

Draft Environmental Assessment

SH 121, Dallas District

Project limits: from the Collin County Outer Loop to North of CR 635

CSJ: 0549-03-021, 0549-03-024, 0549-03-028 and 0549-02-028

Collin and Fannin Counties, Texas

June 2017

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

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List of Acronyms

ACM	Asbestos Containing Materials
ADT	Average Daily traffic
APE	Area of Potential Effects
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
CMP	Congestion Management Process
СО	Carbon Monoxide
CR	County Road
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted decibel
DBH	Diameter at Breast Height
DOT	Department of Transportation
EA	Environmental Assessment
EMST	Ecological Mapping Systems of Texas
EO	Executive Order
EPA	Environmental Protection Agency
EPIC	Environmental Issues, Permits & Commitments
ETC	Estimated Time of Completion
FEMA	Federal Emergency Management Area
FHWA	Federal Highway Administration
FM	Farm-to-Market Road
FPPA	Farmland Protection Policy Act
FTA	Federal Transportation Administration
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information Systems
HCM	Highway Capacity Manual
ISA	Initial Site Assessment
LBP	Lead Based Paint
LEP	Limit English Proficiency
LOS	Level of Service
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
Mph	Miles per hour
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan

NAAQS	National Ambient Air Quality Standards
NCTCOG	North Central Texas Council of Governments
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWP	Nation Wide Permit
PA	Programmatic Agreement
PALM	Potential Archaeological Liability Map
PCN	Pre-construction Notification
PM	Particulate Matter
PWC	Parks and Wildlife Code
RKEI	Raba-Kistner Environmental, Inc.
ROW	Right-of-way
RPW	Relatively Permanent Water
SAL	State Antiquities Landmark
SGCN	Species of Greatest Conservation Need
SH	State Highway
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SOV	Single Occupancy Vehicle
SW3P	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TCAP	Texas Conservation Action Plan
TCEQ	Texas Commission on Environmental Quality
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TNW	Traditional Navigable Water
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks & Wildlife Department
TSWQS	Texas Surface Water Quality Standards
TxDOT	Texas Department of Transportation
TXNDD	Texas Natural Diversity Database
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
VCM	Voluntary Control Measures
vpd	Vehicles per Day

1.0 Introduction

The Texas Department of Transportation (TxDOT) proposes to improve State Highway (SH) 121 by widening the facility from a two-lane facility to a four-lane divided facility from the Collin County Outer Loop to north of County Road (CR) 635, in Collin County, Texas. The total proposed project length is approximately 9.52 miles (Appendix A). The purpose of the Environmental Assessment (EA) is to study the potential environmental consequences of the proposed project and determine whether such consequences warrant preparation of an Environmental Impact Statement. The EA is prepared to comply with TxDOT's environmental review rules and the National Environment Policy Act (NEPA). The EA will be made available for public review and following the comment period, TxDOT will consider any comments submitted.

2.0 Project Description

2.1 Existing Facility

The existing facility is a two-lane, one lane in each direction undivided facility with 10-ft wide outside shoulders and at-grade intersections. The usual right-of-way (ROW) width is 120-ft wide but the width is increased in some locations accommodate intersections. A grade separation intersection improvement project has been approved and is currently under construction for the SH 121/SH 160 intersection (CSJ: 0549-03-025), which is expected to be complete in 2017. The section of SH 121 south of Colin County Outer Loop is being upgraded from a 2-lane to a four-lane divided facility under a separate project. The proposed project overlaps this project to the south for the purpose of creating logical termini. The posted speed limit along SH 121 is 65 miles per hour (mph). Project photos are included in Appendix B.

2.2 Proposed Project

The proposed project would be a rural, four-lane divided highway, containing 12-ft wide travel lanes, 10-ft wide outside shoulders, 4-ft wide inside shoulders, a 40-ft wide grass median, and grass-lined ditches. Grade separated intersections are proposed at FM 455 and FM 2862 with discontinuous frontage roads. Two additional travel lanes will be added to SH 121 near the intersection with SH 160 to make a total of four travel lanes. The southbound entrance and exit ramps will be reconstructed to accommodate the additional lanes. Project schematics are included in Appendix C and typical sections are included in Appendix D.

3.0 Purpose and Need

3.1 Need

The project is needed because SH 121 between the Collin County Outer Loop to CR 635 (a) is inadequate to meet current and future traffic volumes, resulting in congestion, reduced mobility, and level of service "E" on this stretch of highway, and (b) does not meet current design standards, which present safety hazards.

3.2 Supporting Information

Population growth and suburban development in eastern Collin County has increased traffic on existing roadways and decreased regional mobility. High traffic volumes and congestion has accelerated the degradation of roadway surfaces and heightened safety concerns for the traveling public. Currently within the project limits, SH 121 is utilized most heavily by local residents who reside in the vicinity of the project. As the Dallas-Fort Worth Metro area continues to develop more regional traffic would utilize SH 121. Plan and program excerpts are included in Appendix E.

Widening the roadway would accommodate future traffic volumes, reduce congestion, and upgrade the facility to meet current design and safety standards by upgrading narrow bridges and increasing the roadway width. The added capacity resulting from the addition of two travel lanes would reduce the number of vehicles per lane per mile of roadway and establish greater driver sight horizontal clearance.

The improvements to SH 121 are warranted based on the projected population growth in the general vicinity of the project, as well as the projected increase in traffic volumes over the next 20 years. The existing Average Daily Traffic (ADT) for the project was measured at 16,000 vehicles per day (vpd) in 2016. The ADT for this section of SH 121 is predicted to increase to 23,900 vpd by the design year 2037.

The Highway Capacity Manual (HCM) defines six different levels of service (LOS) to grade the performance of intersections. These levels range from LOS "A" to LOS "F", with "A" representing the best performance and "F" representing the worst performance. In general, LOS "D" or better is defined as acceptable for urban conditions, while LOS "C" or better is defined as acceptable for urban conditions, while LOS "C" or better is defined beyond capacity. Table 1 provides the LOS criteria set by the HCM based on the average delay, expressed in seconds per vehicle, which drivers incur due to a traffic control device at an intersection.

LOS	Control Delay (seconds/vehicle)	Qualitative Description
А	<u>≤</u> 10	Good progression, few stops, and short cycle length
В	> 10 - 20	Good progression and/or short cycle lengths; more vehicle stops
С	> 20 - 35	Fair progression and/or longer cycle lengths, some cycle failures; significant portion of vehicles must stop.
D	> 35 – 55	Congestion becomes noticeable; high volume-to-capacity ratio, longer delays, noticeable cycle failures.
E	> 55 - 80	At or beyond limit of acceptable delay; poor progression, long cycles, high volumes, long queues.
F	> 80	Unacceptable to drivers. Arrival volumes greater than discharge capacity; long cycle lengths, unstable-unpredictable flows.

Table 1: LOS Criteria for Signalized Intersections

A LOS analysis was performed to evaluate traffic operations for the existing facility and year 2037. The analysis indicates that the LOS for the existing facility is LOS D/E (Northbound/Southbound) for AM peak hours and LOS E/D (Northbound/Southbound) for PM peak hours. At year 2037 under the projected traffic flow conditions with no improvements, the LOS for the existing roadway would be LOS E for both northbound and southbound directions for AM and PM peak hours. The proposed project would improve the facilities LOS to LOS A at completion and LOS A in 2037.

3.3 Purpose

The purpose of the proposed project is to improve mobility, decrease traffic congestion, accommodate population growth, and enhance safety for the traveling public, while upgrading the facility to current design standards from the Collin County Outer Loop to north of CR 635.

4.0 Alternatives

4.1 Build

The build alternative, described in Section 2.2 Proposed Project, was determined to meet the need and purpose of the project because additional lanes and improved intersections would result in overall improvement to LOS in both 2017 and 2037, as compared with the existing SH 121 configuration. In 2017, SH 121 LOS improves from LOS E to LOS A, and at design year 2037, SH 121 improves from LOS E under the no-build condition to LOS A. The proposed SH 121 facility, in general, is proposed to operate at a LOS A or better through 2037.

4.2 No-Build

In addition to the build alternative discussed above, the only other alternative being considered is the no-build alternative. The no-build alternative would leave the existing facility as is; it would remain a two-lane facility. Normal routine maintenance would continue and all other pending, previously authorized actions would proceed as long as they do not require additional travel lanes. Typical maintenance activities would include inspections of roadway and bridges, minor rehabilitations, pavement edge repair, seal coats and overlays, and other activities such as striping, signing, and patchwork. The no-build alternative is not the preferred alternative because it does not meet the need and purpose of this proposed project.

4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration

Several conceptual design alternatives most likely to meet the project's need and purpose were identified and evaluated by the project study team. These alternatives were analyzed using affects to property owners, mobility benefits, environmental effects, safety, and cost and funding feasibility. The proposed build alternative is the recommended alternative because it utilizes the existing SH 121 alignment, improves area mobility and facilitates future expansion of other local roadways, minimizes environmental effects, improves driving conditions, and is compatible with available funding.

5.0 Affected Environment and Environmental Consequences

In support of this EA, the following technical reports and documents were prepared:

- Air Quality Assessment Technical Report
- Archeological Background Study
- Archeological Survey Report
- Biological Evaluation Form and Technical Report
- Community Impacts Assessment Technical Report
- Hazardous Materials Initial Site Assessment Report
- Report for Historical Studies Survey
- Traffic Noise Technical Report
- Water Resources Technical Report

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

The following sub-sections identify the environmental consequence of the Build and No-Build Alternative on each resource as well as mitigation and compliance with applicable laws and executive orders, where applicable.

Resource specific maps are included in Appendix F, and resource agency coordination is included in Appendix G.

5.1 Right-of-Way/Displacements

Build Alternative

Under the build alternative, ROW would be acquired from both sides of the roadway, but the majority of the widening to accommodate the new lanes would be to the north from the western terminus to FM 455. From FM 455 to FM 2862, the widening would shift to the south side. From FM 2862 to CR 582 the widening would shift to the north side. From CR 582 to the eastern terminus of the proposed project, the widening would shift to the south side.

The largest ROW acquisitions are at FM 455 and FM 2862 since these intersections are currently at-grade and are proposed to be grade-separated. The project would require a total of 165.075 acres of new ROW, which will include the displacement of four residences, one commercial building, and one barn structure. In addition, 2.417 acres of permanent easements would be needed. A table showing ROW and easements required for the proposed project is included in Appendix H. All ROW acquisition would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

- One residential displacement on Collin County Parcel No. 1012950, located 0.75 mile southwest of the SH 121/FM 455 intersection on the northbound side of SH 121, includes one mobile home and two storage buildings. These structures could be relocated to other areas of the property.
- A residential displacement on Collin County Parcel No. 1022743, located 0.1 mile northeast of the SH121/FM 455 intersection on the northbound side of SH 121, consists of a single-family wooden frame structure. It is anticipated that this displacement would require replacement housing in a different location.
- A residential displacement on Collin County Parcel No. 1026552, located at the northeast corner of the SH 121/FM 2862 intersection, consists of a single-family wooden frame structure and a storage structure. It is anticipated that this displacement would require replacement housing in a different location.
- A residential displacement on Collin County Parcel No. 1026561, located 0.3 mile northeast of the SH 121/FM 2862 intersection on the southbound side of SH 121, consists of a wooden frame structure and a storage building. It is

anticipated that this displacement would require replacement housing in a different location.

- A commercial building displacement on Collin County Parcel No. 1026534, located 0.2 mile northeast of the SH 121/FM 2862 intersection on the northbound side of SH 121, consists of a wooden frame structure associated with a golf driving range. This structure could be relocated to another area of the property. Since the structure could be relocated, it is not anticipated employment would be affected by this displacement.
- A barn on Collin County Parcel No. 2121009, located 0.3 mile southwest on CR 936 on the northbound side of SH 121, would be displaced. It is anticipated that the barn would be replaced in another area of the property.

Mitigation

- Replacement housing of the same type and size (including number of bedrooms) is available. Depending on the difference in prices of properties of similar size and comparable in all other criteria, financial assistance in the form of a purchase supplement, rental assistance payments, or a down payment on a loan may be offered to the relocated residents. A potentially displaced person would not be forced to move until at least one comparable replacement dwelling is presented.
- TxDOT would provide, through its Relocation Assistance Program, payment and services to aid in movement to a new location. Relocation assistance is available to all individuals, families, businesses, farmers, and nonprofit organizations displaced as a result of the proposed project. This assistance applies to tenants as well as owners occupying the real property needed for the proposed project.
- The TxDOT Relocation Office would provide assistance to displaced businesses and nonprofit organizations to aid in their satisfactory relocation with a minimum of delay and loss in earnings.
- The proposed project would proceed to construction when all displaced families and businesses have been afforded the opportunity to relocate to adequate replacement sites. The available structures must also be open to persons regardless of race, color, religion, or nationality and be within the financial means of those individuals affected.

No-Build Alternative

Under the No-Build Alternative; there would be no displacements from the proposed project.

5.2 Land Use

The surrounding area can be described as gently rolling terrain in a predominantly rural setting. Scattered rural residential properties and commercial developments can be found in the area; however, development is mostly limited. Signs of suburbanization, such as residential subdivision development, occur to the southwest of the project, but are not found within or adjacent to the project limits. The existing ROW varies from approximately 120 to 270 feet in width at major intersections. As shown in Appendix F and the summarized in Table 2 below, land use in the project area consists of the following:

Туре	Area	Percent of Total
Transportation Right-of-Way	170.2	45
Undeveloped (e.g. Riparian Areas, Mixed Pasture/Woodland)	123.7	33
Agriculture (Row Crops or Hay Production)	66.0	18
Rural Residential	10.8	3
Commercial	5.6	1
Total	376.3	

Table 2: Project Area Land Use

Build Alternative

Under the build alternative, 165.075 acres of land would be converted into transportation use.

No-Build Alternative

Under the No-Build Alternative, there would be no conversion of land use. The 164.95 acres of proposed new right-of-way would remain under their current ownership and continue in their current use (see previous table).

5.3 Farmlands

This section evaluates farmland resources in accordance with TxDOT's Environmental Handbook titled Farmland Protection Policy Act (FPPA) (740.01.GUI, Dated August 2015). According to the Natural Resources Conservation Service (NRCS) "projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency."

The majority of required ROW is rural in nature with a total of approximately 206.9 acres of prime and/or important farmland soils mapped within the project area. Soils within the proposed project include Austin silty clay, Burleson clay, Frio clay loam, Houston black clay,

Lewisville silty clay, Fairlie Clay, and Leson Clay. Approximately 66.0 acres of farmland would be impacted by the proposed project.

Build Alternative

In accordance with the FPPA, the proposed ROW has been scored using the USDA Farmland Conversion Impact Rating Form (Form NRCS-CPA-106). The resulting score was below the 60 point threshold that requires coordination with the NRCS.

Farmland impact would be limited to only that land required by the project, and only along the periphery of agricultural properties.

No-Build Alternative

Under the No Build Alternative, there would be no impact, adverse or beneficial, to the soil and farmland adjacent to and within the project area.

5.4 Utilities/Emergency Services

Build Alternative

The proposed project would require utility adjustments. Numerous pole-mounted utilities including streetlights, telephone cables, traffic signals, and power transmission lines are located within or adjacent to the existing ROW along the project route. Several underground natural gas, crude, and petroleum pipelines cross the proposed project. The majority of the proposed ROW would be acquired from private property owners. Utility adjustments within the project limits would be the responsibility of TxDOT and require coordination with the utility owner/operators.

The project area is served by the Anna, Westminster, and Trenton Fire Departments and the Collin and Fannin County Sherriff Offices. The proposed improvements may temporarily alter access during construction; however, in the long term, mobility and accessibility improvements resulting from the proposed project would be enhanced. The reduction in congestion at these intersections would potentially improve the response time of emergency service providers. Construction-related detours or changes in access will be posted and communicated to emergency service providers prior to commencing construction.

No-Build Alternative

Under the No-Build Alternative there would be no project-related impacts to utilities. Emergency service response would continue to be hindered by heavy congestion and unreliable travel times associated with congestion. Response times would grow even longer in the future as congestion in the corridor worsens.

5.5 Bicycle and Pedestrian Facilities

Build Alternative

The design of the project complies with the U.S. Department of Transportation's Policy Statement on Bicycle and Pedestrian Accommodations, Regulations and Recommendations; and TxDOT's Guidelines Emphasizing Bicycle and Pedestrian Accommodations. Based on the project area's location within a predominately rural sector of Collin County, no special considerations were made for pedestrians or bicycles; however, the proposed typical sections in the project schematics provide for a 10-foot shoulder on both sides of the highway along most of the proposed facility, which would provide space for bicyclists and pedestrians on SH 121.

The design of the project complies with the U.S. Department of Transportation's Policy Statement on Bicycle and Pedestrian Accommodations, Regulations and Recommendations; and TxDOT's Guidelines Emphasizing Bicycle and Pedestrian Accommodations.

No-Build Alternative

Under the No-Build Alternative, there would be no impact, adverse or beneficial, to bicycle or pedestrian facilities.

5.6 Community Impacts

As described in the Community Impact Analysis Assessment Technical Report, completed in November 2016, the proposed project would not split or isolate any existing neighborhoods or communities. Neighborhoods and communities that were divided by the original construction of SH 121 have long accommodated the highway impact. The proposed project is not expected to affect the community's social interaction, attachment, or common responsibilities.

Due to the large number of intersection streets and driveways, the addition of a median would result in U-turns being required to access some of the existing streets and driveways; however, the change to travel patterns and accessibility are expected to be beneficial, overall. The U-turns required would generally not increase travel times by more than 1 minute. Proposed improvements would create safer conditions, such as improved sight lines and separated traffic, which would likely reduce the total number of accidents and increase mobility.

5.6.1 Environmental Justice

The study area consists of 3 census tracts, 5 block groups, and 26 census blocks. The median household income for the study area block groups ranged from \$64,135 to \$100,962. No project area block groups had median household incomes less than the 2016 poverty threshold of \$24,300.

Build Alternative

A total of 4 census blocks had minority populations over 50%; however, impacts will be borne equally by all populations in the project area. No residential displacements are proposed in minority areas. EJ populations would realize the same benefits as non-EJ populations: reduced

congestion and improved mobility. The improved mobility and reduced congestion would allow for more efficient travel through the surrounding area. The proposed project would not subject environmental justice communities to disproportionately high and adverse impacts.

No-Build Alternative

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

5.6.2 Limited English Proficiency

Census data indicates that 1.2% of the block group project area populations (five years and older) reported speaking English less than "very well". Windshield surveys during field visits did not identify any indicators of LEP populations, such as signage in languages other than English.

Build Alternative

Should LEP populations be identified in the course of project development, necessary reasonable steps would be taken to provide services in Spanish to LEP persons so that they may effectively participate in, and have meaningful access to, TxDOT programs and activities. TxDOT ROW publications in Spanish were provided to interested Public Meeting attendees. All Legal Notices published in English language newspapers provided contact information for persons interested in attending the meetings who had special communication/accommodation needs. A Public Hearing is anticipated to be held in the summer of 2017. The previously discussed accommodations would be repeated for the Public Hearing.

Given all of this as well as the project's scope, the proposed action is not likely to have an adverse effect on any LEP populations. The proposed project satisfies the requirements of Executive Order 13166 on Limited English Proficiency.

