LA Highway 23 (Happy Jack to N. Port Sulphur)

Stage 1 - Environmental Assessment
Draft Report

Plaquemines Parish, LA
State Project No. H.001399
FAP No. 2603
RPC No. LA23ENV1

Prepared for the:

The Regional Planning Commission

and

U.S. Department of Transportation - Federal Highway Administration
(Lead Federal Agency)

The Louisiana Department of Transportation and Development

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Prepared by:

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in association with

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Coastal Environments, Inc.
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Essential Environmental Engineering, Inc.

April 2014

Summary of Mitigation, Commitments and Permits

Mitigation, Commitments and Permits for the impacts associated with the implementation of the preferred alternative for the LA Hwy 23 project include the following:

- In regards to wetland mitigation, the Parish will work with the regulatory agencies to develop appropriate mitigation for any unavoidable, permanent impacts to recognized jurisdictional wetlands associated with the project.

- Because the project affects wetlands, a Section 404 Permit will be required from the U.S. Army Corps of Engineers, New Orleans District. .

- The construction of the project will have a minor impact on existing vegetation and visual/aesthetic impacts as the project is likely to result in the removal of 2 to 3 live oaks, which are considered significant trees. The removed tress can be replaced on a one-for-one basis with new trees of adequate diameter breast height (dbh) as a form of mitigation.

- As the Louisiana Department of Natural Resources Coastal Management Division (CMD) has indicated that the proposed project is located inside the Louisiana Coastal Zone, a Coastal Use Permit (CUP) is required from the CMD.

- A Section 401 Permit (Water Quality Certification) will be required from the Office of Environmental Services, Louisiana Department of Environmental Quality.

- During construction, the following mitigation measures shall be in effect:

    - In order to minimize the potential for impacts of construction noise on the local residents, all construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation, and the contractor should operate, whenever possible, between the hours of 7:00 a.m. and 6:00 p.m.

    - To minimize potential air quality impacts, particularly related to control of particulate matter, the contractor shall comply with all relevant State, Federal and local laws and regulations.

    - To minimize vibration impacts, peak particle velocities due to pile driving operations should be monitored with a seismograph at critical structures, pavements and utilities during all pile driving operations.

- Based on the findings of this Phase I ESA and the presence of recognized environmental conditions (RECs) along the route, the following mitigation steps are recommended:

  - Conducting Phase II Environmental Site Assessment inclusive of environmental media sampling to determine if the former fueling stations along the route have any petroleum contamination should land acquisition involve these sites. The Phase II sampling should be done in accordance with most current ASTM standard E1903 Phase II Environmental Site Assessment, the LDEQ Voluntary Remedial Action Process or other agency approved process.

  - Determine the status of the Tesvich property Brownfield Environmental Site Assessment should land acquisition involve this site.

  - Determine location of the Tennessee Gas Pipeline subsurface piping and any other subsurface utilities prior to determining alignment of Hwy 23.

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ENVIRONMENTAL DETERMINATION CHECKLIST

State Project No.: H.001399
Name: LA 23 Widening (Happy Jack to N. Port Sulphur)
Route: LA 23
Parish: Plaquemines Parish, LA

1. General Information

Status: (**X**) Conceptual Layout ( ) Plan-in-Hand
( ) Line and Grade ( ) Preliminary Plans
( ) Survey ( ) Final Design

2. Class of Action

( ) Environmental Impact Statement (E.I.S.)
(**X**) Environmental Assessment (E.A.)
( ) Categorical Exclusion (C.E.)
( ) Programmatic C.E. (as defined in letter of agreement dated 03/15/95, does not require FHWA approval)

3. Project Description (use attachment if necessary)

See Document

4. Public Involvement

(**X**) Views were solicited on July 10, 2012.
Responses are attached.
(**X**) No adverse comments were received. Comments detailed and addressed in document.
( ) Comments are addressed in attachment.
( ) A public hearing (P/H)/Opportunity is not required.
() An opportunity for requesting a P/H will be afforded upon your concurrence.
( ) Opportunity was afforded, with no requests for P/H.
(**X**) A Public Hearing will be scheduled..
( ) A Public Meeting was held on _____..

5. Real Estate (If yes, use attachment)

	NO	YES
a. Will additional right-of-way be required?.....	( )	(**X**)
b. Will any relocations be required?.....	(**X**)	( )
(Attach conceptual stage relocation plan if yes)		
c. Are construction or drainage servitudes required?.....	(**X**)	( )

6. Cultural and 106 Impacts (If yes, use attachment)

		NO	YES
a.	**Section 4(f) or 6(f) lands**		
	Are any impacted by the project? (If so, list below)……..	(**X**)	( )
	Are any adjacent to the project? (If so, list below)……..	(**X**)	( )
b.	**Known Historic sites/structures**		
	Are any impacted by the project? (If so, list below)……..	(**X**)	( )
	Are any adjacent to the project? (If so, list below)……..	(**X**)	( )
c.	**Known Archaeological sites**		
	Are any impacted by the project? (If so, list site # below)…….....	(**X**)	( )
	Are any adjacent to the project? (If so, list site # below)…….....	(**X**)	( )
d.	**Cemeteries**		
	Are any impacted by the project? (If so, list below)……..	(**X**)	( )
	Are any adjacent to the project? (If so, list below) ……	( )	(**X**)
e.	**Historic Bridges**……	( )	( )

7. Wetlands (Attach wetlands finding, if applicable)

		NO	YES
a.	Are wetlands being affected?.....	( )	(**X**)
b.	Are other waters of the U.S. being affected?.....	(**X**)	( )
c.	Can C.O.E. Nationwide Permit be used?.....	(**X**)	( )

8. Natural Environment (use attachment if necessary)

		NO	YES
a.	Endangered/Threatened Species/Habitat……	(**X**)	( )
b.	Within 100 Year Floodplain?.....	( )	(**X**)
	Is project a significant encroachment in Floodplain?.....	(**X**)	( )
c.	In Coastal Zone Management Area?.....	( )	(**X**)
	Is the project consistent with the Coastal Management Program?.....	(**X**)	( )
d.	Coastal Barrier Island (Grand Isle only)……..	(**X**)	( )
e.	Farmlands (use form AD 1006 if necessary)……..	(**X**)	( )
f.	Is project on Sole Source Aquifer?.....	( )	(**X**)
	Is coordination with EPA necessary?.....	( )	(**X**)
g.	Natural & Scenic Stream Permit required……..	(**X**)	( )
h.	Is project impacting a waterway?.....	(**X**)	( )
	Has navigability determination been made?.....	( )	( )
	…..Will a US Coast Guard permit or amended permit be required?.....	( )	( )

9. Physical Impacts (use attachment if necessary)

		NO	YES
a.	Is a noise analysis warranted (Type I project)……	( )	(**X**)
	Are there noise impacts based on violation of the (NAC)?.....	( )	(**X**)
	Are there noise impacts based on the 10 dBA increase?.....	(**X**)	( )
	Are noise abatement measures reasonable and feasible?.....	(**X**)	( )
b.	Is an air quality study warranted?.....	(**X**)	( )
	Do project level air quality levels exceed the NAAQS for CO?.....	(**X**)	( )
c.	Is project in a non-attainment area for carbon monoxide (CO), Ozone (O_3), Nitrogen dioxide (NO_2), or Particulates (PM-10)? ……..	(**X**)	()
d.	Is project in an approved Transportation Plan,Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP)?.....	( )	(**X**)
e.	Are construction air, noise, & water impacts major?……..	(**X**)	( )
f.	Are there any known waste sites or U.S.T.s?.....	( )	(**X**)
	Will these sites require further investigation prior to purchase? ……..	()	(**X**)

10. Social Impacts (use attachment if necessary)

		NO	YES
a.	**Land use changes**……..	(**X**)	( )
b.	**Churches and Schools**		
	Are any impacted by the project? (If so, list below)……..	(**X**)	( )
	Are any adjacent to the project? (If so, list below)……...	( )	(**X**)
c.	**Title VI Considerations**……	(**X**)	( )
d.	**Will any specific groups be adversely affected (i.e., minorities, low-income, elderly, disabled, etc.)?** ……..	(**X**)	( )
e.	**Hospitals, medical facilities, fire police**		
	Are any impacted by the project? (If so, list below)……..	(**X**)	( )
	Are any adjacent to the project? (If so, list below)……	( )	(**X**)
f.	**Transportation pattern changes**……	(**X**)	( )
g.	**Community cohesion**……	(**X**)	( )
h.	**Are short-term social/economic impacts due to construction considered major**?.....	(**X**)	( )
I.	**Do conditions warrant special construction times (i.e., school in session, congestion, tourist season, harvest)?**.....	(**X**)	( )
j.	**Were Context Sensitive Solutions considered?** (If so explain below)……..	(**X**)	( )
k.	**Will the roadway/bridge be closed? (If yes, answer questions below)**……..	(**X**)	( )
	Will a detour bridge be provided?.....	(**X**)	( )
	Will a detour route be signed?.....	(**X**)	( )

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

Cemeteries adjacent to project – The Johnson-Fisher cemetery is immediately adjacent to the project, and the Roxy Jane cemetery lies a short distance outside of the existing and required right-of-way. Neither will be affected by planned construction.

Churches adjacent to project – These include Greater Mount Sinai Church (27954 Hwy 23), Macedonia Baptist Church (27723 Hwy 23), and Port Sulphur Baptist Church (27080 Hwy 23).

Schools adjacent to project - South Plaquemines High School (311 Civic Drive), Plaquemines Parish Learning Center (26892 LA Hwy 23), and the future South Plaquemines Elementary School (315 Civic Drive)

Preparer: Bruce J. Richards, AICP
Title: Project Consultant
Date: February, 2014

Attachments

(**X**) S.O.V. and Responses
(**X**) Wetlands Finding
( ) Project Description Sheet
( ) Conceptual Stage Relocation Plan
(**X**) Noise Analysis
(**X**) Air Analysis
(**X**) Exhibits and/or Maps
( ) 4(f) Evaluation
( ) Form AD 1006 (Farmlands)
( ) 106 Documentation
(**X**) Other Environmental Assessment Document

EXECUTIVE SUMMARY

A comprehensive study for a Draft Environmental Assessment (EA) has been conducted for improvements to LA Highway 23 in Plaquemines Parish, LA.

The purpose of this project is to improve traffic operations along the LA 23 corridor in Plaquemines Parish just north of Port Sulphur, LA. The need for this project is primarily related to (1) economic development, (2) roadway safety, and (3) hurricane evacuation.

Over the last decade or more, there has been much interest and discussion towards adding capacity to this last section of LA 23 that only has two lanes of traffic --the 3.8 miles from the northern portion of Port Sulphur to Happy Jack. As a result, the RPC and Plaquemines Parish undertook a Stage 0 Feasibility Study that was completed in April of 2010. In the late summer of 2011, N-Y Associates began undertaking the next step in the process-- a Stage 1 Environmental Assessment to select and refine one build alternative, and then compare its impacts in relation to a "no build" scenario.

Public and agency input was a vital portion of the project. *Solicitation of Views* (SOV) were requested, and public input for the project was solicited through a public meeting during the EA process.

The affected environment of the project area was then described in the EA document, and the likely impacts of the two alternatives considered (No Build Alternative and Proposed Action) were assessed relative to the evaluation categories of economic development, roadway safety, and hurricane evacuation.

The Proposed Action was found to have three (3) categories of impact considered to be non-adverse/beneficial, and require no mitigation measures: *traffic impacts, access to Community Facilities/Services,* and *land use (redevelopment).* However, the proposed action had four categories of impact that would require mitigation: *removal of 2-3 significant trees (vegetation impacts / visual-aesthetic impacts), construction period impacts, impacts relating to hazardous & solid waste sites,* & *wetland impacts*.

In regards to the *removal of significant trees*, it should be noted that these exist in a grove like setting rather than as stand-alone trees, so the impact is limited, and the removed trees can be replaced on a one-for-one basis with new trees of adequate diameter at breast height (dbh) as a form of mitigation.

Construction period impacts involve disturbances such as noise, vibration, excavation, debris as well as short-term construction traffic impacts. Several mitigation measures are proposed to lessen such construction period impacts.

Regarding *impacts to hazardous and solid waste sites*, based on the findings of this Phase I ESA and the presence of Recognized Environmental Conditions (RECs) along the

route, several mitigation steps are recommended, including conducting a Phase II Environmental Site Assessment inclusive of environmental media sampling to determine if the former fueling stations along the route have any petroleum contamination should land acquisition involve these sites, determining the status of the Tesvich property Brownfield Environmental Site Assessment should land acquisition involve this site, and determining the location of the Tennessee Gas Pipeline subsurface piping and any other subsurface utilities prior to final engineering of Hwy 23.

The project may have a small degree of *wetland impacts*, as a very small portion (0.1810 acres) identified as potential wetlands would be removed. The wetland within the project corridor has very minimal value as wildlife habitat because of its cleared status, small size, location within a developed area of Plaquemines Parish, and relatively low vegetation species diversity. The wetland that would be impacted by construction of the proposed action is not unique or critical to the survival of any known wildlife species. The State can work with the regulatory agencies to develop appropriate mitigation for any unavoidable, permanent impacts if this becomes a Corp-recognized jurisdictional wetland.

Indirect or secondary impacts may likely include quickening the pace of the residential, commercial and possibly industrial re-development. With a new route and improved access in place, there is also an opportunity for further economic growth than that which is anticipated—perhaps commercial or other growth. Such development may also lead to calls for the implementation of zoning in the project area in order to guide or control growth.

The overall *cumulative impacts* of the Preferred Alternative on past, current, and foreseeable future projects in the project area would be generally beneficial. The additional transportation utility and traffic capacity of the Preferred Alternative would assist in alleviating current traffic problems and could encourage and increase new land use opportunities.

Using criteria based upon aspects of the stated purpose and need for of the project (economic development, roadway safety, and hurricane evacuation), a comparative analysis between the No Build Alternative and the Proposed Action was completed, with the Proposed Action being selected as the Preferred Alternative.

It should be noted that as of the date of this document, there is no current funding source identified for designing or constructing this project.

CHAPTER I

INTRODUCTION, BACKGROUND AND PURPOSE AND NEED

PURPOSE AND SCOPE OF THIS REPORT

A comprehensive study for an Environmental Assessment (EA) has been conducted for improvements to (adding capacity to) LA 23 in Plaquemines Parish, LA (see **Figure I-1**, following page, for a general location map). The total length of the project is approximately 3.8 miles. The FHWA is the lead federal agency for this project. This EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) addressing potential social, environmental, and economic impacts.

The proposed project involves adding capacity to existing LA Hwy 23 from Port Sulphur, Louisiana, north to the community of Happy Jack. This is the last remaining stretch of LA 23 that only has two lanes of traffic. The new roadway is proposed to be an Urban Arterial (UA-2) design, 4 lanes with a raised median and outside curbs with no shoulder. Drainage along the roadway would be converted from ditch/swale drainage to underground pipe drainage.

The purpose of this EA is the identification, collection of data and mapping of major categories of social, economic and environmental conditions, and the assessment of the potential for these conditions to be impacted by either the proposed action or the no build alternative.

The data presented in the report text and maps characterize conditions for the general project area as well as the specific project site. Data was collected by document and records reviews, meetings with the public and local and state officials, and also via field work (site reconnaissance and field investigations).

PROJECT PURPOSE AND NEED

The purpose of this project is to improve traffic operations along the LA 23 corridor in Plaquemines Parish just north of Port Sulphur, LA. This 3.8 mile stretch of highway is currently a two lane highway between 4-lane sections. There are no major intersections in this section, and River Road runs parallel to the highway to the east along the Mississippi River levee for most of the length of this study area.

Figure I-1
General Location Map

The need for this project is primarily related to (1) economic development, (2) roadway safety, and (3) hurricane evacuation.

In terms of *economic development*, access and mobility along the narrow LA 23 corridor have always been concerns for industry and the traveling public. Growth in the Parish was consistent prior to the landfall of Hurricane Katrina. While the aftermath has interrupted the growth, the residential population is expected to completely return, and the oil and fishing industries are expected to expand in the coming years. LA 23 is the only access to the industrial facilities in Port Sulphur and Venice.

If left unimproved existing problems can be expected to increase due to the continued recovery from Katrina and as local industry continues to rebuild. It is also important to

enhance the overall plan to provide roadway network continuity, sufficient roadway access, mobility, and capacity improvements to meet future traffic demand.

Currently, the two-lane segment of LA 23 experiences Level of Service (LOS) "E" during both peak periods. This indicates that slow moving traffic, inability to pass and interruptions in traffic flow exist. This Level of Service status is projected to continue under future conditions. The traffic analyses present in this report indicate that a four-lane roadway is expected to operate with LOS A, a significant improvement over the existing and projected 2031 No Build conditions.

In terms of *roadway safety*, the addition of a median is expected to positively impact crash tendencies. While the Highway Safety Manual (HSM) 1st Edition by AASHTO does not provide data on the conversion from a two lane undivided section to a four lane divided section, it does indicate that providing a raised median has been shown to reduce all types of crashes on two lane and rural four lane roadways. It is expected that rear end crashes involving motorists turning from LA 23 to residential areas would be reduced as vehicles will now be able to use the opposite lane for passing vehicles that are slowing down to turn. Right angle crashes involving motorists turning to LA 23 from residential areas would be reduced as the majority of the side streets and driveways will now be right-in/right-out and larger gaps in traffic are expected. Potential head on collisions are also reduced as there will be a median separating the travel lanes.

Finally, in regards to *hurricane evacuation*, LA 23 is not only the Official Evacuation Route for Plaquemines Parish; it is the only evacuation route for the entire lower portion of Plaquemines Parish. This route serves not only the residents of lower Plaquemines, but also numerous oil rig workers in the Gulf of Mexico who utilize lower Plaquemines as their point of embarkation and return. As noted above, the mainline roadway of the project area is the only two lane section of LA 23. In a hurricane evacuation scenario, it acts as a bottleneck for northbound traffic. This bottleneck would be eliminated with the adding of capacity in the project area.

REPORT ORGANIZATION

CHAPTER I – INTRODUCTION, PURPOSE AND NEED, AND REPORT ORGANIZATION

In this chapter the purpose and scope of the EA document is provided, and the need and purpose of the project itself is explained. The chapter concludes with a description of the organization of the EA document.

CHAPTER II – ALTERNATIVE DEVELOPMENT, REVIEW & SELECTION AND DESCRIPTION OF THE PROPOSED ACTION

Chapter II begins with a brief background of the ideas for the project, and a discussion of previous work done for this particular project. The Chapter then provides an in-depth

look at the alternatives considered for the project (including the no-build alternative) and the analysis, screening and refinement involved in narrowing the project down to one (1) build alternative as the proposed action. The proposed action is then fully defined, with roadway design criteria, which were used in the development of the proposed action being discussed. The refined design concept of the proposed action is then described. Conceptual construction costs are then estimated. The conceptual construction cost section includes the sub-cost estimates and assumptions used in determining costs for:

- Main Roadway
- Bump-Outs
- Left Turn Lanes, Cross-Overs, & Turn-Outs,
- Driveways
- Drainage
- Utilities
- Mobilization
- Right-of-Way Acquisition
- Signalization
- Contingencies

Projected operating and maintenance costs are also briefly described. Plan view layouts, u-turn details, and typical sections are presented at the end of this chapter.

CHAPTER III – THE AFFECTED ENVIRONMENT

In this chapter, the areas of primary impact and the overall project study are first delineated and described. The existing transportation system, including existing highways and roadways, rail, transit and bicycle /pedestrian facilities are presented. The chapter concludes with an examination of the affected human and natural environment for the project. For purposes of analysis, the affected environment was divided into the following categories and sub-categories:

EXISTING TRANSPORTATION SYSTEM
- Roadways
- Railroads & Transit
- Pedestrian and Bicyclist Conditions

EXISTING HUMAN ENVIRONMENT
- Affected Neighborhoods
- Demographics
- Land Use
- Public Facilities and Services
- Visual/Aesthetic Conditions
- Cultural Resources
- Hazardous and Solid Waste Sites
- Flood Zones/Floodplains

EXISTING NATURAL ENVIRONMENT

- Geology and Soils
- Vegetation
- Wildlife
- Water Resources
- Coastal Zone Status
- Scenic Rivers

CHAPTER IV -- ENVIRONMENTAL IMPACTS OF THE CONSIDERED ALTERNATIVES AND SELECTION OF PREFERRED ALTERNATIVE

In this chapter, the impacts of the two alternatives considered (No Build Alternative and Proposed Action) are assessed relative to the evaluation categories of transportation and traffic, human environment, and the natural environment.

The chapter then provides a comparative analysis between the two alternatives based on their ability to meet the project Purpose and Need, and describes the selection of the Preferred Alternative.

CHAPTER V – THE PREFERRED ALTERNATIVE: IMPACT SUMMARY, MITIGATION MEASURES AND PERMITS

The direct impacts to the transportation system and the human and natural environments as a result of the implementation of the Preferred Alternative are listed. For unavoidable adverse impacts, this chapter provides a discussion of mitigation measures recommended to reduce those adverse effects. The indirect and cumulative impacts of the Preferred Alternative are also examined in this chapter. Permits required to complete the project are listed.

CHAPTER VI – PUBLIC PARTICIPATION, AGENCY COMMENTS AND COORDINATION

This chapter describes the public participation process for the project, including documentation of public meetings, public hearings and coordination efforts associated with the development of the project. These efforts include contacts made with LADOTD, FHWA, other agencies and elected officials through meetings and a *Solicitation of Views* requesting written comments on the project.

CHAPTER VII – REFERENCES AND APPENDIX

The Environmental Assessment concludes with this chapter. The References section lists publications, websites and other sources of information used in the writing of this document. The Appendix lists the stand-alone documents, correspondence (such as the

responses to the *Solicitation of Views*) and other data which were compiled are considered as part of this EA.

CHAPTER II

ALTERNATIVE DEVELOPMENT, REVIEW & SELECTION AND DESCRIPTION OF THE PROPOSED ACTION

Chapter II begins with a brief background of the ideas for the project, and a discussion of previous work done for this particular project. The Chapter then provides an in-depth look at the alternatives considered for the project (including the no-build alternative) and the analysis, screening and refinement involved in narrowing the project down to one (1) build alternative as the proposed action. The proposed action is then fully defined, with roadway design criteria, which were used in the development of the proposed action being discussed. The refined design concept of the proposed action is then described. Conceptual construction costs are then estimated. The conceptual construction cost section includes the sub-cost estimates and assumptions used in determining costs for:

- Main Roadway
- Bump-Outs
- Left Turn Lanes, Cross-Overs, & Turn-Outs
- Driveways
- Drainage
- Utilities
- Mobilization
- Right-of-Way Acquisition
- Signalization
- Contingencies

Projected operating and maintenance costs are also briefly described. Plan view layouts, u-turn details, and typical sections are presented at the end of this chapter.

BACKGROUND AND PREVIOUS WORK

Over the last decade or more, there has been much interest and discussion towards adding capacity to the last remaining stretch of LA 23 that only has two lanes of traffic --the 3.8 miles from the northern portion of Port Sulphur to Happy Jack. This would be done for several reasons: traveler safety (four lanes would improve safety by allowing in-lanes passing), hurricane evacuation, and economic development. As a result, the RPC and Plaquemines Parish undertook a Stage 0 Feasibility Study that was completed in April of 2010. In the late summer of 2011, N-Y Associates began undertaking the next step in the process-- a Stage 1 Environmental Assessment to select and refine one build alternative, and then compare its impacts in relation to a “no build” scenario.

ALTERNATIVES CONSIDERED

NO BUILD ALTERNATIVE

The "no build" alternative looks at the project study area without the project but with the planned improvements that would take place regardless of whether the project is constructed.

Transportation Projects

While there are no other transportation projects planned for the immediate study area, the Regional Planning Commission, in their *Metropolitan Transportation Plan for the New Orleans Urbanized Area, Fiscal Years 2011 -2040,* lists several projects that will impact Plaquemines Parish and would affect travel and traffic volumes along LA 23 in the study area (it should be noted that this LA 23 widening project is also listed in this transportation plan as a Tier 2 project). These projects are briefly described below:

Tier I Highway Projects (Fiscal Year 2011-2014):

Widening LA 23 from Lapalco Blvd to LA 3017 – This project involves widening LA 23 in both Jefferson and Plaquemines Parishes from four (4) to six (6) lanes.

LA 1261, Peters Road Extension, Phase II, LA 3017 Improvements – This project involves interchange modifications to Peters Road and Engineers Road.

Tier 2 Highway Projects (Fiscal Year 2015-2024):

LA 23 Belle Chasse Tunnel – This project involves replacing the existing two lane tunnel and two lane bridge couplet with a new four-lane bridge.

LA 3017 / Peters Road Extension - This project includes extending Peters Road from Jefferson Parish into Plaquemines Parish via a bridge over the Intracoastal Waterway, as well as connecting roads on the Plaquemines Parish side.

Tier 3 Highway Projects (Fiscal Year 2025-2040):

Donner Road (West bank Expressway – Peters Road) – This future project includes construction of Donner Boulevard in Orleans Parish and its extension via a new GIWW bridge into Plaquemines Parish.

Other Projects

In addition to transportation projects, there are two other projects underway or planned in and around the project area which may affect access or have some other impact along LA 23 in the study area:

New Plaquemines Medical Center – A new 44,000 sq. ft. medical center to replace the original Plaquemines Medical Center (which was destroyed by Hurricane Katrina) is under construction along LA 23 in the project area, and construction is expected to be complete in January 2014.

New Library - A new Port Sulphur branch library to replace the one destroyed by Hurricane Katrina is being planned. It will be located along LA 23 in the study area, just south of the new Plaquemines Parish School Board Learning Center.

BUILD ALTERNATIVES

The Stage 0 study explored three (3) alternatives for improving capacity: two widening alternatives and a "couplet" which would utilize existing LA 23 as a one-way two-lane facility for south bound traffic, and converting River Road into a two-lane one-way facility for northbound traffic. The two widening alternatives only differed in that one was to include a complete reconstruction, while the other was intended to use as much of the existing pavement as possible.

Alignment Analysis, Screening and Refinement

As part of the Scope of Work for the project, consultant team was tasked with evaluating the three build alternatives in the Stage 0 study, eliminating any alternatives not seen as reasonable, and refining any remaining alternatives as necessary.

After examining the three alternatives, the couplet alternative was eliminated from further consideration for several reasons. Primarily, it would negatively affect the nature of River Road, with much higher speed limits and traffic volumes on what is currently a rural residential street. The couplet flow would affect the commercial establishments located along LA 23, as the amount of traffic passing these establishments would be halved and direct access to them limited to southbound traffic. Northbound travelers wishing to access the commercial establishments would need to use one of the numerous cross streets between existing LA 23 and River Road to turn around and access stores and facilities. This in turn would result in higher traffic volumes on the residential cross streets, another negative impact. Finally, the Stage 0 study determined that the couplet would ultimately prove to be the most expensive build alternative, due to the requirements of upgrading River Road. River Road would have to be completely redesigned and constructed to state highway design standards in addition to bringing the pavement itself up to design guidelines. Additionally, as River Road is extremely close to the Mississippi River levee, construction would have to take the levee into account.

As the remaining two alternatives both included the widening and improving LA 23 from two to four lanes with only minor differences in terms of roadway construction, the consultant team began development of a refined widening alternative that (1) met all current LADOTD geometric criteria and (2) avoided and minimized environmental impacts.

Access at Civic Drive and Freeport Drive

An evaluation was performed for the access options at Civic Drive and Freeport Drive. The roadways are approximately 0.25 miles apart and provide access to LA 23 at the south end of the project area. Civic Drive provides access for various land uses including a high school and a fire station. Currently, police details are utilized during school take-in and release times to aid entering/exiting traffic. Freeport Drive provides access for a Plaquemines Parish government building. While twenty four hour volume data and traffic signal warrant analysis indicated that the volume requirements for full access and/or signalization are not met at either location, Civic Drive does warrant a turn lane to accommodate northbound lefts from LA 23 based on NCHRP guidelines for determining the need for a major road left turn bay at two-way stop controlled intersections. A left turn lane at this location is also recommended to accommodate school buses. Without a partial median opening at this location, buses would be required to travel approximately 1/2 mile to the nearest U-turn adding an extra mile of travel. Traffic volumes at Freeport Drive did not indicate a partial median opening should be considered as the highest recorded left turn volume during the peak period was 4 vehicles. It is important; however, to maintain the accessibility to the existing land uses for each roadway.

Limiting access reduces conflict points increasing safety. Roundabouts, an alternative to full access median openings, were determined unfeasible based on proximity to the levee and ROW constraints. The following alternatives were considered to maintain accessibility while minimizing the number of conflict points where possible. Both alternatives are considered feasible based the traffic analysis conducted for this study.

Alternative 1A. Provide a partial median opening at Civic Drive and restrict Freeport Drive to right-in/right-out. This option would require the following provisions based on traffic operations:

- Partial median opening at Civic Drive to allow lefts from LA 23 northbound and provide rollover curb in median to allow emergency vehicles the ability to turn left onto LA 23.
- Extend median on LA 23 through Freeport Drive to restrict access to right-in/right-out.
- Widen LA 23 to the south of Freeport Drive to provide a u-turn that can accommodate a school bus.

Alternative 1B. Provide a full access median opening at Civic Drive and transition from the four-lane divided section into the four-lane undivided section immediately south of Civic Drive. This option would require the following provisions based on traffic operations:

- Provide a full access median opening at Civic Drive, requiring a design exception.
- Ending the divided highway section immediately south of Civic Drive allows the full access at Freeport Drive to remain as is. It is unclear whether or not a design exception would be required for this location.

In both alternatives the following were considered:

- Provide police control at Civic Drive during school take-in and release.
- Provide signage at Civic Drive to restrict U-turns.
- An actuated flashing beacon at Civic Drive for use by the Fire Department and EMS can be installed under permit.

Based upon discussions held in February 2014 with the Regional Planning Commission, LADOTD Traffic Section, LADOTD District 02, and Plaquemines Parish officials, Alternative 1B was identified as the preferred option for access at Civic Drive and Freeport Drive.

A design exception would be required for providing median openings at both River Road (Southern Intersection) and Civic Drive because these locations are less than a half mile apart.

Preferred Alignment

As described earlier, the couplet alternative was eliminated from further consideration and the widening of LA 23 (as refined) became by proxy the preferred alignment and the proposed action.

THE PROPOSED ACTION

DESIGN CRITERIA

The concept design of the roadway, ramps and bridges of the proposed action meet LADOTD UA-2 (urban arterial) criteria for roadway design.

Table II-1, on the following two pages, lists the design criteria.

Table II-1

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
Minimum Design Guidelines for Urban Arterial Roads and Streets

State law requires that the state highway system conform to these guidelines.

Item No.	Item	Urban				
		UA-1	UA-2	UA-3	UA-4	UA-5
1	Design Speed (mph)	40	45	50	55	60
2	Level of Service [1]	C	C	C	C	C
3	Number of Lanes	2 (min) – 4 (typ)	2 (min) – 4 (typ)	2 (min) – 4 (typ)	2 (min) – 4 (typ)	2 (min) – 4 (typ)
4	Width of Travel Lanes (ft)	11	11 – 12	12	12	12
5	Width of Shoulders (minimum) (ft) [2]					
	(a) Inside on multilane facilities	N/A	N/A	4	4	4
	(b) Outside	8	8	8	8	8
6	Shoulder Type	Paved	Paved	Paved	Paved	Paved
7	Parking Lane Width (ft)	10 – 12	10 – 12	N/A	N/A	N/A
8	Width of Median on Multilane Facilities (ft)					
	(a) Depressed	N/A	N/A	30	34 – 42	42
	(b) Raised	6 [3] – 30	6 [3] – 30	30	30	30
	(c) Two way left turn lane	11 – 14 typ. [4]	11 – 14 typ. [4]	N/A	N/A	N/A
9	Width of Sidewalk (minimum) (where used) (ft) [5]					
	(a) When offset from curb	4	4	4	4	4
	(b) When adjacent to curb	6	6	N/A	N/A	N/A
10	Fore slope (vertical – horizontal)	1:3 (min) – 1:4 (des)	1:3 (min) – 1:4 (des)	1:4	1:6	1:6
11	Back slope (vertical – horizontal)	1:3	1:3	1:3	1:4	1:4
12	Pavement Cross-slope (%)	2.5	2.5	2.5	2.5	2.5
13	Min. Stopping Sight Distance (ft)	305	360	425	495	570
14	Maximum Superelevation (%)	4	4	4	6	6
15	Minimum Radius (ft) [6,7]					
	(a) With normal crown (-2.5% cross-slope)	700	1,000	16,700	19,700	22,880
	(b) With 2.5% superelevation	550	750	3,500	5,250	6,280
	(c) With full superelevation	500	700	1,000	1,100	1,400
16	Maximum Grade (%)	7	6	6	5	5
17	Minimum Vertical Clearance (ft) [8]	16	16	16	16	16
18	Minimum Clear Zone (ft)					
	(a) From edge of through travel lane	18 [9]	24 [9]	28 [10]	22	30
	(b) Outside from back of curb (when curb is used)	6 (min) – 16 (des) [11]	6 (min) – 22 (des) [11]	19 [10]	13	21
	(c) Median from back of curb [12] (when curb is used)	4 (min) – 12 (des)	4 (min) – 18 (des)	8 (min) – 17 (des)	8 (min) – 17 (des)	8 (min) – 25 (des)
19	Bridge Design Live Load [13]	AASHTO	AASHTO	AASHTO	AASHTO	AASHTO
20	Width of Bridges (minimum) (face to face of bridge rail at gutter line) (ft)					
	(a) Curbed facilities (without sidewalks)	Traveled way [14] plus 8′	Traveled way [14] plus 8′	Roadway width	Roadway width	Roadway width
	(b) Shoulder facilities	Roadway width	Roadway width	Roadway width	Roadway width	Roadway width
21	Guardrail Required at Bridge Ends	[14]	[14]	Yes	Yes	Yes

Approved _____ Chief Engineer 12-4-09 Date

Minimum Urban Arterial Road and Street Design Guidelines - Sheet 1 of 2

Table II-1 (continued)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Footnotes for Minimum Design Guidelines for Urban Arterial Roads and Streets

1- Level of service D allowable in heavily developed urban areas.
2- Curb may be used in place of shoulders on UA-1 and UA-2 facilities. If used on UA-3, UA-4, or UA-5 facilities, curb should be placed at the edge of shoulder. For design speeds greater than 45 mph, curb will not be placed in front of guardrail.
3- With Chief Engineer's approval, curb offsets may be eliminated and the minimum median width can be reduced to 4 feet. On principal arterials, particularly at intersections, the upper limit should be considered.
4- Cannot be used on multilane roadways (with four or more through lanes) without the Chief Engineer's approval.
5- Sidewalks must be separated from the shoulder and should be placed as near the right of way line as possible. On high speed facilities, they should preferably be placed outside the minimum clear zone shown in item 18.
6- It may be necessary to increase the radius of the curve and/or increase the shoulder width (maximum of 12 feet) to provide adequate stopping sight distance on structure.
7- The following radii apply at divisional islands. The radius selected must match the design speed of the road. These radii also apply to the other guidelines where divisional islands are mentioned.

Design Speed	Radius (rounded)	Degree of Curve	Design Speed	Radius (rounded)	Degree of curve
20 mph	1,450′	4°	40 mph	2,900′	2°
25 mph	1,650′	3° 30′	45 mph	3,850′	1° 30′
30 mph	1,950′	3°	50 mph	5,750′	1°
35 mph	2,300′	2° 30′	55 & 60 mph	11,500′	0° 30′

8- An additional 6 inches should be added for additional future surfacing.
9- Applies to facilities with shoulders. Refer to the Roadside Design Guide when 1:3 fore slopes are used or for slopes flatter than 1:4.
10- The distance may be reduced by 6 feet if 1:6 slopes are used. For outside shoulders wider than 8 feet, further reduction should be proportional to the added shoulder width.
11- If outside shoulders and curb are used, refer to the Roadside Design Guide.
12- Where left turn lanes are provided or where the median is less than 6 feet in width, the minimum clearance will be 1.5 feet from back of curb. For median slopes steeper than 1:6, refer to the Roadside Design Guide for the desirable clear zone.
13- LRFD for bridge design.
14- Refer to EDSM II.3.1.4 when sidewalks will be provided and for guardrail requirements.

General Note:

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

Minimum Urban Arterial Road and Street Design Guidelines - Sheet 2 of 2

DESIGN CONCEPT

The proposed action includes a widening of LA 23 for an approximate 3.8 mile stretch. Currently, LA 23 in this area is functionally classified as a rural minor arterial type roadway with a posted speed limit of 35 mph in some areas and 45 mph in others. It is currently an undivided two lane roadway with approximately 6 foot shoulders. There is roughly 100' of available right-of-way along the roadway. The roadway is intersected at numerous locations by short, residential local streets.

The roadway will be widened from two to four lanes. Using LADOTD design criteria, it was determined to build the roadway to UA-2 (Urban Arterial) highway standards, which would enable a consistent 45 MPH design speed. The design was undertaken with the purpose of avoidance and minimization of impacts. It was determined that in order to limit the amount of right-of-way needed, the existing right-of-way would be sufficient to widen to four lanes of traffic, if parallel drainage is converted from open ditch/swale drainage to underground pipe drainage.

The new roadway will also meet LADOTD design standards for access and safety. As per LADOTD design guidelines, an eighteen foot (18') median is proposed between the northbound and southbound lanes. Access will be limited as per the LADOTD's Engineering Design Standards Manual (EDSM) amendment IV.2.1.4, which was put into effect in September 2008. The amendment provides definitions and criteria for design of median openings on roadways where a median did not exist prior to the current project (i.e., 2 lane to 4 lane divided or 4 lane undivided to 4 lane divided). Most notably, median openings shall be spaced at least ½ mile (2,640 ft) apart and shall be directional u-turns. At locations where u-turns are present, bump-outs to enable varying sizes of u-turn movements are necessary. Provisions are allowed for left turns at key public facilities.

Roadway improvements begin just north of the northerly intersection with Port Sulphur River Road, where the pavement for the existing 4-lane section ends. At that location, a brief transition from paved shoulders to a curb highway occurs. Just north of the Port Sulphur River Road intersection, a northbound u-turn is included. Port Sulphur River Road will have a dead-end Type A barrier installed south of Oakridge Drive, and just south of the current river road intersection. A new connection with River Road (with acceptable roadway geometry) will be installed south of the dead-end barrier just north of the gas station. A dedicated left turn for southbound LA 23 traffic wishing to access River Road is included at this intersection. Vehicles from River Road who wish to travel southbound on LA 23 will need to head northbound and use the northbound u-turn.

Continuing southward, the improved and widened roadway will continue as a divided highway. The first cross-access is a dual u-turn facility just south of Holiday Drive. A second dual u-turn facility is located a short distance north of Udstad Lane. A northbound left turn is included to provide access to the Plaquemines Parish School Board Learning Center, the post office, and the new library site. Another dual u-turn is located a short distance north of Pennydee Drive, and another northbound left turn is

included to provide full access at the new hospital site just north of High Ridge Marina Drive.

