

FINAL ENVIRONMENTAL IMPACT STATEMENT

STATE PROJECT NO. 700-26-0239
FEDERAL AID PROJECT NO. HP-T021(015)
BAYOU BARATARIA BRIDGE REPLACEMENT
ROUTE LA 302
JEFFERSON PARISH, LOUISIANA



August 2002





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Submitted pursuant to 42 U.S.C. 4321 et. seq. by the
U.S. Department of Transportation Federal Highway Administration
and Louisiana Department of Transportation and Development
in cooperation with the
U.S. Army Corps of Engineers and
the U.S. Coast Guard

8/26/02


Date of Approval



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The project is a proposal to replace the existing bridge (Louisiana Route 302) with a larger structure that would provide improved health and safety to the communities of Jean Lafitte and Barataria in Jefferson Parish, Louisiana. The existing structure is rated structurally deficient. Several alternatives, including the No-Build alternative, were considered.

Executive Summary

The Bayou Barataria Bridge Replacement (State Project No. 700-26-0239/F.A.P. No. HP-T021(015)) is the replacement of the existing bridge (Louisiana Route 302), with a larger structure that would provide improved public health and safety to the communities of Jean Lafitte and Barataria in Jefferson Parish, Louisiana. The existing bridge is a low-level, swing bridge built in 1948 to join Louisiana Route 45 (Jean Lafitte Boulevard) with Louisiana Route 3257 (Privateer Boulevard). The existing structure is rated as structurally deficient. The Louisiana Department of Transportation and Development (DOTD), in cooperation with the Federal Highway Administration (FHWA), the United States Army Corps of Engineers (USACE), and the United States Coast Guard (USCG), proposes to construct a replacement bridge that would meet the majority of demands of the marine and land-based traffic patterns.

The existing Bayou Barataria Bridge is a 507-foot-long swing bridge that provides five to seven feet of vertical clearance when closed to marine traffic. When open, the bridge provides a 75-foot horizontal passageway with unlimited vertical clearance within a maintained channel twelve feet deep.

The proposed replacement bridge would improve marine and land-based traffic patterns. The proposed bridge replacement is a mid-level, bascule bridge that would provide 45 feet of vertical clearance when closed and unlimited vertical clearance when open to marine traffic. The bridge's navigation channel would provide 150 feet of horizontal clearance for all marine traffic. An open bascule bridge would present no vertical height restrictions to marine traffic on Bayou Barataria between the Intracoastal Waterway (ICWW) and the Gulf of Mexico. When closed to marine traffic, the vertical clearance of the new bridge would allow more than 90 percent of the existing marine traffic to pass beneath the replacement bridge without interfering with land-based traffic. Additional benefits of a replacement bridge would be improved hurricane evacuation capability for Barataria (western shore of Bayou Barataria), which has no other vehicular access, and an

economic stimulus to shipbuilding and repair businesses, for both local and maritime businesses to the north, including the Harvey Canal.

In 1982, a Notice of Intent was published in the Federal Register by FHWA stating that an EIS was to be prepared for a 3.6-mile long project to extend LA 3134 between Wagner's Ferry Bridge and the existing bridge over Bayou Barataria. This project proposed extending LA 3134 from Wagner's Ferry Bridge to LA 301 in Barataria. One proposed build alternative would have included replacing the existing bridge on LA 301 that connects the towns of Jean Lafitte and Barataria. The Notice of Intent for this project was withdrawn in 1999 and the EIS was not completed.

This project (replacement of the existing bridge) was originally part of the Lafitte-Larose Highway project. The Lafitte-Larose Highway was a proposed 28-mile project that was documented in an Environmental Impact Statement (EIS) in 1972. After purchase of the proposed ROW for replacement of the existing bridge was initiated, the entire project was legally challenged. A legal agreement was signed that allowed for a portion of the Lafitte-Larose highway to be built, which included a bridge at Crown Point.

Normally a bridge replacement project is processed environmentally as a Categorical Exclusion. This project, due to crossing the waterway on new location, presence of many natural resources (such as wetlands), and due to the legal challenge of the previous EIS, FHWA and DOTD chose to prepare an EIS.

This EIS was initiated in 2000 and documents the replacement alternatives considered and the potential environmental, cultural, and socio-economic resource impacts for each of the alternatives considered for analysis.

No Section 4(f) evaluation is required because no recreational or historical properties will be taken as a result of the project.

Alternatives Considered

The development of alternatives followed an iterative approach for developing an acceptable bridge design while considering various environmental concerns. The No-Build alternative and several alternate construction designs were evaluated to provide an alternative that meets public needs and minimizes environmental resource concerns. Because of the location of the project, limited amounts of traffic, and lack of existing means for connectivity, transportation system management and mass transit were not considered to be viable alternatives.

The length of the original study area considered for a replacement bridge location was narrowed from an original distance of six miles to a central location approximately 4,000 feet long. The study area width originally considered structures extending from within the existing roadways to as much as 2,000 feet on either side of the existing roads. The proposed alternatives vary from 700 feet to 1,200 feet outside of the existing roads.

From an initial array of four locations, three bridge clearances, and four bridge types, three locations using the proposed mid-level bascule bridge were selected for further evaluation. One of the final locations analyzed for placement of an alternate was not in the original array, but resulted from input from the cooperating agencies.

The No-Build alternative was retained through the alternatives analysis as a basis for comparing the relative benefits and impacts of each alternate. The No-Build alternative includes only maintenance, operation, and repair of the existing bridge. No additional modifications to the existing bridge would occur as part of the No-Build alternative.

The final alternatives chosen for more detailed analysis incorporate structurally similar designs so that all considerations can be equitably analyzed for each location. The alternatives chosen for detailed analysis are designated as Pipeline Street, Paillet North, and Paillet South. None of the alternatives will entail the displacement of any businesses or residences. Minor adjustments to the final alignments will be made to minimize impacts to properties and structures.

Selected

The preferred alternative is a mid-level bascule bridge at the Paillet South location.

Public Meetings

Input from the public was solicited through two Public Meetings held on October 26, 2000 and March 20, 2001 in Jean Lafitte, Louisiana. These meetings are discussed in detail in Section 5.0.

A Public Hearing was held on April 4, 2002. This public forum presented the results of the alternatives analysis and provided a forum for public comment and input into the selection of a preferred alternative.

Agency Involvement

Regulatory agency input and coordination were also important in fully analyzing all aspects of the environmental complexities of construction within the Louisiana coastal zone. Coastal wetland losses that have occurred and the institution of the Coastal Wetlands Planning, Protection, and Restoration Act (Breaux Act), enacted to address these losses, provide specific means to address impacts to coastal wetlands and to coordinate federal and state funded expenditures. Two coordination meetings were held that included FHWA, DOTD, Coast Guard, Corps and other regulatory agencies to discuss alternatives proposed for the project and to present the information gained in alternatives analysis. Agency input provided at these meetings resulted in several design changes to minimize impacts to coastal zone lands.

Cooperating agencies also reviewed and approved the Purpose and Need section and the Alternatives section of the Draft EIS. This review process was performed in accordance with the Interagency NEPA and 404/10 concurrent process agreement to solicit views, comments, and concurrence from the cooperating agencies on these sections.

A final agency concurrence meeting was held on May 29, 2002. The purpose of the meeting was to present the preferred alternative and solicit comments concerning the selection.

Summary of Mitigations and Permits

The proposed project is located in the coastal zone of Louisiana. As part of the Barataria-Terrebonne National Estuary, this drainage is considered to be important to the future of Louisiana. As evidenced by the passage of the Breaux Act, impacts to wetlands in coastal Louisiana are considered to be of national importance. The general trends of subsidence and wetland loss in Louisiana are highest in the Barataria-Terrebonne Basin. General wetland impacts were one of the major considerations for the elimination of several of the earlier alternatives and served as an impetus for some of the engineering design criteria changes.

Impacts to wetlands resulting from this project included consideration of function, value characteristics, and complete destruction of wetlands habitat. This project would not result in the complete destruction of wetland habitat. However, alteration of functionality, especially in forested wetlands, would occur. Alteration of functionality would result from maintenance of right-of-way (ROW). Forested wetland impacts would primarily be the change in function of forested wetland into scrub-shrub wetland. This impact would range between four and seven acres. Direct impacts to emergent and scrub-shrub habitat would be minimal. However, if the current trends of compaction and subsidence continue in the project vicinity, some of the habitat directly beneath the bridge structures is expected to become unvegetated mudflat habitat.

Construction impacts would be temporary and impacted land would be restored to pre-construction elevations after project completion. Permanent fill impacts to wetlands from all of the proposed alternatives would be less than 0.5 acre. For each of the alternatives, the permanent fill is primarily associated with the approach ramps and pilings.

Impacts to Essential Fish Habitat (EFH) would also be minimal. All alternatives would have less than 0.1 acre of permanent fill impact to EFH. All alternatives, except Paillet South, would have less than one acre of complete shading impact to EFH. Paillet South would have less than three acres of complete shading impact.

Wetland and EFH impacts may be ameliorated or reversed, depending on the eventual outcome of the Davis Pond Freshwater Diversion Project. While all of the calculations contained in this report are considered to be accurate based on current circumstances, there would be potential for a net benefit to the basin as a result of the Davis Pond project outside of the influence of this action. This possibility should be considered in the determination of mitigation concerns and requirements.

Analysis of other environmental aspects of the proposed project provided no other impacts. Land use impacts would be limited to areas currently not developed as residential. The proposed bridge replacement would improve accessibility to the west side of Bayou Barataria.

Air and noise analyses have determined that no negative impacts would occur as a result of the proposed project. Wildlife and fishing species impacts would be temporary, with no project-related impacts to federally or state-listed threatened or endangered species.

No cultural resources impacts have been identified within the Area of Potential Effect (APE). However, due to restricted access to some properties within the APE for the Paillet North and Pipeline alternatives, some areas remain unsurveyed. All areas within the APE for the selected Paillet South alternative have been surveyed.

A Phase I Environmental Site Assessment of the proposed alternatives determined that there is little likelihood of encountering hazardous or radioactive materials. However, depending on the final alignment, some consideration should be made concerning oil and gas wells near the final alignment.

The social and economic impacts of the proposed project would be positive. In addition to improved public health and safety, increased employment opportunities would be available to residents of the project area.

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SECTION 1.0 PURPOSE AND NEED

1.0 PURPOSE AND NEED

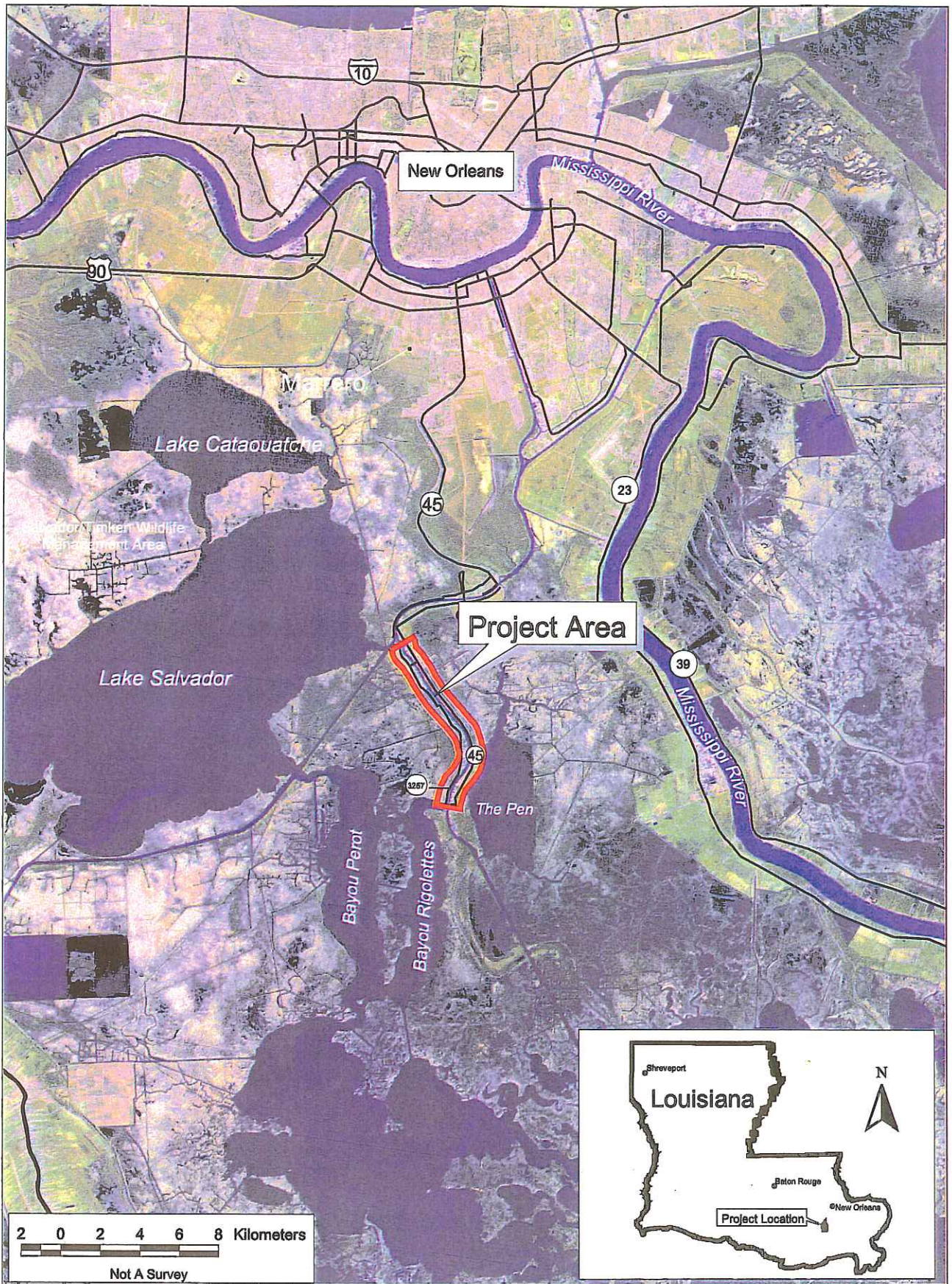
The existing bridge over Bayou Barataria links Jean Lafitte Boulevard, the eastern terminus, with Privateer Boulevard, the western terminus. This bridge has several transportation-related deficiencies. The purpose of the proposed project is to replace the existing bridge structure and address existing deficiencies. The need for the proposed project considers system linkage, roadway capacity, transportation demand, social demands, economic development, and safety considerations.

1.1 Purpose for the Proposed Action

The purpose for the proposed action is to replace the existing Kerner's Ferry swing bridge (the bridge) over Bayou Barataria connecting the communities of Jean Lafitte and Barataria, Jefferson Parish, Louisiana (see **Figure 1-1**). The existing bridge, Inventory Structure Number 02268263900071, has been determined to be structurally deficient. The Sufficiency Rating (SR) of the Bridge is 14.3. The SR is a numerical value ranging from 0 to 100 where 100 represents a completely sufficient structure and 0 represents a completely deficient structure (U.S. Department of Transportation, 1995).

The bridge is designated as Louisiana Route 302 (LA 302) and connects LA 45 to LA 3257. Constructed in 1948, the bridge replaced ferry service between the communities of Jean Lafitte and Barataria across Bayou Barataria. The bridge is 507 feet long with a 204-foot long steel truss that pivots about a pier located within Bayou Barataria. For vehicular traffic (bridge closed) the bridge provides two 12-foot travel lanes.

When closed, the bridge provides 5 to 7 feet of vertical clearance above Bayou Barataria for marine traffic. The open bridge provides unlimited vertical clearance and 75 feet of horizontal clearance between the timber



<p>Legend</p> <p> Primary Roads</p> <p> Project Area</p>	<p>Barataria Project Area</p>	<p>Figure 1-1</p>
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fenders for all boat traffic within the bayou. No vehicular traffic can use the bridge when it is open for marine vessel access. The bridge is the only obstruction to marine traffic between the Intracoastal Waterway (ICWW) and the Gulf of Mexico on Bayou Barataria (see **Figure 1-2**).

1.2 Need for the Proposed Action

The bridge provides the only available public access across Bayou Barataria in lower Jefferson Parish. The bridge replacement project has been developed to address existing and future transportation needs for both land-based and marine traffic. Due to frequent openings for marine traffic, the existing bridge restricts land-based traffic during ordered coastal evacuations and during periods when the bridge is not operational, affecting public health and safety.

1.2.1 Land-Based Traffic

Table 1-1 contains recent, current, and projected traffic patterns on the bridge. Traffic sampled in October 2000 showed average daily traffic (ADT) using the bridge was 3,213 vehicles. Peak hour morning traffic (7:15 AM to 8:15 AM) was 301 vehicles per hour (VPH). Afternoon peak hour (5:15 PM to 6:15 PM) vehicle count was 310 VPH. Traffic projections for the bridge in the year 2025 are based on a conservative 2 percent annual traffic increase. Traffic counts are anticipated to increase to 492 VPH and 508 VPH for morning and afternoon peak hours, respectively (Volkert, 2000).

Figure 1-2: Restrictions to Navigation in the Vicinity of the Bayou Barataria Waterway

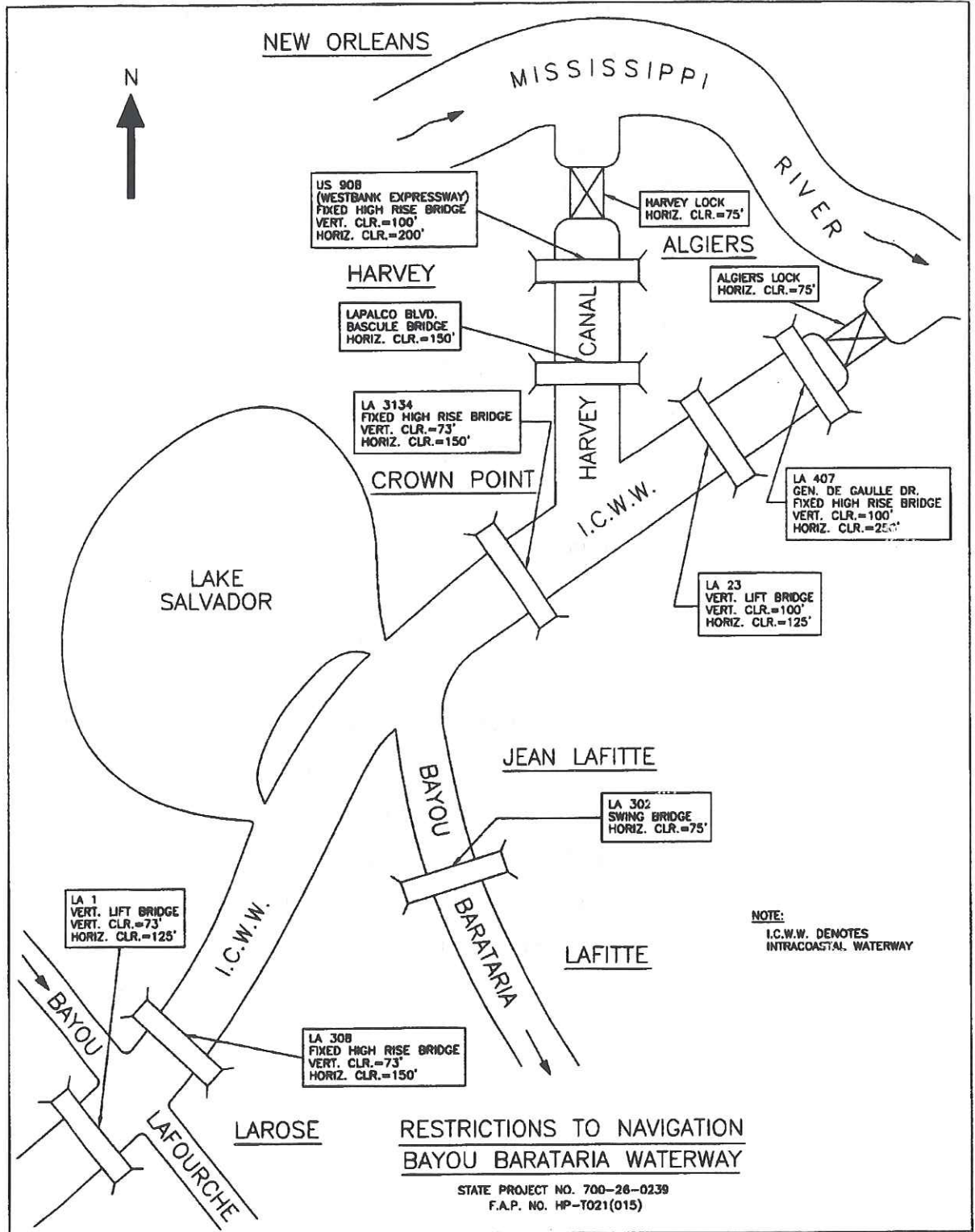


Table 1-1: Recent, Current, and Projected Traffic Patterns across Bayou Barataria

Time	East Bound			West Bound			Total Traffic		
	1997	2000	2025	1997	2000	2025	1997	2000	2025
Early AM	37	33	55	34	34	57	71	67	112
AM Drive	558	529	868	276	288	471	834	817	1,339
Mid-Day	442	409	669	446	432	711	888	841	1,380
PM Drive	451	385	631	605	571	937	1,053	956	1,568
Evening	186	194	317	340	338	556	526	532	873

Legend: Early AM – 12:00 AM to 4:59 AM
 AM Drive – 5:00 AM to 9:59 AM
 Mid-Day – 10:00 AM to 2:59 PM
 PM Drive – 3:00 PM to 6:59 PM
 Evening 7:00 PM to 11:59 PM

Source: Volkert 2000b.

Traffic using the bridge crossing is composed primarily of passenger vehicles and light trucks. However, based on a detailed study of traffic patterns across the bridge in October 2000, approximately 3.3 percent of the vehicles were classified as trucks (19-30 feet long), and 0.9 percent of the vehicles were classified as big trucks (greater than 30 feet in length) (Volkert, 2000).

Because this bridge provides the only access from the east bank to the west bank of Bayou Barataria, the bridge is also used by emergency vehicles and school buses (Hartman, 1998). When the bridge is inoperable, access across Bayou Barataria is provided by a temporary pedestrian ferry service. During one period when the bridge was under repair for an extended period, a vehicle ferry was provided.

The bridge has a posted load limit of 20 tons to 35 tons. This posted load limit restricts the use of the bridge to single vehicles weighing 20 tons or less and to vehicle combinations weighing 35 tons or less (DOTD, 1981). In general, this allows most trucks to use the bridge. However, large trucks with the heaviest legal loads are restricted from using the bridge (DOTD, 1981).

When the bridge is open for marine traffic, all vehicular traffic is stopped. Traffic delays due to marine activity average 5-10 minutes. Current marine traffic and bridge opening data indicates that the bridge opens an average of 9,841 times annually (see **Table 1-2**). This is an average of 27 times per day (Volkert & Associates, 2001a). In 1985, the bridge opened an average of 1,600 times per month (USDOT and DOTD, 1985).

Table 1-2: Three-Year Data for Existing Bridge Openings

Month	1997	1998	1999	2000	Average Monthly Openings
January		568	492	516	525
February		460	523	534	506
March		501	448	622	524
April		653	581	633	622
May		1,197	1,154	1,383	1,245
June		1,123	1,085	1,184	1,131
July	1,144	1,252	921		1,106
August	1,122	1,171	909		1,067
September	866	643	921		810
October	905	1,028	1,005		979
November	694	751	770		738
December	530	613	620		588
Total Annual Openings	5,261	9,960	9,429	4,872	
Average Annual Openings					9,841

Source: Volkert 2001a.

Incidents of damage to the bridge caused by marine traffic have been documented (Modjeski and Masters, 1998). Collisions in 1985 and 1997 resulted in the complete closure of the roadway to vehicular traffic for extended periods of time. Additionally, normal maintenance operations have caused temporary closing of the bridge to traffic that lasted for extended periods of time. Closure of the bridge for periods of time can adversely affect access of fire, police, and emergency vehicles to the west side of Bayou Baratavia. While there is a satellite fire station located on the west side, additional personnel and equipment would be

severely limited. For west-side residents this situation constitutes a severe impact on public health and safety (see Section 1.2.3).

1.2.2 Marine Traffic

Marine traffic through this section of Bayou Barataria consists of three primary use groups:

Oil Industry – supply boats, tugboats, crew boats, standard barges, and shipments of large oil field equipment;

Commercial Fishing – fishermen, shrimpers, crab fishermen, oystermen, etc.; and

Recreational Fishing – large and small personally owned fishing boats.

The bridge, when open to land-based vehicular traffic, effectively blocks all marine-bound traffic on Bayou Barataria for all boat traffic. The tidal range for the bayou provides from 5 to 7 feet of clearance. When the bridge opens to allow marine traffic, the vertical clearance is unlimited, but the horizontal clearance is limited to 75 feet. This is due to the central pier upon which the bridge structure revolves. The bridge is rated as one of the five most opened out of 42 movable bridges in DOTD District 02 (Hartman, 1998). During the 1997 service outage, repairs to bridge parts required that the bridge remain closed to marine traffic for approximately one month.

The bridge represents the only waterway obstruction on Bayou Barataria from the ICWW to the Gulf of Mexico. In 1968, approximately 5.6 million tons were shipped through Bayou Barataria. By 1994, this value had dropped to 0.73 million tons. This represents a drop of 87 percent of total tonnage using the waterway in this period. The drop in shipping is directly related to the downturn in oilfield activity and could increase dramatically

should offshore activity increase (Modjeski and Masters, 1998). Overall, marine traffic through the bridge remains high.

In 1985, a total of 30,652 vessel trips were recorded for Bayou Baratavia. By 1994, that number dropped to 14,241 (Modjeski and Masters, 1998). Of those vessels recorded in 1994, 10,310 were vessels other than tug/tow boats and barges. The channel opening presented by the bridge and fender system represents approximately twice the width of a typical barge and close to the width of some of the crane barges that pass through the bridge (Modjeski and Masters, 1998).

Large oil field related structures that currently cannot pass through the bridge use an unmaintained channel that passes through Bayous Perot and Rigolette to a point downstream of the bridge and continues to the Gulf. This route adds approximately 12 miles to the traverse (Times-Picayune, 1998). Use of this channel is dependent on wind and tides and is not passable at all times. Mean vessel draft for marine traffic through the bridge is approximately 6 feet with some traffic requiring a 12-foot channel (Modjeski and Masters, 1998; Times-Picayune, 1998). Average depth of the unmaintained channel is 7 feet. Normal average depth of local bayous is less than 6 feet (US Geological Survey (USGS), 1995; 1973). The use of the unauthorized channel likely contributes to local wetland losses and prop dredging of the natural bottom of these water bodies.

Overall, hazards to navigation through the bridge include the relatively narrow channel and the high volume of marine traffic. There have been 56 reported collisions with the bridge from 1947 to 1998. Records indicate that there have been more accidents than have been reported (Modjeski and Masters, 1998). Seventeen collisions have affected the superstructure of the bridge while 46

have affected the substructure. This demonstrates that several collisions have affected both components of the bridge structure.

Industrial development along Bayou Barataria and the ICWW consists of several shipbuilding and repair operations. Operations along the Harvey Canal currently are restricted by the bridge clearance along the ICWW to a maximum of 73 feet vertical and 150 feet horizontal (see **Figure 1-2**).