No-Build Alternative

Under the No-Build Alternative, there would be no impacts to LEP populations as a result of the implementation of the proposed project. LEP populations would not benefit from the widened roadway.

5.7 Visual/Aesthetics Impacts

The visual and aesthetic quality of the adjacent area depends upon the topography, natural features and vegetation, as well as the man-made environment. The overall visual character of an area is a combination of influences on the viewer's preferences including factors such as uniqueness of the landscape in relation to the region as a whole, number of potential viewers, and amount of disturbance to the landscape.

The adjacent area is categorized as a rural landscape made up of pastureland and wooded tracts as well as intermittently located residences. Businesses are predominately located at the

major intersections of FM 2862 and SH 160. The adjacent area exhibits a low to medium degree of aesthetic quality, with few unique or spectacular views.

Build Alternative

Due to the relatively large overall size of the project, the proposed highway would have some effect on the aesthetic quality of the surrounding area. Visual impact would take two forms: views of the proposed highway from various points along the alignment and views from the proposed highway of the surrounding landscape. The addition of grade separations at intersections would cause some direct visual and aesthetic impacts in those areas. However, due to the existing SH 121 and the lack of unique viewsheds in the project area, the proposed project is not expected to further reduce the current aesthetic quality of the existing corridor.

No-Build Alternative

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

5.8 Cultural Resources

Cultural resources are structures, buildings, archaeological sites, districts (a collection of related structures, buildings, and/or archeological sites), cemeteries, and objects. Both federal and state laws require consideration of cultural resources during project planning. At the federal level, NEPA and the National Historic Preservation Act (NHPA) of 1966, as amended among others, apply to transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas apply to these projects. Compliance with these laws often requires consultation with the Texas Historical Commission (THC)/Texas State Historic Preservation Office (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.

Coordination with The SHPO and federally-recognized tribes that have an interest in the project area was initiated on December 1, 2016.

Compliance with the implementing regulations of 36 CFR Part 800 was conducted under the terms and conditions of the First Amended Programmatic Agreement (PA) (2005) among TxDOT, FHWA, SHPO, and the Advisory Council on Historic Preservation. Compliance with the Antiquities Code of Texas was coordinated with the THC under the terms of the Memorandum of Agreement (MOA) between TxDOT and the THC (2004).

5.8.1 Archaeology

Build Alternative

An intensive archaeological survey was conducted for the proposed project. The results of this survey are included in the Archaeological Survey Report (January 20, 2017), see Appendix G. All

areas recommended for archaeological survey were not surveyed due to lack of access. TxDOT archaeologists determined no archaeological historic properties or SALs present within project area investigated and that additional investigations will be conducted once property access is granted. Tribal consultation, included in Appendix G, was completed in 2011 and due to project changes was re-coordinated in 2016. SHPO concurrence for the SH 160 intersection project was obtained on February 2, 2017, and SHPO concurrence for the proposed project was obtained March 16, 2017, see Appendix G.

No-Build Alternative

Under the No-Build Alternative, there would be no potential to affect archaeological resources and no requirement to evaluate these resources under applicable regulations and inter-agency agreements.

5.8.2 Historic Resources

Build Alternative

TxDOT certified historians surveyed the project APR in July 2016, the survey results are included in the Report for Historical Studies Survey (July 2016). TxDOT determined on March 30, 2017 that the project would have no effect to historic, non-archeological properties, see clearance memo in Appendix G. Individual project coordination with SHPO was not required.

No-Build Alternative

Under the No-Build Alternative, there would be no potential to affect historic properties and no requirement to evaluate historic properties under applicable regulations and inter-agency agreements.

5.9 DOT Act Section 4(f), LWCF Act Section 6(f), and PWC Chapter 26

Section 4(f) of the Department of Transportation Act of 1966, applies to the project when ROW would be acquired or result in constructive use of the following resources:

- Publicly owned parklands
- Waterfowl refuges
- Wildlife refuges
- Significant historic sites

Section 6(f) protects parks and recreation areas improved by Land and Water Conservation Fund (LWCF). Chapter 26 of the Parks and Wildlife Code (PWC) applies to any project that requires the use or taking of any public land designated and used (prior to the arrangement of the project) as a park, recreation area, scientific area, wildlife refuge, or historic site.

Build Alternative

The proposed project would not require the use of, nor substantially impair the purposes of, publicly owned land from a public park, recreational area, wildlife and waterfowl refuge lands, or historic sites of national, state, or local significance; therefore, consideration of DOT Section 4(f), LWCF 6(f), and PWC Chapter 26 is not required for these resource types.

No-Build Alternative

Under the No-Build Alternative, there would be no potential to impact Section 4(f), 6(f), or Chapter 26 properties in the project area.

5.10 Water Resources

5.10.1 Clean Water Act Section 404

Section 404 of the Clean Water Act (CWA) states that the placement of temporary or permanent dredge or fill material into potentially jurisdictional waters of the U.S. will require a permit from the U.S. Army Corps of Engineers (USACE).

Build Alternative

A total of 14 potential waters of the U.S. would be impacted by the proposed project. The stream crossings are shown in Appendix F. No wetlands were identified within the project area.

The proposed project would impact Sister Grove Tributary Number 4, Sister Grove Creek, and Pilot Grove Creek; however, these impacts consist only of removing existing bridge columns. Impacts to ten other streams would result from necessary culvert replacements/extensions and channel bank and structure protection with stone rip-rap. Impacts to each of the affected crossings were minimized during the schematic preparation in order to avoid and minimize impacts to waters of the U.S. by crossing perpendicular to the stream and avoiding the placement of columns or other fills within the stream channels.

It is anticipated that each of the impacts from the proposed project would be authorized under a USACE Nationwide Permit (NWP) 14: Linear Transportation Projects. The activities at each drainage crossing have been identified as single and complete projects as defined in the NWPs and would therefore be permitted separately. A preconstruction notification (PCN) for Crossing 4 and Crossing 20 is required because the permanent fill at this site would exceed 0.1 acre of permanent impacts. No PCN is required for the twelve other crossings because the project would permanently impact less than 0.1 acre at these crossings.

Mitigation

Appropriate measures would be taken to maintain normal downstream flows and to minimize flooding. Temporary fills would consist of materials and be placed in a manner that would not be eroded by expected high flows. Temporary fills would be removed in their entirety after construction. The affected area would be returned to preconstruction 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.

No-Build Alternative

Under the No-Build Alternative, there would be no impact, adverse or beneficial, to waters of the U.S.

5.10.2 Clean Water Act Section 401

General Condition 21 of the NWP program requires applicants using NWP 14 to comply with Section 401 of the CWA. In Texas, compliance with Section 401 of the CWA is managed by the Texas Commission on Environmental Quality (TCEQ) and requires the use of best management practices (BMPs) to manage water quality on construction sites. TCEQ has developed a tiered review system for all Section 404 applications based on project size and the amount of state water affected. This system includes Tier I projects, which are defined as projects that will affect less than 3 acres of waters of the state or 1,500 linear feet of streams (one acre of impact is considered equal to 500 linear feet of streams), and Tier II projects, which exceed 3 acres of waters or 1,500 linear feet of streams. The TCEQ 401 Certification Description states that by incorporating approved BMPs into Tier I projects, no further 401 review will be required.

Build Alternative

The proposed project is not anticipated to impact greater than 3 acres or 1,500 linear feet of waters of the U.S. and would therefore qualify as a Tier I project.

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

No-Build Alternative

Under the No-Build Alternative, there would be no adverse or beneficial impact to water quality.

5.10.3 Executive Order 11990 Wetlands

EO 11990 requires federal agencies to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. EO 11990 does not apply because no wetlands would be affected by the proposed project.

5.10.4 Rivers and Harbors Act

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

5.10.5 Clean Water Act Section 303(d)

In compliance with Section 303(d) of the CWA, the TCEQ identifies water bodies in the State that do not meet the Texas Surface Water Quality Standards (TSWQS) and reports them biennially to the EPA in the Texas Integrated Report of Surface Water Quality. According to the provisions of the TxDOT-TCEQ memorandum of understanding (MOU), coordination with TCEQ is required if all or part of the project drains to an impaired assessment unit that is within five miles of the project and is in the same watershed as the project.

Runoff from the proposed project would discharge into two TCEQ-designated stream segments: Sister Grove Creek (0821B) and Pilot Grove Creek (0821A). These stream segments are not listed as impaired waters on the 2014 Texas 303(d) list. The project is not within 5 miles of a listed impaired stream segment. Therefore, Section 303(d) does not apply to this project.

5.10.6 Clean Water Act Section 402

Build Alternative

Since the proposed project would disturb more than 5 acres, TxDOT would be required to comply with the TCEQ Texas Pollutant Discharge Elimination System (TPDES) General Permit for Construction Activity. This would be accomplished by filing a Notice of Intent (NOI) to comply with TPDES. A Storm Water Pollution Prevention Plan (SW3P) will be developed prior to any construction activities in accordance with the guidelines set forth in General Permit document.

The proposed project is located within the boundaries of the Collin County Municipal Separate Storm Sewer System (MS4), and would comply with the applicable MS4 requirements.

No-Build Alternative

Under the No-Build Alternative, there would be no adverse or beneficial impact to water quality from runoff.

5.10.7 Floodplains

Portions of the project are located within a Federal Emergency Management Agency (FEMA) designated 100-year floodplain.

Build Alternative

The hydraulic design for this project would be in accordance with current FHWA and TxDOT design policies. The facility would permit the conveyance of the 100-year flood, inundation of the roadway being acceptable, without causing significant damage to the facility, stream or 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.

An initial coordination meeting was held with Collin County (Floodplain Administrator) on May 5, 2014 to discuss the project limits and the project team's hydraulic approach at the four floodplain crossings (Sister Grove Creek Tributary No. 4, Sister Grove Creek, Pilot Grove Creek, and Desert Creek). The approach will be in compliance with FHWA and TxDOT design guidelines and will not adversely impact the 100-year water surface elevation.

No-Build Alternative

Under the No-Build Alternative. there would be no adverse or beneficial impact to floodplains.

5.10.8 Wild and Scenic Rivers

The Wild and Scenic Rivers Act protects rivers that are listed on the National Inventory of Wild and Scenic Rivers, which are characterized as possessing outstandingly remarkable scenic, recreational, geological, fish and wildlife, cultural, or other similar values. There are no wild and scenic river resources in the vicinity of the project.

5.10.9 Trinity River Corridor Development Certification

This project is outside of the Trinity River Corridor Development Regulatory Zone and a Corridor Development Certificate would not be required.

5.10.10 Coastal Barrier Resources

The proposed project is not located within a designated Coastal Barrier Resources Act (CRBA) map unit; therefore, the CBRA does not apply.

5.10.11 Coastal Zone Management

Collin County is also located outside of the coastal zone boundary; therefore, the Texas Coastal Zone Management Plan does not apply.

5.10.12 Edwards Aquifer

The proposed project is not located within the Edwards Aquifer or the Edwards Aquifer Recharge Zone; therefore, no TCEQ Edwards Aquifer Protection Program requirements apply.

5.10.13 International Boundary and Water Commission

The proposed project is not within the jurisdiction of the International Boundary and Water Commission; therefore, coordination is not required.

5.11 Biological Resources

5.11.1 Vegetation

The majority of the project area consists of a variety of grass species along the mowed ROW of SH 121. Woody shrub vegetation observed along the edges of the ROW includes Ashe juniper (*Juniperus ashei*) and hackberry (*Celtis occidentalis*) saplings. Trees observed near edge of the right-of-way include Ashe juniper (*Juniperus ashei*), hackberry (*Celtis occidentalis*), rough-leaf

dogwood (*Cornus drummondi*), cedar elm (*Ulmus crassifolia*), and honey mesquite (*Prosopis glandulosa*) The trees range in size from approximately 6 to-15 feet in height while the diameter at breast height ranges from approximately 3 to 8 inches; averaging approximately 6 inches. No unusually large trees were observed within the project area. Fence line vegetation along portions of the project consisted of honey mesquite, Ashe juniper, and hackberry saplings along with a mixture of grass species. The vegetation along area fence lines is consistent with those along the edges on the project ROW.

МОՍ Туре	Habitat Impacts (acre)
Tallgrass Prairie, Grassland	30.2
Disturbed Prairie	56.2
Agriculture	55.9
Edwards Plateau Savannah, Shrubland and Woodland	31.5
Floodplain	18.5
Riparian	0.8
Urban	183.3
Total	376.4

Table 3: Total Project Vegetation Impacts

Build Alternative

As shown in Table 3 above, 376.4 acres of vegetation would be disturbed by the project, with most occurring in areas best described as Disturbed Prairie; Agriculture; and Edwards Plateau Savannah, Shrubland and Woodland. Some floodplain and riparian vegetation would also be impacted.

No landscaping is proposed as part of the project. As required by Executive Order 13112, TxDOT would not introduce invasive species during any re-vegetation activities within the ROW. In accordance with the Executive Memorandum on Environmentally and Economically Beneficial Landscape Practices, seeding and replanting of disturbed areas with TxDOT-approved seed mixes would be conducted where possible.

Mitigation

Impacts to vegetation would be avoided or minimized by limiting disturbance to only that which is necessary to construct the proposed project. The removal of native vegetation, particularly mature native trees and shrubs, would be avoided to the greatest extent practicable. A native and locally adapted seed mix would be used in the re-vegetation of disturbed areas.

No-Build Alternative

Under the No-Build Alternative, there would be no impact to vegetation within the proposed project area.

5.11.2 Wildlife

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was enacted in 1918 and implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds (other than game birds during valid hunting seasons) is unlawful. Protections extend to migratory bird nests determined to contain eggs or young.

General observations for the presence of migratory bird nests were made on February 26, 2016. Multiple nests were observed within the proposed ROW, primarily in trees. Bird BMPs as described in the Programmatic Agreement between TxDOT and TPWD (2013) will be used to protect migratory birds (See Section 8.0).

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) applies to projects that would result in the control or modification of a natural stream or body of water and would require a Section 404 Individual Permit. TxDOT would comply with the FWCA by adhering to the terms of Nationwide Permit 14, which will be used for jurisdictional water crossings within the project limits.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 2007 (BGEPA) was enacted in 1940 to provide for the protection of the Bald Eagle and the Golden Eagle by prohibiting, except under certain specified conditions, the taking, possession and sale of such birds. The SH 121 project is within the range, but not within suitable habitat for the Bald or Golden Eagles; therefore, the BGEPA does not apply.

Magnuson-Stevens Fishery Conservation Act

The project is not in a coastal/marine setting; therefore, this does not apply.

Marine Mammal Protection Act

The project is not in a coastal/marine setting; therefore, this does not apply.

5.11.3 Threatened and Endangered Species

Build Alternative

There is no critical habitat within the action area; and the piping plover and red knot only need to be considered for wind energy projects; therefore, an effects analysis for those species, for

which there is no suitable habitat present in the proposed action area, is not necessary for this transportation project. There is also no suitable habitat present for the least tern or whooping crane within the proposed action area, as verified by a qualified biologist; therefore, there is no effect to any federally listed species as a result of the proposed project.

According to a Biological Resources Technical Report (TxDOT 2016b), habitat for four statelisted threatened species (wood stork [*Mycteria americana*], Louisiana pig-toe [*Pleurobema riddellii*], alligator snapping turtle [*Macrochelys temminckii*] and timber rattlesnake [*Crotalus horridus*]) may be found adjacent the project area. Potential habitat for several Species of Greatest Conservation Need (SGCN) may be found in or adjacent to the project area. These include the southern crayfish frog (*Lithobates areolatus areolatus*), Henslow's Sparrow (*Ammodramus henslowii*), plains spotted skunk (*Spilogale putorius interrupta*), Texas heelsplitter (*Potamilus amphichaenus*), and the Texas garter snake (*Thamnophis sirtalis annectens*), and western burrowing owl (*Athene cunicularia hypugaea*).

Mitigation

Appropriate measures would be taken to maintain normal downstream flows. The affected area would be returned to preconstruction elevations, and re-vegetated 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. Best management practices (BMP) for birds, freshwater mussels, plains spotted skunk, alligator snapping turtle, timber rattlesnake, and the Texas garter snake will be implemented in order to mitigate any potential impacts. There is potential habitat for the southern crawfish frog (*Lithobates areolatus areolatus*) (SGCN), for which there are no approved species BMPs; however, TxDOT proposes the following voluntary conservation measure (VCM), which would include on the project EPIC sheet: "Contractors would be advised of potential occurrence in the project area, to avoid harming the species if encountered, and to avoid unnecessary impacts to small burrows." Proposed species BMPs and VCM are summarized in Section 8.0. Coordination with TPWD was conducted March 20, 2017 and is included in Appendix G.

No-Build Alternative

Under a No-Build Alternative there would be no potential to adversely impact any TPWD or USFWS listed species in the project area.

5.12 Air Quality

The proposed project is located in Collin County, which is part of the EPA's designated tencounty moderate nonattainment area for the 2008 eight-hour standard for the pollutant ozone; therefore, the transportation conformity rule applies. Both the Mobility 2040 Metropolitan Transportation Plan (MTP) and the 2017-2020 Transportation Improvement Program (TIP) were initially found to conform to the Texas Commission on Environmental Quality (TCEQ) State Implementation Plan (SIP) by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on September 7, 2016, and December 19, 2016, respectively; however, the proposed project is not consistent with this conformity determination, because it was not approved in the 2017-2020 TIP. TxDOT will not take final action on this environmental document until the proposed project is consistent with a currently conforming MTP and TIP. Copies of the TIP and MTP pages are included in the Appendix E.

Build Alternative

Carbon Monoxide (CO) and Particulate Matter (PM) – Hot-Spot Analysis

The project is not located within a CO or PM nonattainment or maintenance area; therefore, a project level hot-spot analysis is not required.

Mobile Source Air Toxics (MSAT)

For each alternative in this document, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the Build Alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the preferred action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under the Build Alternative there may be localized areas where ambient concentrations of MSAT could be higher than the No Build Alternative. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent between 2010 and 2050.

Congestion Management Process (CMP)

The Air Quality Technical Report discusses project CMP strategies. The congestion reduction strategies considered for this project would help alleviate congestion in the Single Occupancy Vehicle (SOV) study boundary, but would not eliminate it. Therefore, the proposed project is justified. The CMP analysis for added SOV capacity projects in the Transportation Management Area (TMA) is on file and available for review at the North Central Texas Council of Governments (NCTCOG).

Construction Emissions

During the construction phase of this project, temporary increases in PM and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are

fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel PM from diesel powered construction equipment and vehicles. The potential impacts of PM emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate.

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

Coordination was conducted and completed with TCEQ, see Appendix G.

No-Build Alternative

Due to federal fuel and vehicle control programs, air quality would be expected to improve regardless of the build or no build alternative.

5.13 Hazardous Materials

A review of environmental regulatory databases was conducted in May 2016 and an Initial Site Assessment (ISA) was completed in February 2017 to identify sites or facilities that could result in potential hazardous materials impacts (see the Hazardous Materials Initial Site Assessment Form for more details).