Further south, dual u-turns are located between Treadway and Adema Lanes and about midway between Adema Lane and Lee Drive. A southbound u-turn is positioned north of the southern intersection with Port Sulphur River Road. That intersection includes a dedicated left turn for southbound LA 23 traffic to access River Road, but vehicles traveling southbound on River Road that wish to continue southbound on LA 23 will need to head northbound and use the northbound u-turn.

A full "T" intersection with a dedicated northbound left turn lane is included at Civic Drive for access to the fire and EMS stations as well as South Plaquemines High School. It is envisioned that a controllable signal will be put in place here, only to be used during school arrival and departure times, and as needed for emergency vehicles. South of Civic Drive, sidewalks and handicapped ramps will be installed on the non-levee side to replace the existing ones. The roadway then continues south and the existing undivided four-lane section of LA 23 would be extended northward to just north of Freeport Drive. The divided four lane section transition to the undivided four lane section between Civic Drive and Freeport Drive.

The entire route includes a standard median width of eighteen (18) feet. This median configuration is not wide enough to provide adequate turning radii for either passenger vehicles or WB-50 or WB-67 classification trucks to make a u-turn. As a result, right-of-way "bump outs" are required at each u-turn location which requires u-turning vehicles to cross both lanes of opposing traffic into the "bump out" areas prior to merging into the traffic flow. The size of these bump-outs vary, however, as truck bump-outs require more right-of-way then passenger car bump-outs. As it is anticipated that truck u-turn movements would be rather limited along this stretch of roadway and in order to save on right-of-way, truck-sized bump-outs were not placed in all locations. They were placed at both ends of the project (at the intersections with River Road) and on both sides of the dual u-turn at the project's midpoint (slightly north of Pennydee Drive). At the remaining dual u-turns, the bump-out sizes are varied by size in a staggered fashion: a northbound u-turn bump-out is built to accommodate passenger cars, while the southbound u-turn bump-out is designed to accommodate cars *and* trucks; the next dual u-turn is reversed, with the southbound u-turn bump-out built to accommodate passenger cars and the northbound u-turn bump-out designed to accommodate cars and trucks. It should be noted that the u-turn/bump-out locations and left-turn intersection shown on exhibits in this document, however, are conceptual in nature and are subject to change during final design.

CONCEPTUAL CONSTRUCTION COST

General

Construction quantities for the proposed action were derived from the typical sections shown at the end of this chapter. Unit prices were based on Louisiana Department of Transportation and Development (LADOTD) 4th quarter 2011 unit prices.

Construction costs were divided into thirteen basic groups: Main Roadway, Bump-Outs, Left Turn Lanes and Cross-Overs, Concrete Turn-Outs, Concrete Driveways, Aggregate Driveways, Drainage, Utilities, Miscellaneous, Mobilization, Right-of-Way Acquisition, Signalization, and Contingencies.

Main Roadway

The at-grade roadway cost estimate includes removal of existing roadway, construction of new roadway, maintenance aggregate, and striping. The area of proposed construction is mostly flat. Portland cement concrete pavement was assumed for estimating purposes along the roadway corridor.

Utilities

Utility costs include costs for relocation of existing water and sewer lines. Private utilities will be relocated at the provider's cost

Right-of-Way Acquisition

Private property will need to be acquired to construct the Proposed Action. The methodology employed in the determination of estimated costs for private property involved internet research of property for sale in the project area. Research on comparable asking prices of "for sale" properties located along LA 23 in the immediate project area was performed and it was found that vacant land in the area was selling for an average price of about $19,700 per acre. For purposes of the cost estimate, this was rounded up to a cost of $20,000 per acre.

Signalization

The conceptual cost estimate includes installation of a new controlled traffic signal at Civic Drive.

Contingencies

A 20% construction cost contingency was included for this concept-level study.

Summary

The total cost estimate for constructing the proposed action is **$39,230,520**. **Table II-2** on the following page presents detailed conceptual cost estimates for the Proposed Action.

As of the date of this document, there is no current funding source identified for designing or constructing this project.

Table II-2
LA 23 (Happy Jack to N. Port Sulphur) Widening and Improvement
Conceptual Cost Estimate

ITEM	UNIT	UNIT PRICE	QUANTITY	AMOUNT
MAIN ROADWAY (4 lanes, PCC Pavement) Including new roadway section, removal of existing roadway, pavement striping, & maintenance aggregate	Ln. Ft.	$660.00	21,312	$14,065,920
LEFT TURN LANES, U-TURN LANES & CROSSOVERS:	Ea.	$60,000.00	18	$1,080,000
TRUCK BUMP OUTS	Ea.	$88,000.00	8	$704,000
AUTO BUMP OUTS	Ea.	$28,000.00	4	$112,000
CONCRETE TURNOUTS	Sq. Yd.	$100.00	7,250	$725,000
CONCRETE DRIVEWAYS				
1) Residential:	Ea.	$2,400.00	22	$52,800
2) Commercial	Ea.	$3,000.00	55	$165,000
AGGREGATE DRIVEWAYS				
1) Residential:	Ea.	$300.00	107	$32,100
2) Commercial	Ea.	$400.00	12	$4,800
DRAINAGE				
Including catch basins, drop inlets, cross drain pipes & storm drain pipe	Lump	$5,500,000.00	1	$5,500,000
UTILITIES				
1) Water:	Lump	$3,300,000.00	1	$3,300,000
2) Sewer:	Lump	$4,500,000.00	1	$4,500,000
MISCELLANEOUS ITEMS				
(including removal of structures & obstructions, project layout, temporary detour roads, temporary signs, & temporary striping	Lump	$700,000.00	1	$700,000
MOBILIZATION	Lump	$1,547,000.00	1	$1,547,000
RIGHT-OF-WAY	Acre	$20,000.00	2.674	$53,480
SIGNALIZATION	Ea.	$150,000.00	1	$150,000
		SUBTOTAL		**$32,692,100**
Contingencies	20%			$6,538,420
		GRAND TOTAL		**$39,230,520**

PROJECTED OPERATIONS AND MAINTENANCE COSTS

The annual total operation and maintenance costs for the proposed action include the annual cost of re-striping and maintenance for the roadways.

The costs of routine grass cutting on the right-of-way and sweeping the roadway are not kept by LADOTD. They are considered negligible.

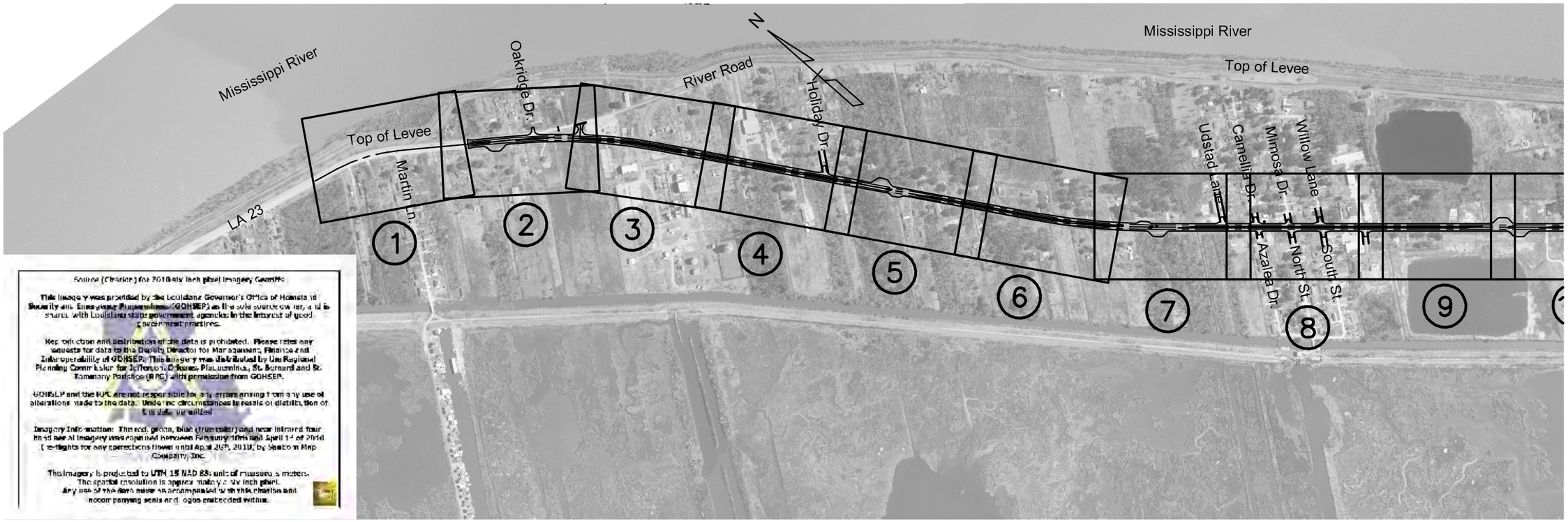
Table II-3 below gives a breakdown of the operations and maintenance costs:

Table II-3
Proposed Action
Annual Operation and Maintenance Costs

O&M Category	LA Hwy 23 Widened Section
Re-Striping	$9,178
Preventive Maintenance	$35,000
TOTAL:	$44,178

ENGINEERING DRAWINGS

Plan view layouts, u-turn details, and typical sections are presented on the following page.



Source (Creator) for 2010 daily inch pixel imagery GeoEye

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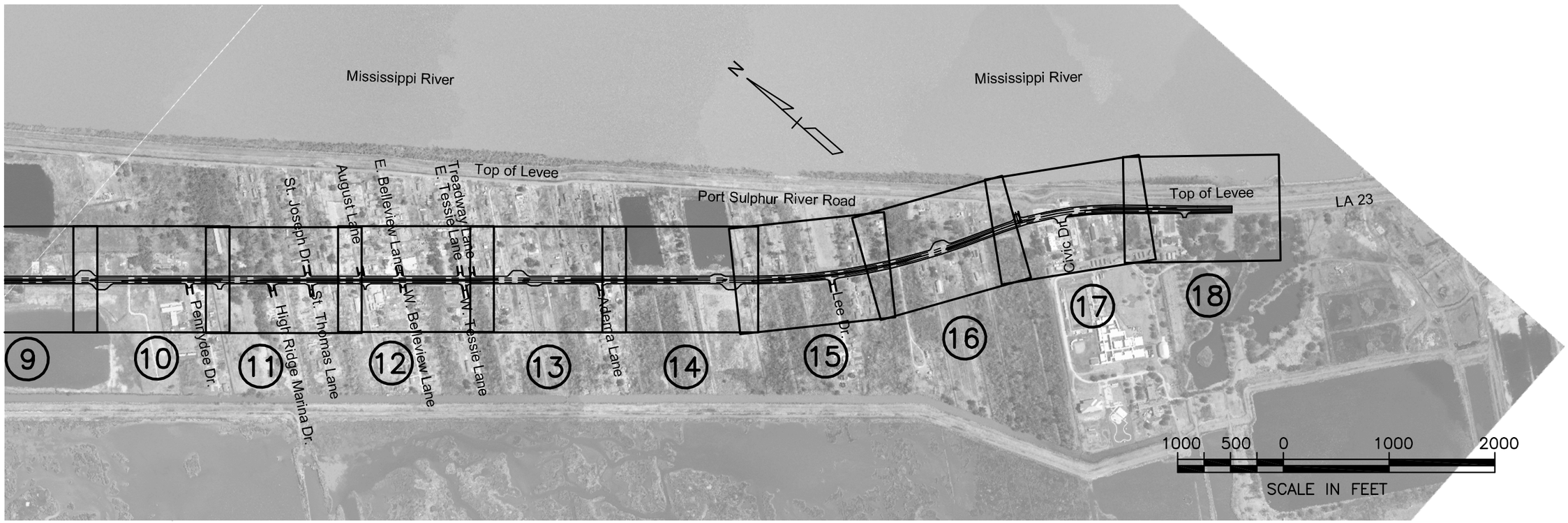

SHEET **INDEX**

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

PLAN LAYOUT INDEX

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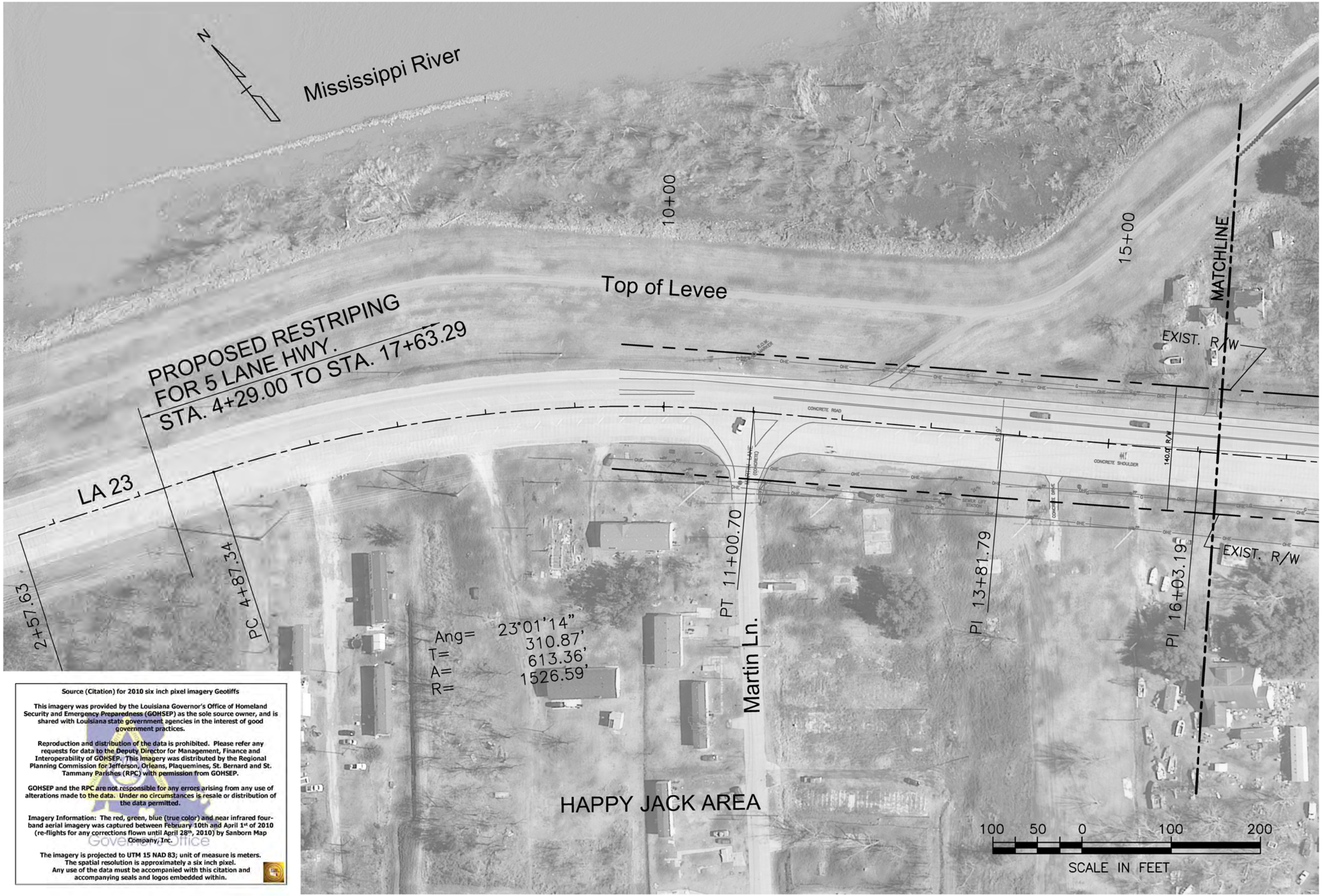
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
DOTD



Source (Citation) for 2010 six inch pixel imagery Geotiffs

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SHEET 1

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

PLAN LAYOUT

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DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
DOTD

MATCHLINE

EXIST. R/W

STA. 17+63.29 BEGIN PROPOSED NEW ROADWAY

20+00

Oakridge Dr.

25+00

DEAD END ROAD INSTALLATION
TYPE A BARRICADE

EXIST. R/W

Port Sulphur River Road

RIVER ROAD CONNECTION

MATCHLINE

140.0' R/W

SHOULDER

ASPHALT

GRAVEL

DITCH

OHE

UGFO

PI 16+03.19

EXIST. R/W

REQ'D. R/W

PC 21+58.53

EXIST. R/W

Ang= 15°49'48"
T= 712.98'
A= 1416.88'
R= 5128.35'

100 50 0 100 200

SCALE IN FEET

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SHEET 2

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399

RPC CONTRACT LA23ENV1

PLAN LAYOUT

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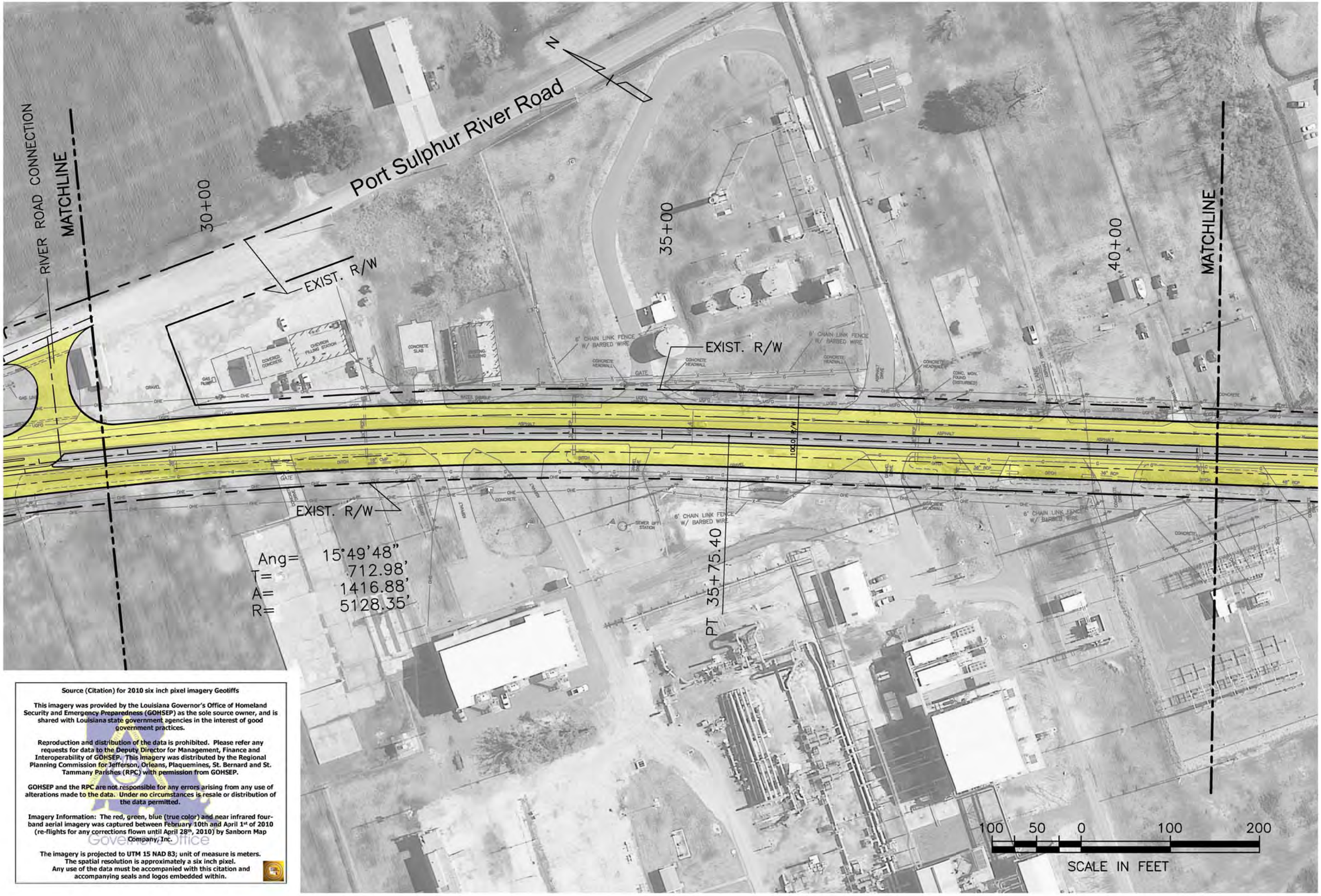

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SHEET 3

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399 RPC CONTRACT LA23ENV1

PLAN LAYOUT

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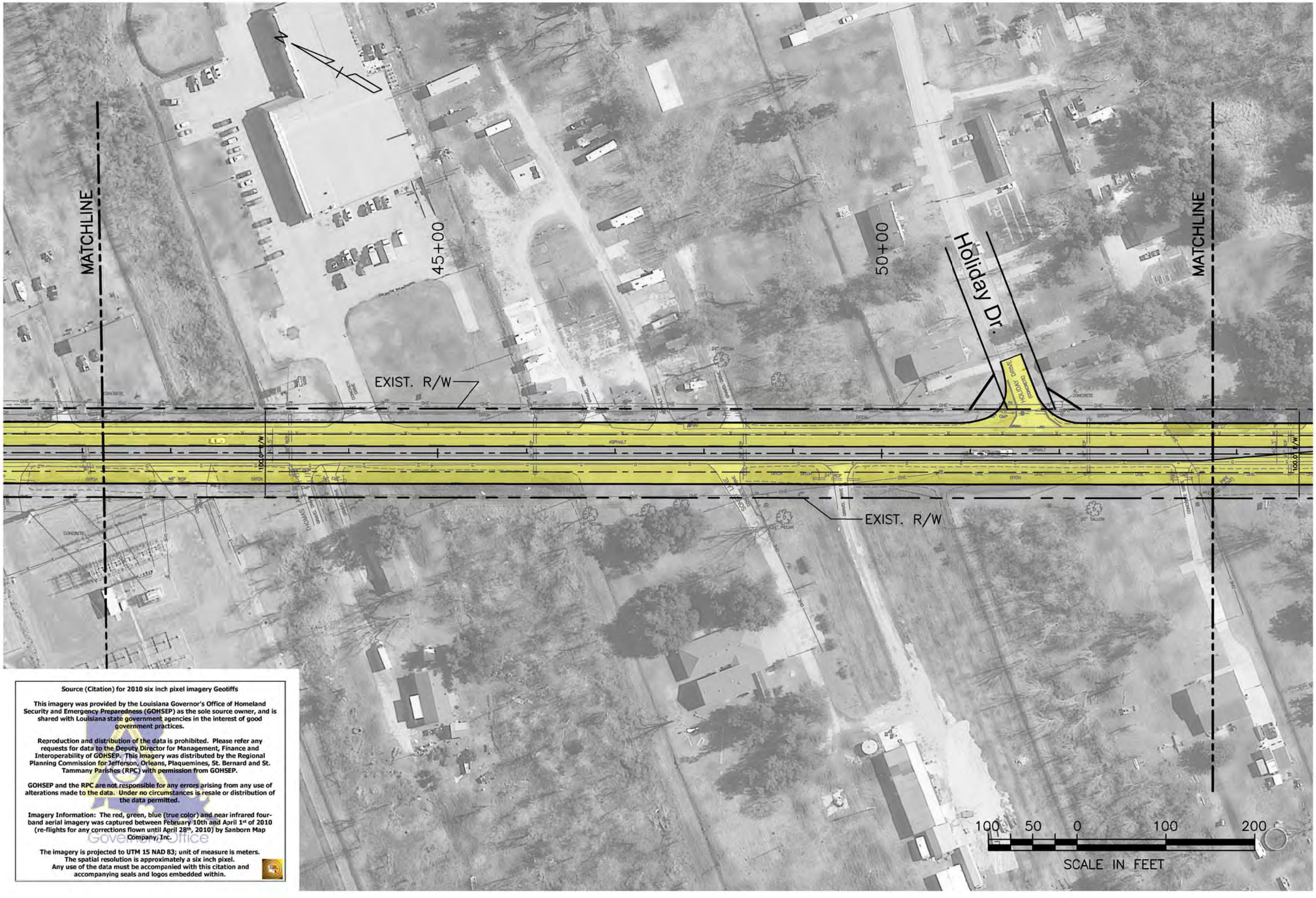

Source (Citation) for 2010 six inch pixel imagery Geotiffs

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Governor's Office

SHEET 4

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

PLAN LAYOUT

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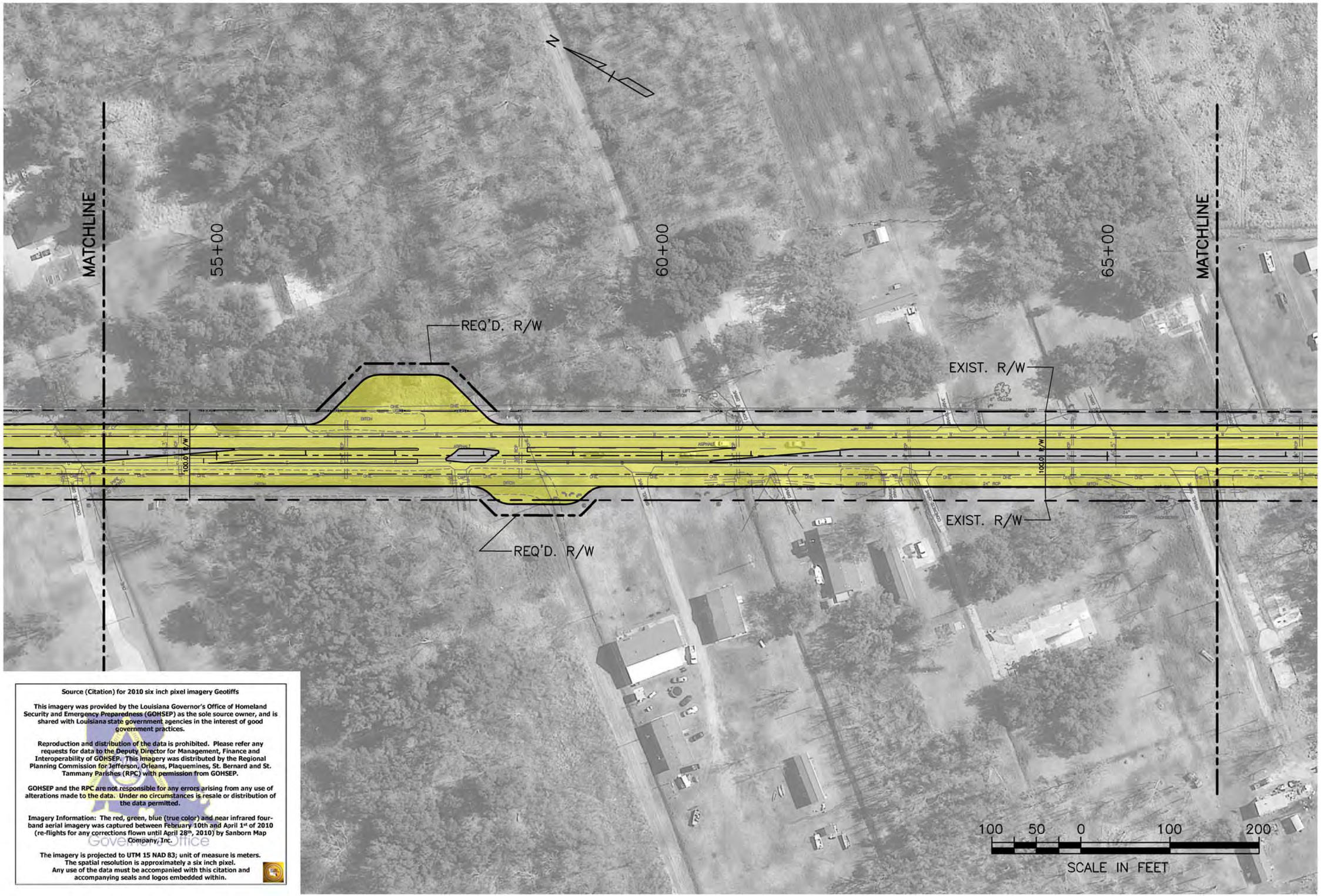
REGIONAL PLANNING COMMISSION — JEFFERSON • ORLEANS • PLAQUEMINES • ST. BERNARD • ST. TAMMANY

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT — DOTD



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SHEET 5

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399

RPC CONTRACT LA23ENV1

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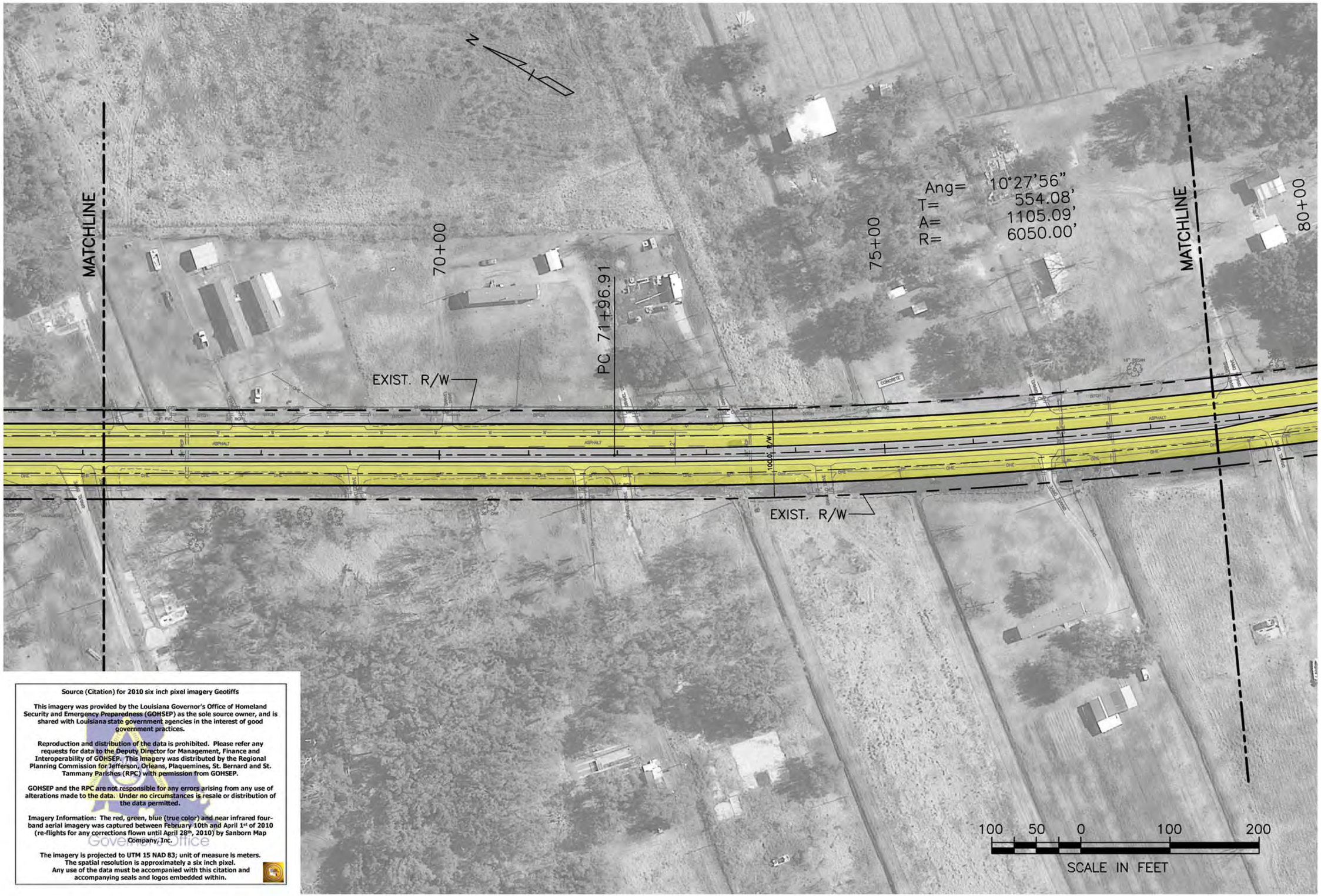
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
DOTD



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SHEET 6

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399
RPC CONTRACT LA23ENV1

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DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
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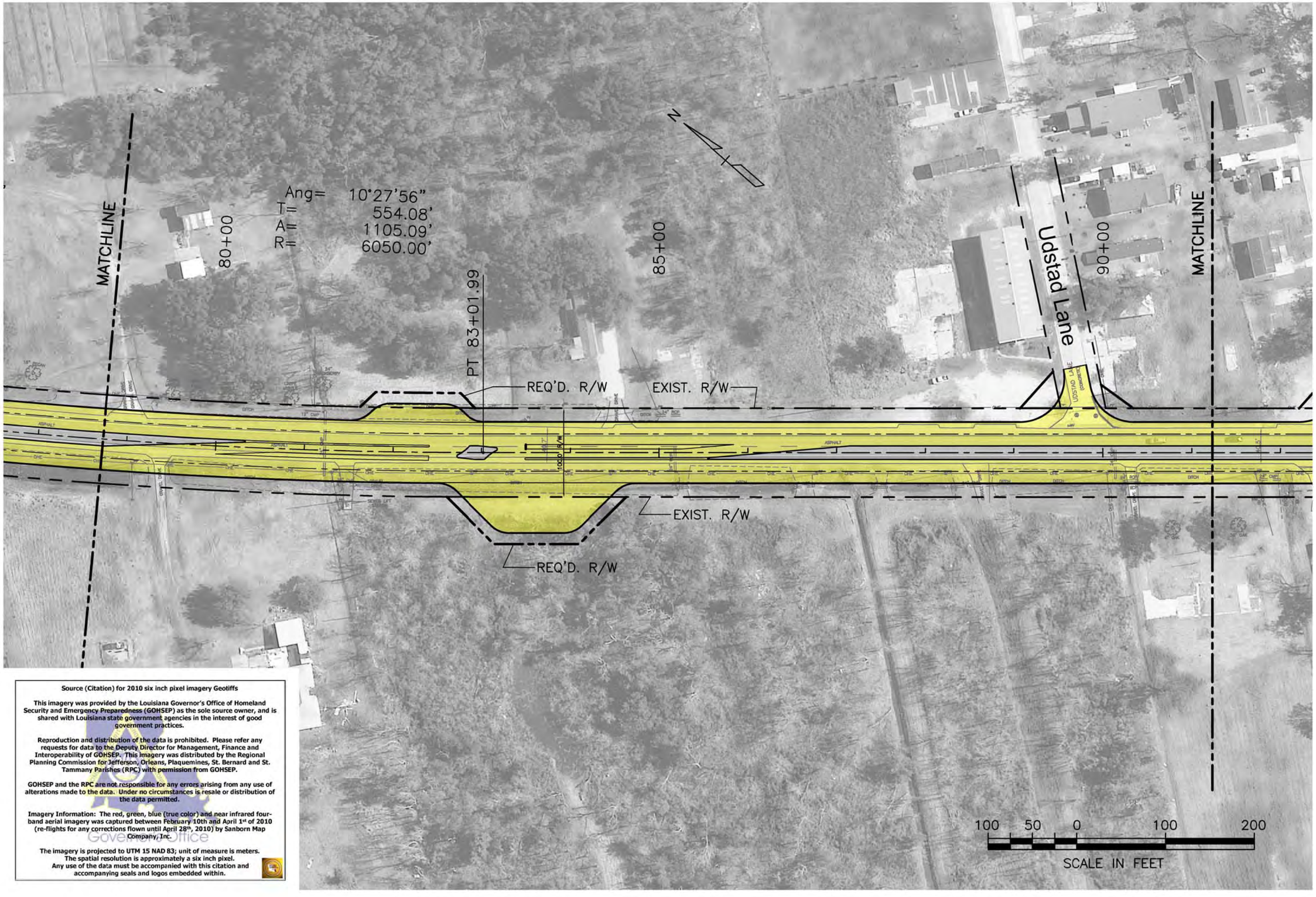

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SHEET 7

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399 RPC CONTRACT LA23ENV1

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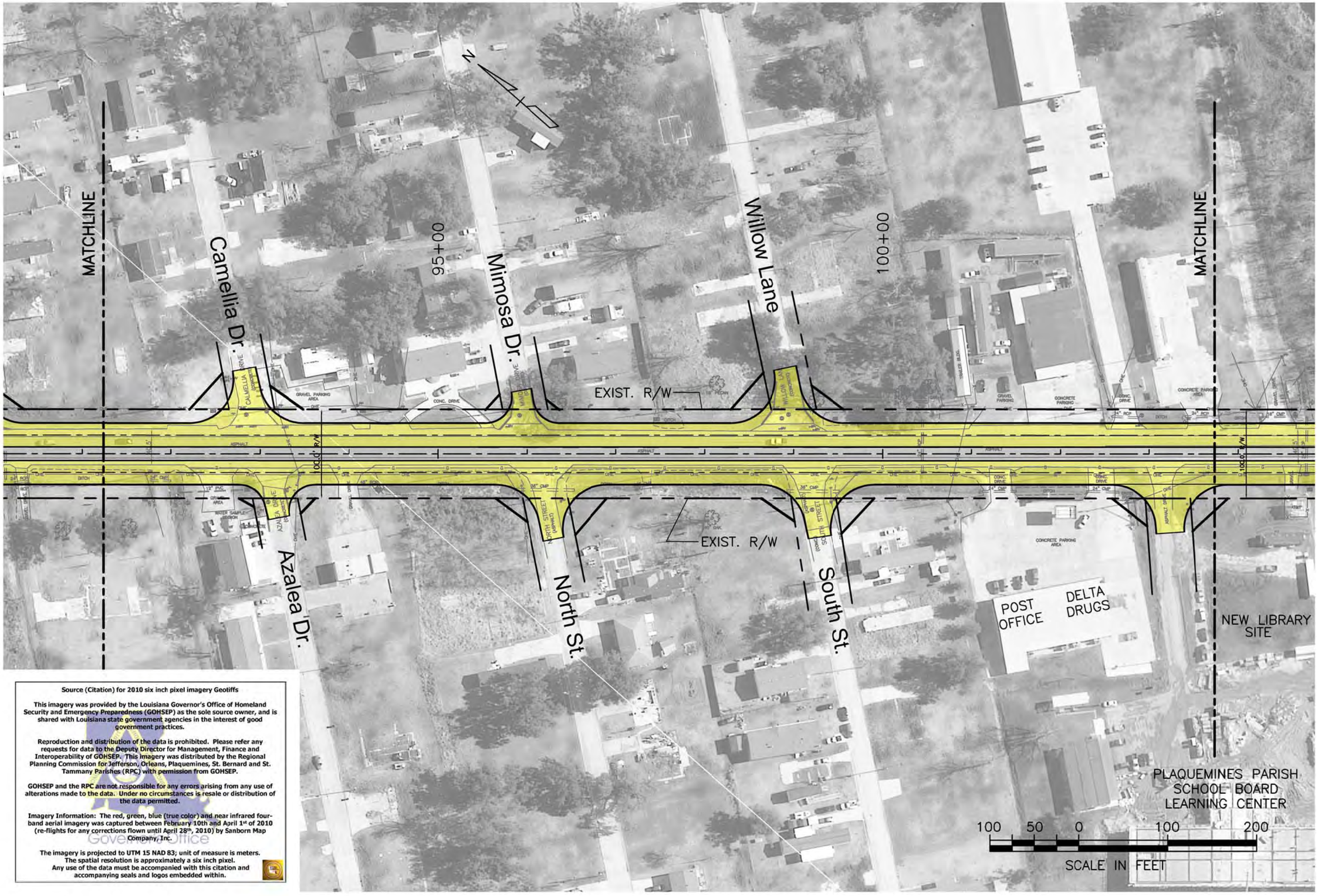