The presence of a bridge with only 75 feet of horizontal clearance along Bayou Barataria greatly limits the amount of industrial expansion and the type of product that can be manufactured. Some of the existing manufacturing operations are planning to manufacture or repair vessels with nearly 100 feet of air draft and exceeding 75 feet in width. If the existing bridge is not replaced, vessels wider than 75 feet would have to use alternate means to reach the Gulf of Mexico.

1.2.3 Public Health and Safety

In Louisiana, bridge inspections are routinely made every two years. However, after an inspection in 1998, the condition of the bridge determined that annual inspections were required (Hartman, 1998). The current overall structural rating of the bridge is poor and the total rating is fair. A 1995 inspection reported the bridge in poor overall condition (Modjeski and Masters, 1998).

Loss of use of the bridge has adverse effects on public health and safety as well as local commerce (USDOT & DOTD, 2000). Loss of use of the bridge precludes access for parish police, fire, ambulance, and other emergency vehicles across Bayou Barataria. The nearest full-service hospital is The West Jefferson Medical Center in Marrero which cannot be reached by vehicular traffic

from the community of Barataria if the bridge is open to marine traffic or closed due to repairs.

In coastal Louisiana, hurricane evacuation has an important impact on communities within the delta. The entire project site is within the Special Flood Hazard Area (100-year floodplain) designated as Zone AE. This means the area is very prone to flooding (Federal Emergency Management Agency, 1995). A majority of structures in the project area is vulnerable to a 5-year design storm event (USACE, 1998). Natural ground elevation within the existing levee system of the project area gently slopes from a maximum of 4 feet National Geodetic Vertical Datum (NGVD) to approximately minus 1-foot NGVD (USACE, 1998). Outside the levee system average elevations are lower (USGS, 1973; 1995). High tide maps for the project vicinity indicate that the entire project area outside the existing levee system is subject to high tide effects.

Studies conducted for Fisher School Basin and the Paillet Basin have determined that the existing levees provide minimal protection from emergency flooding (USACE 1998; in press). The Fisher School Basin Report recommends raising the existing levees to an elevation of + 7.0 feet NGVD. Roadways outside of the levee systems are vulnerable to emergency flooding and become ineffective for hurricane evacuation once flooding occurs. Any bridge landing locations outside of the existing levees will intersect with roads that are not considered as effective hurricane evacuation routes. Improvement to the main roadways (LA 45 and LA 3257) will be required where the replacement bridge intersects the existing roadways outside of the existing levee system. The improvements to hurricane evacuation routes will entail raising the roadbed level to the same level as the improved levees and

installing turn lanes to provide few interruptions to through traffic flow on the main roads when the bridge is open to marine traffic.

During hurricane evacuation of the offshore oil fields, main shipping channels receive an influx of marine-based traffic. Local roads experience increased traffic due to the evacuation of communities within the zones of expected high flood impact. During evacuations, residents of Barataria must wait for bridge access because the bridge must be opened for more than 96 percent of existing boat traffic (Volkert 2001a).

SECTION 2.0 ALTERNATIVES



2.0 ALTERNATIVES

This section presents descriptions and maps of alternatives that were considered for the project. A range of alternatives was considered in the environmental process, and alternatives were either found to be comparatively prudent and reasonable, or they were eliminated from further study.

In addition to build alternatives, alternatives such as mass transit, transportation system management, and not building the proposed project (No-Build) are considered. The following sections describe the alternatives developed for this project and the elimination of alternatives found unreasonable.

Alternate concepts for the project were developed considering social, economic, and environmental features, avoidance and minimization of potential impacts, and engineering design criteria. Factors such as population distribution, flood potential, location, vertical and horizontal clearance, bridge type, and design criteria were very critical in development of the alternatives.

2.1 Mass Transit and Transportation System Management

2.1.1 Mass Transit

Currently, no forms of mass transit are present in the study area. The study area is rural, other than localized traffic, and the current major travel pattern in the area is mainly commuter travel to and from New Orleans, which is located to the north.

The project would provide an improved roadway crossing of Bayou Barataria, which would enhance the availability for express bus service and rideshare strategies. Mass transit options may be implemented as trip patterns and population density change.

2.1.2 Transportation System Management

Transportation System Management (TSM) strategies typically include such options as ridesharing and high-occupancy vehicle

(HOV) lanes for existing roadways. HOV lanes do not apply because the existing roadway network consists of two-lane, rural roadways. Ridesharing may be a viable option to decrease the traffic to and from New Orleans but it does not negate the need for a bridge replacement.

As stated above, the study area is rural; therefore, use of TSM strategies such as ridesharing and HOV lanes does not meet the need for the project.

2.2 Population Distribution

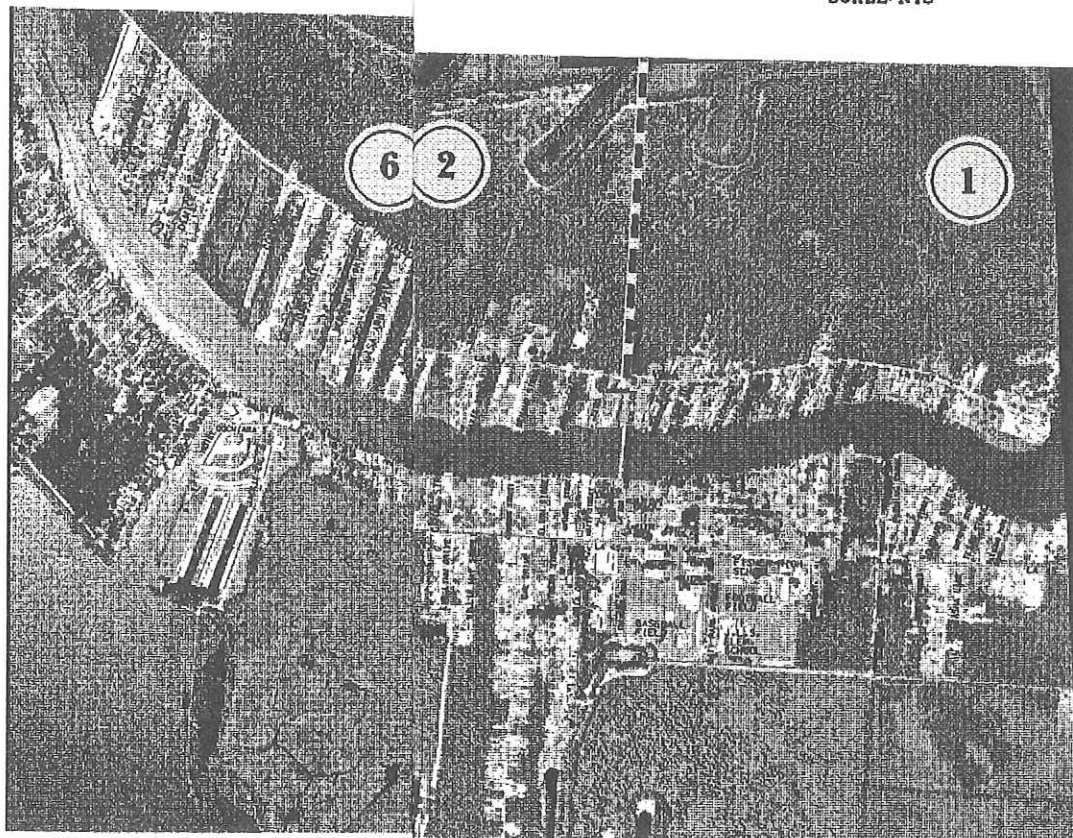
The determination of population distribution was approached from the aspect of the total number of potential trip starting points rather than a complete population breakdown. The housing count study found that the Paillet Canal divides the west side population almost in half.

Approximately 50 percent of residential homes are located north of the Paillet Canal, with the other 50 percent located south of the Paillet Canal. The numbers used for this determination were based on the number of houses within the study corridor. Housing counts were only performed on the west side because of the complete dependence of that population on the bridge connection to the main roadway system. Six specific areas were defined, and the housing within each was determined (**Figure 2-1**). Volkert performed field counts of the housing and businesses in each area (**Table 2-1**).

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AT JEAN LAFITTE
LA 302, JEFFERSON P
RE:BRIDGE NO. 022682

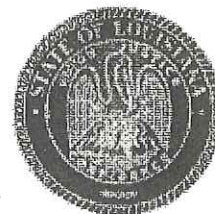


SCALE: NTS



VOLKERT
& ASSOCIATES, INC.

FIGURE 2-1



A separate traffic study concluded that the main destination for residents of the study area is primarily New Orleans and surrounding communities. Replacement of the existing bridge with a structure close to the population center was a primary consideration for public safety and convenience concerns. Due to these considerations, the upper portion of the study corridor was determined to be the best location for a replacement bridge.

Table 2-1: Population/ Business Distribution for Barataria Side

Population Area	Number of Residences	Number of NPOs*	Number of Businesses
1	95	0	4
2	140	1	1
3	39	0	0
4	46	0	2
5	10	2	1
6	226	0	3
TOTALS:	556	3	11

*NPO – Non-profit Organization

2.3 Flooding Potential

Areas of potential flooding and existing levee locations were also considered for alternative locations. Any alternative with landing points outside the existing levee systems on either side may not meet the project purpose and need as a potential evacuation route during storm events.

According to Flood Insurance Rate Maps produced by the Federal Emergency Management Agency (FEMA), the entire project study area is within the 100-year floodplain. Portions of the study area are designated as susceptible to coastal flooding with wave action (Zone VE). Flooding with wave action usually occurs during tropical storm events or weather fronts with sustained southerly winds and heavy rains.

Within the study area there are two existing levee systems. The Paillet Basin levee system, on the west side of the bayou, is located on the north side of Paillet Canal and extends to the ICWW. The Fisher School Basin levee system is on the east side of the Bayou and extends from Fleming Canal to a point just north of Shipyard Street. Areas outside of the levee system within the entire study corridor have a high potential for flooding.

According to the USACE, approximately 75 percent of the structures within the Fisher School Basin are inundated below the five-year design storm event. A similar study of the Paillet Basin on the west side of Bayou Barataria is currently being conducted.

The present condition of the levees contributes to uneven flooding potential for each of the basins. The Paillet Basin is particularly susceptible to inundation of LA 3257 due to the inadequate levee protection provided along the north side of Paillet Canal.

2.4 Vertical Bridge Clearance

In order to determine clearances for the project, Volkert initiated a study in November 2000 to determine vessel height requirements for maritime traffic passing the existing Bayou Barataria Bridge. The final report was submitted in April 2001. Heights of vessels passing the existing Bayou Barataria Bridge were obtained for the period of July 1997 to June 2000 from the Bridge Tender's Report on Openings for Navigation (**Table 2-2**). The Bridge Tender's Report contains the date and time of each opening, and the name and height of each vessel that passes the bridge. The bridge tender estimates the vessel height as the vessel passes; therefore, the height is not a measured value. The report showed that the existing bridge opens over 10,000 times per year.

Volkert conducted a supplemental vessel height study in May 2001. The study was initiated in response to a comment received following the March 20, 2001

Public Meeting. The owners of LeBlanc Seafood were concerned that the existing vessel height study had not taken into account the possibility that larger commercial fishing vessels were using supply facilities south of the existing bridge and then returning south to the fishing grounds without ever going as far north as the existing bridge.

Data obtained as a result of these two studies were submitted to DOTD as separate reports (Volkert 2001a, 2001b).

Table 2-2: Vessel Air Draft Distribution and Bridge Opening Data

Estimated Vessel Height	Number of Openings	Percentage of Vessels at Estimated Vessel Height	Cumulative Percent of Bridge Openings
10	1,173	4.0%	4.0%
15	4,258	14.4%	18.4%
20	6,302	21.4%	39.8%
25	4,569	15.5%	55.2%
30	3,724	12.6%	67.9%
35	4,644	15.7%	83.6%
40	1,666	5.6%	89.2%
45	392	1.3%	90.6%
50	1,091	3.7%	94.3%
55	588	2.0%	96.2%
60	578	2.0%	98.2%
65	178	0.6%	98.8%
70	126	0.4%	99.2%
75	166	0.6%	99.8%
over 75	60	0.2%	100.0%
Total Bridge Openings	29,515		

The purpose of the supplemental vessel height study was to determine the approximate number of bridge openings per day for a bridge located south of the existing bridge. Based on the results of both vessel height studies, a movable bridge with a minimum vertical clearance of 45 feet would pass 90 percent of vessel traffic with no openings (Table 2-3). The results found that a net increase

of an average of one bridge opening per day would occur with a bridge constructed at any alternative location north of Paillet Canal.

Table 2-3: Estimated Average Number of Daily Bridge Openings for Bridge Clearances from 20 to 45 feet

Minimum Vertical Clearance Of Mid-Level Movable Bridge (Feet)	Estimated Number Of Required Openings Per Year	Estimated Number Of Required Openings Per Day	% Of Vessels Passing Without A Bridge Opening
20	9193	26	11.9
30	5145	15	52.3
35	3671	11	67.0
40	1937	5	84.3
45	1372	4	90.0

2.5 Horizontal Bridge Clearance

The existing bridge presents a navigational restriction for horizontal clearance on Bayou Barataria. As a means to alleviate the current restriction, the horizontal clearance of a replacement bridge should be consistent with the clearances of the existing bridges along the ICWW. Currently, vessels that are unable to pass the Bayou Barataria Bridge either continue along the ICWW or in some instances use an unauthorized passage through Bayous Perot and Rigolettes.

The horizontal clearance for the proposed bridge was initially studied at 125 feet. Along the ICWW from Larose to the Crown Point Bridge the horizontal clearance is 150 feet (See **Figure 1-2**). Therefore, in order to provide equivalent horizontal clearance for maritime traffic through the area, a bridge with a 150-foot horizontal clearance is required. The existing channel in Bayou Barataria is maintained at a horizontal width of 125 feet at the bottom of the channel. Due to the maintained channel side slopes, a horizontal clearance of 150 feet is possible for marine traffic without additional dredging.

2.6 Bridge Type Considerations

2.6.1 Low-Level Movable Bridge

A swing bridge replacement was evaluated because it presented the potential for substantial cost savings. Additionally, the environmental impact of a low-level swing bridge would be minimal because the new bridge structures and approach ramps could be constructed between LA 45 and LA 3257 and would not extend into the wetlands beyond the roadways.

If constructed to the existing bridge's clearances, however, the replacement bridge would continue to open for the maritime traffic approximately 10,000 times per year. This number of openings would not satisfy the stated project purpose and need. Additionally, because a 150-foot horizontal clearance is required to eliminate a maritime traffic restriction, a swing bridge replacement with this size of movable bridge segment could become cost prohibitive.

In order to provide a reasonable reduction in the number of annual openings while maintaining a low impact profile for this bridge type, a low-level bascule replacement bridge could be constructed with a vertical clearance of 20 feet. A movable bridge with this clearance would still require approximately 25 openings per day (**Table 2-3**). Therefore, this potential replacement bridge would not meet the project's stated purpose and need to limit bridge openings.

2.6.2 Mid-Level Movable Bridge

A mid-level movable bridge was considered for further study because it would limit the number of potential openings for the replacement bridge while providing the capability for improving the existing horizontal clearance.

Based on the results of the Vessel Height Study performed for the existing bridge, a vertical clearance of 40 feet was originally chosen to represent the greatest vertical clearance for the largest percentage of vessel height class using the waterway (see **Table 2-2**). Beyond this height it was seen that the percent use of the waterway for each height class was less than four percent of the total. This presents a logical point of diminishing return. However, upon consideration of the cumulative percent of vessel use, raising the bridge clearance an additional five feet to 45 feet would permit 91 percent of the existing traffic to pass beneath a closed bridge without disrupting land-based traffic.

The supplemental vessel height survey confirmed the conclusions of the initial survey and provided a more precise estimate based on the potential new bridge locations. A mid-level movable bridge at any of the potential locations is estimated to require an average of four openings per day.

Two mid-level movable bridge types were considered for this project. The bascule bridge, when open, provides unlimited vertical clearance. The vertical lift bridge type would have a maximum vertical clearance of 125 feet. The bascule bridge is preferred by the public and industry of the project area. Information obtained from shipbuilding enterprises in the vicinity of the existing bridge indicates that a clearance of greater than 125 feet would be required for future planned construction. Vertical clearance on Bayou Barataria is also important for the potential movement of oil field related vessels (high air-draft drill rigs) to repair facilities or for storm protection.

Comparison of costs for the mid-level bridge types also presents a definite difference between the types considered. A bascule bridge has lower operation and maintenance costs and is less expensive to construct than a vertical lift type bridge. According to cost estimates developed by Volkert, a vertical lift bridge would cost \$1.6 million more than a bascule.

This cost was derived from a combination of construction, maintenance, and operating costs. The operating and maintenance costs were based on a fifty-year period.

2.6.3 High-Level Fixed Bridge

The high-level fixed bridge type was considered for this project as a means to provide uninterrupted traffic flow and eliminate the need for closing the bridge for repair or mechanical failure.

Completion of the vessel height survey provided information about vessels passing the existing bridge. Nearly 99 percent of the existing marine traffic could be accommodated by the construction of a high-level fixed span bridge at an elevation of 70 feet. Two nearby fixed high-level bridges exist at Crown Point and Larose. These bridges have a vertical clearance of 73 feet. In order to accommodate all existing marine traffic, a fixed span bridge would need to have a minimum vertical clearance of 125 feet.

In addition to discussions with users of the existing bridge, future growth and development should be considered in regard to a fixed span bridge. A total of 352 bridge passages (1.2 percent) is attributable to vessels exceeding a vertical clearance of 70 feet.

Planned construction by North American Shipbuilding includes vessels with an air draft in excess of 125 feet. North American Shipbuilding is located near Houma, but it utilizes Bayou Barataria for transit to the Gulf of Mexico. Bayou Barataria is their only access to the Gulf of Mexico with unrestricted vertical clearance for high air draft vessels.

The height of existing oil-field related equipment currently using Bayou Barataria would have to be reduced by physically cutting the support legs for jack-up barges and then re-welding the support legs after clearing the bridge. Due to the present unlimited vertical clearance presented by the

existing bridge, a fixed height bridge would create a new maritime traffic restriction. Restricted maritime travel would not meet the stated project purpose and need nor would it meet regulatory requirements for navigation.

2.7 Design Criteria

Initial design criteria for the concepts were based on a 60 mph design speed in the tangent (straight) section of the bridge with a transition into 45 mph in the curves. This criterion was developed based on the classification of the existing bridge and connecting roadway as a rural collector (RC-3). This criterion was later reduced to 45 mph in the tangent section with a transition to 30 mph in the curves in order to reduce the footprint and minimize the impacts of each alignment. The reduction of the design criteria lowered the amount of potential environmental impacts at each alternate location. The difference between a 60 mph/ 45 mph and a 45 mph/ 30 mph design speed reduces the size of the roadway footprint by almost 30 percent (Figure 2-2).

2.8 Selection of Alternate Locations

Based on the considerations of population distribution, potential flooding, and existing levee systems, alternate alignment location analysis was narrowed to include only the first two miles of the entire six-mile study area. This corresponds to the area from Paillet Canal to Fleming Canal.

2.8.1 Existing Bridge Location

Consideration of this location for a replacement bridge has been discontinued. Due to the amount of infrastructure in place and the presence of potential cultural resources impacts, this location alternative has been eliminated. Additionally, construction of the proposed bridge would have been adversely impacted by the required continuation of service for the existing bridge. Construction impacts to the area could potentially affect Jean Lafitte Town Hall, the city park, the Jean Lafitte

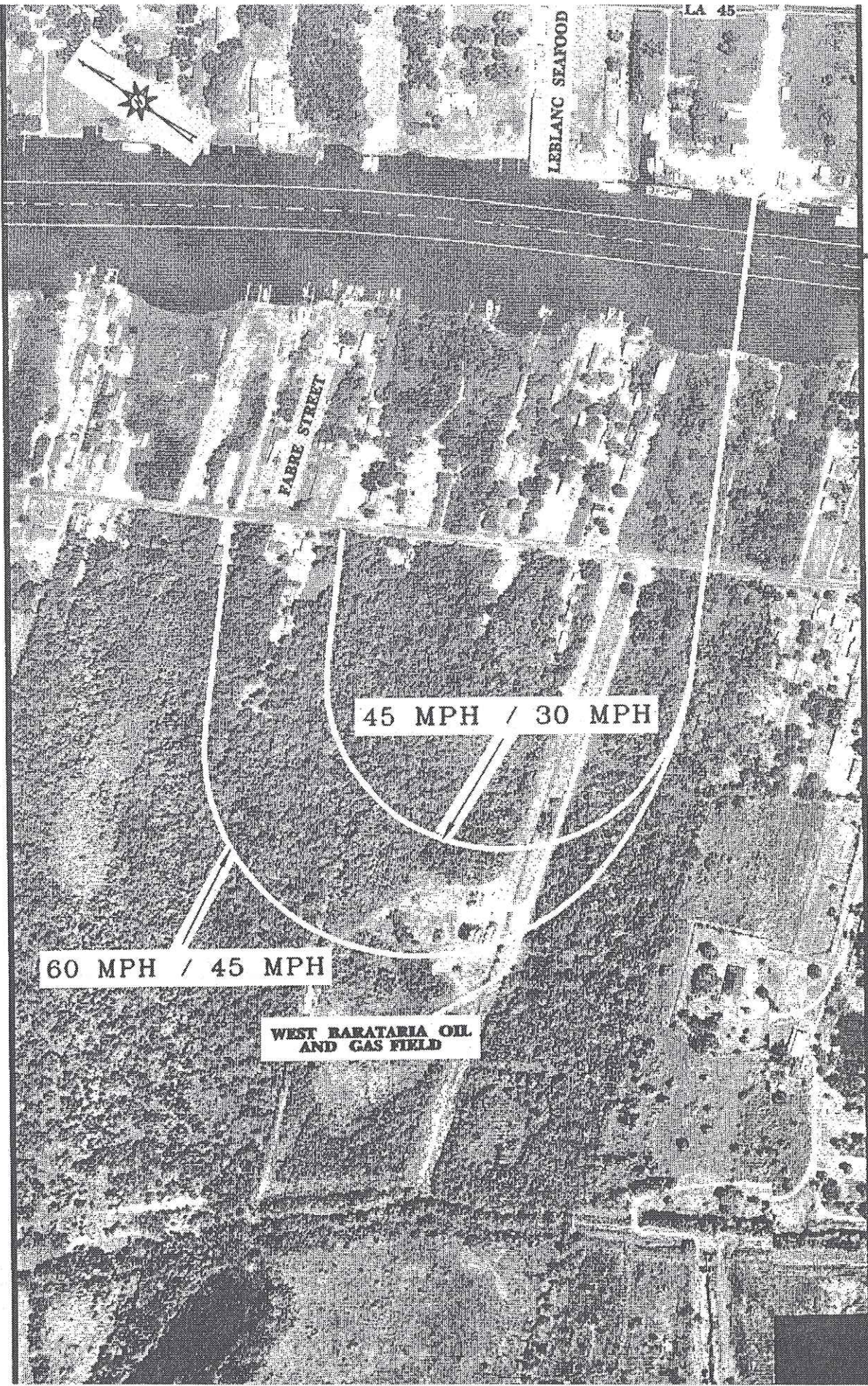


FIGURE 2-2

BAYOU BARATARIA

DESIGN SPEEDS

post office, a church, a school, commercial areas, and residences that surround the existing bridge location. Impacts to the central business area of Jean Lafitte would have been extensive.

2.8.2 Fleming Canal

Several design concepts were considered in the area of Fleming Canal. However, due to several factors, analysis of all concepts at this location has been discontinued.

Public opinion at the first Public Meeting indicated that acceptance of a bridge in this location was preferred because DOTD already owned ROW that was purchased as part of the original Lafitte-Larose highway project. The displacement of additional families for a replacement bridge in a different location was thought to be a waste of money and unnecessary because of the existing ROW.

The alignments proposed at Fleming Canal crossed Bayou Barataria at a location that has a forty-degree bend in the channel. The location of a bridge crossing over a navigable waterway is a key factor in determining the risk of vessel collisions. Evaluation of a bridge at the Fleming Canal location was conducted to determine the probability of a potential vessel collision with the bridge or attendant structures. The collision probability for a bridge located at Fleming Canal was found to be more than double the risk for the existing bridge location. There have been 56 reported collisions with the existing bridge from 1947 to 1998. Collisions in 1985 and 1997 resulted in the complete closure of the roadway to vehicular traffic for extended periods of time.

Because of the increased potential for collision, a bridge at this location would be required to span the entire waterway. At this location Bayou Barataria is approximately 500 feet wide. This potential structure would

be prohibitively expensive and would only be feasible with a fixed high-level bridge type. The vertical restriction on maritime traffic would be incompatible with regulatory requirements for not interfering with existing and foreseeable maritime traffic patterns.

2.8.3 Pipeline Street

Alternatives for consideration were developed around Pipeline Street, which is on the eastern side of Bayou Barataria. The proposed alternatives connect LA 3257 to LA 45 by crossing over the existing Pipeline Street location at A&A Marine.

The Pipeline Street location was chosen to take advantage of undeveloped land on the west side of Bayou Barataria. Based on the development patterns north of this location, this was considered to be the first location that would potentially involve no residential relocations. This location presented a blend of acceptable environmental, social, and economic impacts.

Alternatives at this location were designed to minimize the potential for wetland and natural habitat impacts. At the crossing point for all of the bridge locations, the lots at the edge of Bayou Barataria were previously filled and do not represent impacts to wetlands.

This location was also chosen because of its proximity to the existing levee system on the east side of the bayou and its position within the Paillet Basin on the west side. This location provided the potential for improved flood protection.

At this location, Bayou Barataria is in a straight section, unlike at Fleming Canal, and as such, no navigation restrictions exist at this location.

2.8.4 Paillet Canal

Alternatives were also developed at the Paillet Canal location. Originally, the alternatives were positioned north of the canal. This position was selected based on the population distribution data and the flood information for the area. The proposed alternatives connect LA 3257 to LA 45 by crossing Bayou Barataria on the north side of Paillet Canal.

North of Paillet Canal

The Paillet North location represented the next potential location along Bayou Barataria that took advantage of undeveloped properties across Bayou Barataria. This location was considered one of the southernmost points along the study area that retained the equal population split north and south of the Paillet Canal. This location also represented a location that would have minimal relocation impacts.

Conceptual design at this location attempted to minimize the potential for wetland and natural habitat impact. The lot that presently contains the Barnett Marine facility on the east side of Bayou Barataria was previously filled and does not represent impacts to wetlands. The landing point on the west side of Bayou Barataria is an impacted wooded lot that still retains some wetland characteristics in places but is essentially filled with debris and yard trash.

This location is still close to the existing levee system on the east side of the bayou and is still within the Paillet Basin levee system on the west side. These considerations also helped provide these alternatives with a measure of flood protection. At this location, Bayou Barataria is in a straight section and thus no restrictions to navigation exist at this location.

South of Paillet Canal

After eliminating the existing bridge location and the Fleming Canal location, only the Pipeline Street and Paillet Canal areas remained for consideration for alternate alignment locations. A third alternate location, south of Paillet Canal, was considered after input from the agency coordination meeting on February 15, 2001. After this meeting, alternatives were developed to connect LA 45 to LA 3257 by crossing Bayou Baratavia south of Paillet Canal.

