



This Page Intentionally Left Blank

## EXECUTIVE SUMMARY



The Regional Planning Commission, in cooperation with the Louisiana Department of Transportation and Development and the Federal Highway Administration, proposes to widen a portion of LA 434 and replace the timber bridge over Bayou Lacombe in St. Tammany Parish, Louisiana.

The project area is located north of Interstate 12, east of Watts Road (LA 41), west of LA 1088, and south of LA 36 in St. Tammany Parish, is approximately 300 feet wide, and extends south from LA 36 to the proposed junction of LA 434 and LA 3241.

### Background

The Regional Planning Commission (RPC) is the designated Metropolitan Planning Organization for the New Orleans urbanized area including St. Tammany Parish and the Mandeville-Covington, Slidell, and south Tangipahoa urbanized areas. The proposed project is identified as a Tier II – On System – Funded Project for fiscal year 2015 – 2024 in the *Metropolitan Transportation Plan, St. Tammany Parish Urbanized Areas, Fiscal Years 2011 – 2040* (November 2010) and is included as a financially constrained priority project in the *Transportation Improvement Program, St. Tammany Urbanized Areas, Fiscal Years 2012 – 2016* (March 2012). The project was administratively amended on August 15, 2014, pertaining to project limits.

The study of the alternatives developed in this environmental assessment (EA) and the associated environmental consequences were evaluated according to the National Environmental Policy Act, the Louisiana Department of Transportation and Development's (LADOTD's) Stage 1 Planning/Environmental Manual of Standard Practice, and the Federal Highway Administration's (FHWA's) Guidance for Preparing and Processing Environmental and Section 4(f) Documents.

### Project Purpose

The purpose of the proposed project is to add roadway capacity and improve traffic operations in order to accommodate future traffic volumes for this portion of Louisiana Highway 434 (LA 434), which was constructed in 1960 and 1961. This purpose is consistent with the goals of the Transportation Improvement Plan for the St. Tammany Parish Urbanized Areas and the Transportation Infrastructure Model for Economic Development (TIMED) program for the LA 3241 project, with which this project intersects.

## Project Need

The project is needed to upgrade the roadway segment to current design standards; improve capacity; support planned residential, institutional, and business growth within the parish urban growth boundary; and replace the timber trestle bridge crossing Bayou Lacombe. More specifically, needs for the proposed project include:

- Improve capacity;
- Support planned residential, institutional, and business growth within the parish urban growth boundary;
- Relieve future congestion on area roadways;
- Replace the timber trestle bridge crossing Bayou Lacombe with a new bridge; and
- Improve area-wide mobility and system reliability.

## Project Description

The RPC, in cooperation with LADOTD and FHWA, proposes to widen a portion of LA 434 and replace the timber trestle bridge over Bayou Lacombe in St. Tammany Parish, Louisiana.

The proposed action area extends south from LA 36 along LA 434 terminating between Vortisch Road/Horseshoe Island Road and D'Antonio Road, a distance of approximately 3 miles (**Figure ES-1**), and includes the proposed roadway improvements and limits of construction.

## Study Area and Logical Termini

FHWA defines logical termini for project development as (1) rational end points for a transportation improvement; and (2) rational end points for a review of the environmental impacts. The environmental impact review frequently covers a broader geographic area than the strict limits of the transportation improvements. In the past, the most common termini have been points of major traffic generation, especially intersecting roadways. This is due to the fact that, in most cases, traffic generators determine the size and type of facility being proposed.

The logical termini for the proposed action are LA 434 at LA 36 and LA 434 at the junction with the proposed LA 3241 (Interstate 12 [I-12] to Bush) identified on **Figure ES-1**. The LA 3241 alignment connects with LA 434 approximately 1.5 miles north of I-12 and is identified on preliminary plans for Alternative Q from the I-12 to Bush EIS (August 2011) as Station 3061. The Study Area includes the logical termini and the area that may be impacted by the direct and indirect impacts of the proposed project (**Figure ES-1**).

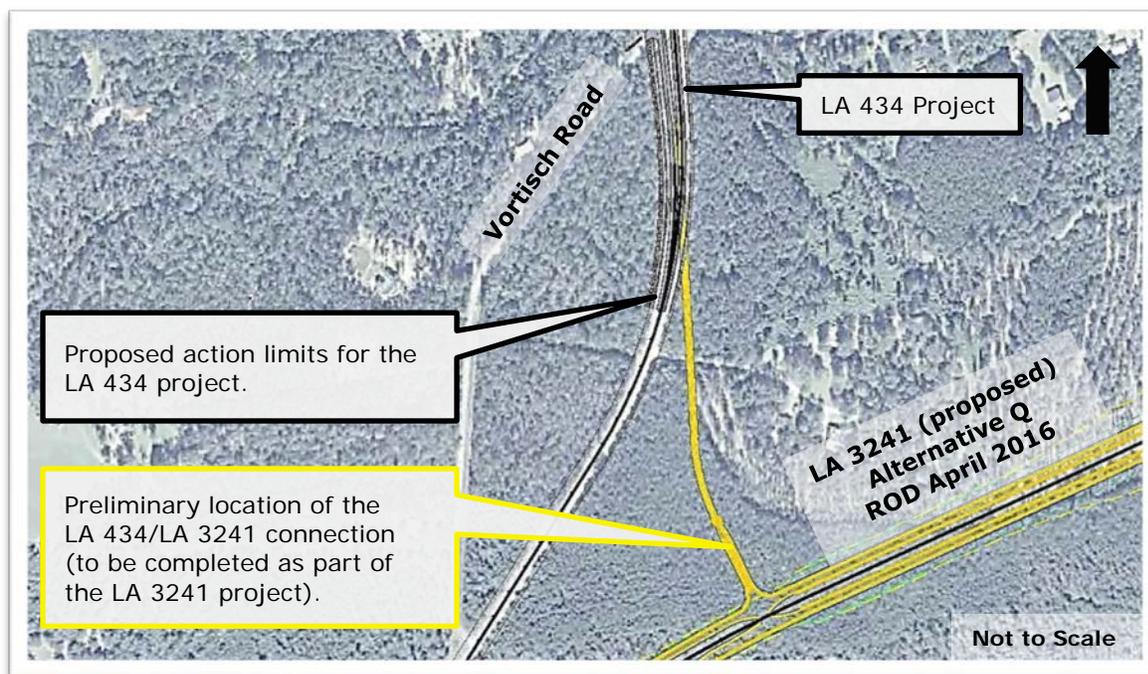
The proposed I-12 to Bush highway is an LADOTD-planned project under the TIMED program (Louisiana Revised Statute 48:820.2). The TIMED program, approved by the 1989 General Session of the Louisiana State Legislature, includes the construction of LA 3241, a four-lane highway [Revised Statute 47:820.2.B(1)(e)], between Bush, Louisiana, and I-12



## ENVIRONMENTAL ASSESSMENT

in St. Tammany Parish. A Record of Decision (ROD) was issued in June 2012 that environmentally approved Alternative Q as the Selected Alternative from the I-12 to Bush Environmental Impact Statement (EIS). The project is now funded with federal aid.

After the ROD was issued, it was determined that two constructed developments, the St. Tammany Parish Coroner's office and the South Central Park and Ride, along with Tamanend, an approximate 900-acre planned unit development, were located within the path of Alternative Q. LADOTD has realigned the portion of Alternative Q that connects with LA 434 to avoid these improvements as described in the I-12 to Bush Final EIS and documented in the ROD (April 2016). The intersecting point has moved north of Station 3061 approximately 1 mile (**Figure ES-2**).



**Figure ES-2. Conceptual Location of LA 434/LA 3241 Junction**

The project team for LA 434 will coordinate with the design team for LA 3241 in order to fully develop the preliminary line and grade for the LA 434 improvements.

### Alternatives Development

The Study Area was initially evaluated in a Stage 0 Feasibility Study completed for the RPC. The *Louisiana Highway 434 Corridor Study, Stage 0 Feasibility Study* (May 2010) developed a preliminary purpose and need statement, initial project concepts to address the needs, and potential alternatives. One alternative was identified in the Stage 0 study:

- Widening of LA 434 to include a four-lane boulevard and four-lane bridge crossing Bayou Lacombe.

The limits of the Stage 0 corridor study extended approximately 8.3 miles from U.S. Highway 190 to LA 36. Following completion of the I-12 to Bush EIS (LA 3241) and identification of the proposed improvements associated with this corridor, the LA 434 Study Area was reduced. The Study Area for this EA extends approximately 3 miles from LA 434 at its junction with the proposed LA 3241 (Project Begin) north along LA 434 to LA 36 (Project End).

To minimize impacts and reduce the amount of additional right-of-way (ROW), required alignments were located as close to the existing LA 434 roadway as design standards and construction would allow. LADOTD policies such as roadway and bridge design, intersection configuration, traffic, noise, and minimization of social and environmental impacts were also considered in the alternatives development. Proposed improvements follow the existing roadway alignment providing widening and improvements to accommodate a multi-lane highway. This resulted in two alternatives.

**Alternative 1** includes widening to a four-lane divided roadway and replacement of the existing timber bridge over Bayou Lacombe with a four-lane bridge. Improvements include using the existing two lanes as northbound lanes with widening to the west for the center median, two southbound lanes, and a shared-use path. Roadway drainage will be accommodated by open ditches to the east and west of LA 434. The existing roadway ROW is 80 feet wide, and the proposed ROW width for **Alternative 1** is 150 feet.

**Alternative 2** includes roadway widening to two lanes with a center turn lane and replacement of the existing timber bridge with a three-lane bridge. Improvements include utilization of the existing two lanes as the northbound and center turn lane with widening to the west for the southbound lane and a shared-use path. Roadway drainage will be accommodated by open ditches to the east and west of LA 434. The existing roadway ROW is 80 feet wide, and the proposed ROW width for **Alternative 2** is 125 feet.

An optional intersection analysis was completed for LA 434 at LA 36 for Alternatives 1 and 2 including a signalized intersection and a roundabout. Roundabout geometry was analyzed using Sidra 6 software and developed in accordance with LADOTD's Roundabout Design standards.

### ***Resource Impact Analysis***

A number of resources and issues were used to compare each alternative chosen for detailed evaluation. The resources used to compare the alternatives are compiled in the Geographic Information System for the project or detailed in a series of technical documents that are incorporated by reference into the EA. Alternatives were evaluated with respect to the environmental and engineering factors and effects are summarized in **Table ES-1**.

ENVIRONMENTAL ASSESSMENT

Table ES-1: Alternatives Evaluation Matrix

Evaluation Factors	Alternative 1 Four-Lane Divided		Alternative 2 Two-Lane With Center Turn Lane		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
<b>Physical Resource Impacts</b>					
Residences	0	0	0	0	0
Businesses	0	0	0	0	0
Churches	0	0	0	0	0
Public Facilities	0	0	0	0	0
USTs/Pumps/Piping	1	1	1	1	0
Anticipated Relocations	3	3	2	2	0
Noise Receptors	NA	NA	15	15	7
Required Right-of-Way (Acres)	24	24	14	14	0
<b>Cultural and Natural Resource Impacts</b>					
Cemeteries	0	0	0	0	0
100-Year Floodplain (acres)	3.5	3.5	3.0	3.0	0
Surface Waters (acres)	<1	<1	<1	<1	0
Wetland (acres)	9	9	4.8	4.8	0
Prime Farmland (acres)	0	0	0	0	0
Archaeological Sites	0	0	0	0	0
Structures >47 Years in Age	10	10	10	10	0
Historic Structures — Potentially Eligible	4	4	4	4	0
Historic Structures — Affected	0	0	0	0	0
Known UST Sites	0	0	0	0	0
Water Wells	0	0	0	0	0
Oil/Gas Pipelines	1	1	1	1	0

\*Intersection Option at LA 434/LA 36  
 NA Not analyzed  
 UST Underground storage tank

**Preliminary Cost Analysis**

Preliminary cost analysis for the alternatives includes roadway construction, bridge construction, utility relocation, ROW, wetland mitigation and surveying, engineering, and construction supervision/inspection. These costs are presented in **Table ES-2**.

**Table ES-2: Alternative Cost Estimate Evaluation**

Evaluation Factors	Alternative 1 Four-Lane Divided (approx. 3 miles)		Alternative 2 Two-Lane With Center Turn Lane (approx. 3 miles)		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
(Total Length – Miles)	2.74	2.74	2.62	2.62	2.62
<b>Cost (million dollars)</b>					
Roadway Construction	7.61	7.61	5.78	5.78	0
Shared-Use Path Construction	0.97	0.97	0.97	0.97	0
Bridge Construction	0.42	0.42	0.28	0.28	0
Utility Relocation	0.26	0.26	0.26	0.26	0
Right-of-Way Acquisition	1.67	1.67	1.32	1.32	0
Wetland Mitigation	1.14	1.14	0.57	0.57	0
Surveying, Engineering, Construction Supervision & Inspection	0.43	0.49	0.34	0.39	0
<b>TOTAL</b>	12.50	12.56	9.52	9.52	0

\*Intersection Option at LA 434/LA 36

Notes:

1. Includes 20% Roadway and 10% Bridge Contingency for Estimating Purposes
2. Costs Rounded

### Preferred Alternative

A comparison of the intersection delays for **Alternatives 1** and **2** demonstrated that there is little benefit from a four-lane section (**Alternative 1**) versus a two-lane section with center turn lane (**Alternative 2**). Given the increased cost of construction for the four-lane section compared to the two-lane section with center turn lane, **Alternative 2** meets the required LOS and will accommodate growth in traffic along the corridor and maintain LOS standards. As a result of the comprehensive resources evaluation, traffic studies, and coordination with public, local, state, and federal officials or agencies, sufficient information and public opinion exist to identify **Alternative 2** as the **Preferred Alternative**.

Proposed improvements for this alternative include roadway widening to two lanes with a center turn lane and replacement of the existing timber bridge over Bayou Lacombe with a three-lane bridge (**Figure ES-3**). Improvements include utilization of the existing roadway as the northbound lane with widening to the west for the center turn lane, southbound lane, and a shared-use path. Roadway drainage will be accommodated by open ditches to the east and west of LA 434.

The bridge, pedestrian facility, and drainage improvements would be constructed to the full roadway section if, and when, traffic conditions warrant. Improvements to provide access management such as a curbed, dedicated left turn lane or a raised median are discussed in detail in this EA.

## ENVIRONMENTAL ASSESSMENT

In summary, Alternative 2, as the Preferred Alternative:

- Satisfies the stated Purpose and Need for the project;
- Alternative 2 intersections are expected to operate within acceptable level of service (LOS) thresholds;
- Meets the required LOS and will accommodate growth in traffic along the corridor and maintain LOS standards;
- Has the lowest anticipated residential relocations;
- Has the lowest required ROW;
- Has the lowest wetland impacts;
- Has the lowest overall cost; and
- Most efficiently balances the expected project benefits with overall impacts.

The identification of the **Preferred Alternative** addresses the stated purpose and need and satisfies, to the fullest extent possible, the objectives of NEPA. Impacts from the **Preferred Alternative** were avoided where possible and minimized to the greatest extent practicable.



LA 434 FROM SOUTH OF HORSESHOE ISLAND/VORTISCH ROAD INTERSECTION (BEGIN PROJECT) TO SALLY WELCH ROAD

Bridge Over Bayou Lacombe



FROM SALLY WELCH ROAD TO STICKER BAY ROAD



FROM STICKER BAY ROAD TO MARSHALL VAUGHN ROAD



FROM MARSHALL VAUGHN ROAD TO LA 36 (END PROJECT)

LA 434 Corridor  
 Environmental Assessment  
 St. Tammany Parish, Louisiana  
 RPC Task LA434EA (H.004981)

# Alternative 2

## Two Lane with Center Turn Lane

- REQUIRED HIGHWAY BRIDGE
  - EXISTING TRAVEL LANES
  - REQUIRED CONCRETE SIDEWALK
  - REQUIRED DITCH
  - EXISTING HIGHWAY RIGHT-OF-WAY
  - REQUIRED HIGHWAY RIGHT-OF-WAY
- Preliminary*                      Not To Scale

Figure ES-3

This Page Intentionally Left Blank

ENVIRONMENTAL CHECKLIST

WBS No. H.00491.2
Name: LA 434 Corridor
Route: LA 434
Parish: St. Tammany

1. General Information

- Conceptual Layout, Survey, Line and Grade, Plan-in-Hand, Preliminary Plans, Advance Check Prints

2. Class of Action

- Environmental Impact Statement (E.I.S.), Environmental Assessment (E.A.), Categorical Exclusion (C.E.), Programmatic C.E., State Funded Only (EE/EF/ER)

3. Project Description

See Executive Summary and Sections 1 and 2

4. Public Involvement

- Views were solicited, Public Involvement events held, A public hearing/opportunity for requesting a public hearing required/not required

5. Real Estate

Table with 4 columns: Question, NO, YES, N/A. Rows include questions about right-of-way requirements and relocation.

6. Section 4(f) and Section 6(f)

Table with 4 columns: Question, NO, YES, N/A. Rows include questions about historic sites and L&WC funds.

## 7. Cultural Section 106

	NO	YES	N/A
a. Are any <b>known historic properties</b> adjacent or impacted by the project? (If so, list below).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Are any <b>known archaeological sites</b> adjacent or impacted by the project? (If so, list site # below) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Would the project affect property owned by or held in trust for a federally recognized <b>tribal government</b> ? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 8. Natural & Physical Environment

	NO	YES	N/A
a. Are <b>wetlands</b> affected? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Are <b>other waters</b> of the U.S. affected? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Are <b>Endangered/Threatened Species/Habitat</b> affected? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Is project within 100 Year <b>Floodplain</b> ? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Is project in <b>Coastal Zone</b> Management Area? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Is project in a <b>Coastal Barrier Resources</b> area? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Is project on a <b>Sole Source Aquifer</b> ? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Is project impacting a <b>navigable waterway</b> ? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Are any State or Federal <b>Scenic Rivers/Streams</b> impacted? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Is a <b>noise</b> analysis warranted (Type I project) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. Is an <b>air</b> quality study warranted? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Is project in a <b>non-attainment</b> area? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Is project in an approved Transportation Plan, Transportation Improvement Program (TIP) and State Transportation Improvement Program ( <b>STIP</b> )? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
n. Are <b>construction</b> air, noise, & water impacts major? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Will the project affect or be affected by a <b>hazardous waste site</b> , leaking underground storage tank, oil/gas well, or other potentially contaminated site? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 9. Social Impacts

	NO	YES	N/A
a. Will project change <b>land use</b> in the area? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Are any <b>churches and schools</b> impacted by or adjacent to the project? ..... (If so, list below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Has <b>Title VI</b> been considered? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Will any <b>specific groups</b> be adversely affected? (i.e., <i>minorities, low-income, elderly, disabled, etc.</i> ) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Are any <b>hospitals, medical facilities, fire police facilities</b> impacted by or adjacent to the project? (If so, list below).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Will <b>Transportation patterns</b> change? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Is <b>Community cohesion</b> affected by the project? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Are <b>short-term social/economic</b> impacts due to construction considered major? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Do conditions warrant <b>special construction times</b> ? (i.e., <i>school in session, congestion, tourist season, harvest</i> ) .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Were <b>Context Sensitive Solutions</b> considered? (If so explain below).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Were <b>bike and pedestrian</b> accommodations considered? (explain below).....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- |                                                                                    | NO                                  | YES                                 | N/A                      |
|------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| I. Will the <b>roadway/bridge be closed?</b> (If yes, answer questions below)..... | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Will a <b>detour bridge</b> be provided? .....                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| Will a <b>detour road</b> be provided? .....                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| Will a <b>detour route</b> be signed? .....                                        | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

---

**10. Permits (Check all permits that may be required)**

---

- |                                                          |                                                        |                                                      |
|----------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|
| <input type="checkbox"/> Corps Nationwide                | <input type="checkbox"/> CUP/Consistency Determination | <input checked="" type="checkbox"/> LA Scenic Stream |
| <input checked="" type="checkbox"/> Corps Section 404/10 | <input type="checkbox"/> USCG Bridge                   | <input checked="" type="checkbox"/> DEQ WQC          |
| <input type="checkbox"/> Levee                           | <input type="checkbox"/> USCG Navigational Lights      | <input checked="" type="checkbox"/> LPDES Stormwater |
| <input type="checkbox"/> Other (explain below)           |                                                        |                                                      |

---

**11. Other (Use this space to explain or expand answers to questions above.)**

---

Views were solicited on March 25, 2014.

A Public Information Meeting was held on January 13, 2015, and the Public Information Meeting Summary dated February 13, 2015, is on file with the RPC and LADOTD.

- 7(b) The field survey identified ten buildings and one bridge within the direct and indirect Areas of Potential Effect (APEs) that are at least 47 years of age (predate 1967). These structures were recorded on Louisiana Historic Resource Inventory forms and photo-documented. The structures included one vacant commercial building, one barn, and eight single-family residences. Of the ten structures identified, two were located within the direct APE and are not considered to be potentially eligible for listing on the National Register of Historic Places (NRHP). Of the eight structures located within the indirect APE, four structures are recommended eligible for listing on the NRHP (52-02399, 52-02401, 52-02402, and 52-02404). Avoidance of these structures was the preferred measure for alternatives development. Proposed improvements for the build alternative avoid impact to the two residential structures located within the direct APE.

The timber bridge over Bayou Lacombe (Recall No. 060340; Structure No. 62528521205991) was constructed in 1953. The LADOTD Historic Bridge Inventory lists the bridge over Bayou Lacombe as ineligible for the NRHP. LADOTD, in cooperation with FHWA and SHPO, completed a statewide historic bridge inventory for bridges constructed prior to 1971. A National Register Eligibility Documentation Report was prepared by Mead & Hunt (2013). FHWA made final NRHP eligibility determinations, which are presented in the Mead & Hunt report, and the SHPO has concurred with those determinations.

- 8(a) Wetland impacts are estimated to be 4.8 acres for the **Preferred Alternative**.
- 8(b) Bridge replacement over Bayou Lacombe will require a scenic rivers permit.
- 8(d) Floodplain associated with Bayou Lacombe.
- 8(e) Following Natural Resources Conservation Service coordination, the farmland conversion impact rating shows a total project score of 100 points. Farmland Protection Policy Act guidelines state that consideration for protection is not required for a total score of less than 160.
- 8(i) Coordination with the Louisiana Department of Wildlife and Fisheries (LDWF) Scenic Streams Coordinator was initiated on March 25, 2014. In email correspondence dated May 28, 2014, LDWF

confirmed that replacement of the timber bridge at Bayou Lacombe, a Louisiana scenic stream, will require a Scenic Rivers Permit.

- 8(j) In the 2034 **No Build Alternative**, growth in traffic volumes will cause exterior sound levels at 7 receiver locations to approach or exceed the Noise Abatement Criteria (NAC). None of these receiver locations will experience a substantial increase in noise level. In the 2034 build condition, the proposed roadway widening will cause exterior sound levels at 15 receiver locations to approach or exceed the NAC.

None of the noise impacts are based on the 10 A-weighted decibel increase.

None of the abatement measures reviewed are considered to be feasible. Reasonableness of placing a structural noise barrier along LA 434 and the impacted receivers was evaluated and found reasonable. However, due to the potential access issues caused by a proposed barrier, it may not be considered feasible.

- 8(o). Required right-of-way for lane widening and intersection improvements associated with the **Preferred Alternative** would not impact sites identified to have known potential environmental conditions that may have the presence or likely presence of hazardous substances or petroleum products or that pose a material threat of release. The **Preferred Alternative** would cross one high-pressure gas pipeline.
- 9(a) To meet roadway widening design criteria, land use changes include some developed and undeveloped residential and timber land use to transportation use.

---

Preparer: ARCADIS U.S., Inc.  
Title: Scott L. Hoffeld, Sr. Project Manager  
Date: August 2017

### Attachments

- S.O.V. and Responses **Appendix B**
- Wetlands Finding **Section 3.2, Appendix CD-1**
- Project Description Sheet **Sections 1, 2, and 3**
- Conceptual Stage Relocation Plan
- Noise Analysis **Section 3.7, Appendix CD-2**
- Air Analysis
- Exhibits and/or Maps
- 4(f) Evaluation
- Form AD 1006 (Farmlands)
- 106 Documentation **Appendix**
- Other **The Public Information Meeting Summary is on file with the RPC and LADOTD and was distributed February 2015.**  
**The Permits, Mitigation, and Commitments document follows the Environmental Checklist.**



# SUMMARY

## PERMITS, MITIGATION, & COMMITMENTS

### **U.S. Army Corps of Engineers Permit**

A Jurisdictional Determination by the U.S. Army Corps of Engineers (USACE), New Orleans District is required.

A USACE permit is anticipated to be required in order to satisfy Section 404 of the Clean Water Act for temporary and permanent construction-related impacts to wetlands and other waters of the U.S. determined to be jurisdictional. The permit process was initiated as part of the Solicitation of Views.

In order to comply with the federal policy of ensuring that there is no net loss of wetlands acres, unavoidable wetlands impacts along the project would be compensated according to an approved mitigation plan as part of the wetland permitting process.

### **Section 401 Water Quality Certification**

A Section 401 Water Quality Certification is required in conjunction with the Section 404 permit according to Louisiana's Water Quality Regulations (Louisiana Administrative Code 3:IX Chapter 15). This certification would be coordinated with the Louisiana Department of Environmental Quality (LDEQ).

### **Louisiana Department of Wildlife and Fisheries (LDWF), Scenic Streams Permit**

The **Preferred Alternative** will require a Scenic Streams permit in compliance with the LDWF for replacement of the timber bridge crossing Bayou Lacombe, a Louisiana scenic stream.

### **Threatened and Endangered Species**

The Study Area does not likely contain habitat that is suitable to support rare, threatened, or endangered species. In the event species of concern are encountered in the project area, further consultation with the U.S. Fish and Wildlife Service will be necessary.

## **Louisiana Pollutant Discharge Elimination System (LPDES) Permit and Storm Water Pollution Prevention Plan (SWPPP)**

Adverse construction impacts to water quality would be reduced by implementation of Best Management Practices as outlined in a project-specific SWPPP and Erosion and Sedimentation Control Plan for the project. Measures to reduce erosion and nonpoint source pollution from runoff into surface waters, properly store materials and equipment, properly store and dispose of waste materials, maintain equipment, and avoid accidental discharges of fuels or other chemicals will be outlined in the SWPPP. The **Preferred Alternative** would require an LPDES Notice of Intent (NOI) for construction-related activities. The SWPPP shall be prepared and kept at the construction site in addition to the LPDES NOI application. LDEQ monitors these practices through its Water Quality Certification program, which is integrated into the Section 404 process.

### **Residential Relocations**

Residential relocations associated with the **Preferred Alternative** will be addressed through the Uniform Relocation Act of 1970. Measures to reduce relocation impacts will be incorporated during the design stage.

### **Drainage Channel Design**

In order to minimize right-of-way impacts to residences along the east side of Louisiana Highway 434 (LA 434) at Azalea Lane, a "V" channel design for the roadside ditch will be considered along the east side of LA 434 from Azalea Lane north approximately 300 feet to the next driveway opening. This optional channel design reduces the additional right-of-way (ROW) requirements for the roadside ditch by 4 feet, from 15 feet to 11 feet in width. Additional coordination will be required during final design.

### **Traffic Control**

Construction-related traffic delays will be minimized through signing plans that inform drivers of work zones, lane closures, and other temporary changes. All traffic maintenance plans will be prepared by qualified traffic engineers in accordance with Louisiana Department of Transportation and Development (LADOTD) standards and will be monitored for effectiveness throughout the construction process.

### **Bicycle and Pedestrian Facilities**

Currently, the St. Tammany Parish Master Plans do not include bicycle and pedestrian improvements along the Study Area. However, considering that future planning within St. Tammany Parish may include bicycle and pedestrian improvements along or near the Study Area, the proposed roadway and bridge sections allow for incorporation of a shared-use path on the west side of LA 434. The shared-use path will provide an opportunity for future local bicycle and/or pedestrian linkages to the Tamanend development via Firetower

Road. Bicycle and pedestrian improvements for the proposed project have been evaluated in accordance with the LADOTD *Complete Streets Policy* and in coordination with St. Tammany Parish.

### **Property Access**

Access will be maintained to properties adjacent to the project.

This Page Intentionally Left Blank



# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>ES-1</b>
Background.....	ES-1
Project Purpose .....	ES-1
Project Need .....	ES-2
Project Description .....	ES-2
Study Area and Logical Termini.....	ES-2
Alternatives Development .....	ES-4
Resource Impact Analysis .....	ES-5
Preliminary Cost Analysis.....	ES-6
Preferred Alternative .....	ES-7
<b>ENVIRONMENTAL CHECKLIST.....</b>	<b>EC-1</b>
<b>SUMMARY PERMITS, MITIGATION, &amp; COMMITMENTS .....</b>	<b>PMC-1</b>
<b>LIST OF ACRONYMS.....</b>	<b>ACR-1</b>
<b>1. PURPOSE AND NEED.....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Project Purpose.....	2
1.3 Project Need.....	2
1.4 Existing Roadway Traffic .....	2
<b>2. ALTERNATIVES.....</b>	<b>7</b>

## ENVIRONMENTAL ASSESSMENT

2.1	Traffic Analysis .....	7
2.1.1	Build Conditions for Intersections .....	8
2.1.2	Build Option Comparisons and Recommendations .....	10
2.2	Alternatives Development .....	10
2.2.1	Stage 0 Alternatives .....	10
2.2.2	Preliminary Alternatives .....	11
2.2.3	No Build Alternative .....	12
2.2.4	LA 3241 Connection.....	12
2.2.5	Alternative Revisions .....	13
2.3	Design Criteria and Project Implementation.....	13
2.4	Bicycle and Pedestrian Facilities .....	13
2.5	Preferred Alternative .....	13
<b>3.</b>	<b>EXISTING CONDITIONS &amp; IMPACTS .....</b>	<b>17</b>
3.1	Environmental Impacts Analysis.....	17
3.1.1	Geographic Information System Environmental Inventory .....	17
3.1.2	Resource Impact Analysis.....	17
3.1.3	Preliminary Cost Analysis .....	18
3.2	Evaluation Criteria.....	19
3.3	Land Use and Community Resources .....	20
3.3.1	Land Use .....	20
3.3.2	Residential and Commercial Relocations .....	20
3.4	Economic Environment .....	22
3.5	Socioeconomic Resources.....	23
3.5.1	Population.....	23
3.5.2	Minority Populations .....	23
3.5.3	Low-Income Populations .....	25

3.5.4	Limited English-Speaking Proficiency.....	26
3.5.5	Environmental Justice .....	26
3.6	Natural and Physical Environment .....	27
3.6.1	Geology and Soils.....	27
3.6.2	Farmland Protection Policy Act .....	28
3.6.3	Water Resources.....	28
3.6.4	Wetlands .....	30
3.6.5	Biological Resources .....	33
3.7	Historic and Cultural Resources.....	33
3.7.1	Archaeological Resources .....	34
3.7.2	Historic Resources – Standing Structures.....	34
3.7.3	Aesthetic and Visual Resources .....	36
3.8	Sections 4(f) and 6(f) .....	37
3.9	Noise.....	38
3.10	Air Quality.....	46
3.11	Hazardous Materials Sites, Underground Storage Tanks, Pipelines, and Wells.....	47
3.12	Temporary Construction Impacts .....	50
3.13	Indirect and Cumulative Impacts.....	50
<b>4.</b>	<b>COORDINATION &amp; PUBLIC INVOLVEMENT .....</b>	<b>53</b>
4.1	Introduction .....	53
4.2	Solicitation of Views .....	53
4.3	Native American Tribal Outreach .....	53
4.4	LA 3241 (I-12 to Bush Coordination) .....	54
4.5	Public Outreach.....	55
4.6	Public Meeting Summary.....	55
<b>5.</b>	<b>REFERENCES.....</b>	<b>57</b>

**TABLES**

Table ES-1: Alternatives Evaluation Matrix ..... ES-6

Table ES-2: Alternative Cost Estimate Evaluation ..... ES-7

Table 1: Average Daily Traffic..... 4

Table 2: LOS Results for Existing Year (2014) Conditions ..... 5

Table 3: LOS Results for Design Year (2034) No Build Alternative ..... 6

Table 4: LOS Results for Design Year (2034) Build Alternative ..... 9

Table 5: LA 434/LA 36 Intersection LOS Results for Design Year (2034)  
Build Conditions..... 10

Table 6: Alternatives Evaluation Matrix ..... 17

Table 7: Alternative Cost Estimate Evaluation ..... 18

Table 8: Anticipated Number of Displacements by Alternative ..... 20

Table 9: Population Data..... 23

Table 10: Total and Minority Populations ..... 25

Table 11: Median Household Income and Poverty Status..... 26

Table 12: Study Area Soils ..... 27

Table 13: Floodplain Impact by Alternative..... 30

Table 14: Wetland Impact by Alternative ..... 31

Table 15: Traffic Noise Impact Summary by Alternative ..... 39

Table 16: Noise Abatement Criteria ..... 45

**FIGURES**

Figure ES-1 Project Study Area and Location Map..... ES-3

Figure ES-2 Conceptual Location of LA 434/LA 3241 Junction ..... ES-4

Figure ES-3 Alternative 2 (Two Lane with Center Turn Lane) ..... ES-9

Figure 1 Project Study Area and Location Map..... 2

Figure 2 Conceptual Location of LA 434/LA 3241 Junction ..... 12

Figure 3 Typical Roadway Section, Suburban Collector – 2 (SC-2)  
LA 434 from LA 36 South to its Junction with Proposed LA 3241 ..... 14

Figure 4 Two-Lane with Center Turn Lane View Looking North across Bayou  
Lacombe Bridge ..... 15

Figure 5 Typical Roadway Section, Suburban Collector – 2 (SC-2)  
LA 434 from LA 36 South to Junction with Proposed LA 3241.  
Optional Designated Left Turn Lanes where Required  
and/or Raised Median..... 15

Figure 6 Land Use Classifications and Displacements..... 21

Figure 7 2010 Census Tracts and Blocks that Intersect the Study Area ..... 24

Figure 8 Total and Minority Populations ..... 25

Figure 9 Limited English Proficiency Populations ..... 26

Figure 10 USDA NRCS Soils, St. Tammany Parish, LA ..... 29

Figure 11 Surface Waters, Floodplains, and Wetlands..... 32

Figure 12 Direct and Indirect Area of Potential Effect (APE) and  
Location of Standing Structures ..... 35

Figure 13 Noise Receiver Impacts – 2034 No-Build Conditions..... 41

Figure 14 Noise Receiver Impacts – 2034 Build Conditions  
(3-Lane Alternative)..... 43

Figure 15 Hazardous Materials Sites and USTs, Water Wells,  
Pipelines, and Utilities ..... 49

## ENVIRONMENTAL ASSESSMENT

### APPENDICES

- A Design Criteria, Typical Sections, and Plan & Profiles
  - A-1 Design Criteria
  - A-2 Typical Roadway and Bridge Sections
  - A-3 Alternative Alignments
- B Agency Coordination
  - B-1 Solicitation of Views and Responses
  - B-2 Solicitation of Views - Tribes
  - B-3 Section 106

### Content on CD

- CD-1 Biological Resources and Wetland Findings Report
- CD-2 Traffic Noise Analysis Technical Report
- CD-3 Phase I Environmental Site Assessment Report
- CD-4 Public Meeting Summary, January 13, 2015



# LIST OF ACRONYMS

APE	Area of Potential Effect
CAAA	Clean Air Act Amendments
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CREC	Conditional Recognized Environmental Condition
dBA	A-Weighted Decibel
DOA	Division of Archaeology
DOT	U.S. Department of Transportation
EA	Environmental Assessment
EDMS	Electronic Document Management System
EDR	Environmental Data Resources
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GIS	Geographic Information System
HREC	Historical Recognized Environmental Condition
I-12	Interstate 12
LA 434	Louisiana Highway 434
LADOTD	Louisiana Department of Transportation and Development
LDCRT	Louisiana Department of Culture, Recreation & Tourism
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LEP	Limited English Proficiency
LNHP	Louisiana Natural Heritage Program
LOS	Level of Service

## ENVIRONMENTAL ASSESSMENT

NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PM-10	Particulate Matter 10 Microns or Less in Size
RCW	Red-cockaded Woodpecker
REC	Recognized Environmental Condition
ROW	Right-of-Way
RPC	Regional Planning Commission
ROD	Record of Decision
SHPO	State Historic Preservation Office/Officer
SOV	Solicitation of Views
SWPPP	Storm Water Pollution Prevention Plan
TDM	Travel Demand Model
TIMED	Transportation Infrastructure Model for Economic Development
TNM	Traffic Noise Model
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
UZA	Urbanized Area

## SECTION



# 1

## PURPOSE AND NEED

The purpose of the proposed project is to add roadway capacity and improve traffic operations for this portion of LA 434.

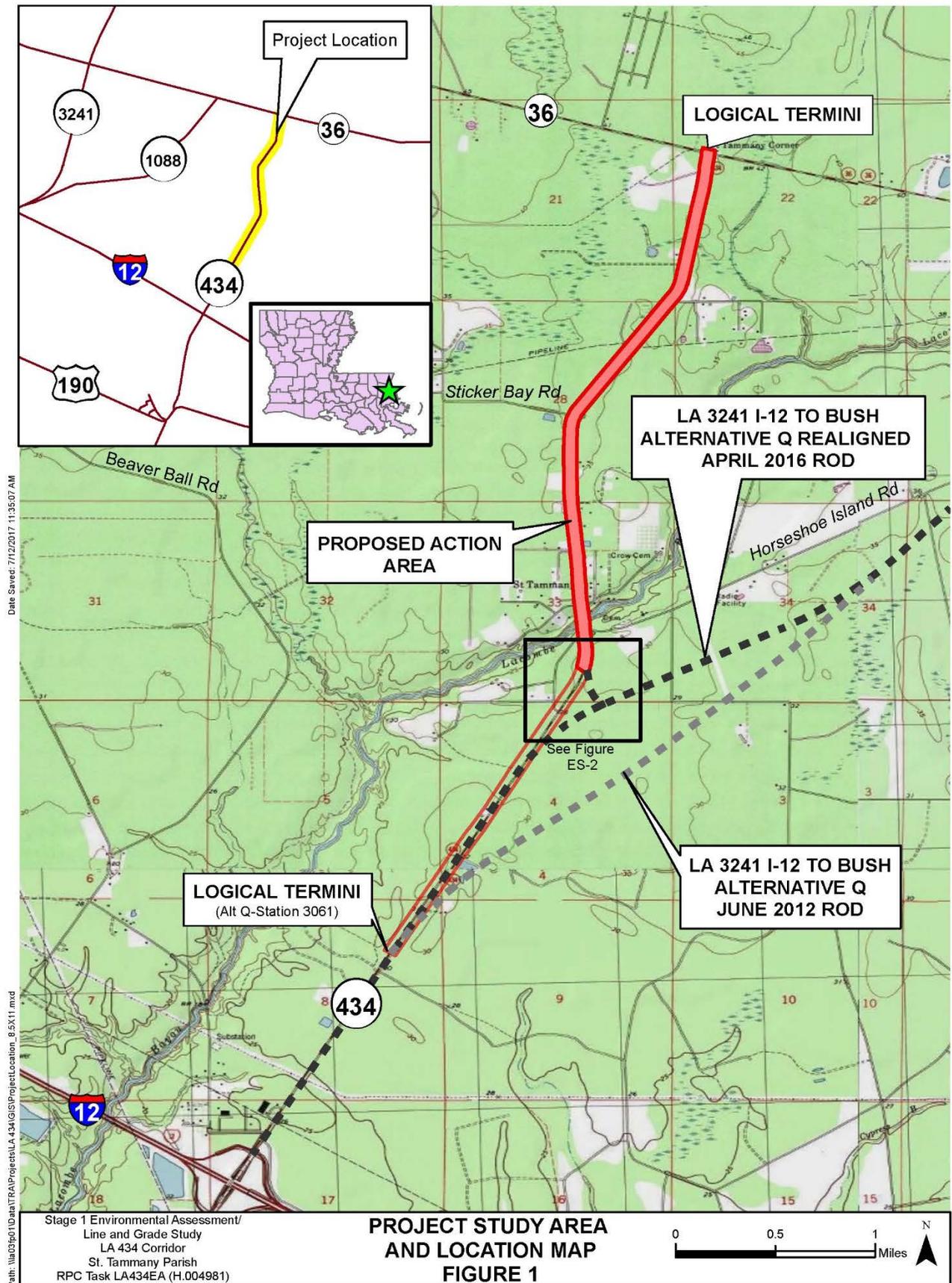
The project need is to improve capacity and travel time and to relieve congestion; to support planned residential, institutional, and business growth within the parish urban growth boundary; and to replace the timber trestle bridge crossing Bayou Lacombe. The proposed roadway segment and bridge improvements will also provide better accommodations for bicycle users and will serve the surrounding community and the larger metropolitan area.

### 1.1 Introduction

The Study Area, located in the south-central portion of St. Tammany Parish, is situated approximately 35 miles northeast of New Orleans, 6 miles north of Lacombe, Louisiana, and 17 miles west of the state of Mississippi. More specifically, the Study Area is north of Interstate 12 (I-12), east of Watts Road (Louisiana Highway 41 [LA 41]), west of LA 1088, and south of LA 36. The proposed action area extends south from LA 36 along LA 434 terminating between Vortisch Road/Horseshoe Island Road and D'Antonio Road, a distance of approximately 3 miles, and includes the proposed roadway improvements and limits of construction (**Figure 1**).

The Study Area is located within the New Orleans Metropolitan Statistical Area, which includes the city of New Orleans and surrounding suburban areas located in Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany parishes. The RPC 2015 – 2044 Metropolitan Transportation Plan for the Mandeville-Covington and Slidell Urbanized Areas (UZAs) indicates the project area is within the Planning Horizon Area (which is forecast to be urbanized over the next 20 years) for the Slidell UZA.

Locally, the Study Area is located within the St. Tammany Parish urban growth boundary line. The urban growth boundary line is specifically described in a parish subdivision ordinance (No. 499) and includes the existing urbanized areas of Covington, Mandeville, and Slidell (as defined by the U.S. Census Bureau) and the unincorporated areas of St. Tammany Parish situated south of the urban growth boundary line.



As of the 2010 U.S Census, the New Orleans urbanized area population was 899,703 persons and the St. Tammany Parish population was 233,740 persons. Between 2000 and 2010, the greater New Orleans region experienced a decline in population of 143,766 persons while St. Tammany Parish experienced an estimated increase of 42,482 persons. The shift in population is due, in part, to the impacts and lingering effects sustained as a result of Hurricane Katrina in 2005 and has led to more complex travel patterns and lengthier trips.

## 1.2 Project Purpose

The purpose of the proposed project is to add roadway capacity and improve traffic operations in order to accommodate future traffic volumes for this portion of LA 434, which was constructed in 1960 and 1961. This purpose is consistent with the goals of the Transportation Improvement Plan for the St. Tammany Parish Urbanized Areas and the TIMED program for the LA 3241 project, with which this project intersects.

