

## 4.0 ENVIRONMENTAL CONSEQUENCES

Environmental consequences associated with implementing the No-Build Alternative and Preferred Alternative, Detour Route 2, are discussed in this chapter along with potential permits and mitigation measures. The No-Build Alternative is discussed in the context of the No-Build existing as a short term solution. In the event of a permanent closure of LA 70, there could be a need to modify the existing 44 and 70-mile detour routes. Impacts associated with widening, signalization or other necessary modifications to accommodate the increase in traffic would be highly speculative and are not discussed in this EA. Agency correspondence referenced in this chapter are included in **Appendix B**, unless stated otherwise.

### 4.1 Land Use and Development

This section addresses impacts to the land use categories of commercial, industrial, residential, and forested wetland. The No-Build Alternative will not change the present development pattern of land use categories in the project area.

Construction of the Preferred Alternative will result in the direct conversion of 8.29 acres of jurisdictional wetland, 5.42 acres of industrial land, 2.68 acres of commercial land, and 0.32 acres of residential land. This information is according to the USGS land use data presented in **Figure 5** (located at the end of Chapter 3) and the results of the wetland findings discussed in Chapter 4.18.

### 4.2 Community Facilities and Services

The No-Build Alternative will not impact any community facilities. However, in the event LA 70 is closed, a No-Build Alternative will affect a variety of community services including school bus routes, emergency services, resident's travel time, postal service routes, and waste management.

The Preferred Alternative will not impact any community facilities as there are none in the project study area. However, if LA 70 is closed, the Preferred Alternative will allow community facilities and services that use LA 70 to continue to function with an alternative route.

A letter was received from the Assumption Parish Police Jury, dated June 27, 2013, stating there is no objection to the proposed project. Correspondence with the Assumption Parish School Superintendent, dated June 25, 2013, states there will be no adverse impacts to the school system from the proposed project.

### 4.3 Relocations

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act) provides important protections and assistance for people

affected by federally funded projects. Relocation resources are available to all residential and business relocations without discrimination.

Although additional ROW is required, no relocations of existing residences will be required. Relocations primarily involve utilities and these are further discussed in Chapter 4.6. The Preferred Alternative will result in impacts to the American Tower/AT&T cell tower. The tower is considered a business interest and not a utility, per communication with DOTD. The tower structure is not in the proposed ROW. However tower anchors will have to be moved. If the anchors cannot be moved outside the limits of construction, the tower will require relocation. Should the tower require temporary or permanent relocation, negotiations may be necessary with American Tower to compensate for replacement or loss of service. If relocation occurs, the lease with the landowner would be compensated under the Uniform Act in accordance with business losses. DOTD will determine during final design how to address the cell tower. **Table 4-1** details the acreage, by parcel, of additional ROW that is anticipated to be acquired and the current value (based on DOTD District 61 Real Estate inquiry).

**TABLE 4-1  
ROW PROPERTY ACQUISITION ACREAGE AND COST**

<b>Parcel ID Number</b>	<b>Acres to be Acquired</b>	<b>Approximate Cost <sup>1</sup></b>
700082960	0.02	\$18.14
700026750	0.03	\$34.70
700042075	0.11	\$114.41
700074582	0.05	\$54.08
700085715	0.02	\$23.07
700042080	5.30	\$5,305.00
700052910	1.16	\$1,157.34
WARD 07	0.01	\$5.50
WARD 07	5.57	\$5,566.29

**NOTES:**

1. Cost is based on data obtained from the DOTD District 61 office at \$1,000/acre. If the project is constructed, a more accurate cost will be determined during the acquisition process.

**4.4 Employment Trends and Local Economy**

The No-Build Alternative will involve no change in the existing businesses abutting LA 70. However, under the No-Build Alternative, traffic and non-traffic serving businesses may be affected by the gradual deterioration of the capacity of the existing roadway network. Also, in the event LA 70 is shut down, local businesses

whose primary vehicular access is provided by LA 70 will be negatively impacted as residents and customers will not be able to easily commute.

The Preferred Alternative will continue to provide access to local businesses along LA 70 and allow residents to safely commute in the event the integrity of LA 70 is threatened.

#### 4.5 Environmental Justice

The No-Build and Preferred Alternatives will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations since census data did not reflect these populations in the project study area.

#### 4.6 Utilities

As no ROW acquisition will be required under the No-Build Alternative, there will be no utility impacts.

The Preferred Alternative will result in the need to cross or relocate multiple utilities including municipal water lines, electric lines, telecom lines, cable lines, and underground pipelines carrying natural gas, brine, and highly volatile liquids (HVLs). A detailed utility survey and cost estimate was prepared as part of the Detour Feasibility Study and can be found in Appendix J of the final Detour Feasibility Study report. Due to the decrease in overall ROW width for the mainline and increase in project area along LA 69, the utility relocation costs were recalculated using the assumptions made during the Detour Feasibility Study. The proposed utility impacts including the direct impacts associated with the turning lane along LA 69, is estimated to cost \$3,162,229. This cost only reflects construction costs and does not account for items such as engineering design, environmental permitting, construction inspection, wetland mitigation, facility shut-in, etc. This report assumed relocation of utilities will be required for any utilities crossing the proposed route with an intersection angle of 15 degrees or less, or traveling parallel and within the proposed ROW. **Table 4-2** provides a listing of the impacted utilities within the proposed ROW and an approximate relocation cost.