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LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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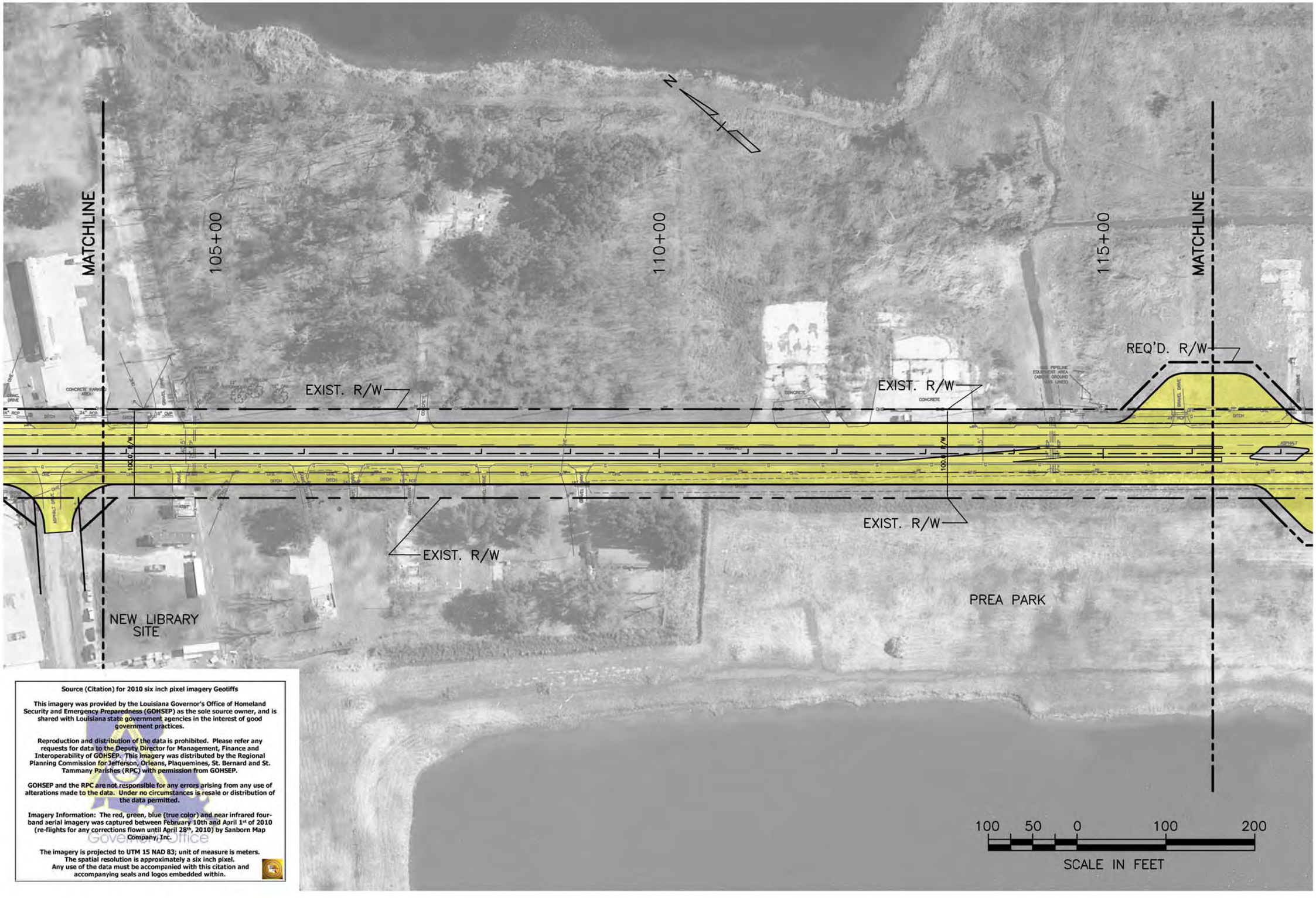

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SHEET 9

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399
RPC CONTRACT LA23ENV1

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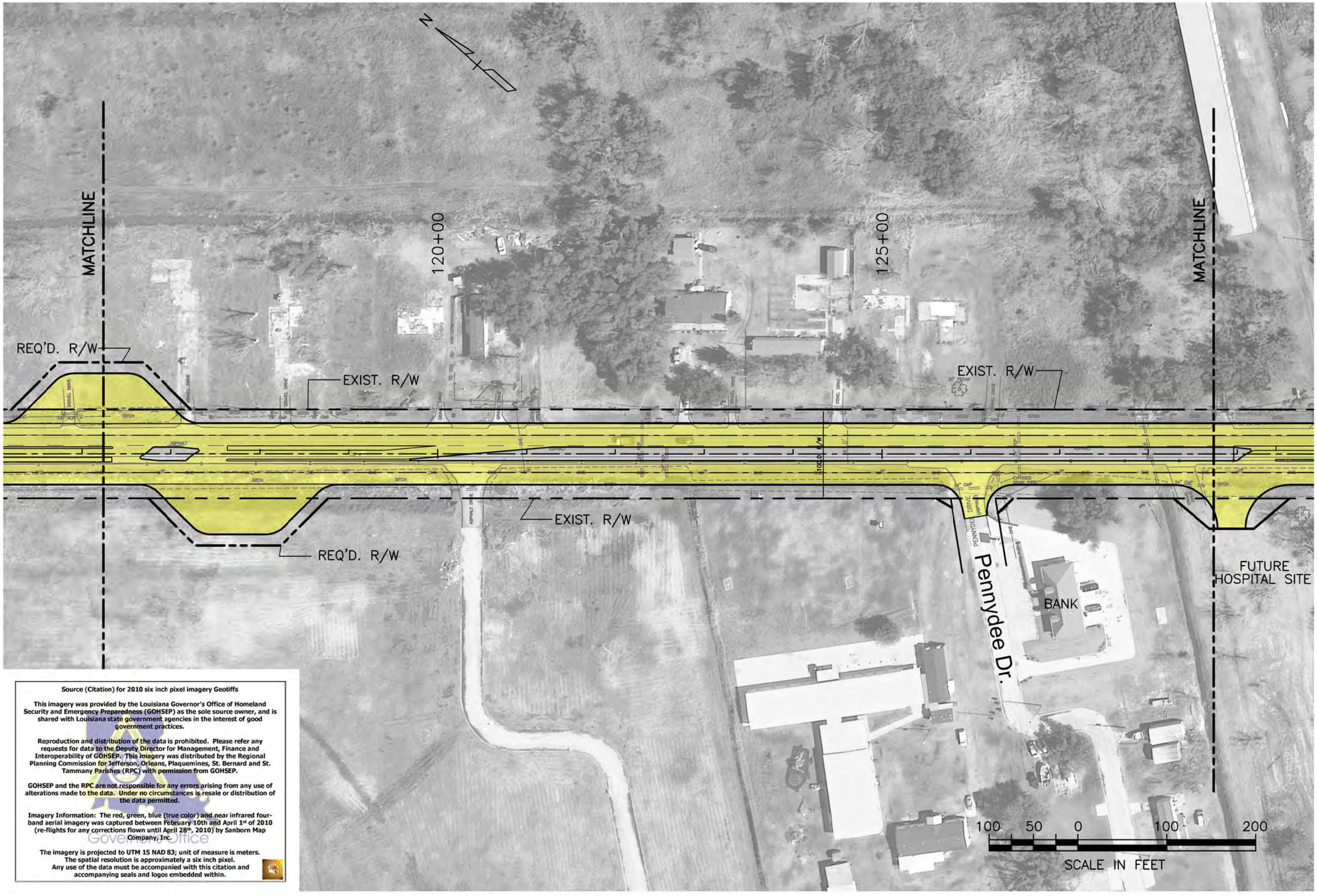

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SHEET 10

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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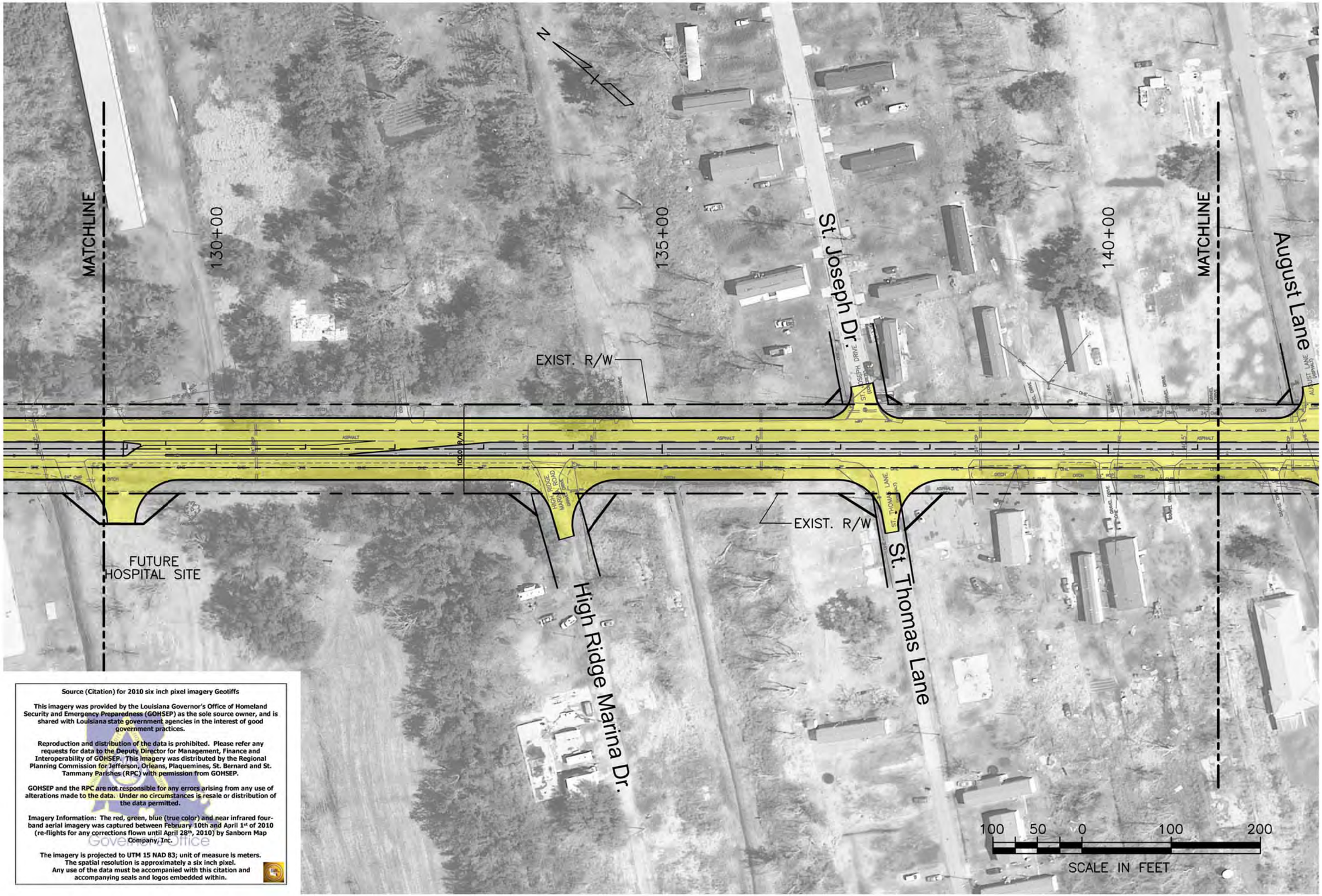
DOTD DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT



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LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

SHEET 11

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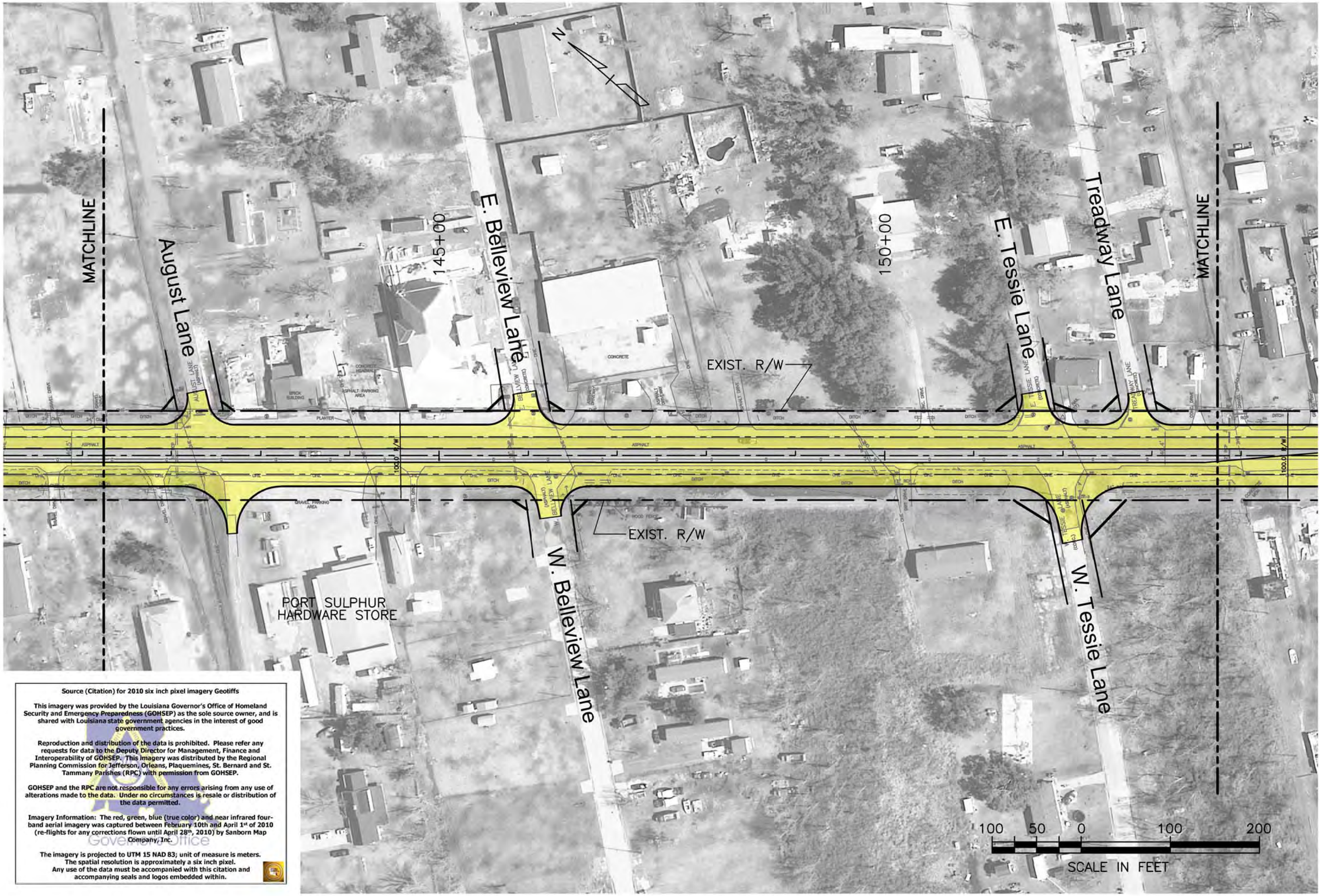

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SHEET 12

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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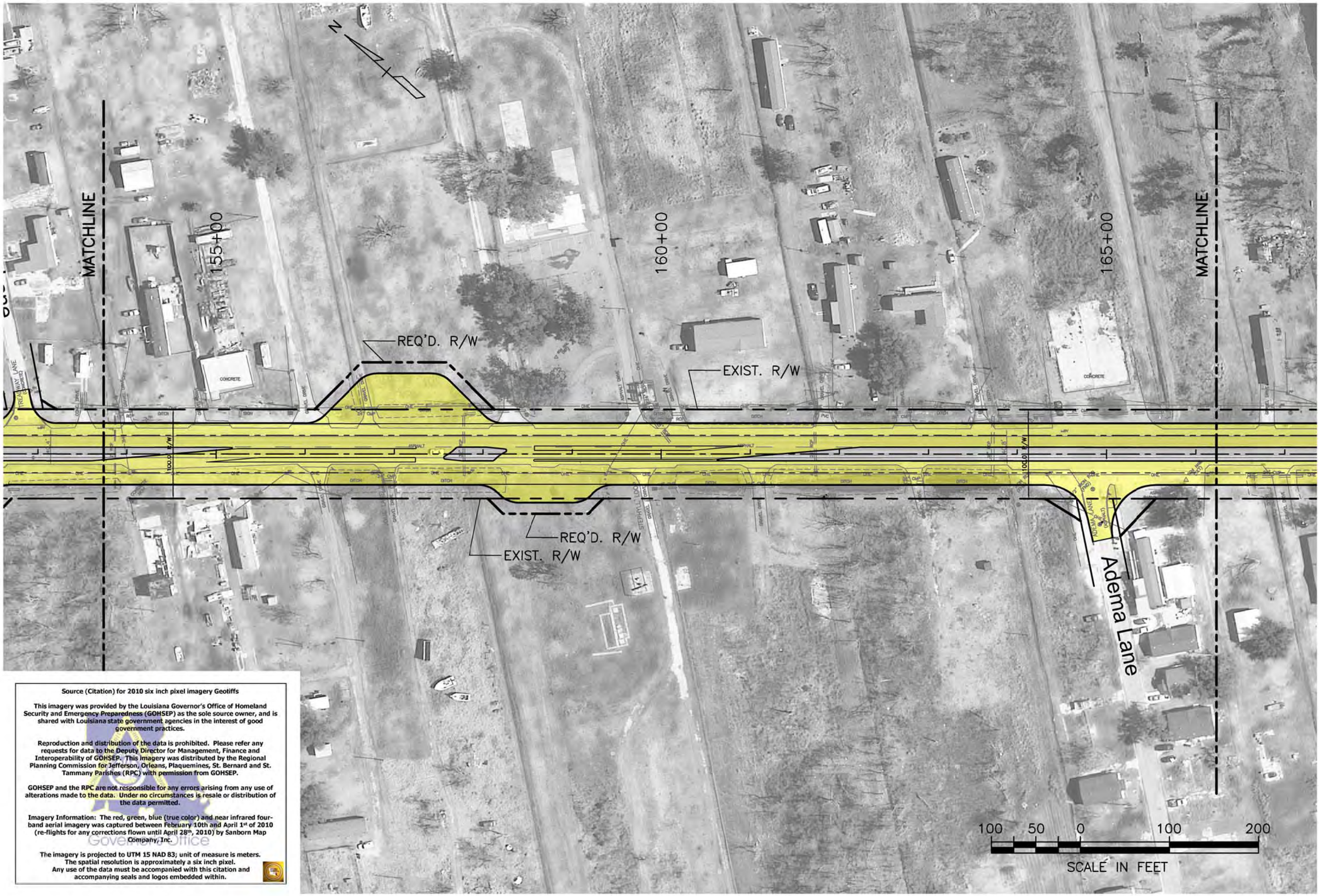

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SHEET 13

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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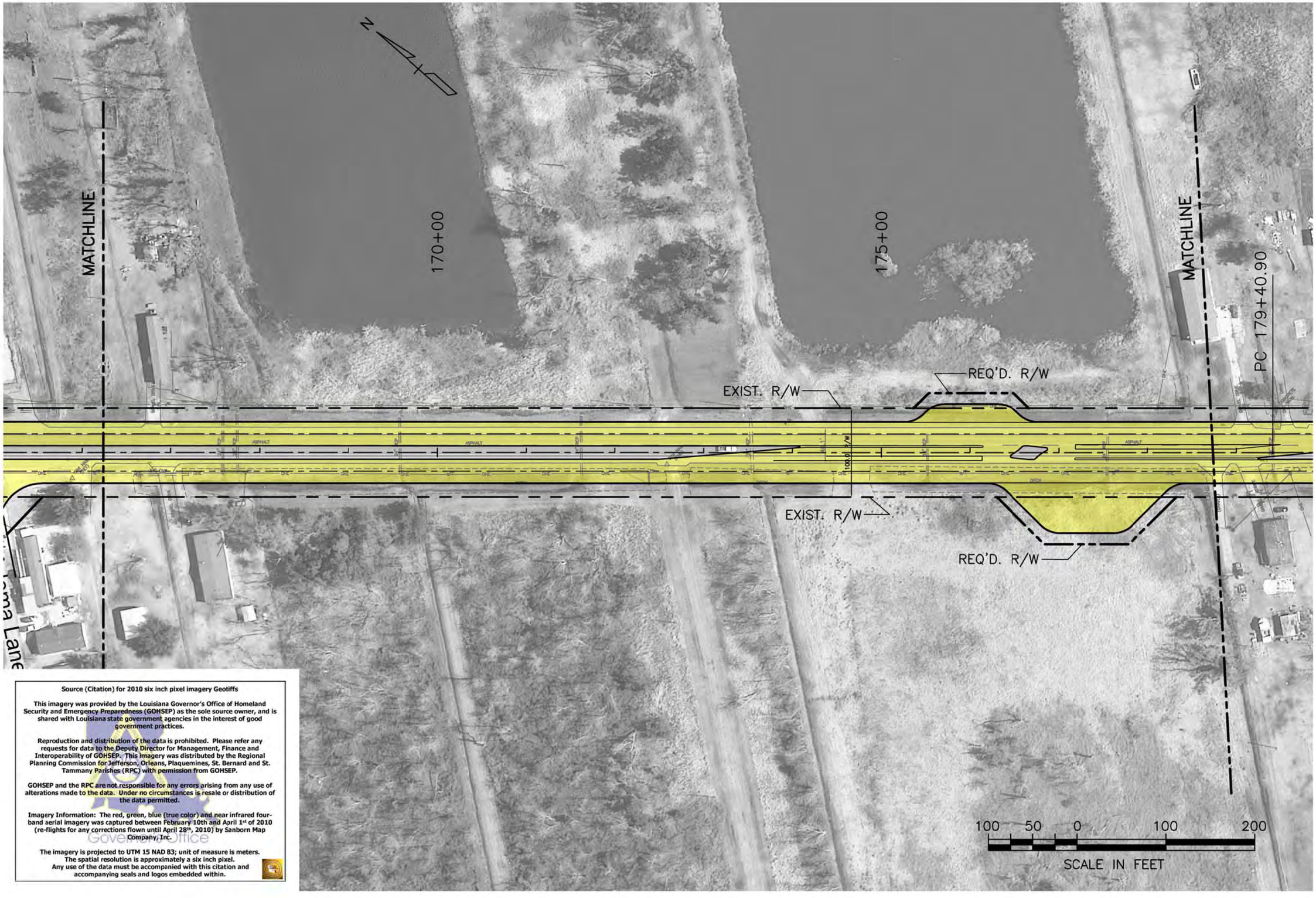

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SHEET 14

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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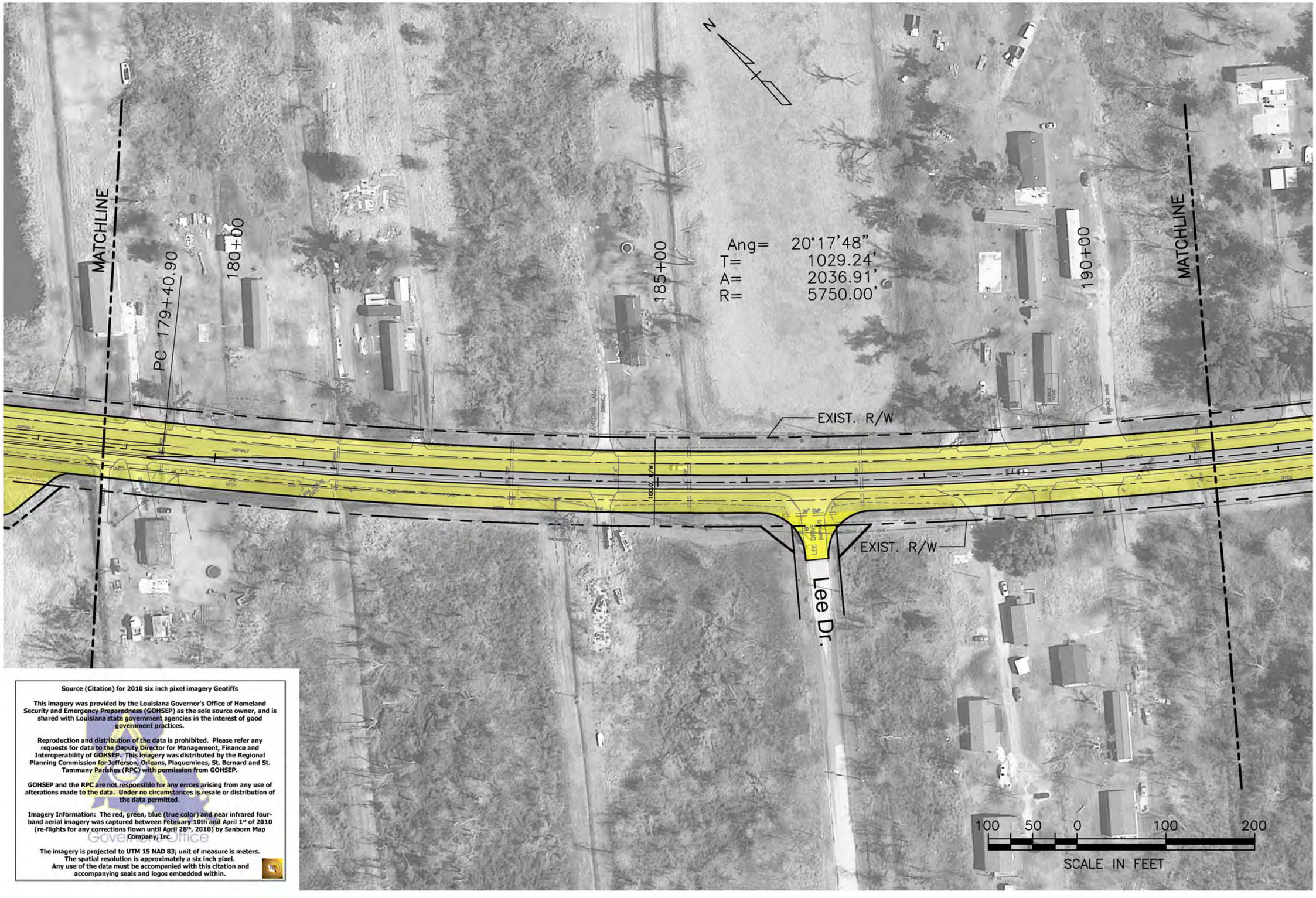

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SHEET 15

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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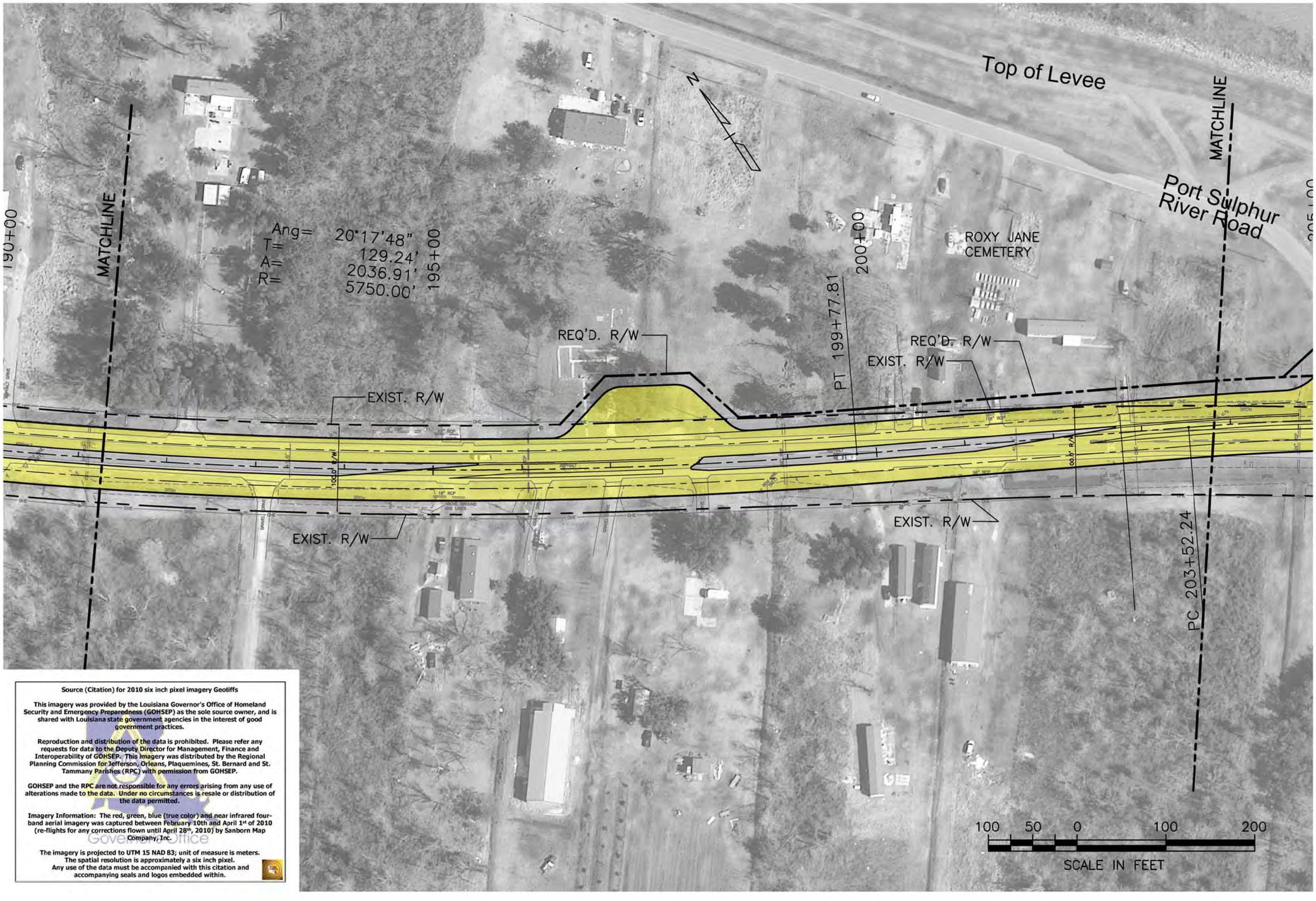
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT DOTD



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SHEET 16

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

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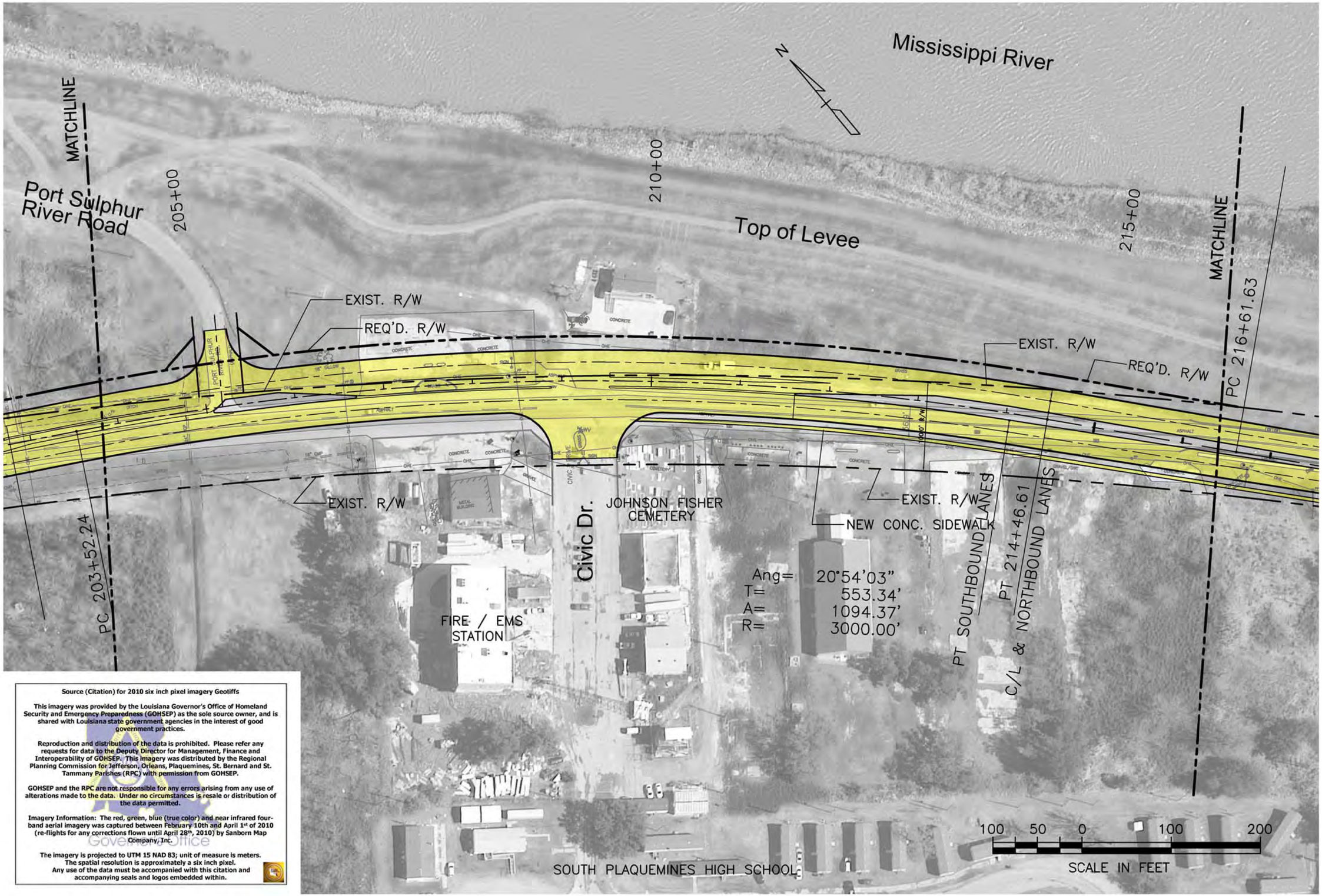
DOTD



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The spatial resolution is approximately a six inch pixel.
Any use of the data must be accompanied with this citation and accompanying seals and logos embedded within.

