MEMORANDUM

Texas Department of Transportation

TO: Bryan Ellis
Environmental Affairs Division

DATE: 08/07/12

FROM: Dennis Beckham, P.E.
Director of Transportation, Planning, & Development

SUBJECT: Determination of PCE for US 82
CSJ 0046-04-057

The Atlanta District has completed a PCE document for the above referenced project. I certify that:

1. The PCE document supports a determination that the proposed project meets current FHWA criteria for a PCE.
2. If the proposed project does not meet current FHWA criteria for a PCE, FHWA has approved an exception for this project and written evidence of FHWA approval is attached to the PCE document as provided in sections B and E(1) of the Programmatic Agreement for the Review and Approval of NEPA Categorically Excluded Transportation Projects.
3. The PCE document meets all current standards of submission for a PCE project.
4. The information disclosed in the PCE document is supported by evidence in the District project file of completion of all studies and coordination needed to verify that the proposed project meets the criteria for a PCE.

I further certify one of the following:

5. ☒ The PCE document has been subjected to QA/QC review by the document preparer and a District staff member, and was complete and accurate as of the date it was transmitted to me for certification,

OR

6. ☐ The PCE document has been subjected to QA/QC review by the document preparer. The District has performed QA/QC review and has determined that as of the date it was transmitted to me for certification:
   a. The PCE document is complete, AND
   b. The PCE document is accurate with respect to areas for which the District has appropriately qualified staff, AND
   c. the District does not have staff with the expertise to verify that the PCE document is accurate with respect to the following sections:
      i. _____
      ii. _____
      iii. _____
      iv. _____
      v. _____
      vi. _____

Certified by: _____ Director of TP&D 8/7/2012

Name Title Date

PCE Determination Form

Note: If an issue is "Not Applicable," write "N/A" in the "No" column.

YES	NO	Description of Item Sufficiency
X		There are no more than 30 acres, or 6 acres per linear mile, of new right of way.
X		The action shall follow the requirements of the Uniform Relocation Act.
X		There are no commercial or residential displacements.
X		There are no "use" of properties protected by Section 4(f) of the Department of Transportation Act (as defined in 49 U.S.C. 303). Any de minimis action shall be received, processed and approved, if appropriate by FHWA before a project is allowed to be processed as PCEs.
X		ENV or SHPO has determined that the project poses "no adverse effects" to properties eligible for or listed in the National Register of Historic Places.
X		The proposed action is not subject to an individual Section 408, 404 and/or Section 10 permit, or Nationwide Permit 23 issued by the U. S. Army Corps of Engineers.
X		The proposed action is not subject to a Section 9 permit issued by the U.S. Coast Guard (USCG). Further, any required USCG advanced approval and/or lighting exemption concurrence is/was received before letting.
X		The action does not lead to any determination other than "no effect" or "may effect, but not likely to adversely affect" for federally listed resources, under regulations implementing the Endangered Species Act. This includes any species and any designated critical habitat. Essential fish habitat meets the equivalent level of effect as applicable under the laws and regulations governing that program.
X		The action does not necessitate construction in or adjacent to the specific section of the Rio Grande River designated as a component in the National System of Wild and Scenic Rivers.
X		The action does not involve known hazardous materials impacts anticipated to adversely affect construction activities, and does not involve the acquisition of known unresolved contaminated sites where TxDOT could reasonably expect to assume liability for corrective action upon acquisition.
	N/A	The action is consistent with the Coastal Zone Management Plan as determined by the appropriate federal and/or state agency(ies).
X		The action conforms to all applicable laws, regulations, implementation plans, or other applicable federal and state air quality requirements pursuant to the federal and Texas Clean Air Acts.

No significant social, economic, and/or environmental impacts associated with this project have been discovered. Therefore, the proposed action is certified/approved as a Programmatic Categorical Exclusion.

John Collison — 8-7-12

Certified/Approved — Date

Programmatic Categorical Exclusion

Reconstruct 2-lane rural roadway to provide passing lanes

US-82 from FM 1840 to SH 98

Bowie County

CSJ 0046-04-057

U.S. Department of Transportation
Federal Highway Administration

and

Texas Department of Transportation

September 2012

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Introduction

This Programmatic Categorical Exclusion (PCE) presents the potential social, economic, and environmental effects that would result from the proposed improvements to US-82 in Bowie County, Texas. Planned improvements include the construction of a passing lane for approximately 8.7 miles from FM 1840 in DeKalb, Texas, to SH 98 near New Boston, Texas. Running parallel and adjacent to the project on the south side is the old Texas and Pacific Railway which has been railbanked in accordance with the National Trails System Act for use as a recreational trail.

Refer to **Appendix A** for the General Location Map and Project Topographic Map. Refer to **Appendix B** for the existing and proposed typical sections. Refer to **Appendix C** for project area photographs.

Proposed Action

Existing Facility

US-82 is a 2-lane roadway with 8-foot to 10-foot shoulders and an open storm drainage system. The existing roadway consists of two 12-foot wide travel lanes with 170 feet of right of way (ROW). US-82 currently functions as a major arterial with posted speed limits ranging from a high of 60 miles per hour (mph) to a low of 35 mph. Average daily traffic along the project area is projected to be 9,400 vehicles per day (vpd) in 2015, and 12,900 vpd in 2035.

The project area does not presently have any paved sidewalks. The entire project area has been disturbed from previous or current construction activities for street, utility, and residential development.

Planned Facility

The project proposes to construct a new concrete pavement from FM 1840 in DeKalb to SH 98 near New Boston. The typical width of pavement will be 50 feet to allow for a passing lane section comprised of two 12-foot lanes in the passing lane direction, one 12-foot lane in the opposite direction, one 4-foot shoulder in the passing direction, and one 10-foot shoulder in the opposite direction. Two parcels will be acquired for ROW to provide for a 30 mph design speed connection for FM 1840 at the beginning of the project.

Funding and Planning

The project has been identified as a Pass-Through Funding project, and is included in and is consistent with TxDOT's 2011-2014 Statewide Transportation Improvement Program (STIP). The STIP total project cost is $31,903,500.00. Based on the Pass-Through Funding Agreement, construction of the project would utilize local funds (Bowie County) and TxDOT would reimburse Bowie County with a mix of Federal and State funds. The anticipated letting date is February 2013. The estimated time of completion is February 2015. See **Appendix D** for the STIP page.

Need and Purpose

The purpose of the proposed project is to improve mobility and safety within the project area. The proposed project is needed to accommodate existing and future traffic volumes along US-82, the pavement for which was constructed in 1946.

Alternatives

Three alternatives were considered for this project: 1) the No Build alternative, 2) reconstructing and widening to the north of US-82, and 3) reconstructing and widening to the south of US-82.

No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. The No Build Alternative would result in the continued roadway safety and mobility concerns. Implementation of the No Build Alternative would not meet the proposed project need and purpose.

Alternative 2 (North Widening)

Widening the existing roadway to the north side of US-82 would fulfill the purpose and need of the proposed project; however, a large amount of ROW would be required to be purchased, and several displacements would occur. Acquiring the necessary ROW for the proposed project would not be a cost-effective option.

Alternative 3 (Preferred Alternative)

The proposed alternative satisfies the need and purpose of the proposed project. Location of the proposed project predominantly within the existing ROW minimizes additional ROW.

Bicycle and Pedestrian Accommodations

A recent federal policy statement on Bicycle and Pedestrian Accommodations, Regulations, and Recommendations by USDOT signed on March 11, 2010, emphasizes an increased commitment to, and investment in, bicycle facilities and walking networks to help meet goals for cleaner, healthier air; less congested roadways, and more livable, safe, cost-effective communities. This USDOT policy encourages the incorporation of safe and convenient walking and bicycling facilities into transportation projects. As modes of travel, walking and bicycling are healthy, efficient, low cost, and available to nearly everyone. Due to the rural nature of the project area, no bicycle or pedestrian facilities are planned as a result of this proposed project.

Right of Way and Utility Adjustment

Almost all construction associated with the proposed project would take place within the existing ROW. Two ROW parcels for realigning the intersection of FM 1840 and some easements for realigning intersecting roads and driveways are anticipated. Although acquisition of additional ROW is required, no relocations or displacements would occur. Existing ROW along US-82 is typically 170 feet in width. Approximately 0.33 acres of additional ROW, from two parcels, would be required for the proposed project. Additionally, approximately 0.73 acres of temporary easements would be required. The proposed ROW acquisition would be done in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended.

Utilities in the area include water and sanitary sewer, telecommunication, gas, and cable television. All utilities needing to be relocated will be relocated in advance of or during the US-82 reconstruction project. Preferably, these utilities would be relocated prior to construction of the proposed project.

Surrounding Area

Surrounding Terrain and Land Use

The project vicinity is comprised of generally flat topography with riparian features adjacent to Austin Chapel Branch and Red Bayou.

The proposed project traverses portions of DeKalb, Texas. The land in the vicinity of the proposed project is generally comprised of agricultural and rural residential land uses. Neither DeKalb nor Bowie County has comprehensive zoning regulations.

Soils

Information contained in the US Department of Agriculture (USDA) Web Soil Survey indicates the proposed project area is predominantly comprised of the following soil associations:

- Sawyer Silt Loam: Moderately well-drained, high available water capacity, greater than 80 inches to the restrictive feature, approximately 24 to 36 inches to the water table, classified as partially hydric.
- Eylau Sandy Loam: Moderately well-drained, moderately high available water capacity, 28 to 60 inches to the fragipan, approximately 24 to 36 inches to the water table, classified as partially hydric.
- Blevins Silt Loam: Well-drained, high available water capacity, greater than 80 inches to the restrictive feature, greater than 80 inches to the water table, classified as not hydric.

Public Facilities and Services

Woodman Cemetery is located adjacent to the proposed project corridor. The cemetery entrance is located on the north side of the project corridor, offset of FM 1840 to the south. The proposed project would not affect the access to the cemetery. Additionally, Malta School is located on the north side of the project area at the northeast corner of the intersection of US-82 and County Road 2789. The main entrances to the school are located off of County Road 2789. Therefore, the proposed project would not affect access to the school.

No other public facilities such as parks, hospitals, or fire/police stations are located within or immediately adjacent to the project corridor. Therefore, the construction, operation, and maintenance of the proposed project would not adversely affect public facilities.

Natural Setting

The project area is located in a rural setting comprised of agricultural fields and rural residential land. The project area crosses Austin Chapel Branch and Red Bayou.

Natural vegetation included loblolly pine, shortleaf pine, southern red oak, post oak, white oak, hickory, and sweetgum; also mid and tall grasses such as yellow Indiangrass, pinehill bluestem,

narrowleaf wood oats, and panicums. American beautyberry, sumac, greenbriar, and hawthorn are part of the understory.

Specific Areas of Environmental Concern

Socioeconomics

Community Impacts
Approximately 0.33 acres of additional ROW is proposed for the project. No changes to travel patterns would occur. Existing access would be maintained during and after construction.

Limited English Proficiency
Executive Order (E.O.) 13166, "Improving Access to Services for Persons with Limited English Proficiency (LEP)" requires federal agencies to examine the services they provide and identify any need for services to those with LEP, and develop and implement a system to provide those services so that LEP persons can have meaningful access to them.

In order to determine the presence of a LEP population in the project area, census data was obtained for the block group located in the project area. Census 2010 data indicated that within Census Tract 116, Block Groups 3, 4, and 6; and Census Tract 115.01, Block Groups 1 and 2, encompassing the proposed project, there were a total of 5,924 people. Of this population, approximately 1.4 percent spoke English "less than very well."

A windshield survey revealed that there are no business signs or advertisements in non-English languages located along the proposed project. No public involvement is planned at this time; however, if it is determined to be necessary at a future date, reasonable steps would be taken to ensure that such persons have meaningful access to the programs, services, and information that TxDOT provides. These reasonable steps include providing bilingual staff (such as Spanish- or French-speaking staff) on request to explain the proposed project, and any mail-outs or correspondence would be provided as bilingual communications. Therefore, the requirements of EO 13166 appear to be satisfied.

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

1. To avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low income populations;

2. To ensure full and fair participation by all potentially affected communities in the transportation decision-making process;

3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

Disproportionately high and adverse human health or environmental effects are defined by FHWA as adverse effects that:

1. are predominately borne by a minority population and/or a low-income population; or

2. will be suffered by the minority population and/or low-income population and are appreciably more severe or greater in magnitude than the adverse effects that will be suffered by the non-minority population and/or non-low-income population.

According to the US Census Bureau 2010 Census, approximately 7.9 percent of the population in the blocks encompassing the proposed project area is considered to be minority. Not enough current data is available from the US Census Bureau to determine the percentage of the population in the block group encompassing the project area considered to be low-income (See Tables 1 and 2). A household income at or below the Department of Health and Human Services poverty guidelines ($23,050 for a family of four in 2012) is considered low-income.

Table 1: Minority Population Percentages

Comparison Area	Total Population	White Alone	Black or African-American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race	Population of Two or More Races	Hispanic or Latino
Census Tract 116	5,238	76.9%	17.5%	1.4%	0.2%	0.1%	2.1%	1.9%	4.0%
Block Group 3	589	48.2%	44.8%	1.0%	0.2%	0.0%	2.4%	3.4%	2.7%
Block 3012	40	72.5%	7.5%	2.5%	0.0%	0.0%	0.0%	17.5%	0.0%
Block 3014	32	78.1%	3.1%	3.1%	0.0%	0.0%	0.0%	15.6%	15.6%
Block 3015	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 3016	4	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 3017	1	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Block 3056	21	81%	4.8%	4.8%	0.0%	0.0%	9.5%	0.0%	9.5%
Block Group 4	1,257	75.3%	17.1%	1.3%	0.3%	0.1%	4.3%	1.7%	6.5%
Block 4000	22	90.9%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	13.6%
Block Group 6	1,292	91.3%	4.2%	2.1%	0.2%	0.2%	0.7%	1.4%	1.9%
Block 6000	75	98.7%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%
Block 6004	157	91.1%	0.0%	1.9%	0.0%	0.0%	4.5%	2.5%	5.1%
Block 6006	27	96.3%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	3.7%
Block 6007	63	90.5%	0.0%	7.9%	0.0%	1.6%	0.0%	0.0%	3.2%
Block 6008	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 6009	79	97.5%	0.0%	0.0%	1.3%	0.0%	1.3%	2.5%	0.0%
Block 6012	8	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 6013	2	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 6017	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 1: Minority Population Percentages									
Comparison Area	**Total Population**	**White Alone**	**Black or African-American Alone**	**American Indian and Alaska Native Alone**	**Asian Alone**	**Native Hawaiian and Other Pacific Islander Alone**	**Some Other Race**	**Population of Two or More Races**	**Hispanic or Latino**
Block 6018	35	100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 6019	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 6020	109	95.4%	0.0%	0.9%	0.0%	0.9%	0.0%	2.8%	0.0%
Block 6023	31	96.8%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	3.2%
Census Tract 115.01	7,910	67.9%	21.0%	0.7%	0.4%	0.0%	8.7%	1.3%	12.9%
Block Group 1	1,835	91.5%	5.0%	1.0%	0.4%	0.0%	0.7%	1.4%	2.8%
Block 1008	76	93.4%	0.0%	2.6%	1.3%	0.0%	0.0%	2.6%	0.0%
Block 1010	37	78.4%	0.0%	8.1%	0.0%	0.0%	5.4%	8.1%	13.5%
Block 1011	6	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 1012	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 1013	2	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 1014	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 1015	48	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block Group 2	951	93.7%	2.8%	1.6%	0.3%	0.0%	0.7%	0.8%	2.9%
Block 2017	63	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 2022	52	90.4%	7.7%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 2023	12	91.7%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	8.3%
Block 2024	7	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 2025	43	93.0%	0.0%	0.0%	2.3%	0.0%	2.3%	2.3%	2.3%
Block 2027	25	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 2041	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 2042	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Source: US Census Bureau, 2010									

Table 2: Median Household Income and Poverty Level			
Comparison Area	**Total Population**	**Individuals below poverty level**	**Median household income in 2010**
Census Tract 116	5,238	29.0%	$36,996
Block Group 3	589	34.2% (1999)	$17,083 (1999)
Block Group 4	1,257	31.9% (1999)	$23,292 (1999)
Block Group 6	1,292	29.2% (1999)	$35,833 (1999)
Census Tract 115.01	7,910	14.8%	$40,995
Block Group 1	1,835	N/A	N/A
Block Group 2	951	N/A	N/A
Source: US Census Bureau, 2010			

While environmental justice populations are present within the project area, the proposed project consists of improvements that would serve the safety and transportation needs of all local residents. No relocations, displacements, or changes in access to residences would occur. Temporary lane encroachments or closures during project construction would cause traffic delays for all populations, but no long-term adverse impacts are expected to occur. Based on the above discussion and analysis, no disproportionately high and adverse impacts on minority or low-income populations are anticipated as a result of this proposed project. Therefore, the requirements of Executive Order 12898 are satisfied.

Section 4(f) Properties

The proposed project would not require the use of, nor substantially impair the purposes of any publicly owned land from a public park, recreational area, wildlife and waterfowl refuge lands or historic sites of national, state, or local significance; therefore, a 4(f) statement is not required.

Cultural Resources

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, National Environmental Policy Act (NEPA) and the National Historic Preservation Act of 1966, among others, apply to transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas apply to this project. Compliance with these laws often requires consultation with the Texas Historic Commission (THC), Texas State Historic Preservation Officer (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.

Historic Properties

A review of the National Register of Historic Places (NRHP), the list of State Archeological Landmarks (SAL), and the list of Recorded Texas Historic Landmarks (RTHL) indicated that no historically significant resources have been previously documented within the area of potential effects (APE). It has been determined through consultation with the State Historic Preservation Officer (SHPO) that the APE for the proposed project is variable. The APE is the current ROW for the majority of the project. Where new ROW/construction easements are needed, the APE is those parcels which the ROW would be required from. A cultural resource survey conducted by TxDOT personnel in 2004 using a 300' APE revealed that there are no historic properties (built prior to 1954) located within the project APE. A further windshield/desktop survey in 2012 of the parcels that ROW is required from revealed no historic properties (built prior to 1967) within the APE.

Pursuant to Stipulation V, Undertakings with No Potential to Affect Historic Resources, of the First Amended Programmatic Agreement for Transportation Undertakings, (PA-TU) between the Federal Highway Administration (FHWA), the Texas State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation, and the Texas Department of Transportation (TxDOT) and the Memorandum of Understanding (MOU), TxDOT Historians determined that the proposed action has no potential to affect historic properties and that individual project coordination with SHPO is not required.

Archeological Resources

Based on a previous archeological study (CSJ 0046-04-034) of the project area, no further investigation is warranted. A field investigation found no archeological sites within the project area. Consultation with federally-recognized Native American tribes with a demonstrated historic interest in the area was initiated on January 23, 2004. No objections or expressions of concern were received within the comment period. TxDOT and the THC/TSHPO consulted on the project impacts. The THC/TSHPO concurred that "no further work was recommended" on January 22, 2004. 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.

Vegetation

According to the Texas Parks and Wildlife Department (TPWD) “Vegetation Types of Texas” publication (1984), the proposed project falls within the “Pine – Hardwood Forest” classification. The project area is also located in the Tertiary Uplands Ecological Region of Texas. This region has a great diversity of habitats and species. Prominent native trees include shortleaf pine, loblolly pine, southern red oak, post oak, black oak, white oak, hickories, and sweetgum. American beautyberry, sumac, greenbriar, and hawthorn are common understory species. Existing vegetation matches the description from the Vegetation Types of Texas. There was no unusual difference between vegetation located within the existing ROW and vegetation outside of the existing ROW.

Dominant herbaceous plants observed during a field reconnaissance include bahia grass (*Paspalum notatum*), bermuda grass (*Cynodon dactylon*), goldenrod (*Solidago Canadensis*), and other turf grasses. The existing ROW also includes black hickory (*Carya texana*), post oak

(*Quercus stellata*), and loblolly pine (*Pinus taeda*). The existing ROW is generally mowed and maintained. Herbaceous and woody vegetation would be permanently removed to accommodate the proposed improvements to US-82.

Approximately 20 acres of mature trees, typically black hickory and loblolly pine, would be impacted by the proposed project. These trees average a diameter at breast height (DBH) of 12 to 18 inches, and generally lie between the existing roadway and the former railroad track. Tree trimming maintenance of over hanging branches could be necessary during construction. Trimming or removal would be minimized as practical.

Unusual vegetation features observed within the existing and proposed ROW include:

(a) unmaintained vegetation,

(b) trees and shrubs along a fenceline adjacent to a field (fencerow vegetation), and

(c) riparian vegetation.

The proposed project would not impact fencerow or unmaintained vegetation. However, the project would impact approximately 0.20 acres of riparian vegetation. According to observations from field visits, it appears that most of the areas within the existing ROW are comprised of maintained vegetation and mature trees.

According to a Memorandum of Agreement (MOA) between TxDOT and TPWD, special habitat features are classified as:

(a) Bottomland hardwoods

(b) Caves

(c) Cliffs and bluffs

(d) Native prairies (particularly those with climax species of native grasses and forbs)

(e) Ponds

(f) Seeps or springs

(g) Snags or groups of snags

(h) Water bodies

(i) Existing bridges with known or easily observed bird or bat colonies.

Special habitat features identified within the project area include Red Bayou, Austin Chapel Branch, and Peters Branch, which are jurisdictional water bodies. There would be approximately 0.04 acre of permanent impacts to Red Bayou, 0.01 acre of permanent impacts to the Austin Chapel Branch, and 0.01 acre of permanent impacts to Peters Branch due to the proposed improvements and the maneuvering of construction equipment (see Table 4). BMPs would be used to avoid and/or minimize impacts to water quality. Measures would be taken to avoid the take of migratory birds, their occupied nests, eggs, or young.

In accordance with Provision (4) (A) (ii) of the Memorandum of Understanding (MOU) and MOA between TxDOT and TPWD, habitats given consideration for non-regulatory mitigation during project planning include the following:

(a) Habitat for federal candidate species if mitigation would assist in the prevention of the listing of the species;

(b) Rare vegetation series (S1, S2, or S3) that also locally provide habitat for a state-listed species;

(c) All vegetation communities listed as S1 or S2, regardless of whether the series in question provide habitat for state-listed species;

(d) Bottomland hardwoods, native prairies, and riparian sites; and

(e) Any other habitat feature considered to be locally important.

The existing vegetation within the project area includes one of the above criteria for consideration of non-regulatory mitigation, riparian sites. Impacts to riparian vegetation would be minimized by limiting construction to the minimum required to properly construct the proposed project. The contractor would be encouraged to avoid and minimize impacts to vegetation where possible. Because of the minimal impacts to riparian vegetation, Bowie County does not propose compensatory mitigation for this activity. Additionally, there are also no caves, cliffs, bluffs, or evidence of bat colonies present in the project area.

Project specific triggers that initiate coordination with TPWD include the following:

(1) might affect mature woody vegetation, dense mature brush, including any significant remnant native vegetation (e.g., undisturbed native prairie or bottomland hardwood, etc.)

(2) are within the range and in suitable habitat of any state or federally-listed threatened or endangered species

Coordination with TPWD was initiated on March 26, 2012 and TPWD responded on April 3, 2012 with "No Comment" (see **Appendix E**).

Endangered Species Act

The Endangered Species Act affords protection for federally listed threatened and endangered species and, where designated, critical habitat for these species. The U.S. Fish and Wildlife Service (USFWS) maintains a list of federally threatened and endangered species of potential

occurrence for each Texas county as does TPWD. TPWD maintains special species lists through the Natural Diversity Database (NDD) by county. The NDD identifies threatened or endangered species that have historically occurred in Bowie County. A review of the Texas Parks and Wildlife Department's (TPWD) Natural Diversity Database (NDD) was requested on February 23, 2012 and was evaluated in conjunction with geographical information systems (GIS).

