts to vegetation and wildlife habitat would affect approximately 69.4 percent of the approximately 88,256.6 acres of non-Urban MOU Habitat-type vegetation within the RSA.

While cumulative impacts would affect approximately 61,210.4 acres of non-Urban MOU Habitat-type vegetation and potential wildlife habitat, it is likely that most of the wildlife that resides in the RSA would migrate to other areas of available non-human-altered habitat such as those protected within floodplain areas near rivers and streams. In addition, riparian areas are known to be migration corridors for wildlife. It is expected that these areas would not be adversely affected due to municipal protections to riparian resources within floodplains. That is, restrictions on construction within

floodplains and tree preservation regulations make it probable that most of the riparian habitat within the RSA would not be subject to widespread removal. Based on the continued availability of protected habitat areas, the potential cumulative impact occurring over a 44-year period, allowing for resource recovery; and assuming appropriate implementation of regulated avoidance, minimization, and mitigation strategies for vegetation and habitat impacts, the proposed project would not contribute to substantial cumulative impacts to the area's vegetation and habitat.

Incorporating parks, open spaces, and riparian corridors around and within developed areas would provide wildlife habitat and shelter. Planting these areas with native fruit or nut-bearing trees and shrubs, and native grain-bearing grasses would provide food for wildlife and would help to mitigate impacts to habitat used by wildlife. This mitigation could be conducted by whoever is responsible for the impact such as a city or a developer. Private development within the associated municipalities within the RSA (Aubrey, Cross Roads, Krugerville, Little Elm, Oak Point, Providence Village, and, to a lesser extent, Denton County) would be subject to the laws and ordinances regulating residential, commercial and industrial development set by each municipal government. Examples of municipal government regulations include the City of Pilot Point's and Town of Cross Roads' Tree Ordinances. Mitigation could include mandatory park areas or a limit on lot sizes. State and federal entities protect the quality of water and wildlife habitat in the area and additional development would follow the requirements of state and federal regulations.

The cumulative impact on prime farmland soils subject to the FPPA resulting from the approximately 33.6 acres of direct impacts, 92.4 acres from accelerated growth impacts, and 36,438.6 acres of impacts from the previously described other past, present, and reasonably foreseeable actions would total 36,564.6 acres. The cumulative impacts to prime farmland soils subject to the FPPA would affect approximately 89.4 percent of the approximately 40,958.3 acres of prime farmland soils subject to FPPA within the RSA.

Private developers would not be subject to the FPPA for impacts to prime farmland soils and farmland soils of statewide importance. The Texas Farm and Ranch Lands Conservation Program (TFRLCP), created in 2005, is a grant-making program that provides landowners with financial incentives to conserve their land and productivity through Agricultural Conservation Easements. These easements restrict all future development while allowing the landowner to continue farming or ranching (American Farmland Trust, 2009). The TFRLCP was transferred from the Texas General Land Office (GLO) to TPWD in 2016. Approved grant projects awarded by the Texas GLO range in size from 175 acres to 2,995 acres and by the TPWD range in size from 144 acres to 7,229 acres. This type of program could be effective mitigation within the Farmland (Soils) RSA. The average farm size in Denton County is 120 acres.

Incorporated areas can manage growth issues through local ordinances, such as zoning and subdivision ordinances. Development activities outside of the incorporated areas are under the jurisdiction of Denton County, which use subdivision ordinances primarily to regulate lot sizes and density.

No-Build Alternative: The implementation of this alternative would not contribute to cumulative impacts in the 92,802.1-acre RSA for vegetation and wildlife habitat and prime farmland soils.

5.17 Construction Phase Impacts

Build Alternative: Depending on required traffic control and phasing, the construction phase of the proposed project, and associated construction impacts, is anticipated to be 24 to 48 months. During the construction phase of the proposed project, there is the potential for noise, dust or light pollution;

impacts associated with physical construction activity and other traffic disruptions. These potential impacts are discussed as follows:

Construction Noise – 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. None of the receptors is expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal activities is not expected. Provisions will 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.

Construction Emissions – "During the construction phase of this project, temporary increases in and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel particulate matter from diesel powered construction equipment and vehicles. The potential impacts of PM emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. Considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized including compliance with applicable regulatory requirements, it is not anticipated that emissions from construction of this project will have a significant impact on air quality in the area.

Light Pollution – Construction normally occurs during daylight hours; however, construction could occur during the night-time hours to minimize impacts to the traveling public during the daylight hours. Due to the close proximity of residences and businesses to the project, if construction were to occur during the night-time hours, it would be of short duration and would not be conducted late in the evening. Construction during the night-time hours would follow any local policies and ordinances established for construction activities, such as light limitations.

Construction Activity Impacts – Construction activities would be limited to the proposed project footprint. Excessive vibration from construction equipment is not anticipated. If there was excessive vibration from construction equipment, it would be of short duration.

Traffic control plans would be prepared and implemented in coordination with the city and the county. Construction that would require cross street closures would be scheduled so only one crossing in an area is affected at one time. Where detours are required, clear and visible signage for an alternative route would be displayed. In residential areas, major activity would be limited to normal work hours whenever practicable, to avoid noise and related impacts to the local population.

Temporary Lane, Road or Bridge Closures (Including Detours) – Traffic control plans would be prepared and implemented in coordination with the city and the county. Construction that would require cross street closures would be scheduled so only one crossing in an area is affected at one time. Where detours are required, clear and visible signage for an alternative route would be displayed.

Motorists would be inconvenienced during construction of the project due to lane and cross-street closures; however, these closures would be of short duration and alternate routes would be provided. Residents and businesses in the immediate construction area would be notified in advance of proposed construction activity using a variety of techniques, including signage, electronic media, community newspapers, and other techniques. The proposed project would not restrict access to any existing public or community services, businesses, commercial areas, or employment centers.

No-Build Alternative: This alternative would not result in noise, dust or light pollution; impacts associated with physical construction activity, temporary lane, road closures; and other traffic disruptions associated with construction.

6.0 Agency Coordination

Coordination with the THC, Federal Aviation Administration, TCEQ, TPWD, and federally-recognized tribes have occurred under TxDOT's respective MOUs and PA with these agencies/entities. See **Appendix G** for the written coordination exchanges.

7.0 Public Involvement

Public Meeting

A virtual public meeting was held on Tuesday, April 28, 2020 at 6 p.m. The virtual public meeting consisted of a video presentation explaining the proposed project, which included both audio and video components, along with other exhibits and materials for review. The virtual public meeting materials were posted to http://www.keepitmovingdallas.com/US377 and https://us377dentoncounty.com/ on April 28, 2020 and remained available online through the comment period deadline of May 13, 2020. For those who did not have internet access, a phone number was provided in order to ask questions about the project and access project materials at any time during the project development process. Formal comments were submitted by mail, email, electronically, or via voicemail. Translation services were available, but was not requested. Attendance for this virtual public meeting did not require elected officials to identify themselves. Total views from April 28, 2020 through May 13, 2020 was 1,097 views and 717 visitors. The average session duration was 1 minute and 23 seconds. The meeting was held to share information about the project and seek input from area residents. Seventy four comments were received during the 15-day comment period that ended on May 13, 2020. Primary issues raised at the Public Meeting included the excessive number of lanes being added to US 377, the addition of signals at intersections, driveway access/ median openings, drainage issues and concerns, ROW acquisition from both sides of US 377, additional right-turn lanes, and noise concerns. The answers provided included that a six-lane roadway is needed to provide roadway capacity for future traffic growth, existing intersections with traffic signals will remain and new signals at other intersections will be determined, noise analysis was conducted, right-turn lanes are being added at various locations, storm water will be collected in an underground storm sewer system and transported to the culvert crossings at the existing locations along the corridor, and median openings will be added where applicable.

Public Hearing

A public hearing will be scheduled once the Draft EA has been approved. The hearing will share information about the project and seek input from area residents. TxDOT and consultant personnel will be available to answer questions during the in-person component of the public hearing. A virtual public hearing will also be available to the public during the 15-day comment period.

The Public Hearing Documentation may be inspected and copied upon request at the TxDOT Dallas District Office.

A notice of impending construction would be provided to owners of adjoining property and affected local governments and public officials. The notice may be provided via a sign or signs posted in the ROW, mailed notice, printed notice distributed by hand, or notice via website when the recipient has previously been informed of the relevant website address. This notice would be provided after the

environmental decision (i.e. FONSI), but before earthmoving or other activities requiring the use of heavy equipment begin.

8.0 Post-Environmental Clearance Activities and Design/Construction Communities

8.1 Post-Environmental Clearance Activities

TxDOT would comply with the requirements of the TCEQ TPDES General Permit No. TxR150000. In order to comply with TPDES General Permit Number TxR150000 for Construction Activities requirements, a NOI would be filed with TCEQ stating that TxDOT would have a SW3P in place during construction of this project. A construction site notice would be posted on the construction site. This SW3P utilizes the temporary control measures as outlined in TxDOT's manual *Standard Specifications for the Construction of Highways, Streets, and Bridges*.

The proposed project is located outside the TxDOT's MS4 boundary area. The proposed project is located within the cities of Aubrey, Cross Roads, Krugerville, and Pilot Point and Denton County extraterritorial jurisdiction and would comply with applicable MS4 requirements.

The proposed project would be compliant with 23 CFR 650 regarding location and hydraulic design of highway encroachments within the floodplains, and the proposed project would comply with EO 11988, Floodplain Management. Local floodplain administrator coordination would be conducted.

The placement of temporary or permanent dredge or fill material into potentially jurisdictional Waters of the U.S. at Crossings 1 through 18 would be authorized under NWP 14 with no PCN.

8.2 Design/Construction Commitments

1.) Section 401 and 404

Appropriate measures would be taken to maintain normal downstream flows and minimize flooding. Temporary fills would consist of clean materials and be placed in a manner that would not be eroded by expected high flows. Temporary fills would be removed in their entirety and the affected area returned to preconstruction elevations, and revegetated as appropriate. If the project involves stream modification, stream channel modifications, including bank stabilization, would be limited to the minimum necessary to construct or protect the structure and the immediate vicinity of the project. The activity would comply with all general and regional conditions applicable to NWP 14.

General Condition 25 of the NWP Program requires applicants using NWP 14 to comply with Section 401 of the CWA. Compliance with Section 401 requires the use of BMPs to manage water quality on construction sites. General Condition 12 also requires applicants using NWP 14 to use appropriate soil erosion and sedimentation controls.

The SW3P would include at least one BMP from the 401 Water Quality Certification Conditions for NWPs as published by the TCEQ. These BMPs would address each of the following categories:

- Category I Erosion Control would be addressed by using temporary vegetation, blankets/matting, permanent seeding/sodding, and stone outlet structures.
- Category II Sedimentation Control would be addressed by installing silt fence, rock berms, and stabilized construction exits.

- Category III Post-Construction TSS control would be addressed by installing rock riprap filters at the downstream end of the storm sewer system before entering the creeks.

Other approved methods would be substituted if necessary, using one of the BMPs from the identical category.

2.) Cultural Resources

In the unlikely event that cultural resources are discovered during construction of the proposed project, TxDOT would immediately initiate cultural resource discovery procedures. All work in the vicinity of the discovery would cease until a specialist from TxDOT and/or the THC could arrive on site and assess the discovery's significance and the need, if any, for additional investigation.

3.) Vegetation Resources

Impacts to vegetation would be avoided or minimized by limiting disturbance to only that which is necessary to construct the proposed project. The removal of native vegetation, particularly mature native trees and shrubs, would be avoided to the greatest extent practicable. Seeding and replanting with TxDOT-approved seed mixes containing native species would be conducted where possible. Soil disturbance would be minimized in the ROW in order to minimize invasive species establishment
.
The following fulfills commitments required by EO 13112 and the Executive Memorandum on Beneficial Landscaping and would be included in section IV of the EPIC sheet: Preserve native vegetation to the extent practical. The contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, and 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

4.) Federal Listed, Proposed Threatened, Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Birds

In accordance with the TxDOT-TPWD MOU, BMPs would be implemented for the Texas garter snake, Western Burrowing Owl, thirteen-lined squirrel, long-tailed weasel, eastern spotted skunk, western hog-nosed skunk, eastern box turtle, western box turtle, slender glass lizard, Woodhouse's toad, Strecker's chorus frog, and Glen Rose yucca.

Texas garter snake, eastern box turtle, western box turtle, and slender glass lizard - Terrestrial Reptile BMPs:

a) Apply hydro-mulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas where feasible. If hydro-mulching and/or hydroseeding are not feasible due to site conditions, utilize erosion control blankets or mats that contain no netting or contain loosely woven, natural fiber netting is preferred. Plastic netting should be avoided to the extent practicable.
b) For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees (1:1) in areas left uncovered. Visually inspect excavation areas for trapped wildlife prior to backfilling.
c) Inform contractors that if reptiles are found on project site allow species to safely leave the project area.
d) Avoid or minimize disturbing or removing downed trees, rotting stumps, and leaf litter where feasible.
e) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.

Western Burrowing Owl - Bird BMPs:

In addition to complying with the MBTA perform the following BMPs:

a) Prior to construction, perform daytime surveys for nests including under bridges and in culverts to determine if they are active before removal. Nests that are active should not be disturbed.
b) Do not disturb, destroy, or remove active nests, including ground nesting birds, during the nesting season.
c) Avoid the removal of unoccupied, inactive nests, as practicable.
d) Prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair.
e) Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.

Woodhouse's toad and Strecker's chorus frog - Amphibian and Aquatic Reptile BMPs

a) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
b) Minimize impacts to wetland, temporary and permanent open water features, including depressions, and riverine habitats.
c) Maintain hydrologic regime and connections between wetlands and other aquatic features.
d) Use barrier fencing to direct animal movements away from construction activities and areas of potential wildlife-vehicle collisions in construction areas directly adjacent, or that may directly impact, potential habitat for the target species.
e) Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas where feasible. If hydromulching and/or hydroseeding are not feasible due to site conditions, using erosion control blankets or mats that contain no netting, or only contain loosely woven natural fiber netting is preferred. Plastic netting should be avoided to the extent practicable.
f) Project specific locations proposed within state-owned ROW should be located in uplands away from aquatic features.
g) When work is directly adjacent to the water, minimize impacts to shoreline basking sites (e.g., downed trees, sand bars, exposed bedrock) and overwinter sites (e.g., brush and debris piles, crayfish burrows) where feasible.
h) Avoid or minimize disturbing or removing downed trees, rotting stumps, and leaf litter, which may be refugia for terrestrial amphibians, where feasible.
i) If gutters and curbs are part of the roadway design, where feasible install gutters that do not include the side box inlet and include sloped (i.e., mountable) curbs to allow small animals to leave roadway. If this modification to the entire curb system is not possible, install sections of sloped curb on either side of the storm water drain for several feet to allow small animals to leave the roadway. Priority areas for these design recommendations are those with nearby wetlands or aquatic features.
j) For sections of roadway adjacent to wetlands or other aquatic features, install wildlife barriers that prevent climbing. Barriers should terminate at culvert openings in order to funnel animals under the road. The barriers should be of the same length as the adjacent feature or 80 feet long in each direction, or whichever is the lesser of the two.
k) For culvert extensions and culvert replacement/installation, incorporate measures to funnel animals toward culverts such as concrete wingwalls and barrier walls with overhangs.

l) When riprap or other bank stabilization devices are necessary, their placement should not impede the movement of terrestrial or aquatic wildlife through the water feature. Where feasible, biotechnical streambank stabilization methods using live native vegetation or a combination of vegetative and structural materials should be used.

Thirteen-lined squirrel, long-tailed weasel, and Glen Rose Yucca - Contractors will be advised of potential occurrence in the project area and to avoid harming the species if encountered.

Eastern spotted skunk and western hog-nosed skunk - Contractors will be advised of potential occurrence in the project area, to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.

5.) Hazardous Materials or Contamination Issues

The proposed project includes the displacement of building structures. The building and bridge structures may contain asbestos containing materials. Asbestos inspections, specification, notification, license, accreditation, abatement and disposal, as applicable, would comply with federal and state regulations. Asbestos issues would be addressed during the ROW acquisition process for building structures and prior to construction for the bridge structures.

The building structures may contain lead-based paint (LBP). Further examination of paint-bearing building and bridge structures for LBP would be performed prior to demolition. Any waste materials and construction debris containing LBP would be disposed of according to current disposal regulations of the TCEQ and EPA.

Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal, state, and local 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. All construction materials used for this project would be removed as soon as the work schedules permit.

Should hazardous materials/substances be encountered, the TxDOT Dallas District Hazardous Materials Section would be notified and steps would be taken to protect personnel and the environment. If necessary, the plans, specifications, and estimates would include provisions for the appropriate soil and/or groundwater management plans for activities within these areas. The management plans would be initiated in accordance with all applicable federal, state and local regulations.

9.0 Conclusion

Implementation of the proposed project would not result in a significant impact on the human or natural environment; therefore, a FONSI is recommended.

10.0 References

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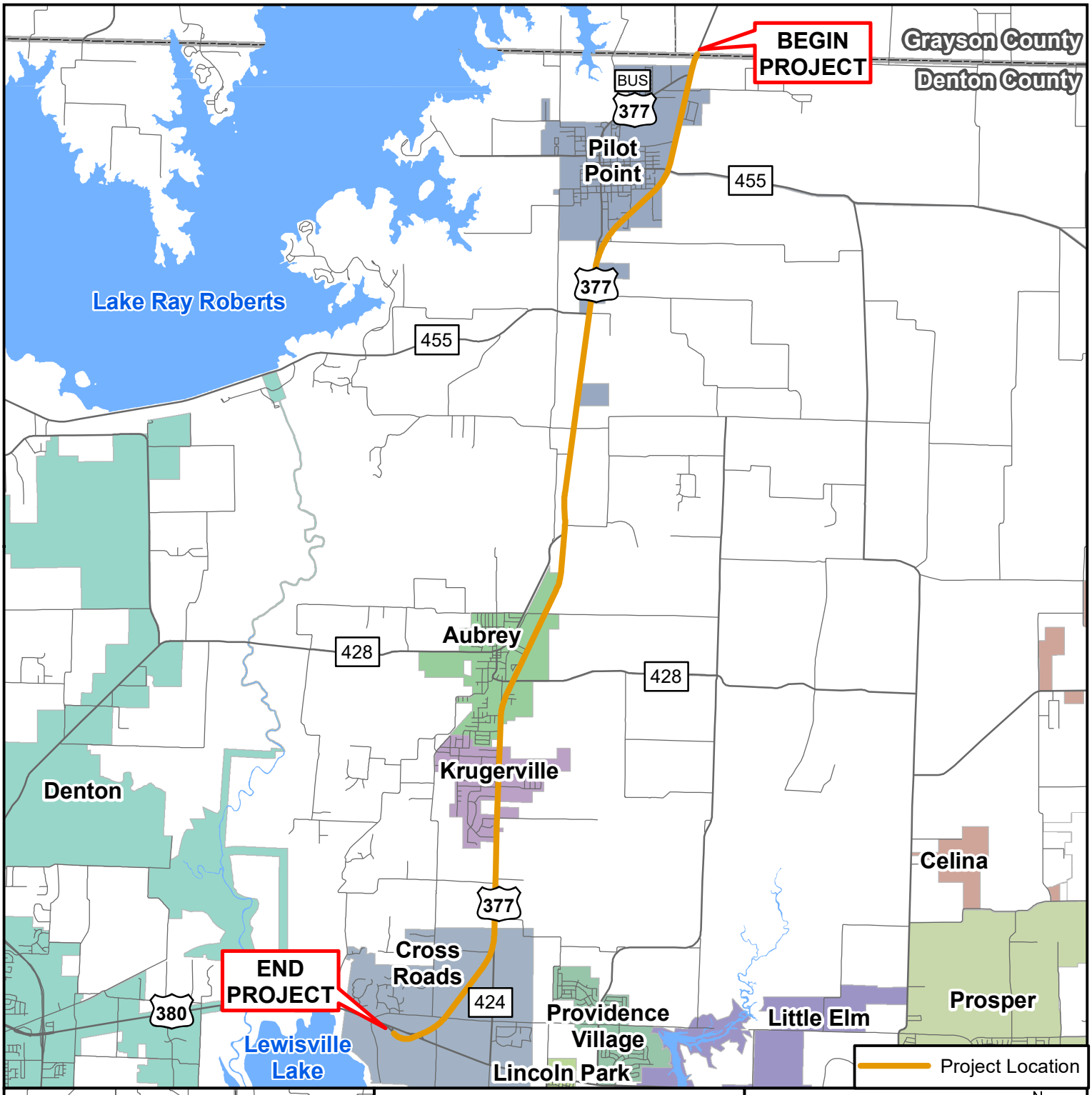
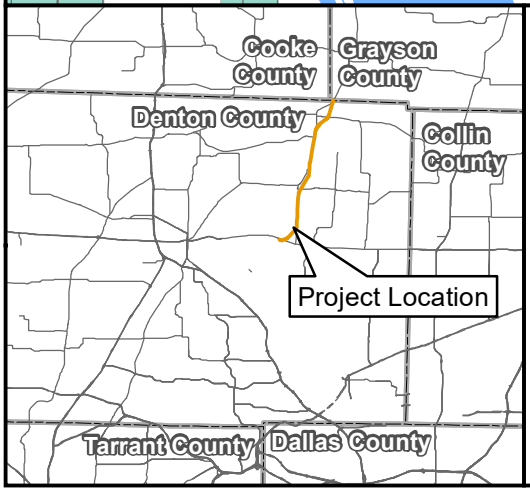
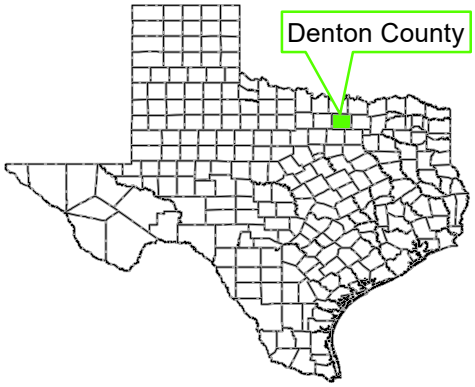
11.0 Appendices

Appendix A – Project Location Map







0 1 2 Miles

N W E S

FIGURE 1
PROJECT LOCATION MAP
United States (US) 377

From BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Appendix B – Project Photos

Photo 1: View looking northwest from a parking lot off Business 377 towards Countryside Nursing & Rehabilitation (ID 3) at 1700 N Washington St, Pilot Point, TX 76258. Date of Photo: 4/29/20.

Photo 2: View looking west from S Harrison St towards Pilot Point Middle School (ID 29) at 828 S Harrison St, Pilot Point, TX 76258. Date of Photo: 4/29/20.

Photo 3: View looking east from S Harrison St towards the Pilot Point ISD Administration Building (ID 30) at 829 S Harrison St, Pilot Point, TX 76258. Date of Photo: 4/29/20.

Photo 4: View looking east from Debbie Ln towards Skinner Cemetery (ID 31) at Debbie Ln, Pilot Point, TX 76258. Date of Photo: 4/29/20.

Photo 5: View looking northeast from US 377 towards the sign of the Denton First Seventh-day Adventist Church (ID 33) at 11010 US-377, Pilot Point, TX 76258. Date of Photo: 4/29/20.

Photo 6: View looking west from Belew Rd towards Belew Cemetery (ID 35) at 9500 Belew Rd, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 7: View looking southeast from US 377 towards Midway Church (ID 36) at 9540 US-377, Pilot Point, TX 76258. Date of Photo: 4/29/20.

Photo 8: View looking west from a parking lot off US 377 towards the Early Bird Learning Center (ID 41) at 415 Tisdell Ln, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 9: View looking southwest from a parking lot off US 377 towards the Aubrey ISD DAEP (ID 42) at 415 Tisdell Ln, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 10: View looking south from Spring Hill Rd towards Aubrey High School (ID 54) at 510 Spring Hill Rd, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 11: View looking north from a parking lot off US 377 towards HL Brockett Elementary School (ID 55) at 900 Chestnut St, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 12: View looking west from a parking lot off US 377 towards The Summit Church and Dreams Music Academy (ID 56 & 57) at 910 US-377, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 13: View looking west from a parking lot off Stanley Dr towards the United States Postal Service (ID 62) at 120 Stanley Dr, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 14: View looking west from a parking lot off US 377 towards Wild Hearts Nature Preschool (ID 63) at 5411 US-377, Aubrey, TX 76227. Date of Photo: 4/29/20.

Photo 15: View looking northwest along Kruger Rd toward the Northeast Police Department (ID 65) at 100 Kruger Rd, Krugerville, TX 76227. Date of Photo: 4/29/20

Photo 16: View looking west from US 377 toward Krugerville City Hall (ID 66) at 5097 US-377, Aubrey, TX 76227. Date of Photo: 4/29/20

Photo 17: View looking northwest from US 377 toward the First Baptist Church of Krugerville (ID 68) at 5021 US-377, Aubrey, TX 76227. Date of Photo: 4/29/20

Photo 18: View looking southeast from US 377 toward New Hope Baptist Church (ID 71) at 5800 US-377, Aubrey, TX 76227. Date of Photo: 4/29/20

Photo 19: View looking north from a parking lot toward Corner Cafe, a potential displacement (Disp. 1) at 1280 S US 377, Pilot Point, TX 76258. Date of Photo: 5/6/20

Photo 20: View looking southeast from US 377 toward Sunny Mart, a potential displacement (Disp. 2) at 1293 S US 377, Pilot Point, TX 76258. The site is a moderate environmental risk. Date of Photo: 5/6/20

Photo 21: View looking southeast from US 377 toward a metal barn that is a potential displacement (Disp. 3) at 1311 S US 377, Pilot Point, TX 76258. Date of Photo: 5/6/20

Photo 22: View looking northeast from Black Jack Rd toward ATX Auction House, a potential displacement (Disp 4) at 556 E Blackjack Rd, Pilot Point, TX 76258. Date of Photo: 5/6/20

Photo 23: View looking north from Chestnut St toward a single-family house, a potential displacement (Disp. 5) at 809 Chestnut St, Aubrey, TX 76227-9116. Date of Photo: 5/6/20

Photo 24: View looking west from US 377 toward Keller Williams Realty, a potential displacement (Disp. 6) at 806 US 377, Aubrey, TX 76227. Date of Photo: 5/6/20

Photo 25: View looking east from US 377 toward Betty's Flowers & Gifts and B. Ellen's House of Brows, both potential displacements (Disp. 7 & 8) at 903 & 901 US 377, Aubrey, TX 76227. Date of Photo: 5/6/20

Photo 26: View looking north from a parking lot off US 377 toward an apartment complex, a potential displacement (Disp. 9) at 5408 US 377 S, Aubrey, TX 76227-6211. Date of Photo: 5/6/20

Photo 27: View looking north from a driveway off US 377 toward Storage Place, a potential displacement (Disp. 10) at 5055 S US 377, Aubrey, TX 76227. Date of Photo: 5/6/20

Photo 28: View looking southwest from US 377 toward a metal shed, and two other storage buildings, potential displacements (Disp. 11) at 855 Sherry Ln S, Krugerville, TX 76227. Date of Photo: 5/6/20

Photo 29: View looking east from Debbie Ln in Pilot Point toward a home in disrepair, possibly abandoned. Date of Photo: 5/6/20

Photo 30: View looking north from E Walcott St in Pilot Point toward a home in disrepair. Date of Photo: 5/6/20

Photo 31: View looking south from E Main St in Pilot Point toward a home with a wheelchair lift, indicating vulnerable populations. Date of Photo: 5/6/20

Photo 32: View looking east from S Magnolia St in Aubrey toward a home with a ramp, indicating vulnerable populations. Date of Photo: 5/6/20

Photo 33: View looking west from a parking lot off US 377 toward a business with a sign indicating Spanish language accommodation, located at 8000 US Highway 380 Ste 400, Crossroads TX, 76227. Date of Photo: 5/6/20

Photo 34: View looking southwest from De Moye Ln in Aubrey, toward an apartment complex with a "For Rent" sign, indicating potential replacement housing for Displacement 9. Date of Photo: 5/6/20

Photo 35: View looking west from a parking lot off US 377 in Aubrey, toward an apartment complex with a "For Lease" sign, indicating potential replacement housing for Displacement 9. Date of Photo: 5/6/20

Photo 36: View looking southeast towards the tank hold of the Sunny Mart LPST and PST site at 1293 S. US 377, Ste. 100, Pilot Point, TX 76258 (HazMat Site 11). Date of Photo: 4/29/20.