**TABLE 4-2  
UTILITIES POTENTIALLY IMPACTED BY THE PREFERRED ALTERNATIVE**

Owner/Operator <sup>1</sup>	Contents	Mitigation Description <sup>2</sup>	Pipe Diameter (inches)	Length (linear feet)	Unit	Unit Cost <sup>3</sup>	Total Cost
Assumption Parish	Water	Re-route Due to Tie-in	6	1,187.6	LNFT	\$30	\$35,629
Assumption Parish	Water	Re-route Due to Tie-in	14	1,187.6	LNFT	\$85	\$100,949
Assumption Parish	Water	Re-route Due to Tie-in	4	81.0	LNFT	\$24	\$1,944
AT&T	Buried Telecommunications Cable	Relocation Due to Tie-in	-	1,187.6	LNFT	\$35	\$41,566
AT&T/American Tower	Cellular Tower	Relocation of Tower and Equipment	-	1.0	EACH	\$1,200,000	\$1,200,000
Bridgeline Holdings	Natural Gas	Split Casing of Pipeline	24	96.0	LNFT	\$1,495	\$143,580
Bridgeline Holdings	Natural Gas	Split Casing of Pipeline	24	96.0	LNFT	\$1,495	\$143,580
Bridgeline Holdings	Natural Gas	Split Casing of Pipeline	24	63.7	LNFT	\$1,495	\$95,187
Bridgeline Holdings	Natural Gas	Split Casing of Pipeline	24	63.8	LNFT	\$1,495	\$95,336
Bridgeline Holdings	Water	Split Casing of Pipeline	12	65.1	LNFT	\$1,050	\$68,366
Bridgeline Holdings	Water	Split Casing of Pipeline	12	64.5	LNFT	\$1,050	\$67,725
EnLink Midstream	Highly Volatile Liquid	Split Casing of Pipeline	10	96.7	LNFT	\$1,000	\$96,730
EnLink Midstream	Highly Volatile Liquid	Split Casing of Pipeline	6	96.5	LNFT	\$600	\$57,924
EnLink Midstream	Natural Gas (Abandoned)	Cut and Seal of Pipeline	36	108.6	LNFT	\$100	\$10,862
Energy/AT&T	Overhead Electric/Telecom	Relocation/Elevation of Lines to EnLink	-	96.0	LNFT	\$90	\$8,640
Energy/AT&T/Allen's	Overhead Electric/Telecom/Cable	Relocation Due to Roadway Tie-in	-	1,188.7	LNFT	\$115	\$136,698
Energy/AT&T/Allen's	Overhead Electric/Telecom/Cable	Relocation Due to Tie-in	-	1,945.3	LNFT	\$115	\$223,711
Enterprise Products	Highly Volatile Liquid	Split Casing of Pipeline	12	63.1	LNFT	\$1,050	\$66,297
Enterprise Products	Highly Volatile Liquid	Split Casing of Pipeline	8	59.6	LNFT	\$800	\$47,712
Enterprise Products	Highly Volatile Liquid	Split Casing of Pipeline	8	60.4	LNFT	\$800	\$48,280
Enterprise Products	Natural Gas	Split Casing of Pipeline	12	96.0	LNFT	\$1,050	\$100,811
Enterprise Products	Natural Gas (Abandoned)	Cut and Seal of Pipeline	20	109.5	LNFT	\$100	\$10,953
Enterprise Products	Natural Gas (Abandoned)	Cut and Seal of Pipeline	20	108.8	LNFT	\$100	\$10,882
Enterprise Products	Natural Gas (Proposed)	Split Casing of Pipeline	20	49.9	LNFT	\$1,350	\$67,298
Texas Brine Company	Brine	Split Casing of Pipeline	12	96.0	LNFT	\$1,050	\$100,811
Texas Brine Company	Brine	Split Casing of Pipeline	12	163.0	LNFT	\$1,050	\$171,161
Texas Brine Company	Brine (Abandoned)	Cut and Seal of Pipeline	10	96.0	LNFT	\$100	\$9,601
<b>TOTAL</b>							<b>\$3,162,229</b>

**NOTES:**

- Utility line locations were estimated based on available data from the Feasibility Study and through contact with the various utility companies. This data should not be used for construction purposes and a detailed survey will need to be conducted during final design.
- For costing purpose, split casing of active pipelines for the entire ROW width was the assumed mitigation option. Additional options such as rerouting and matting may be feasible and will be determined during the final design.
- Unit costs are based on assumptions made in the Feasibility Study (Appendix J: Existing Utility Conflicts and Probable Relocations Study, dated October 2013).

#### **4.7 Traffic Patterns**

The No-Build Alternative will have no impacts on current traffic patterns. However, in the event LA 70 is shut down, traffic will not be able to flow and traffic patterns will be disrupted. The detour routes, one for passenger vehicles and one for truck traffic, involve routing around the east/west portion of LA 70 and are approximately 44 miles and 70 miles, respectively (see **Figure 2** at the end of Chapter 1). These routes result in approximately an hour of additional drive time for each trip from the project area to Napoleonville, Labadieville, or Donaldsonville.

The Preferred Alternative will continue to allow traffic to flow with little delay in the event LA 70 is closed. At its furthest point the Preferred Alternative will result in a 1.2 mile detour. A letter from the South Central Planning and Development Commission, the Metropolitan Planning Organization for Assumption Parish, received on June 28, 2013, confirmed this project will not put a burden on the current transportation system.

#### **4.8 Public Land and Recreation**

As discussed in Chapter 3.7, there are no state or federal parks, wildlife refuges, or wildlife management areas located in the project study area. Therefore, neither the No-Build nor the Preferred Alternative will impact public land or recreation areas.

#### **4.9 Cultural Resources**

The FHWA must consider the potential effects of a proposed action on historic properties per Section 106 of the National Historic Preservation Act of 1966, as amended. The No-Build Alternative will have no effect because no ground disturbances or ROW acquisitions will occur as a result of this project.

TRC conducted a Phase I Cultural Resources Survey (CRS) of the Preferred Alternative on February 4, 2014. Archival research was employed as the first step, including consulting maps, site files, and project files through the use of the Louisiana Division of Archaeology's online Louisiana Cultural Resources Map GIS database, Louisiana Historic Standing Structures Survey, NRHP database, and the Louisiana State Library.

Archaeological surveys and historic structures surveys were completed for an approximately 1.06 mile long, 200-foot-wide corridor. Field investigations were completed using surface inspection and shovel testing at 30 meter intervals across two transects. Two additional archeological sites and eleven previously recorded sites were noted within one mile of the Preferred Alternative. It was determined that none of these sites extend into the ROW of the Preferred Alternative. However, one previously recorded historic structure was shown to be within the area of potential effect. Field investigation confirmed it no longer exists. There were no newly recorded sites. No cultural material was found in the survey, and TRC

recommended no further consideration of archaeological resources or historic properties.

Based on the Phase I CRS, neither the No-Build nor the Preferred Alternative will have an adverse effect on cultural resources. The draft Phase I CRS was submitted to the SHPO on June 9, 2014 and the SHPO provided comments on July 10, 2014. A revised Phase I CRS was submitted to the SHPO on August 4, 2014. In an August 25, 2014 letter, the SHPO concurred with the determination that no historic properties will be impacted by the project (**Appendix B**).

#### **4.10 Sections 4(f) and 6(f)**

As discussed in Chapter 3.9, no properties were identified meeting the criteria for Section 4(f) or 6(f) lands within the project study area. Therefore, there will be no use of Section 4(f) properties and no conversion of Section 6(f) properties under the No-Build Alternative or Preferred Alternative.

#### **4.11 Visual Environment**

The No-Build Alternative will have no impact on existing views and aesthetic characteristics of the surrounding area.