One element of occurrence was documented within a 10-mile buffer of the proposed project. The Element Occurrence records indicate the bald eagle has been documented along the Red River where Texas, Oklahoma, and Arkansas meet, extending one mile on either side of the river, for approximately seven air miles. The proposed project is located approximately seven miles south of this corridor. However, no habitat suitable for the bald eagle was observed within or adjacent to the project area. No managed areas were documented within a 1.5-mile radius or 10-mile buffer of the proposed project. The NDD is used for potential presence data and cannot be interpreted as presence/absence data.

Federal and State Threatened and Endangered Species

Table 3 addresses the Federal and State Threatened or Endangered Species for Bowie County, their listed status, habitat requirements, and anticipated effects from the proposed project.

This project would have no effect on any federal listed threatened or endangered species, its habitat, or designated critical habitat.

The project area contains habitat within or adjacent to the project area that may be potentially suitable for the Timber/Canebrake rattlesnake and Northern Scarlet Snake. Since these species may be encountered during construction, the contractor would be notified (via the EPIC sheet, general notes, and/or pre-construction meeting) of this potential and take the necessary measures to avoid harm to these species. The project is therefore not anticipated to cause adverse impacts to these state listed threatened species.

State Species of Concern

Table 3 addresses the State Species of Concern for Bowie County, their habitat requirements, and anticipated impacts from the proposed project. The project area contains habitat within or adjacent to the project area that may be suitable for the Plains Spotted Skunk, Rafinesque's Big-Eared Bat, Southeastern Myotis Bat, and Common Pimpleback. Since these species may be encountered during construction, the contractor would be notified (via the EPIC sheet, general notes, and/or pre-construction meeting) of this potential and take the necessary measures to avoid harm to these species. The project is therefore not anticipated to cause adverse impacts to state listed species of concern.

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT	SPECIES IMPACT	JUSTIFICA-TION
BIRDS							
American Peregrine	DL*	T	Year-round resident and local breeder in west Texas, nests in	No	No effect	No impact	No impacts to habitat where

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results							
SPECIES	**FEDERAL STATUS**	**STATE STATUS**	**DESCRIPTION OF HABITAT**	**HABITAT PRESENT**	**SPECIES EFFECT**	**SPECIES IMPACT**	**JUSTIFICA-TION**
Falcon *Falco peregrinus anatum*			tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.				shorebirds, etc. are likely to gather.
Arctic Peregrine Falcon *Falco peregrinus tundrius*	DL*		Migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.	No	No effect	No impact	No impacts to habitat where shorebirds, etc. are likely to gather.
Bachman's Sparrow *Aimophila aestivalis*	—	T	Open pine woods with scattered bushes and grassy understory in Pineywoods region, brushy or overgrown grassy hillsides, overgrown fields with thickets and brambles, grassy orchards; remnant grasslands in Post Oak Savannah region; nests on ground against grass tuft or under low shrub.	No	- -	No impact	Brushy habitat is present but is fragmented or routinely disturbed via mowing, maintenance or flooding during nesting season; habitat potential low.
Bald Eagle *Haliaeetus leucocephalus*	DL*	T	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds.	No	No effect	No impact	No large trees or cliffs in vicinity.
Cerulean Warbler *Dendroica cerulea*	—		Treetops of riverbank woodlands, swamps, and bottomlands; mainly insectivorous.	No	- -	No impact	No riverbank woodlands present.

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results							
SPECIES	**FEDERAL STATUS**	**STATE STATUS**	**DESCRIPTION OF HABITAT**	**HABITAT PRESENT**	**SPECIES EFFECT**	**SPECIES IMPACT**	**JUSTIFICA-TION**
Henslow's Sparrow *Ammodramus henslowii*	—		Wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking.	No	- -	No impact	No weedy fields or areas with bunch grasses and bare ground are present within the proposed project area
Interior Least Tern *Sterna antillarum athalassos*	LE	E	Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	No	No effect	No impact	Sandbars/gravel bars not present.
Peregrine Falcon *Falco peregrinus*	DL*	T	Both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (*F. p. anatum*) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, *F.p. tundrius* is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.	No	No effect	No impact	No impacts to habitat where shorebirds, etc. are likely to gather.
Piping Plover *Charadrius melodus*	T*	T	Wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats.	No	No effect	No impact	No exposed beaches, mudflats, or saltflats in the vicinity.
Sprague's Pipit *Anthus spragueii*	C*		Only in Texas during migration and winter, mid-September to early April; short to medium distance, diurnal migrant; strongly tied to native upland prairie, can be locally common in coastal grasslands, uncommon to rare further west; sensitive to patch size and avoids edges.	No	No Effect	No impact	No native upland prairie or coastal grasslands are present within the proposed project area

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results							
SPECIES	**FEDERAL STATUS**	**STATE STATUS**	**DESCRIPTION OF HABITAT**	**HABITAT PRESENT**	**SPECIES EFFECT**	**SPECIES IMPACT**	**JUSTIFICA-TION**
Wood Stork *Mycteria americana*	—	T	Forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.	Yes	- -	No impact	Very little shallow standing water in the project area to be impacted.
FISHES							
Blackside darter *Percina maculata*	—	T	Red, Sulfur and Cypress River basins; clear, gravelly streams; prefers pools with some current, or even quiet pools, to swift riffles	No	- -	No impact	Clear, gravelly streams not impacted by the proposed project.
Creek chubsucker *Erimyzon oblongus*	—	T	Tributaries of the Red, Sabine, Neches, Trinity, and San Jacinto rivers; small rivers and creeks of various types; seldom in impoundments; prefers headwaters, but seldom occurs in springs; young typically in headwater rivulets or marshes; spawns in river mouths or pools, riffles, lake outlets, upstream creeks.	No	- -	No impact	Silt loads at Red Bayou decrease habitat use potential.
Goldeye *Hiodon alosoides*	—		Red River basin below reservoir; spawns spring to July in shallow firm-bottomed backwaters or gravel shoals in tributaries, eggs semibuoyant drift downstream or to quiet water; adults in quiet turbid water of medium to large lowland rivers, small lakes, marshes and muddy shallows connected to them; young feed on microcrustaceans and other inverts; adults on surface water insects, also frogs, fishes, and small mammals.	No	- -	No impact	Medium to large lowland river/small lakes not present.
Orangebelly darter *Etheostoma radiosum*	—		Red through Angelina River basins; just headwaters ranging from high gradient streams to more sluggish lowland streams, gravel and rubble riffles	No	- -	No impact	No headwaters present.

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results							
SPECIES	**FEDERAL STATUS**	**STATE STATUS**	**DESCRIPTION OF HABITAT**	**HABITAT PRESENT**	**SPECIES EFFECT**	**SPECIES IMPACT**	**JUSTIFICA-TION**
			preferred; eggs buried in gravel and riffle raceways, post-larvae live in quiet water, move into progressively faster water as they mature, young feed mostly on copepods and cladocerans, adults on mayfly and fly larvae, spawn late February through mid-April in eastern Texas.				
Paddlefish *Polyodon spathula*	—	T	Prefers large, free-flowing rivers, but will frequent impoundments with access to spawning sites; spawns in fast, shallow water over gravel bars; larvae may drift from reservoir to reservoir	No	- -	No impact	Large, free-flowing rivers/impoundments not present.
Shovelnose sturgeon *Scaphirhynchus platorynchus*	—	T	Open, flowing channels with bottoms of sand or gravel; spawns over gravel or rocks in an area with a fast current; Red River below reservoir and rare occurrence in Rio Grande.	No	- -	No impact	Flowing channels with appropriate substrate not present.
Taillight shiner *Notropis maculatus*	—		Sulfur River and Big Cypress Bayou; mostly headwaters, typically large sluggish, mud-bottomed small to large streams and lakes, usually with some aquatic vegetation; spawns March-October in backwaters and pools; feeds mainly on insect larva and cladocerans, also algae.	No	- -	No impact	Habitat not present.
Western sand darter *Ammocrypta clara*	—		Red and Sabine River basins; clear to slightly turbid water of medium to large rivers that have moderate to swift currents, primarily over extensive areas of sandy substrate.	No	- -	No impact	Medium to large river not present.
INSECTS							
American burying beetle *Nicrophorus*	LE		Varies widely from oak-hickory and coniferous forest ridge tops or hillsides to riparian corridors	No	No effect	No impact	Saturated soils/loose sandy soils

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results							
SPECIES	**FEDERAL STATUS**	**STATE STATUS**	**DESCRIPTION OF HABITAT**	**HABITAT PRESENT**	**SPECIES EFFECT**	**SPECIES IMPACT**	**JUSTIFICA-TION**
americanus			and valley floor pastures; extremely xeric, saturated, or loose sandy soils unsuitable; adults primarily above ground, eggs in soil adjacent to buried carcass, teneral adults overwinter in soil.				present.
MAMMALS							
Plains spotted skunk *Spilogale putorius interrupta*	—		Catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie.	Yes	--	No impact	Potential impacts to habitat would be minor, and the potential for encountering species during construction is low.
Black bear *Ursus americanus*	T/SA;NL	T	Bottomland hardwoods and large tracts of inaccessible forested areas; due to field characteristics similar to Louisiana Black Bear (LT, T), treat all east Texas black bears as federal and state listed Threatened.	No	No effect	No impact	Inaccessible forested area not impacted.
Rafinesque's big-eared bat *Corynorhinus rafinesquii*	—	T	Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures.	Yes	- -	No impact	Potential impacts to habitat would be minor, and the potential for encountering species during construction is low.
Red wolf *Canis rufus*	E*	E	Extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies.	No	No effect	No impact	Extirpated from Texas.
Southeastern myotis bat *Myotis austroriparius*	—		Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures.	Yes	- -	No impact	Potential impacts to habitat would be minor, and the potential for encountering species during construction is low.
MOLLUSKS							
Fawnsfoot	—		Small and large rivers especially	No	- -	None	Insufficient

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results							
SPECIES	**FEDERAL STATUS**	**STATE STATUS**	**DESCRIPTION OF HABITAT**	**HABITAT PRESENT**	**SPECIES EFFECT**	**SPECIES IMPACT**	**JUSTIFICA-TION**
Truncilla donaciformis			on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in still to swiftly flowing waters; Red (historic), Cypress (historic), Sabine (historic), Neches, Trinity, and San Jacinto River basins.				water in channel and no suitable substrate.
Common pimpleback *Quadrula pustulosa*	—		Small streams to larger rivers, and associated with nearly every bottom type except deep shifting sands; Red River downstream of Lake Texoma and possibly Big Cypress Bayou and lower Sulphur river basins.	Yes	- -	None	Potential impacts to habitat would be minor, and the potential for encountering species during construction is low.
Wabash pigtoe *Fusconaia flava*	—		Creeks to large rivers on mud, sand, and gravel from all habitats except deep shifting sands; found in moderate to swift current velocities; east Texas River basins, Red through San Jacinto River basins; elsewhere occurs in reservoirs and lakes with no flow.	No	- -	None	Insufficient water in channel and no suitable substrate.
White heelsplitter *Lasmigona complanata*	—		Typically large rivers and streams with sluggish, turbid waters, on mud or mud-gravel bottoms; also smaller streams and reservoirs usually deep in soft mud or occasionally among rocks; quiet areas of otherwise swift streams; Red River with unsuccessful introductions into the upper Trinity River System.	No	- -	None	Insufficient water in channel and no suitable substrate.
REPTILES							
Alligator snapping turtle *Macrochelys temminckii*	—	T	Perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near deep running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquatic vegetation; may migrate several miles along rivers; active March-October; breeds April-October.	No	- -	None	No deep water is present within the project area.
Northern scarlet snake *Cemophora coccinea copei*	—	T	Mixed hardwood scrub on sandy soils; feeds on reptile eggs; semi-fossorial; active April-September.	Yes	- -	No impact	Potential impacts to habitat would be minor, and the potential for encountering species during

Table 3: Federal, State, Listed Threatened/Endangered Species, Texas Parks and Wildlife Department's Species of Concern, Bowie County, and Texas Natural Diversity Database Results

SPECIES	FEDERAL STATUS	STATE STATUS	DESCRIPTION OF HABITAT	HABITAT PRESENT	SPECIES EFFECT	SPECIES IMPACT	JUSTIFICA-TION
							construction is low.
Timber/Canebrake rattlesnake *Crotalus horridus*	—	T	Swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto.	Yes	- -	May impact	Upland pine, deciduous woodlands, and riparian zones present within project area. No specimens observed during field surveys.
PLANTS							
Arkansas meadow-rue *Thalictrum arkansanum*	—	—	Mostly deciduous forests on alluvial terraces and upper drainages of hardwood slope forests at contacts with calcareous prairies; flowering March-April, withering by midsummer	Yes	- -	No impact	Site reconnaissance conducted during flowering season; no species observed.
TPWD NDD Results	5942—Bald eagle (*Haliaeetus leucocephalus*), Federal/State status, delisted/threatened. Occurrence within 10 mile buffer, but outside of 1.5 mile buffer. 243--Cedar Elm-sugarberry Series (*Ulmus crassifolia-celtis laevigata* series), Federal/State status-none. Occurrence within 10 mile buffer, but outside of 1.5 mile buffer.					- -	Element of Occurrence more than 1.5 miles from the proposed project area.

E – State or Federal Listed Endangered
EXPN- Experimental population, Non-Essential
T – State or Federal Listed Threatened
PT-Proposed Threatened
C – Federal Candidate for Listing
DL – Federally Delisted
"–" – No designation occurring within identified county
"blank" – Rare, but with no regulatory listing status
"- -" – No determination of effect or impact required because species lacks federal and/or state listing status
"*" – TPWD T&E species list indicates species could be present in identified county; however, USFWS T&E species list does not indicate a listing status for the species in the county

Sources: U.S. Fish & Wildlife Service (March 7, 2012), Texas Parks & Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs, County Lists of Texas Special Species (March 7, 2012), and Field Visit (February 21, 2012).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. Between October 1 and February 15, the contractor would remove all old migratory bird nests from any structures that would be affected by the proposed project, and complete any bridge work and/or vegetation clearing. In addition, the contractor would be prepared to prevent migratory birds from building nests between February 15 and October 1, per the Environmental Permits, Issues,

and Commitments (EPIC) plans. In the event that migratory birds are encountered on-site during project construction, adverse impacts on protected birds, active nests, eggs, and/or young would be avoided.

Executive Order 13112 on Invasive Species
Implemented in February 1999, EO 13112 was established "to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause." Protective measures against the introduction of invasive species will be utilized during the construction phase and re-vegetation phase of this project.

Executive Memorandum on Beneficial Landscaping
The Executive Memorandum on Beneficial Landscaping directs that agencies shall, where cost-effective and to the extent practicable:

> (a) use regionally native plants for landscaping;
>
> (b) design, use, or promote construction practices that minimize adverse effects on the natural habitat;
>
> (c) seek to prevent pollution by, among other things, reducing fertilizer and pesticide use, using integrated pest management techniques, recycling green waste, and minimizing runoff. Landscaping practices that reduce the use of toxic chemicals provide one approach for agencies to reach reduction goals established in Executive Order No. 12856, "Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements";
>
> (d) implement water-efficient practices, such as the use of mulches, efficient irrigation systems, audits to determine exact landscaping water-use needs, and recycled or reclaimed water and the selecting and sizing of plants in a manner that conserves water and controls soil erosion. Landscaping practices, such as planting regionally native shade trees around buildings to reduce air conditioning demands, can also provide innovative measures to meet the energy consumption reduction goal established in Executive Order No. 12902, "Energy Efficiency and Water Conservation at Federal Facilities"; and
>
> (e) create outdoor demonstrations incorporating native plants, as well as pollution prevention and water conservation techniques, to promote awareness of the environmental and economic benefits of implementing this directive. Agencies are encouraged to develop other methods for sharing information on landscaping advances with interested nonfederal parties.

These practices, to the extent practicable, will be followed during the revegetation phase of the project.

Water Resources

Section 404 of the Clean Water Act: Jurisdictional Water and Wetlands

The placement of temporary or permanent dredge or fill material into the jurisdictional Waters of the US will be authorized under Nationwide Permit (NWP) 14 with a Pre-Construction Notification (PCN). The US Army Corps of Engineers (USACE) Tulsa District was consulted in regards to potential jurisdictional waters located within the project area. The USACE issued a Preliminary Jurisdictional Determination on May 16, 2012, finding three intermittent streams in the project area to be jurisdictional: Austin Chapel Branch, Peters Branch, and Red Bayou. Additionally, a wetland abutting Red Bayou was found to be jurisdictional and will be permitted in conjunction with activities at Red Bayou.

Waters of the U.S. and anticipated impacts are listed in Table 4.

Table 4: Waters of the US and Anticipated Impacts

Name of Water Body or other location indicators	Existing Structure	Proposed Work or Structure	Permanent Fill		Temporary Fill		NWP (Indicate Number)	PCN (Y/N)
			Water (acres and linear feet)	Wetlands or other Special Aquatic Sites (Acres)	Waters (acres and linear feet)	Wetlands or other Special Aquatic Sites (Acres)		
Red Bayou and Abutting Wetland (STA 997)	3Barrel 8ftx7ft Box Culvert	**Extend approximately 34 ft south**	0.04	0.09	0.00	0.00	14	Y
Peters Branch (STA 891)	None	**Expand Concrete Pavement**	0.01	0.00	0.00	0.00	14	N
Austin Chapel Branch (STA 805)	None	**Expand Concrete Pavement**	0.01	0.00	0.00	0.00	14	N
STA 971	3FT x 2 FT Box Culvert	**Replace with longer box or lengthen**	0.00	0.00	0.00	0.00	N/A	N/A
STA 797	6FT x 5FT Box Culvert	**Replace with longer box or lengthen**	0.00	0.00	0.00	0.00	N/A	N/A
STA 840	24” Pipe Culvert	**Replace with longer pipe or lengthen**	0.00	0.00	0.00	0.00	N/A	N/A

The purpose of the proposed activity is to expand the linear transportation facility at Red Bayou and its abutting wetland, Peters Branch, and Austin Chapel Branch. Appropriate measures would be taken to maintain normal downstream flows and minimize flooding. Temporary fills would be placed in a manner that would not be eroded by expected high flows, and would be removed in their entirety. The affected area would be returned to pre-construction elevations and revegetated as appropriate. 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. A PCN for NWP 14 at Red Bayou and its abutting wetland would be required because greater than 0.10 acre would be impacted; a PCN for NWP 14 is not required at Peters Branch and Austin Chapel Branch. There is no potential to affect listed species or designated critical habitat, and there are no historic properties listed or eligible for listing on the National Register of Historic Places. The activities at Red Bayou and its abutting wetland, Peters Branch, and Austin Chapel Branch have been identified as single and complete projects as defined in the Nationwide Permits by the USACE and will therefore be permitted separately.

The Preliminary Jurisdictional Determination letter from the USACE is included as **Appendix F**.

Section 401 of the Clean Water Act

General Condition 21 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 best management practices (BMPs) to manage water quality on construction sites. The Stormwater Pollution Prevention Plan (SW3P) would include at least one BMP from the *401 Water Quality Certification Conditions for Nationwide Permits* as published by the TCEQ on April 26 2007. These BMPs would address each of the following categories:

- Category I (erosion control) would be addressed by applying temporary and permanent re-seeding, blankets, or matting to stabilize disturbed areas.

- Category II (sediment control) would be addressed by compost logs and berms (low velocity); temporary rock filter dams; temporary rock bedding at the construction exits or silt fence; and

- Category III (post construction total suspended solids control) would be addressed by the hydraulic design to limit structure outlet velocities; grading design generally consisting of 4:1 or flatter slopes with permanent vegetative cover; using permanent seeding/block sod to establish vegetative lined channels; or permanent compost manufactured topsoil and seeding.

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

EO 11990, Wetlands

Alternatives were reviewed as required by Executive Order 11990 on wetlands, and no practicable alternatives to placing fill within the wetlands currently located within ROW were identified other than making minor modifications to side ditch slopes.

Rivers and Harbors Act of 1899

The proposed project does not involve work in or over a navigable water of the US; therefore, Section 9 and 10 of the Rivers and Harbors Act does not apply.

Section 303(d) of the Clean Water Act

Runoff from the proposed project would not discharge directly into a Section 303(d) listed threatened or impaired water, or into a stream within 5 miles upstream of a Section 303(d) listed threatened or impaired water. The 2010 303(d) list was utilized in this assessment.

Section 402 of the Clean Water Act

The proposed project would disturb more than five acres; therefore, a SW3P would be prepared and implemented, and a construction site notice would be posted on the construction site. A Notice of Intent (NOI) would be required. The SW3P would utilize the temporary control measures as outlined in TxDOT's manual "Standard Specifications for the Construction of Highways, Streets, and Bridges."

The project is not located within the boundaries of a Municipal Separate Storm Sewer System (MS4).

Floodplains

Bowie County is a participant in the National Flood Insurance Program. A portion of the proposed project is located within the Federal Emergency Management Agency-designated 100-year floodplain (Flood Insurance Rate Map Nos. 48037C0300D, October 19, 2010). The hydraulic design for this project would be in accordance with current FHWA and TxDOT design policies. The facility would permit the conveyance of the 100-year flood, inundation of the roadway being acceptable, without causing substantial damage to the facility, stream, or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations and ordinances. Coordination with the local Floodplain Administrator would be required.

Trinity River Corridor Development Certificate

The project is not within the Trinity River Corridor Development Regulatory Zone; therefore, a Corridor Development Certificate (CDC) permit would not be required.

Prime, Unique, and Special Farmlands

Additional ROW is required for the project; therefore, Form CS-CPA 106, Farmland Conversion Impact Rating for Corridor-Type Projects, was utilized. A score of less than 60 was found for both parts of the form; therefore, no coordination with the Natural Resources Conservation Service is required.

Noise Assessment

This analysis was accomplished in accordance with TxDOT's (FHWA approved) Guidelines for Analysis and Abatement of Roadway Traffic Noise (2011).

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

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

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

The traffic noise analysis typically includes the following elements:

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

The FHWA has established the following Noise Abatement Criteria (NAC) for various land use activity areas that are used as one of two means to determine when a traffic noise impact would occur.

TABLE 5: FHWA NOISE ABATEMENT CRITERIA

Activity Category	FHWA dB(A) Leq	**TxDOT dB(A) Leq**	Description of Land Use Activity Areas
A	57 (exterior)	**56 (exterior)**	Lands on which serenity and quiet are of extra-ordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	**66 (exterior)**	Residential
C	67 (exterior)	**66 (exterior)**	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (interior)	**51 (interior)**	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
E	72 (exterior)	**71 (exterior)**	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.

TABLE 5: FHWA NOISE ABATEMENT CRITERIA			
Activity Category	FHWA dB(A) Leq	**TxDOT dB(A) Leq**	Description of Land Use Activity Areas
F	--	--	Agricultural, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	--	Undeveloped lands that are not permitted.

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

A noise impact occurs when either the absolute or relative criterion is met:

Absolute criterion: the predicted noise level at a receiver approaches, equals, or exceeds the NAC. "Approach" is defined as one dB(A) below the FHWA NAC. For example: a noise impact would occur at a Category B residence if the noise level is predicted to be 66 dB(A) or above.

Relative criterion: the predicted noise level substantially exceeds the existing noise level at a receiver even though the predicted noise level does not approach, equal, or exceed the NAC. “Substantially exceeds” is defined as more than 10 dB(A). For example: a noise impact would occur at a Category B residence if the existing level is 54 dB(A) and the predicted level is 65 dB(A).

When a traffic noise impact occurs, noise abatement measures must be considered. A noise abatement measure is any positive action taken to reduce the impact of traffic noise on an activity area.

The FHWA traffic noise modeling software was used to calculate existing and predicted traffic noise levels. The model primarily considers the number, type, and speed of vehicles; highway alignment and grade; cuts, fills and natural berms; surrounding terrain features; and the locations of activity areas likely to be impacted by the associated traffic noise.

Existing and predicted traffic noise levels were modeled at receiver locations (Table 6 and **Appendix G**) that represent the land use activity areas adjacent to the proposed project that might be impacted by traffic noise and potentially benefit from feasible and reasonable noise abatement.