Photo 37: View looking east towards the tank hold of the Jerry's Beverage City LPST and PST site at 1225 N. US 377, Pilot Point, TX 76258 (HazMat Site 12). Date of Photo: 4/29/20.

Photo 38: View looking northwest towards the tank hold of the Edgar's Shell LPST and PST site at 100 N. US 377, Krugerville, TX 76227 (HazMat Site 16). Date of Photo: 4/29/20.

Photo 39: View looking north towards the former location of the Gunsmoke Grill, an FRSTX site at 5065 US Highway 377 S, Krugerville, TX 76227-6204 (HazMat Site 19). Date of Photo: 5/26/20.

Photo 40: View looking southeast towards the tank hold of the Stephen's Fuel Center LPST and PST site at 442 S. US 377, Pilot Point, TX 76258 (HazMat Site 26). Date of Photo: 4/29/20.

Photo 41: View looking west towards the former location of Stephen's Supermarket, an IOP site at 444 S. US 377, Pilot Point, TX 76258 (HazMat Site 26). Date of Photo: 5/26/20.

Photo 42: View looking north towards the tank hold of the Chaparral Plaza LPST and PST site at 704 S. US 377, Aubrey, TX 76227 (HazMat Site 28). Date of Photo: 4/29/20.

Photo 43: View looking south towards a monitoring well at the Chaparral Plaza LPST and PST site at 704 S. US 377, Aubrey, TX 76227 (HazMat Site 28). The tank hold is at the right of the photo. Date of Photo: 5/6/20.

Photo 44: View looking west towards the Moore Cleaners & Laundry DCRPS, DCR, and RCRAGR06 site at 424 N. US 377, Pilot Point, TX 76258 (HazMat Site 30). Date of Photo: 4/29/20.

Photo 45: View looking north towards the former Trade Post, an LPST site at 5335 US 377, Krugerville, TX 76227. Date of Photo: 5/26/20.

Photo 46: View looking southwest toward a natural gas pipeline marker along Fishtrap Road just west of US 377. Date of Photo: 5/6/20.

Photo 47: View looking east toward Crossing 1 – tributary to Pecan Creek (US 377 northbound side).

Photo 48: View looking west toward Crossing 1 – tributary to Pecan Creek (US 377 northbound side).

Photo 49: View looking east toward Crossing 2 – tributary to Pecan Creek (US 377 northbound side).

Photo 50: View looking west toward Crossing 2 – tributary to Pecan Creek (US 377 northbound side).

Photo 51: View looking west toward Crossing 2 – tributary to Pecan Creek (US 377 southbound side).

Photo 52: View looking north toward Crossing 2 – tributary to Pecan Creek (US 377 southbound side).

Photo 53: View looking west toward Crossing 3 – tributary to Pecan Creek (US 377 southbound side).

Photo 54: View looking east toward Crossing 3 – tributary to Pecan Creek (US 377 southbound side).

Photo 55: View looking north toward Crossing 3 – tributary to Pecan Creek (US 377 northbound side).

Photo 56: View looking northwest toward Crossing 3 – tributary to Pecan Creek (US 377 northbound side).

Photo 57: View looking southeast toward Crossing 4 – tributary to Pecan Creek (US 377 southbound side).

Photo 58: View looking northwest toward Crossing 4 – tributary to Pecan Creek (US 377 southbound side).

Photo 59: View looking north toward Crossing 4 – tributary to Pecan Creek (US 377 northbound side).

Photo 60: View looking south toward Crossing 4 – tributary to Pecan Creek (US 377 northbound side).

Photo 61: View looking northeast toward Crossing 5 – tributary to Pecan Creek (US 377 southbound side).

Photo 62: View looking west toward Crossing 5 – tributary to Pecan Creek (US 377 northbound side).

Photo 63: View looking west toward Crossing 5 – tributary to Pecan Creek (US 377 southbound side).

Photo 64: View looking southeast toward Crossing 5 – tributary to Pecan Creek (US 377 southbound side).

Photo 65: View looking east toward Crossing 6 – tributary to Pecan Creek (US 377 northbound side).

Photo 66: View looking west toward Crossing 6 – tributary to Pecan Creek (US 377 northbound side) – stream is heavily vegetated.

Photo 67: View looking northwest toward Crossing 6 – tributary to Pecan Creek (US 377 southbound side).

Photo 68: View looking southeast toward Crossing 6 – tributary to Pecan Creek (US 377 southbound side).

Photo 69: View looking southwest toward Crossing 7 – tributary to Pecan Creek (US 377 northbound side).

Photo 70: View looking northeast toward Crossing 7 – tributary to Pecan Creek (US 377 northbound side).

Photo 71: View looking east toward Crossing 8 – tributary to Pecan Creek (US 377 southbound side).

Photo 72: View looking north toward Crossing 8 – tributary to Pecan Creek (US 377 southbound side).

Photo 73: View looking west toward Crossing 8 – tributary to Pecan Creek (US 377 northbound side).

Photo 74: View looking southeast toward Crossing 8 – tributary to Pecan Creek (US 377 northbound side).

Photo 75: View looking northwest toward Crossing 9 – tributary to Pecan Creek (US 377 southbound side).

Photo 76: View looking southeast toward Crossing 9 – tributary to Pecan Creek (US 377 southbound side).

Photo 77: View looking northeast toward Crossing 10 – tributary to Pecan Creek (US 377 southbound side).

Photo 78: View looking southwest toward Crossing 10 – tributary to Pecan Creek (US 377 southbound side).

Photo 79: View looking southwest toward Crossing 10 – tributary to Pecan Creek (US 377 northbound side).

Photo 80: View looking northeast toward Crossing 10 – tributary to Pecan Creek (US 377 northbound side).

Photo 81: View looking southeast toward Crossing 11 – tributary to Pecan Creek (US 377 southbound side).

Photo 82: View looking northwest toward Crossing 11 – tributary to Pecan Creek (US 377 southbound side).

Photo 83: View looking northwest toward Crossing 11 – tributary to Pecan Creek (US 377 northbound side).

Photo 84: View looking east toward Crossing 11 – tributary to Pecan Creek (US 377 northbound side).

Photo 85: View looking northwest toward Crossing 12A – tributary to Pecan Creek (US 377 northbound side).

Photo 86: View looking southeast toward Crossing 12A – tributary to Pecan Creek (US 377 northbound side).

Photo 87: View looking west toward Crossing 12B – tributary to Pecan Creek (US 377 northbound side).

Photo 88: View looking west toward Crossing 12B – tributary to Pecan Creek (US 377 northbound side).

Photo 89: View looking east toward Crossing 13 – Running Branch (US 377 southbound side).

Photo 90: View looking west toward Crossing 13 – Running Branch (US 377 southbound side).

Photo 91: View looking west toward Crossing 13 – Running Branch (US 377 northbound side).

Photo 92: View looking east toward Crossing 13 – Running Branch (US 377 northbound side).

Photo 93: View looking southeast toward Crossing 14 – tributary to Pecan Creek (US 377 southbound side).

Photo 94: View looking northwest toward Crossing 14 – tributary to Pecan Creek (US 377 southbound side).

Photo 95: View looking northwest toward Crossing 14 – tributary to Pecan Creek (US 377 northbound side).

Photo 96: View looking southeast toward Crossing 14 – tributary to Pecan Creek (US 377 northbound side).

Photo 97: View looking west toward Crossing 15 – tributary to Cantrell Slough (US 377 northbound side).

Photo 98: View looking east toward Crossing 15 – tributary to Cantrell Slough (US 377 northbound side).

Photo 99: View looking north toward Crossing 16 – tributary to Cantrell Slough (US 377 southbound side).

Photo 100: View looking west toward Crossing 16 – tributary to Cantrell Slough (US 377 southbound side).

Photo 101: View looking west toward Crossing 16 – tributary to Cantrell Slough (US 377 northbound side).

Photo 102: View looking east toward Crossing 16 – tributary to Cantrell Slough (US 377 northbound side).

Photo 103: View looking northwest toward Crossing 17 – tributary to Cantrell Slough (US 377 northbound side).

Photo 104: View looking southeast toward Crossing 17 – tributary to Cantrell Slough (US 377 northbound side).

Photo 105: View looking north toward Crossing 18 – tributary to Cantrell Slough (US 377 northbound side).

Photo 106: View looking south toward Crossing 18 – tributary to Cantrell Slough (US 377 northbound side).

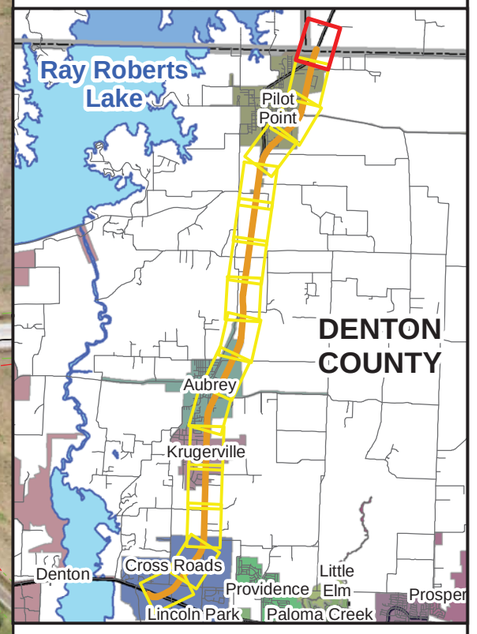
Appendix C – Schematics

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



N E S W

0 200 400
Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

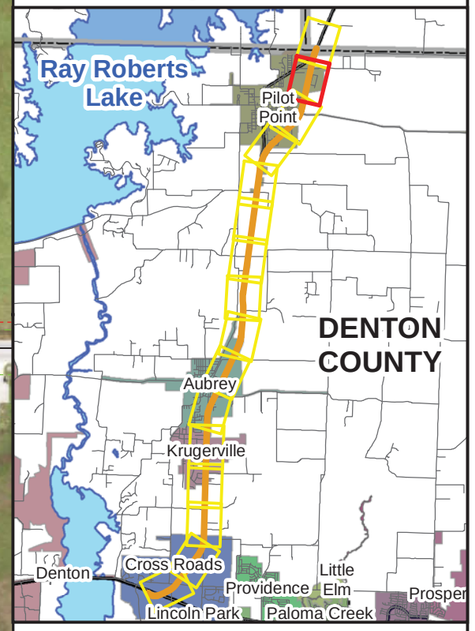
Basemap Source: TNRIS (2018)

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



N E S W

0 200 400
Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

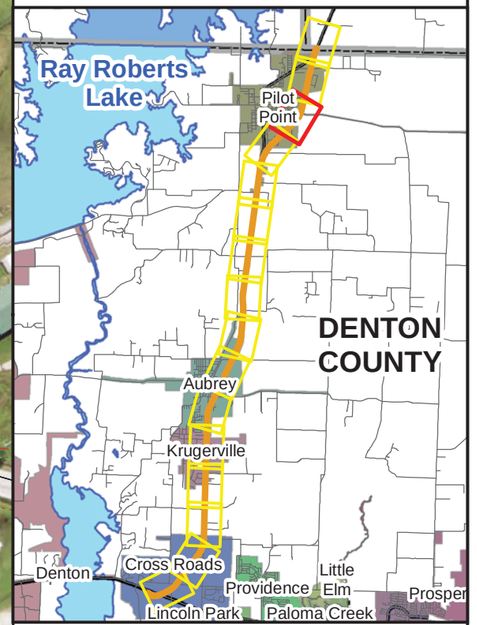
Basemap Source: TNRIS (2018)

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



0 200 400 Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

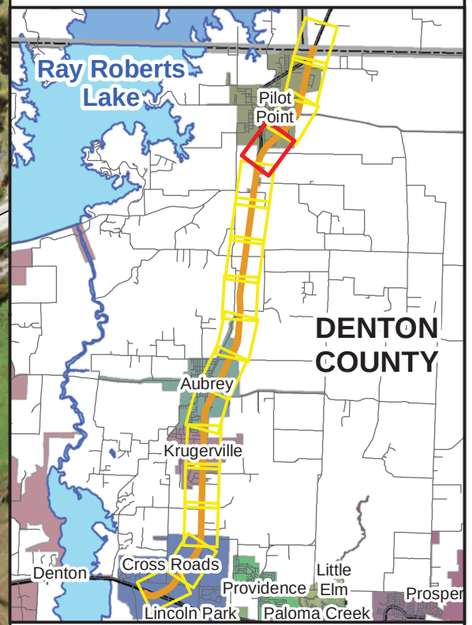
Basemap Source: TNRIS (2018)

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



0 200 400 Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

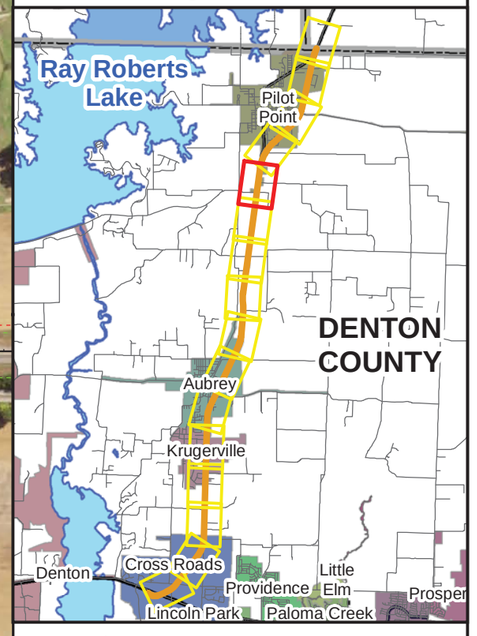
Basemap Source: TNRIS (2018)

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



N W E S

0 200 400 Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

Basemap Source: TNRIS (2018)

Schematic Design Map

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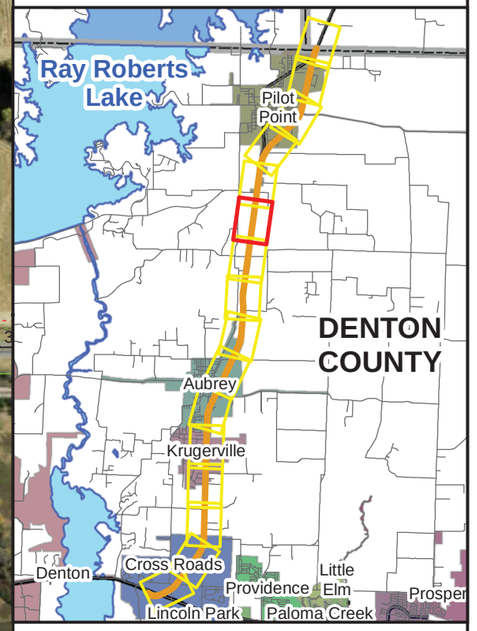
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



N E S W

0 200 400 Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
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Basemap Source: TNRIS (2018)

Schematic Design Map

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To US 380
Denton County, Texas

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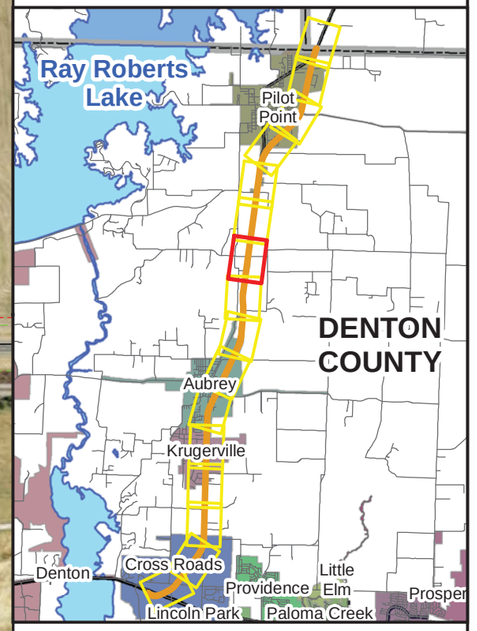

N E S W

0 200 400 Feet

Legend

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- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
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Basemap Source: TNRIS (2018)

Schematic Design Map

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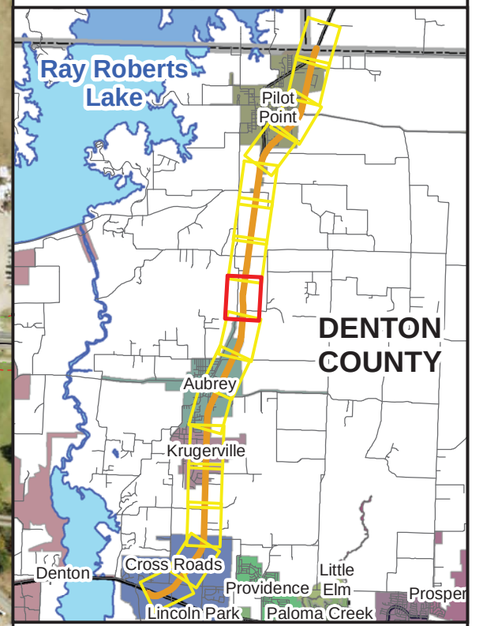
CSJ: 0081-06-040



N E S W

0 200 400 Feet

Legend

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- Proposed Right-of-Way
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Basemap Source: TNRIS (2018)

Schematic Design Map

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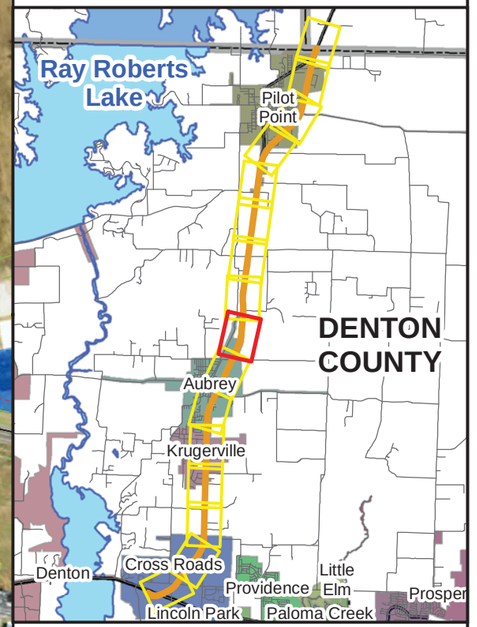
To US 380
Denton County, Texas

CSJ: 0081-06-040



N E S W

0 200 400 Feet

Legend

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- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

Basemap Source: TNRIS (2018)

Schematic Design Map

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Denton County, Texas

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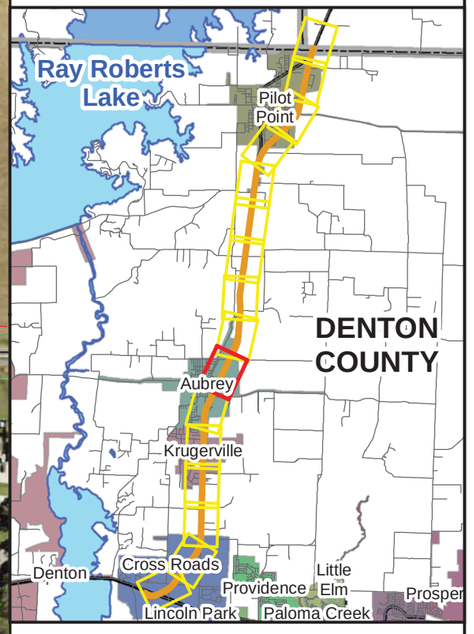

N E S W

0 200 400 Feet

Legend

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- Proposed Right-of-Way
- Proposed Easement
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Basemap Source: TNRIS (2018)

Schematic Design Map

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To US 380
Denton County, Texas

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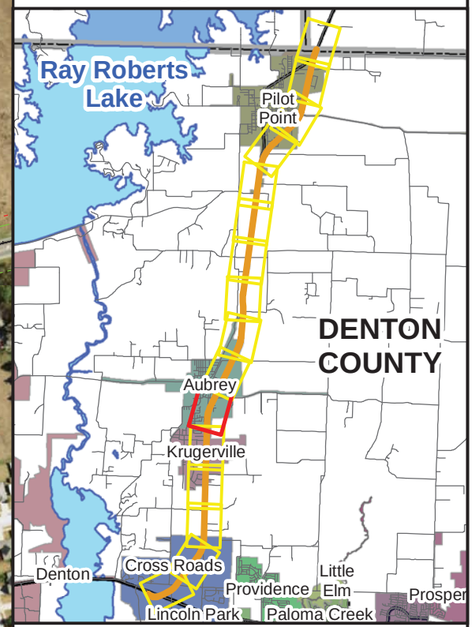

N E S W

0 200 400

Feet

Legend

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- Proposed Right-of-Way
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Basemap Source: TNRIS (2018)

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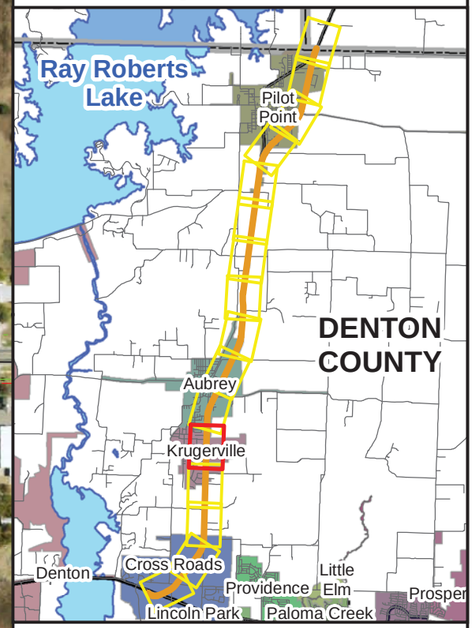
To US 380
Denton County, Texas

CSJ: 0081-06-040



N E S W

0 200 400 Feet

Legend

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- Proposed Right-of-Way
- Proposed Easement
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Basemap Source: TNRIS (2018)

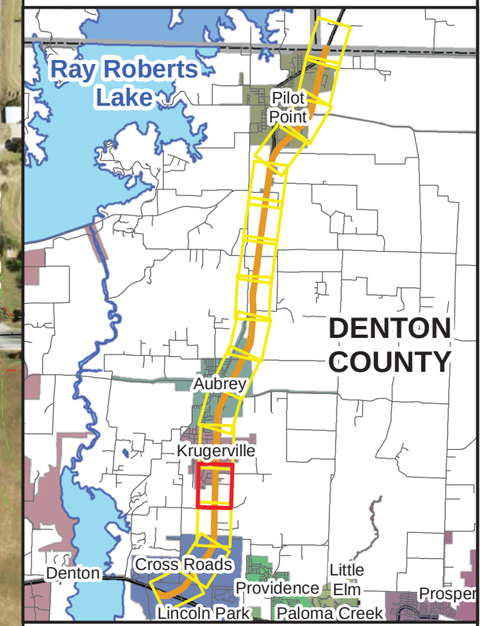
Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 13 of 16



N E S W

0 200 400 Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
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Basemap Source: TNRIS (2018)

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

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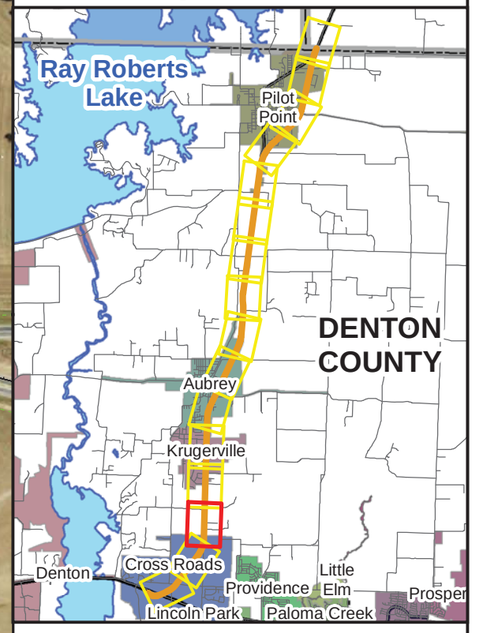

N E S W

0 200 400 Feet

Legend

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- Proposed Right-of-Way
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Basemap Source: TNRIS (2018)

Schematic Design Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

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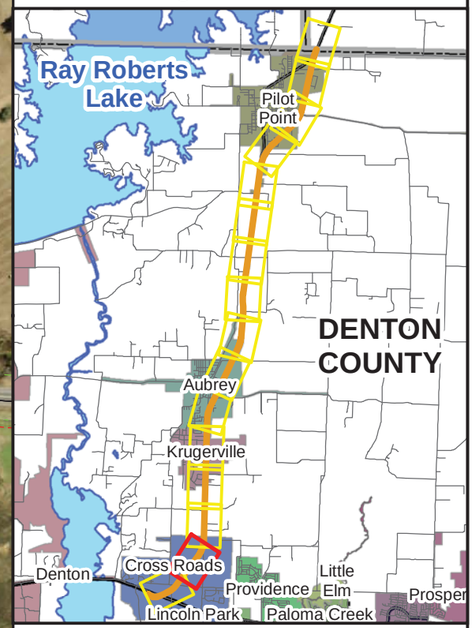

N E S W

0 200 400
Feet

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Schematic Design Map

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From North of BUS 377E
To US 380
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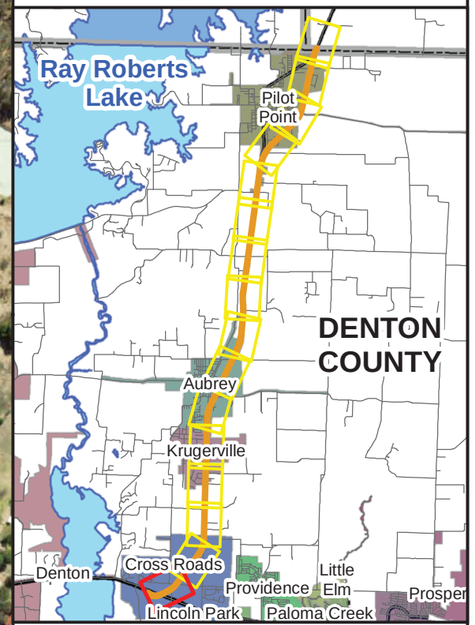


S E N W

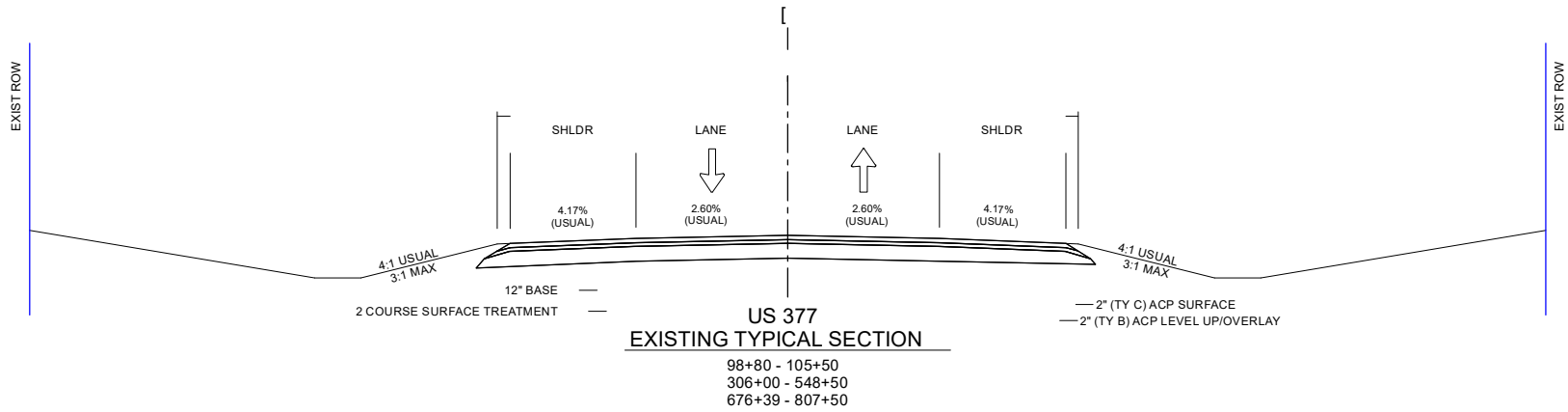
0 200 400
Feet

Legend

- Project Design
- Existing Right-of-Way
- Proposed Right-of-Way
- Proposed Easement
- Proposed Displacement