Build Alternative

An Asbestos Containing Materials (ACM) and Lead Based Paint (LBP) survey of the existing facility was conducted in October 2015. One bridge, the Sister Grove Creek bridge, was identified to have ACM and LBP. Any demolition or modification to this structure would be conducted in compliance with all applicable regulatory requirements. Any waste materials and construction debris containing ACM or LBP would be disposed of according to current disposal regulations of the TCEQ and EPA.

Mitigation

Special provisions or contingency language would be included in the project's construction plans to handle hazardous materials and/or petroleum contamination according to applicable federal and state regulations. In addition, the construction contractor would take appropriate measures to prevent, minimize, and control spillage of hazardous materials in the construction staging area(s).

No-Build Alternative

Under the No-Build Alternative no hazardous materials impacts would occur.

5.14 Traffic Noise

Build Alternative

A traffic noise analysis was conducted in accordance with TxDOT's 2011 Guidance for Analysis and Abatement of Highway Traffic Noise (see the Traffic Noise Technical Report for more details). The traffic noise analysis concluded that there would be a traffic noise impact at one residence located 0.3 mile northeast of the SH 121/FM 2862 intersection on the northbound side of SH 121, see traffic noise technical report.

Mitigation

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 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 Aweighted decibels [dBA]; 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 dBA and the abatement measure must be able to reduce the noise level at least one impacted, first row receptor by at least seven dBA.

The impacted residence has a driveway facing the roadway. A continuous noise barrier would restrict access to this residence. Gaps in a noise barrier would satisfy access requirements but the resulting non-continuous barrier segments would not be sufficient to achieve the minimum, feasible reduction of 5 dBA or the noise reduction design goal of 7 dBA.

None of the above noise abatement measures considered would be both feasible and reasonable; therefore, no abatement measures are proposed.

No-Build Alternative

Under the No-Build Alternative there would be no traffic noise impacts.

5.15 Induced Growth

TxDOT's Induced Growth Indirect Impacts Decision Tree was followed to determine the need for an induced growth analysis. This analysis was not required based on the following:

• The proposed project does not include economic development in the Purpose and Need and is not intended to serve a specific development.

- Economic development or new opportunities for growth/development are not cited as benefits of the project.
- Project does not substantially increase access or mobility in the project area.

The proposed project would not result in induced growth within the area.

5.16 Cumulative Impacts

The proposed improvements would not result in substantial direct or indirect impacts to any resource, and no resources within the project area are in poor or declining health. Based on this, a cumulative impacts analysis is not required.

5.17 Construction Phase Impacts

During the construction phase of the proposed project there will be the potential for noise, air quality, biological, and traffic impacts associated with physical construction activities, lane closures, and other traffic disruptions. The potential impacts and the mitigation measures to be implemented are as follows:

5.17.1 Noise Impacts

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.

Mitigation - 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.

No Build Alternative: Under the No Build Alternative, there would be no impact, adverse or beneficial to the project area from construction noise.

5.17.2 Traffic Pattern Impact

There may be temporary increases in traffic congestion and potential changes in traffic patterns and routes in the vicinity of the project during construction, which could possibly cause temporary delays.

Mitigation - Prior to construction, a detailed traffic control plan would be developed to minimize traffic disruption. Access to adjacent properties would remain open through all phases of construction. The short-term changes to traffic patterns would be communicated via roadside display signs to alert motorists to the time and day of lane closures. Temporary changes in access would be coordinated with emergency responders (police protection, fire protection, emergency medical service providers and others) and other public service providers

prior to construction. Traffic control during project construction would be in accordance with the Texas Manual on Uniform Traffic Control Devices and TxDOT's Work Zone standards.

No Build Alternative: Under the No Build Alternative, there would be no impact, adverse or beneficial to project area traffic flow.

6.0 Agency Coordination

6.1 Cultural Resources

TxDOT completed coordination with the SHPO for archeological resources; concurrence from SHPO was obtained on March 16, 2017, see Appendix G.

Tribal consultation was completed in 2011 and re-coordinated in 2017 due to project changes, see Appendix G.

6.2 Texas Parks and Wildlife Department (TPWD)

TxDOT initiated early coordination with TPWD in accordance with the MOU. Coordination was completed on March 22, 2017.

6.3 Collin County

The proposed project includes work within a FEMA-designated 100-year floodplain; therefore, coordination with the local floodplain administrator is required. A coordination meeting was held with Collin County (Floodplain Administrator) on May 5, 2014.

7.0 Public Involvement

TxDOT held a public meeting to present the proposed project elements and receive input from the public on May 5, 2016. The open house meeting was held at the First Baptist Church Melissa, 2101 East Melissa Road, Melissa, Texas 75454. Public Meeting Notices were placed in the Dallas Morning News, Al Dia, and the Anna-Melissa Tribune on April 5, 2016, April 10, 2016, and April 4, 2016, respectively. A total of 61 individuals registered their attendance at the public meeting. Of the 61 attendees, 59 were member of the general public. A media representative from North Texas e-News and the Public Works Director for the City of Anna were present. No elected officials were in attendance. Twenty-two written comments were received in response to the public meeting.

8.0 Environmental Permits, Issues and Commitments

8.1 Section 401 and Section 404 Clean Water Act

The placement of fill material into jurisdictional Waters of the U.S. would be authorized under NWP 14 with a PCN. NWP 14 - BMPs may include, but will not be limited to:

- Category I Erosion control: Application of compost or mulch filter berms and socks to disturbed areas;
- Category II Sedimentation control: Installation of silt fences; and,
- Category III Post construction TSS control: Vegetation lined ditches in areas where there is a need for an open ditch section to transition to existing outfalls. Grassy swales and/or extended detention basins for storm sewer outfalls.

8.2 Section 402 of the Clean Water Act/Texas Pollution Elimination System (TCEQ)

TxDOT would be required to comply with the TCEQ TPDES General Permit for Large Construction Activity. A NOI would be filed to comply with TCEQ stating that TxDOT would have a SW3P in place during construction of the proposed project. Measures would be taken to prevent or correct erosion that might develop during construction.

8.3 Archeological Resources

Prior to construction, further investigations would be completed once ROW is acquired.

In the unlikely event that significant cultural resources are discovered during construction, TxDOT will immediately initiate cultural resources discovery procedures. All work in the vicinity will immediately cease until a specialist from TxDOT and/or the Texas Historical Commission can assess the discovery's significance and the need for additional investigation, if necessary.

8.4 Hazardous Materials

The proposed project includes the demolition and/or relocation of building structures and bridges. One bridge, the Sister Grove Creek bridge, was identified to have ACM and LBP. Building structures to be demolished or relocated that are outside of the current ROW would need to be surveyed for ACM and LBP. ACM and LBP inspection, specification, notification, license, accreditation, abatement and disposal, as applicable, would comply with applicable federal and state regulatory requirements.

Any unanticipated hazardous materials and/or petroleum contamination encountered during construction will be handled according to applicable federal and state regulations per TxDOT Standard Specifications.

8.5 Vegetation

Upon completion of earthwork operations, disturbed areas will be restored and reseeded in accordance with TxDOT's Vegetation Management Guidelines and will be in compliance with the intent of EO 13112 on Invasive Species. Soil disturbance would be minimized in the ROW in order to minimize invasive species establishment. Re-vegetation of disturbed areas will also be in compliance with the Executive Memorandum on Beneficial Landscaping. Best management

practices will be implemented to provide temporary erosion control during construction and permanent erosion control after the project is complete.

8.6 Migratory Bird Treaty Act

Appropriate measures will be taken to avoid adverse impacts on migratory birds which will include the following:

- Not disturbing, destroying, or removing active nests, including ground nesting birds, during the nesting season;
- Avoiding the removal of unoccupied, inactive nests, as practicable;
- Preventing the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair;
- Not collecting, capturing, relocating, or transporting birds, eggs, young, or active nests without a permit.

8.7 BMPs for TPWD MOU

Several measures designed to protect and/or enhance the environment will be implemented for this project. These measures are summarized below and will be included in the Environmental Issues, Permits and Commitments (EPIC) sheet for this project.

- Henslow's Sparrow (*Ammodramus henslowii*), Western Burrowing Owl (*Athene cunicularia hypugaea*, and Migratory Birds Bird BMPs:
 - Not disturbing, destroying, or removing active nests, including ground nesting birds, during the nesting season;
 - Avoiding the removal of unoccupied, inactive nests, as practicable;
 - Preventing the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair;
 - Not collecting, capturing, relocating, or transporting birds, eggs, young, or active nests without a permit.
- Timber rattlesnake (*Crotalus horridus*) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
- Alligator snapping turtle (*Macrochelys temminckii*) (1) Minimize impacts to wetland and riverine habitats and (2) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.

- Texas garter snake (*Thamnophis sirtalis annectens*) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.
- Plains spotted skunk (*Spilogale putorius interrupta*) Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.
- Louisiana pig-toe (*Pleurobema riddellii*) and Texas heelsplitter (*Potamilus amphichaenus*) -

Freshwater mussel BMPs:

- When work is in the water; survey project footprints for state listed species where appropriate habitat exists.
- When work is in the water and mussels are discovered during surveys; relocate state-listed and SGCN mussels under TPWD permit and implement water Quality BMPs.
- When work is adjacent to the water; water quality BMPs implemented as part of the SWPPP for a construction general permit or any conditions of the 401 water quality certification for the project will be implemented. (Note: SWPPP and 401 BMPs are not listed in this PA). No TPWD coordination required.
- There is no approved species BMP for southern crawfish frog (non-SGCN). However, TxDOT proposes the following voluntary conservation measure (VCM) for the species and would include it in the project EPIC sheet: Southern crawfish frog - Contractors will be advised of potential occurrence in the project area, to avoid harming the species if encountered, and to avoid unnecessary impacts to small burrows.

9.0 Conclusion

The proposed project, which would construct a four-lane, divided facility, is recommended, based on the information provided in this document. The engineering, social, economic, and environmental investigations conducted thus far on this proposed project indicate that it will result in no significant impacts on the quality of the human environment and that a Finding of No Significant Impact is anticipated.

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- United States Fish and Wildlife Service (USFWS). 2017. Critical Habitat Mapping Tool. (Accessed January 23, 2017)
- United States Fish and Wildlife Service (USFWS). 2016. Information for Planning and Conservation (IPaC) online system. (Accessed November 9, 2016)

Appendix A - Project Location Map


Appendix B - Project Photos



Photo 1: Collin County Outer Loop/SH 121 facing northeast



Photo 2: SH 121 northbound south of Collin County Outer Loop



Photo 3: SH 121 at Sister Grove Creek Tributary No. 4 Bridge, facing northwest from southwest side of SH 121



Photo 4: SH 121 facing northbound, Sister Grove Branch Creek Bridge (Signed wrong)



Photo 5: SH 121 southbound side, Pilot Grove Creek, facing southeast, bridge.



Photo 6: SH 121 near the FM 455 intersection facing southbound.

Appendix C - Schematics







Key to Features SH 121 Proposed R.O.W. Existing R.O.W. Parcel Boundary

 Reconstruct Roadway

 Proposed Roadway

 Bridges

 Driveways

 Existing Pavement

 Displaced Structure

Schematic Frame 3 of 19























































Appendix D - Typical Sections





Table_portLoids_Herivity_____ \$9422016 Vi\2142\active\214200160\06-CAD\6.1-Sheets\6.1.1-Exhibit\021EXH[B]T-TYPICALSECTIONS-02.dgn

Appendix E - Plan and Program Excerpts

FRIDAY, JUNE 24 7:08:47 PM	4, 2016		FY 2017-20	DALLA 20 TRANSF DALLA	S-FORT WORTH MPO PORTATION IMPROVEMENT P S DISTRICT PROJECTS	PAGE: 6 PROGRAM
DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR
DALLAS LIMITS FROM: LIMITS TO:	KAUFMAN SOUTH OF FM US 80	0451-02-028 548	SH 205			TXDOT-DALLAS REV DATE: 07/2016 MPO PROJECT ID: 55072
DESCRIPTION:	WIDEN 2 LANE	RURAL HIGHWAY	TO 4 LANE L		ANE OLTIMATE)	MTP REFERENCE: RSA1-1.715.550, RSA1-1.715.600, RSA1-1.715.610
						Project History:
		0451-03-013	SH 205	E	VARIOUS	TXDOT-DALLAS
LIMITS FROM: LIMITS TO: TIP	SH 78 WIDEN 2 LANE	RURAL HIGHWAY	TO 4 LANE D	DIVIDED (6 L	ANE ULTIMATE)	MPO PROJECT ID: 55073
DESCRIPTION: REMARKS:						MTP REFERENCE: RSA1-1.715.200
						Project History:
DALLAS LIMITS FROM: LIMITS TO:	ROCKWALL NORTH OF SH NORTH OF JOH	0451-04-021 66 1N KING	SH 205	E	ROCKWALL	TXDOT-DALLAS REV DATE: 07/2016 MPO PROJECT ID: 55074
TIP DESCRIPTION:	WIDEN 2 LANE	RURAL HIGHWAY	TO 4 LANE E	DIVIDED (6 L	ANE ULTIMATE)	MTP REFERENCE: RSA1-1.715.225, RSA1-1.715.250, RSA1-1.715.275, RSA1-1.715.300, RSA1-1.715.325, RSA1-1.715.350, RSA1-1.715.375
	FANNIN					Project History:
DALLAS- LIMITS FROM: LIMITS TO:	COLLIN NORTH OF FM CR 635 (FANNI	0549-02-028 455 CR 635 (FA N COUNTY LINE)	SH 121 ANNIN COU North of CR	E NTY LINE) 635 (FANI	MELISSA NIN COUNTY LINE)	TXDOT-DALLAS REV DATE: 07/2016 MPO PROJECT ID: 55167
TIP DESCRIPTION: REMARKS:	RECONSTRUC	T AND WIDEN TWA	-LANE RUR	AL TO FOUF	R LANE RURAL DIVIDED	MTP REFERENCE: RSA1-1.745.200, RSA1-1.745.250
Re	vised to indicate	e "THREE" /				Project History:
DALLAS	COLLIN	0549-03-024	SH 121	E,R	ANNA	TXDOT-DALLAS
LIMITS FROM: LIMITS TO:	NORTH OF FM	455 Outer Loop 455				REV DATE: 07/2016 MPO PROJECT ID: 54134
TIP DESCRIPTION: REMARKS:	CONSTRUCT 0	T AND WIDEN FRO TO 4 LANE DISCO	M TWO LANI NTINUOUS F	E TO FOUR RONTAGE I	LANE RURAL DIVIDED; ROAD AND FM 455 INTERCHA	ANGE MTP REFERENCE: RSA1-1.745.260, RSA1-1.745.280
						Project History:
DALLAS LIMITS FROM: LIMITS TO:	COLLIN SOUTH OF SH NORTH OF SH	0549-03-028 160 160	SH 121	E	BLUE RIDGE	TXDOT-DALLAS REV DATE: 07/2016 MPO PROJECT ID: 55102
TIP DESCRIPTION: REMARKS:	RECONSTRUC	T AND WIDEN FRO	0M TWO LANI 549-03-025	E TO FOUR	LANE RURAL DIVIDED	MTP REFERENCE: RSA1-1.745.200, RSA1-1.745.250
						Project History:
DALLAS LIMITS FROM: LIMITS TO:	DALLAS SP 408 SOUTH OF SH	0581-02-077 183	SL 12	E,R	VARIOUS	TXDOT-DALLAS REV DATE: 07/2016 MPO PROJECT ID: 11930
TIP DESCRIPTION:	RECONSTRUC CONSTRUCT 0 DISCONTINUO (ULTIMATE)	T & WIDEN 6 TO 8 TO 2 REVERSIBLE US TO 4/6 CONTIN	GENERAL PU MANAGED I UOUS FRON	JRPOSE LA LANES, REC TAGE ROAD	NES FROM SH 356 TO SH 183 CONSTRUCT AND WIDEN 4 SS FROM SP 408 TO SH 183	3; MTP REFERENCE: FT1-17.20.1, FT1-17.20.2, FT1-17.30.1
REMARKS:	х <i>У</i>					
						! Project History:
DALLAS LIMITS FROM:	DALLAS AT SH 183	0581-02-124	SL 12	C,E,R	IRVING	TXDOT-DALLAS REV DATE: 07/2016 MPO PRO JECT ID: 11527
	RECONSTRUC	T INTERCHANGE (PH 2)			
REMARKS:	LOCAL CONTR	IBUTION PAID BY	CDA PARTNE	R		WIT THE ENERGE. IN 1-17.22.1
						Project History:

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STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM

PAGE: 9 OF 195

TXDOT PARIS DISTRICT - HIGHWAY PROJECTS

EV	201	7
ГΙ	201	1

2017-2020 STIF)		02	2/2017 Revision: Pen	ding Approv	al			
DISTRICT	MPO		COUNTY	CSJ	HWY	PHASE	CITY		YOE COST
PARIS			FANNIN	0549-02-028	SH 121	E,R	OTHER	\$	0
LIMITS FROM	CR 635					PRO	JECT SPONSOR TXDO	T DALLAS	
LIMITS TO	NORTH OF CR	635					REVISION DATE	02/2017	
PROJECT	RECONSTRUC	T AND WIDEN 3 L/	NE UNDIVIDED	TO 4 LANE DIVIDED	RURAL ROA	DWAY	MPO PROJ NUM	1	
DESCR							FUNDING CAT(S)	
REMARKS	DALLAS DISTR	RICT PROJECT; WI	TH 0549-03-021	PRO	JECT Project	t being removed	from the STIP		
P7				HIS.	FORY				
TOTAL PRO	DJECT COST IN	IFORMATION		AL	JTHORIZED	FUNDING BY C	ATEGORY/SHARE		
PREL ENG \$	0		CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
ROW PURCH \$	0	COST OF	SBPE \$	0 \$	0 \$	0	\$ 0 \$	0 \$	0
CONSTR \$	0	APPROVED	S102 \$	0 \$	0 \$	0	\$ 0 \$	0 \$	0
CONST ENG \$	0	PHASES	TOTAL \$	0 \$	0 \$	0	\$ 0 \$	0 \$	0
CONTING \$	0	\$ 0							
INDIRECT \$	0								
BOND FIN \$	0								
PT CHG ORD \$	0								
TOTAL CST \$	0								