TABLE 6: TRAFFIC NOISE LEVELS dB(A) Leq						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R1 - Residential	B	67	59	62	+3	N
R2 - Residential	B	67	60	62	+2	N
R3 - Residential	B	72	60	62	+2	N
R4 - Residential	B	67	62	64	+2	N
R5 - Residential	B	67	61	63	+2	N
R6 - Residential	B	67	60	62	+2	N
R7 - Funeral Home	E	72	65	68	+3	N
R8 - Residential	B	67	60	64	+4	N
R9 - Residential	B	67	67	69	+2	Y
R10 - Residential	B	67	64	66	+2	Y
R11 - Residential	B	67	66	68	+2	Y
R12 - Residential	B	67	67	69	+2	Y
R13 - Residential	B	67	56	60	+4	N
R14 - Residential	B	67	66	68	+2	Y
R15 - Residential	B	67	65	67	+2	Y
R16 - Residential	B	67	59	64	+5	N
R17 - Residential	B	67	60	64	+4	N
R18 - Residential	B	67	60	63	+3	N
R19 - Residential	B	67	61	65	+4	N
R20 - Residential	B	67	61	65	+4	N
R21 - Residential	B	67	62	65	+3	N
R22 - Residential	B	67	61	65	+4	N
R23 - Residential	B	67	66	67	+1	Y
R24 - Residential	B	67	66	67	+1	Y
R25 - Residential	B	67	60	63	+3	N
R26 - Residential	B	67	65	67	+2	Y
R27 - Residential	B	67	64	66	+2	Y
R28 - Residential	B	67	65	67	+2	Y
R29 - Residential	B	67	65	67	+2	Y
R30 - Residential	B	67	65	67	+2	Y
R31 - Residential	B	67	66	68	+2	Y
R32 - Church	D	51	46	47	+1	N
R33 - Residential	B	67	66	67	+1	Y
R34 - Residential	B	67	65	66	+1	Y
R35 - Residential	B	67	65	66	+1	Y
R36 - Residential	B	67	66	67	+1	Y
R37 - Residential	B	67	66	67	+1	Y
R38 - Residential	B	67	65	66	+1	Y
R39 - Church	D	51	45	46	+1	N
R40 - Residential	B	67	65	66	+1	Y

TABLE 6: TRAFFIC NOISE LEVELS dB(A) Leq						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R41 - Residential	B	67	68	68	0	Y
R42 - Restaurant	E	72	68	69	+1	N
R43 - Residential	B	67	69	67	-2	Y
R44 - Residential	B	67	67	66	-1	Y
R45 - Residential	B	67	64	66	+2	Y
R46 - Residential	B	67	66	67	+1	Y
R47 - Coffee Shop	E	72	70	70	0	N
R48 - Residential	B	67	67	68	+1	Y
R49 - Residential	B	67	58	61	+3	N
R50 - Residential	B	67	61	65	+4	N
R51 - Residential	B	67	61	63	+2	N
R52 - Residential	B	67	66	67	+1	Y
R53 - Residential	B	67	65	66	+1	Y
R54 - Residential	B	67	65	66	+1	Y
R55 - Residential	B	67	59	63	+4	N
R56 - Residential	B	67	61	64	+3	N
R57 - Residential	B	67	66	67	+1	Y
R58 - Residential	B	67	65	66	+1	Y
R59 - Residential	B	67	65	66	+1	Y
R60 - Residential	B	67	68	69	+1	Y
R61 - Residential	B	67	66	67	+1	Y
R62 - Residential	B	67	61	64	+3	N
R63 - Residential	B	67	65	66	+1	Y
R64 - Residential	B	67	64	66	+2	Y
R65 - Residential	B	67	65	66	+1	Y
R66 - Residential	B	67	65	66	+1	Y
R67 - Residential	B	67	67	68	+1	Y
R68 - Residential	B	67	66	67	+1	Y
R69 - Residential	B	67	60	64	+4	N
R70 - Residential	B	67	64	67	+3	Y
R71 - Residential	B	67	64	66	+2	Y
R72 - Residential	B	67	66	67	+1	Y
R73 - Residential	B	67	64	66	+2	Y
R74 - Residential	B	67	65	67	+2	Y
R75 - Residential	B	67	63	65	+2	N
R76- Residential	B	67	63	65	+2	N
R77 - Residential	B	67	65	66	+1	Y
R78 - Residential	B	67	62	65	+3	N
R79 - Residential	B	67	58	61	+3	N
R80 - Residential	B	67	65	66	+1	Y

TABLE 6: TRAFFIC NOISE LEVELS dB(A) Leq						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R81 - Residential	B	67	61	63	+2	N
R82 - Residential	B	67	55	57	+2	N
R83 - Residential	B	67	68	68	0	Y
R84 - Residential	B	67	65	66	+1	Y
R85 - Residential	B	67	65	67	+2	Y
R86 - Residential	B	67	67	68	+1	Y
R87 - Residential	B	67	63	65	+2	N
R88 - Residential	B	67	67	68	+1	Y
R89 - Residential	B	67	65	66	+1	Y
R90 - Residential	B	67	67	67	0	Y
R91 - Residential	B	67	67	68	+1	Y
R92 - Residential	B	67	64	66	+2	Y
R93 - Residential	B	67	65	66	+1	Y
R94 - Residential	B	67	65	67	+2	Y
R95 - Residential	B	67	65	67	+2	Y
R96 - Residential	B	67	60	65	+5	N
R97 - Residential	B	67	58	63	+5	N
R98- Residential	B	67	67	68	+1	Y
R99 - School	D	51	47	49	+2	N
R100 - Residential	B	67	66	66	0	Y
R101 - Residential	B	67	66	66	0	Y
R102 - Residential	B	67	65	67	+2	Y
R103 - Residential	B	67	67	68	+1	Y
R104 - Restaurant	E	72	65	67	+2	N
R105 - Residential	B	67	58	62	+4	N
R106 - Residential	B	67	61	66	+5	Y
R107 - Residential	B	67	59	63	+4	N
R108 - Residential	B	67	61	65	+4	N
R109 - Residential	B	67	59	63	+4	N
R110 - Residential	B	67	67	68	+1	Y
R111 - Residential	B	67	66	67	+1	Y
R112 - Residential	B	67	65	67	+2	Y
R113 - Residential	B	67	60	63	+3	N
R114- Residential	B	67	61	65	+4	N
R115 - Residential	B	67	59	63	+4	N
R116 - Residential	B	67	60	64	+4	N
R117 - Residential	B	67	60	63	+3	N
R118 - Residential	B	67	67	68	+1	Y
R119 - Residential	B	67	59	62	+3	N
R120 - Residential	B	67	58	60	+2	N

TABLE 6: TRAFFIC NOISE LEVELS dB(A) Leq						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R121 - Residential	B	67	69	69	0	Y
R122 - Residential	B	67	68	69	+1	Y
R123 - Residential	B	67	66	67	+1	Y
R124 - Residential	B	67	66	67	+1	Y
R125 - Residential	B	67	68	68	0	Y
R126 - Residential	B	67	58	61	+3	N
R127 - Residential	B	67	58	61	+3	N
R128 - Residential	B	67	67	68	+1	Y
R129 - Residential	B	67	67	68	+1	Y
R130 - Residential	B	67	64	65	+1	N
R131 - Residential	B	67	60	64	+4	N
R132 - Residential	B	67	63	65	+2	N
R133 - Residential	B	67	65	67	+2	Y
R134 - Residential	B	67	67	68	+1	Y
R135 - Residential	B	67	66	67	+1	Y
R136 - Residential	B	67	65	66	+1	Y
R137 - Residential	B	67	65	66	+1	Y
R138 - Residential	B	67	62	65	+3	N
R139 - Residential	B	67	65	67	+2	Y
R140 - Residential	B	67	57	59	+2	N
R141 - Residential	B	67	59	61	+2	N
R142 - Residential	B	67	58	61	+3	N
R143 - Residential	B	67	67	68	+1	Y
R144 - Residential	B	67	58	60	+2	N
R145 - Residential	B	67	62	65	+3	N
R146 - Residential	B	67	60	63	+3	N
R147 - Residential	B	67	61	64	+3	N
R148 - Residential	B	67	62	65	+3	N
R149 - Residential	B	67	61	64	+3	N
R150 - Residential	B	67	61	64	+3	N
R151 - Residential	B	67	67	66	-1	Y
R152 - Residential	B	67	61	63	+2	N
R153 - Residential	B	67	64	66	+2	Y
R154 - Church	D	51	44	46	+2	N
R155 - Driving School	D	51	41	44	+3	N
R156 - Residential	B	67	65	68	+3	Y
R157 - Residential	B	67	64	67	+3	Y
R158 - Residential	B	67	58	61	+3	N
R159 - Residential	B	67	62	63	+1	N
R160 - Residential	B	67	67	68	+1	Y

TABLE 6: TRAFFIC NOISE LEVELS dB(A) Leq						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R161 - Residential	B	67	65	66	+1	Y

As indicated in Table 6, the proposed project would result in a traffic noise impact and the following noise abatement measures were considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone, and the construction of noise walls.

Before any abatement measure can be proposed for incorporation into the project, it must be both feasible and reasonable. In order to be "feasible," the abatement measure must be able to reduce the noise level at greater than 50% of impacted, first row receivers by at least five dB(A); and to be "reasonable," it must not exceed the cost-effectiveness criterion of $25,000 for each receiver that would benefit by a reduction of at least five dB(A) and the abatement measure must be able to reduce the noise level at least one impacted, first row receiver by at least seven dB(A).

Traffic management: control devices could be used to reduce the speed of the traffic; however, the minor benefit of one dB(A) per five mph reduction in speed does not outweigh the associated increase in congestion and air pollution. Other measures such as time or use restrictions for certain vehicles are prohibited on state highways.

Alteration of horizontal and/or vertical alignments: any alteration of the existing alignment would displace existing businesses and residences, require additional ROW, and not be cost effective/reasonable.

Buffer zone: the acquisition of undeveloped property to act as a buffer zone is designed to avoid rather than abate traffic noise impacts and, therefore, is not feasible.

Noise walls: this is the most commonly used noise abatement measure. Noise walls were evaluated for each of the impacted receiver locations. Every property on the north side is accessed with a driveway that extends perpendicular from US-82 which makes the possibility of a wall unfeasible. On the south side of US-82, a noise wall was investigated to mitigate the predicted traffic noise level impact to two impacted residential properties. A wall 565’ long and 10’ high would provide up to 3 dB(A) reduction in noise level, which is less than the minimum desired buffer.

From the above analysis, noise walls would not be feasible or reasonable for any of the impacted receivers in Table 6 and, therefore, are not proposed for incorporation into the project. The ineffective conceptual wall barrier design would also exceed the $25,000 per receiver cost-effectiveness criterion.

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, no new activities are planned or constructed along or within the following predicted (2035) noise impact contours.

LAND USE	IMPACT CONTOUR	DISTANCE from RIGHT of WAY
NAC category B & C	66 dB(A)	155 to 220 feet
NAC category E	71 dB(A)	67 to 122 feet

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 receivers 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.

A copy of this traffic noise analysis will be available to local officials. 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.

Hazardous Materials

Based on the acquisition of additional ROW for the project, an Initial Site Assessment (ISA) was conducted to identify potential hazardous materials in the project area. The ISA consisted of the following actions: conducting a site survey, conducting a land use review, and conducting a regulatory database search. An analysis of the ISA data indicates hazardous materials impacts are not anticipated, and further investigation is not required.

Within the project limits, there is one registered petroleum storage tanks (RPST) facility located adjacent to the project. Skaggs Country Store at 3070 W US-82 is also listed as a leaking petroleum storage tank (LPST) site. The site survey and research into the historical land use did not reveal any other abandoned and/or active gasoline service stations.

A review of the Texas Commission on Environmental Quality (TCEQ) leaking petroleum storage tank (LPST) on-line database query indicated five LPST sites adjacent to the proposed project. According to the priority and status indicated in the list search, only minor soil contamination was indicated in three of the five adjacent LPST listings. TCEQ issued the final concurrence for four of these five listings and the cases are closed. In LPST case 117049 at the Skaggs Country Store, no apparent receptors were impacted and the case will be closed upon well plugging. LPST case 94335 occurred in 1989 and approximately 0.18 mile northwest of the westernmost extent of the proposed project area. Although TCEQ has not closed the case, quarterly well monitoring is ongoing, and TCEQ records indicate soil contamination is not a concern as a result of the incident. In this area of the proposed project, no significant lowering of the vertical alignment is required. Therefore, it is not anticipated that petroleum contamination would be encountered during construction.

This project will not involve the acquisition of known unresolved contamination where TxDOT could reasonably expect to assume liability for corrective action upon acquisition. In addition, this project does not involve known hazardous materials impacts that could be anticipated to adversely affect construction (e.g. cannot resolve before letting or during construction).

Magnuson-Stevens Fishery Conservation and Management Act

There are no tidally-influenced waters in Bowie County; therefore, Essential Fish Habitat is not required to be addressed.

Fish and Wildlife Coordination Act (FWCA)

The Fish and Wildlife Coordination Act (FWCA) of 1958 requires that federal agencies obtain comments from USFWS and TPWD. Since the proposed project is authorized under NWP 14, USFWS considers coordination to have been completed as part of their FHWA/TxDOT review last authorized and reissued in 2002.

Wild and Scenic Rivers

The proposed project area contains no Wild and Scenic Rivers. No Wild and Scenic Rivers would be impacted by the proposed project.

Air Analysis

The proposed action is consistent with the FY 2011-2014 STIP. The project is located Bowie County, which is in an area in attainment of all National Ambient Air Quality Standards (NAAQS); therefore, the transportation conformity rules do not apply.

Carbon Monoxide (CO) Traffic Air Quality Analysis (TAQA)

Generally, passing lane projects are considered exempt from a transportation air quality analyses (TAQA) because they are intended to enhance traffic safety and improve traffic flow. The proposed action would not add capacity to an existing facility. Current and future emissions should continue to follow existing trends not being affected by this project. Due to the nature of this project, further carbon monoxide analysis was not required.

Mobile Source Air Toxics (MSATs)

The purpose of this project is to reconstruct a rural roadway to add passing lanes. This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special Mobile Source Air Toxics (MSAT) concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.

Moreover, Environmental Protection Agency (EPA) regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOBILE 6.2 model forecasts a combined reduction of 72 percent in the total annual emission rate for the priority MSAT from 1999 to 2050 while vehicle miles of travel are projected to increase by 145 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

Air Quality Construction Emissions

During the construction phase of this project, there can be temporary increases in air pollutant emissions from construction activities, equipment, and related vehicles. The primary construction related emissions are particulate matter (fugitive dust) from site preparation and construction, and non-road MSATs from construction equipment and vehicles. The primary MSAT emission related to construction is diesel particulate matter from diesel powered construction equipment and vehicles.

These emissions are temporary in nature (only occurring during actual construction) and it is not reasonably possible to estimate impacts from these emissions due to limitations of the existing models. However, the potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls as appropriate. The MSAT emissions will be minimized by measures to encourage use of EPA required cleaner diesel fuels, limits on idling, increasing use of cleaner burning diesel engines, and other emission limitation techniques, as appropriate.

However, considering the temporary and transient nature of construction related emissions as well as the mitigation actions to be utilized, it is not anticipated that emissions from construction of this proposed project will have any substantial impact on air quality in the area.

Items of Special Nature

There are no items of special nature or interest such as navigation or air-highway clearances, special permits, or agreements involved with the proposed project. The proposed project would not affect land or water uses within an area covered by a State Coastal Zone Management Program, nor would it impact coastal barrier resources. Coordination with the US Coast Guard would not be required.

Environmental Permits, Issues, and Commitments

This section summarizes the elements that constitute the Environmental Permits, Impacts, and Commitment (EPIC) Sheet. The EPIC sheet, found in the Environmental Tracking System, documents and communicates permit issues and environmental commitments that must be incorporated into the Plans, Specifications, and Estimates. The permits, impacts, and commitments relevant to the proposed project are as follows:

I. Clean Water Act, Section 402 Texas Pollutant Discharge Elimination System (TPDES) Commitments

Since the proposed project would disturb more than five acres, TxDOT would be required to comply with the TCEQ Texas Pollutant Discharge Elimination System (TPDES) General Permit for Large Construction Activity. A Storm Water Pollution Prevention Plan (SW3P) would be prepared and implemented. A construction site notice would be posted on the construction site. A notice of intent is required.

II. Clean Water Act, Section 401and 404 Compliance Commitments

Although coordination with the USACE regarding jurisdiction of the wetlands within the project area is ongoing, the project is expected to be eligible for NWP 14.

BMPs may include, but will not be limited to:

- Category I Erosion control: Temporary and permanent re-seeding, blankets, or matting to stabilize disturbed areas.

- Category II Sedimentation control: Compost logs and berms (low velocity); temporary rock filter dams; temporary rock bedding at the construction exits or silt fence; and,

- Category III Post construction total suspended solids control: Hydraulic design to limit structure outlet velocities; grading design generally consisting of 4:1 or flatter slopes with permanent vegetative cover; using permanent seeding/block sod to establish vegetative lined channels; or permanent compost manufactured topsoil and seeding.

III. Cultural Resources Commitment

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.

IV. Vegetation Resources Commitment

Mature trees would be removed to accommodate the proposed project and the areas needed for construction purposes. Tree trimming maintenance of over- hanging branches could be necessary during construction. Trimming or removal would be minimized as practical.

V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Bird Treaty Act Commitment

The project area contains habitat within or adjacent to the project area that may be potentially suitable for the Plains Spotted Skunk, Rafinesque's Big-Eared Bat, Southeastern Myotis Bat, Common Pimpleback, Northern Scarlet Snake, and Timber/Canebrake Rattlesnake. Since these species may be encountered during construction, the contractor would be notified (via the EPIC sheet, general notes, and/or pre-construction meeting) of this potential and to take the necessary measures to avoid harm to these species.

<u>Special Notes:</u>
Between October 1 and February 15, the contractor would remove all old migratory bird nests from any structures that would be affected by the proposed project, and complete any bridge work and/or vegetation clearing. In addition, the contractor would be prepared to prevent migratory birds from building nests between February 15 and October 1, per the Environmental Permits, Issues, and Commitments (EPIC) plans. In the event that migratory birds are encountered on-site during project construction, adverse impacts on protected birds, active nests, eggs, and/or young would be avoided.

VI. Hazardous Materials or Contamination Issues Commitment

No action required for the proposed project.

VII. Other Environmental Issues Commitment

Measures to control fugitive dust would be considered and incorporated into the final design and construction specifications.

Public Involvement

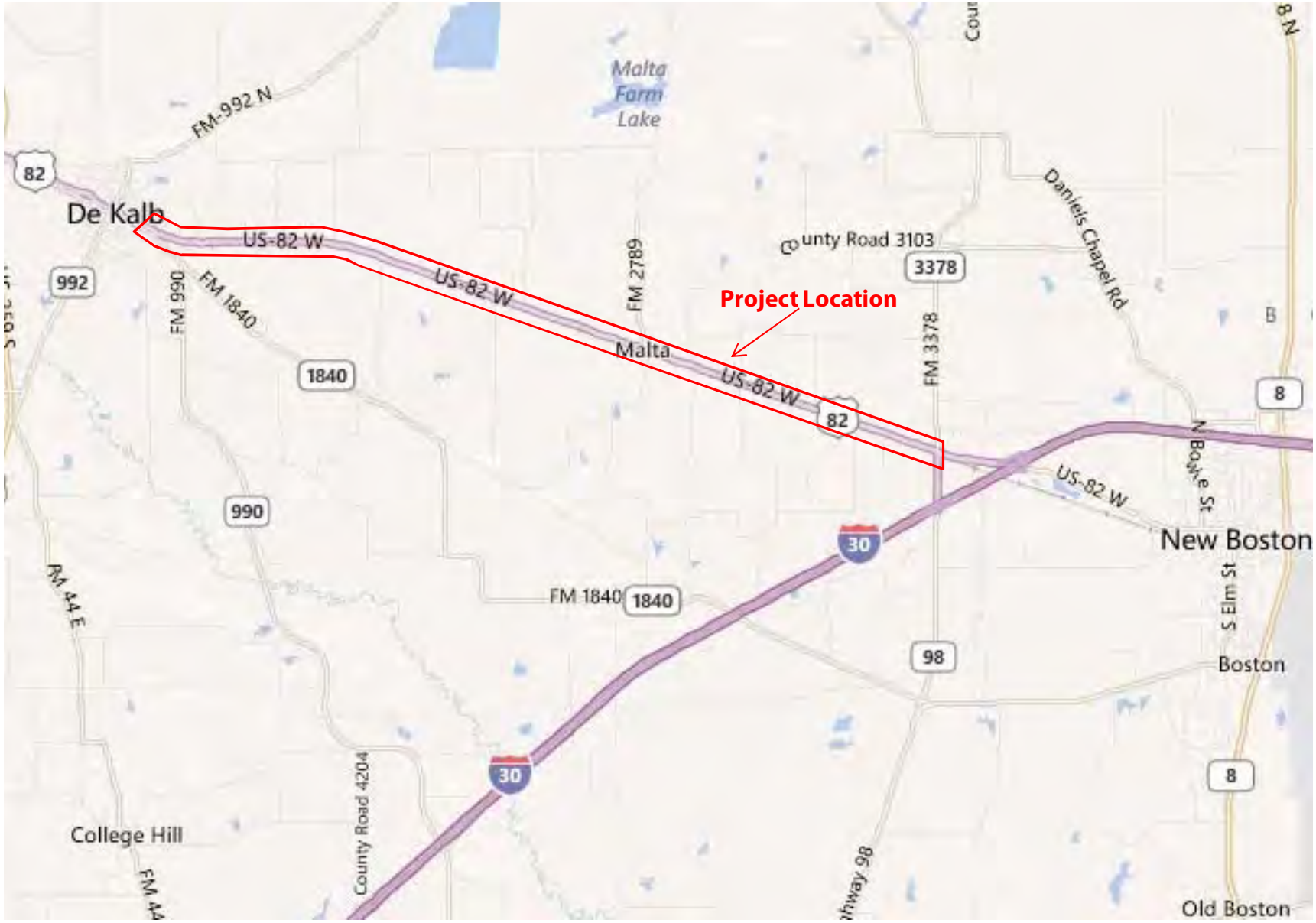
The proposed Pass-Through Funding project was approved by Bowie County voters on May 14, 2011, by approving $35 million in project bonds. Notice letters were sent to the two impacted property owners on March 28, 2012. Individual contact was subsequently made with the affected property owners in April 2012, regarding the proposed project.

The need for a public meeting is not anticipated for this project. TxDOT or Bowie County will contact local officials, schools, post office, and emergency services and inform them of the project. In addition, a news release will be issued to local newspapers and other media.

Conclusion

The proposed action meets the criteria for a Programmatic Categorical Exclusion (PCE) as defined in the *Programmatic Agreement for the Review and Approval of NEPA Categorically Excluded Transportation Projects (PA)*, executed by the Texas Division of the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT) on November 7, 2011.