## 1.3 Project Need

The project is needed in order to upgrade the roadway segment to current design standards; improve capacity; support planned residential, institutional, and business growth within the parish urban growth boundary; and replace the timber trestle bridge crossing Bayou Lacombe. More specifically, needs for the proposed project include:

- Improve capacity;
- Support planned residential, institutional, and business growth within the parish urban growth boundary;
- Relieve future congestion on area roadways;
- Replace the timber trestle bridge crossing Bayou Lacombe with a new bridge; and
- Improve area-wide mobility and system reliability.

## 1.4 Existing Roadway Traffic

The Study Area is comprised of eight unsignalized intersections. A traffic study was prepared to analyze the amount of traffic in the corridor. Traffic counts collected in May 2014 measured existing average daily traffic. Traffic volume data were also obtained from the Louisiana Department of Transportation and Development (LADOTD). The Regional Planning Commission (RPC) is responsible for long- and short-range roadway and transportation plans for the New Orleans urbanized area including St. Tammany Parish and maintains a regional travel demand model (TDM) to forecast traffic conditions. The TDM was utilized to evaluate existing-year (2014) and design-year (2034) traffic volumes for the build alternatives and **No Build Alternative**.

Traffic volumes are projected to increase along LA 434 as shown in **Table 1**. Travel demand projections for the design year applied an estimated annual growth rate of 2.5 percent and include impacts from proposed developments that likely will have an impact in the Study Area. This includes the Weyerhaeuser mixed-use planned development located along the east side of LA 434 just south of the LA 434/LA 3241 junction.

## ENVIRONMENTAL ASSESSMENT

**Table 1: Average Daily Traffic**

Location LA 434 Between:	2014 Existing	2034 No Build	2034 Build
LA 36 and Vortisch Road/Horseshoe Island Road	1,500	12,700	13,200
Vortisch Road/Horseshoe Island Road and LA 3241 Junction	2,400	13,100	13,700

Note: Rounded to nearest 100 vehicles.

A capacity analysis is the primary method for evaluating the quality of service of highway and street facilities. Level of service (LOS) is a quality measure describing operational conditions of these facilities. LOS classifications are designated from LOS A to LOS F, with LOS A representing the best operating conditions and LOS F representing the worst. Operational conditions considered in an LOS classification include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Safety is not included in the measures that establish service levels. LADOTD design standards specify an acceptable LOS based on roadway classifications. Because of its suburban location, LOS D is acceptable for proposed improvements along LA 434. An LOS of C/D is allowable in urban areas.

LOS analysis locations included unsignalized intersections and two-lane roadway segments. Capacity analyses were performed for a.m. and p.m. peak periods for existing and design-year **No Build Alternative**. The capacity analysis results for existing conditions are presented in **Table 2** and indicate that most intersections perform well with LOS B or better.

The capacity analysis results for design-year **No Build Alternative** presented in **Table 3** indicate that several intersection approaches will fail (LOS F) without capacity improvements. By design year, the critical approaches at LA 36 and Old Keller Road/Azalea Lane intersections would fail to operate with LOS E in the a.m. peak period and LOS F in the p.m. peak period due to insufficient capacity to accommodate design-year traffic volumes. The unsignalized intersection of LA 434 and Vortisch Road/Horseshoe Island Road is expected to operate at LOS E during the p.m. peak period.

Table 2: LOS Results for Existing Year (2014) Conditions

Intersection with LA 434	Eastbound		Westbound		Northbound		Southbound		Overall	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
<b>AM Peak Period</b>										
LA 36	-	-	1.8 <sup>2</sup>	A	11.5	B			-	- <sup>1</sup>
Dendinger Road	8.8	A			-	-	-	-	-	- <sup>1</sup>
Marshall Vaughn Road			10.0	A	0.1	A	-	-	-	- <sup>1</sup>
Do Sticker Bay Road	9.5	A			0.2 <sup>2</sup>	A	-	-	-	- <sup>1</sup>
Sally Welch Road			9.5	A	-	-	0.1 <sup>2</sup>	A	-	- <sup>1</sup>
Philip Smith Road			-	-	-	-	-	-	-	- <sup>1</sup>
Old Keller Rd/Azalea Lane	10.8	B	9.9	A	-	-	-	-	-	- <sup>1</sup>
Vortisch Road/ Horseshoe Island Road	10.0	A	10.0	A	4.3	A	4.9	A	-	- <sup>1</sup>
<b>PM Peak Period</b>										
LA 36	-	-	3.7 <sup>2</sup>	A	10.4	B			-	- <sup>1</sup>
Dendinger Road	9.5	A			-	-	-	-	-	- <sup>1</sup>
Marshall Vaughn Road			9.6	A	-	-	-	-	-	- <sup>1</sup>
Sticker Bay Road	9.7	A			-	-	-	-	-	- <sup>1</sup>
Sally Welch Road			11.4	B	-	-	-	-	-	- <sup>1</sup>
Philip Smith Road			9.5	A	-	-	-	-	-	- <sup>1</sup>
Old Keller Rd/Azalea Lane	10.3	B	9.1	A	-	-	-	-	-	- <sup>1</sup>
Vortisch Road/ Horseshoe Island Road	9.4	A	9.4	A	-	-	-	-	-	- <sup>1</sup>

<sup>1</sup>LOS not reported by Synchro for Two-Way Stop Control

<sup>2</sup>Delay due to left turning movement

LOS Level of Service

sec Seconds

- Not Applicable

■ No Approach

ENVIRONMENTAL ASSESSMENT

Table 3: LOS Results for Design Year (2034) No Build Alternative

Intersection with LA 434	Eastbound		Westbound		Northbound		Southbound		Overall	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
<b>AM Peak Period</b>										
LA 36	-	-	9.9 <sup>2</sup>	A	<sup>3</sup>	F <sup>3</sup>			-	- <sup>1</sup>
Dendinger Road	17.2	C			-	-	-	-	-	- <sup>1</sup>
Marshall Vaughn Road			23.5	C	-	-	-	-	-	- <sup>1</sup>
Sticker Bay Road	21.4	C			-	-	-	-	-	- <sup>1</sup>
Sally Welch Road			15.4	C	-	-	-	-	-	- <sup>1</sup>
Philip Smith Road			17.5	C	-	-	-	-	-	- <sup>1</sup>
Old Keller Rd/Azalea Lane	40.3	E	21.7	C	-	-	-	-	-	- <sup>1</sup>
Vortisch Road/ Horseshoe Island Road	33.4	D	27.7	D	-	-	-	-	-	- <sup>1</sup>
<b>PM Peak Period</b>										
LA 36	-	-	10.6 <sup>2</sup>	B	<sup>3</sup>	F <sup>3</sup>			-	- <sup>1</sup>
Dendinger Road	23.5	C			-	-	-	-	-	- <sup>1</sup>
Marshall Vaughn Road			21.1	C	-	-	-	-	-	- <sup>1</sup>
Sticker Bay Road	21.6	C			-	-	-	-	-	- <sup>1</sup>
Sally Welch Road			29.2	D	-	-	-	-	-	- <sup>1</sup>
Philip Smith Road			23.8	C	-	-	-	-	-	- <sup>1</sup>
Old Keller Rd/Azalea Lane	28.0	D	50.6	F	-	-	-	-	-	- <sup>1</sup>
Vortisch Road/ Horseshoe Island Road	23.3	C	42.7	E	-	-	-	-	-	- <sup>1</sup>

<sup>1</sup>LOS not reported by Synchro for Two-Way Stop Control

<sup>2</sup>Delay due to left turning movement

<sup>3</sup>Volume exceeds capacity

LOS Level of Service

- Not applicable

sec Seconds

No approach

LOS E

LOS F

## SECTION



## 2

## ALTERNATIVES

NEPA directs federal agencies to conduct environmental reviews to consider potential impacts from proposed federal undertakings. The study of alternatives and the associated environmental consequences were evaluated according to NEPA, LADOTD's Stage 1 Planning/Environmental Manual of Standard Practice, and FHWA's Guidance for Preparing and Processing Environmental and Section 4(f) Documents. This study consists of three primary tasks:

Scoping &  
Purpose and Need

Alternatives Studies &  
Development

EA Documentation with  
FONSI

The National Environmental Policy Act (NEPA) directs federal agencies to conduct environmental reviews to consider potential impacts from proposed federal undertakings. The NEPA process requires coordination with local, state, and federal agencies throughout planning and project development decision making.

The Federal Highway Administration (FHWA) and LADOTD are committed to the practicable avoidance and minimization of potential impacts to the social and natural environment when considering approval of proposed transportation projects. NEPA project development must consider a range of alternatives that would serve the purpose of the project while balancing the impacts and benefits of the project.

The study of alternatives and the associated environmental consequences were evaluated according to NEPA, LADOTD's Stage 1 Planning/Environmental Manual of Standard Practice, and FHWA's Guidance for Preparing and Processing Environmental and Section 4(f) Documents. This study consists of three primary tasks:

- Scoping & Purpose and Need;
- Alignment Studies & Development; and
- Environmental Assessment (EA) Documentation with Finding of No Significant Impact (FONSI).

This study process allows for coordination during the alternatives development process and thorough consideration of alternatives developed.

## 2.1 Traffic Analysis

A capacity analysis was performed to address future capacity issues along LA 434 from LA 36 south to its future connection to the proposed LA 3241. Traffic forecasts were performed for the design year (2034), and capacity analyses were performed for a.m., noon, and p.m. peak periods for existing conditions, future year **No Build**, and build conditions. The Study Area includes eight unsignalized intersections:

## ENVIRONMENTAL ASSESSMENT

- LA 434 at LA 36
- LA 434 at Dendinger Road
- LA 434 at Marshall Vaughn Road
- LA 434 at Sticker Bay Road
- LA 434 at Sally Welch Road
- LA 434 at Philip Smith Road
- LA 434 at Azalea Lane/Old Keller Road
- LA 434 at Vortisch Road/Horseshoe Island Road

For all future build scenarios, the following conditions were assumed:

- Planned developments included in the LA 434 Stage 0 report (which have not been completed to date) were considered in this study.
- The build-out year for these planned developments was adjusted beyond the originally proposed build-out year to accommodate for the delay in construction.
- Site traffic for these planned developments was used to prepare the Year 2034 traffic projection estimates.
- The LA 3241 corridor was assumed operational during the latter half of the 20-year analysis period. Trip diversion resulting from LA 3241 operations was accounted for in preparing the Year 2034 traffic projections.
- Year 2034 daily traffic projections were estimated by using the existing Year 2014 “K factor” and Year 2034 peak-period traffic projections.

### **2.1.1 Build Conditions for Intersections**

The build conditions were analyzed based on the build improvements discussed previously. The identified improvements will provide safer and more efficient operating conditions in the Study Area as compared to the **No Build Alternative**.

The capacity analysis results for the build alternatives are summarized in **Table 4**. A reduction in delay results at several intersections as compared to the **No Build Alternative** in the design year. The northbound approach of LA 434 at LA 36 and the eastbound approach at Old Keller Road/Azalea Lane show a reduction in delay during the a.m. peak period. The northbound approach of LA 434 at LA 36 and the westbound approaches at LA 434 with Old Keller Road/Azalea Lane and Vortisch Road/Horseshoe Island Road show reduced delays during the p.m. peak period.

Level of service (LOS) is a quality measure describing operational conditions. LOS classifications are designated from LOS A, representing the best operating conditions to LOS F, representing the worst. Operational conditions considered in an LOS classification include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

The intersection analysis at LA 434 and LA 36 includes a signalized intersection and a roundabout option for the design year (2034). Roundabout improvements include continuous right turn lanes from LA 434 northbound to LA 36 eastbound and LA 36 eastbound to LA 434 southbound. LA 36 westbound includes a two-lane roundabout. One

lane is a through lane and the second provides for the left turning movement to southbound LA 434. The number of lanes provided for the roundabout option will be determined in the final design stage of the LADOTD project delivery process. A comparison of capacity results is shown in **Table 5**. All movements at the LA 434/LA 36 intersection operate an overall LOS B or better during weekday a.m. and p.m. peak periods for the roundabout.

**Table 4: LOS Results for Design Year (2034) Build Alternative**

Intersection with LA 434	Eastbound		Westbound		Northbound		Southbound		Overall	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
<b>AM Peak Period</b>										
LA 36	15.8	B	19.4	B	28.1 <sup>1</sup>	C			20.6	C
Dendinger Road	10.8	B			-	-	-	-	-	- <sup>2</sup>
Marshall Vaughn Road			10.3	B	-	-	-	-	-	- <sup>2</sup>
Sticker Bay Road	11.1	B			-	-	-	-	-	- <sup>2</sup>
Sally Welch Road			10.3	B	-	-	-	-	-	- <sup>2</sup>
Philip Smith Road			11.0	B	-	-	-	-	-	- <sup>2</sup>
Old Keller Road/Azalea Lane	11.5	B	10.3	B	-	-	-	-	-	- <sup>2</sup>
Vortisch Road/ Horseshoe Island Road	11.9	B	10.5	B	-	-	-	-	-	- <sup>2</sup>
<b>PM Peak Period</b>										
LA 36	16.2	B	19.1	B	35.1	D			24.7	C
Dendinger Road	10.4	B			-	-	-	-	-	- <sup>2</sup>
Marshall Vaughn Road			11.5	B	-	-	-	-	-	- <sup>2</sup>
Sticker Bay Road	10.5	B			-	-	-	-	-	- <sup>2</sup>
Sally Welch Road			11.5	B	-	-	-	-	-	- <sup>2</sup>
Philip Smith Road			10.5	B	-	-	-	-	-	- <sup>2</sup>
Old Keller Rd/Azalea Lane	10.6	B	11.6	B	-	-	-	-	-	- <sup>2</sup>
Vortisch Road/ Horseshoe Island Road	10.7	B	12.0	B	-	-	-	-	-	- <sup>2</sup>

<sup>1</sup>LOS not reported by Synchro for Two-Way Stop Control

<sup>2</sup>Northbound LA 434 at LA 36

LOS Level of Service

sec Seconds

N/A Not Applicable

■ No Approach

**Table 5: LA 434/LA 36 Intersection LOS Results for Design Year (2034) Build Conditions**

Intersection		AM		PM	
		Delay (sec)	LOS	Delay (sec)	LOS
<b>Signal</b>					
LA 434 at LA 36	Eastbound LA 36	152.4	F	130.1	F
	Westbound LA 36	148.8	F	30.9	C
	Northbound LA 434	32.9	C	85.4	F
	Overall	115.0	F	94.9	F
<b>Roundabout</b>					
LA 434 at LA 36	Eastbound LA 36	8.6	A	4.7	A
	Westbound LA 36	6.4	A	4.8	A
	Northbound LA 434	2.2	A	2.6	A
	Overall	6.0	A	3.8	A

LOS sec Level of Service Seconds  
■ LOS F

### 2.1.2 Build Option Comparisons and Recommendations

The intersection capacity analysis for the **No Build Alternative** shows that several intersections in the Study Area will operate near or over capacity at LOS E or F by the design year. Based on historical growth rates, traffic is projected to increase along LA 434 in the design year. Traffic volume increases are expected to range from 12,600 to 13,100 vehicles per day. Approximately 70 percent of traffic growth is attributed to development that will occur along LA 434.

For the build alternatives, the study intersections are expected to operate within acceptable LOS thresholds. A comparison of the intersection delays for the two alternatives demonstrates that there is little benefit from a four-lane section versus a three-lane section. Given the increased cost of construction for the four-lane section compared to the three-lane section, **Alternative 2** (three-lane section) meets the required LOS and will accommodate growth in traffic along the corridor and maintain LOS standards.

## 2.2 Alternatives Development

### 2.2.1 Stage 0 Alternatives

The Study Area was initially evaluated in a Stage 0 Feasibility Study completed for the RPC. The *Louisiana Highway 434 Corridor Study, Stage 0 Feasibility Study* (May 2010) developed a preliminary purpose and need statement, initial project concepts to address the needs, and potential alternatives. One alternative was identified in the Stage 0 study:

- Widening of LA 434 to include a four-lane boulevard and four-lane bridge crossing Bayou Lacombe.

Early coordination with federal, state, and local agencies solicited comments and responses that were combined with available environmental data. This information was used to help determine if the preliminary alternatives impact certain human, natural, or cultural resources that would result in the decision to dismiss an alternative from further evaluation.

### **2.2.2 Preliminary Alternatives**

The limits of the Stage 0 corridor study extended approximately 8.3 miles from U.S. Highway 190 to LA 36. Following completion of the I-12 to Bush (LA 3241) Environmental Impact Statement (EIS) and identification of the proposed improvements associated with this corridor, the LA 434 Study Area was reduced. The Study Area for this EA extends approximately 3 miles from LA 434 at its junction with the proposed LA 3241 (Project Begin) north along LA 434 to LA 36 (Project End).

To minimize impacts and reduce the amount of additional right-of-way (ROW), required alignments were located as close to the existing LA 434 roadway as design standards and construction would allow. LADOTD policies such as roadway and bridge design, intersection configuration, traffic, noise, and minimization of social and environmental impacts were also considered in the alternatives development. Proposed improvements follow the existing roadway alignment providing widening and improvements to accommodate a multi-lane highway. This resulted in two alternatives.

**Alternative 1** includes widening to a four-lane divided roadway and replacement of the existing timber bridge over Bayou Lacombe with a four-lane bridge (**Appendix A-3**). Improvements include using the existing two lanes as northbound lanes with widening to the west for the center median, two southbound lanes, and a shared-use path. Roadway drainage will be accommodated by open ditches to the east and west of LA 434. The existing roadway ROW is 80 feet wide, and the proposed ROW width for **Alternative 1** is 150 feet.

**Alternative 2** includes roadway widening to two lanes with a center turn lane and replacement of the existing timber bridge with a three-lane bridge (**Appendix A-3**). Improvements include utilization of the existing two lanes as the northbound and center turn lane with widening to the west for the southbound lane and a shared-use path. Roadway drainage will be accommodated by open ditches to the east and west of LA 434. The existing roadway ROW is 80 feet wide, and the proposed ROW width for **Alternative 2** is 125 feet.

An optional intersection analysis was completed for LA 434 at LA 36 for Alternatives 1 and 2 including a signalized intersection and a roundabout. Roundabout geometry was analyzed using Sidra 6 software and developed in accordance with LADOTD's Roundabout Design standards (Engineering Directives and Standards Manual VI.1.1.6)

### 2.2.3 No Build Alternative

NEPA requires that doing nothing be considered during the environmental review process. This alternative was designated as the **No Build Alternative**, signifying that no new structures or major construction would take place. Although this alternative does not meet the purpose and need for the project because it would not improve capacity; support planned residential, institutional, and business growth within the parish urban growth boundary; and replace the timber trestle bridge crossing Bayou Lacombe for this portion of LA 434, it will be considered in the EA as a baseline for comparison.

### 2.2.4 LA 3241 Connection

The junction of LA 434 and LA 3241 identified on preliminary plans for Alternative Q from the I-12 to Bush EIS is proposed to be realigned farther north on LA 434. The approximate locations of the realigned portion of LA 3241 and its connection to LA 434 are shown on **Figure 2**. The project team for LA 434 coordinated with the design team for LA 3241 in order to fully develop the line and grade for the LA 434 improvements. The connection of LA 434 with LA 3241 will be completed by the LA 434 design team.

Additional review for relocation of the WB-67 turnaround and bicycle/pedestrian facility connection to the Tamanend development will be required during design for LA 3241.

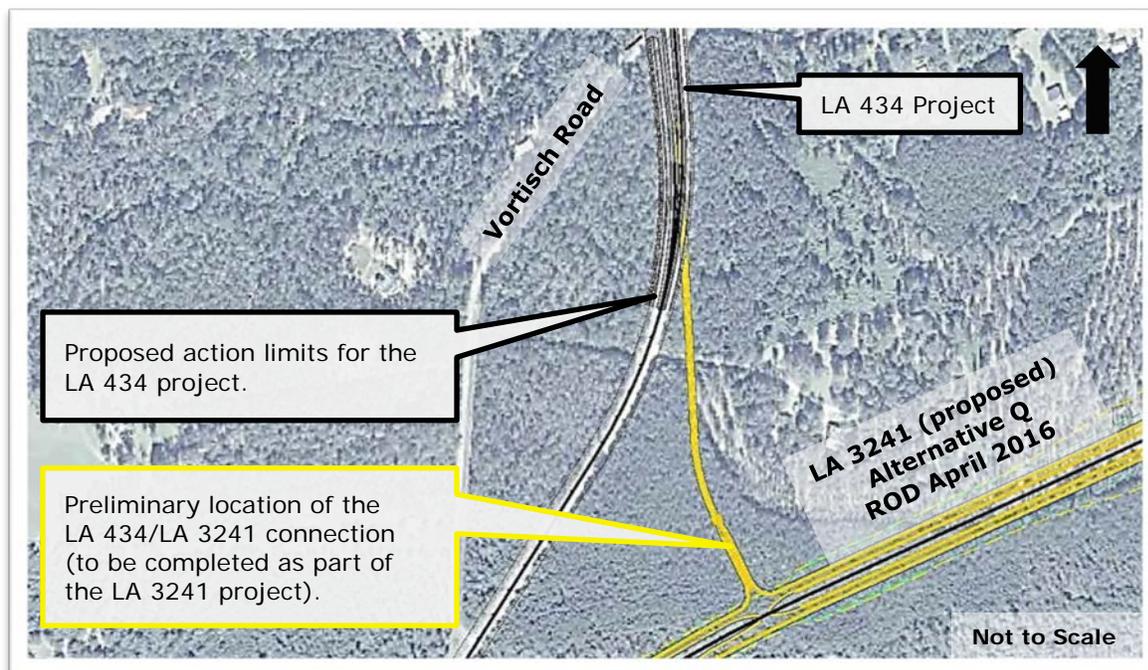


Figure 2. Conceptual Location of LA 434/LA 3241 Junction

### 2.2.5 *Alternative Revisions*

A public information meeting was held from 3:00 p.m. to 5:30 p.m. on January 13, 2015, at the St. Tammany Parish Government Council Chambers, Mandeville, Louisiana. A more detailed discussion regarding this public information meeting is provided in Section 5 of this EA. Following this meeting, comments received from area residents regarding the location of the proposed ROW for **Alternative 2** in the vicinity of Azalea Lane were considered.

**Alternative 2** proposes to increase the required ROW 15 feet to the east. From the existing ROW line moving east, 5 feet is part of the east slope of the grass drainage ditch. The next 10 feet is the required clear zone and will be unimproved. In order to reduce ROW requirements in this area, an optional channel design can be used to reduce the required ROW. It is recommended that a "V" channel design be implemented along the east side of LA 434 from Azalea Lane north approximately 300 feet to the next driveway opening. The optional "V" channel design reduces the additional required ROW by 4 feet, from 15 feet to 11 feet in width. Additional coordination will be required during final design

## 2.3 Design Criteria and Project Implementation

The proposed project includes widening of LA 434 designed to LADOTD suburban collector design criteria (SC-2). The SC-2 design criteria are presented in **Appendix A-1**. The proposed project includes widening and replacement of the bridge over Bayou Lacombe designed to LADOTD Bridge Design Standards. The bridge design criteria are presented in **Appendix A-1**.

## 2.4 Bicycle and Pedestrian Facilities

Currently, the St. Tammany Parish Master Plans do not include bicycle and pedestrian improvements along the Study Area. However, considering that future planning within St. Tammany Parish may include bicycle and pedestrian improvements along or near the Study Area, the proposed roadway and bridge sections allow for incorporation of a shared-use path on the west side of LA 434. The shared-use path will provide an opportunity for future local bicycle and/or pedestrian linkages to the Tamanend development. Bicycle and pedestrian improvements for the proposed project have been evaluated in accordance with the LADOTD *Complete Streets Policy* and in coordination with St. Tammany Parish.

## 2.5 Preferred Alternative

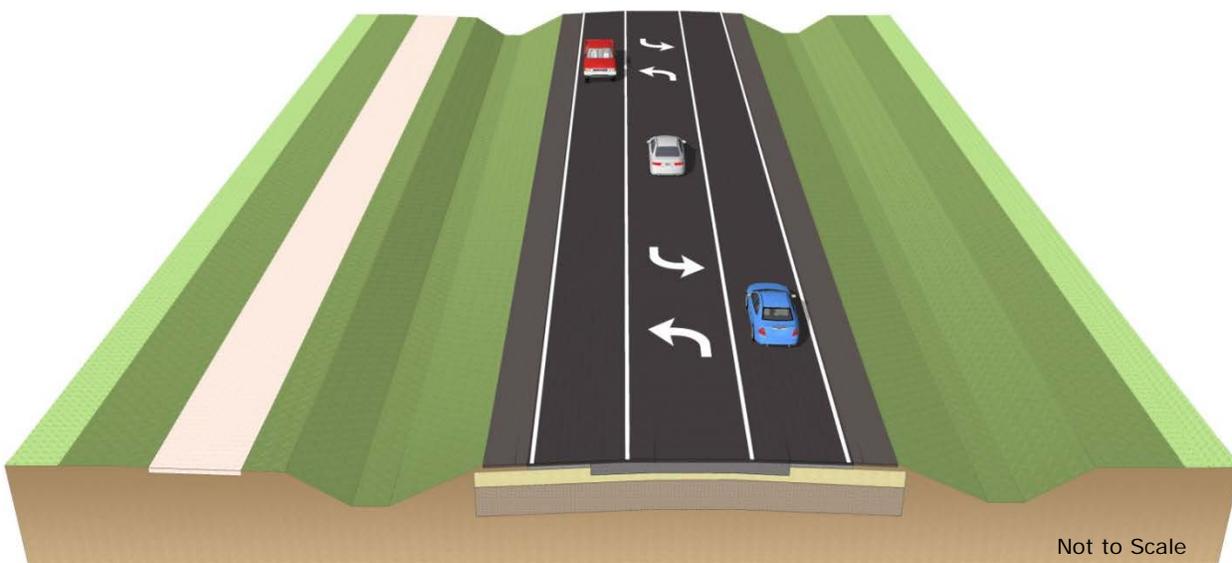
As a result of the comprehensive resources evaluation, traffic studies, and coordination with public, local, state, and federal officials or agencies, sufficient information and public opinion exist to identify **Alternative 2** as the **Preferred Alternative**. A comparison of the intersection delays for **Alternatives 1** and **2** demonstrated that there is little benefit from a four-lane section (**Alternative 1**) versus a two-lane section with center turn lane (**Alternative 2**). Given the increased cost of construction for the four-lane section compared to the two-lane section with center turn lane, **Alternative 2** meets the required LOS and will accommodate growth in traffic along the corridor and maintain LOS standards.

## ENVIRONMENTAL ASSESSMENT

Proposed improvements for this alternative include roadway widening to two lanes with a center turn lane (**Figure 3; Appendix A**) and replacement of the existing timber bridge over Bayou Lacombe with a three-lane bridge (**Figure 4; Appendix A**). Improvements include utilization of the existing roadway as the northbound lane with widening to the west for the center turn lane, southbound lane, and a shared-use path. Roadway drainage will be accommodated by open ditches to the east and west of LA 434.

The bridge, pedestrian facility, and drainage improvements would be constructed to the full roadway section (**Figure 3; Appendix A-2**). If, and when, traffic conditions warrant, improvements to provide access management such as a curbed, dedicated left turn lane or a raised median are shown on **Figure 5** and presented in **Appendix A-2**.

The typical roadway sections are presented on **Figures 3 and 5**. The typical bridge section is presented on **Figure 4**. Detailed typical sections are presented in **Appendix A-2**.



**Figure 3. Typical Roadway Section, Suburban Collector - 2 (SC-2) LA 434 from LA 36 South to its Junction with Proposed LA 3241**



Figure 4. Two-Lane with Center Turn Lane View Looking North across Bayou Lacombe Bridge

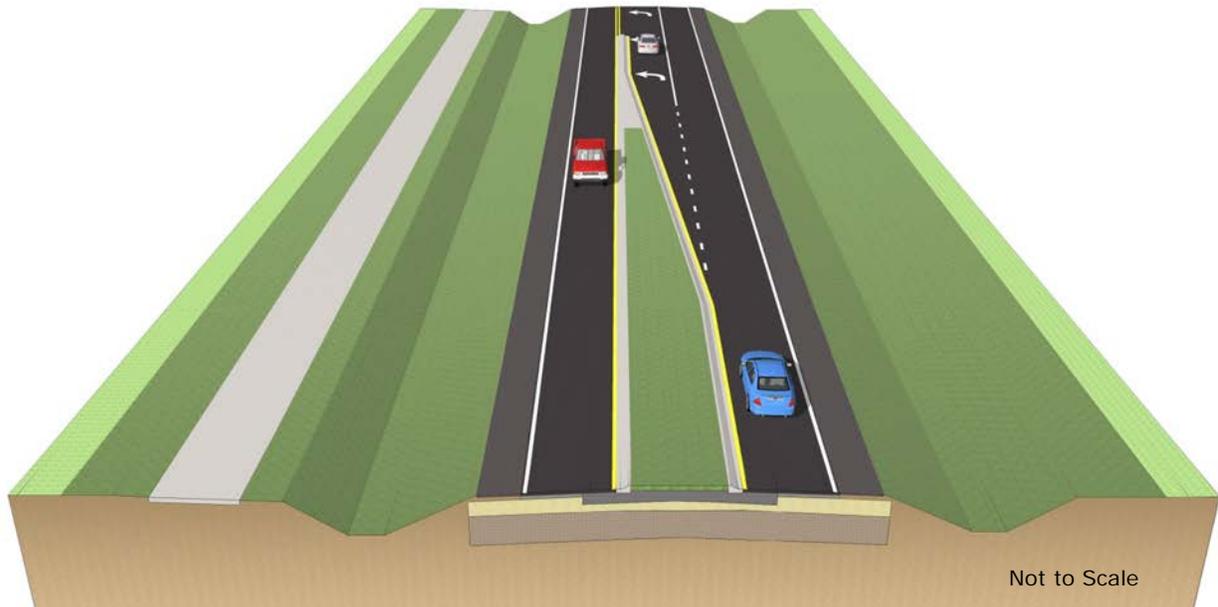


Figure 5. Typical Roadway Section, Suburban Collector - 2 (SC-2) LA 434 from LA 36 South to Junction with Proposed LA 3241. Optional Designated Left Turn Lanes where Required and/or Raised Median

## ENVIRONMENTAL ASSESSMENT

In summary, Alternative 2, as the Preferred Alternative:

- Satisfies the stated Purpose and Need for the project;
- Alternative 2 intersections are expected to operate within acceptable LOS thresholds;
- Meets the required LOS and will accommodate growth in traffic along the corridor and maintain LOS standards;
- Has the lowest anticipated residential relocations;
- Has the lowest required ROW;
- Has the lowest wetland impacts;
- Has the lowest overall cost; and
- Most efficiently balances the expected project benefits with overall impacts.

The identification of the **Preferred Alternative** addresses the stated purpose and need and satisfies, to the fullest extent possible, the objectives of NEPA. Impacts from the **Preferred Alternative** were avoided where possible and minimized to the greatest extent practicable.

**SECTION**



**3**

Key resources evaluated to determine the potential beneficial or adverse impacts of the project's **Preferred Alternative** and **No Build Alternative** include:

**EXISTING CONDITIONS & IMPACTS**

- 100-Year Floodplain Waters and Wetlands Construction Costs
- Commercial and Residential Relocations
- Noise Sensitive Receptors
- Hazardous Sites/USTs
- Archaeological and Historic Resources
- Traffic Impacts Various Populations Pipelines and Wells

**3.1 Environmental Impacts Analysis**

**3.1.1 Geographic Information System Environmental Inventory**

An environmental inventory of existing social, natural, and cultural resource (secondary-source) data was collected within the Study Area. This information was supplemented with field-collected (primary-source) data for the Study Area and proposed alternatives. A Geographic Information System (GIS) was developed for the project and utilized to map and analyze the human, natural, and cultural resources and the proposed preliminary alternatives.

**3.1.2 Resource Impact Analysis**

A number of resources and issues were used to compare each alternative chosen for detailed evaluation. The resources used to compare the alternatives are compiled in the GIS for the project or detailed in a series of technical documents that are incorporated by reference into the EA. Alternatives were evaluated with respect to environmental and engineering factors and the effects are summarized in **Table 6**.

**Table 6: Alternatives Evaluation Matrix**

Evaluation Factors	Alternative 1 Four-Lane Divided		Alternative 2 Two-Lane With Center Turn Lane		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
<b>Physical Resource Impacts</b>					
Residences	0	0	0	0	0
Businesses	0	0	0	0	0
Churches	0	0	0	0	0
Public Facilities	0	0	0	0	0

## ENVIRONMENTAL ASSESSMENT

Evaluation Factors	Alternative 1 Four-Lane Divided		Alternative 2 Two-Lane With Center Turn Lane		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
USTs/Pumps/Piping	1	1	1	1	0
Anticipated Relocations	3	3	2	2	0
Noise Receptors	N.A. <sup>1</sup>	N.A. <sup>1</sup>	15	15	7
Required Right-of-Way (Acres)	24	24	14	14	0
<b>Cultural and Natural Resource Impacts</b>					
Cemeteries	0	0	0	0	0
100-Year Floodplain (acres)	3.5	3.5	3.0	3.0	0
Surface Waters (acres)	<1	<1	<1	<1	0
Wetland (acres)	9	9	4.8	4.8	0
Prime Farmland (acres)	0	0	0	0	0
Archaeological Sites	0	0	0	0	0
Structures >47 Years in Age	10	10	10	10	0
Historic Structures — Potentially Eligible	4	4	4	4	0
Historic Structures — Affected	0	0	0	0	0
Known UST Sites	0	0	0	0	0
Water Wells	0	0	0	0	0
Oil/Gas Pipeline	1	1	1	1	0

\*Intersection Option at LA 434/LA 36

<sup>1</sup>Not Analyzed

UST Underground storage tank

### 3.1.3 Preliminary Cost Analysis

Preliminary cost analysis for the alternatives includes roadway construction, bridge construction, utility relocation, ROW, wetland mitigation and surveying, engineering, and construction supervision/inspection. These costs are presented in **Table 7**.

**Table 7: Alternative Cost Estimate Evaluation**

Evaluation Factors	Alternative 1 Four-Lane Divided (approx. 3 miles)		Alternative 2 Two-Lane With Center Turn Lane (approx. 3 miles)		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
(Total Length – Miles)	2.74	2.74	2.62	2.62	2.62
<b>Cost (million dollars)</b>					
Roadway Construction	7.61	7.61	5.78	5.78	0
Shared-Use Path Construction	0.97	0.97	0.97	0.97	0

Evaluation Factors	Alternative 1 Four-Lane Divided (approx. 3 miles)		Alternative 2 Two-Lane With Center Turn Lane (approx. 3 miles)		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
Bridge Construction	0.42	0.42	0.28	0.28	0
Utility Relocation	0.26	0.26	0.26	0.26	0
Right-of-Way Acquisition	1.67	1.67	1.32	1.32	0
Wetland Mitigation	1.14	1.14	0.57	0.57	0
Surveying, Engineering, Construction Supervision & Inspection	0.43	0.49	0.34	0.39	0
<b>TOTAL</b>	12.50	12.56	9.52	9.52	0

\*Intersection Option at LA 434/LA 36

Notes:

1. Includes 20% Roadway and 10% Bridge Contingency for Estimating Purposes
2. Costs Rounded

### 3.2 Evaluation Criteria

The following subsections provide an analysis of the potential beneficial or adverse impacts of the project’s **Preferred Alternative** and **No Build Alternative**. The project is evaluated with respect to transportation, social, economic, cultural, physical, natural, and biological resources. The project was evaluated utilizing the following degree of effect matrix for social, economic, cultural, physical, natural, and biological impacts. A degree of effect is assigned to the resources evaluated in this section and is shown to the right of the resource heading, as applicable.

Degree of Effect to Resource	Description	Definition
0	Negligible	The project has no measurable effect.
1	Minor	The project has little adverse effect.
2	Moderate	The project has some adverse effect. Avoidance and minimization of impacts have been applied during alternatives development and can be further addressed during final design. Permitting may be required during final design.
3	Substantial	The project has substantial adverse impact. Avoidance and minimization or mitigation options will be identified and listed in the Permits, Commitments, and Mitigation Summary. Additional coordination will be required during final design and permitting.
4	Improved	A positive, restorative, or mitigating effect to a resource is a result of the project.

### 3.3 Land Use and Community Resources

#### 3.3.1 Land Use

1

The Study Area comprises approximately 161 acres. Land use within the Study Area is predominantly undeveloped timber lands and transportation located along LA 434 and existing local roadways as shown on **Figure 6**. Some residential land use is located along LA 434 but is predominantly along existing local roadways.

LA 36 is located adjacent to and at the northern limits of the Study Area. The southern limits of the Study Area are located approximately 1.5 miles north of I-12.

For the **Preferred Alternative**, existing roadway ROW or previously disturbed lands will be converted from their present use to transportation use.

The **No Build Alternative** would have no impact to land use within the Study Area.

#### 3.3.2 Residential and Commercial Relocations

1

Additional ROW required for the **Preferred Alternative** is 14 acres. This requirement results in two potential residential structure impacts for the **Preferred Alternative**. **Figure 6** shows and **Table 8** lists the number of displacements the proposed project may have on structures within the Study Area.

**Table 8: Anticipated Number of Displacements by Alternative**

Anticipated Type of Displacement	Alternative 1 Four-Lane Divided (approx. 3 miles)		Alternative 2 Two-Lane With Center Turn Lane (approx. 3 miles)		No Build
	Signalized*	With Roundabout*	Signalized*	With Roundabout*	
Residential	2	2	2	2	0
Commercial	1	1	0	0	0
<b>TOTAL</b>	3	3	2	2	0

\*Intersection Option at LA 434/LA36.

Source: ARCADIS 2015.

No impact on the neighborhood or housing where the relocations are likely to take place is anticipated because, historically, most displacees in rural or semi-rural areas choose to relocate on their remainder properties or in the general area of displacement.

There is limited replacement housing available in the general area. However, as stated above, it is likely the owner-occupant will relocate on their remainder property or in the

**Legend**

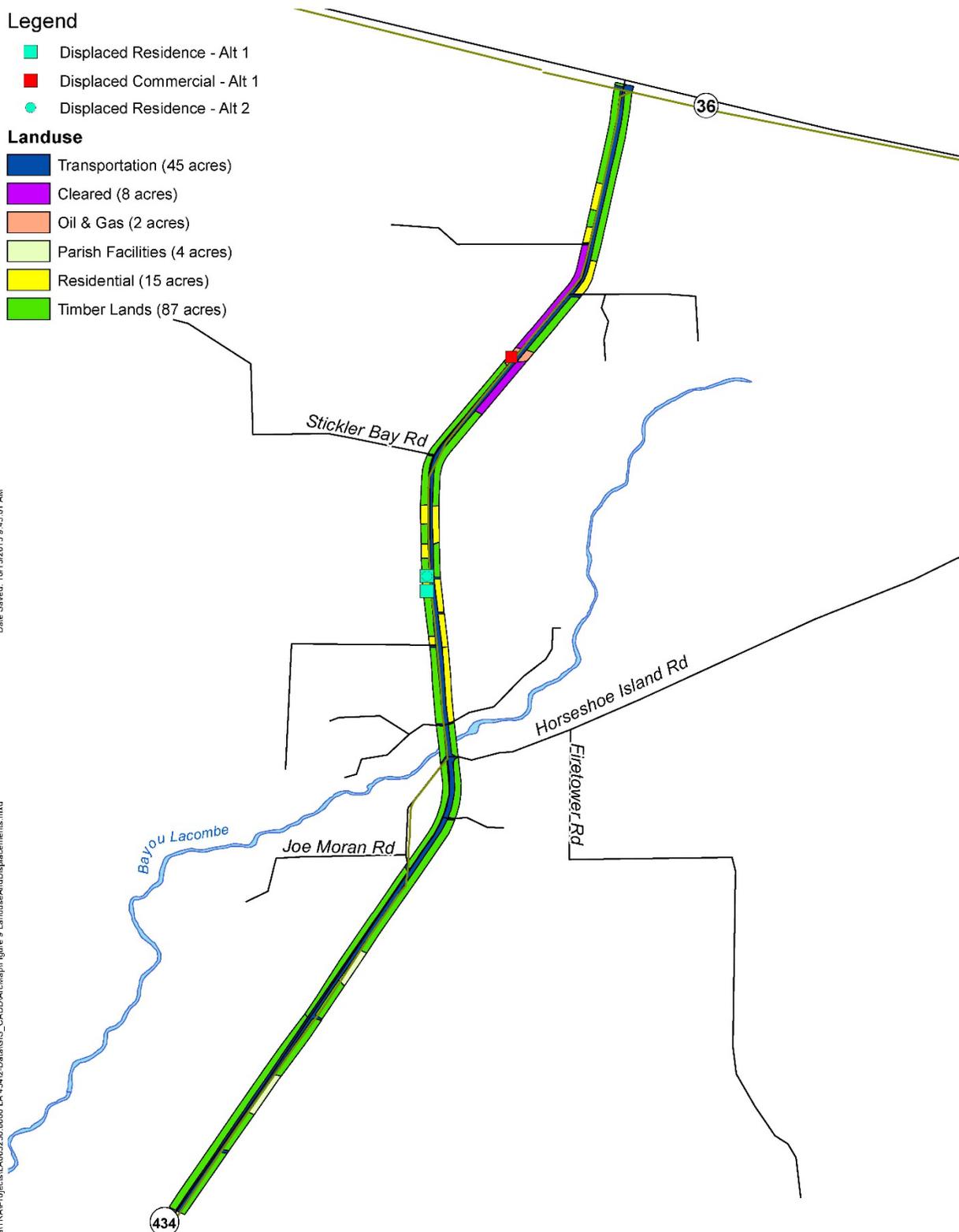
- Displaced Residence - Alt 1
- Displaced Commercial - Alt 1
- Displaced Residence - Alt 2

**Landuse**

- Transportation (45 acres)
- Cleared (8 acres)
- Oil & Gas (2 acres)
- Parish Facilities (4 acres)
- Residential (15 acres)
- Timber Lands (87 acres)

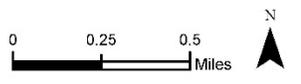
Date Saved: 10/13/2015 9:45:01 AM

Path: \\LA01\FP02\Data\TRA\Projects\LA003230\_0000\_LA\_434\2-Data\GIS\_CADD\AcMap\Figure 9\_LanduseAndDisplacements.mxd



Stage 1 Environmental Assessment/  
Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish  
RPC Task LA434EA (H.004981)

**LAND USE CLASSIFICATIONS  
AND DISPLACEMENTS  
FIGURE 6**



## ENVIRONMENTAL ASSESSMENT

general area of displacement. It is estimated that the residential owner-occupant has remainder property of sufficient size on which to relocate. A recent survey in nearby Lacombe revealed 194 properties for sale including 149 parcels of undeveloped land and 45 homes for sale, ranging in price from \$53,000 to \$750,000. Review of recent real estate data in the area indicates a cost per square foot on new construction as being in the \$126 range.