WEDNESDAY, FEBRUARY 01, 2017 14:45:41 PM

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM

PAGE: 72 OF 195

DALLAS-FORT WORTH MPO - HIGHWAY PROJECTS

FY 2019

2017-2020 STIP	,			02/2017 R	evision: Pe	ending Appro	oval			
DISTRICT	MPO		COUNTY		CSJ	HWY	PHASE	CITY		YOE COST
DALLAS	DALLAS-FORT	WORTH	COLLIN		0549-03-02	21 SH 121	E,ENG,R,ACC	MELIS	SA \$	16,250,000
LIMITS FROM	NORTH OF FM	455					PRC	JECT SPONSOR	TXDOT-DALLAS	
LIMITS TO	CR 635 (FANNI	N COUNTY LINE)						REVISIO	N DATE 02/2017	
PROJECT	RECONSTRUC	T AND WIDEN FR	OM TWO LANE	TO FOUR	LANE RUR	AL DIVIDED	CONSTRUCT 0	TO 2 MPO PR	OJ NUM 20076	
DESCR	LANE DISCONT	TINUOUS FRONTA	GE ROADS AN	ND FM 2862	INTERCH	ANGE		FUNDING	GCAT(S)	
REMARKS	REVISE SCOPE	E; RTR 121 - CC1			PR	OJECT				
P7					HI	STORY				
TOTAL PRO	DJECT COST IN	FORMATION				AUTHORIZEI	D FUNDING BY C	ATEGORY/SHAP	E	
PREL ENG \$	6,250,000		CATEGORY	FEDE	RAL	STATE	REGIONAL	LOCAL	LC	TOTAL
ROW PURCH \$	10,000,000	COST OF	3RTR121	\$	0 \$	0	\$ 5,000,000	\$ 1,250,000	\$ 0 \$	6,250,000
CONSTR \$	0	APPROVED	S102	\$ 8,000	,000 \$	1,000,000	\$0	\$ 1,000,000	\$ 0 \$	10,000,000
CONST ENG \$	2,332,732	PHASES	TOTAL	\$ 8,000	,000 \$	1,000,000	\$ 5,000,000	\$ 2,250,000	\$ 0 \$	16,250,000
CONTING \$	935,915	\$ 16,250,000								
INDIRECT \$	0									
BOND FIN \$	0									
PT CHG ORD \$	0									
TOTAL CST \$	19,518,647									

, the second		CI OLIV	E. Mailin.	Cronn Chronet	TA Chennet	2017	2027	2037	2040	VOE Coot *
COULIER			raciirty			Lanes	Lanes	Lanes	Lanes	
Collin	RSA1-	1.737.300	BU 78	SH 78 (North)	SH 78 (South)	2	2	2	2	÷
Collin	RSA1-	1.600.200	Coit Road	SH 121	President George Bush Turnpike	9	9	9	9	\$ -
Collin	RSA1-	1.600.225	Coit Road	President George Bush Turnpike	Mccallum Blvd	6	6	6	6	\$ -
Collin	RSA1-	1.557.200	Dallas North Tollway Frontage	CR 60	North Of FM 428	0	2	2	2	\$ 54.42
Collin	RSA1-	1.557.225	Dallas North Tollway Frontage	.16 Mile North Of FM 428	FM 428	0	1/1	1/1	1/1	Ş 1.15
Collin	RSA1-	1.557.450	Dallas North Tollway Frontage **	North Of US 380	South Of US380	2/2	N/A	N/A	N/A	N/A
Collin	RSA1-	1.557.250	Dallas Parkway **	FM 428	North Of US 380	2	N/A	N/A	N/A	N/A
Collin	RSA1-	2.215.500	Eldorado Parkway	Dallas North Tollway	SH 289 Preston Road	6	9	9	9	۰ ۲
Collin	RSA1-	2.215.525	Eldorado Parkway	Preston Road	Hillcrest Road	9	9	9	9	- S
Collin	RSA1-	2.215.540	Eldorado Parkway	Hillcrest Road	.5 Mile West Of Independence Parkway	9	9	9	9	'
Collin	-TA2H	2.215.550	Eldorado Parkway	. 5 Mile West Of Independence Parkway	Independence Parkway	9	9	.0	9	^
Collin	-TA21-	2.215.560	Eldorado Parkway	Independence Parkway	Custer Koad	9	9			5
Collin	-TA31-	2.215.5/5 2.215.52F	Eldorado Parkway	FM 2478 Custer Road	US /5	4	9	0 •		<u>5</u> 39./8
Collin	-TACH	279.CT2.2	Eldorado Parkway	c/ cn	FM 544	4	4	4	4	י גע
Collin	-TA2A	1.660.20U	FM 1378 Country Club Road	SH 5 6 Mile North Of Starty Lane	-b Mile North UT Stacy Lane	7	7	7	7	
Collin	-TACA	1 660 750	FM 1378 Country Club Road	- O IVITIE NOT LIT OF 3 LALY LATE	Rork Ridge Road	7	t α	t u	t (1	γ 4.72 γ
Collin	-LACH	1.660.775	FM 1378 Country Club Road	Rock Ridre Rood	FNA 2514 Darker Road	4 (o u	o u	o u	
	-THCN	C/7.000.T	FINITES/S Country Club Pood	NUCK NIUGE NOdu	LIVI Z2 14 Marker Nodu	v u	o u	0 4	o u	0T-00 ¢
Collin	RSA1-	1 660 375	FM 1378 Country Club Road	BIUWII BLIEGL FM 2514 Parker Road	Brown Street	0 9	o u	o (c	o u	 . v
Collin	RSA1-	1.615.200	FM 2478 Custer Road	US 380	Stonebridge Drive	9	9	9	9	\$ 29.55
Collin	RSA1-	1.615.225	FM 2478 Custer Road	Stonebridge Drive	SH 121	4	9	9	9	\$ 7.27
Collin	RSA1-	1.615.250	FM 2478 Custer Road	SH 121	Spring Creek Parkwav	. 9	9	9	9	
Collin	RSA1-	2.130.350	FM 455	County Line Road	US 75	2	2	2	2	è.
Collin	RSA1-	2.130.375	FM 455 Anna Weston Road	US 75	SHS	4	4	4	9	\$ 13.00
Collin	RSA1-	2.290.350	FM 544 Park Blvd	Midway Road	Dallas North Tollway	9	9	9	9	Ś.
Collin	RSA1-	2.290.400	FM 544 Park Blvd	Dallas North Tollway	Enterprise Drive	9	9	9	9	- S
Collin	RSA1-	1.680.400	K Avenue	18th Street	.4 Mile North Of Plano Parkway	3/3	3/3	3/3	3/3	, '
Collin	RSA1-	1.680.425	K Avenue	.4 Mile North Of Plano Parkway	SH 190	9	9	9	. 9	, ,
Collin	RSA1-	1.570.200	Midway Road	President George Bush Turnpike	Trinity Mills Road	9	9	9	9	\$ -
Collin	RSA1-	1.742.100	Outer Loop Frontage	FM 981	CR 637	0	0	2	2/2	\$ 271.98
Collin	RSA1-	1.742.200	Outer Loop Frontage	CR 637	FM 2755	0	2	2	2/2	\$ 50.98
Collin	RSA1-	2.150.710	Outer Loop Frontage	West Of SH 121	SH 121	2	2/2	3/3	3/3	\$ 8.40
Collin	RSA1-	2.150.715	Outer Loop Frontage	SH 121	East Of SH 121	0	0	1/1	2/2	\$ 3.73
Collin	RSA1-	2.150.720	Outer Loop Frontage	East Of SH 121	FM 981	0	0	2	2/2	\$ 164.71
Collin	RSA1-	2.150.600	Outer Loop Frontage **	FM 428	West Of Dallas North Tollway	0	2	3/3	N/A	N/A
Collin	RSA1-	2.150.650	Outer Loop Frontage **	Dallas North Tollway	US 75	0 (2/2	N/A	N/A	N/A
Collin	-TA21-	2.150./00	Uuter Loop Frontage **	US /5	West Uf SH 1/21	7	7/7	0/A	N/A	A/N
Collin	-TA21-	2.2/5.300	Parker Road		US /5 Parker Access	3/3	3/3	3/3	3/3	י גע
Collin	-TA2A	2.2/2.325 250 350 5	Parker Koad	US /5 Parker Access	U.14 Mile East UT US /5	3/3 6	3/3	3/3	3/3	^ u
	-TACH	2.2/25300	Parker Road		IN AVE Objio Dobjio	0 C/ C	0 0/0	0 0	0	- ^ v
Collin	RSA1-	2.285.275	Plano Parkway	Dhio Drive	Colt Road	r/r 9	r/r 9	<i>r/r</i>	9	- ~ ~
Collin	RCA1-	2.202.20	Plano Parkway	0110 0110	Stone Road	o u	o u	o u	o y	, , ,
Collin	-TACA	1 680 150	Plano Road	103 / J Dresident George Bush Turnnike	June Noad	o u	o u	u	0 4	
nallin	RSA1-	1 745 200		Freedom County Line		> ~	2	610	610	¢ 9.41
Collin	- RSA1-	1.745.250	5H 121	ISH 160	CR 509	2	4 0	212	212 217	S 58.01
nullin Collin	RSA1-	1 745.260	511 121 SH 121	ICR 5/09	PM 455	1 2	1 ~	212	212	\$ 3.30
Collin	RSA1-	1 745 280	SH 121	FM 455	Duterloon	- C	- ~	212	212	¢ 5033
Collin	RSA1-	1.745.300	SH 121	Outer Loop	Berry Road	2	2/2	2/2	2/2	Ś 38.18
Collin	RSA1-	1.745.325	SH 121	Berry Road	East Of SH 5	2	2/2	2/2	2/2	\$ 3.95
Collin	RSA1-	1.745.350	SH 121	East Of SH 5	SH 5	1/1	2/2	2/2	2/2	\$ 2.23
Collin	RSA1-	1.745.375	SH 121	SH 5	Fannin Road	2/2	3/2	3/2	3/2	\$ 1.44
Collin	RSA1-	1.745.400	SH 121	Fannin Road	.2 Mile West Of Fannin Road	2/2	2/2	2/2	2/2	, Ş
Collin	RSA1-	1.735.200	SH 160	.88 Mile North Of SH 121	SH 121	2	2	2	2	\$ -
Collin	RSA1-	1.735.225	SH 160	SH 121	SH 78	2	2	2	2	\$
Collin	RSA1-	1.715.200	SH 205	SH 78	John King Blvd	2	4	9	9	\$ 44.23
Collin	RSA1-	1.605.200	SH 289 Preston Road	CR 107/CR 60	BU 289	2	4	4	4	\$ 16.66

Appendix 12.8 Mobility 2040/2016 Transportation Conformity Regionally Significant Arterials

Region	<u>ally Signific</u>	<u>ant Arterial Recomme</u>	<u>ndations</u>					Septemb	er 7, 2016
County	MTP ID	Facility	From Street	To Street	2017 Lanes	2027 Lanes	2037 Lanes	2040 Lanes	YOE Cost*
Collin	RSA1- 1.557.200	Dallas North Tollway	CR 60	North of FM 428	0	2	2	2	\$ 54.42
Collin	RSA1- 1.557.225	Dallas North Tollway frontage	0.16 miles north of FM 428	FM 428	0	1/1	1/1	1/1	\$ 1.15
Collin	RSA1- 1.557.450	Dallas North Tollway frontage**	North of US 380	South of US 380	2/2	N/A	N/A	N/A	N/A
Collin	RSA1- 1.557.250	Dallas Parkway**	FM 428	North of US 380	2	N/A	N/A	N/A	N/A
Collin	RSA1-2.215.575	Eldorado Parkway	FM 2478/Custer Road	US 75	4	9	9	9	\$ 39.78
Collin	RSA1- 1.660.225	FM 1378/Country Club Road	0.6 miles north of Stacy Lane	FM 2786/Stacy Road	2	4	4	4	\$ 4.52
Collin	RSA1- 1.660.250	FM 1378/Country Club Road	FM 2786/Stacy Road	Rock Ridge Road	2	9	9	9	\$ 6.42
Collin	RSA1- 1.660.275	FM 1378/Country Club Road	Rock Ridge Road	FM 2514/Parker Road	2	9	9	9	\$ 86.16
Collin	RSA1-1.615.200	FM 2478/Custer Road	US 380	Stonebridge Drive	9	9	9	9	\$ 29.55
Collin	RSA1-1.615.225	FM 2478/Custer Road	Stonebridge Drive	SH 121	4	9	9	9	\$ 7.27
Collin	RSA1-2.130.375	FM 455/Anna Weston Road	US 75	SH 5	4	4	4	9	\$ 13.00
Collin	RSA1-1.742.100	Outer Loop frontage	FM 981	CR 637	0	0	2	2/2	\$ 271.98
Collin	RSA1-1.742.200	Outer Loop frontage	CR 637	FM 2755	0	2	2	2/2	\$ 50.98
Collin	RSA1-2.150.710	Outer Loop frontage	West of SH 121	SH 121	2	2/2	3/3	3/3	\$ 8.40
Collin	RSA1-2.150.715	Outer Loop frontage	SH 121	East of SH 121	0	0	1/1	2/2	\$ 3.73
Collin	RSA1-2.150.720	Outer Loop frontage	East of SH 121	FM 981	0	0	2	2/2	\$ 164.71
Collin	RSA1-2.150.600	Outer Loop frontage**	FM 428	West of Dallas North Tollway	0	2	3/3	N/A	N/A
Collin	RSA1-2.150.650	Outer Loop frontage**	Dallas North Tollway	US 75	0	2/2	N/A	N/A	N/A
Collin	RSA1-2.150.700	Outer Loop frontage**	US 75	West of SH 121	2	2/2	N/A	N/A	N/A
Collin	RSA1- 1.745.200	SH 121	Fannin County Line	SH 160	2	2	2/2	2/2	\$ 9.41
Collin	RSA1- 1.745.250	SH 121	SH 160	CR 509	2	2	2/2	2/2	\$ 58.01
Collin	RSA1- 1.745.260	SH 121	CR 509	FM 455	2	2	2/2	2/2	\$ 3.30
Collin	RSA1- 1.745.280	SH 121	FM 455	Outer Loop	2	2	2/2	2/2	\$ 50.33
Collin	RSA1-1.745.300	SH 121	Outer Loop	Berry Road	2	2/2	2/2	2/2	\$ 38.18
Collin	RSA1-1.745.325	SH 121	Berry Road	East of SH 5	2	2/2	2/2	2/2	\$ 3.95
Collin	RSA1-1.745.350	SH 121	East of SH 5	SH 5	1/1	2/2	2/2	2/2	\$ 2.23
Collin	RSA1-1.745.375	SH 121	SH 5	Fannin Road	2/2	3/2	3/2	3/2	\$ 1.44
Collin	RSA1-1.715.200	SH 205	SH 78	John King Blvd.	2	4	9	9	\$ 44.23
Collin	RSA1-1.605.200	SH 289/Preston Road	CR 107/CR 60	Business 289	2	4	4	4	\$ 16.66
Collin	RSA1- 1.605.225	SH 289/Preston Road	BU 289	FM 455	2	4	9	6	\$ 18.50
Collin	RSA1-1.605.240	SH 289/Preston Road	FM 455	FM 1461	4	4	9	6	\$ 29.94
Collin	RSA1-1.605.425	SH 289/Preston Road	Plano Parkway	President George Bush Turnpike	9	9	8	8	\$ 1.65
Collin	RSA1-1.605.475	SH 289/Preston Road	Mapleshade Drive	Frankford Road	9	8	∞	8	\$ 5.39

Appendix E: Mobility Options

*Year of Expenditure Cost (millions) **Staged facilities reported as 'Not Applicable' (N/A) indicates that the project is no longer classified as an arterial and lanes will be reported in the Freeway/Tollway Recommendations listing instead. NOTE: lanes reported as '2/2' indicates the facility operates as a couplet with 2 lanes per direction.

E92 **Mobility 2040**

Appendix F - Resource-specific Maps





S

COLLIN COUNTY OUTER LOOP TO FM 635 (S. COUNTY LINE RD.) COLLIN COUNTY, TEXAS CSJ: 0549-03-021, 0549-03-024








STATE HIGHWAY 121 COLLIN COUNTY OUTER LOOP TO FM 635 (S. COUNTY LINE RD.) COLLIN COUNTY, TEXAS CSJ: 0549-03-021, 0549-03-024















































Parcel Boundary


































SOURCE: Ecological Mapping System of Texas (EMST) Data Obtained from Texas Parks & Wildlife Department (TPWD)





Appendix G - Resource Agency Coordination



September 2, 2011

Mr. Jimmy Arterberry, THPO Comanche Nation of Oklahoma Comanche Nation Office of Historic Preservation P.O. Box 908 Lawton, OK 73502

RE: CSJ: 0549-03-018 and 0549-03-021; SH 121 from SH 5 to CR 635 (Fannin County Line), Roadway Expansion from Two-Lane Rural to Four-Lane Divided; Collin County, Dallas District

Dear Mr. Arterberry:

The above referenced transportation project is being considered for construction by the Texas Department of Transportation. As currently proposed, this project does not involve federal oversight or funding. Therefore, this letter initiates consultation in compliance with the Antiquities Code of Texas under the 2004 Memorandum of Understanding (MOU) (43 TAC 2.24) between the Texas Department of Transportation (TxDOT) and the Texas Historical Commission (THC). We are in the process of completing environmental studies for this project. The purpose of this letter is to solicit your comments regarding potential project impacts to archeological sites. The project is located in an area that may be of interest to your Tribe.

The proposed project would provide roadway improvements along State Highway (SH) 121 from SH 5 in Melissa, Texas (northeast Collin County), to County Road (CR) 635 (Fannin County Line). The proposed improvements would include widening the roadway from a two-lane rural highway to a four-lane divided highway. The proposed project length is 14.3 miles. The highway passes through two incorporated cities, Melissa and Anna. A map that shows the project area is enclosed, as well as a map of the state that indicates the location of Collin County.

The existing roadway limit in Melissa, Texas, consists of a two-lane divided rural section with 12-foot-wide travel lanes, 10-foot-wide outside shoulders, 8-foot-wide inside shoulders, and a variable width median. A 14-foot-wide center median exists north of SH 5 to Liberty Way, with two 12-foot-wide lanes and 10-foot-wide outside shoulders. From Liberty Way to 3,000 feet north of Farm-to-Market Road (FM) 2933 the median is 12 feet wide with 6-foot-wide outside shoulders. From the intersection of SH 121 and CR 418/FM 2933 to the end of the proposed

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An Equal Opportunity Employer

project, there are 10-foot-wide outside shoulders and no median. The total width of pavement goes from 58 feet to 48 feet to 44 feet wide. The usual right of way (ROW) is 120 feet wide but expands to a maximum of 270 feet wide to accommodate intersections.

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Streams along SH 121	Existing Structure	Proposed Structure	Stream Class
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Sixteen Drainages Located Within the Proposed Project Area

The area of potential effects (APE) would include the existing ROW within the project limits and areas of new ROW or easements, as outlined in the project description. The APE extends to a maximum depth below the modern ground surface. The usual depth of impact in the APE would be a maximum of 1.0 meter (3.3 feet). The depth of impact could extend to a maximum of 50 feet below surface in the areas of drill shafts to accommodate bridge supports. There are no easements identified in the project area images. However, where typical easements would be shown (near stream crossings) the designer depicted larger areas needed for side slopes, etc. The attached figures show the additional ROW required at stream crossings.

The full length and width of the APE would be examined, pending property access and landowner permission to portions of the proposed additional new ROW. Some of the property owners have not given TxDOT access to the proposed ROW, so the recommended archeological survey would be conducted after the properties are acquired by the State.

Utilities located within the existing ROW include subterranean telephone cable, aerial transmission lines and subterranean water pipes. The adjustment and relocation of any utilities would be managed so that no substantial interruptions would take place while adjustments are

being made. Plans for relocating any utilities would be provided by the appropriate utility provider and would occur according to standard TxDOT procedures.