This location was chosen due to the complete lack of impact to residential areas. However, most impacts at this location would represent impacts to wetlands and essential fish habitat. Flood protection would be less than the previous two locations. Navigation restrictions would exist at the Paillet Canal for any alternatives at this location. Due to the roadway elevation, vertical clearance at the Paillet Canal will be less than five feet and could present a navigational restriction to small vessels.

2.9 Proposed Alternatives

Through the elimination of alternate locations and designs, seven alignments were developed for detailed analysis. These alternatives were presented at the Public Meeting held on March 20, 2001. The seven alternatives presented were: Pipeline 1, Pipeline 2, Paillet North1, Paillet North 2, Paillet North 3, Paillet South 1, and Paillet South 2, (**Figures 2-3 through 2-9**).

2.9.1 Pipeline Street

The Pipeline Street alignments chosen for analysis were Pipeline 1 and Pipeline 2 (**Figures 2-3 and 2-4**). These alternatives impacted roughly the same area on the west side of Bayou Baratavia. However, on the east side of the waterway, the alignments impacted very different areas. Both alignments equally satisfied the purpose and need for the proposed action;

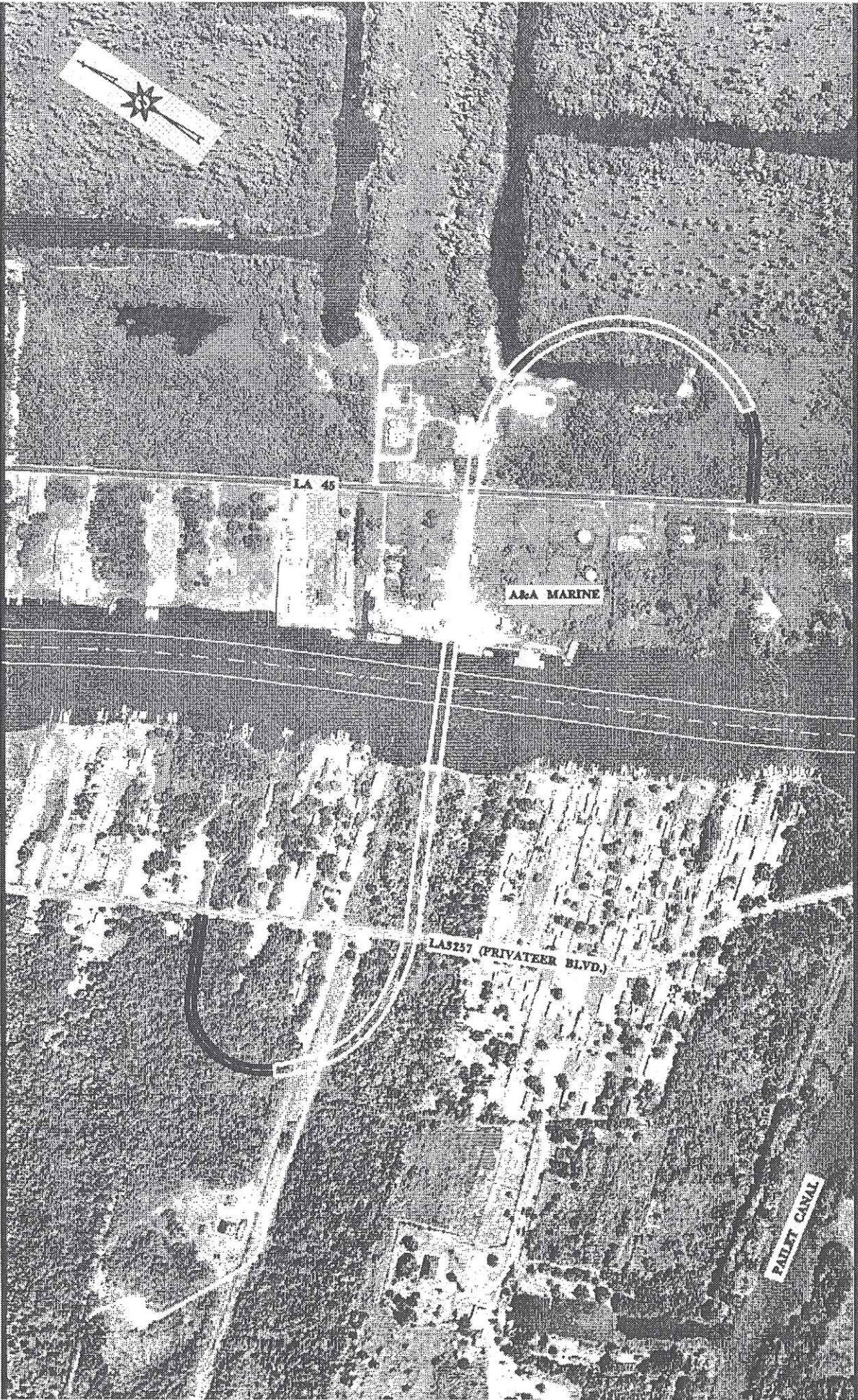


FIGURE 2-3

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PIPELINE 1

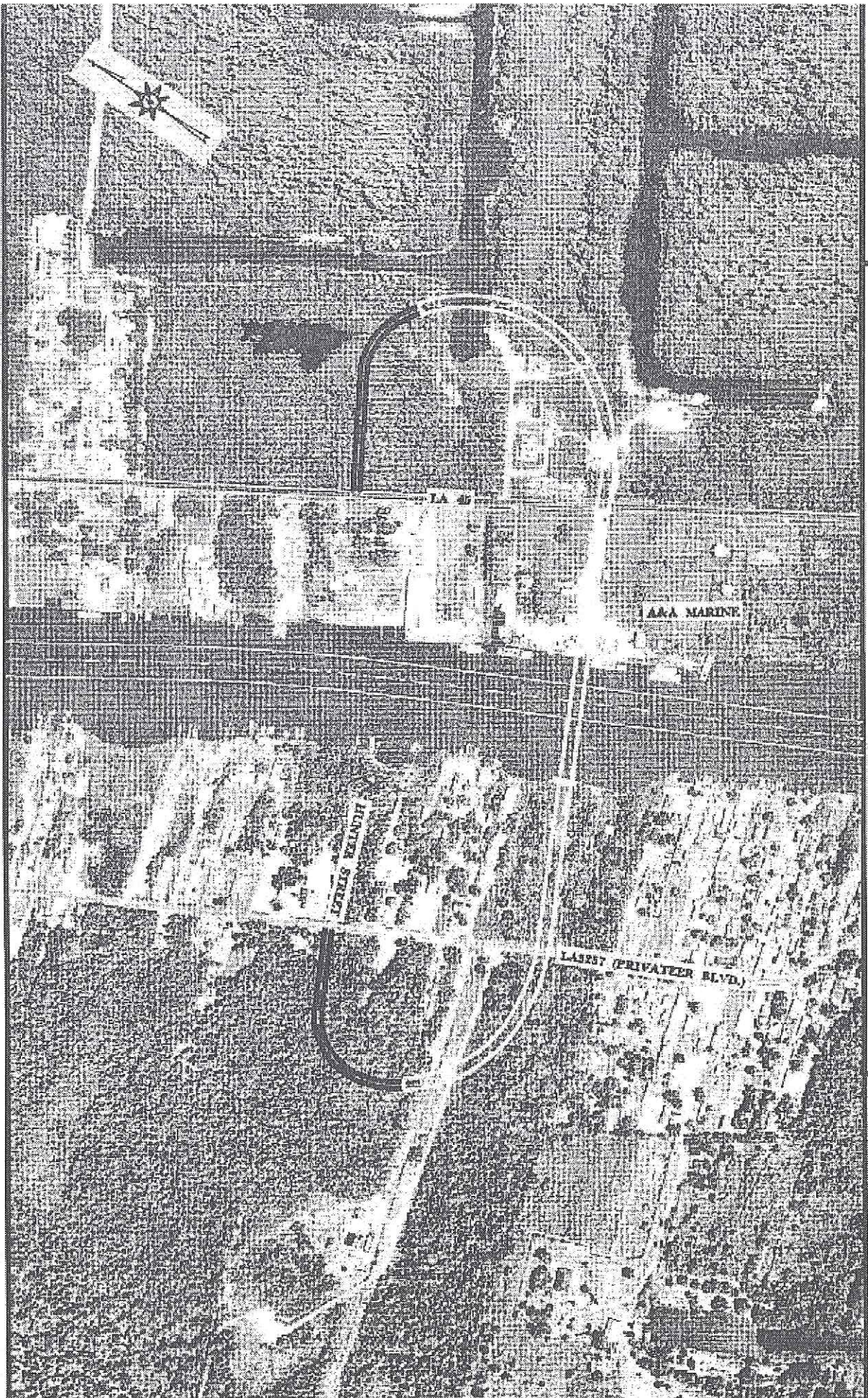


FIGURE 2-4

BAYOU BARATARIA

PIPELINE 2

therefore, the alignment with the least amount of impacts was chosen as the alternate of further consideration. Pipeline 1 curved toward the south, while Pipeline 2 curved toward the north. Pipeline 1 had potential to impact more wetlands than Pipeline 2. For this reason, Pipeline 1 was eliminated from further consideration.

2.9.2 Paillet Canal North

The alignments considered north of Paillet Canal were Paillet North 1, Paillet North 2, and Paillet North 3 (**Figures 2-5, 2-6, and 2-7**). Each alignment satisfied the purpose and need of the proposed action, but each alignment impacted the area in different ways. Paillet North 3 crossed over LA 3257, looped around, and intersected LA 3257 just south of the subdivision on the west side of Bayou Baratavia, and intersected into LA 45 without passing over the roadway on the east side. Further study of this alignment showed that the proposed bridge would not be able to intersect LA 45 without passing over the roadway first. For this reason, Paillet North 3 was eliminated from further study.

Comparing Paillet North 1 and Paillet North 2 (**Figures 2-5 and 2-6**), it can be seen that Paillet North 2 has a much more compact loop on the west side of Bayou Baratavia than does Paillet North 1. This allows Paillet North 2 to intersect LA 3257 without passing around the subdivision located north of the Paillet Canal on the west side of Bayou Baratavia. Paillet North 2 was determined to have the potential to directly impact more residences than the Paillet North 1 alignment. For this reason, Paillet North 2 was eliminated from further consideration.

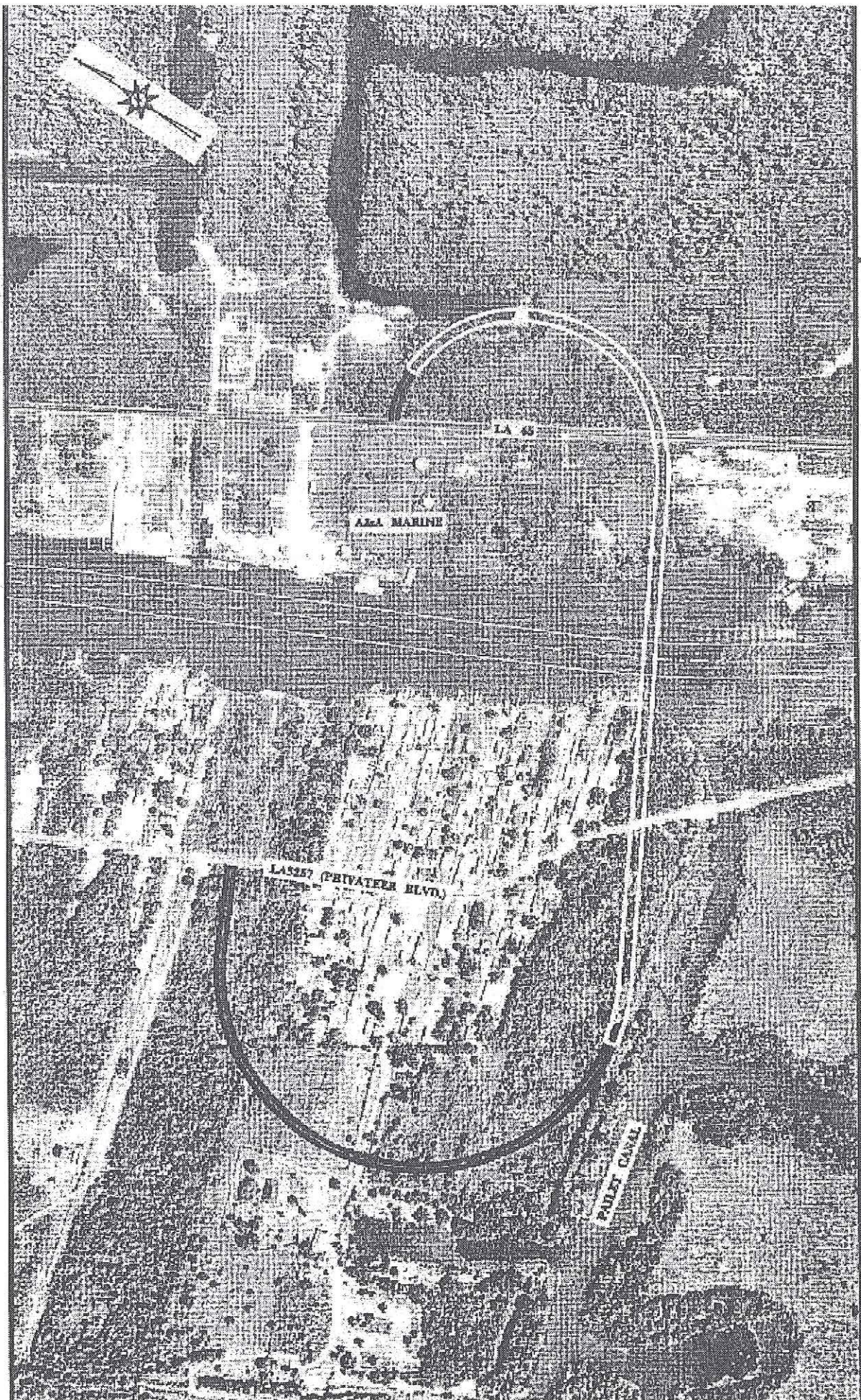


FIGURE 2-5

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PAILET NORTH I

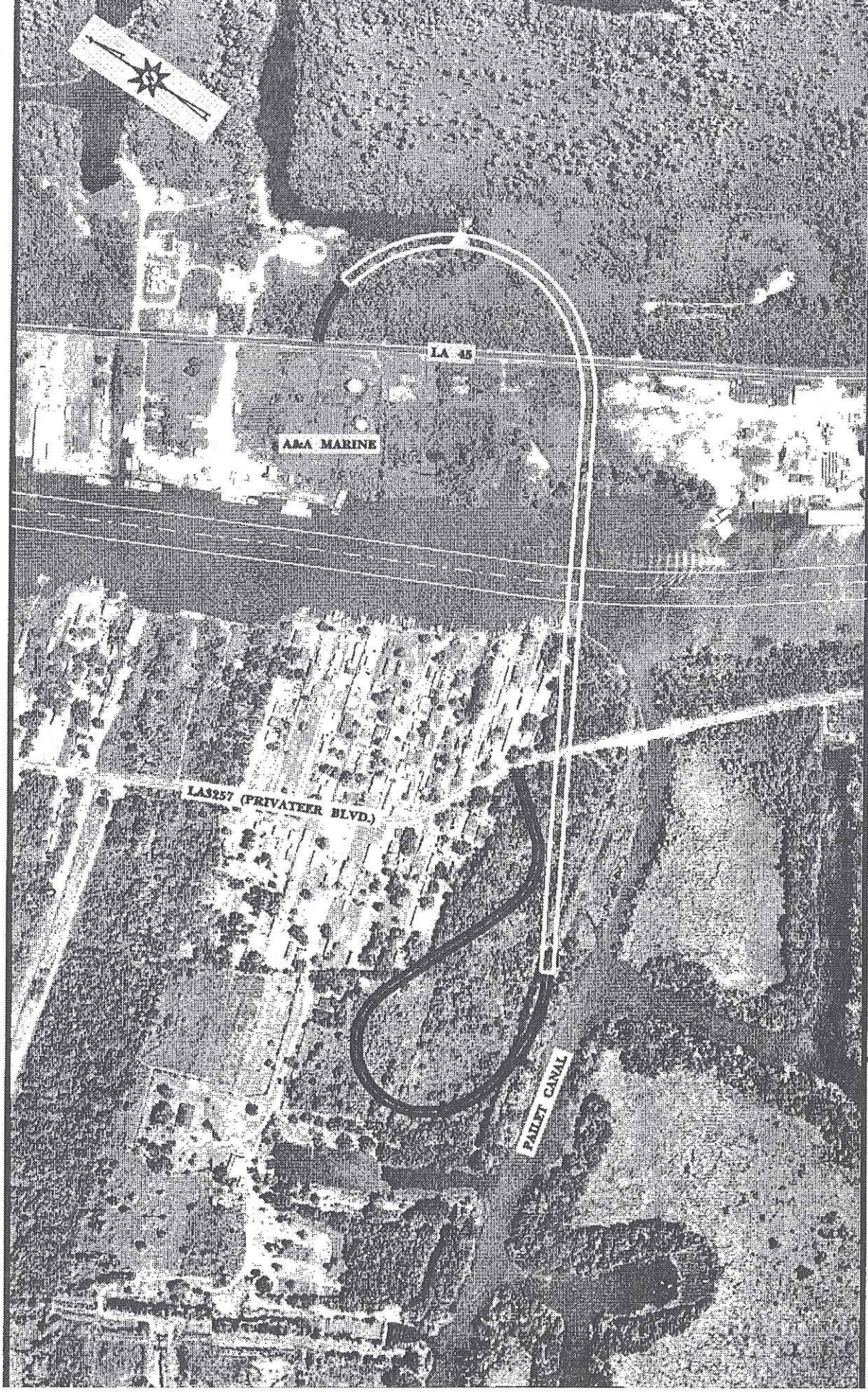


FIGURE 2-6

BAYOU BARATARIA

PAILET NORTH 2

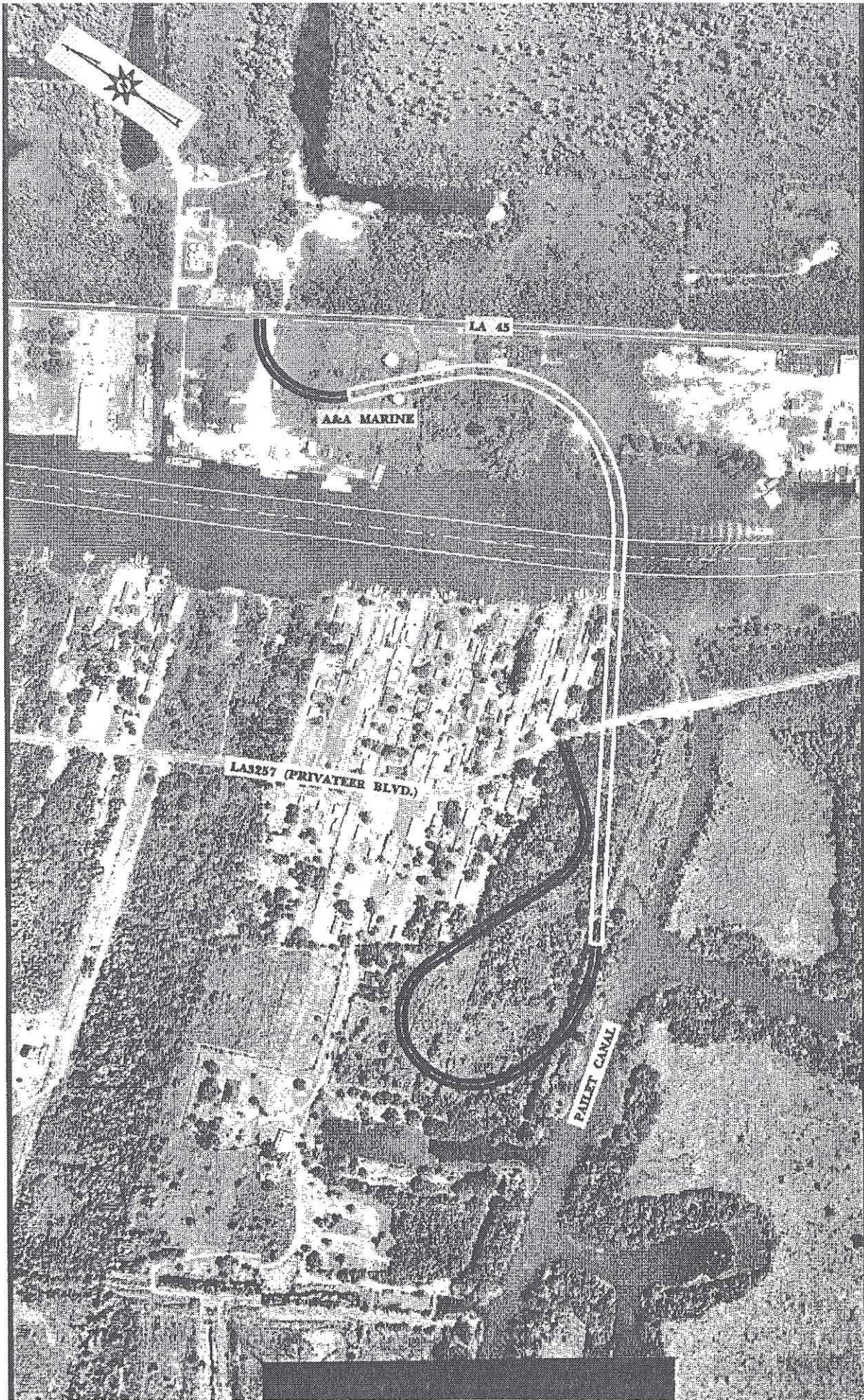


FIGURE 2-7

BAYOU BARATARIA

PALLET NORTH 3

2.9.3 Paillet Canal South

The Paillet South alignments considered for analysis are Paillet South 1 and Paillet South 2 (Figures 2-8 and 2-9). Each alternative satisfied the purpose and need for the proposed action. Paillet South 2 had the potential to impact more residences than Paillet South 1. Because minimization of residential impacts and relocations is a consideration for the project, Paillet South 2 was eliminated from further consideration.

2.10 Detailed Analysis of Alternatives

The three remaining alignments, Pipeline 2, Paillet North 1, and Paillet South 1 were further evaluated to determine the best alternate and location for the Bayou Baratavia Bridge replacement.

A comparison of each of the alternatives was made by development of a matrix (Table 2-4). Environmental constraints, construction cost, utility relocation cost, right-of-way cost, length of bridge and roadway, and improvements to LA 45 have been addressed in this table.

Improvements to LA 45 include adding turn lanes and raising the roadway to the proposed levee elevation from the bridge intersection to the levee. The improvements to LA 45 are required to provide protection to land-based traffic during hurricane evacuations.

The environmental constraint categories are addressed in detail in Sections 3.0 and 4.0. The categories pertaining to cost issues are detailed in the location and feasibility study.

2.10.1 Pipeline 2

Pipeline 2 crosses Bayou Baratavia at Pipeline Street on the east side of the bayou and between A.F. Pizani Street and E.J. Ruttley Street on the west side of the bayou (Figure 2-10). On the west side of Bayou Baratavia, the bridge curves northward and intersects LA 3257. This is within the



FIGURE 2-8

BAYOU BARATARIA

PAILET SOUTH 1

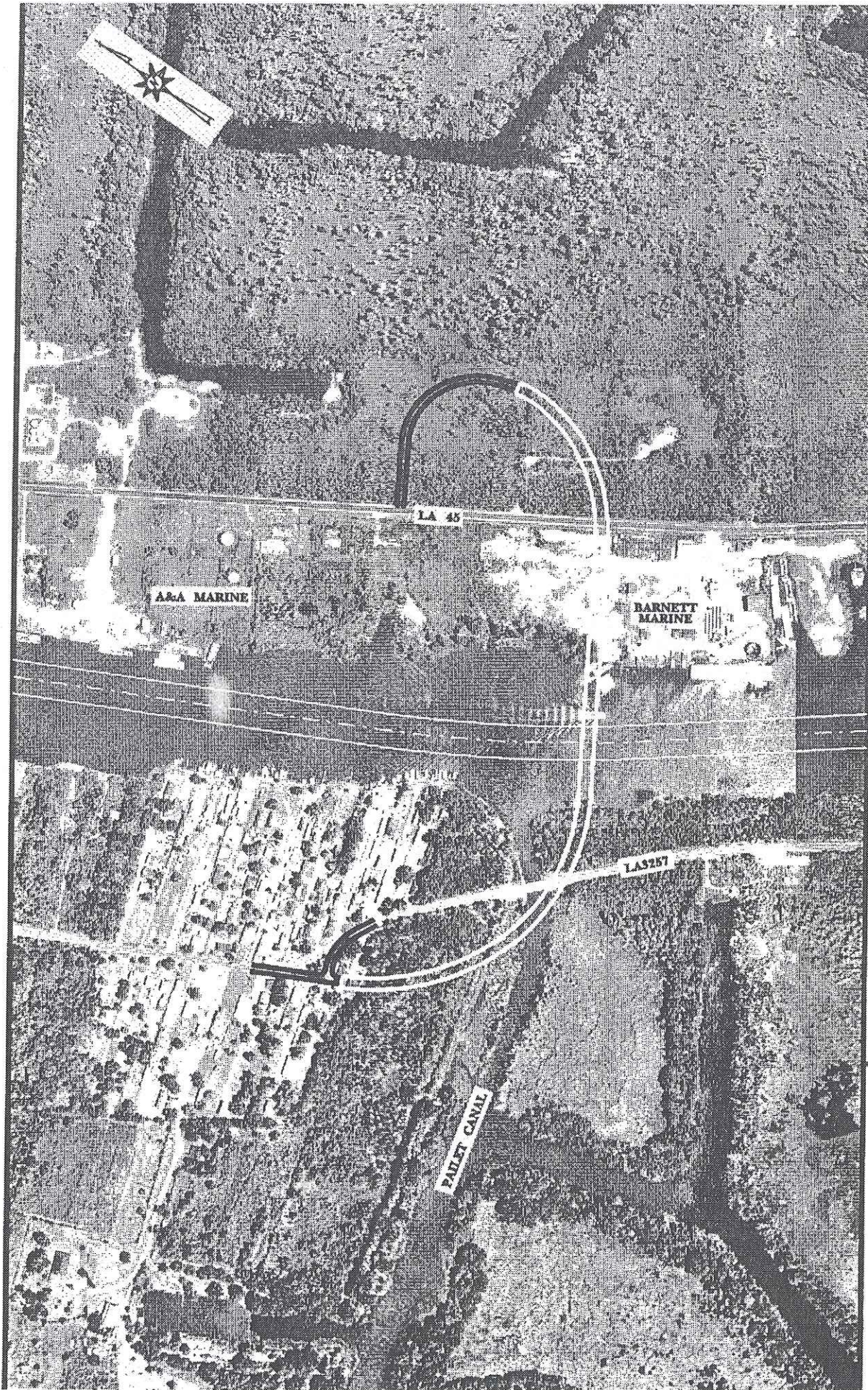


FIGURE 2-9

BAYOU BARATARIA

PAILLET SOUTH 2

Table 2-4: Bayou Barataria Bridge Replacement Alternatives Comparison Summary

Alternate	Roadway (length)	Bridge (length)	Total (length)	Noise Sites	Potential Wetlands Affected (acres)	Essential Fish Habitat (acres)	Potential Contamination Sites	Historic and Archaeological Sites	Impacts (acres ROW/CS)*			Public Involvement Location Poll Results	
									Bus	Res	Farms	Positive	Negative
Pipeline 2	200'	5900'	6100'	0	8.5	2.0	1	0	1.08/0.31	0/0	0/0	0	2
Paillet North 1	200'	6400'	6600'	0	11.6	2.8	0	0	0/0	0/0.20	2.08/0.55	1	1
Paillet South 1	200'	5700'	5900'	0	13.3	7.5	2	0	0/0	0/0	0/0	40	2