Governor's Office

SHEET 17

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399 RPC CONTRACT LA23ENV1

PLAN LAYOUT

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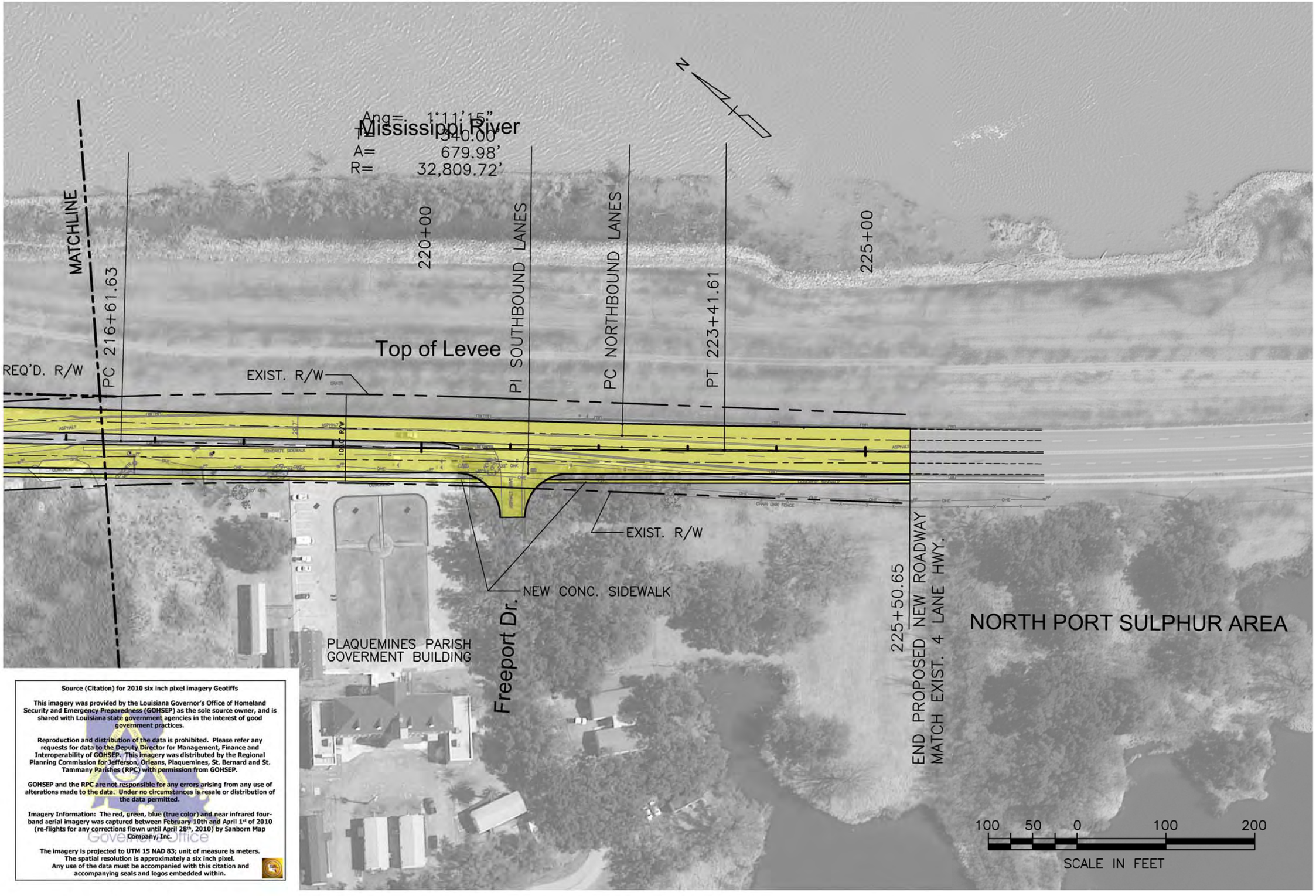
RPC REGIONAL PLANNING COMMISSION — JEFFERSON • ORLEANS • PLAQUEMINES • ST. BERNARD • ST. TAMMANY

DOTD DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT



Source (Citation) for 2010 six inch pixel imagery Geotiffs

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Governor's Office

SHEET 18

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399 RPC CONTRACT LA23ENV1

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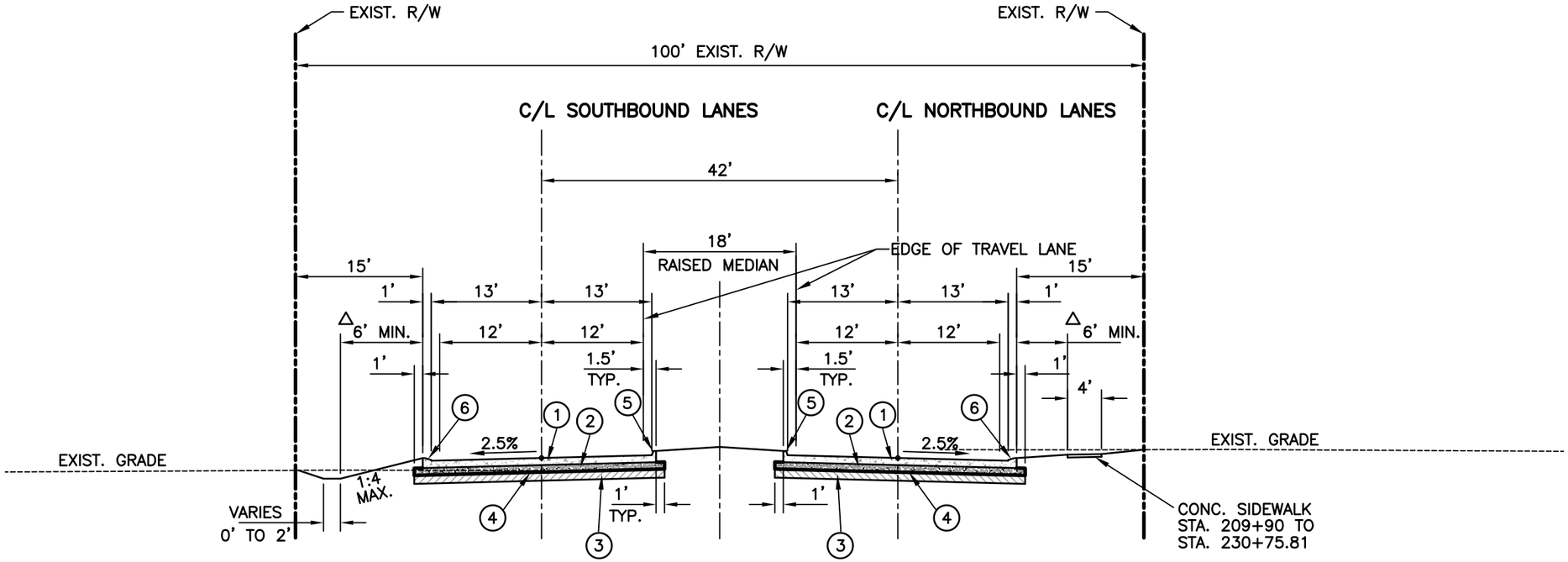

TYPICAL SECTION
CLASS UA-2 (URBAN ARTERIAL)
45mph

LEGEND

1. PORTLAND CEMENT CONCRETE PAVEMENT
2. CLASS II BASE COURSE
3. LIME TREATMENT SUBGRADE
4. GEOTEXTILE FABRIC
5. INTEGRAL CONCRETE CURB (BARRIER TYPE)
6. INTEGRAL CONCRETE CURB (MOUNTABLE TYPE)
7. INTEGRAL CONCRETE RAISED MEDIAN (MOUNTABLE TYPE)

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

15 10 5 0 15 30

SCALE IN FEET

SHEET TS-1

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399
RPC CONTRACT LA23ENV1

TYPICAL SECTIONS

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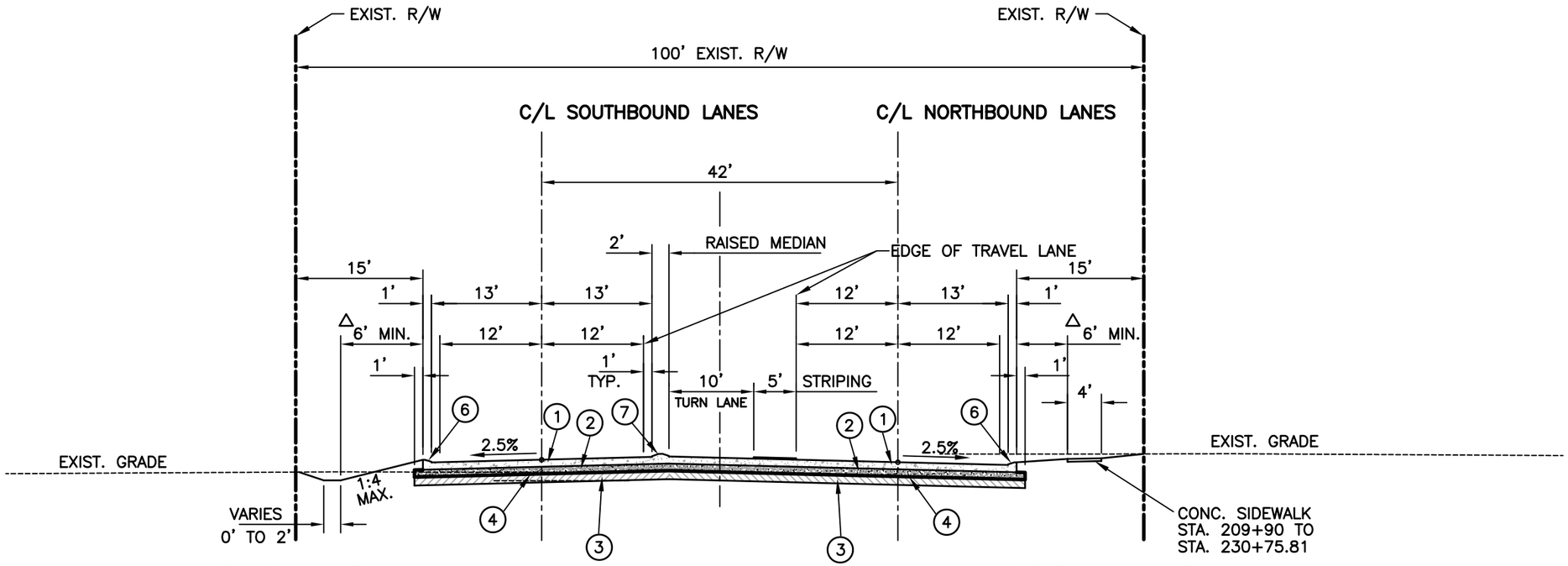


SECTION IN FILL

SECTION IN CUT

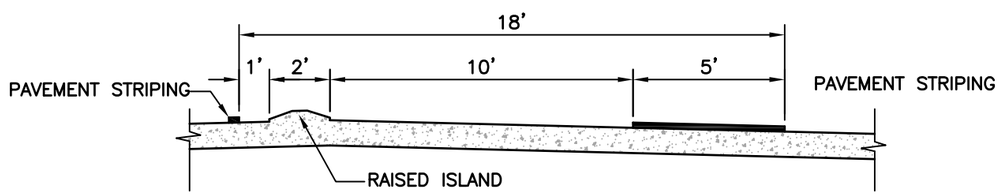
LEGEND

1. PORTLAND CEMENT CONCRETE PAVEMENT
2. CLASS II BASE COURSE
3. LIME TREATMENT SUBGRADE
4. GEOTEXTILE FABRIC
5. INTEGRAL CONCRETE CURB (BARRIER TYPE)
6. INTEGRAL CONCRETE CURB (MOUNTABLE TYPE)
7. INTEGRAL CONCRETE RAISED MEDIAN (MOUNTABLE TYPE)

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

TYPICAL SECTION
CLASS UA-2 (URBAN ARTERIAL)
45mph
WITH OFFSET TURN LANE

SCALE: 1"= 15'-0"



TYPICAL SECTION
MEDIAN DETAIL
WITH OFFSET TURN LANE

SCALE: 1"= 5'-0"

15 10 5 0 15 30

SCALE IN FEET (1"=15'-0")

5 0 5 10

SCALE IN FEET (1"=5'-0")

SHEET T8-2

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399

RPC CONTRACT LA23ENV1

TYPICAL SECTIONS

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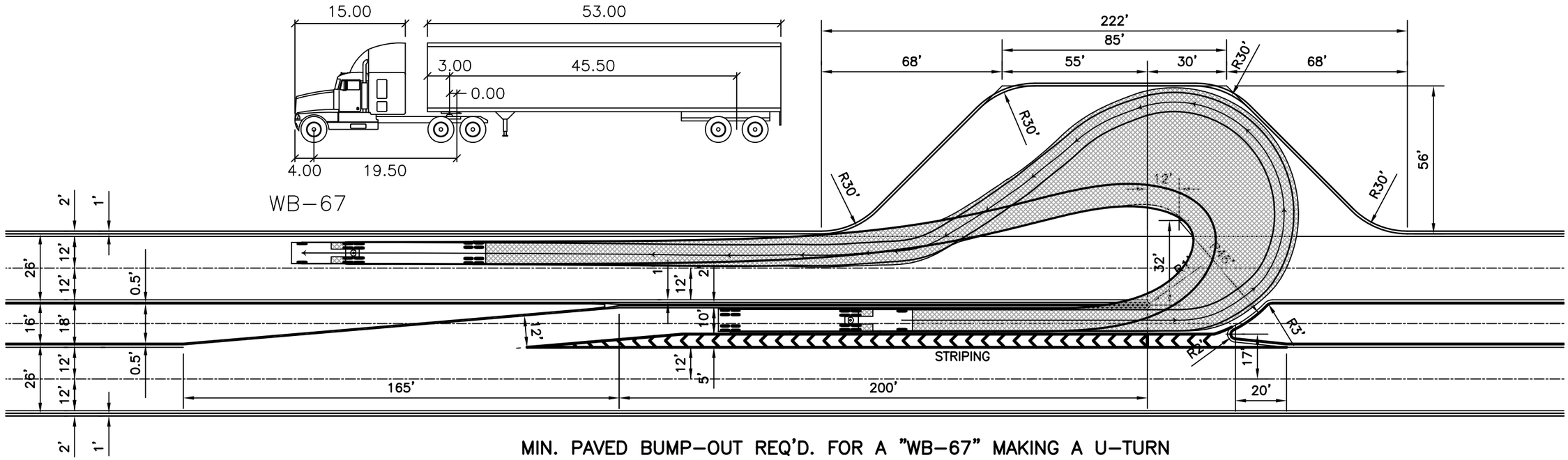
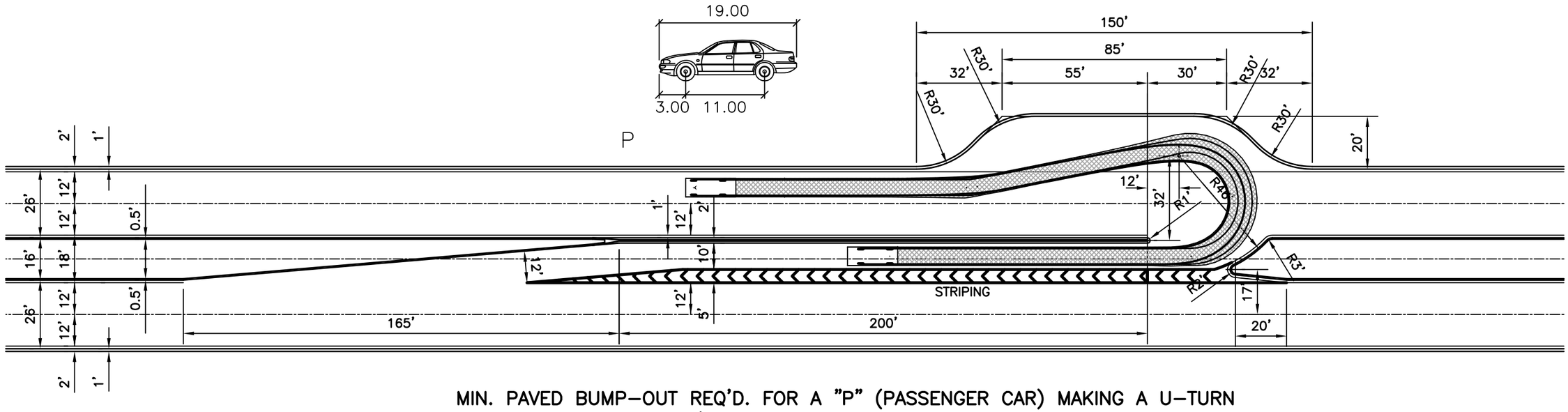


MIN. PAVED BUMP–OUT REQ'D. FOR A "WB–67" MAKING A U–TURN
WITH A 18' MEDIAN, TRAVEL LANE TO TRAVEL LANE.



MIN. PAVED BUMP–OUT REQ'D. FOR A "P" (PASSENGER CAR) MAKING A U–TURN
WITH A 18' MEDIAN, TRAVEL LANE TO TRAVEL LANE.

40 30 20 10 0 40 80

SCALE IN FEET

SHEET D-1

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH

S.P. No. H.001399

RPC CONTRACT LA23ENV1

BUMP OUT DETAIL

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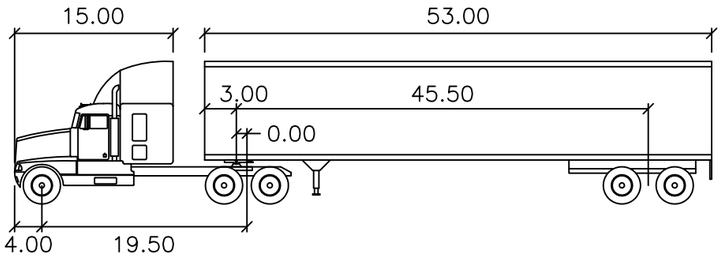

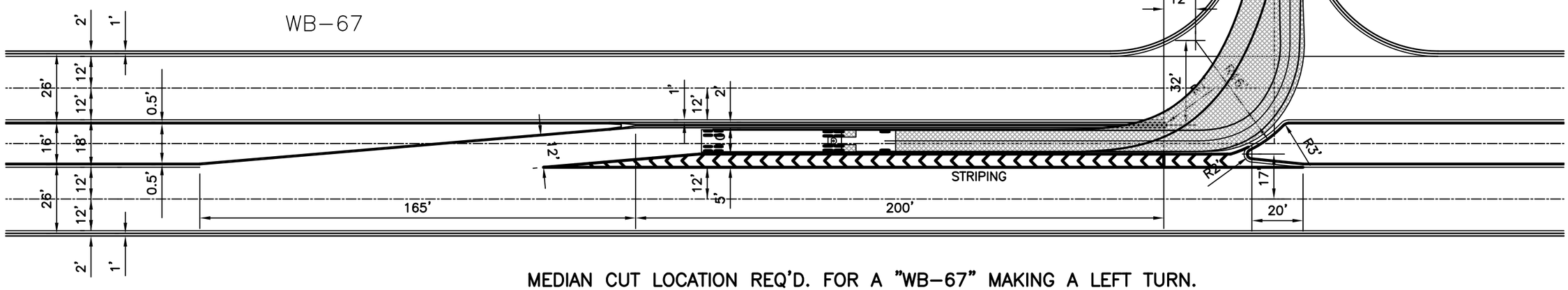

MEDIAN CUT LOCATION REQ'D. FOR A "WB–67" MAKING A LEFT TURN.

40 30 20 10 0 40 80

SCALE IN FEET

SHEET D-2

LA HIGHWAY 23 (HAPPY JACK TO NORTH PORT SULPHUR)
STAGE 1 - ENVIRONMENTAL ASSESSMENT
PLAQUEMINES PARISH
S.P. No. H.001399
RPC CONTRACT LA23ENV1

LEFT TURN DETAIL

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DOTD

CHAPTER III

THE AFFECTED ENVIRONMENT

In this chapter, the project corridor study area is first delineated and described. The existing transportation system, including highways and roadways, rail, transit and pedestrian facilities are presented. The Chapter concludes with an examination of the affected human and natural environment for the project. For purposes of analysis, the affected environment is divided into the following categories and sub-categories:

EXISTING TRANSPORTATION SYSTEM
- Roadway Network
- Rail Network
- Transit
- Pedestrian and Bicyclist Conditions

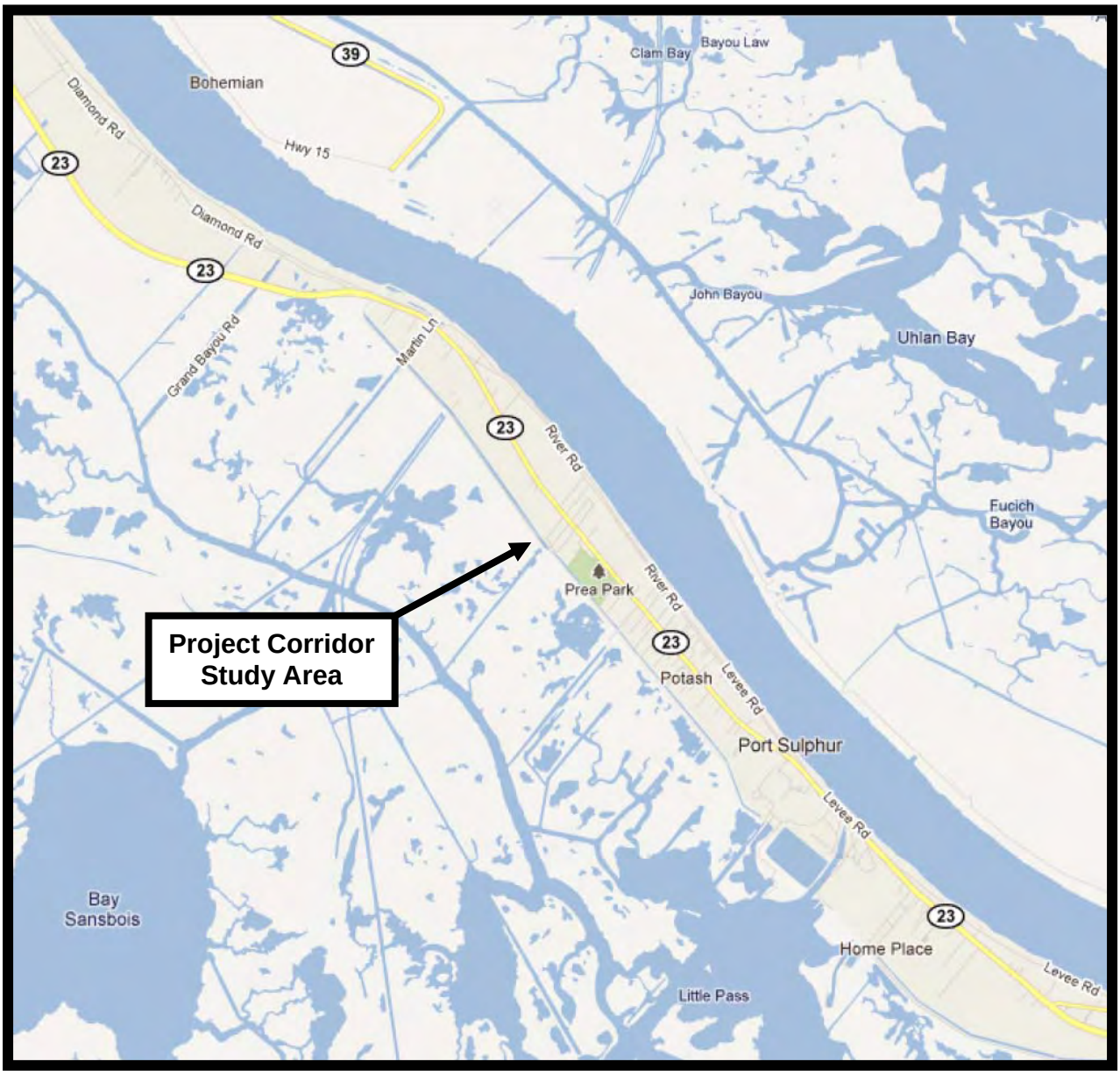
EXISTING HUMAN ENVIRONMENT
- Demographics
- Land Use
- Neighborhoods and Community Cohesion
- Public Facilities and Services
- Hazardous and Solid Waste Sites
- Cultural Resources
- Visual/Aesthetic Conditions
- Flood Zones / Floodplains

EXISTING NATURAL ENVIRONMENT
- Scenic Rivers
- Existing Wetlands
- Water Resources (Sole Source Aquifers)
- Soils / Prime Farmland
- Fish and Wildlife Critical Habitat / Threatened and Endangered Species
- Coastal Zone Status

PROJECT CORRIDOR STUDY AREA

The project corridor study area is linear in nature stretching from the connector levee on the north to just south of the Plaquemines Parish Civic/Government complex on the south. The other boundaries of the area include the Mississippi River on the east and the back levees on the west. **Figure III-1** on the following page shows the overall Project Study Area.

Figure III-1
LA 23 Project Corridor Study Area



EXISTING TRANSPORTATION SYSTEM

ROADWAY NETWORK IN STUDY AREA

The project area, being linear in nature, contains only one roadway that is not a local street (LA Hwy 23). Other than River Road, which runs parallel to LA 23 for the 3.8 mile length of the

project, all other streets and roads in the area are essentially short local streets which either connect between LA 23 and River Road or dead-end off of either LA 23 or River Road.

RAIL NETWORK IN STUDY AREA

There are no freight or passenger rail lines in the study area.

TRANSIT IN STUDY AREA

No transit routes are present in the study area. Existing transit routes are located further north in the Parish.

BICYCLE AND PEDESTRIAN FACILITIES IN STUDY AREA

There are currently no bicycle-specific facilities in the project area. Most local streets do not have sidewalks or pedestrian facilities; however, on the southern end of the project area, LA 23 has a sidewalk on the western side of the roadway extending south from Civic Drive.

EXISTING HUMAN ENVIRONMENT

DEMOGRAPHICS

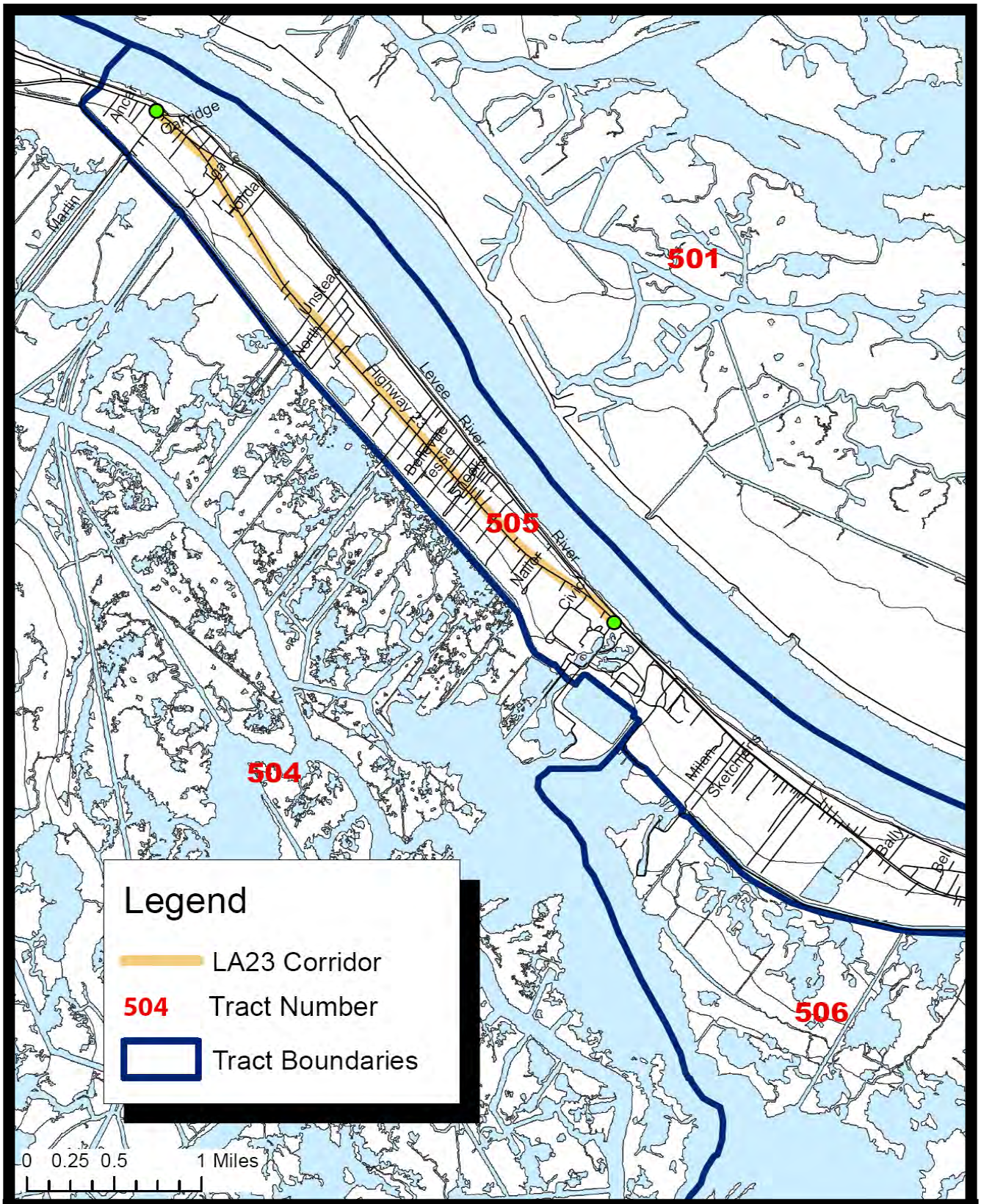
Methodology

This section of the *LA Hwy 23 Environmental Assessment* analyzes existing conditions of the human environment in the study area. The methodology employed involved research of demographic data that define the human environment for the study area available from the *U. S. Census Bureau American Fact Finder*.

The *LA Hwy 23 Environmental Assessment* demographic study area is located in Plaquemines Parish, Louisiana and consists solely of Census Tract 505. The boundaries of this and surrounding census tracts are shown on **Figure III-2** on the following page.

The demographic analysis examines indices and trends in the census tract for the following data in the study area:

- Population
- Housing
- Employment
- Income



LA HIGHWAY 23
(HAPPY JACK TO
N. PORT SULPHUR)
S.P. H.001389

CENSUS TRACTS

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Urban Systems Associates, Inc.
Coastal Environments, Inc.
Bowlby and Associates, Inc.
Essential Environmental Engineering, Inc.

FIGURE
III-2

Findings

Population Characteristics and Trends

Table III-1 documents the current general population in the study area at 1,426. This is a 45% decrease in population from the year 2000, at which time the population was 2,605. The population in Plaquemines Parish also decreased, but not as dramatically as the study area. The population of Louisiana increased slightly.

Table III-1 General Population in the Study Area

	CENSUS 2000	CENSUS 2010
LA 23 Study Area	2,605	1,426
Plaquemines Parish	26,757	23,042
Louisiana	4,468,976	4,533,372

Age

Table III-2 divides the general population of the study area into five age ranges. The study area contains a young population with 55.5 % of the population 39 years and younger.

Table III-2 - Age of the Population in the Study Area

RANGE	CENSUS 20100
0 to 19 years	29.4%
20 to 39 years	26.1%
40 to 59 years	27.4%
60 to 79 years	15.5%
80+ years	1.6%

Racial Composition

Table III-3, on the following page, reveals racial composition in the study area between 2000 and 2010. Census 2010 data show 90.7% of the study area population composed of *White* and *Black or African American* with 27.9% *White* and 62.8% *Black or African American*.

A noted shift in the racial balance in the study area has occurred over the last ten years. The previously minority population has become an overwhelming majority, with the minority population in the 2000 Census consisting of about 48 % of the total population in the study area, compared to a 72% in 2010.

Table III-3 - Racial Composition in the Study Area

	White	Black or African American	Hispanic	Asian	Native (*American Indian, Alaska Native, Hawaiian Native, Pacific Islander):*	Other
Census 2000	51.8%	41.2%	1.1%	0.7%	4.1%	1.4%
Census 2010	27.9%	62.8%	1.9%	1.8%	3.72%	2.71%

Housing

Housing data in the study area shows a mixture of owners and renters with a strong occupancy rate. **Table III-4** shows 553 housing units in the study area, of which 13.4% are vacant. The occupied units are divided into 89.1% owners and 10.9% renters.

Table III-4 - Housing in the Study Area, 2010

	NUMBER OF HOUSING UNITS	PERCENTAGE
Occupied	479	86.6%
Owners	*427*	*89.1%*
Renters	*52*	*10.9%*
Vacant	74	13.4%
Total in the Study Area	553	

Table III-5 documents the value of housing in the study area by looking at the average median value of owner occupied units across the study area. The value of housing in the study area has increased by 53% between Census 2000 and Census 2010. However, Table III-5 also demonstrates that the median value of housing in the study area is still significantly lower than that of Plaquemines Parish and Louisiana.

Table III-5 - Median Value of Owner-Occupied Housing in the Study Area

CENSUS 2000	$54,600
CENSUS 2010	$83,600
Plaquemines Parish (2010)	$203,100
Louisiana (2010)	$130,000

Business and Economy

Per Capita Income

Table III-6 illustrates the average per capita income across the study area recorded in the Census 2010 as $14,805, a 10.5% increase over the per capita income in the Census 2000, which was $13,979. Table III-6 shows that parish and state level per capita incomes are considerably higher.

Table III-6 - Per Capita Income in the Study Area

CENSUS 2000	$13,979
CENSUS 2010	$14,805
Plaquemines Parish (2010)	$23,378
Louisiana (2010)	$23,094

Median Household Income

Table III-7, on the following page, reviews the median household income for the study area, which is $28,750 in the Census 2010, a 13.2% decrease over the median household income reported in the 2000 Census. The median household income for the study area is much lower than the Louisiana state level and the Plaquemines Parish level.

Table III-7 - Median Household Income in the Study Area

CENSUS 2000	$33,125
CENSUS 2010	$28,750
Plaquemines Parish (2010)	$54,730
Louisiana (2010)	$43,445

Employment

Table III-8, on the following page, looks at employment levels in the study area recorded in the Census 2010. The employment analysis is based on the work force population, which the U.S. Census Bureau defines as that portion of the population that is sixteen years or older.

The work force population constitutes only 53% of the general population in the study area. About 65% of the work force population is in the labor force, with 35% not in the labor force.

That portion of the work force population that is currently in the labor force is 86% employed, and 14% unemployed. Thus 10.5% of the work force population in the study area is

unemployed. This is more than the 7.7 % unemployment rate for Louisiana in the same time period.

Table III-8 - Work Force Population in the Study Area

Total	759
Not in Labor Force	263
In Labor Force	496
Employed in armed services	*0*
Employed as civilians	*444*
Unemployed	*52*

LAND USE

The LA 23 study area is moderately developed with a mixture of predominantly rural (large lot, non-subdivision) residential uses, land in an agricultural or natural/undeveloped state, some commercial development directly along LA 23 and a limited amount of industrial uses at either end of the project corridor. There is also a defined institutional/government complex at the southern portion of the project corridor. As was demonstrated in the previous section, Hurricanes Katrina and Rita greatly affected the general population with the pre-Katrina population nearly halved. Much of this decline was reflected in a change of active land use, as residents' homes were destroyed and not replaced. For the most part, vacant home sites have remained cleared and not reverted to a natural state.

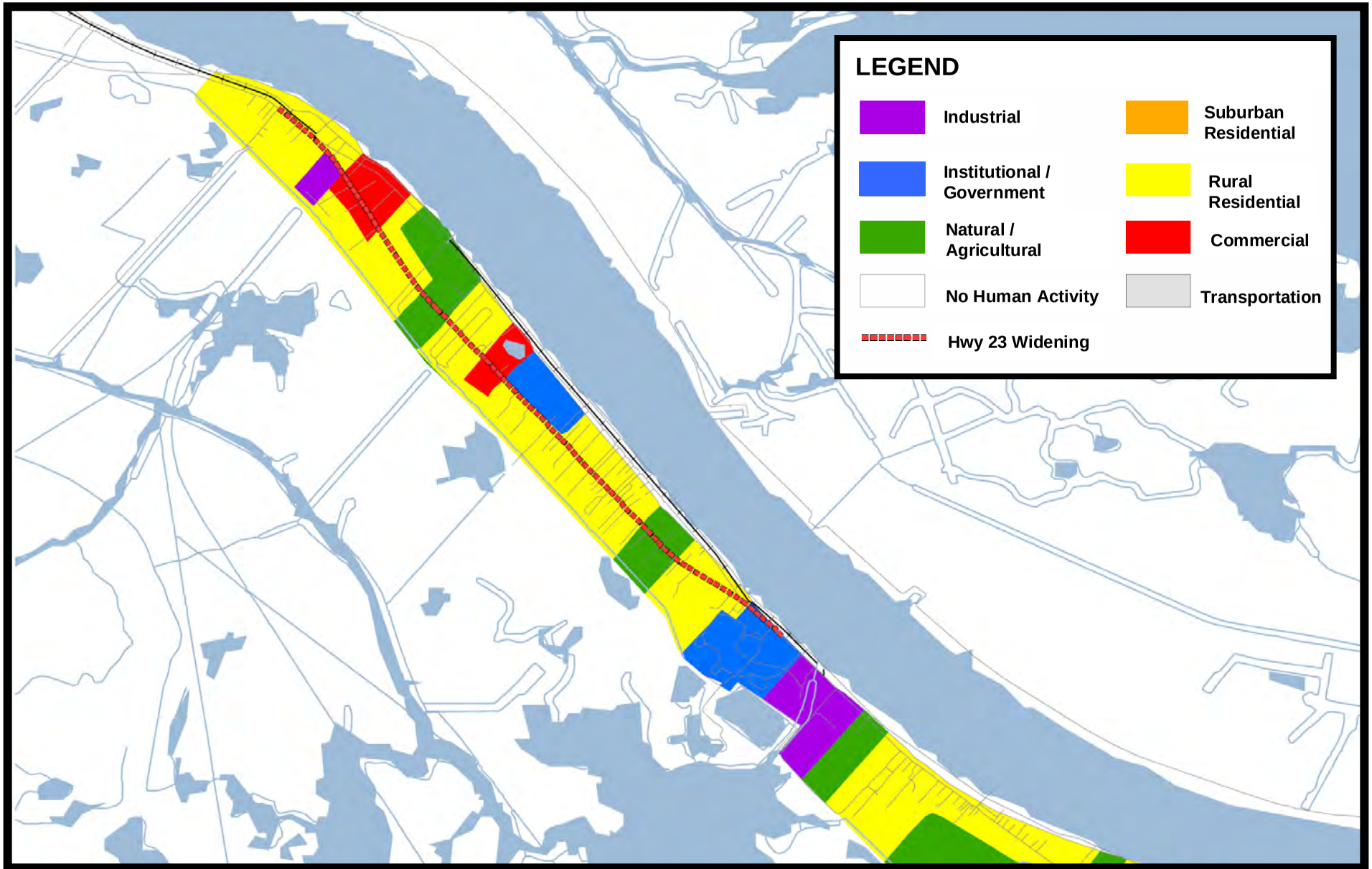
The existing rural residential nature of the study area is anticipated to be the prevailing development pattern over the short term (five years) and long term (twenty years). The trend for residential development within this corridor will likely continue to be the redevelopment of previously existing home sites. The proposed project will serve to support the transportation needs of the existing rural residential community as well as the local commercial and industrial sites, and may ultimately encourage additional residential re-development in the study area.

Figure III-3, on the following page provides a map of the area's land use.

PUBLIC FACILITIES & SERVICES

Methodology

Locations for and lists of addresses for public facilities were obtained from Google Maps, Google Earth, TransWestern Publishing Yellow Pages and field reconnaissance.



LA HIGHWAY 23
(HAPPY JACK TO N. PORT SULPHUR)
S.P. H.001389

LAND USE MAP

Source: Plaquemines Parish Land Use and Transportation Vision Plan, RPC, 2008

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Bowlby and Associates, Inc.
Essential Environmental Engineering, Inc.

FIGURE III-3

Findings

There are numerous public services and facilities available to serve the project study area. Analysis of the study area indicates that there are three (3) schools/learning institutions, three (3) churches, two (2) cemeteries, two (2) Community Centers and parks/playgrounds, one (1) parish government building, one (1) EMS/fire station, one (1) U.S. Post Office, one (1) library (temporary facility, with new facility planned), and one (1) medical center (temporary facility, with new facility under construction).

Schools

- South Plaquemines High School – 311 Civic Drive
- Plaquemines Parish Learning Center – 26892 Hwy 23
- Future South Plaquemines Elementary School – 315 Civic Drive

Churches

- Greater Mount Sinai Church - 27954 Hwy 23
- Macedonia Baptist Church - 27723 Hwy 23
- Port Sulphur Baptist Church – 27080 Hwy 23

Cemeteries

- Johnson-Fisher Cemetery - (Hwy 23 @Delta St.)
- Roxy Jane Cemetery - 27815 LA Hwy 23

Parks, Playgrounds, Recreational Facilities, Community Centers

- Port Sulphur Community Center & Park / YMCA - 278 Civic Drive
- Prea Park - Hwy 23

Municipal, Fire & Police Stations

- Plaquemines Parish Government Building – 28028 Hwy 23
- Port Sulphur EMS Fire Department – 114 Civic Drive
- Parish Maintenance Facility – 27279 Hwy 23

Libraries

- Plaquemines Parish Library (Current Temporary Site) – 139 Delta Street
- Plaquemines Parish Library (Future Site) – 139 Delta Street

U.S. Post Office

- 26852 Hwy 23

Hospitals

- Plaquemines Medical Center (Current Temporary Site) – 26851 Hwy 23
- Plaquemines Medical Center (Future Site) – 27136 Hwy 23

HAZARDOUS AND SOLID WASTE SITES

Methodology

As a subconsultant to N-Y Associates, Inc., Essential Environmental Engineering, Inc. (E3) has performed a Phase I Environmental Site Assessment (ESA) for a highway corridor located in Plaquemines Parish, Louisiana 70083 (the "Property").

The Phase I ESA was designed to provide an assessment of the environmental conditions (limited to those issues identified in the report) as they exist at the property. This assessment was conducted utilizing generally accepted ESA industry standards in accordance with the American Society of Testing and Materials (ASTM) E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

The Property is a 3.8 mile segment of the state highway LA 23 located in the Plaquemines Parish, Louisiana that extends from the towns of Happy Jack to Port Sulphur. The Property is bound to the north and south by the continuation of Hwy 23; to the east by businesses and residential developments near the Mississippi River; and to the west by businesses and residential developments near various bayous and water bodies.

E3 obtained and reviewed a database report from Environmental Data Resources (EDR) for the Property and the surrounding area. Based on the database report and other references, there appear to be recognized environmental conditions (RECs) with regards to the Property at this time. These RECs are detailed below.

Conclusions

The results of E3's *Environmental Site Assessment, Phase 1* investigation are summarized in **Table III-9** that lists hazardous waste sites, underground and above ground storage tanks and dumpsites in the area. **Figure III-4**, on the next page following, locates these sites on a map of the area. This assessment has revealed evidence of the following recognized environmental conditions (RECs) or associated issues in connection with the Property:

- The three (3) underground storage tanks (USTs) located at the site of Greater Mount Sinai Baptist Church (formerly Tony's Gulf) located at 27954 Highway 23 are adjacent to the Property. These tanks were closed in place with LDEQ approval, but may pose environmental concerns should land acquisition involve this site.

- There is what appears to be an abandoned service station located on the Mississippi River side of Hwy 23 near the EMS/Fire Station on Delta Drive. E3 could not locate any information on this site; however, there may be environmental concerns related to possible USTs at the former fueling station and/or other service station operations.