The terrain surrounding SH 121 is level to gently rolling and has a predominantly rural setting. Approximately 80 percent of the land use within the proposed project is agricultural, either row crop or rangeland. Approximately 15 percent of the land use is residential, commercial or industrial. A small portion, approximately 5 percent, of the land use is vacant, not in agriculture. Approximately 158 acres would be transferred to transportation ROW. Land use is changing from rural agricultural to suburban residential, retail, commercial, and industrial as the county population increases. Recent aerial photographs indicate that the lands adjacent to the existing ROW are undeveloped range and farm lands, with some areas of residential and commercial developments, particularly between the City of Melissa and FM 2933 and at the intersection of SH 121 and SH 160.

The topography in the vicinity of the proposed project area is generally level to gently rolling. The highway is located in the northeast portion of Collin County, in the watershed of the East Fork of the Trinity River. The proposed project is located in the Cross Timbers and Prairies Ecological Area (Griffith et al. 2004). The Cross Timbers ecoregion is a transitional area between the once prairie, and contains irregular plains with some low hills and tablelands. It is a mosaic of forest, woodland, savanna, and prairie. The terrain is cut by perennial and intermittent creeks bordered by mature wooded areas. The transitional natural vegetation of little bluestem grassland with scattered blackjack oak and post oak trees is used mostly for rangeland and pastureland, with some areas of woody plant invasion and closed forest.

According to the Texas Parks and Wildlife Department (TPWD) Vegetation Types of Texas (McMahan 1984), the proposed project area is designated as (44) Crops and Other Native or Introduced Grasses. The vegetation within the proposed project area is consistent with that classification. Crops and Introduced Native or Introduced Grasses. The Crops vegetation type is a statewide vegetation category that includes cultivated cover crops and row crops utilized for food and/or fiber for humans or domesticated animals. The Introduced Native or Introduced Grasses vegetation type includes mixed native or introduced grasses and forbs on grassland sites or mixed herbaceous communities resulting from the clearing of woody vegetation. This type is associated with the clearing of forests in northeast and east-central Texas and may portray early stages of (41) Young Forest. This type also occurs in the South Texas Plains where brush has been cleared. Such areas are particularly subject to change due to regrowth brush. The upland herbaceous vegetation within the existing TxDOT-maintained ROW consists almost entirely of grasses. The grassy vegetation includes native and introduced herbaceous vegetation such as Johnson grass, bermuda grass, silver bluestem, switchgrass, and common oats. Due to past agricultural land use most of the vegetation within the existing and proposed ROW has been previously disturbed.

This stretch of SH 121 crosses deposits of the Upper Cretaceous age Austin Chalk (Kau) with Gober Chalk (Kgc) of Upper Cretaceous age in Fannin County. Austin Chalk covers approximately 48 percent of Collin County, while Gober Chalk is more commonly present in Fannin County. Holocene-age Alluvium (Qal) occurs along both Sister Grove and Pilot Grove

creek drainages (McGowen et al. 1991). The Holocene is contemporaneous with human life, but the Cretaceous is far too early. The most commonly mapped soils within the SH 121 project area are Houston Black clay, Austin silty clay, Eddy gravelly clay loam, and Lewisville silty clay, all of which are upland soils (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx). Trinity clay soils and Frio clay loam occupy alluvial landforms of stream valleys, though they are not extensive (Hanson and Wheeler 1969).

The Houston Black soil series consists of very deep, moderately well drained, very slowly permeable soils that formed from weakly consolidated calcareous clays and marls of Cretaceous Age, mainly of the Taylor Marl geological formation. The Austin soil series consists of moderately deep, well drained, moderately slowly permeable soils that formed in chalk and interbedded marl, mostly derived from the Austin formation. The Eddy soil series consists of shallow to very shallow, well drained, moderately permeable soils that formed in chalky limestone, with underlying Austin chalk geologic formation. The Lewisville soil series consists of very deep, well drained, moderately permeable soils that formed in ancient loamy and calcareous sediments, assumed to have originated in areas underlain by limestone.

The Trinity series consists of very deep, moderately well drained, very slowly permeable soils on flood plains, formed in calcareous clayey alluvium. The Frio series consists of very deep, well drained, moderately slowly permeable soils that formed in loamy and clayey calcareous alluvium, from soils that formed in limestone of Cretaceous age.

The Texas Archaeological Sites Atlas (Atlas) shows no previously recorded archeological sites located within the proposed project area. However, the Atlas does indicate six previously recorded sites (41C0L127, 41C0L129, 41C0L133, 41C0L143, 41C0L205, and 41C0L208) within 1.0 kilometer (0.62 mile) of the proposed project area.

The Atlas also shows a number of previously conducted archeological surveys completed within 1.0 kilometer (0.62 mile) intersecting within or near the project area. In January 1987, the Texas State Department of Highways and Public Transportation (now TxDOT) conducted a 7.3-mile linear survey from Spring Creek Parkway to SH 121 at the westernmost limits of the current project. No archeological sites were found. In June 2003, Blanton and Associates, Inc. (B&A) performed a reconnaissance survey (of the parcels for which right of entry [ROE] was granted) for the current US 75 proposed project (Ringstaff 2005). The US 75 survey will be completed when the properties are acquired. In November 2003, TRC Environmental Corporation surveyed US 75 from Spur 399 to SH 121. No archeological sites were found, and no further work was recommended (Owens 2007).

The City of Melissa and Greater Texoma Utility Authority funded construction of approximately 2.2 miles of sanitary sewer line and 1300 feet of water line for the Fitzhugh Branch Sewer Project in northcentral Collin County. AR Consultants, Inc. (AR) conducted a comprehensive pedestrian survey of the proposed routes. No prehistoric cultural resources were encountered during the survey, likely owing to the upland location of the study area and distance from major drainages. However, archival research suggested the presence of a historic gravesite near the sewer line. The grave, which sits completely outside of the AR project corridor, was located

during the survey and recorded as site 41COL208. Site 41COL208 is a single historic burial marked with a bois d' arc post. The grave is situated "on a ridge 325 feet east of Fitzhugh Branch and 1280 feet south of SH 121," where Fitzhugh Branch crosses the highway in Melissa. Brett Lang, who recorded the grave, indicated that records date the grave to the 1860s, although the deceased is unknown. The site was recorded primarily to establish its location in relation to the proposed sewer line and to insure its avoidance by this and future development. Site 41COL208 is located 285 meters (935.04 feet) south of SH 121. Based on the results of the survey, no further archeological investigations were recommended (Coleman and Shelton 2010).

In June 2009, Geo-Marine, Inc. (GMI) conducted an archeological survey of the proposed Collin County Outer Loop, a new location truck reliever route from US 75 to SH 121, a distance of 4.6 miles. The survey was completed for HNTB Corporation. GMI found three historic-age sites (41COL203, 41COL204, and 41COL205) in the course of their survey. Only one of the sites (41COL205) is located within 1.0 kilometer (0.62 mile) of the current project. Site 41COL205, located 277 meters (908.79 feet) north of SH 121, was a historic-age (late nineteenth to early twentieth century) house surrounded by an outhouse, possible root cellar, and a sheet midden north of the house with historic-age ceramics, and glass. The parcel was originally part of Hiram Brinlee's portion of the Fannin #1 land grant of 1849. All three sites were determined to be not eligible for listing in the National Register of Historic Places (NRHP), and no further archeological investigations were recommended (Dayton and Erickson 2010).

In July 2001, PBS&J archeologists surveyed the Valley Junction-Anna Switch transmission line for the Public Utilities Commission (PUC) and Texas Utilities (TXU). The pipeline project was 9.66 miles long and crossed US 75. One prehistoric site, 41COL141, site 41COL142 with both prehistoric and historic components, and six historic-age sites were recorded. The historic-age site, 41COL143, located within 500 meters (1,640.42 feet) of SH 121 is composed of a surface scatter, eight wooden posts, and a depression in the soil. The historic-age artifact scatter included typical historic-age farmstead items such as glass, whiteware, crockery, and unidentified metal. All of the other sites are located more than 1.0 kilometer (0.62 mile) from US 75. None of the sites were considered eligible for listing in the NRHP, and no further archeological investigation was recommended (Cliff and Shortes 2001).

In November 2006, GMI surveyed FM 455 from US 75 to SH 121 for TxDOT. The 6.4-mile-long project consisted of reconnaissance, pedestrian, and cut bank survey of existing and new ROW. No archeological sites were found, and no further archeological investigation was recommended (Bastis 2006).

In 2000, GMI conducted an archeological survey of the proposed 1,460-acre landfill site near Melissa, south of SH 121 for the North Texas Municipal Water District (NTMWD). As a result of the survey, four prehistoric sites, nine historic-age sites, one prehistoric locality, 11 historic-age localities, and 15 structures were identified. Of the sites GMI reported, only 41COL127, 41COL129, and 41COL133 are plotted within 1.0 kilometer (0.62 mile) of the current SH 121 proposed project. Site 41COL127 (663 meters [2,175.2 feet] south) is a farmstead with a barn, two wells, probable remnants of a storm shelter and root cellar, and a low density historic-age

artifact scatter. Site 41COL129 (415 meters [1,361.55 feet] south) is a farmstead consisting of two barns, a storm shelter/root cellar, a well, and a low density historic-age artifact scatter. Site 41COL133 (784 meters [2,572.2 feet] south) was described as an unknown prehistoric site consisting of tested cobbles, cores and large primary flakes. All the sites located within the NTMWD project area were thought to have very little research potential and deemed not eligible for listing in the NRHP and no further investigation was required. Structures lying within the project area were also determined not eligible for listing in the NRHP.

In December 1974, an archeologist named Hughston from Southern Methodist University (SMU) conducted a block archeological survey for the United States Department of Agriculture Soil Conservation Service (now the United States Department of Agriculture Natural Resources Conservation Service) south of SH 121. The survey identified site 41COL53, which is located just northwest of the dam site for proposed Structure 50, a Soil Conservation Service (SCS) floodwater retarding structure. The area of the lithic scatter appears to encompass about 1.0 acre, but this is an estimate as the area is in pasture. A portion of the survey area lies within 550 meters (1,804.46 feet) of the current project, but the site area does not. Research potential for the site was undetermined. In 1976, the Natural Resources Conservation Service (NRCS) also conducted several small block archeological surveys south of SH 121, but only one of the surveys lies within 1.0 kilometer (0.62 mile) of the SH 121 project. No sites are shown in the survey area, and no other information is available.

Based on the background information presented above, the potential for encountering intact prehistoric sites is considered low throughout most of the project area. Prehistoric sites are uncommon in such upland settings, and any sites present likely would be restricted to the surface and thus have a high likelihood of having been disturbed. However, deposits of Pleistocene and Holocene alluvium are mapped at the crossings of Sister Grove and Pilot Grove Creeks. These localities have the potential to contain buried and intact prehistoric sites with good contextual integrity. The potential for encountering intact historic-age sites is considered moderate, in part because substantial new ROW is required for the project. Therefore, TxDOT recommends that additional archeological investigations, be conducted in the SH 121 project area when the additional right of way for the project has been purchased by the State to confirm the presence or absence of intact archeological deposits that could be adversely impacted by the undertaking.

In accordance with the MOU between TxDOT and THC, we are writing to request your comments on sites of cultural or religious significance to your Tribe that may be affected by the proposed undertaking. Any comments you may have on the TxDOT recommendation should also be provided. If you do not object that the provided findings and recommendations are appropriate, please sign below to indicate your concurrence. In the event that further investigations by our office disclose the presence of archeological deposits, we will contact your Tribe to continue consultation.

Thank you for your attention to this matter. If you have questions, please contact Barbara Hickman (TxDOT Archeologist) at 512/416-2637 (email: Barbara.Hickman@txdot.gov) or me at 512/416-2631 (email: Scott.Pletka@txdot.gov). When replying to this correspondence, please

ensure that the envelope address includes reference to the Archeological Studies Branch, Environmental Affairs Division.

Sincerely,

Scott Pletka, Ph.D., Supervisor Archeological Studies Branch Environmental Affairs Division

Concurrence by:

Date:

Attachments

cc w/attachments: Dan Perge, TxDOT Dallas District Environmental Coordinator; Lindsey Kimmitt, ENV-PD TxDOT; Barbara Hickman, ENV-ARCH TxDOT; ENV-ARCH Project File

cc w/o attachments: ETS Scan

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- United States Department of Agriculture
- 2011 Natural Resources Conservation Service Web Soil Survey, Electronic database, http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, accessed August 16, 2011.

The attached letter was sent to the following tribes on _____ September 2, 2011_____

Mr. Jimmy Arterberry, THPO Comanche Nation of Oklahoma Comanche Nation Office of Historic Preservation P.O. Box 908 Lawton, OK 73502

Ms. Jame Eskew, c/o Kiowa Culture Preservation Authority Kiowa Indian Tribe of Oklahoma P.O. Box 369 Carnegie, OK 73015

Mr. Don Patterson, President Tonkawa Tribe of Indians of Oklahoma 1 Rush Buffalo Rd Tonkawa, OK 74653

Mr. Mark Chino, President c/o Holly Houghten Mescalero Apache Tribe P.O. Box 227 Mescalero, NM 88340





FEDERAL HIGHWAY ADMINISTRATION 300 EAST 8TH STREET, RM 826 AUSTIN, TEXAS 78701

September 2, 2011

Mr. Leslie Standing, President Wichita and Affiliated Tribes P.O. Box 729 Anadarko, OK 73005

RE: CSJ: 0549-03-018 and 0549-03-021; SH 121 from SH 5 to CR 635 (Fannin County Line), Roadway Expansion from Two-Lane Rural to Four-Lane Divided; Collin County, Dallas District

Dear Mr. Standing:

The above referenced transportation project is being considered for construction by the Texas Department of Transportation. As currently proposed, this project does not involve federal oversight or funding. Therefore, this letter initiates consultation in compliance with the Antiquities Code of Texas under the 2004 Memorandum of Understanding (MOU) (43 TAC 2.24) between the Texas Department of Transportation (TxDOT) and the Texas Historical Commission (THC). We are in the process of completing environmental studies for this project. The purpose of this letter is to solicit your comments regarding potential project impacts to archeological sites. The project is located in an area that may be of interest to your Tribe.

The proposed project would provide roadway improvements along State Highway (SH) 121 from SH 5 in Melissa, Texas (northeast Collin County), to County Road (CR) 635 (Fannin County Line). The proposed improvements would include widening the roadway from a two-lane rural highway to a four-lane divided highway. The proposed project length is 14.3 miles. The highway passes through two incorporated cities, Melissa and Anna. A map that shows the project area is enclosed, as well as a map of the state that indicates the location of Collin County.

The existing roadway limit in Melissa, Texas, consists of a two-lane divided rural section with 12-foot-wide travel lanes, 10-foot-wide outside shoulders, 8-foot-wide inside shoulders, and a variable width median. A 14-foot-wide center median exists north of SH 5 to Liberty Way, with two 12-foot-wide lanes and 10-foot-wide outside shoulders. From Liberty Way to 3,000 feet north of Farm-to-Market Road (FM) 2933 the median is 12 feet wide with 6-foot-wide outside shoulders. From the intersection of SH 121 and CR 418/FM 2933 to the end of the proposed

project, there are 10-foot-wide outside shoulders and no median. The total width of pavement goes from 58 feet to 48 feet to 44 feet wide. The usual right of way (ROW) is 120 feet wide but expands to a maximum of 270 feet wide to accommodate intersections.

The proposed project would involve the widening of the existing two-lane roadway to a four-lane divided highway. The proposed roadway would include 12-foot- and 14-foot-wide travel lanes with a 40-foot-wide grass median. From SH 5 to 3,300 feet north of CR 420, the section would be urban curb-and-gutter with no shoulders. From 3,300 feet north of CR 1220 (future Collin County Outer Loop tie-in) to CR 635 (Fannin County Line), the proposed project would be a rural, four-lane divided highway, containing 12-foot-wide travel lanes, 10-foot-wide outside shoulders, 4-foot-wide inside shoulders, a 40-foot-wide grassy median, and grass-lined ditches. The proposed project includes six bridges. Each of the existing bridges would be replaced and six new bridges would be built parallel to the existing bridge locations due to the divided highway. One of these bridges crosses over Dallas Area Rapid Transit (DART) ROW.

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The terrain surrounding SH 121 is level to gently rolling and has a predominantly rural setting. Approximately 80 percent of the land use within the proposed project is agricultural, either row crop or rangeland. Approximately 15 percent of the land use is residential, commercial or industrial. A small portion, approximately 5 percent, of the land use is vacant, not in agriculture. Approximately 158 acres would be transferred to transportation ROW. Land use is changing from rural agricultural to suburban residential, retail, commercial, and industrial as the county population increases. Recent aerial photographs indicate that the lands adjacent to the existing ROW are undeveloped range and farm lands, with some areas of residential and commercial developments, particularly between the City of Melissa and FM 2933 and at the intersection of SH 121 and SH 160.

The topography in the vicinity of the proposed project area is generally level to gently rolling. The highway is located in the northeast portion of Collin County, in the watershed of the East Fork of the Trinity River. The proposed project is located in the Cross Timbers and Prairies Ecological Area (Griffith et al. 2004). The Cross Timbers ecoregion is a transitional area between the once prairie, and contains irregular plains with some low hills and tablelands. It is a mosaic of forest, woodland, savanna, and prairie. The terrain is cut by perennial and intermittent creeks bordered by mature wooded areas. The transitional natural vegetation of little bluestem grassland with scattered blackjack oak and post oak trees is used mostly for rangeland and pastureland, with some areas of woody plant invasion and closed forest.

According to the Texas Parks and Wildlife Department (TPWD) Vegetation Types of Texas (McMahan 1984), the proposed project area is designated as (44) Crops and Other Native or Introduced Grasses. The vegetation within the proposed project area is consistent with that classification. Crops and Introduced Native or Introduced Grasses. The Crops vegetation type is a statewide vegetation category that includes cultivated cover crops and row crops utilized for food and/or fiber for humans or domesticated animals. The Introduced Native or Introduced Grasses vegetation type includes mixed native or introduced grasses and forbs on grassland sites or mixed herbaceous communities resulting from the clearing of woody vegetation. This type is associated with the clearing of forests in northeast and east-central Texas and may portray early stages of (41) Young Forest. This type also occurs in the South Texas Plains where brush has been cleared. Such areas are particularly subject to change due to regrowth brush. The upland herbaceous vegetation within the existing TxDOT-maintained ROW consists almost entirely of grasses. The grassy vegetation includes native and introduced herbaceous vegetation such as Johnson grass, bermuda grass, silver bluestem, switchgrass, and common oats. Due to past agricultural land use most of the vegetation within the existing and proposed ROW has been previously disturbed.

This stretch of SH 121 crosses deposits of the Upper Cretaceous age Austin Chalk (Kau) with Gober Chalk (Kgc) of Upper Cretaceous age in Fannin County. Austin Chalk covers approximately 48 percent of Collin County, while Gober Chalk is more commonly present in Fannin County. Holocene-age Alluvium (Qal) occurs along both Sister Grove and Pilot Grove

creek drainages (McGowen et al. 1991). The Holocene is contemporaneous with human life, but the Cretaceous is far too early. The most commonly mapped soils within the SH 121 project area are Houston Black clay, Austin silty clay, Eddy gravelly clay loam, and Lewisville silty clay, all of which are upland soils (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx). Trinity clay soils and Frio clay loam occupy alluvial landforms of stream valleys, though they are not extensive (Hanson and Wheeler 1969).