LADOTD's Acquisition of Right-of-Way and Relocation Assistance document (July 30, 2015) outlines policies that implement federal regulations promulgated under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 Code of Federal Regulations [CFR] Part 24), as amended, and Title VI of the Civil Rights Act of 1964. A sufficient supply of replacements housing is available in the area surrounding the project location and use of Last Resort Housing options are not anticipated.

The **No Build Alternative** does not impact any residential, business, or other facility and therefore would not require any relocations.

### 3.4 Economic Environment

Early Slidell and St. Tammany Parish residents enjoyed a robust tourist industry while many depended on the land for their economic welfare. Along with farming and trapping, an aggressive timber industry supported lumber mills, while boat building around the lakes and bayous and brick making were major economic activities. Brickmaking also remained an important industry in the parish until the decline of this industry following World War I. Today, industry sectors that contribute the highest employment opportunities include a combination of educational services, health care, and government followed by retail trade, insurance, light manufacturing, and professional services (St. Tammany Economic Development Foundation 2014).

Construction has begun at an 848-acre mixed-use development located on the east side of LA 434 immediately south of the Study Area. The development includes a technical college campus, retail town center, business offices, apartments, town and garden homes, single-family homes, and a community recreation center.

Economic impacts associated with construction of the **Preferred Alternative** will include a temporary increase in construction-related employment. Benefits from the proposed project, such as reduced congestion, increased traffic flow, and increased accessibility, may improve the economic environment within and adjacent to the Study Area.

The **No Build Alternative** would lead to continued and worsened congestion within the Study Area and surrounding area and may have a negative economic impact on employment.

### 3.5 Socioeconomic Resources

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations (59 Federal Register 7629 1994), and FHWA Order 6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, require federal agencies to determine whether a proposed action would have an adverse and disproportionately high impact on minority and/or low-income populations.

#### 3.5.1 Population

The 2010 U.S. Census identified two Census Tracts, 401.02 (north of LA 36) and 407.01 (south of LA 36), comprised of 14 census blocks that intersect the Study Area (**Figure 7**). The population within the census blocks was examined to determine total population and minority and/or low-income populations associated with improvements related to all alternatives. Census block data were compared with Census Tract-level data in order to identify potential disproportionate impacts.

The Study Area population of 495 persons represents 3 percent of the Census Tract population and less than 1 percent of the St. Tammany Parish population (**Table 9**).

**Table 9: Population Data**

Geographic Area	Population
Louisiana	4,533,372
St. Tammany Parish	233,740
City of Lacombe	8,679
2010 Census Tracts within Study Area	17,343
2010 Census Blocks within Study Area	495

Note: Geographic area was determined to be the census blocks that intersect the Study Area within Census Tracts 401.02 and 407.01.

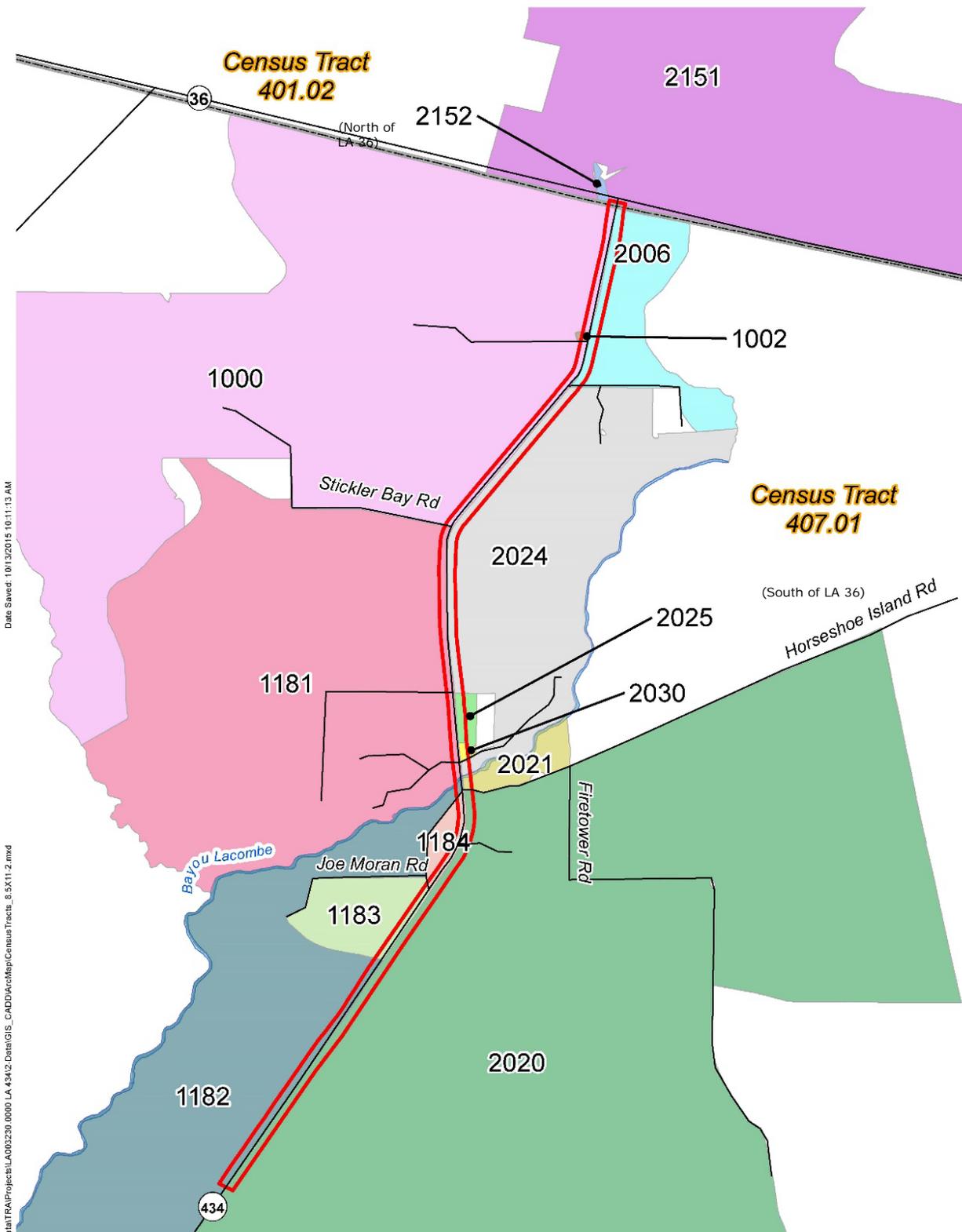
Source: U.S. Census Bureau, Census 2010 Tables P-1 and DP-1.

#### 3.5.2 Minority Populations



The racial and ethnic composition of the population within the Study Area was examined in order to identify the presence or absence of minority populations. Within the census blocks that intersect the Study Area, 86 percent of the population is identified as white alone and 14 percent as minority. Total and minority population data are depicted on **Figure 8** and presented in **Table 10**.

Neither the **Preferred Alternative** nor the **No Build Alternative** would have an effect on the minority populations within the Study Area.

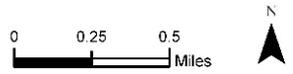


Date Saved: 10/13/2015 10:11:13 AM

Path: \\LA01FF02\Data\TRAP\Projects\LA002230\_0000\_LA\_434\2\_Data\GIS\_CADD\ArcMap\CensusTracts\_8\_5X11-2.mxd

Stage 1 Environmental Assessment/  
Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish  
RPC Task LA434EA (H.004981)

**2010 CENSUS TRACTS AND BLOCKS  
THAT INTERSECT THE STUDY AREA  
FIGURE 7**



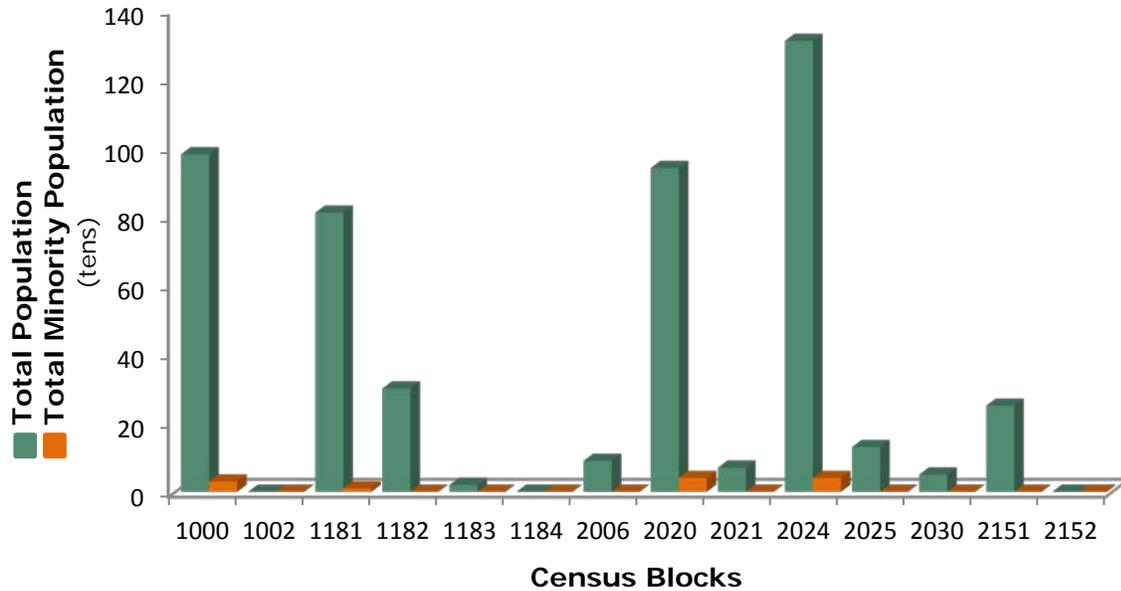


Figure 8. Total and Minority Populations

Table 10: Total and Minority Populations

Geographic Area	Total Pop.	Not Hispanic or Latino						Hispanic or Latino of Any Race
		White	Black/ African American	AIAN*	Asian	NHPI*	Other Race	
<b>All Blocks TOTAL</b>	<b>495</b>	<b>483</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>
<b>TOTAL Percent</b>	<b>100</b>	<b>98</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
CT 401.02 TOTAL	9,083	8,483	293	42	18	5	64	286
CT 407.01 TOTAL	8,260	6,442	1,384	47	118	4	84	378
<b>Census Tracts TOTAL</b>	<b>17,343</b>	<b>14,925</b>	<b>1,677</b>	<b>89</b>	<b>136</b>	<b>9</b>	<b>148</b>	<b>664</b>
<b>TOTAL Percent</b>	<b>100</b>	<b>86.1</b>	<b>9.7</b>	<b>0.5</b>	<b>0.8</b>	<b>0.1</b>	<b>0.9</b>	<b>3.8</b>

\*AIAN - American Indian and Alaskan Native, NHPI - Native Hawaiian and Other Pacific Islander.

Note: Geographic Area was determined to be the Blocks within 2010 Census Tracts 407.01 and 401.02 that intersect the Study Area. The race concept of "alone or in combination" includes people who reported a single race alone (e.g., Asian) and people who reported that race in combination with one or more of the other race groups. The sum of the six individual race "alone or in combination" categories may add to more than the total population because people who reported more than one race are tallied in each race category. Likewise, the "alone" categories may add to less than the total population.

Source: U.S. Census Bureau, 2010 Summary File 1 Tables QT-P5 and P5.

### 3.5.3 Low-Income Populations



The Census Tracts that intersect the Study Area represent the demographic area evaluated for low-income populations. The median household income and households below the poverty status were examined in order to identify the presence or absence of low-income populations and determine if the proposed project would impact low-income persons. The poverty level was determined based on the 2014 U.S. Department of Health and Human Services poverty threshold of \$23,850 for a family of four.

**Table 11** presents the estimated number of households, median household income, and households below the poverty level within Census Tracts 401.02 and 407.01.

Neither the **Preferred Alternative** nor the **No Build Alternative** would have a disproportionate impact on low-income populations.

**Table 11: Median Household Income and Poverty Status**

Geographic Area	2012 Households <sup>1</sup>	Median Household Income	Households Below Poverty Level <sup>2</sup>	
			Number	Percent of Census Tract
Census Tract 401.02	3,570	\$49,444	795	23
Census Tract 407.01	3,211	\$67,316	491	15
<b>Total</b>	<b>6,781</b>		<b>1,286</b>	<b>19</b>

<sup>1</sup>Total Households within Census Tracts 401.02 and 407.01.

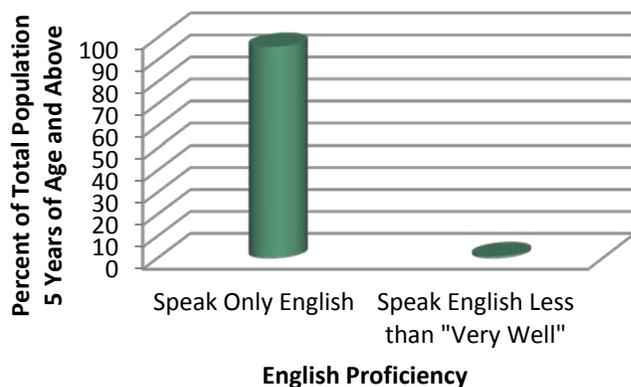
<sup>2</sup>Households below the poverty level were determined based on 2008-2012 American Community Survey 5-Year Estimates, B25121 and 2013 U.S. Department of Health and Human Services poverty threshold of \$23,550 for a family of four. Note: Geographic Area was determined to be the Census Tracts that intersect the Study Area.

Source: U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates S1901 (www.census.gov).

### 3.5.4 Limited English-Speaking Proficiency

0

Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency* (LEP) (2001), requires federal agencies to work to provide



meaningful access to LEP applicants and beneficiaries. 2010 Census data were reviewed for language spoken at home by ability to speak English for the population 5 years of age and above in the Study Area. Less than 1 percent of the Study Area population speaks English "less than very well." **Figure 9** shows LEP for the population within the Study Area.

**Figure 9. Limited English Proficiency Populations**

It is expected that neither the **Preferred Alternative** nor the **No Build Alternative** would have an impact on LEP populations within or adjacent to the Study Area.

### 3.5.5 Environmental Justice

0

Pursuant to Executive Order 12898 and FHWA Order 6640.23A, the Study Area was examined to determine if the proposed project would disproportionately affect minority populations. Concentrations of minority populations were identified within the Study Area by mapping the census block populations of individuals who self-identified as Black/African American, American Indian, Alaska Native, Native Hawaiian, Other Pacific Islander, Other

Race, and/or Two or More Races for the 2010 U.S. Census. The total of all census blocks within the Study Area have minority populations less than 1 percent. Therefore, the proposed project will not have a disproportionately high and adverse effect on minority and low-income populations. It is expected that neither the **Preferred Alternative** nor the **No Build Alternative** will raise environmental justice issues.

### 3.6 Natural and Physical Environment

This section discusses direct impacts (loss of a resources), indirect impacts (changes in function or quality of a resource), and cumulative impacts (historical, project-related, and foreseeable impacts).

#### 3.6.1 Geology and Soils



The Study Area is located within the Gulf Coastal Plain of Louisiana and lies on the Mississippi Embayment, a sedimentary sequence thousands of meters thick, which includes mostly unconsolidated clays, silts, and sands. The topography of the Study Area is characterized by broad terraces characteristic of the southern part of the parish. Elevations across the Study Area rise 15 feet from the junction of LA 434 and LA 3241 to the intersection of LA 434 and LA 36.

Soils within the Study Area are primarily composed of the Myatt-Stough-Prentiss; Latonia; and Ouachita and Bibb map units as classified by the U.S. Department of Agriculture, *Soil Survey of St. Tammany Parish, Louisiana* (March 1990). These associations are located on broad terraces in the southern part of the parish. The Myatt soils are level and poorly drained with a permanent high water table. The Stough soils are level and somewhat poorly drained, while the Prentiss soils are level, very gently sloping, and moderately well drained. Both have a water table within 2 feet of the surface. The Latonia and Ouachita and Bibb series are well-drained fine sandy loam and silt loam, respectively. Soil series, or groups mapped within the Study Area are shown on **Figure 10** and presented in **Table 12**.

**Table 12: Study Area Soils**

Map Unit Symbol	Map Unit Name	Acres in Study Area
Lt	Latonia fine sandy loam	26.3
Mt	Myatt fine sandy loam	15.2
My	Myatt fine sandy loam, frequently flooded	31.3
OB	Ouachita and Bibb soils, frequently flooded	3.8
Pr	Prentiss fine sandy loam, 0 to 1 percent slopes	34.8
St	Stough fine sandy loam	104.2

Source: Custom Soil Resource Report for St. Tammany Parish, Louisiana Stage 1 Environmental Assessment LA 434 RPC TaskLA434EA (H.004981), March 2014.

Measures to reduce erosion and nonpoint source pollution from runoff into surface waters during construction-related activities would be reduced by implementation of Best

Management Practices as outlined in a project-specific Erosion and Sedimentation Control Plan.

### 3.6.2 *Farmland Protection Policy Act*

0

The U.S. Department of Agriculture (USDA), through the Natural Resources Conservation Service (NRCS), administers the Farmland Protection Policy Act 1983 Subtitle I of Title XV, Section 1539 – 1549 (FPPA). The purpose of the FPPA is to “minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.”

The NRCS defines prime farmland and soils as those that have the best combination of physical and chemical characteristics to economically produce high yields of agricultural crops when treated and managed according to acceptable farming practices.

To ensure compliance with the FPPA, agency coordination with the NRCS, Alexandria, Louisiana, was initiated on March 25, 2014 (**Appendix B-1**). In a letter dated April 23, 2014, the NRCS stated that the proposed project may potentially impact soils classified as prime or unique farmland soils including Latonia and Prentiss fine sandy loams. The farmland conversion impact rating shows a total project score of 100 points. FPPA guidelines state that consideration for protection is not required for a total score of less than 160.

The **Preferred Alternative** would result in minimal disturbance to soils and geologic resources and is primarily located within existing roadway ROW. As such, these areas have been previously disturbed and no impacts are anticipated.

The **No Build Alternative** would have no impacts to the geology, soils, or farmlands.

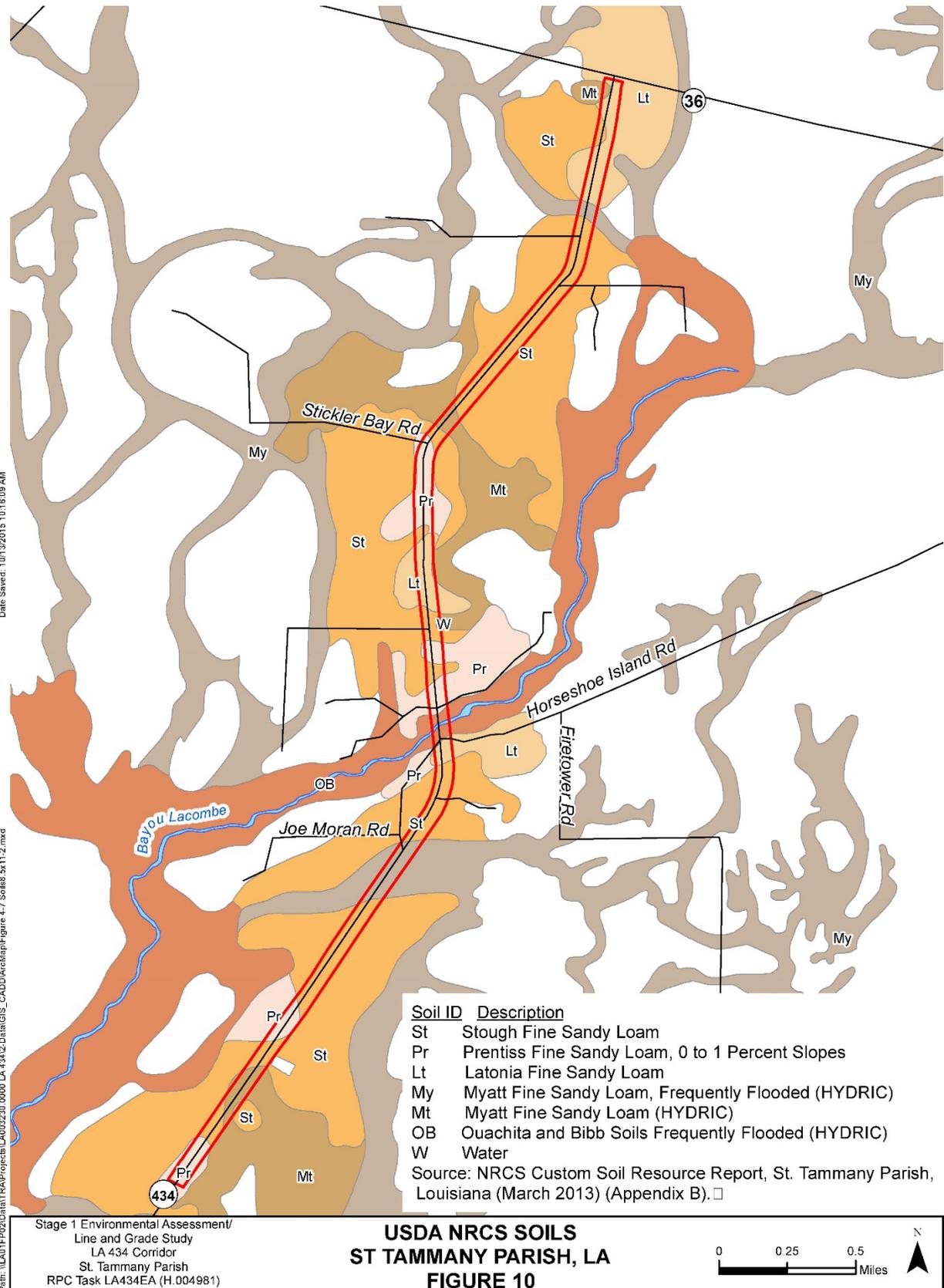
### 3.6.3 *Water Resources*

2

The Study Area is located within the Pontchartrain Basin of Louisiana, which is bounded by the state of Mississippi to the north, the Gulf of Mexico to the south, the Pearl River to the east, and the Mississippi River to the west.

The Louisiana Scenic Rivers Act of 1988 established the Louisiana Natural and Scenic Rivers System, which is intended to protect, conserve, and replenish the natural resources of the state including certain free-flowing streams or segments.

To ensure compliance, agency coordination with the Louisiana Department of Wildlife and Fisheries (LDWF) Scenic Streams Coordinator was initiated on March 25, 2014 (**Appendix CD-1**). In email correspondence dated May 28, 2014, LDWF confirmed that replacement of the timber bridge at Bayou Lacombe, a Louisiana scenic stream, will require a Scenic Rivers Permit.



The **No Build Alternative** would not impact natural and scenic rivers or other surface waters within the Study Area.

A floodplain evaluation was conducted in accordance with Executive Order 11988, Floodplain Management (1977), 23 CFR Part 650, Subpart A “Location and Hydraulic Design of Encroachments on Floodplains” and U.S. Department of Transportation (DOT) 5650.2 “Floodplain Management and Protection.”

The location of the 100-year floodplain for the Study Area was identified from Federal Emergency Management Agency Digital Flood Insurance Rate Maps and is shown on **Figure 11**. Special Flood Hazard Areas include Zones A and X within the Study Area. Zone A designates areas where a flood is expected to occur once every 100 years, and Zone X designates areas expected to flood once every 500 years.

The **Preferred Alternative** impacts approximately 3 acres of floodplain area (**Table 13**).

**Table 13: Floodplain Impact by Alternative**

Alternative	Flood Zone A (acres)
<b>Alternative 1</b>	
Signalized	3.5
With Roundabout	3.5
<b>Alternative 2</b>	
Signalized	3.0
With Roundabout	3.0
<b>No Build</b>	0

Source: *Flood Insurance Rate Map, St. Tammany Parish* Revised April 21, 1999.

There is no practicable alternative to the proposed location of the **Preferred Alternative** that does not cross floodplains. The **Preferred Alternative** includes all practicable measures to minimize floodplain impacts.

The **No Build Alternative** would not further impact floodplains within the Study Area.

### 3.6.4 Wetlands

2

All wetlands identified within the Study Area were evaluated in accordance with Executive Order 11990, *Protection of Wetlands* (1977), and the technical guidelines and methods for wetland delineations as set forth in the U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Wetland Delineation Manual* (2010).

An initial site visit was conducted on March 18, 2014, to visually assess the Study Area and note the location of probable wetlands. A formal delineation followed on March 19, 2014.

Each wetland site was documented with photographs and field notes, and boundaries were delineated and mapped using a sub-meter global positioning system unit. Observations of vegetation, hydrology, soils, and other visible wetland indicators were recorded on *Wetland Determination Forms – Atlantic and Gulf Coastal Plain Region*.

**Table 14** lists wetland impacts by alternative. **Figure 11** shows field delineated wetlands within the Study Area. A detailed analysis and description of wetlands and other waters

identified within the Study Area can be found in the Biological Resources and Wetland Findings Report (**Appendix CD-1**).

**Table 14: Wetland Impact by Alternative**

Alternative	Wetland Area (acres)
<b>Alternative 1</b>	
Signalized	9.0
With Roundabout	9.0
<b>Alternative 2</b>	
Signalized	4.9
With Roundabout	4.9
<b>No Build</b>	0

Source: ARCADIS, Biological Resources and Wetland Findings Report (December 2014) (**Appendix CD-1**).

Wetlands lost due to construction of the proposed project would be replaced through mitigation activities.

Mitigation includes measures which avoid, minimize, and/or compensate for unavoidable losses to resources that cannot be further minimized. The assessment of mitigation measures (avoidance, minimization, and compensation) is an integral part of the NEPA/Section 404 process. For those impacts that cannot be avoided, other mitigation efforts must be considered. These efforts include minimization of potentially adverse impacts and compensation for those remaining adverse impacts that cannot be reduced any further.

Construction activities associated with the **Preferred Alternative** would impact wetlands and surface waters to varying degrees. Land clearing during construction

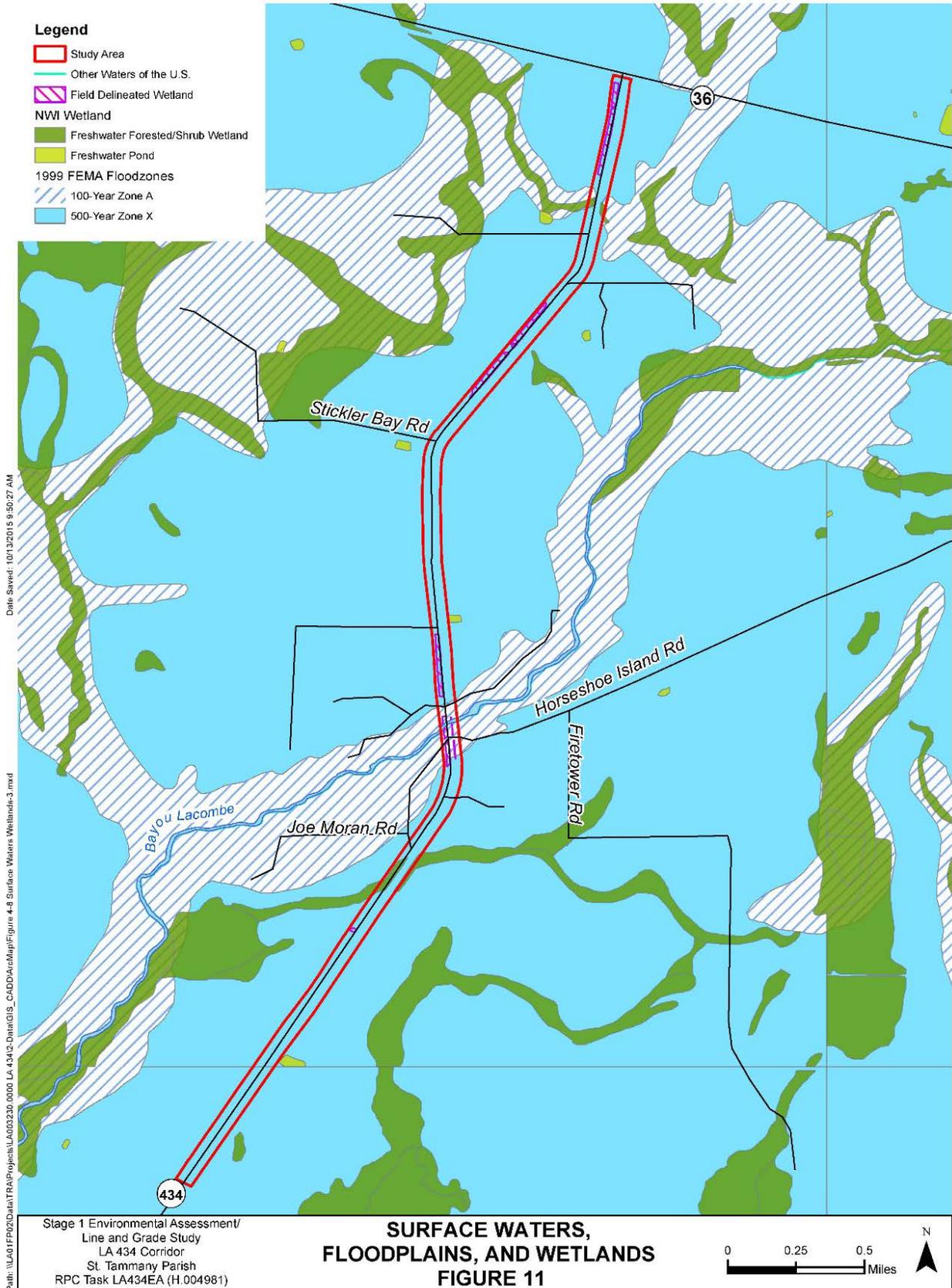
would remove vegetative cover with the potential to increase surface runoff during storm events leading to erosion and increased sediment deposited in surface waters.

To aid in minimizing such impacts, placement and monitoring of erosion control measures for soil stabilization along with temporary and permanent vegetation measures at the start of, during, and after construction would be incorporated into project construction plans according to LADOTD’s standard specifications.

Measures to minimize impacts to wetlands may include minimizing clearing of wetland vegetation to the limits of construction and avoiding use of wetland areas outside the construction limits for construction support activities (borrow sites, waste sites, storage, parking, access, etc.).

Final compensatory mitigation ratios and requirements for impacted areas classified as jurisdictional will be determined by the USACE New Orleans District through the Section 404 permit process.

The **No Build Alternative** would not impact area wetlands and other waters of the U.S.



### 3.6.5 Biological Resources

0

Section 7 of the Endangered Species Act of 1973 (amended) requires that federal agencies ensure any action authorized, funded, or carried out by that agency is not likely to adversely impact threatened or endangered species or result in destruction of critical



Red-cockaded Woodpecker.

habitat. Coordination with the U.S. Fish and Wildlife Service (USFWS), Louisiana Ecological Services Office, and the Louisiana Natural Heritage Program (LNHP) was made as part of the Solicitation of Views (SOV) process to determine if known rare, threatened, or endangered species exist within the Study Area.

In response to a request for review (**Appendix B-1**), the USFWS responded stating that the proposed project is located within a parish known

to be inhabited by the red-cockaded Woodpecker (RCW, *Picoides borealis*). Although not seen in St. Tammany Parish since 1965, the location of LA 36 and LA 3241 may traverse through or be adjacent to a dusky gopher frog (*Rana sevosa*) habitat. Impacts to critical habitat for this species are not anticipated due to the location of the proposed project being 2 miles east of the critical habitat area.



Dusky gopher frog.

The LNHP maintains a database with known locations of federally listed threatened and endangered species as well as state species of special concern. The LNHP responded to the SOV stating that no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. The response also stated that no state or federal parks, wildlife refuges, or wildlife management areas are known to be at the project location (**Appendix B-1**).

Field work conducted March 18, 2014, did not identify suitable nesting and/or foraging habitat for the RCW or dusky gopher frog within the Study Area. Proposed project improvements will primarily occur along the existing LA 434 roadway facility. Additional ROW required for roadway widening will include previously cleared or disturbed areas. The **Preferred Alternative** does not likely contain habitat that is suitable to support rare, threatened, or endangered species. In the event species of concern are encountered in the project area, further consultation with the USFWS will be necessary.

The **No Build Alternative** would have no impact to threatened and endangered species or critical habitat.

## 3.7 Historic and Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 (NHPA; as amended) protects those properties that are listed in or eligible for listing in the National Register of Historic

Places (NRHP). In accordance with the requirements of Section 106, an assessment was made of the cultural resources within the Study Area.

Methods used in this review and assessment were consistent with the applicable federal and Louisiana guidelines for conducting cultural and historic resource studies. Project-specific cultural resources data, as well as recorded archaeological sites and historic standing structures, were obtained from a review of archaeological site forms and reports on previous cultural resources surveys on file at the Division of Historic Preservation Louisiana Department of Culture, Recreation & Tourism (LDCRT), and the State Historic Preservation Office (SHPO).

A Phase 1 cultural resources survey of the Study Area was conducted within the direct Area of Potential Effects (APE), which includes the existing and required ROW for all alternatives (**Figure 12**). The standing structure survey examined both the direct APE and indirect APE, which included the existing and required ROW and a 0.25-mile buffer of the existing LA 434 roadway (**Figure 12**).

### 3.7.1 Archaeological Resources

0

Identification and assessment of potential cultural resources were conducted for the APE and included all areas that could include cultural resources and be directly or indirectly impacted by the proposed project. A geomorphological assessment of the APE was completed in order to determine the potential for the area to have fostered human development or to have been preserved. An overview of the region's prehistory is provided in the *Phase 1 Cultural Resources Survey for the Louisiana Highway 434 (LA 434), St. Tammany Parish, Louisiana* (2015) which has been submitted to LDCRT as required under Section 106 of the NHPA.

A cultural resource investigation was completed in order to locate all archaeological remains within the direct APE and to assess their significance. A records search was conducted at the Division of Archaeology (DOA). The DOA maintains archaeological site information for the State of Louisiana including U.S. Geological Survey 7.5-minute quadrangle maps depicting the locations of all recorded archaeological sites, site forms, and corresponding reports. Examination of these records indicates that no archaeological sites exist within the direct APE. The field survey revealed no evidence of intact archaeological deposits based on shovel tests excavated within the APE.

Neither the **Preferred Alternative** nor the **No Build Alternative** would impact archaeological resources.

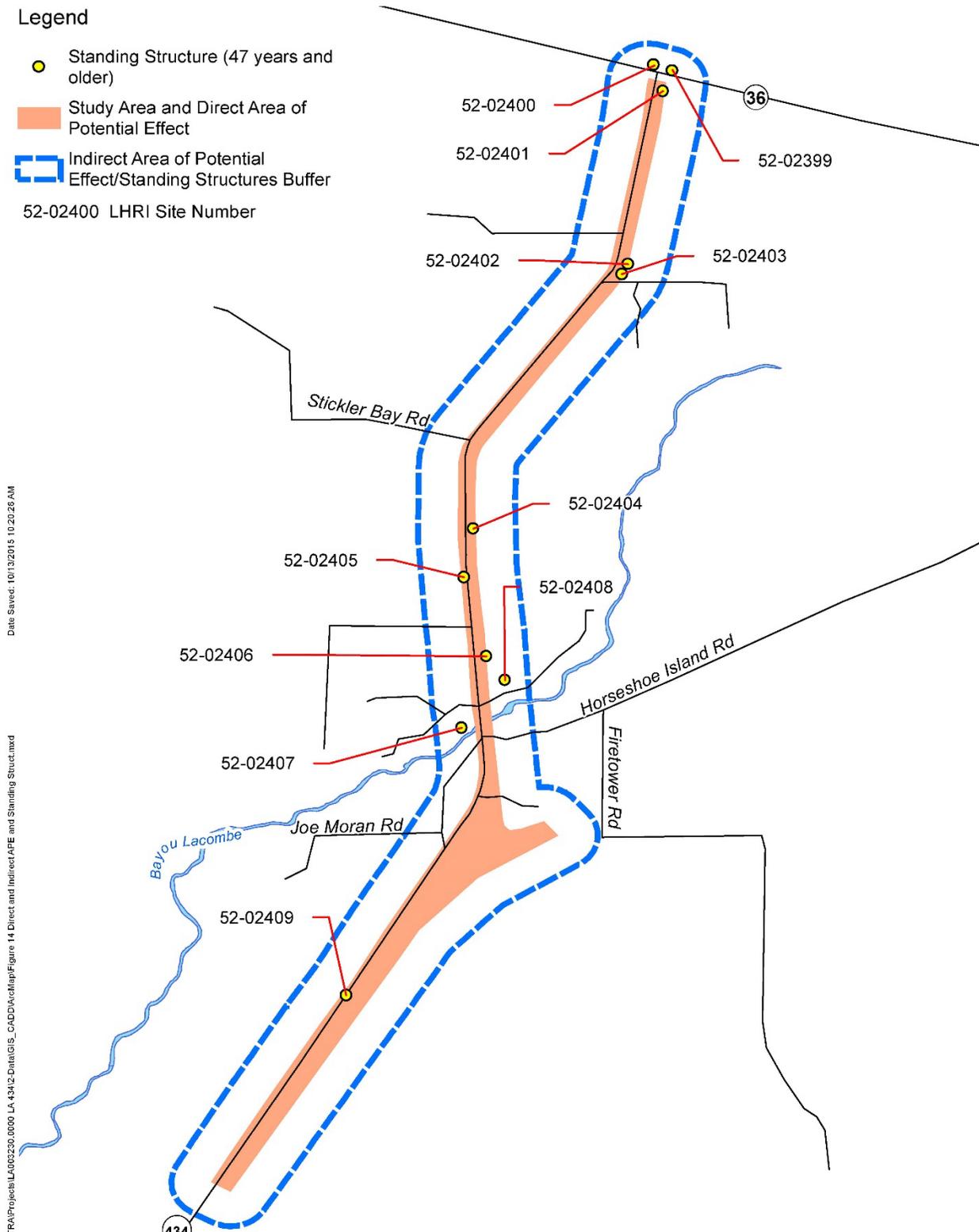
### 3.7.2 Historic Resources – Standing Structures

2

The identification and assessment of historic resources was conducted for the direct APE and indirect APE and included all historic resources that could be directly or indirectly impacted by the proposed project. Review of LDCRT files indicated that there are two recorded structures within the direct APE which are not NRHP eligible properties.

Legend

- Standing Structure (47 years and older)
  - Study Area and Direct Area of Potential Effect
  - Indirect Area of Potential Effect/Standing Structures Buffer
- 52-02400 LHR1 Site Number



Date Saved: 10/13/2015 10:20:26 AM

Path: \\L01\F022\Data\TPA\Projects\LA434\GIS\_CADD\Map\Figure 14 Direct and Indirect APE and Standing Structures.mxd

Stage 1 Environmental Assessment/ Line and Grade Study LA 434 Corridor St. Tammany Parish RPC Task LA434EA (H.004981)	<b>DIRECT AND INDIRECT AREA                  OF POTENTIAL EFFECT (APE)                  AND LOCATION OF STANDING STRUCTURES</b> <b>FIGURE 12</b>	
-----------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	--

The field survey identified ten buildings and one bridge within the direct and indirect APEs (**Figure 12**) that are at least 47 years of age (predate 1967). These structures were recorded on Louisiana Historic Resource Inventory forms and photo-documented. The structures included one vacant commercial building, one barn, and eight single-family residences. Of the ten structures identified, two were located within the direct APE and are not considered to be potentially eligible for listing on the NRHP. Of the eight structures located within the indirect APE, four structures are recommended eligible for listing on the NRHP (52-02399, 52-02401, 52-02402, and 52-02404). Avoidance of these structures was the preferred measure for alternatives development and no impacts to these structures are anticipated.

The timber bridge over Bayou Lacombe (Recall No. 060340; Structure No. 62528521205991) was constructed in 1953. The LADOTD Historic Bridge Inventory lists the bridge over Bayou Lacombe as ineligible for the NRHP. LADOTD, in cooperation with FHWA and SHPO, completed a statewide historic bridge inventory for bridges constructed prior to 1971. A National Register Eligibility Documentation Report was prepared by Mead & Hunt (2013). FHWA made final NRHP eligibility determinations, which are presented in the Mead & Hunt report, and the SHPO has concurred with those determinations.

Proposed improvements for the **Preferred Alternative** avoid impacts to the two residential structures located within the direct APE.

The **No Build Alternative** would not impact historic resources.

### **3.7.3 Aesthetic and Visual Resources**

0

Louisiana's aesthetic and visual resources are an important component of the state's tourism industry and contribute significantly to the quality of life in Louisiana. These resources include a broad range of natural and developed areas from the coastal marshlands and swamps along the Gulf Coast to the rich cotton fields of North Louisiana and from its historic cities and towns to its forestlands and wildlife. The visual experience and aesthetic quality of an area depend upon the pattern of land or topography, the pattern of water bodies, vegetation, and human development (FHWA 1990). More specifically, factors used to assess a person's visual experience and the aesthetic quality of an area may include:

- Uniqueness of the landscape in relation to the region as a whole;
- Whether the scenic area is a foreground, middle ground, or background view;
- Focus of the view and number of potential viewers;
- Scale of the elements in the scene;
- Duration of the view; and
- Amount of disturbance to the landscape.

The Study Area includes part of a state highway system adjacent to an area that is suburban residential and rural in character. There would be no change to the nightscape, which is moderately accented with artificial light from street lights and residential security lights.



The **Preferred Alternative** would not noticeably change the obscured view of the landscape from ground level.

Temporary construction impacts due to clearing will detract from the view along LA 434. Tree growth would restore the current viewshed and partially obscure the build alternative within 15 years. The viewshed throughout the remainder of the Study Area will be minimally disturbed because the widening will be

implemented along the existing LA 434 alignment. The **Preferred Alternative** is anticipated to have minimal adverse impacts to the aesthetic and visual resources in the Study Area.

The **No Build Alternative** would not impact aesthetic and visual resources.

### 3.8 Sections 4(f) and 6(f)

0

Section 4(f) of the DOT Act of 1966 stipulates that FHWA cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent avoidance alternative following all possible planning to minimize harm to the property; or if the use of the land would have only a *de minimis* impact, or no adverse effect, to key features of the property.

The bridge over Bayou Lacombe was identified as not eligible for the NRHP under the Louisiana Historic Bridge Inventory (Mead & Hunt 2013); therefore, no Section 4(f) resources would be impacted by the proposed project.

Section 6(f) of the Land and Water Conservation Act requires that unavoidable conversion of lands or facilities acquired or developed with Land and Water Conservation Act funds be replaced in kind or coordinated with the Department of Interior. No Section 6(f) lands would be impacted by the proposed project.

The **Preferred Alternative** and the **No Build Alternative** would have no impacts to parks, public lands, or public or private historical sites.