The Preferred Alternative could impact the view shed of the residents near the start of the project, in the vicinity of Gumbo Street, because a roadway corridor will replace a previously undeveloped area. The proposed roadway is at-grade and view shed impacts will be minimal.

#### **4.12 Water Resources**

The No-Build Alternative will not impact existing surface water, groundwater quality, recharge potential, or area water wells.

There are potential impacts to surface waters associated with the Preferred Alternative during construction activities. The potential for sedimentation of erosion materials into the nearby drainage ditches and adjacent wetlands caused by storm water runoff could increase during construction activities. Exposed soils from construction activities are more susceptible to erosion. A majority of the project area drains to an unnamed tributary and then west to Bayou Corne. Portions of the project area where it intersects with LA 69 drain into an unnamed tributary and then to Grand Bayou. The appropriate use of Best Management Practices (BMPs) during construction will serve to reduce and/or eliminate the potential for sedimentation associated with construction activities.

The potential for an adverse impact associated with the Preferred Alternative on groundwater is extremely low due to the lack of usable aquifers in the project area. There are no SSAs in the project area and the Louisiana aquifer, MRAA, is not used for public water supply in this area. The project will not result in a substantial increase in impervious surface area. The Preferred Alternative will impact two

water wells, both of which are listed in SONRIS as monitoring wells. No PWS wells will be directly impacted by the proposed roadway. Water resources impacted can be seen in **Figure 9**, located at the end of Chapter 3.

In addition to the water well search performed in SONRIS, the LDNR was contacted regarding the location of ORWs in the project study area, as these wells are not necessarily in the SONRIS database. One of the two directly impacted monitoring wells in the ROW is an ORW.

A risk study was also conducted as part of the Detour Feasibility Study in regard to the close proximity of the proposed route to ORWs associated with the remediation of the Grand Bayou/Bayou Corne sinkhole. This study used the Computer-Aided Management of Emergency Operations (CAMEO) software to assist in identifying ORWs along the proposed roadway that should be plugged and abandoned. CAMEO was used to analyze several ORWs for methane gas (CH<sub>4</sub>) and hydrogen sulfide (H<sub>2</sub>S). The results of the study indicated there was no danger of either an explosive release or toxic gas plume. The threat zone analysis of H<sub>2</sub>S for explosive gas cloud showed the level of concern was never exceeded. However, Red and Orange Threat Zones resulted from the potential toxic area of a H<sub>2</sub>S vapor cloud release. According to the Detour Feasibility Study final report the:

- Red Threat Zone represents an area where anyone would experience a minimum H<sub>2</sub>S gas exposure of 50 parts per million (ppm) during a gas release. This area was determined to be approximately 51 feet from the well. Concentration of 100 ppm can cause loss of consciousness and possible death.
- Orange Threat Zone represents an area where anyone would experience and exposure between 27 ppm and 49 ppm of H<sub>2</sub>S gas. This area was determined to be between 52 and 160 feet from the well. Concentration less than 50 ppm can potentially cause headaches; eye, ear, and throat irritations; poor attention span and motor function; and bad memory.

The model results justify plugging all ORWs within 160 feet of the ROW. ORWs near the Preferred Alternative are shown on **Figure 16**. Six ORWs that will require plugging are listed on **Table 4-3** along with their current status and threat zone. The DOTD will closely coordinate with LDNR, the well owner, relative to the planning and implementation of plugging and abandonment activities. The anticipated cost to plug and abandon these wells is included in **Table 2-3**.

**TABLE 4-3  
ORWS IMPACTED BY THE PREFERRED ALTERNATIVE**

ORW No. <sup>1</sup>	Status	Threat Zone <sup>2</sup>
ORW-2	Active	Orange
ORW-15	Active	Red
ORW-16	Active	Red
ORW-24	Active	Orange
ORW-28	Active	Orange
ORW-31	Active	Orange

**NOTES:**

1. ORW locations are based on a shapefile obtained directly from LDNR on July 24, 2014 for ORWs in the project study area.
2. Threat zone distances were defined in the Detour Feasibility Study.

**4.13 Floodplains**

The No-Build Alternative will have no impact on floodplains or future flooding in the area.

**Figure 11** (located at the end of Chapter 3) shows the 100-year floodplain data for the project study area. Within the boundary of the Preferred Alternative, approximately 18.9 acres are located in the 100-year floodplain. In order to assure compliance with local, state, and federal agencies regarding floodplain requirements for the National Flood Insurance Program, correspondence was sent to the Assumption Parish Office of Emergency Preparedness, DOTD Floodplain Management Program (FMP), and the FEMA Region VI Mitigation Division via the Solicitation of View (SOV) process.

FEMA’s Mitigation Division sent a response dated June 13, 2013, requesting contact with the Assumption Parish Floodplain Administrator (APFA) for permits and requirements. SOV letters were sent to the APFA and the Flood Insurance Program Coordinator with the DOTD FMP on June 10, 2013. An SOV response was not received from the DOTD FMP or the APFA. However, direct contact was made with the APFA, John Boudreaux, during the floodplains findings discussed below.

**4.13.1 Project Area Background**

The entire project area is contained within Zone A designated floodplain as detailed on the FEMA FIRM Panel 220017-0025B. Base Flood Elevation (100-year event) in this area is 6.0 feet. At the request of Assumption Parish, the USACE conducted an independent evaluation of the 100-year flood level in this area. The results of that evaluation, dated September 20, 1993, determined that the Base Flood Elevation should be revised to 6.5 feet. This information was received during consultation with the APFA. The

majority of surrounding land is classified as wetland and has very little relief with an average elevation of 3.0 feet above mean sea level.

#### **4.13.2 Alternatives Impacts**

No impacts to existing floodplains are anticipated under the No-Build Alternative.

Due to the nature of the project area and purpose and need of this project, there is no feasible build alternative that does not impact the floodplain. The Preferred Alternative is designed to establish an emergency corridor in the case of catastrophic failure and should therefore be a practical length that avoids the potential hazard area. The Preferred Alternative described in Chapter 2.2 is 5,499 feet in length and will involve the placement of approximately 31,347 cubic yards of fill in order to elevate the proposed roadway one foot above the 100-year base flood elevation. Construction also requires the removal of approximately 4,411 cubic yards of existing soil in order to establish proper drainage along the roadway. Total floodplain impact is calculated at 18.9 acres. The proposed alternative alignment generally follows an established ridgeline which directs storm water away from the center. Existing LIDAR (elevation) data along the Preferred Alternative is shown in **Figure 17**. Culverts will be placed at appropriate locations to allow runoff to convey along its natural course. Since the duration of time the alternative may remain in place is uncertain and depends on a multitude of factors, all cross drain culverts will be designed to convey the 50-year frequency storm. Construction of detention treatment facilities to provide additional storage in the floodplain are not feasible since the surrounding existing grade elevation is well below the 100-year flood elevation.

