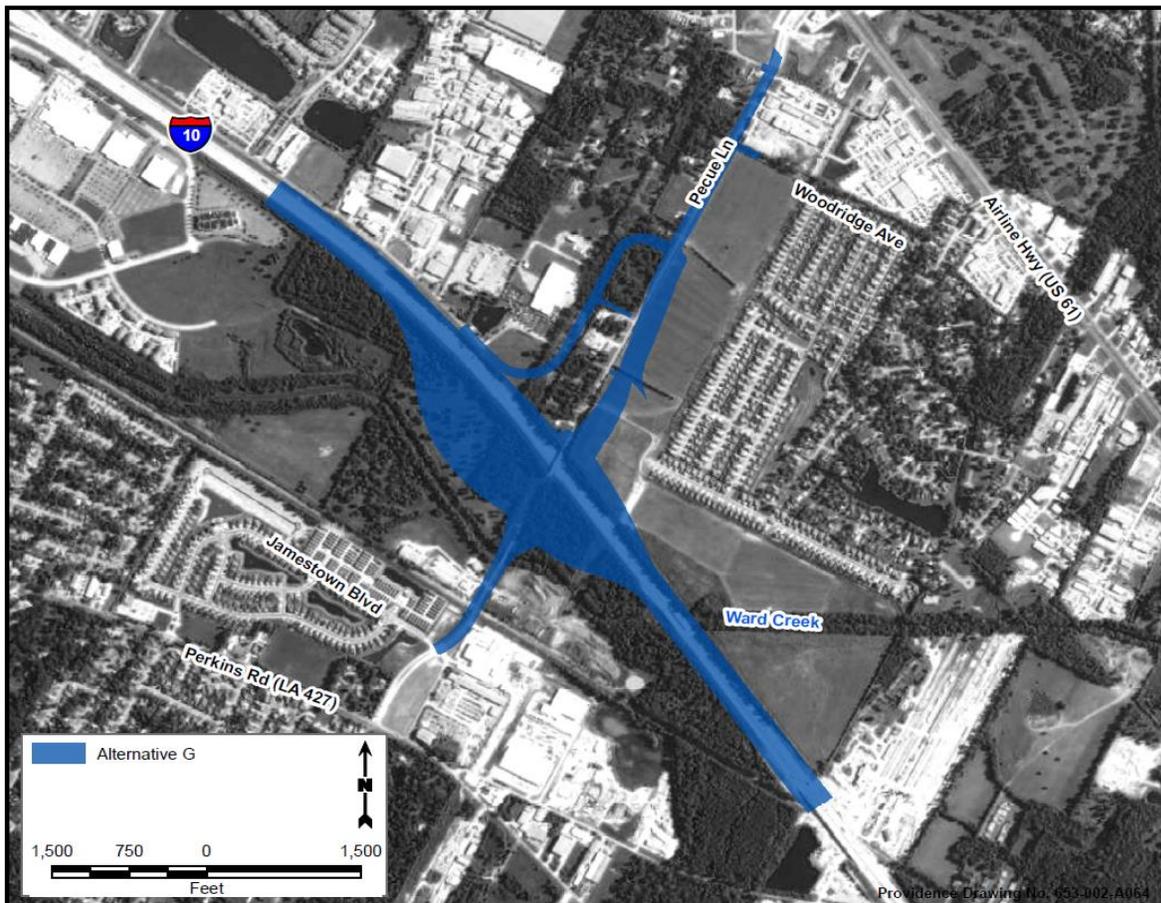


ENVIRONMENTAL ASSESSMENT with Finding of No Significant Impact

PECUE LANE/I-10 INTERCHANGE EAST BATON ROUGE PARISH

State Project No. H.004104
Federal Aid Project No. H004104



Base map comprised of ESRI World Imagery dated 2015.

JUNE 2016



FEDERAL HIGHWAY ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACTS (FONSI)

FOR

STATE PROJECT NO. H.004104

F.A.P. NO. H004104

NAME: PECUE LANE/I-10 INTERCHANGE

ROUTE: I-10

PARISH: EAST BATON ROUGE

The FHWA has determined that this project will not have any significant impact on the human environment. This Finding of No Significant Impacts (FONSI) is based on the Environmental Assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required.

APPROVED

CARL M. HIGHSMITH
PROJECT DELIVERY TEAM LEADER
FEDERAL HIGHWAY ADMINISTRATION
DATE 6/21/2016

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

E.1 INTRODUCTION

E1.1. Background

Between 1994 and 2005, the need for a new Interstate Highway 10 (I-10) interchange had been investigated by DOTD and the Capital Region Planning Commission (CRPC) and Pecue Lane was the location selected. The I-10/Pecue Lane project was added to the projects to be studied and implemented by the GLP and was also included in the State Implementation Plan (SIP). In 2008, an Interchange Justification Study (IJS) was completed to support the development of a new I-10 interchange at Pecue Lane. This study looked at current and future traffic at existing I-10 interchanges at Siegen Lane and Highland Road, as well as future improvements at Pecue Lane since the proposed project would be expected to relieve congestion at these interchanges. The IJS recommended an urban diamond interchange as the preferred interchange configuration.

In 2010 the project moved forward with the initiation of the environmental clearance document, class of action determined to be an Environmental Assessment (EA).

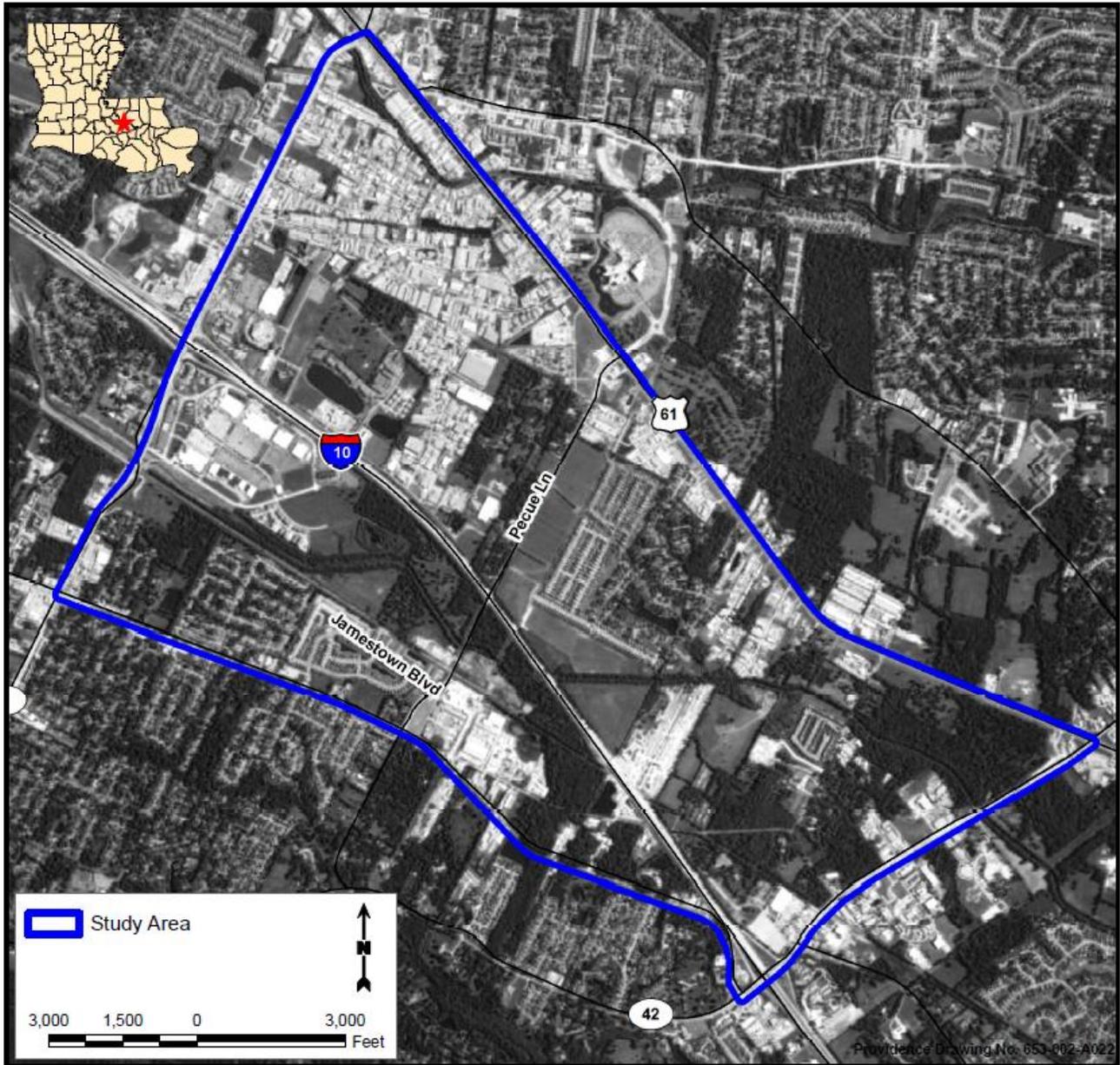
E1.2. Project Description

The City of Baton Rouge and Parish of East Baton Rouge (City-Parish), as part of the Green Light Plan Transportation and Street Improvements Program (GLP), are proposing to create a new interchange off of Interstate Highway 10 (I-10) at Pecue Lane in East Baton Rouge Parish, Louisiana. The proposed project involves the widening of Pecue Lane and the construction of a new interchange at I-10 and Pecue Lane, replacing the existing overpass.

Pecue Lane will be widened from a primarily two-lane facility to a six lane facility. In addition to road widening, the project will include entrance and exit ramps on eastbound and westbound I-10, the replacement of the current two-lane overpass bridge and the Pecue Lane/Ward's Creek Bridge, the installation of a raised median on Pecue Lane, and the construction of an extension of Rieger Road to Pecue Lane with a new intersection at Pecue Lane. The project will also consider ramp metering. Temporary barriers on I-10 will be replaced with permanent barriers.

Figure 1 demonstrates the project study area.

**FIGURE ES-1
STUDY AREA MAP**



Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

E.2 PURPOSE AND NEED

The purpose of the project is to relieve congestion at existing I-10 interchanges in the project study area, reduce travel time, redistribute traffic on the local network decreasing surface street delays, and provide better access for trucks to and from I-10 to local commercial and industrial corridors. Increased travel demand and changing travel patterns have resulted in heavy congestion on and at existing interchanges with I-10 in the project study area. A new interchange is needed to alleviate congestion by providing additional access to and off I-10 in the project study area.

E.3 ALTERNATIVES DEVELOPMENT AND SCREENING

E3.1. Alternatives Considered

In total, 15 build alternatives for the interchange of Pecue Lane with I-10 as well as the No-Build Alternative were studied to determine the best option for access and other traffic considerations. The alternatives primarily differed by interchange type (conventional diamond, single point urban interchange, *etc.*) and were suggested for study by DOTD, the City-Parish, or the Engineer for the City-Parish. Some of the build alternatives represented different alignments of the same interchange type (D-1, D-2, and D-3). Rieger Road options, termed R1 and R2, and were added to Alternatives B, C, and D-1, D-2, and D-3. R1 opted for a shorter route through residential property and R2 traveled around all the residential properties within 0.4 miles of I-10. Further along in the alternatives development process, and after the first two rounds of public meetings, another build alternative was added that incorporated a diverging diamond design, this alternative is Alternative G.

Figure ES-2 represents the alignments of the original Build Alternatives considered for this project that were presented to the public prior to the third public meeting. **Exhibit ES-1** is a summary of the alternatives development and screening process. The exhibit provides a time line and rationale for alternatives that were dropped from further study.

E3.2. Alternatives Studied in Detail

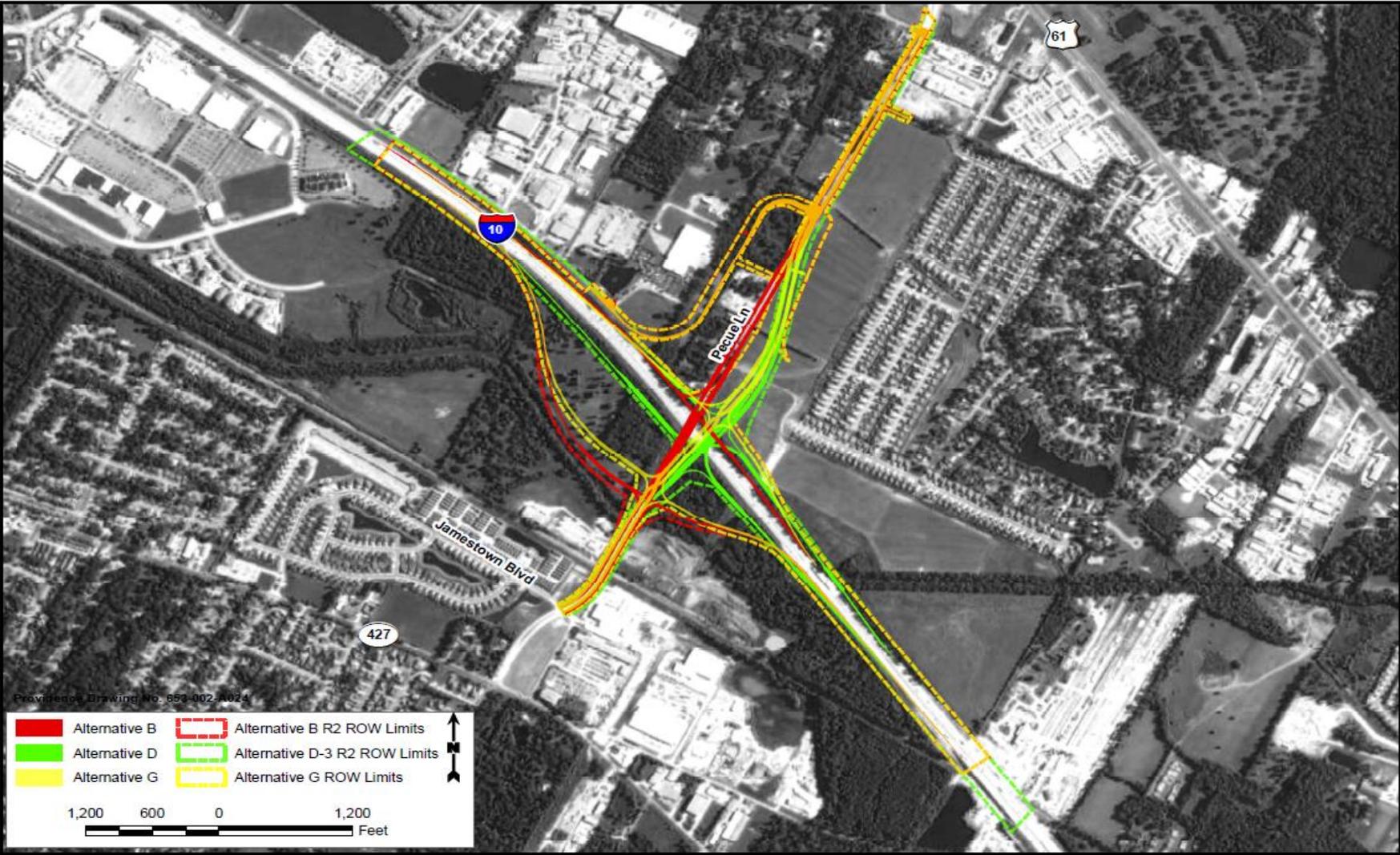
Alternatives B R2 (conventional diamond interchange), D-3 R2 (single point urban interchange) and G (diverging diamond interchange) were determined to meet the purpose and need, future projected traffic demand, and to be reasonable and feasible. A public meeting held in February 2015 presented the three remaining build alternatives, as well as the No-Build Alternative, for review and comment. **Figure ES-3** represents the three build alternatives recommended for consideration as the preferred alternative. **Exhibit ES-2** is the Build Alternatives Comparison Matrix that provides a side by side comparison of the build alternatives and their potential impact on various elements.

FIGURE ES-2
PRELIMINARY ALTERNATIVES



Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

**FIGURE ES-3
BUILD ALTERNATIVES**

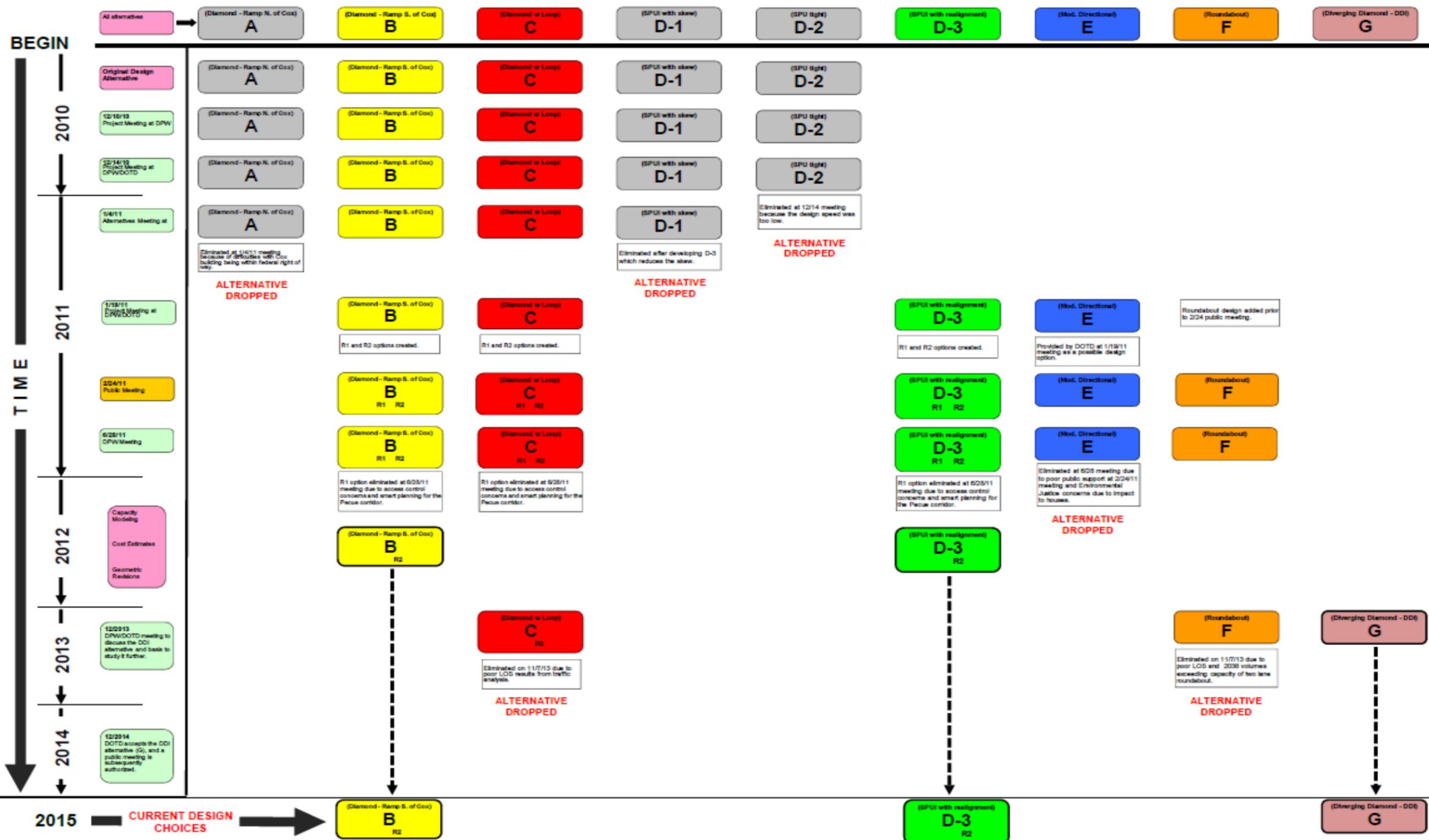


Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

EXHIBIT ES-1
SUMMARY OF DEVELOPMENT OF DESIGN ALTERNATIVES

Pecue Lane at I-10: Summary of the Development of Design Alternatives

Last Update: 3/15/2015



**EXHIBIT ES-2
BUILD ALTERNATIVES COMPARISON MATRIX**

EVALUATION CRITERIA	ALTERNATIVE B R2 Conventional Diamond Interchange	ALTERNATIVE D-3 R2 Single Point Urban Interchange	ALTERNATIVE G Diverging Diamond Interchange
Purpose and Need			
Meets Purpose and Need	Yes	Yes	Yes
Engineering			
Length (miles)	4.45	4.69	4.56
Pecue Length (miles)	1.29	1.31	1.31
Required Right-of-Way (acres)	70.54	39.27	68.82
2038 Average Daily Traffic for Connector (Pecue) ¹	53,000	53,000	53,000
Anticipated Level of Service for the Alternatives (Pecue) ¹	D or better	D or better	C or better
Potential At-Grade Railroad Crossings	1	1	1
Potential Navigable Water Crossings (assumes Ward's Creek is navigable)	1	1	1
Constructability			
Construction Complexity ²	Medium	High	High
Community Disruption/Impacts during Construction	High	Medium	Medium
Cultural Resources ³			
Potential to Impact Historical Resources	Low	Low	Low
Potential to Impact Archaeological Resources	Medium	Medium	Medium
Potential Wetlands			
Potential Wetlands (acres) ⁴	57.37	25.78	50.32
Potential Hydric Soils (acres)	74.85	42.18	62.02
Threatened/Endangered/Protected Species			
Potential Impact to Threatened and Endangered Species	None	None	None
Community Impacts			
Residential Structures	9	5	5
Commercial Property	5 ^{5,6,7}	3 ⁵	3 ⁵
Churches	0	0	0
Recreational Areas	0	0	0
Other Community Facilities	0	0	0
Land Use			
Potential Impact to Prime Farmland (acres)	88.73	85.78	79.74
Potential Impact to the 100-yr Floodplain (acres)	88.42	48.46	72.32
Visual Quality			
Potential Visual Quality Impacts	Low	Low	Low
Environmental Liability Concerns ⁸			
Potential Impacts to Hazardous Sites	Medium	Medium	Medium
Active Oil and Gas Wells within 160 feet of Proposed Right-of-Way	2	2	2
Active Water Well Locations	3	2	2
Other Environmental Concerns			
Utility Impacts ^{9,10}	41,470 feet	41,780 feet	42,280 feet
State Scenic Streams	None	None	None
Potential Visual Quality Impacts	Medium	Medium	Medium

NOTES:

- ¹ Average Daily Traffic and Level of Service data applies to Pecue Lane only; it does not include I-10 and ramps.
- ² Construction complexity estimates the general difficulty of construction based on grade adjustments, the number of railroad crossings, the number of potential navigable water crossings, utility relocations, and ROW.
- ³ Cultural resource estimates are based off data provided by Earth Search, Inc. conducted on November 30, 2010.
- ⁴ Potential wetlands were defined using National Wetlands Inventory data and minimal field verification. Wetland numbers are based on entire proposed right-of-way and do not differentiate between permanent or temporarily impacted areas. A wetlands delineation will be conducted once a Preferred Build Alternative is identified.
- ⁵ Total number includes Cable Works, Stanley Security Solutions, and a Strip Center housing Flower Basket Florist and Premier Office Products.
- ⁶ Total number includes Cox Distribution Center.
- ⁷ Total number includes Bofinger Tree Services.
- ⁸ According to the LDNR SONRIS database as of 1/2/15.
- ⁹ Total number includes utilities for water, gas, and electric lines impacted throughout
- ¹⁰ Total number includes impact to Ascension Parish Wastewater due to impact to fence and possible undergrounds.

E3.3. Preferred Alternative

Exhibit ES-3 represents the Preferred Alternative Identification Matrix. The criteria by which the build alternatives were compared are listed in order of importance after determining that each alternative met the project purpose and need.

Alternative D-3 R2/Single Point Urban Interchange requires the least amount of right-of-way acquisition and impacts the least amount of natural resources. This alternative was second in operational efficiency and conflict points; however, it was the most expensive of the three build alternatives.

Alternative B R2/Conventional Diamond Interchange was last in operational efficiency and has almost double the conflict points of Alternative G/Diverging Diamond Interchange. The cost of Alternative B R2 is slightly higher than Alternative G and it requires the acquisition of more right-of-way than Alternative G. Alternative B R2 received the highest support by the participating public.

Alternative G/Diverging Diamond Interchange is the most efficient of the three interchange options and has the fewest conflict points. While it does require more right-of-way (ROW) than Alternative D-3 R2, it affects fewer residential and commercial properties. Alternative G represents the least expensive of the three build alternatives based on preliminary estimates and has been identified as the Preferred Alternative.

Alternative G is shown on **Figure ES-3a**.