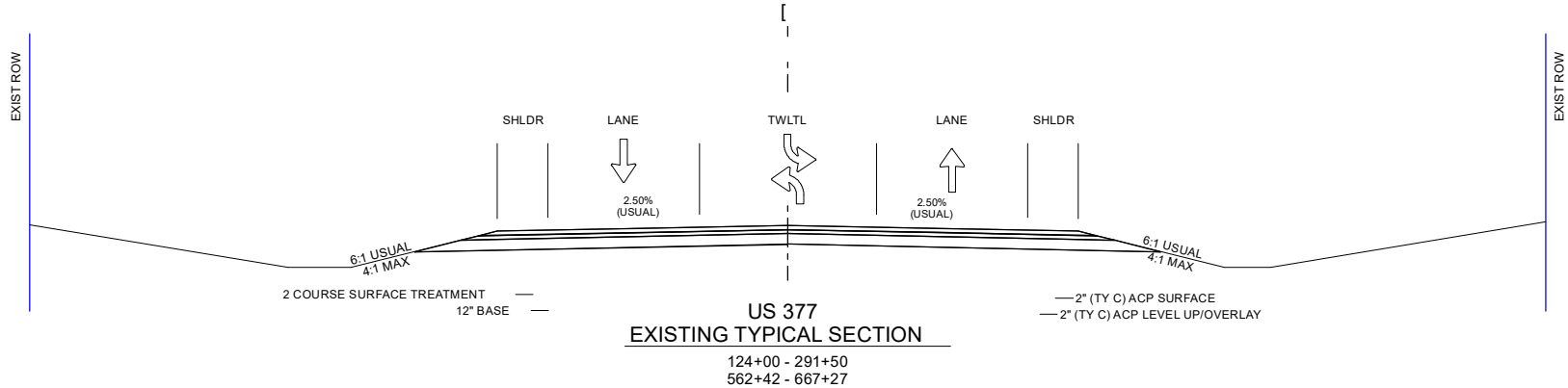
Basemap Source: TNRIS (2018)

Appendix D – Typical Sections



US 377
EXISTING TYPICAL SECTION

98+80 - 105+50
306+00 - 548+50
676+39 - 807+50



US 377
EXISTING TYPICAL SECTION

124+00 - 291+50
562+42 - 667+27

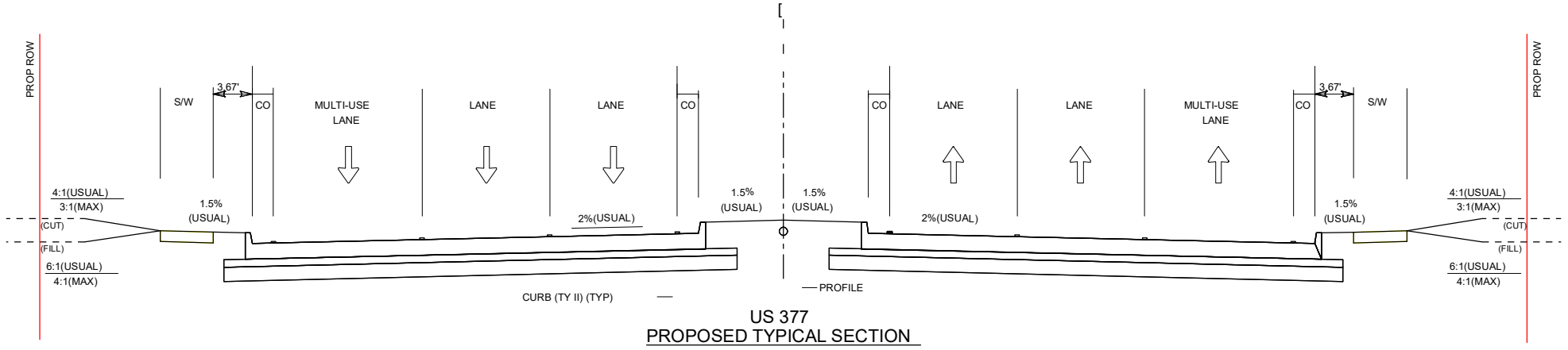
FOR REPORT
PURPOSES ONLY

Not for construction, bidding,
or permit purposes

FIGURE 4
TYPICAL SECTIONS

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

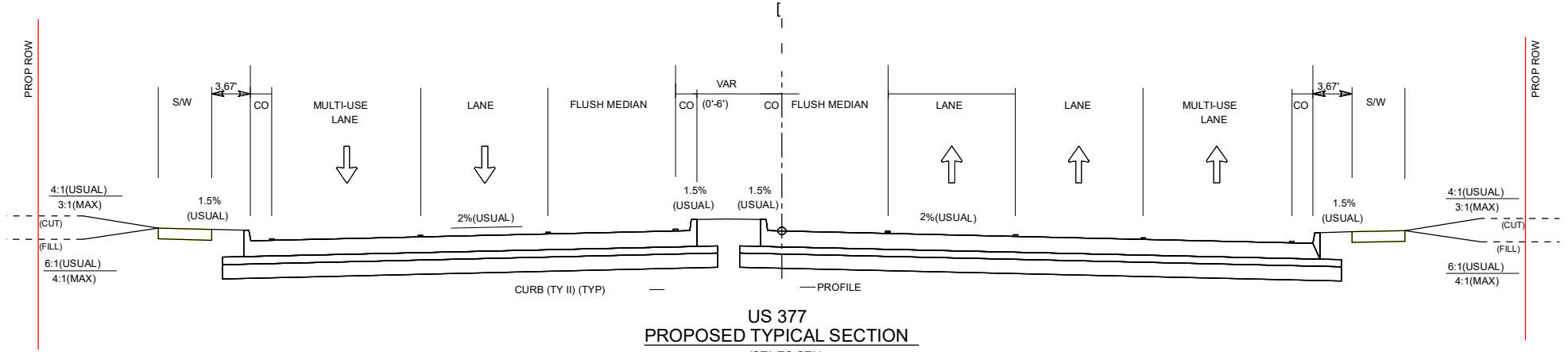


US 377
PROPOSED TYPICAL SECTION

130+31.32 TO 138+14.46
143+02.75 TO 160+21.50
165+09.52 TO 174+80.99
184+98.30 TO 195+87.55
201+06.80 TO 212+92.49
223+47.34 TO 232+38.67
242+50.94 TO 252+44.04
463+83.01 TO 490+26.07

494+15.55 TO 502+17.07
512+13.06 TO 529+96.11
540+16.92 TO 547+11.22
551+99.04 TO 553+39.77
563+80.00 TO 567+14.67
577+10.67 TO 578+96.97
593+01.60 TO 594+81.88

599+70.30 TO 615+05.15
624+90.35 TO 628+10.58
638+06.58 TO 649+54.91
659+50.92 TO 662+62.11
672+98.10 TO 719+12.59
729+19.27 TO 743+34.14
752+46.17 TO 797+65.38
808+01.38 TO 819+11.81



US 377
PROPOSED TYPICAL SECTION

(STA TO STA)
107+68.36 TO 114+23.68

FOR REPORT
PURPOSES ONLY

Not for construction, bidding,
or permit purposes

FIGURE 4
TYPICAL SECTIONS

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Appendix E – Plan and Program Excerpts

Mobility 2045

Regionally Significant Arterial Improvements

Revised July 1, 2020

RSA ID	Agency	County	Facility	From	To	2018*	2020*	2028	2037	2045	YOE Cost
2.150.375	TxDOT Dallas	Denton	Outer Loop Greenbelt Pkwy **	US 377	Legacy Drive	0	0	2	3/3	N/A	
2.205.425	TxDOT Dallas	Denton	SH 114 EB/SH 114 WB	County Line Road	West Of FM 156	2	2	2	2/2	2/2	$33,817,800
2.205.450	TxDOT Dallas	Denton	SH 114	West of FM 156	FM 156	2/2	2/2	2/2	2/2	2/2	$1,938,600
2.205.475	TxDOT Dallas	Denton	SH 114	FM 156	Double Eagle Blvd	2/2	2/2	N/A	N/A	N/A	
2.205.500	TxDOT Dallas	Denton	SH 114	Double Eagle Blvd	IH 35W	3/3	3/3	N/A	N/A	N/A	
2.205.600	TxDOT Dallas	Denton	SH 114	Labonte Drive	IH 35W	2/2	2/2	N/A	N/A	N/A	
2.205.625	TxDOT Dallas	Denton	SH 114	US 377	East Of US 377	2/2	2/2	N/A	N/A	N/A	
2.205.650	TxDOT Dallas	Denton	SH 114	East of US 377	SH 170	2/2	2/2	N/A	N/A	N/A	
2.325.500	TxDOT Dallas	Denton	SH 170 **	US 377	Roanoke Road	2/2	2/2	N/A	N/A	N/A	
2.325.550	TxDOT Dallas	Denton	SH 170 **	Roanoke Road	Jt Ottinger Road	2/2	N/A	N/A	N/A	N/A	
2.325.560	TxDOT Dallas	Denton	SH 170 **	Jt Ottinger Road	East Of Jt Ottinger Road	3/3	N/A	N/A	N/A	N/A	
2.325.575	TxDOT Dallas	Denton	SH 170 **	East Of Jt Ottinger Road	SH 114	2/2	N/A	N/A	N/A	N/A	
1.430.200	TxDOT Dallas	Denton	SL 288/ FM 2449	John Paine Road	Vintage Parkway	2	2	2	2/2	2/2	$5,898,590
1.523.110	TxDOT Dallas	Denton	US 377	North of E Northside Dr	S Washington Street	2	2	2	4	6	$20,678,165
1.523.120	TxDOT Dallas	Denton	US 377	S Washington Street	FM 428	2	2	2	4	6	$39,767,808
1.523.130	TxDOT Dallas	Denton	US 377	FM 428	US 380	2	2	2	4	6	$34,399,687
1.540.210	TxDOT Dallas	Denton	US 377	IH 35E	South of FM 1830 Country Club Road	2	2	6	6	6	$37,980,000
1.540.220	TxDOT Dallas	Denton	US 377	South of FM 1830	Crawford Road	2	2	2	6	6	$80,000,000
1.540.230	TxDOT Dallas	Denton	US 377	Crawford Road	Marshall Creek Road	2	2	4	4	4	$133,900,000
1.540.240	TxDOT Dallas	Denton	US 377	Marshall Creek Road	SH 114	4	4	4	4	4	$2,536,000
1.540.250	TxDOT Dallas	Denton	US 377	SH 114	North Of Byron Nelson Blvd	4	4	4	4	4	$1,040,000
1.540.260	TxDOT Dallas	Denton	US 377	North of Byron Nelson Blvd	Parish Lane	2	2	4	4	4	$12,050,000
2.225.300	TxDOT Dallas	Denton	US 380 University Drive	Bonnie Brae Street	Malone Street	6	6	6	6	6	$7,456,430
2.225.275	TxDOT Dallas	Denton	US 380	FM 156	IH 35	6	6	6	6	6	$45,700,000
2.225.425	TxDOT Dallas	Denton	US 380	East of Fish Trap Road	US 377	2/2	2/2	3/3	3/3	3/3	$3,340,000
2.225.440	TxDOT Dallas	Denton	US 380	US 377	Potter Shop Road	2/2	2/2	3/3	3/3	3/3	$760,000
2.225.445	TxDOT Dallas	Denton	US 380	Potter Shop Road	FM 720	4	4	6	6	6	$19,430,000
2.225.450	TxDOT Dallas	Denton	US 380	FM 720	FM 423	4	4	6	6	6	$96,280,000
2.225.475	TxDOT Dallas	Denton	US 380	FM 423	CR 26	4	4	3/3	3/3	3/3	$32,370,000
2.267.300	TxDOT Dallas	Denton	Valley Ridge Blvd	Mill Street	College Street	0	0	4	4	4	$17,770,000
1.430.225	TxDOT Dallas	Denton	Vintage Parkway	IH 35W	US 377	2	2	4	4	4	$11,344,400
2.787.250	TxDOT Dallas	Ellis	BU 287 BU 45	Paris Street	IH 45	2	2	4	4	4	$7,610,800
1.563.200	TxDOT Dallas	Ellis	FM 664 Ovilla Road	Ovilla Main Street	BU 287	2	2	4	4	6	$100,000,000
2.710.225	TxDOT Dallas	Ellis	FM 664 Ovilla Road	Westmoreland Road	Ovilla Main Street	2	2	4	4	6	$20,000,000
2.710.250	TxDOT Dallas	Ellis	FM 664	Westmoreland Road	IH 35E	2	2	6	6	6	$45,100,000
2.710.300	TxDOT Dallas	Ellis	FM 664	IH 35E	SH 342	4	4	6	6	6	$40,128,140
2.710.325	TxDOT Dallas	Ellis	FM 664	SH 342	IH 45	2	2	6	6	6	$192,371,860
1.840.750	TxDOT Dallas	Ellis	SH 34 Lake Bardwell Drive	SP 437 Clay Street	IH 35E	2	2	2	4	4	$141,087,000
1.840.650	TxDOT Dallas	Ellis	SH 34	FM 2451	Sunridge Drive	2	2	2	4	4	$18,452,600
1.840.655	TxDOT Dallas	Ellis	SH 34	Sunridge Drive	Sonoma Trail	2	2	2	4	4	$4,882,400
1.840.660	TxDOT Dallas	Ellis	SH 34	Sonoma Trail	IH 45	2	2	2	4	4	$2,656,600
1.840.700	TxDOT Dallas	Ellis	SH 34	FM 1181	Kaufman Street	2	2	4	4	4	$1,220,600
1.840.725	TxDOT Dallas	Ellis	SH 34	FM 1183	SP 437 Clay Street	2	2	2	4	4	$4,810,600
1.595.390	TxDOT Dallas	Ellis	SH 342	Loop 9	FM 664	2	2	2	4	4	$12,349,600
1.595.400	TxDOT Dallas	Ellis	SH 342	FM 664	US 77	2	2	2	4	4	$12,032,995
1.220.875	TxDOT Dallas	Ellis	US 287	SH 34	IH 45	2	2	N/A	N/A	N/A	
1.580.300	TxDOT Dallas	Ellis	US 77 Elm Street	Ferris Avenue	FM 66	2	2	4	4	4	$21,183,600
1.580.325	TxDOT Dallas	Ellis	US 77	FM 66	FM 877	2	2	4	4	4	$502,600
2.745.240	TxDOT Fort Worth	Hood	FM 4 FM 167 Fall Creek	FM 4 Acton Hwy	North Gate Road	2	2	2	4	4	$160,610
2.745.250	TxDOT Fort Worth	Hood	FM 4 FM 167 Fall Creek	North Gate Road	FM 167	2	2	2	4	4	$6,000,000
1.205.275	TxDOT Fort Worth	Hood	SH 144	Pear Orchard Road	North of US 67	2	2	2	2	4	$24,860,000
1.250.200	TxDOT Fort Worth	Hood	US 377 Bypass	North of SH 171	Old Granbury Road	0	0	2/2	2/2	2/2	$77,500,000
1.540.520	TxDOT Fort Worth	Hood	US 377 NB/US 377 SB	East of SH 144	FM 51	2/2	2/2	3/3	3/3	3/3	$13,900,000
1.540.455	TxDOT Fort Worth	Hood	US 377	BU 377	North of BU 377	2/2	2/2	4	4	4	$5,169,600
1.540.470	TxDOT Fort Worth	Hood	US 377	FM 167 S (Fall Creek Hwy)	FM 167 N (Temple Hall Hwy)	2/2	2/2	3/3	3/3	3/3	$53,800,000
1.540.480	TxDOT Fort Worth	Hood	US 377	FM 167 N (Temple Hall Hwy)	Mustang Trail	4	4	6	6	6	$12,161,541
1.540.490	TxDOT Fort Worth	Hood	US 377	Mustang Trail	Harbor Lakes Drive	2/2	2/2	3/3	3/3	3/3	$41,392,000
1.540.500	TxDOT Fort Worth	Hood	US 377	Harbor Lakes Drive	Old Cleburne Road	4	4	6	6	6	$2,465,777
1.540.510	TxDOT Fort Worth	Hood	US 377	Old Cleburne Road	East Of SH 144	2/2	2/2	3/3	3/3	3/3	$5,306,096
1.540.540	TxDOT Fort Worth	Hood	US 377	FM 51	BU 377	2/2	2/2	2/2	2/2	2/2	$43,107,000
1.540.550	TxDOT Fort Worth	Hood	US 377	BU 377	Holmes Dr.	1/2	1/2	1/2	2/2	2/2	$800,000
1.540.560	TxDOT Fort Worth	Hood	US 377	Holmes Dr.	Powell Cemetery Road	2	2	2	4	4	$40,680,000

* Attainment Years

**Stage facilities reported as 'N/A' indicate project is no longer classified as an arterial and will be reported in Freeway/Tollway Recommendations listing instead.

Note: '2/2' indicates facility operates as couplet.

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DENTON	0081-06-040	US 377	E,R	VARIOUS	TXDOT-DALLAS
LIMITS FROM:	US 380					REV DATE: 07/2018
LIMITS TO:	NORTH OF BUS 377E					MPO PROJECT ID: 55229
TIP DESCRIPTION:	RECONSTRUCT AND WIDEN 2 LANE UNDIVIDED ROADWAY TO 4 LANE DIVIDED FACILITY (ULTIMATE SIX LANE)					MTP REFERENCE: RSA1-1.523.110, RSA1-1.523.120, RSA1-1.523.130
REMARKS:						
						Project History:

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DENTON	0081-13-050	IH 35W	E,R	VARIOUS	TXDOT-DALLAS
LIMITS FROM:	SH 114					REV DATE: 07/2018
LIMITS TO:	IH 35W/IH 35E INTERCHANGE					MPO PROJECT ID: 55242
TIP DESCRIPTION:	WIDEN AND RECONSTRUCT 4 LANE RURAL TO 6 MAIN LANE URBAN FREEWAY AND RECONSTRUCT 2/4 TO 4/6 LANE FRONTAGE ROADS					MTP REFERENCE: FT1-5.10.2, FT1-5.10.1
REMARKS:						
						Project History:

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DENTON	0081-13-058	IH 35W	E,R	VARIOUS	TXDOT-DALLAS
LIMITS FROM:	TARRANT COUNTY LINE					REV DATE: 07/2018
LIMITS TO:	SH 114					MPO PROJECT ID: 55230
TIP DESCRIPTION:	RECONSTRUCT AND WIDEN 4 LANE RURAL TO 6 LANE URBAN FREEWAY AND CONSTRUCT 4 TO 4/6 LANE FRONTAGE ROADS					MTP REFERENCE: FT1-5.20.1
REMARKS:						
						Project History:

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	COLLIN	0091-03-022	SH 289	E,R	VARIOUS	TXDOT-DALLAS
LIMITS FROM:	N BUS 289C, NORTH OF CELINA					REV DATE: 07/2018
LIMITS TO:	N CR 60/CR 107 (GRAYSON C/L)					MPO PROJECT ID: 54023
TIP DESCRIPTION:	RECONSTRUCT AND WIDEN 2 LANE RURAL HIGHWAY TO 4 LANE DIVIDED URBAN (ULTIMATE 6 LANES)					MTP REFERENCE: RSA1-1.605.200
REMARKS:						
						Project History:

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DALLAS	0092-02-130	IH 45	E,R	VARIOUS	TXDOT-DALLAS
LIMITS FROM:	AT SL 9					REV DATE: 11/2018
LIMITS TO:						MPO PROJECT ID: 55249
TIP DESCRIPTION:	RECONSTRUCT EXISTING 2 TO 2 LANE SOUTHBOUND FRONTAGE ROAD AND RAMP MODIFICATIONS					MTP REFERENCE: IN1-27.6.1, NRSA1-27.30.2, TSMO2-001
REMARKS:	ADD PROJECT TO APPENDIX D OF THE 2019-2022 TIP/STIP					
						Project History:

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DALLAS	0094-07-044	SH 183	E,R	IRVING	TXDOT-DALLAS
LIMITS FROM:	1.0 MILE EAST OF SL 12					REV DATE: 11/2018
LIMITS TO:	WEST END OF ELM FORK TRINITY RIVER BRIDGE					MPO PROJECT ID: 53198
TIP DESCRIPTION:	RECONSTRUCT EXISTING 8 GP LANES, 2 TO 6 CONCURRENT MANAGED LANES, AND 4/6 DISCONTINUOUS TO 6/8 CONTINUOUS FRONTAGE ROADS (ULTIMATE)					MTP REFERENCE: FT1-22.40.2
REMARKS:	REMOVE CONSTRUCTION PHASE FROM APPENDIX D OF THE 2019-2022 TIP/STIP					
						Project History: 10-YEAR PLAN PROJECT

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DALLAS	0094-07-045	SH 183	E,R	IRVING	TXDOT-DALLAS
LIMITS FROM:	WEST END OF ELM FORK TRINITY RIVER BRIDGE					REV DATE: 11/2018
LIMITS TO:	WEST OF IH 35E					MPO PROJECT ID: 54072
TIP DESCRIPTION:	RECONSTRUCT AND WIDEN 6/8 TO 6/8 GP LANES, 2 TO 2/6 MANAGED LANES & RECONSTRUCT 4/6 DISCONTINUOUS TO 4/8 LANE CONTINUOUS FRONTAGE ROADS (ULTIMATE)					MTP REFERENCE: FT1-22.40.2, FT1-22.40.3
REMARKS:	REMOVE CONSTRUCTION PHASE FROM APPENDIX D OF THE 2019-2022 TIP/STIP					
						Project History: 10-YEAR PLAN PROJECT

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS	DALLAS	0095-02-096	US 80	C	SUNNYVALE	TXDOT-DALLAS
LIMITS FROM:	BELT LINE RD					REV DATE: 07/2018
LIMITS TO:	LAWSON RD					MPO PROJECT ID: 53110
TIP DESCRIPTION:	RECONSTRUCT AND WIDEN 4 TO 6 MAINLANES AND 2/4 TO 4/6 LANE CONTINUOUS FRONTAGE ROADS					MTP REFERENCE: FT1-32.10.3
REMARKS:						
						Project History: 10-YEAR PLAN PROJECT

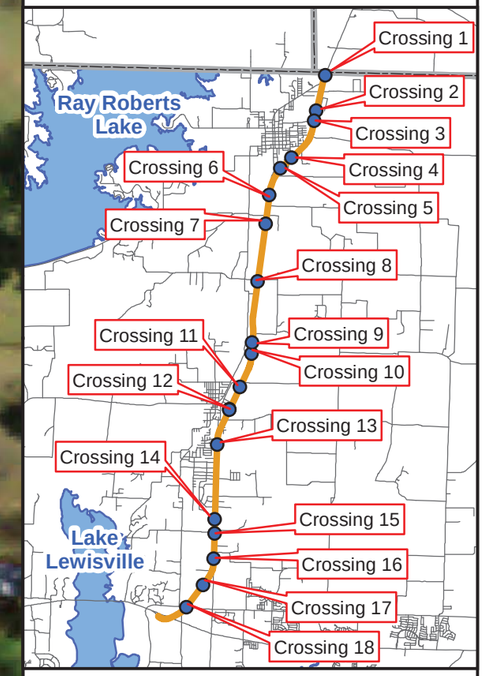
Appendix F – Resource-specific Maps

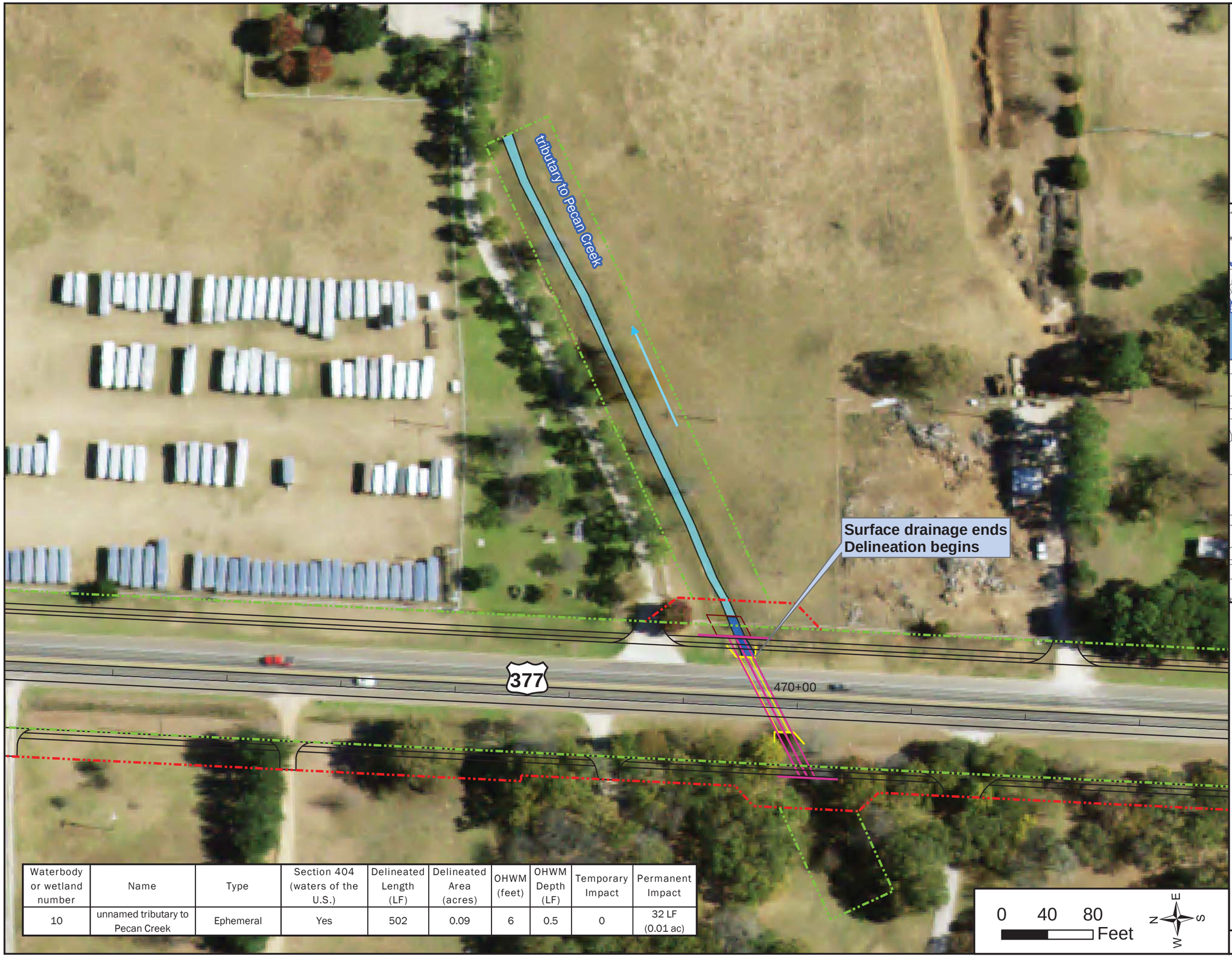
Figure 1 – Land Use and Community Facilities
Figure 2 – Project Area Soils
Figure 3 – Census Geographies
Figure 4 – Water Resources
Figure 5 – Observed Vegetation Types
Figure 6 – Hazardous Materials
Figure 7 – Noise Analysis Results
Figure 8 – Indirect Impact Area
Figure 9 – Cumulative Impact Area