#### **4.13.3 Floodplain Finding**

The entire project study area is fully contained within the Grand Bayou and Bayou Corne floodplains. Therefore, there is no practicable alternative to the proposed construction of a detour route that does not affect the floodplain. The Preferred Alternative is designed to provide all practicable measures to minimize floodplain impacts.

#### **4.13.4 Floodplain Mitigation**

Detailed hydrologic and hydraulic studies will be conducted during final design to determine the water surface elevation impacts of placing fill within the floodplain. These studies should show that no increase in flood level due to construction will occur.

The DOTD will review these studies in order to ensure that the most feasible mitigation measures are being taken to provide adequate assurance to the

adjacent properties that no increased risk of flooding will be a result of the detour construction.

#### 4.14 Farmlands

The No-Build Alternative will involve no disturbance of existing soils, the topographic character of the project study area, or prime farmland.

According to USDA guidance, federal agencies involved in projects that may convert farmland, as defined in the Farmland Protection Policy Act to nonagricultural uses, will need to submit Form AD-1006 or Form CPA-106 Farmland Conversion Impact Rating. A request was submitted to the NRCS and corridor project Form CPA-106 was utilized for the impact assessment. Per the CPA-106 provided by the NRCS dated June 17, 2014, out of the 18.9 acres included in the Preferred Alternative 13.5 are considered prime farmlands and are to be converted directly. The remainder of the project area is either not classified as prime farmland or exempt due to location within existing ROW. A majority of the prime or unique farmland soils are classified as Cancienne silty clay loam, totaling to 11.4 acres. A copy of the completed Form CPA-106 is included in **Appendix B**.

#### 4.15 Noise

As previously mentioned in Chapter 3.15, the TNM was used to determine traffic noise impacts for 20 noise-sensitive receptors near the proposed project. Noise impacts for the existing year, design year no-build, and design year build conditions were determined from a comparison of the NAC to the TNM results. Where a predicted noise level equaled or exceeded the DOTD NAC, or where the predicted noise level exceeded an existing noise level by 10 dBA, an impact will occur.

Noise level impacts are the same for both the No-Build and Build Alternative. In both the design year no-build and build conditions nine receptors experience noise impacts (see **Figure 18** and **Table 4-4**). When a traffic noise impact occurs, noise abatement measures must be considered. Noise abatement such as traffic management measures, alteration of horizontal or vertical alignments, and acquisition of property rights to serve as a buffer zone were determined to not be feasible or reasonable. The last abatement measure considered was the construction of noise barriers. A noise barrier would not be beneficial for Receptors 1, 9, 10, 11, or 12 due to the reoccurring breaks that would be required to maintain property access. A barrier analysis was conducted for the remaining four receptors (6, 7, 18, and 19) and determined to be feasible (a 10-foot barrier with a length of 431 feet was modeled). However, due to the cost per benefitted receptor, the barrier was determined unreasonable. Therefore, no feasible or reasonable noise abatement measures were defined. A copy of the full traffic noise analysis is included as **Appendix C**.

**TABLE 4-4  
TNM PREDICTED NOISE LEVELS**

Receiver	DOTD NAC (dBA)	Existing Year (2013)		Design Year (2038)					
		LAeq1h (dBA)	Impact Type <sup>(1)</sup>	No Build			Build		
				LAeq1h (dBA)	Increase over Existing (dBA)	Impact Type <sup>(1)</sup>	LAeq1h (dBA)	Increase over Existing (dBA)	Impact Type <sup>(1)</sup>
1	66	65.7	SL	67.4	1.7	SL	67.4	1.7	SL
2	66	56.9	-	58.6	1.7	-	58.6	1.7	-
3	66	49.9	-	51.6	1.7	-	51.9	2.0	-
4	66	45.8	-	47.5	1.7	-	48.3	2.5	-
5	66	57.5	-	57.6	0.1	-	61.8	4.3	-
6	66	66.3	SL	68.0	1.7	SL	68.0	1.7	SL
7	66	65.9	SL	67.5	1.6	SL	67.6	1.7	SL
8	66	62.5	-	64.1	1.6	-	64.1	1.6	-
9	66	64.2	-	65.9	1.7	SL	65.9	1.7	SL
10	66	64.6	-	66.3	1.7	SL	66.4	1.8	SL
11	66	65.6	SL	67.3	1.7	SL	67.3	1.7	SL
12	66	64.8	-	66.4	1.6	SL	66.4	1.6	SL
13	66	47.6	-	49.3	1.7	-	49.8	2.2	-
14	66	58.0	-	59.7	1.7	-	59.6	1.6	-
15	66	57.7	-	59.4	1.7	-	59.4	1.7	-
16	66	58.5	-	60.2	1.7	-	60.2	1.7	-
17	66	58.4	-	60.1	1.7	-	60.0	1.6	-
18	66	66.0	SL	67.6	1.6	SL	67.7	1.7	SL
19	66	66.1	SL	67.7	1.6	SL	67.8	1.7	SL
20	66	52.8	-	54.5	1.7	-	54.6	1.8	-

**NOTES:**

1. Types of impacts include sound level (SL), substantial increase (SI), or both (B).

**4.16 Air Quality**

The No-Build Alternative will involve no impacts to existing air quality.

The Preferred Alternative is not located in an area deemed nonattainment or maintenance for air quality by the USEPA. Therefore, conformity requirements and hot-spot analysis are not required for the proposed project. The proposed project is also exempt from a Transportation Air Quality Analysis because it is intended to enhance traffic safety and improve traffic flow. The project has low potential Mobile Source Air Toxic (MSAT) effects since current and projected vehicle traffic does not exceed the FHWA threshold (140,000 vehicles per day). Also, emissions for the years 2018 and 2038 will likely be lower than existing levels as a result of the USEPA’s national control programs, which are projected to reduce annual MSATs. Based on the results of the air quality analysis, the project is not expected to cause or contribute to any violations of the NAAQS.

Temporary impacts to air quality may occur during the construction phase of this project. Particulate Matter (PM) from site preparation will be the primary construction-related emissions, which will be temporary in nature and only occur during the construction phase. The potential impacts of PM emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate.

#### **4.17 Hazardous Waste**

The No-Build Alternative does not involve any ground disturbances or ROW acquisitions. Therefore, no impacts to hazardous waste sites and oil and gas wells will occur.