### 3.9 Noise

1

Noise, by definition, is unwanted sound that interferes with normal activities and would not be considered a resource, but rather a condition that potentially affects both the human and natural environment. Noise is described in terms of loudness, frequency, and duration and is emitted from many sources, including airplanes, factories, railroads, power-generating plants, and highway vehicles. Highway noise, or traffic noise, is usually a composite of noises from engine exhausts, drive trains, and tire-roadway interaction.

The magnitude of noise is usually described by its sound pressure. Because the range of sound pressure varies greatly, a logarithmic scale is used to relate sound pressures to some common reference level, particularly the decibel. Sound pressures described in decibels are called sound pressure levels and are often defined in terms of frequency-weighted scales (A, B, C, or D).

For a community noise impact assessment, the A-weighted scale is used almost exclusively in vehicle noise measurements because it places most emphasis on the frequency characteristics that correspond to a human's subjective response to noise (1,000 to 6,000 Hertz). Sound levels measured using A-weighting are often expressed as A-weighted decibels (dBA).

A noise monitoring program was conducted within the Study Area (**Appendix CD-2**) to establish existing sound levels in accordance with the LADOTD Highway Traffic Noise Policy (2011). Twelve field-measured noise locations were identified for the collection of existing sound levels along roadways within the Study Area. Data were collected at two additional locations outside the Study Area to measure background sound levels not related to traffic. Existing noise levels ranged from 44.2 (collected during traffic peak periods) to 56.5 dBA. The lowest traffic noise level was measured on Sticker Bay Road west of its intersection with LA 434. The highest traffic noise level was measured on Markham Drive north of its intersection with Azalea Lane.

The dominant noise source at each receiver site is existing traffic including automobiles, heavy trucks, and medium trucks and is usually a composite of noises from engine exhausts, drive trains, and tire/roadway interaction.

Future traffic noise level predictions were performed using the FHWA Traffic Noise Model 2.5 (TNM 2.5). The difference between the field-measured sound levels and TNM-calculated sound levels is within the acceptable range of  $\pm 3$  dBA (the amount of sound that is barely perceptible by the human ear) at all locations where existing measurements were taken.

A total of 60 noise receivers (representing a total of 60 dwelling units) were modeled within the Study Area.

As presented in **Table 15** and shown on **Figure 13**, the 2014 existing conditions exterior sound levels do not approach or exceed the Noise Abatement Criteria (NAC). In the 2034 **No Build Alternative**, growth in traffic volumes will cause exterior sound levels at 7 receiver locations to approach or exceed the NAC. None of these receiver locations will

experience a substantial increase in noise level. In the 2034 build alternative, the proposed roadway widening will cause exterior sound levels at 15 receiver locations to approach or exceed the NAC (**Figure 14**).

**Table 15: Traffic Noise Impact Summary by Alternative**

Conditions		Total Number		Approaching or Exceeding LADOTD NAC		Impacted under Substantial Increase Criteria		Total Impacted	
		R	DU	R	DU	R	DU	R	DU
2014 Existing Conditions		60	60	N/A	N/A	N/A	N/A	None	None
2034 No Build Alternative		60	60	7	7	None	None	7	7
2034 Build Alternative									
Preferred Alternative	Alt 2, Signalized	59	59	15	15	None	None	15	15
	Alt 2 with Roundabout	59	59	15	15	None	None	15	15

- N/A Not applicable for the listed alternative.
- Alt Alternative.
- R Receiver.
- DU Dwelling Unit.
- NAC Noise Abatement Criteria.

Source: ARCADIS, Traffic Noise Analysis Technical Report (March 2015) (**Appendix CD-2**).

Traffic noise impacts occur when the predicted traffic sound levels equal or exceed the NAC, or when the predicted traffic sound levels exceed existing levels by 10 dBA.

This Page Intentionally Left Blank



**Legend**

**Category, Impact**    ■ B, No    ■ B, Yes

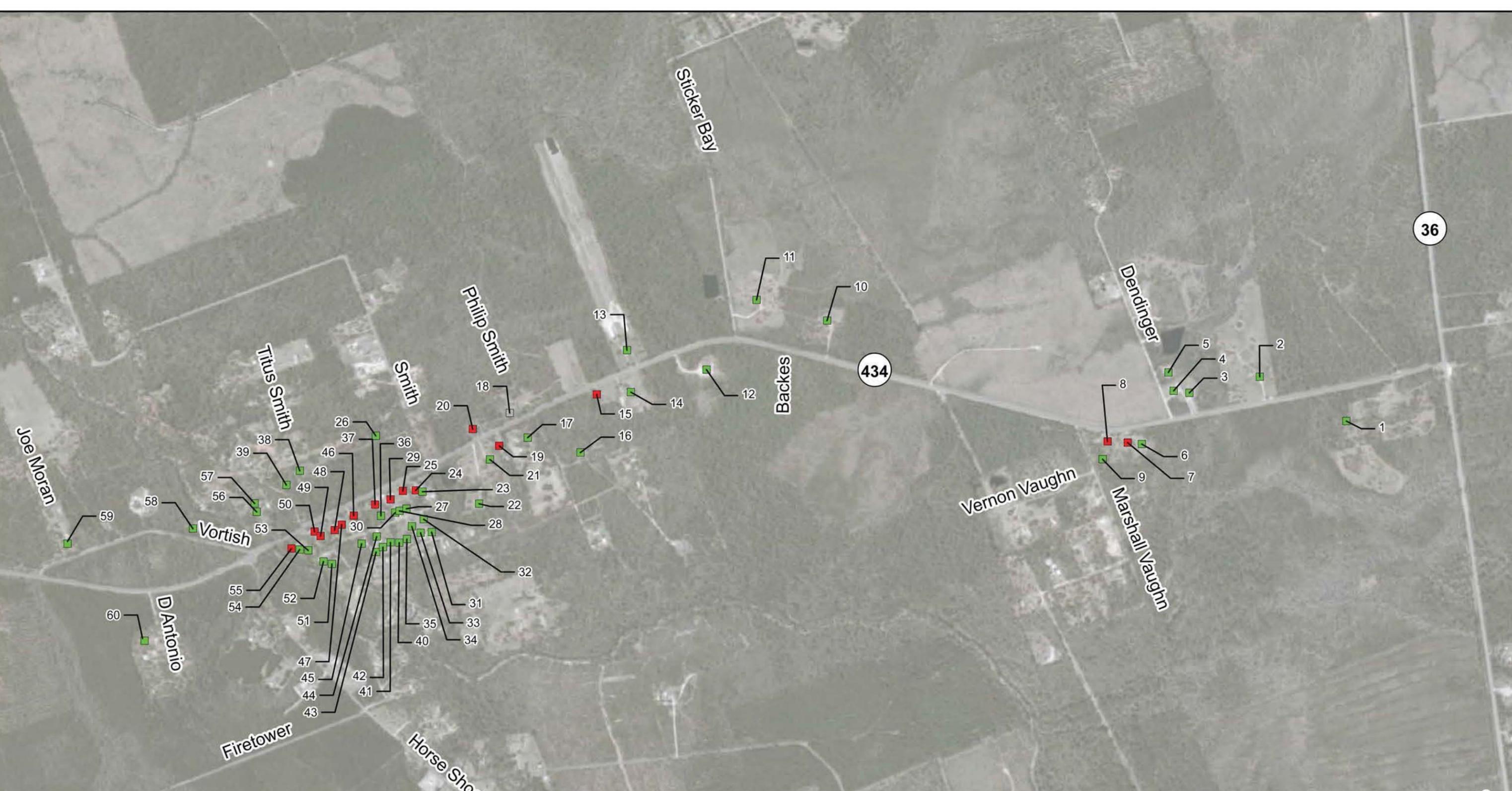
LA 434 STAGE 1 - ENVIRONMENTAL ASSESSMENT /  
 LINE AND GRADE STUDY  
 ST. TAMMANY PARISH, LOUISIANA ROUTE LA HIGHWAY 434  
 RPC PROJECT: LA434EA

**NOISE RECEIVER IMPACTS - 2034 NO-BUILD CONDITIONS**  
**Figure 13**



This Page Intentionally Left Blank

Path: G:\ITRA\Projects\LA003230\_0000\_LA\_434\6 - TRF\2-Analysis\GIS-Noise\NoiseReceiverImpacts\_2035 -Alternative 2 Conditions.mxd  
Date Saved: 2/19/2015 5:35:28 PM



**Legend**

**Category, Impact**    ■ B, No    ■ B, Yes    ■ Displaced

LA 434 STAGE 1 - ENVIRONMENTAL ASSESSMENT /  
LINE AND GRADE STUDY  
ST. TAMMANY PARISH, LOUISIANA ROUTE LA HIGHWAY 434  
RPC PROJECT: LA434EA

**NOISE RECEIVER IMPACTS - 2034 BUILD CONDITIONS (3-LANE ALTERNATIVE)**  
**Figure 14**



This Page Intentionally Left Blank

**Table 16** describes the LADOTD NAC threshold values that represent the noise level at which abatement measures, like noise walls, must be evaluated.

**Table 16: Noise Abatement Criteria**

Activity Category	Hourly A-weighted Decibels <sup>1</sup>	Activity Category Description
A	56 (exterior)	Land on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66 (exterior)	Residential.
C	66 (exterior)	Active sports areas, amphitheatres, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	51 (interior)	Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	71 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed land, properties, or activities not included in A through D or F.
F	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	-	Undeveloped land that is not permitted.

<sup>1</sup>Hourly A-weighted equivalent noise level in dBA - L<sub>eq</sub> (hour).

Noise abatement consideration evaluates both feasibility and reasonableness. For feasibility, a 5-dBA reduction in noise is considered to be a benefited receptor and at least one benefited receptor must receive an 8-dBA reduction in noise and the average cost per benefited receptor must not exceed \$35,000 to be considered reasonable.

Various noise abatement measures were reviewed to mitigate noise impacts and protect public health in the vicinity of the proposed project. All impacted receivers were reviewed in detail for noise abatement. The types of abatement considered include acquisition of ROW/land use designations, traffic management strategies, alignment alterations, and use of vegetative or structural barriers.

None of the abatement measures reviewed are considered to be feasible. Land use or zoning to create a “buffer” between developed areas and roads is most effective prior to development when implemented at the local level. Traffic management cannot be enforced along this route due to its intended use as an arterial roadway. Often, alignment alterations are not considered for noise reduction. A roadway shift significant enough to achieve a required reduction in noise levels often is not feasible or reasonable, especially when a roadway is already established in an area, such as a state route/interstate. In addition, alignment alterations introduce noise to a new area and/or result in displacements. Receivers 7, 8, 15, 19, and 20 are located along and have existing direct access to LA 434. A barrier would prevent direct access and, therefore, would not be feasible. Receivers 25,

29, 37, 46, and 50 are also located along and have existing direct access to LA 434. A barrier at these locations would be feasible should the property owners agree to move their access to Markham Drive.

The reasonableness of placing a structural noise barrier along LA 434 was evaluated and found reasonable. However, due to the potential access issues caused by a proposed barrier, a noise barrier is considered not feasible.

### 3.10 Air Quality

0

The Clean Air Act Amendments of 1990 (CAAA) requires that a proposed project not cause any new violation of National Ambient Air Quality Standards (NAAQS), or increase the severity of existing violations, or delay attainment of NAAQS. National and state ambient air quality standards, developed for specific (criteria) pollutants to protect public health, safety, and welfare, are established in the CAAA.

The U.S. Environmental Protection Agency (USEPA) and Louisiana Department of Environmental Quality (LDEQ) are responsible for the protection of air quality within Louisiana. The USEPA established NAAQS for six air pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), and particulate matter of 10 microns (PM-10) or less in size. NAAQS require the transportation sector to meet specified standards for PM-10, CO, and ozone at ground level. Unlike PM-10 and CO, ozone is not directly emitted, but created by a chemical reaction between nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds in the presence of sunlight. Ground-level ozone is the primary component of smog.

Air quality is defined by primary standards which refer to air quality levels required to protect public health within an adequate margin of safety. Secondary standards refer to air quality levels required to safeguard visibility, comfort, animals, and property from poor air quality. The CAAA requires that transportation plans, programs, and projects funded or approved by FHWA be in conformity with the State Implementation Plan which represents the state's plan to either achieve or maintain the NAAQS for a particular pollutant.

Transportation conformity is a process required of Metropolitan Planning Organizations, pursuant to the CAAA, to ensure that federal funding and approval are given to those transportation activities that are consistent with air quality goals. As the agency responsible for regional transportation planning, the RPC leads the analysis for the impact of the region's transportation sector to air quality. Currently, the Greater New Orleans region is designated as an area in attainment. St. Tammany Parish, the City of Slidell, and the Study Area are in attainment for the criteria pollutants.

Due to the region's compliance with NAAQS, the RPC is not required to produce an air quality conformity analysis at this time. The region's last air quality conformity analysis was performed in 2004 in conjunction with the development of the 2027 Metropolitan Transportation Plan. In addition, the conformity requirements do not apply to this project.

There are no air quality impacts for the **Preferred Alternative** or **No Build Alternative**.

### 3.11 Hazardous Materials Sites, Underground Storage Tanks, Pipelines, and Wells

1

A standard environmental records review and site reconnaissance were conducted to locate sites of potential concern for hazardous materials or previously identified recognized environmental conditions (RECs) on properties within the Study Area. This environmental site assessment was completed utilizing the standard practices outlined in *ASTM International E1527-13: Standard Practice for Environmental Site Assessments, Phase I Environmental Site Assessment Processes* (2013) in conjunction with 40 CFR Part 312.

Contamination of soils, groundwater, or surface waters can result from former use, storage, or disposal of hazardous materials on subject properties or from migration of contaminants from adjacent properties. The purpose of conducting an environmental site assessment is to determine a property's potential for containing soil, groundwater, or surface water contamination with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act and petroleum products.

A REC is defined as the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or an observable or obvious threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property, excluding *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action. A historical recognized environmental condition (HREC) is defined as an environmental condition that would have been considered a REC in the past, but may or may not be considered a REC currently. A controlled recognized environmental condition (CREC) is a REC resulting from a past release that has been addressed to the satisfaction of the applicable regulatory authority. The subject property is also subjected to activity and use limitations (restrictive covenants).

A records search was conducted by Environmental Data Resources (EDR), Inc. (**Appendix CD-3**) for the Study Area and immediate surrounding area. Because EDR locates sites based on addresses, which are not always representative of the actual location of a site, the results of the EDR search were supplemented with a review of LDEQ Electronic Document Management System (EDMS) records (**Appendix CD-3**). EDMS is LDEQ's electronic repository of official records that have been created or received by LDEQ.

Sites determined to be outside the Study Area or listed in the EDR report and considered to represent *de minimis* conditions that generally do not present a material risk of harm to public health or the environment were removed from consideration for further investigation.

None of the unmapped sites identified in the EDR report are located within the Study Area and were removed from further investigation.

## ENVIRONMENTAL ASSESSMENT

In addition, historical aerial photographs, historical topographic maps, and Sanborn® Fire Insurance Maps of the Study Area and adjoining properties were reviewed for evidence of environmental concerns.

Database searches were followed by a field reconnaissance of the Study Area, which also identified sites not documented in the environmental databases. Seven sites with known environmental conditions were identified to be present within or adjacent to the Study Area. **Figure 15** shows the identified sites from the EDR report, EDMS review, and field reconnaissance that are within the Study Area or in proximity to all alternatives.

Several sites were unoccupied and the identified site type for the St. Tammany Parish Coroner's office is not a potential impact to proposed improvements due to the nature of the regulated materials. No HRECs or CRECs were identified.

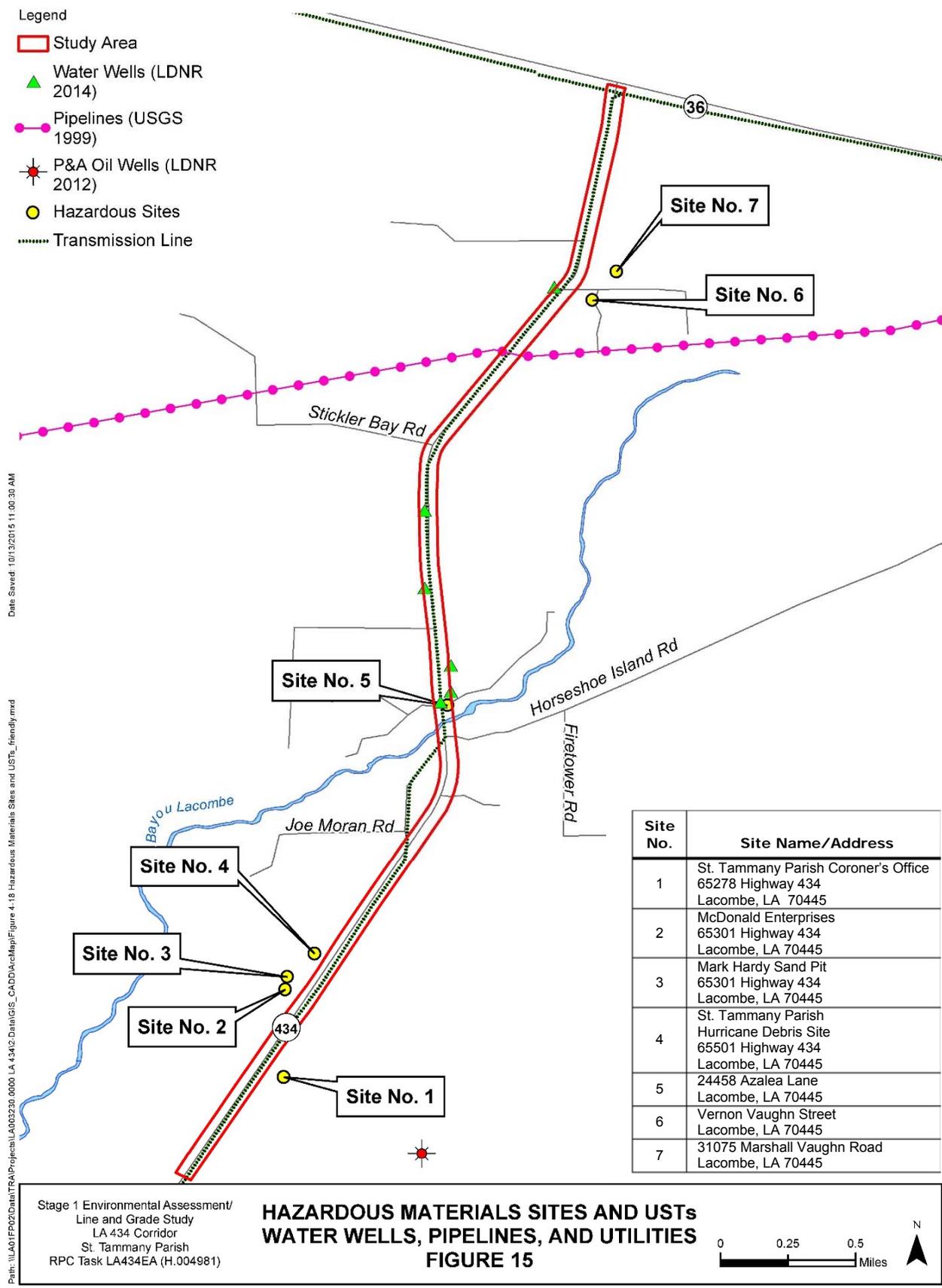
Oil and gas and water well information was obtained from the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resource Information System database and a response from the LDNR Office of Conservation (**Appendix CD-1**). Information collected indicates six active water wells located within the Study Area. No recorded oil and gas wells are located within the Study Area.

The Study Area is traversed by a high-pressure natural gas pipeline approximately 1,500 feet south of the intersection of LA 434 and Marshall Vaughn Road.

Required ROW for lane widening and intersection improvements associated with the **Preferred Alternative** would not impact sites identified to have known potential environmental conditions that may have the presence or likely presence of hazardous substances or petroleum products or that pose a material threat of release. The **Preferred Alternative** would not impact water wells located within the Study Area and would cross one high-pressure gas pipeline.

The **No Build Alternative** would have no impact on sites identified to have known potential environmental conditions that may have the presence or likely presence of hazardous substances or petroleum products or that pose a material threat of release.

The **No Build Alternative** would not impact any water wells or gas pipelines located within the Study Area.



### 3.12 Temporary Construction Impacts

1

Short-term impacts associated with construction of the **Preferred Alternative** are anticipated including erosion of areas cleared for construction, temporary increases in noise levels, and fugitive dust from use of heavy construction equipment. Temporary impacts to traffic flow and travel patterns are anticipated with construction of the **Preferred Alternative**. These impacts would occur along existing roads and at intersections during construction activities. Local and through traffic would be maintained during construction in accordance with LADOTD's Standard Specifications for Roads and Bridges. Utilization of maintenance of traffic flow practices including phasing, timing of construction activities, and signing would be implemented.

Worker and motorist safety is paramount. Traffic control standards will be used to establish and maintain a safe work zone. Workers are required to meet LADOTD standards for worker visibility and equipment driven on roadways must meet proper signage and licensing requirements. The contractor will take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction area.

The use of construction equipment within sensitive areas should be minimized and all construction materials used for this project should be removed as soon as the work schedule permits. Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal and state regulations for handling emergency discovery of hazardous materials.

By adopting the safety and coordination efforts described above, it is anticipated that the **Preferred Alternative** could be constructed with no adverse impacts to human health and safety or the environment.

There are no construction impacts for the **No Build Alternative**.

### 3.13 Indirect and Cumulative Impacts

1

The Council on Environmental Quality regulations (40 CFR Subsections 1500 through 1508) define three types of impacts routinely assessed for proposed federal actions. Direct impacts, which are effects caused by the action and occur at the same time; indirect impacts, which are caused by an action and are later in time or farther removed in distance but are reasonably foreseeable; and cumulative impacts. Cumulative impacts include the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions which may become significant in the aggregate as time passes.

NEPA requires that the effects of the proposed project be considered in combination with effects from unrelated past, present, and reasonably foreseeable future actions as part of the decision-making process.

The **Preferred Alternative** would convert a small amount of previously disturbed undeveloped land into transportation use. This will improve accessibility and may induce further residential and commercial development within or near the Study Area, which is

located within the St. Tammany Parish urban growth boundary line. Future development could cause additional loss of natural resources from development, and it is reasonable to predict that land values adjacent to improvements may increase.

Future planned developments would be considered a foreseeable action and are reasonably expected to occur near the Study Area and under either the **Preferred Alternative** or **No Build Alternative**. These actions will have corresponding development effects to the social, natural, and cultural environments within the project Study Area.

Predominant cumulative effects from construction of the **Preferred Alternative** include change in land use and growth in traffic through the Study Area.

This Page Intentionally Left Blank

## SECTION



## 4

COORDINATION &  
PUBLIC INVOLVEMENT

Participation in the decision-making process includes community leaders, federal and state agencies, Native American Tribes, and the public. Outreach milestones include:

Solicitation of Views

Public Outreach

Community Leaders

Native American and Tribal Outreach

Agency Coordination

### 4.1 Introduction

Community leaders, federal and state agencies, Native American Tribes, and the public were invited to participate in the decision-making process for this project. The outreach program is intended to initiate and continue discussion with stakeholders and obtain written comments. Outreach efforts including meeting dates, times, and locations and summaries of events are discussed below.

### 4.2 Solicitation of Views

The Solicitation of Views process is designed to inform interested agencies and persons of the proposed project and request early comments regarding potential adverse economic, social, or environmental effects or other related concerns. Federal, state, and local agencies were invited to participate in the SOV process. An SOV packet, including a project overview and figure of the Study Area boundaries, was mailed to various federal, state, and local agencies requesting their views. In addition to identifying any concerns or issues as mentioned above, consultation to address cultural and historical resource issues pursuant to Section 106 of the NHPA (36 CFR Part 800) was also requested. The SOV packet and distribution list are included in **Appendix B-1**.

### 4.3 Native American Tribal Outreach

LADOTD invited Federal Tribes to participate in the SOV process (**Appendix B-2**). The SOV packet was mailed to Native American Tribes requesting their views. In addition to identifying any concerns or issues, consultation to address cultural and historical resource issues pursuant to Section 106 of the NHPA was also requested (**Appendix B-3**).

#### **4.4 LA 3241 (I-12 to Bush Coordination)**

Coordination with LADOTD representatives leading the LA 3241 project was conducted throughout the LA 434 Stage 1 process. During these coordination points, it was confirmed that the connection from LA 3241 to LA 434 is part of the LA 3241 design contract and the LA 3241 team identified the most practical location for the LA 434 improvements to terminate.

Although the LA 434 Study Area extends south from LA 36 along LA 434 to its junction with the proposed LA 3241, the proposed action area extends south from LA 36 along LA 434 terminating between Vortisch Road/Horseshoe Island Road and D'Antonio Road, a distance of approximately 3 miles, and includes the proposed roadway improvements and limits of construction. At this location, the LA 434 widening improvements narrow to the existing two-lane roadway. This concept is proposed to remain until the first segment of LA 3241 is constructed, at which time the connection between LA 434 and LA 3241 will be completed. In addition, coordination with the LA 3241 team resulted in the SC-2 design criteria designation for the LA 434 improvements.

#### **4.5 Public Outreach**

Utilizing a contact list of interested parties developed in coordination with the RPC and the LADOTD, elected/agency officials, stakeholders, and the public were invited to a meeting held from 3:00 p.m. to 5:30 p.m. on January 13, 2015, at the St. Tammany Parish Government Council Chambers, Mandeville, Louisiana. The purpose of the informational meeting was to present an overview of the project, present the preliminary alternatives, and obtain input from the public. This meeting preceded the regularly scheduled St. Tammany Parish Planning Commission Meeting.

In addition, the meeting was an opportunity for any interested parties to request participation in Section 106 of the NHPA consultation to address cultural and historical resource issues related to the proposed project. The meeting handout included the alternatives and a comment form.

Notification of the meeting was posted on the LADOTD and St. Tammany Parish websites. A meeting flyer indicating the project name and purpose, date, place, and time was sent via email or U.S. mail to elected/agency officials, stakeholders, and landowners within the Study Area, along with members of the public who requested project correspondence. On Saturday, January 10, 2015, flyers were also distributed by hand to occupants along the Study Area within the proposed construction limits.

A total of 35 persons registered their attendance on the sign-in sheets. Of these persons, 12 were public or agency officials, 20 were members of the public, and 3 were members of the project consultant team. Four verbal comments were recorded by the transcriber at the public meeting and five written comments were received through the close of the comment period on January 23, 2015.

Commenters expressed concern for the project need, citing low traffic volume and low growth along the corridor. Support was expressed for the bridge replacement. Additional comments included the need to first complete other projects in the St. Tammany Parish community.

#### **4.6 Public Meeting Summary**

A summary of the public information meeting was prepared for the January 13, 2015, meeting (**Appendix CD-4**). The summary includes a discussion of the meeting events, attendance, comments, and outreach following the public meeting. A description of the meeting format, copies of handouts, meeting sign-in sheets, and written comments received by the close of the comment period, January 23, 2015, are appended to the summary. The summary was distributed to federal and state agencies and local governments. The full record of this public meeting is available at the RPC in New Orleans and LADOTD Headquarters in Baton Rouge.

This Page Intentionally Left Blank

## SECTION



## 5

## REFERENCES

- ARCADIS. 2015. Conceptual Stage Relocation Plan. May 1.
- ASTM International. 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, E-1527. November 1.
- Earth Search, Inc. 2015. Phase I Cultural Resources Survey for the Louisiana Highway 434 (LA 434), St. Tammany Parish, Louisiana. September.
- Federal Emergency Management Agency. 2014. Digital Flood Insurance Rate Maps, Community Panel Number 225205 0275 C, October 17, 1989. [www.fema.gov](http://www.fema.gov). Last Accessed May 2014.
- Federal Highway Administration. 1990. Visual Impact Assessment for Highway Projects. FHWA – RE-90-007.
- Louisiana Department of Transportation and Development. 2011. Louisiana Department of Transportation and Development (LDOTD) Highway Traffic Noise Policy. July.
- Mead & Hunt. 2013. National Register Eligibility Determination Report. Pre-971 Louisiana Highway Bridges. Volume 1: Report and Appendices A—D. September.
- Regional Planning Commission. 2012. Transportation Improvement Program. St. Tammany Urbanized Areas. Fiscal Years 2012—2016. March.
- St. Tammany Economic Development Foundation. 2014. Parish Profile. [http://www.stedf.org/p\\_profile.htm](http://www.stedf.org/p_profile.htm). Last Accessed April 2014.
- U.S. Army Corps of Engineers. 1987. Wetland Delineation Manual.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Wetland Delineation Manual.
- U.S. Census Bureau. 2014. 2011 American Community Survey. <http://www.census.gov/acs/www/>. Last accessed June 2014.

## ENVIRONMENTAL ASSESSMENT

U.S. Department of Agriculture, Natural Resources Conservation Service. 2014. WebSoil Survey. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Last accessed May 2014.



# Appendix A

## Design Criteria, Typical Sections, and Plan & Profiles

- A-1 Design Criteria
- A-2 Typical Roadway and Bridge Sections
- A-3 Alternative Alignments

This Page Intentionally Left Blank



# Appendix A-1

## Design Criteria

This Page Intentionally Left Blank

## Appendix A-1. Minimum Design Guidelines for Suburban Collector Roads and Streets

Item No.	Description	LA 434
		LA36 to Junction with LA3241 SC-2
1	Design Speed (mph)	45
3	Number of Lanes (minimum)	2 - 4
4	Width of Travel Lanes (ft)	11
5	Width of Shoulders (ft)	
	(a) Inside on multilane facilities	N/A
	(b) Outside	4 - 5 <sup>4</sup>
6	Shoulder Type	Paved
7	Width of Parking Lanes (where used) (ft)	11
8	Width of median on multilane facilities (ft)	
	(a) Depressed	N/A
	(b) Raised	4 (min) – 30 (des)
	(c) Two-way Left Turn Lane	11 – 14 typ <sup>7</sup>
9	Width of Sidewalk (minimum) (where used) (ft)	
	(a) When offset from curb	4
	(b) When adjacent to curb	6
10	Fore Slope (vertical-horizontal)	1:4
11	Back slope (vertical-horizontal)	1:3
12	Pavement Cross Slope (%)	2.5
13	Minimum Stopping Sight Distance (ft)	360
14	Maximum Superelevation (%)	4
15	Minimum Radius (ft) <sup>11, 12</sup>	
	(a) With Normal Crown (-2.5% cross-slope)	1,000
	(b) With 2.5% Superelevation	750
	(c) With Full Superelevation	700
16	Maximum Grade (%)	6
17	Minimum Vertical Clearance (ft) <sup>13</sup>	15
18	Minimum Clear Zone (ft)	
	(a) From edge of through travel lane	10
	(b) Outside from back of curb (when curb is used)	6 (min) – 8 (des)
	(c) Median from back of curb (when curb is used)	1 (min) – 8 (des)
19	Bridge Design Live Load <sup>16</sup>	AASHTO
20	Minimum Width of Bridges (face to face of bridge rail at gutter line)	
	(a) Curbed facilities (without sidewalks)	Traveled way <sup>17</sup> plus 8'
	(b) Shoulder facilities	Roadway width
21	Guardrail Required at Bridge Ends	Note <sup>17</sup>

### Footnotes for Minimum Design Guidelines for Urban and Suburban Collector Roads and Streets

1. These guidelines may be used only on a rural roadway section that adjoins a roadway section currently classified as urban. The classification selected should be based on the posted speed.
2. For ADT less than 2,000 refer to Exhibit 6-5 on page 425 in the '2004 AASHTO Policy on Geometric Design of Highways and Streets'.
3. Applicable to depressed medians only.
4. Curb may be used instead of shoulder. Where bicycle activity is observed, a bike lane should be considered.
5. If curb will not be used, shoulder widths may be reduced, see Footnote 2. When curb is used on mainline facilities, it shall be placed at the edge of shoulder. When curb is used on 2-lane facilities, 8 foot shoulders will be required if a future center turn lane will be added. Curb will not be placed in front of guardrail.

6. Seven and 8-foot widths are limited to residential areas for 30 and 40 mph respectively.
7. Cannot be used on multilane roadways (with four or more through lanes) without Chief Engineer's approval.
8. If shoulders are used, sidewalks should be separated from shoulder.
9. Where shoulders are used, 1:4 minimum fore slopes are required through the limits of minimum clear zone.
10. 1:2 back slopes are allowed where right of way restrictions dictate.
11. It may be necessary to increase the radius of the curve and/or increase the shoulder width (maximum of 12 feet) to provide adequate stopping sight distance on structure.
12. Different radii apply at divisional islands. See Footnote 7 for "Minimum Design Guidelines for Urban Arterial Roads and Streets".
13. Where the roadway dips to pass under a structure, a higher vertical clearance may be necessary. An additional 6 inches should be added for additional future surfacing.
14. The higher value is applicable to roadways with an ADT greater than 6,000.
15. These values apply to roadways with 8-foot shoulders. For outside shoulders less than 8 feet, further increase should be proportional to the reduced shoulder width.
16. LRFD for bridge design.
17. Refer to EDSM II.3.1.4 when sidewalks will be provided and for guardrail requirements.

General Note:

DOTD pavement preservation minimum design guidelines or 3R minimum design guidelines (separate sheets) shall be applicable to those projects for which the primary purpose is to improve the riding surface.



# Appendix A-2

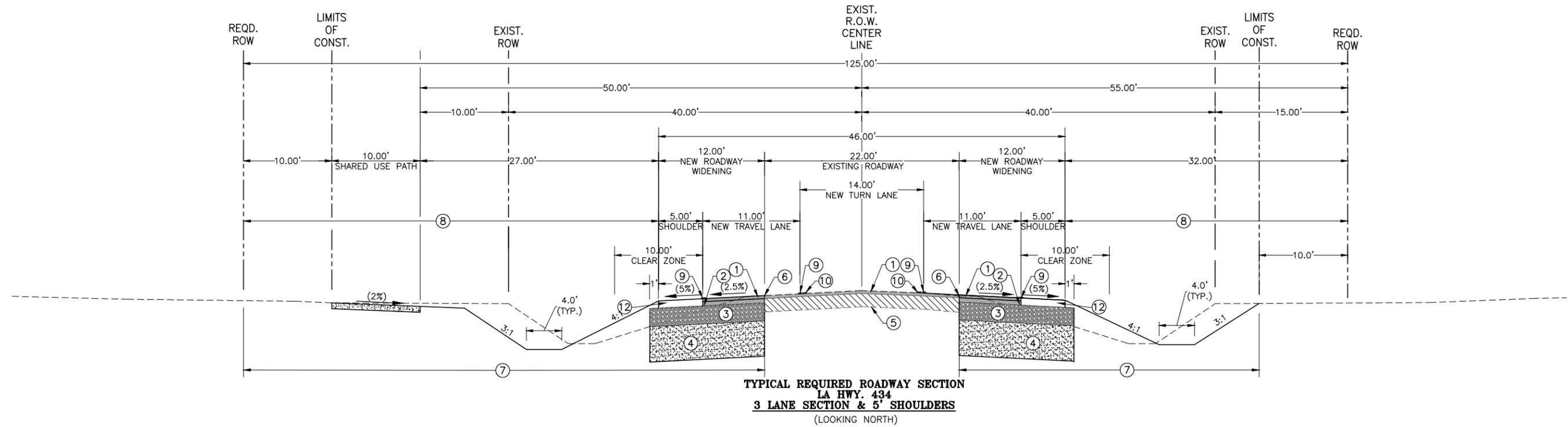
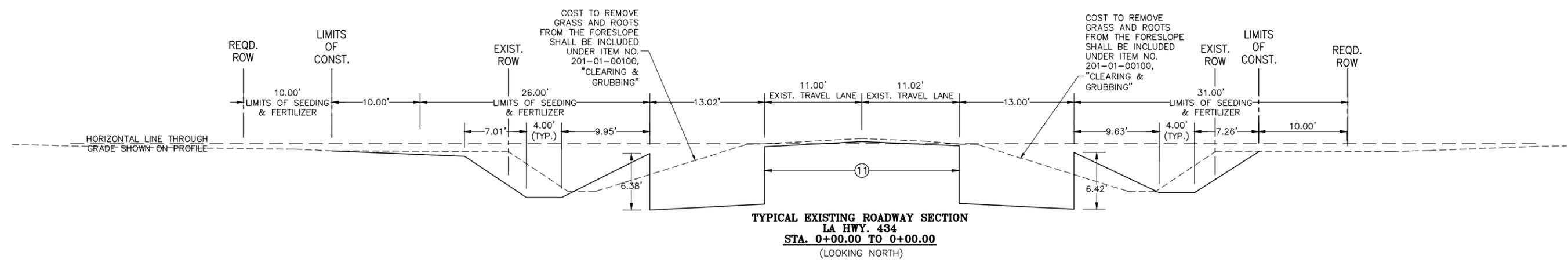
## Typical Roadway and Bridge Sections

This Page Intentionally Left Blank



This Page Intentionally Left Blank

SHEET NUMBER	2
ST. TAMMANY	H004981
PARISH	FEDERAL PROJECT
F/JZ	NOVEMBER 2014
RC/L	NOVEMBER 2014
LBW	NOVEMBER 2014
F/JZ	NOVEMBER 2014
DESIGNED	DATE
CHECKED	SHEET
DATE	BY
NO.	DATE
REVISION DESCRIPTION	



**FULL SCALE**  
 HOR.: 1" = 6'  
 VER.: 1" = 3'

**HALF SCALE**  
 HOR.: 1" = 12'  
 VER.: 1" = 6'

- LEGEND**
- ① SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (2" THICK)(LEVEL 2F)(ITEM 502-01-00100)
  - ② SUPERPAVE ASPHALTIC CONCRETE BINDER COURSE (3" THICK)(LEVEL 2)(ITEM 502-01-00100)
  - ③ CLASS II BASE COURSE (12" THICK)(ITEM 302-02-03000)
  - ④ REQUIRED GRANULAR SUBGRADE LAYER (24" MIN.)(ITEM 305-01-04000)
  - ⑤ EXIST. ASPHALT PAVEMENT TO REMAIN (VARIABLE THICKNESS)
  - ⑥ REQUIRED PROFILE GRADELINE AS SHOWN ON PROFILE
  - ⑦ GENERAL EXCAVATION (ITEM 203-01-00100) EMBANKMENT (ITEM 203-03-00100)
  - ⑧ LIMITS OF HYDRO-SEEDING (ITEM 739-01-00100)
  - ⑨ REQUIRED PAVEMENT STRIPING
  - ⑩ REQUIRED PAVEMENT STRIPING & REFLECTORIZED MARKERS
  - ⑪ EXIST. ASPHALT TO BE COLD PLANED TO 2" (±)(ITEM 202-02-38500)
  - ⑫ SUPERPAVE ASPHALTIC CONCRETE SHOULDER COURSE (6" THICK)(LEVEL A)(ITEM 502-01-00200)

**PRELIMINARY AND SUBJECT TO CHANGE**  
 11/7/14  
**FRANZ J. ZEMMER, P.E.**  
 La. License No. 28232

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

**SUBURBAN COLLECTOR 2**  
 (SC-2)

REQ'D/EXISTING ROADWAY SECTION  
 ALTERNATIVE 2 - 3 LANE SECTION  
 & 5' SHOULDERS  
 LA HWY. 434

This Page Intentionally Left Blank



This Page Intentionally Left Blank



This Page Intentionally Left Blank



This Page Intentionally Left Blank



# Appendix A-3

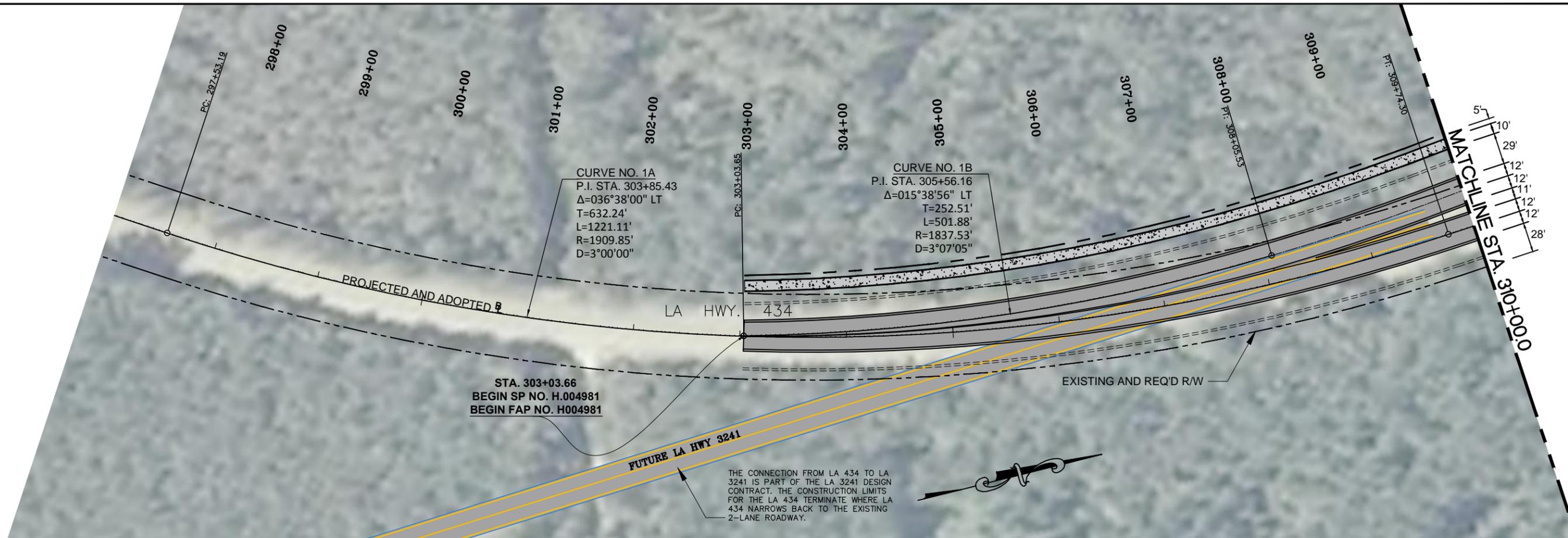
## Alternative Alignments

This Page Intentionally Left Blank



# Alternative 1

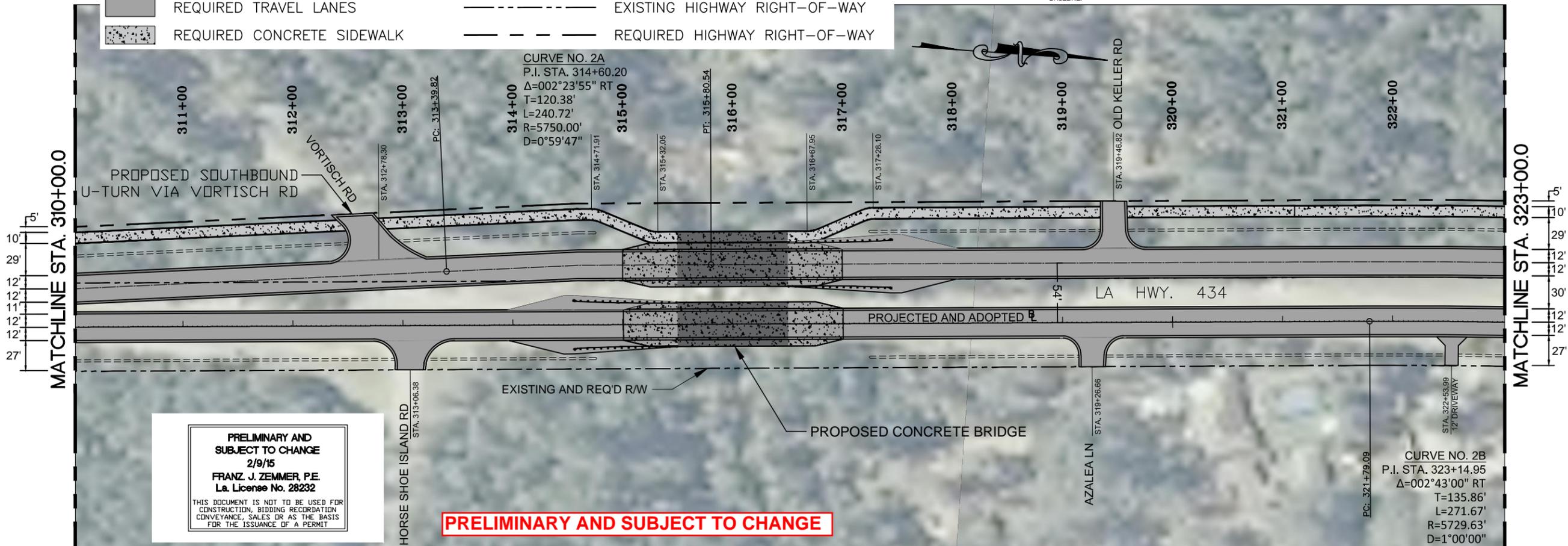
This Page Intentionally Left Blank



- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**NOTE**  
 ALL ROADWAY STATIONS ARE BASED OFF OF THE EXISTING/NORTHBOUND PROJECTED AND ADOPTED BASELINE.