APPENDIX A: GENERAL LOCATION MAP AND PROJECT TOPOGRAPHIC MAPS



LOCHNER

General Location Map
US-82, Bowie County
0046-04-057
Source: Bing Maps Scale: NTS

N

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

The National Map
US Topo

DE KALB QUADRANGLE
TEXAS-OKLAHOMA
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 15S
10 000-foot ticks: Texas Coordinate System of 1983
(north central zone)
and Oklahoma Coordinate System of 1983
(south zone)

Imagery.....NAIP, April 2008 - July 2008
Roads.....US Census Bureau TIGER data
with limited USGS updates, 2004 - 2006
Names.....GNIS, 2008
Hydrography.....National Hydrography Dataset, 1995
Contours.....National Elevation Dataset, 2004

MN
GN
2° 45′
49 MILS
0° 52′
15 MILS
UTM GRID AND 2010 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
UT
Grid Zone Designation
15S

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET

This map was produced to conform with version 0.5.10 of the
draft USGS Standards for 7.5-Minute Quadrangle Maps.
A metadata file associated with this product is also draft version 0.5.10

TEXAS

QUADRANGLE LOCATION

De Kalb NW	Tom	Foreman
Oak Grove	De Kalb	Daniels Chapel
Hodgson	Malta	New Boston

ADJOINING 7.5′ QUADRANGLES
TX 3394-311

ROAD CLASSIFICATION

Interstate Route	State Route
US Route	Local Road
Ramp	4WD

Interstate Route · US Route · State Route

DE KALB, TX-OK
2010

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

The National Map US Topo

MALTA QUADRANGLE
TEXAS
7.5-MINUTE SERIES

Project Area

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 15S
10 000-foot ticks: Texas Coordinate System of 1983
(north central zone)

Imagery.....NAIP, January 2009
Roads.....US Census Bureau TIGER data with limited USGS updates, 2004
Names.....GNIS, 2008
Hydrography.....National Hydrography Dataset, 1995
Contours.....National Elevation Dataset, 2004

UTM GRID AND 2010 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

MN 2° 45′ 49 MILS
GN 0° 52′ 15 MILS

U.S. National Grid
100,000-m Square ID
UT / US 37 00
Grid Zone Designation
15S

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET

This map was produced to conform with version 0.5.10 of the draft USGS Standards for 7.5-Minute Quadrangle Maps.
A metadata file associated with this product is also draft version 0.5.10

TEXAS

QUADRANGLE LOCATION

Oak Grove	De Kalb	Daniels Chapel
Hodgson	Malta	New Boston
Dalby Springs	Bassett	Corley

ADJOINING 7.5′ QUADRANGLES
TX 3394-244

ROAD CLASSIFICATION

Interstate Route
US Route
Ramp
State Route
Local Road
4WD

Interstate Route US Route State Route

MALTA, TX
2010

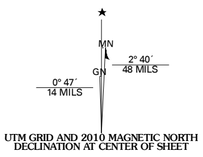
U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

The National Map
US Topo

NEW BOSTON QUADRANGLE
TEXAS
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 15S
10 000-foot ticks: Texas Coordinate System of 1983
(north central zone)

Imagery.....NAIP, January 2006 - January 2009
Roads.....US Census Bureau TIGER data with limited USGS updates, 2004
Names.....GNIS, 2008
Hydrography.....National Hydrography Dataset, 1995
Contours.....National Elevation Dataset, 2004



UTM GRID AND 2010 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
UT / US 37 00
Grid Zone Designation 15S

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET

This map was produced to conform with version 0.5.10 of the draft USGS Standards for 7.5-Minute Quadrangle Maps.
A metadata file associated with this product is also draft version 0.5.10

QUADRANGLE LOCATION

De Kalb	Daniels Chapel	Redbank
Malta	New Boston	Hooks
Bassett	Corley	Maud

ADJOINING 7.5' QUADRANGLES
TX 3394-133

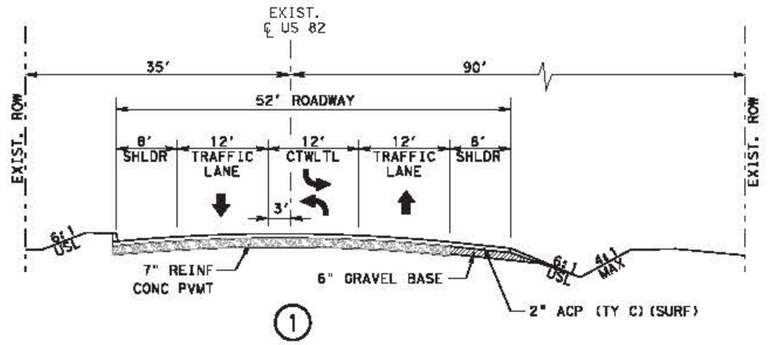
ROAD CLASSIFICATION

Interstate Route	State Route
US Route	Local Road
Ramp	4WD

Interstate Route US Route State Route

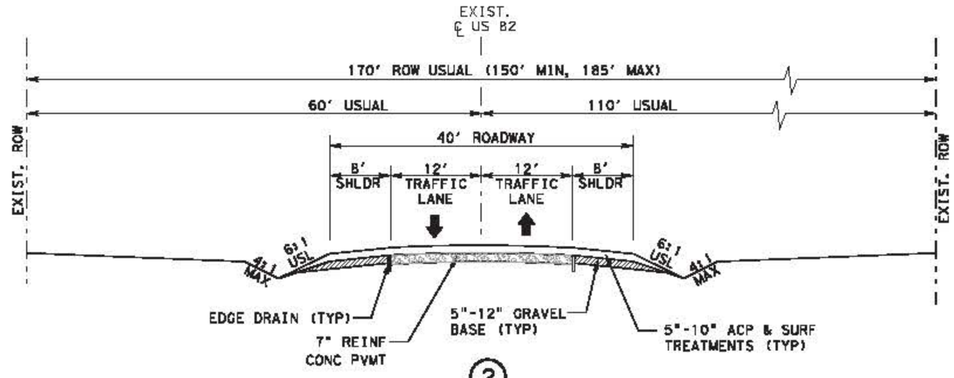
NEW BOSTON, TX
2010

APPENDIX B: TYPICAL SECTIONS



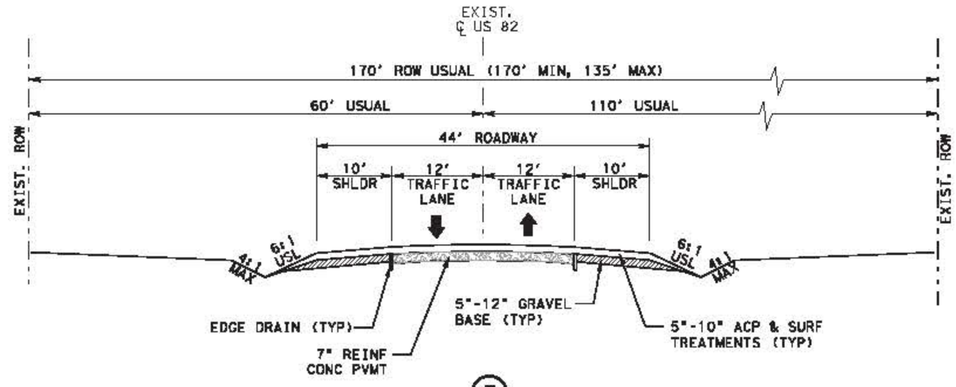
①

US 82
DEKALB URBAN SECTION
STA 622+00.00 TO STA 627+83.56



②

US 82
RURAL SECTION
STA 627+83.56 TO STA 1064+00.00



③

US 82
SUBURBAN SECTION
STA 1064+00.00 TO STA 1078+00.00

Document incomplete: Not intended for permit, bidding or construction.

Engineer: John B. Goodwin
P.E. Registration No.: 63174
Date: 3/22/2012

0 10 20 FT
HORIZONTAL SCALE

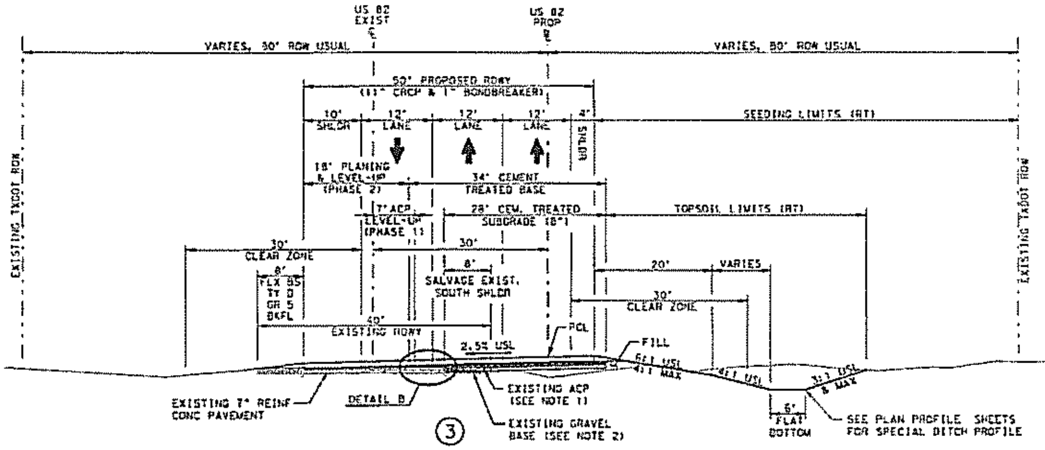
SHEET 1 OF 3

EXISTING TYPICAL SECTIONS

LOCHNER | 1928 ESE Loop 323 | Suite 202
Tyler, Texas 75701
TBPE Firm Reg. No. 10488

FED.RD. DIV.NO.	PROJECT NO.		SHEET NO.
6			
STATE	DIST.	COUNTY	
TEXAS	ATL	BOWIE	
CONT.	SECT.	JOB	HIGHWAY NO.
0046	04	057	US 82

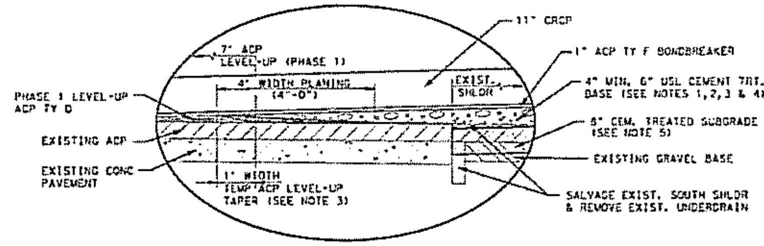
FILE: US82AC01.dgn
DATE: 3/22/2012 TIME: 2:36:07 PM
PROJECT DIRECTORY: I:\TYL\PRJ\0000617\01\TRE\DGN\PSE\US82AC01.dgn



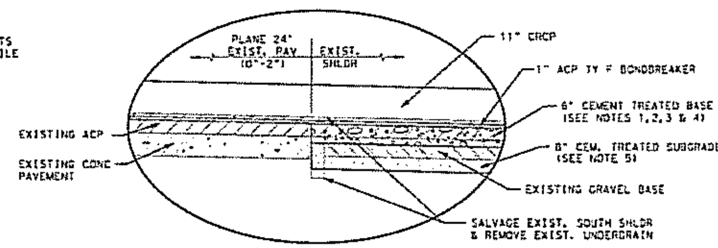
(3)

US 82
PROPOSED EB PASSING LANE SECTION

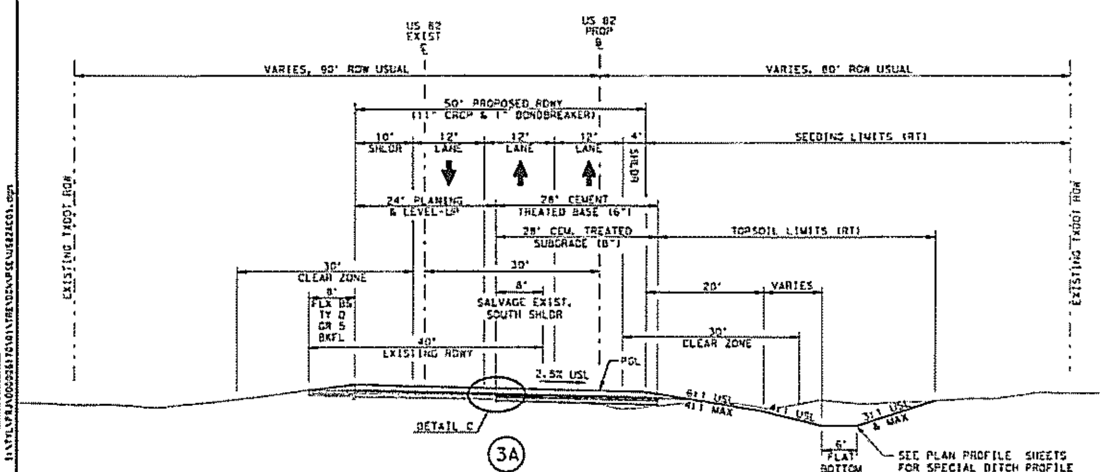
	STA. 666+66.00 TO STA. 702+12.00 (SEE NOTE 5)
TRANSITION FROM (3) TO (3A)	STA. 702+12.00 TO STA. 706+13.00
	STA. 747+24.00 TO STA. 767+00.00
TRANSITION FROM (3) TO (4)	STA. 767+00.00 TO STA. 784+30.00
	STA. 914+20.00 TO STA. 977+00.00
TRANSITION FROM (3) TO (4)	STA. 977+00.00 TO STA. 994+30.00



DETAIL B
(NOT TO SCALE)



DETAIL C
(NOT TO SCALE)



(3A)

US 82
SUPERELEVATION SECTION

	STA. 706+13.00 TO STA. 743+23.00
TRANSITION FROM (3A) TO (3)	STA. 743+23.00 TO STA. 747+24.00

NOTES:

1. PLANE ASPHALTIC CONCRETE PAVEMENT ON SHOULDER. SALVAGE AND STOCKPILE PLANED MATERIALS AND REUSE IN PROPOSED CEMENT TREATED BASE AS PART OF ITEM 354 WORK.
2. SCARIFY, SALVAGE AND REPLACE GRAVEL BASE ON SHOULDER AS PART OF ITEM 251 WORK.
3. PLANE ACP LEVEL-UP TAPER AND EXISTING ACP (UNDER ITEM 354 WORK) TO A NEAT VERTICAL TRIM LINE. INCORPORATE PLANED MATERIAL INTO CEMENT TREATMENT OPERATIONS AS PART OF ITEM 275 WORK.
4. FURNISH TY D GR 2 FLEXIBLE BASE AND MIX WITH SALVAGED GRAVEL BASE AND SALVAGED PLANED ASPHALTIC CONCRETE PAVEMENT AS PART OF ITEM 247 WORK.
5. PRETREAT SUBGRADE HAVING A PI > 18 WITH LIME UNDER ITEM 260 AS DIRECTED BY THE ENGINEER.

Document incomplete: Not intended for permit, bidding or construction.

Engineer: John B. Goodwin
P.E. Registration No.: 63174
Date: 8/29/2012

0 10 20 FT
HORIZONTAL SCALE

SHEET 2 OF 7

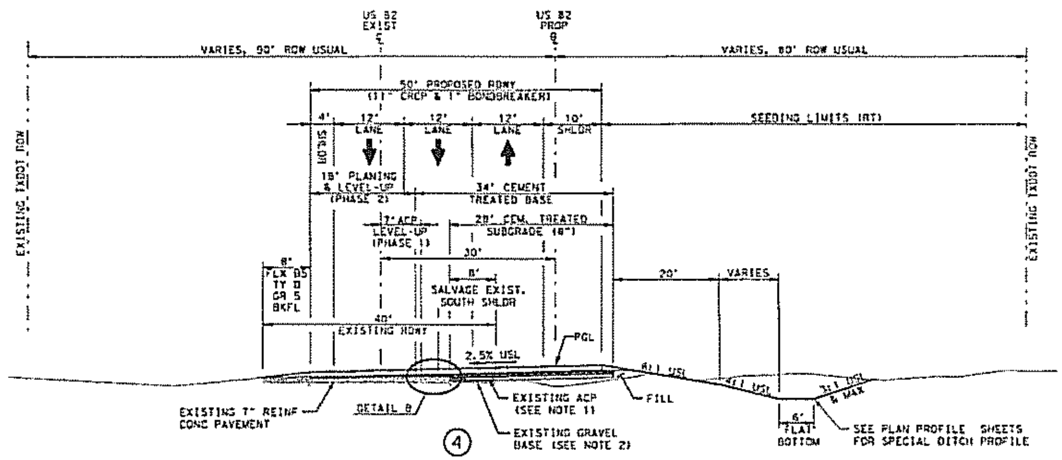
PROPOSED
TYPICAL SECTIONS

Texas Department of Transportation
© 2012

LOCHNER | 1923 ESE Loop 323 | Suite 202 Tyler, Texas 75701 TBPE Firm Reg. No. 10453

FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.
6		

STATE	DIST.	COUNTY	
TEXAS	ATL	BOWIE	
CONT.	SECT.	JOB	HIGHWAY NO.
0046	04	057	US 82



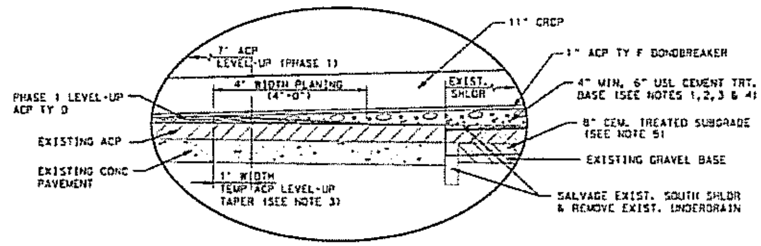
④
US 82
PROPOSED WB PASSING LANE SECTION

STA. 784+30.00 TO STA. 885+80.00 (GO TO SECTION ⑤)
STA. 994+30.00 TO STA. 1052+35.00
TRANSITION FROM ④ TO ⑥ STA. 1052+35.00 TO STA. 1068+45.28 (SEE PLAN PROFILE SHEETS FOR TRANSITION DETAILS)

NOTES:

1. PLANE ASPHALTIC CONCRETE PAVEMENT ON SHOULDER. SALVAGE AND STOCKPILE PLANED MATERIALS AND REUSE IN PROPOSED CEMENT TREATED BASE AS PART OF ITEM 354 WORK.
2. SCARIFY, SALVAGE AND REPLACE GRAVEL BASE ON SHOULDER AS PART OF ITEM 251 WORK.
3. PLANE ACP LEVEL-UP TAPER AND EXISTING ACP (UNDER ITEM 354 WORK) TO A NEAT VERTICAL TRIM LINE. INCORPORATE PLANED MATERIAL INTO CEMENT TREATMENT OPERATIONS AS PART OF ITEM 275 WORK.
4. FURNISH TY D GR 2 FLEXIBLE BASE AND MIX WITH SALVAGED GRAVEL BASE AND SALVAGED PLANED ASPHALTIC CONCRETE PAVEMENT AS PART OF ITEM 247 WORK.
5. PRETREAT SUBGRADE HAVING A PI > 18 WITH LIME UNDER ITEM 260 AS DIRECTED BY THE ENGINEER.

Document Incomplete: Not intended for permit, bidding or construction.
Engineer: John B. Goodwin
P.E. Registration No.: 63174
Date: 8/29/2012



DETAIL B
(NOT TO SCALE)

0 10 20 FT
HORIZONTAL SCALE

SHEET 3 OF 7

PROPOSED
TYPICAL SECTIONS

Texas Department of Transportation
©2012

LOCHNER | 1829 ESE Loop 323 | Suite 202 Tyler, Texas 75701 TBPE Firm Reg. No. 10434

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			
STATE	DIST.	COUNTY	
TEXAS	ATL	BOWIE	
CONT.	SECT.	JOB	HIGHWAY NO.
0046	04	057	US 82

APPENDIX C: PHOTO LOG

Photographic Inventory of Site Visit

Bowie County
US-82
0046-04-057

Photo 1: Shell gas station located adjacent to eastern end of project area (USTs located approximately 200 feet north of centerline of US 82).

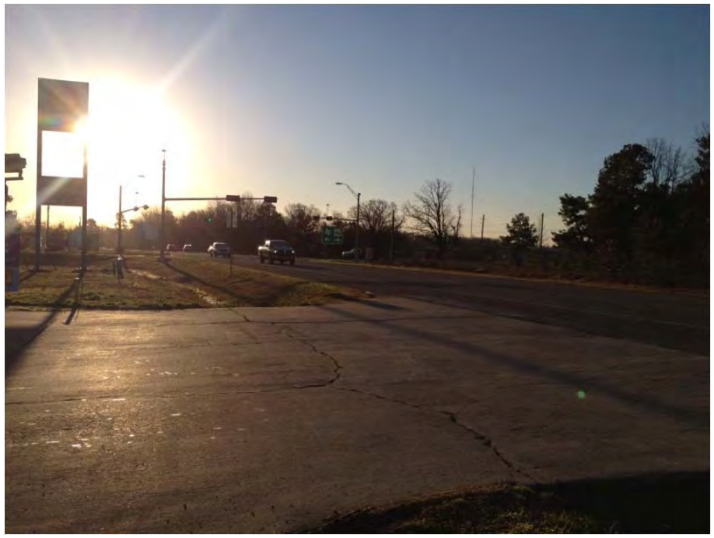


Photo 2: View of eastern extent of project area; view to southeast.

Photo 3: Utility service station located on south end of project area.

Photo 4: Typical vegetation near low-quality wetland on eastern end of project area.

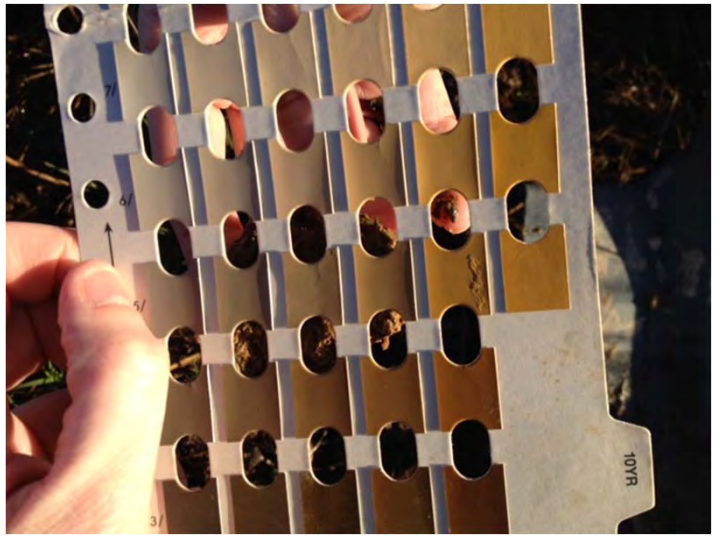


Photo 5: Mottled soil characterized using Munsell Soil Chart on eastern extent of project area.

Photo 6: Contact information for Utility Service yard adjacent to south portion of project area.

Photo 7: View of project area from eastern extent of project area; view to northwest.

Photo 8: View of potentially jurisdictional wetlands within eastern extent of project area.

Photo 9: North side of box culvert over Red Bayou.

Photo 10: Red Bayou channel on north side of project area.

Photo 11: South side of box culvert over Red Bayou.

Photo 12: Riparian area between existing US-82 alignment and railbank.

Photo 13: Rural residential land adjacent to Red Bayou on north side of project area.

Photo 14: Wetland within project area on south side of current US-82 alignment.

Photo 15: View of north side of current US-82 right of way, adjacent to Malta School.

Photo 16: View of current US-82 alignment; junction with County Road 4105.

Photo 17: View of project area from Malta School; view to northwest.

Photo 18: View of auto repair shop located adjacent to project area.

Photo 19: View of project area near western extent of corridor; view to southeast.

Photo 20: View of project area near western extent of corridor; view to northwest.

Photo 21: LUST site located adjacent to project area on western extent of corridor.

Photo 22: View of typical vegetation within and adjacent to US-82 and railbank.

Photo 23: View of project area near western extent of corridor.