The Houston Black soil series consists of very deep, moderately well drained, very slowly permeable soils that formed from weakly consolidated calcareous clays and marls of Cretaceous Age, mainly of the Taylor Marl geological formation. The Austin soil series consists of moderately deep, well drained, moderately slowly permeable soils that formed in chalk and interbedded marl, mostly derived from the Austin formation. The Eddy soil series consists of shallow to very shallow, well drained, moderately permeable soils that formed in chalky limestone, with underlying Austin chalk geologic formation. The Lewisville soil series consists of very deep, well drained, moderately permeable soils that formed in ancient loamy and calcareous sediments, assumed to have originated in areas underlain by limestone.

The Trinity series consists of very deep, moderately well drained, very slowly permeable soils on flood plains, formed in calcareous clayey alluvium. The Frio series consists of very deep, well drained, moderately slowly permeable soils that formed in loamy and clayey calcareous alluvium, from soils that formed in limestone of Cretaceous age.

The Texas Archaeological Sites Atlas (Atlas) shows no previously recorded archeological sites located within the proposed project area. However, the Atlas does indicate six previously recorded sites (41C0L127, 41C0L129, 41C0L133, 41C0L143, 41C0L205, and 41C0L208) within 1.0 kilometer (0.62 mile) of the proposed project area.

The Atlas also shows a number of previously conducted archeological surveys completed within 1.0 kilometer (0.62 mile) intersecting within or near the project area. In January 1987, the Texas State Department of Highways and Public Transportation (now TxDOT) conducted a 7.3-mile linear survey from Spring Creek Parkway to SH 121 at the westernmost limits of the current project. No archeological sites were found. In June 2003, Blanton and Associates, Inc. (B&A) performed a reconnaissance survey (of the parcels for which right of entry [ROE] was granted) for the current US 75 proposed project (Ringstaff 2005). The US 75 survey will be completed when the properties are acquired. In November 2003, TRC Environmental Corporation surveyed US 75 from Spur 399 to SH 121. No archeological sites were found, and no further work was recommended (Owens 2007).

The City of Melissa and Greater Texoma Utility Authority funded construction of approximately 2.2 miles of sanitary sewer line and 1300 feet of water line for the Fitzhugh Branch Sewer Project in northcentral Collin County. AR Consultants, Inc. (AR) conducted a comprehensive pedestrian survey of the proposed routes. No prehistoric cultural resources were encountered during the survey, likely owing to the upland location of the study area and distance from major drainages. However, archival research suggested the presence of a historic gravesite near the sewer line. The grave, which sits completely outside of the AR project corridor, was located

during the survey and recorded as site 41COL208. Site 41COL208 is a single historic burial marked with a bois d' arc post. The grave is situated "on a ridge 325 feet east of Fitzhugh Branch and 1280 feet south of SH 121," where Fitzhugh Branch crosses the highway in Melissa. Brett Lang, who recorded the grave, indicated that records date the grave to the 1860s, although the deceased is unknown. The site was recorded primarily to establish its location in relation to the proposed sewer line and to insure its avoidance by this and future development. Site 41COL208 is located 285 meters (935.04 feet) south of SH 121. Based on the results of the survey, no further archeological investigations were recommended (Coleman and Shelton 2010).

In June 2009, Geo-Marine, Inc. (GMI) conducted an archeological survey of the proposed Collin County Outer Loop, a new location truck reliever route from US 75 to SH 121, a distance of 4.6 miles. The survey was completed for HNTB Corporation. GMI found three historic-age sites (41COL203, 41COL204, and 41COL205) in the course of their survey. Only one of the sites (41COL205) is located within 1.0 kilometer (0.62 mile) of the current project. Site 41COL205, located 277 meters (908.79 feet) north of SH 121, was a historic-age (late nineteenth to early twentieth century) house surrounded by an outhouse, possible root cellar, and a sheet midden north of the house with historic-age ceramics, and glass. The parcel was originally part of Hiram Brinlee's portion of the Fannin #1 land grant of 1849. All three sites were determined to be not eligible for listing in the National Register of Historic Places (NRHP), and no further archeological investigations were recommended (Dayton and Erickson 2010).

In July 2001, PBS&J archeologists surveyed the Valley Junction-Anna Switch transmission line for the Public Utilities Commission (PUC) and Texas Utilities (TXU). The pipeline project was 9.66 miles long and crossed US 75. One prehistoric site, 41COL141, site 41COL142 with both prehistoric and historic components, and six historic-age sites were recorded. The historic-age site, 41COL143, located within 500 meters (1,640.42 feet) of SH 121 is composed of a surface scatter, eight wooden posts, and a depression in the soil. The historic-age artifact scatter included typical historic-age farmstead items such as glass, whiteware, crockery, and unidentified metal. All of the other sites are located more than 1.0 kilometer (0.62 mile) from US 75. None of the sites were considered eligible for listing in the NRHP, and no further archeological investigation was recommended (Cliff and Shortes 2001).

In November 2006, GMI surveyed FM 455 from US 75 to SH 121 for TxDOT. The 6.4-mile-long project consisted of reconnaissance, pedestrian, and cut bank survey of existing and new ROW. No archeological sites were found, and no further archeological investigation was recommended (Bastis 2006).

In 2000, GMI conducted an archeological survey of the proposed 1,460-acre landfill site near Melissa, south of SH 121 for the North Texas Municipal Water District (NTMWD). As a result of the survey, four prehistoric sites, nine historic-age sites, one prehistoric locality, 11 historic-age localities, and 15 structures were identified. Of the sites GMI reported, only 41COL127, 41COL129, and 41COL133 are plotted within 1.0 kilometer (0.62 mile) of the current SH 121 proposed project. Site 41COL127 (663 meters [2,175.2 feet] south) is a farmstead with a barn, two wells, probable remnants of a storm shelter and root cellar, and a low density historic-age

artifact scatter. Site 41COL129 (415 meters [1,361.55 feet] south) is a farmstead consisting of two barns, a storm shelter/root cellar, a well, and a low density historic-age artifact scatter. Site 41COL133 (784 meters [2,572.2 feet] south) was described as an unknown prehistoric site consisting of tested cobbles, cores and large primary flakes. All the sites located within the NTMWD project area were thought to have very little research potential and deemed not eligible for listing in the NRHP and no further investigation was required. Structures lying within the project area were also determined not eligible for listing in the NRHP.

In December 1974, an archeologist named Hughston from Southern Methodist University (SMU) conducted a block archeological survey for the United States Department of Agriculture Soil Conservation Service (now the United States Department of Agriculture Natural Resources Conservation Service) south of SH 121. The survey identified site 41COL53, which is located just northwest of the dam site for proposed Structure 50, a Soil Conservation Service (SCS) floodwater retarding structure. The area of the lithic scatter appears to encompass about 1.0 acre, but this is an estimate as the area is in pasture. A portion of the survey area lies within 550 meters (1,804.46 feet) of the current project, but the site area does not. Research potential for the site was undetermined. In 1976, the Natural Resources Conservation Service (NRCS) also conducted several small block archeological surveys south of SH 121, but only one of the surveys lies within 1.0 kilometer (0.62 mile) of the SH 121 project. No sites are shown in the survey area, and no other information is available.

Based on the background information presented above, the potential for encountering intact prehistoric sites is considered low throughout most of the project area. Prehistoric sites are uncommon in such upland settings, and any sites present likely would be restricted to the surface and thus have a high likelihood of having been disturbed. However, deposits of Pleistocene and Holocene alluvium are mapped at the crossings of Sister Grove and Pilot Grove Creeks. These localities have the potential to contain buried and intact prehistoric sites with good contextual integrity. The potential for encountering intact historic-age sites is considered moderate, in part because substantial new ROW is required for the project. Therefore, TxDOT recommends that additional archeological investigations, be conducted in the SH 121 project area when the additional right of way for the project has been purchased by the State to confirm the presence or absence of intact archeological deposits that could be adversely impacted by the undertaking.

In accordance with the MOU between TxDOT and THC, we are writing to request your comments on sites of cultural or religious significance to your Tribe that may be affected by the proposed undertaking. Any comments you may have on the TxDOT recommendation should also be provided. If you do not object that the provided findings and recommendations are appropriate, please sign below to indicate your concurrence. In the event that further investigations by our office disclose the presence of archeological deposits, we will contact your Tribe to continue consultation.

Thank you for your attention to this matter. If you have questions, please contact Barbara Hickman (TxDOT Archeologist) at 512/416-2637 (email: Barbara.Hickman@txdot.gov) or me at 512/416-2631 (email: Scott.Pletka@txdot.gov). When replying to this correspondence, please

ensure that the envelope address includes reference to the Archeological Studies Branch, Environmental Affairs Division.

Sincerely,

Scott Pletka, Ph.D., Supervisor Archeological Studies Branch Environmental Affairs Division

Concurrence by:

Date:

Attachments

cc w/attachments: Dan Perge, TxDOT Dallas District Environmental Coordinator; Lindsey Kimmitt, ENV-PD TxDOT; Barbara Hickman, ENV-ARCH TxDOT; ENV-ARCH Project File

cc w/o attachments: ETS Scan

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Mr. Leslie Standing, President Wichita and Affiliated Tribes P.O. Box 729 Anadarko, OK 73005

Sarah Stroman

From:	Sarah Stroman
Sent:	Thursday, December 01, 2016 11:23 AM
То:	lbrown@tonkawatribe.com; mallen@tonkawatribe.com; terri.parton@wichitatribe.com; gary.mcadams@wichitatribe.com
Subject: Attachments:	Section 106 Consultation, Texas Department of Transportation, CSJ 054903021 054903021_Consultation_Request_12-01-2016.pdf

Good morning,

We kindly request your comments on a proposed undertaking. Please see the attached letter for project details and information. Thank you in advance for your consideration.

Regards, Sarah Stroman Information Specialist

Sarah G. Stroman

Texas Department of Transportation Environmental Affairs Division 118 E. Riverside Drive Austin, TX 78704

512/416-2608 Office 512/550-9306 Mobile 512/416-2746 Fax

Mailing Address: 125 E. 11th Street Austin, TX 78701

Sarah.Stroman@txdot.gov



125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

December 1, 2016

RE: CSJ: 0549-03-021; SH 121, Roadway Widening, Section 106 Consultation; Collin County, Dallas District

To: Representatives of Federally-recognized Tribes with Interest in this Project Area

The above referenced transportation project is being considered for construction by the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT). Environmental studies are in the process of being conducted for this project. The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

The purpose of this letter is to contact you in order to consult with your Tribe pursuant to stipulations of the Programmatic Agreement among the Federal Highway Administration, the Texas Department of Transportation, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings (PA-TU). The project is located in an area that is of interest to your Tribe. Tribal consultation for this project was previously initiated in a letter dated September 1, 2011, but re-coordination is now necessary due to recent design changes requiring additional new ROW.

Undertaking Description

TxDOT's Dallas District is proposing to widen the existing SH 121 roadway from a two-lane rural highway to a four-lane divided highway. The limits of the proposed project are from 2.2 miles southwest of FM 455 in northeast Collin County, Texas, to 0.75 northeast of the Collin/Fannin County line (Exhibits A and B).

The proposed improvements would consist of a rural, four-lane divided highway containing 12-footwide travel lanes, 8- to 10-foot-wide outside shoulders, 4-foot-wide inside shoulders, 40-foot-wide grass median and grass-lined ditches. Grade separation intersections are proposed at FM 455 and FM 2862 with discontinuous frontage roads. The proposed project includes 4 bridge replacements, 9 new bridge constructions, and 5 new grade separations (overpasses). Bridge modifications are replacing bridges at Sister Grove Creek Tributary No.4 (1 existing, 2 new), Sister Grove Creek (1 existing, 4 new), Pilot Grove Creek (1 existing, 2 new), and Desert Creek (1 existing, 1 new). Five new grade separations (overpasses) are proposed at three intersections: CR 475/FM 455 intersections (1), FM 455 intersection (2), and FM 2862 intersection (2) (Exhibit C). Tribal consultation is being reinitiated due to recent design changes that require additional new ROW (Exhibit D). Sections of new ROW will be taken from both sides of the existing roadway, and some easements would be required.

Area of Potential Effects

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The project's area of potential effects (APE) comprises the following area.

- The project limits extend from 2.2 miles southwest of FM 455 to 0.75 northeast of the Collin/Fannin County line along SH 121. The total project length is thus 54,912 feet (10.4 miles).
- The existing right of way varies between 60 and 160 feet in width.
- The latitude and longitude for the end points of the project are:
 - o Begin latitude: +33.33009797 Begin longitude: -96.48553848
 - o End latitude: +33.39687315 End longitude: -96.38464450
- The existing right of way comprises an area estimated at 208.5 acres.
- About 165 acres of new ROW would be required; sections of new ROW will be taken from both sides of the existing roadway.
- About 2.4 acres of easement would be required.
- According to typical bridge design the depth of impacts is estimated to up to 40 feet below ground surface for the bridge supports and up to ten feet in depth for the rest of the project.
- For the purposes of this cultural resources review, the APE also includes an additional 50foot area around the previously-described horizontal dimensions to account for potential alterations to the proposed APE included in the final project design. Consultation would be continued if potential impacts extend beyond this additional area, based on the final design

Identification Efforts

For this project, TxDOT has conducted a desktop-based study of available background information, which indicates that further field investigation is warranted. The background study revealed that archeological surveys in the general area have resulted in numerous recorded archeological sites. Five previous surveys have encroached slightly within or crossed the APE, four of which documented archeological sites. Significant areas of the APE, particularly at water crossings and within wooded tracts, contain undisturbed landforms conducive to the preservation of archeological deposits. The APE contains many intact and undeveloped floodplain, terrace, hillslope, and hilltop landforms. Holocene-age Quaternary alluvium is mapped within the APE at the Sister Grove Creek and Pilot Grove Creek crossings. Such undeveloped water crossings have potential to contain moderately deep- to-deep soils, and thus have high potential for buried, intact archeological remains. These areas have not been previously surveyed for archeological resources. In addition, there is potential for early 20th century deposits within the APE. In summary:

- The APE occurs in a setting with the potential to bury and preserve archeological materials.
- The APE occurs in a setting favorable for occupation.

Findings and Recommendations

Based on the above, TxDOT proposes the following findings and recommendations:

• while archeological sites occur rarely even under favorable circumstances for their presence and preservation, field investigation of the APE to identify potential archeological historic properties (36 CFR 800.16(I)) is warranted to verify that archeological historic properties do not occur within the APE;

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- that a zone of 50 feet beyond the horizontal project limits be considered as part of the cultural resources evaluation; and
- if any future changes to the project APE extend beyond the additional 50-foot zone or if archeological deposits are discovered, your Tribe would then be contacted for further consultation.

According to our procedures and agreements currently in place regarding consultation 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 project APE and the area within the above defined buffer. Any comments you may have on the TxDOT findings and recommendations should also be provided. Please provide your comments within 30 days of receipt of this letter. Any comments provided after that time will be addressed to the fullest extent possible. If you do not object that the proposed findings and recommendations are appropriate, please sign below to indicate your concurrence. In the event that further work discloses the presence of archeological deposits, we will contact your Tribe to continue consultation.

Thank you for your attention to this matter. If you have questions, please contact Kevin Hanselka (TxDOT Archeologist) at 512/416-2608 (email: Kevin.Hanselka@txdot.gov) or Sarah Stroman at 512/416-2608 (email: Sarah.Stroman@txdot.gov). When replying to this correspondence by US Mail, please ensure that the envelope address includes reference to the Archeological Studies Branch, Environmental Affairs Division.

Sincerely,

Scott Pletka, Deputy Section Director Environmental Affairs Division

Concurrence by:

Date:

Enclosure

cc w/ enclosure: ENV-ARCH ECOS

OUR GOALS MAINTAIN A SAFE SYSTEM = ADDRESS CONGESTION = CONNECT TEXAS COMMUNITIES = BEST IN CLASS STATE AGENCY

An Equal Opportunity Employer





TO:Administrative FileFrom:Chantal McKenzie

District: Dallas County: Collin CSJ#: 0549-03-021 Highway: SH 121 Let Date: January 2019

Project Limits: South of FM 455 to CR 635

Project

- Description: Stipulation IX, Appendix 6. Major road widening. 167.8 acres of new ROW. No effects to historic, non-archeological properties.
- SUBJECT: Internal review under the Section 106 Programmatic Agreement (Section 106 PA) among the Texas Department of Transportation, Texas State Historic Preservation Officer, Advisory Council on Historic Preservation, and Federal Highway Administration; and the Memorandum of Understanding (MOU) between the Texas Historical Commission (THC) and the Texas Department of Transportation

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

Existing Conditions:

Located northeast of Collin County, the area surrounding the proposed project consists of residential and agricultural properties, along with scattered commercial, religious, and transportation-related properties. State Highway (SH) 121 is the main connector between the Dallas metroplex and Fannin County (see map, HRSR page 180). Much of the area's development occurred after the mid-1970s through present day, corresponding with the immense growth of the Dallas metroplex during this time.

Proposed Project:

The proposed project consists of widening the existing two-lane undivided roadway to a fourlane divided roadway (two lanes in each direction) with a grassy median. The proposed project requires approximately 167.8 acres of new right-of-way (ROW), and no proposed easements.

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Through consultation with the State Historic Preservation Officer (SHPO), the APE for the proposed project is defined as 150-ft beyond proposed ROW.

Determination of Eligibility:

A review of the National Register of Historic Places (NRHP), the list of State Antiquities Landmarks (SAL), the list of Recorded Texas Historic Landmarks (RTHL), and TxDOT files identified no historically significant resources previously documented within the area of potential effects (APE).

In accordance with provisions of 36 CFR 800, TxDOT conducted a cultural resources survey in July of 2016 to identify additional properties listed and potentially eligible for listing in the NRHP. The survey identified 56 historic-age (constructed prior to 1974) resources at 26 locations in the APE. *TxDOT determined none of these eligible for listing in the NRHP* (see HRSR, pages 17-24).

Following the reconnaissance survey, the following historic-age property warranted intensive level analysis to finalize determinations of eligibility:

 5420/5430 SH 121, Collin County, TX- At a reconnaissance level, one of the resources (Resource 6a) surveyed on these parcels represented a somewhat unusual resource type for the area, slated for displacement by this project (see HRSR pages 81-2). In addition, the aerial of the main residence (Resource 6b, see HRSR page 83-4) revealed an unusual architectural plan view which merited further investigation. The project impact and resource types initiated the intensive survey. The intensive survey included seven built resources on three historically associated parcels still owned by the same family. TxDOT determined none of the historic resources eligible for listing in the NRHP (see Intensive Survey, pages 23-31).

Consultation with Other Parties:

During identification efforts, TxDOT contacted the Collin and Fannin County Historical Commissions (CHCs) for assistance in locating historic resources within the project's APE. The Collin CHC indicated few historic resources remained along SH 121. Leads related to Rhymer Spring and 'catch structures' owned by a local property owner yielded no additional information. Fannin County did not respond to TxDOT inquiries (see HRSR, page 8). TxDOT provided copies of both the Reconnaissance and Intensive Surveys to the Collin and Fannin County CHCs.

Determination of Effects:

Therefore, pursuant to Stipulation IX, Appendix 6 "Undertakings with the Potential to Cause Effects per 36 CFR 800.16(i)" of the Section 106 PA and the MOU, TxDOT historians determined that there are no effects to historic, non-archeological properties in the APE. Individual project coordination with SHPO is not required.