**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ J. ZEMMER, P.E.  
 La. License No. 28232

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

**PRELIMINARY AND SUBJECT TO CHANGE**

DESIGNED	FJZ	ST. TAMMANY
CHECKED	RCL	PARISH
DETAILED	LBW	FEDERAL PROJECT
CHECKED	FJZ	STATE PROJECT
DATE	DECEMBER 2014	NO.
SHEET		BY

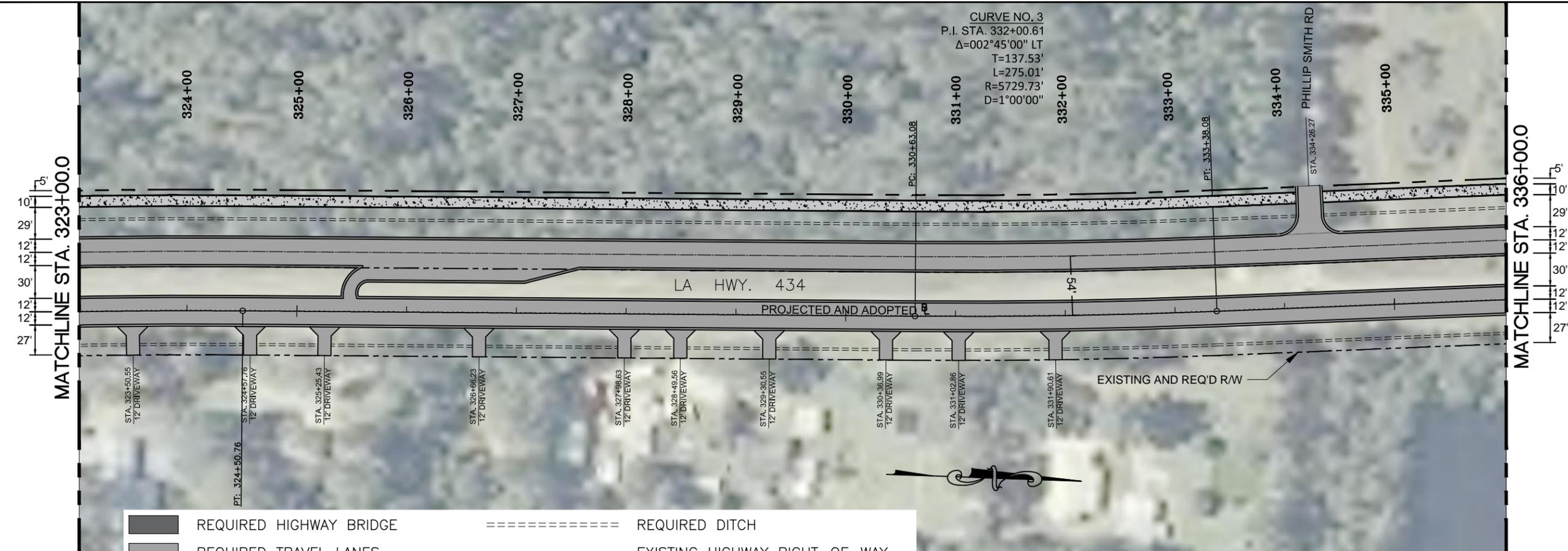
SHEET NUMBER	6
PROJECT	H.004981
STATE PROJECT	H.004981

PLAN VIEW  
 ALTERNATIVE 1  
 4 LANE SECTION  
 LA HWY. 434

This Page Intentionally Left Blank

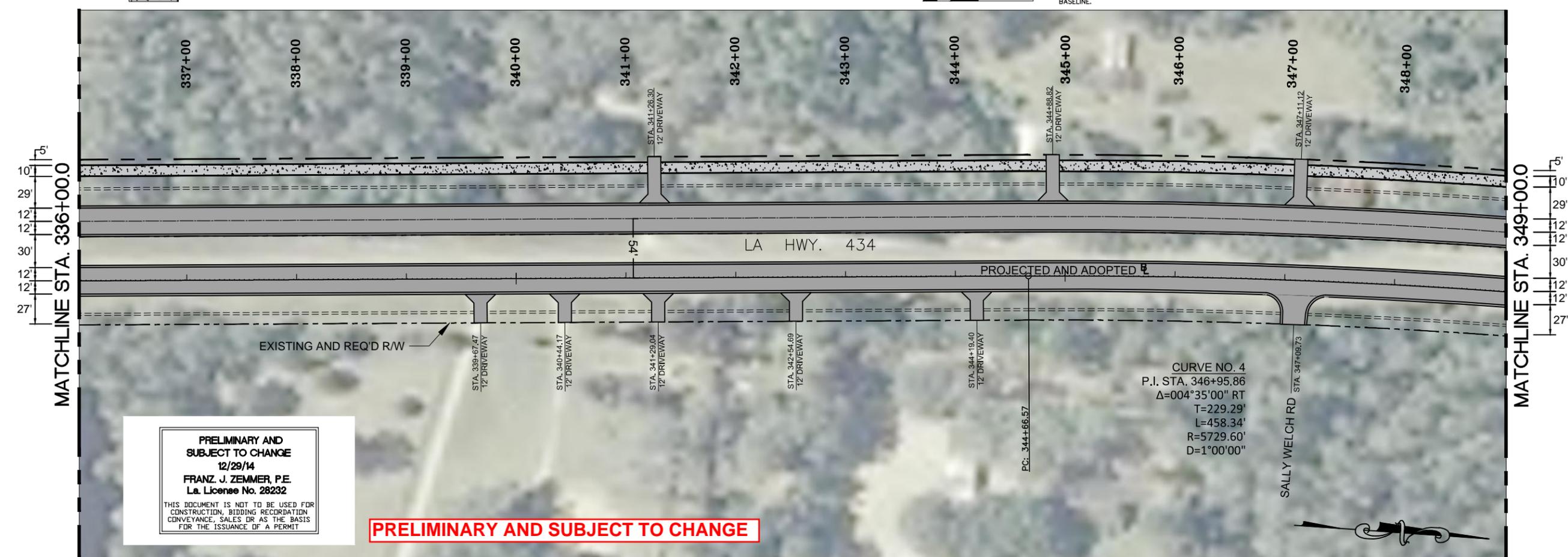
C:\CAD\1405 Hwy 434\WORKING DRAWINGS\Plan\_434 - 4 Lanes.dwg



- REQUIRED HIGHWAY BRIDGE
- REQUIRED DITCH
- REQUIRED TRAVEL LANES
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED CONCRETE SIDEWALK
- REQUIRED HIGHWAY RIGHT-OF-WAY

0      50'      100'

NOTE  
ALL ROADWAY STATIONS ARE BASED OFF OF THE EXISTING/NORTHBOUND PROJECTED AND ADOPTED BASELINE.



**PRELIMINARY AND SUBJECT TO CHANGE**  
12/29/14  
FRANZ J. ZEMMER, P.E.  
La. License No. 28232

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

**PRELIMINARY AND SUBJECT TO CHANGE**

	S. TAMMANY	PARISH	ST. TAMMANY	SHEET NUMBER	7
DESIGNED	CHECKED	F.U.Z.	R.C.L.	FEDERAL PROJECT	H004981
DETAILED	CHECKED	L.B.W.	F.U.Z.	STATE PROJECT	H.004981
DATE	SHEET	DATE	BY	NO.	DATE
DECEMBER 2014	7	DECEMBER 2014	BY	NO.	DATE
REVISION DESCRIPTION					
<b>PLAN VIEW  ALTERNATIVE 1  4 LANE SECTION</b> LA HWY. 434					

This Page Intentionally Left Blank



This Page Intentionally Left Blank

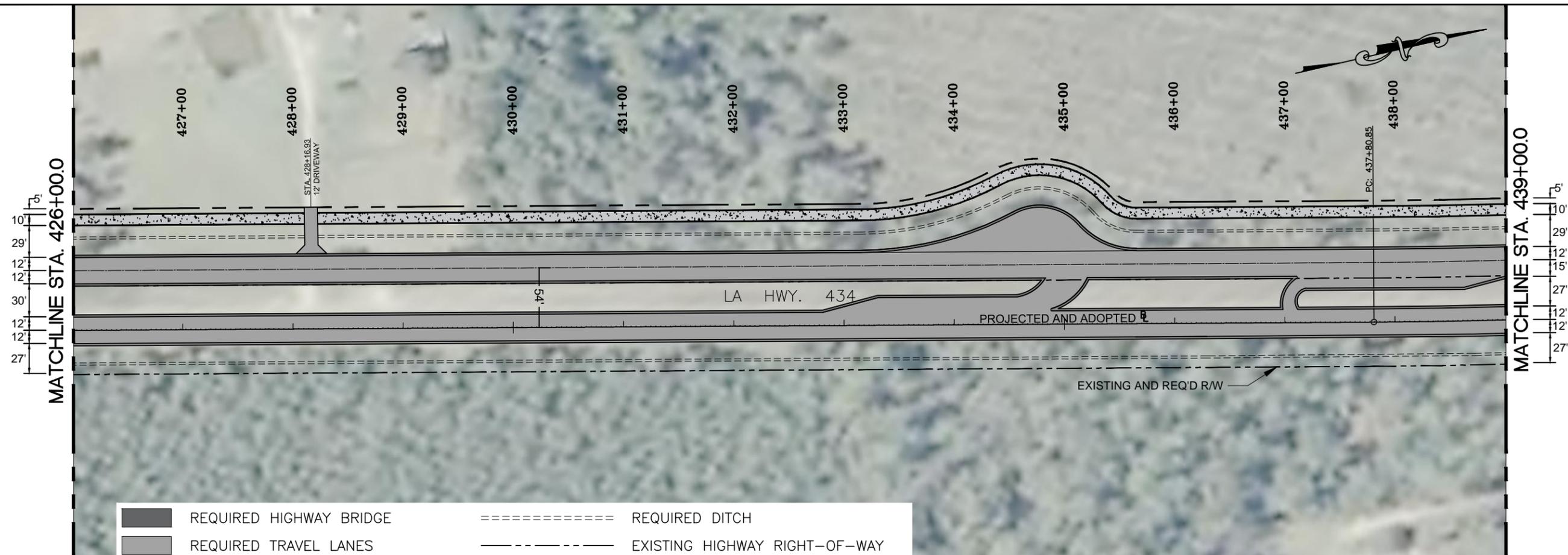


This Page Intentionally Left Blank

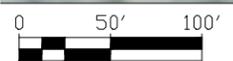


This Page Intentionally Left Blank

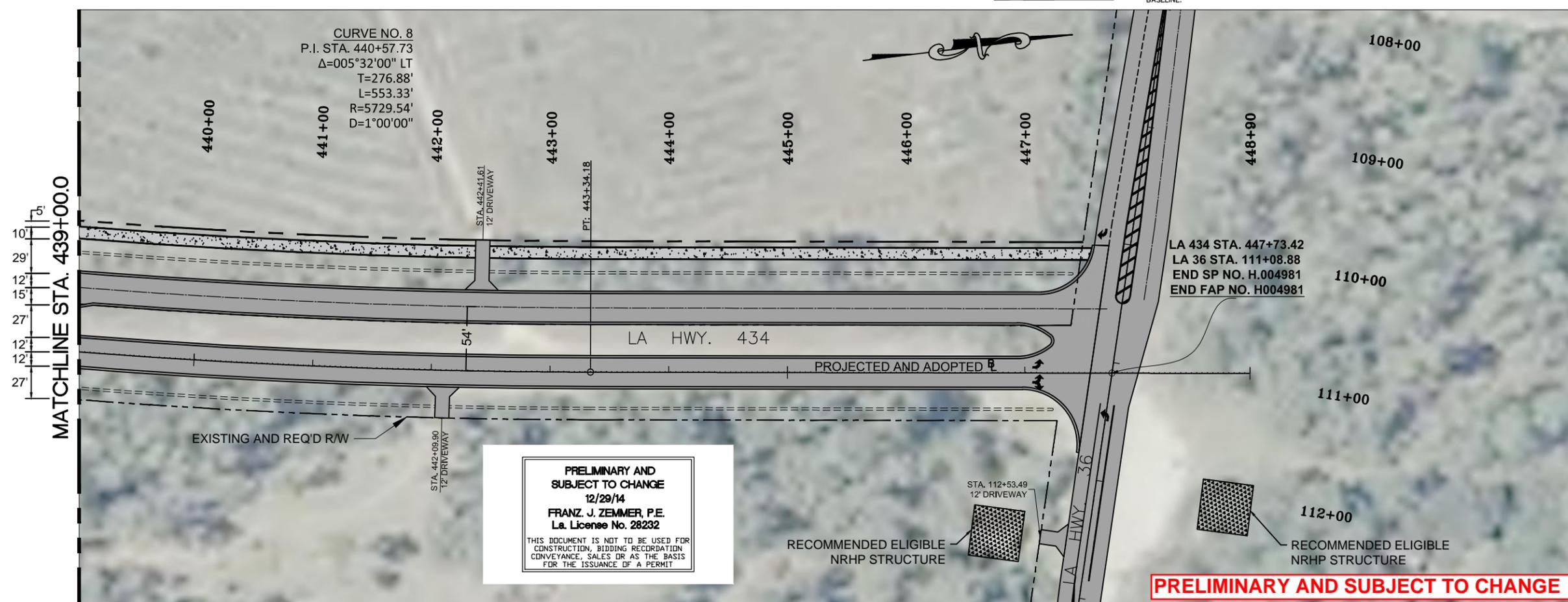
C:\CAD\1405 Hwy 434\WORKING DRAWINGS\Wdr\_434 - 4 Lanes.dwg



- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**NOTE**  
ALL ROADWAY STATIONS ARE BASED OFF OF THE EXISTING/NORTHBOUND PROJECTED AND ADOPTED BASELINE.

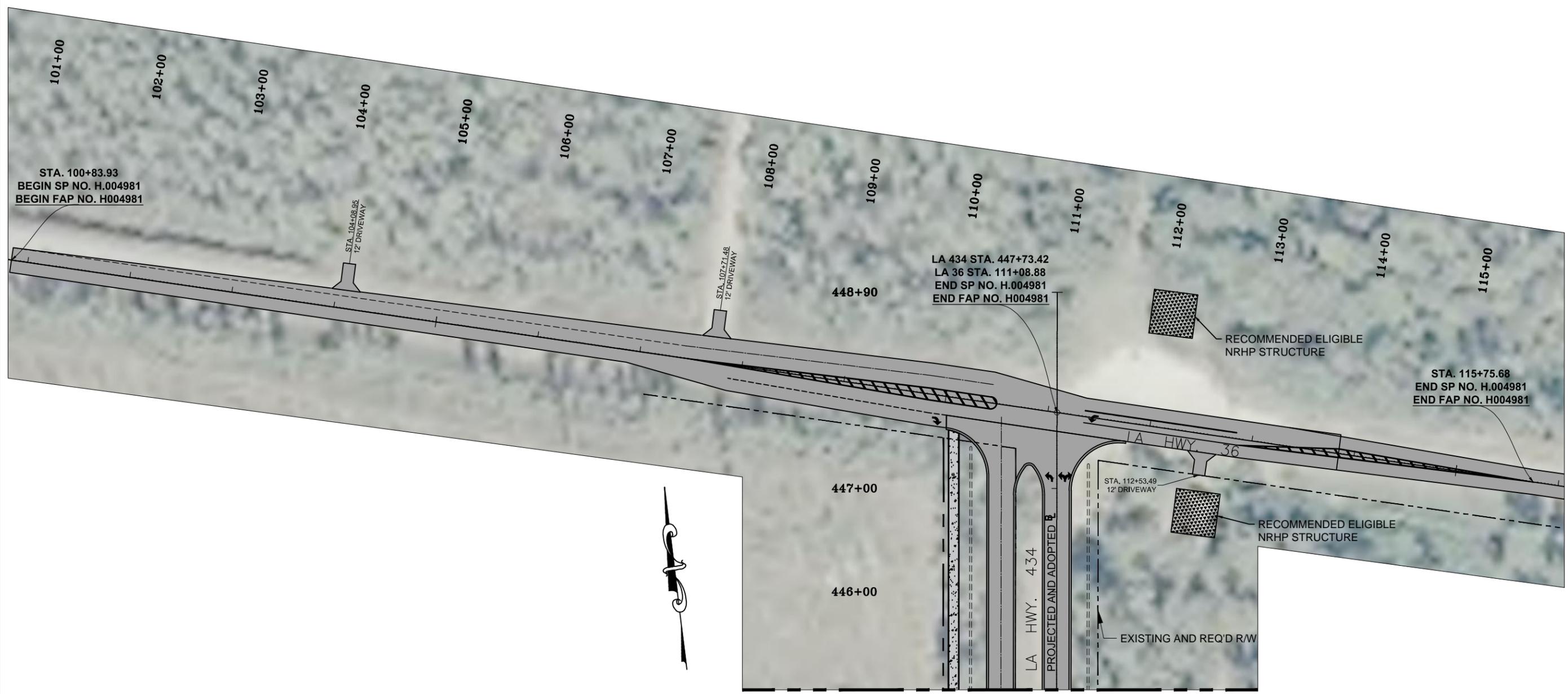


**PRELIMINARY AND  
SUBJECT TO CHANGE**  
12/29/14  
**FRANZ, J. ZEMMER, P.E.**  
La. License No. 28232

THIS DOCUMENT IS NOT TO BE USED FOR  
CONSTRUCTION, BIDDING RECORDATION  
CONVEYANCE, SALES OR AS THE BASIS  
FOR THE ISSUANCE OF A PERMIT

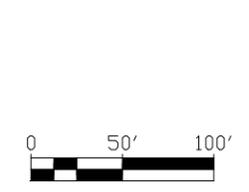
SHEET NUMBER	11
DESIGNED	ST. TAMMANY
CHECKED	PARISH
FJZ	RCL
RCL	FEDERAL PROJECT
LAW	H004981
FJZ	STATE PROJECT
DATE	H.004981
DECEMBER 2014	PROJECT
SHEET	BY
NO.	DATE
REVISION DESCRIPTION	BY
<b>PLAN VIEW ALTERNATIVE 1 4 LANE SECTION</b> LA HWY. 434	
<b>PRELIMINARY AND SUBJECT TO CHANGE</b>	

This Page Intentionally Left Blank



REQUIRED HIGHWAY BRIDGE  
 REQUIRED TRAVEL LANES  
 REQUIRED CONCRETE SIDEWALK

REQUIRED DITCH  
 EXISTING HIGHWAY RIGHT-OF-WAY  
 REQUIRED HIGHWAY RIGHT-OF-WAY



MATCHLINE STA. 445+00.0



NOTE  
 ALL ROADWAY STATIONS ARE BASED OFF OF THE EXISTING/NORTHBOUND PROJECTED AND ADOPTED BASELINE.

PRELIMINARY AND SUBJECT TO CHANGE  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
 THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

**PRELIMINARY AND SUBJECT TO CHANGE**



PLAN VIEW  
 ALTERNATIVE 1  
 4 LANE SECTION  
 LA HWY. 434



This Page Intentionally Left Blank

DESIGNED	FIZ	PARISH	ST. TAMMANY
CHECKED	RCL	FEDERAL PROJECT	H004981
DATE	NOVEMBER 2014	STATE PROJECT	H.004981
CHECKED	LEW		
NO. DATE			
BY			



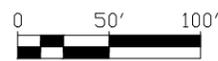
PLAN VIEW  
ALTERNATIVE 1  
ROUNDABOUT OPTION AT LA 36  
LA HWY. 434



**PRELIMINARY AND SUBJECT TO CHANGE**

CURVE TABLE				
Curve #	LENGTH	RADIUS	Δ	TANGENT
1	352.38'	800.00'	025°14'15"	179.10'
2	348.99'	800.00'	024°59'41"	177.32'
3	281.73'	800.00'	020°10'40"	142.34'
4	201.77'	1000.00'	011°33'38"	101.23'
5	108.78'	100.00'	062°19'32"	60.47'
6	110.12'	100.00'	063°05'48"	61.40'
7	106.41'	100.00'	060°57'57"	58.86'
8	103.04'	300.00'	019°40'48"	52.03'
9	85.06'	300.00'	016°14'40"	42.81'
10	271.44'	500.00'	031°06'19"	139.16'
11	224.22'	500.00'	025°41'36"	114.03'
12	81.04'	100.00'	046°26'07"	42.90'
13	81.04'	100.00'	046°26'07"	42.90'
14	81.04'	100.00'	046°26'07"	42.90'
15	81.04'	100.00'	046°26'07"	42.90'
16	136.15'	400.00'	019°30'09"	68.74'
17	141.33'	413.63'	019°34'37"	71.36'
18	78.73'	100.00'	045°06'34"	41.53'
19	78.04'	100.00'	044°42'41"	41.13'
20	75.81'	100.00'	043°26'03"	39.83'
21	75.18'	100.00'	043°04'20"	39.46'

- REQUIRED SPLITTER ISLAND/TRUCK ISLAND
- REQUIRED TRAVEL LANES
- REQUIRED SIDEWALK
- REQUIRED CENTER GRASS ISLAND
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
12/17/14  
FRANZ J. ZEMMER, P.E.  
La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING RECORDATION CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

I:\CAD\71408 Hwy 434\WORKING DRAWINGS\Hwy 434 - 4 Lema RB.dwg

This Page Intentionally Left Blank

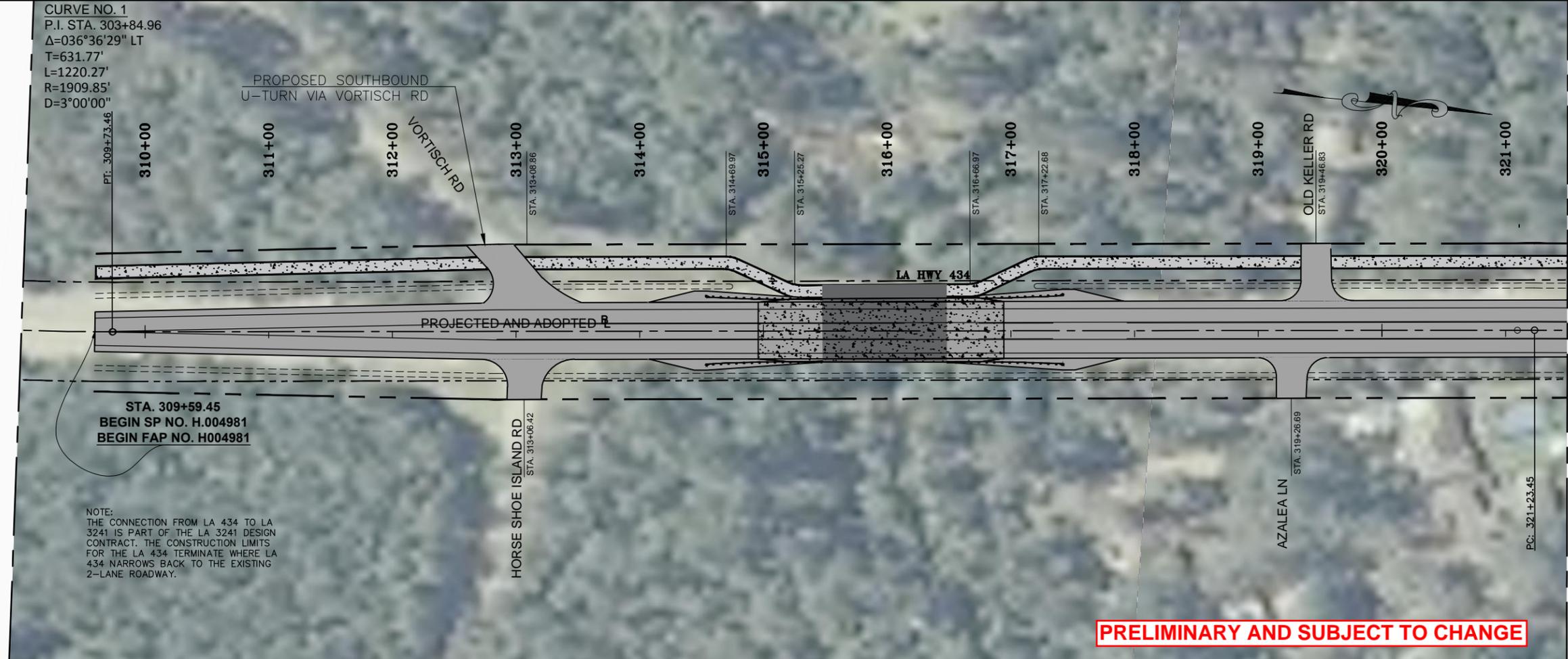


# Alternative 2

This Page Intentionally Left Blank

CURVE NO. 1  
 P.I. STA. 303+84.96  
 $\Delta=036^{\circ}36'29''$  LT  
 $T=631.77'$   
 $L=1220.27'$   
 $R=1909.85'$   
 $D=3^{\circ}00'00''$

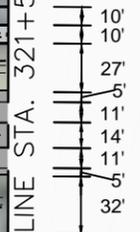
PROPOSED SOUTHBOUND  
 U-TURN VIA VORTISCH RD



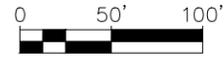
STA. 309+59.45  
 BEGIN SP NO. H.004981  
 BEGIN FAP NO. H004981

NOTE:  
 THE CONNECTION FROM LA 434 TO LA 3241 IS PART OF THE LA 3241 DESIGN CONTRACT. THE CONSTRUCTION LIMITS FOR THE LA 434 TERMINATE WHERE LA 434 NARROWS BACK TO THE EXISTING 2-LANE ROADWAY.

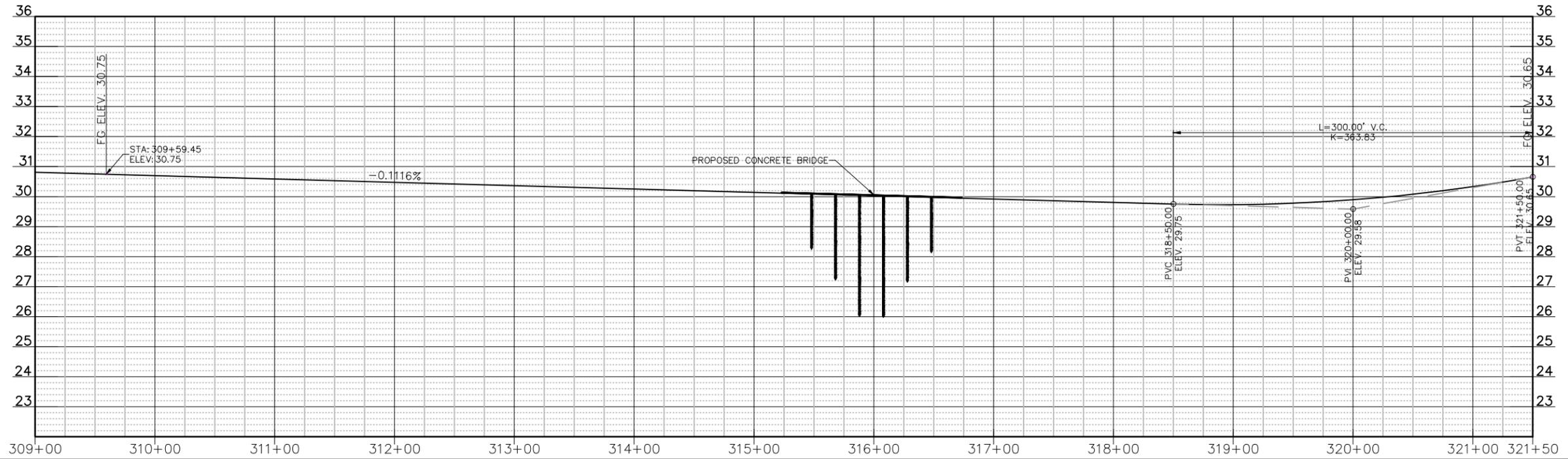
**PRELIMINARY AND SUBJECT TO CHANGE**



- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
 THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



SHEET NUMBER		13	
DESIGNED	FIZ	PARISH	ST. TAMMANY
CHECKED	RCL	FEDERAL PROJECT	H004981
DATE	DECEMBER 2014	STATE PROJECT	H.004981
NO.	DATE	BY	REVISION DESCRIPTION

PLAN AND PROFILE  
 ALTERNATIVE 2  
 3 LANE SECTION  
 LA HWY. 434

This Page Intentionally Left Blank

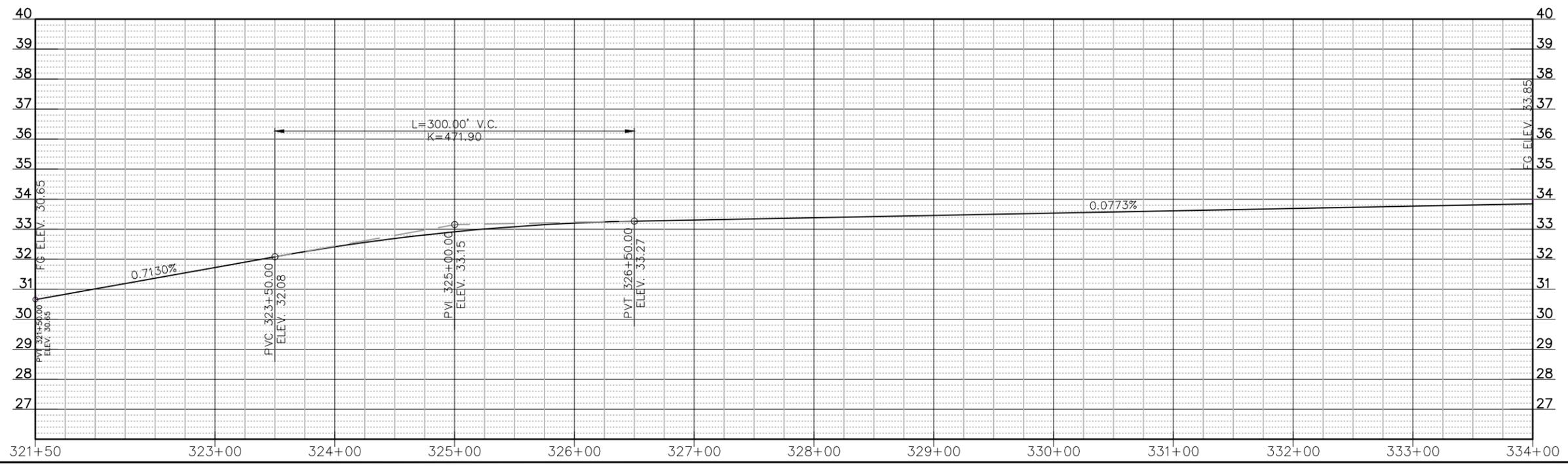
SHEET NUMBER	14
DESIGNED	ST. TAMMANY
CHECKED	PARISH
DATE	FEDERAL PROJECT
NO.	STATE PROJECT
DATE	H004981
BY	H.004981



**PRELIMINARY AND SUBJECT TO CHANGE**

- REQUIRED HIGHWAY BRIDGE
- REQUIRED DITCH
- REQUIRED TRAVEL LANES
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED CONCRETE SIDEWALK
- REQUIRED HIGHWAY RIGHT-OF-WAY

**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECRUITMENT, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



PLAN AND PROFILE  
 ALTERNATIVE 2  
 3 LANE SECTION  
 LA HWY. 434

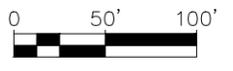
This Page Intentionally Left Blank

SHEET NUMBER	15
DESIGNED	FIZ
CHECKED	RCL
DETAILED	LEW
CHECKED	FIZ
DATE	DECEMBER 2014
SHEET	
NO.	DATE
BY	REVISION DESCRIPTION
ST. TAMMANY	PARISH
H004981	FEDERAL PROJECT
H.004981	STATE PROJECT

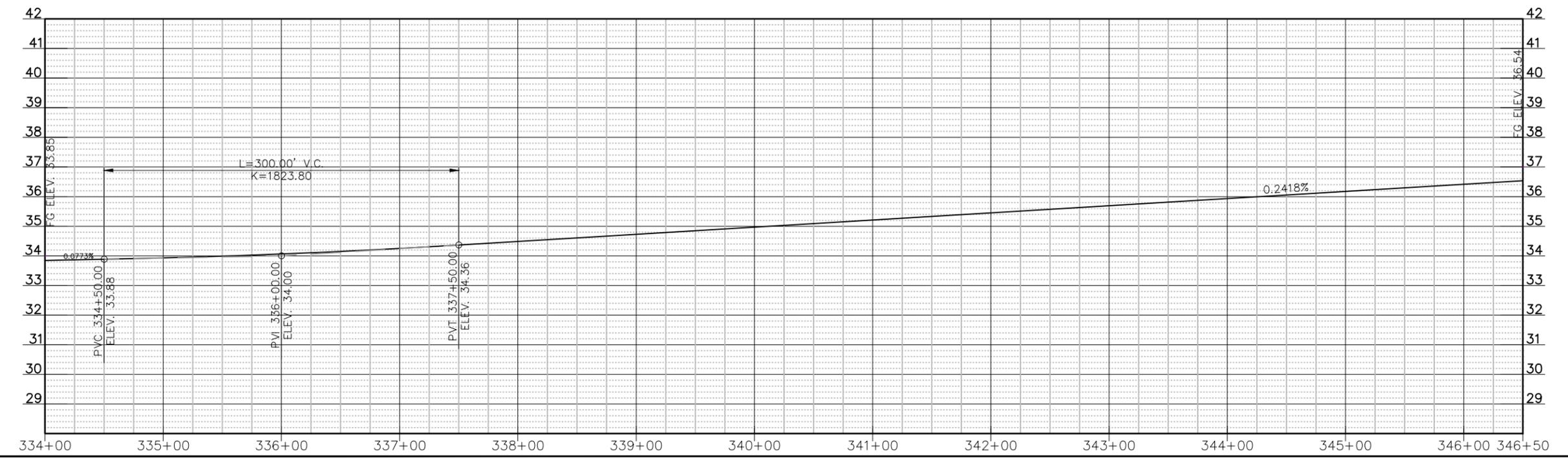


**PRELIMINARY AND SUBJECT TO CHANGE**

- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECREATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



PLAN AND PROFILE  
 ALTERNATIVE 2  
 3 LANE SECTION  
 LA HWY. 434



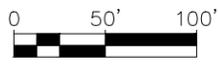
LA HWY. 434

This Page Intentionally Left Blank

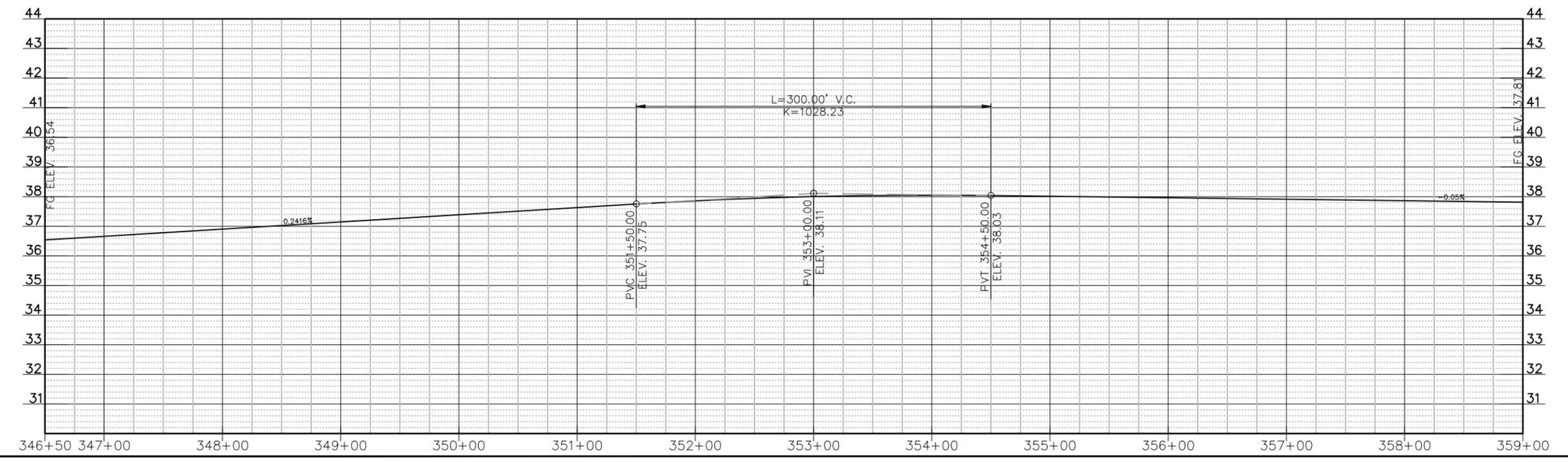


**PRELIMINARY AND SUBJECT TO CHANGE**

- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



PLAN AND PROFILE  
 ALTERNATIVE 2  
 3 LANE SECTION  
 LA HWY. 434



This Page Intentionally Left Blank

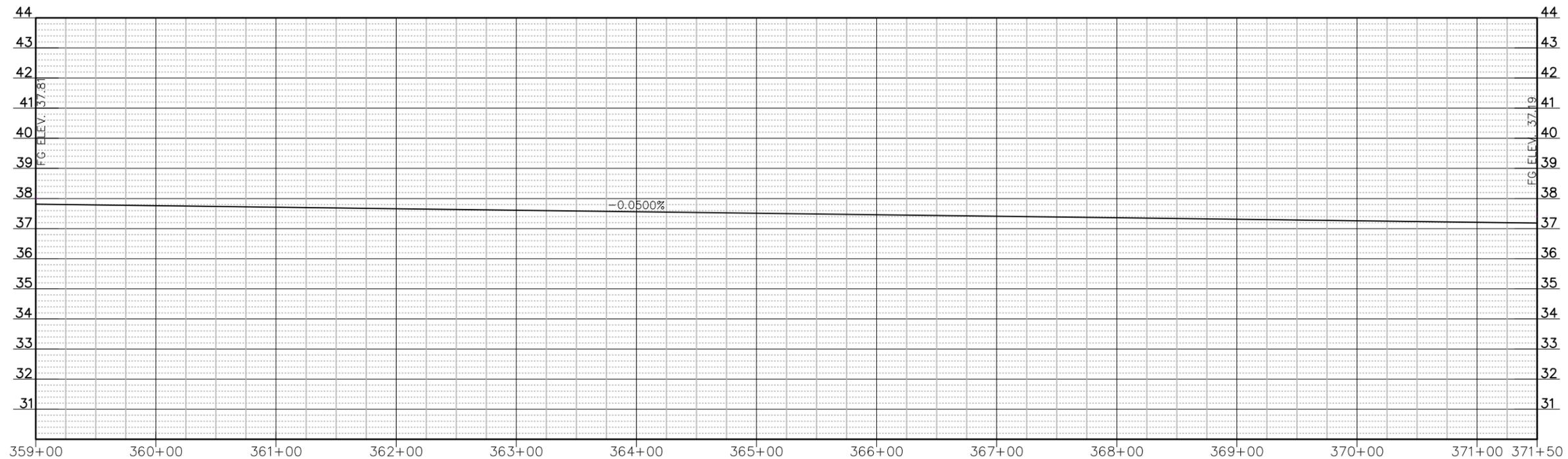


- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232

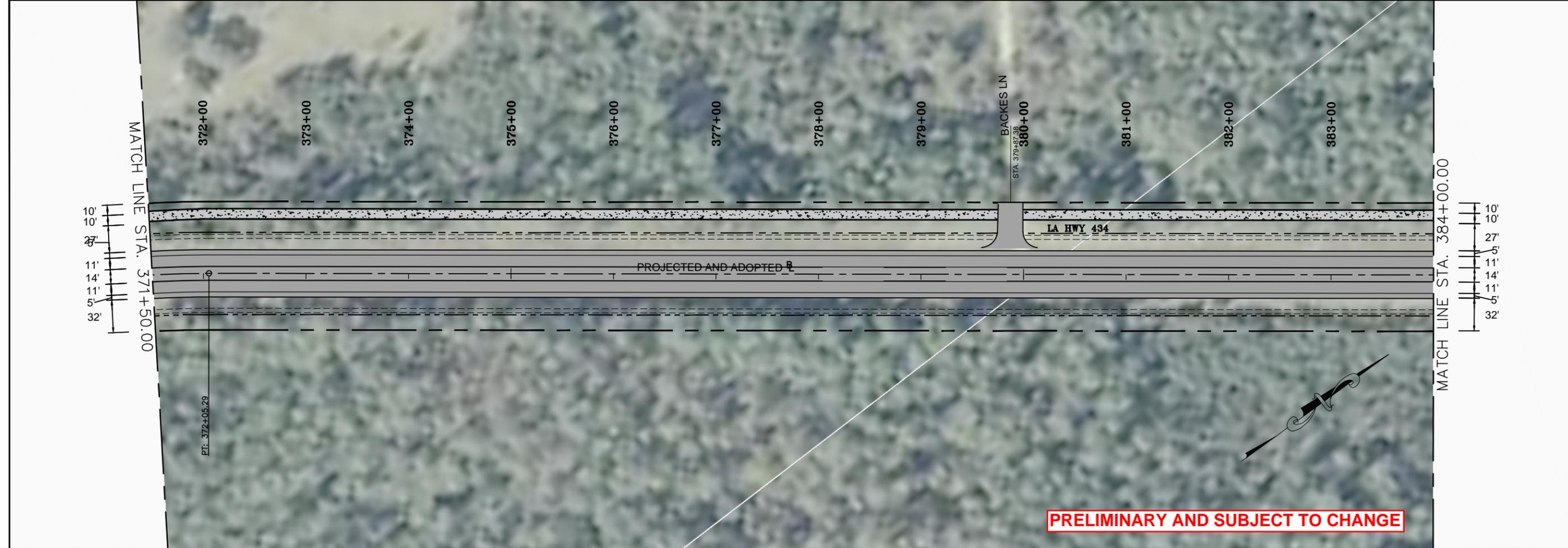
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