The potential impacts of the Preferred Alternative in terms of hazardous waste sites and oil and gas wells are based on data revealed during the search of LDNR's SONRIS database and the Phase I ESA. Providence personnel conducted a site reconnaissance of the subject property, which is the proposed ROW for the Preferred Alternative, and adjacent properties on June 16, 2014. The purpose of the investigation was to observe whether any visible areas of environmental concern were evident on the subject property. The Phase I ESA, dated September 2014, revealed evidence of recognized environmental conditions in connection with the subject property and provides further detail on the location and definition of subject property in Section 3.1, Location and Legal Description of the Phase I ESA (see **Appendix E**).

The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. Historical recognized environmental conditions are conditions that in the past would have been considered recognized environmental conditions, but under present circumstances may or may no longer be considered recognized environmental conditions. Historical recognized environmental conditions usually involve properties that have experienced a past release and have been remediated to the satisfaction of the responsible regulatory authority. Neither recognized environmental conditions nor historical recognized environmental conditions are intended to include de minimis conditions that generally do not present a material risk or harm to public health or the environment, and that will not likely be the subject of an enforcement action if discovered by the appropriate regulatory authority. Below is a summary of the various conditions documented in the Phase I ESA. Additional findings that did not illicit an environmental liability concern are discussed in detail in Chapter 9.4 of the Phase I ESA (see **Appendix E**).

#### 4.17.1 *Recognized Environmental Conditions*

Providence discovered an abandoned concrete pad and a bermed pond on parcel number 0700042080 during the June 16, 2014, site visit (see picture insert). Providence suspects the concrete pad and pond with the berm may have been constructed and used by the oil and gas industry, as the subject property is situated within the Napoleonville Oil and Gas Field. A review of LDNR's SONRIS well location system revealed one oil and/or gas production well, serial number 45197, to be on the subject property. The well was Dugas & Leblanc No. 1, and was located on the subject property within parcel number 0700042080 in close proximity to the aforementioned bermed pond and concrete slab. The well was drilled in November 1944 and converted into a saltwater disposal well in 1945. Documents obtained through LDNR indicate the Dugas & Leblanc No. 1 well was plugged and abandoned on June 23, 1999.



View of concrete slab in the woods along the northern boundary.

Additionally, SONRIS indicates a well pit existed adjacent to the Dugas & LeBlanc No. 1 well that contained produced water. It is likely the well pit was constructed without a protective liner. Without a protective liner, it is possible that petroleum byproducts in the production water in the well pit may have leached into the ground. Since it is likely the well pit was constructed without a liner, the well pit is a recognized environmental condition.

#### 4.17.2 *Historical Recognized Environmental Conditions*

No Historical Recognized Environmental Conditions were identified in the Phase I ESA on the subject property.

#### 4.17.3 *De Minimis Conditions*

Solid waste existed in various locations along the adjoining properties. Various forms of solid waste including a mattress, paint cans, car parts, bottles, cans, and other miscellaneous items were observed on parcel number 0700026400 and on the sides of the access road north of the cellular tower. The solid waste does not elicit an environmental concern on the property, and is a *de minimis* condition.

#### **4.18 Wetlands**

The No-Build Alternative does not involve any ground disturbances or ROW acquisitions. Therefore, the No-Build will not have any adverse impacts on jurisdictional wetlands or other waters of the United States.

Based on field observations, the wetland habitat proposed to be impacted by the Preferred Alternative appears to be of high quality consisting of 4.97 acres of bottomland hardwoods and 2.16 acres of cypress/tupelo. Potential jurisdictional wetlands and habitat type within the ROW of the Preferred Alternative are shown on **Figure 19**. Very few, if any, undesired species were identified such as Chinese tallow tree (*Triadica sebifera*) and sweet gum (*Liquidambar styraciflua*). High quality forested wetland habitat types provide essential habitat for wildlife and ample canopy for canopy dependent species. These hydric areas serve as excellent wading bird foraging areas, denning, and travel ways for numerous species, such as gray and fox squirrels, raccoon, opossum, and white-tailed deer.

Little evidence of old rookeries was observed. However, the likelihood of potential future rookery establishment would be considered high based on the quality of the habitat. Bald eagles were observed in the surrounding area, but no nests were discovered within the project area.

In addition to providing quality habitat for terrestrial and avian species, wetlands help maintain water quality by retaining sediment and contaminants and removing or transforming nutrients. As these wetlands appear healthy, it is presumed that they perform these functions adequately. The majority of the impacts to the identified wetland habitats will be permanent, with temporary impacts expected in construction laydown areas and temporary access roads.

As discussed in Chapter 2.1.1, three preliminary alternatives were studied during the Feasibility phase and all would have resulted in impacts to area wetland habitats (see **Figure 3** at the end of Chapter 2). The northern most route, Detour Route 3, was developed to avoid the cell tower impact but was eliminated early on because it had the largest impact to wetlands. According to NWI data, the southernmost alternative, Detour Route 1, may have resulted in fewer impacts to wetlands than the Preferred Alternative. However, it was not selected due to additional impacts to utilities that rendered the alternative infeasible. Therefore, DOTD selected Detour Route 2, as the Preferred Alternative to move through to the Planning/Environmental Stage.

A request for a jurisdictional determination on the amount and location of wetlands associated with the ROW for the Preferred Alternative was submitted to the USACE on February 18, 2014. The request was revised on June 16, 2014 to include the additional project area along LA 69. A preliminary jurisdictional determination (MVN-2014-00584-SY) was received from USACE dated August 11, 2014 (see **Appendix F**). This determination confirms the presence of jurisdictional wetlands in the project area and a Section 404 permit is required prior to the deposition or redistribution of dredged or fill material into wetlands. This

determination also identified Grand Bayou as a navigable waterway and is subject to USACE jurisdiction under Section 10 of the Rivers and Harbors Act. However, no work will occur in this bayou as part of the proposed detour route.

A joint permit application (JPA) may be submitted to the LDNR for the proposed project after the EA is completed. Mitigation for impacts to wetland functions and value will be assessed and conducted during the permitting process. Best Management Practices (BMP's) will be utilized during construction to aid in preventing additional impacts to the adjacent wetland areas. The Preferred Alternative represents the only practical alternative for the LA 70 Detour Route.

#### **4.19 Coastal Zone**

The No-Build Alternative will involve no impacts to the coastal zone.

As discussed in Chapter 3.19, Assumption Parish lies within the Louisiana Coastal Zone Boundary. Therefore, the Preferred Alternative will have impacts to the coastal zone and will require permitting through the LDNR. A JPA may be submitted to the LDNR for the proposed project after the EA is completed.