BRIDGE AND RAMP CONSTRUCTION COSTS				
Alternate	Construction (with Bascule Bridge)	R.O.W.	Utility Relocation	TOTAL
Pipeline 2	\$21,929,000	\$1,612,000	\$155,000	\$23,696,000
Paillet North 1	\$23,163,000	\$1,289,000	\$75,000	\$24,527,000
Paillet South 1	\$21,726,000	\$1,040,000	\$75,000	\$22,841,000

LA 45 IMPROVEMENTS						TOTAL PROJECT COST
Alternate	Length (feet)	Construction Cost	ROW Acquisition (acres)	Acquisition Cost	Utility Relocation Cost	TOTAL
Pipeline 2	670'	\$398,000	0.73	\$55,000	\$123,000	\$576,000
Paillet North 1	1915'	\$704,000	2.05	\$154,000	\$347,000	\$1,205,000
Paillet South 1	3215'	\$1,027,000	3.43	\$257,000	\$581,000	\$1,865,000
						\$24,272,000
						\$25,732,000
						\$24,706,000

NOTE: The above is based on a bascule bridge with a closed vertical clearance of 45 feet and an unlimited vertical clearance when open. The bridge would also have a horizontal clearance of 150 feet. There are no relocations of residences. There is land acquired for highway usage
 * ROW- Right-of-Way, CS- Construction Servitude

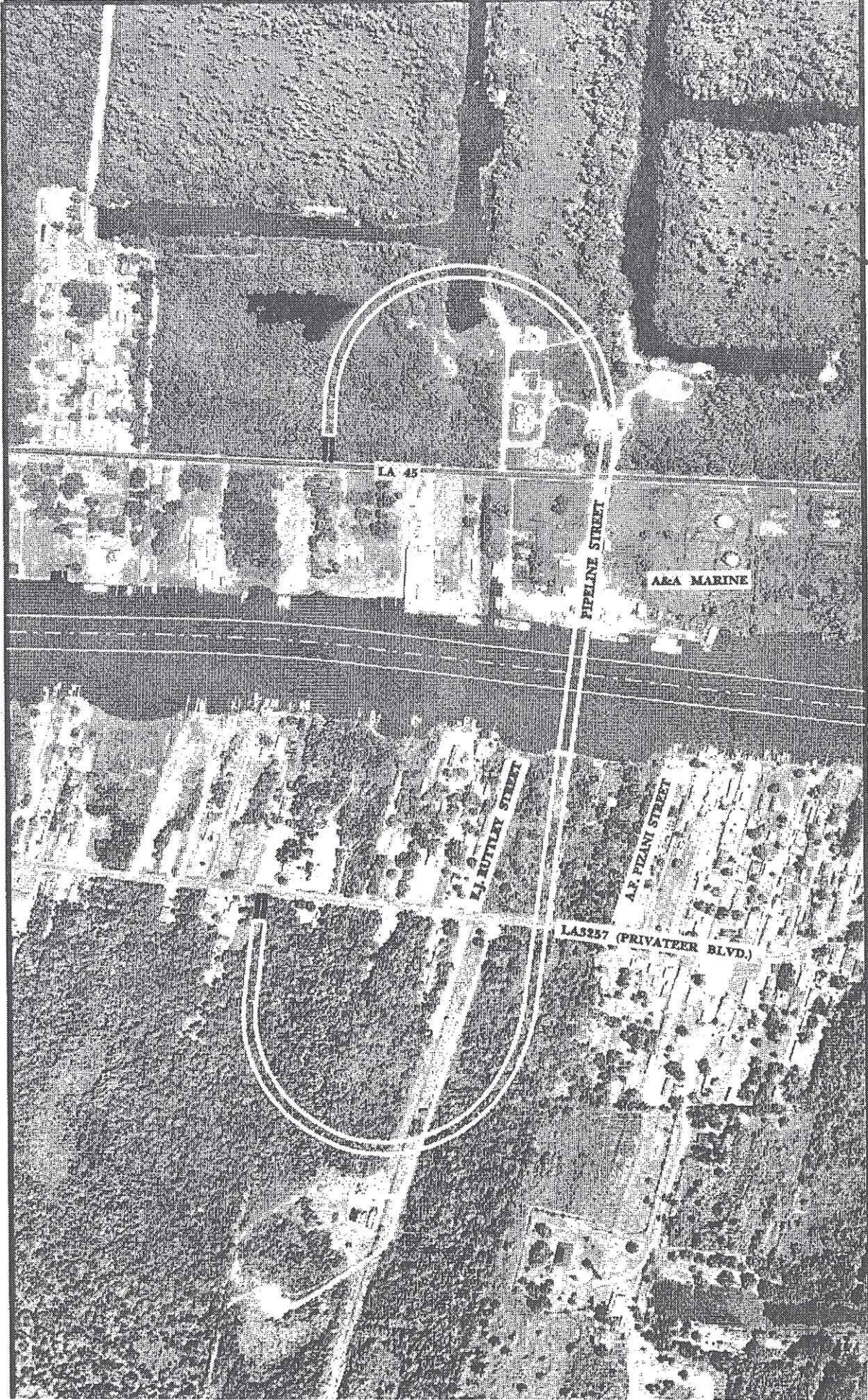


FIGURE 2-10

BAYOU BARATARIA

PIPELINE 2

existing levee, which is north of the Paillet Canal. On the east side of the bayou, the bridge also curves northward and intersects LA 45. LA 45 would need to be improved from this intersection to the existing levee system on the east side of Bayou Barataria.

Pipeline 2 has the second shortest overall length. Pipeline 2 affects the least number of acres for both wetlands and essential fish habitat. Pipeline 2 contains one potential contamination site and one potential business impact. Pipeline 2 is the second highest priced alternative (\$23,696,000). However, Pipeline 2 has the shortest length of improvement for LA 45, and the lowest associated cost (\$576,000).

2.10.2 Paillet North 1

Paillet North 1 crosses Bayou Barataria just north of Paillet Canal on the west side of the bayou, and on the northern end of Barnett Marine on the east side of the bayou (**Figure 2-11**). On the west side, the bridge loops around to the north, behind the small subdivision located on the west side of LA 3257 and is proposed to intersect LA 3257 between A.F. Pizani Street and E.J. Ruttley Street. This is within the existing levee, which is north of the Paillet Canal. On the east side of the bayou, the bridge curves northward and intersects with LA 45 outside of the existing levee system. Improvements to LA 45 would include roadway elevation and the addition of turn lanes. Roadway elevation would be required for approximately 1,900 feet as part of efforts for hurricane evacuations in the area.

Paillet North 1 has the longest overall length and the largest cost associated with construction of the bridge and ramps (\$24,527,000). The potential for affected wetlands falls between the other two alternatives; however, it is higher than Pipeline 1. The potential effect on essential fish habitat is also between the other two alternatives and is relatively low. This alternate contains one potential residential impact.

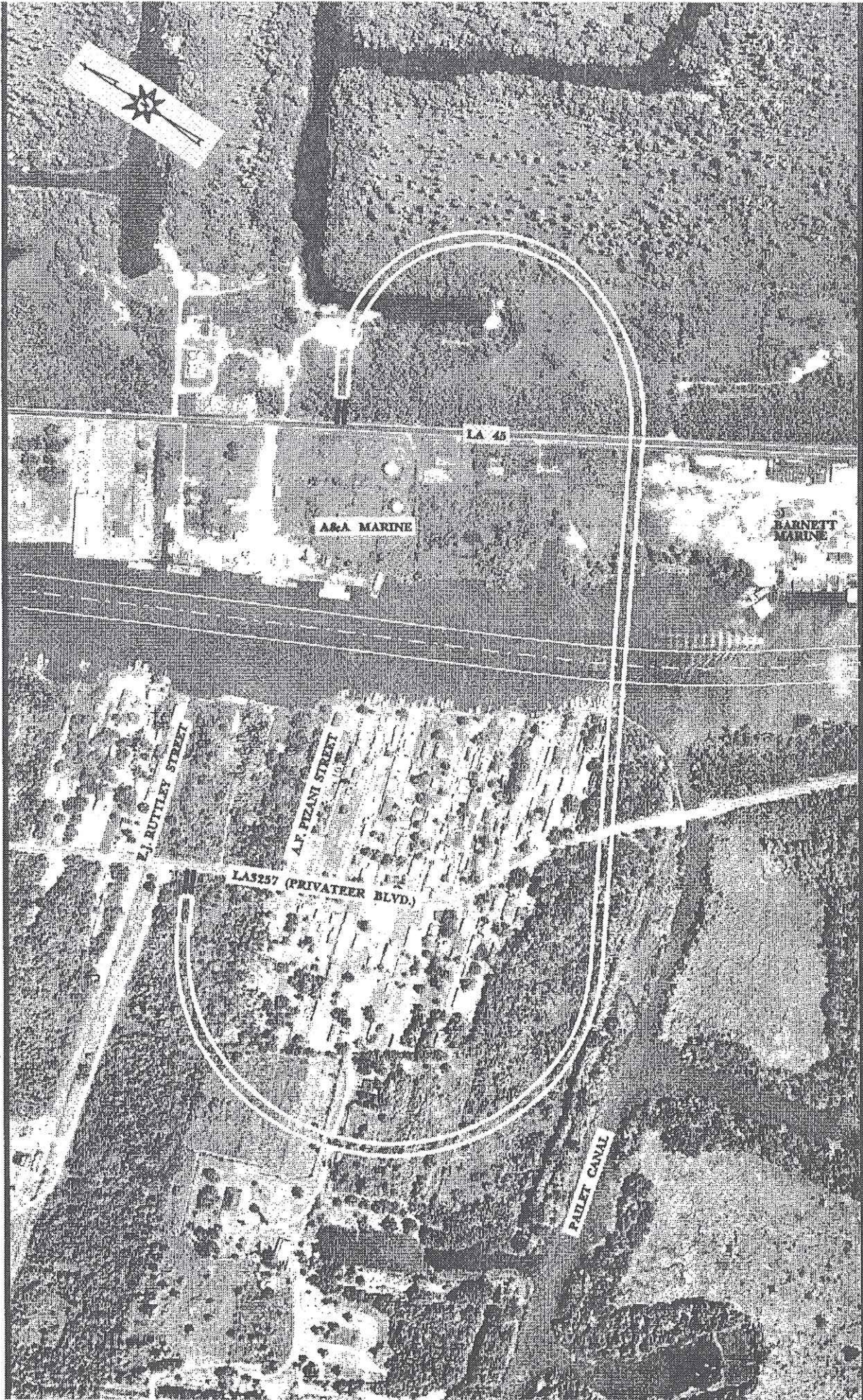


FIGURE 2-11

BAYOU BARATARIA

PAULET NORTH I

The cost for improvements to LA 45 for Paillet North 1 is \$1,205,000.

2.10.3 Paillet South 1

Paillet South 1 crosses Bayou Baratavia south of Paillet Canal on the west side of the bayou and on the southern end of Barnett Marine on the east side of the bayou (**Figure 2-12**). Paillet South 1 loops to the north on the west side of the bayou and intersects LA 3257 inside the levee, located on the north side of Paillet Canal. Paillet South 1 also loops to the north on the east side of the bayou and intersects LA 45 near Barnett Marine. The intersection is located 3,200 feet south of the Fisher School Basin levee. Improvements to LA 45 would include roadway elevation and the addition of turn lanes. These improvements would benefit hurricane evacuation efforts and help relieve traffic interruptions on LA 45 during bridge openings.

Paillet South 1 is the shortest of the three alternatives and construction of the bridge and ramps is the least expensive of the alternatives (\$22,841,000). Paillet South 1 has the highest potential for impacts to wetlands and essential fish habitat. On the west side of LA 3257 and along the alignment to Paillet Canal, the proposed roadway is located within the boundaries of the Jonathan Davis Wetland Restoration Project. The alignment would impact 8.0 acres of essential fish habitat. This alternate contains no business or residential relocations. It contains two potential contamination sites. The cost for improvements to LA 45 for this alternate is \$1,865,000.

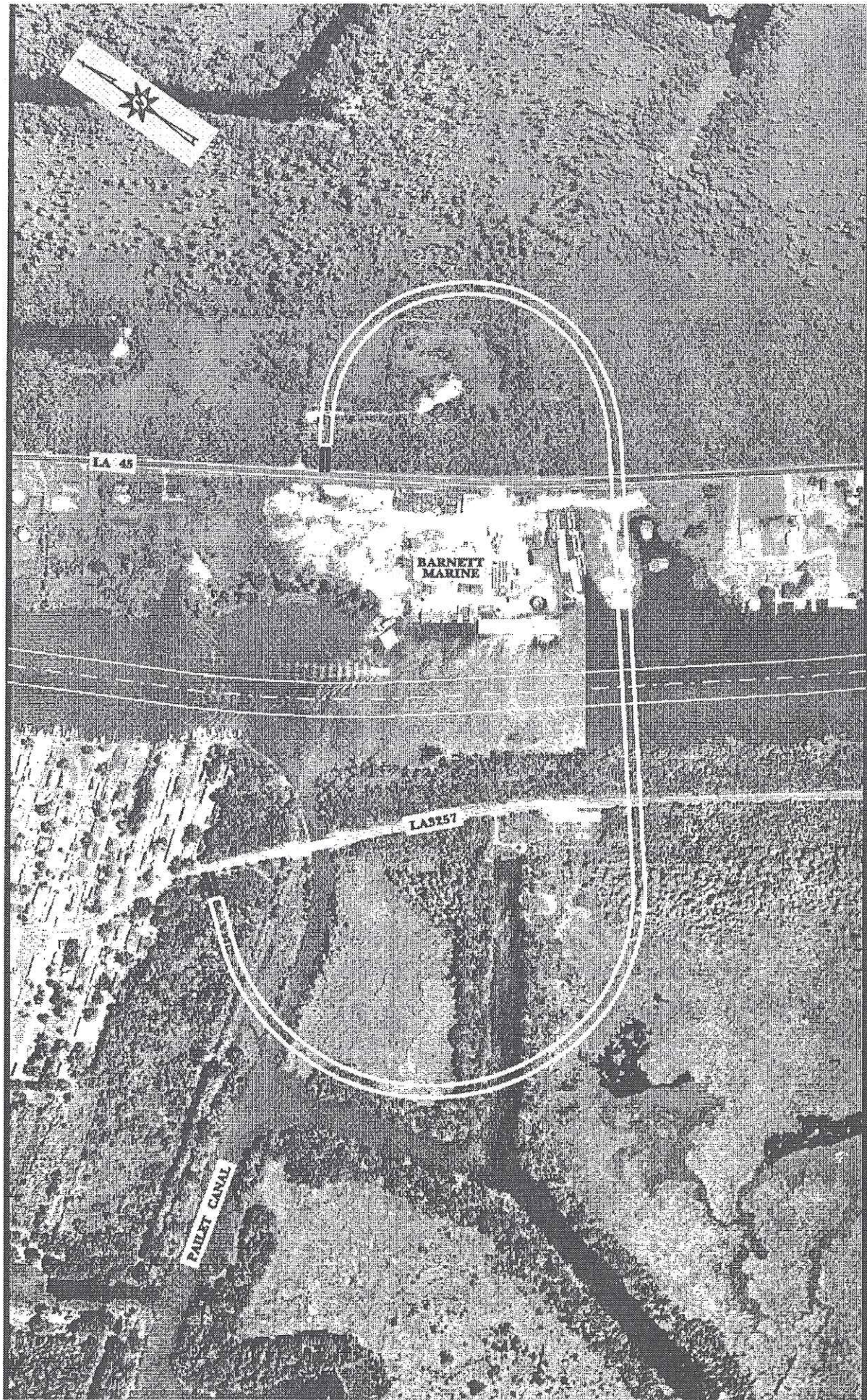


FIGURE 2-12

BAYOU BARATARIA

PAILET SOUTH I

2.11 Conclusion

Based on the studies conducted to date, a mid-level bascule bridge with a 45-foot vertical clearance and a 150-foot horizontal clearance has been selected for continued detailed analysis in the EIS. This bridge concept is being studied at three locations. These alternatives are identified as Pipeline 2, Paillet North1, and Paillet South 1.

As a means to compare the alternatives and to facilitate the review and analysis by the agencies and the public, the three alternatives were presented with similar vertical and horizontal configurations. Each alternate represented the same design elements. The subsequent analysis in the EIS will focus on the effect that the proposed action will have on the environmental, social and economic resources.

Overall, the total costs for each of the alternatives, including bridge and ramp construction, ROW acquisition, utility relocations, and LA 45 improvements are as follows:

- **Pipeline 2:** \$24,272,000
- **Paillet North 1:** \$25,732,000
- **Paillet South 1:** \$24,706,000

For ease of identification within the body of the EIS, the alternatives will be identified by their locations (Pipeline, Paillet North, and Paillet South).

SECTION 3.0
AFFECTED ENVIRONMENT

3.0 AFFECTED ENVIRONMENT/EXISTING CONDITIONS

This section contains descriptions of all environmental aspects of the project area. Each section describes the current status or condition of the subject resource potentially affected by the proposed alternatives presented in the previous section.

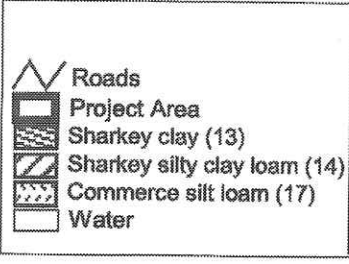
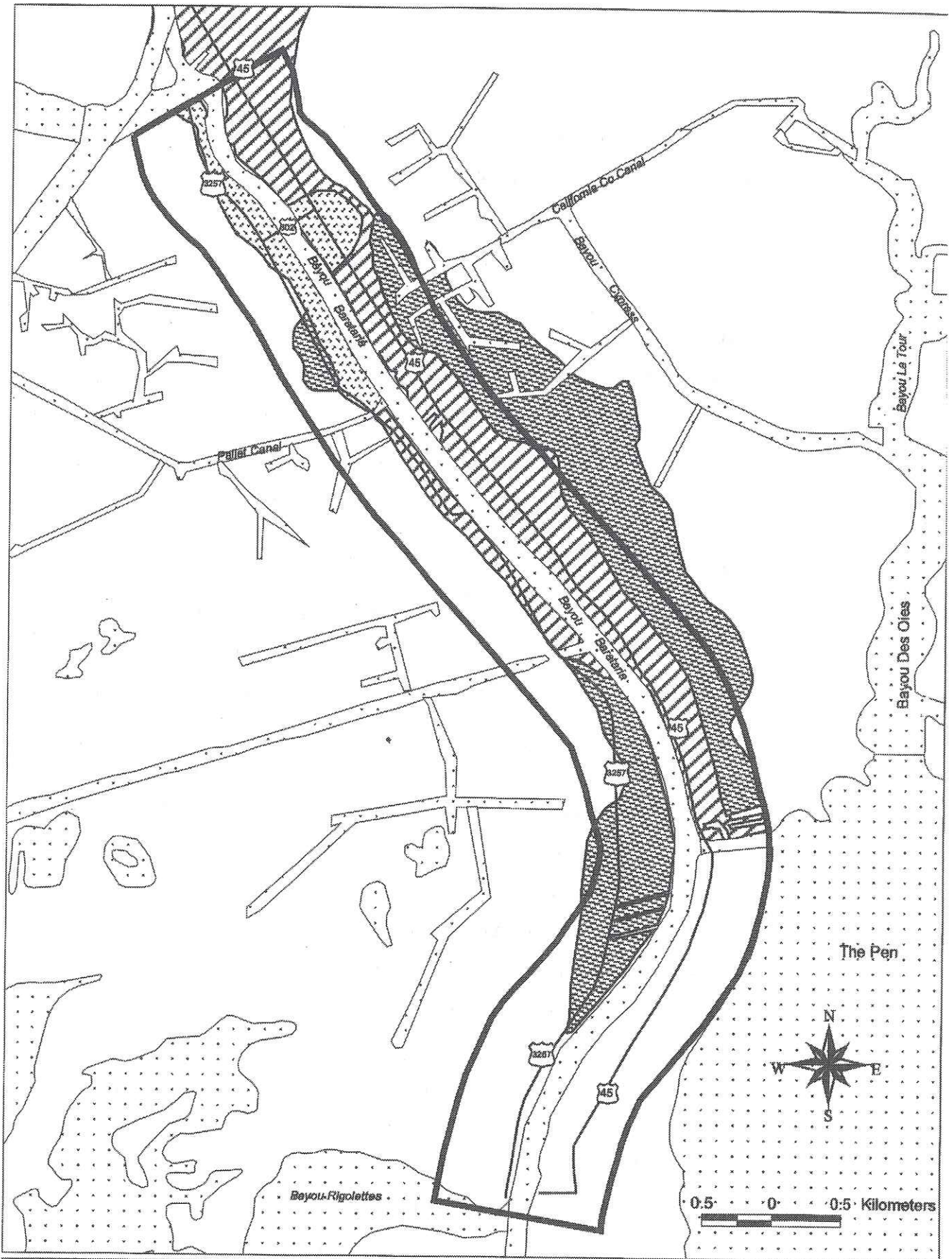
3.1 Human/Man-Made Environment

The human/man-made environment considered in this section includes land use and zoning, social and economic effects, recreational facilities, historic and cultural resources, agriculture and farming, noise, air quality, and hazardous and toxic waste.

3.1.1 Land Use

Within the six-mile corridor designated for the project study area, development is centered on or near the banks of Bayou Barataria (**Figure 3-1**). Development in the communities of Jean Lafitte and Barataria is primarily residential/mixed use at 25 percent. Undeveloped wetlands and conservation areas account for 54 percent of the total acreage within the study area. The four percent industrial/commercial development is primarily centered on the location of the existing bridge (ESI, 2001a). The current development pressure for the communities of Jean Lafitte and Barataria is within the levees (USACE 1998; 1999). As population density increases within the existing levees, development occurs in areas that are not protected by a levee.

In general, housing outside the levees is built on stilts or mounds of imported fill to minimize flooding impacts. On LA 3257 south of the Pallet Basin, a small subdivision centered on Joe's Landing was built with dredged access canals adjoining each house. For the most part, development in this area was accomplished using fill on existing wetland habitat, except where natural levee materials exist at the edge of Bayou Barataria.



Barataria Prime Farmland

45

Figure 3-1

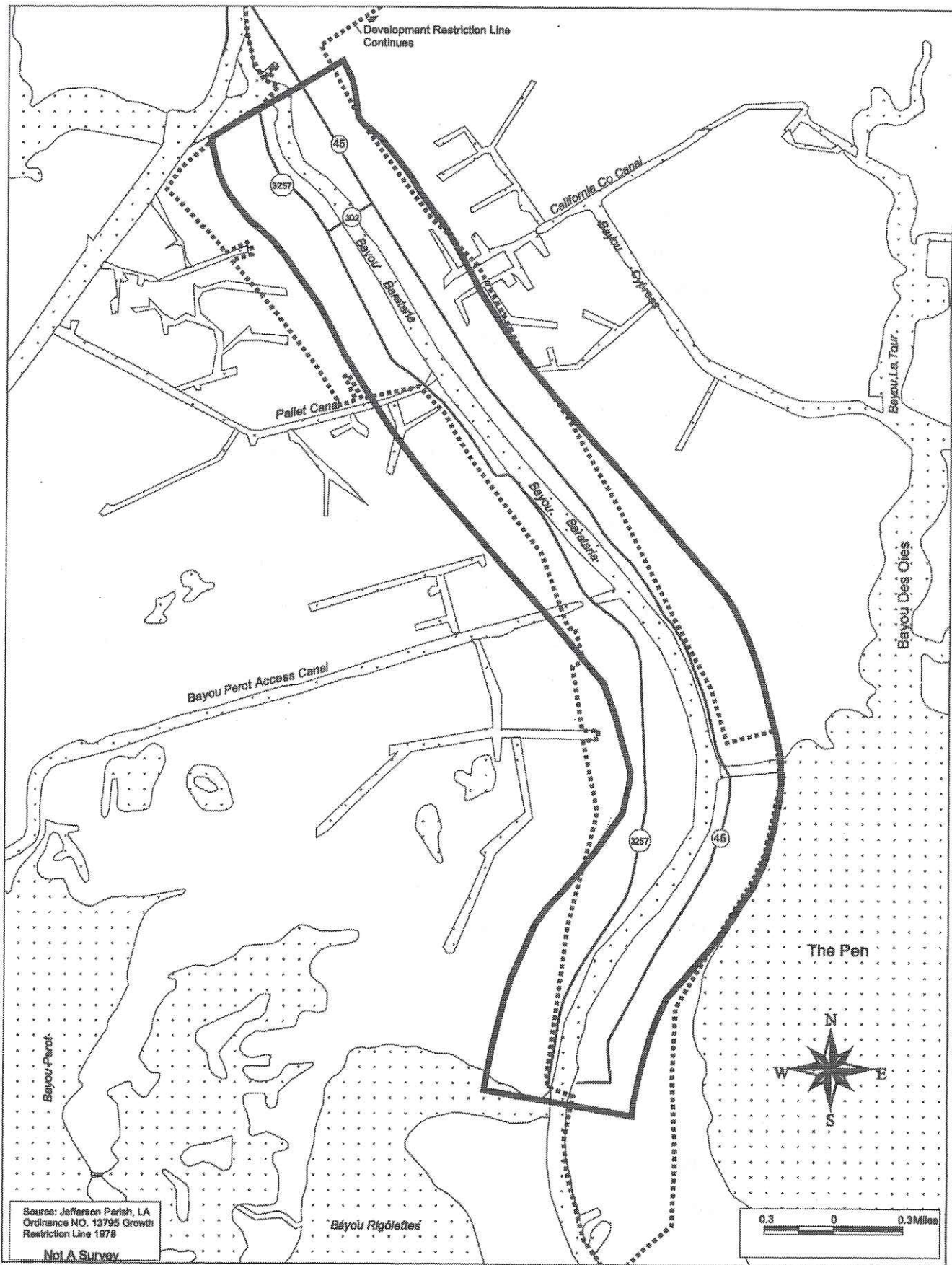
On LA 45, the Fisher School Basin levee system extends to just north of Shipyard Road. Outside the levee, development is primarily on the west side of the road. Some oil field related facilities are found east of the road and are usually associated with fill material. South of the Bayou Des Oies (Goose Bayou) bridge, development in Lafitte is completely within the Lafitte Basin levee. However, even in this area, development is primarily along the banks of Bayou Barataria. South of Lafitte on the east side of the bayou, some development exists near the mouth of Bayou Rigolettes. There are also two marina complexes near the end of LA 45.





According to a Memorandum of Agreement between Jefferson Parish and the Environmental Protection Agency, a growth limit line was established as a mitigative measure to lessen environmental impacts associated with the construction of the Marrero-Lafitte waterline (Figure 3-2). This growth limit line is the eventual outline of future growth potential for the study area.

The only existing farm in the project study corridor is located along the apex and return curve for the Pailet North alternative. Approximately 0.49 acre of actively grazed land would be made inaccessible under the structure of the Pailet North alternative. Additionally, the access road for the farm would become inaccessible. The farm access road would be relocated within the proposed 25-foot DOTD ROW on the outside curve of the bridge.