Table III-9 - Hazardous Waste Sites and Storage Tank Facilities Within the ASTM Prescribed Search Radii

Site ID No. on Plates	Plate No.	Facility Name	Faclity Address/ Location	LDEQ Agency Interest (AI) No.	Types of Facilities/ Waste Sites/Data Sources								Sources/Status							Comments
					Storage Tanks															
					UST	AST	LUST	CERCLIS/NFRAP	RCRIS	ERNS	PADS	Other	Environmental Databas	Aerial Photos	Field Reconaissance 20	DEQ Records	Stage O Report	Interview	Current Status	
		Chevron Gas Station/ Caffe Casa Restaurant	26145 Highway 23 Port Sulphur, LA 70083	72419	X										X	X			Active	
2		Tennessee Gas Pipeline Station 527	26166 Highway 23 Port Sulphur, LA 70083	2448	X			X	X		X		X		X	X		X	Active	
		El Paso Tank Facility (AKA Tennessee Gas & Pipeline)	26166 Highway 23 Port Sulphur, LA 70083			X									X				Active	
		Southern Natural Gas	26166 Highway 23 Port Sulphur, LA 70083	71348	X											X	X		Inactive	Per DEQ records, USTs removed in 1990, but listed in Stage O report.
		Delta Drugs Pharmacy	26852 Highway 23 Port Sulphur, LA 70083	79882	X										X	X	X		Active	
		Ernie's Gas Station (former) - Abandoned Site	26961 Highway 23 Port Sulphur, LA 70083	15752										X	X	X			Inactive	Per DEQ records, former AST removed. No USTs.
		Happyland #2 Gas Station (Active - AST)	27910 Highway 23 Port Sulphur, LA 70083	172465		X									X	X			Active	
		Greater Mount Sinai Church (Formerly Tony's Gulf Gas Station)	27954 Highway 23 Port Sulphur, LA 70083	74784	X										X	X			Inactive	Per DEQ records, USTs closed in place in front of current church.
1		Freeport McMoran Entergy	28310 Highway 23 Port Sulphur, LA 70083	17227		X			X				X	X	X				Active	
3		Guilbeau, Inc.	28564 Highway 23 Port Sulphur, LA 70083	20825	X								X		X				Active	Per DEQ records, no further action for hurricane 2005/2006 related releases.
		Tesvich Property	? Highway 23 Port Sulphur, LA 70083													X			Unknown	Per EPA Facility Registry System, Brownfield site.
		Abandoned Gas Station (across from EMS Bldg @ Delta)	? Highway 23 Port Sulphur, LA 70083									X			X		X		Inactive	Address & extent of storage facilities unknown. Not listed in any environmental databases.

Types of Facilities/ Waste Sites:

UST: Underground Storgae Tank (LDEQ UST List)

AST: Aboveground Storage Tank

LUST: Leaking Underground Strage Tank (LDEQ LUST List)

CERCLIS/NFRAP: Comprehensive Environmental Response, Compensation & Liability Information System/ No Further Remedial Action Planned (EPA CERCLIS List)

RCRIS: Resource Conservation and Recovery Information System, Conditionally Exempt Small Quantity Generator & Small Quantity Generator (EPA RCRIS List)

ERNS: Emergency Response Notification System

PADS: PCB Activity Database

Other: Explained in comments.

Data Sources:

Environmental Database Report: EDR report reviewed for site information

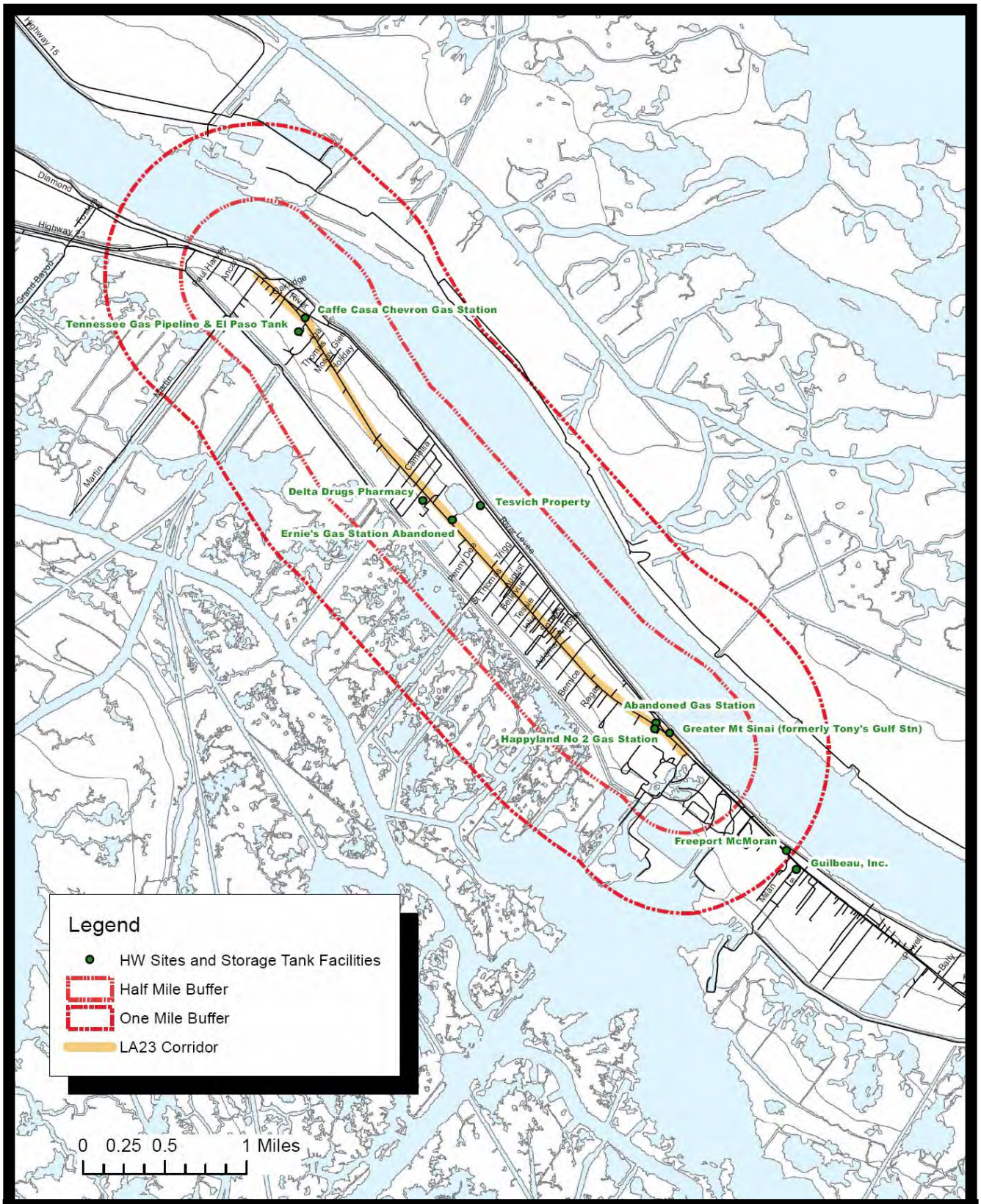
Aerial Photographs: 1956, 1971, 1973, 1978, 1983, 1989, 1994, 1998, 2004

Field Reconnaissance: Observations from public roadways and servitudes 2/6/2012

Interview: Personal Interviews with adjacent site owners, agency personnel on various dates.

DEQ Records: Information from DEQ online public records (www.deq.la.gov/edms)

Stage 0 Report: Information from the Krebs LaSalle Stage 0 - Feasibility Study dated April 2010.



LA HIGHWAY 23 (HAPPY JACK TO N. PORT SULPHUR) S.P. H.001389

HAZARDOUS WASTE & STORAGE TANK SITES

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FIGURE III-4

- Based on information in the EPA Facility Registry System, the Tesvich property is a 2.6 acre Brownfield site located on the Mississippi River side of Hwy 23, across from Prea Park near the levee. However, the exact address of the site is not known. This site has undergone a Brownfield assessment. The results of the assessment are not known; thus the site is a potential REC should land acquisition involve this site.

No recognized environmental conditions were identified associated with the subsurface natural gas and liquid gas pipelines crossing Hwy 23 at the Tennessee Gas Pipeline facility at 26166 Hwy 23 (Section 5.3.5); however, the presence of these large bore pipelines is noteworthy. This and all subsurface utilities and infrastructure should be positively located prior to determining the alignment and construction of Hwy 23.

Also of note is the abandoned Ernie's Gas Station located at 26961 Highway 23 across from Prea Park. It is not known if the Tesvich property and the Ernie's Gas Station are related in terms of ownership and operation. As indicated in DEQ records, the Ernie's Station did not utilize USTs and has removed the aboveground storage tanks at the site. Thus, Ernie's Gas Station is not an REC.

CULTURAL RESOURCES

Archaeology

A records search was conducted at the Division of Archaeology (DOA), Department of Culture, Recreation and Tourism. The DOA maintains archaeological site information for the State of Louisiana, assigning a trinomial number (e.g., 16PL5 [State Number + Parish Abbreviation + Site Number]) to each site. The DOA also maintains USGS 7.5-minute quadrangle maps depicting the locations of all recorded archaeological sites, site forms and corresponding reports. Examination of these records indicates that there are no previously recorded archaeological sites within the proposed project area.

Research of landforms and settlement patterns of the area indicate that approximately 25 percent of the project area would be considered to have high archaeological potential. These areas are located near the project termini. The remaining 75 percent is considered to have a low archaeological potential.

An archaeological survey of the required right-of-way (ROW) did not reveal any new archaeological sites. Archaeological examination of the existing ROW was not conducted due to the presence of buried utilities, paved parking areas, etc.

Standing Structures

A records search was also conducted at the Division of Historic Preservation (DHP), Department of Culture, Recreation and Tourism. Standing structure and NRHP files for the State of Louisiana are maintained by the DHP. Each recorded standing structure over fifty years of age is assigned a binomial number (e.g., 38-11 [Parish Number + Structure Number]) by the DHP.

The DHP also maintains USGS 7.5-minute and 15-minute quadrangle maps, and DOTD city maps depicting the location of each recorded structure, Louisiana Historic Resource Inventory forms, and corresponding reports. Only a very limited portion of Plaquemines Parish has been previously surveyed and is on file at DHP. None of those previously recorded standing structures are located within the Area of Potential Effect (APE) for the LA Highway 23 Happy Jack to North Port Sulphur project.

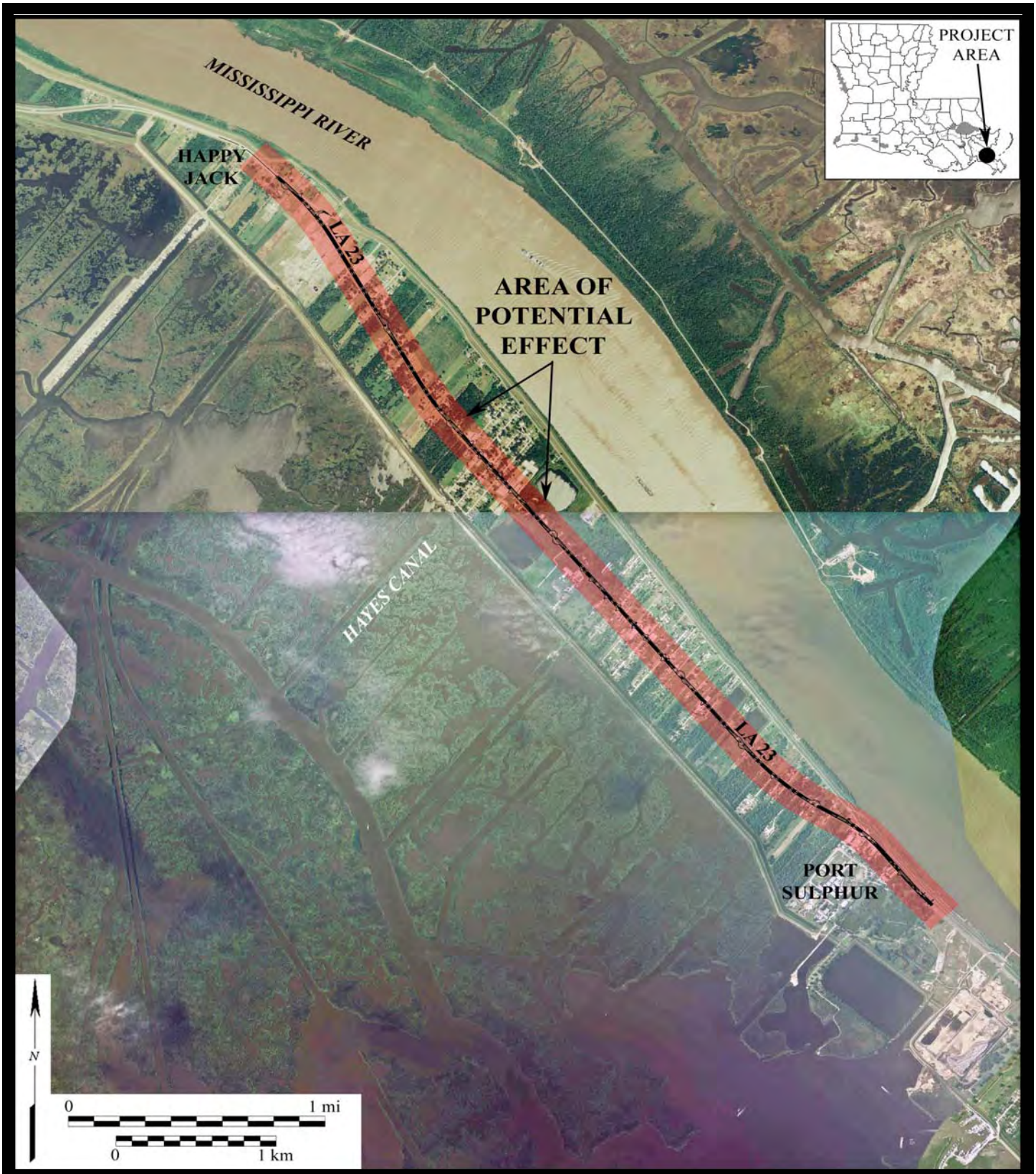
In addition to the records search, a standing structure survey was conducted within the APE for the proposed project. The APE, which encompasses the project area, extends outward from the centerline of the proposed ROW approximately 122 meters (400.26 feet) as shown on **Figure III-5**. A total of 14 structures constructed or potentially constructed before 1967 were recorded within the APE. None were recommended as eligible for listing on the NRHP.

One cemetery, the Johnson-Fisher Cemetery located at the intersection of LA Hwy 23 and Civic Drive, extends well into the existing ROW. Nearby, the Roxy Jane Cemetery lies a short distance outside of the existing and required ROW at 27815 LA Hwy 23.

VISUAL /AESTHETIC CONDITIONS

The LA 23 study area consists almost entirely of flat land with medium to low-density residential and commercial development. The Mississippi River levee is a prominent feature at both ends of the project, and can be glimpsed a short distance away for most of the length of the project. Areas along the project alternate between cleared areas and moderately wooded areas, and there are a substantial number of attractive live oak trees lining the corridor.

Structures in the study area include single-family homes of one or two stories, residential trailers, and low height (1-3 story tall) commercial structures and public facilities. Most of the residences in the study area are widely dispersed on larger lots, though in several areas residential developments or neighborhoods have homesites in much closer proximity to each other. Several mobile home parks are located along the proposed alignment.



LA HIGHWAY 23
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Cultural Resources –
Area of Potential Effect

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FIGURE III-5

FLOOD PLAINS / FLOOD ZONES

Flood Plains

Flood plains in the LA 23 study area are influenced by hydrology in the region. The natural hydrology in the project area has been altered substantially by the construction of an extensive system of man-made drainage ditches and flood protection levees. The hydrology of the entire project area is controlled by this system of drainage ditches, which lead to large pumps designed to pump storm water out of the levee-protected area. Twenty-five man-made and maintained ditches connected to culverts facilitate surface drainage under LA Hwy 23 southwestward across the back slope of the natural levee on the west bank of the Mississippi River toward the back flood protection levee and associated interior, parallel borrow canal.

Flood Zones

The Federal Emergency Management Agency (FEMA) is charged with the determination of flood zones. The LA 23 corridor study area is entirely within the levee-protected area and consists of only one (1) FEMA flood zone, though the surrounding area contains other flood zones.

The study area corridor along the proposed route is designated as "Zone AE" which is within the 100 year floodplain and is termed a "Special Flood Hazard Area". It has a base flood elevation of 12 feet.

EXISTING NATURAL ENVIRONMENT

SCENIC RIVERS

The Louisiana Natural and Scenic Streams System of the Louisiana Department of Wildlife and Fisheries (LDWF) does not list any wild and scenic rivers within the project area. Additionally, the United States Geological Survey Maps do not denote any wild or scenic rivers.

WETLANDS

A wetlands biologist with Coastal Environments, Inc. (CEI) conducted a field investigation on July 9, 2012 to delineate jurisdictional wetlands within the proposed project footprint. Criteria (wetland plants, hydric soils, and wetland hydrology) outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), and the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0) (Environmental Laboratory 2010) were used to characterize sites as either wet or non-wet. Prior to the field survey, information on the site was obtained from the Plaquemines Parish soil survey maps (USDA, NRCS 2012); low-altitude, aerial color

photographs **(**Louisiana Governor's Office of Homeland Security and Emergency Preparedness [GOHSEP] 2010); low-altitude, color infrared aerial photographs (US Geological Survey [USGS] 2008); U. S. Fish and Wildlife Service (USFWS) wetland inventory maps (USFWS 1992); USGS quadrangle topographic maps (unknown date) prior to the field investigation.

The project area is located on the natural levee of the west bank of the Mississippi River approximately 47 miles from downtown New Orleans. The portion of LA Hwy 23 within the project area is located within the upland or fastland area (e.g., leveed area under forced drainage) of the parish approximately mid-way between the Mississippi River flood protection and the back flood protection levee. However, the northern and southern termini of the LA Hwy 23 project area swing northward and closely parallel the Mississippi River flood protection levee. Natural levee elevations within the area range from approximately - 2 feet to + 2 feet, with only the northern and southern portion of the roadway being on land above 2 feet in elevation. Land use along the LA Hwy 23 corridor consists of residential areas, pasture/agricultural areas, orchards, unincorporated communities and overgrown pasture land.

The majority of the proposed project footprint exists within the currently cleared highway ROW. This area includes the current two-lane highway, parts of the adjacent, shallow roadside ditches/drainageways and generally maintained vegetation. The vegetation within the ROW, roadway shoulder areas and ditches/drainageways is composed of various pasture grasses and weeds such as bahia grass (*Paspalum notatum*), Johnson grass (*Sorghum halpense*), bermudagrass (*Cynodon dactylon*), Vasey's grass (*Paspalum urvellei*), Brazilian vervain (*Verbena brasiliensis*) and curley dock (*Rumex crispus*).

As indicated on **Figure III-6** on the following page, one wetland area was identified within the proposed project footprint. The wetland area encompasses approximately 0.1810 acres, and can be classified as a palustrine scrub-shrub wetland. The wetland appears to be abandoned pasture land. Dominant vegetation at this area includes Chinese tallow (*Triadica sebifera*), eastern baccharis (*Baccharis halimifolia*), Roseau cane (*Phragmites australis*), sawtooth blackberry (*Rubus argutus*), and Canadian goldenrod (*Solidago canadensis*).

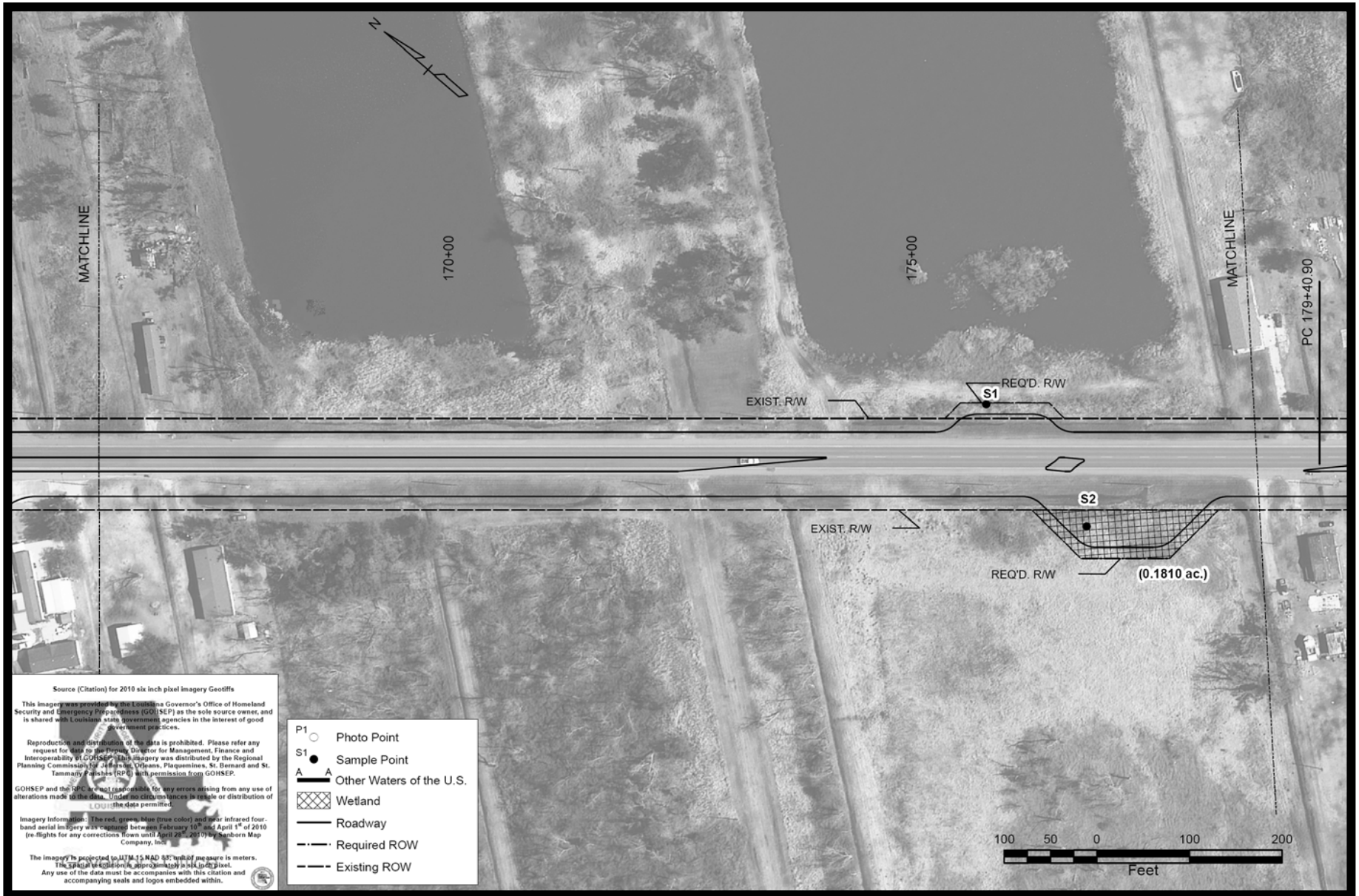
WATER RESOURCES (SOLE SOURCE AQUIFERS, ETC.)

According to the U. S. Environmental Protection Agency (EPA) the project area does not lie within the boundaries of a designated sole source aquifer (Bechdol 2012).

SOILS / PRIME FARMLANDS

Surface Geology

The natural levee of the Mississippi River comprises the surface geology of the area. The surface geology consists of linear vertical deposits that formed over time when the river



LA HIGHWAY 23
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POTENTIAL WETLANDS

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FIGURE III-6

overflowed its banks during flooding episodes. These levees decrease in height and thickness the further they are from the river. Of course, the placement of man-made levees both on the river side and back side of the natural levee high ground have affected the natural surface geology, As a result, in the project corridor, elevations can range from 4-5 feet in the northern portions of the corridor and nearer the man-made Mississippi River levee to below sea level in interior areas, particularly nearer the back levees.

Soils

The soils in the project area between the river and back levee system are all within the Commerce-Mhoon-Sharkey association. They are loamy and clayey alkaline soils, level to nearly level. Commerce soils have dark grayish brown silt loam or silty clay loam surfaces and grayish brown silty clay loam subsoils with brown mottling. They are highly fertile, with a slight to moderate wetness and slow permeability. Mhoon soils are poorly drained soils that have dark gray silty clay loam surfaces and gray silty clay loam subsoils. They have slow permeability and are susceptible to moderate to high shrink-swell. Sharkey soils have dark gray silty clay loam or clay surfaces, and gray clay subsoil. They generally occur at the lowest elevations within this association.

Although these soils exhibit wetness, low strength and some shrink-swell potential as road fill or base material, these characteristics are not difficult to overcome.

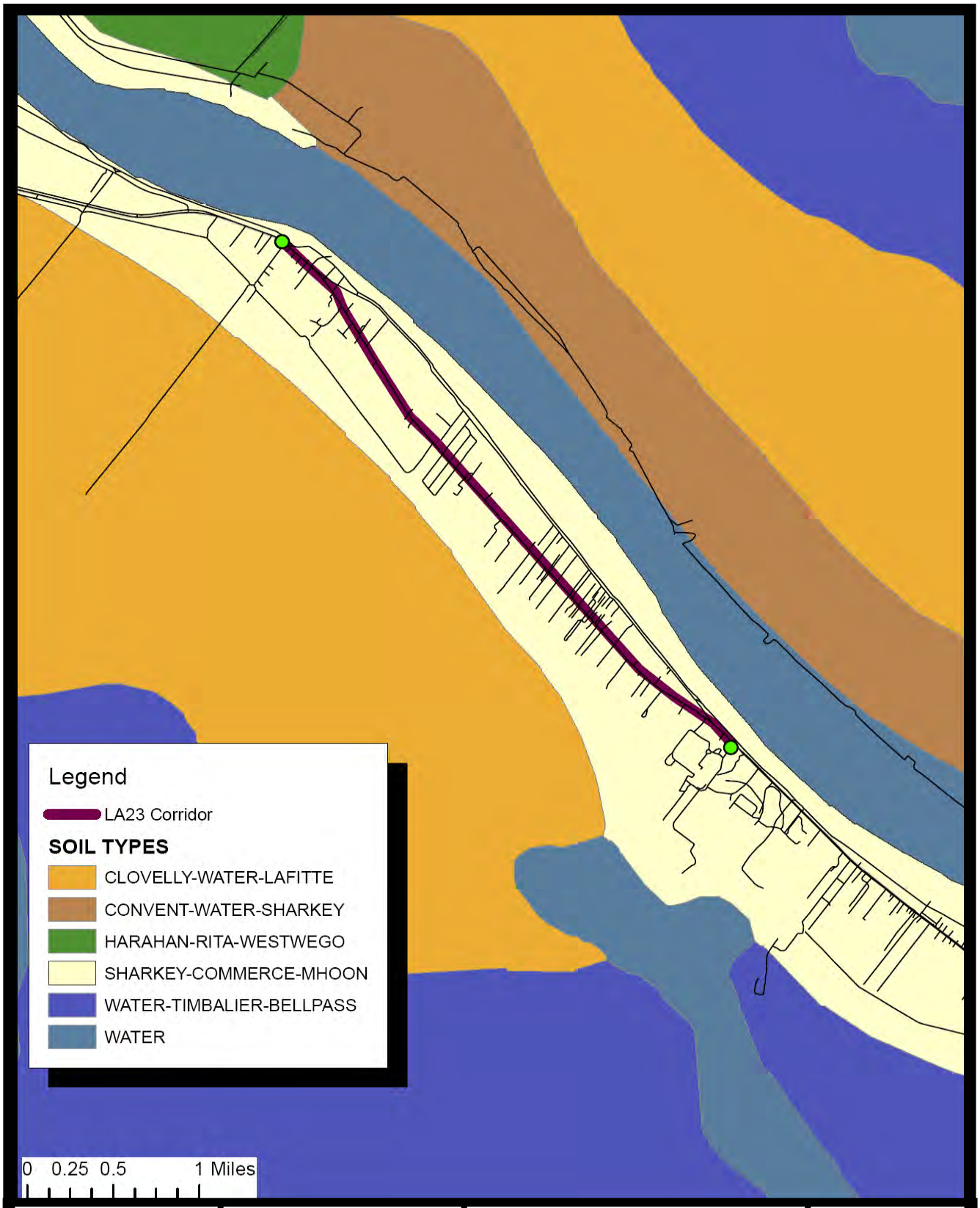
Figure III-7, on the following page, shows the distribution of primary soils within and surrounding the study area.

Prime Farmland

The construction areas in the project study corridor have been designated as within urban areas by the National Resources Conservation Service, and are therefore exempt from the rules and regulations of the Farmland Protection Policy Act (Norton 2012).

FISH AND WILDLIFE CRITICAL HABITAT / THREATENED AND ENDANGERED SPECIES

Prior to the field survey, an inventory was made of species listed as either threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) and Louisiana Department of Wildlife and Fisheries (LDWF). The USFWS lists the Piping Plover (*Charadrius melodus*), Gulf sturgeon (*Acipenser oxyrinchus desotoi*), Pallid sturgeon (*Scaphirhynchus albus*), West Indian manatee (*Trichechus manatus*), Louisiana black bear (*Ursus americanus luteolus*), Hawksbill sea turtle (*Eretmochelys imbricata*), Leatherback sea turtle (*Dermochelys coriacea*), Kemp's ridley sea turtle (*Lepidochelys kempii*), and Green sea turtle (*Chelonia mydas*) as either



RPC REGIONAL PLANNING COMMISSION

LA HIGHWAY 23
(HAPPY JACK TO
N. PORT SULPHUR)
S.P. H.001389

SOILS MAP

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FIGURE
III-7

threatened or endangered in Plaquemines Parish. Upon desktop review of maps and aerial photographs, it appeared that the proposed project area did not contain any of these species, or critical habitats. Observations made during the field investigation on July 9, 2012 confirmed this observation. Correspondence from the USFWS (Fuller 2012) stated that the proposed project would not adversely affect any threatened or endangered species.

An inventory of species listed as threatened or endangered by LDWF yielded a list of threatened or endangered species including the Piping Plover, Peregrine falcon (*Falco peregrinus*), and West Indian manatee in Plaquemines Parish. Observations made during the field survey on July 9, 2012 revealed that the project did not contain any state listed species of concern. Correspondence from the USFWS (Fuller 2012) stated that the proposed project would not adversely affect any threatened or endangered species.

COASTAL ZONE STATUS

The proposed project is located within the Louisiana Coastal Zone. However, the project site is within a fastlands and the determination of the need for a coastal use permit and/or potential impacts to the coastal zone would be made by the Louisiana Department of Natural Resources, Office of Coastal Management after an application for a coastal use permit for the project has been submitted for review (Morgan 2012).

CHAPTER IV

ENVIRONMENTAL IMPACTS OF THE CONSIDERED ALTERNATIVES AND SELECTION OF PREFERRED ALTERNATIVE

In this chapter, the impacts of the two alternatives considered (No Build Alternative and Proposed Action) are assessed relative to the evaluation categories of transportation and traffic, human environment, and the natural environment. Impact assessment categories include:

IMPACTS ON TRANSPORTATION AND TRAFFIC

IMPACTS ON THE HUMAN ENVIRONMENT

- Displacements/Relocations
- Environmental Justice
- Neighborhood / Community Cohesion
- Land Use
- Access to Community Facilities and Services
- Impacts to Parks and Recreation Facilities
- Historic/Cultural Resources
- Visual/Aesthetic Impacts
- Air Quality Impacts
- Traffic Noise and Impacts
- Construction Period Impacts
- Hazardous and Solid Waste Sites

IMPACTS ON THE NATURAL ENVIRONMENT

- Vegetation
- Wetlands
- Natural and Scenic Rivers
- Threatened and Endangered Species
- Hydrology, Floodplains & Flooding
- Water Quality
- Prime Farmland and Soils

The chapter then provides a comparative analysis between the two alternatives based on their ability to meet the project Purpose and Need, and describes the selection of the Preferred Alternative.

IMPACTS ON TRANSPORTATION AND TRAFFIC

TRAFFIC IMPACTS

As part of this Environmental Assessment**,** a traffic study was undertaken to assess the impacts of improving the LA 23 corridor between the northern and southern termini with River Road in Port Sulphur, Louisiana. Improving LA 23 is expected to help accommodate the ongoing increase in industrial driven traffic and decrease evacuation times in the region.

Methodology

The objective of this traffic study was to determine the expected impact that improving LA 23 would have on the surrounding road network. Traffic conditions for the base year of 2011 and a design year of 2031 were analyzed.

Traffic volume data was collected to determine the base year traffic conditions. Capacity analysis was used to determine level of service and delay estimates for comparison between alternatives. The following three (3) scenarios were analyzed for this study:

- 2012 Base Conditions
- 2031 No Build
- 2031 Build

The "No Build" condition was defined as LA 23 remaining as is without any improvements. The "Build" condition included widening LA 23 to a four-lane section with a varying median width.

Projected peak hour traffic volumes were developed for both the AM and PM peak periods for the study area utilizing the existing traffic volume data, input from the Regional Planning Commission (RPC) and professional judgment. Levels of Service/Capacity analyses based on these peak hour volumes were conducted for intersection locations for each of the project scenarios for both peak periods. The 2011 base year analysis was based on current geometry and existing traffic control as well as field observations and engineering judgment. The projected design year analyses were based on proposed geometry based on LADOTD requirements, design considerations, surrounding land use and engineering judgment. Geometric improvements were developed and analyzed for intersections that were expected to experience failing Levels of Service (LOS) in the 2031 "Build" design year. The resulting LOS and delays expected for each scenario were compared to determine the impact on traffic conditions.

Study Area

The following existing unsignalized intersections were included in the study area:

- LA 23 at River Road (Northern Intersection)
- LA 23 at River Road (Southern Intersection)
- LA 23 at Plaquemines Parish Library Driveway
- LA 23 at Civic Drive
- LA 23 at Freeport Drive
- LA 23 at Medical Center Driveway (future conditions only)

LA 23 is a two-lane undivided roadway with shoulders between its two intersections with River Road and widens to a four-lane roadway to the north and south of the study area. LA 23 services both residential and commercial land uses in the area.

River Road is a two-lane roadway without shoulders that parallels LA 23. River Road terminates on both ends at LA 23. River Road services mostly residential traffic.

Civic Drive provides access to South Plaquemines High School and is located approximately 400' south of LA 23 at River Road (Southern Intersection). Currently, police details are utilized during take-in and release times to aid entering/exiting traffic.

Freeport Drive provides access to the Plaquemines Parish Government Building and is located approximately 1,200' south of Civic Drive.

Data Collection

Daily Traffic Volumes

Existing traffic volume and class data was collected within the project study area in September 2011 and May 2013. Twenty-four hour classification traffic counts were collected at the following locations:

- LA 23 just south of its northern termini with River Road
- LA 23 just north of its southern termini with River Road
- LA 23 between South St and Penny Dee Dr
- River Road between its terminus with LA 23
- Civic Drive near LA 23
- Plaquemines Parish Library Driveway
- Freeport Drive

Data collected along LA 23 was utilized to determine heavy vehicle percentages for the traffic analyses based on the FHWA vehicle classifications. Based on the data collected, the percentage of heavy vehicles is approximately 5%.

Intersection Turning Movement Counts

Intersection turning movement counts were collected during the AM peak period (7:30-9:30 AM) and the PM peak period (4:15-6:15 PM) at the intersections of LA 23 and River Road. The peak hours for the study area were determined to be 7:00 AM to 8:00 AM and 4:30 PM to 5:30 PM.

15-Minute Turning Movement Spot Counts

Intersection turning movement spot counts were collected for 15-minute intervals during the AM peak period and the PM peak period at various locations along LA 23. Spot counts at the following intersections were used to estimate hourly volumes and these intersections were included in the analysis:

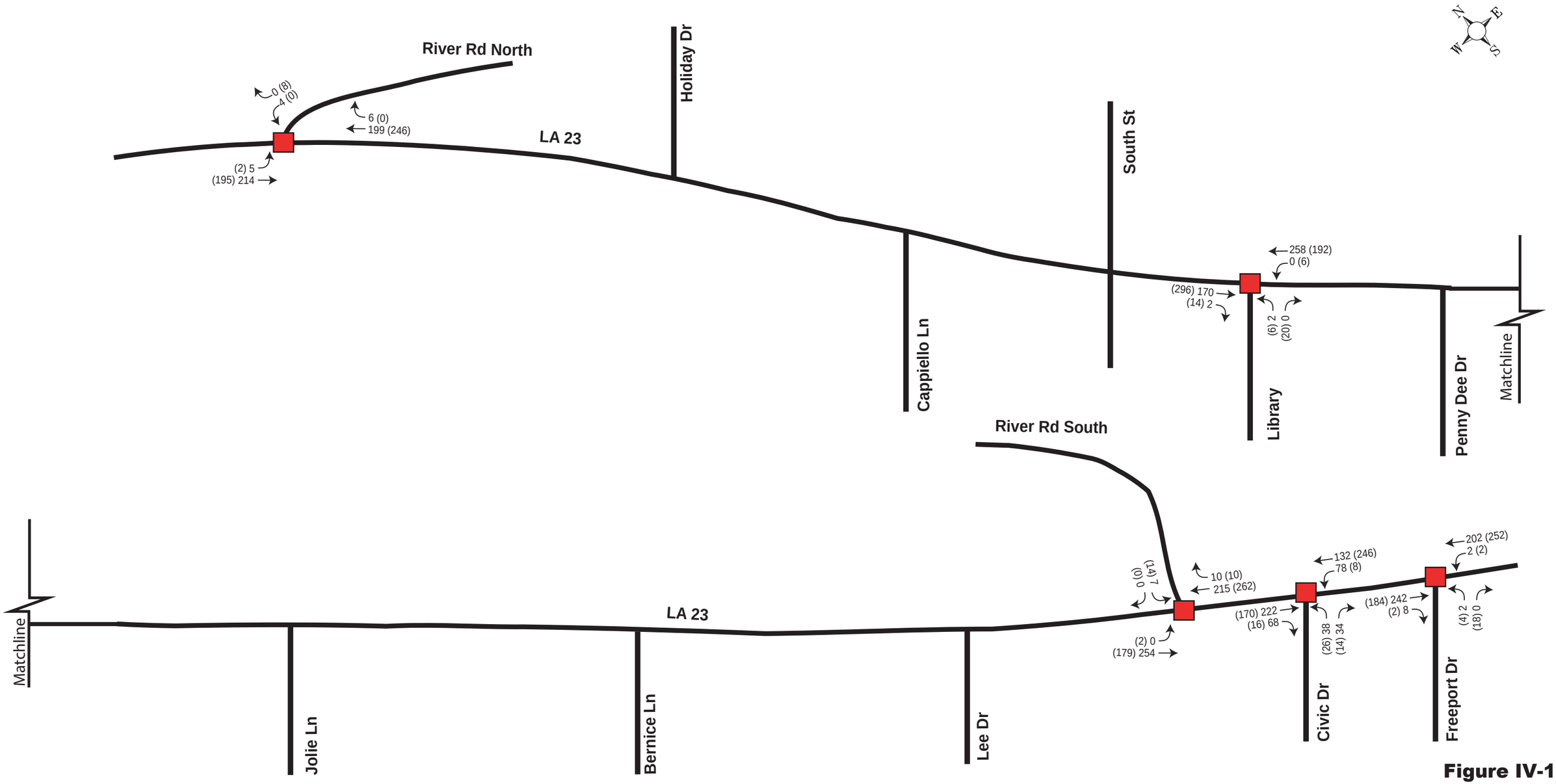
- LA 23 at Plaquemines Parish Library Driveway
- LA 23 at Civic Drive
- LA 23 at Freeport Drive

At the time of the data collection the Plaquemines Medical Center was not open. Turning movement volumes at the intersection of LA 23 and the Medical Center Driveway were developed using trip generation estimates based on the ITE *Trip Generation Manual* 9th Edition. Expected trips were developed based on ITE Land Use 610 (Hospital). Weekday, AM peak and PM peak volumes were calculated based on the proposed 43,000 square foot development and turning movement volumes were developed based on the existing traffic patterns on LA 23. The trip generation calculations are presented in the appendix of the stand-alone *Traffic Study*.