E.4 ENVIRONMENTAL CONSEQUENCES

Exhibit ES-3's impact evaluation criteria contains generalized data on potential environmental impacts associated with the Preferred Alternative. Additional technical studies for wetlands, cultural resources, air and noise impacts, and possible environmental liability concerns were conducted after the selection of the Preferred Alternative. The results of these studies indicate:

- There are potential jurisdictional wetlands in the proposed ROW
- No cultural resources were located
- No impacts to air quality are expected
- 12 receptors receive a noise impact that cannot be mitigated with structures or changes to the alignment
- One parcel within the proposed ROW had materials on site that meet the definition of "recognized environmental concern"; whether this site represents an environmental liability will require additional investigation

**EXHIBIT ES-3
PREFERRED ALTERNATIVE IDENTIFIED MATRIX**

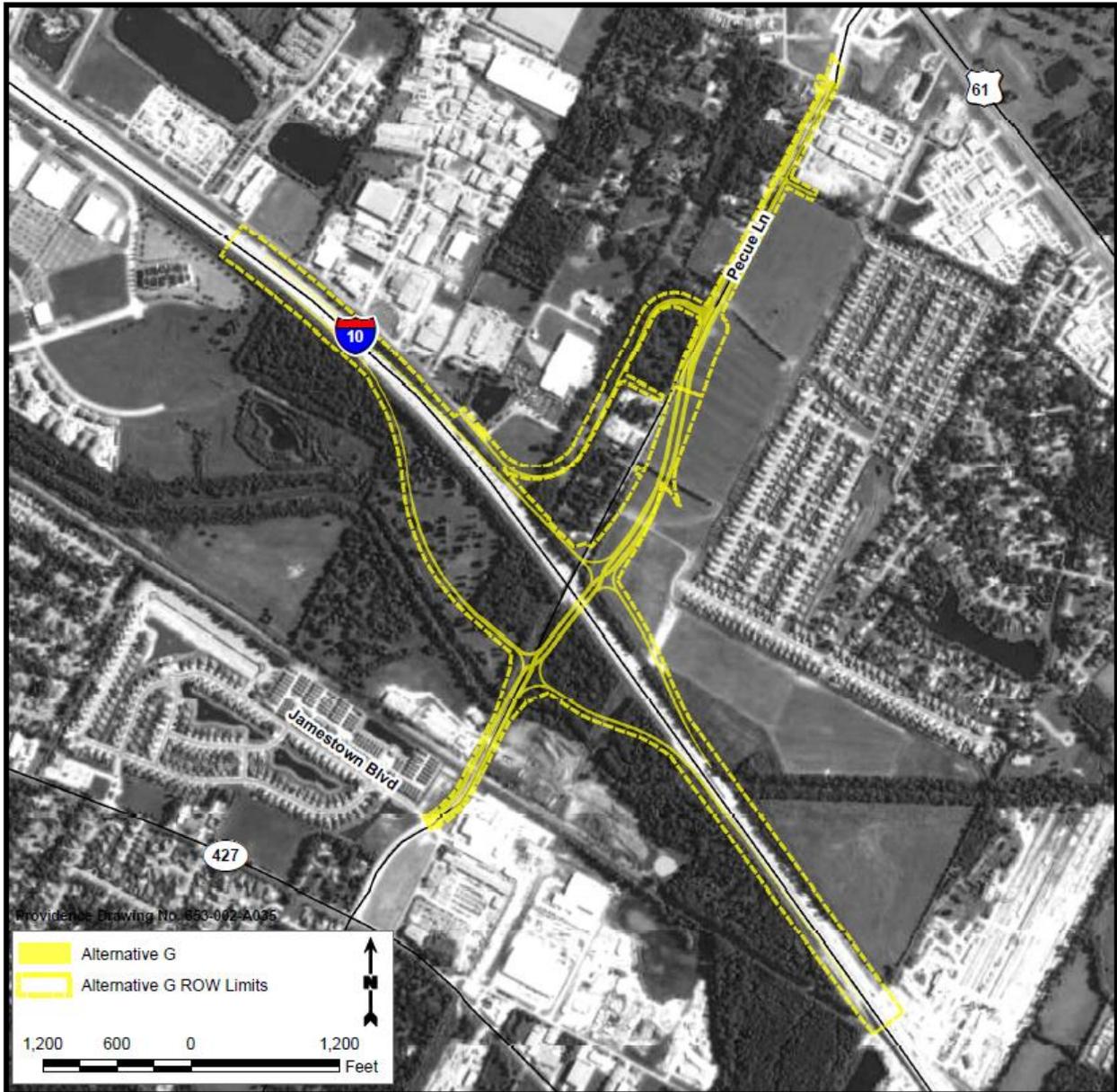
EVALUATION CRITERIA (in order of importance in decision-making process)	ALTERNATIVE B R2 Conventional Diamond Interchange	ALTERNATIVE D-3 R2 Single Point Urban Interchange	ALTERNATIVE G Diverging Diamond Interchange	NO BUILD
Meets Purpose and Need	Yes	Yes	Yes	No
Function				
Anticipated Level of Service (Pecue) ¹	D or better	D or better	C or better	NA
Operational Efficiency	Good	Better	Better	NA
Safety (points of conflict)	26	18	14	NA
Cost				
Estimated Construction Costs (millions)	\$ 41.88	\$ 57.21	\$ 40.40	NA
Estimated Total Cost (does not include mitigation)	\$ 54.28	\$ 70.37	\$ 52.54	NA
Impacts				
Required Right-of-Way (acres)	70.54	39.27	68.82	0
Potential to Impact Archaeological Resources ²	Medium	Medium	Medium	NA
Potential Wetlands (acres) ³	57.01	25.78	49.55	0
Potential Impact to the 100-yr Floodplain (acres)	78.22	47.77	71.37	0
Residential Structures	3	5	3	0
Commercial Property	0	3 ⁴	0	0
Churches	0	0	0	0
Potential Impacts to Hazardous Sites	Medium	Medium	Medium	0
Active Oil and Gas Wells within 160 feet of Proposed Right-of-Way ⁵	0	2	0	2
Active Water Well Locations ⁵	2	2	2	2
Utility Impacts ^{6,7}	41,470 feet	41,780 feet	42,280 feet	0
Public Comments				
Number of 1, 2, and 3 ranks received on comment sheets	79	34	33	26
Number 1 concern - Right-of-Way, Property, Business Impacts	Highest	Lowest	Middle	NA

Most desirable/least affected is highlighted in purple (for build alternatives)

TABLE NOTES:

- ¹ Average Daily Traffic and Level of Service data applies to Pecue Lane only; it does not include I-10 and ramps.
- ² Cultural resource estimates are based off data provided by Earth Search, Inc. conducted on November 30, 2010.
- ³ Potential wetlands were defined using National Wetlands Inventory data and minimal field verification. Wetland numbers are based on entire proposed right-of-way and do not differentiate between permanent or temporarily impacted areas. A wetlands delineation will be conducted once a Preferred Build Alternative is identified.
- ⁴ Total number includes Cable Works, Stanley Security Solutions, and a Strip Center housing Flower Basket Florist and Premier Office Products.
- ⁵ According to the LDNR SONRIS database as of 1/2/15.
- ⁶ Total number includes utilities for water, gas, and electric lines impacted throughout the length of project.
- ⁷ Total number includes impact to Ascension Parish Wastewater due to impact to fence and possible undergrounds.

**FIGURE ES-3a
PREFERRED ALTERNATIVE G**



Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

E.5 COST SUMMARY

A total cost comparison of the preliminary build alternatives was prepared for the preferred alternative selection process, **Exhibit ES-3**. The cost for the Preferred Alternative was further refined during the EA process and is estimated to be \$59 million. The Preliminary Opinion of Probable Cost is located in **Appendix B**.

E.6 PERMITS, MITIGATIONS, AND COMMITMENTS

E6.1. Permits

Permits that may be required to be obtained prior to construction of the Pecue Lane/I-10 Interchange include:

- United States Army Corps of Engineers (USACE) Section 404 Permit for impacts to jurisdictional wetlands
- Section 401 Water Quality Certification issued by the Louisiana Department of Environmental Quality (LDEQ) in support of the Section 404 permit
- Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water Discharge Permit for Construction Activities (greater than five acres) issued by the LDEQ
- Railroad Crossing

E6.2. Mitigation and Commitments

All ROW purchased will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) and will be based on fair market value as determined by local, recent real estate transactions as approved by the City-Parish and DOTD.

Mitigation and Commitments

ITEM	OVERSITE AGENCY	MITIGATION/COMMITMENT
Residential Property Acquisition	City-Parish	All ROW purchased will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and will be based on fair market value negotiated by the City-Parish and individual owner.
Commercial Property Acquisition	City-Parish	All ROW purchased will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and will be based on fair market value negotiated by the City-Parish and individual owner.
Utility Relocation	City-Parish	Specific relocation plans for utilities are developed during final design. Functional or financial responsibility for relocation of a specific facility or line may differ depending on prior agreements between the utility providers, current landowners, local government, and the City-Parish.
Traffic Management	DOTD/City-Parish	Suggested sequence of construction and traffic maintenance will be developed as part of final design to ensure continued access to all properties. Requirements for special considerations will be identified and addressed.
Wetlands	USACE	A preliminary jurisdictional determination request will be submitted to the USACE. As jurisdictional wetland impacts are anticipated, a Section 404 permit application will be filed and required mitigation conducted prior to permit issuance.

SPN H.004104 – EXECUTIVE SUMMARY

ITEM	OVERSITE AGENCY	MITIGATION/COMMITMENT
BREC Trails Program	BREC	The multi-use path under design by BREC will be incorporated into the design for the Preferred Alternative.
General Construction Impacts	LDEQ	Cut and fill operations will be minimized, as practicable. Design and construction activities will incorporate best management practices (BMPs) to prevent future erosion including temporary soil erosion control measures and permanent control measures. Compliance with the provisions of the storm water general permit will minimize environmental impacts during construction.
Construction Impacts – Surface Water	LDEQ	Temporary control measures to reduce migration of soils offsite to surface water may include the phasing of construction, limiting the amounts of impervious surfaces created, preservation of stream buffers and sensitive areas such as natural wetlands and riparian corridors, limiting disturbance of soil and vegetation, and maintaining the natural infiltrative capacity. Permanent control measures may include the use of sediment barriers, temporary and permanent vegetative cover for soil stabilization, and the use of riprap for the protection of soils from erosion.
Construction Impacts – Air Quality	LDEQ	Fugitive dust control measures will be implemented during construction to minimize the potential release of particulate matter from the construction site. Such measures may include cover or treatment of disturbed areas with dust suppression techniques.
Construction Impacts - Noise	DOTD-City Parish	The City-Parish or DOTD contractors and developers shall comply with local construction noise ordinances and all construction equipment will be required to comply with Occupational Safety and Health Administration regulations as they apply to employee safety.
Drainage		Hydrologic and hydraulic studies will be conducted during final design to ensure the construction of the results in no increase in flood elevation on surrounding properties.
Cultural Resources		Should any significant cultural resources be unearthed during construction, the LDCRT Offices of Archaeology and Historic Preservation will be contacted immediately. Construction will cease in the area of the discovery until a plan is developed for the recovery of the resources
Environmental Liability		During final design, a Phase II Site Investigation/ Assessment may be conducted to assess whether environmental liability concern exists that requires remediation prior to construction. Remediation of the site will be conducted, if required.

E.7 AREAS OF CONTROVERSY/UNRESOLVED ISSUES

As of the drafting of this EA, there are concerns among the Pecue Lane landowners relative to the purchasing of property/property valuation, future property acquisitions by third parties (post construction of the Preferred Alternative), noise impacts, and future property values.

The detailed noise analysis indicated that although 12 receptors experienced a noise impact, noise abatement measures including noise barriers, alteration of the alignment (vertical or horizontal), and acquisition of property rights to serve as a buffer zone were determined to not be feasible and/or reasonable. Concerns relative to noise were expressed by the public. Based on the noise analysis, only traffic management measures such as *No Engine Brake* signs and modified speed limits reducing Pecue Lane and Rieger Lane to 40 mph (which proved effective in abating the impact for four of the 12 impacted receptors), were considered reasonable and feasible. It is unknown if these measures will be implemented or resolve resident's concerns relative to increased traffic noise.

To further address noise concerns, noise measurements were re-sampled at two locations, one in Woodridge Subdivision and one at Village Charmant off of Rieger Road. The results of the re-sampling effort support the original conclusions that 12 receptors experience a noise impact and noise abatement measures were not reasonable or feasible.

Concerns associated with purchasing of ROW will be addressed during the public hearing, however, it is likely that until ROW acquisition is initiated, property valuations will be a concern. Potential property acquisitions post construction cannot be addressed, because future actions taken on behalf of as yet unidentified potential purchasers are not reasonable to assume.

ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST

(Revised 04/2013)

WBS No. H.004104
Name: Pecue Lane/I-10 Interchange
Route: Pecue Lane
Parish: East Baton Rouge

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

The proposed project involves the widening of Pecue Lane and the construction of a new interchange at I-10 and Pecue Lane, replacing the existing overpass. Pecue Lane will be widened from a primarily two-lane facility to a primarily six-lane facility with up to eight lanes at the interchange.

4. Public Involvement

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

5. Real Estate

- Will additional right-of-way be required?, Is right of way required from a burial/cemetery site?, Is right-of-way required from a Wetland Reserve Program (WRP) property?, Is required right-of-way prime farmland?, Will any relocation of residences or businesses occur?, Are construction or drainage servitudes required?

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

- Will historic sites or publicly owned parks, recreation areas, wildlife or waterfowl refuges (Section 4f) be affected?, Are properties acquired or improved with L&WC funds affected?

7. Cultural Section 106

	NO	YES	N/A
a. Are any known historic properties adjacent or impacted by the project? (If so, list below).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Are any known archaeological sites 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 tribal government ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Natural & Physical Environment

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

9. Social Impacts

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

Item 4: Three public meetings were held between 2010 and 2015. A public hearing was held on January 28, 2016.

Item 8.o: A dump site was located during the performance of the Phase I Environmental Site Assessment that may represent a contaminated site. Further investigation will be required to discern any environmental liability associated with this site.

Item 9.b: Trinity Fellowship Baptist Church is located on Pecue Lane adjacent to the project.

9.e.: There are two police stations and two fire stations in the project area; however, none are in the project corridor or will be affected by project construction.

Item 9.j: Context sensitive solutions were considered when developing the build alternatives. Stakeholders were consulted multiple times throughout the Stage 0 and Stage 1 process including stakeholder meetings, solicitation of view (SOV) process, and invitations to public meetings. Land use patterns, cultural resources, environmental resources, and community input were all considered in the development of the build alternatives.

Item 9.k: While the addition of a bike lane is not part of the overall plan, the final plans will include accommodations for the Ward Creek trail and a four foot sidewalk along Pecue Lane.

Item 9.l: The project will affect traffic patterns by providing a new exit to/from I-10 within East Baton Rouge Parish.

Preparer: Kerry Oriol
Title: Project Manager
Date: December 8, 2015

Attachments

- S.O.V. and Responses (see *Appendix A*)
- Wetlands Analysis (see *Chapter 4* and *Appendix G*)
- Project Description Sheet (see *Chapter 1*)
- Conceptual Stage Relocation Plan (see *Chapter 4* and *Appendix H*)
- Traffic Noise Analysis (see *Chapter 4* and *Appendix D*)
- Air Quality Analysis (see *Chapter 4* and *Appendix E*)
- Exhibits and/or Maps (see figures located throughout the EA)
- 4(f) Evaluation (see *Chapter 4*, not required)
- Form AD 1006 (see *Chapter 4*, not required)
- 106 Documentation (see *Chapter 4* and SHPO correspondence in *Appendix A*)
- Other: Line and Grade Plan/Profile Sheets and Detailed Cost (see *Appendix B*)
 - Traffic Study (see *Appendix C*)
 - Phase I ESA (see *Appendix F*)
 - Agency and Public Outreach Transcripts (see *Appendix I*)

SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

Prior to the construction of the Pecue Lane/I-10 Interchange, the following actions will be required in the event the project moves forward:

- Preliminary and Final design (including studies required to complete the design, *i.e.*, geotechnical, *etc.*)
- Development of a construction sequencing and traffic management plan
- Acquisition of right-of-way (ROW)
- Obtain permits for construction
- Utility relocations
- Fulfillment of commitments and mitigation

The following permits, commitments, and mitigation will be implemented by the Louisiana Department of Transportation and Development (DOTD) to ensure that adverse environmental impacts as a result of the project are avoided or minimized to the maximum extent practicable.

Permits, Mitigation, and Commitments

ITEM	OVERSITE AGENCY	MITIGATION/COMMITMENT
CWA Section 404 Permit	USACE	The City-Parish will prepare for and submit a Section 404 permit to the USACE for the placement of fill in jurisdictional wetlands. Wetlands south of I-10 in control of access areas will not be used for construction laydown. The City-Parish will implement required permit conditions to ensure compliance.
CWA Section 401 Certification	LDEQ	The City-Parish will prepare for and submit a Section 404 permit to the USACE for the placement of fill in jurisdictional wetlands, which will serve as the application for 401 Certification. The City-Parish will implement required permit conditions to ensure compliance.
LPDES Storm Water Discharge Permit	LDEQ	The City-Parish will apply for an LPDES General Permit for the discharge of stormwater associated with construction of the project. A Stormwater Pollution Prevention Plan will also be prepared and followed to ensure compliance with permit conditions.
Residential Property Acquisition	City-Parish	Approximately three residential properties are expected to be acquired. All ROW purchased for relocations will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act). These purchases will be based on fair market value as determined by local, recent real estate transactions as approved by the DOTD.

SPN H.004104 – SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

ITEM	OVERSITE AGENCY	MITIGATION/COMMITMENT
Commercial Property Acquisition	City-Parish	Multiple commercial drives and frontages will be acquired, however, no commercial relocations will be necessary. All ROW purchased for relocations will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act). These purchases will be based on fair market value as determined by local, recent real estate transactions as approved by the DOTD.
Utility Relocation	City-Parish	Specific relocation plans for utilities are developed during final design. Functional or financial responsibility for relocation of a specific facility or line may differ depending on prior agreements between the utility providers, current landowners, local government, and the City-Parish.
Traffic Management	DOTD/City-Parish	Construction sequence and traffic maintenance plans will be developed as part of final design to ensure continued access to all properties. Requirements for special considerations will be identified and addressed.
Wetlands	USACE	A preliminary jurisdictional determination request will be submitted to the USACE. As jurisdictional wetland impacts are anticipated, a Section 404 permit application will be filed and required mitigation conducted prior to permit issuance.
BREC Trails Program	BREC	The multi-use path under design by BREC will be incorporated into the design for the Preferred Alternative.
Significant Trees	DOTD	During design, the location(s) of significant trees will be determined and identified on the final plans in accordance with the DOTD Engineering Directives and Standards, <u>Treatment of Significant Trees in DOTD Right-of-Way</u> (EDSM No: I.1.1.21).
General Construction	LDEQ	Cut and fill operations will be minimized, as practicable. Design and construction activities will incorporate best management practices (BMPs) to prevent future erosion including temporary soil erosion control measures and permanent control measures. Compliance with the provisions of the storm water general permit will minimize environmental impacts during construction.
Construction – Surface Water	LDEQ	Temporary control measures to reduce migration of soils offsite to surface water may include the phasing of construction, limiting the amounts of impervious surfaces created, preservation of stream buffers and sensitive areas such as natural wetlands and riparian corridors, limiting disturbance of soil and vegetation, and maintaining the natural infiltrative capacity. Permanent control measures may include the use of sediment barriers, temporary and permanent vegetative cover for soil stabilization, and the use of riprap for the protection of soils from erosion.
Construction – Air Quality	LDEQ	Fugitive dust control measures will be implemented during construction to minimize the potential release of particulate matter from the construction site. Such measures may include cover or treatment of disturbed areas with dust suppression techniques.

SPN H.004104 – SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

ITEM	OVERSITE AGENCY	MITIGATION/COMMITMENT
Construction Impacts - Noise	DOTD-City Parish	The City-Parish or DOTD contractors and developers shall comply with local construction noise ordinances and all construction equipment will be required to comply with Occupational Safety and Health Administration regulations as they apply to employee safety.
Floodplain/Drainage		Hydrologic and hydraulic studies will be conducted during final design to ensure the construction of the results in no increase in flood elevation on surrounding properties.
Cultural Resources		Should any significant cultural resources be unearthed during construction, the LDCRT Offices of Archaeology and Historic Preservation will be contacted immediately. Construction will cease in the area of the discovery until a plan is developed for the recovery of the resources
Environmental Liability		During final design, a Phase II Site Investigation/ Assessment may be conducted to assess whether environmental liability concern exists that requires remediation prior to construction. Remediation of the site will be conducted, if required.

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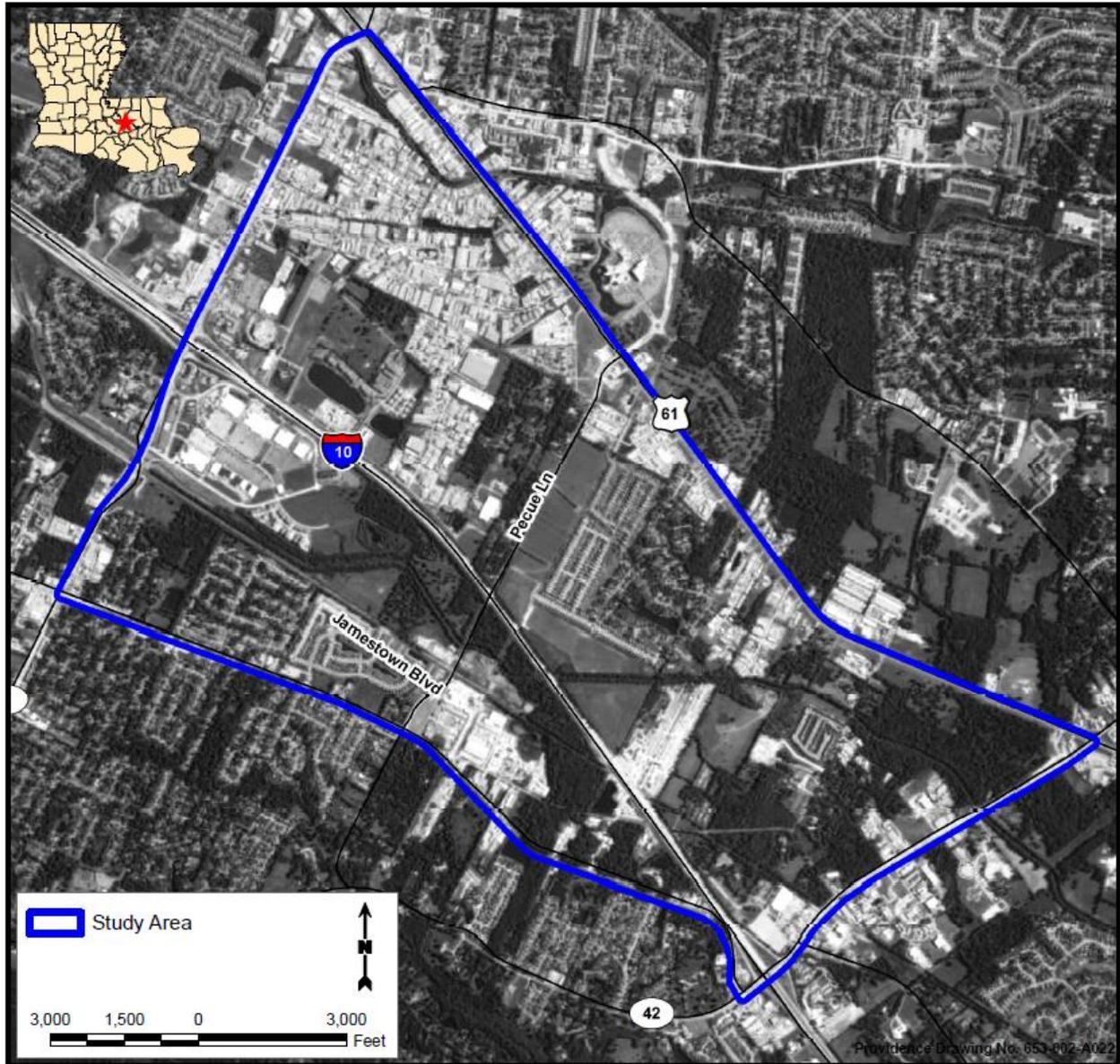
1.0 PURPOSE AND NEED

1.1 Description of the Proposed Project

The City of Baton Rouge and East Baton Rouge Parish (City-Parish), as part of the Green Light Plan Transportation and Street Improvements Program, are proposing to create a new interchange off of Interstate Highway 10 (I-10) at Pecue Lane in East Baton Rouge Parish, Louisiana. The proposed project involves the widening of Pecue Lane and the construction of a new interchange at I-10 and Pecue Lane, replacing the existing overpass. Pecue Lane will be widened from a primarily two-lane facility to a six lane facility (with ramps and exit lanes adjacent to I-10). In addition to road widening, the project will include entrance and exit ramps on eastbound and westbound I-10, the replacement of the current two-lane overpass bridge and the Pecue Lane/Ward's Creek Bridge, the installation of a raised median on Pecue Lane, and the construction of an extension of Rieger Road to Pecue Lane with a new intersection at Pecue Lane. The project will also consider ramp metering. Temporary barriers on I-10 will be replaced with permanent barriers.