APPENDIX D: STIP PAGE

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
19 - ATLANTA	BOWIE	0046-04-057	US 82	C	OTHER		$ 29,471,437

LIMITS FROM SH 98
LIMITS TO: FM 1840
PROJECT DESCR: RECONSTRUCT 2 LANE RURAL ROADWAY TO PROVIDE PASSING LANES
REMARKS
P7:

REVISION DATE: 07/2010
MPO PROJ NUM:
FUNDING CAT(S): LC

PROJECT HISTORY: RECONSTRUCT 2 LANE RURAL ROADWAY TO PROVIDE PASSING LANES; BOWIE COUNTY PASS THROUGH PROJECT

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 1,444,100
ROW PURCHASE:	$ 0
CONST COST:	$ 29,471,437
CONST ENG:	$ 1,326,215
CONTING:	$ 2,652,429
IND COSTS:	$ 1,800,705
BND FINANCING:	$ 0
TOTAL PRJ COST:	$ 36,694,886

COST OF APPROVED PHASES: $ 29,471,437

AUTHORIZED FUNDING BY CATEGORY/SHARE

	FEDERAL	STATE	LOCAL	LC	TOTAL
LOCAL CONTR:	$ 0	$ 0	$ 0	$ 29,471,437	$ 29,471,437*
TOTAL:	$ 0	$ 0	$ 0	$ 29,471,437	$ 29,471,437

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
19 - ATLANTA	UPSHUR	0402-02-024	SH 154	C	OTHER		$ 843,648

LIMITS FROM 0.7 MI WEST OF US 259
LIMITS TO: US 259
PROJECT DESCR: WIDEN EXISTING ROADWAY
REMARKS
P7:

REVISION DATE: 07/2010
MPO PROJ NUM:
FUNDING CAT(S): 1

PROJECT HISTORY: WIDEN EXISTING ROADWAY

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 41,339
ROW PURCHASE:	$ 40,723
CONST COST:	$ 843,648
CONST ENG:	$ 63,274
CONTING:	$ 59,055
IND COSTS:	$ 51,547
BND FINANCING:	$ 0
TOTAL PRJ COST:	$ 1,099,586

COST OF APPROVED PHASES: $ 843,648

AUTHORIZED FUNDING BY CATEGORY/SHARE

	FEDERAL	STATE	LOCAL	LC	TOTAL
1-PRVNT	$ 674,918	$ 168,730	$ 0	$ 0	$ 843,648*
TOTAL:	$ 674,918	$ 168,730	$ 0	$ 0	$ 843,648

PHASE: C = CONSTRUCTION, E = ENGINEERING, R = ROW, T = TRANSFER

* FUNDING NOT FIXED

APPENDIX E: COORDINATION DOCUMENTS

cc: CRM 1-23-04

Texas Department of Transportation

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

January 22, 2004

Dr. James E. Bruseth
Department of Antiquities Protection
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

Dear Dr. Bruseth:

In accordance with Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas, we are forwarding for your information review sheets and accompanying maps and other information for the attached projects reviewed since **January 16, 2004**.

The attached information includes projects that, in our opinion, do not warrant archeological surveys, projects that do not have the potential to affect historic properties, and/or projects where impact evaluations or surveys have been conducted and no archeological sites were found. We respectfully request your concurrence with our recommendations that these projects do not warrant further investigation and will not affect historic properties. Should any cultural remains be identified during construction, construction shall cease in that portion of the project and an archeologist from my staff will conduct an on-site evaluation of the find and consult further with your office.

Thank you for your attention to this matter. If you have any questions, please contact me at 416-2631.

Sincerely,

Owen Lindauer

Owen Lindauer, Ph.D., Supervisor
Archeological Studies Program
Environmental Affairs Division

Attachments
Cc: FHWA, Project Managers, CRM Archeologists, SBW/file

TxDOT - ENV
JAN 23 2004
CRM

ETS

Inbox : 1/17/2004

To: 1/22/2004

ARCHEOLOGICAL COORDINATION

Impact Evaluations, No Further Work Recommended

(Section 106 and ANTIQUITIES CODE OF TEXAS)

Date: 1/22/2004

COUNTY	DISTRICT	PROJECT	CSJ	*F30/T20 Concur, no further work	*F10/T10 Unable to Concur
Angelina	Lufkin	FM 1819	1795-02-013	✓	
Bowie	Atlanta	US 82	0046-04-034	✓	

Number of Projects: 2

TxDOT - ENV
JAN 23 2004
CRM

Marc H. Pentecost

F. Lawerence Oaks
State Historic Preservation Officer and Executive Director

1-22-04
Date

U.S. Department
of Transportation

Federal Highway Administration

Texas Division Office
300 E. 8th Street, Rm. 826
Austin, Texas 78701

January 23, 2004

In Reply Refer To:

HB-TX

Mr. Kenneth Blanchard, Governor
Jennifer Makaseah
Absentee-Shawnee Executive Committee
2025 S. Gordon Cooper Drive
Shawnee, OK 74801-9381

RE: CSJ: 0046-04-034 & 0046-04-046; US 82, from U.S. Highway 259 in De Kalb to IH 30 west of New Boston, Bowie County, Atlanta District

Dear Mr. Blanchard, Governor:

The above referenced transportation project is being considered for construction by the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT), and we are in the process of conducting environmental studies for the project. The project is located in an area that may be of interest to your tribe. A brief summary of the proposed project, as well as a map of its general location and a map of the specific project location, are attached for your review. The summary includes information on archeological sites (if any) that are present within the area of the proposed project as well as the recommendations of TxDOT archeologists concerning the proposed project.

According to our procedures under Section 106 of the National Historic Preservation Act, we are writing to request your comments on historic properties of cultural or religious significance to your tribe that may be affected by the proposed undertaking. Any comments you may have on TxDOT's recommendations should also be provided. Please provide your comments within 30 days of receipt of this letter, and please reference the project information listed above. Further consultation with your tribe will continue for this project in the event that archeological sites are identified during our investigations or during construction.

Thank you for your attention to this matter. If you have questions, please contact me at 512/536-5968 or Waldo Troell, TxDOT Archeologist, at 512/416-2624.

Sincerely,

Paul D. Clutts, P. E.
Area Engineer

Enclosure

cc w/enclosures: FHWA File Copy
Dianna F. Noble, P.E., Division Director/swb-file,TxDOT
Manual R. Flores, TxDOT-ENV, Project Manager
John Callison, TxDOT Atlanta District ENV Coordinator
Waldo Troell, TxDOT Archeologist

Project Description

CSJ: 0046-04-034 & 0046-04-046; U.S.82, from U.S. Highway 259 in DeKalb to Interstate Highway 30 west of New Boston, Bowie County, Atlanta District.

The existing facility is a two-lane, undivided, rural roadway (two 12-ft-wide travel lanes and 8 to 10-ft-wide paved shoulders) with adjacent open drainage ditches within a 120-ft-wide right of way, except in urban areas where it varies between 70 and 100-ft-wide.

This project would improve safety and mobility along the 11.25-mile length of highway, by constructing two additional lanes to create a four-lane divided facility. The proposed facility would require an additional 94 acres of right of way, 84 of these acres would be obtained from an abandon railroad that is adjacent to the south side. Where the railroad diverges from U.S. 82 in DeKalb, all right of way between the highway and the railroad corridor would be purchased. Near New Boston, where the highway and railroad diverge, new right of way would be obtained from the south side of the existing highway.

A check of the Texas Archeological Sites Atlas (on December 8, 2003) revealed no recorded archeological sites within or adjacent to the proposed project area of potential effect.

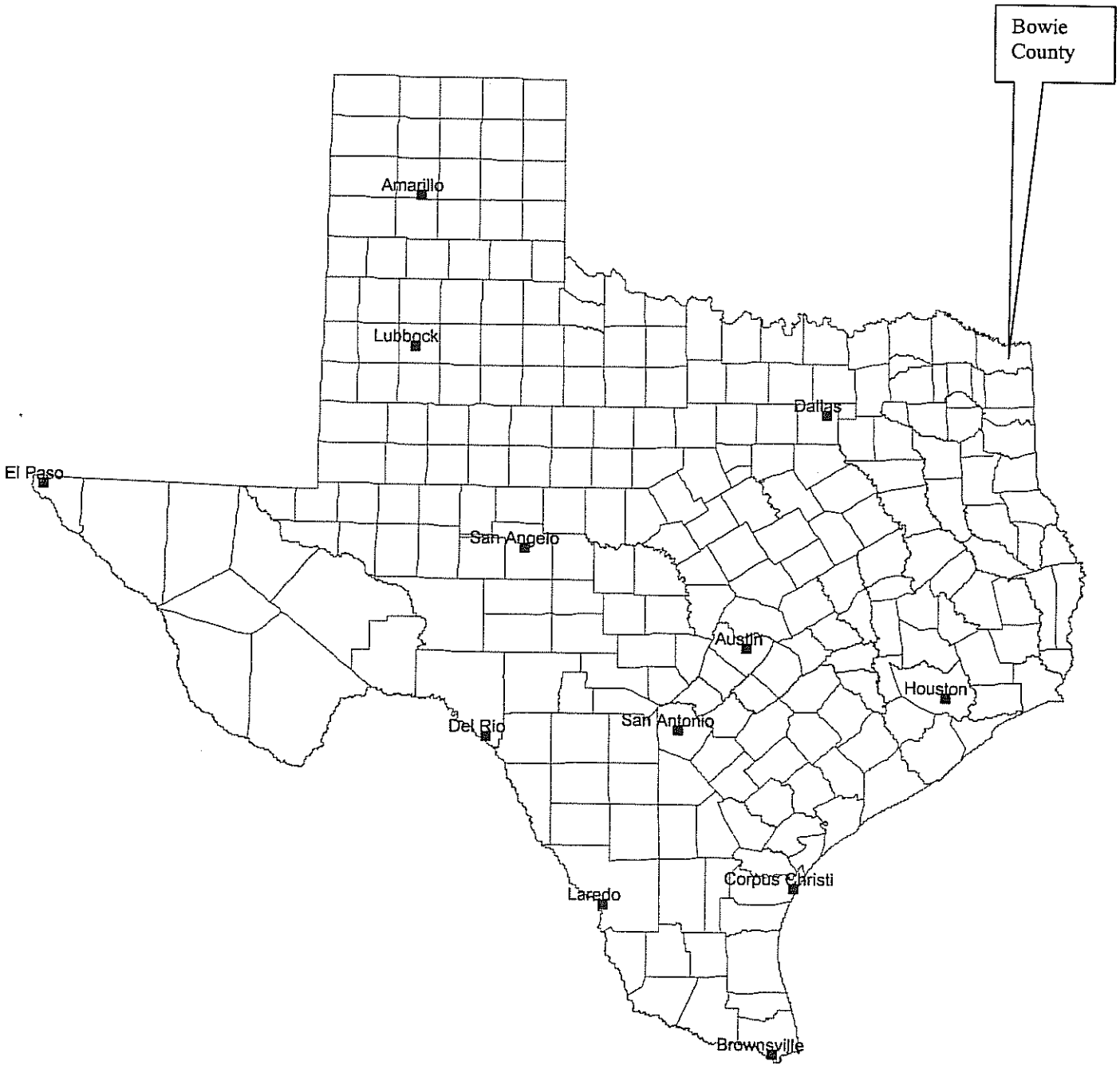
An archeological impact evaluation was conducted on December 18, 2003 and revealed that both the existing and proposed right of way exhibited extensive disturbances. The disturbances were caused by construction and maintenance of the highway, railroad, utilities, buildings, and driveways. No settings with reasonable potential to contain archeological historic properties (36 CFR 800.16. (1)) or State Archeological Landmarks (13 TAC 26.12) were observed. Since the disturbance is so extensive, no further archeological work is warranted or proposed.

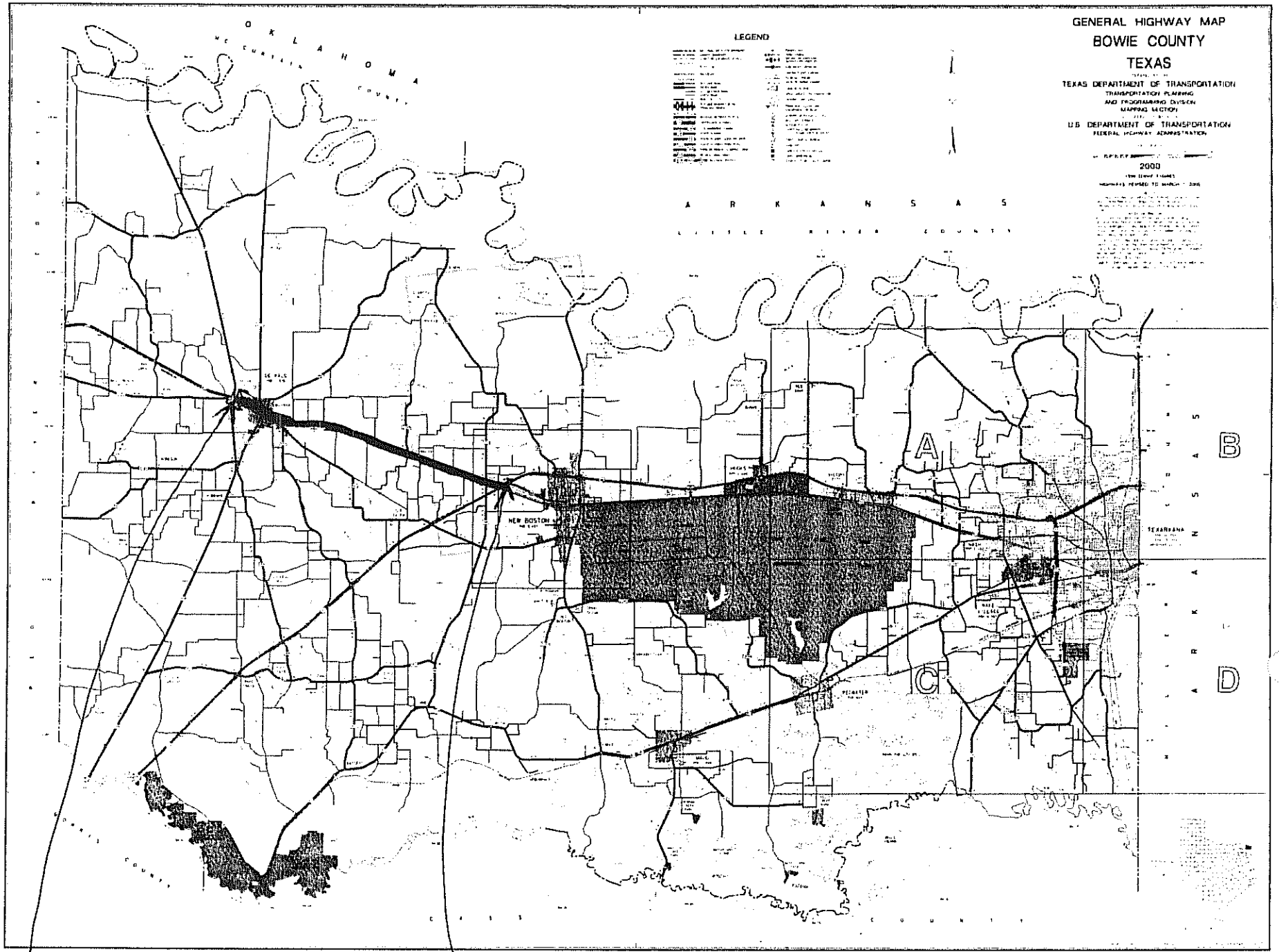
County Location Map

County: Bowie

Project CSJ: 0046-04-034 &
0046-04-046

Project Name: US 82, from US Highway 259 in De Kalb to IH 30 west of New Boston, Bowie County, Atlanta District.





BEGIN PROJECT

END Project

CSJ: 0046-04-034, BOWIE CO.

CSJ: 0046-04-046)

SECTION 3: ENV HIST DETERMINATIONS ADDITIONAL ACTIONS REQUIRED BY THE DISTRICT. SOU TO BE RESUBMITTED WITH REQUESTED INFORMATION [DO NOT WRITE on this page; for ENV HIST STAFF ONLY]	Yes
1 Project information is **insufficient** to determine level of Historic Resource Review and Consultation (see attached comments indicating why information is insufficient).	☐
2 Project information is sufficient to recommend that a **Reconnaissance Survey** be performed.** ENV HIST staff will consult with the District to specify survey needs and to develop a scope of work and a timeline for receiving contract deliverables.	☐
3 Project information is sufficient to recommend that an **Intensive Survey** be performed.** ENV HIST staff will consult with the District to specify survey needs and develop a scope of work and a timeline for receiving contract deliverables.	☐
ADDITIONAL COMMENTS: No survey req'd	

** All work must meet appropriate Standards of Uniformity. Please consult with ENV HIST if District requires assistance through an ENV Scientific Services Contract.

SECTION 4: ENV HIST CERTIFICATION [TO BE FILLED OUT BY ENV HIST STAFF. TO BE INCLUDED WITH DISTRICT'S SUBMISSION TO THE REC]
ENV HIST staff determined that the project information is sufficient to record Section 106 actions on HIST screen in ~~ETS~~ ECOS. The appropriate NEPA language was submitted to the District and recorded in ~~ETS~~ ECOS.
ENV HIST Reviewer Name: Renée Ahr Date: 3/7/12 0046-04-057

✓SCANNED ETS
ECOS

Texas Department of Transportation

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

March 26, 2012

Texas Parks & Wildlife Dept.
MAR 27 2012
Wildlife Habitat Assessment Program

Environmental Document Coordination
CSJ: 0046-04-057 District: Atlanta
Highway: US 82
From: FM 1840
To: SH 98
Bowie County

Ms. Kathy Boydston
Texas Parks and Wildlife Department
Wildlife Division – Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, Texas 78744

Dear Ms. Boydston:

Consistent with the Memorandum of Understanding signed by our two agencies, attached is a copy of the environmental document covering the subject project for your review and comment. Any comments you may have on this document will assist the Texas Department of Transportation (Department) in ensuring that the Department's projects are sensitive to the natural resources of the state. Please include the above CSJ number in your correspondence.

Please submit any comments you may have within 45 days from the date of this letter. If you do not have any comments on the document, please sign and date the bottom of this letter and return a copy to the Environmental Affairs Division. If no response is received after the 45 days have expired, we will proceed with project development. If you have any questions regarding this project please contact John Callison of the Atlanta District at (903) 799-1302 or by email at John.Callison@txdot.gov.

Sincerely,

Andrew Blair
Ecological Resources Branch
Environmental Affairs Division

Enclosure

☒ NO COMMENT: Steven B Hardi ERCS-179
Wildlife Habitat Assessment Program
DATE: 4-3-12

RECEIVED - TXDOT
APR 09 2012
ENVIRONMENTAL AFFAIRS

APPENDIX F: USACE PRELMINARY JURISDICTIONAL DETERMINATION

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

May 16, 2012

RECEIVED
MAY 21 2012

Regulatory Office

Mr. Alex Bartlett
HW LOCHNER, Inc.
903 E. 104th St., Suite 800
Kansas City, MO 64114

Dear Mr. Bartlett:

This is in reference to your submitted delineation and request for a jurisdictional determination dated March 30, 2012. The review area consists of an 8.7 mile long segment of U.S. Route 82, located in the northern portion of Bowie County, Texas. More specifically, the review area is between Farm to Market Road 1840 in De Kalb, Texas and State Highway 98 near New Boston, Texas. We have reviewed the submitted data relative to Section 404 of the Clean Water Act (CWA).

We concur with your delineation that the review area does appear to contain waters of the United States. The intermittent streams, within the review area, identified as waters of the United States are Austin Chapel Branch, Peters Branch and Red Bayou. Additionally, there appears to be one jurisdictional wetland, identified in your delineation report as W3. The placement of dredged or fill material into these jurisdictional waters would require Department of the Army authorization pursuant to Section 404 of the CWA prior to commencement.

We encourage you to locate your proposed project away from any aquatic resources. Should you choose to site your operation near any stream or wetland, preparations should be made to maintain at least a 100-foot undisturbed buffer zone between the adjacent waterway and the borrow site.

This jurisdictional determination is based solely upon available office resources and not upon direct observation of the subject property. We believe this determination to be a reasonable assessment of the presence of jurisdictional waters on the site subject to Section 404 of the CWA. However, this is only a preliminary jurisdictional determination (PJD), and as such, is not a definitive description of on-site wetlands or U.S. Army Corps of Engineers (Corps) jurisdiction over the area. For an understanding of Administrative Appeal options regarding this PJD, please read the enclosed information sheet. Upon receipt of this letter please review, sign and return to this office the enclosed PJD form.

This determination has been conducted to identify the limits of the Corps CWA jurisdiction for the particular area identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you desire to complete a "Customer Service Survey" on your experience with the Corps Regulatory Program, you are invited to visit http://per2.nwp.usace.army.mil/survey.html on the internet at your convenience and submit your comments.

Your request has been assigned Identification No. SWT-2012-292. Please refer to this number during future correspondence. If you have any questions, contact Mr. Jamie R. Hyslop at 918-669-7618.

Sincerely,

Andrew R. Commer
Chief, Regulatory Office

Enclosures

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): May 15, 2012

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: Mr. Alex Bartlett, HW LOCHNER, Inc, 903 E. 104th St., Suite 800, Kansas City, MO 64114.

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Tulsa District, U.S. Route 82 reconstruction project, SWT-2012-292.

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: (USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES) **SEE ATTACHED TABLE FOR ALL WATERS**

State: Texas County/parish/borough: Bowie City: DeKalb
Center coordinates of site (lat/long in degree decimal format): Lat. ° N, Long. ° W.

Universal Transverse Mercator:

Name of nearest waterbody: Red Bayou

Identify (estimate) amount of waters in the review area: Red Bayou
Non-wetland waters: 200 linear feet: 10-20 width (ft) and/or acres.
Cowardin Class: Riverine
Stream Flow: Intermittent

Wetlands: 0.21+ acres. Abutting Red Bayou
Cowardin Class: Forested

Name of any water bodies on the site that have been identified as Section 10 waters:
Tidal:
Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (Check all that apply):
☒ Office (Desk) Determination. Date: May 15, 2012
☐ Field Determination. Date(s):

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Mr. Alex Bartlett.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☒ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 / DeKalb, Malta and New Boston, Texas.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: New Boston, Texas.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):1 Meter Color, TX Aerials, most current Google Earth Pro.
  or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Jamie R. Hyslop
Regulatory Project Manager
Regulatory Office, 918-669-7618
Tulsa District U.S. Army Corps of Engineers

05-22-12
Mr. Alex Bartlett

(Only use with multiple sites).

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
1. Austin Chapel Branch	33.4974	-94.5540	Riverine	200 linear feet	Intermittent
2. Peters Branch	33.4889	-94.5251	Riverine	200 linear feet	Intermittent
3.					
4.					
5.					

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Mr. Alex Bartlett, Lochner, Inc	File Number: SWT-2012-292	Date: May 16, 2012
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: Mr. Jamie Hyslop 918-669-7618	If you only have questions regarding the appeal process you may also contact: Mr. Elliott Carman Administrative Appeals Review Officer (CESWD-PD-O) U.S. Army Corps of Engineers 1100 Commerce Street, Suite 831 Dallas , Texas 75242-1731 469-487-7061

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____ Signature of appellant or agent.	Date:	Telephone number:

APPENDIX G: TRAFFIC NOISE RECEIVERS

US-82 TRAFFIC NOISE ANALYSIS

From FM 1840 to SH 98

Bowie County, Texas

CSJ 0046-04-057

Prepared for:

Texas Department of Transportation
Atlanta District

Prepared by:

LOCHNER

May 29, 2012

LOCHNER

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INTRODUCTION

This document discusses and describes the potential for noise effects from the US-82 roadway improvement from FM 1840 to SH 98 in Bowie County, Texas.

Noise is often defined as unwanted sound. Highway vehicle noise is primarily composed of engine exhaust, drive train, tire-roadway interaction and vehicle aerodynamics. Sound is a very subjective concept, and degrees of sound disturbance depend on several things: the amount and nature of the intruding noise, the relationship between the background noise and intruding noise, the type of activity where the noise is heard, and the time of day.

This analysis was accomplished in accordance with **TxDOT's (FHWA approved) 2011 Guidelines for Analysis and Abatement of Roadway Traffic Noise.**

US-82 PROJECT

Bowie County, acting under a Pass Through Finance Agreement with The Texas Department of Transportation (TxDOT), plans to widen and improve US-82 in the TxDOT Atlanta District from FM 1840 to SH 98 in Bowie County. US-82 currently serves as a rural farm-to-market road consisting of two 12-foot travel lanes. The project proposes to construct new concrete pavement from FM 1840 in DeKalb to SH 98 near New Boston. The typical width of pavement will be 50 feet to allow for a passing lane section comprised of two twelve-foot lanes in the passing lane direction, one twelve-foot lane in the opposite direction, one four-foot shoulder in the passing direction, and one ten-foot shoulder in the opposite direction. The proposed project is approximately 8.7 miles in length. In DeKalb, a center turn lane section will be provided with a 16-foot center turn lane and 5-foot shoulders on both sides (50-foot total width). At the intersection of FM 2789 in Malta and at the intersection of SH 98, a center turn lane section will be provided with a 16-foot center turn lane and 10-foot shoulders. Additional turn and thru lanes will be provided at SH 98 to transition to the four-lane section proposed by TxDOT east of SH 98. Two parcels will be acquired for right of way to provide for a 30 mph design speed connection for FM 1840 at the beginning of the project.