The data collected was used as the base traffic volumes for the study. **Figure IV-1** presents the base peak hour intersection turning movement counts. The 24 hour tube counts were not adjusted using seasonal factors and are presented as measured.

Alternatives

The proposed action alternative consists of asymmetrical widening of LA 23 to a four-lane divided roadway with a varying median width. The No-Build Alternative would entail no changes to the current LA 23 configuration.



LEGEND:

- Full access median opening
- Permitted movement arrow

Figure IV-1

Existing Volumes

LA 23 (Happy Jack to Port Sulphur)
Stage "1" E.A.
Plaquemines Parish, Louisiana

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Access Management

A four lane section with a median is the alternative studied and will match the existing roadway sections of LA 23 just north and south of the study area. Introduction of a raised median will require side streets and driveways along LA 23 to be right-in/right-out. To provide access, partial median openings must be provided to allow left turns and/or u-turns. Full access median openings may be justified at intersections based on traffic demand and/or other considerations.

Guidance

The location and type of median opening were based on the spacing requirements of LADOTD Engineering Directives and Standards Manual (EDSM) IV.2.1.4, surrounding land use needs, design considerations and engineering judgment.

LADOTD EDSM IV.2.1.4, states the following definitions and criteria for design of median openings on roadways where a median did not exist prior to the current project (i.e. two-lane to four-lane divided):

- *A full access median opening is defined as a median opening that allows all directions of movement including lefts, thru, rights, and u-turns when necessary.*
- *A partial median opening is defined as a median opening that allows for lefts from the mainline and right-in / right-out from the side street. This opening does not allow for left or thru traffic from the side street (driveway).*
- *Median openings shall be spaced at least ½ mile and shall be directional u-turns.*
- *Full access median openings shall be designed only for public roadways that meet MUTCD Traffic Signal Warrant 1A (100%) and shall be spaced ½ mile (2,640 ft) from another median opening. Full access median openings shall be designed with left turn lanes where the storage lengths have been verified by the District Traffic Operations Engineer.*

Full Access and Traffic Signal Warrants

The potential installation of traffic signals was evaluated based on engineering judgment, surrounding land use and LADOTD EDSM VI.3.1.6.

LADOTD EDSM VI.3.1.6, states that all new signals shall meet Warrant 1A or Warrant 7 (crash experience), must be spaced at least ½ mile from an adjacent signal and service a public road on the minor approach. For purposes of this analysis, potential installation of traffic signals was based on the EDSM requirements that full median openings and traffic signal installations satisfy the MUTCD signal warrant 1A.

Based on the EDSM requirements that full median openings and traffic signal installations satisfy the MUTCD signal warrant 1A. The MUTCD, Section 4C.01 gives the following standards for justifying traffic control signals:

An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location.

The investigation of the need for a traffic control signal shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operation and safety at the study location:

- *Warrant 1, Eight-Hour Vehicular Volume.*
- *Warrant 2, Four-Hour Vehicular Volume.*
- *Warrant 3, Peak Hour.*
- *Warrant 4, Pedestrian Volume.*
- *Warrant 5, School Crossing.*
- *Warrant 6, Coordinated Signal System.*
- *Warrant 7, Crash Experience.*
- *Warrant 8, Roadway Network.*

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic signal"

For the purposes of this study only Warrants 1, 2 and 3 were considered. Existing traffic volumes, roadway geometry, speed and crash data were input into PCWarrants software. The *Manual on Uniform Traffic Control Devices 2009 Edition* (MUTCD) provides lower thresholds for justifying a traffic signal on high speed roadways and in rural communities. The MUTCD states:

If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area on an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 100 percent columns.

The lower thresholds were utilized in the warrant analysis for the subject intersections because the posted speed limit is greater than 40 mph. The results of the analysis indicate that the subject intersections do not meet traffic signal warrant 1A; therefore, partial median openings were initially considered at each location.

Left turn warrant analyses were conducted for the unsignalized intersections, where mainline turn lanes are not present in the existing conditions. The analyses were based on the critical peak volumes using spreadsheets based on the findings of NCHRP Report 457. Results of the warrant analyses indicated that only the intersections of LA 23 at the Hospital Driveway and Civic Drive warrant left turn lanes. The analysis reports are included in the Appendix of the stand-alone *Traffic Study*.

A roundabout was also considered at Civic Drive; however, was eliminated from due to right of way constraints.

Proposed Median Openings and Operation

Proposed median openings and intersection operation were developed based on traffic volumes, commuter trends, surrounding land uses, DOTD requirements and engineering judgment.

Partial median openings allowing southbound left turns from LA 23 are proposed at the intersections on LA 23 at River Road (north and south) and at Medical Center Driveway. Commuters wishing to access LA 23 southbound from River Road and LA 23 northbound from Medical Center Driveway will be required to turn right and utilize the nearest u-turn. Provisions should be made in the median at the Medical Center Driveway to provide emergency vehicles the capability of turning left onto LA 23.

A partial median opening at LA 23 and River Road (south) to allow lefts onto River Road is recommended due to physical constraints. Although the left turn movement is low a U-turn cannot be provided south of this intersection due to the tow of the levee on the east and multiple significant trees on the west. A design exception will be required for this location should Civic Drive be a full access median opening as spacing requirements will not be satisfied. A design exception for a partial median opening at LA 23 and River Road (north) is not required as the nearest u-turn location is approximately 1/2 miles south.

It is proposed that the Library Driveway be restricted to right-in/right-out only based on low traffic demand.

U-Turn Locations

Directional U-turns were spaced at ½ mile spacing along LA 23 based on the EDSM. Accommodations for southbound and northbound u-turning heavy vehicles should be provided as heavy vehicles will need to access multiple facilities along the corridor from both directions including gas stations and industrial facilities. Based on turning radii, large bump outs would be required at u-turn locations; therefore, accommodations for heavy vehicles were not recommended at every u-turn location to reduce the amount of right-of-way takings. At a minimum, heavy vehicle u-turn accommodations should be provided at either end of the project. To reduce travel distances, alternating heavy vehicle u-turn locations is recommended. The projected u-turn volumes were developed using trip generation estimates based on the surrounding land use expected to utilize each u-turn along LA 23. Trip generation estimates were ITE *Trip Generation Manual* 9th Edition. Expected trips were distributed through each u-turn location based on existing AM and PM peak period traffic distributions.

A storage lane should be provided at each location on LA 23. U-turns require longer gaps in opposing traffic as the movement take longer to perform than a left turn. The addition of a storage lane would allow traffic to wait for acceptable gaps while not deterring through traffic on LA 23. Capacity analysis of the critical u-turn locations

indicated a max 95th percentile queue of one (1) vehicle. Based on this and guidance in the LADOTD Traffic Impact Policy, a minimum storage length of 155' with a 165' taper is recommended.

Traffic Assignment and Forecasting

Traffic volume projections for the design year 2031 were developed based on existing traffic volumes, input provided by LADOTD and RPC, and engineering judgment. A projected annual growth rate of 2.0 percent per year for 20 years was utilized. The resulting projected traffic volumes for both the No Build conditions and the Build Alternative conditions are presented in **Figures IV-2 and IV-3**, respectively.

Traffic Analysis Criteria

Capacity analyses were performed for the roadway segments and subject intersections within the project study area for each of the project scenarios.

The various types of analyses performed for this study included two-lane highway, multilane highway, and unsignalized intersection. Each analysis was performed using Highway Capacity Software Version 5.4 (HCS+). The LOS for the two-lane and multilane roadway segments are based on volume to capacity ratio and density, passenger cars per mile per lane (pc/mi/ln). Intersection LOS is based on control delay in seconds per vehicle (sec/veh).

Levels of Service represent a qualitative and quantitative evaluation of the traffic operation of a road segment and/or intersection using procedures developed by the Transportation Research Board and contained in the Highway Capacity Manual, Special Report 209. The Highway Capacity Manual (HCM) procedures have been adapted to computer based analysis packages, which include modules for each roadway condition.

Unsignalized Intersections

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

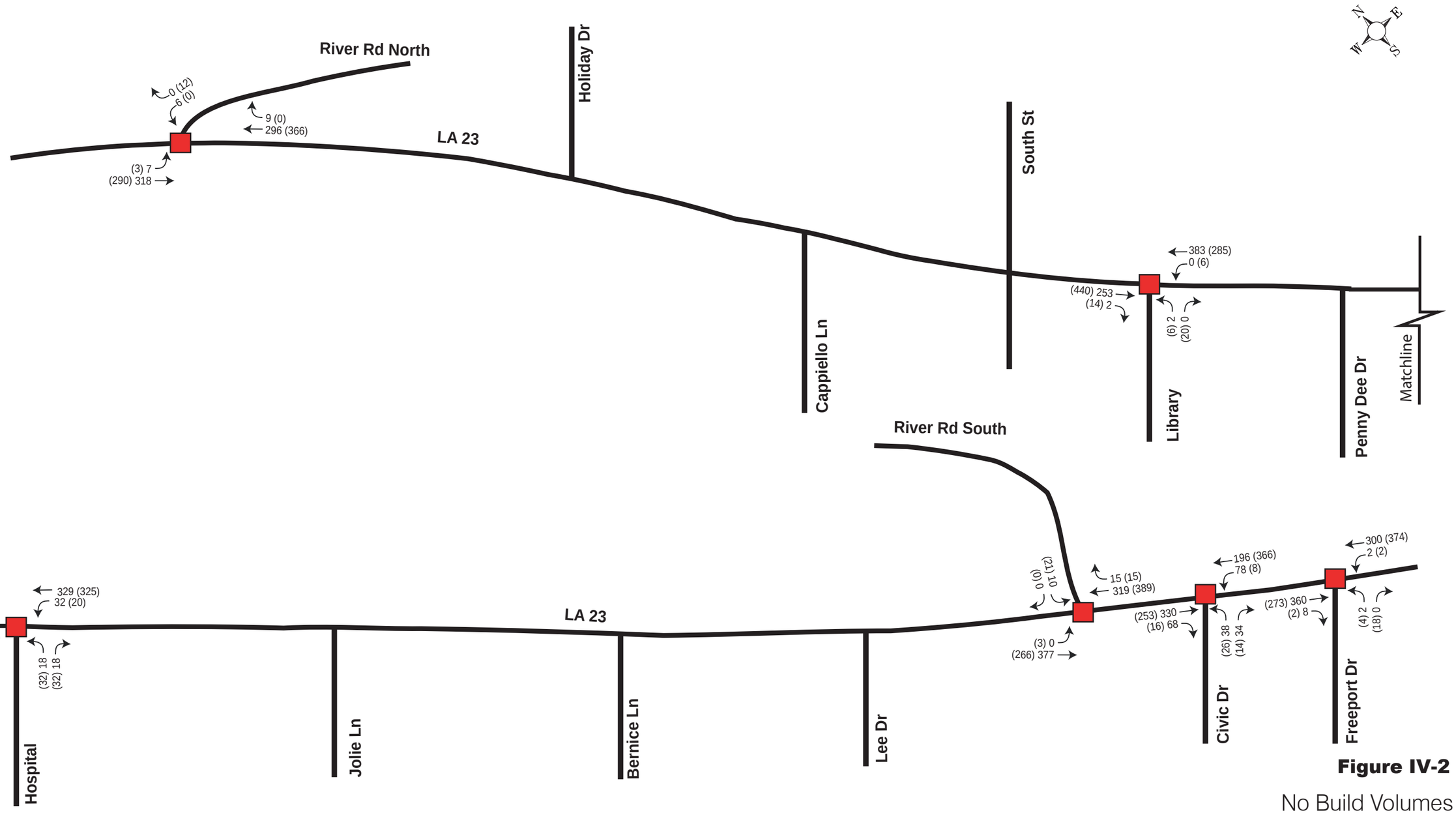

Figure IV-2

No Build Volumes

LEGEND:

- Full access median opening
- Permitted movement arrow

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LA 23 (Happy Jack to Port Sulphur)
Stage "1" E.A.
Plaquemines Parish, Louisiana

NOT TO SCALE
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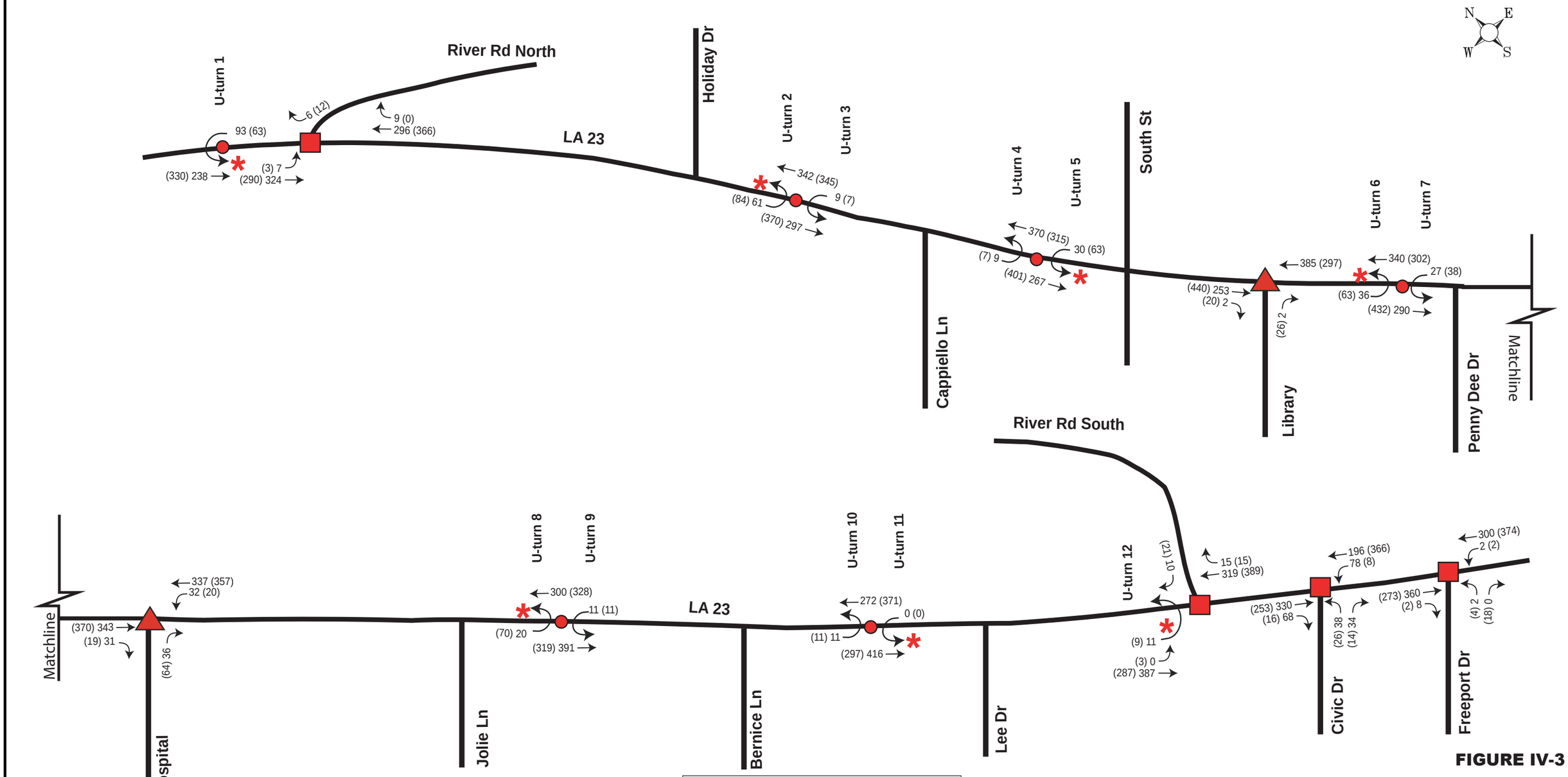

LEGEND:

- Full access median opening
- Partial median opening
- U-Turn location (approximate)
- Permitted movement arrow
- Permitted heavy vehicle movement

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FIGURE IV-3

2031 Projected Volumes

LA 23 (Happy Jack to Port Sulphur)
Stage "1" E.A.
Plaquemines Parish, Louisiana

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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 IV-1** presents Level of Service criteria for unsignalized intersections.

Table IV-1
Level of Service Criteria for Un-signalized Intersections

Level of Service	Control Delay Per Vehicle (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	>15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Two-Lane Section Capacity Analysis

For two-lane highways that facilitate shorter trips and multiple trip purposes, the Highway Capacity Manual measures LOS quality by percent-time-spent-following. LOS A describes the highest quality of traffic service, when motorists are able to travel at their desired speed. LOS B characterizes a slightly higher impedance of traffic flow. LOS C describes further increases in flow, resulting in noticeable increases in platoon formation, platoon size, and frequency of passing impediments. LOS D describes unstable traffic flow. The two opposing traffic streams begin to operate separately at higher volume levels, as passing becomes extremely difficult. At LOS E, traffic flow conditions have a "percent time-spent-following" greater than 80 percent. Passing is virtually impossible and platooning becomes intense, as slower vehicles or other interruptions are encountered. LOS F represents heavily congested flow with traffic demand exceeding capacity. Volumes are lower than capacity and speeds are highly variable. **Table IV-2** presents Level of Service criteria for two-lane highways.

Table IV-2
Level of Service Criteria for Two-Lane Highways

Level of Service (Class II Highways)	Percent Time Spent Following
A	≤40
B	>40 and ≤55
C	>55 and ≤70
D	>70 and ≤85
E	>85

Multi-Lane Section Capacity Analysis

According to the Highway Capacity Manual, level of service on a multi-lane highway is characterized by three performance measures:

- Density, in terms of passenger cars per mile per lane (the primary performance measure);
- Speed, in terms of mean passenger car speed; and
- Volume to capacity ratio.

LOS A describes completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences. LOS B also indicates free-flow, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver. In LOS C, the influence of traffic density on operations becomes evident. The ability to maneuver within the traffic stream is clearly effected by other vehicles. At LOS D, the ability to maneuver is severely restricted due to traffic congestion. Travel speed is reduced by the increasing volume. LOS E represents operations at or near capacity, an unstable level. LOS F represents forced or breakdown flow. **Table IV-3** presents Level of Service criteria for multi-lane highways.

Table IV-3
Level of Service Criteria for Multi-Lane Highways

Level of Service (Free-Flow Speed 45 mph)	Maximum Density Passenger cars per mile per lane
A	≤11
B	>11 and ≤18
C	>18 and ≤26
D	>26 and ≤35
E	>35 and ≤45
F	>45

The analysis methods used are considered appropriate for this type of study and are the widely accepted practice of evaluating impacts on traffic operations.

Traffic Analysis Results

Existing Conditions

Existing traffic volumes, geometry and intersection control were input into HCS+ software to determine expected LOS and delay. The results of the analyses are presented in **Table IV-4**, on the following page

Table IV-4
Level of Service Analysis
Existing Conditions

Intersection/Approach	AM Peak		PM Peak	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
LA 23 at River Road – North*				
LA 23 southbound	A	7.8	A	8.0
River Road westbound	B	12.3	B	10.3
LA 23 at River Road – South*				
LA 23 southbound	A	8.1	A	8.3
River Road westbound	B	14.5	C	15.2
LA 23 at Library*				
LA 23 northbound	A	7.6	A	7.9
Library eastbound	B	11.5	B	10.8
LA 23 at Civic Dr*				
LA 23 northbound	A	8.1	A	7.7
Civic Dr eastbound	B	12.3	B	11.1
LA 23 at Freeport Dr*				
LA 23 northbound	A	7.8	A	7.6
Freeport Dr eastbound	B	11.8	A	9.9

***Overall LOS not reported by HCS+ for two-way stop controlled intersections.*

A review of Table 6 indicates that that each of the subject intersections are expected to experience acceptable levels of delay during both peak periods. Slightly higher delays are expected on the minor street approaches; however, this affects a low volume of traffic. Little to no delay was observed at the subject intersections during field visits.

The results of the existing roadway analysis are presented in **Table IV-5**:

Table IV-5
Roadway Analysis
Existing Conditions

	AM Peak		PM Peak	
	LOS	V/C	LOS	V/C
LA 23 between River Road	E	0.17	E	0.17

The two-lane highway analysis indicated that LA 23 is expected to operate well below capacity; however, it is expected to experience LOS E during both peak periods. This indicates that slow moving traffic, inability to pass and interruptions in traffic flow result

in more than 80% time-spent following. Minimal platooning was observed during field visits, but did not seem to hinder traffic flow.

2031 No Build Conditions Analysis

The existing intersection control and geometry with projected 2031 "No Build" volumes were input into HCS Software to determine the expected LOS and delay. The results of the analysis are presented in **Table IV-6** below.

Table IV-6
Level of Service Analysis
2031 No Build Conditions

Intersection/Approach	AM Peak		PM Peak	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
LA 23 at River Road – North*				
LA 23 southbound	A	8.1	A	8.4
River Road westbound	C	15.8	B	11.8
LA 23 at River Road – South*				
LA 23 southbound	A	8.6	A	9.0
River Road westbound	C	21.7	D	28.8
LA 23 at Library*				
LA 23 northbound	A	7.8	A	8.4
Library eastbound	B	13.9	B	12.6
LA 23 at Hospital*				
LA 23 northbound	A	8.2	A	8.2
Hospital eastbound	B	13.9	B	14.7
LA 23 at Civic Dr*				
LA 23 northbound	A	8.5	A	7.9
Civic Dr eastbound	B	14.4	B	13.1
LA 23 at Freeport Dr*				
LA 23 northbound	A	8.1	A	7.9
Freeport Dr eastbound	B	14.4	B	10.8

***Overall LOS not reported by HCS+ for two-way stop controlled intersections.*

Analysis results indicate that the River Road approach at the south intersection is expected to experience an increase in delay with the projected 2031 traffic volumes, while still maintaining acceptable LOS and delay.

The results of the 2031 No Build conditions roadway analysis are presented in Table IV-7.

Table IV-7
Two-Lane Roadway Analysis - No Build Conditions

	AM Peak		PM Peak	
	LOS	**V/C**	**LOS**	**V/C**
LA 23 between River Road	E	0.25	E	0.25

Analysis results indicate LA 23 is expected to continue to operate well below capacity with the projected 2031 volumes and remain LOS E.

2031 Build Conditions Analysis

The 2031 projected build volumes were input into HCS Software to determine the expected LOS and delay. The intersection control and geometry was based on preliminary analysis and engineering judgment. The results of the analyses as compared to the existing and No Build conditions are presented for the AM and PM peaks in **Tables IV-8 and IV-9**, respectively.

Table IV-8
Level of Service Analysis - Comparison of AM Peak

Intersection/Approach	**Base Conditions**		**2031 No Build**		**2031 Build**	
	LOS	**Delay (sec/veh)**	**LOS**	**Delay (sec/veh)**	**LOS**	**Delay (sec/veh)**
LA 23 at River Road - North						
LA 23 southbound	A	7.8	A	8.1	A	8.1
River Road westbound	B	12.3	C	15.8	A	9.3
LA 23 at River Road - South						
LA 23 southbound	A	8.1	A	8.6	A	8.6
River Road westbound	B	14.5	C	21.7	B	10.0
LA 23 at Library						
LA 23 northbound	A	7.6	A	7.8	--	--
Library eastbound	B	11.5	B	13.9	A	9.0
LA 23 at Hospital						
LA 23 northbound			A	8.2	A	8.3
Hospital eastbound			B	13.9	A	9.6
LA 23 at Civic Dr						
LA 23 northbound	A	8.1	A	8.5	A	8.5
Civic Dr eastbound	B	12.3	B	14.4	B	11.7
LA 23 at Freeport Dr						
LA 23 northbound	A	7.8	A	8.1	A	8.1
Freeport Dr eastbound	B	11.8	B	14.4	B	11.8

Overall LOS not reported by HCS+ for two-way stop controlled intersections.
-- Not applicable for current scenario

Table IV-9
Level of Service Analysis
Comparison of PM Peak

Intersection/Approach	Base Conditions		2031 No Build		2031 Build Alt	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
LA 23 at River Road - North						
LA 23 southbound	A	8.0	A	8.4	A	8.4
River Road westbound	B	10.3	B	11.8	A	9.8
LA 23 at River Road - South						
LA 23 southbound	A	8.3	A	9.0	A	9.1
River Road westbound	C	15.2	D	28.8	B	10.9
LA 23 at Library						
LA 23 northbound	A	7.9	A	8.4	--	--
Library eastbound	B	10.8	B	12.6	A	9.8
LA 23 at Hospital						
LA 23 northbound			A	8.2	A	8.3
Hospital eastbound			B	14.7	A	9.8
LA 23 at Civic Dr						
LA 23 northbound	A	7.7	A	7.9	A	7.9
Civic Dr eastbound	B	11.1	B	13.1	B	10.7
LA 23 at Freeport Dr						
LA 23 northbound	A	7.6	A	7.9	A	7.9
Freeport Dr eastbound	A	9.9	B	10.8	A	9.6

***Overall LOS not reported by HCS+ for two-way stop controlled intersections.*
-- Not applicable for current scenario

Tables IV-8 and IV-9 indicate that with the proposed intersection configurations and operation the subject intersections are expected to operate with less delay than in the base condition. The River Road approaches are expected to experience decreases in delay due to more gaps in the LA 23 traffic.

2031 Build U-turn Analysis

The 2013 projected build volumes for each u-turn location was input into Synchro 8 software to determine the expected LOS and delay. Each location included a separate storage lane for the U-turn. The results of the analysis for both the AM and PM peaks are presented in **Table IV-10**.

Table IV-10.
Level of Service Analysis - U-turn AM and PM Peaks

LA 23 U-turn	AM Peak		PM Peak	
	2031 Build Alt		2031 Build Alt	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh
U-turn North of River Rd North				
U-turn 1 NB to SB	A	9.1	A	9.
U-turn btw Holiday Dr and Cappiello Ln				
U-turn 2 SB to NB	A	9.7	A	9.
U-turn 3 NB to SB	A	9.1	A	9.
U-turn btw Cappiello Ln and South St				
U-turn 4 SB to NB	A	9.6	A	9.
U-turn 5 NB to SB	A	9.0	B	10.2
U-turn btw Library and Penny Dee Dr				
U-turn 6 SB to NB	A	9.5	A	9.
U-turn 7 NB to SB	A	9.1	B	10.3
U-turn btw Jolie Ln and Bernice Ln				
U-turn 8 SB to NB	A	9.1	A	9.
U-turn 9 NB to SB	A	9.7	A	9.
U-turn btw Bernice Ln and Lee Dr				
U-turn 10 SB to NB	A	8.9	A	9.
U-turn 11 NB to SB	A	10.0	A	9.1
U-turn at River Rd South				
U-turn 12 SB to NB	A	9.2	A	9.
U-turn South of Freeport Dr (Alt B Only)				
U-turn 13 NB to SB	A	9.5	A	10.0

Table IV-10 indicates that the proposed u-turn locations are expected to operate acceptably during both the AM and PM peaks under the projected conditions.

2031 Build Roadway Analysis

LA 23 segments were analyzed as a four-lane divided roadway. The level of service for the highway segments is based on delay which is measured in a volume to capacity ratio for the two-lane analysis and in passenger cars per mile per lane (pc/mi/ln) for the multi-lane analysis. The results of the analyses as compared to the existing and No Build conditions are presented for the AM and PM peaks in **Tables IV-11 and IV-12**, respectively.

Table IV-11
Multi-Lane Roadway Analysis
Comparison of AM Peak

		Existing		2031 No Build		2031 Build	
		LOS	V/C	LOS	V/C	LOS	Density (pc/mi/ln)
LA 23	***Overall***	**E**	**0.17**	**E**	**0.25**		
	Northbound					A	4.4
	Southbound					A	4.6

Table IV-12
Multi-Lane Roadway Analysis
Comparison of PM Peak

		Existing		2031 No Build		2031 Build	
		LOS	V/C	LOS	V/C	LOS	Density (pc/mi/ln)
LA 23	***Overall***	**E**	**0.17**	**E**	**0.25**		
	Northbound					A	4.5
	Southbound					A	4.5

Tables IV-11 and IV-12 indicate that a four-lane roadway is expected to operate with LOS A, a significant improvement over the expected existing and 2031 No Build conditions.

Safety Review

The Crash Data for this section of roadway was reviewed as part of the Stage "0" Feasibility Study submitted by Krebs, LaSalle, LeMieux Consultants dated April 2010. The conclusions were as follows:

> *"A review of crash data supplied by LADOTD for the years of 2006-2008 on stretch of roadway under study was performed. Crash data is broken down by conditions, type, number of vehicles involved, time of day, location, etc. There appears to be no overriding pattern of crash happenings on this section of roadway, beyond the expected incidents caused by turns to and from a highway into residential areas, i.e. rear end collisions, right angle collisions, etc. No single location stands out."*

Specific crash patterns were not targeted in the development of alternatives; however, the addition of a median is expected to affect crash tendencies. While the *Highway Safety Manual* (HSM) 1st Edition by AASHTO does not provide data on the conversion from a

two lane undivided section to a four lane divided section, it does indicate that providing a raised median has been shown to reduce all types of crashes on two lane and rural four lane roadways. It is expected that rear end crashes involving motorists turning from LA 23 to residential areas would be reduced as vehicles will now be able to use the opposite lane for passing vehicles that are slowing down to turn. Right angle crashes involving motorists turning to LA 23 from residential areas would be reduced as the majority of the side streets and driveways will now be right-in/right-out and larger gaps in traffic are expected. Potential head on collisions are also reduced as there will be a median separating the travel lanes.

While specific areas of concern were not identified by the crash data, the widening of a roadway from a two lane undivided section to a four lane divided section is expected to significantly reduce the frequency and severity of crashes; however, increased speeds are expected as vehicles will be able to pass slower moving traffic.

POTENTIAL TRUCK TRAFFIC IMPACTS

The No Build Alternative will maintain the status quo relative to truck traffic.

The Preferred Alternative may introduce some truck traffic into the study area that presently does not exist. By adding capacity to LA 23 and making it easier for trucks to access industrial and maritime facilities located in the lower portion of the Parish, more facilities may consider locating in the lower portion of the Parish, or existing facilities may expand their operations. However, as explained in the traffic impact analysis section earlier, the addition of a second lane in each direction and installation of access controls should improve both truck and passenger vehicle safety for vehicles traveling in and through the study area.

POTENTIAL RAIL AND TRANSIT IMPACTS

The study area presently contains no active rail or transit lines. The No Build Alternative will have no impact on the current status of these services. The Preferred Alternative should also have no impact on the current status of these services..

POTENTIAL IMPACTS TO BICYCLE AND PEDESTRIAN FACILITIES

The only bicycle or pedestrian facility in the study area is a sidewalk on the west side of LA 23 that begins at Civic Drive and proceeds southward. This is the location where LA 23 is already four (4) lanes wide. The No Build Alternative will have no impact on this sidewalk. Under the proposed action, the transition from the new four lane section to the existing four-lane section would affect the sidewalk. The sidewalk would be reconstructed and replaced with a new sidewalk.

In July of 2010, the Louisiana Department of Transportation and Development enacted a *Complete Streets Policy*. In short, the Complete Streets Policy addresses the needs of pedestrians and bicyclists, and calls for the LADOTD to consider and include (where appropriate) sidewalks and bicycle accommodations along new and reconstruction roadway projects.

The Complete Streets Policy was addressed and considered during the development of the proposed action, although at this stage of project development no specific facilities are shown or are included in cost estimates. While the standard cross section of the proposed facility does not include sidewalks or bike paths, LADOTD's complete streets policy states that "*on all new construction and reconstruction roadway projects that serve adjacent areas with existing or reasonably foreseeable development or transit service, DOTD will plan, fund, and design sidewalks and other pedestrian facilities. The appropriate facility will be determined by the context of the roadway*".

One of the goals of the conceptual design of this project for the EA was to complete the planned widening in such a way that right-of-way taking was minimized, so as to lessen the amount of impacts. In order to accomplish this, the typical section used includes conversion of the existing shouldered section with ditch and swale drainage to a curbed highway with underground drainage. As seen on Sheet TS-1 in *Chapter III*, in those sections where the highway will be cut into existing grade, fifteen (15) feet of right-of-way outside of the curb would be available and could be used for sidewalks, and/or bike paths. However, if the highway is built above existing grade, the fifteen (15) feet would be required for swale drainage of adjacent properties with drop inlets to funnel rainwater to the underground pipes. This would preclude the construction of sidewalks and/or bike paths along the improved roadway.

A better option for bicyclists is one which can be used currently: taking River Road as a less-busy "bypass" route.

As noted in the Policy, the need for and appropriate facility type will be determined by the context of the roadway, which should occur during the Design Engineering Phase of this project.

IMPACTS ON THE HUMAN ENVIRONMENT

DISPLACEMENTS/RELOCATIONS

Legal Requirements

Various federal statutes have been enacted to establish a uniform policy for the fair and equitable treatment of persons displaced, and from whom land is acquired as a result of programs designed and funded for the benefit of the public as a whole. Some of the applicable laws that guide government actions for acquisitions, displacements and relocations are:

- 49 CFR Part 24, Department of Transportation implementing regulations for: "The Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970," as amended.
- National Environmental Policy Act of 1969 (NEPA)

These laws provide for a process that is fair and require practical and financial assistance in helping individuals and businesses transition into a comparable situation. Any private property acquisition required for this project would be in compliance with the identified laws and statutes.

For housing units, these laws require that replacement housing must be "decent, safe and sanitary" and must be functionally equivalent to the number of rooms, living space, location, and general improvements of the displaced units. Replacement dwellings must also meet all of the minimum housing requirements established by federal regulations and conform to occupancy codes.

Relocation benefits may also be available for businesses, farms, and non-profit organizations. Payment may be made for:

- Moving costs
- Tangible personal property loss as a result of relocation or discontinuance of an operation
- Re-establishment expenses
- Costs incurred in identifying a replacement site

Businesses, farms or non-profit organizations may be eligible for fixed payments in lieu of moving and reestablishment costs.

No Build Alternative

Under the No Build alternative, existing conditions would be maintained. The No Build Alternative would not require any displacements or relocations and, thus, would not result in any direct or indirect impact(s) to the study area. In addition, no property acquisitions would be required with the No Build Alternative.

Proposed Action

Implementation of the Proposed Action would result in very little right-of-way property acquisition along the project corridor. Acquisition areas are along the mainline of the roadway, at the two intersections with River Road, and at the u-turn "bump outs" along the route. No residential or commercial relocations are needed under the proposed action.

ENVIRONMENTAL JUSTICE

Background

Requirements for environmental justice originated in 1994 with adoption of Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. This order directed federal agencies to identify and address disproportionately high and adverse human health and environmental effects, including social and economic effects of their programs, policies and activities on minority populations and low income populations in the United States.[1]

In 1998, the Federal Highway Administration (FHWA) formulated Order 6640.23 to establish agency policies and procedures to address environmental justice as follows:[2]

- Identify and evaluate environmental, public health and interrelated social and economic effects for FHWA programs, policies and activities;

- Propose measures to avoid, minimize and/or mitigate disproportionately high and adverse environmental and public health effects and interrelated social and economic effects;

- Provide mitigation and opportunities to enhance communities, neighborhoods and individuals affected by FHWA programs, policies and activities, where permitted by law and consistent with Executive Order 12898. Other factors may be taken into account include design, comparative impacts and the relevant number of similar existing system elements in nonminority and non low income areas.

- Consider alternatives to proposed programs, policies and activities, where such alternatives would result in avoiding and/or minimizing disproportionately high and adverse human health or environmental impacts, consistent with Executive Order 12898;

- Provide public involvement opportunities and meaningful access to public information concerning project impacts and solicit input from affected minority and low-income populations in considering alternatives during the planning and development of alternatives and decisions.

Additionally, FHWA policy takes into account issues as aesthetic values, traffic congestion and community isolation or displacement in determining environmental justice. [3]

[1] http://www.fhwa.dot.gov/legsregs/directives/orders/6640_23.thm
[2] *FHWA Actions to Address Environmental Justice in Minority Populations and Low Income Population, Order 6640.23.* 1998.
[3] http://www.its.berkeley.edu/publications/ejhandbook.html.

Methodology

The methodology employed in this section adheres to the previously noted FHWA policy in addressing environmental justice for the project in identifying concentrations of minority and low-income populations for the LA 23 study area.

As described in the previous chapter, the LA 23 study area comprises only tract 505 in Plaquemines Parish.

The key demographic elements measured are:

- Race
- Housing
- Poverty status

Race examines the racial breakdown in the study area and determines the total and minority populations in the study area from the following counts:

- White
- Black or African American
- Native (American Indian, Alaska Native, Native Hawaiian or Pacific Islander)
- Asian
- Some other race

Housing studies housing units in the study area with emphasis on vacancy and the level and quality of home ownership:

- Vacancy
- Renters
- Owner occupied
- Median value of owner occupied units

Poverty status utilizes a number of economic factors to identify poverty in the study area:

- Per capita income
- Population living below the poverty level
- Households with public assistance income

Percentages for the key demographic elements are determined for each census tract identified in the study area and compared to Louisiana state levels. Census tracts that exceed state thresholds are highlighted and considered for avoidance or minimizing impacts to minority and low income areas early in the planning process of project alternatives.

Findings

Race and Minority Composition

As was indicated in the previous chapter, the study area has a majority-minority population. About 28% of the population is white, 62.8% is black or African-American; 3.2% identify as native (American Indian, Alaska Native, Hawaiian Native, Pacific Islander); 1.9% is identified as Hispanic, 1.8% as Asian, and 2.71% as other. This is in comparison to the state as a whole, which has 62.6% white population.

Housing

The housing stock in the LA 23 study area contains a 13.4% vacancy rate, slightly higher than the state level of 12%.

The majority of housing in the study area (89.1%) is owner occupied. A potential indication of poverty is a high level of renters. Renters represent only 10.9% of the occupied housing units in the ACP study area, a lower rate when compared to the 32.8% level of renters for the state.

The average median value of owner occupied housing in the study area is $83,600, lower than the state average of $130,000.