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 10

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
10	unnamed tributary to Pecan Creek	Ephemeral	Yes	502	0.09	6	0.5	0	32 LF (0.01 ac)

0 40 80 Feet

N W E S

LEGEND

- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

Basemap Source: TNRIS (2018)

Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
11	unnamed tributary to Pecan Creek	Intermittent	Yes	767	0.08	6	1	78 LF (0.01 ac)	62 LF (0.01 ac)

tributary to Pecan Creek

510+00

377

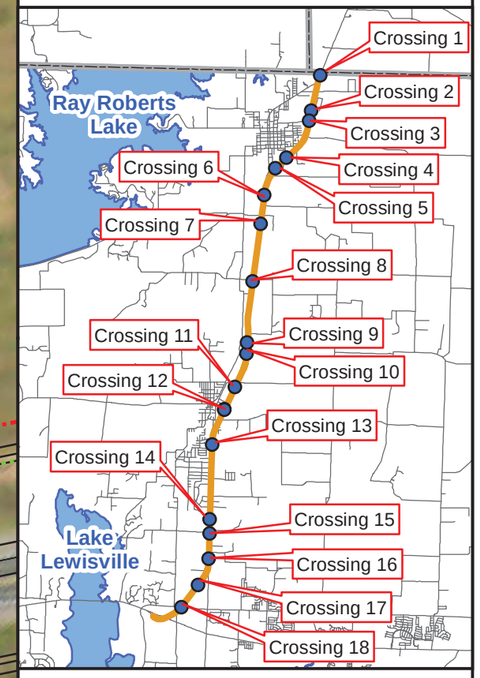
W Blackjack Rd

0 40 80 Feet

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 11

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



LEGEND

- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

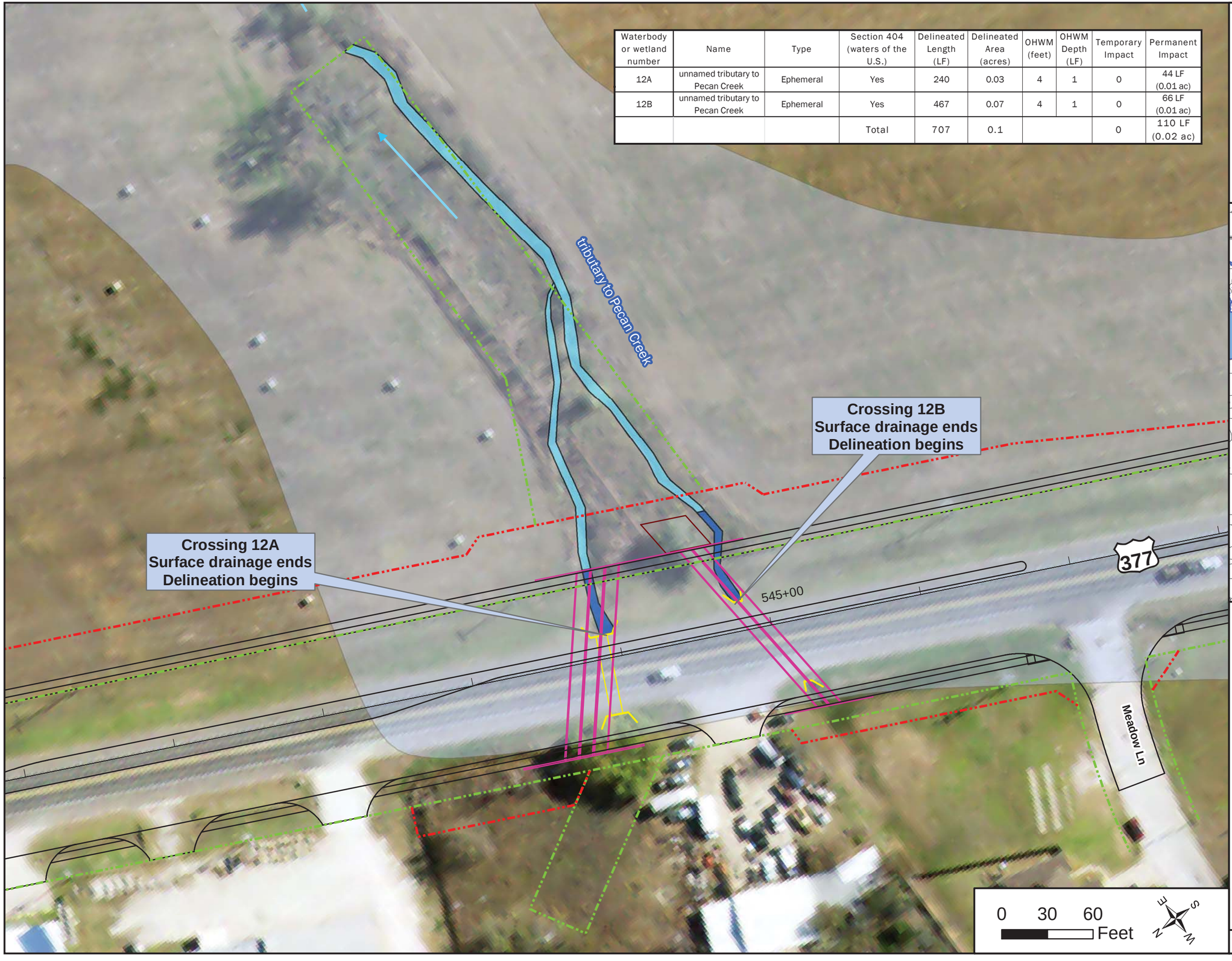
Basemap Source: TNRIS (2018)

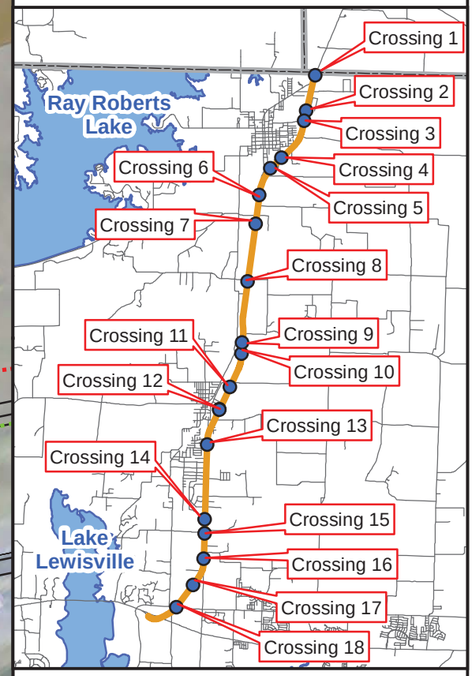
FIGURE 4
PROJECT LAYOUT MAP
CROSSING 12

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
12A	unnamed tributary to Pecan Creek	Ephemeral	Yes	240	0.03	4	1	0	44 LF (0.01 ac)
12B	unnamed tributary to Pecan Creek	Ephemeral	Yes	467	0.07	4	1	0	66 LF (0.01 ac)
			Total	707	0.1			0	110 LF (0.02 ac)





LEGEND

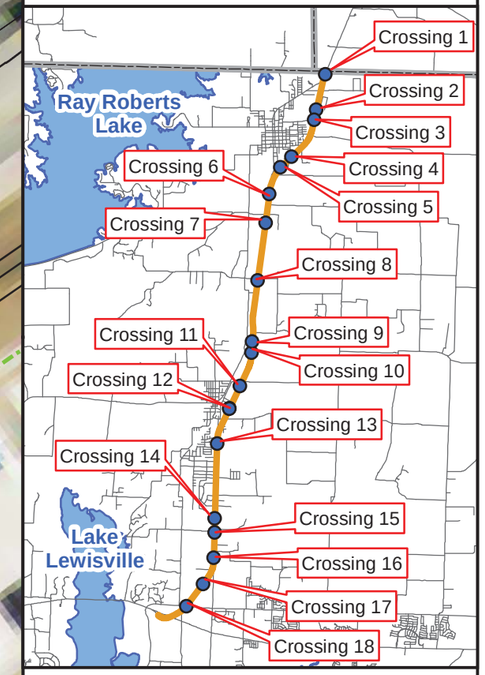
- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

Basemap Source: TNRIS (2018)

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 13

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
13	Running Branch	Intermittent	Yes	290	0.06	8	2	82 LF (0.03 ac)	42 LF (0.01 ac)

0 20 40 Feet

LEGEND

- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

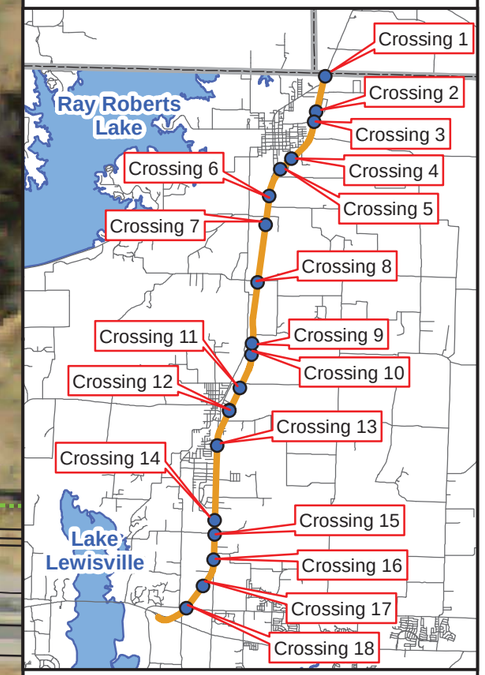
Basemap Source: TNRIS (2018)

Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
14	unnamed tributary to Pecan Creek	Intermittent	Yes	487	0.18	15	1	92 LF (0.05 ac)	87 LF (0.04 ac)

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 14

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



LEGEND

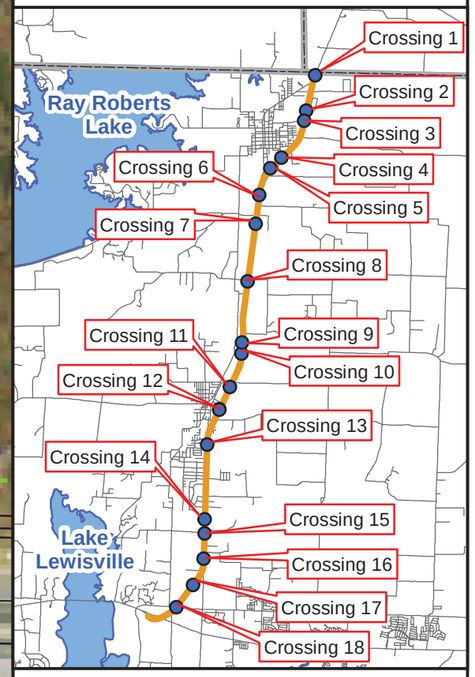
- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

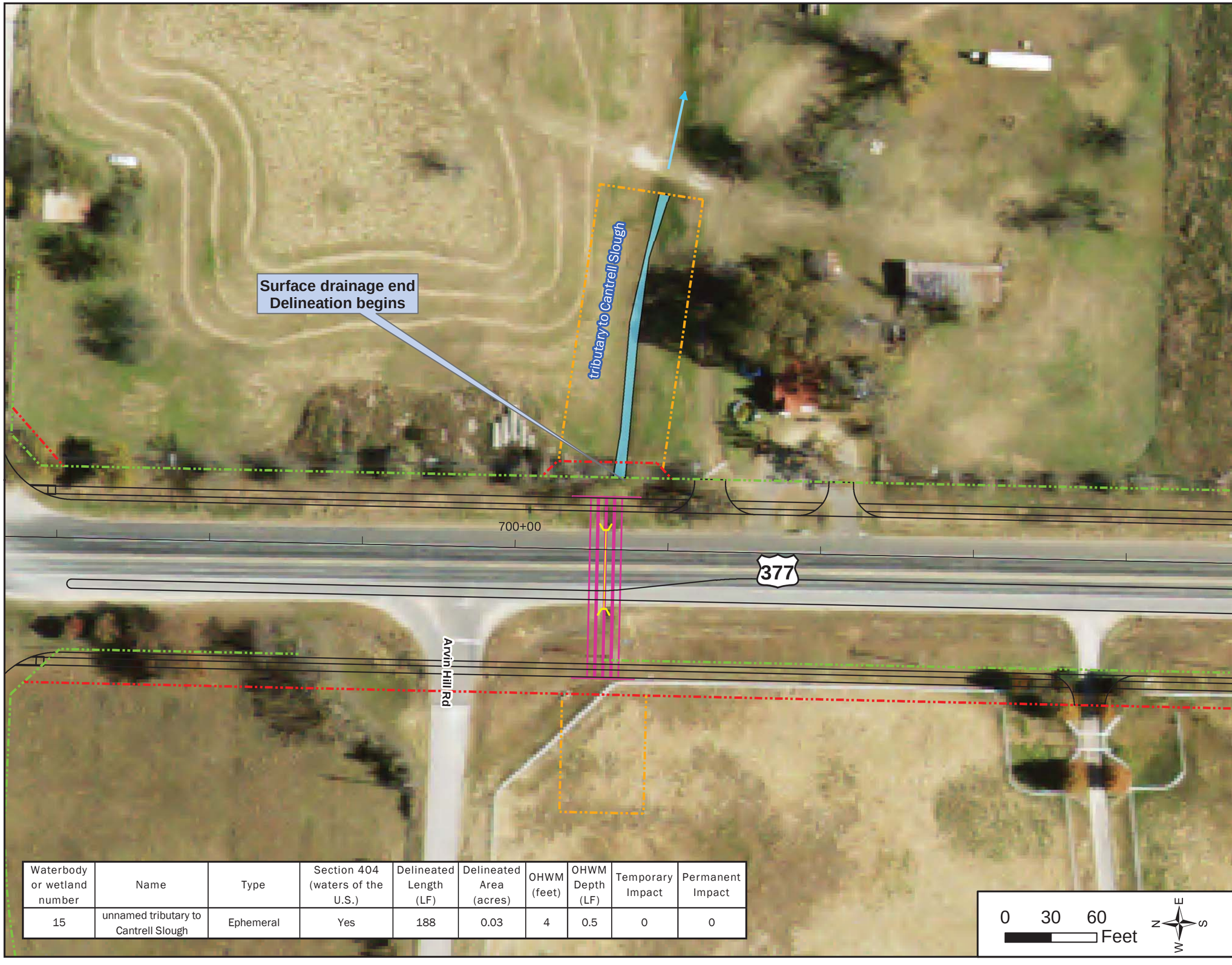
Basemap Source: TNRIS (2018)

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 15

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
15	unnamed tributary to Cantrell Slough	Ephemeral	Yes	188	0.03	4	0.5	0	0

0 30 60
Feet

N E S W

LEGEND

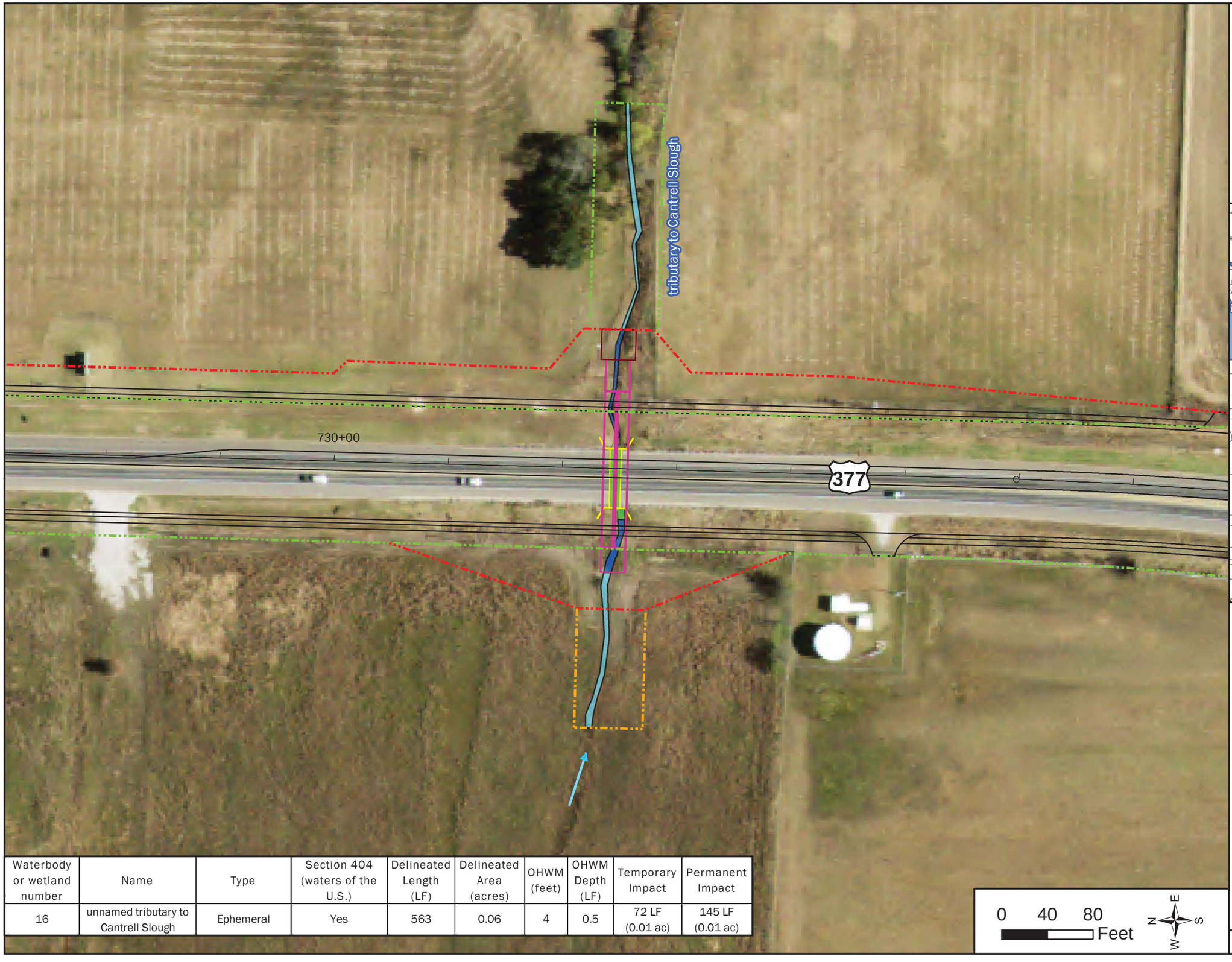
- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

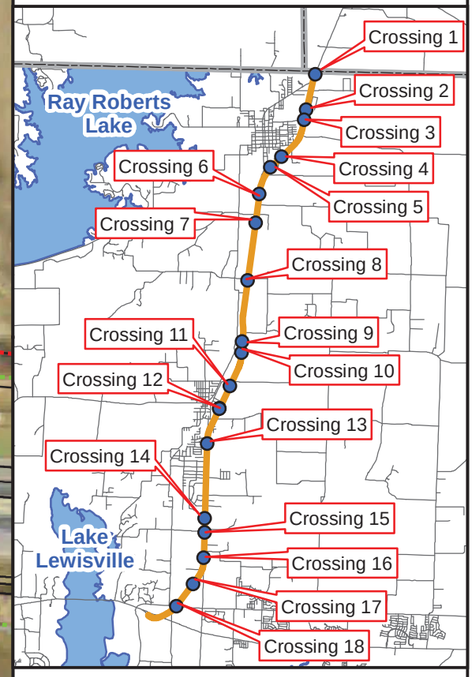
Basemap Source: TNRIS (2018)

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 16

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
16	unnamed tributary to Cantrell Slough	Ephemeral	Yes	563	0.06	4	0.5	72 LF (0.01 ac)	145 LF (0.01 ac)

LEGEND

- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

0 40 80 Feet

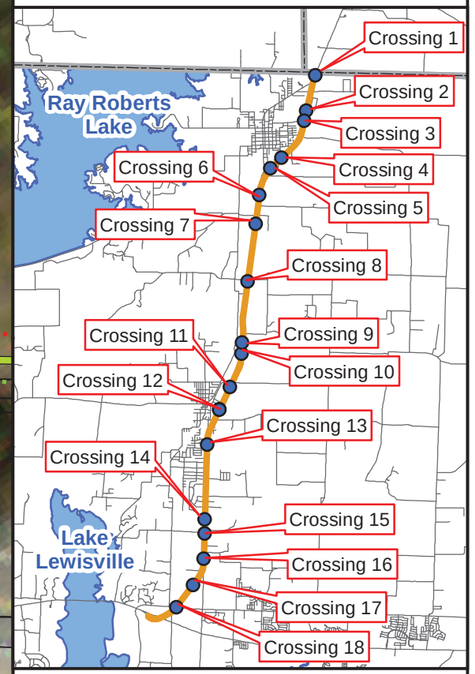
N E S W

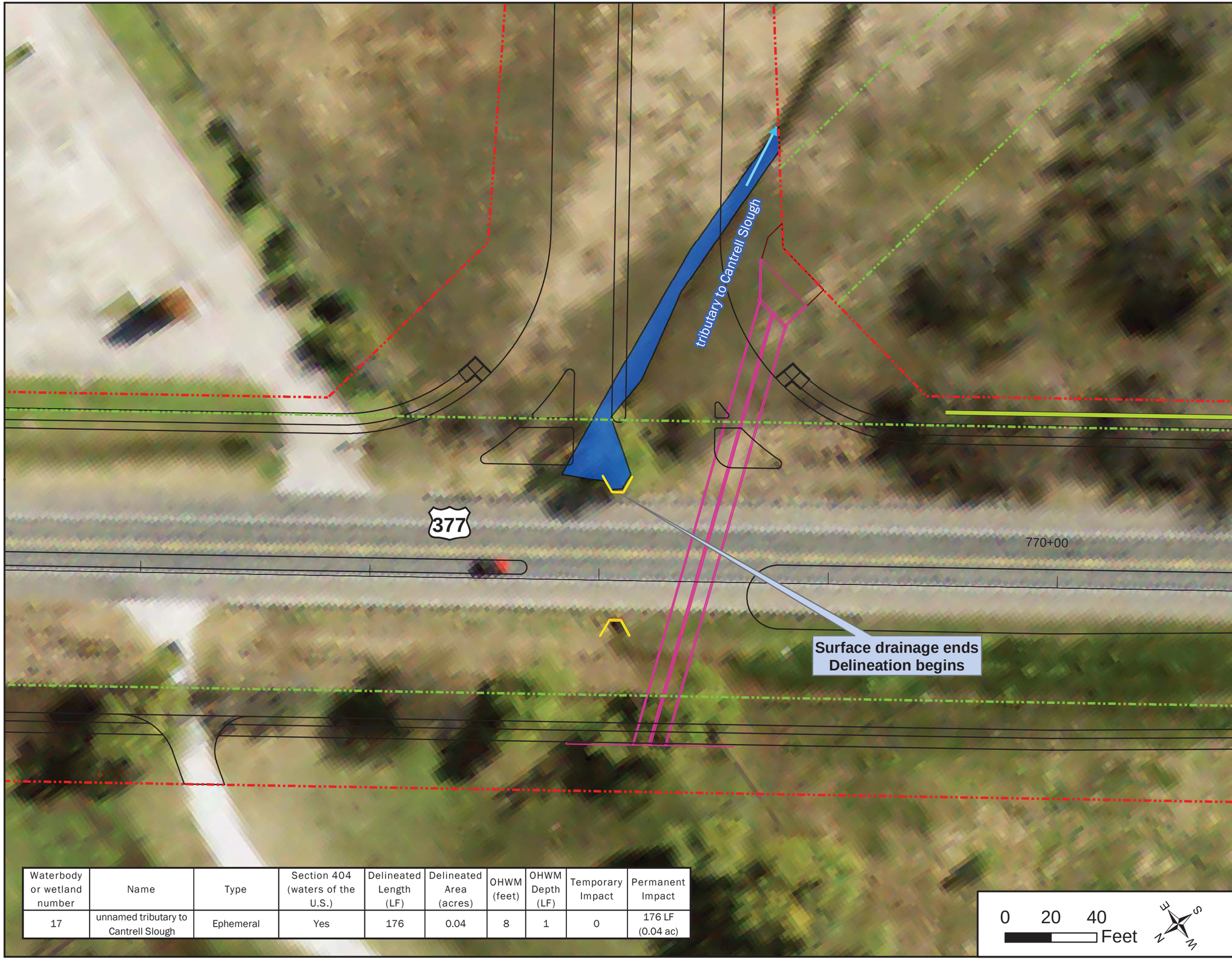
Basemap Source: TNRIS (2018)

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 17

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
17	unnamed tributary to Cantrell Slough	Ephemeral	Yes	176	0.04	8	1	0	176 LF (0.04 ac)

LEGEND

- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

0 20 40 Feet

N E S W

Basemap Source: TNRIS (2018)

Waterbody or wetland number	Name	Type	Section 404 (waters of the U.S.)	Delineated Length (LF)	Delineated Area (acres)	OHWM (feet)	OHWM Depth (LF)	Temporary Impact	Permanent Impact
18	unnamed tributary to Cantrell Slough	Ephemeral	Yes	100	0.01	4	1	9 LF (0.001 ac)	23 LF (0.002 ac)

Fishtrap Rd

tributary to Cantrell Slough

Surface drainage ends
Delineation begins

800+00

377

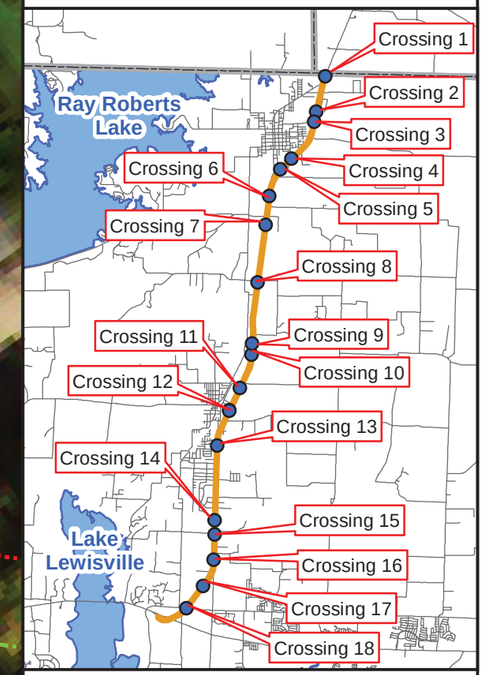
0 20 40 Feet

N E S W

FIGURE 4
PROJECT LAYOUT MAP
CROSSING 18

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



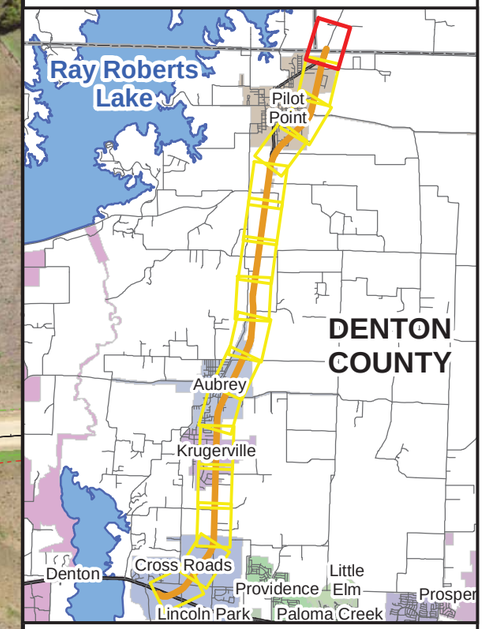
LEGEND

- Existing ROW
- Proposed Easement
- Proposed ROW
- Pavement
- Proposed Retainaing Wall
- Existing Culvert
- Proposed Culvert
- Proposed Riprap
- Stream (No Impact)
- Stream (Permanent Impact)
- Stream (Temporary Impact)
- Floodplain Area
- Flow Direction

Basemap Source: TNRIS (2018)

Figure 5
Actual Vegetation Map
United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040
Page 1 of 16