CHARACTERISTICS OF NOISE

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

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

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

The traffic noise analysis typically includes the following elements:

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

GUIDELINES

Title 23 of the Code of Federal Regulations Part 772 (23 CFR 772) defines traffic noise impacts as those "impacts which occur when predicted traffic noise levels approach or exceed the Noise Abatement Criteria, or when the predicted traffic noise levels substantially exceed the existing noise levels."

The FHWA has established the following Noise Abatement Criteria (NAC) for various land use activity areas that are used as one of two means to determine when a traffic noise impact would occur. Table 1 summarizes the FHWA noise abatement criteria.

TABLE 1: NOISE ABATEMENT CRITERIA

Activity Category	FHWA dB(A) Leq	TxDOT dB(A) Leq	Description of Land Use Activity Areas
A	57 (exterior)	56 (exterior)	Lands on which serenity and quiet are of extra-ordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	66 (exterior)	Residential
C	67 (exterior)	66 (exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (interior)	51 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (exterior)	71 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	--	--	Agricultural, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	--	Undeveloped lands that are not permitted.

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

The FHWA has established absolute and relative criteria to more objectively determine when traffic sounds reach levels that result in impacts for humans. A noise impact occurs when either the absolute or relative criterion is met:

Absolute criterion: the predicted noise level at a receiver approaches, equals or exceeds the NAC. "Approach" is defined as one dB(A) below the NAC. For example: a noise impact would occur at a Category B residence if the noise level is predicted to be 66 dB(A) or above.

Relative criterion: the predicted noise level substantially exceeds the existing noise level at a receiver even though the predicted noise level does not approach, equal or exceed the NAC. "Substantially exceeds" is defined as more than 10 dB(A). For example: a noise impact would occur at a Category B residence if the existing level is 54 dB(A) and the predicted level is 65 dB(A).

When a traffic noise impact occurs, noise abatement measures must be considered. A noise abatement measure is any positive action taken to reduce the impact of traffic noise on an activity area.

METHODOLOGY AND TRAFFIC NOISE IMPACT ASSESSMENT

The FHWA traffic noise modeling software (TNM 2.5) was used to calculate existing and predicted traffic noise levels. The model primarily considers the number, type and speed of vehicles; highway alignment and grade; cuts, fills and natural berms; surrounding terrain features; and the locations of activity areas likely to be impacted by the associated traffic noise.

Existing and predicted traffic noise levels were modeled at receiver locations (Table 2 and Exhibits 2.1-2.18) that represent the land use activity areas adjacent to the proposed project that might be impacted by traffic noise and potentially benefit from feasible and reasonable noise abatement.

The TxDOT Atlanta District provided the traffic data for the analysis. During the peak hour, the US-82 facility would carry approximately 910 vehicles by 2015. By 2035, US-82 is projected to carry 1,240 vehicles. The peak hour vehicle fleet mix is 83.4% autos/ light duty vehicles, 2.6% medium trucks, and 14.0% heavy trucks. The directional split is 51/49.

As indicated in Table 2, the proposed project would result in a traffic noise impact. As depicted on the maps in Exhibits 2.1 to 2.18, about 96 receptors along the route would be impacted. Of the impacted receptors, 90 are residential properties largely located on the north side of US-82. Only two properties are located on the south side. The next section outlines potential noise abatement measures to mitigate predicted noise impacts.

TABLE 2: TRAFFIC NOISE LEVELS dB(A) Leq						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R1 - Residential	B	67	59	62	+3	N
R2 - Residential	B	67	60	62	+2	N
R3 - Residential	B	72	60	62	+2	N
R4 - Residential	B	67	62	64	+2	N
R5 - Residential	B	67	61	63	+2	N
R6 - Residential	B	67	60	62	+2	N
R7 - Funeral Home	E	72	65	68	+3	N
R8 - Residential	B	67	60	64	+4	N
R9 - Residential	B	67	67	69	+2	Y
R10 - Residential	B	67	64	66	+2	Y
R11 - Residential	B	67	66	68	+2	Y
R12 - Residential	B	67	67	69	+2	Y
R13 - Residential	B	67	56	60	+4	N
R14 - Residential	B	67	66	68	+2	Y
R15 - Residential	B	67	65	67	+2	Y
R16 - Residential	B	67	59	64	+5	N
R17 - Residential	B	67	60	64	+4	N
R18 - Residential	B	67	60	63	+3	N
R19 - Residential	B	67	61	65	+4	N
R20 - Residential	B	67	61	65	+4	N
R21 - Residential	B	67	62	65	+3	N
R22 - Residential	B	67	61	65	+4	N
R23 - Residential	B	67	66	67	+1	Y
R24 - Residential	B	67	66	67	+1	Y
R25 - Residential	B	67	60	63	+3	N
R26 - Residential	B	67	65	67	+2	Y
R27 - Residential	B	67	64	66	+2	Y
R28 - Residential	B	67	65	67	+2	Y
R29 - Residential	B	67	65	67	+2	Y
R30 - Residential	B	67	65	67	+2	Y
R31 - Residential	B	67	66	68	+2	Y
R32 - Church	D	51	46	47	+1	N
R33 - Residential	B	67	66	67	+1	Y
R34 - Residential	B	67	65	66	+1	Y
R35 - Residential	B	67	65	66	+1	Y
R36 - Residential	B	67	66	67	+1	Y
R37 - Residential	B	67	66	67	+1	Y
R38 - Residential	B	67	65	66	+1	Y

TABLE 2: TRAFFIC NOISE LEVELS dB(A) Leq (Cont'd)						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R39 - Church	D	51	45	46	+1	N
R40 - Residential	B	67	65	66	+1	Y
R41 - Residential	B	67	68	68	0	Y
R42 - Restaurant	E	72	68	69	+1	N
R43 - Residential	B	67	69	67	-2	Y
R44 - Residential	B	67	67	66	-1	Y
R45 - Residential	B	67	64	66	+2	Y
R46 - Residential	B	67	66	67	+1	Y
R47 - Coffee Shop	E	72	70	70	0	N
R48 - Residential	B	67	67	68	+1	Y
R49 - Residential	B	67	58	61	+3	N
R50 - Residential	B	67	61	65	+4	N
R51 - Residential	B	67	61	63	+2	N
R52 - Residential	B	67	66	67	+1	Y
R53 - Residential	B	67	65	66	+1	Y
R54 - Residential	B	67	65	66	+1	Y
R55 - Residential	B	67	59	63	+4	N
R56 - Residential	B	67	61	64	+3	N
R57 - Residential	B	67	66	67	+1	Y
R58 - Residential	B	67	65	66	+1	Y
R59 - Residential	B	67	65	66	+1	Y
R60 - Residential	B	67	68	69	+1	Y
R61 - Residential	B	67	66	67	+1	Y
R62 - Residential	B	67	61	64	+3	N
R63 - Residential	B	67	65	66	+1	Y
R64 - Residential	B	67	64	66	+2	Y
R65 - Residential	B	67	65	66	+1	Y
R66 - Residential	B	67	65	66	+1	Y
R67 - Residential	B	67	67	68	+1	Y
R68 - Residential	B	67	66	67	+1	Y
R69 - Residential	B	67	60	64	+4	N
R70 - Residential	B	67	64	67	+3	Y
R71 - Residential	B	67	64	66	+2	Y
R72 - Residential	B	67	66	67	+1	Y
R73 - Residential	B	67	64	66	+2	Y
R74 - Residential	B	67	65	67	+2	Y
R75 - Residential	B	67	63	65	+2	N
R76- Residential	B	67	63	65	+2	N

TABLE 2: TRAFFIC NOISE LEVELS dB(A) Leq (Cont'd)						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R77 - Residential	B	67	65	66	+1	Y
R78 - Residential	B	67	62	65	+3	N
R79 - Residential	B	67	58	61	+3	N
R80 - Residential	B	67	65	66	+1	Y
R81 - Residential	B	67	61	63	+2	N
R82 - Residential	B	67	55	57	+2	N
R83 - Residential	B	67	68	68	0	Y
R84 - Residential	B	67	65	66	+1	Y
R85 - Residential	B	67	65	67	+2	Y
R86 - Residential	B	67	67	68	+1	Y
R87 - Residential	B	67	63	65	+2	N
R88 - Residential	B	67	67	68	+1	Y
R89 - Residential	B	67	65	66	+1	Y
R90 - Residential	B	67	67	67	0	Y
R91 - Residential	B	67	67	68	+1	Y
R92 - Residential	B	67	64	66	+2	Y
R93 - Residential	B	67	65	66	+1	Y
R94 - Residential	B	67	65	67	+2	Y
R95 - Residential	B	67	65	67	+2	Y
R96 - Residential	B	67	60	65	+5	N
R97 - Residential	B	67	58	63	+5	N
R98- Residential	B	67	67	68	+1	Y
R99 - School	D	51	47	49	+2	N
R100 - Residential	B	67	66	66	0	Y
R101 - Residential	B	67	66	66	0	Y
R102 - Residential	B	67	65	67	+2	Y
R103 - Residential	B	67	67	68	+1	Y
R104 - Restaurant	E	72	65	67	+2	N
R105 - Residential	B	67	58	62	+4	N
R106 - Residential	B	67	61	66	+5	Y
R107 - Residential	B	67	59	63	+4	N
R108 - Residential	B	67	61	65	+4	N
R109 - Residential	B	67	59	63	+4	N
R110 - Residential	B	67	67	68	+1	Y
R111 - Residential	B	67	66	67	+1	Y
R112 - Residential	B	67	65	67	+2	Y
R113 - Residential	B	67	60	63	+3	N
R114- Residential	B	67	61	65	+4	N

TABLE 2: TRAFFIC NOISE LEVELS dB(A) Leq (Cont'd)						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R115 - Residential	B	67	59	63	+4	N
R116 - Residential	B	67	60	64	+4	N
R117 - Residential	B	67	60	63	+3	N
R118 - Residential	B	67	67	68	+1	Y
R119 - Residential	B	67	59	62	+3	N
R120 - Residential	B	67	58	60	+2	N
R121 - Residential	B	67	69	69	0	Y
R122 - Residential	B	67	68	69	+1	Y
R123 - Residential	B	67	66	67	+1	Y
R124 - Residential	B	67	66	67	+1	Y
R125 - Residential	B	67	68	68	0	Y
R126 - Residential	B	67	58	61	+3	N
R127 - Residential	B	67	58	61	+3	N
R128 - Residential	B	67	67	68	+1	Y
R129 - Residential	B	67	67	68	+1	Y
R130 - Residential	B	67	64	65	+1	N
R131 - Residential	B	67	60	64	+4	N
R132 - Residential	B	67	63	65	+2	N
R133 - Residential	B	67	65	67	+2	Y
R134 - Residential	B	67	67	68	+1	Y
R135 - Residential	B	67	66	67	+1	Y
R136 - Residential	B	67	65	66	+1	Y
R137 - Residential	B	67	65	66	+1	Y
R138 - Residential	B	67	62	65	+3	N
R139 - Residential	B	67	65	67	+2	Y
R140 - Residential	B	67	57	59	+2	N
R141 - Residential	B	67	59	61	+2	N
R142 - Residential	B	67	58	61	+3	N
R143 - Residential	B	67	67	68	+1	Y
R144 - Residential	B	67	58	60	+2	N
R145 - Residential	B	67	62	65	+3	N
R146 - Residential	B	67	60	63	+3	N
R147 - Residential	B	67	61	64	+3	N
R148 - Residential	B	67	62	65	+3	N
R149 - Residential	B	67	61	64	+3	N
R150 - Residential	B	67	61	64	+3	N
R151 - Residential	B	67	67	66	-1	Y
R152 - Residential	B	67	61	63	+2	N

TABLE 2: TRAFFIC NOISE LEVELS dB(A) Leq (Cont'd)						
Representative Receiver	**NAC Category**	**NAC Level**	**Existing**	**Predicted 2035**	**Change (+/-)**	**Noise Impact**
R153 - Residential	B	67	64	66	+2	Y
R154 - Church	D	51	44	46	+2	N
R155 - Driving School	D	51	41	44	+3	N
R156 - Residential	B	67	65	68	+3	Y
R157 - Residential	B	67	64	67	+3	Y
R158 - Residential	B	67	58	61	+3	N
R159 - Residential	B	67	62	63	+1	N
R160 - Residential	B	67	67	68	+1	Y
R161 - Residential	B	67	65	66	+1	Y

POTENTIAL NOISE ABATEMENT MEASURES

The 23 Code of Federal Regulations, Part 772 identifies certain noise abatement measures that may be considered in the project design to reduce traffic noise impacts. These abatement measures include: traffic management, alteration of alignments, buffer zones, building insulation, and the construction of sound barriers.

Before any abatement measure can be proposed for incorporation into the project, it must be both feasible and reasonable. In order to be "feasible," the abatement measure must be able to reduce the noise level at greater than 50% of impacted, first row receivers by at least five dB(A); and to be "reasonable," it must not exceed the cost-effectiveness criterion of $25,000 for each receiver that would benefit by a reduction of at least five dB(A) and the abatement measure must be able to reduce the noise level at least one impacted, first row receiver by at least seven dB(A).

Traffic Management

Control devices could be used to reduce the speed of the traffic; however, the minor benefit of one dB(A) per five mph reduction in speed does not outweigh the associated increase in congestion and air pollution. Moreover, reduced speed limits will not likely be observed. Other measures such as time or use restrictions for certain vehicles are prohibited on state highways.

Alteration of Horizontal and/ or Vertical Alignments

The proposed US-82 alignment is shifted slightly toward the south. For the most part, traffic will be 4’ in west bound passing lane situations and 10’ in west bound non-passing lane situations further away from noise receivers on the north side of US-82. The predicted 2035 noise levels are based on this shifted alignment. Shifting vertical alignments can have a positive effect on noise levels; however, the terrain in the project area is relatively flat and will not likely result in a positive impact on noise levels.

Buffer Zones

On the north side of US-82, buffer zones are not possible since the impacted properties have been constructed adjacent to the right of way and there is no available land for use as a buffer. Moreover, the acquisition of undeveloped property to act as a buffer zone is designed to avoid rather than abate traffic noise impacts and, therefore, is not feasible.

Building Insulation

Use of building insulation as a traffic abatement measure is limited to interior noise-sensitive receptor locations within public-use buildings, defined as NAC “D” in Table 1 on Page 2. No public-use buildings are predicted to be impacted by this project.

Noise Barriers

Construction of a noise barrier is the most commonly used noise abatement measure. The feasibility of a noise barrier is based on its effectiveness in reducing traffic noise levels as well as any adverse impacts to property access, drainage, topography, utilities, safety, and maintenance requirements. A barrier which reduces noise levels by a minimum of five dB(A) is considered effective.

Noise barriers were evaluated for each of the impacted receiver locations. Noise barriers would not be feasible and reasonable for any of the following impacted receivers and, therefore, are not proposed for

incorporation into the project:

R9-R12, R14-R15, R23-R24, R26-R31, R33-38, R40-R41, R43-R46, R48, R52-R54, R57-R61, R63-R68, R71-R72, R74, R77, R80, R83-R86, R88-R95, R98, R100-R103, R110-R112, R118, R121-R125, R128-R129, R133-R137, R139, R143, R151, R153, R156-R157, R160-R161: these receivers are separate individual residences with driveways that extend perpendicular from US-82 which makes the possibility of a barrier unfeasible.

R70 and R63: a noise barrier was investigated to mitigate the predicted traffic noise level impact to these two impacted residences. A wall 565' long and 10' high, shown in Exhibit 3.0, would provide up to 3 dB(A) reduction in noise level, which is less than minimum to be considered.

R106: a noise wall would be feasible based on the location of this single residence. However, a noise wall would not achieve the minimum noise reduction.

From the above analysis, noise barriers would not be feasible and reasonable for any of the impacted receivers in Table 2 and, therefore, are not proposed for incorporation into the project. The ineffective conceptual wall barrier design would also exceed the $25,000 per receiver cost-effectiveness criterion.

CONSTRUCTION NOISE

The major construction elements of this project are expected to be bridge building, earth removal, hauling, grading, and paving. General construction noise impacts, such as temporary speech interference for passersby and those individuals living or working near the project, can be expected particularly from bridge construction, paving operations and grading equipment. Extremely loud construction noise activities such as the usage of impact hammers will provide sporadic, temporary, and potentially significant noise impacts in localized areas.

Whenever possible, measures should be taken to reduce the duration and intensity of construction noise impacts, such as work-hour limitations, enforcing equipment muffler and maintenance requirements, locating haul-road locations sensitive to neighboring land use, and the restriction of tailgate banging. In addition, the neighboring property owners and users should be provided with a means to register complaints about construction noise that includes timely response and follow-up procedures.

To reduce the potential for noise impacts at the majority of residential properties, work should not be allowed during typical sleeping hours and limited during weekends. Impact-type activities especially should be conducted in residential areas while people are at work and children are at school. Any construction activities that are necessary during evening and overnight hours should be closely coordinated so that appropriate mitigation strategies can be put into place before the construction activities are started.

There are three churches among the residential and commercial properties along this project located on the north side. One is located at the northwest corner of County Road 3204 intersection with US-82. Another is located approximately 1,600 feet east of County Road 3204. A third location is roughly 1,000 feet west of FM 3378. Evening and weekend work should be scheduled to be sensitive to not interrupting activities and services being conducted at the church property.

There is also a school at the northeast corner of FM 2789 and US-82 intersection. Construction noise near the school should not be an issue; however, if possible, truck traffic should be routed away from the school during school hours.

COORDINATION WITH LOCAL OFFICIALS

The 23 CFR Part 772 delegates to highway agencies the responsibility for taking measures that are prudent and feasible to assure that the location and design of highways are compatible with base year and planned land uses.

To assist local authorities in exercising land use control over the undeveloped lands adjacent to the roadways proposed for this project, land use compatibility noise data was developed. Table 3 provides the typical distance at which the 66 dB(A) and 71 dB(A) noise levels occur. If no distance is provided, the contour is predicted to fall within the proposed right of way.

TABLE 3: 66 AND 71 dB(A) CONTOURS FOR DESIGN YEAR 2035

Segment	Distance[1] to 66 dB(A) Contour (feet)	Distance[1] to 71 dB(A) Contour (feet)
West of FM 1840	North = 155 South = ROW	North =67 South = ROW
East of FM 1840 to Co. Rd 4112	North = 170 South = 200	North = 77 South = ROW
1,700' east of Co. Rd 4112 to Co. Rd 4115	North = 170 South = 185	North = 77 South = Inside ROW
East of Co. Rd 4115 to FM 2789	North = 170 South = 200	North = 77 South = Inside ROW
FM 2789 to Co. Rd 3104	North = 170 South = 210	North = 80 South = Inside ROW
Co. Rd 3104 to SH 98	North = 170 South = 210	North = 80 South =Inside ROW
US 98 to end of project	North = 180 South = 220	North = 80 South = 122

[1]Distances measured from existing roadway centerline

Although the information contained in Table 3 is based on the results of the noise modeling, it is not site-specific for any area along proposed US-82. Variations in terrain and the roadway profile can result in changes to the distances to these noise contours. This information is intended to provide a general guide for future planning, but should not be used in the final design or layout of future development.

A copy of this traffic noise analysis will be available to local officials. 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.

CONCLUSION

This noise assessment for the US-82 Improvements (CSJ: 0046-04-057) was conducted according to the requirements of 23 CFR 772, the TxDOT Guidelines for Analysis and Abatement of Roadway Traffic Noise, March 1, 2011. Noise levels for noise-sensitive land uses along the proposed improvements were calculated using the FHWA's Traffic Noise Model, Version 2.5. Noise impacts were predicted to occur at 90 residential properties.

Noise abatement was considered at each impact. The findings of the abatement study concluded that traffic management, alignment alterations, buffer zones, building insulation, and noise barrier are not feasible abatement measures.

EXHIBITS

EXHIBIT 1.0
PROJECT LOCATION
FM 1840 - SH 98, Bowie County

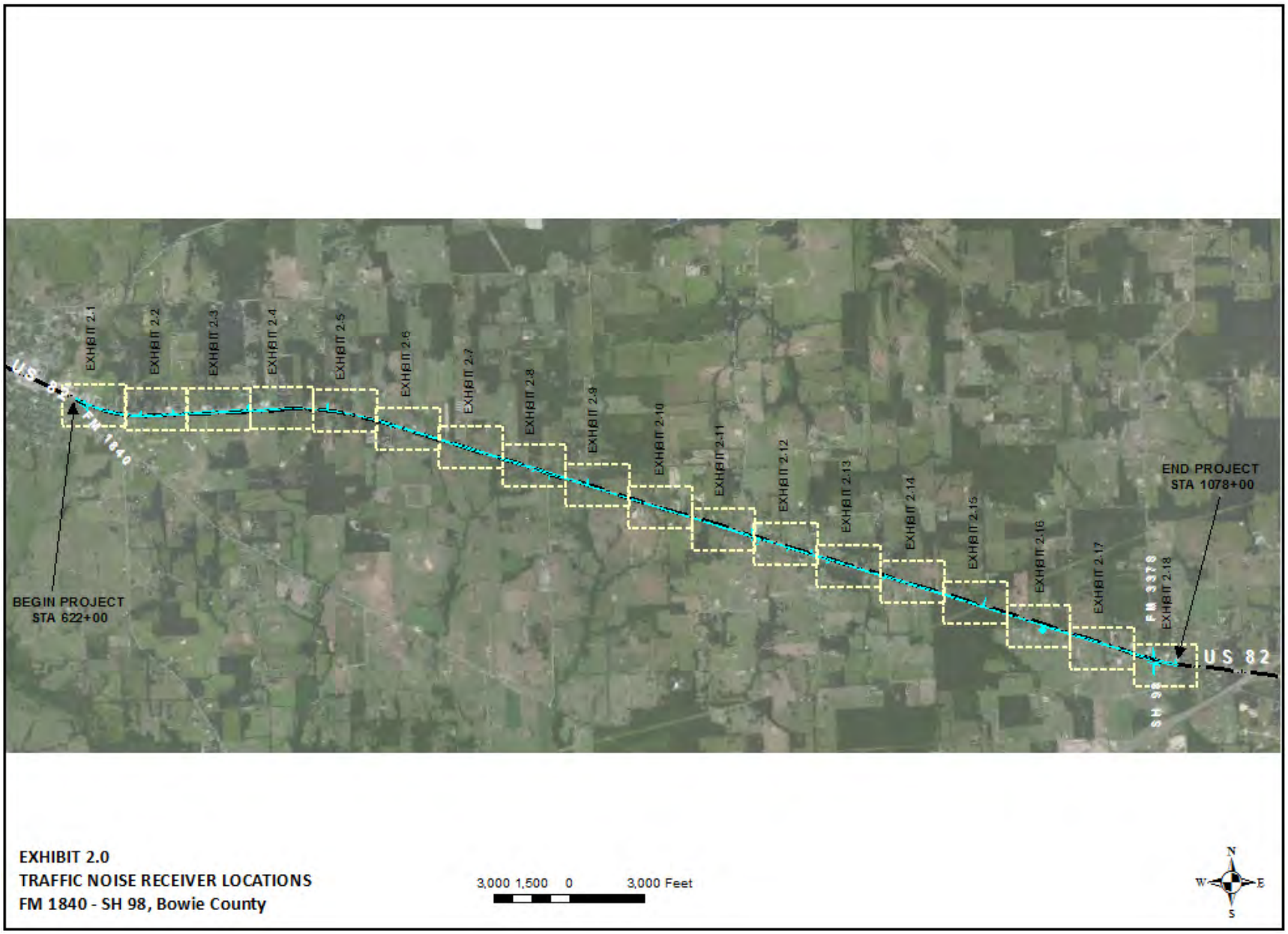
EXHIBIT 2.1
EXHIBIT 2.2
EXHIBIT 2.3
EXHIBIT 2.4
EXHIBIT 2.5
EXHIBIT 2.6
EXHIBIT 2.7
EXHIBIT 2.8
EXHIBIT 2.9
EXHIBIT 2.10
EXHIBIT 2.11
EXHIBIT 2.12
EXHIBIT 2.13
EXHIBIT 2.14
EXHIBIT 2.15
EXHIBIT 2.16
EXHIBIT 2.17
EXHIBIT 2.18
US 82
FM 1840
FM 3378
SH 98
BEGIN PROJECT
STA 622+00
END PROJECT
STA 1078+00
EXHIBIT 2.0
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County
3,000 1,500 0 3,000 Feet
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EXHIBITS