3.1.2 Social and Economic Environment

2000 Census data was only available for population statistics of Jefferson Parish, Barataria, and Jean Lafitte. Therefore, 1990 Census data was used to determine income and industry statistics. According to the 2000 Census, Jefferson Parish has a population of 487,884 people.



-  Roads
-  Project Area
-  Development Restriction Line
-  Water

Development Restriction Line

47

Figure 3-2

Approximately 34.8 percent of Jefferson Parish's population is minority, with approximately 21.3 percent African-American. The town of Jean Lafitte has a population of 2,137, and the town of Barataria has a population of 1,333. Barataria's minority population comprises approximately 14.9 percent of the total population, with 11.1 percent African American. In Jean Lafitte, the total minority population is 8.8 percent, with 0.6 percent African American. **Table 3-1** presents a break down of the population of Barataria, Jean Lafitte, and Jefferson Parish by race.

Table 3-1: Population by Race

Race	Barataria	Jean Lafitte	Jefferson Parish
White	1,159	1,988	318,002
African-American	148	13	104,121
American Indian or Alaska Native	8	59	2,032
Asian	0	28	14,065
Native Hawaiian or Pacific Islander	0	3	154
Other Race	3	7	9,239
Two or more Races	15	39	7,853
Hispanic/Latino	25	40	32,418
Total	1,333	2,137	487,884

Source: 2000 Census

According to the 1990 Census, the per capita income for the state of Louisiana was \$10,635, and 23.6 percent of all Louisiana families reported incomes below poverty level. In comparison, Jefferson Parish had a per capita income of \$12,845 in 1989, and 11.4 percent of Jefferson Parish families reported incomes below poverty level. The per capita income for Jean Lafitte was \$8,311, and 19.1 percent of Jean Lafitte families reported incomes below poverty level. The per capita income for Barataria was \$8,864. The percentage of families with incomes below poverty levels was 17.4 percent.

The 1990 Census reported that administrative support occupations were the most common occupations in Jefferson Parish with approximately 19.2 percent. The second most prevalent occupation was sales, which accounted for approximately 15 percent of the parish's occupations. Precision production, craft, and repair occupations made up approximately 11.1 percent of Jefferson Parish's occupations, and farming, forestry, and fishing occupations made up approximately 1 percent. Services dominate the parish's industry at 38 percent. Retail trade is second at 19.4 percent, while agriculture, farming, and fisheries rank last at 1 percent.

In comparison, the economies of Barataria and Jean Lafitte have historically been dominated by the fishing and service industries. The most prevalent industry in Barataria is the agriculture, forestry, and fisheries industry, which makes up approximately 20.1 percent of Barataria's industrial base. The service industry accounts for approximately 10.3 percent of industry.

Farming, fishing, and forestry occupations account for approximately 23.4 percent of Barataria's economy. The second most common occupation in Barataria is precision production, craft, and repair which accounts for approximately 14.8 percent.

The most prevalent industry in Jean Lafitte is the services industry which accounts for approximately 25.8 percent of the area's industry. Retail trade, at approximately 17 percent, is the second most dominant industry in Jean Lafitte.

Jean Lafitte's economy is dominated by the precision production, craft, and repair occupations, which account for approximately 19.2 percent of the occupations. The second most common occupation is the transportation and moving of materials at approximately 13.7 percent.

Farming, forestry, and fishing occupations constitute approximately 6 percent of Jean Lafitte's economy.

Services in Barataria and Jean Lafitte include business and repair services, personal services, entertainment and recreation services, health services, legal services, educational services, automobile and boat maintenance, and other professional and related services. Retail trade includes food, clothing, medical supplies, home furnishings, automobiles, trucks, and boats. Industrial development unique to the local area includes shipbuilding and repair, operation and maintenance of the commercial fishing vessels docked along the bayou, and activities in support of oil and gas production.

3.1.3 Recreational Facilities

Recreational facilities within the study area include several roadside parks, playgrounds, and public boat launching facilities. Jean Lafitte National Historic Park is located north of the study area along LA 45.

The predominant recreational activities in the Barataria/Jean Lafitte area are boating, hunting, and fishing. The Salvador-Timken Wildlife Management Area is located northwest of the study area.

There is no requirement for completion of a Section 4(f) evaluation for recreational or historic properties because there will be no impacts to these properties as a result of this project.

3.1.4 Historic and Cultural Features

A number of archaeological sites have been identified in the Barataria Basin. Ten archaeological sites have been previously recorded in the Barataria area. Two of these ten sites exist within the area of potential

effect (APE). The two sites are located on the west bank of Bayou Barataria, in the northern portion of the study area (ESI, 2001a, 2001b).

The first previously recorded site located within the APE is the North of Paillet Canal site. The site extends approximately 0.3 km along the Bayou Barataria bank line. The site has been disturbed by the construction of docks, bulkheads, pipeline crossings, and spoil deposits. A site visit determined that the site was destroyed by erosion. Therefore, the site is not eligible for nomination to the National Register of Historic Places (NRHP).

The second previously recorded site located within the APE is the Rutley Cemetery, located approximately 0.7 km south of the St. Anthony Cemetery. The cemetery is a family cemetery with approximately ten graves. The oldest marked grave was dated 1926, but unmarked graves could be even older. The cemetery is still in use. However, it holds no architectural or historical significance; therefore, it is ineligible for nomination to the NRHP.

Shovel and auger tests were performed to identify any archaeological sites in the APE for each alternative. Two archaeological sites were identified during the cultural resources survey. Neither site had further research potential; therefore, both sites were deemed ineligible for the NRHP. Due to the denial of access to many properties within the APE for the Pipeline Street and Paillet North alternatives, several survey blocks were not adequately surveyed. However, all archaeological work has been completed for the Paillet South (selected) alternative.

A marine survey was performed in Bayou Barataria for the project area. The preliminary marine archaeological assessment of the geophysical

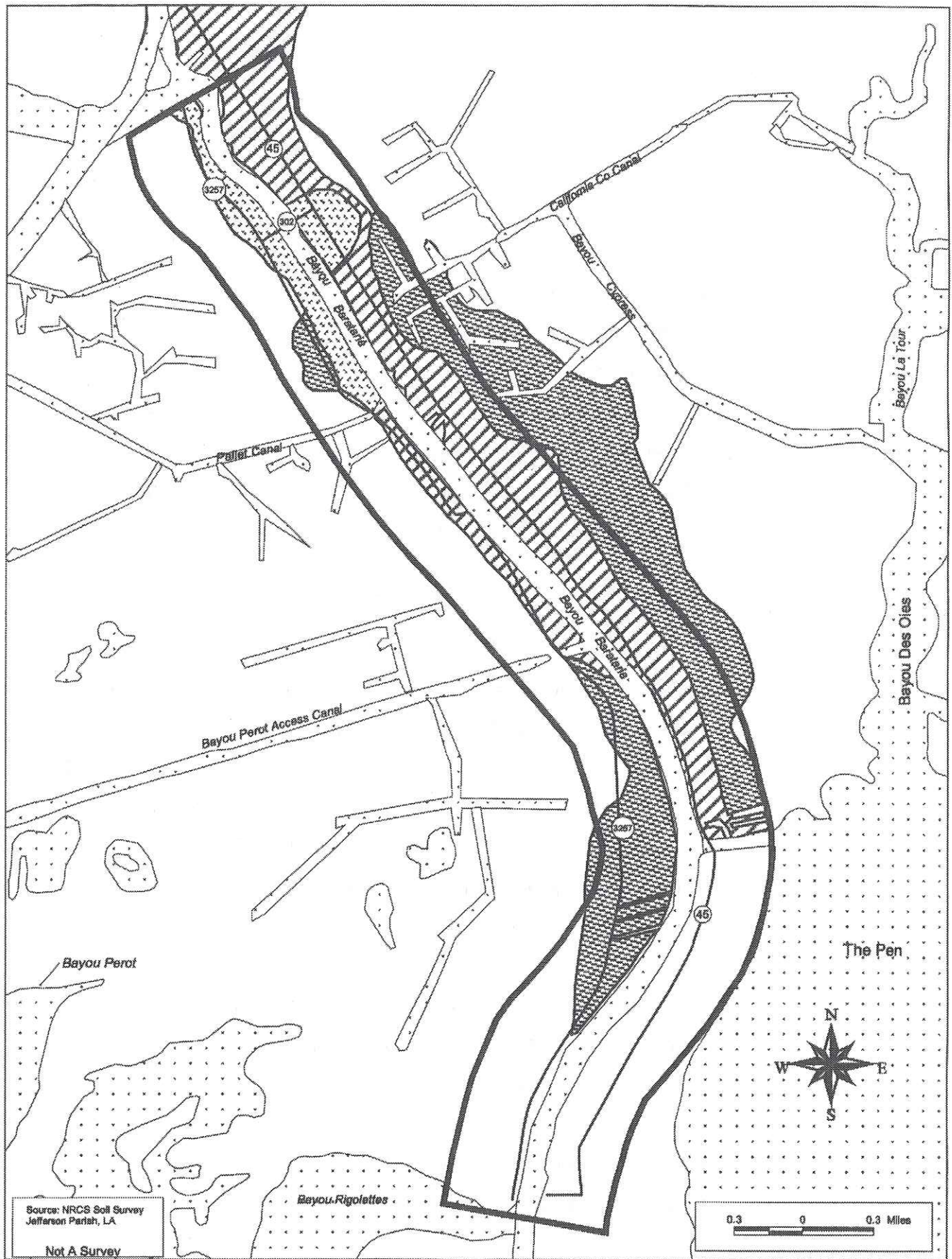
survey data indicates that no significant cultural features are present within any of the alternative rights-of-way.







A standing structure survey was performed in the APE for the three alternatives for the Bayou Barataria Bridge replacement. Thirty-seven historic buildings were documented on both sides of the bayou in Jean Lafitte and Barataria. None of the thirty-seven buildings were determined to be eligible for the NRHP. A preliminary assessment of the existing Bayou Barataria Bridge suggests that the bridge is not eligible for the NRHP because it does not exhibit any technological innovation, special creativity in engineering design, or the work of an engineering master.

3.1.5 Agriculture and Farming

Within the study area the majority of the land has been developed for housing and industrial/commercial facilities along both sides of Bayou Barataria (See **Figure 3-1**). Due to the low elevation for land in this part of the coastal zone, levees have been built and are maintained to minimize flooding. Outside the levee systems most of the land is inundated, except for spoil piles resulting from dredging of oil field access canals. Soils are primarily unconsolidated outside the levee systems. Inside the levees, the fast land soils are drained and sometimes filled.

Three soil types found in the study area have been designated as prime farmland (**Figure 3-3**). These soils are: Sharkey Clay, Sharkey Silty Clay Loam, and Commerce Silt Loam (NRCS 1983). The Sharkey Silty Clay Loam and the Commerce Silt Loam located adjacent to either bank of Bayou Barataria have undergone residential and commercial/industrial development between the water and the roadway.



-  Roads
-  Project Area
-  Sharkey clay (13)
-  Sharkey silty clay loam (14)
-  Commerce silt loam (17)
-  Water

Prime Farmland

Figure 3-3

In most instances, development has meant the placement of non-native fill on top of the farmland soils. In general, however, undeveloped areas outside the levee areas on prime farmland soil types are constantly inundated and could not support farming

One farm exists within the study area. It is located along the north side of the Paillet Canal. This farm is not located on designated prime farmland soil. The farm does not currently support row crops. Cattle grazing is the only land-based farming operation.

3.1.6 Noise

The existing noise signature for the study area comprises a combination of maritime, industrial, and automobile traffic (Volkert, 2001d). In general, ambient noise readings are considered high. Existing traffic-related noise is considered a minor component of the ambient noise environment due to the low traffic numbers and the concentration of peak traffic counts (Volkert, 2000).

Noise from marine traffic associated with the natural reflection and amplification properties of the open water of Bayou Barataria is a large factor in the ambient noise present in the study area.

Development patterns along the banks of Bayou Barataria contribute to the high ambient noise levels. Land-based industrial facilities are also located along the banks of the bayou, and noise from the operations would be propagated further than normal due to the open water of the bayou.

3.1.7 Air Quality

According to information available from the Louisiana Department of Environmental Quality (DEQ), Jefferson Parish was designated as an ozone attainment area in December 1995 (DEQ, 2001b). The nearest

registered air quality monitoring station is Marrero. This station is primarily in place to monitor Total Suspended Particulates (TSP). An ozone monitoring station in Kenner and two carbon monoxide monitoring stations in New Orleans provide up-to-date information about air quality in the region.

According to documents recently published by the USACE, the air quality of the Bayou Barataria area, which includes Jean Lafitte, Barataria, and Lafitte, has had no violations within the five-year period of 1992-1996 (USACE, 1998; 1999).

3.1.8 Hazardous and Toxic Waste

A Phase I Environmental Site Assessment (ESA) was performed by Hartman Engineering, Inc. in order to identify any Recognized Environmental Conditions (RECs) in the subject area. Under ASTM E 1527-00, REC's are identified as properties that could potentially contain hazardous substances or petroleum products indicative of a past or existing release. The release could be within structures or affecting the ground, groundwater, or surface water of the property. A REC would not apply to an area of de minimus impact or for amounts not sufficient for harm to public health or requiring enforcement action.

Information obtained from the LaDEQ revealed that no registered Underground Storage Tanks (USTs) or leaking Underground Storage Tanks (LUSTs) are present in the study area. This information along with a site reconnaissance suggests that USTs are not RECs to the subject property. *Joe's Landing* is identified as a UST site. It is located on the west side of Bayou Barataria across from the Goose Bayou Bridge; the site is not considered a REC.

The EPA's National Priorities List (NPL) of controlled or abandoned hazardous waste sites was reviewed for sites within one mile of the study area. No NPL sites were identified.

The EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) lists were reviewed to identify any sites within one-half mile of the project area. No CERCLIS sites are located within the project area.

The EPA's No Further Remedial Action Planned (NFRAP) listings were reviewed to identify any sites within one-half mile of the project area that were listed for contamination investigation. No NFRAP sites are located within one-half mile of the project area.

A database search of the Resource Conservation and Recovery Act (RCRA) Notifiers List was performed to determine if any RCRA treatment, storage, or disposal sites (TSDs) are within one-half mile of the project. No RCRA TSD facilities were found.

The EPA's Emergency Response Notification System (ERNS) list, which contains reported oil and hazardous substance spills, was reviewed, and one property in the project area, *606 Lisa Ann Drive*, was identified as an ERNS site.

The State Solid Waste Facilities (SWF) list identifies known or suspected uncontrolled or abandoned waste sites. No SWF sites were identified. However, throughout the study area, there are numerous small sites containing solid waste. The items seen during field confirmation site visits include household trash, abandoned vehicles, and unlabeled storage drums of various sizes (55 gallon and smaller).

After investigations of the above-listed environmental databases, the following sites were identified as the RECs in the project area (**Figure 3-4**).

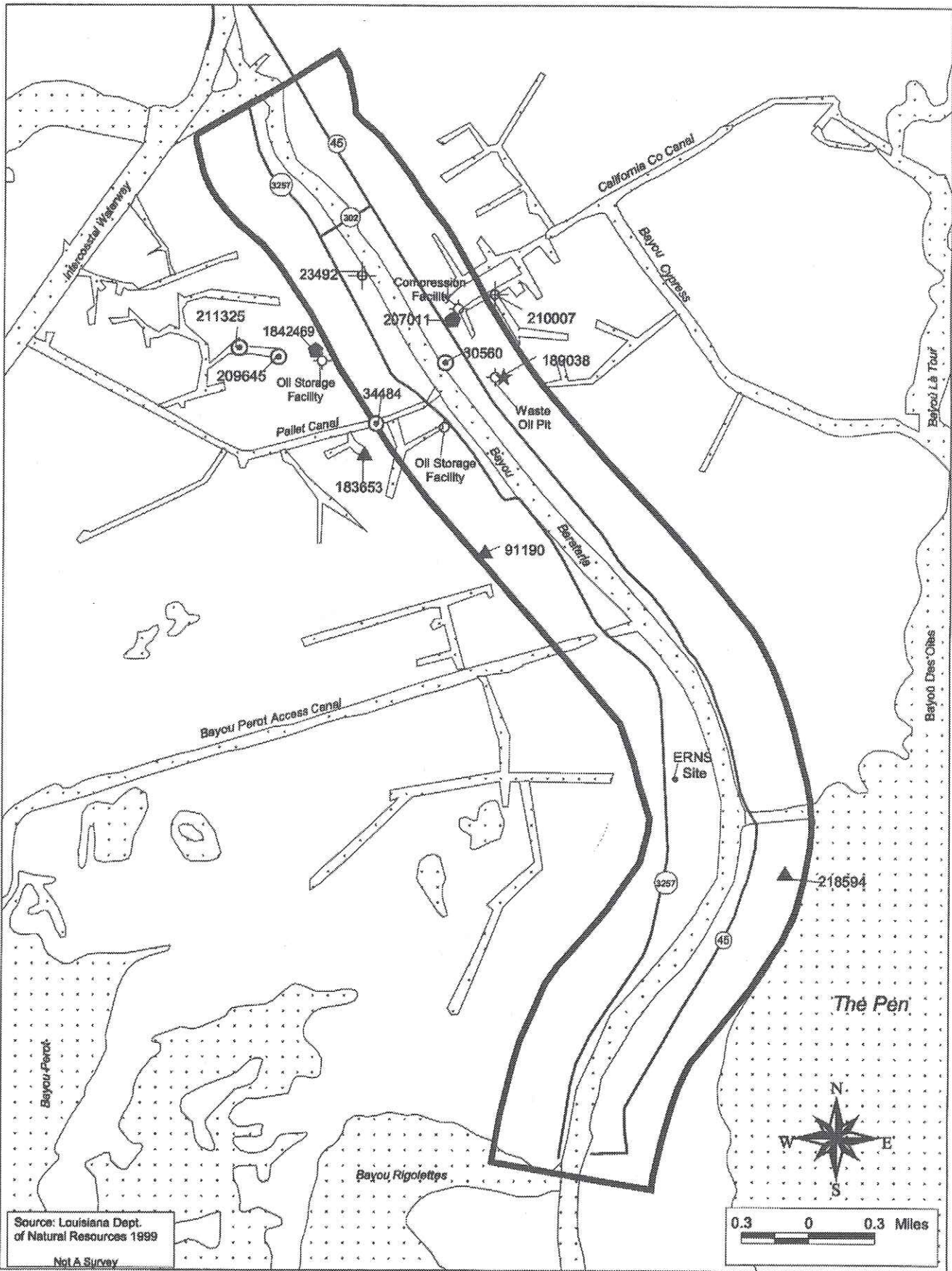
- Central Crude, Inc./Alpine Exploration facilities on LA 3257, 150 feet north of Paillet South 1 proposed alignment
- Waste oil pit located 300 feet west of Paillet South 1 crown, east of LA 45
- Louisiana gas compressor and associated piping immediately below Pipeline 2 proposed alignment
- Active or potentially active oil wells
- 606 Lisa Ann Drive - ERNS Site.

3.1.9 Navigation

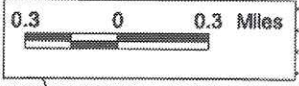
Bayou Barataria is the main navigational thoroughfare through the project area to the Gulf of Mexico (See **Figure 1-2**). The ICWW lies north of the project area. South of the project area are three large bodies of water: The Pen, Bayou Perot, and Bayou Rigolettes. Numerous smaller water bodies exist in the project area, but are limited to man-made canals primarily dredged as access to oil field locations within the marshes.

Bayou Barataria and the ICWW are the only waterways that are maintained at a depth useful for commercial vessel navigation. Maintenance dredging of Bayou Barataria permits passage of vessels with a draft of 12 to 14 feet.

Bayou Barataria averages approximately 400-500 feet wide overall. Approximately 150 feet of the overall width corresponds to the navigational channel. The outer shelves of the Bayou are not maintained to a specific depth by a maintenance dredging program. The Corps of Engineers is responsible for dredging Bayou Barataria.



Source: Louisiana Dept. of Natural Resources 1999
 Not A Survey



- Primary Roads
- Project Area
- Water
- Shut-in Productive-No Future Use
- Permit Expired
- Salt Water Well
- Shut-in Productive-Future Use
- Active Wells
- Other REC's Sites

Sites With Recognized Environmental Conditions

Figure 3-4

Non-maintained water bodies throughout this portion of the coastal zone average 6-8 feet in depth. These depths are not considered to be suitable for maritime traffic. Local "Swamp tour" operations use the oil field access canals, as do local fishermen.

Aside from the existing bridge, two other elevated bridges cross water bodies within the study area. The bridge over Bayou des Oies (Goose Bayou) is part of LA 45. It is a fixed bridge that provides approximately 10 feet of clearance over the water body allowing access to the Pen and Goose Bayou to the east of Bayou Barataria. The bridge over the Paillet Canal is part of LA 3257. The bridge is a small structure that provides approximately 3-5 feet of clearance over the canal and permits access to the oil field canals and the ICWW to the west.

3.2 Physical Environment

This subsection contains descriptions of the location of the project area within the greater aspect of the Bayou Barataria ecosystem.

3.2.1 Physiography

The dominant physiographic features of the project area are Bayou Barataria and its natural levees. Development in the form of housing and businesses occurs mostly within the towns of Jean Lafitte and Barataria, which lie within artificial flood control levees at the north end of the project study area on both sides of Bayou Barataria.

Outside the artificial levee systems the landscape is dominated by emergent and forested wetlands, man-made canals remaining from oil and gas exploration, and shallow lakes and open water resulting from the subsidence of alluvial soils.

Natural ground elevations range from approximately 4.0 Feet National Geodetic Vertical Datum (NGVD) to approximately one foot below sea level within the existing artificial levee systems in the area (USACE, 1998; 1999). Elevations outside the levee systems range from approximately 1.5 feet above sea level to greater than 2 feet below sea level (Montgomery, 1983).

Due to the low elevations present and the proximity of the project area to the Gulf of Mexico, the entire project area is subject to flooding. Jean Lafitte and Barataria are both within the 100-year floodplain (**Figure 3-5**). For the majority of the project area on either side of the bayou, the flood hazard zone designation is AE with base flood elevations from seven to ten feet (**Figure 3-5**). Zones of coastal flooding with potential wave activity are found at the western edge of the project area, the western side of LA 3257 near the southern project boundary and on either side of Goose Bayou on the eastern side (FEMA, 1995). Both towns are vulnerable to a 10-year flood event (USACE, 1998; 1999). The primary flood mechanism includes a combination of rainfall and tidal surge. Tropical storms are a particularly dangerous combination of elements in this area that can cause widespread flooding.

3.2.2 Geology

The project area lies within Region 2 of the Louisiana Coastal Zone (Louisiana Coastal Wetlands Conservation and Restoration Task Force [LCWCRTF] 1999a). The Barataria Basin was part of the geologically recent deposition of alluvium in the deltaic plain associated with the St. Bernard deltaic lobe of the Mississippi delta. Following the flood of 1927, artificial levees were reconstructed along the main Mississippi River channel. After that point, no freshwater recharge of the existing wetlands occurred. Thus, the project area no longer receives sediment from the Mississippi River. Shorelines and emergent wetlands are currently

undergoing severe deterioration. The Deltaic Plain in general is approaching a condition of system collapse (LCWCRTF, 1999a).

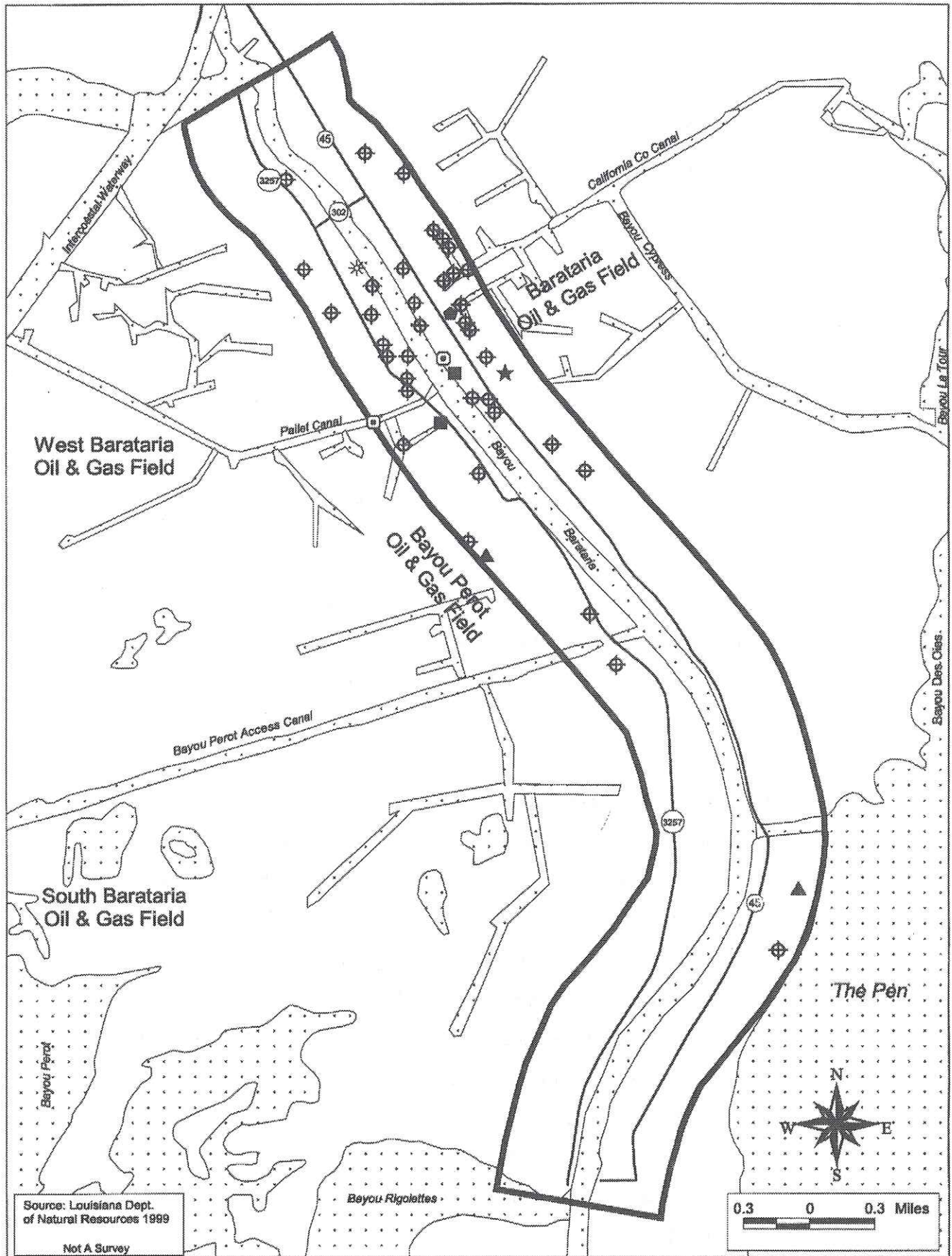
3.2.3 Subsidence

Subsidence is defined as the loss of surface elevation within the Louisiana coastal region. In general, subsidence is attributed to four major processes: relative sea level rise, compaction of soils, reduced sediment load, and subsurface extraction of groundwater or hydrocarbons. Within the Deltaic Plain of coastal Louisiana, the average subsidence rate is 3.0 to 4.3 feet per century (LCWCRTF, 1999a). The Barataria basin as a whole is experiencing the greatest subsidence rates of coastal Louisiana.