Legend
- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

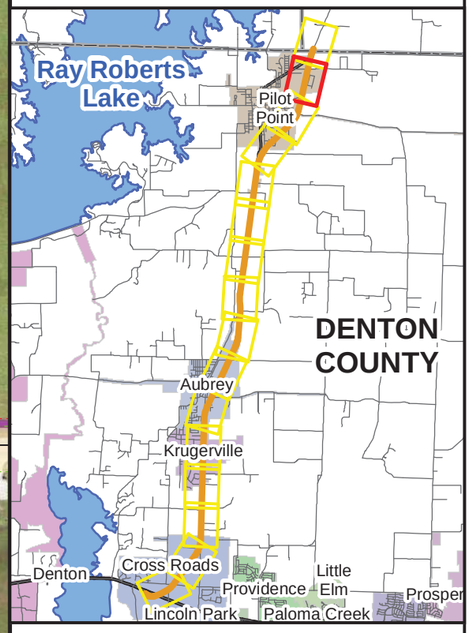
Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 2 of 16



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

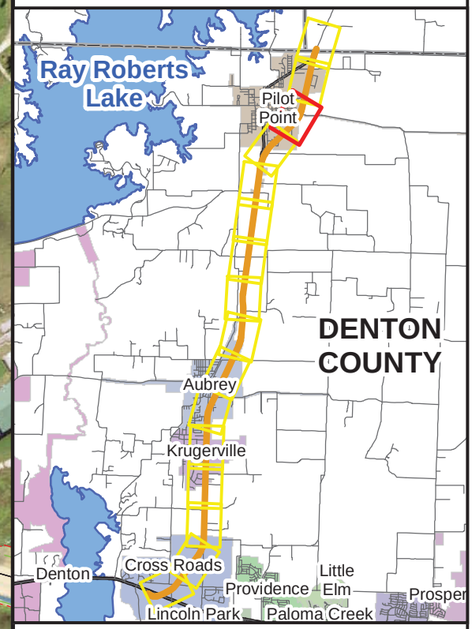
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

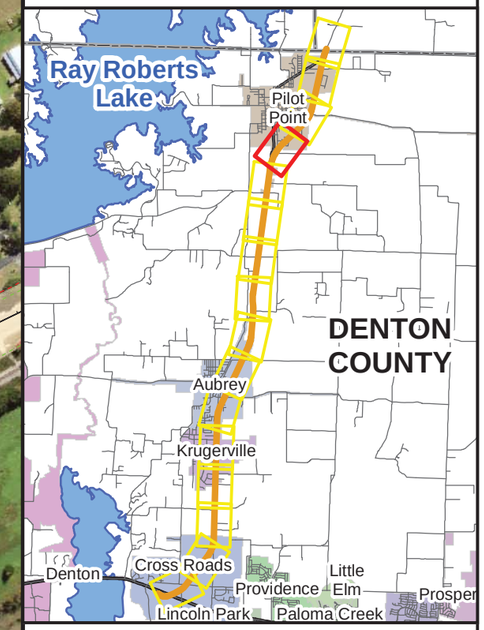
Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 4 of 16



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

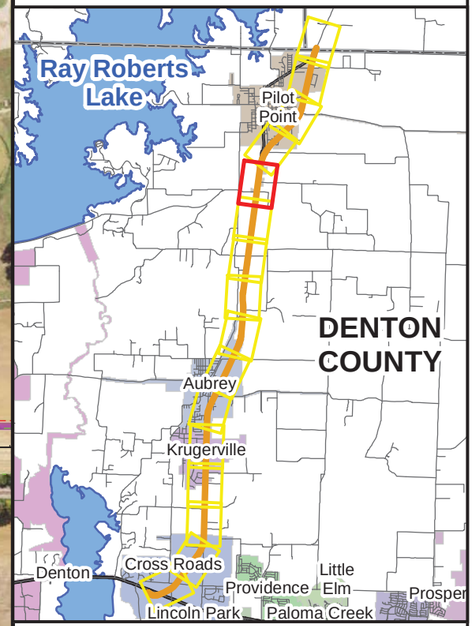
Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 5 of 16



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

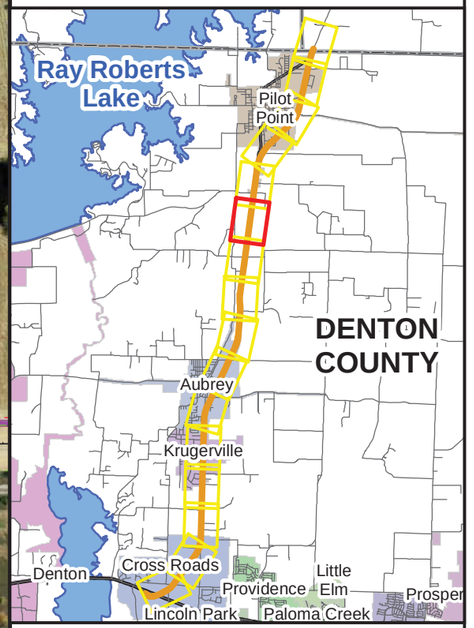
Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 6 of 16



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

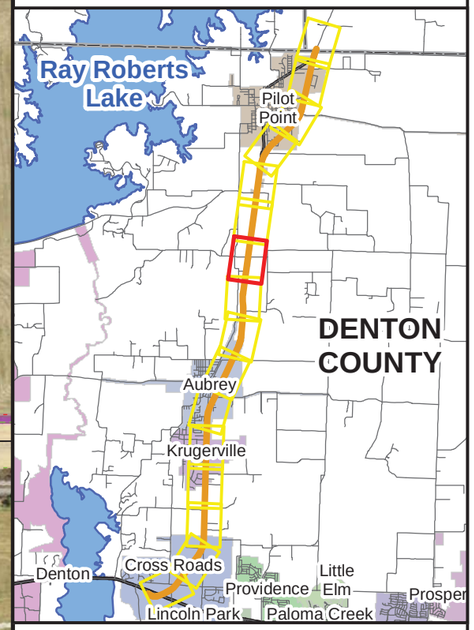
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

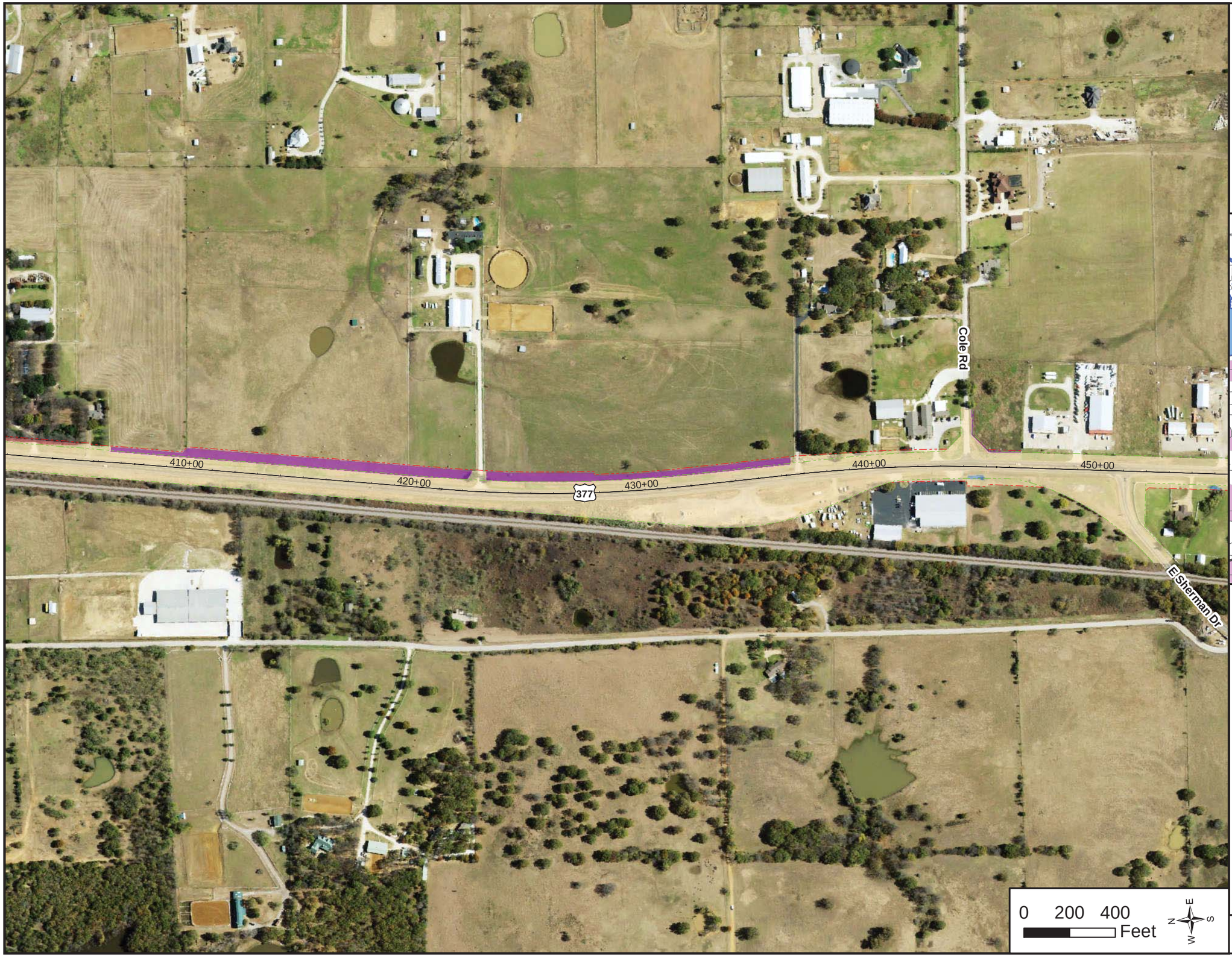
Actual Vegetation Map

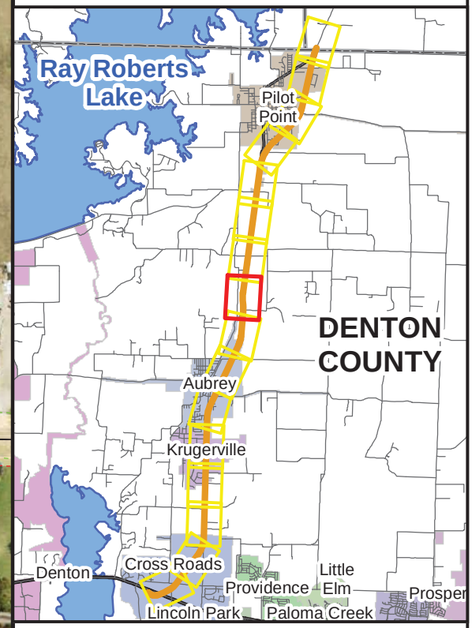
United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 8 of 16





Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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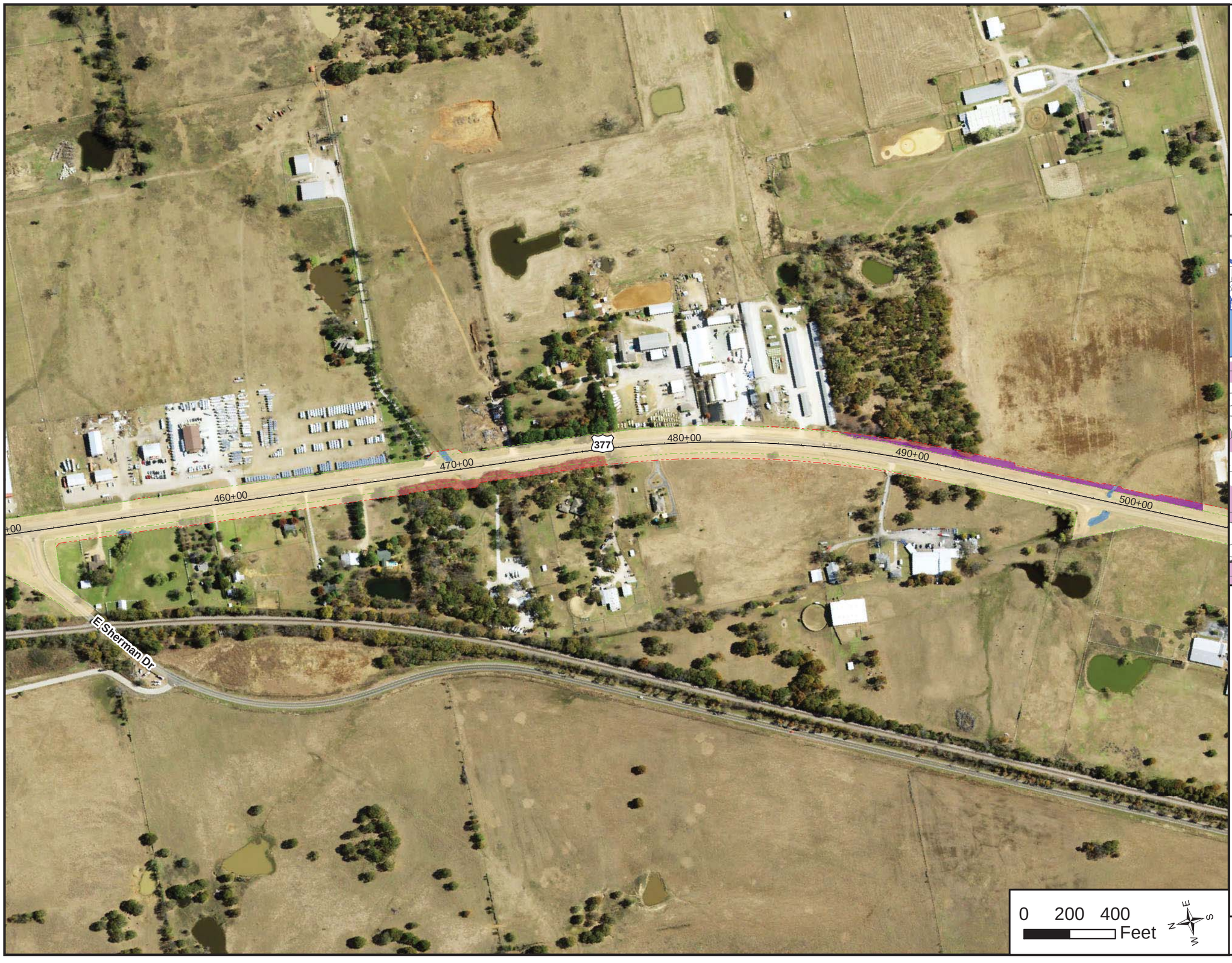
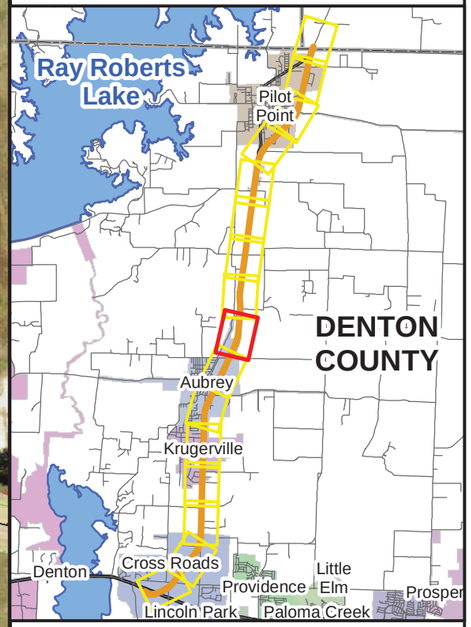




Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

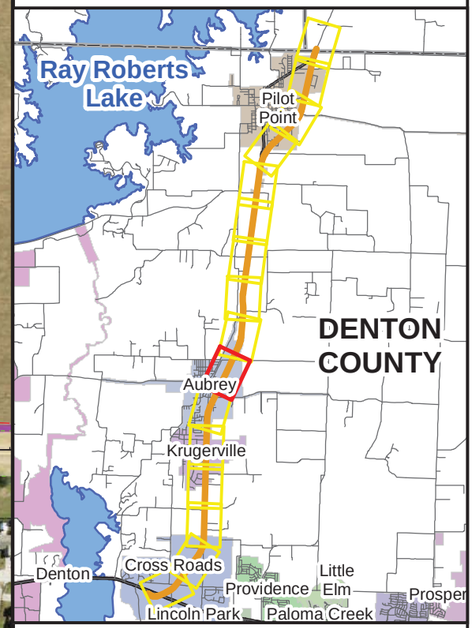
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

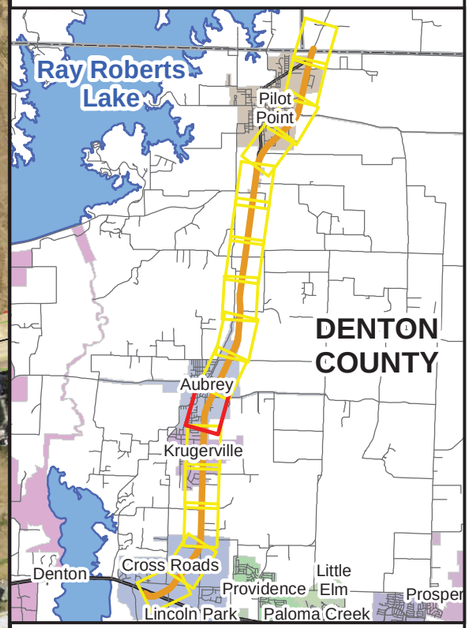
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

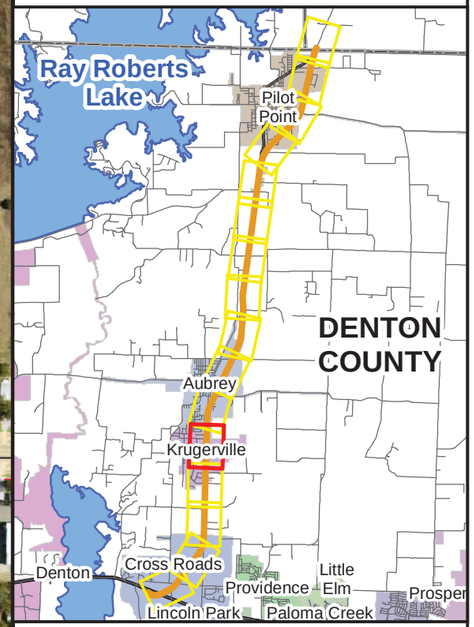
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

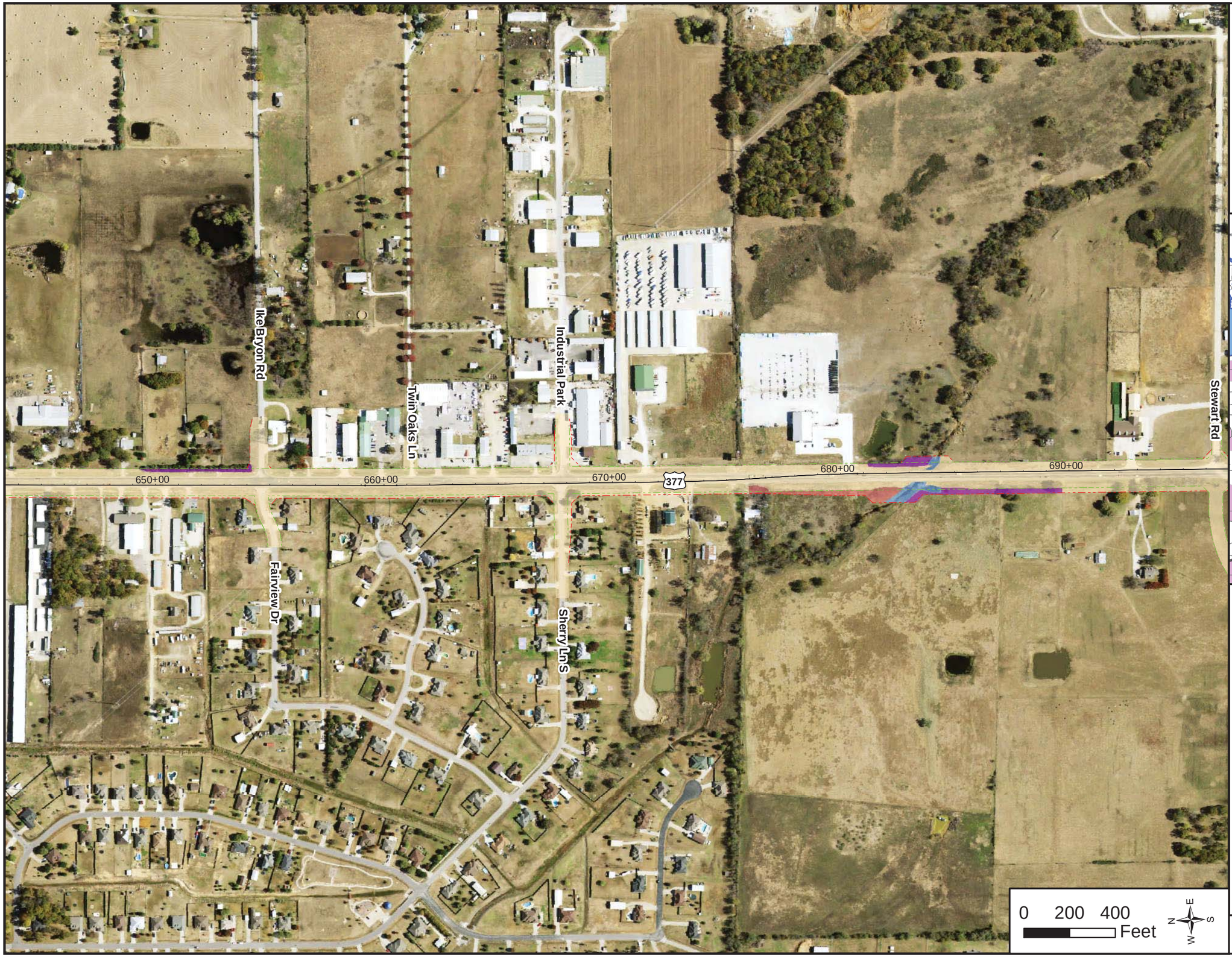
Figure 5

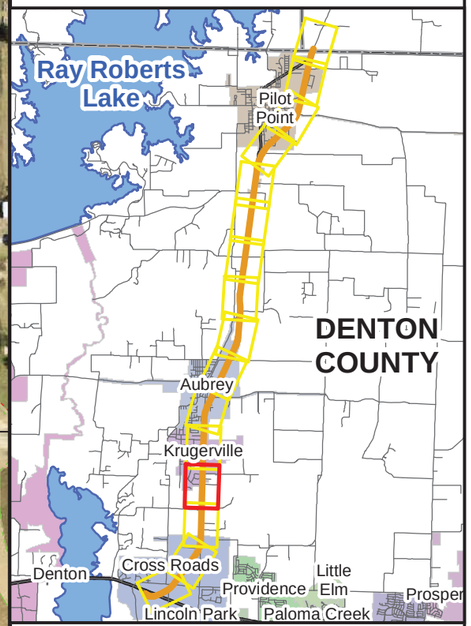
Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

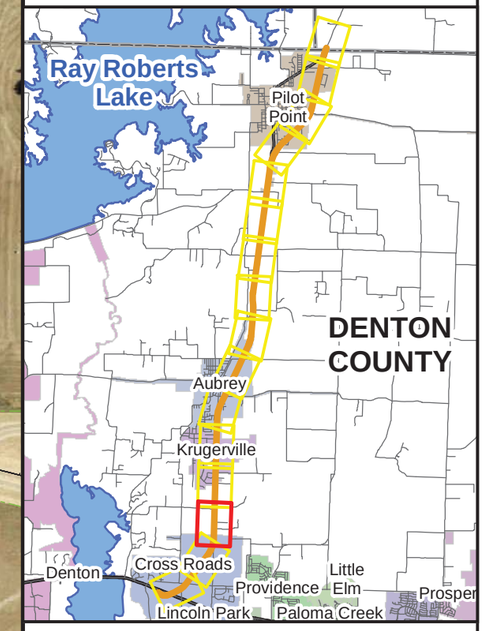
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 5

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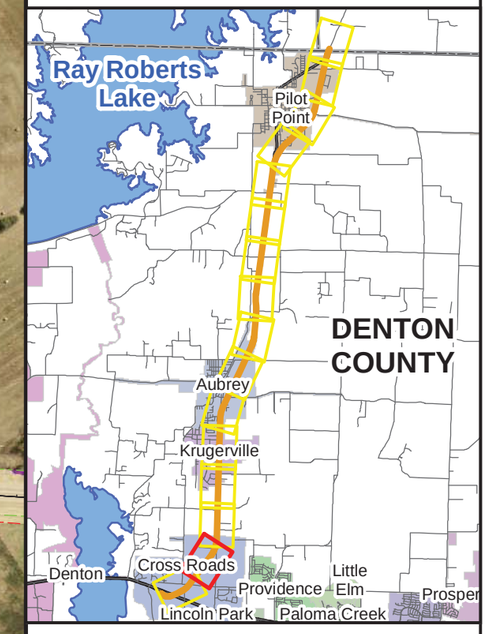
United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

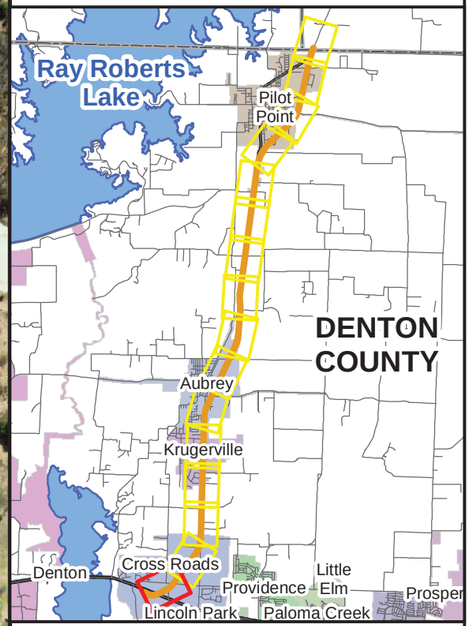
Figure 5

Actual Vegetation Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



Legend

- Existing Right-of-Way
- Proposed Right-of-Way
- Agriculture
- Crosstimbers Woodland and Forest
- Disturbed Prairie
- Riparian
- Urban

Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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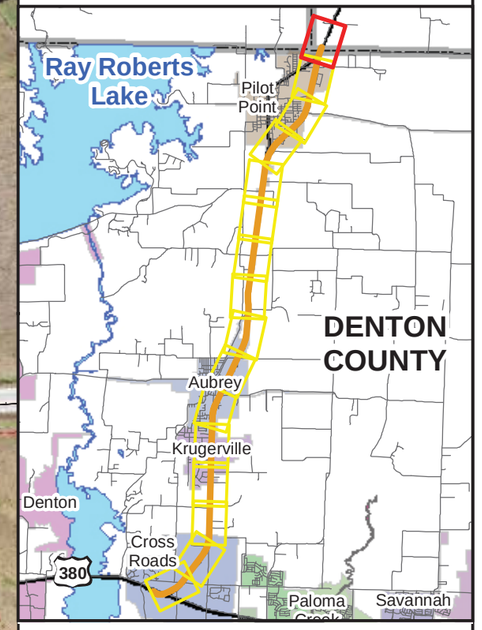

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
- Low Potential or No Potential for Project Impacts

Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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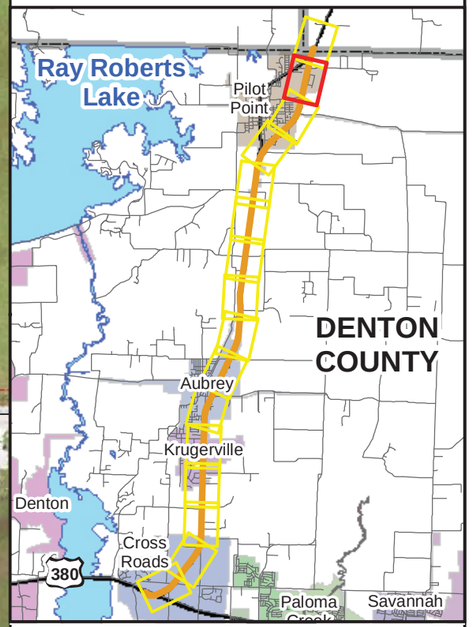