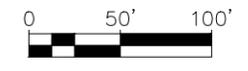
SHEET NUMBER	17	ST. TAMMANY	PARISH	FEDERAL PROJECT	STATE PROJECT
DESIGNED	BY	ST. TAMMANY	H004981	H.004981	
CHECKED	DATE	DECEMBER 2014			
REVISION DESCRIPTION					

**PLAN AND PROFILE**  
 ALTERNATIVE 2  
 3 LANE SECTION  
 LA HWY. 434

This Page Intentionally Left Blank

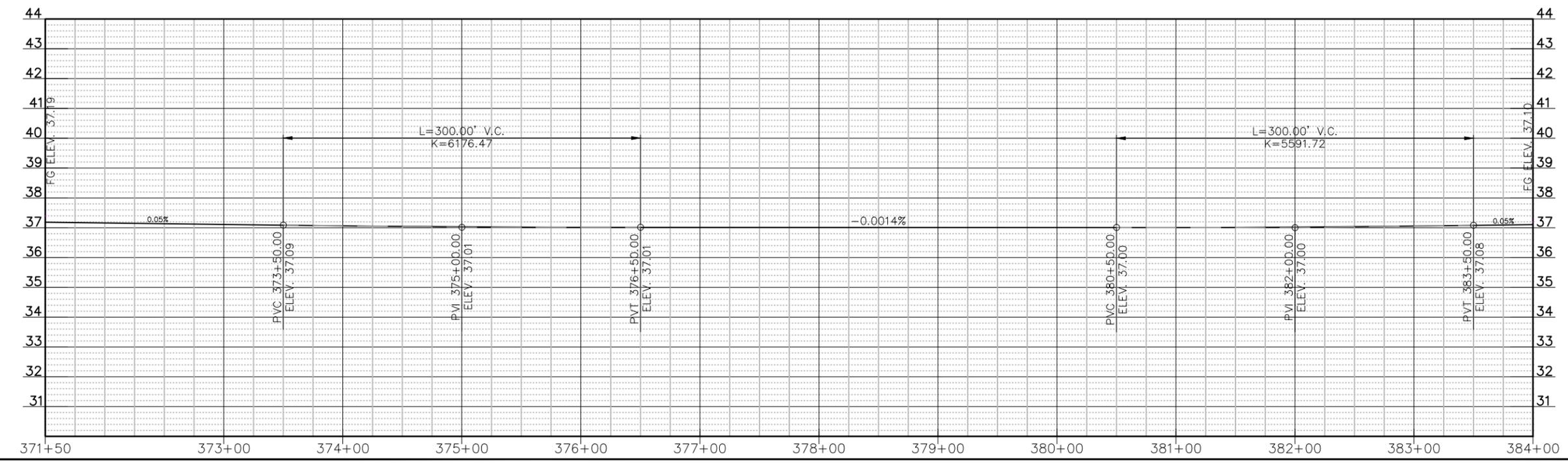


- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY

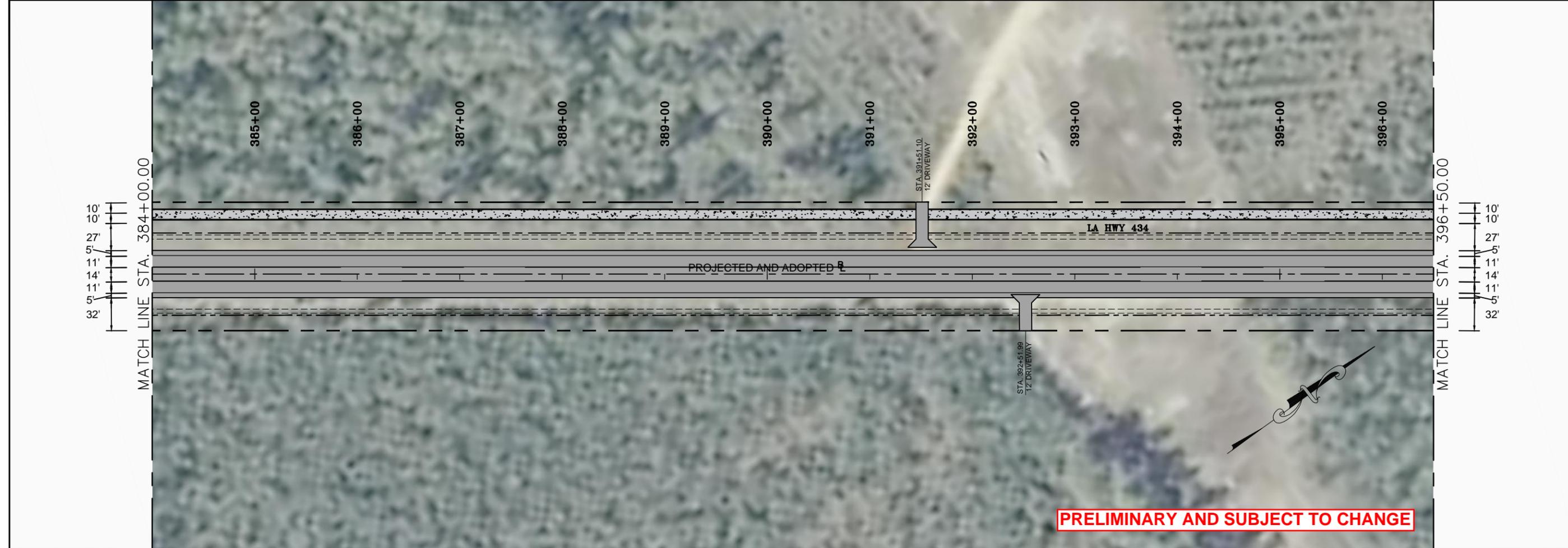


**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

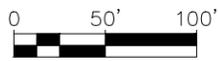


This Page Intentionally Left Blank

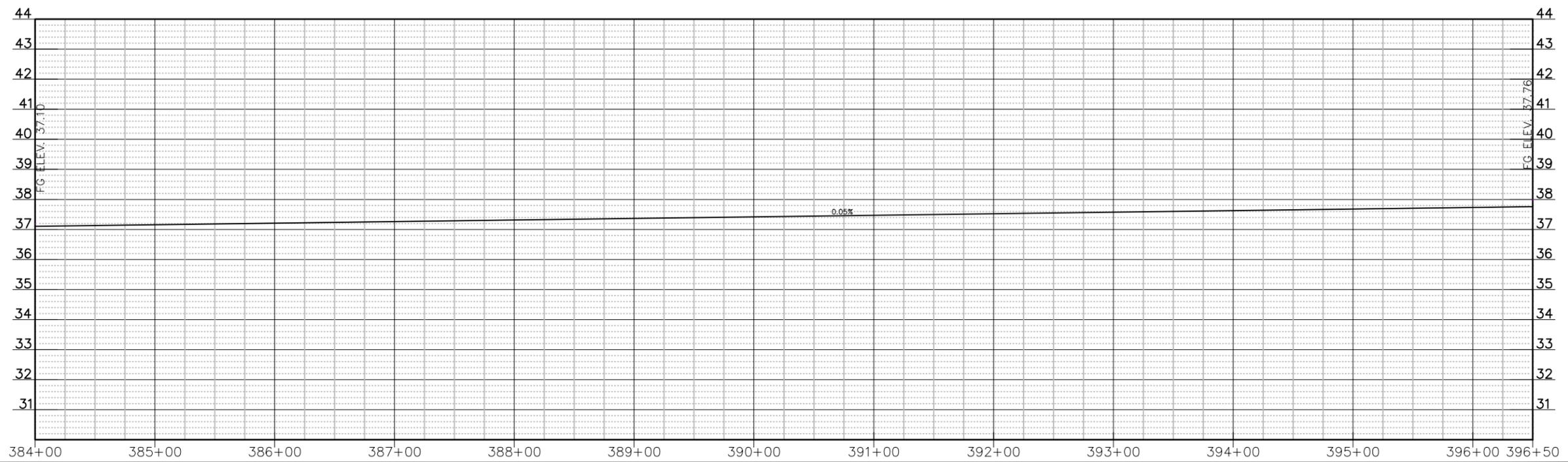


**PRELIMINARY AND SUBJECT TO CHANGE**

- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
2/9/15  
FRANZ, J. ZEMMER, P.E.  
La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



PLAN AND PROFILE  
ALTERNATIVE 2  
3 LANE SECTION  
LA HWY. 434

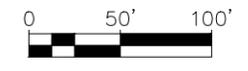


This Page Intentionally Left Blank

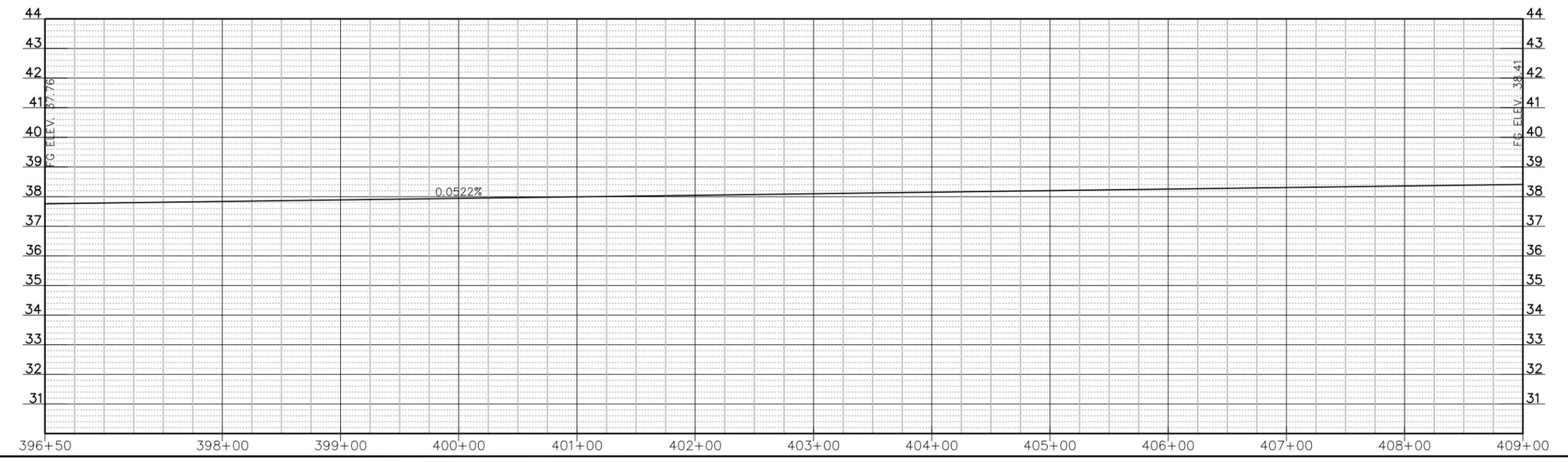
SHEET NUMBER	20
ST. TAMMANY	
PARISH	
FEDERAL PROJECT	H004981
STATE PROJECT	H.004981
DESIGNED	
CHECKED	
DATE	DECEMBER 2014
SHEET	
BY	
NO.	
DATE	
REVISION DESCRIPTION	



- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
**FRANZ, J. ZEMMER, P.E.**  
 La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



**PLAN AND PROFILE**  
**ALTERNATIVE 2**  
**3 LANE SECTION**  
 LA HWY. 434

This Page Intentionally Left Blank



This Page Intentionally Left Blank

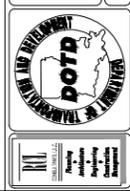


This Page Intentionally Left Blank

NO.	DATE	REVISION DESCRIPTION	BY



PLAN AND PROFILE  
 ALTERNATIVE 2  
 3 LANE SECTION  
 LA HWY. 434

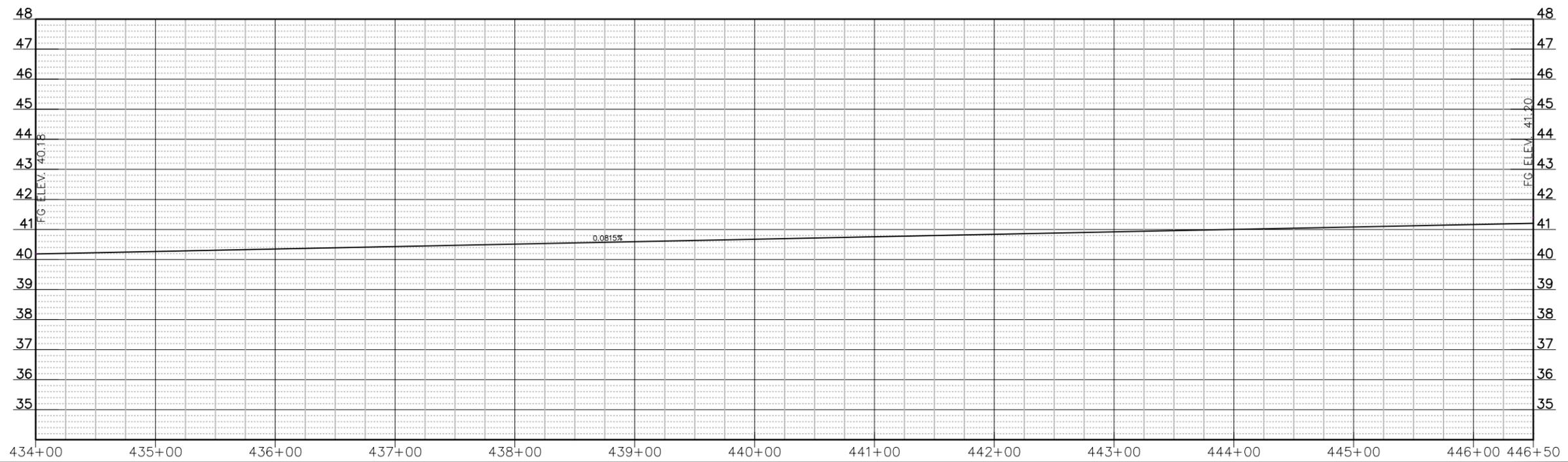


**PRELIMINARY AND SUBJECT TO CHANGE**

- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



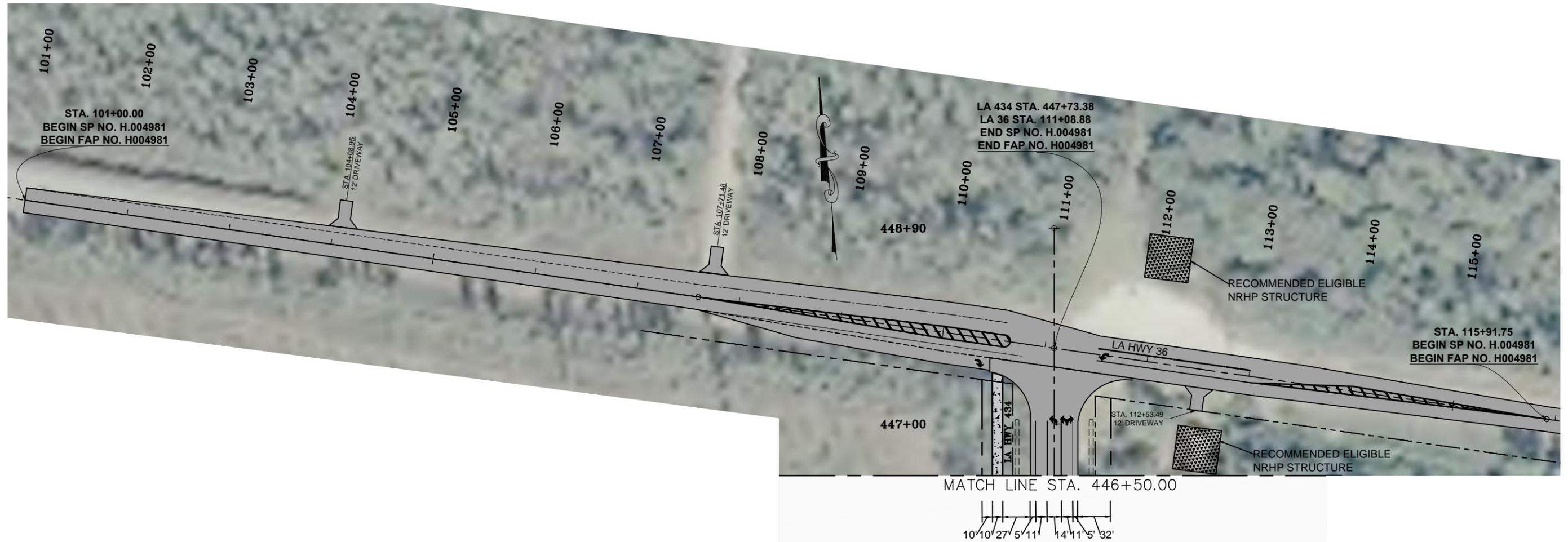
**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT



This Page Intentionally Left Blank



This Page Intentionally Left Blank



- REQUIRED HIGHWAY BRIDGE
- REQUIRED TRAVEL LANES
- REQUIRED CONCRETE SIDEWALK
- REQUIRED DITCH
- EXISTING HIGHWAY RIGHT-OF-WAY
- REQUIRED HIGHWAY RIGHT-OF-WAY



**PRELIMINARY AND SUBJECT TO CHANGE**

**PRELIMINARY AND SUBJECT TO CHANGE**  
 2/9/15  
 FRANZ, J. ZEMMER, P.E.  
 La. License No. 28232  
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT

DESIGNED	FIZ	PARISH	ST. TAMMANY
CHECKED	RCL	FEDERAL PROJECT	H004981
DETAILED	LBW	STATE PROJECT	H.004981
CHECKED	FIZ	DATE	NOVEMBER 2014
NO.	DATE	BY	BY
REVISION DESCRIPTION			

**PLAN AND PROFILE**  
**ALTERNATIVE 2**  
**3 LANE SECTION**  
 LA HWY. 434

This Page Intentionally Left Blank



# Appendix B

## Agency Coordination

- B-1 Solicitation of Views and Responses
- B-2 Solicitation of Views - Tribes
- B-3 Section 106

This Page Intentionally Left Blank



# Appendix B-1

## Solicitation of Views and Responses

This Page Intentionally Left Blank



ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge  
Louisiana 70816  
Tel 225 292 1004  
Fax 225 218 9677  
www.arcadis-us.com

«Courtesy» «First» «M» «Last\_Name»  
«Title»  
«Org\_1»  
«Org\_2»  
«Address»  
«City», «State» «Zip»

Subject:  
Solicitation of Views and  
Initiation of Section 106 Consultation  
Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, Louisiana  
RPC Task LA434EA (H.004981)

INFRASTRUCTURE

Date:  
25 March 2014

Dear «Salutation»:

Contact:  
Beth Beam

Early in the planning process for a transportation facility, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the New Orleans Regional Planning Commission (NORPC), in cooperation with the Louisiana Department of Transportation and Development (LADOTD), in identifying possible adverse economic, social, or environmental effects from the project or other related concerns and reaching agreeable decisions while taking into account the interests of all parties.

Extension:  
215

Email:  
elizabeth.beam@  
arcadis-us.com

In addition to identifying any concerns or issues mentioned above, a consultation with you to address cultural and historic resource issues pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800) is requested. Earth Search, Inc., will be conducting the cultural resources survey for the proposed project. If you know of potential Section 106 concerns, or if you know of another interested party, please advise us accordingly. If you would like to request participation as a consulting party, please forward a written request using the contact information below.

Our ref:  
LA003230.0000.00001  
NORPC/3230.0/C/1a/lf

A project overview, including a project location map and Study Area map, is attached for your review. We ask that your agency or organization provide comments regarding this preliminary information. A Stage 0 Feasibility Study for this project was completed in May 2010. If you would like to review the Stage 0 Study in its entirety, please request a copy from Beth Beam by e-mail at elizabeth.beam@arcadis-us.com or by U.S. mail to Ms. Beth Beam, ARCADIS, 10352 Plaza Americana Drive, Baton Rouge, Louisiana 70816.

We would also like to advise you that a stakeholders/elected officials meeting is anticipated in late summer 2014 and will be held in St. Tammany Parish, Louisiana,

Imagine the result

followed by a public meeting on the same day. Notice of this public meeting will be published in a local newspaper. The Environmental Assessment will then be distributed for comments upon approval by the Federal Highway Administration and followed by a public hearing. Specific information regarding the meetings will be provided soon.

### **Closing**

On behalf of NORPC and LADOTD, ARCADIS U.S., Inc., requests that you review the attached information and furnish us with your views and comments by Tuesday, April 22, 2014. Replies should be sent to Beth Beam by e-mail or by U.S. mail at the addresses provided above. Please reference RPC Task LA434EA (H.004981) in your reply.

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in black ink that reads "Elizabeth Beam".

Elizabeth Beam, AICP  
Senior Planner/Scientist

Attachments



## Solicitation of Views and Initiation of Section 106 Consultation

Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, Louisiana  
RPC Task LA434EA (H.004981)

### PRELIMINARY PROJECT DESCRIPTION

---

The New Orleans Regional Planning Commission (NORPC), in cooperation with the Louisiana Department of Transportation and Development (LADOTD), proposes widening a portion of Louisiana Highway 434 (LA 434) from two lanes to four lanes from LA 36 to its junction with the proposed LA 3241, a distance of approximately 4.5 miles, and replacing the bridge over Bayou Lacombe in St. Tammany Parish. The proposed Logical Termini include LA 36 to the north and Station 3061 of the I-12 to Bush Alternative Q to the south. The project consists of providing all necessary services required to prepare an Environmental Assessment (EA), in accordance with the National Environmental Policy Act, as amended, and the Federal Highway Administration's (FHWA's) regulations and guidelines, and to complete a Line and Grade Study.

The proposed action is identified as a Tier II – On System – Funded Project for fiscal year 2015 – 2024 in the *Metropolitan Transportation Plan, St. Tammany Urbanized Areas, Fiscal Years 2011 – 2040* (November 2010) and is included as a financially constrained priority project in the *Transportation Improvement Plan, St. Tammany Urbanized Areas, Fiscal Years 2012 – 2016* (March 2012). The project was administratively amended on August 15, 2014, pertaining to project limits.

The Study Area is located north of Interstate 12 (I-12), east of Watts Road (LA 41), west of LA 1088, and south of LA 36 in St. Tammany Parish, Louisiana. The Study Area is approximately 300 feet wide and extends south along LA 434 from LA 36 to the proposed junction of LA 434 and LA 3241. A location map that illustrates the Study Area is attached (Figure 1). The proposed I-12 to Bush Highway is an LADOTD-planned project funded by the Transportation Infrastructure Model for Economic Development (TIMED) program (Louisiana Revised Statute 48:820.2). The stated mission of the TIMED program is to “foster economic development throughout the state of Louisiana and enhance the quality of life for its residents through an investment in transportation projects.” The TIMED program, approved by the 1989 General Session of the Louisiana State Legislature, includes the construction of LA 3241, a multi-lane (four or more lanes) highway [Revised Statute 47:820.2.B(1)(e)], between Bush, Louisiana, and I-12 in St. Tammany Parish.

A Record of Decision (ROD) was issued in June 2012 that environmentally approved Alternative Q as the Selected Alternative from the I-12 to Bush Environmental Impact Statement (EIS). The LA 3241 alignment is a limited access corridor that connects with LA 434 approximately 1.3 miles north of I-12. The junction of LA 434 and LA 3241 is identified on the preliminary line and grade plans prepared as part of the I-12 to Bush EIS (August 2011) for Alternative Q. The intersecting point is identified as Station 3061. Subsequent to the ROD, it was determined that two constructed developments, the St. Tammany Parish Coroner's office and the South Central Park and Ride, along with an approximate



900-acre planned unit development, were located within the path of Alternative Q. LADOTD has realigned the portion of Alternative Q that connects with LA 434 to avoid these improvements. The realigned Alternative Q has not yet been environmentally cleared. Alternative Q of the realigned portion of LA 3241 and the Study Area for the LA 434 project are identified on Figure 2 (attached). The project team for LA 434 will coordinate with the design team for LA 3241 in order to fully develop the preliminary line and grade for the LA 434 improvements.

The EA will investigate the potential for effects to social, economic, and environmental resources including, but not limited to, cultural resources, threatened and endangered species, scenic rivers, natural resources, and the human environment within the Study Area. The proposed project will improve existing roadway infrastructure, require additional right-of-way, and may require relocations.

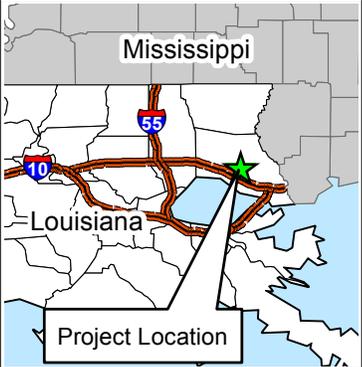
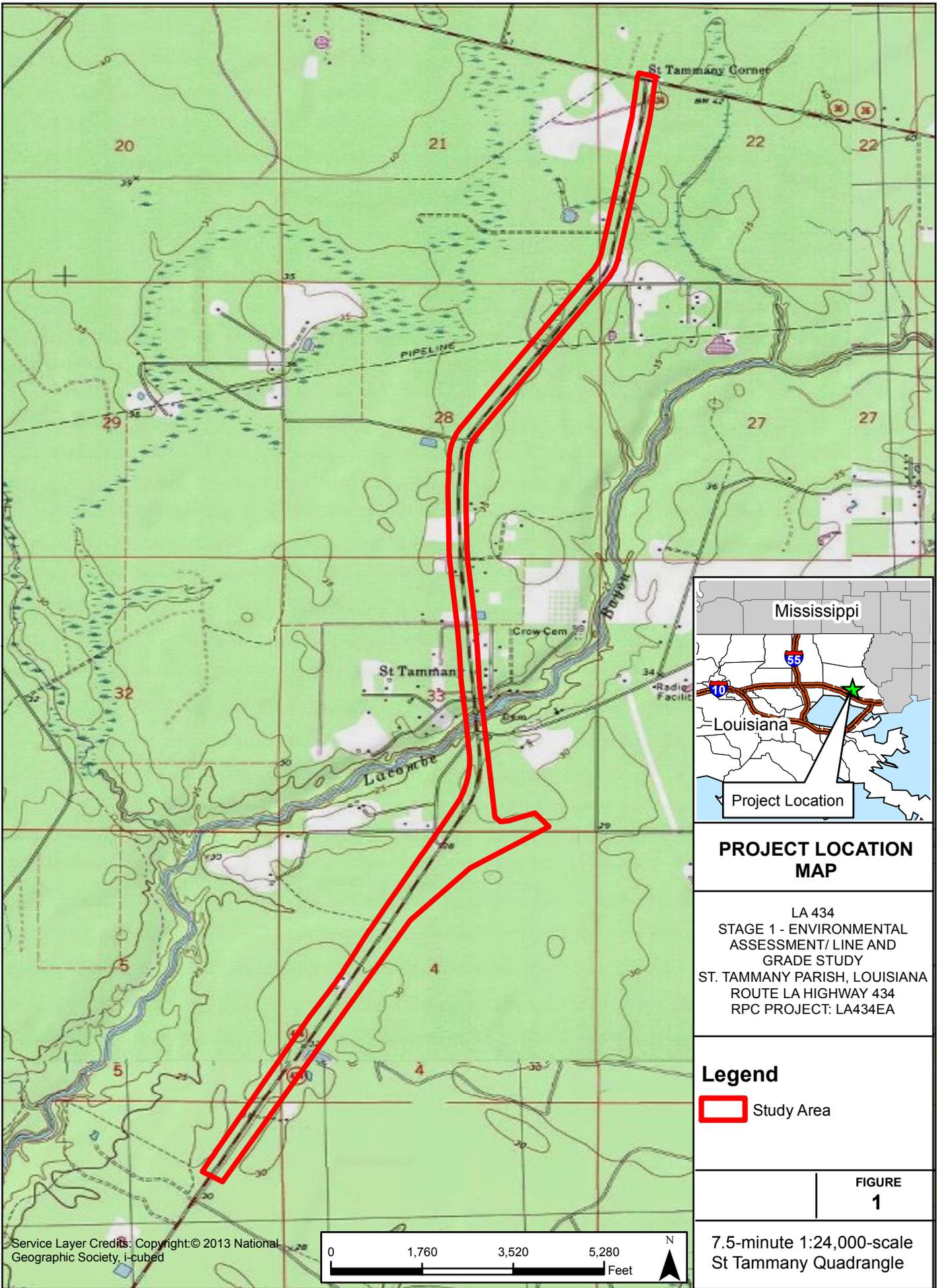
The purpose of the proposed project is to add roadway capacity and improve traffic operation for this segment of LA 434. The project need is to improve capacity and travel time and to relieve congestion; to support planned residential, institutional, and business growth within the parish urban growth boundary; and to replace the two-lane timber trestle bridge crossing Bayou Lacombe. This purpose is consistent with the goals of the Transportation Improvement Plan for the St. Tammany Urbanized Area and the TIMED program for the LA 3241 project, with which this project intersects. On behalf of NORPC and LADOTD, ARCADIS U.S., Inc., requests that you review the attached information and furnish us with your views and comments.

The conceptual improvement identified in the Stage 0 Feasibility Study as most feasible and practical includes widening LA 434 from two lanes to four lanes with median and shoulders. This widening will require the replacement of the existing bridge over Bayou Lacombe. Due to the earliness of this request, additional alternatives have not been developed. The Stage 0 alternative, along with all reasonable alternatives considered for the proposed action, will be discussed in the EA. The No Build Alternative, which assumes that this project will not be built, will also be considered.

The bridge over Bayou Lacombe, constructed in 1953, is a two-lane treated timber bridge with no shoulders. The bridge spans approximately 100 feet and is approximately 28 feet wide. LADOTD, in cooperation with FHWA and the State Historic Preservation Office (SHPO), completed a statewide historic bridge inventory for bridges constructed prior to 1971, which is presented in the *National Register Eligibility Documentation Report* (September 2013) prepared by Mead & Hunt. FHWA made its final National Register eligibility determinations, which are presented in this report, and the SHPO has concurred. As a result of this Louisiana historic bridge inventory, LA 434 (Recall Number 060260; Structure Number 62528520604621) crossing Bayou Lacombe was identified as *ineligible*.

Date Saved: 3/5/2014 9:08:03 AM

Path: \\LA01\FP02\Data\TRAP\Projects\LA003230.0000 LA 434\2-Data\GIS\_CADD\ArcMap\Project\Location\_8.5X11.mxd



**PROJECT LOCATION  
MAP**

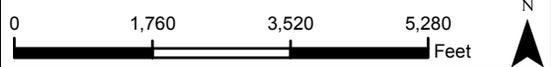
LA 434  
STAGE 1 - ENVIRONMENTAL  
ASSESSMENT/ LINE AND  
GRADE STUDY  
ST. TAMMANY PARISH, LOUISIANA  
ROUTE LA HIGHWAY 434  
RPC PROJECT: LA434EA

**Legend**

 Study Area

**FIGURE  
1**

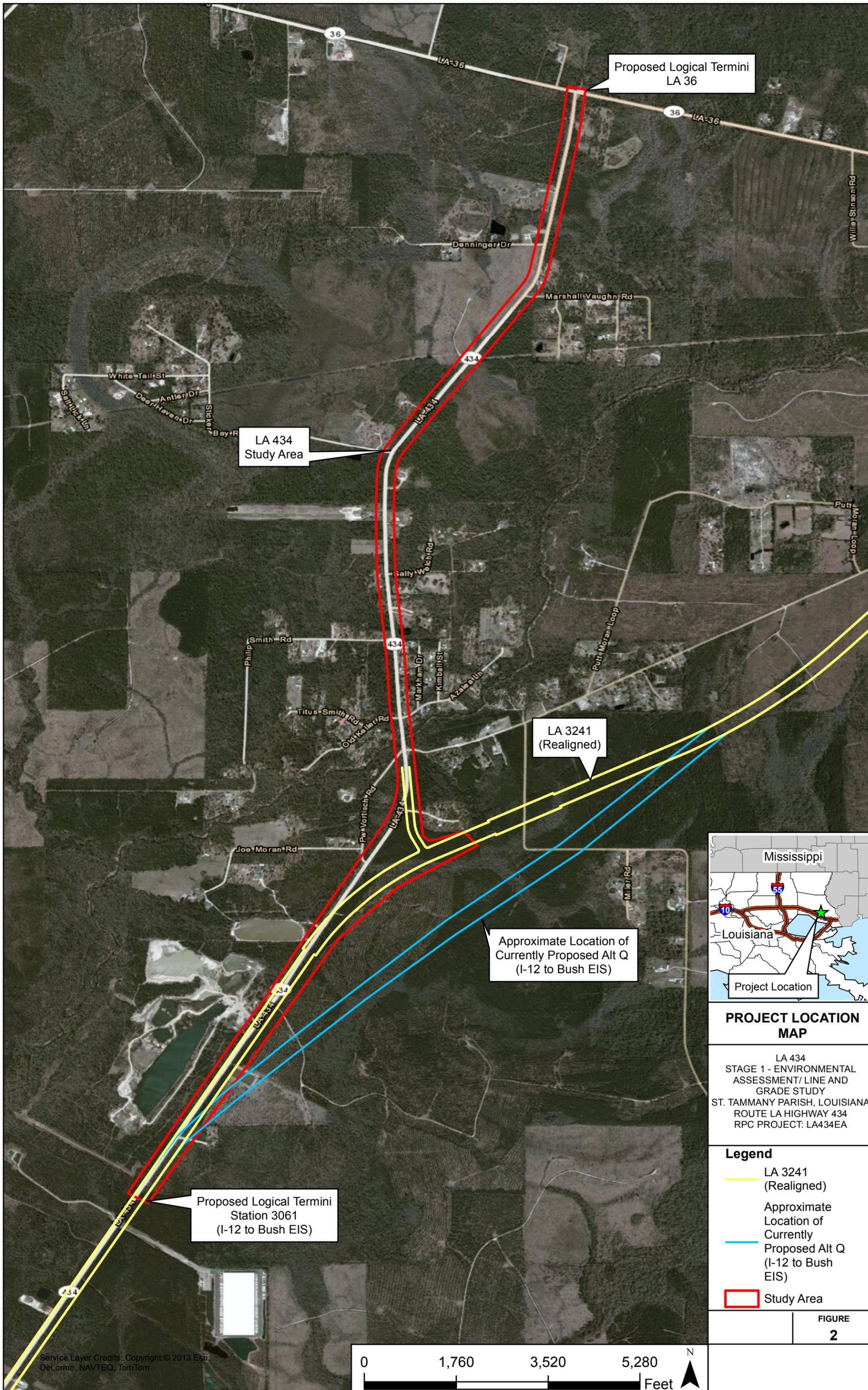
Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed



7.5-minute 1:24,000-scale  
St Tammany Quadrangle

Date Saved: 3/7/2014 9:45:43 AM

Path: \\LA01\FP02\Data\TRAI\Projects\LA003230.0000.LA.434\2-Data\GIS\_CADD\Map\Project\Location\_11x17-2.mxd



**PROJECT LOCATION MAP**

LA 434  
 STAGE 1 - ENVIRONMENTAL ASSESSMENT/ LINE AND GRADE STUDY  
 ST. TAMMANY PARISH, LOUISIANA  
 ROUTE LA HIGHWAY 434  
 RPC PROJECT: LA434EA

- Legend**
- LA 3241 (Realigned)
  - Approximate Location of Currently Proposed Alt Q (I-12 to Bush EIS)
  - Study Area

FIGURE 2



RECEIVED  
MAR 31 2014

BY: .....

CHARLES R. DAVIS  
DEPUTY SECRETARY

JAY DARDENNE  
LIEUTENANT GOVERNOR

**State of Louisiana**  
OFFICE OF THE LIEUTENANT GOVERNOR  
DEPARTMENT OF CULTURE, RECREATION & TOURISM  
OFFICE OF STATE PARKS

STUART JOHNSON, PH.D.  
ASSISTANT SECRETARY

March 27, 2014

Ms. Elizabeth Beam, AICP  
Senior Planner/Scientist  
Arcadis U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816

Re: Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, Louisiana  
RPC Task LA 4433EA (H.004981)

Dear Ms. Beam,

I am in receipt of the solicitation of views request for the Initiation of Section 106 Consultation regarding the LA 434 Corridor in St. Tammany Parish.

The Division of Outdoor Recreation in the Louisiana Office of State Parks administers the Land and Water Conservation Fund and the Recreational Trails Program for Louisiana. In this capacity we compile an inventory of recreational sites within the state for publication in the Statewide Comprehensive Outdoor Recreation Plan (SCORP) published periodically. The most recent SCORP was published for the period of 2009-2014 with an inventory developed in 2009.

Based on the information provided, there does not appear to be any conflict regarding this proposed project with existing recreational facilities identified in the most recent SCORP.

Sincerely,

A handwritten signature in blue ink, appearing to read "Cleve Hardman".

Cleve Hardman  
Director of Outdoor Recreation



**State of Louisiana**  
Department of Health and Hospitals  
Office of Public Health

Thursday, April 03, 2014

Elizabeth Beam  
ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816

Re: Solicitation of Views and Initiation of Section 106 Consultation  
Stage 1 Environmental Assessment/Line and Grade Study; LA 434 Corridor; St. Tammany  
Parish, LA; RPC Task LA434EA (H.004981)

This office is in receipt of a Solicitation of Views regarding the above referenced project(s).

Based upon the information received from your office we have no objection to the referenced project(s) at this time. The applicant shall be aware of and comply with any and all applicable Louisiana State Sanitary Code regulations (LAC 51, as applicable). Furthermore, should additional project data become available to this office that in any way amend the information upon which this office's response has been based, we reserve the right of additional comments on the referenced project(s).

In the event of any future discovery of evidence of non-compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any applicable public health laws or statutes which may have escaped our awareness during the course of this cursory review, please be advised that this office's preliminary determination on this Solicitation of View of the project(s) shall not be construed as absolving the applicant of responsibility, if any, with respect to compliance with the Louisiana Administrative Code Title 51 (Public Health-Sanitary Code) and the Title 48 (Public Health-General) regulations or any other applicable public health laws or statutes.

Sincerely,

A handwritten signature in black ink, appearing to read "Yuanda Zhu".

Yuanda Zhu  
Louisiana Department of Health and Hospitals, Office of Public Health  
Engineering Services  
Telephone: (225) 342-7432  
Electronic mail: [yuanda.zhu@la.gov](mailto:yuanda.zhu@la.gov)



**FEMA**

FEDERAL EMERGENCY MANAGEMENT AGENCY  
REGION VI  
MITIGATION DIVISION

**PUBLIC NOTICE REVIEW/ENVIRONMENTAL  
CONSULTATION**

---

We have no comments to offer.       We offer the following comments:

**WE WOULD RECOMMEND THAT THE PARISH FLOODPLAIN ADMINISTRATOR  
BE CONTACTED FOR THE POSSIBLE PERMIT REQUIREMENTS FOR THIS  
PROJECT.**

**If project is Federally funded, we would request project to be compliant with EO 11988  
and 11990.**

**LA 434 Corridor**

Alan Pelegrin  
FPA  
St. Tammany Parish  
21454 Koop Drive  
Mandeville, LA 70471  
apelegrin@stpgov.org  
985-898-2574

---

REVIEWER: *Mayra G. Diaz*  
Natural Hazards Program Specialist

DATE: April 1, 2014

If additional jurisdictions are involved in the project or if you have any questions, please contact me at 940-898-5541.



RECEIVED  
FRC MAIL CENTER  
FEMA REGION VI

2014 MAR 28 A 3:10

ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge  
Louisiana 70816  
Tel 225 292 1004  
Fax 225 218 9677  
www.arcadis-us.com

Mr. Greg Solvey  
Attn: Myra G. Diaz  
Natural Hazards Program Specialist  
FEMA Region VI  
800 North Loop 288  
Denton, TX 76201

Subject:  
Solicitation of Views and  
Initiation of Section 106 Consultation  
Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, Louisiana  
RPC Task LA434EA (H.004981)

INFRASTRUCTURE

Date:  
25 March 2014

Dear Mr. Solvey:

Contact:  
Beth Beam

Early in the planning process for a transportation facility, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the New Orleans Regional Planning Commission (NORPC), in cooperation with the Louisiana Department of Transportation and Development (LADOTD), in identifying possible adverse economic, social, or environmental effects from the project or other related concerns and reaching agreeable decisions while taking into account the interests of all parties.

Extension:  
215

Email:  
elizabeth.beam@  
arcadis-us.com

In addition to identifying any concerns or issues mentioned above, a consultation with you to address cultural and historic resource issues pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800) is requested. Earth Search, Inc., will be conducting the cultural resources survey for the proposed project. If you know of potential Section 106 concerns, or if you know of another interested party, please advise us accordingly. If you would like to request participation as a consulting party, please forward a written request using the contact information below.

Our ref:  
LA003230.0000.00001  
NORPC/3230.0/C/1a/1f

A project overview, including a project location map and Study Area map, is attached for your review. We ask that your agency or organization provide comments regarding this preliminary information. A Stage 0 Feasibility Study for this project was completed in May 2010. If you would like to review the Stage 0 Study in its entirety, please request a copy from Beth Beam by e-mail at elizabeth.beam@arcadis-us.com or by U.S. mail to Ms. Beth Beam, ARCADIS, 10352 Plaza Americana Drive, Baton Rouge, Louisiana 70816.

We would also like to advise you that a stakeholders/elected officials meeting is anticipated in late summer 2014 and will be held in St. Tammany Parish, Louisiana,

Imagine the result

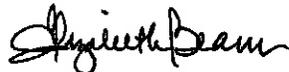
followed by a public meeting on the same day. Notice of this public meeting will be published in a local newspaper. The Environmental Assessment will then be distributed for comments upon approval by the Federal Highway Administration and followed by a public hearing. Specific information regarding the meetings will be provided soon.

**Closing**

On behalf of NORPC and LADOTD, ARCADIS U.S., Inc., requests that you review the attached information and furnish us with your views and comments by Friday, April 25, 2014. Replies should be sent to Beth Beam by e-mail or by U.S. mail at the addresses provided above. Please reference RPC Task LA434EA (H.004981) in your reply.