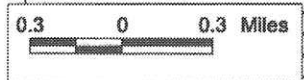
The current project is contained within the Perot/Rigolettes coastal mapping unit. Estimated subsidence rates within this mapping unit are classified as high (2.1 to 3.5 feet per century) (LCWCRTF, 1999a; NRCS, 1995).

3.2.4 Mineral Resources

In the vicinity of the project, there are four named oil and gas fields and numerous active and inactive wellheads (**Figure 3-6**). Exploration and production in the area began as early as 1939. The last permitted well was completed in 1990. A database survey of well data within these fields revealed a total of 45 wells registered in the state database (Louisiana Department of Natural Resources, 1999). There are 36 plugged and abandoned wells in the project area. As of April 1999, there were only two active wells. Three other wells are capable of production but are currently shut-in. All but one of the productive wells is producing oil. The number of wells that could potentially be reworked in the surrounding oil fields is unknown. There is renewed interest in attempting to produce oil and gas from previously abandoned wells. The potential for future production is used to prevent the restoration of previously dredged oil and



Source: Louisiana Dept.
of Natural Resources 1999
Not A Survey



Legend

- ▲ Active Wells
- ◆ Plugged/Abandoned
- ▬ Primary Roads
- ▭ Project Area
- Water
- ⊛ Permit Expired
- ⊙ Salt Disposal Well
- ⊕ Future Use Well
- ★ No Future Use Well
- No Permit/Plugged

Mineral Resources

Figure 3-6

gas canals that are directly responsible for land loss and subsidence in the project vicinity.

3.2.5 Soils

The study area for this project contains seven soil types (Table 3-2). Soils in the vicinity of the project are generally poorly structured with a low capacity to support loads. The soils found in the area are considered to be poor road fill material and generally unsuitable topsoil.

Outside the levee areas the soils are nearly always flooded and are generally described as semi-fluid. All of the soils in the area have a high potential for subsidence (NRCS, 1983). All soils are designated as hydric (NRCS, 2001). The Barbary muck and Lafitte-Clovelly soils are susceptible to erosion when not protected by vegetation (NRCS, 1995).

Table 3-2: Soils Found In The Jean Lafitte / Barataria Study Area

Soil Name	Description	Typical Location	Surface water	Common Vegetation
Allemands Muck	Level, very poorly drained, semi-fluid, organic soil	Freshwater Marsh	Flooded to 12 inches	<i>Sagittaria lancifolia</i> , <i>Panicum hemitomom</i> , <i>Alternanthera philoxeroides</i> , <i>Typha</i> sp., <i>Juncus effusus</i> , <i>Pontederia cordata</i> , <i>Zizaniopsis milliacea</i>
Harahan Clay	Level, Poorly drained, firm surface with semi-fluid mineral material	Urban Areas	1-3 feet below surface	Urban landscape and pasture species
Barbary Muck	Level, poorly drained, semi-fluid	Swamps	Flooded to 12 inches	<i>Taxodium distichum</i> , <i>Salix nigra</i> , <i>Nyssa aquatica</i> , <i>Alternanthera philoxeroides</i> , <i>Senecio glabellus</i> , <i>Cephalanthus occidentalis</i> , <i>Lemna minor</i> , <i>Pontederia cordata</i> , <i>Eichornia crassipes</i>
Sharkey Clay	Poorly drained, firm mineral soil	Prime Urban	Surface to 2 feet below	Urban landscape, hardwood silviculture, and pasture species
Sharkey Silty Clay Loam	Level, poorly drained, firm, mineral soil	Natural Levees	Surface to 2 feet below	Urban landscape, pasture, and hardwood silviculture.

Soil Name	Description	Typical Location	Surface water	Common Vegetation
Commerce Silt Loam	Level, somewhat poorly drained, firm, mineral soil	Urban	1.5 to 4 feet below the surface	Urban landscape, cropland, pastureland, hardwood silviculture
Lafitte-Clovelly Association	Level, poorly drained, saline, semi-fluid.	Brackish marsh	1 foot above to 0.5 foot below	<i>Spartina patens</i> , <i>Bacopa monnieri</i> , <i>Eleocharis parvula</i> , <i>Scirpus olneyi</i> , <i>Ipomea sagittata</i>

3.3 Climatology

Located in the southeastern coastal region of Louisiana, the climate within the project area is classified as a subtropical marine environment (USACE, 1998, 1999). The surrounding water bodies (Gulf of Mexico, Lake Salvador, The Pen, Bayou Perot, Bayou Rigolettes) ameliorate temperature and humidity extremes to provide slightly different localized weather patterns than nearby New Orleans.

Regional weather events are recorded and measured from a station approximately 20 miles south of the project area.

3.3.1 Climate

Seasonal climate change in this area is defined by the spring/summer months of April to September and the fall/winter months of October to March. Spring/summer is dominated by weather patterns resulting from tropical air masses in the Gulf of Mexico. Fall/winter seasonal influence is primarily dominated by cold air masses from the northern United States. Hurricane season is officially designated from June 1 to November 30 of each year.

3.3.2 Precipitation

Precipitation in Louisiana results from storms commonly associated with polar fronts, squall lines, tropical fronts, tropical weather systems, and local or regional showers and thunderstorms (USACE, 1998; 1999).

Average annual rainfall is nearly 63 inches. The dry season is in the fall/winter weather cycle (average monthly precipitation 4.8 inches). The wet spring/summer season averages 5.7 inches per month.

3.3.3 Temperature

The average daily temperature for the project area is 60°F for the 30-year period from 1961 to 1990 (USACE, 1998, 1999). The monthly mean temperature norms vary from 43° F in January to 74° F in July. Between 1984 and 1992 the highest recorded temperature was 97°F and the lowest recorded temperature was 12°F.

3.3.4 Wind

Wind direction and speed in the region are directly related to the prevailing seasonal weather patterns. The average annual wind velocity measured from 1973 to 1992 is eight miles per hour. The prevailing wind direction shifts seasonally from the northeast in the fall/winter to southwest in the spring/summer seasons. Strongest winds experienced in the region are associated with winter high- pressure systems and summer hurricanes.

3.3.5 Flooding

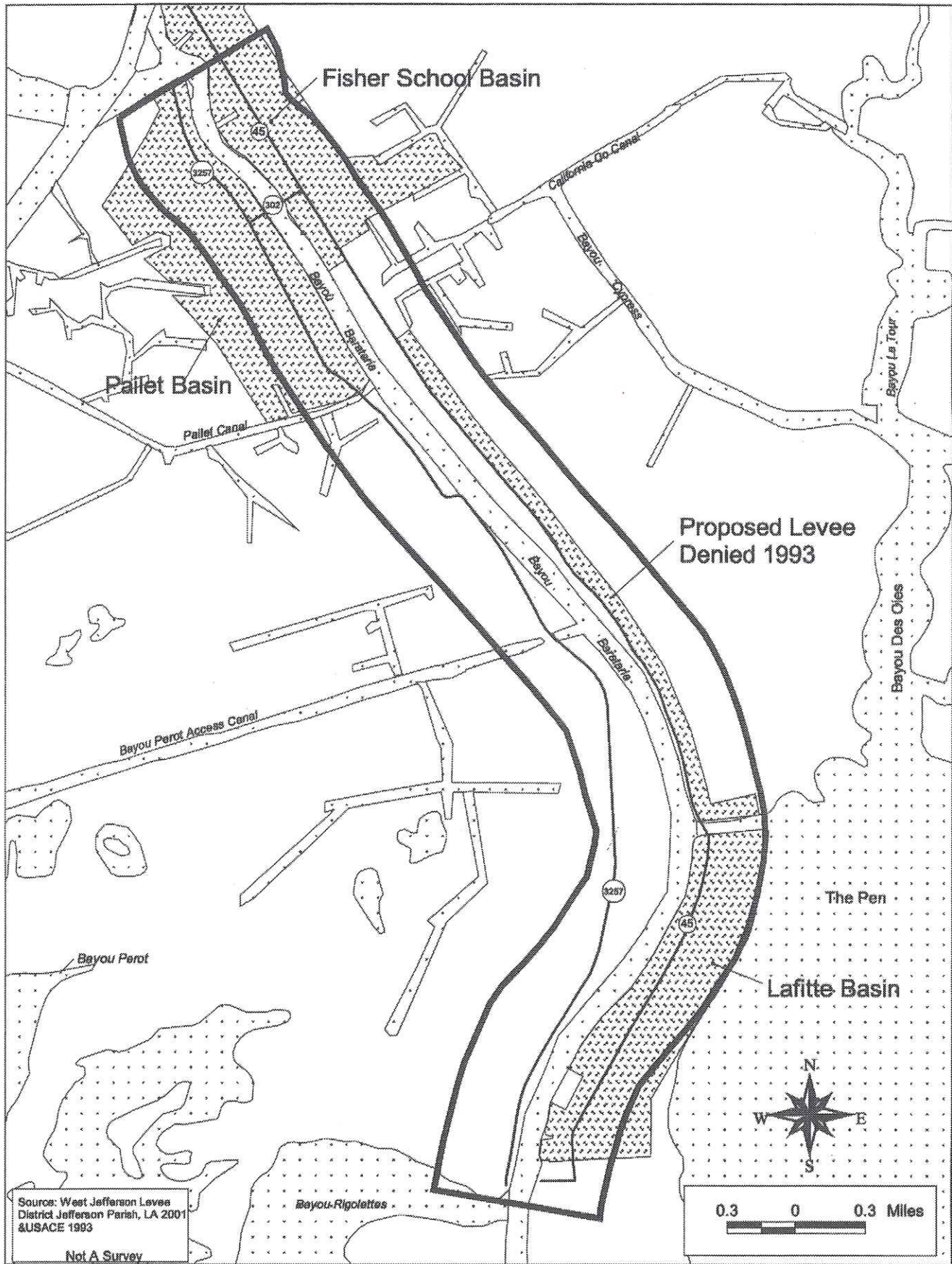
The study area is completely within the 100-year floodplain. The USACE has determined that more than 75% of the structures in the Fisher Basin area are inundated below the 5-year design flood event (USACE, 1998). The structures within the basin are protected by the existing levee system that extends from near the Fleming Canal to a point just north of Pipeline Street on the east side of the bayou (**Figure 3-7**). On the west side of Bayou Barataria, the Paillet Basin is currently under study. However, levee design and pump capacity appears to indicate that the same flooding potential is true for that area as well. The existing levee system has been determined to be adequate for the 10-year rainfall event.

A permit application was submitted in 1990 for the construction of an additional levee system that would have extended levee protection for LA 45 from the existing Fisher School Basin to the bridge over Bayou des Oies (**Figure 3-7**). The USACE determined that the project area was not permissible, and the permit was denied in 1993. While the proposed levee corresponded to the EPA no growth line, it was found that the MOA for the no growth line could not be used to establish a new levee configuration. Additionally, the USACE determined that the project, as proposed, was contrary to the public interest. A compromise construction alternative that would have limited wetland impacts throughout the proposed levee alignment was found unacceptable to the applicant, Jefferson Parish (USACE, 1993).

No information was found that documented overtopping of the existing levees during recent flood events. Flooding within the Jefferson Parish levee system during storm events has been attributed to levee failure, such as breaching (Spohrer, pers. comm.).

Areas outside levee protection are susceptible to flooding on a more frequent basis, but specific non-anecdotal data is not available.

Tides within the study area can be diurnal and semi-diurnal, depending on the astronomical conditions. Tidal range is approximately 0.25 feet with mean high tide, referenced to the National Geodetic Vertical Datum of 1929 (NGVD) at 1.47 feet NGVD and the low tide at 1.22 feet NGVD (**Figure 3-8**). While the levee systems do provide some protection from flooding, the maximum high tides represented on **Figure 3-8** do indicate areas regularly susceptible to flooding under normal weather conditions. The Pailet Basin exhibits a tremendous area of flooding susceptibility west of the LA 3257 road bed. These tide-driven flood conditions can inundate



Legend

-  Roads
-  Project Area
-  Levee

Jefferson Parish Levee System

Figure 3-7

**intentionally
left
blank**

LA 3257 from a point north of the Paillet Basin levee to a point approximately one mile south. Flooding would also occur in small sections of LA 3257 south of the Bayou Perot access canal.

Southerly winds can drive water levels beyond normal tidal ranges and contribute to extensive flooding. Hurricane induced tidal surge is the extreme case of flooding in this region of coastal Louisiana. The highest flood gauge records for the study area were attributed to Hurricane Juan in 1985.

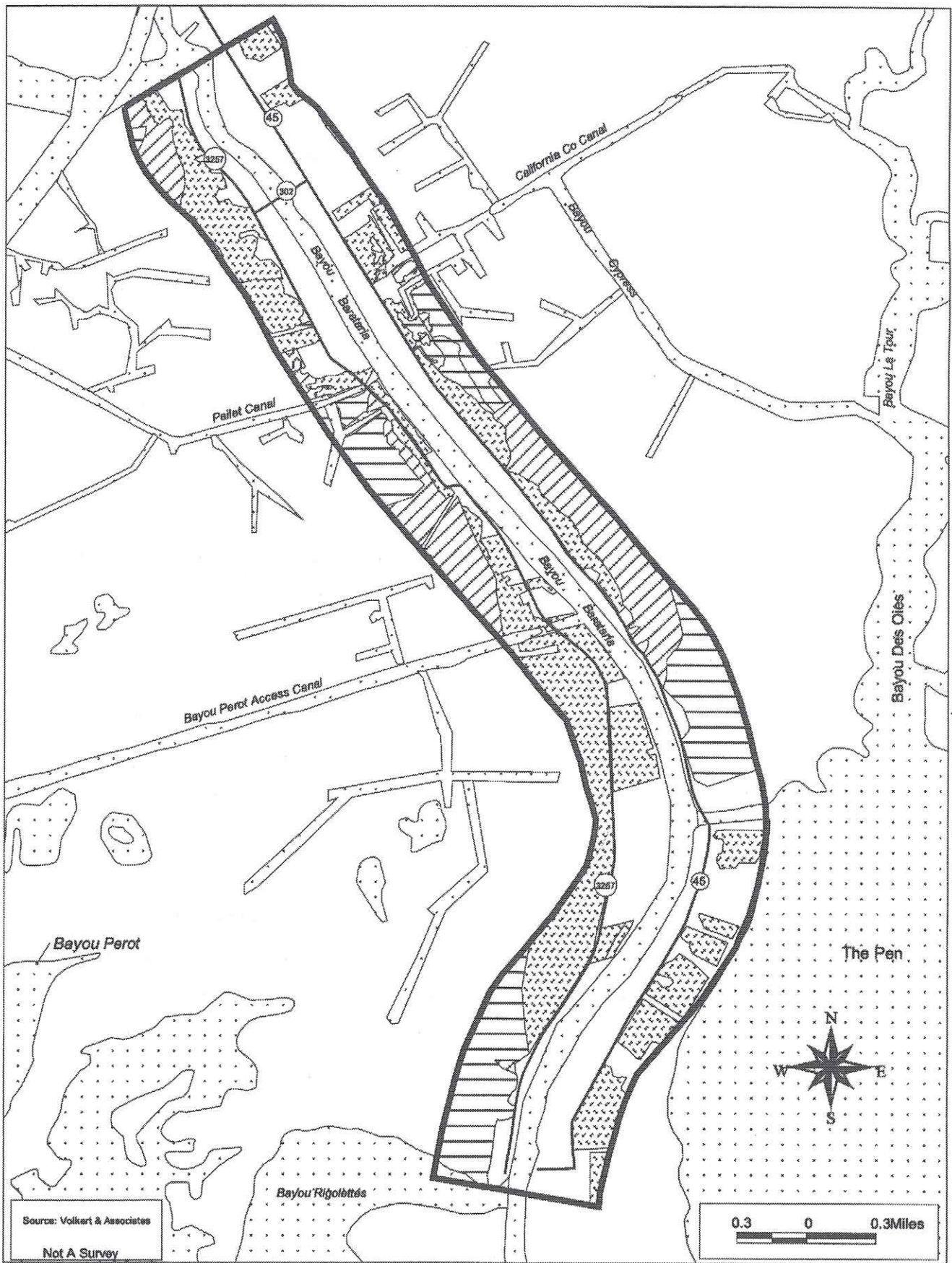
3.4 Biological Resources

The study area is located in the Mississippi Deltaic Plain. Outside the areas of limited development, this portion of Louisiana is dominated by wetland habitat with associated fish and wildlife assemblages. The study area supports viable tourism and fishing industries.

The deltaic plain of coastal Louisiana has undergone tremendous change since the early 20th century. Composed almost entirely of fresh, intermediate, and brackish marshlands, the deltaic plain ecosystems revolve around the health of the marshlands. A recent study of the entire coastal region of Louisiana has determined that the deltaic plain is in a condition of collapse (DNR, 1999a). Wetland loss is the major contributing factor to the collapse of ecosystems within the deltaic plain. Wetland loss is attributed to four main factors: subsidence, hydrologic alteration, herbivory, and dredge and fill activity.

3.4.1 Wetlands

Wetland boundaries were determined from interpreting vegetative signatures on color infrared aerial photography and field verification using the USACE methodology (USACE, 1987). The project area contains three basic wetland types: palustrine forest (PFO), scrub/shrub (PSS), and emergent (PEM) (Cowardin, et al., 1979) (**Figure 3-9**). Community



- Roads
- Project Area
- PEM
- PSS
- PFO
- Farmland
- Water

Wetlands

Figure 3-9

structure within the palustrine forested wetlands ranges from fairly undisturbed hardwood hammock habitat and bottomland hardwood to areas of early successional bottomland hardwood.

The undisturbed hardwood hammocks are dominated by large oaks (*Quercus virginiana*, *Q. nigra*, and *Q. laurifolia*) and hackberry (*Celtis laevigata*) with an understory consisting of *Sabal minor* (dwarf palmetto).

One specific area of oak forest is located east of LA 45 across from Barnett Marine. The Bayou Barataria forest has been designated as a good to excellent example of a coastal live oak- hackberry forest (LDWF, 2001). Water in the hardwood hammocks appears to be at or above the surface of the ground most of the time. The herbaceous understory is fairly undeveloped. However, where it exists, the understory includes *Saururus cernuus* (lizards tail), *Parthenocissus quinquefolia* (Virginia creeper), and *Campsis radicans* (trumpet creeper). The shrub layer includes various small tree species as well as *Baccharis halimifolia* (groundsel tree), *Myrica cerifera* (wax myrtle), and *Solanum diphyllum* (nightshade).

Successional forest community structure retains remnant mature individuals of *Acer rubrum* (Drummond red maple), *Taxodium distichum* (bald cypress) and *Nyssa aquatica* (swamp tupelo). In some areas, the vegetation consists of dense stands of *Acer negundo* (box elder), *Sapium sebiferum* (popcorn tree), and *Fraxinus caroliniana* (pop ash). This community type is found within the levees and away from most development. Successional pressure has been proposed to be the result of pumping water from the wetland habitat within the levee system (USACE, 1999).

Emergent wetlands in the study area are generally described as fresh or intermediate marsh (Reed, 1995). For the most part, emergent and scrub-shrub wetlands in the project study area are designated as floating marsh, or flotant (Evers, Holm and Sasser, 1996). Typically, the constituent flora in intermediate marsh is adapted to an average salinity of 2 parts per thousand (NRCS, 1995). While an exact demarcation line between fresh and intermediate marsh is not easily discernable, the vegetation change for emergent wetlands appears to be from a *Sagittaria lancifolia* (bull tongue) dominated, mostly fresh community to one dominated by *Spartina patens* (saltmeadow cordgrass).

Some areas of *Sagittaria* dominance are transitioning from forested-scrub/shrub wetlands. These areas have dead or dying cypress trees and stressed shrub vegetation (*Myrica cerifera* and *Baccharis halimifolia*). All of these wetland types have standing water most of the time.

One additional wetland type that has an effect on the study area is open water habitat. Numerous oilfield access canals have been cut through emergent marsh habitat. Side cast spoil banks along the canals effectively prohibit sheet flow of water through the surrounding wetlands for most cases, the spoil banks support hardwood trees, indicating that the banks have been in place for a long time. Open water areas within the undisturbed emergent habitat appear to be the result of surface subsidence.

3.4.2 Wildlife

Wildlife diversity in the vicinity of the study area is limited. Primary species of mammal include: deer, rabbit, squirrels, nutria, mink, muskrat, and rodents (Condrey et al., 1995). Amphibians common to freshwater and brackish habitats can be found throughout the area. Alligators and turtles represent the majority of reptile species. Bird species present in the study area are primarily waterfowl and wading birds. Shorebird and gull

species use the mudflats and shallow open water areas of emergent marshes (NRCS, 1995). Neotropical species use the wooded spoil and natural banks during migration.

For the most part, wildlife presence is limited to areas outside the existing levees.

Nutria are present in this area and contribute to wetland loss through herbivory within the freshwater and intermediate marsh of the Barataria-Terrebonne basin (Linscombe and Kinler, 1997). Jefferson Parish estimates that the population in the parish is in excess of 10,000 animals. According to a statewide survey, the population of nutria in the state is stable (Bounds, 2000).

3.4.3 Fisheries

The study area has a diverse fishery consisting of commercially valuable fresh and salt-water species. Inside the levee areas there is no commercial fishery. *Gambusia affinis* (mosquito fish) is the primary fish species found in still waters inside of the levees (USACE, 1998; 1999).

Outside the levees, recreational fishery species include several freshwater species: *Micropterus salmoides* (large mouth bass), *Ictalurus punctatus* (channel catfish), *I. furcatus* (blue catfish), *Aplodinotus grunniens* (freshwater drum), and several species of sunfish (*Lepomis* spp.). Seasonally, saltwater fish are found in the open waters. These species include: *Cynoscion nebulosus* (speckled trout), *Micropogonias undulatus* (Atlantic croaker), *Paralichthys lethostigma* (southern flounder) and *Sciaenops ocellata* (redfish) (Condrey, et al., 1995).

The shrimp industry is well represented in the study area by numerous shrimp boats that are housed along the bayou. However, shrimp harvest

mainly occurs south of the project area. Little Lake is the nearest location of permanent State sampling stations in the Barataria estuary for shrimp and finfish (Condrey, et al., 1995)

3.4.4 Essential Fish Habitat

Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) as waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (Minello, 1999; Gulf of Mexico Fishery Management Council (GMFMC), 1998).

For estuarine waters, EFH is defined as all estuarine waters and substrates, including the sub-tidal vegetation and adjacent inter-tidal vegetation. Estuaries provide essential habitat for many species managed by the GMFMC, serving mainly as nursery areas for juveniles and also as habitat for adults in certain seasons of the year (GMFMC, 1998). Within the study area essential fish habitat includes all open water and emergent or scrub-shrub marsh located outside the levee system.

For the project study area, EFH is designated for the juvenile stages of the following species: *Penaeus aztecus* (brown shrimp), *P. setiferus* (white shrimp) and *Sciaenops ocellatus* (redfish) (National Marine Fisheries Service, 2001). Sampling studies have permitted generalized designation and mapping of habitat and seasonal variation for species believed to occur within the Barataria Basin.

3.4.5 Threatened and Endangered Species

As part of the project coordination with state and federal agencies, early notification was performed with the U.S. Fish and Wildlife Service and the Louisiana Department of Wildlife and Fisheries to determine if any state or federally listed species were found within the project study area.

Additional data specific to the Barataria-Terrebonne estuary is available and confirms agency determinations (Condrey, et al., 1995)

A list of threatened and endangered species of Jefferson Parish, Louisiana, was obtained from the U.S. Fish and Wildlife Service. The following species were included as occurring in Jefferson Parish: Brown pelican (*Pelecanus occidentalis*) (Endangered), Bald eagle (*Haliaeetus leucocephalus*) (Threatened), Piping plover (*Charadrius melodus*) (Threatened), West Indian manatee (*Trichechus manatus*) (Endangered), Pallid sturgeon (*Scaphirhynchus albus*) (Endangered), and Kemp's Ridley sea turtle (*Lepidochelys kempii*) (Endangered).

3.5 Water Quality

Water bodies in the project area are subject to periodic saltwater intrusion. In general, the local waters are considered to be oligohaline (0 – 9 parts per thousand). State water quality designation for local waters is that they partially support primary (servicing) and secondary (boating) recreational contact. Local waters have been designated as fully supporting fish and wildlife propagation. Starting in the early 1940's oil field canals were dredged throughout the study area to facilitate oil and gas well development. These canals have contributed to the saltwater intrusion that has resulted in vegetative community conversion from freshwater marsh to intermediate marsh.

Permanent water quality monitoring stations in the vicinity of the project area are located northeast and southwest of the project area. Salinity readings at monitoring stations near the mouth of Bayou Perot west of Lafitte show salinity ranges from 9.5 to 24.9 parts per thousand (ppt) at the south extreme of the project study area. Readings range from 3.7 to 15.9 ppt north of the study area, near Crown Point.

The Bayou Barataria Basin has not been sampled during the semi-annual surface water assessment since 1996 (Louisiana Department of Environmental Quality, 1996; 1998; 2000). As of the last sampling period Bayou Barataria was designated as partially supporting primary and secondary recreational contact and fully supporting fish and wildlife propagation. No fish consumption advisories have been issued for waters within the project study area. The partial support ratings for primary and secondary recreational contact were primarily due to high fecal coliform readings.

As part of the separate flood protection feasibility studies for the Rosethorn and Fisher School Basins, water quality monitoring data from water monitoring stations active prior to 1994 were analyzed. Samples were automatically taken monthly at each station. Not all samples were eventually analyzed, so the monitoring data is sporadic. Sixteen samples were taken between February 1990 and December 1993.

In general, fecal coliform values averaged higher than the state standard of 400 Most Probable Number (mpn) for primary recreational contact. The averages peaked near the existing bridge (3284 colonies per milliliter). Copper and mercury showed elevated levels compared to other metals. LDEQ acute and chronic concentration limits were exceeded for Mercury and Copper for a majority of the samples (USACE 1998; 1999).

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES



4.0 ENVIRONMENTAL CONSEQUENCES

This section addresses the potential effects of the three alternatives chosen for further study identified in Section 2.0. These alternatives have been chosen because they meet the project purpose and need and provide the minimum impact to one or more resources. Using the general data presented in Section 3.0, the proposed alternatives will be compared to the No-Build alternative and each other for the potential impacts to each of the resources listed.

For this project, the No-Build alternative is defined as maintaining the existing bridge structure in place. Repairs and maintenance to the existing structure would occur, but the operation and configuration of the existing bridge would not be altered.

Each alternative will be described in detail concerning direct impacts to resources and the foreseeable secondary impacts resulting from the construction of a new bridge. Where applicable, the cumulative effects of the alternative will be described for each of the resources.

4.1 Land Use Impacts

As described in Section 3.1.1, developed land is primarily associated with the banks of Bayou Barataria. Building a new bridge in a new location would impact some of the development existing along the banks. The locations for the proposed alternatives were chosen to minimize the impacts to all development-related structures (housing, industry, etc.).

Construction of a new bridge would have the direct effect of providing easier access to the Barataria side of the bayou. However, no additional land would be made available for development as a result of the bridge replacement project. While the road system would remain essentially unchanged, improved access to the Barataria side of the project could increase development pressure along LA 3257.

The recently completed flood protection feasibility study for the Fisher School Basin flood protection and the yet to be completed study for the Paillet Basin are both set to address inadequacies in the existing levee protection for the communities of Jean Lafitte and Barataria (USACE, 1998; In Prep.).