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
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Basemap Source: TNRIS (2018)

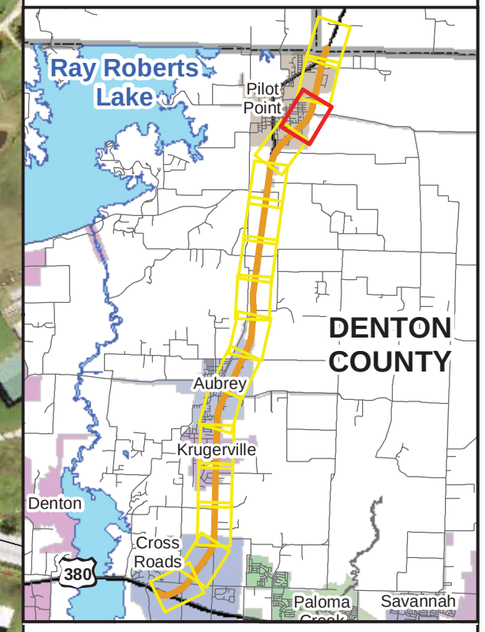
Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
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Basemap Source: TNRIS (2018)

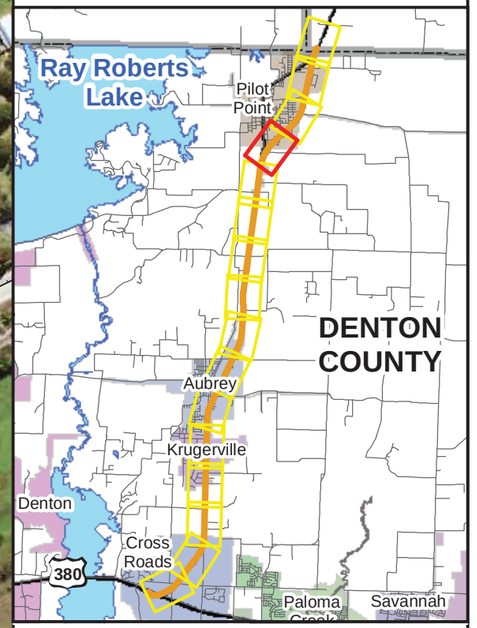
Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



0 250 500 Feet

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
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Basemap Source: TNRIS (2018)

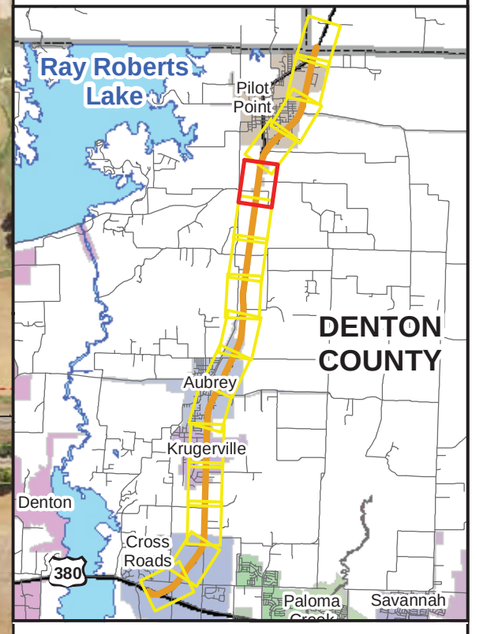
Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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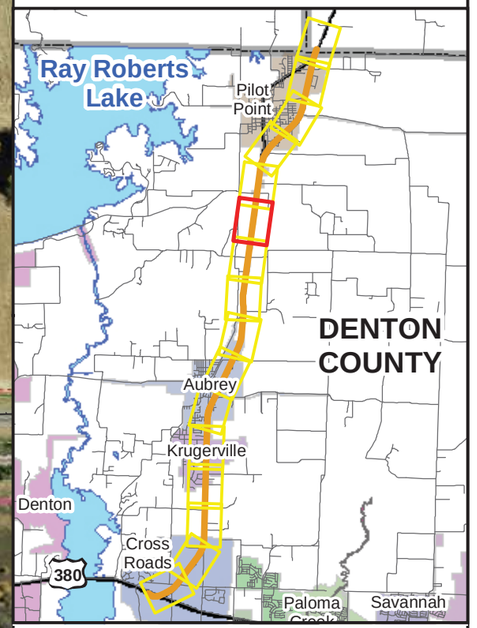

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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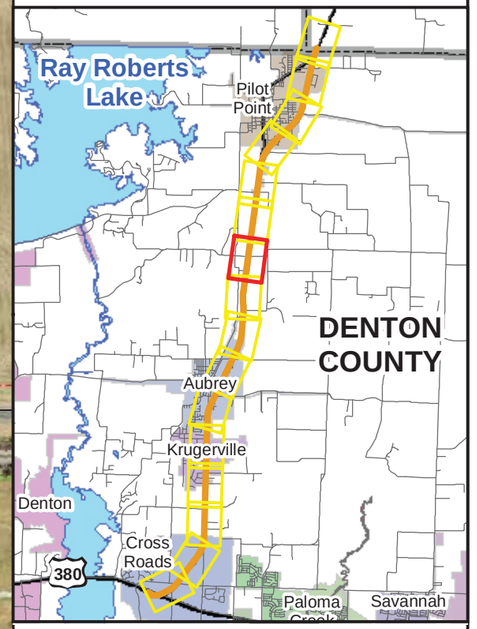

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
- Low Potential or No Potential for Project Impacts

Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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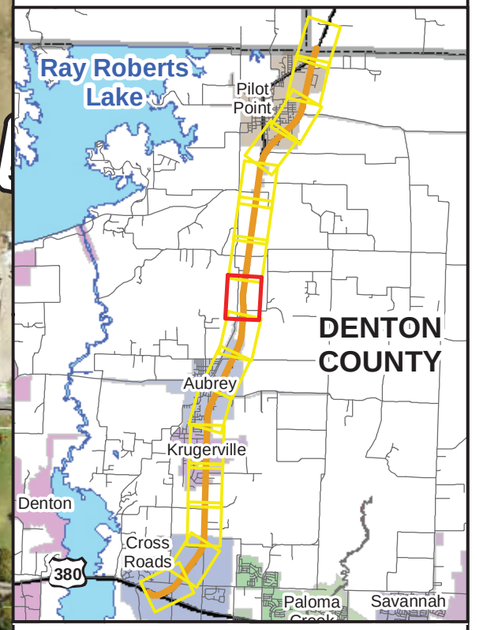

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
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Basemap Source: TNRIS (2018)

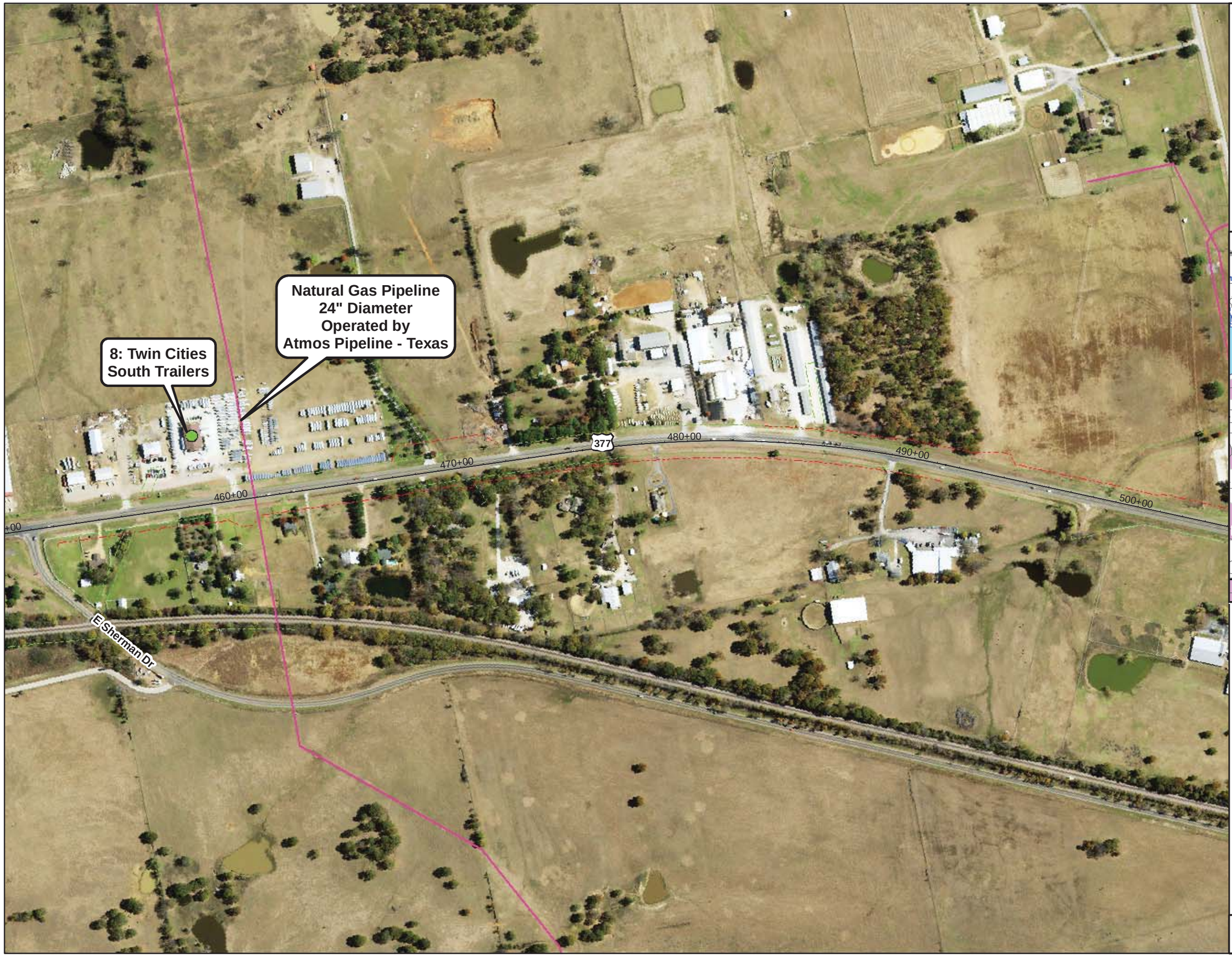
Figure 6

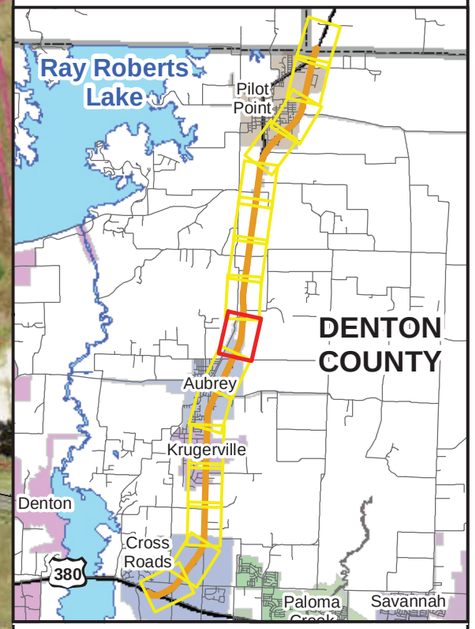
Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

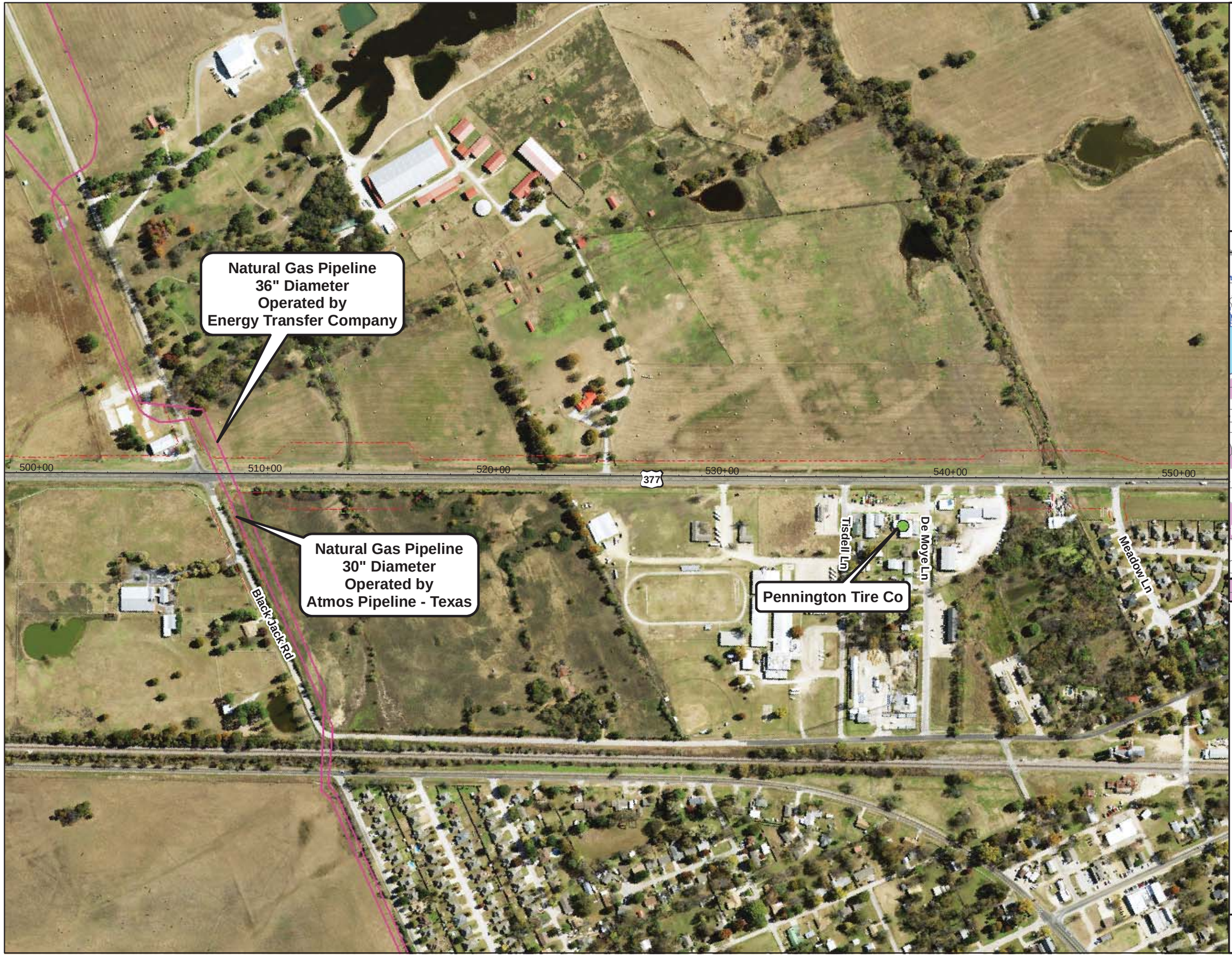
Hazardous Materials Site Map

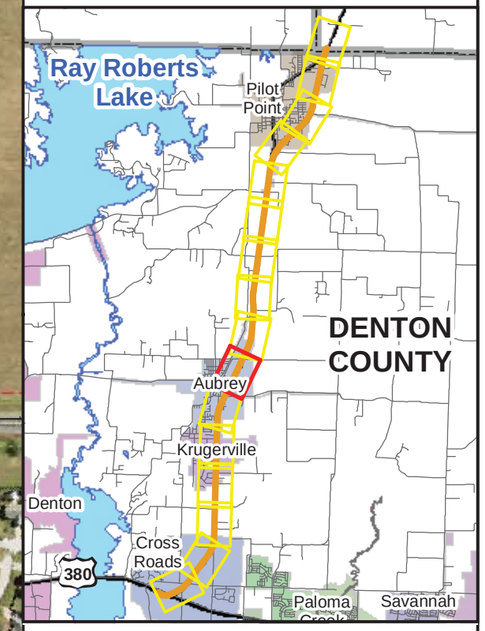
United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 10 of 16





0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

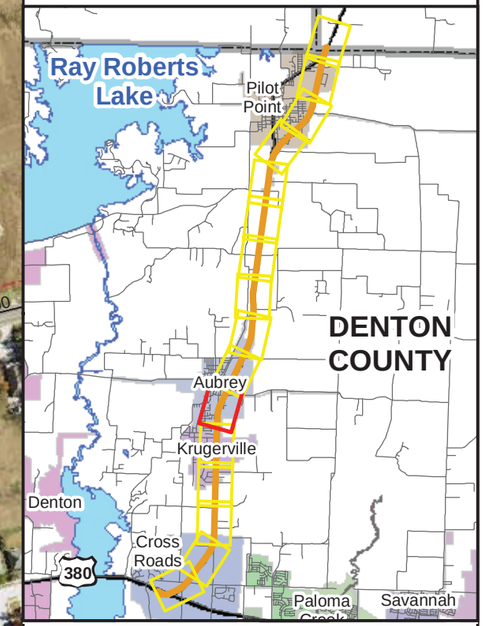
Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 11 of 16



0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
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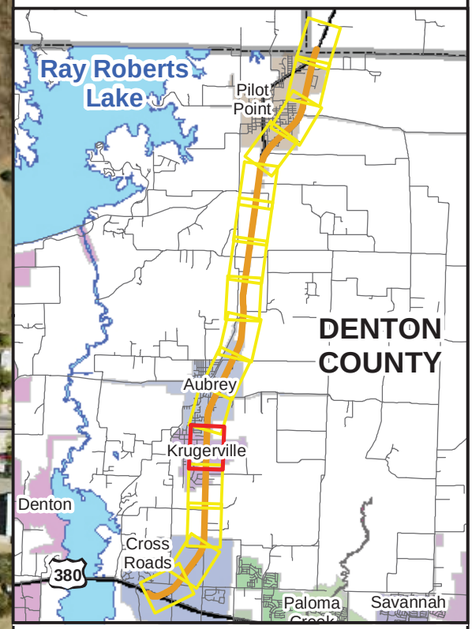

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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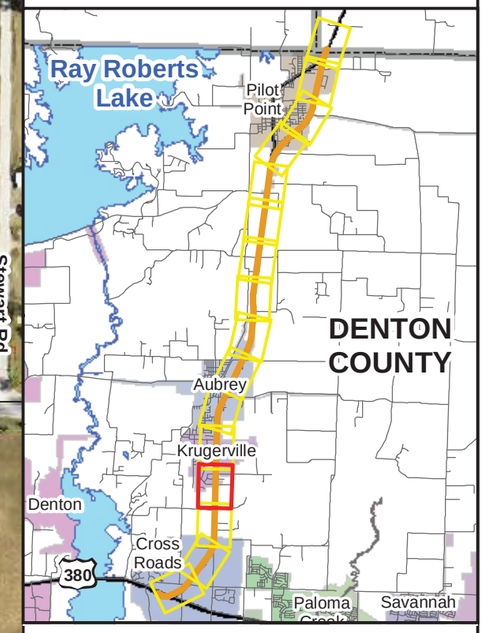
Highly Volatile Liquid Pipeline
6.63" Diameter
Operated by
Oneok NGL Pipeline, LLC

3: BCS Switchgear

unsmoke Grill

Ike Bryon Rd
Twin Oaks Ln
Industrial Park
Stewart Rd
Fairview Dr
Sherry Ln S

650+00
660+00
670+00
680+00
690+00
377



0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
- Low Potential or No Potential for Project Impacts

Basemap Source: TNRIS (2018)

Figure 6

Hazardous Materials Site Map

United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

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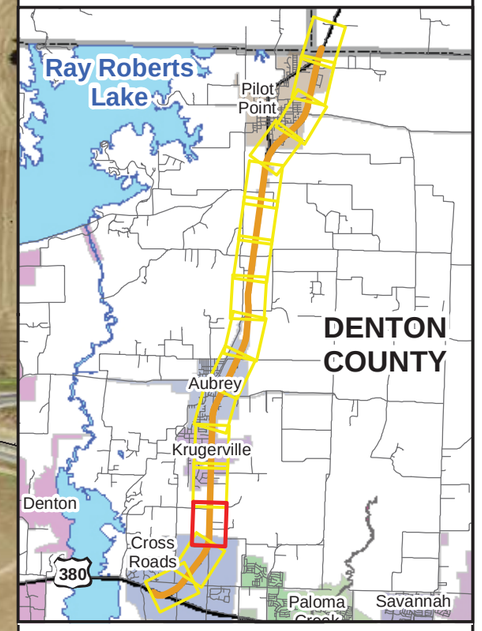

0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
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Figure 6

Hazardous Materials Site Map

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From North of BUS 377E
To US 380
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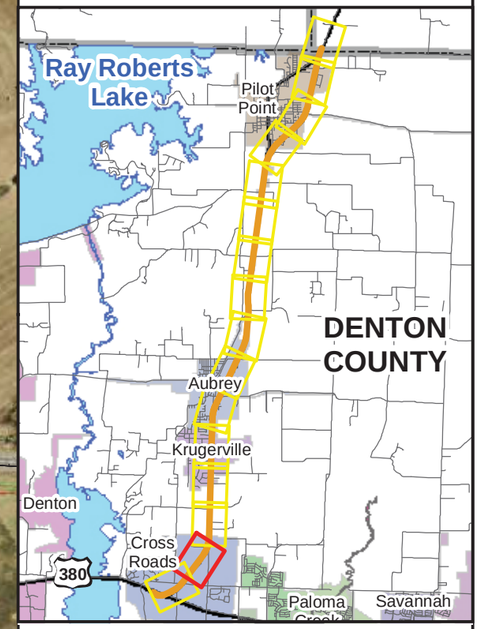
CSJ: 0081-06-040



0 250 500 Feet

N E S W

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
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Basemap Source: TNRIS (2018)

Figure 6

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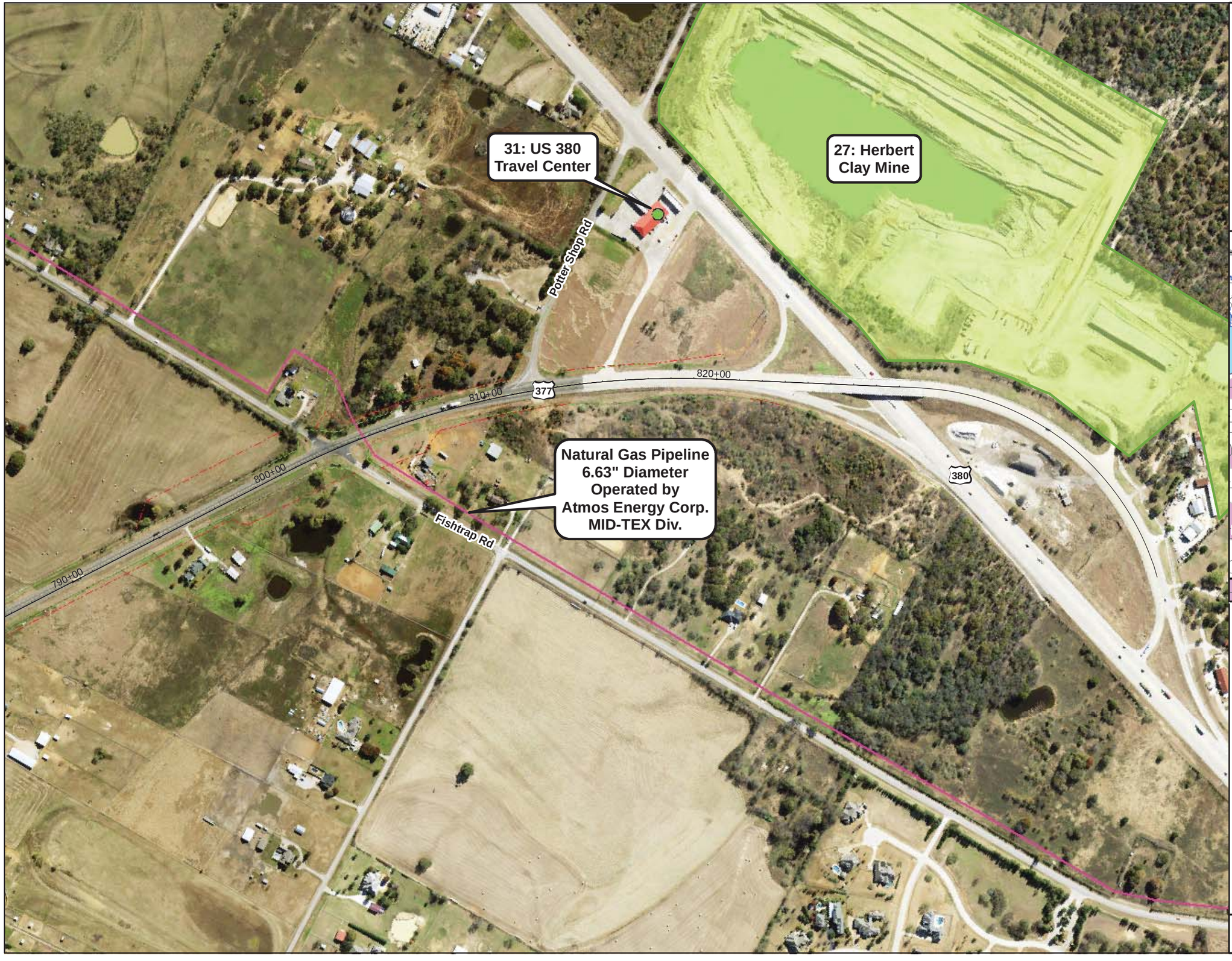
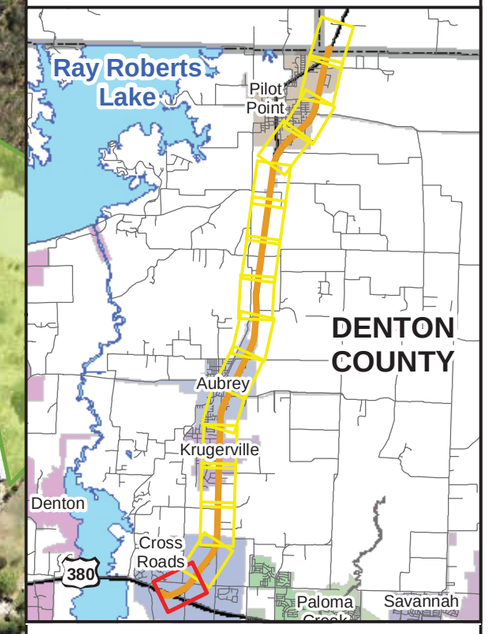
United States (US) 377

From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





0 250 500 Feet

Legend

- Proposed Right-of-Way
- Proposed Easement
- Exisiting Right-of-Way
- Pipelines
- Anticipated Project Impacts
- Possible Project Impacts
- Low Potential or No Potential for Project Impacts

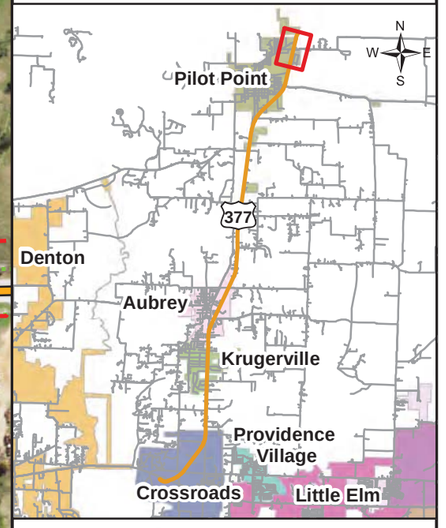
Basemap Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