The study area for the I-10/Pecue Lane project, as shown on **Figure 1**, extends from Airline Highway to Perkins Road to the north and south, respectively, and to Siegen Lane to the west and Highland Road to the east. It is essentially defined by the logical termini approved by the Federal Highway Administration (FHWA) on March 1, 2010 (**Appendix A**).

**FIGURE 1
STUDY AREA MAP**



Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

As early as 1994, the Louisiana Department of Transportation and Development (DOTD) had begun to investigate a new I-10 interchange at Pecue Lane, and by 2005, the I-10/Pecue Lane project had been studied by the Capital Region Planning Commission (CRPC) and added to the projects to be studied and implemented by the newly established Green Light Plan (GLP), a bond program developed to improve transportation and streets in East Baton Rouge Parish. In 2008, an Interchange Justification Study (IJS), incorporated by reference, was completed to support the development of a new I-10 interchange at Pecue Lane. This study looked at current and future traffic at existing I-10 interchanges at Siegen Lane and Highland Road, as well as future improvements at Pecue Lane since the proposed project would be expected to relieve congestion at these

interchanges. The IJS recommended an urban diamond interchange as the preferred interchange configuration. A loop ramp in the southeast quadrant of the interchange was considered, as was a single point urban diamond interchange. These two alternatives were not selected due to higher costs and greater environmental impacts, particularly to Ward Creek.

In 2010 the project moved forward with the initiation of the environmental clearance document, class of action determined to be an Environmental Assessment (EA).

1.2 Purpose and Need

The purpose of the project is to relieve congestion at existing I-10 interchanges in the project study area, reduce travel time, redistribute traffic on the local network decreasing surface street delays, and provide better access for trucks to and from I-10 to local commercial and industrial corridors. Increased travel demand and changing travel patterns have resulted in heavy congestion on and at existing interchanges with I-10 in the project study area. A new interchange is needed to alleviate congestion by providing additional access to and off I-10 in the project study area.

2.0 ALTERNATIVES

2.1 Preliminary Alternatives

The 2008 IJS considered several conceptual alternative designs. The preferred alternative selected to move forward into Stage 1, Planning and Environmental, was an urban diamond interchange. Two other alternatives, a loop ramp in the southeast quadrant of the interchange and a single point urban diamond interchange were also studied. The loop ramp required more right-of-way (ROW) than the other two alternatives and resulted in impacts to Ward Creek and wetland areas. The single point urban diamond interchange was demonstrated to have a considerably higher construction cost (IJS, 2008). As a result, the urban diamond interchange was selected as the preferred alternative to be carried forward.

At the onset of the EA process, a Solicitation of Views (SOV) was mailed to notify and solicit comments from agencies and interested parties on the proposed project (**Appendix A**). Multiple build alternatives for the interchange of Pecue Lane with I-10 were developed through this process. The build alternatives as well as the No-Build Alternative were studied to determine the best alternative to provide for traffic and I-10 access. Prior to the first public meeting in November 2010, six build alternatives had been developed:

- Alternative A – Diamond Interchange with westbound ramp located north of Cox property (a modified version of the preferred alternative selected by the Interchange Justification Study completed in 2008)
- Alternative B – Diamond Interchange with westbound ramp located south of Cox property
- Alternative C – Diamond Interchange with single loop
- Alternative D1 – Single Point Urban Interchange (SPUI) with a skewed interchange approach with I-10 and narrow right-of-way (ROW)
- Alternative D2 – SPUI with a tight curve and skewed interchange approach at I-10
- Alternative E – Modified Directional Interchange

During early alternatives screening, initiated in December 2010, Alternative D-2 was removed due to the low design speed necessary to accommodate the alignment and its approach to I-10. Alternative A, a slight modification of the diamond interchange selected in the IJS, was removed from the study in January 2011 after it was determined that a multimillion dollar Cox Communications facility would be impacted. Alternative D-1 was also removed in January 2011 because Alternative D-3 had been developed in response to the public meeting. Alternative D-3 resulted in a realignment of Pecue at I-10 and resolved issues with the skewed I-10 interchange approach associated with Alternative D-1.

Later in January 2011, two options for connecting to Rieger Road were developed, one of which opted for a shorter route through residential property (R1) and the other went around all the residential properties within 0.4 miles of I-10 (R2). These were added to Alternatives B, C, and D-3. Alternative E was suggested by DOTD and by the time of the second public meeting in February 2011, Alternative F had been added. Alternative E represents a Modified Directional Interchange and Alternative F, a Diamond Interchange with roundabout terminals.

After the public meeting and further discussion between the City-Parish, DOTD, and FHWA, Rieger Road Option 1 was removed from all the alternatives due to the access issues created for nearby properties and lack of compliance with smart planning guidelines. Additionally, Alternative E was removed due to poor public support and potential impact to low income properties.

As of February 2011, the following build alternatives had been removed from the study:

- A – Diamond Interchange with westbound ramp located north of the Cox property (a modified version of the preferred alternative selected by the IJS completed in 2008)
- Alternative B R1 – Diamond Interchange with westbound ramp located south of the Cox property and Rieger Road Option 1, a connection to Rieger Road from Pecue originating approximately 0.17 miles north of the interstate
- Alternative C R1 – Diamond Interchange with single loop and Rieger Road Option 1
- Alternative D-1 – Single Point Urban Interchange (SPUI) with a skewed interchange approach with I-10 and narrow right-of-way (ROW)
- Alternative D-2 – SPUI with a tight curve and skewed interchange approach at I-10
- Alternative E – Modified Directional Interchange

2.2 Design Criteria

Pecue Lane is being designed as an Urban Arterial 2 with a design speed of 45 miles per hour (mph). Although the current posted speed limit on Pecue Lane is 40 mph, the expected posted speed upon completion is 45 mph. I-10 will not change, it is presently an F-3 Interstate/Expressway with a design and posted speed of 70 mph (in some areas). Ramp terminal areas on Pecue Lane are recommended to be posted between 20 and 30 mph. Ramp metering will be investigated as part of the interchange. The Rieger Road extension is an Urban Collector 2 with a design, posted, and expected speed of 45 mph.

2.3 Alternative Development

Traffic studies were conducted on the four remaining build alternatives to assess necessary capacity improvements. Based on these analyses, four build alternatives were carried forward into more detailed traffic studies for an eight-lane facility along with the No-Build Alternative:

- No-Build Alternative - projected future condition that would exist if the proposed project were not constructed
- Alternative B R2 – Diamond Interchange with Rieger Road Option 2
- Alternative C R2 – Single Loop Diamond Interchange with Rieger Road Option 2
- Alternative D-3 R2 – SPUI with realignment of Pecue to reduce skew and obtain near 90 degree approach at I-10 interchange with Rieger Road Option 2
- Alternative F – Diamond Interchange with Roundabout Terminals

The detailed traffic analysis conducted on the four build alternative interchange options completed in October 2013 revealed that Alternatives C R2 and F would not function at an acceptable Level of Service (LOS). An acceptable LOS is C, and under some circumstances, D (LOS A represents free flow and F means demand is greater than capacity). These two alternatives demonstrated LOS ratings of D and F, respectively, for eastbound I-10 ramps at Pecue Lane during morning peak hours and D during evening peak hours. Westbound I-10 ramps at Pecue Lane were shown to operate at LOS of E and F levels during morning and evening peak traffic hours for both alternatives. As a result of providing inadequate LOS, Alternatives C R2 and F were removed from further study. **Exhibit 2-1** details the alternatives screening process that removed eight build alternatives from further study. As of November 2013, Alternatives B R2 and D-3 R2 remained as viable build alternatives.

In December 2013, the concept of a Diverging Diamond Interchange (DDI) was introduced and accepted for further study as a possible third build alternative. Traffic studies conducted during 2014 concluded that the DDI concept represented a more efficient interchange than the other two build alternatives and could be constructed at Pecue and I-10. The DDI became Alternative G and was accepted into the EA process in December 2014.

EXHIBIT 2-1
SUMMARY OF DEVELOPMENT OF DESIGN ALTERNATIVES

Pecue Lane at I-10: Summary of the Development of Design Alternatives

Last Update: 3/15/2015

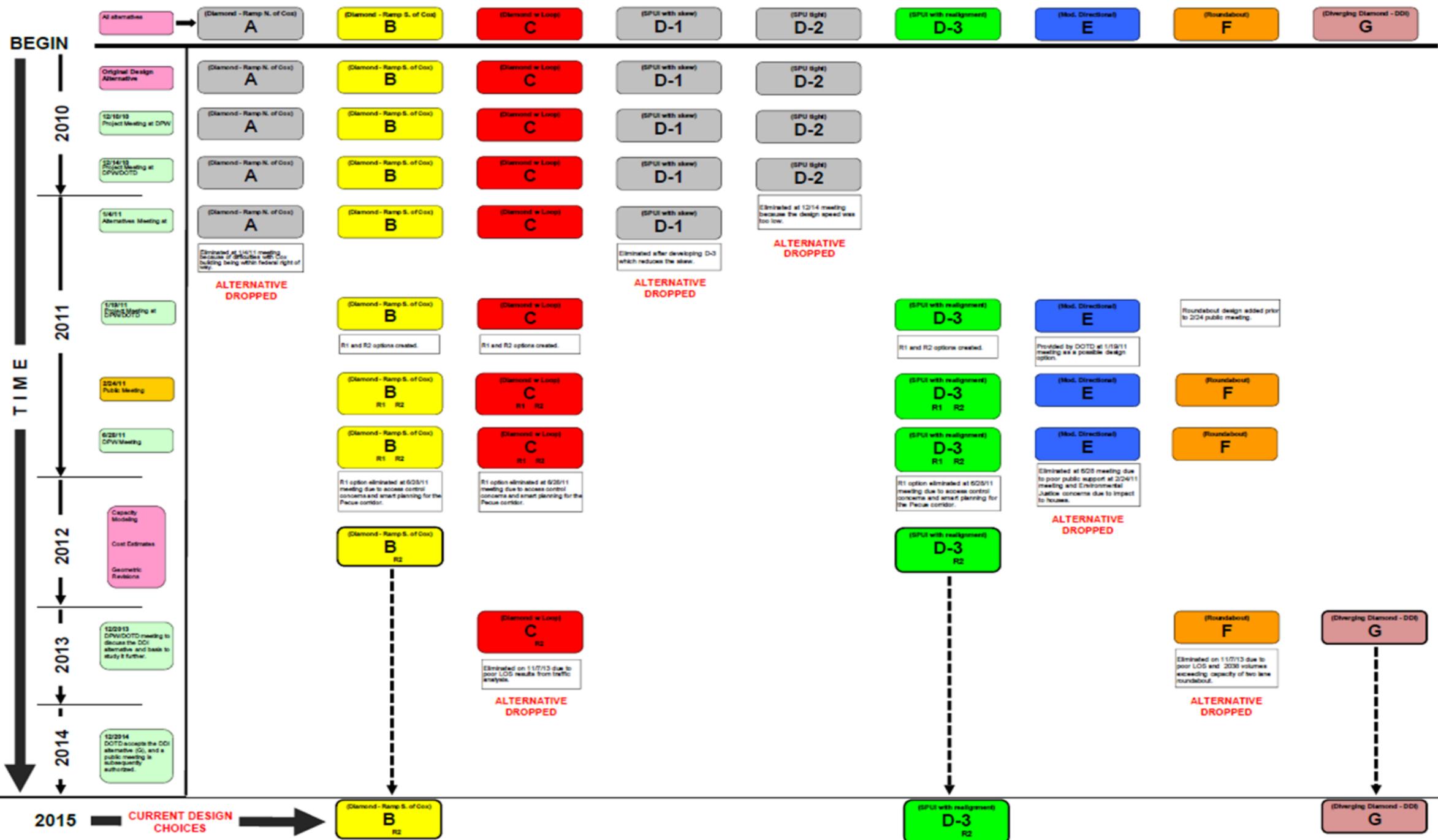
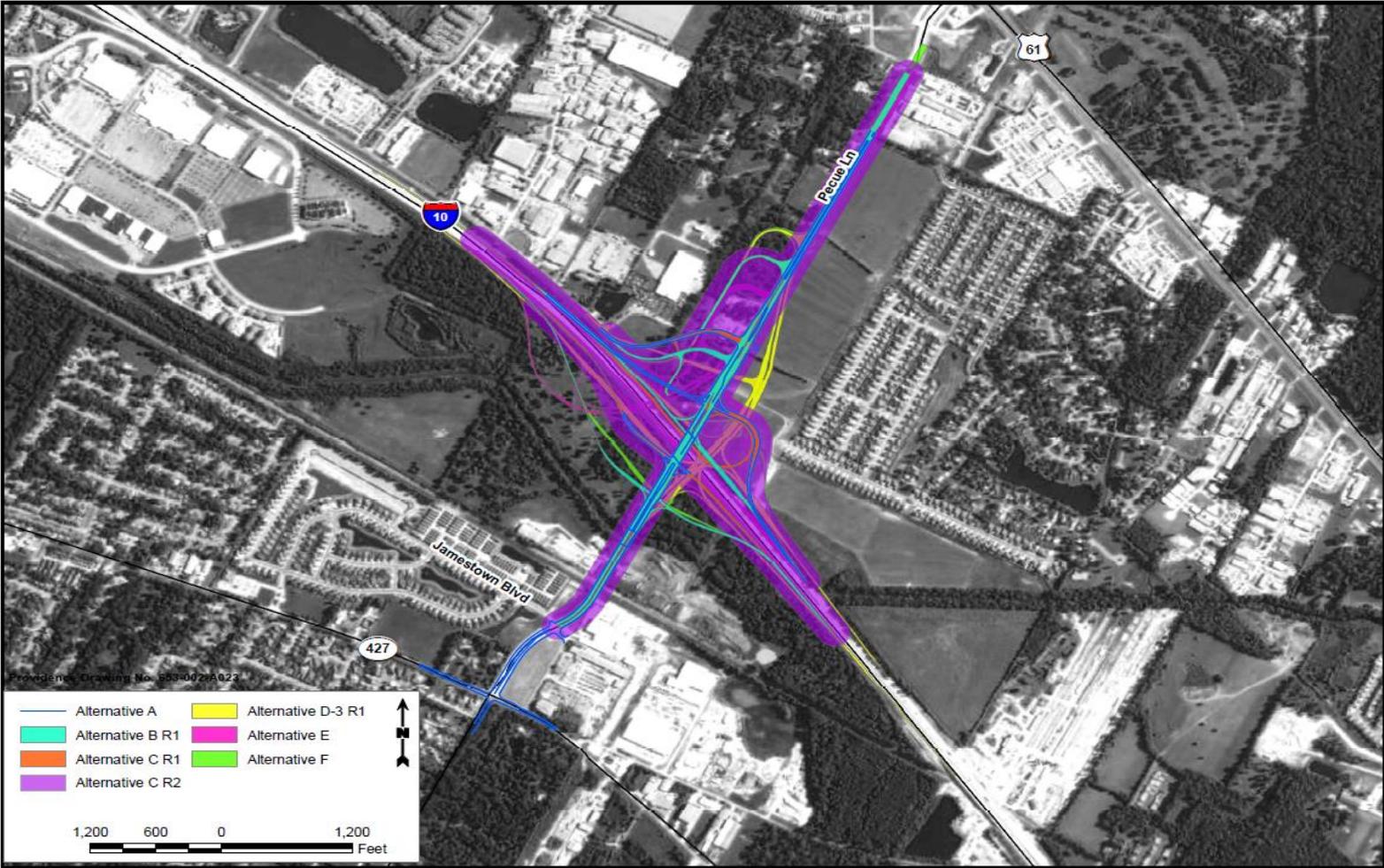


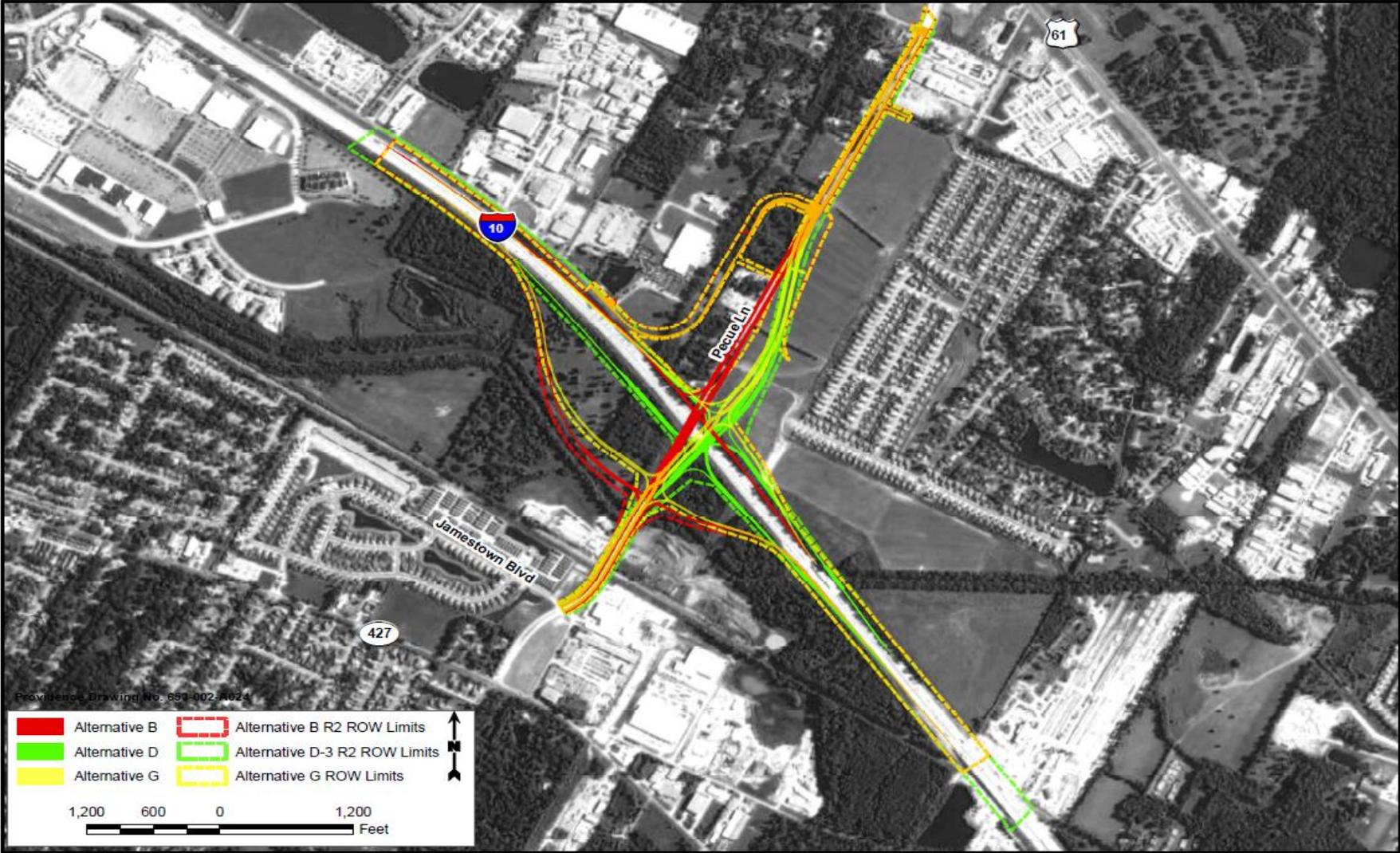
Figure 2 represents all the build alternatives considered. Figure 3 represents the three build alternatives studied in detail in this EA. Figure 3a is the Preferred Alternative.

FIGURE 2
PRELIMINARY ALTERNATIVES

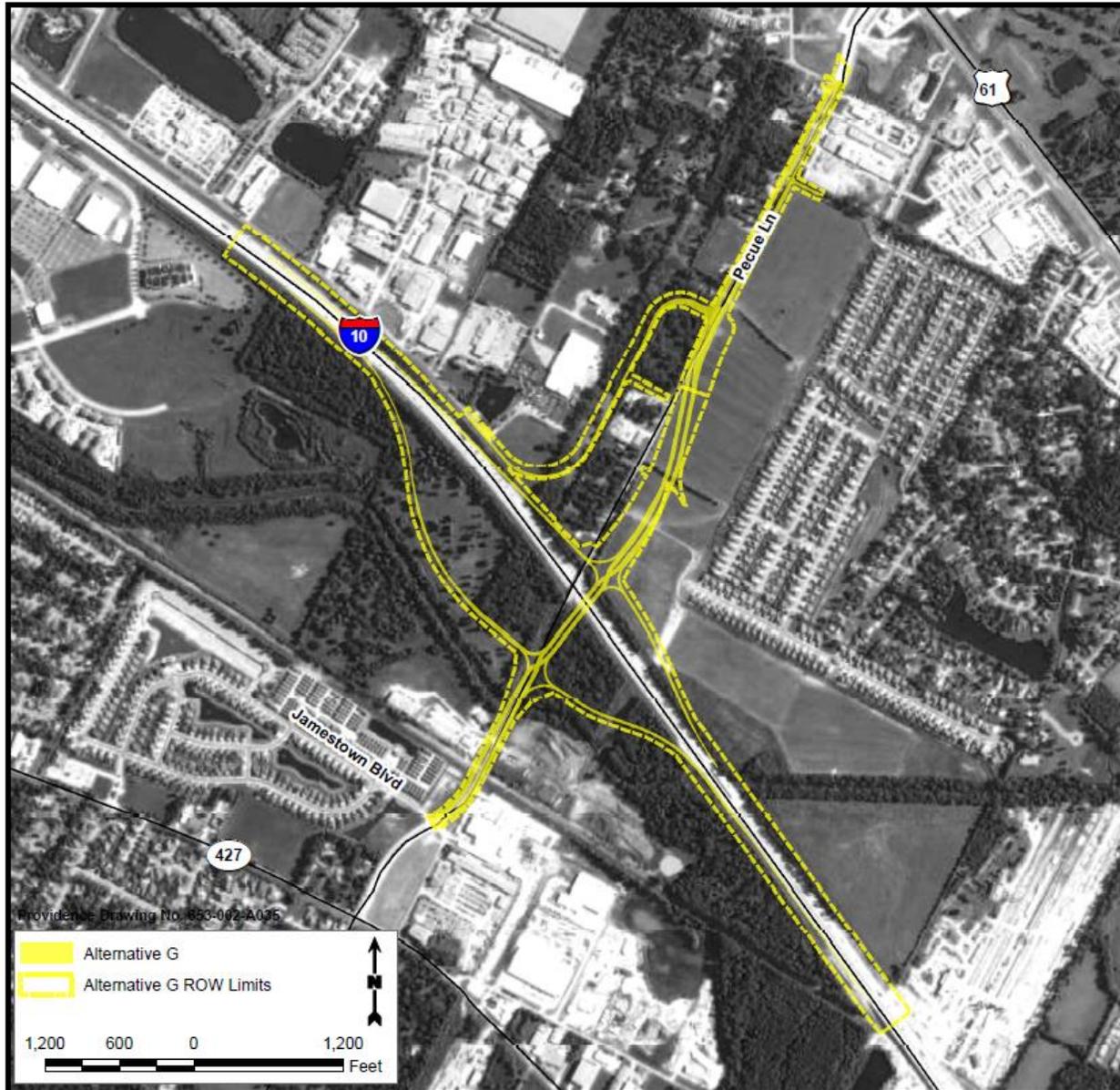


Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

**FIGURE 3
BUILD ALTERNATIVES**



**FIGURE 3a
PREFERRED ALTERNATIVE G**



Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

2.4 Preferred Alternative

Exhibit 2-2 is the Preferred Alternative Identification Matrix. The criteria by which the build alternatives were evaluated are listed in order of importance. As reflected in the exhibit, Alternative G was identified as the Preferred Alternative. Wetland impacts, as well as acreages associated with other categories shown in **Exhibit 2-2**, reflect acres of resources potentially present (based on publicly available data) within the proposed required ROW for each of the alternatives. Under the wetlands category, the acres shown do not reflect formal wetland jurisdictional

determinations and do not differentiate between permanent and temporary impacts.

Alternative B R2/Conventional/Traditional Diamond was last in operational efficiency and has almost double the conflict points of Alternative G/Diverging Diamond Interchange. The cost of Alternative B R2 is slightly higher than Alternative G and it requires the acquisition of more right-of-way (ROW) than Alternative G. Alternative B R2 did receive the highest support by the participating public and is the most common interchange type in the general area. After the third public meeting, the alignment of Alternative B was shifted to be more in-line with Alternative G, which reduced impacts to residences and businesses.

Alternative D-3 R2/SPUI requires the least amount of ROW acquisition and impacts the least amount of natural resources. This alternative was second in operational efficiency and conflict points, however, it was the most expensive of the three build alternatives to construct.

Alternative G/Diverging Diamond Interchange is the most efficient of the three interchange options with the fewest conflict points. While it does require more ROW than Alternative D-3 R2, it affects fewer residential and commercial properties. Alternative G is the least expensive of the three build alternatives, based on preliminary estimates. The alignment of Alternative G was also shifted after the third public meeting to align more with existing Pecue Lane and move potential noise impacts further from Woodridge subdivision.