Sincerely,

ARCADIS U.S., Inc.



Elizabeth Beam, AICP  
Senior Planner/Scientist

Attachments



**ST. TAMMANY PARISH**  
DEPARTMENT OF ENGINEERING  
21490 KOOP DRIVE  
P.O. Box 628  
COVINGTON, LA 70434  
PHONE: (985) 898-2552  
FAX: (985) 898-5205  
[edsmythe@stpgov.org](mailto:edsmythe@stpgov.org)

*Pat Brister*  
*Parish President*

April 11, 2014

Mrs. Beth Beam, P.E.  
ARCADIS  
10352 Plaza Americana Drive,  
Baton Rouge, LA 70816  
(225) 292-1004  
[elizabeth.beam@arcadis-us.com](mailto:elizabeth.beam@arcadis-us.com)

Re: Solicitation of View  
Initiation of Section 106 Consultation  
Stage I Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St Tammany Parish, LA  
RPC Task LA434EA (H.004981)

Ms. Beam,

The St Tammany Department of Engineering (STP DoE) has reviewed the proposed project to four-lane Hwy 434 along a road alignment from "north of I-12, east of Watts Road (LA 41), west of LA 1088 and south of LA 36". The STP DoE has no special knowledge of cultural or historical significance in this area, thus, can offer no comments pursuant to NEPA - Section 106 of the National Historic Preservation Act (36 CFR 800).

However, STP DoE can offer comments specific to the regulatory environment of the study area:

- The proposed project is located outside of FEMA's Special Flood Hazard Area (SFHA) as regulated under both the Effective FIRM and Preliminary DFIRMs.
- The Project area will discharge stormwater into two LDEQ subsegments of the Bayou Lacombe Watershed: LA040901 ("Bayou LaCombe-From headwaters to US-190 (Scenic)" and LA040902 ("Bayou Lacombe-From US-190 to Lake Pontchartrain (Scenic) (Estuarine)"). The subsegments have designated uses<sup>1</sup> of: Primary Contact Recreation (A), Secondary Contact Recreation (B) Fish and Wildlife Propagation (C) and Outstanding Natural Resource water (ONRW). Since Bayou Lacombe has been designated a Scenic Stream, (regulated through Louisiana Department of Wildlife and Fisheries), and an ONRW, (regulated by the LDEQ), the development will require a Scenic Streams permit application and compliance with implemented TMDLs in Bayou Lacombe Watershed.

---

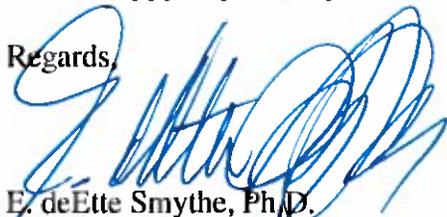
<sup>1</sup> The term *Designated Uses* is defined in the LA Civil Code, LAC 33:IX.1105 and 1109. Water Quality standards for these specific subsegments can be found in LAG 33:IX.1123.

- An LDEQ LPDES permit will be required for stormwater discharge and a Separate Storm Sewer Pollution Prevention Plan (SWPPP) must be provided to LDEQ and the St Tammany Parish Department of Engineering, MS4 Coordinator. This document must be kept on-site during construction and made available for St Tammany Parish stormwater inspections. St Tammany Parish inspects sites pre-, during and post-construction to assure that Best Management Practices (BMPs) are being observed to prevent stormwater pollutants from being discharged into Parish waterbodies. The construction plans will be reviewed by STP DoE for stormwater Best Management Practices (BMPs) to prevent stormwater pollutants from being discharged into Parish waterbodies. St Tammany Parish Department of Development inspects sites pre-, during and post-construction to assure that BMPs are implemented and maintained.

The project as proposed should have a positive impact on economic development in the area. It will increase traffic access for residential, commercial and institutional properties in the area that only a global solution, such as this, could accomplish.

We are in support of the project as proposed. If you need specific information about these comments, we will be happy to provide you with details.

Regards,



E. deEtte Smythe, Ph.D.  
Regulatory Manager

xc: Ms. Gina Campo  
Mr. Eddie Williams, P.E.  
Mr. Paul Carroll, P.E.  
Mrs. Sabrina Schenk



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
646 Cajundome Blvd.  
Suite 400  
Lafayette, Louisiana 70506

April 8, 2014

Ms. Elizabeth Beam  
ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge, Louisiana 70816

Dear Ms. Beam:

Please reference your March 25, 2014, letter regarding the Regional Planning Commission (RPC) and the Louisiana Department of Transportation and Development's (LADOTD) proposed LA Highway 434 (LA 434) widening project from LA 36 to its junction with the proposed LA 3241 in St. Tammany Parish, Louisiana. The U.S. Fish and Wildlife Service has reviewed the information provided, and offers the following comments in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

### Red-Cockaded Woodpecker

The proposed project would be located in a parish known to be inhabited by the endangered red-cockaded woodpecker (RCW, *Picoides borealis*). RCWs roost and forage year-round and nest seasonally (i.e., April through July) in open, park-like stands of mature pine trees containing little hardwood component, a sparse midstory, and a well-developed herbaceous understory. RCWs can tolerate small numbers of overstory and midstory hardwoods at low densities found naturally in many southern pine forests, but they are not tolerant of dense midstories resulting from fire suppression or from overstocking of pine. Trees selected for cavity excavation are generally at least 60 years old, although the average stand age can be younger. The collection of one or more cavity trees plus a surrounding 200 foot wide buffer of continuous forest is known as a RCW cluster. RCW foraging habitat is located within one-half mile of the cluster and is comprised of pine and pine-hardwood stands (i.e., 50 percent or more of the dominant trees are pines) that are at least 30 years of age and have a moderately low average basal area (i.e., 40 – 80 square feet per acre is preferred).

If the proposed project area does not contain suitable nesting and/or foraging habitat as defined above, further consultation with the Service will not be necessary. However, if potential RCW nesting or foraging habitat is located within the project area, all suitable nesting habitat within the project area and within a one-half mile radius from such habitat should be carefully surveyed by a qualified biologist for the presence of RCW cavity trees in accordance with the survey protocol found in Appendix 4 of the RCW Recovery Plan (2003), which can be found online at [http://www.fws.gov/rcwrecovery/recovery\\_plan.html](http://www.fws.gov/rcwrecovery/recovery_plan.html). We request that you provide this office with a copy of the survey report, which should include the following details:

1. survey methodology including dates, qualifications of survey personnel, size of survey area, and transect density;
2. pine stand characteristics including number of acres of suitable nesting and/or foraging habitat, tree species, basal area and number of pine stems 10 inches or greater per acre, percent cover of pine trees greater than 60 years of age, species of dominant vegetation within each canopy layer, understory conditions and species composition (several representative photographs should be included);
3. number of active and inactive RCW cavity trees observed and the condition of the cavities (e.g., resin flow, shape of cavity, start-holes);
4. presence or absence of RCWs; and
5. topographic quadrangle maps which illustrate areas of adequate RCW nesting and/or foraging habitat, cluster sites, and cavity tree locations relative to proposed construction activities.

If implementation of the proposed project has the potential to directly or indirectly affect RCW individuals or their habitat, further consultation with this office will be necessary.

#### Dusky Gopher Frog

Historically, the dusky gopher frog (=Mississippi gopher frog) (*Rana sevosa*) was found in Louisiana, Mississippi, and Alabama, west of the Mobile River drainage. It has not been seen in Louisiana since 1965 and is presently known to survive at only one site in Mississippi. The dusky gopher frog is a darkly-colored, moderately-sized frog with warts covering its back and dusky spots on its belly. The Dusky (Mississippi) gopher frog was listed as endangered under the Endangered Species Act on December 4, 2001, as a distinct population segment (DPS) of the gopher frog.

The Dusky gopher frog's habitat includes both upland, sandy areas covered with longleaf pine; and isolated, temporary, wetland breeding sites within the forested landscape. Adult frogs spend most of their lives underground in forests with an open canopy and abundant ground cover. They use active and abandoned gopher tortoise burrows, abandoned mammal burrows and holes in and under stumps as their underground retreats. Breeding sites are isolated ponds that dry out completely at certain times of the year. Substantial winter rains are needed to ensure that ponds are filled sufficiently to allow development of juvenile frogs.

On June 12, 2012, the Service announced the final rule in the Federal register (Volume 77, No. 113) designating Dusky gopher frog critical habitat on 1,544 acres in St. Tammany Parish, Louisiana (Unit 1) and 1,996 acres in four Mississippi counties (Units 2-12). Although the LA 3241 realignment project is not part of this project, LADOTD and RPC should be cognizant that a portion of that realignment project may traverse through or adjacent to that Unit 1 Dusky gopher frog critical habitat. That area of concern is where the LA 3241 realignment terminates with LA 36. The primary constituent elements (PCE) essential for the conservation of the Dusky gopher frog are:

PCE 1—Ephemeral wetland habitat. Breeding ponds, geographically isolated from other waterbodies and embedded in forests historically dominated by longleaf pine communities, that are small (generally <0.4 to 4.0 ha (<1 to 10 ac)), ephemeral, and acidic. Specific conditions necessary in breeding ponds to allow for successful reproduction of dusky gopher frogs are:

- (a) An open canopy with emergent herbaceous vegetation for egg attachment;
- (b) An absence of large, predatory fish that prey on frog larvae;
- (c) Water quality such that frogs, their eggs, or larvae are not exposed to pesticides or chemicals and sediment associated with road runoff; and
- (d) Surface water that lasts for a minimum of 195 days during the breeding season to allow a sufficient period for larvae to hatch, mature, and metamorphose.

PCE 2 —Upland forested nonbreeding habitat. Forests historically dominated by longleaf pine, adjacent to and accessible to and from breeding ponds, that are maintained by fires frequent enough to support an open canopy and abundant herbaceous ground cover and gopher tortoise burrows, small mammal burrows, stump holes, or other underground habitat that the dusky gopher frog depends upon for food, shelter, and protection from the elements and predation.

PCE 3 —Upland connectivity habitat. Accessible upland habitat between breeding and nonbreeding habitats to allow for dusky gopher frog movements between and among such sites. This habitat is characterized by an open canopy, abundant native herbaceous species, and a subsurface structure that provides shelter for dusky gopher frogs during seasonal movements, such as that created by deep litter cover, clumps of grass, or burrows.

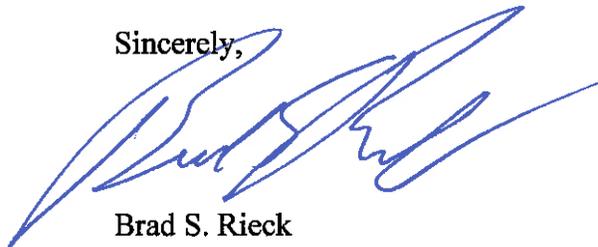
Although the Louisiana Unit (Unit 1) is currently unoccupied, the last observation of this frog occurred in 1965 in one of the ponds within this unit. The uplands associated with this unit currently do not contain the essential physical or biological features of critical habitat (PCE 2 and PCE 3), however, the Service believes them to be restorable with reasonable effort. Thus, the Service determined Unit 1 to be essential for the conservation and recovery of the Dusky gopher frog because it provides important breeding sites for recovery. Should a proposed action involve federal implementation, funding, or a federal permit and directly or indirectly affect designated critical habitat, further consultation with this office will be necessary.

#### Wetland Impacts

The proposed project may also impact wetlands. For a complete jurisdictional wetland delineation of the proposed project, please contact Mr. Robert Heffner (504/862-2274) at the New Orleans District, U.S. Army Corps of Engineers (Corps). If the Corps determines that the proposed project is within their regulatory jurisdiction, official U.S. Fish and Wildlife Service comments will be provided in response to the corresponding Public Notice.

We appreciate the opportunity to provide comments in the planning stages of this proposed project. If you need further assistance, please contact Joshua Marceaux (337/291-3110) of this office.

Sincerely,



Brad S. Rieck  
Deputy Supervisor  
Louisiana Ecological Services Office

cc: Corps of Engineers, New Orleans, LA  
LADOTD, Louisiana Department of Transportation and Development, Baton Rouge, LA  
LDWF, Natural Heritage Program, Baton Rouge, LA

**Literature Cited**

U.S. Fish and Wildlife Service. 2003. Recovery plan for the red-cockaded woodpecker (*Picoides borealis*): second revision. U.S. Fish and Wildlife Service, Atlanta, GA. 296 pp.



**BOBBY JINDAL**  
GOVERNOR

**State of Louisiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF CONSERVATION**

**STEPHEN CHUSTZ**  
SECRETARY  
**JAMES H. WELSH**  
COMMISSIONER OF CONSERVATION

April 11, 2014

TO: Ms. Elizabeth Beam, AICP  
Senior Planner/Scientist  
Arcadis U.S. Inc.  
10352 Plaza Americana Drive  
Baton Rouge, Louisiana 70816

RE: Solicitation of Views  
RPC Task LA434EA (H.004981)  
LA 434 Corridor  
St. Tammany Parish

Dear Ms. Beam:

In response to your letter dated March 25, 2014, concerning the referenced matter, please be advised that the Office of Conservation collects and maintains many types of information regarding oil and gas exploration, production, distribution, and other data relative to the petroleum industry as well as related and non-related injection well information, surface mining and ground water information and other natural resource related data. Most information concerning oil, gas and injection wells for any given area of the state, including the subject area of your letter can be obtained through records search via the SONRIS data access application available at:

<http://www.dnr.louisiana.gov>

A review of our computer records for the referenced project area indicates that there no oil, gas or injection wells located in the project area. The DNR water well database indicates that there are registered water wells in the vicinity of the project area. Also, it is possible that unregistered water wells may be located in the area.

The Office of Conservation maintains records of all activities within its jurisdiction in paper, microfilm or electronic format. These records may be accessed during normal business hours, Monday through Friday, except on State holidays or emergencies that require the Office to be closed. Please call 225-342-5540 for specific contact information or for directions to the Office of Conservation, located in the LaSalle Building, 617 North Third Street, Baton Rouge, Louisiana. For pipelines and other underground hazards, please contact Louisiana One Call at 1-800-272-3020 prior to commencing operations. Should you need to direct your inquiry to any of our Divisions, you may use the following contact information:

<u>Division</u>	<u>Contact</u>	<u>Phone No.</u>	<u>E-mail Address</u>
Engineering	Jeff Wells	225-342-5638	jeff.wells@la.gov
Pipeline	Steven Giambrone	225-342-2989	steven.giambrone@la.gov
Injection & Mining	Laurence Bland	225-342-4286	brad.bourgoyne @la.gov
Geological	Mike Kline	225-342-3335	mike.kline@la.gov
Environmental	Gary Snellgrove	225-342-7222	gary.snellgrove@la.gov

If you have difficulty in accessing the data via the referenced website because of computer related issues, you may obtain assistance from our technical support section by selecting Help on the SONRIS tool bar and submitting an email describing your problems and including a telephone number where you may be reached.

Sincerely,



James H. Welsh

 Commissioner of Conservation

JHW:MSK



Office of the Secretary  
PO Box 94245 | Baton Rouge, LA 70804-9245  
ph: 225-379-3005 | fx: 225-379-3002

Bobby Jindal, Governor  
Sherri H. LeBas, P.E., Secretary

April 17, 2014

INITIATION OF SECTION 106 CONSULTATION  
STAE 1 ENVIRONMENTAL ASSESSMENT/  
LINE AND GRADE STUDY  
LA 434 CORRIDOR  
PARISH: ST. TAMMANY  
RPC TASK LA 434EA (H. 004981)

Ms. Beth Beam  
ARCADIS  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816

**Subject: Solicitation of Views**

Dear Ms. Beam:

Enclosed are copies of St. Tammany Parish's Flood Insurance Rate Maps (FIRM) indicating the proposed project area.

During the construction, there must be allowance for the adequate flow of water and assurance that there will be no back up of water. There must be no instance of the creation of flooding where there was no flooding prior to construction. At this time, consideration must also be given to the responsibility for clearing debris and keeping the surrounding area clear so as not to interfere with its function.

In order to assure compliance with the Parish's requirements for the National Flood Insurance Program (NFIP), and ensure that appropriate permits are obtained, please contact the floodplain administrator for St. Tammany Parish. The contact person is: Mr. Alan Pelegrin, 21490 Koop Drive, Mandeville, LA, 70448, and telephone no. 985-898-2574.

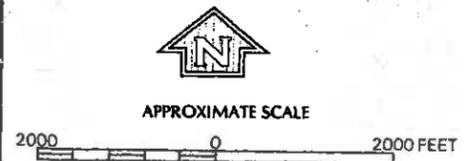
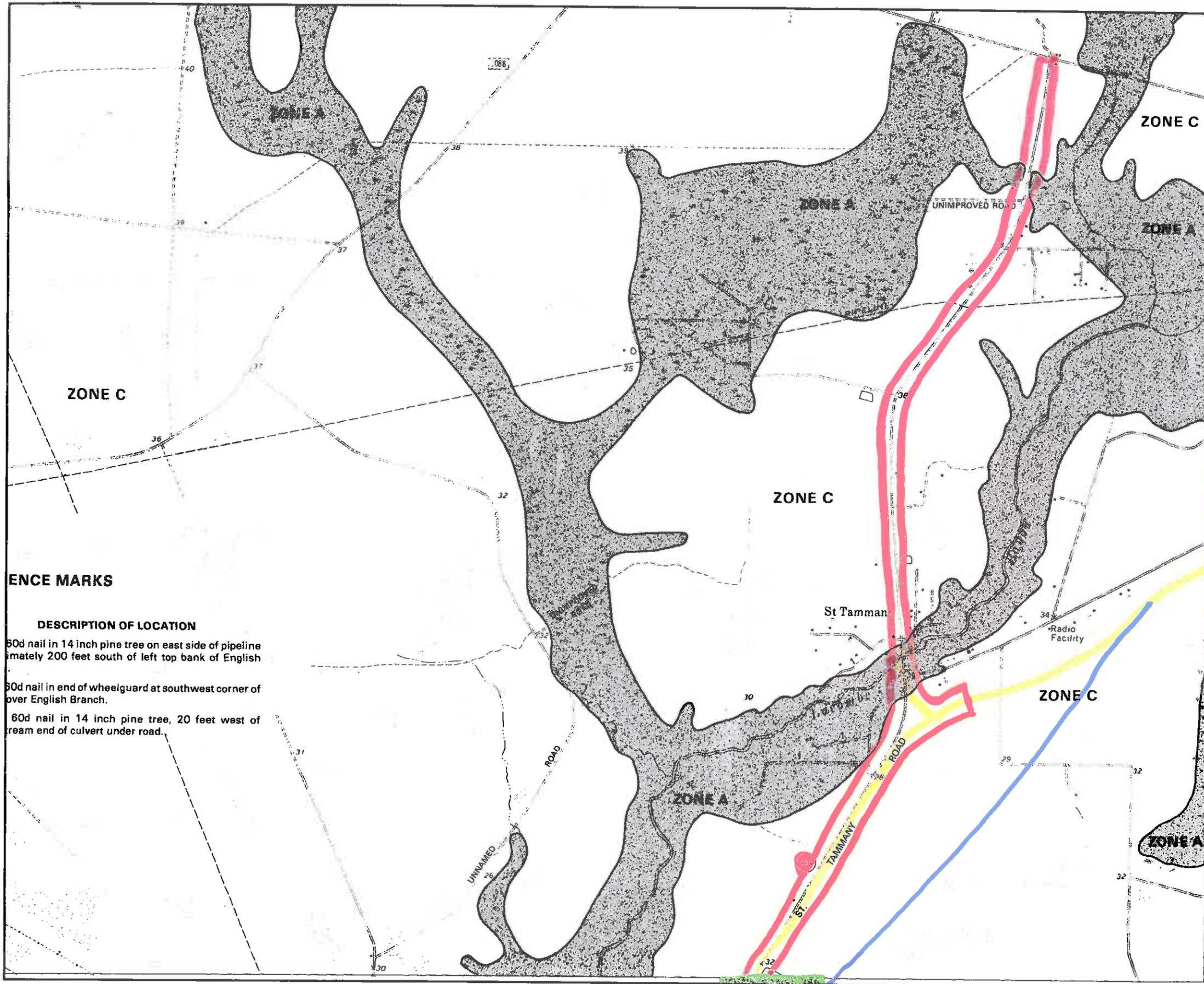
We thank you for the opportunity to comment on this project. If you need additional information, please contact our office, (225) 379-3005.

Sincerely,

*Pam Lightfoot*

Pam Lightfoot, CFM  
Floodplain Management Program Coordinator

Enclosures  
pc: Mr. Alan Pelegrin



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM  
FLOOD INSURANCE RATE MAP**

**ST. TAMMANY PARISH,  
LOUISIANA  
(UNINCORPORATED AREAS)**

**PANEL 275 OF 600**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

**COMMUNITY-PANEL NUMBER**  
**225205 0275 C**

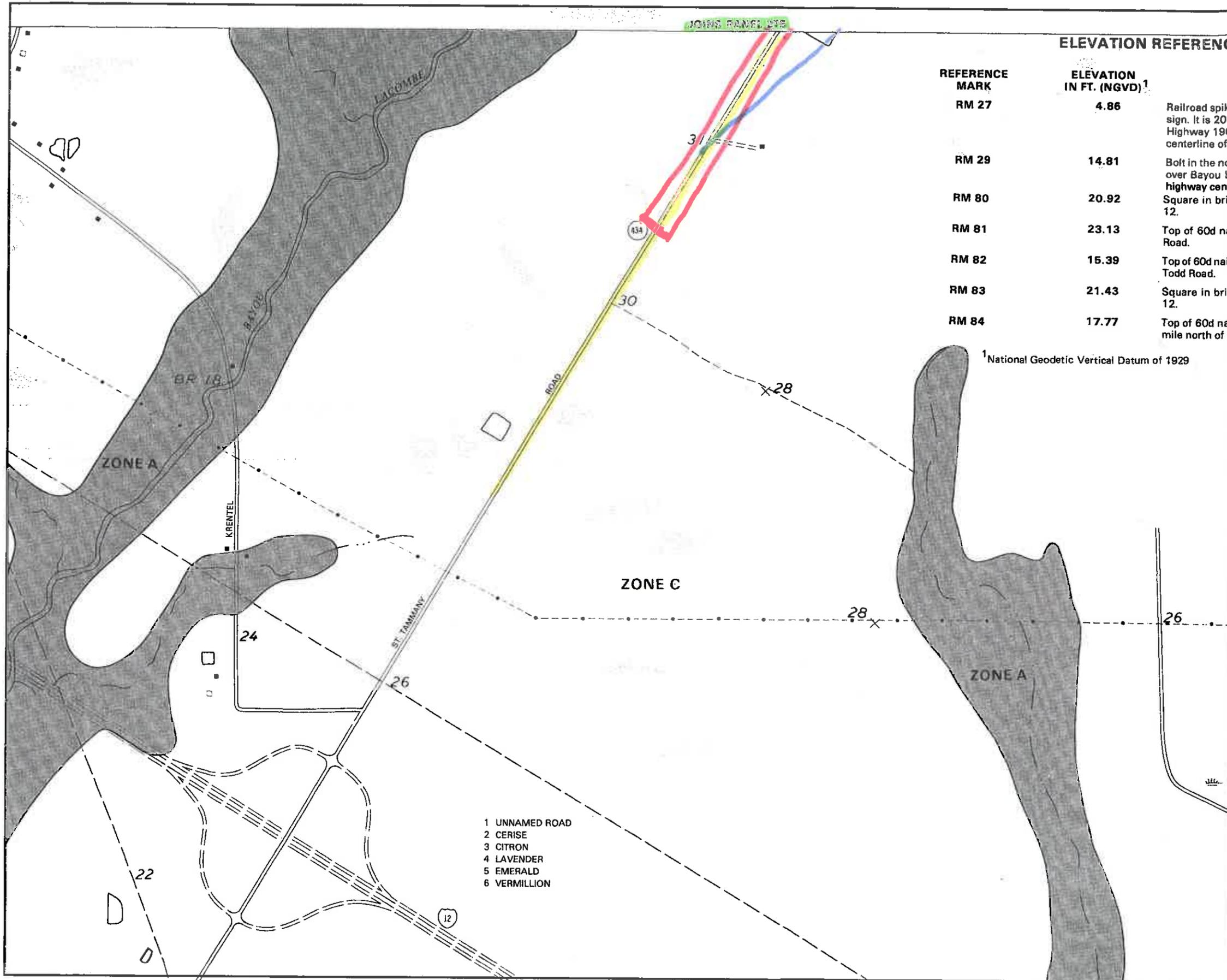
**MAP REVISED:**  
**OCTOBER 17, 1989**



**Federal Emergency Management Agency**

Joins Panel 300

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



**ELEVATION REFERENCE**

REFERENCE MARK	ELEVATION IN FT. (NGVD) <sup>1</sup>	
RM 27	4.86	Railroad spike sign. It is 20 feet above the centerline of the highway 190.
RM 29	14.81	Bolt in the north corner of the highway centerline square in bridge 12.
RM 80	20.92	
RM 81	23.13	Top of 60d nail in Todd Road.
RM 82	15.39	Top of 60d nail in Todd Road.
RM 83	21.43	Square in bridge 12.
RM 84	17.77	Top of 60d nail in mile north of U.S. 190.

<sup>1</sup>National Geodetic Vertical Datum of 1929



APPROXIMATE SCALE



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM  
FLOOD INSURANCE RATE MAP**

**ST. TAMMANY PARISH,  
LOUISIANA  
(UNINCORPORATED AREAS)**

**PANEL 385 OF 600**  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

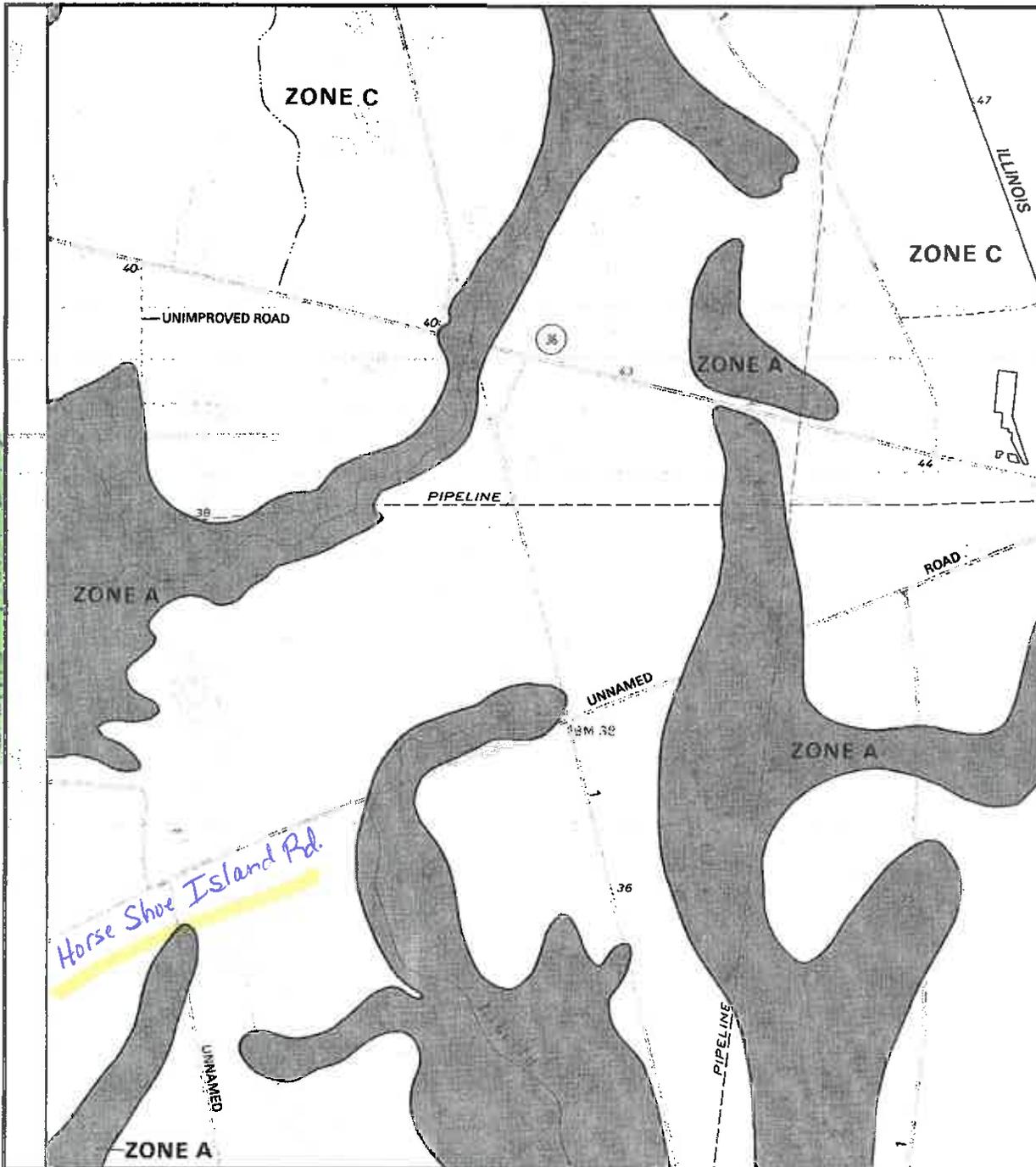
**COMMUNITY-PANEL NUMBER  
225205 0385 C**

**MAP REVISED:  
OCTOBER 17, 1989**



**Federal Emergency Management Agency**

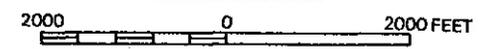
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



Dins Panel 275



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM**  
FLOOD INSURANCE RATE MAP

**ST. TAMMANY PARISH,  
LOUISIANA  
(UNINCORPORATED AREAS)**

PANEL 300 OF 600  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
225205 0300 C

MAP REVISED:  
OCTOBER 17, 1989



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

Page 3 of 3 S.P.# H.004981 LA 434 Corridor & LA 3241 Realignment

## Beam, Elizabeth

---

**From:** Linda (Brown) Hardy <Linda.Hardy@la.gov>  
**Sent:** Tuesday, April 22, 2014 8:07 AM  
**To:** Beam, Elizabeth  
**Cc:** Yasob Zia  
**Subject:** DEQ SOV 140327/0360EA Line and Grade Study LA 434 Corridor

April 22, 2014

Elizabeth Beam  
ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816  
[elizabeth.beam@arcadis-us.com](mailto:elizabeth.beam@arcadis-us.com)

RE: 140327/0360 EA Line and Grade Study LA 434 Corridor  
DOTD Funding  
St. Tammany Parish, Louisiana

Dear Ms. Beam:

The Department of Environmental Quality (LDEQ), Business and Community Outreach Division has received your request for comments on the above referenced project.

After reviewing your request, the Department has no objections based on the information provided in your submittal. However, for your information, the following general comments have been included. Please be advised that if you should encounter a problem during the implementation of this project, you should immediately notify LDEQ's Single-Point-of-contact (SPOC) at (225) 219-3640.

- Please take any necessary steps to obtain and/or update all necessary approvals and environmental permits regarding this proposed project.
- If your project results in a discharge to waters of the state, submittal of a Louisiana Pollutant Discharge Elimination System (LPDES) application may be necessary.
- If the project results in a discharge of wastewater to an existing wastewater treatment system, that wastewater treatment system may need to modify its LPDES permit before accepting the additional wastewater.
- All precautions should be observed to control nonpoint source pollution from construction activities. LDEQ has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that you contact the LDEQ Water Permits Division at (225) 219-9371 to determine if your proposed project requires a permit.
- If your project will include a sanitary wastewater treatment facility, a Sewage Sludge and Biosolids Use or Disposal Permit application or Notice of Intent must be submitted no later than January 1, 2014. Additional information may be obtained on the LDEQ website at <http://www.deq.louisiana.gov/portal/tabid/2296/Default.aspx> or by contacting the LDEQ Water Permits Division at (225) 219- 9371.
- If any of the proposed work is located in wetlands or other areas subject to the jurisdiction of the U.S. Army Corps of Engineers, you should contact the Corps directly regarding permitting issues. If a Corps permit is required, part of the application process may involve a water quality certification from LDEQ.
- All precautions should be observed to protect the groundwater of the region.
- Please be advised that water softeners generate wastewaters that may require special limitations depending on local water quality considerations. Therefore if your water system improvements include water softeners, you are advised to contact the LDEQ Water Permits to determine if special water quality-based limitations will be necessary.
- Any renovation or remodeling must comply with LAC 33:III.Chapter 28, Lead-Based Paint Activities; LAC 33:III.Chapter 27, Asbestos-Containing Materials in Schools and State Buildings (includes all training and accreditation); and LAC 33:III.5151, Emission Standard for Asbestos for any renovations or demolitions.

- If any solid or hazardous wastes, or soils and/or groundwater contaminated with hazardous constituents are encountered during the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Additionally, precautions should be taken to protect workers from these hazardous constituents.

**Currently, St. Tammany Parish is classified as attainment with the National Ambient Air Quality Standards and has no general conformity determination obligations.**

Please send all future requests to my attention. If you have any questions, please feel free to contact me at (225) 219-3954 or by email at [linda.hardy@la.gov](mailto:linda.hardy@la.gov).

Sincerely,



Technical Assistant to the Deputy Secretary  
Louisiana Department of Environmental Quality  
Office of the Secretary  
P.O. Box 4301  
Baton Rouge, LA 70821-4301  
Ph: (225) 219-3954  
Fax: (225) 219-3971  
Email: [linda.hardy@la.gov](mailto:linda.hardy@la.gov)

## Beam, Elizabeth

---

**From:** Keith Cascio <DCascio@wlf.la.gov>  
**Sent:** Wednesday, May 28, 2014 11:57 AM  
**To:** Beam, Elizabeth  
**Cc:** Hoffeld, Scott  
**Subject:** RE: RPC Task LA434EA (H.004981): Solicitation of Views

Good morning Beth,

This bridge replacement will require a Scenic Rivers Permit. If you need information on the application process or any other materials, please let me know. Below is a link to the permit application information on our website. There is a link at the bottom that will take you to a .pdf file of the application itself. Thanks and have a great day!

Keith Cascio

<http://www.wlf.louisiana.gov/permit-process>

---

**From:** Beam, Elizabeth [<mailto:Elizabeth.Beam@arcadis-us.com>]  
**Sent:** Tuesday, May 27, 2014 12:07 PM  
**To:** Keith Cascio  
**Cc:** Hoffeld, Scott  
**Subject:** RPC Task LA434EA (H.004981): Solicitation of Views

Mr. Cascio,

An SOV packet was mailed to the WLF Baton Rouge office on March 25, 2014. As a follow up to this initial correspondence, attached please find a pdf copy of the SOV for your reference.

The proposed project includes replacement of an existing timber bridge crossing Bayou Lacombe. Our preliminary environmental database review indicates that Bayou Lacombe is a scenic stream. Following your review, please forward correspondence to my attention either via mail or email.

Thank you and I appreciate your assistance with this project.

Beth Beam

**Beth Beam MS, AICP, ENV SP** | Senior Planner/Scientist | [elizabeth.beam@arcadis-us.com](mailto:elizabeth.beam@arcadis-us.com)  
ARCADIS U.S., Inc. | 10352 Plaza Americana Drive | Baton Rouge, LA 70816  
T 225.292.1004 | M 225.335.0134 | F 225.218.9677  
[www.arcadis-us.com](http://www.arcadis-us.com)

ARCADIS, Imagine the result

Please consider the environment before printing this email.

---

NOTICE: This e-mail and any files transmitted with it are the property of ARCADIS U.S., Inc. and its affiliates. All rights, including without limitation copyright, are reserved. The proprietary information contained in this e-mail message, and any

files transmitted with it, is intended for the use of the recipient(s) named above. If the reader of this e-mail is not the intended recipient, you are hereby notified that you have received this e-mail in error and that any review, distribution or copying of this e-mail or any files transmitted with it is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete the original message and any files transmitted. The unauthorized use of this e-mail or any files transmitted with it is prohibited and disclaimed by ARCADIS U.S., Inc. and its affiliates. Nothing herein is intended to constitute the offering or performance of services where otherwise restricted by law.



JAY DARDENNE  
LIEUTENANT GOVERNOR

**State of Louisiana**  
OFFICE OF THE LIEUTENANT GOVERNOR  
DEPARTMENT OF CULTURE, RECREATION & TOURISM  
OFFICE OF CULTURAL DEVELOPMENT

CHARLES R. DAVIS  
DEPUTY SECRETARY

PAM BREAU  
ASSISTANT SECRETARY

April 8, 2014

Elizabeth Beam  
Senior Planner/Scientist  
Arcadis US, Inc.  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816

Re: Section 106 Request for Additional Information  
State Project No. H004981  
Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, LA

Dear Ms. Beam:

Thank you for your letter that we received on March 27, 2014, concerning the above-referenced undertaking. In order to conduct the Section 106 Review for the proposed LA 434 Corridor project, we will need the following information:

- Name of federal agency, agency involvement (Funding, license\permit, etc. and description of the undertaking (Detailed description of project).
- Applicant contact information (Name, address, phone number and email address).
- Agency contact information (Name, address, phone number and email address).
- Description of the Area of Potential Effects (APE). The APE can be direct or indirect. It is defined as "the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist." (Include the latitude\longitude of the undertaking location and APE)
- Description of all historic properties within and adjacent to the APE. The historic standing structure is any structure fifty years of age and older. Under Section 106, it is the responsibility of the federal agency or its designee to identify all structures listed or eligible for listing in the National Register of Historic Places.
- Detailed project scope of work including design plans.

Elizabeth Beam  
April 8, 2014  
Page 2

- Map and site plan showing APE and exact location of project undertaking.
- Photographs of the entire APE and project location. Photographs of all historic (fifty years of age and older) within the APE. Buildings should be documented showing diagonal views of front and side and rear and opposite side of the building. All photos should be keyed to a site map and project plans if applicable.

If you have any questions, please contact Mike Varnado in the Division of Historic Preservation at (225) 219-4596 or [mvarnado@crt.la.gov](mailto:mvarnado@crt.la.gov).

Sincerely,



Pam Breaux  
State Historic Preservation Officer

PB:MV:s

## Beam, Elizabeth

---

**From:** Billie Jones <bjones@crt.la.gov>  
**Sent:** Thursday, April 17, 2014 4:09 PM  
**To:** Beam, Elizabeth  
**Subject:** SHPO Response  
**Attachments:** LA 434 CORRIDOR.pdf

Billie M. Jones  
Project Developer  
Office of Cultural Development  
Department of Culture, Recreation and Tourism  
P.O. Box 44247  
Baton Rouge, LA 70802  
225.342.6931  
bjones@crt.la.gov

**BOBBY JINDAL**  
GOVERNOR



**KRISTY H. NICHOLS**  
COMMISSIONER OF ADMINISTRATION

**State of Louisiana**  
Division of Administration  
**STATE LAND OFFICE**

March 28, 2014

ARCADIS U.S., Inc.  
Attn: Beth Beam  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816

RE: Letter of No Objection  
State Project No. H.004981  
St Tammany Parish, Louisiana

Thank you for the information and the opportunity to comment on the above referenced project. I have reviewed the proposal to widen a portion of LA 434 and replacement of the bridge over Bayou Lacombe.

The Office of State Lands has no objection to the proposed widening of LA 434 and bridge replacement over Bayou Lacombe. The Office of State Lands has executed this letter of No Objection with the specific understanding that, in so doing, the Office of State Lands does not, in any way, make any concession or waive any rights with respect to the ownership of any lands or water bottoms within the project area by the State of Louisiana.

Sincerely,

  
Marty L. Beasley  
Public Lands Administrator



**DEPARTMENT OF THE ARMY**  
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS  
P. O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

**MAY 15 2014**

REPLY TO  
ATTENTION OF

Operations Division  
Operations Manager,  
Completed Works

Ms. Beth Beam  
Arcadis  
10352 Plaza Americana Drive  
Baton Rouge, Louisiana 70816

Dear Ms. Beam:

This is in response to your Solicitation of Views request dated March 25, 2014, concerning the LA 434 widening and bridge replacement, at Lacombe, Louisiana, in St. Tammany Parish (State Project H.004981).

We have reviewed your request for potential Department of the Army regulatory requirements and impacts on any Department of the Army projects.

We do not anticipate any adverse impacts to any Corps of Engineers projects.

Based on review of recent maps, aerial photography, and soils data, we have determined that wetland areas that may be subject to Corps' jurisdiction occur on this property. However, these wetlands cannot be accurately delineated without a field investigation. If an accurate delineation is needed, please furnish us with the field data concerning vegetation, soils, and hydrology that we require for all jurisdictional decisions. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into jurisdictional wetlands. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into other waters subject to Corps' jurisdiction. Other waters that may be subject to Corps' jurisdiction are indicated in blue on the map.

This preliminary determination is advisory in nature. The fact that a field wetland delineation/determination has not been completed does not alleviate your responsibility to obtain the proper DA permits prior to working in jurisdictional wetlands or waters occurring on this property.

Off-site locations of activities such as borrow, disposals, haul-and detour-roads and work mobilization site developments may be subject to Department of the Army regulatory requirements and may have an impact on a Department of the Army project.

You should apply for said permit well in advance of the work to be performed. The application should include sufficiently detailed maps, drawings, photographs, and descriptive text for accurate evaluation of the proposal.

Please contact Mr. Robert Heffner, of our Regulatory Branch by telephone at (504) 862-1288, or by e-mail at [Robert.A.Heffner@usace.army.mil](mailto:Robert.A.Heffner@usace.army.mil) for questions concerning wetlands determinations or need for on-site evaluations. Questions concerning regulatory permit requirements may be addressed to Mr. Michael Farabee by telephone at (504) 862-2292 or by email at [Michael.V.Farabee@usace.army.mil](mailto:Michael.V.Farabee@usace.army.mil).

Future correspondence concerning this matter should reference our account number MVN-2014-00958-SY. This will allow us to more easily locate records of previous correspondence, and thus provide a quicker response.

Sincerely,



Karen L. Clement  
Solicitation of Views Manager

Copy Furnished:

Ms. Christine Charrier  
Coastal Zone Management  
Department of Natural Resources  
Post Office Box 44487  
Baton Rouge, Louisiana 70804-4487



**DEPARTMENT OF THE ARMY**

VICKSBURG DISTRICT, CORPS OF ENGINEERS  
4155 CLAY STREET  
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO  
ATTENTION OF:

April 24, 2014

Regional Planning and  
Environment Division South

Ms. Beth Beam  
10352 Plaza Americana Drive  
Baton Rouge, Louisiana 70816

Dear Ms. Beam:

Your letter dated March 25, 2014, regarding widening a portion of LA 434 from two lanes to four lanes from LA 36 to its junction with the proposed LA 3241 and replacing the bridge over Bayou Lacombe, St. Tammany Parish, Louisiana (RPC Task LA434EA (H.004981), has been forwarded to the U.S. Army Corps of Engineers, New Orleans District, as a matter under their jurisdiction. You can expect a reply from that office in the near future.