#### **4.20 Rivers and Scenic Streams**

As mentioned in Chapter 3.20, there will be no impact with either the No-Build or Preferred Alternative on national or state scenic rivers, as there are no national wild and scenic rivers, free-flowing segments of the Nationwide Rivers Inventory, or Louisiana Scenic Streams within or near the project study area.

#### **4.21 Wildlife**

The No-Build Alternative should involve no disturbance of existing wildlife.

The proposed project area provides habitat for expected wildlife in wetlands. A site visit to ascertain the presence of sensitive species in the project area was conducted in February 2014. While the project area does support habitat suitable for the bald eagle, no nests were observed. Additionally, no wading or nesting bird colonies or golden eagles or nests were observed during the field visit. Construction activities associated with the Preferred Alternative may result in temporary relocation of species mentioned in Chapter 3.21, as shelter and food resources could be temporarily affected. Correspondence from the LDWF, dated June 13, 2013, indicated nesting bird colonies may be present in the general project area. As nesting colonies are mobile, a project commitment has been made to conduct a field survey for nesting birds no more than two-weeks prior to the commencement of construction activities. The LDWF will be consulted if construction activities will come within 400 meters of most nesting colonies or 700 meters within brown pelican nesting colonies.

#### **4.22 Threatened and Endangered Species**

As mentioned in Chapter 3.22, correspondence with the USFWS and LDWF stated there will be no effect on threatened or endangered species or their critical habitats. A site visit was conducted by two Providence personnel on February 3, 2014, to assess the presence of threatened or endangered species. The survey was conducted 500 feet north and south of the Preferred Alternative's centerline, and no federally listed threatened or endangered species were observed in the area. Therefore, both the No-Build and the Preferred Alternative will have no effect on threatened and endangered species or critical habitats for threatened or endangered species.

#### **4.23 Unique and Environmentally Sensitive Areas**

The No-Build Alternative is not expected to impact unique or environmentally sensitive areas.

Wetland habitats in and adjacent to the Preferred Alternative represent environmentally sensitive areas. Construction of the Preferred Alternative cannot proceed without obtaining proper permits from the USACE and LDNR to allow for construction in wetlands and the coastal zone. BMP's and restrictions contained within the Section 404/Coastal Use Permit, the Clean Water Act Section 401 Certification, and the Storm Water Pollution Prevention Plan (required for construction activities greater than five acres) will provide protection measures to prevent damage to adjacent wetland (and agricultural) habitats during construction.

Potential areas of significant trees were identified in the project area. During the design stage, landscape architectural staff and District Roadside Development Coordinators will be consulted concerning ROW to identify the location of significant trees. The design section will indicate the location of these trees on the final plans and implement a context sensitive design to accommodate these trees, if any, as practical.

#### **4.24 Mineral Resources**

The No-Build Alternative is not expected to impact Assumption Parish's mineral resources.

While the Napoleonville Salt Dome and one mineral lease are present within the bounds of the project area, the Preferred Alternative will not prevent or encumber access to or use of these resources. Mineral resources within the ROW of the Preferred Alternative can be seen on **Figure 15**, located at the end of Chapter 3.