A DDI is a diamond interchange that more efficiently facilitates heavy left-turn movements than a traditional diamond (like Build Alternative B R2). While the ramp configuration is similar to a traditional diamond interchange, traffic on the cross route moves to the left side of the roadway for the segment between signalized ramp intersections. By moving traffic to the left, left-turning vehicles can enter the limited access highway without the need for a left-turn signal phase at the signalized ramp intersections. Also, left-turning vehicles on the cross route do not conflict with opposing through traffic and may turn without stopping.

The Rieger Road Extension will be a signalized intersection with the proposed Alternative G, having a dedicated left and right turn along with a through lane to access the property across Pecue Lane (**Appendix B** contains the line and grade data).

**EXHIBIT 2-2
PREFERRED ALTERNATIVE IDENTIFIED MATRIX**

EVALUATION CRITERIA (in order of importance in decision-making process)	ALTERNATIVE B R2 Conventional Diamond Interchange	ALTERNATIVE D-3 R2 Single Point Urban Interchange	ALTERNATIVE G Diverging Diamond Interchange	NO BUILD
Meets Purpose and Need	Yes	Yes	Yes	No
Function				
Anticipated Level of Service (Pecue) ¹	D or better	D or better	C or better	NA
Operational Efficiency	Good	Better	Better	NA
Safety (points of conflict)	26	18	14	NA
Cost				
Estimated Construction Costs (millions)	\$ 41.88	\$ 57.21	\$ 40.40	NA
Estimated Total Cost (does not include mitigation)	\$ 54.28	\$ 70.37	\$ 52.54	NA
Impacts				
Required Right-of-Way (acres)	70.54	39.27	68.82	0
Potential to Impact Archaeological Resources ²	Medium	Medium	Medium	NA
Potential Wetlands (acres) ³	57.01	25.78	49.55	0
Potential Impact to the 100-yr Floodplain (acres)	78.22	47.77	71.37	0
Residential Structures	3	5	3	0
Commercial Property	0	3 ⁴	0	0
Churches	0	0	0	0
Potential Impacts to Hazardous Sites	Medium	Medium	Medium	0
Active Oil and Gas Wells within 160 feet of Proposed Right-of-Way ⁵	0	2	0	2
Active Water Well Locations ⁵	2	2	2	2
Utility Impacts ^{6,7}	41,470 feet	41,780 feet	42,280 feet	0
Public Comments				
Number of 1, 2, and 3 ranks received on comment sheets	79	34	33	26
Number 1 concern - Right-of-Way, Property, Business Impacts	Highest	Lowest	Middle	NA

Most desirable/least affected is highlighted in purple (for build alternatives)

TABLE NOTES:

- ¹ Average Daily Traffic and Level of Service data applies to Pecue Lane only; it does not include I-10 and ramps.
- ² Cultural resource estimates are based off data provided by Earth Search, Inc. conducted on November 30, 2010.
- ³ Potential wetlands were defined using National Wetlands Inventory data and minimal field verification. Wetland numbers are based on entire proposed right-of-way and do not differentiate between permanent or temporarily impacted areas. A wetlands delineation will be conducted once a Preferred Build Alternative is identified.
- ⁴ Total number includes Cable Works, Stanley Security Solutions, and a Strip Center housing Flower Basket Florist and Premier Office Products.
- ⁵ According to the LDNR SONRIS database as of 1/2/15.
- ⁶ Total number includes utilities for water, gas, and electric lines impacted throughout the length of project.
- ⁷ Total number includes impact to Ascension Parish Wastewater due to impact to fence and possible undergrounds.

2.5 Traffic

There has been a considerable amount of traffic modeling associated with the Pecue Lane/I-10 project. Based on the IJS, the original traffic study was designed to determine the preferred configuration (lanes, storage lengths) of a diamond interchange on I-10 at Pecue Lane based on operations. Stakeholder and public input resulted in a change in the traffic study objectives, which became, *to identify other feasible interchange configurations and to provide a comparison based on operations to aid in the selection of a preferred alternative* (USI, 2015). **Appendix C** contains the traffic summary for the Pecue Lane/I-10 project.

The final traffic study defined the build condition as the widening of Pecue Lane to a multi-lane boulevard section and providing access to I-10. The following five interchange options were considered:

- Diamond Interchange
- Diamond Interchange with Roundabouts
- Semi Cloverleaf Interchange
- Single Point Urban Interchange (SPUI)
- Diverging Diamond Interchange (DDI)

The traffic study compared the five interchange options based on anticipated Level of Service (LOS). According to the traffic study, “Levels of Service range from LOS A, a condition of little or no delay to LOS F, a condition of capacity breakdown represented by heavy delay and congestion. Level of Service B is characterized as stable flow. Level of Service C is considered to have a stable traffic flow, but is becoming susceptible to congestion with general levels of comfort and convenience declining noticeably. Level of Service D approaches unstable flow as speed and freedom to maneuver are severely restricted, and LOS E represents unstable flow at or near capacity levels with poor levels of comfort and convenience.”

Table 2-1 represents the overall LOS for each of the interchange options during morning and evening peak traffic for the design year. Due to projected LOS, the Semi-Cloverleaf and Diamond with Roundabouts interchanges were removed from further study. Only the remaining three interchange options were carried through CORSIM modeling.

Projected traffic volumes provided in the IJS were for 2031. As the design year for the project is 2038, the projected 2038 design year traffic volumes were developed by growing the 2031 projected traffic volumes by 2% per year for 7 years.

Capacity analysis/LOS and CORSIM (corridor simulation) modeling were used to compare the operation of each of the Pecue interchange alternatives and to develop recommended lane configurations and storage lengths. Based on the results, the standard diamond and SPUI are expected to operate similarly and acceptably, while the DDI is expected to operate with the least delay of the three alternatives.

**TABLE 2-1
OVERALL LEVEL OF SERVICE FOR FIVE INTERCHANGE OPTIONS
UNDER CONSIDERATION AT PECUE LANE AND I-10**

Interchange Type	Location	AM Peak	PM Peak
Diamond	I-10 Westbound at Pecue	D	C
	I-10 Eastbound at Pecue	D	D
SPUI	I-10 Westbound at Pecue	D	D
DDI	Northern Intersection	C	C
	Southern Intersection	B	B
Semi-Cloverleaf	I-10 Westbound at Pecue	F	E
	I-10 Eastbound at Pecue	D	D
Diamond with Roundabouts	I-10 Westbound at Pecue	F	D
	I-10 Eastbound at Pecue	E	E

Note: Data from Pecue Lane/I-10 Interchange Stage "1" Environmental Assessment, Urban Systems, Inc., 9/20/15.

2.6 Context Sensitive Solutions

Land use patterns, cultural resources, environmental resources, and community input were all considered in the development of the build alternatives along with early stakeholder involvement. The majority of Pecue Lane between I-10 and Airline Highway is either developed residential/commercial or pasture. The Rieger Road extension will provide access to the Planned Unit Development (PUD) adjacent to Woodridge subdivision.

Incorporating the BREC (Recreation and Park Commission for East Baton Rouge Parish) Ward Creek multi-use trail into the final design for the Pecue Lane/I-10 project will create a nature trail adjacent to the new Pecue Lane and provide for a more attractive streetscape between I-10 and Perkins Road along Pecue Lane.

3.0 AFFECTED ENVIRONMENT

The project study area boundary shown in **Figure 1** (see Chapter 1) defines the geographic area of the affected environment associated with the Pecue Lane/I-10 Interchange project. The total length of the project along Pecue Lane is approximately two miles, including I-10 ramps, the project length is approximate five miles.

Due to the size of the study area compared to the size of the proposed project corridor, greater emphasis is placed on resources within the actual project corridor. All agency correspondence noted in this chapter are included as **Appendix A**, unless stated otherwise.

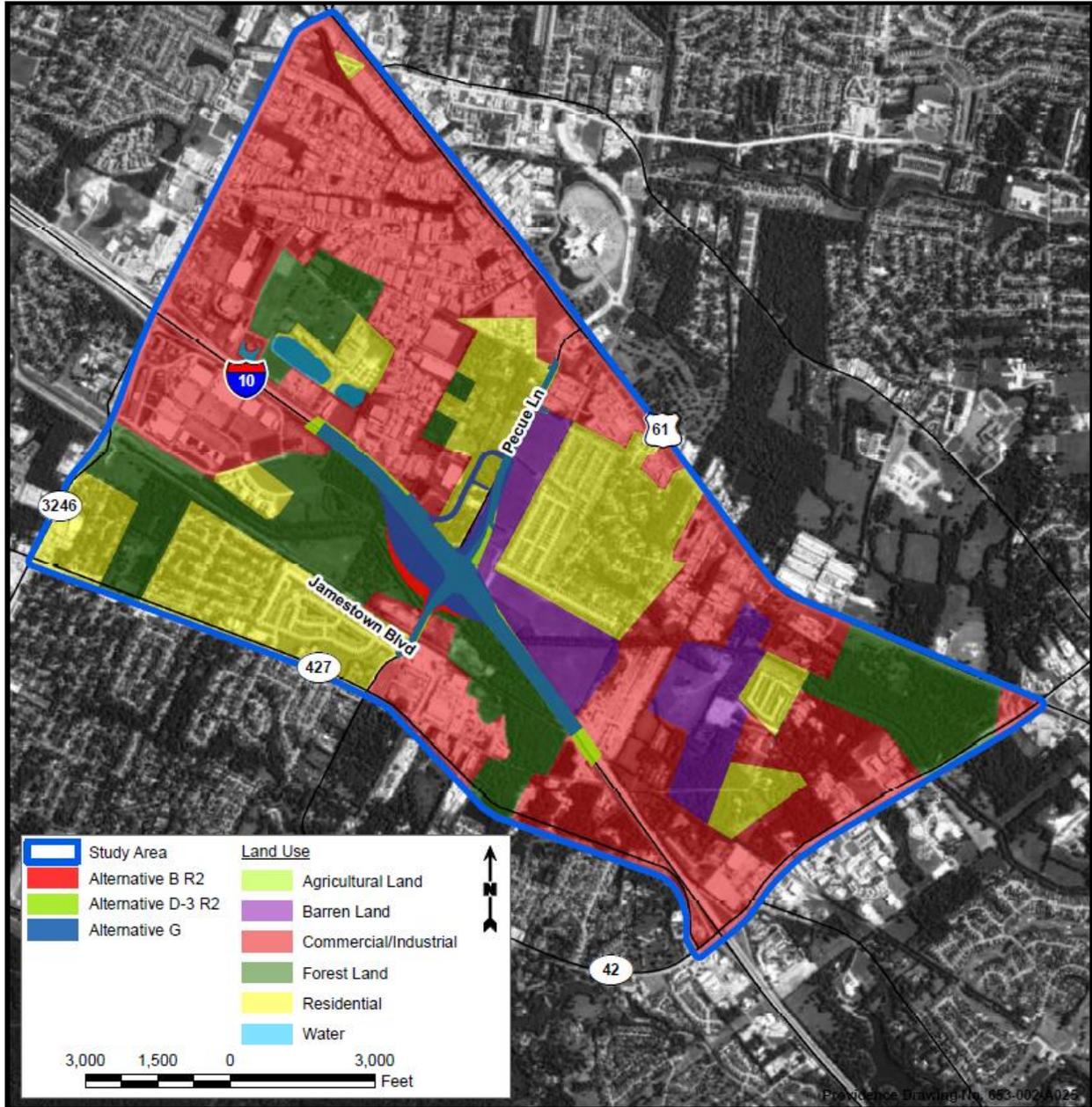
3.1 Project Setting

The proposed project is in the northern portion of East Baton Rouge Parish, which is located in south Louisiana, with the Mississippi River to the west, the Amite River bordering the east, and Manchac Bayou on the south. East Baton Rouge Parish's history is tied to Native Americans and periods of French, English, and Spanish settlement. Baton Rouge was discovered by the French in 1699, who transferred land to the British in 1763. The British were defeated by the Spanish in 1779, who were then overthrown by local settlers in 1810. East Baton Rouge Parish was established shortly after by Governor Claiborne for the United States ("A Brief History," 2015). Farming and logging supported early settlers, but in the early 1900s, Standard Oil opened a refinery north of Baton Rouge and the economy rapidly grew, even thriving during the Great Depression. The petrochemical industry quickly expanded and continues to be a main employer in the parish ("East Baton Rouge and Livingston Parishes," n.d.).

3.2 Land Use and Development Trends

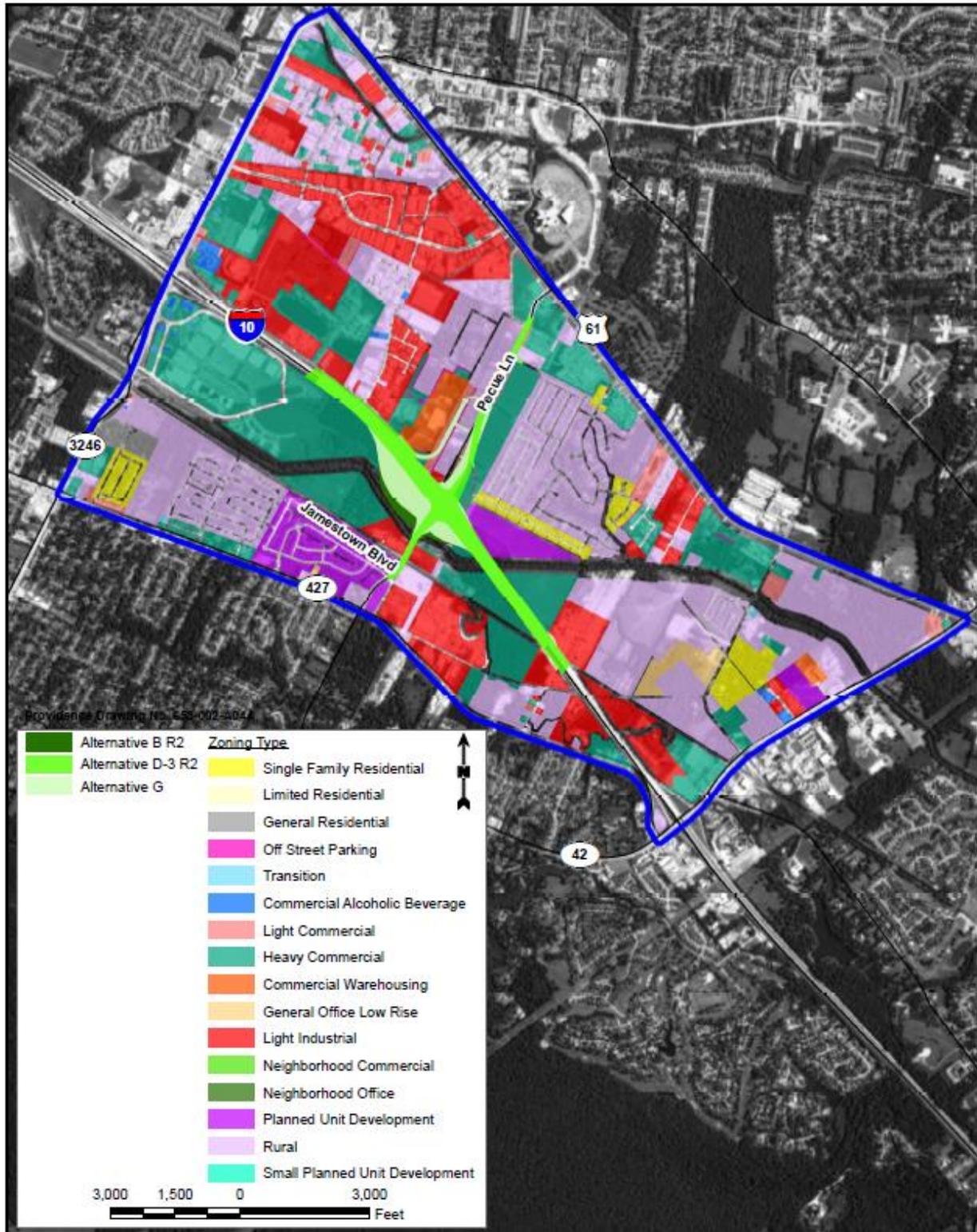
The project study area encompasses approximately 3,803 acres in East Baton Rouge Parish. Current land use is represented in **Figure 4**. **Figure 5** is a zoning map of the Pecue Lane area. The majority of the project study area is classified as forest (1,571 acres), followed by agricultural (1,134 acres) and urban/built, respectively (878 acres). Residences and businesses line the major roadways in the project study area and the Pecue Lane project corridor supports numerous significant commercial establishments as well as individual residential properties.

**FIGURE 4
LAND USE**



Land Use Land Cover data obtained from the USGS data set and updated based on aerial and field investigation.
Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

FIGURE 5
ZONING



Zoning data obtained from the City of East Baton Rouge, Office of the Planning Commission on 5/18/15.
Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

3.3 Community Facilities and Services

Schools

No schools managed by the East Baton Rouge Parish School District are located within the project study area, therefore there are no dedicated public school bus pick-up routes. There are eleven schools located within the project study area (listed below), none of which are located along the project corridor:

- Alpha & Omega Childcare System, 6640 Siegen Lane
- Cypress Heights Academy, 10420 Barringer Foreman Road
- Cross Point Baptist School, 14965 Airline Highway
- ITI Technical College, 13944 Airline Highway
- ITT Technical Institute, 14141 Airline Highway
- HappyFeet, 5801 Siegen Lane
- Parkview Elementary School, 5660 Parkforest Drive
- School Time, 11811 Industriplex Boulevard
- Southern Medical School of Ultrasound, 12133 Industriplex Boulevard
- Woolsey Recording Studio and Production School, 7446 Meadowbrook Avenue

Day Cares

Lad's & Lassie's Academy, 13833 Perkins Road, describes its business as a school that “provides children with educational activities and age-appropriate learning materials that stimulate the children's curiosity, imagination, creativity and natural learning ability”. They also provide day care services before and after school. They represent the only day care facility observed in the project area.

Libraries

No libraries were observed or listed for the project study area.

Parks and Recreation Areas

There are two Recreation and Park Commission for the Parish of East Baton Rouge (BREC) parks in the project study area and one dog park. Gentilly Court Park, located off of Metairie Drive south of Siegen Lane and Meadow Park, located off of Meadow Park Avenue south of Siegen Lane are BREC parks located outside the project corridor. Cypress Lake Dog Park is located at the Cypress Lake Apartments off of Rieger Road north of Pecue Lane.

Houses of Worship and Cemeteries

There are nine houses of worship and no cemeteries located in the project study area; only one of which is in the project corridor:

- All Saints Church, 14141 Airline Highway
- Antioch Family Church, 11940 Industriplex Boulevard
- Bethany World Prayer Center, 10877 Rieger Road
- Bethel Temple Assembly Of God Church, 12124 Airline Highway
- Church of the Highlands, 17240 Perkins Road
- Cross Point Baptist Church, 14965 Airline Highway
- Healing Place Church, 19202 Highland Road
- *Trinity Fellowship Baptist Church, 8226 Pecue Lane*
- World Outreach Ministries, 5810 McCann Drive

Police and Fire

Two police stations and two fire stations are within the project study area, none are in the project corridor.

- Kleinpeter Station Sheriff's Office, 14431 Airline Highway
- St. George Fire Department, 13686 Perkins Road
- St. George Fire Department, 14141 Airline Highway # H
- Louisiana State Police Troop A, Highland Road at I-10

Hospitals

There are no hospitals in the project study area however, one hospital, Woman's Hospital, is located adjacent to the project study area, at 100 Woman's Way.

Public Transportation

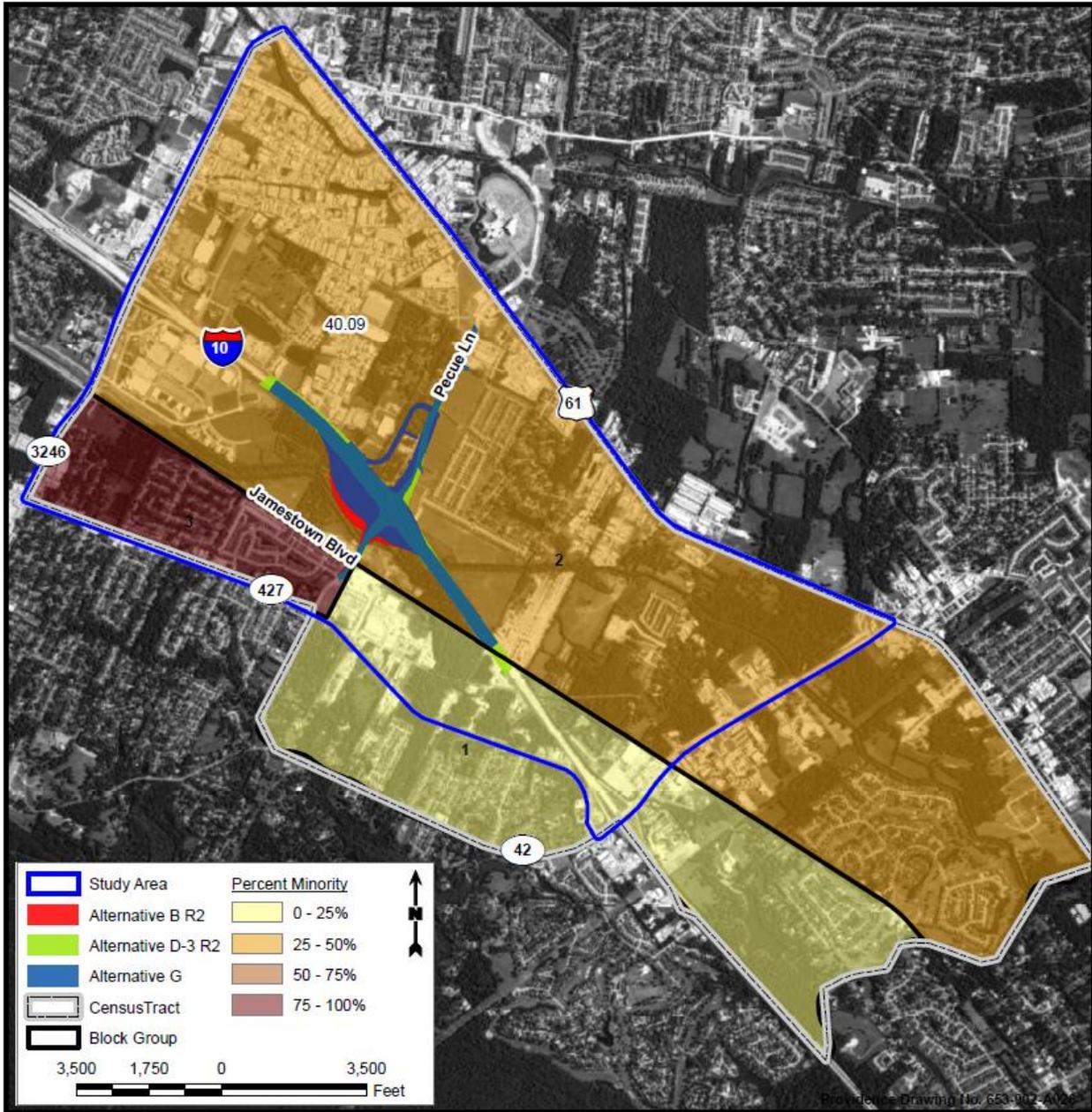
There are several bus stops within the project study area, most located along Siegen Lane and Airline Highway and none in the project corridor.

3.4 Community Demographic

All of the project study area falls within Census Tract 40.09, Block Groups 1, 2, and 3 in East Baton Rouge Parish. **Figure 6** and **Table 3-1** provide details on the population present in the block groups that comprise the study area. Demographic

data for these tracts relating to housing units, educational attainment, age groups, and language spoken was obtained from the United States Census Bureau (USCB), 2008-2012 American Community Survey (ACS) 5-Year Estimates (see **Table 3-2**). This data was available on the USCB’s American Fact Finder (AFF) website and is the most recent data currently available for the project study area.

**FIGURE 6
MINORITY DATA**



Minority data obtained from USCB, 2010 Census Summary File 1 (SF 1) 100-Percent Data, Table P9 Hispanic or Latino, and not Hispanic or Latino by Race. Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

**TABLE 3-1
POPULATION DATA FOR CENSUS TRACT 40.09**

Census Tracts within the Project Study Area	Block Groups within the Project Study Area	Subject	Total Population (all races)	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic ^(A)	Minority Calculation ^(B)
Tract 40.09	Block Group 1	Number	1,318	1,188	76	0	61	5	3	13	35	130
		Percent	-	90.1%	5.8%	0.0%	4.6%	0.4%	0.2%	1.0%	2.7%	9.9%
	Block Group 2	Number	4,859	3,028	1,026	21	342	5	3	70	364	1,831
		Percent	-	62.3%	21.1%	0.4%	7.0%	0.1%	0.1%	1.4%	7.5%	37.7%
	Block Group 3	Number	2,230	447	1,521	1	47	0	7	45	162	1,783
		Percent	-	20.0%	68.2%	0.0%	2.1%	0.0%	0.3%	2.0%	7.3%	80.0%

NOTES:

A. Since all Hispanics regardless of race are considered a minority, the population with Hispanic ethnicity is identified in this column, and all the other race categories do not include Hispanic ethnicity.