EXHIBIT 1.0
PROJECT LOCATION
FM 1840 - SH 98, Bowie County

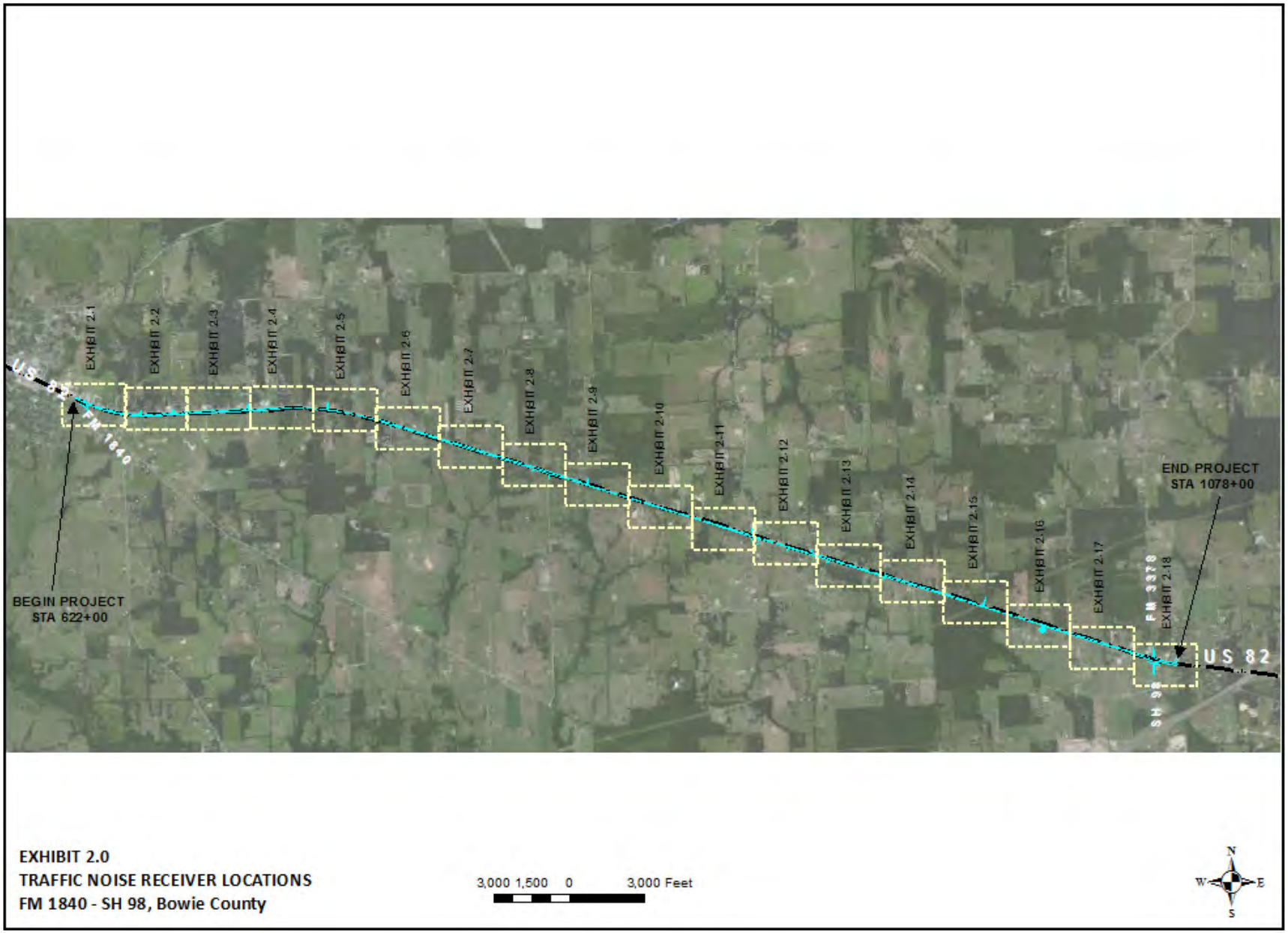
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EXHIBIT 2.18
FM 1840
FM 3378
SH 98
US 82
BEGIN PROJECT
STA 622+00
END PROJECT
STA 1078+00
EXHIBIT 2.0
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County
3,000 1,500 0 3,000 Feet
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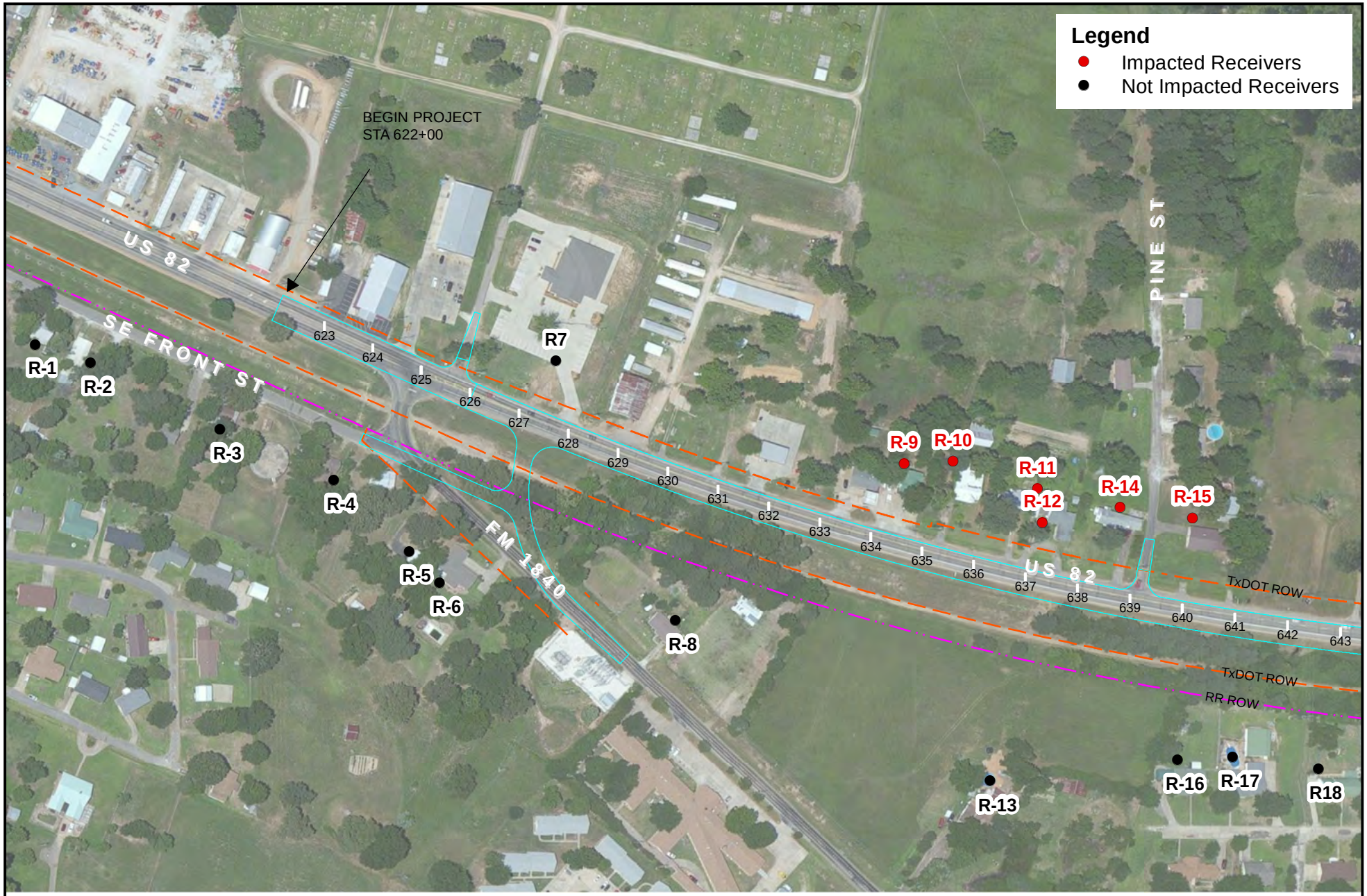