Poverty Levels

The average per capita income for the ACP study area is $14,805, lower than the state average of $23,094. About 16% of the households in the study area were living below the poverty level, slightly higher than the state percentage (14%). Census estimates indicate that about 10% of the study area receives public assistance, much higher than the 1.61% state level of public assistance.

Conclusions

The indicators show that the study area is in fact composed of a mostly minority population with a low income component higher than that of the state. But on the other hand, housing in the area is largely owner-occupied, especially in comparison to state levels.

The project involves very little right-of-way acquisition, and no residential relocations. The alignment has been refined to minimize impacts on the human environment in general, including both minority and general populations. Residents both within the study area and outside of the study area should benefit from the positive impacts of the project including roadway safety, economic development, and improved hurricane evacuation.

Due to the nature of the project there should be little if any environmental justice issues associated with this project. No disproportionately high or adverse effects to the minority population were identified with the project

NEIGHBORHOOD AND COMMUNITY COHESION

The LA 23 study area consists largely of medium- to low-density residential development and some commercial development, along with assorted public uses. Neighborhood and community cohesion in these areas is more in terms of area-wide cohesion or sense of city or regional community, rather than on a "neighborhood" basis. However, within the corridor, there are some distinct subdivisions and housing developments, as well as mobile home parks, each of which has a sense of neighborhood identity and cohesion.

No Build Alternative

The No Build Alternative will maintain the status quo and should have no impact on neighborhood and community cohesion.

Proposed Action

The Proposed Action should have little if any impact on neighborhood and community cohesion in the area. The project involves only the widening of an existing highway.

LAND USE

No Build Alternative

The No Build Alternative will have no impact on land use within the LA 23 study area.

Proposed Action

The potential impacts of the Proposed Action on land use are expected to be positive yet minimal. The study area is moderately developed, and the various roadway alignments have been configured to eliminate conflicts with existing structures and land uses. The general population and the number of housing units in the study area have greatly decreased over the last decade as a result of recent hurricanes, and the widening of LA 23 should only assist the Happy Jack and North Port Sulphur communities to redevelop in the same manner they were before the storms..

ACCESS TO COMMUNITY FACILITIES & SERVICES

Community facilities and services define a community and further characterize its cohesion and sense of place. A vital factor in the utilization of these facilities and distribution of services is their access.

No Build Alternative

Existing roadway during peak hours are strained to provide adequate service, operating at Level of Service "E". The No Build Alternative will not contribute to enhancing service levels of the road network or improving through traffic to community facilities and services outside of the study area. The No Build Alternative will not improve access to public facilities and services.

Proposed Action

The development of the Proposed Action is expected to have a positive impact on access to community facilities and services. By improving local and regional access, residents and businesses will be better able to reach necessary facilities and services. Additionally, emergency vehicle access, including fire and police response and emergency medical service to trauma medical facilities at area hospitals, will be enhanced.

The Proposed Action would also provide quicker and safer access to area amenities, such as parks, playgrounds, other recreation facilities and services, and community centers. Those amenities are vital to the quality of life a community needs to sustain itself.

IMPACTS TO PARKS AND RECREATION FACILITIES

Two parks and recreational facilities are located within the study area, Prea Park and the Port Sulphur Community Center.

No Build Alternative

The No Build Alternative will have no impact on either of the two parks or any other recreational facilities in the study area.

Proposed Action

The Proposed Action will have a positive impact on these facilities by providing improved access to them. In addition, correspondence received from the State's Department of Culture, Recreation and Tourism (in response to the Solicitation of Views) stated that there does not appear to be any conflict regarding this proposed project with existing recreational facilities identified the most recent Statewide Comprehensive Outdoor Recreation Plan's statewide inventory of recreational sites (Hardman, 2012).

HISTORIC / CULTURAL RESOURCES

No Build Alternative

The No Build Alternative would have no impact on the historic/cultural resources of the project area.

Proposed Action

An archaeological survey was conducted within the required project ROW in 2012. No archaeological sites were recorded within the project area in 2012 and no previously recorded sites are within the limits of the existing and required ROW. Therefore, the proposed action would have no impact on archaeological sites within the proposed project ROW.

A standing structure survey of the project APE recorded 14 structures constructed before 1967. None have been recommended eligible for listing on the NRHP. Therefore, the proposed action would have no impact on historic properties.

The Johnson-Fisher Cemetery, located at the intersection of LA Highway 23 and Civic Drive, extends well into the existing ROW. Planned construction in the immediate area of the Johnson-Fisher Cemetery is limited to the opposite side (east) of LA Highway 23. The Roxy Jane Cemetery lies a short distance outside of the existing and required ROW at ~27815 LA Highway 23 and will not be affected by the planned construction.

VISUAL / AESTHETIC IMPACTS

No Build Alternative

Under the No Build Alternative, there will be little if any visual and aesthetic impacts related to the completion of some planned projects and projects under construction. The new Port Sulphur branch library and new Plaquemines Medical Center will become new visual markers along the route.

Proposed Action

The Proposed Action will also have little, if any visual impact on the primary impact area as it involves the widening of an existing roadway. To the fullest extent possible, right-of-way taking was minimized and “bump outs” for u-turns were situated so as to minimize impacts to significant trees along the route. However, the transition to the 4 lane section at the southern end of the route required additional right-of way, and will likely result in the removal of 2-3 live oaks. It should be noted that these exist in a grove-like setting rather than as stand-alone trees, and can be replaced on a one-for-one basis as a form of mitigation.

AIR QUALITY IMPACTS

Air

The United States Environmental Protection Agency (EPA) has established allowable concentrations and exposure limits called the National Ambient Air Quality Standards (NAAQS) for various "criteria" pollutants. These pollutants include carbon monoxide (CO), nitrogen oxides (NOx), ozone (O3), particulate matter (PM10 and PM2.5), sulfur oxides (SOx), and lead (Pb).

In accordance with the Clean Air Act Amendments of 1990 (CAAA of 1990), EPA identified those areas that did not meet the NAAQS for the criteria pollutants and designated them as "nonattainment" areas. Once a nonattainment area meets the NAAQS, it is re-designated as a "maintenance" area.

Plaquemines Parish is currently not a nonattainment or maintenance area for any criteria pollutant.

Transportation Conformity

Transportation conformity is a process required of Metropolitan Planning Organizations (MPOs) pursuant to the Clean Air Act Amendments of (CAAA) of 1990. CAAA require that transportation plans, programs, and projects in nonattainment or maintenance areas that are funded or approved by the Federal Highway Administration (FHWA) be in conformity with the State Implementation Plan (SIP), which represents the State's plan to either achieve or maintain the NAAQS for a particular pollutant.

The proposed project is not located in a nonattainment or maintenance area, so conformity does not apply to this project.

Carbon Monoxide (CO)

Transportation projects have the potential to affect air quality by changing the number of vehicles at specific locations. Tailpipe emissions from vehicles could result in increases in ambient concentrations of carbon monoxide (CO) near the project.

Carbon monoxide (CO) is a colorless, odorless gas that interferes with the delivery of oxygen to a person's organs and tissues. The health effects of CO exposure depend on the duration and intensity of exposure as well as a person's health. CO concentrations are usually higher during the winter months because vehicles emit higher CO emissions in cold weather due to the characteristics of internal combustion engines.

The state of Louisiana is in attainment statewide for CO. EPA and FHWA guidance state that a CO hot spot analysis is suggested only for signalized intersections operating below

Level of Service C. There are no planned signalized intersections for this project and it is anticipated that LA23 will operate at or above LOS C. CO concentrations are not anticipated to cause or contribute to an exceedance of the CO NAAQS.

Mobile Source Air Toxics (MSATs)

On February 3, 2006, FHWA released "Interim Guidance on Air Toxic Analysis in NEPA Documents."[Ref] The purpose of this guidance is to advise on when and how to analyze Mobile Source Air Toxics (MSATs) in the NEPA process for highways. This guidance is interim because MSAT science is still evolving. As the science progresses, FHWA will update the guidance.

A basic analysis of the potential MSAT emissions impacts of this project was completed in accordance with this Interim Guidance.

Technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions. The qualitative assessment presented below has been prepared in accordance with FHWA's Interim Guidance derived in part from a study conducted by the FHWA entitled "A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives."

FHWA's Interim Guidance groups projects into the following categories:

- Exempt Projects or Projects with no Meaningful Potential MSAT Effects;
- Projects with Low Potential MSAT Effects; and,
- Projects with Higher Potential MSAT Effects.

Examples of projects with low potential MSAT emissions include minor widening projects and new interchanges, such as those that replace a signalized intersection on a surface street, or where design year traffic projections are less than 140,000 to 150,000 annual average daily traffic (AADT).

The Build Alternative includes the widening of LA23 and meets the definition of a project with low potential MSAT effects as the highest design year AADT on LA23 is substantially lower than the FHWA criterion.

For the No-Build and Build Alternatives, the amount of MSATs emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The estimated VMT for the Build Alternative is essentially the same as the VMT for the No-Build Alternative. Therefore, it is expected that there would be no appreciable difference in overall MSAT emissions between the No-Build and Build Alternatives.

Additionally, travel speeds for the Build Alternative will be higher than for the No-Build Alternative. According to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated for the Build Alternative will have the effect of moving some traffic closer to nearby homes and churches; therefore, under the Build Alternative there may be localized areas where ambient concentrations of MSATs could be higher than under the No-Build Alternative. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

Substantial construction-related MSAT emissions are not anticipated for this project as construction is not planned to occur over an extended building period. However, construction activity may generate temporary increases in MSAT emissions in the project area.

TRAFFIC NOISE AND IMPACTS

Noise impacts are determined by comparing future “design year” project worst-hour $L_{eq}(h)$ values at areas of frequent human use to: (1) a set of Noise Abatement Criteria (NAC) for different land use categories, and (2) existing $L_{eq}(h)$ values. The FHWA noise standards (23 CFR 772) and DOTD’s noise policy state that when traffic noise impacts have been identified, then noise abatement should be considered.

Table IV-13 shows the land uses that are classified as Activity Categories A - G and the corresponding NAC.

Table IV-13
Noise Abatement Criteria in 23 CFR 772

Activity Category	*Activity $L_{eq}(h)$*	*Evaluation Location*	*Activity Description*
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[1]	67	Exterior	Residential
C [1]	67	Exterior	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E [1]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	–––	–––	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	–––	–––	Undeveloped lands that are not permitted.

[1] *Includes undeveloped lands that are permitted for this activity category.*

Specifically, a receptor is impacted in either of two ways:

1. The predicted, worst hour, design year $L_{eq}(h)$ approaches or exceeds the NAC, even if there is not a substantial increase over the existing levels. "Approach" is defined by DOTD as 1 dBA less than the appropriate NAC. As an example, the NAC for Activity Category B and C land uses is 67 dBA. An impact would occur if the design year $L_{eq}(h)$ is predicted to be 66 dBA or higher at a point of frequent exterior human use for a land use in either category.

2. The predicted, worst hour, design year $L_{eq}(h)$ exceeds the existing $L_{eq}(h)$ by 10 dBA or more, even if the NAC is not approached or exceeded.

Identification of Noise Sensitive Land Uses

A review of available electronic mapping as well as field reconnaissance identified residences on both sides of LA23 between the project's start north of Oak Ridge Drive and the project's end south of the Plaquemines Parish offices. A total of 253 single family homes, mobile home trailers or RVs were found within 500 feet of the proposed edge of roadway. The NAC for Activity Category B will apply to these noise-sensitive land uses. Noise impacts will be identified and noise abatement will be evaluated if future sound levels are 66 dBA or higher, or if an increase of 10 dBA or more is predicted over existing sound levels.

Other noise-sensitive land uses within 500 feet of the project that might be affected by traffic noise are the Plaquemines Parish Medical Center, Plaquemines Parish School Board Learning Center and the cemetery at Civic Drive and LA23. Each of these land uses are in Activity Category C. Noise impacts will be identified if future, exterior sound levels are 66 dBA or higher, or if an increase of 10 dBA or more is predicted over existing sound levels.

The Port Sulphur Baptist Church, Greater Macedonia Baptist Church, and the Mount Sinai Greater Baptist Church are land uses that also fit in Activity Category C. Noise impacts will be identified if future, exterior sound levels are 66 dBA or higher, or if an increase of 10 dBA or more is predicted over existing sound levels.

Several commercial land uses were noted during the field reconnaissance, however, since none of these land uses had exterior uses they were not included as part of this study.

There are several tracts of undeveloped Activity Category G lands along the project. These undeveloped lands are not noise-sensitive and have not been included in the noise analysis. However, noise impacts could occur in the future if noise-sensitive land uses are constructed near LA23. A discussion of future sound levels and the need for noise-compatible land use planning is provided later in this report.

Prediction of Existing and Future Traffic Noise Levels

The FHWA's Traffic Noise Model (TNM) predicted sound levels that are shown in **Table IV-14** below and resulting impacts were determined by evaluating those noise levels against the NAC. In Table IV-13 most receptor names are reflective of the address or name (in the case of non-residential receptors) of the land use. In instances where the address of a residential receptor was not available the receptor name is based on the approximate project stationing.

Table IV-14
Predicted Traffic Noise Levels and Impact Determinations

Receiver Name	Number of Represented Residences	Existing $L_{eq}(h)$ (dBA)[1]	Build $L_{eq}(h)$ (dBA)[1]	Increase Over Existing (dBA)	No Build Leq(h) (dBA)[1]
26045 Hwy 23	1	59	62	3	61
26055 Hwy 23	2	58	61	3	59
110 Oakridge Dr (M)	1	64	65	1	***66***
26058 Hwy 23	2	57	62	5	58
1-40	1	64	65	1	65
1-41	1	63	65	2	64
26280 Hwy 23	2	63	65	2	64
1-MG46	2	***66***	***68***	2	***68***
1-MG48	2	***66***	***67***	1	***67***
1-SO48	1	57	61	4	58
110 Holiday Dr (M)	1	64	65	1	65
105 Holiday Dr	1	64	65	1	65
26386 Hwy 23	1	54	59	5	56
26432-26442 Hwy 23	2	58	62	4	59
26454-26462 Hwy 23	2	65	***66***	1	***66***
1-63	2	58	62	4	60
1-65	2	63	64	1	64
26571-26523 Hwy 23	2	63	64	1	64
26537 Hwy 23	1	59	62	3	60
26564 Hwy 23	1	51	56	5	52
1-75	1	60	63	3	61
26582 Hwy 23	1	60	63	3	61
26602 Hwy 23	2	56	60	4	57
1-80	2	58	62	4	59
1-81	1	57	61	4	58
26689 Hwy 23	1	65	***67***	2	***66***
117 Udstad Lane	2	57	61	4	58
1-AZ93	3	61	64	3	62
26783 Hwy 23	1	***66***	***68***	2	***67***
111 North St (M)	2	62	64	2	63
1-MO98	1	64	***66***	2	***66***
109 South Street	2	61	64	3	62
1-98	2	60	63	3	61
1-101	1	***66***	***67***	1	***67***
26918-26922 Hwy 23	1	63	65	2	64
26928 Hwy 23	2	63	65	2	64
27061 Hwy 23	3	63	64	1	64
Port Sulphur Baptist Church	--	59	63	4	60

Table IV-14 (continued)
Predicted Traffic Noise Levels and Impact Determinations

Receiver Name	Number of Represented Residences	Existing $L_{eq}(h)$ (dBA)[1]	Build $L_{eq}(h)$ (dBA)[1]	Increase Over Existing (dBA)	No Build Leq(h) (dBA)[1]
1-134	2	60	63	3	61
1-135	1	58	62	4	59
27209 Hwy 23(M)	1	***66***	***67***	1	***67***
27221 Hwy 23	2	65	***66***	1	***66***
27220 Hwy 23	3	65	***67***	2	***66***
27284 Hwy 23	1	63	65	2	65
111 W. Bellvue	2	57	61	4	58
27334 Hwy 23	1	61	63	2	62
27365-27377 Hwy 23	2	64	65	1	65
27390 Hwy 23	1	62	64	2	63
116 Jolie Lane	1	60	62	2	61
121 Gilberts Lane	3	61	62	1	62
27464 Hwy 23	1	53	57	4	54
165 Adema Lane	1	58	61	3	59
27502 Hwy 23	2	55	59	4	56
27506 Hwy 23 (M)	1	61	63	2	62
27499 Hwy 23	1	63	65	2	64
27545 Hwy 23	1	57	60	3	58
27619 Hwy 23	1	59	61	2	61
27628 Hwy 23	1	62	64	2	63
27635 Hwy 23	1	59	61	2	61
27651 Hwy 23	1	63	64	1	64
1-LE188	2	58	61	3	59
27719-27721 Hwy 23	2	64	65	1	65
27786 Hwy 23	1	62	64	2	63
27840 Hwy 23	2	60	62	2	61
118 Nailor Lane	1	57	60	3	58
27839 Hwy 23	1	63	65	2	64
1-203	1	60	62	2	61
27900 Hwy 23	1	59	60	1	60
Cemetery	--	65	64	-1	***66***
Mt. Sinai Church (M)	--	57	59	2	58
1-218	1	56	60	4	57

[1] Noise impacted receptors are in ***bold italics***

Noise Impact Summary

An impact assessment was completed for the Existing, Build and No-Build scenarios. As shown in **Table IV-15**, there will be a total of sixteen impacted residential properties (Activity Category B), for the Build case. All of the impacts will be in terms of approaching or exceeding the NAC with no impacts caused by an increase of 10 dBA over the Existing noise level.

Table IV-15
Summary of Noise Impacts

Prediction Case	Impacts
Existing Year 2012	7 residences
Build Year 2012	16 residences
No Build Year 2012	17 residences 1 cemetery

Noise Abatement

In accordance with criteria in the DOTD noise policy, noise abatement needs to be studied first for "feasibility" and, if feasible, for "reasonableness." Noise barriers must be both feasible and reasonable for them to be deemed likely for construction.

Feasibility includes acoustical and engineering considerations. Acoustical feasibility means that a noise barrier will provide at least a 5 dBA reduction in the one-hour equivalent sound level for at least 75% of the first-row, impacted receptors. If a barrier cannot meet this criterion, abatement is considered to not be acoustically feasible. Additionally, the noise barrier should be feasible from an engineering perspective. Engineering feasibility takes into account topography, drainage, safety, barrier height, utilities, and access and maintenance needs (which may include right-of-way considerations). If a barrier poses engineering problems, it may be judged as not feasible even if it meets the acoustical feasibility criterion, and it will not be recommended for construction.

If feasible, then the barriers are assessed for reasonableness in accordance with the criteria in DOTD's noise policy. All proposed noise abatement must meet the following three criteria to be considered reasonable by DOTD. If any of the criteria is not met, noise abatement measures will not be constructed.

1. *Noise Reduction Design Goal:* At a minimum, at least one receptor must receive an 8 dBA reduction for the noise abatement system to be reasonable.
2. *Cost-Effectiveness:* If the estimated cost of constructing a noise barrier (including installation and additional necessary construction such as foundations or guardrails) divided by the number of benefited receptors (those who would receive a reduction of at least 5 dBA) is $35,000 or less per benefited receptor, a

barrier is considered to be cost-effective.

3. *Consideration and Obtaining Views of Residents and Property Owners*: The viewpoints of the affected property owners and residents are important. For those barriers found to be reasonable by the Cost-Effectiveness and Design Goal criteria above, viewpoints of the benefited receptors and affected property owners will be sought.

For this project all of the impacted, first row receptors are either isolated single residences or small groups of 2-3 residences with driveway access through the right of way where a noise barrier would need to be constructed. The expense of protecting a single residence with a noise barrier will not pass the cost-effectiveness test of the reasonableness determination. For the groupings of 2-3 residences with needed driveway access DOTD policy states, "noise barriers that block existing driveways are considered unfeasible". Therefore, there are no noise barriers that are considered feasible or reasonable for this project.

Construction Noise

The construction of the project would result in temporary noise increases for the residences and noise-sensitive land uses along LA23. Any other noise-sensitive land uses that are located farther from the project area would likely experience little, if any, increase in noise levels because of the background noise of the LA23 traffic, traffic on other roads, and other community noise sources. The construction noise would be generated primarily from heavy equipment used in hauling materials and accomplishing the widening of the roadway.

The construction contractor has the responsibility for protection of the general public in all aspects of construction throughout the life of the project. All construction equipment will be required to comply with OSHA Regulations as they apply to the employees' safety, and in accordance with the DOTD Standard Specifications. All construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. In order to minimize the potential for impacts of construction noise on the local residents, the contractor should only operate, whenever possible, between the hours of 7:00 AM and 5:00 PM.

Coordination with Local Officials

DOTD encourages local communities and developers to practice noise compatibility planning in order to avoid future noise impacts. Generalized noise predictions for the design year 2032 peak hour were made for areas along LA23 where vacant and possibly developable lands exist. The results showed exterior residential activities would be considered to be impacted out to a distance of roughly 60 feet from centerline of the nearest travel lane of LA23. The modeled levels and associated impact distance at any particular site along LA23 will vary depending on the actual terrain and other conditions

at that site. This information is being included to make local officials and planners aware of anticipated highway noise levels with the goal that any future development along LA23 will be compatible with these levels.

CONSTRUCTION PERIOD IMPACTS

In the construction phase of the LA 23 widening project, constructing new roadways and installing signalization would result in various construction-related effects. The population that would be most affected includes local residents whose neighborhoods are located adjacent to the proposed improvements. Vehicular traffic along the existing route and intersecting streets would inevitable experience some delays and minor inconveniences as a result of construction.

No Build Alternative

The No Build Alternative includes 2 new building projects located within the project study area. These projects may produce construction impacts within the Study Area. These projects must be coordinated with the affected jurisdictions and authorities to ensure that proper permits are obtained and the potential construction effects limited.

Proposed Action

The Proposed Action includes construction of a widened, four-lane divided roadway, including construction of new at-grade roadways, medians, and subsurface drainage. This construction will produce disturbances such as noise, vibration, excavation, debris and will require construction staging areas. Short-term construction traffic impacts will also be present under this alternative.

The construction impacts for the Proposed Action are described for each type of impact below:

Construction Period Noise and Air Quality

As mentioned in the previous section, the construction of the proposed project would result in temporary noise level increases within the study area. The noise would be generated primarily from heavy equipment used in hauling materials and building the roadway. Sensitive areas located close to the construction alignments may temporarily experience increased noise levels; however, there are currently no areas within the study area where quiet is of extraordinary significance, and therefore no such areas should be significantly impacted by construction noise.

The construction of the proposed project could result in short-term air quality impacts, particularly related to particulate matter (dust), during project construction. To minimize

potential air quality impacts, particularly related to control of particulate matter, the contractor shall comply with all relevant State, Federal and local laws and regulations.

Construction Period Vibration

As no structures are involved with this project, there should be no pile driving to cause vibrations. The only vibration impacts which may occur during construction would be from loading and unloading of material from trucks, which is expected to be minor in nature.

Excavations, Fill Material, Debris and Spoil

Excavated material for roadway and foundation is not anticipated to require specialized disposal. A Phase I ESA was conducted for this study and a summary of this report is included as a part of this document.

Fill material for the project is readily available locally.

Construction debris from the project will require disposal. No anticipated construction debris is anticipated to require specialized disposal.

Construction Staging Areas

A construction staging area will be needed for construction. Substantial amounts of vacant, privately-held land exist along the project route and will likely need to be leased as staging areas.

HAZARDOUS AND SOLID WASTE SITES

No Build Alternative

The No Build Alternative would have no impact on facilities/sites with recognized environmental conditions.

Proposed Action

Based on the findings of this Phase I ESA and the presence of RECs along the route, the following steps are recommended:

- Conducting Phase II Environmental Site Assessment inclusive of environmental media sampling to determine if the former fueling stations have any petroleum

contamination should land acquisition involve these sites. The Phase II sampling should be done in accordance with most current ASTM standard E1903 Phase II Environmental Site Assessment, the LDEQ Voluntary Remedial Action Process or other agency approved process.

- Determine the status of the Tesvich property Brownfield Environmental Site Assessment should land acquisition involve this site.

- Determine location of the Tennessee Gas Pipeline subsurface piping and any other subsurface utilities prior to final engineering of Hwy 23.

IMPACTS ON THE NATURAL ENVIRONMENT

VEGETATION

No Build Alternative

No impacts to vegetation in the Project Area are foreseen under the No Build Alternative.

Proposed Action

The construction of the project will have a minor impact on existing vegetation. The overwhelming majority of construction for the project is located in existing right-of-way, which has been cleared of trees. However, as mentioned in the visual/aesthetic impacts section earlier, the transition to the 4 lane section at the southern end of the route requires additional right-of way, and will likely result in the removal of 2 to 3 live oaks, which are considered significant trees. It should be noted that these exist in a grove-like setting rather than as stand-alone trees, and can be replaced on a one-for-one basis as a form of mitigation.

WILDLIFE

No Build Alternative

Construction of the No-Build Alternative should not adversely affect the native wildlife types as they are abundant in number and are adaptable on an individual basis. Any wildlife present should be able to re-establish itself in new locations rather easily.

Proposed Action

Construction of the Proposed Action should not adversely affect the native wildlife types as it only involves the widening of an existing roadway within cleared right-of-way. Again, the native wildlife types are abundant in number and are adaptable on an

individual basis. Any wildlife present should be able to re-establish itself in new locations rather easily.

WETLANDS

No Build Alternative

The No Build Alternative would have no impact on wetlands.

Proposed Action

The clearing of vegetation and construction of the roadway within one of the required ROW bump outs would remove approximately 0.1810 acres of wetlands.

NATURAL AND SCENIC RIVERS

No Build Alternative

No impacts to the area's natural or scenic rivers would occur under the No Build Alternative.

Proposed Action

No scenic rivers are present within a 1-mile radius of the project area. Therefore, the project will have no adverse impacts on natural and scenic rivers.

THREATENED AND ENDANGERED SPECIES

No Build Alternative

The No Build Alternative would not affect any rare, threatened or endangered species or critical habitat.

Proposed Action

The US Fish & Wildlife Service, after reviewing the information presented in the *Solicitation of Views*, responded that after review, the project will have no effect on Federal trust resources protected by the Endangered Species Act of 1973. Similarly, the Louisiana Department of Wildlife and Fisheries also responded that no impacts to rare, threatened or endangered species or critical habitat are anticipated for the proposed project.

HYDROLOGY, FLOODPLAINS AND FLOODING

No Build Alternative

The No-Build Alternative would not affect the current floodplain designations, nor would it likely affect the hydrology or flooding of the project area.

Proposed Action

Similar to the No-Build Alternative, the hydrology and floodplains in the project area would not be affected by the construction or operation of the projects included in the Proposed Action. The existing ditches and swales within the ROW will be replaced with pipes, existing cross-pipes will be maintained (though extended across the widened roadway and pipes under the existing roadway) and existing drainage patterns will continue.

WATER QUALITY

No Build Alternative

The No Build Alternative would not adversely affect water quality or sole source aquifers.

Proposed Action

The Proposed Action would not affect water quality in the project area. Correspondence from the US EPA, Ground Water UIC section received in response to the *Solicitation of Views* stated that there is no sole source aquifer in the project area to be affected by the proposed project (Bechdol, 2012).

PRIME FARMLAND AND SOILS

No Build Alternative

There would be no impacts to study area soils or geology if the No Build Alternative is selected. No mitigation would be proposed or required with this alternative.

Proposed Action

There should be no loss of Prime Farmland and Soils as a result of this project, as the majority of the project is a roadway widening within existing highway right-of-way. The construction areas in the project study corridor have been designated as within urban

areas by the National Resources Conservation Service, and are therefore exempt from the rules and regulations of the Farmland Protection Policy Act (Norton 2012).

COMPARATIVE ANALYSIS OF THE ALTERNATIVES

EVALUATION MEASURES

Aspects of the stated purpose and need for of the project identified in *Chapter I* are used as criteria to assess the effectiveness of the two alternatives considered (the No-Build Alternative and the Proposed Action) in addressing the purpose and need for the project. A text description of how each alternative meets the purpose and need for the project is presented below.

Economic Development

The existing LA Hwy 23 is hampered by its state of having a two lane "bottleneck" on what is otherwise a four-lane facility. If left unimproved, this existing problem can be expected to increase due to the continued recovery from Hurricane Katrina and as local industry continues to rebuild. It is also important to enhance the overall plan to provide roadway network continuity, sufficient roadway access, mobility, and capacity improvements to meet future traffic demand.

Currently, the two-lane segment of LA 23 experiences Level of Service (LOS) "E" during both peak periods. This indicates that slow moving traffic, inability to pass and interruptions in traffic flow exist. This Level of Service status is projected to continue under future conditions. The traffic analyses in this report indicate that a four-lane roadway is expected to operate with LOS A, a significant improvement over the existing and projected 2031 No Build conditions.

While redevelopment and growth in South Plaquemines Parish is currently occurring and will likely continue to occur under the No Build Alternative, the Proposed Action provides a better opportunity for the area to participate in economic growth. The widening can entice economic development by providing quick and efficient access to redeveloping existing areas and "opening up" new areas for development.

Increased Roadway Safety

Safety is one facet of the Proposed Action's merit when compared to the No Build Alternative. In terms of roadway safety, the addition of a median alone is expected to reduce crash tendencies. The Highway Safety Manual (HSM) 1st Edition by AASHTO indicates that providing a raised median has been shown to reduce all types of crashes on two lane and rural four lane roadways. It is expected that rear end crashes involving motorists turning from LA 23 to residential areas would be reduced as vehicles will now be able to use the opposite lane for passing vehicles that are slowing down to turn. Right

angle crashes involving motorists turning to LA 23 from residential areas would be reduced as the majority of the side streets and driveways will now be right-in/right-out and larger gaps in traffic are expected. Potential head on collisions are also reduced as there will be a median separating the travel lanes.

Improved Hurricane Evacuation

Finally, in regards to *hurricane evacuation*, LA 23 is not only the Official Evacuation Route for Plaquemines Parish; it is the only evacuation route for the entire lower portion of Plaquemines Parish. This route serves not only the residents of lower Plaquemines, but also numerous oil rig workers in the Gulf of Mexico who utilize lower Plaquemines as their point of embarkation and return. As noted above, the mainline roadway of the project area is the only two lane section of LA 23. In a hurricane evacuation scenario, it acts as a bottleneck for northbound traffic. This bottleneck would be eliminated with the adding of capacity in the project area, and would continue to exist if the No Build Alternative is selected.

SELECTION OF THE PREFERRED ALTERNATIVE

As a result of the comparative analysis above and due to the consensus shown by local officials and residents, the Proposed Action is selected as the Preferred Alternative.

CHAPTER V

THE PREFERRED ALTERNATIVE: IMPACT SUMMARY, MITIGATION MEASURES, COMMITMENTS AND PERMITS

The Direct Impacts to the transportation system and the human and natural environments as a result of the implementation of the Preferred Alternative are listed. For unavoidable adverse impacts, this chapter provides a discussion of mitigation measures recommended to reduce those adverse effects. The indirect and cumulative impacts of the Preferred Alternative are also examined in this chapter. Commitments made to further the project are then described. The Chapter concludes with a section in which the permits required to complete the project are listed.

DIRECT IMPACTS NOT REQUIRING MITIGATION

As outlined in *Chapter IV*, implementation of the Preferred Alternative (widening of LA Hwy 23) will likely have some direct impacts within the project study area. Three (3) of these impact categories are considered non-adverse/beneficial, and require no mitigation measures. They include:

- Traffic Impacts
- Access to Community Facilities/Services
- Land Use (Redevelopment)

DIRECT IMPACTS REQUIRING MITIGATION

Four other impacts or impact area categories are considered unavoidable, adverse social, economic, or natural environmental impacts that require some form of mitigation:

- Removal of 2-3 Significant Trees (Vegetation Impacts / Visual Aesthetic Impacts)
- Construction Period Impacts
- Hazardous & Solid Waste Sites
- Wetlands

A discussion of the proposed mitigation measures for each is provided below:

The construction of the project will have a **minor impact on existing vegetation and visual/aesthetic impacts as the project is likely result in the removal of 2 to 3 live oaks, which are considered significant trees.** It should be noted that these exist in a grove like setting rather than as stand-alone trees, so the impact is limited, and the removed trees can be replaced on a one-for-one basis with new trees of adequate diameter

at breast height (dbh) as a form of mitigation.

In terms of mitigation of **construction period impacts** (noise, air quality and vibration), several mitigation steps shall be taken and proper procedures followed. To minimize noise impacts, all construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. In order to minimize the potential for impacts of construction noise on the local residents, the contractor should operate, whenever possible, between the hours of 7:00 a.m. and 6:00 p.m. To minimize potential air quality impacts, particularly related to control of particulate matter, the contractor shall comply with all relevant State, Federal and local laws and regulations. To minimize vibration impacts, pile driving operations should be monitored at critical structures, pavements and utilities during all pile driving operations. To minimize impacts to drainage channels and excavated ponds, the following procedures should be followed:

- Channel work should be minimized and the rerouting of stream segments should be avoided. If channel work is necessary, precautions should be taken to avoid channel degrading from head-cutting. For example, grades at the culverts and bridges should remain at their existing grade.

- Minimize impacts to the riparian corridor, especially forested areas. For new crossings, prior cleared areas in the floodplain should be used when possible.

- To reduce the width of impact through any floodplain/riparian area, the entire right-of-way through the riparian area of floodplain should not be cleared. Only clear what is needed for access and construction. Constructing feeder roads across floodplains should be avoided.

- Minimize impacts to the creek banks (soil and vegetation). Stabilize and replant disturbed banks as soon as construction at that specific site is finished.

- Best Management Practices (BMPs) be used to avoid and minimize water quality impacts and to minimize erosion of banks and bare soil and the siltation of streams. Bare soil should he stabilized and revegetated as soon as possible.

- Wetlands or forested floodplains should not be used for staging or storage area.

- The applicant should thoroughly brief contractors on all permit conditions. Copies of the issued permit should be posted at the project site during construction for easy reference to avoid misunderstanding and inadvertent violations.

As indicated earlier the document, in regards to Hazardous and Solid Waste Sites, a number of recognized environmental conditions were noted along the corridor. Based on the findings of this Phase I ESA and the presence of RECs along the route, the following mitigation steps are recommended:

- Conduct Phase II Environmental Site Assessment inclusive of environmental media sampling to determine if the former fueling stations along the route have any

petroleum contamination should land acquisition involve these sites. The Phase II sampling should be done in accordance with most current ASTM standard E1903 Phase II Environmental Site Assessment, the LDEQ Voluntary Remedial Action Process or other agency approved process.

- Determine the status of the Tesvich property Brownfield Environmental Site Assessment should land acquisition involve this site.
- Determine the location of the Tennessee Gas Pipeline subsurface piping and any other subsurface utilities prior to final engineering of Hwy 23.

In regards to **Wetlands**, a very small portion (0.1810 acres) would be removed. The wetland within the project corridor has very minimal value as wildlife habitat because of its cleared status, small size, location within a developed area of Plaquemines Parish, and relatively low vegetation species diversity. The wetland that would be impacted by construction of the proposed action is not unique or critical to the survival of any known wildlife species.

The State can work with the regulatory agencies to develop appropriate mitigation for any unavoidable, permanent impacts if this becomes a Corp-recognized jurisdictional wetland.

INDIRECT (SECONDARY) IMPACTS

The indirect or secondary impacts discussed in this section concern possible future conditions following construction of the LA Hwy 23 Widening.

As noted earlier in the report, residential and commercial activity has severely decreased as a result of major hurricanes over the last ten years. Redevelopment has been occurring, but at a relatively slow pace. With an improved route and improved access in place, there is also an opportunity for further economic growth than that which is anticipated--perhaps commercial or industrial growth.

Most in the area see redevelopment and economic growth as a positive trend. Transportation is, of course, tied into this growth. Without a transportation network there can be no growth. But transportation in and of itself does not and cannot create the growth-- there are several other factors at work, such as desirability of location, presence of utilities and other infrastructure, issuance of development permits by appropriate agencies, etc. Transportation developments, such as widening of an existing highway, can only *affect* this growth.

Normally, the mitigation measures for handling growth-related impacts are already in the public's hands, and the public sector will lead the way in determining the limit and scope of mitigation. The most common public process mechanism to do so is via *planning* and *zoning*. Plaquemines Parish is currently underway with the development of a comprehensive master plan which will guide its growth over the following decades.

CUMULATIVE IMPACTS

This section provides a definition of *cumulative impacts*; the methodology utilized to determine cumulative impacts, and describes the cumulative impacts for the Preferred Alternative. In general, a cumulative impact is the impact of this project considered together with all past, present and foreseeable projects in the area.

METHODOLOGY

The Code of Federal Regulations (Title 40, Section 1508.7), states that cumulative effects are *"…impacts which result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions, …"* The assessment will determine the impact(s) upon quality of life and environmental quality. Consideration of past, present, and foreseeable future actions in conjunction with anticipated effects of the Preferred Alternative is required. The point of the assessment is to determine the past impacts that have occurred, the present impact implications, and future impacts to the entire study area.

Past Actions

The methodology of assessing the cumulative impacts of the Preferred Alternative also considers the impacts from past projects within the study area of lower Plaquemines Parish. Cumulative past impacts include the impacts from the overall improvement of the remainder of LA 23 to a four-lane facility; impacts from the development and post-hurricane redevelopment of residential, commercial, office, industrial and governmental land uses in lower Plaquemines; and completed flood protection and drainage projects.

Current Projects

The methodology of assessing the cumulative impacts of the Preferred Alternative also considers the impacts on other major current projects within the study area of lower Plaquemines Parish. Current, ongoing projects or developments that are included in the Preferred Alternative's cumulative impact analysis include:

- Redevelopment in the project area, including both the public sector (South Plaquemines Elementary School, Plaquemines Medical Center) and the commercial/commercial/industrial sector.
- Ongoing flood protection and levee work in the Parish.

Future Projects

The methodology of assessing the cumulative impacts of the Preferred Alternative also considers the impacts on future foreseeable projects or developments within the study areas of Plaquemines Parish. Many roadway and highway projects programmed for development are included as part of the No Build Alternative and described in detail in

Chapter II. Additionally, planned facilities that are not yet under construction, such as the Port Sulphur branch of the Plaquemines Parish Library would also be considered.

CUMULATIVE IMPACTS EVALUATION AND SUMMARY

Transportation/Traffic Circulation

The cumulative impact on LA Hwy 23 is that the proposed widening will serve as an upgrade and asset to that highway. The project's cumulative impact on the surrounding routes is positive in that it would prevent traffic delays by improving the level of service during peak periods. It will also improve roadway safety by providing a left lane for passing. Finally, the Preferred Alternative should also increase roadway safety via addition of a median and access management.

Residual impacts may include enhancements such as landscaping or beautification along the route.

Land Use Redevelopment/Development/

Redevelopment of land uses impacted by the major hurricanes of the last decade as well as new land use development could possibly be a positive residual effect as a result of the Preferred Alternative. New land use opportunities could entail further residential and possibly commercial, office, or industrial uses. Due to the rural residential setting, it is anticipated that land use patterns would continue in a similar manner as past development. Substantial change is not anticipated to occur relative to the entire study area's land use character.