B. In accordance with FHWA Order 6640.23A and DOT Order 5610.2, a minority means a person who is Black, Asian American, American Indian/Alaskan Native, or Hispanic (regardless of race). To determine the number of minorities, the total population minus the "white alone" population was determined.

Source: USCB, 2010 Census Summary File 1 (P7) 100-Percent Data

**TABLE 3-2
DEMOGRAPHIC DATA FOR CENSUS TRACT 40.09**

Census Tract within the Project Study Area	Tract 40.09	
	Estimate	Percent
Housing Data		
Total housing units	3,159	-
Occupancy status		
Occupied housing units	2,955	93.5%
Vacant housing units	204	6.5%
Tenure		
Occupied housing units	2,955	-
Owner occupied	1,790	60.6%
Renter occupied	1,165	39.4%
Educational Attainment		
Population 25 years and over	4,655	-
Less than high school graduate	302	6.5%
High school graduate (includes equivalency)	711	15.3%
Associate's degree	1,235	26.5%
Bachelor's degree or higher	2,407	51.7%
Age Groups		
Total Population	8,470	-
0-9 years	1,363	16.1%
10-19 years	1,166	13.8%
20-29 years	1,372	16.2%
30-39 years	1,185	14.0%
40-49 years	1,212	14.3%
50-59 years	1,189	14.0%
60-69 years	667	7.9%
70-79 years	116	1.4%
80 years and older	78	0.9%
Language Spoken at Home		
Population 5 years and over	6,751	-
English only	6,135	90.9%
Language other than English	616	9.1%

NOTES:

1. Although the ACS produces population demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units. For 2006 to 2011, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.
2. An estimated margin of error was given for each category and is available on the AFF website.

Sources: USCB, 2007-2011 and 2006-2010 ACS 5-Year Estimates Table DP-02, DP-04, and DP-05

3.5 Employment and Economic Trends

Employment and economic data for Census Tract 40.09, the Census Tract that covers the study area is presented in **Table 3-3**. The Airline Highway corridor supports significant commercial enterprises, as do Pecue Lane and Industriplex Boulevard. Baton Rouge’s diversified economy and favorable business climate have kept the city below the state and national average for unemployment (“East Baton Rouge Parish”). As of November 2013, the unemployment rate for the nine parish Capital Region was 5.4 percent. No one singular business sector dominated the employment scene, which is spread among finance, health care, manufacturing, research and development, education, renewable energy, transportation, construction, and distribution (“East Baton Rouge Parish”). The Baton Rouge Area Chamber (BRAC) predicts positive growth to continue into 2014 as a result of new construction, high employment, and confidence in the local economy. In 2013, Forbes Magazine listed Baton Rouge as the 7th best city for information jobs, one of the top 25 places to retire, and 14th in America’s engineering hubs.

Table 3-3 provides economic and employment details as reported by the USCB ACS 2012 5-Year Estimates for the census tracts that make up the project study area.

**TABLE 3-3
EMPLOYMENT AND ECONOMIC DATA
EMPLOYMENT AND ECONOMIC STATUS FOR CENSUS TRACT 40.09**

Location	Tract 40.09	
	Estimate	Percent
Employment Status		
Population 16 years and over	5,747	-
In labor force	4,566	79.5%
Civilian labor force	4,566	79.5%
Employed	4,442	77.3%
Unemployed	124	2.2%
Armed Forces	0	0.0%
Not in labor force	1,181	20.5%
Occupation		
Civilian employed population 16 years and over	4,442	-
Management, business, science, and arts occupations	1,877	42.3%
Service occupations	638	14.4%
Sales and office occupations	1,196	26.9%
Natural resources, construction, and maintenance occupations	384	8.6%
Production, transportation, and material moving occupations	347	7.8%
Industry		
Civilian employed population 16 years and over	4,442	-
Agriculture, forestry, fishing and hunting, and mining	0	0.0%
Construction	392	8.8%
Manufacturing	575	12.9%
Wholesale trade	82	1.8%
Retail trade	651	14.7%
Transportation and warehousing, and utilities	146	3.3%
Information	73	1.6%
Finance and insurance, and real estate and rental and leasing	419	9.4%
Professional, scientific, and management, and administrative and waste management services	508	11.4%
Educational services, and health care and social assistance	916	20.6%
Arts, entertainment, and recreation, and accommodation and food services	269	6.1%
Other services, except public administration	161	3.6%
Public administration	250	5.6%
Income and Benefits (in 2010 inflation-adjusted dollars)		
Total households	2,955	-
Median household income (dollars)	68,679	-
Mean household income (dollars)	100,655	-
With earnings	2,681	90.7%
With Social Security	342	11.6%
With retirement income	230	7.8%
With Supplemental Security Income	91	3.1%
With cash public assistance income	44	1.5%
With Food Stamp/SNAP benefits in the past 12 months	182	6.2%

NOTES:

1. An estimated margin of error was given for each category and is available on the AFF website.

Source: USCB, 2007-2011 ACS 5-Year Estimates Table DP-03

3.6 Environmental Justice Analysis

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994), specifies actions to be taken on a range of issues that are intended to promote nondiscrimination in federal actions to provide minority and low-income communities equal access to public information regarding a federal action, and to provide an opportunity for public participation in the evaluation of a federal action in matters relating to human health and the environment. FHWA Order 6640.23A establishes policies and procedures for the Federal Highway Administration (FHWA) to use in complying with Executive Order 12898.

A demographic profile for the Census tract comprising the project study area was prepared to answer the following questions posed by Executive Order 12898:

- Does the potentially affected community include minority and/or low-income populations?
- Are the environmental impacts likely to fall disproportionately on minority and/or low-income members of the community and/or tribal resources?

The population/minority and poverty data obtained from the USCB AFF website are summarized in **Tables 3-1** and **3-4** and illustrated on **Figures 6** (see Chapter 3.4) and **7**. Based on the data found, Block Groups 1 and 2 do not support a low-income or minority population. Block Group 3 does support a minority population, however, construction in Block Group 3 is limited in scope, approximately a 10th of a mile, and is not expected to adversely affect residential areas.

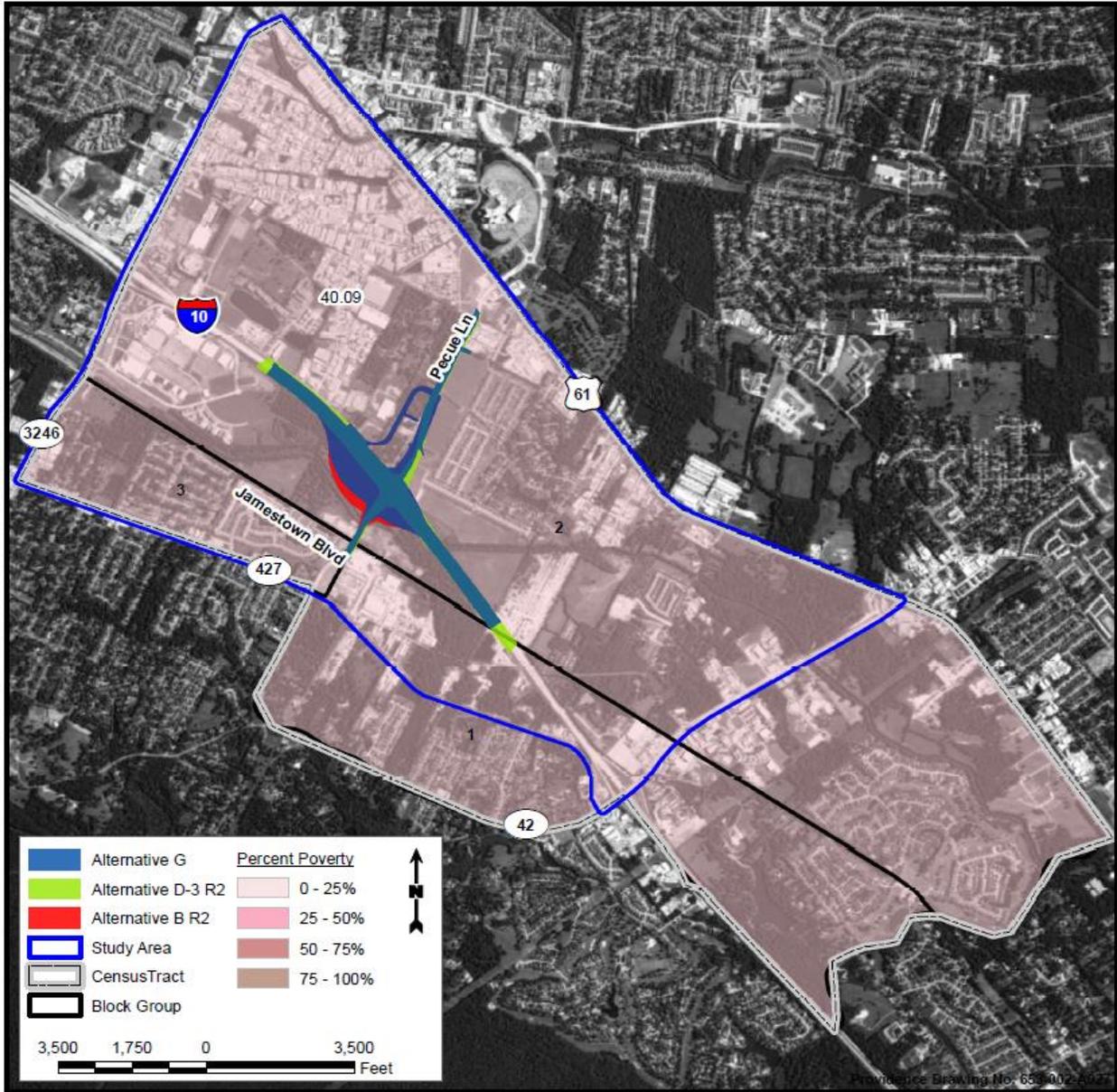
**TABLE 3-4
POVERTY DATA WITHIN THE LAST 12 MONTHS**

Census Tracts within the Project Study Area	Subject	Population for whom Poverty Status is Determined ⁽¹⁾
East Baton Rouge Parish Tract 40.09	Total Population Status Determined	7,179
	Below Poverty Level	350
	Percent Below Poverty Level	4.9%

NOTES:

1. An estimated margin of error was given for each category and is available on the AFF website.
 Source: USCB, 2007-2011 ACS 5-Year Estimates Table S1701: Poverty Status in the Past 12 Months.
 The USCB uses poverty thresholds based on the Department of Health and Hospitals poverty guidelines to determine the population in poverty. As of 2014, this value was approximately \$15,500 for a family of two.

**FIGURE 7
POVERTY DATA**



Poverty data obtained from USCB, 2006-2010 ACS 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months.
Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corp. and its data suppliers.

3.7 Public Lands and Recreation

There are two BREC parks located in the project study area and one dog park. Gentilly Court Park, located off of Metairie Drive south of Siegen Lane and Meadow Park, located off of Meadow Park Avenue south of Siegen Lane are BREC parks located outside the project corridor. Cypress Lake Dog Park is located at the Cypress Lake Apartments off of Rieger Road north of Pecue Lane. This information was confirmed with the USFWS *Information, Planning, and Conservation System* database. A letter from Louisiana Department of Wildlife and Fisheries (LDWF) received on March 4, 2010 states there are no state or federal

parks, wildlife refuges, or wildlife management areas located in or within a quarter mile of the project study area.

3.8 Cultural Resources

A preliminary cultural resources assessment was conducted for the project study area using the Louisiana Department of Cultural, Recreation, and Tourism's (LDCRT's) Louisiana Cultural Resources Map Geographic Information System (GIS) database and the National Register of Historic Places (NRHP) database for previously recorded historic structures and archeological sites and properties. Based on this preliminary search, no archeological sites were found within the project study area. For confidentiality reasons, these archeological sites are not shown on a figure.

The State Historic Preservation Officer's (SHPO's) response, dated March 18, 2010, states no known historic properties will be affected by this project. However, a Phase I Cultural Resources Survey will be conducted on the preferred build alternative when identified. Earth Search, Inc. completed preliminary archaeological investigations for the I-10/Pecue Lane Interchange build alternatives in March 2010, which is further described in Chapter 4.9.

Title 49 United States Code (USC) Section 303, previously Section 4(f) of the Department of Transportation (DOT) Act of 1966, and 23 Code of Federal Regulations (CFR) 774 state that the DOT and the FHWA, agencies may not approve the use of land from significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. However, a taking may be approved if a determination is made that there is no feasible and prudent alternative to the use of the land and the action includes all possible planning to minimize harm to the property resulting from use. The FHWA determines the application of Section 4(f) unless the federal, state, or local officials having jurisdiction over the land determines that the entire site is not significant. In the absence of a determination, the Section 4(f) land is presumed to be significant. The Safety, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Section 6009 simplified the process and approval for projects that have only *de minimis* impacts. No publicly owned parks, recreational areas, or wildlife and waterfowl refuges were found in the project study area. As mentioned in Chapter 3.7, a letter from LDWF received on March 4, 2010 confirms there are no wildlife refuges in the project study area.

The United States Department of the Interior (DOI), National Park Service's (NPS's) Land and Water Conservation Fund (LWCF) provides grants to state and local governments for the acquisition and development of public outdoor recreation areas and facilities. Section 6(f) of the Land Water Conservation Act (CFR Title 36, Chapter 1, Part 59) requires the acquisition of Section 6(f) lands and facilities be coordinated with the DOI. Typically, replacement in kind is required for acquisition of Section 6(f) lands and facilities. The identification of Section 6(f) properties in the project study area was conducted through written consultation with the LDCRT Office of State Parks and the NPS's LWCF website.

A search conducted through the NPS's LWCF website revealed that fifty eight LWCF grants have been issued for parks and recreation facilities in East Baton Rouge Parish since 1980. One of the facilities listed is located in or adjacent to the project study area, Gentilly Park. The grant was approved on February 14, 1977. This park is not located in the project corridor.

3.9 Visual Environment

The visual environment of the project study area in East Baton Rouge Parish primarily consists of commercial and residential areas, with forested areas off of I-10 to the south and along Ward Creek. The project corridor does support pasture as well as commercial and residential properties.

3.10 Geology/Topography

According to the USDA's *Soil Survey of East Baton Rouge Parish*, East Baton Rouge Parish lies in southeastern Louisiana and has three major physiographic features: the Mississippi River flood plain, the Prairie formation, and the Montgomery formation. The parish's elevation is highest in the northwestern part of the parish (140 feet above mean sea level [MSL]) and lowest at Kleinpeter (25 feet above MSL).

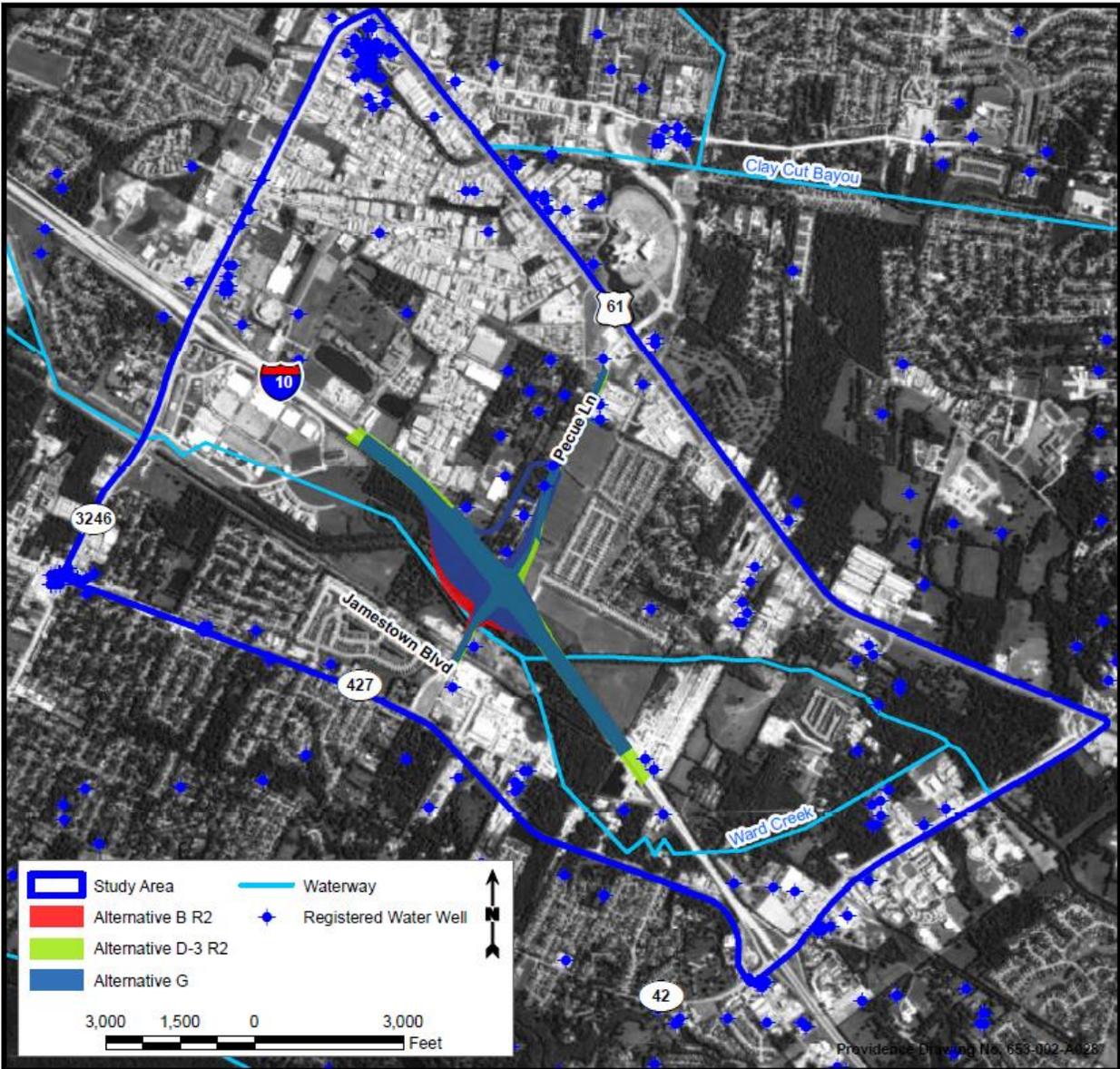
3.11 Water Resources

3.11.1 Surface Water

Surface water exists in the project study area in rivers, bayous, canals, and other drainage ways, and occasionally, wetlands. **Figure 8** shows area water resources. Water quality in the project study area is affected by both natural occurring conditions and point source and nonpoint source discharges. Point sources include mainly industrial, municipal, and sewer discharges. Nonpoint sources include storm water runoff, industrial discharges, landscape maintenance activities, forestry, agriculture, and natural sources (LDEQ 2010).

A review of the *2012 Louisiana Water Quality Inventory: Integrated Report - Fulfilling the Requirements of the Federal Clean Water Act Sections 305(b) and 303(d)* revealed that the project study area lies within the Pontchartrain Basin in Subsegments 040201 and 040302. Subsegment 040201, Bayou Manchac Headwaters to the Amite River and Subsegment 040302, Amite River from LA 37 to the Amite River Diversion Canal, are listed as not meeting their designated water use category of fish and wildlife propagation. Subsegment 040201, also not meeting its primary contact recreation category, is noted as failing to meet its designated uses due to elevated chlorides, sulfates, and total dissolved solids. Subsegment 040302 is noted as not meeting its designated uses due to elevated mercury levels.

**FIGURE 8
WATER RESOURCES**



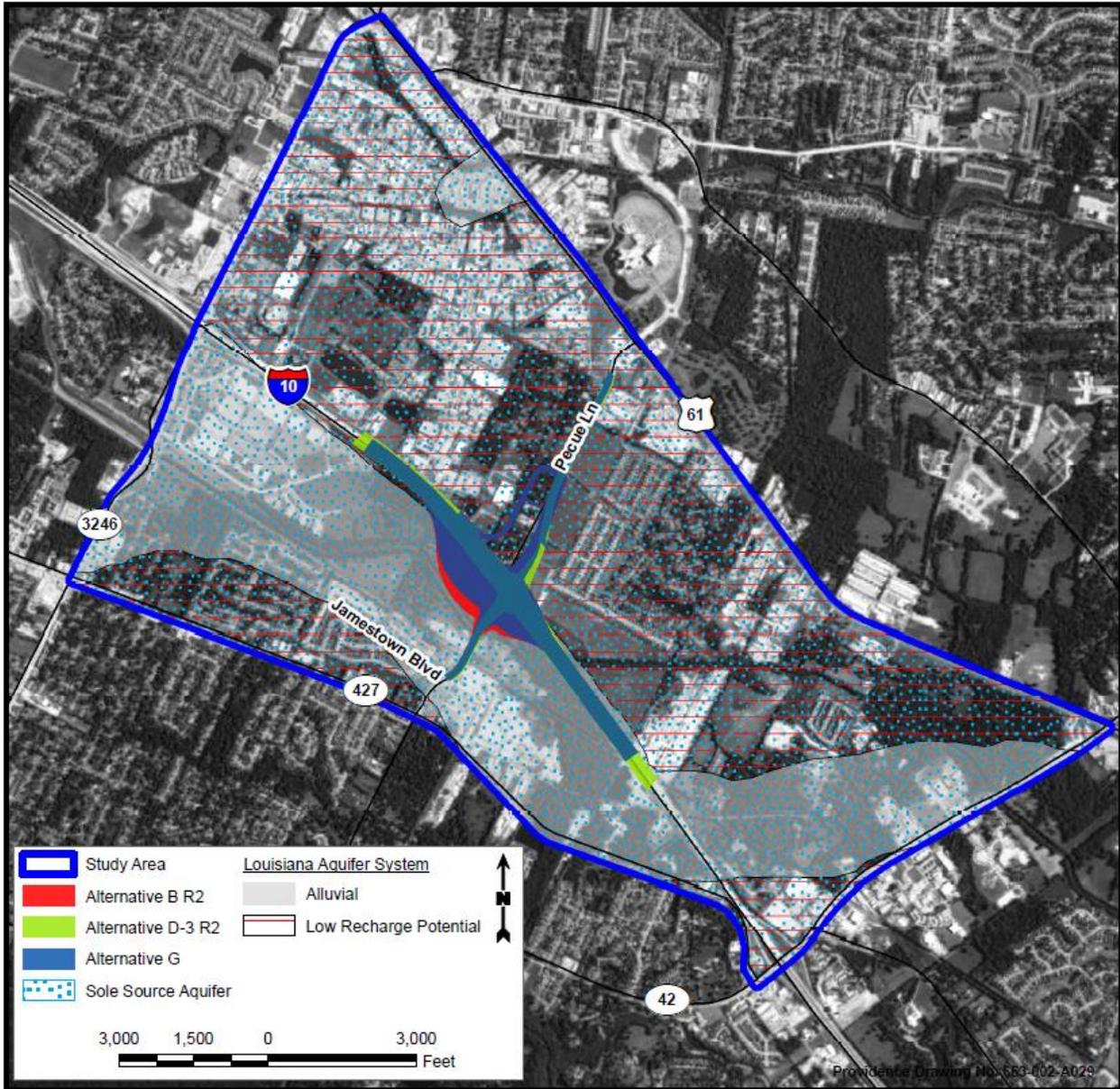
Registered water wells obtained from the LDNR SONRIS water well server as of 8/12/15.
Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

3.11.2 Groundwater

According to the United States Environmental Protection Agency (USEPA), a Sole Source Aquifer (SSA) is an aquifer that would normally supply at least 50 percent of the drinking water for a particular community or area where no viable alternative drinking water sources exist. The project study area is located above a designated SSA, Southern Hills aquifer system. Correspondence received from the USEPA's SSA Program dated February 25, 2010 confirms the presence of the SSA. An SOV response from the Capital Area Groundwater Conservation Commission dated February 25,

2010 stated they anticipate no adverse effects on the groundwater resources from this project. **Figure 9** demonstrates the limits of area aquifers and aquifer recharge potential.

**FIGURE 9
AQUIFERS AND RECHARGE POTENTIAL**



*Aquifer data comprised of Recharge Potential of Louisiana Aquifers, LDEQ (1999) dated 10/15/12.
Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.*

A Public Water System (PWS) is any water system that provides water to at least 25 people for at least 60 days annually. A search was performed using the LDNR’s Strategic Online Natural Resources Information System (SONRIS) databases for PWS wells located within the project study area. The SONRIS database includes all water wells registered with the DOTD. All water wells identified are shown in **Figure 8** (see Chapter 3.11.1) and

are detailed in **Table 3-5**. This search was conducted on July 29, 2015; it is possible that additional wells have been drilled but are not registered. There are thirteen PWS wells within the project study area. A letter from the Louisiana Department of Natural Resources (LDNR) dated March 24, 2010 confirms that there are water wells in the vicinity of the project study area.