Improvements to both levee systems would provide better protection from flooding and provide more opportunity for development within the existing basins on both sides of the bayou. Development pressure in the Paillet Basin is likely to increase as a result of levee upgrades rather than the bridge replacement project.

Development of the project area as a secondary or cumulative action related to the construction of a new bridge would be limited by the boundaries set by the growth limit line contained in Jefferson Parish Resolution Number 37936 (See Section 3.1.1). While additional land on the east side of Bayou Barataria could become available for development based on the no-growth line, no plans are currently in place to reinstate the request for an additional levee that would extend from Goose Bayou to the southern edge of the Fisher School Basin levee.

On the west side of Bayou Barataria from the Paillet Canal south to the end of the project study area, the no-growth line includes approximately 396 acres of wetland habitat that is part of the Jonathan Davis Wetland Restoration (JDWR) project. The goal of the wetland restoration project is to restore the hydrology of an estimated 7,199 acres of intermediate marsh. All of the land included in the JDWR is privately owned (NRCS, 1995). No specific provisions exist for protection of land within the boundaries of the JDWR from future development.

Planned improvements to LA 45 are designed to provide additional flood protection to the east connector for all of the alignments (Volkert, 2001c). Improvements would not change the level of service for the existing roadway or provide any additional platform for secondary development adjacent to the road.

The pre-existing roadside ditch system would be replaced to aid in storm water conveyance.

4.1.1 No-Build

The No-Build alternative would have no direct effect on land use in Jean Lafitte or Barataria. Secondary impacts could include a diminished demand for development on the Barataria side of the bayou. Cumulative effects could entail the abandonment of existing property or the loss of existing business as the marine traffic becomes less reliable due to the development of alternate routes to the Gulf of Mexico or business relocations.

Improvements to the existing levee systems on either side of the bayou would be a factor in increased development pressure for Jean Lafitte and Barataria.

4.1.2 Pipeline

The majority of the land impacted by this alignment is undeveloped and conforms to the definition of wetland habitat. The quality of the habitat will be discussed in Section 4.11.

The second largest impact to land use on this alignment is classified as commercial/industrial. On the east side of LA 45, a portion of the Gulf South/Louisiana gas metering and distribution/compression station would be located beneath the structure of the bridge. The elevation at the crossing of this facility is high enough to provide unimpeded access to all structures.

To the west of LA 45, the A&A Marine facility is bisected by the alignment. The bridge height in this area would be near the 45-foot ground clearance maximum for the bridge. Again, access to structures

should present no problem. A multi-story metal building that is part of the A&A Marine facility on the east bank of Bayou Barataria could be impacted by construction.

The bridge landing on the west bank begins in an empty lot that has previously been filled. No structures would be impacted on the west side of the bayou.

The eastern connection to LA 45 is located across the roadway from a single-family residence. The western connection to LA 3257 is located between H. Ruttlely Street and Forges Street within the Barataria neighborhood. A church entrance is located approximately 600 feet north of the LA 3257 connector. Two single-family residences are within 150 feet north and south of the LA 3257 connector.

4.1.3 Pailet North

The majority of the land impacted by this alignment is undeveloped and conforms to the definition of wetland habitat. While close to existing residences, there are no actual relocations. The quality of wetland habitat will be discussed in Section 4.11.

East of LA 45, the alignment crosses fill associated with the Gulf South/Louisiana gas metering and distribution/compressor station. The elevation of the bridge structure at this point would provide approximately 4.5 feet of clearance over piping associated with the facility at this location.

West of LA 45, the bridge alignment crosses undeveloped fill associated with the A&A Marine/Barnett Marine complex. The bridge elevation is sufficient at this point to have no effects on access to and through this land.

The land use impacts on the west side of the bayou are almost entirely within forested wetlands. The bridge would traverse a small portion of an existing farm. Impacts to this farm would be the removal of the land beneath the bridge from use as pasture. Further discussion of farmland effects is addressed in Section 4.2. An access road to the farm would also be traversed. Due to the low elevation of the bridge in this location, the access road would no longer be usable.

The alternate is located adjacent to an existing residence. The actual structure will be avoided.

The alignment for this alternative would circumscribe the entire neighborhood on the west side of LA 3257. While the structure is greater than 200 feet from any residence, the bridge would have an aesthetic impact on the neighborhood.

The eastern connection to LA 45 is located across from the A&A Marine complex. The nearest residence is 1,200 feet north of the connector. The western connector to LA 3257 is 200 feet south and 350 feet north of the nearest residential street.

4.1.4 Pailet South (Selected Alternative)

This alignment was chosen specifically to minimize impacts to developed land within the project area. For nearly the entire alignment, the land impacts are to undeveloped land that conforms to the definition of wetland habitat. The quality of the wetland habitat is discussed in Section 4.11. The entire non-forested wetland habitat impacted by this alignment is also within designated Essential Fish Habitat, which is discussed in Section 4.15.

The only developed land impacted by this alignment is located near the south boundary for Barnett Marine. The elevation of the bridge structure where it crosses this land spit is sufficient that there would be no access restriction to the area beneath the bridge.

The eastern connector to LA 45 is located nearly 600 feet north of the entrance to Barnett Marine and 1,500 feet north of the nearest residential street. The western connector to LA 3257 is 350 feet north of the existing Paillet Canal bridge and within 50 feet of A. Dufrene Street at the south end of the Barataria neighborhood.

4.2 Farmland Impacts

Agency coordination was performed with the NRCS via completion of the Form AD-1006. The completed form is located at the end of this document. Site assessment points for all of the alternatives are 96-99 from a total possible ranking of 266 points. Thus, the value of farmland impacted by any of the alternatives is marginal. Construction impacts for each alternative would be temporary because access roads would be restored following completion of all construction access.

4.2.1 No-Build

No impacts to farmlands would result from the No-Build alternative. However, continuing development in the vicinity of the natural levees of Bayou Barataria is likely to occur south of the Paillet Canal. Designated prime farmland on both sides of the bayou outside of the existing roadways is subsiding and is no longer considered viable farmland. Between the roadway and the bayou, prime farmland soils are being filled for housing and other development and would likely continue with the No-Build alternative.

4.2.2 Pipeline Street

The Pipeline Street alternative would impact approximately 0.65 acres of designated prime farmland. This impact would include the area under the bridge and the ramp fill on the west side of Privateer Boulevard. Prime farmland soils on the east side of Bayou Baratavia east of Jean Lafitte Boulevard are not considered usable due to subsidence and a lack of flood protection.

4.2.3 Paillet North

The Paillet North alternative would impact approximately 1.22 acres of designated prime farmland. This impact includes the area under the bridge within the small parcel east of Privateer Boulevard on the west bank of Bayou Baratavia, the area under the bridge, and the fill area of the ramp in the forested parcel near the alignment endpoint. Prime farmland soils on the east side of Bayou Baratavia east of Jean Lafitte Boulevard are not considered usable due to subsidence and a lack of flood protection.

This alternative would impact the existing farm. This facility is not located on soils designated as prime farmland (See **Figure 3-3**).

Therefore, impacts to this land are not included in the calculation of prime farmland impacts.

Approximately 0.49 acre would be permanently impacted under the roadway. While the bridge is designed to be entirely on-structure through this area, the clearance below the structure in this area is 2.5 feet above the existing grade. An additional impact of 0.90 acre would be attributable to construction impacts.

4.2.4 Paillet South (Selected Alternative)

The Paillet South alternative would impact approximately 0.34 acre of

designated prime farmland. This impact is localized to the area beneath the bridge on the west bank of the bayou, east of Privateer Boulevard and the fill and structure just north of the Paillet Canal. Prime farmland soils on the east side of Bayou Barataria east of Jean Lafitte Boulevard are not considered usable due to subsidence and a lack of flood protection.

4.3 Social Impacts

Social and economic characteristics of the study area are described in detail in Section 3.1.2. No adverse impacts to minorities would occur. No impacts to churches, schools, recreation areas, businesses, or non-profit organizations (NPOs) would occur.

4.3.1 Travel Patterns and Accessibility

Vehicular/ Commuter

Vehicular and commuter traffic primarily consists of passenger vehicles and light trucks. Because the bridge provides the only access from the east bank of the bayou to the west bank, the bridge is also used by emergency vehicles and school buses.

As discussed in detail in Section 1.0, vehicular traffic is completely stopped when the existing bridge opens for marine traffic. On average, the bridge opens 27 times per day (Volkert, 2001a; Hartman, 1998). These openings result in traffic delays lasting an average of five to ten minutes each.

In addition to bridge openings, marine vessel collisions and normal maintenance operations have caused the complete closure of the bridge to vehicular traffic for extended periods of time. During such closures, a temporary pedestrian ferry service was used to transport citizens from one bank to the other.

The new bridge would reduce closures of the bridge resulting from marine traffic. Less maintenance would be required for the new bridge, eliminating the frequent closures of the bridge for repair. The new bridge would thus help to protect public safety by reducing and/or eliminating lengthy delays and closures that prevent emergency vehicles from crossing the bayou.

Marine Traffic

As detailed in Section 1.2.2, marine traffic is primarily composed of three use groups: the oil industry, commercial fishing, and recreational fishing. While the bridge presents no vertical restriction to marine traffic, the navigation channel is only 75 feet wide. When open to land-based vehicular traffic, the bridge blocks virtually all marine-bound traffic on Bayou Baratavia. Vessels wider than 75 feet cannot pass between the fenders of the existing bridge.

The bridge is the only horizontal waterway restriction from the ICWW to the Gulf of Mexico. Some large vessels used by the oil industry cannot pass within the navigation channel of the bridge. Consequently, these vessels are forced to use an unmaintained channel that adds approximately twelve miles to the trip.

The new bridge would accommodate larger marine vessels, such as those used by the oil field industry and the shipbuilding and repair operations. Operations along the Harvey Canal would benefit from the larger bridge clearances, which would allow them to be more competitive in the shipbuilding industry.

Due to the narrow horizontal clearance and high volumes of marine traffic, numerous collisions with the bridge have occurred. The wider horizontal clearance of the new bridge would result in fewer collisions with the

bridge, fewer long-term bridge closings, and less damage to the bridge's superstructure and substructure. Vessels wider than 75 feet traveling on the ICWW would no longer have to use alternate routes to reach the Gulf of Mexico.

4.3.2 Highway and Traffic Safety

A detailed traffic study for the project corridor was performed to evaluate the existing conditions and projected conditions for the year 2025.

Because the No-Build and all alternative locations will not change basic traffic patterns, the traffic analysis detailed in Section 1.2.1 is applicable to all alternatives.

Total traffic counts for the study area are expected to increase from 532 VPH to 873 VPH in 2025 (Volkert, 2000; 2001e). The projected LOS for a two-lane bridge, either existing or replacement, will remain at B in 2025. This LOS is the same for all alternatives.

The eastern intersection of LA 302 with LA 45 leading to the bridge has been determined to have a LOS of F if the intersection is unsignalized. The addition of a signal raises the 2025 LOS for the east intersection to A. The addition of extended turn lanes could be used to further improve highway and traffic safety for all alternatives.

4.3.3 Public Health and Safety

As detailed in Section 1.2.1, public health and safety is compromised with the existing bridge. Frequent openings during hurricane evacuations and other emergency situations restrict and, in some cases, prohibit land-based vehicular traffic, putting public health and safety at risk. During periods when the bridge is not operational, fire, police, medical, and other emergency vehicles have limited access to the west side of Bayou Barataria.

The proposed design for all of the alternatives is the same and will have similar effects on public health and safety for each alternative. All alternatives for the new bridge would significantly reduce the number of openings required for marine traffic, allowing land-based traffic to flow without interruption, and emergency vehicles would have improved access to the west side of the bayou. The addition of shoulders would also protect broken-down motorists.

4.4 Relocation Impacts

None of the proposed alternatives are expected to result in the displacement of a business or residence. Only one alternative, Paillet North, is adjacent to a residence at the end of A. Dufrene Street. Where possible, alignment adjustments would be made to minimize impacts to residential or business structures during the final ROW acquisition negotiations. Utility relocations are expected for each of the alternatives. The Feasibility Study contained data on residential relocations. Subsequently, adjustments in the alignment have avoided the structures such that relocation is not required (Table 2-4) on any alternates.

ROW requirements for each of the alternatives would include the roadway width in addition to 25 feet outside the structure reserved as a maintenance servitude. In the tangent section of each alternative, the total roadway width is 35 feet. In the curve sections, the width of the inside shoulder would increase, making the sections a width of 41 feet. On the inside curve for all alternatives, a 25-foot temporary construction servitude would be required. An additional one-acre temporary construction servitude site would be required for staging and storage of equipment and materials. This site would be located between LA 45 and Bayou Barataria, adjacent to the proposed ROW and Bayou Barataria.

4.4.1 No-Build

The No-Build alternative would not entail any residential or business relocations. Small-scale repair and maintenance operations that would result from retaining the existing bridge would be restricted to the existing ROW on either side of the bayou.

4.4.2 Pipeline Street

No residences would be relocated as a result of the proposed ROW limits for the Pipeline Street alternative.

The proposed ROW does have secondary impacts on some industrial facilities. The total projected right-of-way-related cost for this alternative is \$1.6 million. Utility relocations will entail an additional \$155,000. Complete and detailed relocation cost estimates are contained in the Location and Feasibility Study (Volkert, 2001c) (See **Table 2-4**).

Prior to crossing LA 45, the proposed ROW would have some impact on existing oil field infrastructure. These structures include a gas compressor station.

Between LA 45 and Bayou Barataria, the proposed ROW would impact operations of A&A Marine during construction and may necessitate the relocation of the facility access road located at Pipeline Street.

A three-inch distribution gas line traversing Bayou Barataria is located between Pipeline Street and E.J. Ruttley Street on the west side of the bayou. This pipeline appears to originate at the oil storage facility west of the outside curve for the Pipeline Street alternative.

On the west bank of Bayou Barataria, the return curve for the alternative would prevent access to the existing oil field access road associated with

an oil storage facility west of the bridge structure. The access road would be relocated within the proposed 25-foot DOTD ROW on the outside curve of the bridge.

4.4.3 Paillet North

The Paillet North alternative is adjacent to one residence and will require some minor utility relocations along LA 45 and LA 3257. The total projected ROW-related costs for this alternative is \$51.3 million. The proposed ROW does acquire ROW from an existing farm and oil field infrastructure facilities. Utility relocations in the project vicinity will entail an additional \$75,000 (Volkert, 2001c) (See **Table 2-4**).

On the east side of LA 45, the proposed ROW would cross infrastructure facilities related to the existing pipeline distribution system. Impacts would be minimized or avoided.

On the west bank of Bayou Barataria, several piers and water associated structures could require some form of reconfiguration to permit continued access under the new bridge structure and inside of the fender system. A single-family residence is located adjacent to the designated ROW at the waterward end of A. Dufrene Street. This building is a wood frame structure set on piers; it is currently in fair condition

4.4.4 Paillet South (Selected Alternative)

No residences exist within the proposed ROW limits for the Paillet South alternative. Some minor utility relocations along LA 45 and LA 3257 would be required for this alternative. The proposed ROW would have some secondary impacts to oil field facility access. The total projected ROW-related cost for this alternative is \$1.0 million. Utility relocations will entail an additional \$75,000 (Volkert, 2001c) (See **Table 2-4**).

An oil facility access road located north of the proposed ROW would become inaccessible beneath the bridge structure east of LA 45. The road would be relocated within the proposed 25-foot DOTD ROW on the inside curve of the bridge.

Temporary access would be restricted to the southern-most land within the Barnett Marine complex. Two jack-up rigs are located in the cove south of the peninsula. Access relocation, if necessary, would be accomplished using the proposed DOTD ROW on the outside of the structure. After construction is complete, no access restriction would exist due to the roadway elevation in this area. No permanent relocation cost would be incurred.

4.5 Economic Impacts

The construction of a new bridge with larger horizontal and vertical clearances would allow marine industries in the study area to be more competitive with neighboring marine industries. The larger clearances would more easily accommodate larger vessels, allowing them to pass underneath the bridge and to reach shipbuilders, docks, repair shops, and other marine operations further along the bayou.

The improved access and increased competition would have a beneficial impact on the local economy by bringing more businesses and people into the area. The larger bridge clearances would allow industrial expansion and would increase the types of products that can be manufactured. The preliminary draft of the Jefferson Parish Economic Development Commission's Harvey Canal Industrial Corridor Economic Impact Study found that improved access to the canal, which would result from the construction of a new bridge, could increase annual revenues by at least \$50 million (see Correspondence Section).

4.6 Considerations Relating to Pedestrians and Bicyclists

4.6.1 No-Build

The No-Build alternative would not permit the addition of either pedestrian or bicycle lanes on the existing bridge due to the limited structure width. Present conditions are unsafe for either pedestrian or bicycle travel across the bridge.

4.6.2 Alternate Alignments

The bridge design for all of the alternatives includes two, twelve-foot travel lanes with shoulders. In the curved sections of the roadway, the shoulder width would be four feet (4') on the outside of the curve and ten feet (10') on the inside of the curve to provide for stopping sight distance. In the tangent sections, the shoulder width would change to four feet (4') on both sides of the travel lanes.

The roadway design for all of the alternatives does not provide specific designated access for either pedestrian or bicycle use. Because the bridge alternatives are 45-foot elevated bascule bridges, use of the structure by other than vehicular traffic is considered unsafe.

Current use patterns for the existing bridge do not include enough pedestrian or bicycle traffic to justify design changes for the proposed alternatives to include accommodation for pedestrian or non-motorized vehicle use.

4.7 Air Quality Impacts

Jefferson Parish is an attainment area for all criteria pollutants. As such, the only pollutant of concern for this project is carbon monoxide (CO).

An initial screening test for the known and projected traffic density at the LA 45/LA 302 intersection (most traffic) was performed using model curves derived

from MOBILE5 and CALINE3 models to determine the minimum distance for a receptor to experience a significant air quality impact (FDOT, 1999).

Since the current and projected peak traffic volumes at the existing bridge location and all potential new bridge locations do not exceed 1,000 vehicles at any intersection, there is no critical distance for significant air quality impact. Thus, the project corridor passes the initial screening process to the design year of 2025 for all alternatives and does not require computer modeling.

Site-specific data used to provide the screening assumptions are listed below:

1. The project location is considered a rural area.
2. The average peak traffic for the LA 45/ LA 302 intersection is approximately 240 VPH. The projected traffic peak would be approximately 400 VPH by the project plan year 2025.
3. The current posted speed limit for LA 45 in the mainly rural areas, is 45 mph. Within Jean Lafitte, the speed limit is 25 mph.

The screening result indicates that there would be no receptors affected by carbon monoxide from any of the proposed build alternatives or the No-Build alternative. The proposed project is a replacement of an existing roadway; thus, there would be no additional traffic. Instead, there would be a relocation of existing traffic. The proposed locations for the replacement bridge are all located away from the main residential development and should also diminish impacts to potential receptors. The proposed construction of a mid-level bascule bridge would significantly reduce the number of bridge openings per day and should reduce the amount of carbon monoxide emissions currently experienced for the existing bridge.

The proposed project does not involve any capacity expansion. Improved access to the west side of the bayou could increase traffic projections based on the potential increase in development pressure. The ramps for the proposed bridge

would allow the alleviation of potential peak traffic congestion on both LA 45 and LA 3257 during bridge openings. Thus, the main roadways would remain relatively free-flowing and would thus benefit overall air quality.

4.8 Noise Impacts

A quantitative, computer-based noise impact analysis was performed to determine the effects of the proposed Bayou Barataria Bridge replacement on existing noise levels at noise sensitive receptors in the project area. The noise study was performed in accordance with DOTD Highway Traffic Noise Policy, which became effective in October 1997. The DOTD policy is consistent with Title 23, CFR, Part 772, U.S. Department of Transportation, Federal Highway Administration, entitled *Procedures for Abatement of Highway Traffic Noise and Construction*.

A separate Noise Study Report was prepared and is included as Appendix A. The report contains the detailed methodology and results of the noise study (Volkert, 2001d). The results of the noise report are summarized in this document.

Activities performed for the noise study included:

1. Determining the location of noise sensitive receptors in the project area accounting for existing ambient noise, as well as future development.
2. Characterizing the existing ambient noise environment by obtaining measurements at selected sites.
3. Determining existing and future noise levels resulting from all build alternatives through computer modeling.
4. Assessing impacts for each build alternate by comparing future modeled noise levels to the DOTD Noise Abatement Criteria (NAC) and by determining if future noise levels are expected to exceed existing modeled noise levels by 10 dBA.
5. Evaluating noise abatement measures at any sites where a future impact was predicted.

None of the proposed alternatives were predicted to result in present or future noise impacts at any noise sensitive receptors. Because no future noise impacts from this project are anticipated, no noise abatement measures were recommended for any of the alternatives.

4.8.1 Determination of Existing Ambient Noise Levels

Following identification of activities and land uses in the project corridor and their sensitivities to noise level changes, it was necessary to select specific sites at which measurements of existing ambient (background) noise levels would be taken. Locations were chosen that would provide a good representation of areas that may be affected by changes in noise levels. Measurements were taken throughout the project area and were not restricted to the vicinity of the final three proposed alignments. Measurements were taken over a five-day period during and between rush hour traffic times, which correspond to peak and off-peak times.

The ambient readings were relatively high, which is likely a result of the following factors:

1. There is a significant amount of boat traffic along the bayou.
2. Several industrial facilities associated with the bayou are present in the project area.
3. Water in the bayou and nearby canals helps to propagate noise from the source to the receiver.

4.8.2 Selection of Noise Sensitive Receptors

For this analysis, noise sensitive receptors were selected based on land uses and their proximity to proposed alignments of the build alternatives. Noise sensitive receptors are typically defined as property where frequent exterior human use occurs and where a lowered noise level would be of benefit. Typical land uses constituting a noise sensitive receptor include

residences, commercial sites, parks, churches, schools, etc. All noise sensitive receptors within 500 feet of each proposed alignment were selected for analysis. A height of five feet above the ground elevation at each receptor location was used for modeling purposes at all receptors. Some receptors may have been modeled for more than one alternate and thus may have been labeled differently for each respective model run.

4.8.3 Existing, Predicted, and Future Predicted Noise Levels

Noise levels for existing conditions (2000) and anticipated future noise levels (2025) for all build alternatives were predicted using STAMINA 2.0. Conceptual design plans superimposed on aerial photos were used to develop the horizontal and vertical coordinate input required by STAMINA. Modeling was performed utilizing the University of Louisville's STAMINA 2.0 interface. This interface utilizes Microstation to create the roadway network and location of noise to be incorporated into the noise model.

4.8.4 Impact Assessment

The DOTD NAC, summarized in **Table 4-1**, establishes guidelines for traffic noise impacts assessments. As previously discussed, DOTD adopted a NAC consistent with the FHWA NAC, allowing for consideration of traffic noise impacts one dBA below the FHWA criteria. The NAC is based on various activity categories in order to assess changes in ambient noise levels caused by roadway improvements.

Table 4-1: DOTD NAC Hourly A-Weighted Sound Level¹

Activity Category	$L_{eq}(h)$ ²	Description of Activity Category
A	56 (external)	Lands on which serenity and quietness are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential in the area to continue to serve its intended purpose.
B	66 (external)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	71 (external)	Developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped lands
E	51 (internal)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

¹ These criteria are consistent with the FHWA NAC (23 CFR 772), allowing for consideration of traffic noise impacts one dBA below the FHWA criteria.

² Hourly average noise level

Noise impacts occur when the predicted noise levels equal or exceed the DOTD NAC. This criteria is equivalent to the FHWA guidance, which designates a value that approaches the FHWA NAC to be considered an impact. Impacts also occur when future noise levels are predicted to exceed the existing noise levels by 10 dBA, which is the DOTD definition of substantial exceedance. When an impact is identified due to either or both of these conditions, mitigation measures must be evaluated. The results of the existing and future year analyses were evaluated with regard to DOTD criteria and policies to determine whether project impacts on noise levels are expected (Table 4-2).

Table 4-2: Summary Of Noise Impact Assessment

Alternate - Year	Impacted Receptors	
	Equaling or Exceeding DOTD NAC	Predicted to Increase over Existing by 10 dBA
Existing - 2000	None	None
Pipeline - 2025	None	None
Paillet North - 2025	None	None
Paillet South - 2025	None	None

None of the proposed alternatives were predicted to result in future exceedances of the NAC or to cause increases of ten dBA or greater above existing noise levels at any noise receptors. Because no future noise impacts from this project are anticipated, no noise abatement measures were considered.

4.9 Water Quality Impacts

Water quality in the vicinity of the project has been designated as fully supporting overall designated uses (DEQ, 1996). Individual designations for the waters of Bayou Barataria are partially supporting primary and secondary recreational contact and fully supporting fish and wildlife propagation. Water quality regulations in Louisiana do not require storm water retention or treatment facilities for roadway or bridge structures. The DEQ currently has permitting authority for the National Pollutant Discharge Elimination System (NPDES).

Traffic across the proposed bridge is not expected to increase dramatically from present levels within the bridge project design period ending in 2025 (Volkert, 2000).

Construction impacts to water quality would be similar for all of the alternatives. Soils in the project area are prone to erosion and compaction. Disturbance of the organic components of the soil would likely cause some increased turbidity in open water areas of the project. Turbidity would be minimized in open water

habitat through the use of sedimentation controls designed specifically for the site. These controls would include, but are not limited to, hay bales and/or sediment curtains.

4.9.1 No-Build

The existing bridge is 507 feet long with a timber deck and steel checkered floor plate runners in the swing span portion of the bridge. The approach roadways on both sides of the bayou are ditched to drain directly into the bayou as well. No storm water treatment is currently in use on the existing bridge. The No-Build alternate would retain the existing bridge structure.

Water quality impacts from the existing bridge are not quantifiable. Thus, no direct comparison of existing and expected water impacts for the No-Build and the other alternatives can be made.

4.9.2 Alternate Alignments

Due to similar lengths of each alternative, general impacts to water quality would be the same. In general, all of the proposed bridge replacement structures would have a greater amount of surface area collecting and discharging storm water than the current bridge. Compared to the existing bridge, storm water discharge from any of the proposed bridge locations would impact a larger area. Storm water discharge into wetland habitat would result from each of the alternatives. The existing bridge does not discharge into wetland habitat.

The new bridge construction would include down drains placed to direct storm water off of the roadway. These storm water down drains would directly discharge onto the surface below the roadway. In general, the number of down drains would be two per span for the short spans (20 feet)

at the approach ramps and as many as six per span for the longer sections (70 feet) in the tangent roadway.

Storm water runoff from the bridge alternatives would not adversely affect water quality in Bayou Barataria. Storm water runoff quality would not be substantially different from water already leaving the existing roadways and entering the ditches and wetlands throughout the study area. While direct discharge into the wetlands would be a new impact to the ecosystem, wetland treatment of the storm water should ensure that there is no overall water quality degradation. The slight increase in traffic projected over the project life would not lead to a substantial increase in automobile pollutants entering the ecosystem.

Sanitary discharge from the proposed bridge alternatives would not occur. The bridge tender housing would contain sanitary facilities that would be tied into existing sewage treatment facilities in Jean Lafitte or Barataria.

4.10 Permits

All bridge replacement alternatives would require the same permitting regime.