Lead Reviewer_	emporadio	for TxDOT 3 30 2017
	Rebekah Dobrasko	Date
Approved by	Bruce Jensen	for TxDOT 3.30.17 Date

2

Bruce Jensen



125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

February 9, 2017

Transmittal of SWCA Archeological Survey Report: Intensive Archeological Survey of the Proposed Widening of State Highway 121, Northeast Collin County and Southwest Fannin County, Texas. Denton County, Dallas District, CSJ: 0549-03-021 THC Antiquities Permit No. 7862

Ms. Pat Mercado-Allinger, Division of Archeology, Texas Historical Commission P.O. Box 12276 Austin, Texas 78711

Dear Ms. Mercado-Allinger:

The above proposed project will be undertaken with state and federal funds. As required by the First Amended Programmatic Agreement (PA, 2005) and the Memorandum of Understanding with your agency, we are continuing consultation with your office on this project and are enclosing for your review and processing a draft report of an archeological survey recently conducted by SWCA Environmental Consultants, Inc. for the undertaking.

On behalf of TxDOT's Dallas District, SWCA conducted an Intensive Archeological Survey with systematic shovel testing and backhoe trenching within the area of potential effects (APE) of a proposed widening of State Highway (SH) 121 in northeast Collin County and southwest Fannin County. The work was conducted in compliance with Section 106 of the National Historic Preservation Act and the Texas Antiquities Code. The project APE is approximately 10.4 miles in length and up to 475 feet wide. The total project APE is about 380 acres consisting of 186.56 acres of existing right-of-way (ROW), 194.3 acres of proposed new ROW, and 2.4 acres of proposed easement. However, an 81.67-acre segment stretching from 3,635 feet east and 4,000 feet west of the intersection with SH 160 was surveyed under a separate yet overlapping TxDOT project (CSJ 0549-03-025, Antiquities Permit 7847, Jon Budd, TxDOT project archeologist). Thus the APE surveyed under the present permit and discussed in the present report is about 299.19 acres, with 141.45 acres of existing ROW, 157.74 acres of new ROW, and 2.4 acres of temporary easement. Typical roadway construction depths would be less than ten feet, but impacts for proposed bridge expansions would extend up to 40 feet.

Field investigations consisted of intensive pedestrian survey supplemented with 92 shovel tests and 14 backhoe trenches. SWCA surveyed the entire existing ROW and the proposed new ROW on private property where access was available. At time of survey, access was unavailable to about 101.78 acres of new ROW. One previously recorded site (41COL261) was identified within the APE, but based on significant disturbances SWCA concurs with the previous determination that the site is not eligible for the NRHP or as an SAL. The site likely extends to

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Archeological Survey Report: Intensive Archeological Survey of the Proposed Widening of State Highway 121, Northeast Collin County and Southwest Fannin County, Texas. Denton County, Dallas District. CSJ: 0549-03-021

THC Antiquities Permit No. 7862

the north into proposed new ROW where access has not been granted, so that portion of the site has yet to be assessed. Otherwise, SWCA did not encounter any unrecorded cultural resources during intensive investigations within the APE. Based on these results, SWCA recommends a finding of "no historic properties affected" and no further archeological investigations are recommended within the surveyed portions of the APE (see attached report).

A TxDOT archeologist has reviewed the report by SWCA and concurs with the results. TxDOT seeks THC concurrence that:

1. No archeological historic properties (36 CFR Part 800.16(1) or State Archeological Landmarks (13 TAC 26.12) are present within the 197.4 acres of APE examined by SWCA.

2. Additional investigations are recommended for about 76.62 acres of the total 101.78 acres of inaccessible areas, once access is granted. The remaining 25.16 acres have been subject to heavy disturbance and are not recommended for survey. Portions of site 41COL261 that extend into currently inaccessible new ROW are to be assessed once access is granted.

3. Since the survey was conducted under an individual THC Antiquities Permit, we are forwarding the draft for your review and processing in partial fulfillment of THC Antiquities Permit No. 7862. TxDOT finds the report acceptable as a draft and pending any final report review comments from your office, we request your concurrence that the report may proceed toward production.

Thank you for your consideration of this matter. If you have any questions regarding the survey report, please contact Steve Carpenter at (512) 476-0891. If you have any other questions or have need of further information, please contact me at (512) 416-2639. Thank you for your consideration in this matter.

Sincerely,

Amkin Hansella

J. Kevin Hanselka, Archeological Studies Program **Environmental Affairs Division**

Cc w/attachment: Sandra Williams, TxDOT Dallas District Environmental Coordinator; Scott Ford, ENV-PD; Kevin Hanselka, ENV-Arch; ENV Arch Project File

Cc w/o attachments: ECOS Scan

Concurrence By:	
for: Mark Wolfe Executive Director and SHPO	3/16/17
Texas Historical Commission	Date

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February 1, 2017

RE: Section 106 and Antiquities Code of Texas Consultation: PA-TU and MOU: SH 121 at SH 160, Improve Overpass and Approaches and New Bridge at Desert Creek: Collin County, Dallas District: CSJ: 0549-03-025: TxDOT Draft Intensive Archeological Survey Report and Recommendations for No Effect and No Further Work Texas Antiquities Permit No. 7847

Patricia A. Mercado-Allinger Division of Archeology/Texas Historical Commission P.O. Box 12276 Austin, Texas 78711

Dear Ms. Mercado-Allinger:

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

TxDOT's Dallas District is proposing to construct an overpass at the intersection of State Highway 121 (SH) at SH 160 in the community of Desert in Collin County, Texas. This construction would include the installation of entrance and exit ramps, and an access road. In addition, one new bridge would be constructed over Desert Creek. The two-lane SH 121 roadway would be realigned and depressed below grade to accommodate the over-crossing, while the profile of SH 160 would be elevated approximately 2 feet. Approximately 36.56 acres of proposed new right of way (ROW) would be required.

The undertaking's area of potential effects (APE) is defined as the existing 120 to 500 foot wide existing SH 121 ROW beginning approximately 4,000 feet west of SH 160 and extending approximately 1.483 miles east. The APE also includes the 120 to 475 foot wide existing SH 160 ROW beginning approximately 1,400 feet north of SH 121 and extending 0.53 miles south. The APE also includes approximately 36.56 acres of proposed new ROW that would be acquired along the south side of SH 121 for the length of the project. Based upon typical roadway design, the depth of impacts is anticipated to be no more than 10 feet (3 meters) below the current ground surface, and no more than 30 feet (9.2 meters) during the construction of new bridge supports. The total proposed ROW required for the project encompasses 81.67 acres, which includes 36.56 acres of new proposed ROW and 45.11 acres of existing ROW.

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Your office issued Texas Antiquities Permit No. 7847 to TxDOT to conduct an intensive archeological survey of the APE. During implementation of the field survey, it was noted by investigators that construction was already under way within the APE. Your office was immediately notified of the construction in an email dated January 4, 2017 (please see attached). Construction within the APE was stopped immediately. The investigators conducted 100% pedestrian survey of the entire APE as well as the excavation of eleven shovel tests. Due to extensive bulldozing disturbance associated with the construction, the investigators determined that backhoe trenching or additional shovel tests were not warranted. No archeological remains, either intact or disturbed due to bulldozing, were observed. The investigators have recommended no further work for the undertaking. A draft copy of that report is attached for your review

TxDOT and seeks your concurrence that the archeological inventory of the undertaking is complete, for a finding of "no historic properties affected", no State Archeological Landmarks affected, and no further work or TSHPO consultation is required. In addition, TxDOT seeks your concurrence that the attached report is adequate and that the stipulations set forth in the Antiquities Code of Texas have been fulfilled. Please signify your concurrence by signing on the signature line provided below.

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

Sincerely Staff Archeologist

Concurrence by:

2-2-17 Date:

For Mark Wolfe, State Historic Preservation Officer and Executive Director

Attachments

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-16-14, and executed by FHWA and TxDOT.

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Report for Archeological Survey

Intensive Archeological Survey of the Proposed Widening of State Highway 121, Northeast Collin County and Southwest Fannin County, Texas

Dallas and Paris Districts

Kevin Hanselka, Principal Investigator, Antiquities Permit No. 7862 CSJ: 0549-03-021, 0549-02-028 January 20, 2017

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-16-14, and executed by FHWA and TxDOT.

Abstract

On behalf of the Texas Department of Transportation (TxDOT), SWCA Environmental Consultants (SWCA) conducted an intensive archeological survey of new and existing State Highway (SH) 121 right-of-way (ROW) in Collin and Fannin Counties, north central Texas. Conducted from January 3–5 and 18–20, 2017, the survey assessed accessible portions of 299.19 acres of ROW, which includes 157.74 acres of new proposed ROW, 139.05 acres of existing ROW, and 2.4 acres of proposed easement along SH 121 northeast of the town of Melissa. The proposed project will widen SH 121 from a two-lane rural highway to a four-lane divided highway. Because the project will receive funding from the Federal Highways Administration, it qualifies as an undertaking as defined in Title 36 Code of Federal Regulations Part 800.16(y) and, therefore, was conducted in compliance with Section 106 of the National Historic Preservation Act (54 U.S. Code 306108). Furthermore, the project must also comply with the Antiquities Code of Texas (9 Natural Resources Code 191). Kevin Hanselka served as Principal Investigator under Texas Antiquities Code Permit No. 7862.

The total area of potential effects (APE) for the project is defined as the 10.4-mile-long stretch of SH 121 ROW from 2.2 miles southwest of the intersection with Farm-to-Market Road 455 and 0.75 mile northeast of the Collin/Fannin County line. Based upon typical roadway design, the depth of impacts is anticipated to be no more than 10 feet (3 meters) below the current ground surface, and no more than 40 feet (12 meters) during the construction of new bridge supports. The section of SH 121 stretching from 3,635 feet east of the intersection with SH 160 and 4,000 feet to the west of the intersection with SH 160 was surveyed and reported under CSJ 0549-03-025, Texas Antiquities Code Permit No. 7847 (Nielsen et al. 2017). The total proposed ROW for the section of the project under CSJ 0549-03-025 encompasses 81.67 acres, which includes 36.56 acres of new proposed ROW and 45.11 acres of existing ROW. Most of the proposed project APE had already been modified and lacked soils; therefore, shovel testing was limited to two small areas, totaling approximately 8.45 acres, outside of the active highway construction, on the northeast and southwest extents of the project APE. The field investigations completed under CSJ 0549-03-025 discovered neither historic properties nor cultural resources as defined in the respective regulations, and SWCA therefore recommended that a finding of "no historic properties affected" be made for the current undertaking.

Background research at the Texas Archeological Sites Atlas identified three archeological sites, two cemeteries, seven previously conducted archeological surveys, and 26 potentially historic structures within a 0.6-mile (1-kilometer) search radius of the proposed project APE. One of the identified archeological sites, 41COL261, intersects the proposed project APE and is located in the southeast quadrant of the intersection of SH 121 and SH 424. Archeological site 41COL261 consists of an early- to mid-twentieth-century domestic debris scatter. A structure depicted on historic maps near the site area is no longer extant and the recovered artifacts are in a secondary context. Therefore, the site was recommended as not eligible for listing in the National Register of Historic Places (NRHP) or for designation as a State Antiquities Landmark (SAL).

Field investigations were conducted in compliance with the Texas Historical Commission Archeological Survey Standards, and this documentation was produced consistent with the Council of Texas Archeologists guidelines for reporting. Field investigations consisted of an intensive pedestrian survey supplemented with the excavation of 92 shovel tests and 14 backhoe trenches. All 139.05 acres of existing ROW, 2.4 acres of proposed easement, and 55.96 acres of proposed new ROW were surveyed during these investigations. Access was not granted at the time of survey for the remaining 101.78 acres of proposed new ROW; therefore, these areas have not been assessed. The proposed ROW has been modified by previous road construction, residential and commercial development, and utilities, thereby lessening the potential for intact archeological deposits within the APE. Investigators did not encounter any unrecorded cultural resources during intensive investigations of the APE. A previously recorded archeological site (41COL261) was identified as intersecting the proposed ROW. However, after revisiting the site, it was determined that due to the intensive disturbances within the immediate area, site 41COL261 lacks integrity and significance. SWCA therefore concurs with the previous determination that the site is not eligible for the NRHP nor as an SAL. However, the site likely extends to the north into proposed new ROW where access has not yet been granted and this portion of the site has not been evaluated. Based on the results of the survey, SWCA recommends a finding of "no historic properties affected," and no further archeological investigations are recommended within the surveyed portions of the APE.

However, a total of 101.78 acres of proposed new ROW have not been assessed, due to lack of access. Archeological investigations are recommended for approximately 76.62 acres of the total 101.78 acres of inaccessible areas once access has been granted. The remaining 25.16 acres of inaccessible areas have been impacted by construction of SH 121, private driveways, utilities, and artificial terracing and have little potential for containing intact or significant archeological sites; as such, these areas are not recommended for survey. In addition, deep mechanical excavations are recommended for areas outside of existing TxDOT ROW at three of the drainage crossings where land access was not available at the time of the survey. Specifically, mechanical excavations are recommended for both sides of Brinlee Branch (north of SH 121), both sides of Sister Grove (south of SH 121), and the east side (left bank) of Pilot Grove (north of SH 121), as these areas contain deep alluvial deposits that may contain intact buried cultural materials. No deep mechanical investigations are recommended for the west side (right bank) of Pilot Grove Creek as this area has a sharp upland rise.

Project Identification

Date: January 20, 2017 Date(s) of Survey: January 3–5 and 18–20, 2017 Archeological Survey Type: Reconnaissance 🗆 Intensive 🖾 **Report Version:** Draft Final 🖾 Jurisdiction: Federal 🖂 State 🖂 **Texas Antiquities Permit Number: 7862** District: Dallas and Paris County or Counties: Collin and Fannin USGS Quadrangle(s): Anna (3396-241), Blue Ridge (3396-132), Pilot Grove (3396-133) Highway: State Highway (SH) 121 CSJ: 0549-03-021, 0549-02-028 Report Author(s): Chris Shelton, Ken Lawrence, Ashley Eyeington, and Christina Nielsen Principal Investigator: Kevin Hanselka, Texas Department of Transportation

Texas Historical Commission Approval

	by
Signature	Mart 3/16/17 Date

Millin a Mart

Signature

Re: Response to Request for TCEQ Environmental Review

The Texas Commission on Environmental Quality (TCEQ) received a request from the Texas Department of Transportation (TxDOT) regarding the following project: TCEQ Coordination for Air Quality, Air Quality Technical Report, SH 121 Project, Collin and Fannin Counties, 0549-03-021, etc.

In accordance with the Memorandum of Understanding between TxDOT and TCEQ addressing environmental reviews, which is codified in Chapter 43, Subchapter I of the Texas Administrative Code (TAC) and 30 TAC § 7.119, TCEQ is responding to your request for review by providing the below comments:

This project is in an area of Texas classified by the United States Environmental Protection Agency as moderate nonattainment for the 2008 ozone National Ambient Air Quality Standard. Air Quality staff has reviewed the document in accordance with transportation and general conformity regulations codified in 40 Code of Federal Regulations Part 93 Subparts A and B. We concur with TxDOT's assessment.

TxDOT will still need to follow all other applicable laws related to this project, including applying for applicable permits.

If you have any questions, please feel free to contact the NEPA Coordinator at (512) 239-3500 or <u>NEPA@tceq.texas.gov</u>.

Chikaodi Agumadu NEPA Coordinator TCEQ, MC-119 <u>NEPA@tceq.texas.gov</u> 512-239-3500

Leslie Mirise

From:	Laura Zebehazy <laura.zebehazy@tpwd.texas.gov></laura.zebehazy@tpwd.texas.gov>
Sent:	Monday, March 20, 2017 2:31 PM
То:	Leslie Mirise
Cc:	Sandra Williams; Dan Perge; Jan Heady; Stirling Robertson
Subject:	RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin
	counties) - Request for Early Coordination

Good afternoon, Leslie,

Thank you for acknowledging my recommendation to consider constructing wildlife passage benches under perennial waterway bridges. TPWD is very interested in collaborating with TxDOT regarding the wildlife passage bench installation, and we continue to encourage TxDOT to evaluate future projects early in the planning and design process for opportunities to do so.

With that being said, thank you for submitting the SH 121 Widening project in Collin and Fannin Counties for early coordination. TPWD appreciates TxDOT's commitment to implement the Best Management Practices discussed in the information provided and in the emails below. Based on a review of the project description and the avoidance and minimization efforts described, and provided that the project plans do not change, TPWD considers coordination to be complete. However, please note it is the responsibility of the project proponent to comply with all federal, state, and local laws that protect fish, wildlife, and plants.

Sincerely,

Laura Zebehazy, CWB Transportation Conservation Coordinator TPWD – Wildlife Habitat Assessment Program Phone: (512)389-4638

From: Leslie Mirise [mailto:Leslie.Mirise@txdot.gov]
Sent: Friday, March 10, 2017 11:39 AM
To: Laura Zebehazy <Laura.Zebehazy@tpwd.texas.gov>
Cc: Sandra Williams <Sandra.Williams2@txdot.gov>; Dan Perge <Dan.Perge@txdot.gov>; Jan Heady
<Jan.Heady@txdot.gov>; Stirling Robertson <Stirling.Robertson@txdot.gov>
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Hi Laura,

Thank you for your recommendation regarding wildlife passage benches. TxDOT acknowledges your recommendation. However, implementing these project changes without justification for the delays in project design, increases in design cost, and increase in taxpayer expense cannot be done for the SH 121 project where 1) there is no suitable habitat for federally listed species and 2) BMPs for state-listed species and SGCN, per the MOU, are already implemented and included in EPIC sheets. Therefore, TxDOT would not consider a wildlife passage bench at this time for the SH 121 project (CSJ 0549-03-021, etc).

Thank you,

Leslie Mirise

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

From: Laura Zebehazy [mailto:Laura.Zebehazy@tpwd.texas.gov]
Sent: Thursday, March 09, 2017 4:37 PM
To: Leslie Mirise
Cc: Sandra Williams; Dan Perge; Jan Heady; Stirling Robertson
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Leslie,

I apologize for the delay in responding.

In response to your questions in TxDOT Response #1 below, I understand that the SH 121 project will not be affecting any federally listed species. I used the SH 100 project as an example of what is possible within TxDOT specifications to alleviate the impacts of roadways on local wildlife populations. I am interested in encouraging TxDOT Districts to consider design changes during scheduled project construction that may provide a safer roadway for the traveling public as well as facilitate daily and seasonal movements of wildlife regardless of rarity. As for data, no, TPWD does not have any site specific data for this project area. Does TxDOT? It is my understanding that some Maintenance Divisions keep records of roadkill within their area of responsibility. TPWD is very interested in collaborating with TxDOT in developing a roadkill database that may help targeting areas that would benefit from future project design and construction modifications that avoid and minimize impacts to wildlife that attempt to cross roads. Also, it should be noted that the absence of roadkill does not necessarily indicate that a roadway does not create a barrier to movement. Many species avoid roadways which in turn can potentially impact gene flow, dispersal, and seasonal migrations. Please see the attached copy of Chapter 1 of van der Ree's Handbook of Road Ecology for further information. I have also included color versions of the figures found in Chapter 1 since I find them incredibly helpful and thought-provoking.