EXHIBIT 2.1
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

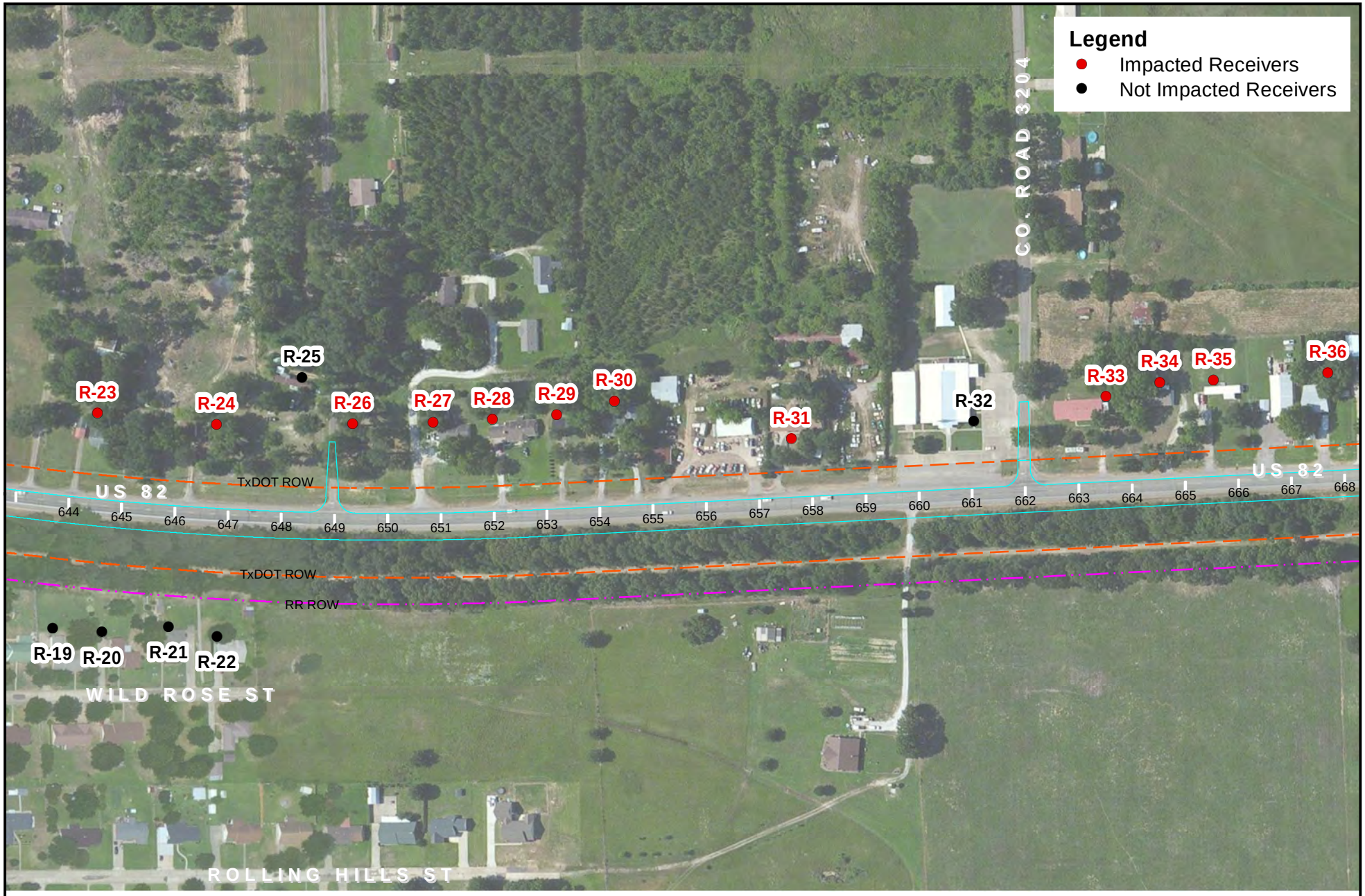

EXHIBIT 2.2
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

400 200 0 400 Feet

N W E S

EXHIBIT 2.3
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

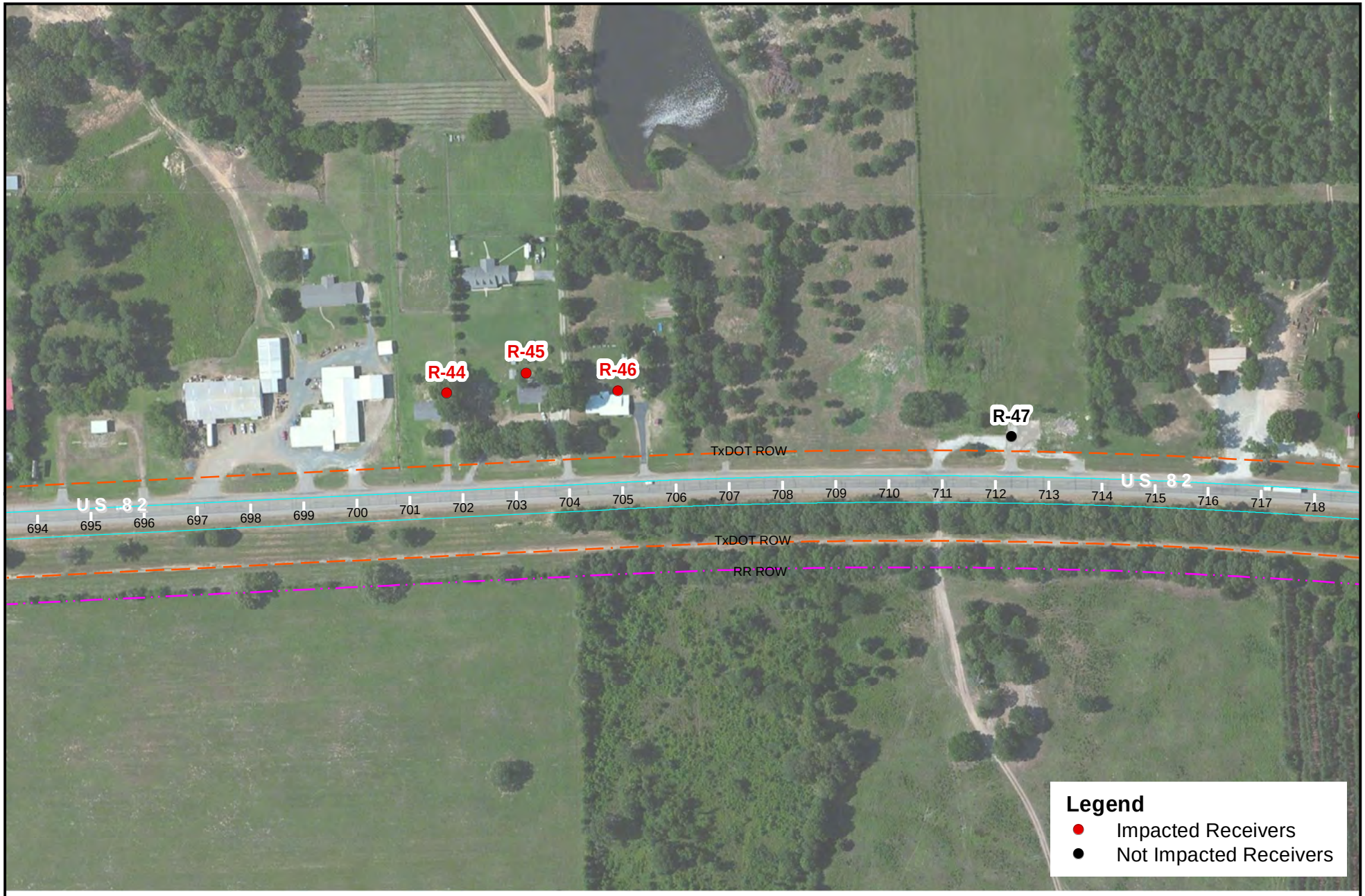

EXHIBIT 2.4
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

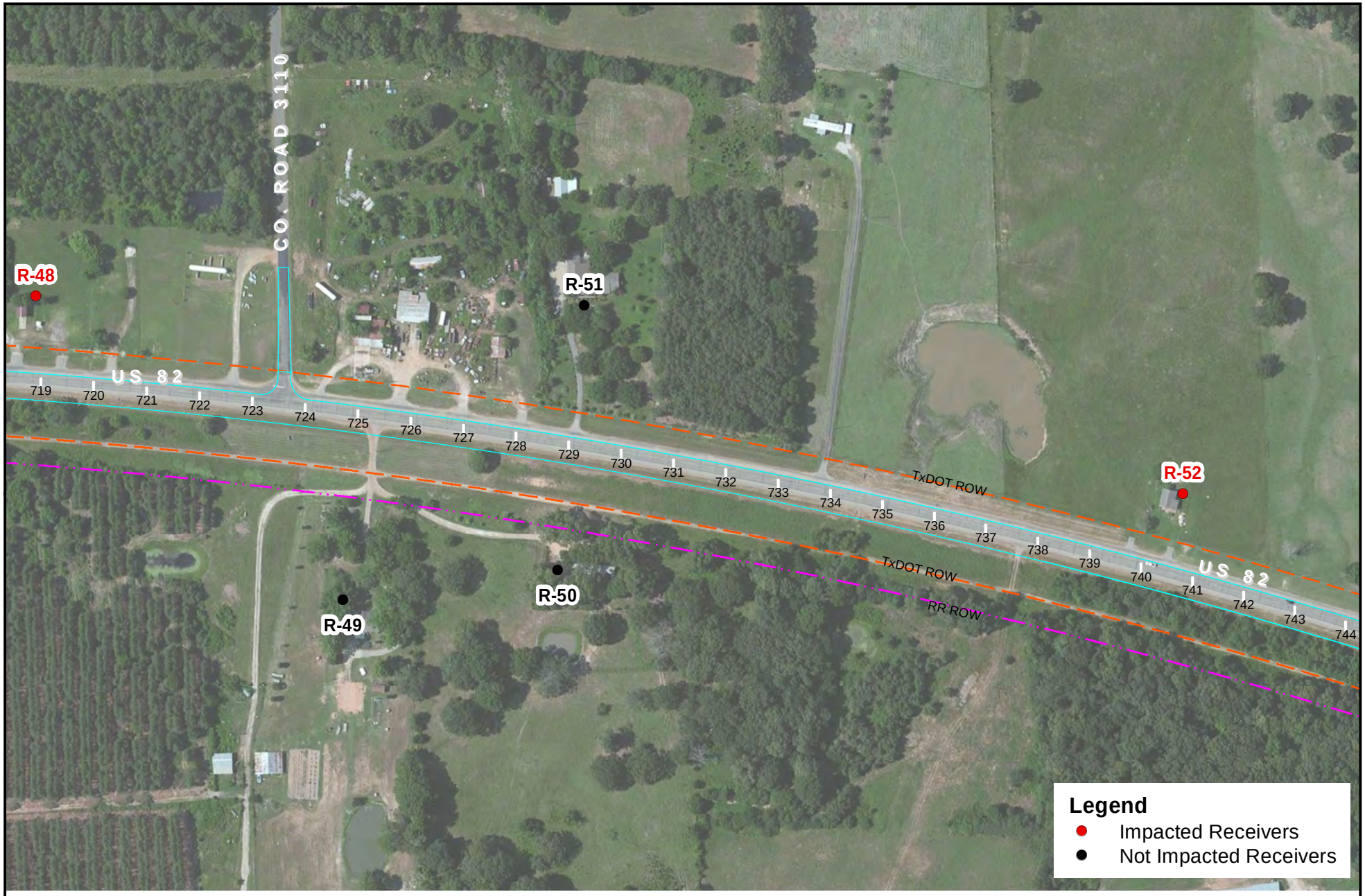

EXHIBIT 2.5
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

EXHIBIT 2.6
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

EXHIBIT 2.7
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

EXHIBIT 2.8
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

400 200 0 400 Feet

N W E S

EXHIBIT 2.9
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

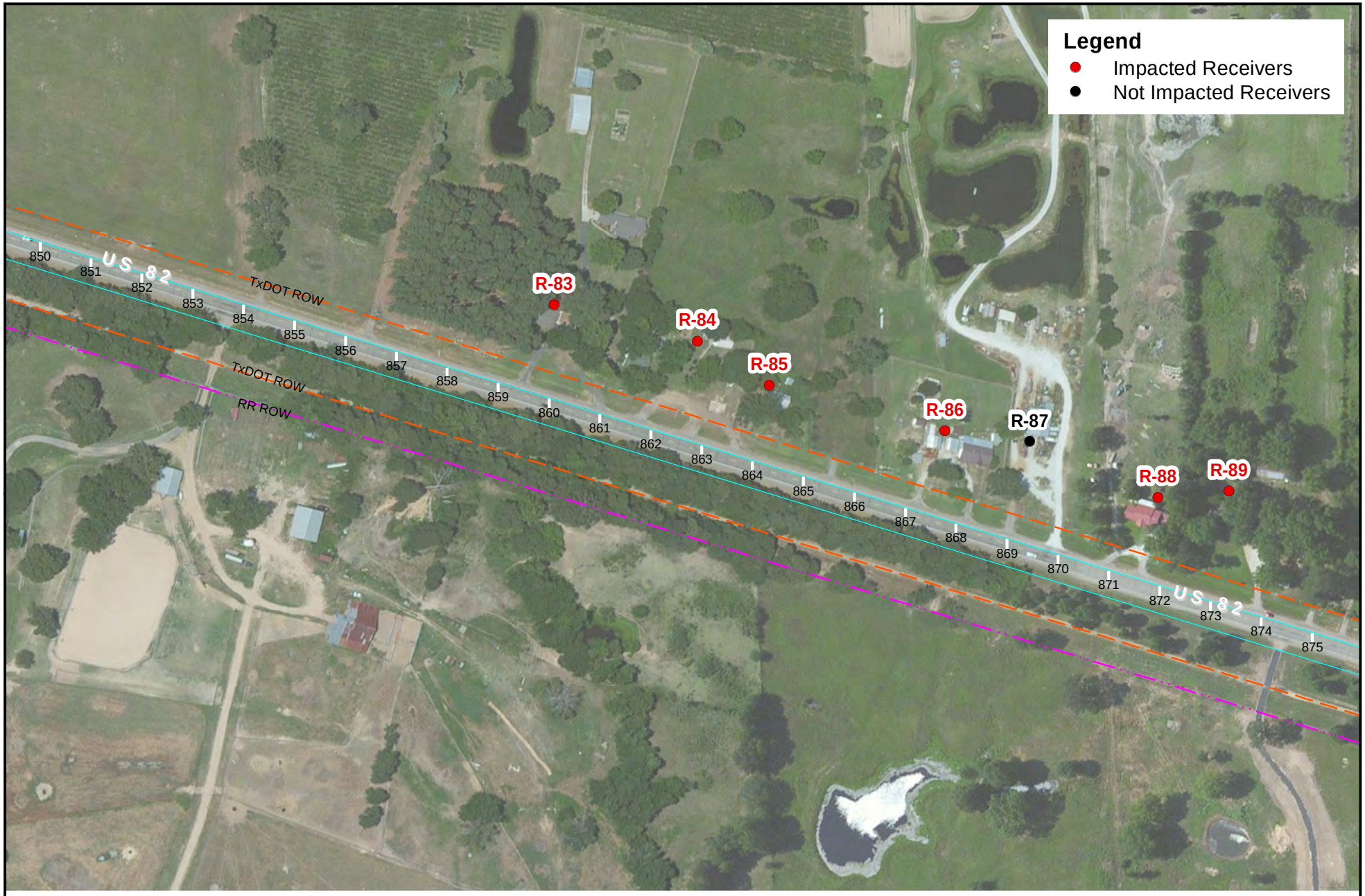

EXHIBIT 2.10
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

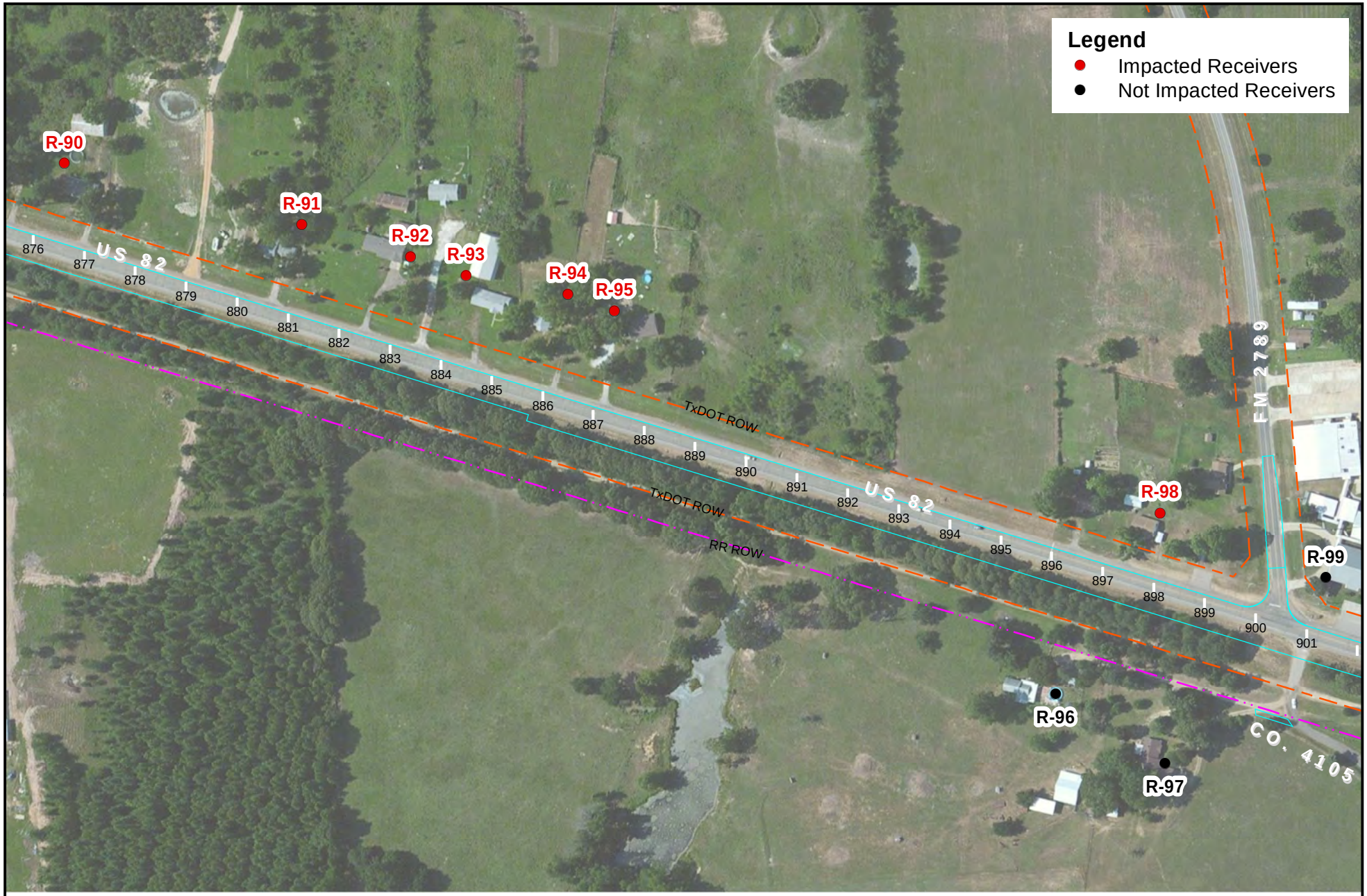

EXHIBIT 2.11
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

EXHIBIT 2.12
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

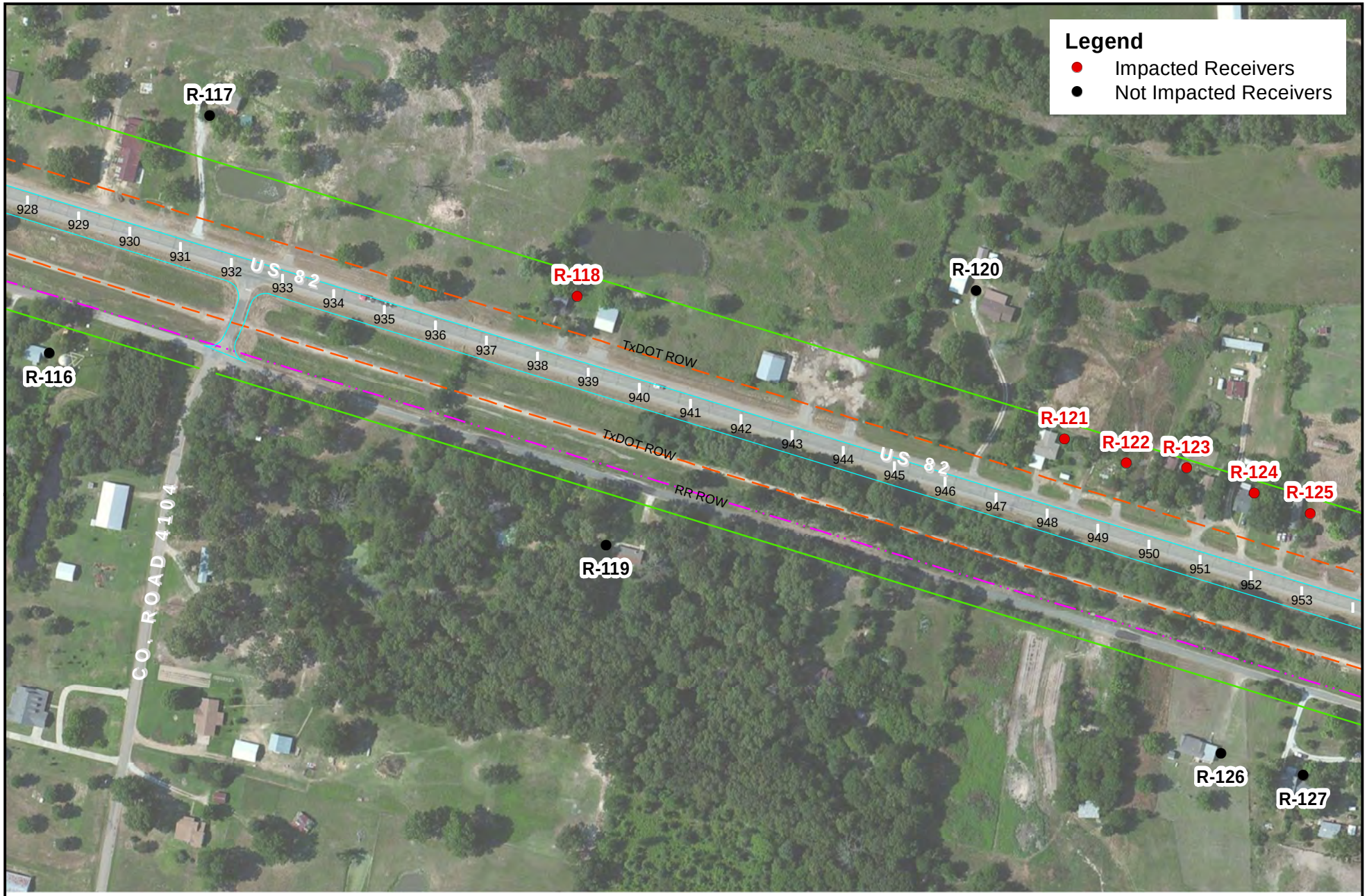

EXHIBIT 2.13
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

EXHIBIT 2.14
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

400 200 0 400 Feet

N W E S

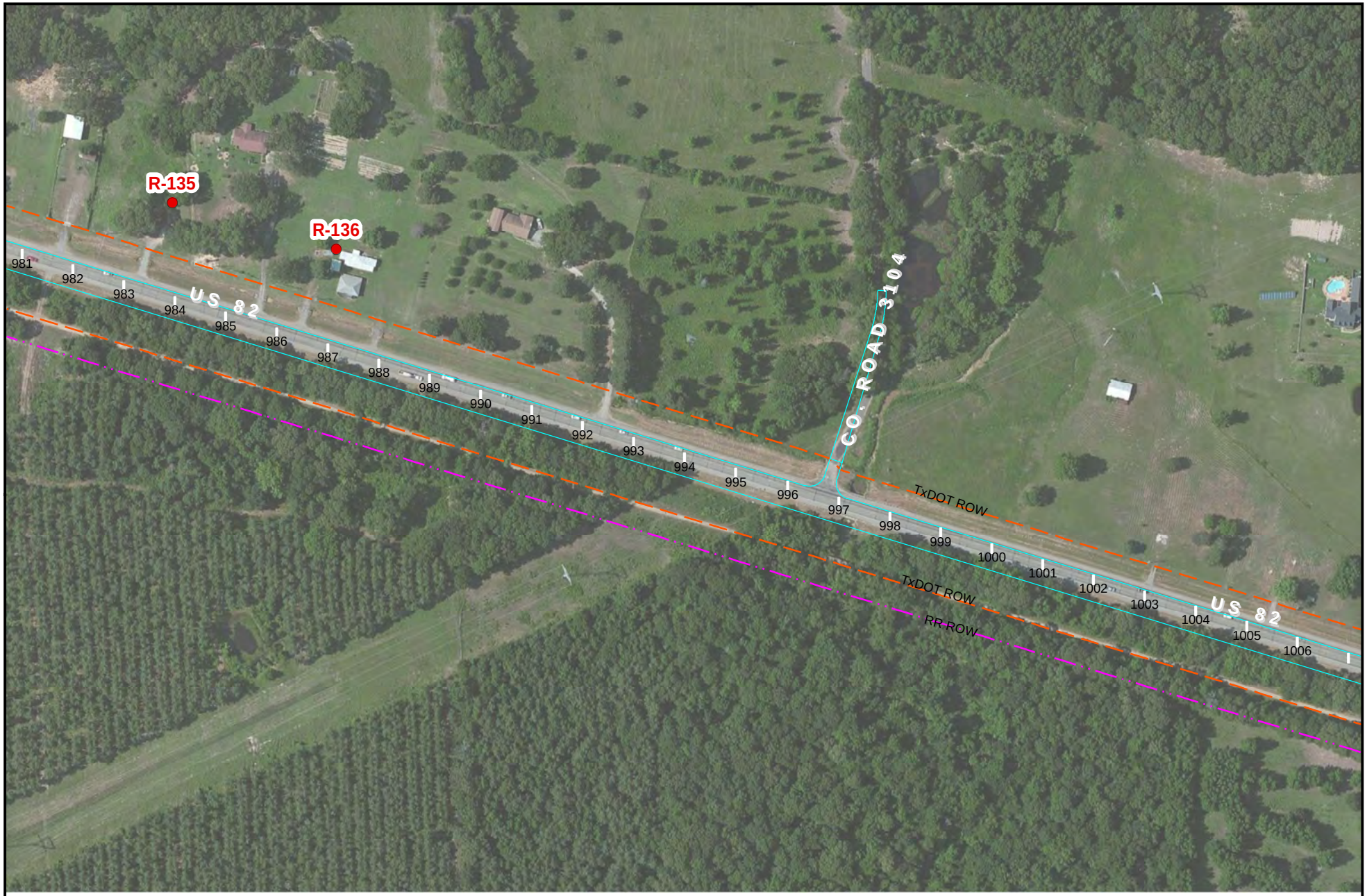

EXHIBIT 2.15
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

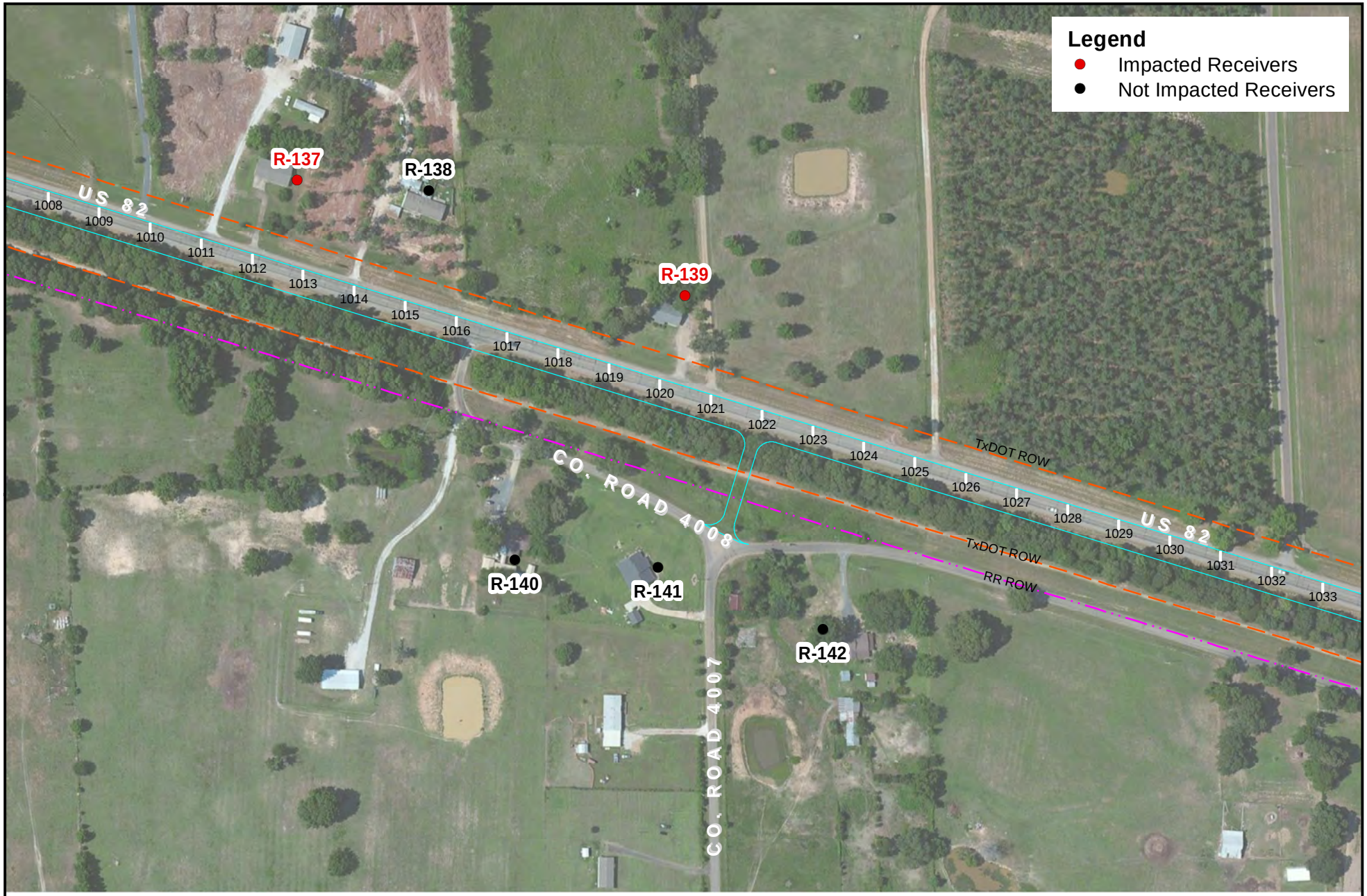

EXHIBIT 2.16
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

400 200 0 400 Feet

N W E S

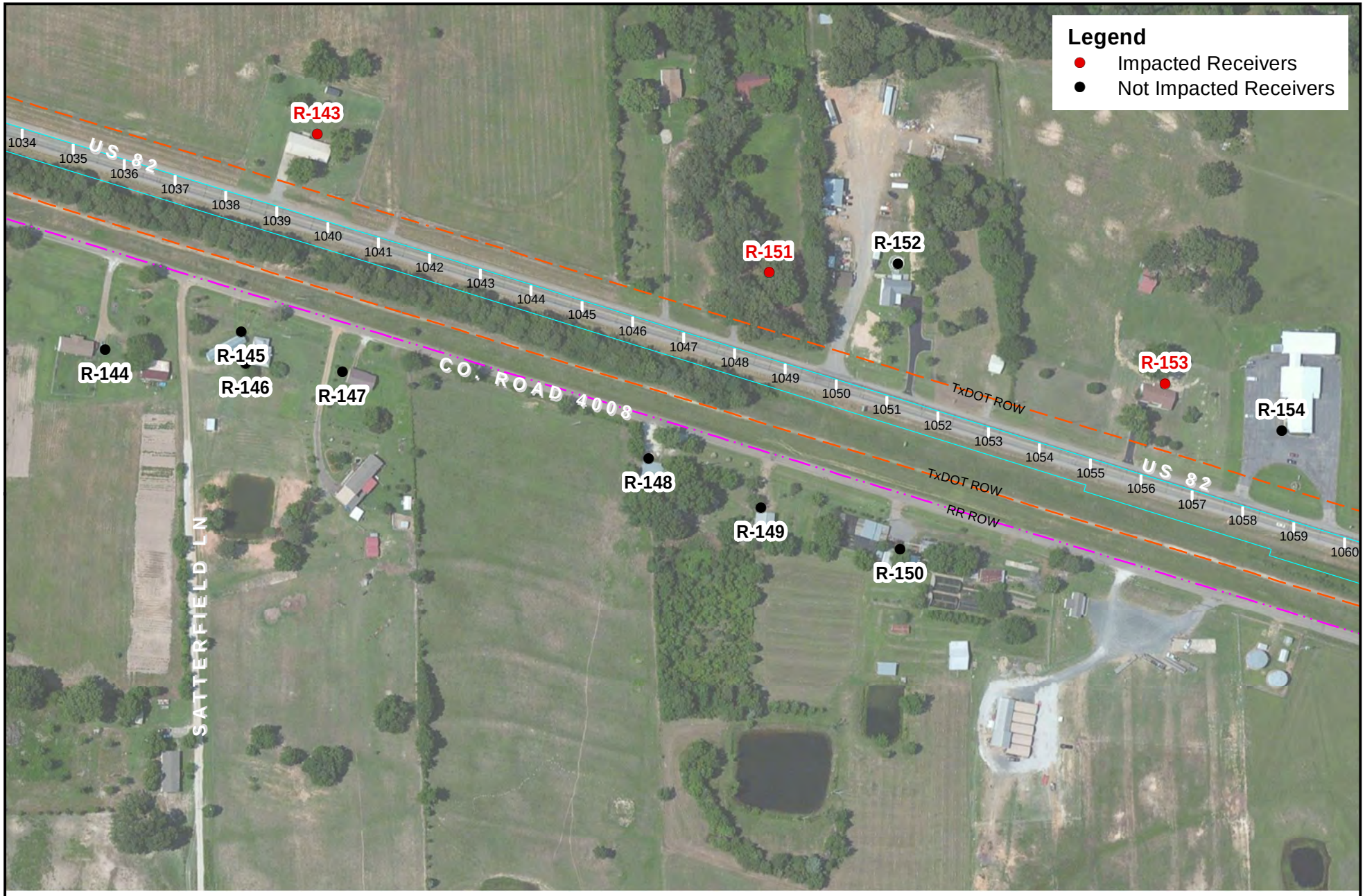

EXHIBIT 2.17
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

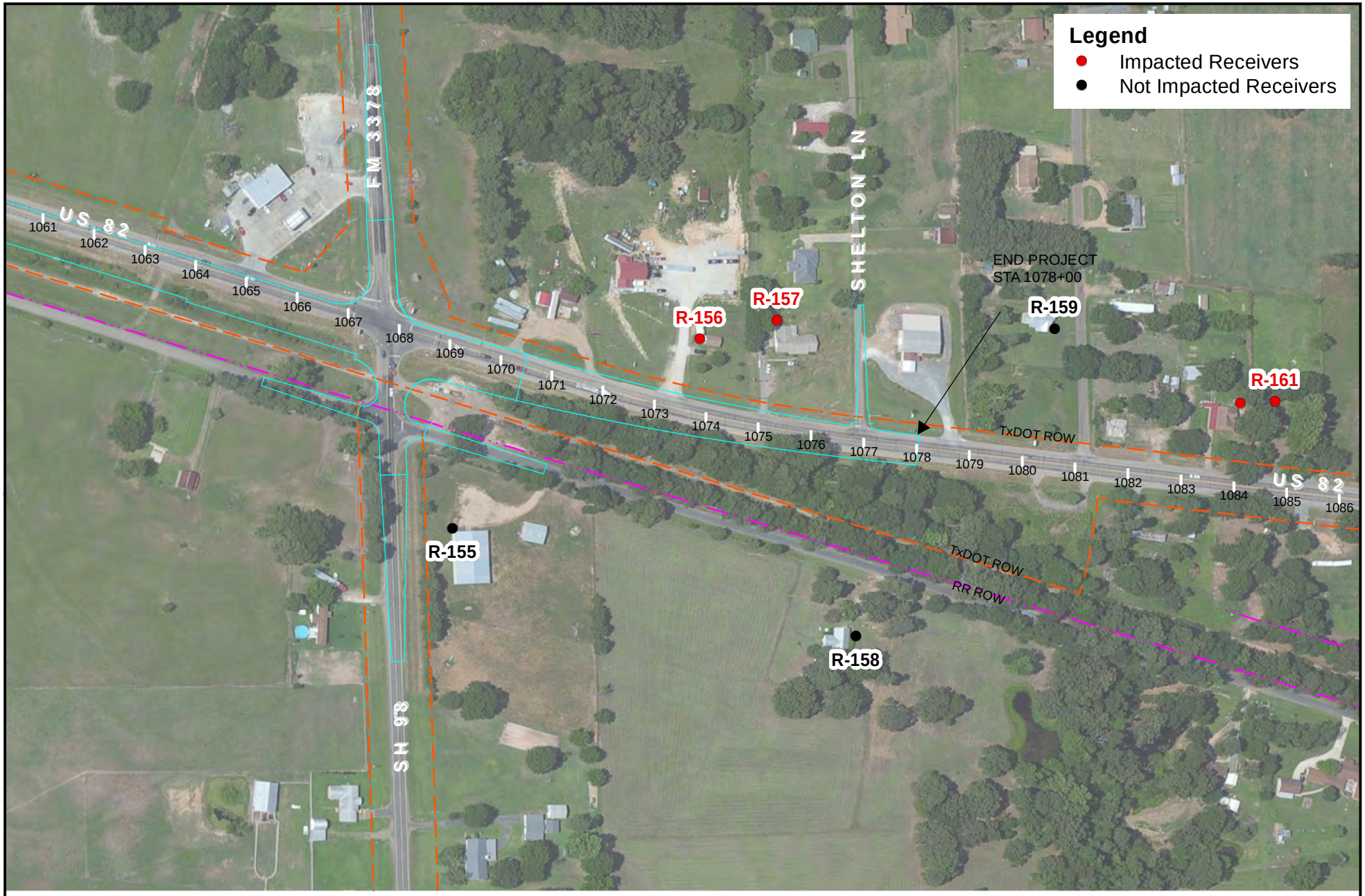

EXHIBIT 2.18
TRAFFIC NOISE RECEIVER LOCATIONS
FM 1840 - SH 98, Bowie County

EXHIBIT 3.0
NOISE BARRIER LOCATION
FM 1840 - SH 98, Bowie County