If you have any questions regarding this matter, please contact Mr. Dan Moore of this office (telephone (601) 631-5008).

Sincerely,

A handwritten signature in black ink, appearing to read "J Brister", with a long horizontal line extending to the right.

Jacob Brister  
Chief, Project Management Branch



April 23, 2014

Elizabeth Beam, AICP  
ARCADIS U.S., Inc.  
10352 Plaza Americana Drive  
Baton Rouge, Louisiana 70816

RE: St Tammany Parish – RPC Task LA434EA (H.004981)

Dear Ms. Beam:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resources Conservation Service projects in the immediate vicinity.

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. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and narrative submitted with your request indicates that the proposed construction areas will potentially impact the following prime or unique farmland soils:

Lt = Latonia fine sandy loam	16.6 acres	RV = 100
Pr = Prentiss fine sandy loam, 0 to 1 percent slopes	26.8 acres	RV = 100

Please find attached an NRCS-CPA-106 Farmland Conversion Impact Rating for Corridor Type Projects with our agencies information completed. Furthermore, we do not predict impacts to NRCS work in the vicinity.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location: <http://websoilsurvey.nrcs.usda.gov/>

For more information on FPPA requirements or the process to receive a Farmland Conversion Impact Rating (Form AD-1006 or CPA-106), please visit the following location: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>

Please direct all future correspondence to me at the address shown above.

Respectfully,

Kevin Norton **ACTING FOR**  
State Conservationist

**FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS**

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>3/28/14</b>	4. Sheet 1 of _____
1. Name of Project <b>RPC Task LA434EA (H.004981)</b>		5. Federal Agency Involved <b>DOTD</b>	
2. Type of Project <b>LA Hwy 434 road widening project</b>		6. County and State <b>St. Tammany Parish, LA</b>	
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS <b>3/28/14</b>	2. Person Completing Form <b>Mike Lindsey</b>
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form) YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated   Average Farm Size <b>NA</b>   <b>76</b>	
5. Major Crop(s) <b>Pasture, corn, truck crops</b>	6. Farmable Land in Government Jurisdiction Acres: <b>345,575</b> % <b>61</b>		7. Amount of Farmland As Defined in FPPA Acres <b>341,930</b> % <b>60</b>
8. Name Of Land Evaluation System Used <b>St Tammany Parish LESA</b>	9. Name of Local Site Assessment System <b>NA</b>	10. Date Land Evaluation Returned by NRCS <b>4/23/14</b>	

<b>PART III (To be completed by Federal Agency)</b>	<b>Alternative Corridor For Segment</b>			
	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
A. Total Acres To Be Converted Directly	<b>164</b>			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor	<b>164</b>			

<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>	
A. Total Acres Prime And Unique Farmland	<b>43</b>
B. Total Acres Statewide And Local Important Farmland	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<b>0.01</b>
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	<b>13.5</b>

<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>	
	<b>100</b>

<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>	<b>Maximum Points</b>				
1. Area in Nonurban Use	<b>15</b>				
2. Perimeter in Nonurban Use	<b>10</b>				
3. Percent Of Corridor Being Farmed	<b>20</b>				
4. Protection Provided By State And Local Government	<b>20</b>				
5. Size of Present Farm Unit Compared To Average	<b>10</b>				
6. Creation Of Nonfarmable Farmland	<b>25</b>				
7. Availability Of Farm Support Services	<b>5</b>				
8. On-Farm Investments	<b>20</b>				
9. Effects Of Conversion On Farm Support Services	<b>25</b>				
10. Compatibility With Existing Agricultural Use	<b>10</b>				
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>	<b>160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>PART VII (To be completed by Federal Agency)</b>					
<b>Relative Value Of Farmland (From Part V)</b>	<b>100</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Corridor Assessment (From Part VI above or a local site assessment)	<b>160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>	<b>260</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
5. Reason For Selection:			

Signature of Person Completing this Part: \_\_\_\_\_ DATE \_\_\_\_\_

**NOTE: Complete a form for each segment with more than one Alternate Corridor**

## CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points  
 90 to 20 percent - 14 to 1 point(s)  
 Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points  
 90 to 20 percent - 9 to 1 point(s)  
 Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points  
 90 to 20 percent - 19 to 1 point(s)  
 Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points  
 Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)

As large or larger - 10 points  
 Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points  
 Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)  
 Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points  
 Some required services are available - 4 to 1 point(s)  
 No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points  
 Moderate amount of on-farm investment - 19 to 1 point(s)  
 No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points  
 Some reduction in demand for support services if the site is converted - 1 to 24 point(s)  
 No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points  
 Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)  
 Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

## Beam, Elizabeth

---

**From:** Elizabeth D. Smythe <edsmythe@stpgov.org>  
**Sent:** Tuesday, April 15, 2014 11:30 AM  
**To:** Beam, Elizabeth  
**Cc:** Charles E. Williams; Paul Carroll; Rebecca Lala  
**Subject:** RPC Task LA434EA (H.004981)  
**Attachments:** Hwy 434 Widening I-12 to Hwy 36 SoV (Smythe) 041414.pdf

Ms. Beam,

Attached please find the detailed SoV response from St Tammany Parish Department of Engineering for the subject project.

The project as proposed should have a positive impact on economic development in the area. It will increase traffic access for residential, commercial and institutional properties in the area that only a global solution, such as this, could accomplish.

The Department of Engineering is in support of the project as proposed. If you would like to receive specific information about these comments, we will be happy to provide you with details.

Regards,  
deEtte

*E. deEtte Smythe, PhD*  
Department of Engineering  
St. Tammany Parish  
21490 Koop Drive  
Mandeville, LA 70471  
(985) 898-2552 office  
(985) 974-1941 cell  
[edsmythe@stpgov.org](mailto:edsmythe@stpgov.org)

*Any e-mail may be construed as a public document, and may be subject to a public records request.*

## Beam, Elizabeth

---

**From:** Billie Jones <bjones@crt.la.gov>  
**Sent:** Thursday, April 17, 2014 4:09 PM  
**To:** Beam, Elizabeth  
**Subject:** SHPO Response  
**Attachments:** LA 434 CORRIDOR.pdf

Billie M. Jones  
Project Developer  
Office of Cultural Development  
Department of Culture, Recreation and Tourism  
P.O. Box 44247  
Baton Rouge, LA 70802  
225.342.6931  
bjones@crt.la.gov

## Beam, Elizabeth

---

**From:** Beth Altazan-Dixon <Beth.Dixon@LA.GOV>  
**Sent:** Thursday, March 27, 2014 9:50 AM  
**To:** Beam, Elizabeth  
**Subject:** RE: RPC Task LA434EA (H.004981): Solicitation of Views

I did.  
It was a pleasure working with you.



Beth Altazan-Dixon  
Office of Environmental Services/Public Participation and Permit Support Services Division  
P.O. Box 4313  
Baton Rouge, LA 70821-4313  
Phone: (225)219-3283  
Fax: (225)325-8148  
Email: [beth.dixon@la.gov](mailto:beth.dixon@la.gov)

---

**From:** Beam, Elizabeth [<mailto:Elizabeth.Beam@arcadis-us.com>]  
**Sent:** Thursday, March 27, 2014 9:48 AM  
**To:** Beth Altazan-Dixon  
**Subject:** RE: RPC Task LA434EA (H.004981): Solicitation of Views

Thank you.

I will forward on to her.

Beth

---

**From:** Beth Altazan-Dixon [<mailto:Beth.Dixon@LA.GOV>]  
**Sent:** Thursday, March 27, 2014 9:42 AM  
**To:** Beam, Elizabeth  
**Cc:** Linda (Brown) Hardy  
**Subject:** FW: RPC Task LA434EA (H.004981): Solicitation of Views  
**Importance:** High

Good morning Ms. Beam.

I am no longer associated with the SOV process.  
Please direct all correspondence of this nature to Mrs. Linda Hardy at [Linda.Hardy@LA.GOV](mailto:Linda.Hardy@LA.GOV).

Regards,



Beth Altazan-Dixon  
Office of Environmental Services/Public Participation and Permit Support Services Division  
P.O. Box 4313

Baton Rouge, LA 70821-4313  
Phone: (225)219-3283  
Fax: (225)325-8148  
Email: [beth.dixon@la.gov](mailto:beth.dixon@la.gov)

---

**From:** Beam, Elizabeth [<mailto:Elizabeth.Beam@arcadis-us.com>]  
**Sent:** Thursday, March 27, 2014 9:39 AM  
**To:** Beth Altazan-Dixon  
**Subject:** RPC Task LA434EA (H.004981): Solicitation of Views

Ms. Altazan-Dixon:

Early in the planning process for a transportation facility, views from federal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist the New Orleans Regional Planning Commission (NORPC), in cooperation with the Louisiana Department of Transportation and Development (LADOTD), in identifying possible adverse economic, social, or environmental effects from the project or other related concerns and reaching agreeable decisions while taking into account the interests of all parties.

In addition to identifying any concerns or issues mentioned above, a consultation with you to address cultural and historic resource issues pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800) is requested.

A project overview, including a project location map and Study Area map, is attached for your review.

On behalf of NORPC and LADOTD, ARCADIS U.S., Inc., requests that you review the attached information and furnish us with your views and comments by Monday, April 28, 2014. Replies should be sent to Beth Beam by e-mail or by U.S. mail at the addresses provided above. Please reference RPC Task LA434EA (H.004981) in your reply.

Thank you.

**Beth Beam MS, AICP, ENV SP** | Senior Planner/Scientist | [elizabeth.beam@arcadis-us.com](mailto:elizabeth.beam@arcadis-us.com)  
ARCADIS U.S., Inc. | 10352 Plaza Americana Drive | Baton Rouge, LA 70816  
T 225.292.1004 | M 225.335.0134 | F 225.218.9677  
[www.arcadis-us.com](http://www.arcadis-us.com)

ARCADIS, Imagine the result

Please consider the environment before printing this email.

---

NOTICE: This e-mail and any files transmitted with it are the property of ARCADIS U.S., Inc. and its affiliates. All rights, including without limitation copyright, are reserved. The proprietary information contained in this e-mail message, and any files transmitted with it, is intended for the use of the recipient(s) named above. If the reader of this e-mail is not the intended recipient, you are hereby notified that you have received this e-mail in error and that any review, distribution or copying of this e-mail or any files transmitted with it is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete the original message and any files transmitted. The unauthorized use of this e-mail or any files transmitted with it is prohibited and disclaimed by ARCADIS U.S., Inc. and its affiliates. Nothing herein is intended to constitute the offering or performance of services where otherwise restricted by law.

## Beam, Elizabeth

---

**From:** Ray, Dana R MVN <Dana.R.Ray@usace.army.mil>  
**Sent:** Thursday, May 15, 2014 3:13 PM  
**To:** Beam, Elizabeth  
**Cc:** Christine.charrier@la.gov  
**Subject:** SOV Response: MVN-2014-00958-SY (UNCLASSIFIED)  
**Attachments:** 2014-00958-SY.pdf

Classification: UNCLASSIFIED  
Caveats: NONE

Subject: LA434 widening and bridge replacement  
Location: Lacombe, LA, St. Tammany Parish

Thanks!

Dana Ray  
Completed Works, Operations Division  
New Orleans District Corps of Engineers CEMVN-OD-W P.O. Box 60267 New Orleans, LA 70160-0267  
504-862-1491

Classification: UNCLASSIFIED  
Caveats: NONE



BOBBY JINDAL  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES  
OFFICE OF WILDLIFE

ROBERT J. BARHAM  
SECRETARY  
JIMMY L. ANTHONY  
ASSISTANT SECRETARY

**Date** September 18, 2015  
**Name** Beth Beam  
**Company** ARCADIS  
**Street Address** 10352 Plaza Americana Drive  
**City, State, Zip** Baton Rouge, LA 70816  
**Project** LA 343 Corridor  
St. Tammany Parish  
**Project ID** 882014  
**Invoice Number** 15091803

Personnel of the Coastal & Nongame Resources Division have reviewed the preliminary data for the captioned project.

The Bayou Lacombe, which is designated as Scenic Rivers, is located within the proposed project area. Contact Chris Davis with the Louisiana Department of Wildlife and Fisheries at 225-765-2642 concerning these Scenic Rivers.

After careful review of our database, no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

The Louisiana Natural Heritage Program (LNHP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the LNHP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. Heritage reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. LNHP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time Heritage tracked species are encountered within the project area, please contact the LNHP Data Manager at 225-765-2643. If you have any questions, or need additional information, please call 225-765-2357.

Sincerely,

Amity Bass, Coordinator  
Natural Heritage Program

cc: Chris Davis

This Page Intentionally Left Blank



# Appendix B-2

## Solicitation of Views and Responses Tribes

This Page Intentionally Left Blank



**Environmental Section**

PO Box 94245 | Baton Rouge, LA 70804-9245  
Phone: 225-242-4502

**Bobby Jindal, Governor**  
Sherri H. LeBas, P.E., Secretary

April 2, 2014

STATE PROJECT NO. H.004981  
F.A.P. NO. H004981  
LA 434 CORRIDOR  
ROUTE: LA 434  
PARISH: ST. TAMMANY

The Honorable Oscola Clayton Sylestine  
Alabama Coushatta Tribe of Texas  
571 State Park Rd. 56  
Livingston, TX 77351

ATTN: Bryant Celestine  
Historic Preservation Officer

SUBJECT: Solicitation of Views and Initiation of Section 106 Consultation

Dear Chief Sylestine:

Early in the planning process for a transportation facility, views from federal, tribal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist with the identification of possible adverse economic, social, or environmental effects from the project or other related concerns and reach agreeable decisions while taking into account the interests of all parties.

In addition to identifying any concerns or issues mentioned above, a consultation with you to address cultural and historic resource issues pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800) is requested. Earth Search, Inc, will be conducting the cultural resources survey for the proposed project. If you know of potential Section 106 concerns, please advise us accordingly.

A project overview, project location map, and project study area map are attached for your review. We would also like to advise you that a stakeholders/elected officials meeting is anticipated in late Summer 2014 and will be held in St. Tammany Parish, Louisiana, followed by a public meeting on the same day. Notice of this meeting will be published in a local newspaper. The Environmental Assessment will be distributed for comments upon approval by FHWA and followed by a public hearing. Specific information regarding these meetings will be provided soon.

On behalf of the Federal Highway Administration (FHWA), we would appreciate receiving any comments you would like to offer by April 28, 2014; however, your ongoing input on the project

State Project No.:H.004981  
LA 434 CORRIDOR  
4-2-2014  
Page 2 of 2

is welcome at any time. If you have any questions concerning the project, please contact Ms. Michelle Whipp, LADOTD Environmental Impact Specialist at 225-242-4514 or [michelle.whipp@la.gov](mailto:michelle.whipp@la.gov), or Mr. Robert Mahoney, FHWA Environmental Specialist, at 225-757-7624.

Sincerely,

Noel Ardoin  
Environmental Engineer Administrator

NA/mw  
Attachments  
cc: Scott Nelson (FHWA)



**Environmental Section**

PO Box 94245 | Baton Rouge, LA 70804-9245  
Phone: 225-242-4502

**Bobby Jindal, Governor**  
Sherri H. LeBas, P.E., Secretary

April 2, 2014

STATE PROJECT NO. H.004981  
F.A.P. NO. H004981  
LA 434 CORRIDOR  
ROUTE: LA 434  
PARISH: ST. TAMMANY

The Honorable Gregory Pyle  
Choctaw Nation of Oklahoma  
P.O. Box 1210  
Durant, OK 74702

ATTN: Ian Thompson  
Tribal Historic Preservation Officer

SUBJECT: Solicitation of Views and Initiation of Section 106 Consultation

Dear Chief Pyle:

Early in the planning process for a transportation facility, views from federal, tribal, state, and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist with the identification of possible adverse economic, social, or environmental effects from the project or other related concerns and reach agreeable decisions while taking into account the interests of all parties.

In addition to identifying any concerns or issues mentioned above, a consultation with you to address cultural and historic resource issues pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800) is requested. Earth Search, Inc, will be conducting the cultural resources survey for the proposed project. If you know of potential Section 106 concerns, please advise us accordingly.

A project overview, project location map, and project study area map are attached for your review. We would also like to advise you that a stakeholders/elected officials meeting is anticipated in late Summer 2014 and will be held in St. Tammany Parish, Louisiana, followed by a public meeting on the same day. Notice of this meeting will be published in a local newspaper. The Environmental Assessment will be distributed for comments upon approval by FHWA and followed by a public hearing. Specific information regarding these meetings will be provided soon.

On behalf of the Federal Highway Administration (FHWA), we would appreciate receiving any comments you would like to offer by April 28, 2014; however, your ongoing input on the project

State Project No.:H.004981  
LA 434 CORRIDOR  
4-2-2014  
Page 2 of 2

is welcome at any time. If you have any questions concerning the project, please contact Ms. Michelle Whipp, LADOTD Environmental Impact Specialist at 225-242-4514 or [michelle.whipp@la.gov](mailto:michelle.whipp@la.gov), or Mr. Robert Mahoney, FHWA Environmental Specialist, at 225-757-7624.

Sincerely,

Noel Ardoin  
Environmental Engineer Administrator

NA/mw  
Attachments  
cc: Scott Nelson (FHWA)



## Solicitation of Views and Initiation of Section 106 Consultation

Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, Louisiana  
RPC Task LA434EA (H.004981)

### PRELIMINARY PROJECT DESCRIPTION

---

The New Orleans Regional Planning Commission (NORPC), in cooperation with the Louisiana Department of Transportation and Development (LADOTD), proposes widening a portion of Louisiana Highway 434 (LA 434) from two lanes to four lanes from LA 36 to its junction with the proposed LA 3241, a distance of approximately 4.5 miles, and replacing the bridge over Bayou Lacombe in St. Tammany Parish. The proposed Logical Termini include LA 36 to the north and Station 3061 of the I-12 to Bush Alternative Q to the south. The project consists of providing all necessary services required to prepare an Environmental Assessment (EA), in accordance with the National Environmental Policy Act, as amended, and the Federal Highway Administration's (FHWA's) regulations and guidelines, and to complete a Line and Grade Study.

The proposed action is identified as a Tier II – On System – Funded Project for fiscal year 2015 – 2024 in the *Metropolitan Transportation Plan, St. Tammany Urbanized Areas, Fiscal Years 2011 – 2040* (November 2010) and is included as a financially constrained priority project in the *Transportation Improvement Plan, St. Tammany Urbanized Areas, Fiscal Years 2012 – 2016* (March 2012). The project was administratively amended on August 15, 2014, pertaining to project limits.

The Study Area is located north of Interstate 12 (I-12), east of Watts Road (LA 41), west of LA 1088, and south of LA 36 in St. Tammany Parish, Louisiana. The Study Area is approximately 300 feet wide and extends south along LA 434 from LA 36 to the proposed junction of LA 434 and LA 3241. A location map that illustrates the Study Area is attached (Figure 1). The proposed I-12 to Bush Highway is an LADOTD-planned project funded by the Transportation Infrastructure Model for Economic Development (TIMED) program (Louisiana Revised Statute 48:820.2). The stated mission of the TIMED program is to “foster economic development throughout the state of Louisiana and enhance the quality of life for its residents through an investment in transportation projects.” The TIMED program, approved by the 1989 General Session of the Louisiana State Legislature, includes the construction of LA 3241, a multi-lane (four or more lanes) highway [Revised Statute 47:820.2.B(1)(e)], between Bush, Louisiana, and I-12 in St. Tammany Parish.

A Record of Decision (ROD) was issued in June 2012 that environmentally approved Alternative Q as the Selected Alternative from the I-12 to Bush Environmental Impact Statement (EIS). The LA 3241 alignment is a limited access corridor that connects with LA 434 approximately 1.3 miles north of I-12. The junction of LA 434 and LA 3241 is identified on the preliminary line and grade plans prepared as part of the I-12 to Bush EIS (August 2011) for Alternative Q. The intersecting point is identified as Station 3061. Subsequent to the ROD, it was determined that two constructed developments, the St. Tammany Parish Coroner's office and the South Central Park and Ride, along with an approximate



900-acre planned unit development, were located within the path of Alternative Q. LADOTD has realigned the portion of Alternative Q that connects with LA 434 to avoid these improvements. The realigned Alternative Q has not yet been environmentally cleared. Alternative Q of the realigned portion of LA 3241 and the Study Area for the LA 434 project are identified on Figure 2 (attached). The project team for LA 434 will coordinate with the design team for LA 3241 in order to fully develop the preliminary line and grade for the LA 434 improvements.

The EA will investigate the potential for effects to social, economic, and environmental resources including, but not limited to, cultural resources, threatened and endangered species, scenic rivers, natural resources, and the human environment within the Study Area. The proposed project will improve existing roadway infrastructure, require additional right-of-way, and may require relocations.

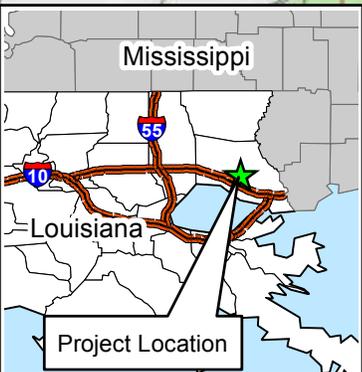
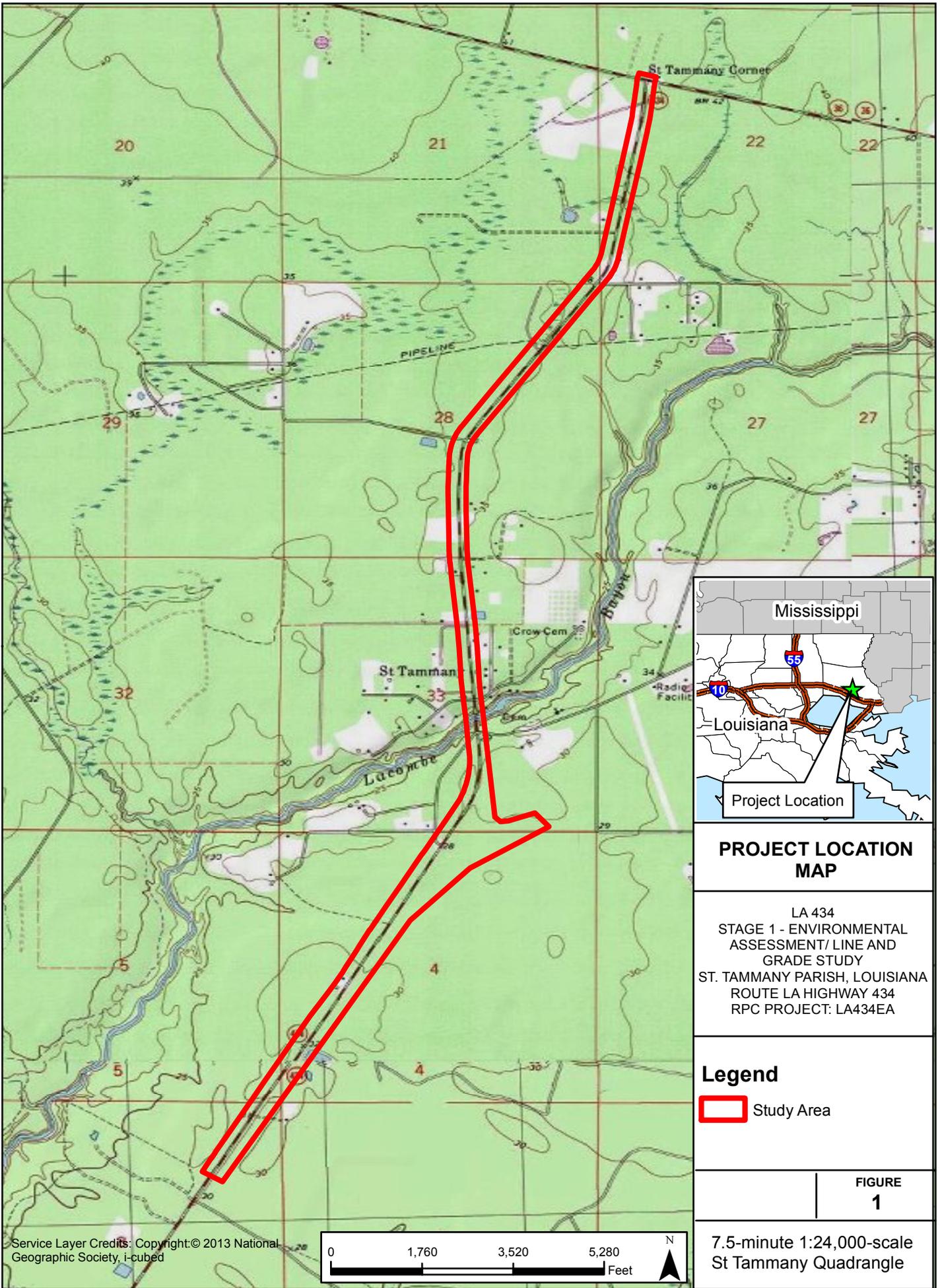
The purpose of the proposed project is to add roadway capacity and improve traffic operation for this segment of LA 434. The project need is to improve capacity and travel time and to relieve congestion; to support planned residential, institutional, and business growth within the parish urban growth boundary; and to replace the two-lane timber trestle bridge crossing Bayou Lacombe. This purpose is consistent with the goals of the Transportation Improvement Plan for the St. Tammany Urbanized Area and the TIMED program for the LA 3241 project, with which this project intersects. On behalf of NORPC and LADOTD, ARCADIS U.S., Inc., requests that you review the attached information and furnish us with your views and comments.

The conceptual improvement identified in the Stage 0 Feasibility Study as most feasible and practical includes widening LA 434 from two lanes to four lanes with median and shoulders. This widening will require the replacement of the existing bridge over Bayou Lacombe. Due to the earliness of this request, additional alternatives have not been developed. The Stage 0 alternative, along with all reasonable alternatives considered for the proposed action, will be discussed in the EA. The No Build Alternative, which assumes that this project will not be built, will also be considered.

The bridge over Bayou Lacombe, constructed in 1953, is a two-lane treated timber bridge with no shoulders. The bridge spans approximately 100 feet and is approximately 28 feet wide. LADOTD, in cooperation with FHWA and the State Historic Preservation Office (SHPO), completed a statewide historic bridge inventory for bridges constructed prior to 1971, which is presented in the *National Register Eligibility Documentation Report* (September 2013) prepared by Mead & Hunt. FHWA made its final National Register eligibility determinations, which are presented in this report, and the SHPO has concurred. As a result of this Louisiana historic bridge inventory, LA 434 (Recall Number 060260; Structure Number 62528520604621) crossing Bayou Lacombe was identified as *ineligible*.

Date Saved: 3/5/2014 9:08:03 AM

Path: \\LA01\FP02\Data\TRAP\Projects\LA003230.0000 LA 434\2-Data\GIS\_CADD\ArcMap\Project\Location\_8.5X11.mxd



**PROJECT LOCATION MAP**

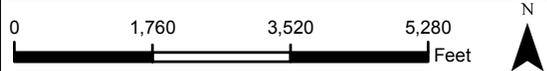
LA 434  
STAGE 1 - ENVIRONMENTAL  
ASSESSMENT/ LINE AND  
GRADE STUDY  
ST. TAMMANY PARISH, LOUISIANA  
ROUTE LA HIGHWAY 434  
RPC PROJECT: LA434EA

**Legend**  
 Study Area

**FIGURE 1**

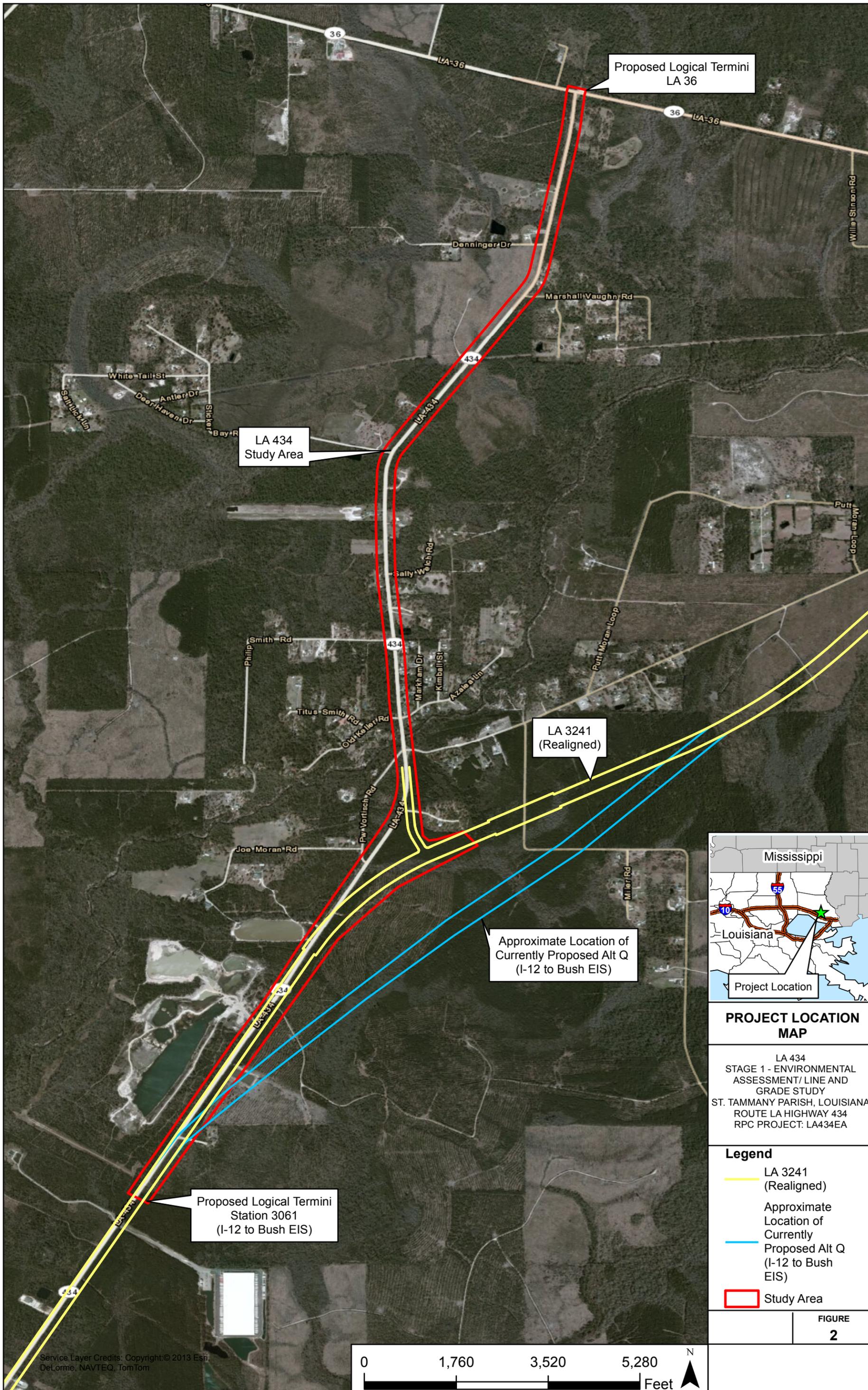
7.5-minute 1:24,000-scale  
St Tammany Quadrangle

Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed



Date Saved: 3/7/2014 9:45:43 AM

Path: \\LA01\FP02\Data\TRAI\Projects\LA003230.0000.LA.434\2-Data\GIS\_CADD\ArcMap\Project\Location\_11x17-2.mxd



**PROJECT LOCATION MAP**

LA 434  
 STAGE 1 - ENVIRONMENTAL ASSESSMENT/ LINE AND GRADE STUDY  
 ST. TAMMANY PARISH, LOUISIANA  
 ROUTE LA HIGHWAY 434  
 RPC PROJECT: LA434EA

- Legend**
- LA 3241 (Realigned)
  - Approximate Location of Currently Proposed Alt Q (I-12 to Bush EIS)
  - Study Area

FIGURE 2



# Appendix B-3

## Section 106

This Page Intentionally Left Blank



Environmental Section  
PO Box 94245 | Baton Rouge, LA 70804-9245  
ph: 225-242-4502 | fx: 225-242-4500

Bobby Jindal, Governor  
Sherri H. LeBas, P.E., Secretary

October 7, 2015

STATE PROJECT NO: H.004981  
F.A.P. NO: H004981  
NAME: LA 434 CORRIDOR  
ROUTE: LA 434  
PARISH: ST. TAMMANY

The Final Report has been reviewed and accepted. 22-5052  
*Phil Boggan* 10-22-15  
Phil Boggan Date  
Deputy State Historic Preservation Officer

Mr. Phillip E. Boggan II  
Deputy State Historic Preservation Officer  
Office of Cultural Development  
Louisiana Department of Culture, Recreation and Tourism  
P.O. Box 44247, Capitol Station  
Baton Rouge, LA 70804

SUBJECT: Final Report (LaDOA Report No. 22-5052): *Phase I Cultural Resources Survey for the Louisiana Highway 434 (LA 434), St. Tammany Parish, Louisiana*

Dear Mr. Boggan:

Enclosed for your library are two bound copies and one PDF copy of the final Cultural Resources Survey (CRS) report entitled, *Phase I Cultural Resources Survey for the Louisiana Highway 434 (LA 434), St. Tammany Parish, Louisiana*, dated September 2015, for the above captioned project. Also included are the Standing Structure Forms related to the captioned project, and one digital copy of the Standing Structure Forms, as well as the concurrence letter from your office dated September 18, 2015.

If you have any questions or require additional information, please do not hesitate to contact Michelle Hanks at 225-242-4514 or [Michelle.Hanks@la.gov](mailto:Michelle.Hanks@la.gov).

Sincerely,

*Noel Ardoin*  
for

Noel Ardoin  
Environmental Engineer Administrator

Enclosures  
NA/mwh  
cc: FHWA via [Louisiana.FHWA@dot.gov](mailto:Louisiana.FHWA@dot.gov) (w/ copy of enclosures)  
SHPO File

RECEIVED

OCT 07 2015

Louisiana Department of Transportation & Development | 1201 Capitol Access Road | Baton Rouge, LA 70802 | 225-379-1200

ARCHAEOLOGY

An Equal Opportunity Employer | A Drug-Free Workplace | Agency of Louisiana.gov | [dotd.la.gov](http://dotd.la.gov)



**Environmental Section**  
PO Box 94245 | Baton Rouge, LA 70804-9245  
ph: 225-242-4502 | fx: 225-242-4500

**Bobby Jindal**, Governor  
**Sherri H. LeBas**, P.E., Secretary

September 15, 2015

STATE PROJECT NO. H.004981  
F.A.P. NO. H004981  
NAME: LA 434 CORRIDOR  
ROUTE: LA 434  
PARISH: ST. TAMMANY

---

Mr. Phillip E. Boggan II  
Deputy State Historic Preservation Officer  
Office of Cultural Development  
Louisiana Department of Culture, Recreation and Tourism  
P.O. Box 44247, Capitol Station  
Baton Rouge, LA 70804

SUBJECT: Draft Report: *Phase I Cultural Resources Survey for the Louisiana Highway 434 (LA 434), St. Tammany Parish, Louisiana and No Adverse Effect To Historic Properties*

Dear Mr. Boggan:

Enclosed for your review and comment are two copies of the above-titled draft Cultural Resource Survey report, prepared by Earth Search, Inc., dated August 2015, which include copies of the Louisiana Historic Resource Inventory Standing Structure forms for the structures associated with this project in the Appendix. The Louisiana Department of Transportation and Development (LADOTD) in conjunction with the New Orleans Regional Planning Commission (RPC) and the Federal Highway Administration (FHWA), are proposing a project to widen a portion of the existing two-lane roadway from LA 36 to its junction with the proposed LA 3241, near Lacombe, in St. Tammany Parish. Plans also include replacing the 1953 bridge (Structure Number 62528521205991, Recall Number 060340) over Bayou Lacombe. No roadway closures are anticipated along LA 434. The project is approximately 4.5 miles in length, and approximately 80 acres of additional right-of-way (ROW) will be required.

The direct and indirect Area of Potential Effects (APE) for the proposed project was subject to a systematic cultural resources survey. On August 21-22, 2014, staff from Earth Search, Inc. (ESI) conducted a cultural resources survey to identify historic properties. The archaeological survey examined the direct APE, which was the limits of the required ROW, 80 acres. No archaeological sites were identified within the direct APE.

The standing structure study identified all structures 50 years of age or older within the direct and indirect APE, which included the required ROW and structures within .25 mile (400 M) diameter buffer of the existing LA 434 centerline. Eleven standing structures, greater than fifty years of age were identified: two were identified within the direct APE, and nine were identified in the indirect APE (see Table 1).

The Bayou Lacombe Bridge (Recall No. 060340), has been previously determined not eligible for listing on the National Register of Historic Places (NRHP) as a result of the Statewide Historic

Bridge Inventory conducted by Mead and Hunt Inc. on behalf of FHWA and LADOTD. The bridge did not meet the NRHP Criterion under A (associated with historic events or trends) or C (characteristic of a type, period or method of construction or are the work of a master). SHPO concurred with the NRHP determination on October 15, 2013.

**Table 1: Standing Structures identified within the direct and indirect APE.**

Standing Structure No.	Description	NRHP Eligibility	Effect Determination	Recommendations	Direct APE
52-02399	Unknown address, north side of LA 36 at LA 434 ca. 1930	Eligible	No Adverse Effect	Avoidance	No
52-02400	Unknown address (store), north side of LA 36 at LA 434 ca.1920	Not Eligible	N/A	No further work recommendation	No
52-02401	Unknown address, south of LA 36 at LA 434 ca.1930	Eligible	No Adverse Effect	Avoidance	No
52-02402	68070 LA 434 ca. 1935-40	Eligible	No Adverse Effect	Avoidance	No
52-02403	68032 LA 434 ca. 1940	Not Eligible	N/A	No further work recommendation	No
52-02404	68072 LA 434 ca. 1910	Eligible	No Adverse Effect	Avoidance	No
52-02405	66555 LA 434 ca.1930	Not Eligible	N/A	No further work recommendation	Yes
52-02406	66394 LA 434 ca.1960	Not Eligible	N/A	No further work recommendation	No
52-02407	30346 Old Keller Rd. ca. 1930	Not Eligible	N/A	No further work recommendation	No
52-02408	66308 Markham Dr. ca. 1965	Not Eligible	N/A	No further work recommendation	No
52-02409	65305 LA 434 (barn) ca. 1960	Not Eligible	N/A	No further work recommendation	Yes

STATE PROJECT NO: H.004981  
NAME: PHASE I CULTURAL RESOURCES SURVEY LA 434  
ST. TAMMANY  
LETTER TO MR. BOGGAN  
9/15/15  
Page 3 of 3

Two standing structures, greater than fifty years of age were identified within the direct APE: 52-02405 and 52-02409 (see Table 1). Neither building is recommended eligible for nomination to the NRHP. Of the nine standing structures recorded in the indirect APE, four of them are recommended eligible for nomination to the NRHP, however, as there is already a major highway adjacent to these structures and the proposed widening will not substantially affect the view shed of these eligible structures, the proposed project will not have an adverse effect on them and therefore no further consultation is requested (see Table 1). The remaining structures are recommended not eligible.

LADOTD, in conjunction with the RPC and FHWA, believe that there will be no adverse effects to historic properties as a result of the proposed project, and request your concurrence on the eligibility determinations of Structures 52-02399 through 52-02409, the proposed recommendations listed in Table 1, and our no adverse effect finding. If you have any questions or comments, contact Michelle Hanks at 225-242-4514 or michelle.hanks@la.gov.

Sincerely,



Digitally signed by Carey Coxie  
DN: cn=Carey Coxie, o,  
ou=LADOTD,  
email=carey.coxie@la.gov, c=US  
Date: 2015.09.16 08:20:45 -05'00'

Noel Ardoin  
Environmental Engineer Administrator

Enclosures  
NA/mwh  
cc: SHPO File  
FHWA



JAY DARDENNE  
LIEUTENANT GOVERNOR

**State of Louisiana**  
OFFICE OF THE LIEUTENANT GOVERNOR  
DEPARTMENT OF CULTURE, RECREATION & TOURISM  
OFFICE OF CULTURAL DEVELOPMENT

CHARLES R. DAVIS  
DEPUTY SECRETARY

PAM BREAU  
ASSISTANT SECRETARY

April 8, 2014

Elizabeth Beam  
Senior Planner/Scientist  
Arcadis US, Inc.  
10352 Plaza Americana Drive  
Baton Rouge, LA 70816

Re: Section 106 Request for Additional Information  
State Project No. H004981  
Stage 1 Environmental Assessment/Line and Grade Study  
LA 434 Corridor  
St. Tammany Parish, LA

Dear Ms. Beam:

Thank you for your letter that we received on March 27, 2014, concerning the above-referenced undertaking. In order to conduct the Section 106 Review for the proposed LA 434 Corridor project, we will need the following information:

- Name of federal agency, agency involvement (Funding, license\permit, etc. and description of the undertaking (Detailed description of project).
- Applicant contact information (Name, address, phone number and email address).
- Agency contact information (Name, address, phone number and email address).
- Description of the Area of Potential Effects (APE). The APE can be direct or indirect. It is defined as "the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist." (Include the latitude\longitude of the undertaking location and APE)
- Description of all historic properties within and adjacent to the APE. The historic standing structure is any structure fifty years of age and older. Under Section 106, it is the responsibility of the federal agency or its designee to identify all structures listed or eligible for listing in the National Register of Historic Places.
- Detailed project scope of work including design plans.

Elizabeth Beam  
April 8, 2014  
Page 2

- Map and site plan showing APE and exact location of project undertaking.
- Photographs of the entire APE and project location. Photographs of all historic (fifty years of age and older) within the APE. Buildings should be documented showing diagonal views of front and side and rear and opposite side of the building. All photos should be keyed to a site map and project plans if applicable.

If you have any questions, please contact Mike Varnado in the Division of Historic Preservation at (225) 219-4596 or [mvarnado@crt.la.gov](mailto:mvarnado@crt.la.gov).

Sincerely,



Pam Breaux  
State Historic Preservation Officer

PB:MV:s

## Beam, Elizabeth

---

**From:** Billie Jones <bjones@crt.la.gov>  
**Sent:** Thursday, April 17, 2014 4:09 PM  
**To:** Beam, Elizabeth  
**Subject:** SHPO Response  
**Attachments:** LA 434 CORRIDOR.pdf

Billie M. Jones  
Project Developer  
Office of Cultural Development  
Department of Culture, Recreation and Tourism  
P.O. Box 44247  
Baton Rouge, LA 70802  
225.342.6931  
bjones@crt.la.gov

This Page Intentionally Left Blank



# Content on CD

- CD-1 Biological Resources and Wetland Findings Report
- CD-2 Traffic Noise Analysis Technical Report
- CD-3 Phase I Environmental Site Assessment Report
- CD-4 Public Meeting Summary, January 13, 2015

This Page Intentionally Left Blank