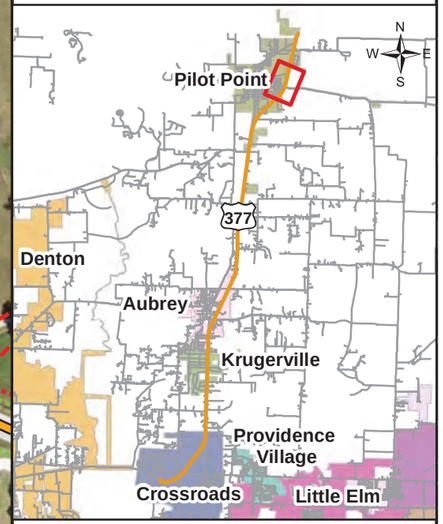
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

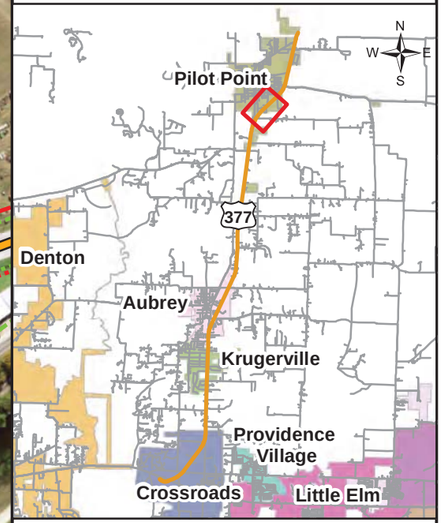
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

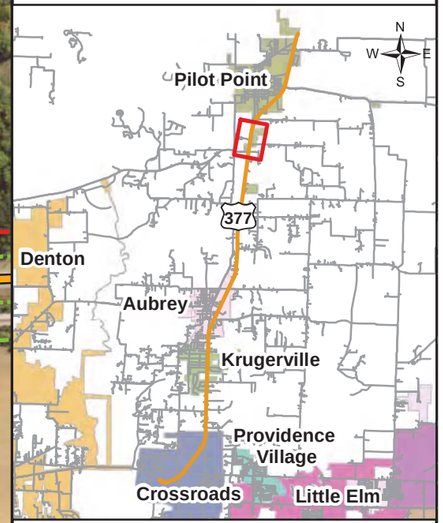
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

Base Map Source: TNRIS (2018)

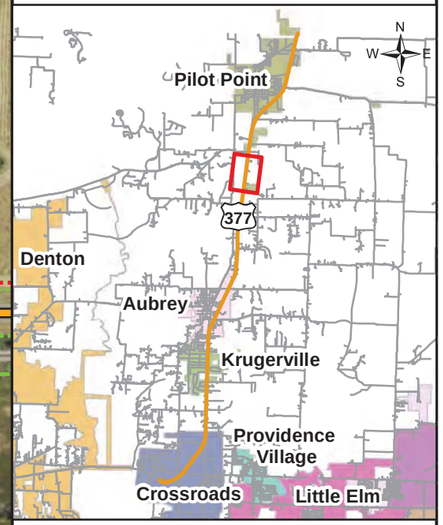
Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040

Page 5 of 15



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

0 400 800 Feet

N E S W

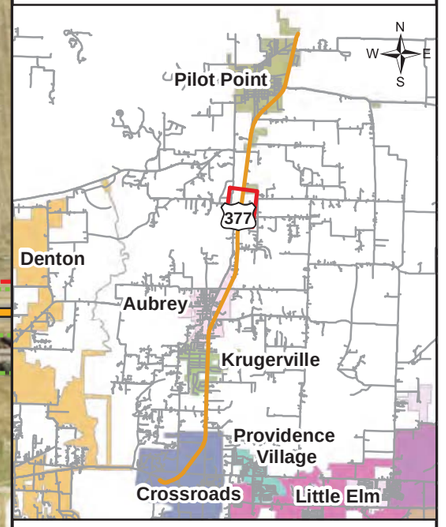
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
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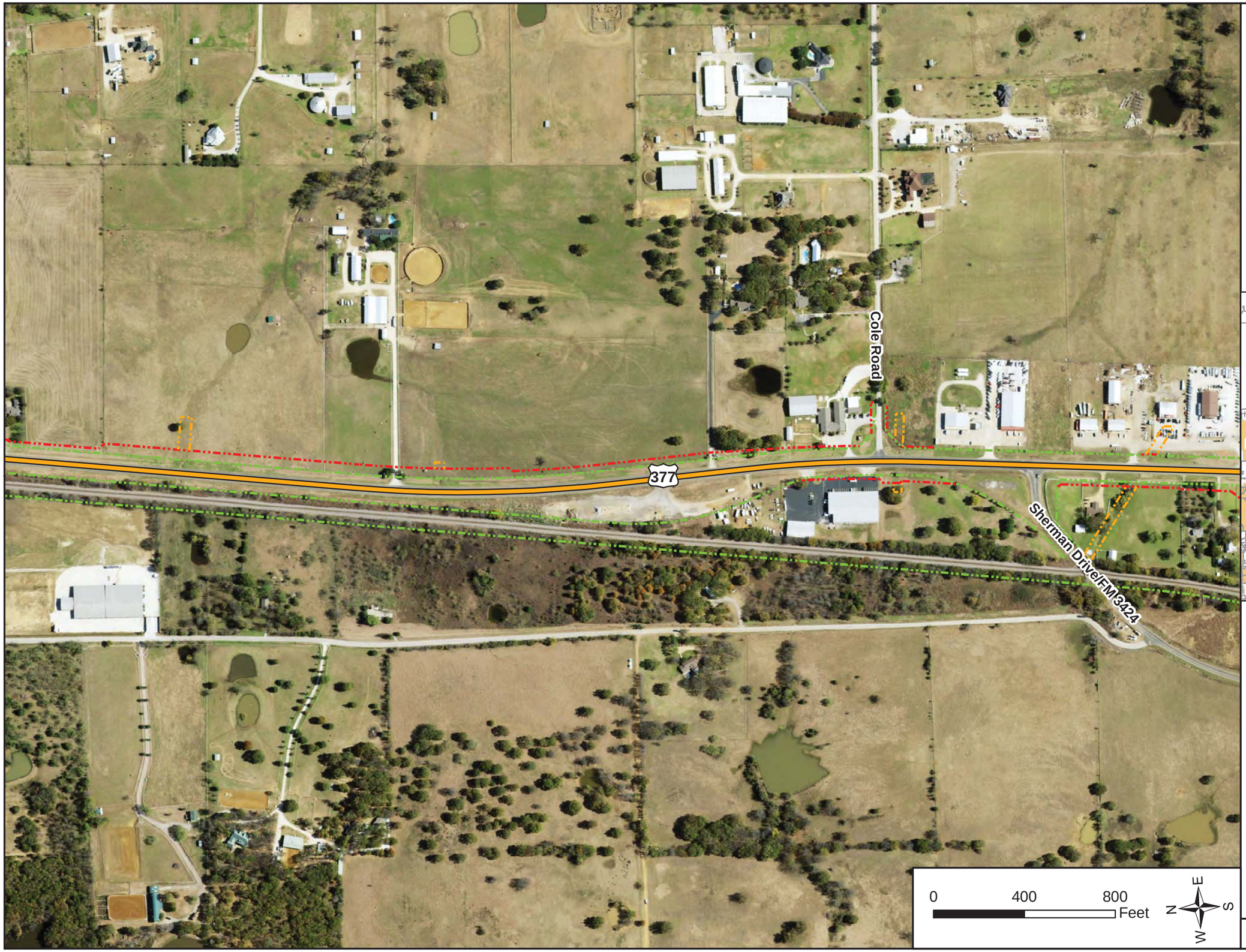
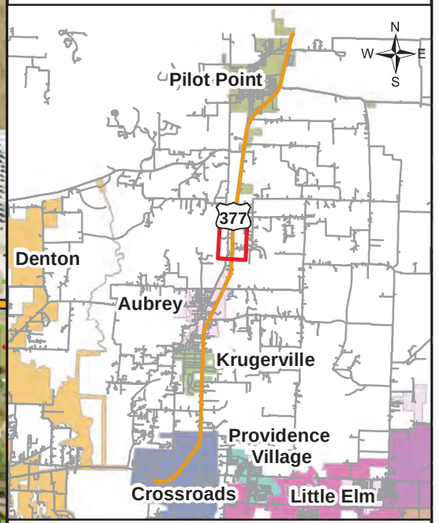
United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040

Page 7 of 15





Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

Base Map Source: TNRIS (2018)

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United States (US) 377

From North of BUS377E
To US 380

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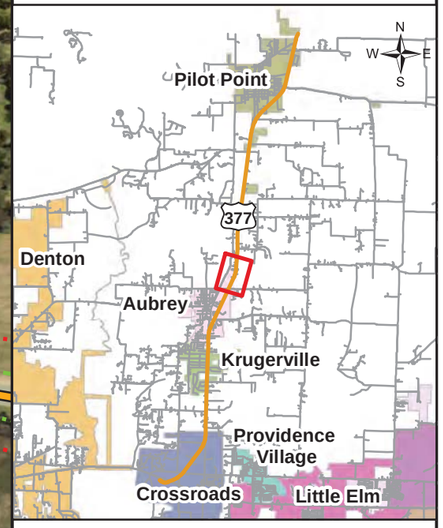

Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

Base Map Source: TNRIS (2018)

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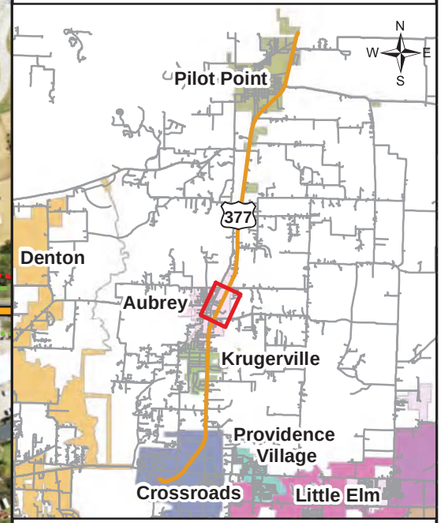
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

Base Map Source: TNRIS (2018)

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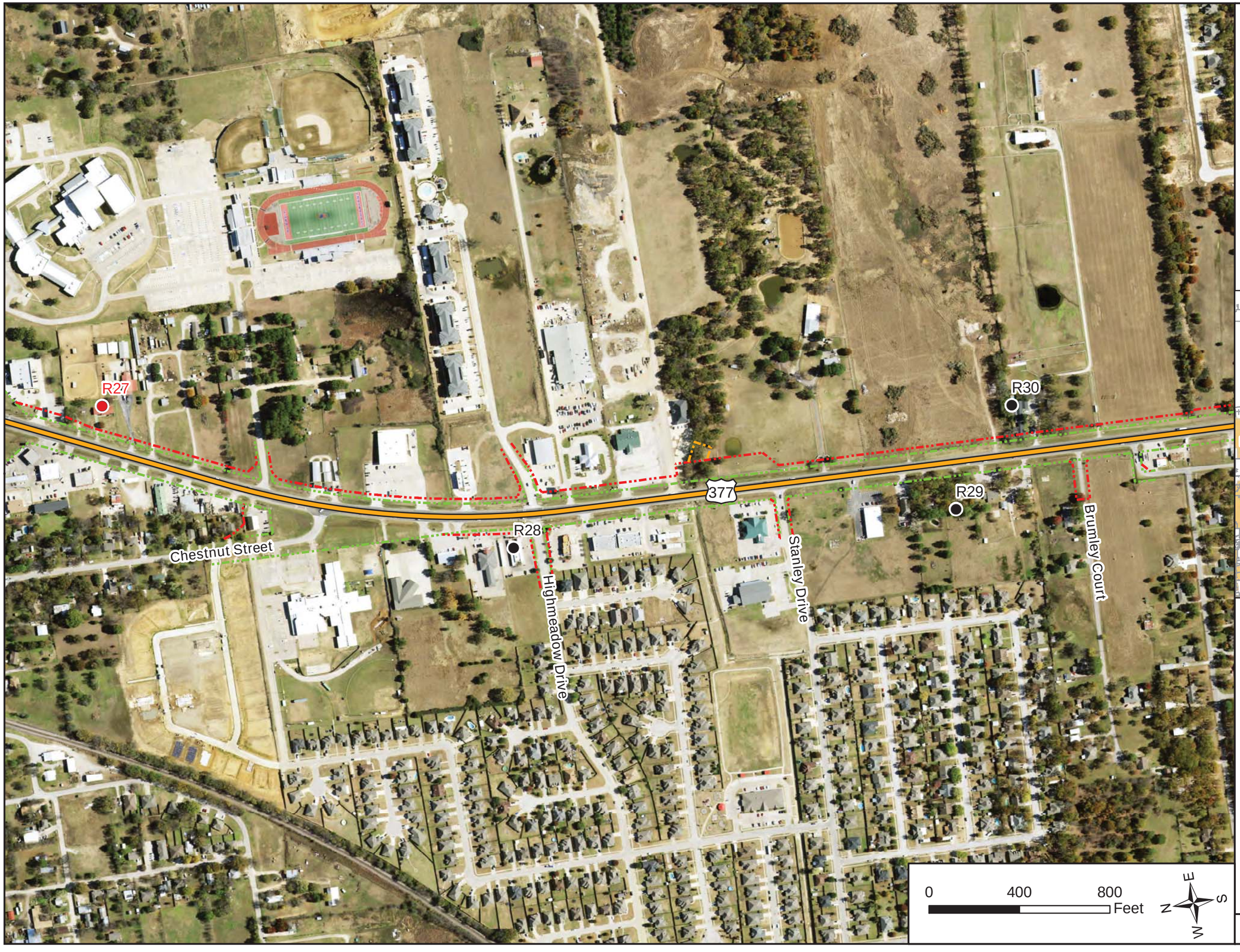
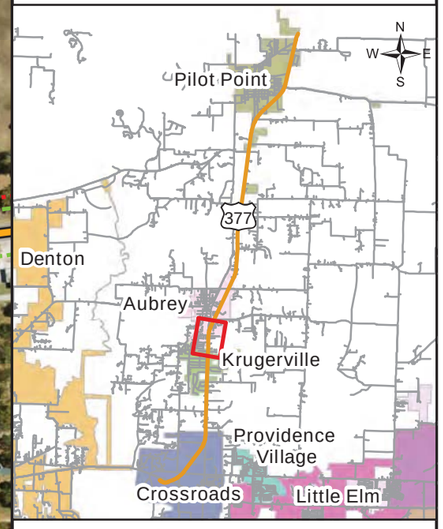
United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040





Legend

- Existing Right-of-way
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- Proposed Easements
- Non-Impacted Receiver
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Base Map Source: TNRIS (2018)

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United States (US) 377

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To US 380

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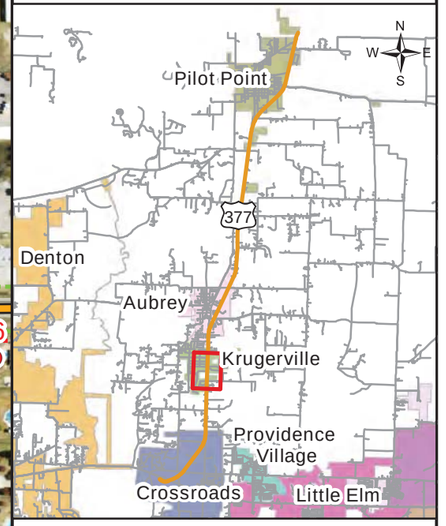

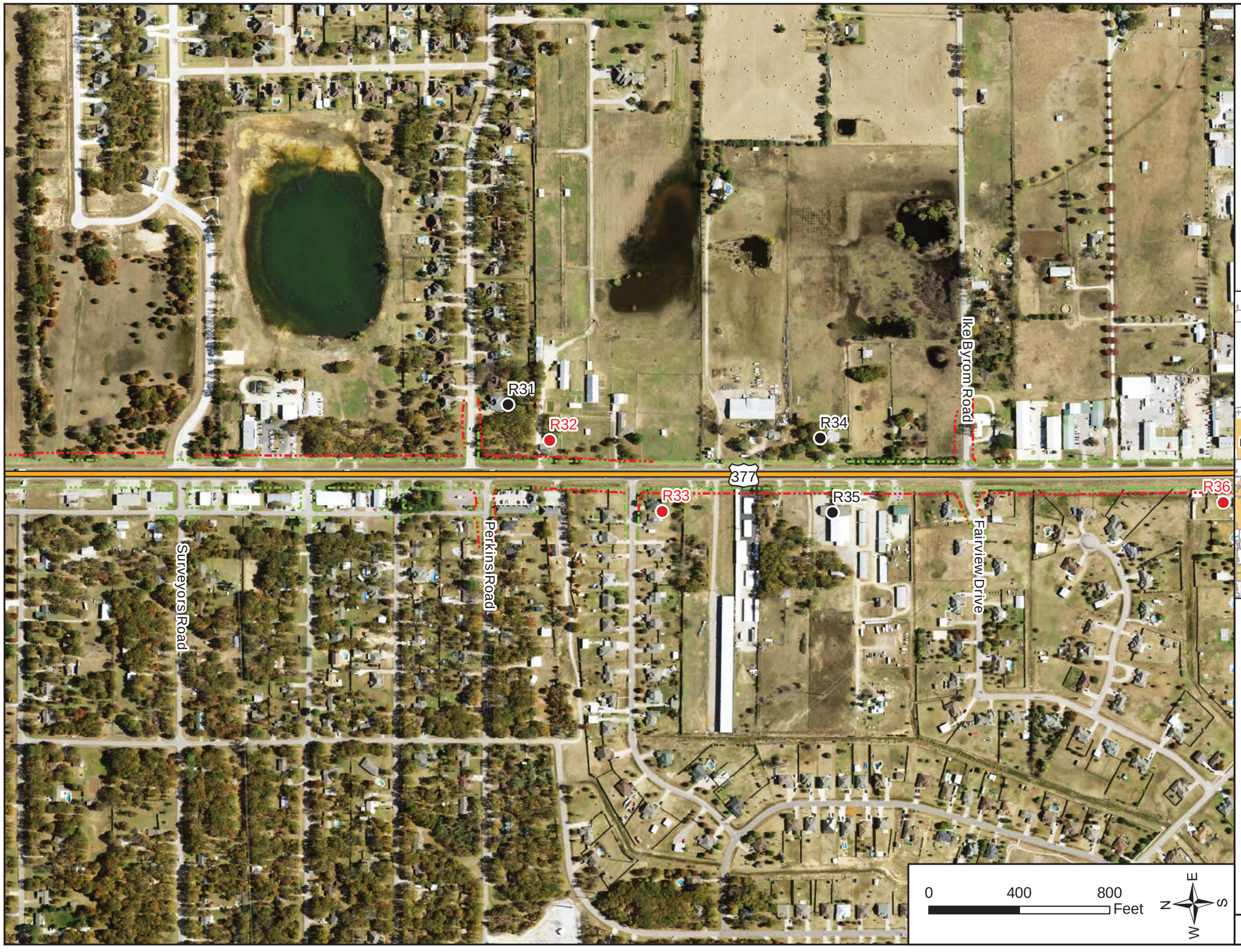

Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
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Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

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To US 380

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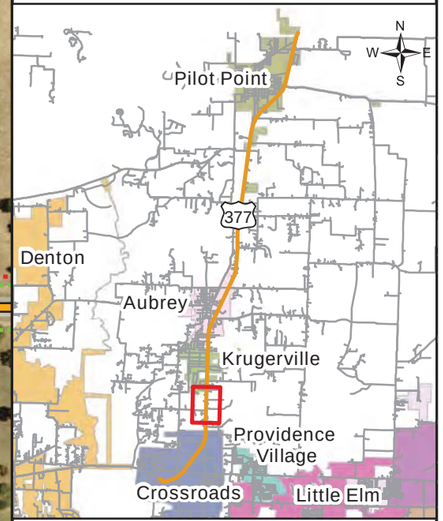


Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

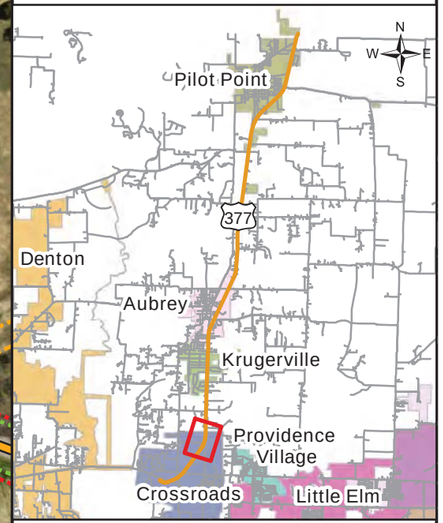
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

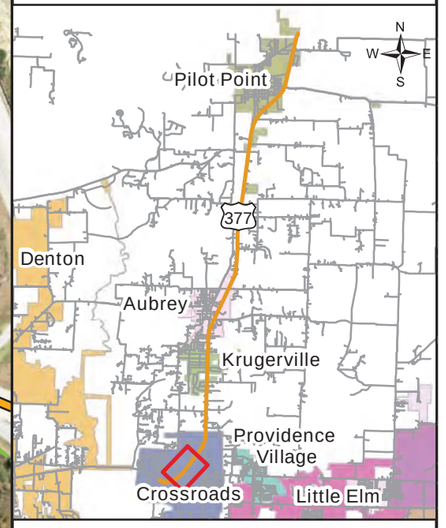
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Legend

- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

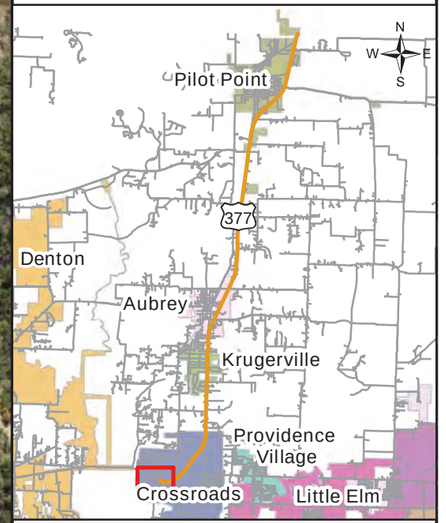
Base Map Source: TNRIS (2018)

Figure 7
NOISE RECEIVER LOCATION MAP

United States (US) 377

From North of BUS377E
To US 380

CSJs: 0081-06-040



Mosley Road

End Project

377

377

Fishtrap Road

0 400 800 Feet

S
W E
N

Legend

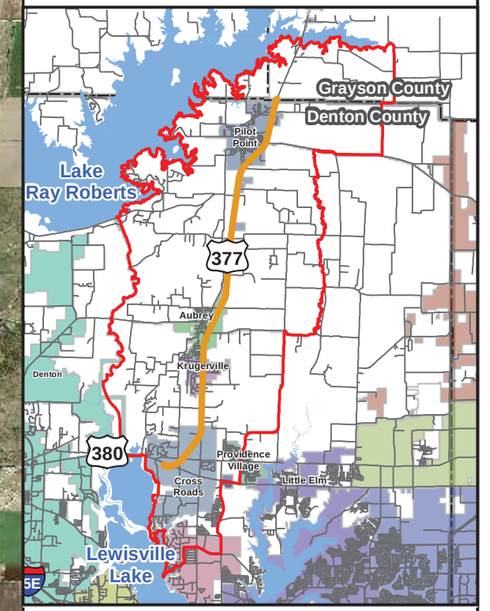
- Existing Right-of-way
- Proposed Right-of-Way
- Proposed Easements
- Non-Impacted Receiver
- Impacted Receiver

Base Map Source: TNRIS (2018)

FIGURE 8: INDIRECT IMPACTS AREA OF INFLUENCE MAP

United States (US) 377 From
North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040



0 0.5 1 Miles

N W E S

Legend

- Project Location
- Area of Influence
- Potential Accelerated Growth
- Potential Induced Growth
- Planned Development
- Cemetery
- Parks/Recreation
- Potential Wetland
- Waters of the U.S.
- 100-Year Floodplains

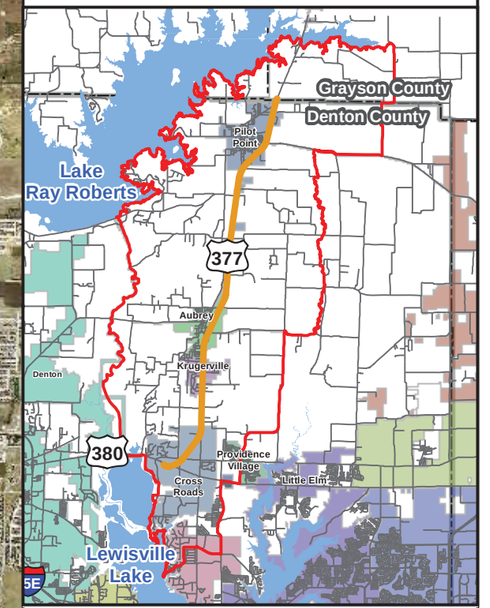
Base Map Source: TNRIS (2018)

FIGURE 8: INDIRECT IMPACTS AREA OF INFLUENCE MAP

United States (US) 377 From
North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 2 of 2



0 0.5 1 Miles

N W E S

Legend

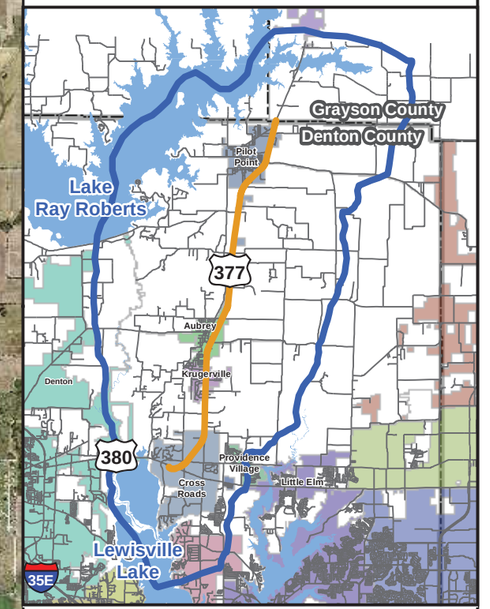
- Project Location
- Area of Influence
- Potential Accelerated Growth
- Potential Induced Growth
- Planned Development
- Cemetery
- Parks/Recreation
- Potential Wetland
- Waters of the U.S.
- 100-Year Floodplains