**TABLE 3-5
REGISTERED WATER WELLS IN THE PROJECT STUDY AREA**

Well Type	Quantity
Aquaculture	4
Commercial Public Supply	13
Destroyed Domestic	3
Domestic	17
Environmental Recovery	11
Excavated Monitor	2
Heat Pump Hole	4
Inactive Industrial	2
Inactive Public Supply	1
Industrial	4
Industrial Food Process	1
Institution Public Supply	1
Irrigation	5
Monitor	40
Oil/Gas Well Rig Supply	3
Piezometer	4
Plugged and Abandoned	2
Plugged and Abandoned Domestic	2
Plugged and Abandoned Industrial	6
Plugged and Abandoned Monitor	25
Plugged and Abandoned Public Supply	4
Plugged and Abandoned Recovery	1
Plugged and Abandoned Rig Supply	4
Plugged and Abandoned Test Hole	2
Unknown	1
TOTAL	162

3.12 Floodplains

Federal Emergency Management (FEMA) Flood Insurance Rate Maps (FIRMS) were used to determine the extent of the 100-year floodplain in the project study area. **Figure 10** shows the 100-year floodplain consisting of 1,747 acres within the project study area.

**FIGURE 10
FLOODPLAINS**

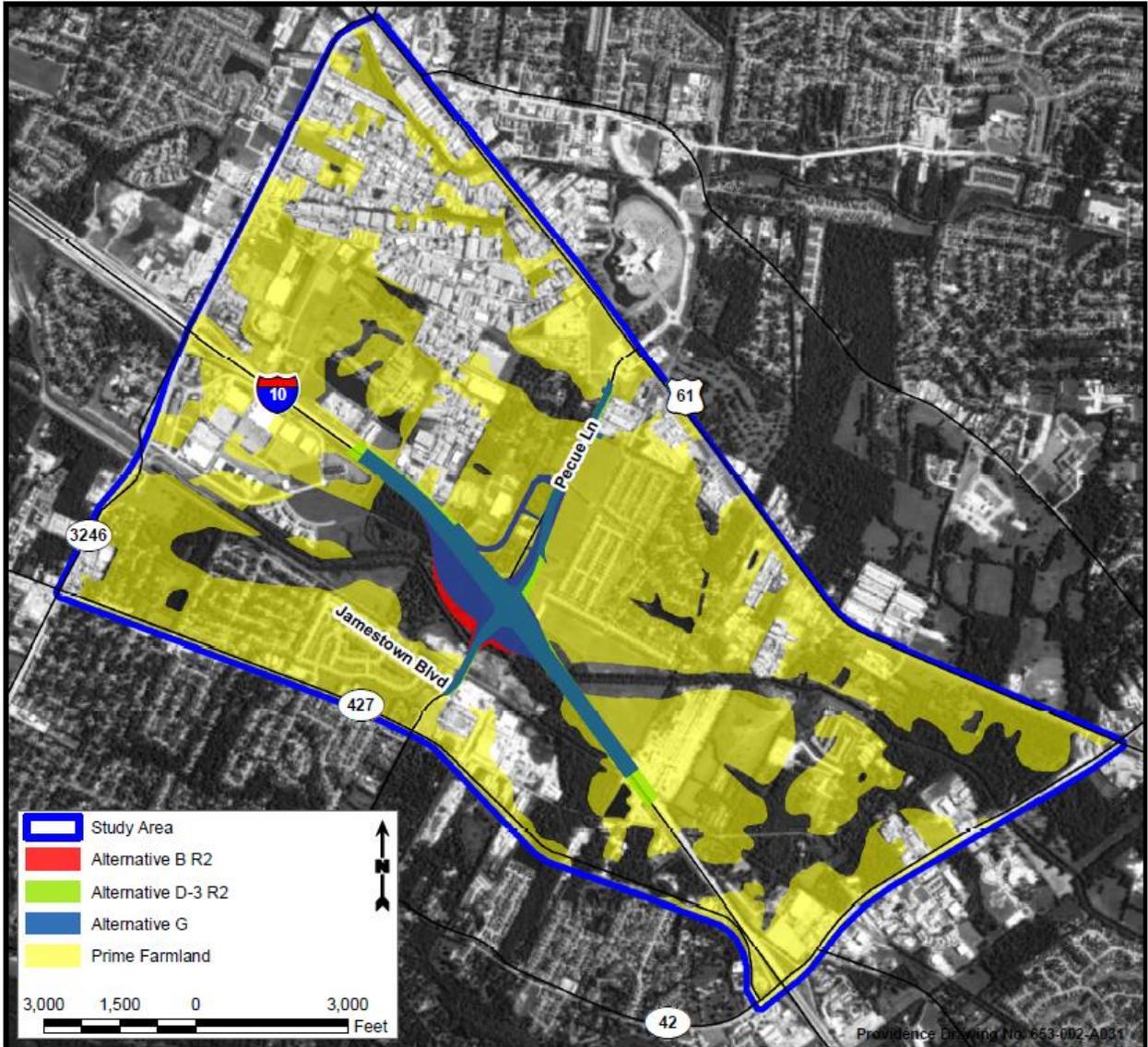


*The Q3 Flood Data obtained from the Flood Insurance Rate Maps (FIRMS) published by FEMA.
Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.*

3.13 Farmland

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Per preliminary correspondence from the Natural Resources Conservation Service (NRCS) dated February 24, 2010, they had no comment at the time but a Farmland Conversion Impact Rating may be necessary as the project moves along. No impacts to NRCS projects are anticipated. **Figure 11** shows prime farmland data obtained from the NRCS Web Soil Survey within the project study area.

**FIGURE 11
PRIME FARMLANDS**



Prime farmland data obtained from NRCS server as of 8/12/13. Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

3.14 Noise

According to the FHWA’s Highway Traffic Noise: Analysis and Abatement Guidance, sound is when an object moves and the movement causes vibrations of the molecules in the air to move in waves. We hear what we call sound when the vibration reaches our ears. Sound from highway traffic is generated primarily from a vehicle’s tires, engine, and exhaust. Sound pressure levels used to measure the intensity of sound are described in terms of decibels (dB). Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear. Therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds.

This adjustment is called A-weighting decibels (dBA). Generally, when the sound level exceeds the mid-60 dBA range, outdoor conversation in normal tones at a distance of three feet becomes difficult.

Because traffic sound levels are never constant due to the changing number, type, and speed of vehicles, a single value is used to represent the average or equivalent steady-state sound level (Leq). For traffic noise assessment purposes, Leq is typically evaluated over the worst one-hour period and is defined as Leq(h).

The FHWA has established noise abatement criteria (NAC) for various land use activity categories that can be used to determine when a traffic noise impact would be expected to occur. The DOTD’s noise policy defines traffic noise levels as “approaching” when the noise level is a least 1 dBA below the FHWA NAC. The DOTD policy also states a 10 dBA increase over existing levels is a substantial increase. In accordance with current FHWA noise regulations, the Traffic Noise Model (TNM) version 2.5 computer program was used to predict the noise levels associated with the proposed build alternatives including the existing, design year no-build, and design year build conditions. One hundred and seventy one (171) noise receivers were used in the models. The traffic noise analysis is detailed further in Chapter 4.15, and a complete copy of the analysis is contained in **Appendix D**.

3.15 Air Quality

Air quality is measured by the type and level of pollutants in the air. The 1990 Clean Air Act Amendment requires the USEPA to set National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) for pollutants considered harmful to public health and the environment. The USEPA has set NAAQS for six principal pollutants, which are called "criteria" pollutants as shown in **Table 3-6** (USEPA, NAAQS). In addition to criteria air pollutants for where there are NAAQS, the USEPA regulates air toxics which mostly originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories, refineries) (USEPA, *Pollutants and Sources*, 2013).

**TABLE 3-6
CRITERIA POLLUTANTS**

Pollutant Name	Chemical Abbreviation
Ozone	O ₃
Carbon Monoxide	CO
Particulate Matter	PM
Nitrogen Dioxide	NO ₂
Sulfur Dioxide	SO ₂
Lead	Pb

Highway agencies are required to consider the impacts of transportation improvement projects on a regional level in the Transportation Conformity analysis and at a statewide level in the State Implementation Plan (USEPA, Transportation Conformity, 2011) for those areas that are not in attainment with current standards. The proposed project is located in East Baton Rouge Parish in Louisiana, which is currently designated as attainment or unclassifiable for all NAAQS (USEPA, "Louisiana Nonattainment/Maintenance Status for Each County," 2015). An air quality conformity analysis to conform to the State Implementation Plan for attainment and maintenance of the NAAQS is not required.

A solicitation of views (SOV) response from the Louisiana Department of Environmental Quality (LDEQ) dated April 1, 2010 confirmed that East Baton Rouge Parish is classified as an attainment parish with the NAAQs for all criteria air pollutants and has no general conformity obligations. However, presently, East Baton Rouge Parish is part of the Baton Rouge 5-parish area that was designated by USEPA in July 2012 as a marginal nonattainment area for the 8-hour ozone standard; therefore, the transportation conformity rules do apply. The USEPA has given the Baton Rouge 5-parish nonattainment area an attainment date of December 31, 2015. The Baton Rouge area is considered in attainment or unclassifiable with respect to all other NAAQS pollutants including carbon monoxide.

An air quality analysis was conducted for the Preferred Alternative and is detailed in Chapter 4.16. The full report is located in **Appendix E**.

3.16 Hazardous Materials

A survey of a one mile radius of the project study area was conducted to identify sites that contain or potentially contain hazardous or toxic materials and/or wastes. Environmental Data Resource, Inc. (EDR) was contracted to provide a search of the project study area, using the standard American Society for Testing and Materials (ASTM) format for Phase I Environmental Site Assessments (ESAs). The EDR report included regulatory agency record reviews, including a search of federal and state environmental compliance databases. Field reconnaissance was conducted to confirm the EDR data.

The database search and regulatory agency records review were conducted to determine what, if any, information, release reporting, or registrations exist, or have been applied for, which might reveal a potential for contamination, indicate the possible presence of contamination, or assist in identifying recognized environmental conditions in connection with the project study area. This procedure includes the examination of standard environmental record sources identified within Section 8.2.1 of ASTM Standard Practice E 1527-13, along with other appropriate agencies as deemed necessary. The databases searched include: Federal ASTM E 1527-13 Databases, Federal ASTM E 1527-13 Supplemental Databases, and State ASTM E 1527-13 Databases. Two types of sites were considered to be of particular interest for this project:

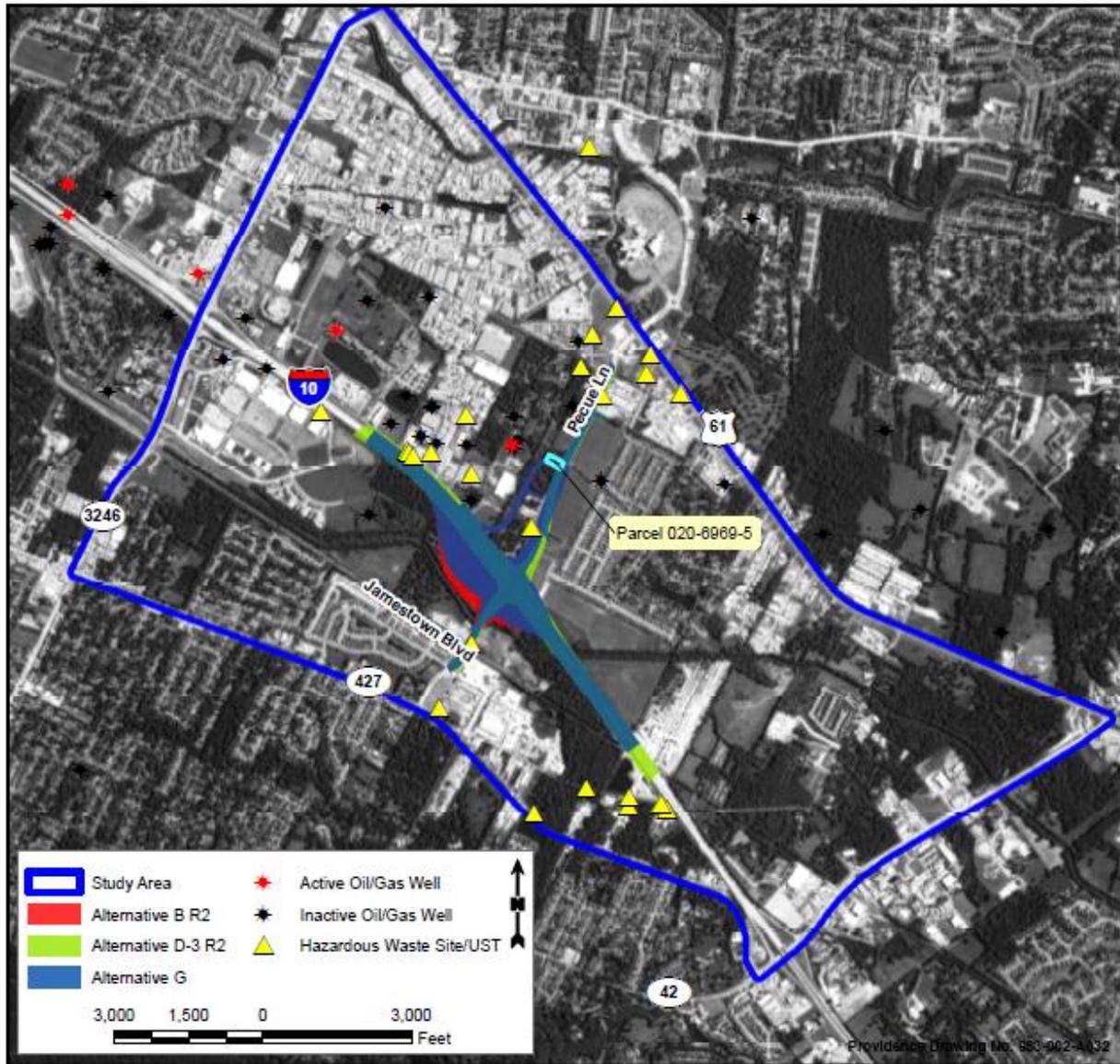
- Sites where hazardous materials or wastes are generated, stored, handled, or disposed
- Sites containing underground storage tanks (USTs)

These sites, should they be contaminated, have the potential to directly impact the project study area if located in the existing or proposed ROW, or indirectly through migration of contamination off site and into the project ROW.

3.16.1 Hazardous Waste Sites

Hazardous waste is defined by 42 USC § 6903 as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.” Federal and state databases were used to identify known hazardous waste sites. Potential hazardous waste sites in the search area identified by the EDR Report are shown on **Figure 12**. All efforts were made to avoid these sites during line and grade development. A copy of the EDR report can be found in the Phase I ESA (see **Appendix F**).

**FIGURE 12
POTENTIAL ENVIRONMENTAL LIABILITY SITES**



Potential Hazardous Sites data obtained from EDR shapefile as of 6/17/15. Oil and gas well data obtained from the LDNR SONRIS oil and gas well server as of 8/12/15. Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

One Resource Conservation and Recovery Act - Large Quantity Generator and one Small Quantity Generator were identified on or adjacent to the subject property. CVS Pharmacy on Airline Highway was the one Large Quantity Generator identified and Environmental Abatement Services/Bofinger Tree Service was identified as the Small Quantity Generator. A review of Electronic Document Management System (EDMS) documents for these facilities did not reveal compliance issues of concern.

Four Conditionally Exempt Small Quantity Generators were located in close proximity to or on Pecue Lane: Kentwood Spring Water and Averitt Express located on Rieger Road, Performance Contractors, located on Pecue Lane,

and SVC Pump and Compressor, located on Exchequer. A review of EDMS documents for these facilities did not reveal compliance issues of concern.

The SPILLS is a databased of spills and/or releases, to land, reported to the Emergency Response Section of LDEQ. The SPILLS list revealed three sites on Pecue Lane in the study area with former spill-related incidents:

- HI Insulation (7987 Pecue Lane)
- Natural Resources Recovery (9477 Pecue Lane)
- Averitt Express (11601 Rieger Road)

A review of EDMS records for these facilities did not reveal compliance issues of concern.

One solid waste facility/landfill site, Natural Resources Recovery, was noted off of Pecue Lane and is considered a local landfill and a Statewide Recycling facility. A review of EDMS documents for Natural Resources Recovery did not reveal compliance issues of concern.

Five sites maintaining Louisiana Pollutant Discharge Elimination System Permits were identified:

- Natural Resources Recovery (9477 Pecue Lane)
- Woodridge Subdivision (Pecue Lane/Woodridge Road)
- EHS Investments LLC (Woodridge Subdivision)
- Averitt Express (11601 Rieger Road)
- Boykin Brothers LLC DBA Louisiana Concrete Products (16255 Old Perkins Road West)

A review of EDMS documents for these facilities did not reveal compliance issues of concern.

3.16.2 USTs

USTs are defined as any one, or a combination of tanks used to contain regulated substances, the volume of which, including connecting underground pipes, is ten percent or more beneath the surface of the ground. The LDEQ requires by law that all USTs within the state be registered. The data search queried UST records maintained by the LDEQ. The preliminary EDR report identified 4 UST sites:

- Cableworks (8061 Pecue Lane)
- Kentwood Spring Water (11465 Rieger Road)
- Toomer Electric Company (13050 Airline Highway)
- Boykin Brothers LLC DBA Louisiana Concrete Products (16255 Old Perkins Road West)

3.16.3 Oil and Gas Wells

A letter from the LDNR dated March 24, 2010 confirms there a no active and producing oil and gas wells in the vicinity of the project study area. A search was performed on the SONRIS database on July 29, 2015 to determine the location of oil and gas wells in the project study area. There are 33 oil and gas wells located in the project study area, as shown in **Figure 12** (see Chapter 3.17.1). **Table 3-7** provides information relative to well type and status of these wells.

A secondary search was also performed for oil and gas wells in the EDR Underground Injection Control (UIC) database. Within the one mile search area, no UIC’s were found.

**TABLE 3-7
REGISTERED OIL AND GAS WELLS
IN THE PROJECT STUDY AREA**

Well Type	Quantity
Plugged and Abandoned Dry Hole	12
Plugged and Abandoned Oil Producer	10
Plugged and Abandoned Producer	1
Permit Expired/No Product Code	3
Producing Well (Oil)	2
Salt Water Disposal Wells--Conventional	1
Shut-in Productive Wells--Future Utility (Oil)	3
Wells Reverted to Single Completion	1
TOTAL	33

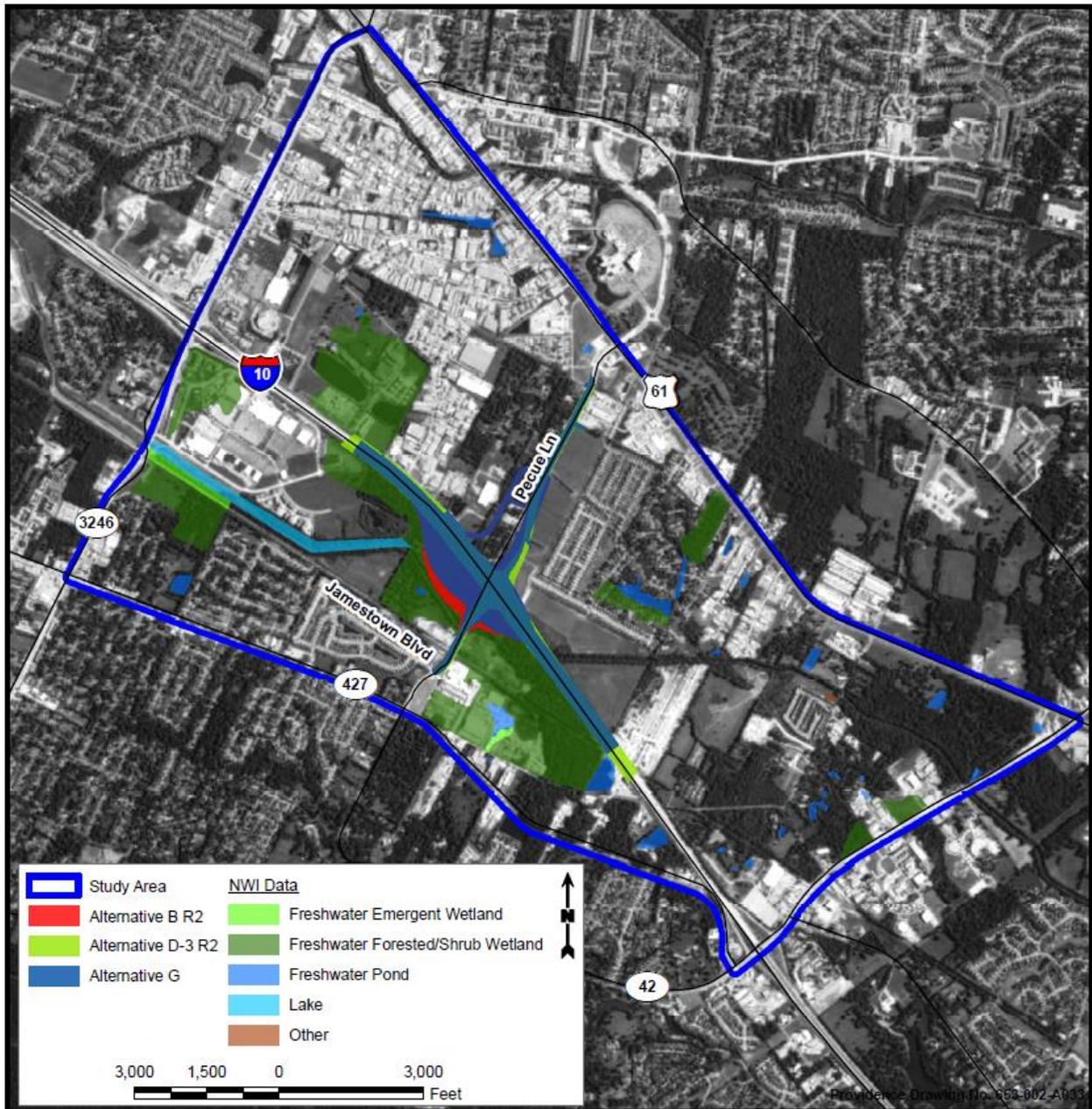
3.17 Wetlands

Wetlands are defined jointly by the United States Army Corps of Engineers (USACE) and the USEPA as “those areas that are inundated or saturated by surface or groundwater, at a frequency and duration sufficient to support, and that under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (40 CFR 230.3 and 33 CFR 328.3). In compliance with Executive Order 11990, a preliminary desktop wetland investigation was conducted on the proposed study area using soils data and local knowledge. **Figure 13** demonstrates the location of potential wetlands and hydric soils in the project study area based on National Wetlands Inventory (NWI) data. Wetlands are potentially present where hydric soils exist.

Wetlands potentially present in the project study area have been observed to be primarily comprised of bottomland hardwood forested wetlands and emergent wetlands. According to NWI data, 468.74 acres of the project study area are classified as Freshwater Forested/Shrub Wetland, 47.61 acres are Freshwater Pond, 29.14 acres of Lake, 10.31 acres of Freshwater Emergent Wetland, and

0.60 acres are Other Waters. Field investigations were required to accurately delineate the site. The results of the wetland analysis are discussed in Chapter 4.18, and the full analysis is included as **Appendix G**.

**FIGURE 13
POTENTIAL WETLANDS AND HYDRIC SOILS**



NWI Data from the USFWS, Division of Habitat and Resource Conservation, as of 3/25/15. Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

3.18 Coastal Zone

The project study area is located within East Baton Rouge Parish, Louisiana. All of the project study area falls outside the bounds of Louisiana's Coastal Zone Boundary.

3.19 Rivers and Scenic Streams

The National Wild and Scenic Rivers System was created by Congress in 1968 to preserve rivers throughout the country demonstrating "outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations". According to the Wild and Scenic Rivers System's website, there is only one waterway in Louisiana protected under this program, Saline Bayou, and it is located in LaSalle Parish ("Saline Bayou, Louisiana," 2014).

The NPS's Nationwide Rivers Inventory "is a listing of more than 3,400 free-flowing river segments in the United States that are believed to possess one or more outstanding remarkable natural or cultural values judged to be of more than local or regional significance". According to the NPS's Nationwide Rivers Inventory webpage, there are 11 free-flowing Louisiana Segments. However, none are located in East Baton Rouge Parish.

The Louisiana Natural and Scenic River Act of 1970 established the Louisiana Natural and Scenic River System. According to LDWF's Scenic Rivers webpage, there is one scenic river in East Baton Rouge Parish, but is not near the project study area. A letter from LDWF dated March 4, 2010 addressing regulated resources in the project study area confirmed that there are no scenic streams within the project study area.

3.20 Wildlife

Mammals in the project study area include those that have adapted to life in more urban environments. Within the project study area, mammals such as squirrels, rabbits, raccoons, opossum, rats, and mice would be expected to be present.

In addition, there are reptiles and amphibians more common along the roadside ditches within the project study area. Snakes, turtles, frogs, salamanders, and lizards would be expected to be encountered in the project study area.

Habitat within the project study area supporting various species of birds includes agricultural/open land and forested habitats. Agricultural and forested habitats in the project study area provide open spaces for nesting and/or foraging for raptors and other species. Ward Creek which traverses the project study area, provides habitat suitable for some wading birds.