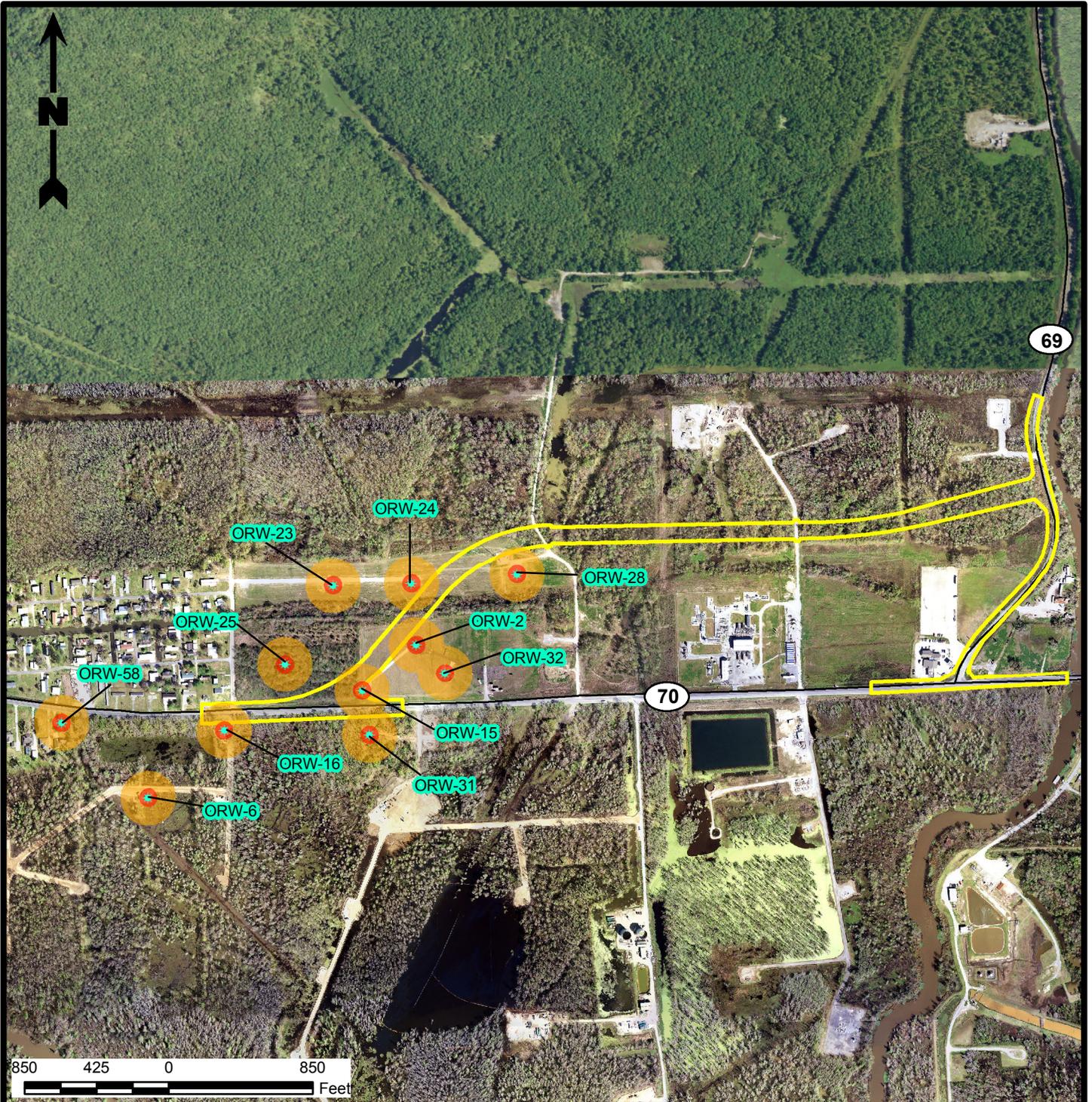
## 4.25 Other Considerations

### 4.25.1 *Secondary and Cumulative Effects*

Secondary or Indirect effects/impacts are those “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”(40 CFR 1508.8(b)). Effects that are considered reasonably foreseeable include changes in land use patterns, population density, traffic patterns, and increased area growth. For the LA 70 Detour Route, traffic pattern changes will be a direct impact, as LA 70 will be closed and traffic will have to be re-routed. Secondary effects would only be expected in the event the roadway was built and remained in place. It is the intent of the detour route to be a temporary solution, as proposed in this EA. As a temporary roadway, it could be removed after the emergency situation was resolved, thereby minimizing the potential for secondary effects. In the event that the Preferred Alternative remained in place as a permanent solution, it is reasonable to assume that agricultural land and wetlands adjacent to the new roadway may experience development pressure.

Cumulative effect or impact is the “impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). As with secondary impacts, since the project is intended to be a temporary solution, it is not expected to remain in place long enough to result in measureable cumulative effects. However, it should be noted that the sinkhole and associated area of subsidence may cumulatively affect land use patterns due to the potential closure of LA 70 and the need to relocate existing structures and business interests. In the event the Preferred Alternative becomes a permanent solution, current traffic patterns will be permanently altered. Business interests could relocate to the LA 70 Detour Route due to the lack of access resulting from the sinkhole, resulting in development pressure on existing wetlands and agricultural lands. In the absence of impacts to area businesses (agricultural, industrial, etc.) resulting from the sinkhole, the LA 70 Detour Route would not be expected to change the general land use pattern of the project area.

Traffic patterns will change because LA 70 will be closed and the detour route will become the new east/west travel pattern. This change will not unduly burden the existing network, as it will replace the closed portion of LA 70.



**Legend**

-  Detour Route 2
-  Red Threat Zone
-  Orange Threat Zone
-  Observation Relief Well (ORW)

**Reference**

Base map provided by CB&I on 4/15/14. ORW data was only partially available on LDNR SONRIS and the remainder was obtained directly from LDNR on 7/24/14.

**ORW Threat Zones**

LA 70 Detour Route  
 State Project No. H.010571.2 EA  
 Assumption Parish, Louisiana

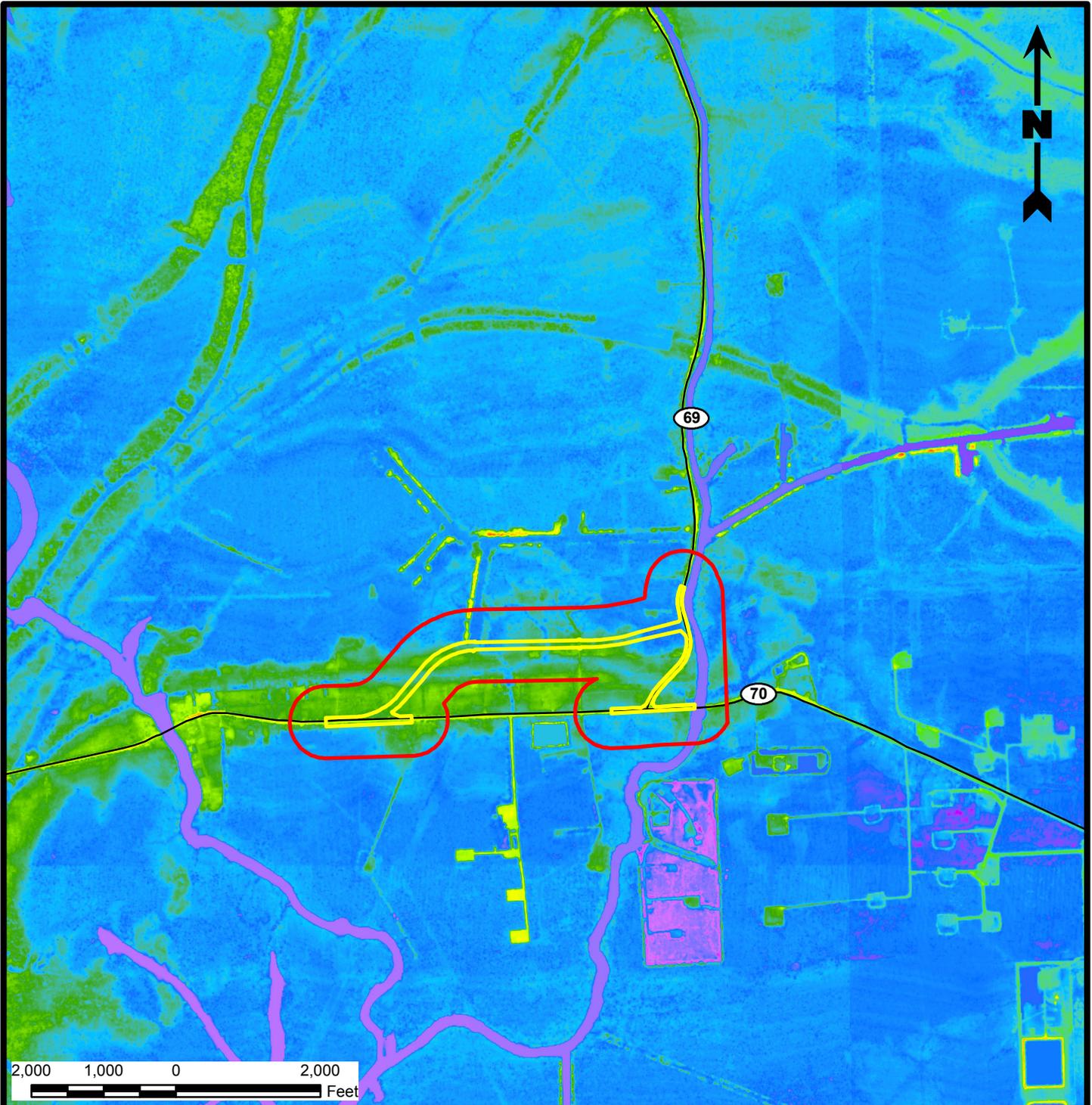
**Louisiana Department  
 of Transportation and Development**



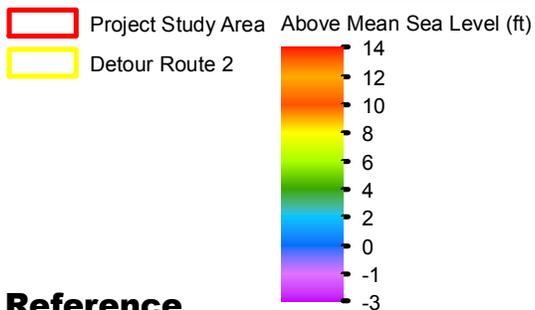
**PROVIDENCE**

Drawn By	ECL	12/12/13
Checked By	MEH	5/27/14
Approved By	MEH	11/4/14

Project Number 040-014-000	<b>16</b> Figure
Drawing Number 040-014-000-A074	



**Legend**



**Reference**

Lidar data obtained from Louisiana Oil Spill Coordinator's Office dataset 2014.