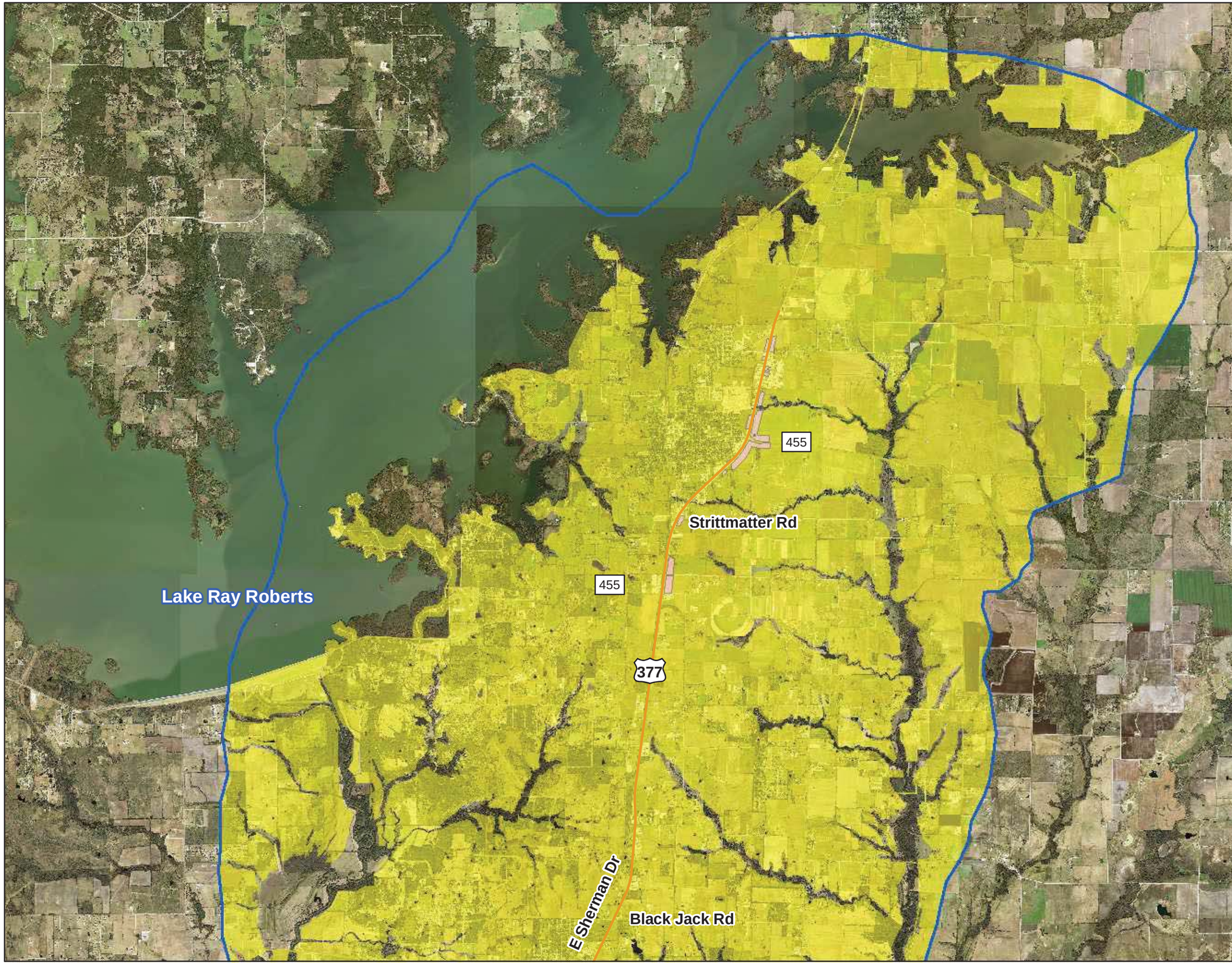
Base Map Source: TNRIS (2018)

FIGURE 9: CUMULATIVE IMPACTS RESOURCE STUDY AREA MAP

United States (US) 377 From
North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040





0 0.5 1 Miles

N
W E
S

Legend

- Project Location
- Resource Study
- Potential Accelerated Growth
- Potential Induced Growth
- Past, Present, and Reasonably Foreseeable Actions

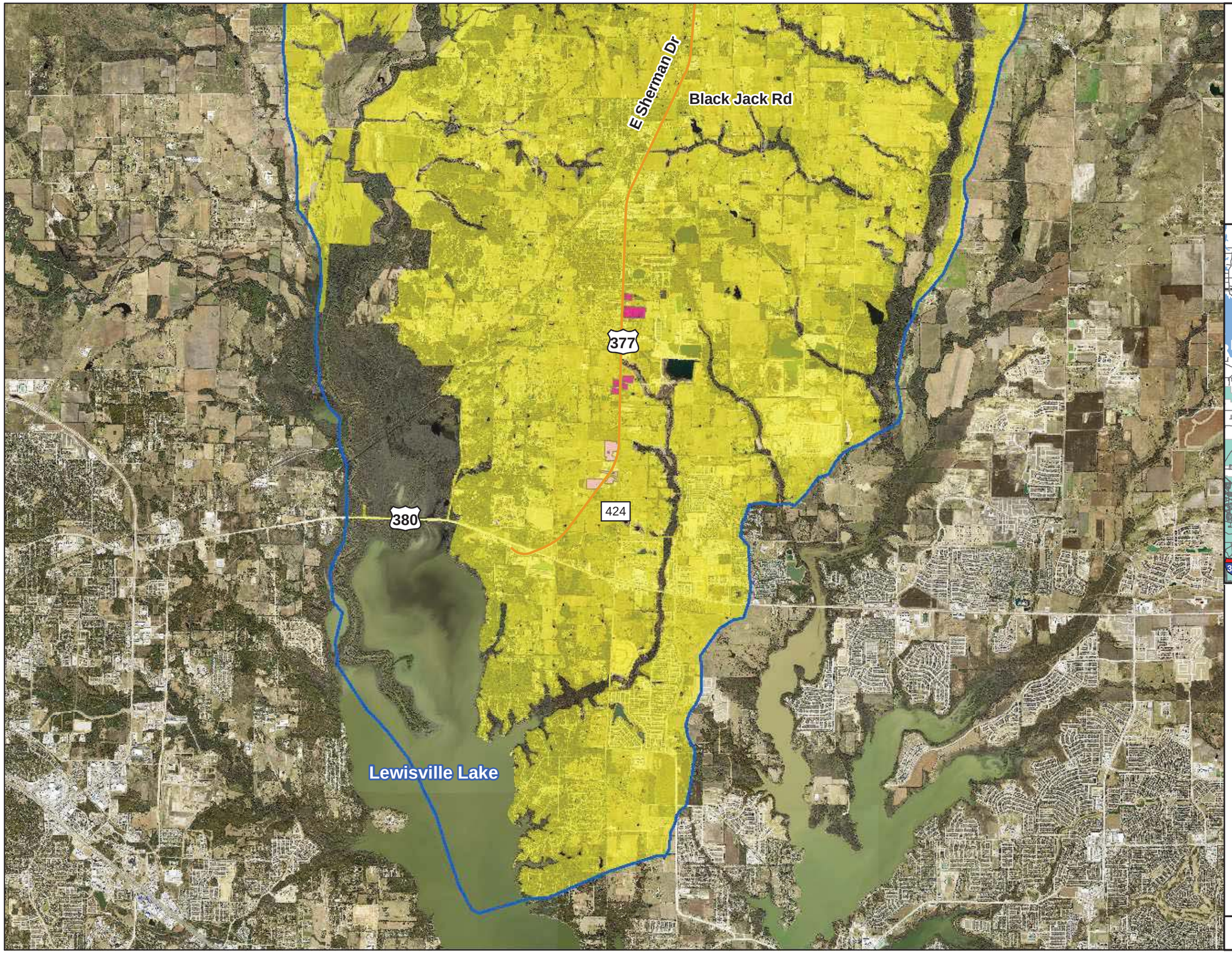
Base Map Source: TNRIS (2018)

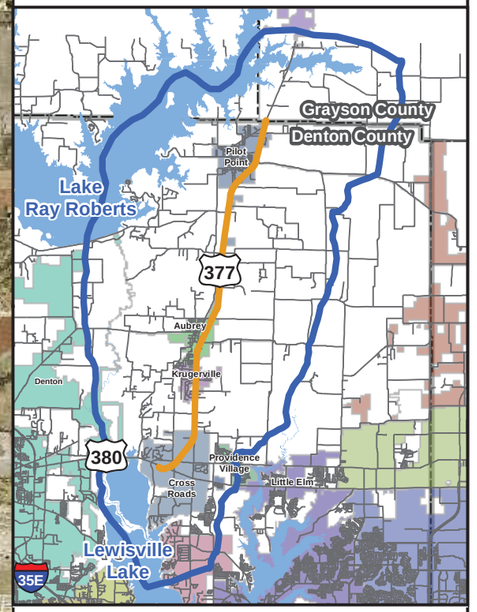
FIGURE 9: CUMULATIVE IMPACTS RESOURCE STUDY AREA MAP

United States (US) 377
From North of BUS 377E
To US 380
Denton County, Texas

CSJ: 0081-06-040

Page 2 of 2





0 0.5 1 Miles

N
W E
S

Legend

- Project Location
- Resource Study
- Potential Accelerated Growth
- Potential Induced Growth
- Past, Present, and Reasonably Foreseeable Actions

Base Map Source: TNRIS (2018)

Appendix G – Resource Agency Coordination

From: noreply@thc.state.tx.us
To: Scott Pletka; reviews@thc.state.tx.us
Subject: Project Review: 202014887
Date: Wednesday, July 15, 2020 2:39:19 PM

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas
Permit 9421
THC Tracking #202014887
008106040 US 377
US 377 at US 380
Pilot Point,TX 76258

Dear TxDOT Staff:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff led by Bill Martin has completed its review and has made the following determinations based on the information submitted for review:

Archeology Comments

- No identified historic properties, archeological sites, or other cultural resources are present or affected. However, if cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- Property/properties are not eligible for listing in the National Register of Historic Places.
- This draft report is acceptable. Please submit a final report: one restricted version with any site location information (if applicable), and one public version with all site location information redacted. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submitting abstracts online at http://xapps.thc.state.tx.us/Abstract and e-mailing survey area shapefiles to archeological_projects@thc.texas.gov if this has not already occurred. Please note that these steps are required for projects conducted under a Texas Antiquities Permit.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: bill.martin@thc.texas.gov

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

For Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

DocuSign Envelope ID: F8C31F54-71B4-4094-8AAB-7D27230A38F6

MEMO

July 27, 2020

TO: Administrative File
From: Jennifer Carpenter

District: Dallas
County: Denton
CSJ#: 0081-06-040
Highway: US 377
Project Limits: US 380 to North of BUS 377E
Let Date: August 2028

SUBJECT: Internal review under the Section 106 Programmatic Agreement (Section 106 PA) among the Texas Department of Transportation, Texas State Historic Preservation Officer, Advisory Council on Historic Preservation, and Federal Highway Administration; and the Memorandum of Understanding (MOU) between the Texas Historical Commission and the Texas Department of Transportation

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

Project Description

See the attachment from TxDOT's Environmental Compliance Oversight System (ECOS) that describes the project, setting, and amount of right-of-way (ROW) and easements necessary for the project.

Determination of Eligibility

The TxDOT Section 106 Programmatic Agreement defines the Area of Potential Effect (APE) for this project as the existing ROW and 150' from proposed ROW and easements.

TxDOT historians conducted research to identify properties previously listed in or determined eligible for the National Register of Historic Places (NRHP), as State Antiquities Landmarks (SAL), and Recorded Texas Historic Landmarks (RTHL). There were no previously identified historic properties within the APE. The c.1880 Belew Cemetery (named a Historic Texas Cemetery (HTC) in 2012) is located three miles north of Aubrey along the project corridor but is outside of the APE. Two others, Skinner Cemetery in Pilot Point (named a HTC in 2011) and Conway Cemetery two miles north of Cross Roads, are also outside of the APE.

A Historic Resources Survey Report (HRSR) for the project documented 40 historic-age properties spanning from c. 1910 to 1975. Most historic-age resources were residential properties, followed by commercial and agricultural properties. Residential properties were constructed between c. 1910

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and 1975; most are post-World War II Ranch style homes. Other architectural styles include Victorian, Craftsman, Minimal Traditional, and Mansard. Commercial properties date from c. 1930 to 1975 and include specialty stores, warehouses, and businesses housed in converted Craftsman and Ranch style homes.

Eleven agricultural properties are present within the project area, including a farm established in 1927 with 1960s buildings (Resource 1); a c. 1975 horse-breeding and training ranch (Resource 20); and a 15.5-acre property with a c. 1930 Tudor style house surrounded by pasture (Resource 37). Four parcels with Ranch style homes operate as hobby farms.

Historically, agricultural use characterized the project area from 1854 to 1975. Early farmers grew crops to feed their families and raised cattle. The arrival of the Texas and Pacific Railway in the 1880s allowed farmers to transport their goods to markets and production shifted from subsistence farming to cash crops like wheat and cotton. Denton County ranked first and second in US wheat production between 1890 and 1920. Low-level production oil wells could be found within the area by the 1930s. The county remained largely agrarian following World War II and the prosperity of the post-war period allowed farmers to upgrade their properties with Ranch style homes and pre-fabricated metal buildings.

Other post-war changes in Denton County, such as the expansion The University of North Texas and Texas Women's University, the construction of Interstate Highway 35E in the 1950s and Interstate Highway 35W in the 1970s, and the opening of the Dallas-Fort Worth International Airport in 1974, transformed the county into a fast-growing bedroom community of Dallas and Fort Worth. One example of this within the project area is Krugerville, named for developer L.H. Kruger who platted the subdivision in the 1960s. Agricultural land use shifted in the 1970s as horse breeding and ranching grew in popularity. The practice remains important to the local economy; by 2017 more than 350 horse farms operated in the county (see pages 11-14 and 15-25 of the HRSR).

Based on the reconnaissance survey, TxDOT historians determined that there are no historic properties within the APE. None of the surveyed resources were associated with notable historical events or trends that would deem them eligible for listing in the NRHP under Criterion A, nor were they associated with persons important to local, state, or national history that would deem them eligible under Criterion B. None of the surveyed resources embodied distinctive architectural characteristics of a type, period, or method of construction, were the work of a master, or possessed high artistic value that would deem them eligible under Criterion C.

Consultation

TxDOT historians contacted the Denton County Historical Commission (CHC), the City of Pilot Point Main Street Director, the City of Aubrey City Planner, the City of Krugerville City Secretary, and the Town of Cross Roads Town Administrator in May and June 2020 to inform them about the project and inquire about any locally important historic properties within the project area. The groups identified one historic property, the Belew Cemetery, which is outside of the APE.

Determination of Effects

Staff determined that the project will not affect any historic properties. Therefore, pursuant to Stipulation IX, Appendix 6 "Undertakings with the Potential to Cause Effects per 36 CFR 800.16(i)" of the Section 106 PA and the MOU, TxDOT historians determined that there are no historic properties affected. In compliance with the Antiquities Code of Texas and the MOU, TxDOT historians determined project activities have no potential for adverse effects. Individual project coordination with SHPO is not required.

Program Manager DocuSigned by: Rebekah Dobrasko 0F414A49C0E44B3... for TxDOT 7/29/2020

Rebekah Dobrasko Date

Approved by DocuSigned by: Bruce Jensen 7EBA09BEBA8043B... for TxDOT 7/29/2020

Bruce Jensen, CRM Section Director Date

DocuSign Envelope ID: F8C31F54-71B4-4094-8AAB-7D27230A38F6

Project Definition

Project Name: CSJ 0081-06-040 - US 377 Widening

CSJ: 0081 - 06 - 040

Anticipated Environmental Classification: EA

No — Is this an FHWA project that normally requires an EIS per 23 CFR 771.115(a)?

- Project Association(s)
- DCIS Project Funding and Location
- DCIS & P6 Letting Dates
- DCIS Project Description
- Jurisdiction

Environmental Clearance Project Description

Project Area

Typical Depth of Impacts:	1	(Feet)	Maximum Depth of Impacts:	30	(Feet)
New ROW Required:	54.7	(Acres)			
New Perm. Easement Required:	1.14	(Acres)	New Temp. Easement Required:	0	(Acres)

Project Description

Describe Limits of All Activities: (3519 characters left) Spell

The project would extend for a total of approximately 13.75 miles along US 377 from north of BUS 377E to US 380 in Denton County, Texas. Improvements would also be made at BU 377 N, BU 377 S, FM 455, FM 3524, FM 428, FM 424, US 380 and other minor collectors and local roads. the width of ROW would be typical 140 feet. The project would require 65 acres of additional ROW and 2 acres of permanent easement. There is potential for displacements as a result of the proposed project.

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Describe Project Setting:

The project passes through the cities of Cross Roads, Krugerville, Aubrey, and Pilot Point, Texas. These cities may be considered substantial traffic generators for the project area. Additionally, US 380 located at the south end of the project is also a substantial traffic generator. The vegetation within and immediately adjacent to the proposed project limit is classified as urban, agriculture, disturbed prairie, tallgrass prairie grassland, and crosstimbers woodland and forest. There are several water features that cross or run parallel to the US 377. Adjacent land use consists of residential, commercial, development, and undeveloped land.

Describe Existing Facility:

The existing US 377 facility from North of BUS 377E to US 380 in Denton County, Texas mainly consists of a rural 2-lane roadway with 12-foot driving lanes and 10-foot shoulders. The roadway consists of a rural 2-lane roadway with a continuous two way left turn lane in Pilot Point, Texas from BU 377 N to FM 455 E, and in Aubrey, Texas / Krugerville, Texas from FM 428 to Sherry Lane / industrial Park. This section consists of 12-foot driving lanes, a 14-foot continuous two way left turn lane, and 4-foot shoulders. Along US 377 from BU 377 S to FM 3524, Union Pacific Railroad runs parallel to the roadway on the west side of the facility. Along this section of roadway, there are four at grade railroad crossings: FM 455 E, St. John Rd, Belew Rd and a private driveway. There are ditches along both sides of the roadway that provide surface drainage as well

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Describe Existing Facility:

The existing US 377 facility from North of BUS 377E to US 380 in Denton County, Texas mainly consists of a rural 2-lane roadway with 12-foot driving lanes and 10-foot shoulders. The roadway consists of a rural 2-lane roadway with a continuous two way left turn lane in Pilot Point, Texas from BU 377 N to FM 455 E, and in Aubrey, Texas / Krugerville, Texas from FM 428 to Sherry Lane / industrial Park. This section consists of 12-foot driving lanes, a 14-foot continuous two way left turn lane, and 4-foot shoulders. Along US 377 from BU 377 S to FM 3524, Union Pacific Railroad runs parallel to the roadway on the west side of the facility. Along this section of roadway, there are four at grade railroad crossings: FM 455 E, St. John Rd, Belew Rd and a private driveway. There are ditches along both sides of the roadway that provide surface drainage as well as culverts crossing along the existing roadway at multiple locations. Stormwater runoff within the limits is conveyed through an open ditch drainage system. The facility is intersected by seven major collectors, including: BU 377 N, BU 377 S, FM 455, FM 3524, FM 428, FM 424, US 380 and other minor collectors and local roads. Existing speed limits are 60 miles per hour (mph) in rural areas, 55 mph in the urban areas of Pilot Point, Aubrey and Krugerville, Texas and 35 mph in school zones.

Describe Proposed Facility:

The proposed project consists of the reconstruction and widening of US 377 from US 380 to North of BUS 377E for approximately 13.75 miles. Improvements would include the expansion of the current 2-lane rural roadway to a 6-lane urban roadway with a raised median to provide additional capacity and improve safety. Improvements would consist of 12-foot-wide travel lanes, and 14-foot-wide outside shared-use lanes, 5-foot sidewalks with American Disabilities Act (ADA) curb ramps in both directions. The exception would be no sidewalk on the west side of the road along the parallel section with the Union Pacific Railroad. Proposed drainage will be conveyed by curb & gutter, a storm sewer system and crossing culverts. Other improvements would include realigning the intersection BU 377 S at US 377 and FM 424 at US 377 for safer operations. The existing ROW width will increase with the proposed project to the typical 140-foot ROW footprint. The proposed project is anticipated to require 65 acres of additional ROW and 2 acres of proposed permanent drainage easements to accommodate the proposed improvements.

Yes **Would the project add capacity?**

Transportation Planning

Environmental Clearance Information

Project Contacts

Last Updated By: Mohammed Shaikh

Last Updated Date: 07/23/2020 01:09:41

Sec. 106 Consultation

JUNE 26, 2020

We kindly request your comments on historic properties of cultural or religious significance to your Tribe that may be affected by the proposed project. Please see the following summary for project details and information. To access the associated reports, which include a detailed project description, APE definition and identification efforts, use the attached link. After 21 days, the link will expire. We will provide an updated link upon request. This project will also be included during our monthly Sec. 106 conference call every third Wednesday of the month at 2 p.m.

Contacts:

Laura Cruzada
512-416-2638

Notice:

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2020, and executed by FHWA and TxDOT.

Summary:

Project ID (CSJ), County and TxDOT District	*CSJ 0081-06-040, Denton County, Dallas District*
Project Sponsor:	*TxDOT*
Consultation Status:	☒ *Initial Consultation* ☐ *Continuation of Consultation*
Short Description:	*Roadway widening*
New Right of Way:	*78.19 acres (including two acres of new easements)*
Depth of Impacts:	*Typical: one foot; maximum: 30 feet*
Known Archeological Sites in project area:	*41DN622, the remains of an early-to-mid twentieth century household.*
Identification Efforts:	*Survey*
Recommendations:	*No archeological historic properties affected; additional survey needed*
Link to Detailed Report:	https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fftp.dot.state.tx.us%2Fdropbox%2Fpickup.php%3FclaimID%3DsnyZVjE4yQTY9PaJ%26claimPasscode%3DTz5v8vNmiPknkhuE%26emailAddr%3Dscott.pletka%2540txdot.gov&data=02%7C01%7Cscott.pletka%40txdot.gov%7Cf31395892e3b4206709508d819ddb012%7C39dba4765c094c6391dace7a3ab5224d%7C0%7C0%7C637287787218702826&sdata=GBHacx3zlPlWSl8gUfP%2Be0Jmv0sxrePI4EcFVToxr9E%3D&reserved=0

Please provide any comments that you may have on the TxDOT findings and recommendations. Please provide your comments within 30 days of receipt of this letter. Any comments provided after that time will be addressed to the fullest extent possible.

The Delaware Nation
Historic Preservation Department
31064 State Highway 281
Anadarko, OK 73005
Phone (405)247-2448

July 1, 2020

To Whom It May Concern:

The Delaware Nation Historic Preservation Department received correspondence regarding the following referenced project(s).

Project(s): CSJ 0081-06-040

Our office is committed to protecting tribal heritage, culture and religion with particular concern for archaeological sites potentially containing burials and associated funerary objects.

The Lenape people occupied the area indicated in your letter during and prior to European contact until their eventual removal to our present locations. According to our files, the location of the proposed project does not endanger any known cultural, or religious sites of interest to the Delaware Nation. However, there is still the potential for the discovery of unknown resources. We would like to accept your invitation for consultation.

Please note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Cultural Preservation Office to conduct proper Section 106 consultation. Should you have any questions, feel free to contact our offices at 405-247-2448 ext. 1403.

Erin N. Paden

Erin Paden
Director of Historic Preservation
Delaware Nation
31064 State Highway 281
Anadarko, OK 73005
Ph. 405-247-2448 ext. 1403
epaden@delawarenation-nsn.gov

Leslie Mirise

From: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Sent: Thursday, September 17, 2020 5:22 PM
To: Leslie Mirise
Cc: Dan Perge; Mohammed Shaikh; Christine Polito
Subject: RE: CSJ 0081-06-040 US 377 Widening (Denton County) - Request for Early Coordination
Attachments: TxDOT-DallasDistrict-09.17.2020-Yucca necopina.pdf

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Leslie,

TPWD accepts the Best Management Practices proposed by the district for species in Denton County that have suitable habitat present but do not yet have BMPs identified under the 2017 BMP PA. We appreciate that TxDOT commits to implementing these proposed BMPs for this project. Additionally, we would appreciate efforts by TxDOT to minimize temporary impacts to streams and riparian areas during construction.

For your reference, please find attached an information sheet by Bill Carr of the Nature Conservancy of Texas (2011) for the SGCN plant, Glen Rose Yucca, that will be included in the EPIC sheet for this project.

Thank you for submitting the following project for early coordination: US 377 from US 380 to North of BUS 377E (CSJ: 0081-06-040). TPWD appreciates TxDOT's commitment to implement the practices listed in the Tier I Site Assessment form submitted on August 19, 2019. Based on a review of the documentation, the avoidance and mitigation efforts described, and provided that project plans do not change, TPWD considers coordination to be complete. However, please note it is the responsibility of the project proponent to comply with all federal, state, and local laws that protect plants, fish, and wildlife.

According to §2.204(g) of the 2013 TxDOT-TPWD MOU, TxDOT agreed to provide TXNDD reporting forms for observations of tracked SGCN (which includes federal- and state-listed species) occurrences within TxDOT project areas. Please keep this mind when completing project due diligence tasks. For TXNDD submission guidelines, please visit the following link: http://tpwd.texas.gov/huntwild/wild/wildlife_diversity/txndd/submit.phtml

Sincerely,

Suzanne Walsh
Transportation Conservation Coordinator
(512) 389-4579

From: Leslie Mirise <Leslie.Mirise@txdot.gov>
Sent: Thursday, September 17, 2020 4:22 PM
To: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Cc: Dan Perge <Dan.Perge@txdot.gov>; Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Subject: RE: CSJ 0081-06-040 US 377 Widening (Denton County) - Request for Early Coordination

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Hi Suzanne,

Like you, I am also in the process of reviewing the Draft EA. Of the species that would have BMPs implemented for the project, none with species-specific BMPs from the BMP PA call out the Water Quality BMPs. Those without species-specific BMPs in the BMP PA do not propose to implement the Water Quality BMPs, so the Tier 1 Form is correct. Thanks for the heads up.

Leslie Mirise
Environmental Specialist
Dallas District – DAL-ENV
Texas Department of Transportation
4777 East Highway 80
Mesquite, Texas 75150
(214) 320-6162 office
(214) 320-4470 FAX

From: Suzanne Walsh [mailto:Suzanne.Walsh@tpwd.texas.gov]
Sent: Thursday, September 17, 2020 4:13 PM
To: Leslie Mirise <Leslie.Mirise@txdot.gov>
Cc: Dan Perge <Dan.Perge@txdot.gov>; Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Subject: RE: CSJ 0081-06-040 US 377 Widening (Denton County) - Request for Early Coordination

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Hi Leslie,

I just wanted to confirm that the district will implement the Water Quality BMPs from the 2017 BMP PA. They are not listed in the Tier I form but are included in the draft EA.

Thanks,
Suzanne

From: Suzanne Walsh
Sent: Wednesday, September 9, 2020 4:26 PM
To: Leslie.Mirise@txdot.gov
Cc: Dan Perge <Dan.Perge@txdot.gov>; Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Subject: RE: CSJ 0081-06-040 US 377 Widening (Denton County) - Request for Early Coordination

Hi Leslie,

I have initiated review of this project and will let you know if I have any questions or need additional information.

Thanks,
Suzanne

Suzanne Walsh
Transportation Conservation Coordinator
(512) 389-4579

From: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Sent: Thursday, August 20, 2020 2:45 PM
To: Leslie Mirise <Leslie.Mirise@txdot.gov>; WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>; Dan Perge <Dan.Perge@txdot.gov>; Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Cc: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Subject: RE: CSJ 0081-06-040 US 377 Widening (Denton County) - Request for Early Coordination

The TPWD Wildlife Habitat Assessment Program has received your request and has assigned it project ID # 44831. The Habitat Assessment Biologist who will complete your project review is copied on this email.

Thank you,

John Ney
Administrative Assistant
Texas Parks & Wildlife Department
Wildlife Diversity Program – Habitat Assessment Program
4200 Smith School Road
Austin, TX 78744
Office: (512) 389-4571

From: Leslie Mirise <Leslie.Mirise@txdot.gov>
Sent: Tuesday, August 18, 2020 6:03 PM
To: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Cc: Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Dan Perge <Dan.Perge@txdot.gov>; Christine Polito <Christine.Polito@txdot.gov>
Subject: CSJ 0081-06-040 US 377 Widening (Denton County) - Request for Early Coordination

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Hello,

TxDOT requests early coordination for the US 377 Widening Project in Denton County, Texas. Please see ECOS for the project description. The project is classified as an EA. Project documents include the following, and those of appropriate file size are attached:

1. Species Analysis Spreadsheet
2. Species Analysis Spreadsheet (SGCN)
3. Species Analysis Form
4. Tier 1 Site Assessment Form
5. USFWS Official Species List
6. TPWD RTEST list
7. NDD figure and EORs
8. EMST Figures*
9. Actual Vegetation Figures*
10. EMST and Observed Veg Impacts Table
11. Photos*

*Files sizes are too large to be included in this email. They are available in ECOS.

These documents, along with other project-related information, are available in ECOS under the CSJ: 0081-06-040. The planned NEPA clearance date for this project is October 1, 2020. Please provide comments or complete coordination on or before September 23, 2020. Please feel free to contact me with any questions or if you need any additional information.

Thank you,

Leslie Mirise
Environmental Specialist
Dallas District – DAL-ENV
Texas Department of Transportation
4777 East Highway 80
Mesquite, Texas 75150
(214) 320-6162 office
(214) 320-4470 FAX

A Texas Department of Transportation (TxDOT) message

#EndTheStreakTX

A Texas Department of Transportation (TxDOT) message