Aquatic habitat (primarily Ward Creek) in the project study area is characterized as freshwater. Common fish species expected to occur in the project study area include: gar, largemouth bass, crappie, bluegill, red ear sunfish, warmouth, and mosquitofish.

A letter from LDWF was received on March 4, 2010 stating there are no wildlife refuges or wildlife management areas in the project study area or nearby, and they reserve comment for the permit public notice period.

3.21 Threatened and Endangered Species

The Endangered Species Act of 1973 allows the USFWS to manage threatened and endangered species and their ecosystems. According to the USFWS *Information, Planning, and Conservation System*, there are four threatened or endangered species or protected habitats listed for East Baton Rouge Parish. The two threatened species are the Alabama heelsplitter (*Potamilus inflatus*) and the Atlantic sturgeon (*Acipenser oxyrinchus*), which also has a final designated critical habitat. The two endangered species are the Pallid sturgeon (*Scaphirhynchus albus*) and the West Indian Manatee (*Trichechus manatus*), which also has a final designated critical habitat. However, correspondence with the USFWS and LDWF, dated March 2, 2010 and March 4, 2010 respectively, state no impacts to threatened or endangered species are anticipated for the project study area.

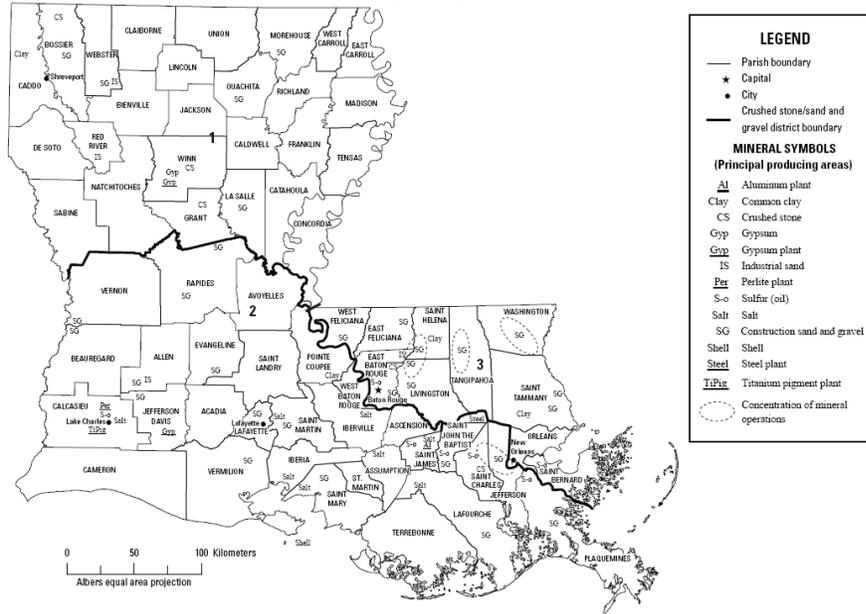
3.22 Unique and Environmentally Sensitive Areas

The DOTD Engineering Directives and Standards Treatment of Significant Trees in DOTD Right-of-Way (EDSM No: I.1.1.21) defines significant trees as a live oak, red oak, white oak, magnolia, or cypress that is considered aesthetically important, has a diameter at breast height of 18 inches, and having a form that separates it from the surrounding vegetation or is considered historic. Properties adjacent to Pecue Lane may have significant trees.

3.23 Mineral Resources

Mineral resources information for the project study area was obtained by researching the LDNR's SONRIS database and USGS publicly available data. The USGS 2009 Minerals Yearbook for Louisiana included the picture below illustrating principal mineral producing areas. Sulfur (oil) and construction sand and gravel are listed as mineral resources in East Baton Rouge Parish.

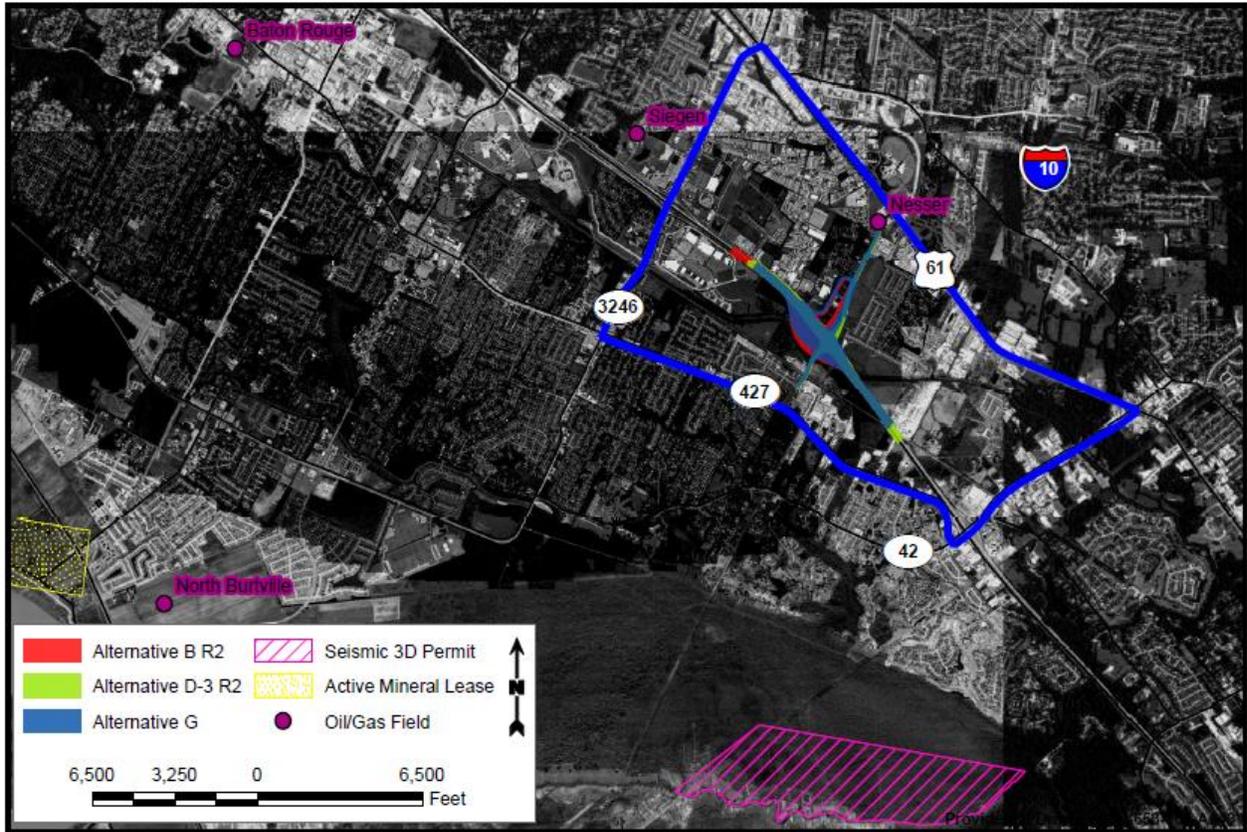
LOUISIANA



Source: Louisiana Geological Survey/U.S. Geological Survey (2009).

Active mineral leases in the project study area were researched through the State Mineral and Energy Board of the State of Louisiana, the entity that issues leases for the purpose of exploring, prospecting, and/or drilling for and producing oil, gas, and any other liquid or gaseous minerals in solution and produced with oil and gas. Lease terms exclude free sulphur, potash, lignite, sale, and other solid minerals. There are no active mineral leases (oil and gas) or Seismic 3D permits in the study area. There is one Oil and Gas field, the Nesser Gas Field, located in the northern portion of the project study area (see **Figure 14**).

**FIGURE 14
MINERAL RESOURCES**



Active Mineral Leases, Seismic 3D Permits, and Oil/Gas Fields obtained from the LDNR SONRIS data server as of 4/28/15. Base map comprised Bing Maps aerial imagery from (c) 2013 Microsoft Corporation and its data suppliers.

4.0 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

Environmental consequences associated with implementing the No-Build Alternative and Preferred Alternative, are discussed in this chapter, along with potential permits and mitigation measures. All agency correspondence noted in this chapter are included as **Appendix A** in chronological order, unless stated otherwise.

4.1 Land Use and Development

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

Construction of the Alternative G will result in the direct conversion of 1928.73 acres of commercial and industrial land, 841.35 acres of residential land, 714.03 acres of forested land, 289.95 acres of barren land, 20.74 acres of water, and 3.30 acres of urban or built-up land. This information is according to the USGS land use data presented in **Figure 4** (see Chapter 3.2).

4.2 Community Facilities and Services

Neither the No-Build Alternative nor the Preferred Build Alternative will impact any community facility structures. Trinity Baptist Church is located on Pecue Lane adjacent to the ROW for Alternative G. Construction of the Preferred Alternative will require reconstruction of the church driveways and replacement of several parking spaces.

4.3 Relocations

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (the Uniform Act) provides important protections and assistance for people affected by federally funded projects. Relocation resources are available to all residential and business relocates without discrimination in compliance with Title VI of the Civil Rights Act of 1964. Assistance could be provided in the form of replacement housing, replacement buildings (for businesses), rental assistance, moving expenses, re-establishment expenses, and/or housing of last resort.

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

Table 4-1 details the acreage by parcel of additional ROW that is anticipated to be acquired for Alternative G. Costs are based on current market value derived from recent and posted property sales as well as pre-project announcement sales amounts for commercial properties located along the proposed ROW.

**TABLE 4-1
ROW PROPERTY ACQUISITION ACREAGE AND COST FOR
ALTERNATIVE G**

Parcel ID Number¹	Acres to be Acquired	Approximate Cost²
027-0194-4	0.28	\$27,899.50
020-8512-73 ³	0.00	\$0.00
000-0000-0	0.16	\$15,523.70
019-7515-33 ³	0.00	\$0.00
019-4462-2	0.15	\$14,700.80
020-6969-5	0.93	\$93,043.10
024-9222-9	3.38	\$337,671.50
020-7632-2	0.17	\$17,093.20
017-6644-9	0.08	\$7,707.10
018-8279-13 ³	0.00	\$0.00
019-7516-1	0.36	\$36,341.80
024-9223-7	7.32	\$731,748.70
020-8794-4	0.04	\$4,179.20
019-7518-8	0.03	\$2,696.00
018-8721-1	0.03	\$2,648.50
018-7810-7	0.06	\$6,427.60
024-4964-1	0.46	\$46,086.20
018-7168-4	8.56	\$855,597.80
010-5269-1	0.00	\$246.40
020-0764-9	0.11	\$10,779.80
025-1498-2	0.10	\$10,080.40
020-7767-1	0.07	\$7,181.00
010-6118-6	17.29	\$1,728,917.00
000-0000-0	0.10	\$9,995.30
014-8588-1	0.05	\$5,323.10
017-6643-0	0.12	\$12,195.60
017-6642-2	0.11	\$10,967.20
020-7636-5	1.21	\$120,576.80
000-0000-0	0.24	\$24,367.60
018-8718-1	0.09	\$8,921.20
017-8518-4	0.08	\$7,562.30
018-0742-0	0.14	\$14,037.10
014-8593-8	0.03	\$2,791.90
018-7850-6	0.17	\$16,960.00
018-6499-8	0.04	\$3,832.10
020-8426-0	0.08	\$7,696.50
020-7741-8	1.02	\$101,896.20
031-1911-4	0.40	\$39,841.70

**TABLE 4-1 (continued)
ROW PROPERTY ACQUISITION ACREAGE AND COST FOR
ALTERNATIVE G**

Parcel ID Number ¹	Acres to be Acquired	Approximate Cost ²
012-5718-8	3.80	\$379,964.60
018-6591-9	0.05	\$4,884.10
005-4347-0	0.98	\$97,632.70
018-7167-6	5.60	\$559,919.70
000-0000-0	0.08	\$8,430.30
024-9221-0	0.85	\$85,157.50
007-3773-9	1.61	\$160,568.70
000-0000-0	3.56	\$355,794.40
019-0625-9	0.02	\$1,781.50
000-0000-0	0.0003	\$30.40

NOTES:

1. Parcel ID Numbers were obtained from the East Baton Rouge Parish Assessor’s Office.
2. The currently marketed value of \$600,000 per acre for commercial property on Pecue Lane (CJ Brown, Loopnet, Beau Box - August 2015), may be reflective of the potential project (study announced 2009/2010). Therefore, property values are a conservative estimate based on documented sales of commercial property sold prior to the announcement of the proposed project.
3. These three properties involve residential relocations and are accounted for in Table 4-2.

Based on preliminary ROW estimates, three residences may require relocation; no businesses will be relocated. Driveways, commercial drives and entrances, and one ornamental gate are expected to be damaged and may require replacement.

The potential ROW acquisition costs are detailed in **Table 4-2**. This cost does not include utility relocations or mitigation for impacts to jurisdictional wetlands. Potential utility relocations are discussed in Section 4.6. Costs associated with mitigation for wetland impacts and utilities are also included in the Preliminary Opinion of Probable Cost in **Appendix B**.

**TABLE 4-2
ESTIMATED RIGHT-OF-WAY COSTS FOR ALTERNATIVE G**

Item	Unit Price	Unit	Quantity	Total
Land (taxable value) ¹	see Table 4-1	ACRE	60	\$5,997,698
Improvements - Three Residences ²	\$300,000.00	LUMP	3	\$900,000
Damages - Commercial Driveways/ Parking ³				
Concrete	454	SQ YD	\$40.00	\$18,160
Gravel	207	SQ YD	\$8.00	\$1,656
Damages - Residential Driveways	299	SQ YD	\$8.00	\$2,392
Replace Commercial Entrances ⁴				
Concrete	454	SQ YD	\$55.00	\$24,970
Gravel	207	SQ YD	\$8.00	\$1,656
Replace Residential Entrances	299	SQ YD	\$8.00	\$2,392
Replace Existing Gate ⁵				
Custom Metal Gate	1	LUMP	\$2,000.00	\$2,000
Subtotal				\$6,950,924
Appraisals	\$400.00	PROPERTY	48	\$19,200
Litigation (10% of subtotal)				\$695,092
Contingency (5% of subtotal)				\$347,546
Total				\$8,012,762

Values for real estate are for estimation purposes only.

NOTES:

- 1 Total acreage for land is based on values provided in Table 4-1; value is based on a conservative estimate based on purchase price of commercial property on Pecue Lane prior to the announcement of the Pecue Lane/I-10 project.
- 2 Residence estimated values are based on current asking prices in the area. Current sales data indicates residential property is priced based on realtor accepted current commercial value, not residence value.
- 3 Driveway footage inside the existing Pecue Lane ROW is not included in the cost of damage. Entergy, Sysco, and Trinity Church are included in the concrete drives/parking. Railroad access, Total Wood, and Mike's Tree/Crane Service are included in gravel drives. Four residential driveways are affected.
- 4 Driveway footage inside the existing Pecue Lane ROW is not included in the cost of replacement.
- 5 One custom metal gate at Trinity Baptist Church may require replacement (due to lose of driveway, gate may have to be widened).

No special or unusual conditions have been identified. No discussions have been held with local officials or community groups regarding potential displacements, and none are anticipated at this time. Replacement housing is available in the area of displacement. In conclusion, there are no unusual problems anticipated in providing replacement housing under normal procedures. Additional details regarding this relocation can be found in the Conceptual Stage Relocation Plan, located in **Appendix H**. The other relocations will involve utilities, and these are further discussed in Section 4.6.

4.4 Employment Trends and Local Economy

The No-Build Alternative is not expected to result in changes to the existing business composition along Pecue Lane and would not be expected to result in a change in employment or economic opportunity.

Alternative G would result in an additional exit to/from I-10 and is expected to significantly increase traffic volumes in the project corridor. Additionally, the extension of Rieger Road will allow access to property scheduled for multi-use development on the north side of I-10 and easier access to I-10 from existing commercial operations located on Rieger Road. The construction and subsequent operation of Alternative G is expected to allow for an increase in economic development and employment opportunities.

4.5 Environmental Justice

As discussed in Section 3.6, the No-Build Alternative and Alternative G will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations since census data did not reflect minority or low-income populations in the project corridor. These findings are consistent with FHWA Order 6640.23A.

4.6 Utilities

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

Table 4-3 reflects the utilities presumed to be affected by the construction of Alternative G. Utility relocation is estimated to cost approximately one million dollars.

**TABLE 4-3
UTILITIES POTENTIALLY AFFECTED BY ALTERNATIVE G**

Utility	Type	Footage
Entergy Electrical	Electrical/Overhead	6,900.00
Ebroscos	Force main	6,900.00
SCBT Telephone	Overhead Phone	6,900.00
Cox Cable	Fiber Optic	5,950.00
Baton Rouge Waterworks	Water main	6,900.00
Entergy Transmission Lines	Electrical	1,800.00

4.7 Traffic Patterns

The No-Build Alternative is expected to have no impacts on current traffic patterns.

Implementation of any build alternative would result in a change in traffic patterns, as the project will result in a new operational interchange with I-10 at Pecue Lane and an extension of Rieger Road with an intersection at Pecue Lane. Implementation of Alternative G is expected to result in a traffic increase of at least eight times the existing traffic volume on Pecue Lane and almost four times greater than the existing traffic volume on Rieger Road in the design year. Some properties located between the Rieger Road extension and the expanded Pecue Lane will utilize a section of former Pecue Lane to access the new roadway at the Rieger intersection. This will be adjustment in current access, as these properties presently have unrestricted access to Pecue Lane.

4.8 Public Land and Recreation

As discussed in Chapter 3.7, there are no local, state or federal parks, wildlife refuges, or wildlife management areas in the project corridor; there are two local parks in the project study area. Therefore, the No-Build and Alternative G will not impact public land or recreation areas, as there are none in the project corridor.

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 adverse effect because no ground disturbances or ROW acquisitions will occur as a result of this project.

Earth Search, Inc. conducted a Phase I Cultural Resources Survey (CRS) of the Alternative G from June 15 through 19, 2015. 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.

Federal regulations define the area of potential effects (APE) as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." For assessment of direct effects, the APE is defined as the areas of construction and clearing in which ground-disturbing activities are possible. The APE for archeological resources was limited to the proposed ROW for Alternative G (direct APE). The APE for historic structures included the proposed ROW for Alternative G as well as an indirect APE, 0.25 mile diameter buffer (0.125 miles around the direct APE). The direct APE comprises approximately 131.5 acres (53.2 hectares).

Standard archaeological survey methods were used during the field study and included a combination of surface inspection and shovel testing. In areas having greater than 85 percent surface visibility, pedestrian survey with surface scanning and judgmental shovel testing was performed. Shovel testing was undertaken in areas where the vegetation hindered surface visibility. Transects were spaced 164 feet (50 meters [m]) apart for the majority of the project area. The two transects excavated nearest to Ward Creek were spaced at 98.4 foot (30 m) intervals because this was the only area considered high probability for sites. In low probability areas, shovel tests were excavated at 164 foot (50 m) intervals along each transect. The shovel tests excavated along the transects adjacent to Ward Creek were spaced at 98.4 foot intervals. In areas that contained numerous buried utilities, partially inundated areas, and areas of dense commercial and residential properties, survey consisted of an intensive pedestrian survey with judgmental shovel testing. Shovel tests were a minimum of 11.8 inches (30 centimeters [cm]) in diameter and excavated to a maximum depth of 19.7 inches (75 cm), the soil was then screened through 0.25 inch (0.64 cm) mesh hardware cloth.

Seven structures approaching or determined over 50 years in age were evaluated and recorded during the current survey. However, none of these were deemed eligible for the NRHP. No further work with respect to cultural resources is recommended in relation to the proposed project.

Based on the Phase I CRS, Alternative G is not expected to have an adverse effect on cultural resources. The draft Phase I CRS report will be submitted to the SHPO for concurrence.

4.10 Section 4(f) and 6(f)

As there are no Section 4(f) or 6(f) properties within the project study area, no use to any Section 4(f) properties nor any conversion to any Section 6(f) properties will occur under the No-Build or Alternative G.

4.11 Visual Environment

The No-Build Alternative would have no impact on existing views and any aesthetic characteristics of the project study area.

Alternative G will result in the replacement of the existing Pecue Lane I-10 overpass with an interchange comprised of ramps and bridge structure as well as widen the existing roadway. While most residential and commercial facilities located on or in proximity to Pecue Lane in the project corridor currently have a roadway or interstate overpass in their view shed, Alternative G will result in a wider roadway and a shift that would move the roadway closer to Woodridge Subdivision, bringing the view of Pecue Lane closer to their neighborhood.

4.12 Water Resources

The No-Build Alternative would not be expected to impact existing surface water, groundwater quality, recharge potential, or area water wells.

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 associated with Alternative G. Exposed soils from construction activities are more susceptible to erosion. Appropriate Best Management Practices (BMPs) to be implemented as part of the Storm Water General Permit for Construction Activities will minimize and mitigate for construction-related impacts to area waterways.

There is minimal potential for impact on groundwater, due to the presence of a SSA in the project study area. The Southern Hills SSA covers the entirety of the project study area, as mentioned in Chapter 3.11.2. Alternative G may impact two active domestic water wells, but will not result in impacts to any PWS wells. Water resources potentially impacted are shown in **Figure 8** (see Chapter 3.12.1).

4.13 Floodplains

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

FEMA's Mitigation Division sent a response dated March 17, 2010 requesting contact with the East Baton Rouge Parish Floodplain Administrator (EBRFA). SOV letters were sent to the Floodplain Administrator and the Flood Insurance Program Coordinator with the DOTD Flood Management Program on February 17, 2010. An SOV response was received from the DOTD Floodplain Management Program Coordinator dated March 15, 2010, which included FIRMs and a request to contact the EBRFA. Based on a response received from the EBRFA, they anticipate no adverse impacts to the floodplain as a result of the construction and operation of Alternative G.

To minimize potential impact to floodplains, detailed hydrologic and hydraulic studies will be conducted during final design to determine any 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 would involve no disturbance of existing soils, the topographic character of the project study area, or prime farmland.

According to the USDA guidance, federal agencies involved in projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will need to submit Form AD-1006 or CPA-106 Farmland Conversion Impact Rating. A request was submitted to the NRCS, and in a response dated July 13, 2015, the NRCS determined that the project was exempt from FPPA regulations.

4.15 Noise

As previously mentioned in Chapter 3.14, the TNM was used to determine traffic noise impacts for 170 noise-sensitive receptors near the proposed Alternative G. 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.

Of the 170 receptors modeled, one experiences a noise impact during the existing year conditions. The 2038 design year traffic predictions for the No-Build Alternative result in an impact to nine receptors.

For the 2038 build conditions of Alternative G, 12 receptors experienced a noise impact. Noise abatement measures were considered for these impacted receptors. Noise abatement such 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. Noise barriers were considered for all impacted receptors. Five of these receptors occur on the first row of houses along Pecue and a noise barrier would not be feasible in order to maintain property access. Therefore, no noise abatement measures were analyzed for these five receptors. The remaining seven receptors (1, 19-21, and 24-26 per **Figures 15, 15b**) experience a sound level impact, which results when the predicted levels reach the NAC threshold. Construction of three noise barriers were analyzed for these receptors. None of the barriers met the feasibility and reasonableness criteria. Therefore, no further analysis was required regarding noise barriers. There will be no noise barriers erected for the 12 impacted receptors since they were not determined to be feasible.

Public concerns relative to noise levels in the Woodridge Subdivision prompted a re-sampling of noise measurements at the two locations that did not validate during the noise study, one in Woodridge Subdivision and one in Village Charmant off of Rieger Road. The results of the re-sampling effort support the original conclusions that 12 receptors experience a noise impact and noise abatement measures were not reasonable or feasible.

Traffic management measures such as *No Engine Brake* signs could be beneficial since most of these receptors are located near flow control devices. Also, modified speed limits reducing Pecue Lane and Rieger Lane to 40 mph proved effective in abating the impact for four of the 12 impacted receptors (24, 25, 26, and 108) and could be considered during the design phase; design criteria designates at 45 mph speed limit for Pecue Lane.

It is important to note that during Stage 1 Planning/Environmental, the noise analysis identifies noise abatement measures that are likely to be incorporated into the project's design. The final determination of any proposed noise abatement measure will be made during the design stage. If during design conditions substantially change that impact the implementation of likely barriers, the DOTD will reevaluate the reasonableness of the proposed barrier. Only barriers determined to be both reasonable and feasible will be constructed. Barriers that are no longer reasonable and feasible will be removed from the project.

Impacted receivers are illustrated on **Figures 15a-15c**. Copies of the full traffic noise analysis and the re-sampling effort are included as **Appendix D**.

FIGURE 15a
2012 EXISTING IMPACTED RECEIVERS



Base map comprised of ESRI World Imagery dated 2015.

FIGURE 15b
2038 NO-BUILD IMPACTED RECEIVERS



Base map comprised of ESRI World Imagery dated 2015.

FIGURE 15c
2038 BUILD (ALTERNATIVE G) IMPACTED RECEIVERS



Base map comprised of ESRI World Imagery dated 2015.