Also, I highlighted the bridges in this project area that have a vegetated bank and slope (rather than stone or concrete) as more ideal since it allows unobstructed wildlife movement under the bridge. I was trying to convey that this could be another option. I understand that TxDOT instructs it's contractors to preserve native vegetation as much as possible.

With that being said, TPWD still recommends that TxDOT consider installing wildlife passage benches, where practicable, to facilitate wildlife movement across the project area, particularly at bridges crossing perennial waterways. The effectiveness of wildlife passage benches increases with the installation of fencing by directing wildlife to the installed bench. TPWD is available to help with the planning and design of any passage benches for this project area or any future projects that may warrant this recommendation.

I hope we can come to a consensus on this recommendation so TxDOT can fulfill their mission of delivering a safe, reliable, and integrated transportation system while TPWD upholds their mission of managing and conserving the natural resources of Texas.

Sincerely,

Laura Zebehazy, CWB Transportation Conservation Coordinator TPWD – Wildlife Habitat Assessment Program Phone: (512)389-4638

From: Leslie Mirise [mailto:Leslie.Mirise@txdot.gov]
Sent: Wednesday, March 01, 2017 5:22 PM
To: Laura Zebehazy <Laura.Zebehazy@tpwd.texas.gov>
Cc: Sandra Williams <Sandra.Williams2@txdot.gov>; Dan Perge <Dan.Perge@txdot.gov>; Jan Heady
<Jan.Heady@txdot.gov>; Stirling Robertson <Stirling.Robertson@txdot.gov>
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Hi Laura,

Thank you for providing recommendations for the SH 121 project. TxDOT provides the following responses:

- **TPWD Recommendation #1:** With the increased lanes and capacity of SH 121 project and the large number of bridges proposed for improvements, TPWD has concerns about the ability for wildlife to safely move throughout the area. The slopes beneath bridges and overpasses, even in suburban areas, are often used for movement between habitat patches by many species of wildlife. During construction of this project, bridges may be modified to permit safe passage by adding a bench or similar wildlife path to facilitate movement. I was recently in the Pharr District, and I visited an ongoing construction project along SH 100 that has incorporated interlocking articulating concrete blocks to facilitate a passage bench (see attached Special Specification 4014 and pictures from that project area); however passage benches can also be incorporated using traditional rip rap applications (see excerpts from a Minnesota DNR publication that provide examples). To facilitate wildlife movement, TPWD recommends incorporating passage benches and fencing (to direct animals to the modified slope and to prevent their movement onto the road surface) in the project design for SH 121. As an alternative, project plans could retain vegetated banks under the bridges that can facilitate wildlife passage (with the fencing recommendation) as noted in the photos (such as Photo 1 of Sister Grove Creek in the Potential Mussel Habitat Areas attachment) provided in the Biological Resources Technical Report dated February 14, 2017.
- **TxDOT Response #1:** TxDOT Dallas District (District) does not use concrete or concrete products as stabilization at or near bridges. Stone riprap and/or gabions are typically used. With regard to benches or wildlife paths, the proposed project would not affect federally listed species, such as ocelots in the Pharr District, that might warrant such a measure at waterway crossings. Is there data from the vicinity of the project area that justifies the implementation of such design(s) (*e.g.*, traffic accidents due to wildlife crossings, impacts to state-listed species or SGCN as a result of vehicle strikes)? As a standard measure for vegetation resources, native vegetation is preserved to the extent practical.
- **TPWD Recommendation #2:** Lastly, please let me know if you need any assistance locating mitigation opportunities with regard to any USACE permitting. I am happy to help however I can.

TxDOT Response #2: Recommendation noted. Thank you.

We appreciate your recommendations.

Sincerely,

Leslie Mirise

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

From: Laura Zebehazy [mailto:Laura.Zebehazy@tpwd.texas.gov]
Sent: Tuesday, February 28, 2017 6:04 PM
To: Leslie Mirise
Cc: Sandra Williams; Dan Perge; Jan Heady
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Good evening, Leslie,

For this SH 121 Widening project in Collin and Fannin Counties, TxDOT's proposed voluntary conservation measures regarding the southern crawfish frog seem sufficient to minimize impacts to this species. With regard to other natural resources, TPWD makes the following recommendations:

- With the increased lanes and capacity of SH 121 project and the large number of bridges proposed for improvements, TPWD has concerns about the ability for wildlife to safely move throughout the area. The slopes beneath bridges and overpasses, even in suburban areas, are often used for movement between habitat patches by many species of wildlife. During construction of this project, bridges may be modified to permit safe passage by adding a bench or similar wildlife path to facilitate movement. I was recently in the Pharr District, and I visited an ongoing construction project along SH 100 that has incorporated interlocking articulating concrete blocks to facilitate a passage bench (see attached Special Specification 4014 and pictures from that project area); however passage benches can also be incorporated using traditional rip rap applications (see excerpts from a Minnesota DNR publication that provide examples). To facilitate wildlife movement, TPWD recommends incorporating passage benches and fencing (to direct animals to the modified slope and to prevent their movement onto the road surface) in the project design for SH 121. As an alternative, project plans could retain vegetated banks under the bridges that can facilitate wildlife passage (with the fencing recommendation) as noted in the photos (such as Photo 1 of Sister Grove Creek in the Potential Mussel Habitat Areas attachment) provided in the Biological Resources Technical Report dated February 14, 2017.
- Lastly, please let me know if you need any assistance locating mitigation opportunities with regard to any USACE permitting. I am happy to help however I can.

Please indicate if TxDOT is willing to commit to the recommendations provided in this email.

Sincerely,

Laura Zebehazy, CWB Transportation Conservation Coordinator TPWD – Wildlife Habitat Assessment Program Phone: (512)389-4638

From: Leslie Mirise [mailto:Leslie.Mirise@txdot.gov]
Sent: Wednesday, February 15, 2017 4:03 PM
To: Laura Zebehazy <Laura.Zebehazy@tpwd.texas.gov>

Cc: Sandra Williams <<u>Sandra.Williams2@txdot.gov</u>>; Dan Perge <<u>Dan.Perge@txdot.gov</u>>; Jan Heady <<u>Jan.Heady@txdot.gov</u>>

Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Hi Laura,

I've attached the Biological Resources Technical Report for the above project, and it has been uploaded in ECOS in the Documents/Biology section. The Tech Report contains additional project area photos, particularly of the crossings containing potentially suitable mussel habitat. Please let me know if you need any additional information.

Thanks,

Leslie Mirise

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

From: Sandra Williams
Sent: Thursday, February 09, 2017 3:53 PM
To: Laura Zebehazy; Leslie Mirise; Dan Perge; Jan Heady
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Here is the schematic (with plan and profile) for the project.

Sandra J. Williams Environmental Specialist Dallas District- Advanced Project Development (APD)

Office Address: Texas Department of Transportation 4777 E. Highway 80 Mesquite, TX 75150-6643 Office: (214) 320-6686 Fax: (214) 320-4470 Email Address: Sandra.williams2@txdot.gov

From: Laura Zebehazy [mailto:Laura.Zebehazy@tpwd.texas.gov]
Sent: Thursday, February 09, 2017 3:33 PM
To: Sandra Williams; Leslie Mirise; Dan Perge; Jan Heady
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Thank you, Sandra, for providing the clarification about the SH 121 project coordinated in 2015.

Can TxDOT provide either schematics or project plan profiles for this project?

Thank you for providing the EMST discrepancy photos with the coordination materials. Are there any other project-wide photos available for my review? Do you know when the Biological Resources Technical Report will be available for review?

Thank you,

Laura Zebehazy, CWB Transportation Conservation Coordinator TPWD – Wildlife Habitat Assessment Program Phone: (512)389-4638

From: Sandra Williams [mailto:Sandra.Williams2@txdot.gov]
Sent: Saturday, February 04, 2017 9:13 AM
To: Laura Zebehazy <<u>Laura.Zebehazy@tpwd.texas.gov</u>>; Leslie Mirise <<u>Leslie.Mirise@txdot.gov</u>>; Dan Perge
<<u>Dan.Perge@txdot.gov</u>>; Jan Heady <<u>Jan.Heady@txdot.gov</u>>
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Good Morning Laura,

My name is Sandra and hopefully I can help in answering your question.

Yes, a portion (an intersection) of this roadway has been coordinated with TPWD previously under a separate approved project (CSJ 0549-03-025), which is a grade separated intersection proposed for SH 121 at SH 160 within the limits from north of SH 160 to south of SH 160 (project length is 1.894 miles). TPWD Coordination was completed for this section as of 06/26/15 (see attached PDF). Coordination for this intersection of the roadway is tracked in ECOS under the CSJ 0459-03-025.

For the project that you are currently reviewing, the roadway extends through the intersection of SH 121 at SH 160. The CSJs for this project are 0549-02-028; 0549-03-021; 0549-03-024; 0549-03-028. The CSJ that intersects the previously approved project area under CSJ 0549-03-025 is CSJ 0549-03-028 (within the limits from north of SH 160 to south of SH 160). Project Location Map identifying each segment by CSJ is attached.

Please let us know if you need any additional information. Thanks!

Sandra J. Williams Environmental Specialist Dallas District- Advanced Project Development (APD)

Office Address: Texas Department of Transportation 4777 E. Highway 80 Mesquite, TX 75150-6643 Office: (214) 320-6686 Fax: (214) 320-4470 Email Address: <u>Sandra.williams2@txdot.gov</u>

From: Laura Zebehazy [mailto:Laura.Zebehazy@tpwd.texas.gov]
Sent: Friday, February 03, 2017 5:31 PM
To: Leslie Mirise; Sandra Williams; Dan Perge; Jan Heady
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Good evening, Leslie,

I have begun my preliminary review of the SH 121 Widening project in Collin and Fannin Counties, and I was wondering if a portion or all of this proposed roadway has been coordinated with TPWD previously? I noticed that there is a Biological Evaluation Form in ECOS from 2015 that mentions that this project was previously coordinated but I cannot find it in our project tracking database.

I will let you know if I have any further questions or need any other information.

Sincerely,

Laura Zebehazy, CWB Transportation Conservation Coordinator TPWD – Wildlife Habitat Assessment Program Phone: (512)389-4638

From: WHAB_TxDOT
Sent: Tuesday, January 17, 2017 4:10 PM
To: Leslie Mirise <<u>Leslie.Mirise@txdot.gov</u>>; Sandra Williams <<u>Sandra.Williams2@txdot.gov</u>>; Dan Perge
<<u>Dan.Perge@txdot.gov</u>>; Jan Heady <<u>Jan.Heady@txdot.gov</u>>
Cc: Laura Zebehazy <<u>Laura.Zebehazy@tpwd.texas.gov</u>>
Subject: RE: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early
Coordination

The TPWD Wildlife Habitat Assessment Program has received your request and has assigned it project ID # 37510. The Habitat Assessment Biologist who will complete your project review is copied on this email.

Thank you,

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

From: Leslie Mirise [mailto:Leslie.Mirise@txdot.gov]
Sent: Tuesday, January 17, 2017 2:18 PM
To: WHAB_TxDOT <<u>WHAB_TxDOT@tpwd.texas.gov</u>>
Cc: Sandra Williams <<u>Sandra.Williams2@txdot.gov</u>>; Dan Perge <<u>Dan.Perge@txdot.gov</u>>; Jan Heady
<Jan.Heady@txdot.gov>
Subject: CSJ: 0549-03-021, etc SH 121 Widen from 2-Ln to 4-Ln Divided (Collin & Fannin counties) - Request for Early Coordination

Hello,

TxDOT requests early coordination for the SH 121 Widen from 2-lane to 4-lane divided project in Collin & Fannin counties, Texas. I have attached the following:

- 1. The Biological Evaluation Form, including the Tier 1 Site Assessment, including the project description and BMPs to be implemented;
- 2. Supporting Documents, including but not limited to, project location map, species lists from TPWD and USFWS/IPaC, EMST documentation, species impact table, and site photos;
- 3. The EMST and Observed Vegetation Excel spreadsheet; and
- 4. TxNDD Map.

These documents, along with related documentation, are also available in ECOS under the CSJ: 0549-03-021. A Biological Resources Technical Report is currently being finalized and will be uploaded to ECOS soon.

Please feel free to contact me with any questions or if you need any additional information.

Leslie Mirise

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





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Appendix H: Right-of-Way and Easement Summary

Right-of-Way and Easements Summary

Parcel No.	Owner	Area of New Row (Acres)	Permanent Easements (Acres)
2583546	St Charles Apartments Inc C/O Mr. Yongshik Kim	0.107	
2594710	Bp Prd Corp	0.166	
2144391	Anna 121 Patnership	0.803	
2611682	Hsiutao Liang & Lin Yun-Hua	1.211	
2611681	James A Luscombe	2.498	0.115
1012950*	Glenn & Dee L Gentry	0.110	
1022681	Cox Residuary Trust Laud Howell-Trustee C/O Judy H Cox-Trustee	9.864	0.076
2132020	Van Lawrence & Boone Hannibal Shelton	0.062	0.070
2132021	Van Lawrence & Boone Hannibal Shelton	0.036	
2132022	Van Lawrence & Boone Hannibal Shelton	0.028	
2132019	Michael & Julie Burnside	0.046	
2132023	John Everett & Shannon Kaye Gidney Revocable Trust	0.295	
2110490	Dennis Ramsey & Carolyn Faye Gidney	0.233	
2088997	James D & Sandra Wilson	0.165	
2088998	Texoma Spg Limited	0.135	
2087722	Jeffery & Michell Wickliffe	0.161	
2087723	Clinton Van Lawrence	1.239	
1096361	Sherley Partners Ltd	0.949	
1096370	Sherley Partners Ltd	7.165	0.404
1012941	Sherley Partners Ltd	0.576	
1022716	Kenneth & Carol A Matuszak	0.064	
2572197/2679820	Wkg Enterprises Ltd	9.064	0.000
1022743*	Sherley Partners Ltd	13.522	
1022761	Sherley Partners Ltd	0.723	
2663854	Newtune Group Inc	8.232	
2531780	Bp Prd Corp	4.277	
1010088	T W West Family Llc	2.655	0.195
2121595	Srinivasa & Jyothirmai Kaarlapudi Bhommanna & Deepa Chintam	0.941	
2615839	Srinivasa & Jyothirmai Kaarlapudi Bhommanna & Deepa Chintam	0.786	
2615837	Brunson Trust Patsy Jean Brunson Trustee	0.724	
1022690	Richard Dzanski		0.072
2679820	Wkg Enterprises Ltd	5.194	0.079
2730886	T W West Family Llc	0.304	

Parcel No.	Owner	Area of New Row (Acres)	Permanent Easements (Acres)
2717997	Srinivasa & Jyothirmai Kaarlapudi Bhommanna & Deepa Chintam	0.273	
2615838	Sohrab Vafadari & Mirzaei Sharareh	0.134	
2615836	Brunson Trust Patsy Jean Brunson Trustee	0.134	
1860490	John W & Melody Ann Eletcher	0.133	
1860481	C & Miller B Lawrence	0.726	
2615834	Richard L Garner Etux	1.676	0.027
	Wanda Hamilton Revocable Trust		
2615832	Wanda Williams Hamilton Trustee	5.280	0.042
1010159	T W West Family Llc	3.065	
2509979	Basil K & Anteope B Sideris	0.951	
19398	Sun Hyang Kim	0.018	
1026678	Westminister-121 Assoc	1.083	0.039
2509980	Jeffrey W Garner	0.269	
1026687	Michael Chad & Eileen Devine Joyce	1.005	0.040
1026473	Omnipart Usa Llc	1.008	
1026534*	John Hall	2.089	
2120635	John Q & Cynthia Hall	0.546	
1622970	Sormin Llc	0.231	
1353298	Sormin Lic	0.135	
2615833	The Chin J & Wanda Chang Family Limited Partnership	0.000	0.049
	Wanda Hamilton Revocable Trust		
2615831	Wanda Williams Hamilton Trustee	0.355	0.031
2730885	T W West Family Llc	1.125	
2101675	Basil K & Anteope B Sideris	2.215	
1026650	Sherley Partners Ltd	7.964	
2668698	Texas-New Mexico Power Company	0.152	
2668697	David L Graham	2.300	
1026632	Larry Don & Donna Brown	0.296	
1026552*	Larry Don & Donna Brown	0.274	
1026570	Larry Don & Donna Brown	0.951	
2120634	Troy R & Judy L Conway	0.995	
1026598	Curtis M Brown Etux	1.908	
2042552	Michael E Felini	0.062	
1026623	David & Nancy Bell	0.060	
1026605	Jesus Franco	0.546	
1026561*	Raul I & Adelina O Lonez	0.868	
2520387/2718355/27183			
54	Anna/121 Land Holdings Llc	7.441	0.671
2718357/2718358/27183	Anna/121 Land Holdings Llc	3.555	0.073

Parcel No.	Owner	Area of New Row (Acres)	Permanent Easements (Acres)
60			
2120626	Rhoda A - Le Smith	0.126	
102286	Victor A Wooding Ir	E 227	
1025680	Spaffle Bit Lls	0.537	
2000022	William B Weaver	0.554	
1023920	Kristen B Weaver	0.379	
1023813-1	Sherley Partners Ltd	1.063	0.204
1034749-1	Sherley Partners Ltd	1.558	
1023902	John A Turner	1.326	
2584568	John A Turner	1.204	0.050
1034749-2	Sherley Partners Ltd	2.807	
1023813-2	Sherley Partners Ltd	0.744	0.180
1034749	Sherley Partners Ltd	3.434	
2121010	Andy C & Holly Wild Anderson	1.799	
2124322	Grant & Millicent Callant	0.893	
1034730	Nellie J Nichols	0.878	
2528785	Billy G & Martha O Collard	1.498	
2528784	David S & Stacy Michelle Kohm	1.109	
1034259	Richard & Betty M - Le Mays Mays Living Trust	3.092	
1024215	William L & Barbara A Docekal	4.447	
77092	Keratex, LP	1.114	0.035
77083	Davy & Contessa Essary	0.870	0.034
2732588	Chen Wen, Et Al.	0.239	
2727300	Brian Sterling Bell & Mai C Lieu	0.078	
1028881	Byron H Simiele	0.082	
1739462	Cary L & Tracy R Bartoo	0.223	
2653177	Denver L Jr & Linda J Hall	0.135	
2653178	Denver L Jr & Linda J Hall	0.148	
2712053	Ronald Fortner & Pamela Gleason	0.351	
2685202	Hector & Cristina Moreno	0.096	
2685194	Hector & Cristina Moreno	0.040	
77082	Lewis W Donaghey	0.347	
1368193	Sam Zamani Trustee	0.000	
1034231	Larry D & Betty Donaldson	4.386	
2121194	Douglas Brummett	1.040	
2121193	Patricia & Sterling Bartlowe	1.540	
TOTALS		165.075	2.417

As indicated in the table above (parcel numbers with an asterisk), there would be four residential displacements and one commercial displacement associated with the Build Alternative. Right-of-way acquisition would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, in the Uniform Relocation Assistance Act of 1987. Relocation resources are available without discrimination to all residential and business owners being displaced.