Summary

The overall cumulative impacts of the Preferred Alternative on past, current, and foreseeable future projects in the project area would be generally beneficial. The additional transportation utility and traffic capacity of the Preferred Alternative would assist in alleviating current traffic problems and could encourage and increase new land use opportunities.

COMMITMENTS

No commitments relating to the construction of the preferred alternative are currently in place at this time.

PERMITS REQUIRED

- A Section 401 Permit (Water Quality Certification) will be required from the Louisiana Department of Environmental Quality.

- Because the project affects wetlands, a Section 404 Permit will be required from the U. S. Army Corps of Engineers, New Orleans District.

- As the Louisiana Department of Natural Resources Coastal Management Division (CMD) has indicated that the proposed project is located inside the Louisiana Coastal Zone, a Coastal Use Permit (CUP) is required from the CMD.

CHAPTER VI

PUBLIC PARTICIPATION, AGENCY COMMENTS AND COORDINATION

This chapter describes the public participation process for the project, including documentation of public meetings and coordination efforts associated with the development of the project. These efforts included meetings with the RPC, LADOTD, FHWA, other agencies and elected officials and a *Solicitation of Views* requesting written comments on the project.

A complete record of all comments and coordination, including all responses from the *Solicitation of Views*, agency correspondence, public meeting summaries and transcript, sign-in sheets and handouts from the public meetings and all written comments received from citizens and interested parties are located in the project files of LADOTD.

PUBLIC PARTICIPATION

PUBLIC MEETING

An informational public meeting was held at the Port Sulphur Community Center on June 5th, 2012 to familiarize area residents about the project and to gain their input on the project.

The meeting was advertised on May 29th and May 5th in the *Plaquemines Gazette*, and on June 4th in the *Times-Picayune*. Flyers announcing the meeting were posted in public locations and on business bulletin boards along the project corridor prior to the meeting. Twenty-three (23) persons signed in on the sign-in sheets at the entrance to the meeting hall.

The meeting was held in an "open house" format, with the public free to show up anytime during the meeting's scheduled time. Information packet hand-outs were available for the public at the sign-in table, which was manned by consultant staff. The information packet included a comment form that could be turned in at the end of the meeting or mailed in at a later date. The hall featured three different display stations, each manned by consultant staff that was available to answer question. Each station had a display of the full project alignment at 1"= 500' scale on an easel, and 24" X 36"' blow-ups of the report document's 11"X 17" plan view, typical section and detail sheets (at approximately 1" = 175' scale). Copies of the previous Stage 0 Feasibility Report were also available for review at each station. Although no attendees availed themselves of the service, a transcriptionist was on hand to take any oral comments for the official record from attendees. Attendees were free to look at exhibits and ask questions of staff. No comment forms were submitted in person, and two (2) comment forms were received

following the public meeting: one by mail, one by fax. Several persons also contacted the project team afterwards with ideas and requests for additional information.

Summary of Public Comments and Input

The comments and input gathered during the first public meeting are summarized below:

Staff members who manned the stations made note of informal comments and questions received from attendees. Comments and questions discussed with project staff included:

- Building name on sheet (meeting location) is not Port Sulphur Civic Center, but Port Sulphur Community Center,
- The gas pumps near the south end of the project have been relocated out of the LADOTD right-of-way;,
- Truck movements for fueling at gas station at north end of project (approaching and leaving pump area) were described by the station owner, who suggested geometric revisions to better accommodate these movements;
- An attendee expressed their happiness that their 60 year old crepe myrtle trees would not be disturbed by required right-of-way;,
- There was some concern over the median spacing between U-turn locations. Some attendees felt they would have to drive relatively far to make a u-turn., as in a particular location there were six (6) side streets between u-turn locations. It was explained that the LADOTD's EDSM regulations specified a minimum distance between median openings.
- The addition of the median was questioned. Some people felt that a 5 lane section would be better.
- The use and necessity of bump-outs was questioned.
- The desire/need for a truck turn to Fremin's grocery was expressed.
- Many attendees were happy that their property was not being taken, and that very little property was being taken along the route.
- There were many inquiries about the project schedule, project cost, and where funding would come from..
- Compensation amounts for right of way were inquired.
- The drainage system was asked about a few times and if sub surface drainage would be implemented.
- Some people asked if the "alternative" of widening River Road or the idea of a couplet was studied.
- The emergency signal at Civic Drive seemed to please the public.
- Most people seemed to like the project and feel it is necessary to tie into the 4 lane section on either side of the study area.

The two formal comments received via mail or fax after the meeting are presented below:

Rodney J. Barthelemy, resident of Port Sulphur

Comment: After having attended the meeting in Port Sulphur on Tuesday, June 5; reviewing the proposed construction plans; and learning that the Highway 23 widening project will not require the expansion of the existing right-of-way, and that no truck/car turn-around will be constructed in front of my property; my main concern about the additional taking of property is no longer an issue. My lot is not very deep, and I would not want to have any additional property taken that would further reduce the depth/length of my lot. However, after just recently having spent money to purchase limestone to improve my driveway, I am also concerned about restoration of my driveway to its original condition. Or even better, will a concrete apron be installed in the driveway as part of the subsurface drainage? Also, another question that I did not ask at the meeting is: will the project require the relocation of any sewer and water infrastructure? It would certainly cause some disruption in services.

David J. Barthelemy, resident of Port Sulphur

Comment: My lot is relatively small and I cannot afford for any more of my property to be taken that would further reduce its size – without it seriously affecting my quality of life.

Also, is an 18' wide median necessary, and can the size of the proposed median be reduced?

Please stay, as much as possible, within the existing highway right-of-way!

Information from the public meeting, including Meeting Notice and advertisements, sign-in sheets, and written comment forms is included in the Appendix.

AGENCY MEETINGS

Three (3) Agency meetings were held on this project:

- The first of these was a Project Initiation Meeting held at the consultant's office on September 15, 2011. The primary point of this meeting was to discuss points of clarification on the Scope of Work as well as the project schedule. The typical section for the proposed alignment was also discussed. In addition to the consultant team, RPC and LADOTD representatives were in attendance.
- The second agency meeting was held on February 14, 2012 at the Regional Planning Commission offices. The primary purpose of this meeting was to review the build alternative alignment, typical section, u-turn locations and bump-out details at u-turns. In addition to consultant staff, LADOTD, RPC, and Plaquemines Parish staff was present, and LADOTD provided guidance and comments on the geometric details that necessitated some minor revisions.

- The third agency meeting was held on May 22, 2012 in the Plaquemines Parish Government Building. The primary purpose of this meeting was to review the revised alignment, gain local knowledge of key factors along the route, and discuss details of the upcoming public informational meeting. In addition to the consultant team, RPC staff and Plaquemines Parish staff and officials were present, and those officials provided the consultant team with local information on pending developments and suggested several factual corrections, additions and revisions to the build alternative layout. These corrections, additions and revisions were completed prior to the Public Informational Meeting.

SOLICITATION OF VIEWS

Early in the planning stages of a transportation facility, views from federal, state and local agencies, organizations and individuals are solicited. The special expertise of these groups can often assist in the early identification of possible adverse economic, social, or environmental impacts or concerns.

A *Solicitation of Views* (SOV) package regarding the LA 23 Widening EA was distributed by the project consultant. The package included a map showing the general location of the project, and a preliminary project description. The SOV was mailed to approximately ninety (90) agencies, elected officials, and organizations.

Nine (9) responses were received from the following agencies and organizations:

- Department of the Army, New Orleans District, Corps of Engineers
- State of Louisiana, Department of Natural Resources, Office of Coastal Management
- Federal Emergency Management Agency, Region VI
- US Department of the Interior, Fish and Wildlife Service
- US Environmental Protection Agency, Ground Water /UIC Section
- US Department of Agriculture, National Resources Conservation Service
- Louisiana Department of Culture, Recreation & Tourism, Office of State Parks
- Louisiana Department of Wildlife and Fisheries, Office of Wildlife
- Louisiana State Historic Preservation Office

Most of the responses stated that the agencies had no comment, that the project would have no impact in regards to their particular jurisdiction, or that the agency had no objections to the project.

A full copy of the *Solicitation of Views* responses is included in the Appendix of this document.

CHAPTER VII

REFERENCES AND APPENDIX

The Environmental Assessment concludes with this chapter. The References section lists publications, websites and other sources of information used in the writing of this document. The Appendix lists the stand-alone documents and other data which were completed as part of this EA and are considered part of this EA. The Appendix also includes copies of the responses to the *Solicitation of Views* and formal agency responses received during the Draft EA review process. Finally, the Appendix also includes information from the Public Meeting, including Meeting Notice and advertisements, sign-in sheets, and written comment forms.

REFERENCES:

Bass, A. 2012 (July 20). Response to July 12, 2010 letter from Coastal Environments, Inc. regarding Threatened and Endangered Species within LA Hwy 23 Widening Project. Coordinator, Natural Heritage Program, Department of Wildlife and Fisheries.

Bechdol, M. 2012 (July 13). Letter in response to inquiry regarding sole source aquifers in project area. Coordinator, Sole Source Aquifer Program, Ground Water/UIC Section, U.S. EPA, Region 6, Dallas, TX.

Claggett, M., et. al., "*A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*," Federal Highway Administration, Resource Center.

Environmental Laboratory. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0).* U.S. Army Corps of Engineers, Vicksburg District, Wetlands Regulatory Assistance Program, ERDC/El TR-10-20, Nov. 2010. Prepared for U.S. Army Corps of Engineers, Washington, DC. 180 pp

Entering the Quiet Zone: Noise Compatibility Land Use Planning, FHWA, May, 2002. http://www.fhwa.dot.gov/environment/noise/quietzon

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual. Technical Rep. Y-87-1*, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

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Fuller, D. A., 2012 (July 20). Response to July 10, 2012 Solicitation of Views Letter regarding threatened and endangered species in project area. Acting Supervisor, Louisiana Field Office, U.S. Fish and Wildlife Service. Lafayette, LA.

Google Earth

Google Maps

Highway Traffic Noise Policy, Louisiana Department of Transportation and Development, July 2011.

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Interim Guidance on Air Toxic Analysis in NEPA Documents, FHWA, February 3, 2006. http://www.fhwa.dot.gov/environment/airtoxic/020306guidmem.htm

LA 23 Corridor Improvements (Happy Jack to Port Sulphur) Stage 0 Feasibility Study, prepared for Regional Planning Commission by Krebs LaSalle, Le Mieux, April 2010

Louisiana Governor's Office of Homeland Security and Emergency Preparedness. 2010 (Feb 10-Apr. 1). Color aerial photographs flown by Sanborn Map Co., Inc., UTM 15 NAD 83, meters, six inch pixel imagery Geotiffs. Provided by Regional Planning Commission, for Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes, LA

Louisiana Natural and Scenic Rivers System's *Louisiana Natural and Scenic Rivers' Descriptions*

Morgan, K. 2012 (Oct. 17). Telephone communication between Coastal Environments, Inc. (Karen Wicker) and Karl Morgan, Adm., Office of Coastal Management, regarding response to July 10, 2012 SOV letter to Assistant Secretary L. Buatt, LA Department of Natural Resources.

NRCS Web Soil Survey. U.S. Department of Agriculture, Natural Resource Conservation Service. http://websoilsurvey.nrcs.usda.gov Downloaded June 2012.

Procedures for Abatement of Highway Traffic and Construction Noise, 23 CFR 772, Federal Highway Administration

The Audible Landscape: A Manual for Highway Noise and Land Use, FHWA, November, 1974. http://www.fhwa.dot.gov/environment/audible/index.htm

United States Department of Agriculture, Soil Conservation Service, S*oil Survey of Plaquemines Parish, Louisiana*

U. S. Census 2000- 2010, American Factfinder (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml)

U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. 1995. Louisiana Coordinated Conventions and Procedures for Implementing the 1994 Wetland Delineation Memorandum of Agreement.

U.S. Fish and Wildlife Service. 1992. 1:24,000 National Wetlands Inventory Map, interpreted from CIR NASA (Nov. 1988) photography. Atlanta, GA. Digital source: http://107.20.228.18/Wetlands/WetlandsMapper.html Downloaded June 2012.

United States Geological Survey (USGS). 2009. Happy Jack Quadrangle, Louisiana. 1:24,000 series. United States Geological Survey, United States Department of the Interior, Washington, D.C.

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United States Geological Survey (USGS). Date Unknown. Happy Jack, LA. 1:24,000 scale topographic map. Digital download.

United States Geological Survey (USGS). Date Unknown. Port Sulphur, LA. 1:24,000 scale topographic map. Digital download.

APPENDIX:

The following are stand-alone documents which were completed as part of this EA and are considered as part of this EA. They are available for review from the RPC.

- *Traffic Noise and Air Quality Analysis Draft Technical Report – LA 23 Improvements from Happy Jack to Port Sulphur, Plaquemines Parish, Louisiana.* Prepared by Bowlby and Associates, Inc. October 2012.

- *Environmental Site Assessment, Phase I – LA Hwy 23, Happy Jack to Port Sulphur, Plaquemines Parish, Louisiana.* Prepared by Essential Environmental Engineering, Inc., June 2012.

- *Wetlands Finding for LA Hwy 23 (Happy Jack to Port Sulphur), Plaquemines Parish, LA, State Project No. H.001399.* Prepared by Coastal Environments, Inc., August 2012.

- *LA 23 (Happy Jack to N. Port Sulphur) Traffic Data Collection and Analysis*. Prepared by Urban Systems Associates, Inc., February 2014.

- *LA Highway 23 Happy Jack to North Port Sulphur Cultural Resource Investigations, Plaquemines Parish, LA, SP. No. H.001399,* Prepared by Coastal Environments, Inc. October 2012

Copies of the *Solicitation of Views* responses and formal agency responses during the Draft EA review process are presented beginning on the following page. Following the *Solicitation of Views* responses is information from the Public Meeting, including Meeting Notice and advertisements, sign-in sheets, and written comment forms.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

July 13, 2012

RECEIVED
JUL 18 2012
N-Y ASSOCIATES, INC.

Mr. Bruce J. Richards, AICP
Consultant Project Manager
N-Y Associates, Inc.
2750 Lake Villa Drive
Metairie, LA 70002

Dear Mr. Richards:

We have received your July 10, 2012, letter requesting our evaluation of the potential environmental impacts that might result from the following project:

Improve Traffic Operations
on LA 23
SP No. H.001399
RPC Contract LA23ENV1
N-Y Job No. 11010.01
Plaquemines Parish, Louisiana

In administering the sole source aquifer (SSA) program under Section 1424 of the Safe Drinking Water Act our Office performs evaluations of projects with federal financial assistance which are located over a designated sole source aquifer.

Based on the information provided, we have concluded that the project does not lie within the boundaries of a designated sole source aquifer and is thus not eligible for review under the SSA program.

If you did not include the Parish/County; a legal description; project location and the latitude and longitude if available, please do so in future Sole Source Aquifer correspondence.

If you have any questions on this letter or the sole source aquifer program please contact me at (214) 665-7133.

Sincerely yours,

Michael Bechdol, Coordinator
Sole Source Aquifer Program
Ground Water/UIC Section

cc: Jesse Means, LDEQ

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302

(318) 473-7751
Fax: (318) 473-7626

RECEIVED

JUL 19 2012

N-Y ASSOCIATES, INC.

July 16, 2012

Bruce Richards
N-Y Associates, Inc.
2750 Lake Villa Drive
Metairie, LA 70002

RE: LA Hwy 23 – Happy Jack to North Port Sulphur – State Project No. H.001399

Dear Mr. Richards:

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

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map submitted with your request indicates that the proposed construction areas are within urban areas and therefore is exempt from the rules and regulations of the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549.

For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location:

http://websoilsurvey.nrcs.usda.gov/

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

Respectfully,

W. [illegible]

ACTING FOR

Kevin D. Norton
State Conservationist

Helping People Help the Land

An Equal Opportunity Provider and Employer

JAY DARDENNE
LIEUTENANT GOVERNOR

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

CHARLES R. DAVIS
DEPUTY SECRETARY

STUART JOHNSON, PH.D.
ASSISTANT SECRETARY

July 13, 2012

RECEIVED
JUL 18 2012
N-Y ASSOCIATES, INC.

LA 23 Environmental Assessment
c/o N/Y Associates, Inc.
attn: Bruce J. Richards, AICP
2750 Lake Villa Drive
Metairie, LA 70002

Re: LA Highway 23 (Happy Jack to North Port Sulphur)
Stage 1 – Environmental Assessment
Plaquemines Parish

To Whom It May Concern:

I am in receipt of the solicitation of views request for a road widening and improvement project of LA Highway 23 from Happy Jack to North Port Sulphur, Plaquemines Parish, Louisiana.

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

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

Sincerely,

Cleve Hardman
Director of Outdoor Recreation

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

AUG 01 2012

REPLY TO
ATTENTION OF

Operations Division
Operations Manager,
Completed Works

Mr. Bruce Richards
NY Associates, Inc.
2750 Lake Villa Drive
Metairie, Louisiana 70002-6797

Dear Mr. Richards:

This is in response to your Solicitation of Views request dated July 10, 2012, concerning the Louisiana Highway 23 Environmental Assessment, from Happy Jacks to North Port Sulphur, Louisiana, in Plaquemines Parish.

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

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

Information and signatures obtained from recent maps, aerial photography, and local soil surveys concerning this site are indicative of the occurrence of wetlands. Department of the Army (DA) permits are required prior to the deposition or redistribution of dredged or fill material into waters and wetlands that are waters of the United States.

Please be advised that this property is in the Louisiana Coastal Zone. For additional information regarding coastal use permit requirements, contact Ms. Christine Charrier, Coastal Management Division, Louisiana Department of Natural Resources at (225) 342 7953.

You are advised that you must obtain a permit from the Plaquemines Parish West Bank Levee District for any work within 1500 feet of a federal flood control structure such as a levee. Performance of all subsurface work within this area is usually restricted when the stage of the Mississippi River is above elevation +11.0 feet on the Carrollton gage, at New Orleans, Louisiana. As a consequence, subsurface work should be scheduled for performance during the low-water period (typically June through November) to avoid delays in performance of the proposed work. You must apply by letter to the Plaquemines Parish West Bank Levee District including full-size construction plans, cross sections, and details of the proposed work. Concurrently with your application to the Plaquemines Parish West Bank Levee District, you

must also forward a copy of your letter and plans to Operations Division, Operations Manager for Completed Works of the Corps of Engineers and to the Coastal Protection and Restoration Authority (CPRA) in Baton Rouge for their review and comments concerning the proposed work. The Plaquemines Parish West Bank Levee District will not issue a permit for the work to proceed until they have obtained letters of no objection from both of these reviewing agencies. For further information regarding permit requests affecting federal flood control levees and structures, please contact Ms. Amy Powell, Operations Manager for Completed Works at (504) 862-2241.

This preliminary determination is advisory in nature. If an approved delineation is needed please furnish us with the detailed field data concerning vegetation, soils, and hydrology that we require for all jurisdictional decisions. The fact that a field wetland delineation/determination has not been completed does not alleviate your responsibility to obtain the proper DA permits prior to working in wetlands occurring on this property.

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

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

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

Future correspondence concerning this matter should reference our account number MVN-2012-01742-SZ. This will allow us to more easily locate records of previous correspondence, and thus provide a quicker response.

Sincerely,

Karen L. Clement

Karen L. Clement
Solicitation of Views Manager

Please see page 3 for copies furnished.

Copy Furnished:

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

N-Y ASSOCIATES, INC.
ENGINEERS • ARCHITECTS • PLANNERS
PROGRAM & PROJECT MANAGERS

FRANK NICOLADIS, P.E. — PRESIDENT
MICHAEL F. NICOLADIS, E.I. — SENIOR VICE PRESIDENT
CONSTANTINE F. NICOLADIS, P.E. — VICE PRESIDENT
JAMES E. SIMMONS, P.E. — VICE PRESIDENT
JONATHAN M. O'REAR, ARCHITECT, AIA — VICE PRESIDENT
BRUCE J. RICHARDS, AICP — ASSISTANT VICE PRESIDENT
GERALD T. WILLIAMSON, CPA — ASSISTANT VICE PRESIDENT

Reply to Metairie Office

ESTABLISHED 1969

July 10, 2012

Architectural Historian
State Historic Preservation Office
P.O. Box 44247
Baton Rouge, LA 70804

The proposed undertaking will have no adverse effect on historic properties. This effect determination could change should new information come to our attention.

Pam Breaux — 7-25-12
Pam Breaux — Date
State Historic Preservation Officer

State Project No. H.001399
RPC Contract LA23ENV1
N-Y Job No. 11010.01
LA Highway 23 (Happy Jack to North Port Sulphur)
Stage 1 -Environmental Assessment
Plaquemines Parish

RE: Solicitation of Views

Early in the planning stages of a transportation facility, views from federal, state and local agencies, organizations, and individuals are solicited. The special expertise of these groups can assist DOTD with the early identification of possible adverse economic, social, or environmental effects or concerns. Your assistance in this regard will be appreciated.

Enclosed with this request is a plan view map of the conceptual project, along with a preliminary project description.

It is requested that you review the attached information and furnish the project consultant with your views and comments by August 3, 2012. Replies should be addressed to LA 23 Environmental Assessment; c/o N-Y Associates, Inc. - attn; Bruce J. Richards, AICP; 2750 Lake Villa Drive; Metairie, Louisiana, 70002. Please refer to the State Project Number(s) in your reply. If you have any questions, please feel free to call the consultant project manager, Bruce Richards (225) 242-4501.

Sincerely,

Bruce J. Richards, AICP
Consultant Project Manager
N-Y Associates, Inc.

JUL 12 2012

2750 LAKE VILLA DRIVE METAIRIE, LOUISIANA 70002-6797
PHONE (504) 885-0500 FAX (504) 885-0595

1260 MAIN STREET, SUITE B BATON ROUGE, LOUISIANA 70802-4657
PHONE (225) 383-0633 FAX (225) 383-7925

www.n-yassociates.com

Org: BR
CC: FN
MFN
CFN

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

RECEIVED

JUL 26 2012

N-Y ASSOCIATES, INC.

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

PUBLIC NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

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

WE WOULD REQUEST THAT THE PARISH FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT.
If project is Federally funded, we would request project to be compliant with EO 11988 and 11990.

Mike Metcalf
Permit Officer/FPA

102 Ave. G, Suite C
Belle Chasse, LA 70037
mmetcalf@plaqueminesparish.com
504-297-5342

REVIEWER: *Mayra G. Diaz* DATE: July 16, 2012
Natural Hazards Program Specialist

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

N-Y ASSOCIATES, INC.
ENGINEERS • ARCHITECTS • PLANNERS
PROGRAM & PROJECT MANAGERS

FRANK NICOLADIS, P.E. — PRESIDENT
MICHAEL F. NICOLADIS, E.I. — SENIOR VICE PRESIDENT
CONSTANTINE F. NICOLADIS, P.E. — VICE PRESIDENT
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GERALD T. WILLIAMSON, CPA — ASSISTANT VICE PRESIDENT

Reply to Metairie Office

ESTABLISHED 1969

2012 JUL 12 P 12:08

July 10, 2012

Mr. Greg Solvey
FEMA Region VI
800 North Loop 288
Denton, TX 76201

State Project No. H.001399
RPC Contract LA23ENV1
N-Y Job No. 11010.01
LA Highway 23 (Happy Jack to North Port Sulphur)
Stage 1 -Environmental Assessment
Plaquemines Parish

RE: Solicitation of Views

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Sincerely,

Bruce J. Richards, AICP
Consultant Project Manager
N-Y Associates, Inc.

2750 LAKE VILLA DRIVE METAIRIE, LOUISIANA 70002-6797
PHONE (504) 885-0500 FAX (504) 885-0595

1260 MAIN STREET, SUITE B BATON ROUGE, LOUISIANA 70802-4657
PHONE (225) 383-0633 FAX (225) 383-7925

www.n-yassociates.com

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

Date	July 20, 2012
Name	Bruce J. Richards
Company	N-Y Associates, Inc
Street Address	2750 Lake Villa Drive
City, State, Zip	Metarie, LA 70002
Project	State Project No. H.001399 N-Y Job No. 11010.01 LA 23 Environmental Assesment
Project ID	2982012
Invoice Number	12072011

Personnel of the Habitat Section of the Coastal & Non-Game Resources Division have reviewed the preliminary data for the captioned project. After careful review of our database, no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries.

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

Sincerely,

for Amity Bass, Coordinator
Natural Heritage Program

RECEIVED
JUL 25 2012
N-Y ASSOCIATES, INC.

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

INVOICE

RETURN THIS COPY OF INVOICE WITH PAYMENT

Date	July 20, 2012
Invoice Number	12072011
Project	State Project No. H.001399 N-Y Job No. 11010.01 LA 23 Environmental Assesment
Name	Bruce J. Richards
Company	N-Y Associates, Inc
Street Address	2750 Lake Villa Drive
City, State, Zip	Metarie, LA 70002
Number of Quads Reviewed	1
Total Due	$30.00

Payment should be made to "Louisiana Department of Wildlife & Fisheries" within 30 days of the date of this invoice. Please include the invoice number on your check and return a copy of this invoice with your remittance to the following address:

Louisiana Department of Wildlife & Fisheries
Attn: Jennifer Riddle
P.O. Box 80399
Baton Rouge, LA 70898-0399

Should you have any questions regarding this invoice, for review of the Louisiana Natural Heritage database for information on known sensitive elements at a charge of $20.00 per quad reviewed, please contact LNHP at (225) 765-2357.

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE AND FISHERIES
OFFICE OF WILDLIFE

ROBERT J. BARHAM
SECRETARY
JIMMY L. ANTHONY
ASSISTANT SECRETARY

INVOICE

RETAIN THIS COPY FOR YOUR RECORDS

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N-Y ASSOCIATES, INC.
ENGINEERS • ARCHITECTS • PLANNERS
PROGRAM & PROJECT MANAGERS

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JUL 12 2012
FISH & WLDL. SERV
LAFAYETTE, LA.

FRANK NICOLADIS, P.E. — PRESIDENT
MICHAEL F. NICOLADIS, E.I. — SENIOR VICE PRESIDENT
CONSTANTINE F. NICOLADIS, P.E. — VICE PRESIDENT
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Reply to Metairie Office

ESTABLISHED 1969

July 10, 2012

Jim Boggs
Field Supervisor
US Fish & Wildlife Service
624 Cajundome Blvd., Suite 400
Lafayette, LA 70506

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
(X) Will have no effect on those resources
( ) Is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

Deborah A Fuller July 20, 2012
Acting Supervisor — Date
Louisiana Field Office
U.S. Fish and Wildlife Service

State Project No. H.001399
RPC Contract LA23ENV1
N-Y Job No. 11010.01
LA Highway 23 (Happy Jack to North Port Sulphur)
Stage 1 -Environmental Assessment
Plaquemines Parish

RE: Solicitation of Views

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Sincerely,

Bruce J. Richards, AICP
Consultant Project Manager

2750 LAKE VILLA DRIVE METAIRIE, LOUISIANA 70002-6797
PHONE (504) 885-0500 FAX (504) 885-0595

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www.n-yassociates.com

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

STEPHEN CHUSTZ
INTERIM SECRETARY

JAMES H. WELSH
COMMISSIONER OF CONSERVATION

August 20, 2012

TO: LA 23 Environmental Assessment; c/o N-Y Associates, Inc.
Attention: Mr. Bruce J. Richards, AICP
2750 Lake Villa Drive
Metairie, Louisiana 70002

RE: Solicitation of Views
State Project No. H.001399
N-Y Job No. 11010.01
LA Highway 23 (Happy Jack to North Port Sulphur)
Stage 1- Environmental Assessment
Plaquemines Parish, Louisiana

Dear Mr. Richards:

In response to your letter dated July 10, 2012, concerning the referenced matter, please be advised that the Office of Conservation collects and maintains many types of information regarding oil and gas exploration, production, distribution, and other data relative to the petroleum industry as well as related and non-related injection well information, surface mining and ground water information and other natural resource related data. Most information concerning oil, gas and injection wells for any given area of the state, including the subject area of your letter can be obtained through records search via the SONRIS data access application available at:

http://www.dnr.louisiana.gov

A review of our computer records for the referenced project area indicates that there are wells drilled for oil and gas in the proposed project area. Moreover, the DNR water well database indicates the possibility that there are registered water wells located in the vicinity of the project area. Additionally, there may be unregistered water wells in the area.

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

Division	Contact	Phone No.	E-mail Address
Engineering	Jeff Wells	225-342-5638	jeff.wells@la.gov
Pipeline	Steven Giambrone	225-342-2989	steven.giambrone@la.gov
Injection & Mining	Laurence Bland	225-342-5515	laurence.bland@la.gov
Geological	Mike Kline	225-342-3335	mike.kline@la.gov
Environmental	Gary Snellgrove	225-342-7222	gary.snellgrove@la.gov

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

Sincerely,

James H. Welsh
Commissioner of Conservation

JHW:MBK

BOBBY JINDAL
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT

07/27/2012

N-Y ASSOCIATES, INC.
2750 LAKE VILLA DRIVE
METAIRIE, LA 70002

RE: P20120999, Solicitation of Views
N-Y ASSOCIATES, INC.
Description: Proposed performance of Stage 1 Environmental Assessment for the widening of LA 23 for approximately a 3.8-mile stretch from Happy Jack to North Port Sulphur. State Project No. H.001399/RPC Contract LA23ENV1
Location: LA Highway 23 (Happy Jack to North Port Sulphur)
Plaquemines Parish, LA

Dear Bruce Richards:

We have received your Solicitation of Views for the above referenced project, which has been found to be inside the Louisiana Coastal Zone. In order for us to properly review and evaluate this project, we require that a complete Coastal Use Permit Application packet (Joint Application Form, locality maps, project illustration plats with plan and cross section views, etc.) along with the appropriate application fee be submitted to our office. Using your complete application, we can provide you with an official determination, and begin the processing of any Coastal Use Permit that may be required for your project. You may obtain a free application packet by calling our office at (225) 342-7591 or (800)-267-4019, or by visiting our website at http://www.dnr.state.la.us/crm/coastmgt/cup/cup.asp.

We recommend that, during your planning process, you make every effort to minimize impacts to vegetated wetlands. As our legislative mandate puts great emphasis on avoiding damages to these habitats, in many cases the negotiations involved in reducing such disturbances and developing the required mitigation to offset the lost habitat values delay permit approval longer than any other factor. Additionally, the following sensitive features may require additional processing time by the appropriate resource agencies: Chitimacha Tribe of Louisiana Aboriginal Homelands (La. Dept. of Culture, Recreation & Tourism, Kimberly S. Walden, Cultural Director, 337-923-9923 or Melanie Aymond, Research Coordinator, 337-923-4395) and Local Levee District Construction Permits from the West Plaquemines Levee District and the Buras Levee District (Coastal Protection & Restoration Authority, Rhonda Braud, (225) 342-4553, rhonda.braud@la.gov).

Should you desire additional consultation with our office prior to submitting a formal application, we recommend that you call and schedule a pre-application meeting with our Permit Section staff. Such a preliminary meeting may be helpful, especially if a permit application that is as complete as possible

is presented for evaluation at the pre-application meeting.

If you have any questions, would like to request an application packet or would like to schedule a pre-application meeting, please contact Vickie Amedee at (225) 342-3781 or vickie.amedee@la.gov.

Sincerely,

Karl L. Morgan
Administrator

Karl L. Morgan/va

Attachments

Final Plats:

1) P20120999 Final Plats 07/13/2012

cc: Jessica Diez, OCM w/plats
Frank Cole, CMD/FI w/plats
Plaquemines Parish w/plats

PUBLIC

MEETING

INFORMATION

Public Meeting Notice

State Project No. H. 001399
Stage 1 Environmental Assessment for the
Proposed Widening of LA Hwy. 23 (Happy Jack to N. Port Sulphur)
Plaquemines Parish, LA

The Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany Parishes (RPC), in conjunction with The Louisiana Department of Transportation (LADOTD) is undertaking an **Environmental Assessment** for the proposed widening of LA Hwy 23 in Plaquemines Parish, LA between the communities of Happy Jack and North Port Sulphur. This is the last stretch of LA 23 that is not four lanes and contains only two lanes of traffic. A Stage 0 Study was previously completed in order to explore the feasibility of various alternatives.

The RPC is inviting interested citizens to attend a **Public Informational Meeting** on the proposed highway widening project. The date and time of the meeting are as follows:

Date / Time: **Tuesday, June 5th, 2012**
6:30 – 8:30 PM

Location: **Port Sulphur Community Center,**
278 Civic Drive, Port Sulphur, Louisiana 70083

The purpose of this meeting is to obtain public input on (1) the draft purpose and need that has been prepared for the project and (2) the final build alternative for widening that has been developed and screened. The meeting will be conducted in an informal, "open house" format, and attendees can stop by at any time during the two-hour meeting time. Plans of the proposed widening will be on display, and knowledgeable informed staff will be available to answer questions and address project-related issues. All interested parties and their representatives are invited to be present at the above date, time and location for the purpose of becoming acquainted with the project and providing comments and input. Written statements or comments may be submitted at the meeting, or may be mailed to the following address:

LA Hwy 23 Widening EA, c/o N-Y Associates, Inc.
ATTN: Bruce J. Richards
2750 Lake Villa Drive – Suite 100
Metairie, LA 70002

If you require special assistance due to a disability in order to participate in this public meeting, or if you need more information relating to this meeting, please call Mr. Bruce Richards of N-Y Associates, Inc. at (504) 885-0500.

Sheet 1

GENERAL PUBLIC SIGN-IN SHEET

LA 23 Widening - Environmental Assessment
Public Meeting
June 4, 2012

	(Please Print Clearly) Print Name Here	Mailing Address	Phone	Email	Organization you are representing (if any)
1.	Connie Treadway	P.O. Box 757 Port Sulphur, LA. 70083	504-430-4330	cportsulphur@yahoo.com	
2.	Manuel Treadway, Jr	P.O. Box 757 Port Sulphur, LA 70083	504-430-4330	↑	
3.	Amos Cormier Jr.	PoBox151 Port Sulphur La 70083	(504) 343-1416		
4.	Sullivan J. Vallo	P.O. Box 493 Port Sulphur, La. 70083	(504) 564-0914	Vallos@Bellsouth.net	
5.	Amy Armstrong	PO Box 704 Port Sulphur LA 70083	504-564 0518	alpigniola@bellsouth.net	
6.	Bobby Thomas	P.O. Box 369 Buras, LA 70041	504-458-6167	Rthomas985@aol.com	
7.	Jody Guilbeau	P.O. Box 66 Port Sulphur, LA	56Y-252	guilbeaus1947@Bellsouth.net	
8.	Jeff Roesel	10 VETERANS BLVD NOLA 70124	504-483-8529	jroesel@norpc.org	
9.	Annie Cossé		504-912-3627	Cossee@bellsouth.net.	

GENERAL PUBLIC SIGN-IN SHEET

LA 23 Widening - Environmental Assessment
Public Meeting
June 4, 2012

	(Please Print Clearly) Print Name Here	Mailing Address	Phone	Email	Organization you are representing (if any)
1.	James L. Cappiello	26642 Hwy 23	P.O. Box 961 Port Sulphur, La. 70083	(504-756-3863)	
2.	Roy Treadway	27385 Hwy 23	PO Box 217 PS La 70083	504-433-0559	
3.	Brian Bubrig	30931 Hwy #23 -	Buras, LA. 70041	504-564-3193	
4.	Phil W. Buras	26166 Hwy 23	Port Sulphur, LA 70083	Tenn. Gas Pipeline	504-564-3902 Ext-2023
5.	Rodney J. Barthelemy	P.O. Box 331,	Port Sulphur, LA 70083	504-453-7730	
6.					
7.					
8.					
9.					

GENERAL PUBLIC SIGN-IN SHEET

LA 23 Widening - Environmental Assessment
Public Meeting
June 4, 2012

	(Please Print Clearly) Print Name Here	Mailing Address	Phone	Email	Organization you are representing (if any)
1.	Chimes Sklue	P.O. Box 153 26290 Hwy 23	985-677-2764		
2.	Douglas + Pamela	26783 Hwy. 23 PO Box 34 PS. 70083	504-564-0323	alexi34@hotmail.com	
3.	Jos. + Helen Saucier	190 Bellevue Ln.W. P.O. Box 293 P.S. 70083	504-564-0705		
4.	J. Hw Hymes	P.O. Box 481 Belle Chasse	504-570-3089		
5.	Burghart H. Turner	P.O. Box 137 Port Sulphur, LA 70083	(504) 329-0503	gal_6_9@MSN.com	
6.					
7.					
8.					
9.					

GENERAL PUBLIC SIGN-IN SHEET

LA 23 Widening - Environmental Assessment
Public Meeting
June 4, 2012

	(Please Print Clearly) Print Name Here	Mailing Address	Phone	Email	Organization you are representing (if any)
1.	Kathleen Bernel Burmaster	6913 Hwy 39	Braithwaite LA 70040	504.682.8244	
2.	Kurt Cheramie	158 Regal Row	Houma, LA 70360	985-209-2283	Tennessee Gas
3.	Byron Marmoolich	Council Chairman	Parish Council		PPG
4.					
5.					
6.					
7.					
8.					
9.					

Comment Form

Proposed Widening of LA Hwy 23
Environmental Assessment

Public Meeting – June 5, 2012

State Project No. **H.001399**

The LA 23 Widening Project Team would appreciate your comments on this project. Please write your comments below and give to a member of the Project Team or fold, tape, stamp and mail to the address on the back of this form or fax to (504) 885-0595. Thanks for your input.

After having attended the meeting in Port Sulphur on Tuesday, June 5; reviewing the proposed construction plans; and learning that the Highway 23 widening project will not require the expansion of the existing right-of-way, and that no truck/car turn-around will be constructed in front of my property; my main concern about the taking of additional property is no longer an issue. My lot is not very deep and I would not want to have any additional property taken that would further reduce the depth/length of my lot. However, after just recently having spent money to purchase limestone to improve my driveway, I am also concerned about restoration of my driveway to its original condition. Or even better, will a concrete apron be installed in the driveway as part of the subsurface drainage? Also, another question that I did not ask at the meeting is: Will this project require the relocation of any sewer and water infrastructure? It would certainly cause some disruption in services.

Your Name: Rodney J. Barthelemy

Address: P.O. Box 331
Port Sulphur, LA 70083

To ensure that your comments become part of the official meeting record, they should be post marked within ten calendar days following this meeting (by 6/5/12).

Comment Form

Proposed Widening of LA Hwy 23
Environmental Assessment

Public Meeting – June 5, 2012

State Project No. **H.001399**

The LA 23 Widening Project Team would appreciate your comments on this project. Please write your comments below and give to a member of the Project Team or fold, tape, stamp and mail to the address on the back of this form or fax to (504) 885-0595. Thanks for your input.

My lot is relatively small and I cannot afford for any more of my property to be taken that would further reduce its size – without it seriously affecting my quality of life.

Also, is a 18' wide median necessary, and can the size of the proposed median be reduced?

Please stay, as much as possible, within the existing highway right-of-way!

Your Name: David J. Barthelemy

Address: P.O. Box 244

Port Sulphur, LA 70083

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