4.16 Air Quality

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

Alternative G is located in East Baton Rouge Parish which is part of the Baton Rouge 5-parish area that was designated by USEPA in July 2012 as a marginal nonattainment area for the 8-hour ozone standard; therefore, the transportation conformity rules apply. The USEPA has given the Baton Rouge 5-parish nonattainment area an attainment date of December 31, 2015. The Baton Rouge area is considered in attainment or unclassifiable with respect to all other NAAQS pollutants including carbon monoxide.

On June 17, 2015, the LDEQ submitted a formal request for redesignation to attainment for the 2008 8-hour Ozone NAAQS and a maintenance plan for the five-parish Baton Rouge Nonattainment Area (BRNA). The request was based on the most recent monitoring data for the BRNA that showed a design value of 0.075 parts per million (ppm) or 75 parts per billion (ppb) as of December 31, 2013.

The proposed project is located within an ozone nonattainment or maintenance area; therefore, the project must comply with the project-level conformity criteria as listed in 40 CFR Part 93. A project conforms to the SIP if it comes from a conforming MTP. The proposed Pecue Lane / I-10 Interchange project is included in the *Baton Rouge Metropolitan Transportation Plan 2037*, (Capital Region Planning Commission, July 2013). The project is also included in the latest version of the Transportation Improvement Program (TIP), *Transportation Improvement Program for the Baton Rouge Metropolitan Area, 2015-2018* (Capital Region Planning Commission, last modified July 2015), as State Project No. H.003047 and MTP No. 136. The USEPA and the FHWA last approved the air quality conformity plans on July 12, 2013.

A qualitative Mobile Source Air Toxic (MSAT) assessment was conducted relative to the various alternatives of MSAT emissions and has acknowledged that the project's Preferred Alternative may result in increased exposure to MSAT emissions in certain locations. However, since concentrations and duration of exposures are uncertain, the health effects from these emissions cannot be estimated.

During the construction phase of this project, temporary increases in air pollutant emissions may occur from construction activities. The primary construction-related emissions are particulate matter (fugitive dust) from site preparation which is temporary in nature (only occurring during actual construction). The potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling of water in dust prone areas, covering loaded trucks, and other dust abatement controls, as appropriate.

The construction activity phase of this project may also generate a temporary increase in MSAT emissions from construction activities, equipment and related vehicles. The primary construction-related MSAT emissions are particulate matter from site preparation and diesel particulate matter from diesel powered construction equipment and vehicles.

The MSAT emissions will be minimized by federal measures that require the use of low emission diesel fuel for non-road diesel construction equipment operated in East Baton Rouge Parish, and by provisions that would be included in the plans and specifications that require the contractor to minimize construction air quality impacts through abatement measures such as limits on construction equipment idling and other emission limitation techniques, as appropriate.

Considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized, it is not anticipated that emissions from construction of this project would have any significant impact on air quality in the area.

Based on the data available and modeled, the Pecue Lane at I-10 Interchange project would not be expected cause or exacerbate a violation of any NAAQS. There would be no adverse air quality impacts associated with the implementation of the proposed project. Therefore, no mitigation measures are proposed with respect to operational activities. The Air Quality Analysis is provided as **Appendix E**.

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 would be expected.

The potential impacts of Alternative G, in terms of hazardous waste sites and oil and gas wells, are based on the search of the LDNR's SONRIS database and the Phase I ESA (see **Appendix F**). Providence personnel conducted a site reconnaissance of the subject property and adjacent properties on July 7-8, 2015. The purpose of the investigation was to observe whether any visible areas of environmental concern were evident on the subject property.

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 Section 9.4 of the Phase I ESA (see **Appendix F**).

4.17.1 Recognized Environmental Conditions

The Phase I ESA was conducted in general conformance with ASTM Standard E1527-13, with some exceptions. All exceptions to, or deletions from, this practice are described in Sections 1.0 and 2.0 of the report, included in **Appendix F**. This assessment has revealed evidence of recognized environmental conditions with the subject property for Alternative G:

Providence discovered an abandoned shed surrounded by solid waste in the woods located on Parcel 020-6969-5. The solid waste included an automobile fuel tank, waste tire, a waste commode, various forms of debris, and oil containers. The vegetation surrounding the area was sparse and stressed in areas. The unknown timeframe, evidence of petroleum products, and stressed vegetation around the shed represents a recognized environmental condition.

4.17.2 Historical Recognized Environmental Conditions

No Historical Recognized Environmental Conditions were identified on the subject property through our investigations into the subject property.

4.17.3 De Minimis Conditions

No *De Minimis* Conditions were identified on the subject property through our investigations into the subject property.

4.18 Wetlands

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

On June 17 and 18, 2015, Providence biologists visited the project site and collected field data on the three diagnostic wetland parameters: soils, vegetation, and hydrology.

Alternative G consists of approximately 3 miles (1.5 miles along I-10 as well as 1.5 on Pecue Lane), encompassing approximately 131 acres of existing road and ROW. Based on site observations and data collected in the field, potential jurisdictional wetlands exist on the site. Approximately 11.6 acres of palustrine emergent wetland habitat, 10.49 acres of palustrine forested wetland habitat, and 1.05 acres of other waters of the United States were identified in the ROW for Alternative G (Providence, 2015). Potential jurisdictional wetlands and habitat type within the project corridor are shown on the figures in the wetland delineation report in **Appendix G**.

The PFO wetlands appear to historically exhibit high quality bottomland hardwood habitat characteristics, providing essential chemical, physical, and biological, wetland functions including: protecting water quality by trapping sediments and retaining excess nutrients, providing flood control and flood storage capacity, providing groundwater recharge/exchange, and providing essential wildlife habitat (nesting, denning, and foraging habitat for wading birds, small and large mammals). The majority of the PFO wetlands, however, have been previously segregated and directly impacted by the construction of I-10, and therefore now exhibit relatively moderate to low quality habitat. This habitat exhibits several undesirable species including Chinese tallow tree (*Triadica sebifera*) and Chinese privet (*Ligustrum sinense*).

A portion of the PEM wetlands in the project corridor, observed in existing maintained pastures, existing oil and gas rights-of-way and residential areas, exhibit relatively moderate to low quality herbaceous habitat characteristics due to ongoing disturbance by periodical mowing. The remainder of the PEM wetlands appears to exhibit high quality PEM habitat characteristics and remain relatively undisturbed. Despite habitat quality, all PEM wetlands provide flood control/flood storage capacity, provide groundwater recharge/exchange, and foraging habitat for wildlife.

Impacts to the above referenced wetland habitats include: mechanized clearing, grubbing and filling of the PFO and PEM wetlands. Construction may require conversion of the forested wetland habitat to herbaceous habitat which could potentially reduce the ability to trap sediments and excess nutrients, thus reducing water quality protection, and remove essential nesting habitat for wading birds and denning habitat for small and large mammals. However, PEM wetlands can provide flood control/flood storage capacity, provide groundwater recharge/exchange, and foraging habitat for wildlife. The entire ROW will not be impacted, therefore the areas outside the construction footprint should maintain wetland characteristics after completion of construction.

To minimize permanent and temporary wetland impacts, phased construction will be implemented, which reduces the required temporary workspace required, to the maximum extent practicable throughout the construction area. In addition, construction methods will include use of best management practices (BMPs), both temporary and permanent, to minimize and mitigate impacts to adjacent wetlands and drainage ditches. Temporary measures may include but are not limited to silt

screen fencing, temporary vegetative cover and hay bales. Permanent measures may include vegetative cover for soil stabilization and the use of riprap for the protection of soils from erosion. Additional control measures, including limiting impervious surfaces and preservation of stream buffers may also be implemented to reduce migration of soils offsite. Existing culverts will be replaced/modified to maintain functionality and flow of existing waters. The existing Ward Creek Bridge will require additional footings but will be designed to allow unimpeded water flow.

4.19 Coastal Zone

Neither alternative will involve impacts to the coastal zone. As discussed in Chapter 3.18, East Baton Rouge Parish, in its entirety, is outside of the Louisiana Coastal Zone Boundary.

4.20 Scenic Streams

There would be no impact with on natural or scenic rivers, as there are no federally listed natural and scenic rivers, Louisiana Scenic Streams, or Nationwide Rivers within or near the project study area. This information was confirmed with LDWF as mentioned in Chapter 3.19.

4.21 Wildlife

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

The proposed project corridor provides agricultural and urban habitats for wildlife. During the June 2015 site visit, Providence personnel made observations relative to the presence of sensitive species in the project corridor. Portions of the survey corridor contains habitat suitable for nesting and wading birds (Ward Creek in particular).

4.22 Threatened and Endangered Species

The No-Build Alternative should not have any adverse impacts on threatened and endangered species or critical habitats for threatened or endangered species. As mentioned in Chapter 3.21, correspondence with both USFWS and LDWF stated there will be no effects on threatened or endangered species or their critical habitats. During the June 2015 site visit, Providence personnel did not observe federally listed threatened and/or endangered species within the survey area.

4.23 Unique and Environmentally Sensitive Areas

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

Potential areas with significant trees could be present in the ROW for Alternative G. During the design stage, landscape architectural staff and District Roadside Development Coordinators will be consulted concerning ROW to identify the

location of all 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 East Baton Rouge Parish's mineral resources.

While there is one Oil/Gas Field present within the bounds of the project study area, Alternative G will not prevent or encumber access to or use of these resources. Mineral resources within the project study area are located on **Figure 14** (see Chapter 3.23).

4.25 Construction

4.25.1 Water Quality

The potential for sedimentation of erosional materials into the nearby drainage ditches, adjacent wetlands, and bayous caused by storm water runoff could increase during construction activities because soils are exposed and are more susceptible to erosion.

BMPs to be implemented as part of the Storm Water General Permit for Construction Activities will minimize and mitigate for construction-related impacts to area waterways.

4.25.2 Air Quality

During the construction phase of this project, temporary increases in air pollutant emissions may occur from construction activities. PM or fugitive dust from site preparation will be the primary construction-related emissions. 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.

4.25.3 Noise

Noise may increase during construction activities. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. Construction normally occurs during daylight hours when people tolerate occasional loud noises. Project plans and specifications include provisions requiring the contractor to make every reasonable effort to minimize construction noise through abatement measures, such as ensuring all construction equipment is properly muffled and all motor panels are shut during operation. The City-Parish or DOTD contractors and developers shall comply with local construction noise ordinances and all construction equipment will be required to comply with Occupational Safety and Health Administration regulations as they apply to employee safety.

4.25.4 Wildlife

Construction activities associated with Alternative G may result in temporary relocation of commonly occurring species that inhabit the project corridor, as their shelter and food resources could be temporarily impacted. Upon completion of construction, wildlife would be expected to resume use of resources adjacent to and within the ROW.

4.26 Other Considerations

4.26.1 Secondary Effects

Secondary or Indirect effects/impacts per 40 CFR 1508.8(b) are those “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” Effects that are considered reasonably foreseeable include changes in land use patterns, population density, traffic patterns, and increased area growth.

Traffic pattern changes would be expected under Alternative G. Traffic utilizing the new interchange at Pecue Lane may relieve some of the congestion on local roadways. It is reasonable to assume that agricultural and undeveloped land adjacent to Pecue Lane may experience increased development pressure with the additional visibility resulting from the presence of an interstate interchange. A permitted Planned Unit Development is adjacent to the proposed project and will have access via the Rieger Road extension. The PUD was granted right of access prior to the development of the project. However, smart planning delayed construction of an access until the Pecue Lane/I-10 project was designed.

The project is proposed in response to regional growth, therefore, it is intended to ease the effects of growth currently being experienced by I-10 and other area roadways.

4.26.2 Cumulative Effects

Cumulative effect or impact per 40 CFR 1508.7 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.” When considered in concert with current land use and traffic patterns, Alternative G should serve to alleviate some of the traffic volume on I-10 and presumably increase the level of service of I-10 in the overall project study area. Constructing the project in accordance with recreational trail plans will allow for less cumulative impact to the environment (constructing both projects at the same time) while increasing recreational opportunities.

5.0 AGENCY INVOLVEMENT AND PUBLIC OUTREACH

5.1 Agency Coordination

As part of the EA outreach, SOV letters were mailed out February 17, 2010 to federal, state, and local agencies and elected officials on the list of recipients located in **Appendix A**. The USACE was invited to be a cooperating agency. A cooperating agency means any Federal Agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. USACE accepted the role of a cooperating agency.

5.2 Public Outreach

Three public meetings were held in East Baton Rouge Parish to inform the public and request their comments on the proposed project. The first public meeting was held on November 4, 2010 from 4:30 PM to 7:30 PM at Associated Builders & Contractors. The purpose of this informational meeting was to present the project's history, the anticipated path forward, to differentiate between other projects in the area, and to solicit comments from the public and other interested parties on the draft purpose and need. A public notice advertising the meeting ran in *The Advocate* on October 9, 2010.



A second public meeting was held on February 24, 2011 at the St. George Kleinpeter Activity Center in Baton Rouge, LA from 4:30 PM to 7:30 PM. The purpose of the meeting was to present the proposed alternatives to the public and solicit comments on those alternatives. The public notice ran in *The Advocate* on February 1, 2011. Other methods of notification employed included push cards delivered to homeowners and businesses in the project corridor, yard signs, media communications, emails to interested parties, homeowners associations, and business owners, and website announcements on DOTD's webpage and the GLP webpage. A project information telephone line was also established to receive input and advertise for the meeting. Approximately 149 people attended the meeting which provided a continuously running PowerPoint presentation about the project, exhibits representing the alternatives and the NEPA process, and the opportunity to provide verbal and/or written comments to the project team. Fifty comments were received in response to the meeting.

The third public meeting was held on February 25, 2015 at the St. George Kleinpeter Activity Center from 4:30 PM to 7:30 PM. The public notice ran in *The Advocate* on January 23, 2015. Similar to the second public meeting, the telephone information line was updated with the meeting information, 368 post cards were mailed to property owners in the project corridor as well as those delivered by hand, 338 emails were sent out on two occasions to notify and remind people of the upcoming meeting, and a press release was provided to local media. The purpose of holding this meeting was to update the public on the status of the project, introduce a new build alternative, and solicit comments on the remaining alternatives. A brief PowerPoint presentation was running on a continuous loop throughout the meeting. Also consistent with the last two public meetings, the public was given the opportunity to record individual comments or to provide a written comment via drop box, e-mail, or US Mail. Approximately 144 people attended the meeting with 119 comments received as of the closing date of the public meeting comment period.



A public hearing was held on the draft EA on January 28, 2016. Approximately 153 people were in attendance. Comments received during the public hearing are contained in the Public Hearing summary document located in Appendix I. Additionally, **Table 5-1** provides a paraphrased version of the comments received during the EA public comment period, which closed on February 12, 2016, along with responses.

Meeting summaries, including meeting material, exhibits, public notices, invitations, presentation slide, transcript of verbal comments, sign-in sheets, and photographs, for each meeting were provided under separate cover and are included on CD as **Appendix I**.

**TABLE 5-1
COMMENTS RECEIVED DURING DRAFT EA COMMENT PERIOD**

COMMENT (PARAPHRASED)	RESPONSE
Via meeting, email and comment form - Our property did not show up on the map shown during the hearing - want to know why.	Complete response is contained in Appendix I as the comment was contained in an email.
Via email - If we increase noise with increased traffic wouldn't that be the norm and not the exception? Wouldn't we naturally have more noise with 18-wheelers on Pecue?	Thank you for your comments. The noise study conducted for the project indicated that 12 homes/structures would receive noise impacts as a result of Alternative G. All but one of the receptors were located on the west side of Pecue Lane. Application of DOTD's reasonable and feasible criteria indicated that no noise abatement measures would be reasonable or feasible. The Noise Study is in Appendix D of the EA.

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COMMENT (PARAPHRASED)	RESPONSE
Via email - Would like to have noise sampling re-conducted at a house in Woodridge, as noise readings taken by the commenter with a rented meter are not the same as what has been presented. Believe there is a noise impact and noise abatement measures are needed for Woodridge (particularly first row of homes closest to Pecue Lane).	Responded to original and follow-up questions via email as contained in Appendix I. DOTD did agree to conduct re-sampling of sites that did not validate to confirm Woodridge findings that no impacted receivers were determined present on the east side of Pecue Lane, particularly within Woodridge Subdivision.
Via email - 58 million is too much to pay for the interchange, it is double the original estimate. We should go back and re-engineer to get costs down.	Thank you for your comments. This project has studied multiple alternatives with varying interchange types and configurations. Without further detail relative to what you are referring to as the "original estimate", we cannot accurately discuss the variations.
Comment 1 from Transcript - There has not been enough planning or provision of information in regard to noise. There will also be lighting problems with street lights shining into houses.	Thank you for your comments. The Noise Study is in Appendix D of the EA. Final design will consider the type of lighting most appropriate for the project.
Comment 2 from Transcript - Concerned that there is a lack of rear access to, Rieger Road from property and that new alignment should be further into the field. Also wants to be sure if house located at 8074 Pecue Lane will be taken, notes that the address on file is not accurate.	Rear access to Rieger Road was not necessary when it was determined that existing Pecue Lane could remain as an access road for residences and businesses located between the new Rieger Road connection to Pecue Lane and I-10. The house referenced as 8074 Pecue Lane is listed by the East Baton Rouge Assessor's office as 8070 Pecue Lane and is within the proposed ROW for Alternative G (see Appendix H for details).
Comment 3 from Transcript - Would like a traffic signal at Pecue Lane and Highland Road.	Thank you for your comments. Perkins Road was the southern project study area boundary, therefore this interchange is not in the project study area and would require a separate action from DOTD or the City-Parish.
Comment 3 from Transcript and in comment form - Can't see turning left out of Jamestown due to railroad grade.	Thank you for your comments. Site distance will be further reviewed during project design.
Comments 4 and 5 from Transcript - A traffic signal is needed at Woodridge and the intersection should be widened.	Thank you for your comments. A signal warrant analysis indicated that a signal was not warranted at this location as a result of the project.
Comment 6 from Transcript - Comment supports the project and states the sooner, the better.	Thank you for your comments.
Comment 7 from Transcript - Favors the project but also has concerns about site distance when turning left out of Jamestown.	Thank you for your comments. Site distance will be further reviewed during project design.
Comment 8 from Transcript - Keep Pecue on its existing alignment, did not have to come into the field.	Thank you for your comments. The geometry required for the diverging diamond interchange moved the alignment further into the field.

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COMMENT (PARAPHRASED)	RESPONSE
Comment 9 from Transcript - Would like to see why noise barriers are not feasible.	The Noise Study is contained in Appendix D. An explanation of reasonableness/feasibility criteria is in the study along with the reasons the criteria were not met.
Comment 10 from Transcript - Trinity Church will lose parking, which is important to the church. Looking forward to finding solutions to parking issues that may result from the project.	Thank you for your comments. As the design phase is on-going, a concerted effort is being made to reduce the overall right-of-way necessary for the project. Right-of-way has already been reduced over what was shown during the public hearing. As right-of-way maps are finalized and necessary footage confirmed, the design team will be contacting the church to develop appropriate solutions to any parking that may require replacement.
Via email - This is crazy, we can't afford it.	Thank you for your comments.
Via comment form - Hoping that the project considered the widening of Perkins Road in the planning.	Thank you for your comments. The widening of Perkins Road was considered in the traffic studies, as a separate study is underway to widen Perkins Road from Siegen Lane to Highland Road.
Via comment form - Pecue Lane at Jamestown needs a light.	Thank you for your comments. Traffic studies conducted in association with the construction of Jamestown as well as for the widening of Pecue Lane at Perkins Road indicated that a traffic signal at that location is not warranted.
Via comment form - Was elevation taken into account for noise?	The Noise Study models the noise from the roadway based on preliminary engineering design, therefore, the elevation of proposed Alternative G was considered in the noise data analysis.
Via comment form - We need off ramps at Bluff Road.	Thank you for your comments. Bluff Road is outside of the project study limits.
Via comment form - Try to use less property for the interchange.	Thank you for your comments. The design phase will involve efforts to reduce necessary right-of-way.
Via comment form - Have concerns for family's safety with the extension of Rieger Road to Pecue.	Your comment has been noted.

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FIGURE REFERENCES

Figure 1 Study Area Map

Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 2 All Alternatives

Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figures 3 and 3a Build Alternatives

Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 5 Land Use

Land Use Land Cover data obtained from the USGS data set and updated based on aerial and field investigations. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 5 Zoning Data

Zoning data obtained from the City of East Baton Rouge, Office of the Planning Commission on 5/18/15. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 6 Minority Data

Minority data obtained from USCB, 2010 Census Summary File 1 (SF 1) 100-Percent Data, Table P9 Hispanic or Latino, and not Hispanic or Latino by Race. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 6 Poverty Data

Poverty data obtained from USCB, 2006-2010 ACS 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 7 Water Resources

Registered water wells obtained from the LDNR SONRIS water well server as of 7/29/15. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 8 Aquifers and Recharge Potential

Aquifer data comprised of Recharge Potential of Louisiana Aquifers, LDEQ (1999) dated 10/15/12. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 9 Floodplains

The Q3 Flood Data obtained from the Flood Insurance Rate Maps (FIRMS) published by FEMA. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 10 Prime Farmlands

Prime farmland data obtained from the NRCS server as of 8/12/13. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 11 Potential Environmental Liability Sites

Potential Hazardous Sites data obtained from EDR shapefile as of 6/17/15. Oil and gas well data obtained from the LDNR SONRIS oil and gas well server as of 7/29/15. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 12 Potential Wetlands and Hydric Soils

NWI Data from the USFWS, Division of Habitat and Resource Conservation, as of 3/25/15. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 13 Mineral Resources

Active Mineral Leases, Seismic 3D Permits, and Oil/Gas Fields obtained from the LDNR SONRIS data server as of 4/28/15. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 14 LIDAR Data

LIDAR data obtained from Louisiana Oil Spill Coordinator's Office dataset 2014. Base map provided by Bing Maps aerial imagery from © 2013 Microsoft Corporation and its data suppliers.

Figure 15 Noise Receptors

Figures 16-16e Potential Jurisdictional Wetlands

7.0 LIST OF ACRONYMS

ACS	American Community Survey
AFF	American Fact Finder
APE	Area of Potential Effects
ASTM	American Society for Testing and Materials
BMPs	Best Management Practices
BRAC	Baton Rouge Area Chamber
BREC	Recreation and Park Commission for the Parish of East Baton Rouge
CFR	Code of Federal Regulations
City-Parish	City of Baton Rouge, East Baton Rouge Parish
cm	centimeters
CO	Carbon Monoxide
CORSIM	Corridor Simulation (traffic model)
CRPC	Capital Region Planning Commission
CRS	Cultural Resources Survey
dB	Decibel
dBA	A-weighted average sound
DOI	Department of the Interior
DOT	Department of Transportation
DOTD	Louisiana Department of Transportation and Development
EA	Environmental Assessment
EBRFA	East Baton Rouge Parish Floodplain Administrator
EDMS	Electronic Document Management System
EDR	Environmental Data Resources, Inc.
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRMs	Flood Insurance Rate Maps
FPPA	Farmland Protection Policy Act
GIS	Geographic Information System
GLP	Green Light Plan
H ₂ S	Hydrogen Sulfide
I-10	Interstate Highway 10
LDCRT	Louisiana Department of Culture, Recreation, and Tourism
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
Leq	Equivalent Sound Level
Leq(h)	Worst-one-hour Sound Levels
LPDES	Louisiana Pollution Discharge Elimination System
LWCF	Land and Water Conservation Fund
mph	miles per hour
MSAT	Mobile Source Air Toxic
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria

NO ₂	Nitrogen Oxide
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O ₃	Ozone
Pb	Lead
PM	Particulate Matter
ppb	parts per billion
ppm	parts per million
PUD	Planned Unit Development
PWS	Public Water System
ROW	Right-Of-Way
SHPO	State Historic Preservation Officer
SONRIS	Strategic Online Natural Resources Information System
SO ₂	Sulfur Dioxide
SOV	Solicitation of Views
SSA	Sole Source Aquifer
TIP	Transportation Improvement Program
TNM	Traffic Noise Model
TSCA	Toxic Substances Control Act
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
USACE	United States Army Corps of Engineers
USC	United States Code
USCB	United States Census Bureau
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank

APPENDICES (on CD)

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- B Line and Grade
- C Traffic Study
- D Traffic Noise Analysis
- E Air Quality Analysis
- F Phase I Environmental Site Assessment
- G Wetland Analysis
- H Conceptual Stage Relocation Plan
- I Agency and Public Outreach

APPENDIX A

AGENCY CORRESPONDENCE

APPENDIX B

OPINION OF PROBABLE COST

APPENDIX B
LINE AND GRADE

APPENDIX C
TRAFFIC STUDY

APPENDIX D
TRAFFIC NOISE ANALYSIS

APPENDIX E
AIR QUALITY ANALYSIS

APPENDIX F

PHASE I ENVIRONMENTAL SITE ASSESSMENT

APPENDIX G
WETLAND ANALYSIS

APPENDIX H

CONCEPTUAL STAGE RELOCATION PLAN

APPENDIX I

AGENCY AND PUBLIC OUTREACH