**LIDAR Data**  
 LA 70 Detour Route  
 State Project No. H.010571.2 EA  
 Assumption Parish, Louisiana

**Louisiana Department  
 of Transportation and Development**



**PROVIDENCE**

Drawn By	ECL	12/12/13
Checked By	MEH	6/4/14
Approved By	RAD	11/4/14

Project Number 040-014-000	<b>17</b> Figure
Drawing Number 040-014-000-A061	



**Legend**

- Detour Route 2
- Receiver Location
- Impacted Receiver Location

**Reference**

Base map provided by CB&I on 4/15/14.

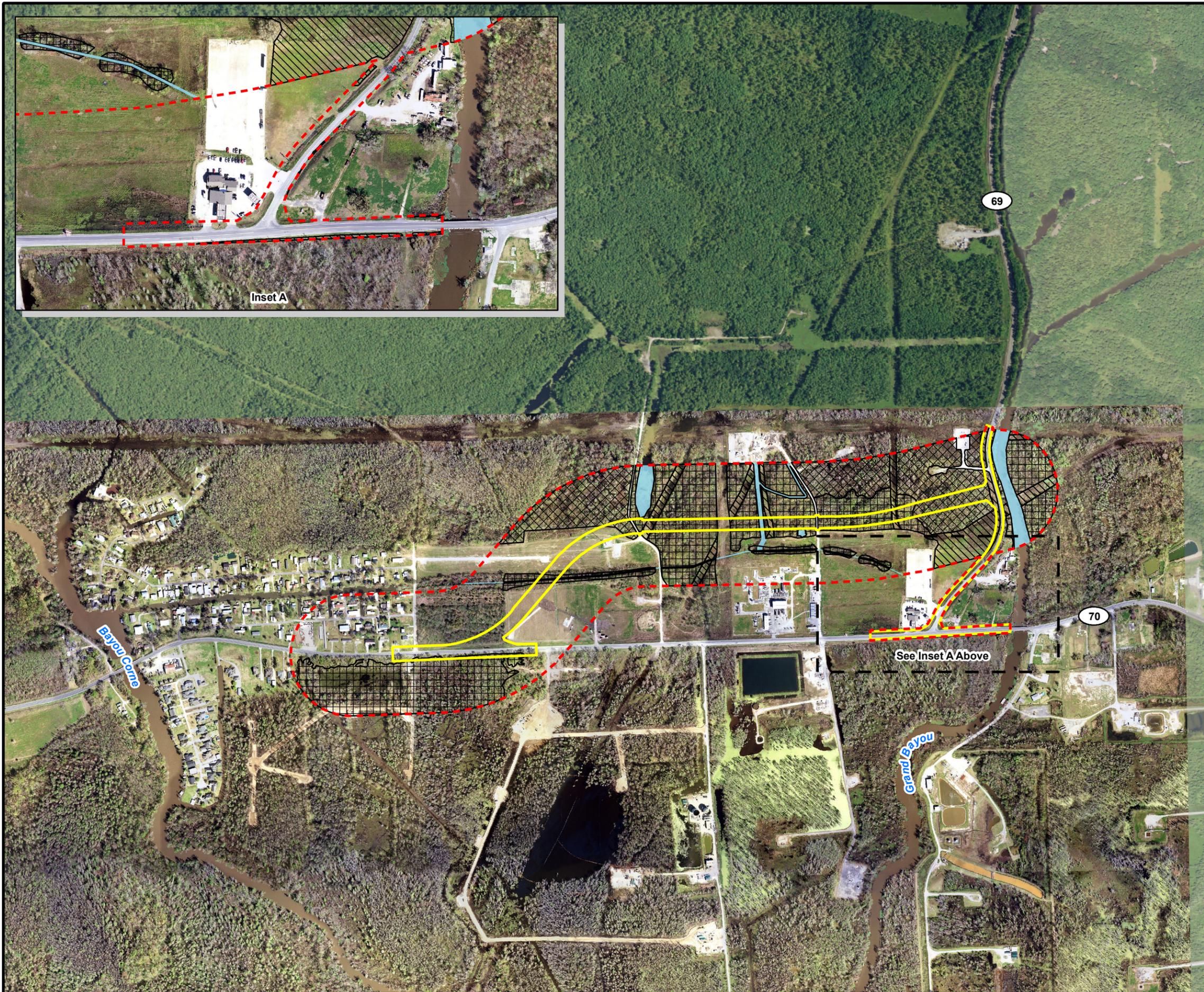


**2038 Predicted Noise Levels**  
 LA 70 Detour Route  
 State Project No. H.010571.2 - EA  
 Assumption Parish, Louisiana

**Louisiana Department  
 of Transportation and Development**



Drawn By	ECL	5/2/14
Checked By	MEH	5/27/14
Approved By	MPH	11/4/14
Project Number	040-014-000	<b>18</b> Figure
Drawing Number	040-014-000-B046	



**Legend**

- Limits of Delineation (153.22 acres)
- Detour Route 2
- Potential Jurisdictional Wetlands within Project Area**
- Palustrine Emergent (1.16 acres)
- Palustrine Forested (4.97 acres)
- Cypress/Tupelo (2.16 acres)
- Potential Other Waters of the U.S. (1.27 acres)

**Reference**

Base map provided by CB&I on 4/15/14. Potential jurisdictional wetlands based on wetlands delineation conducted on 2/3/14 and 6/10/14 by Providence personnel.



**Potential Jurisdictional Wetlands**  
 LA 70 Detour  
 State Project No. H.010571.2 EA  
 Assumption Parish, Louisiana  
**Louisiana Department**  
**of Transportation and Development**



Drawn By	ECL	5/20/14
Checked By	MEH	5/27/14
Approved By	MEH	11/4/14
Project Number	040-014-000	<b>19</b> Figure
Drawing Number	040-014-000-B062	