The following permits are known to be required for this project:

- USCG permit for construction of a bridge over navigable waterway;
- USACE Section 404 permit for impacts to wetlands;
- DNR Coastal Use permit for impacts within the Coastal Zone that occur outside of fast lands;
- DEQ Storm Water General Permit for construction activities. This permit requires the development of a Storm Water Pollution Prevention Plan;
- DEQ WPS-G for sanitary discharge of less than 100,000 gallons per day.

The Coast Guard approves the location and clearances of bridges through the issuance of bridge permits or permit amendments under the authority of the General Bridge Act of 1946, and other statutes. The permit is valid for three

years until commencement of construction and five years to completion of construction.

Section 404 of the Clean Water Act authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into the waters of the United States, including wetlands. The Section 404 permit issued by the USACE is required for all impacts to wetlands within the final project area. Wetlands are defined by delineation methodology described in the 1987 manual (USACE, 1987). Jurisdictional wetlands would include all areas that meet the 1987 manual criteria. This criteria includes wetlands inside and outside of the levee systems. The permit is valid for five years after issuance.

Mitigation for wetland impacts would be required as part of the permitting process. Mitigation requirements would be determined prior to issuance of the permit.

Authorization for the issuance of a Coastal Use Permit (CUP) by the DNR is the State and Local Coastal Resources Management Act of 1978, Act 361 of 1978, as amended (R.S. 49:214.21-214.40). Under a public notice requirement for issuance of a CUP, the LDWF and the DEQ are state advisory agencies that can comment on a pending CUP (State of Louisiana, 1996). A CUP is valid for two years after issuance until initiation of the project and 5 years to completion. The CUP contains the same information that is included in the Section 404 permit and any additional information required by the DNR. Issuance of the CUP would fulfill the requirement for coastal zone consistency determination required in the Section 404 permit. Mitigation for impacts to coastal zone habitat would be determined at the time of permit application and review. A complete and approved compensatory mitigation plan would be required prior to issuance of a CUP.

Water Quality Certification under the Louisiana Pollutant Discharge Elimination System (LPDES) is issued within the process of issuance of the Section 404 permit for USACE. For the construction of any of the proposed bridge alternatives a general permit for construction that requires the preparation and acceptance of a Storm Water Pollution Prevention Plan would be necessary. The LPDES Stormwater General Permit for construction activities replaces the NPDES General Permit for stormwater discharges from construction sites in accordance with the provisions of the Louisiana Administrative Code 33:1X.2345.B.2.f. The LPDES Permit is valid for five years after issuance. As part of the permitting process, a Notice of Intent would be submitted to DEQ at least 48 hours prior to initiation of construction.

While there are plans to provide sanitary sewer tie-in with either of the adjacent communities, DEQ would require a general discharge permit for less than 100,000 gallons per day for a self-contained package station associated with the bridge structure.

Aside from the required permits and prior to the completion of the permitting process, the National Marine Fisheries Service has the obligation pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act to provide comments and recommendations for federally-funded projects that would impact EFH. Prior to issuance of the Section 404 permit by the USACE, a mitigation plan specifically addressing impacts to EFH must be presented and approved by NMFS.

4.11 Wetland Impacts

Avoidance of wetlands is not possible for any of the alternatives in this project due to the low elevation and lack of levee protection in some areas. All undeveloped and unfilled areas within the project study corridor meet the criteria for classification as wetland habitat (Cowardin, et al., 1979; USACE, 1987; Volkert, 2001d).

Field verification of wetlands was performed in November 2000 and March and May of 2001. The object of the fieldwork was to confirm aerial photographic interpretation of the project area.

Wetlands that were potentially crossed by any of the selected alternatives were photographed. Wetland habitat quality was determined using best professional judgment.

Values calculated for wetland impacts were derived from calculations performed utilizing ArcView, a Geographic Information System (GIS) program. Values were cross-checked by an ecologist using the basic construction geometry and known boundaries for natural environments within the study area.

Construction impacts were calculated by measuring distances along the alignment for each of the wetland types crossed and multiplying that distance by the proper width (35 feet and 41 feet for the roadway, and 25 to 75 feet for construction easement). Wetland boundaries were determined through the interpretation of false-color infrared aerial photography and ground-truth determination by a Professional Wetland Scientist (Volkert, 2001d).

The required height of the bridge and other design criteria for the bridge structure necessitated extending approach and exit ramps beyond the existing roadways (LA 45 and LA 3257). Development on the east side of Bayou Baratavia did not permit placement of a bridge within the Fisher School Basin levee.

Lafitte Boulevard Improvements

On the east side of Bayou Baratavia, all of the proposed alignments would be built outside of the existing Fisher School Basin levee located north of Shipyard Street. As a means to minimize flooding potential on the alternatives, improvements to Lafitte Boulevard (LA 45) would be made to raise the elevation of the roadway to the proposed levee height of seven feet (Volkert, 2001c; USACE, 1998;

Montgomery Consulting Engineers, 1983). The roadway improvements would entail raising the elevation of the roadway and shifting the main roadway alignment to the west.

This proposed roadway improvement would impact the roadside ditch on the west side of LA 45. Generally, the existing ditches in the project area are federally jurisdictional wetlands. The eventual impact to wetlands from road realignment would be a zero net change in total acreage because the new alignment would recreate the ditch system lost from the original roadway alignment. No habitat evaluation would be done for jurisdictional ditches. In the following discussions, no calculations have been made for any potential roadway improvements on the east side of Bayou Barataria.

In the following subsections, impacts to wetlands are categorized as follows: Permanent Fill, Permanent Shading, Temporary Construction Easement, and Permanent ROW.

Permanent Fill

Construction of the bridge alternatives would entail the placement of permanent fill within wetlands in the form of pilings and other bridge support structures. Permanent fill at the approach and exit ramps would entail the placement of material for new road base and associated intersection construction. In general, this type of fill amounts to a section approximately 100 feet long by 41 feet wide at each end of the bridge structure. For all of the alternatives, fill for the approach and exit ramps would impact forested wetland habitat.

Permanent Shading

Permanent shading is an impact to wetland communities due to the interception of ambient sunlight by the roadway. Where roadway elevations are sufficient, shading can be partial or nonexistent. While a specific threshold elevation has not been determined for complete shading, some general values have been assumed.

Based on the given road widths of 41 feet in the curves and 35 feet in the straight sections, ground clearance of less than ten feet is expected to completely shade the vegetation beneath.

Permanent shading is expected to result in the weakening of vegetation directly beneath the roadway and the eventual loss of vegetation in areas that receive minimal light levels. Permanent shading impacts are not completely quantifiable at this time. Some edge-effect vegetation would persist for a distance beneath the bridge structure following vegetation recovery within the impacted area.

Outside of the existing levees, areas of complete shading are expected to experience a shift in functionality from the existing vegetated community to mud flats or open water wetland habitat (LCWCRTF, 1999a; 1999b; Reed, 1995). With the eventual loss of vegetation under the roadway, the soils would likely subside or compact because vegetative matter would not accumulate, and plant material that normally traps sediments would be missing. Wetlands within the existing levees have already experienced compaction due to the constant hydrologic manipulation resulting from pumps draining the land. Complete shading in these “fast lands” wetlands will likely result in the eventual wetland functionality shift to sparsely vegetated substrate that supports low-density emergent and scrub-shrub species. These fast lands will become low-quality habitat over time.

Complete shading would occur on the curved approach ramp sections for all of the alternatives. Roadway elevations are seven feet on the east side and four feet on the west side of the sections (Volkert, 2001c). With a road depth of 1.5 feet from the roadway surface elevation, the clearances beneath the roadway are 5.5 feet and 2.5 feet, respectively.

Temporary Construction Easements

The proposed construction easements for all of the alternatives are 25 feet on either side of the structure and an additional 25 feet on the inside curve of the structure. An additional acre of land would be required for staging and equipment storage. These areas would be used for all construction-related access to the selected alternate alignment. The staging area would be placed adjacent to the selected alignment and would be located on the east bank of the bayou.

Where required, access roads would be constructed within the proposed construction easements. Access road construction would entail the placement of fill over a semi-pervious fabric and complete removal after construction is completed. In some instances, the access roads might need to remain in place to provide access to lands adjacent to the bridge (see Section 4.4). Every effort would be made to minimize access road construction.

On all alignments, permanent conversion of forested wetland to scrub-shrub wetland would occur within the designated ROW width (50 to 75 feet). Final construction and restoration techniques would determine the eventual permanent impacts to forested wetlands.

The following subsections address site-specific impacts to wetlands for each of the alternatives.

4.11.1 No-Build

The existing bridge was built in 1948. The land used for the approach ramps was filled and currently does not meet any of the wetland determination criteria. Repair and maintenance activities that could result from the No-Build alternative would have no effect on wetlands.

4.11.2 Pipeline Street

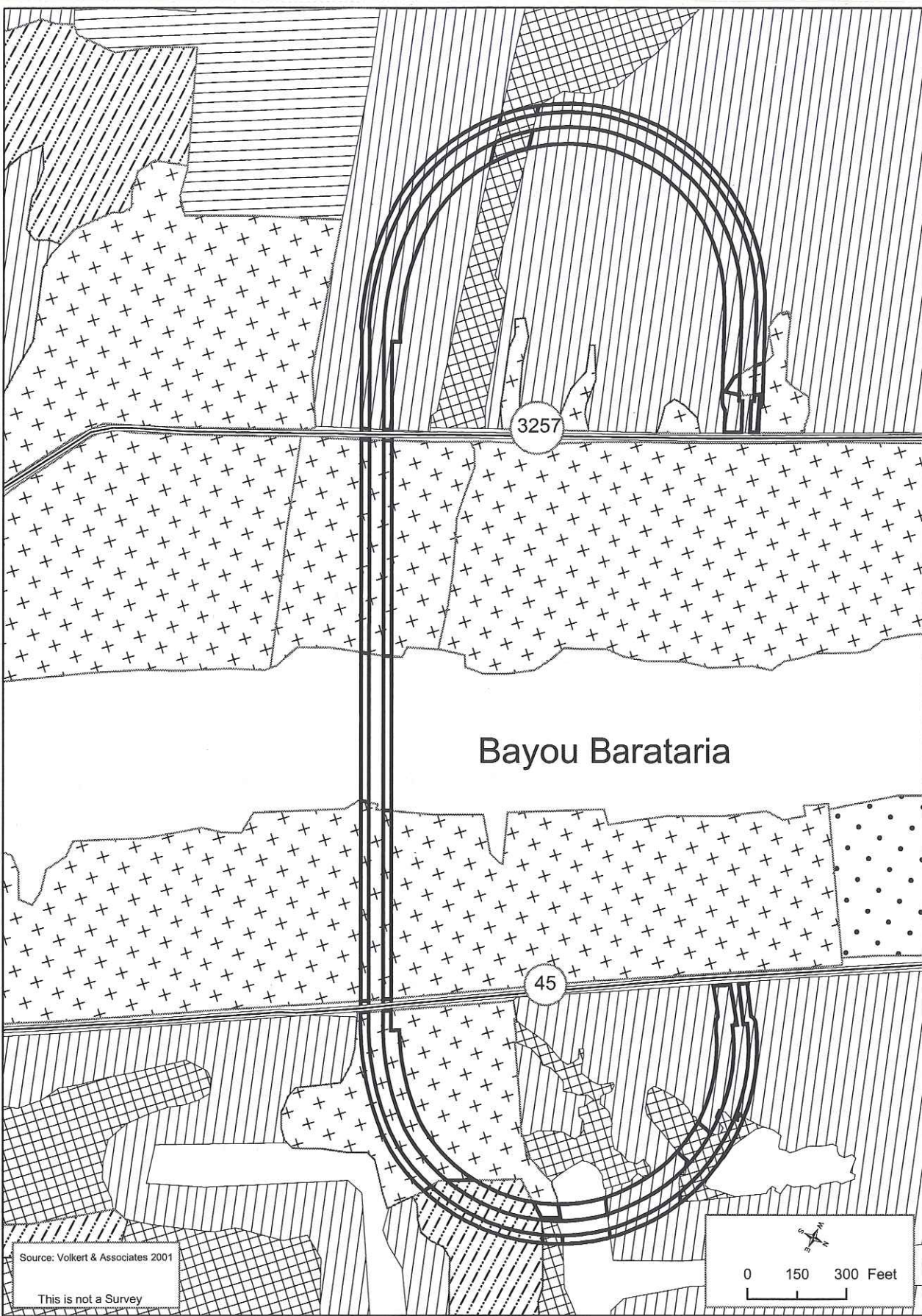
The Pipeline Street alternative starts just south of Shipyard Street and just outside of the Fisher School Basin levee (approximately 650 feet) on the east side of Bayou Barataria. The alignment crosses Bayou Barataria within the existing location of Pipeline Street on the east bank of the bayou. The west side landing is within an undeveloped lot that has been filled (Figure 4-1).

Initial wetland community impacts would be clearing and construction within low-quality, bottomland, hardwood forest community. A small portion of emergent marsh and some open water is encountered near the apex of the curve for the eastern portion of the alignment. This alignment traverses existing fill on the east side for the last 1100 feet from near the oil access canal to Bayou Barataria.

Landfall on the west bank of the bayou is on existing fill for the first 600 feet. Except for a small strip of land at the apex of the west curve, the entire west side wetland impacts are limited to already disturbed successional bottomland hardwood forest. Community dominance by the invasive exotic Chinese tallow tree (*Sapium sebiferum*) indicates a degree of continued disturbance.

Ground-truth investigation of the area revealed that cattle from the farm south of the alignment graze throughout the forested and open lands west of LA 3257.

The west side alignment for this alternate is entirely within the Paillet Basin levee and is not subject to DNR CUP requirements. However, fast lands that meet the wetlands criteria remain subject to federal jurisdiction by USACE.



Legend

Pipeline	Open Water
PEM	PFO
Farmland	PSS
Fill	

Pipeline Street Wetland Impacts

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Figure 4-1

Wetland impacts for the Pipeline Street alternate have been determined (Table 4-3).

Table 4-3: Pipeline Street Alternative Wetland Community Impact Areas

Wetland Type	Permanent Fill		Complete Habitat Shading		Construction Easement	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Forested	10,154	0.23	74,923	1.72	206,500	4.74
Scrub-Shrub	224	0.01	16,810	0.39	30,750	0.71
Emergent	213	0.00	14,760	0.34	27,000	0.62
Open Water	2,350	0.05	6,098	0.14	11,250	0.26

Permanent Fill- Represents pilings and roadway constructed at-grade.

Complete Habitat Shading- based on roadway width of 35 feet in straight sections and 41 feet in curved sections. Potential shading impact is calculated for roadway clearance of 10 feet or less.

Construction Easement- Easement width is based on 25 feet on each side of the structure in straight sections and an additional 25 feet on the inside of curved sections.

Construction impacts were determined by measuring distances along the alignment for each of the wetland types crossed and multiplying that distance by the proper width (35 to 41 feet for the roadway and 50 to 75 feet for construction easement).

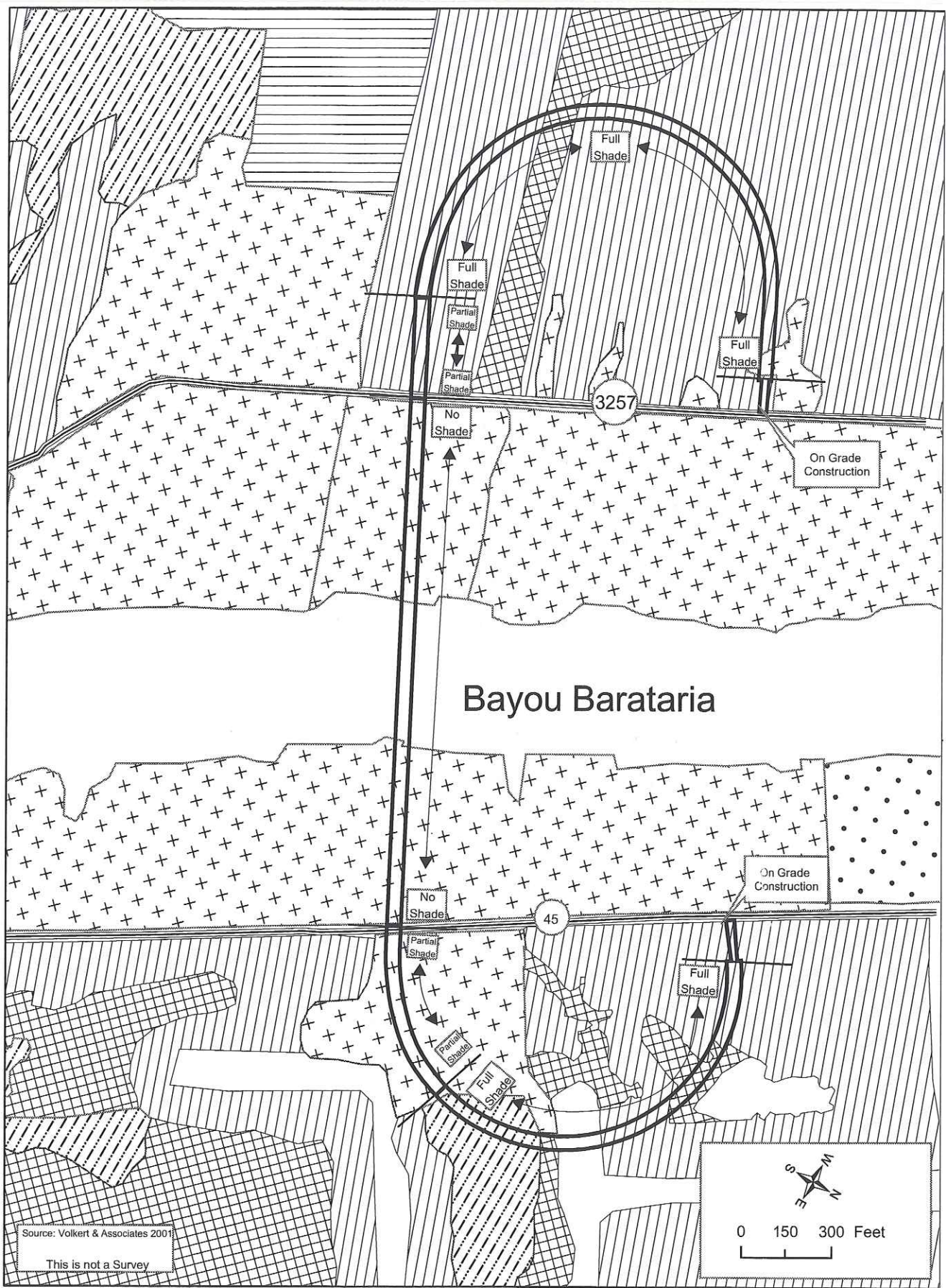
For the entire alignment, the permanent fill of wetland habitat would amount to 0.24 acre. Permanent fill calculations include bridge support structures extending into the substrate and the proposed approach and exit ramps that would be constructed at-grade. Fill calculations for open water include structures placed in Bayou Barataria and the oil access canal. Permanent fill in open water is 0.05 acre for this alignment.

On the Pipeline Street alternative, a total of 2.45 acres of wetland habitat are completely shaded by the roadway. Complete shading will occur where the roadway is ten feet or less above the ground elevation. Forested wetlands that are not completely shaded will be subject to maintenance as scrub-shrub habitat to permit structural inspections.

Forested wetlands account for 1.72 acres of complete shading impact. On the east bank, a total of 0.51 acre of forested wetland would be completely shaded. This forested wetland habitat will eventually experience a functionality shift to mud flat or open water due to lack of light and soil compaction. The remaining 1.21 acres of completely shaded forest community is located in the Paillet Basin and is considered fast land.

Emergent and scrub-shrub wetland habitat accounts for 0.73 acre of the total shading impacts to wetlands. These are primarily located on the east bank of the bayou. The only emergent wetland associated with the alignment on the west side is that area adjacent to the oil fields access road near the apex of the curve. The emergent (0.28 acre) and scrub-shrub (0.39 acre) habitats on the east bank would be permanently converted to open water due to shading and compaction of sediments outside the existing levee system. Emergent wetlands associated with the existing roadway accessing the oil field storage facility on the west side will be completely shaded and will necessitate construction of a new access road. The roadway will not be usable due to the low bridge elevation in this area.

Open water habitat would not change as a result of this alignment. However, the roadway elevation above the oil access canal on the east side of LA 45 would entail a complete shading impact of the open water.



Legend	
Pipeline	Open Water
PEM	PFO
Farmland	PSS
Fill	

**Pipeline Street
Shade Impacts on Wetlands**

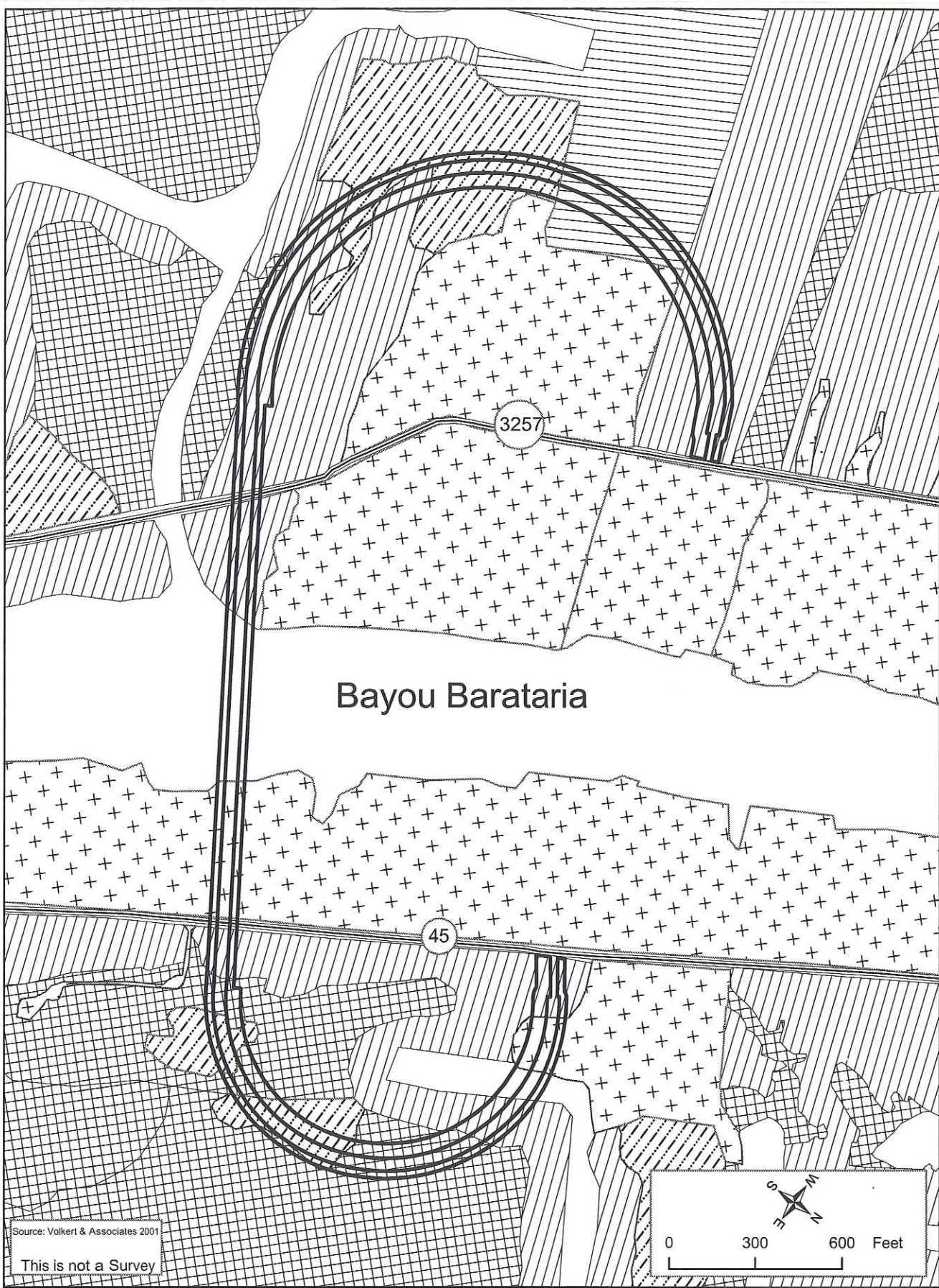
Figure 4-2

Construction easement impacts to forested wetlands would amount to 4.74 acres. This wetland type would be converted from forested wetland to scrub-shrub wetland after construction is completed. Construction impacts to emergent and scrub-shrub habitat would be 0.62 acre and 0.71 acre, respectively.

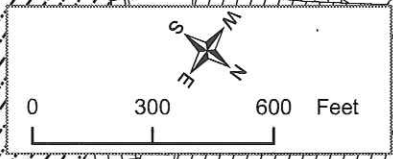
4.11.3 Pailet North

The Pailet North alternate starts approximately 1,200 feet south of the Pipeline Street alignment and approximately 1,900 feet south of the Fisher School Basin levee on the east side of Bayou Barataria. The alignment crosses the bayou within the Barnett Marine complex just north of the main buildings, and makes landfall just south of Dufrene Street, located north of the Pailet Canal (**Figure 4-3**).

Initial wetland community impacts would be clearing and construction for the first 200 feet within a low-quality, successional, bottomland, hardwood forest community. This area was impacted by previous work performed in association with the nearby oil storage facility. The alignment then crosses existing fill for approximately 200 feet before crossing an oil access canal. From this point (approximately 500 feet from the beginning) to the LA 45 overpass (approximately 2,000 feet), the alignment crosses wetland habitat including forested, scrub-shrub, and emergent communities. Between LA 45 and the east bank of Bayou Barataria, the alignment traverses approximately 500 feet of existing fill.



Source: Volkert & Associates 2001
 This is not a Survey



Legend

Pipeline	Open Water
PEM	PFO
Farmland	PSS
Fill	

**Pallet North
 Wetland Impacts**
 114

Figure 4-3

The west side of this alignment lands just north of the Paillet Canal and within the existing levee. The forested parcel on the east side of Privateer Boulevard (approximately 400 feet) is impacted from previous activities associated with the neighboring houses and the dredging associated with digging and maintaining the Paillet Canal.

The alignment on the west side of Privateer Boulevard traverses through approximately 950 feet of impacted low-quality, bottomland, hardwood community before entering an emergent, scrub-shrub mixed community that is constantly inundated. This portion of the alignment contains an existing power line ROW that is subject to continuing maintenance.

From near the apex of the western curve for approximately 550 feet, the alignment crosses the only pastureland in the entire project area. The terminus of this alignment ends in the same disturbed, successional, bottomland hardwood community as the Pipeline alignment. The entire west side of this alignment circumscribes an existing neighborhood in the community of Barataria.

Wetland impacts for the Paillet North alternative have been calculated (**Table 4-4**).

For the entire alternate, permanent fill would total 0.36 acre. Permanent fill calculations would include bridge support structures extending into the substrate and the proposed approach and existing ramps. Permanent fill in open water totals 0.03 acre.

Table 4-4: Paillet North Alternative Wetland Community Impact Areas

Wetland Type	Permanent Fill		Complete Habitat Shading		Construction Easement	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Forested	14,240	0.33	55,756	1.28	177,375	4.07
Scrub-Shrub	213	0.00	12,197	0.28	28,875	0.66
Emergent	1,075	0.03	77,972	1.79	154,202	3.54
Open Water	1,473	0.03	3,049	0.07	5,250	0.12

Permanent Fill- Represents pilings and roadway constructed at-grade.

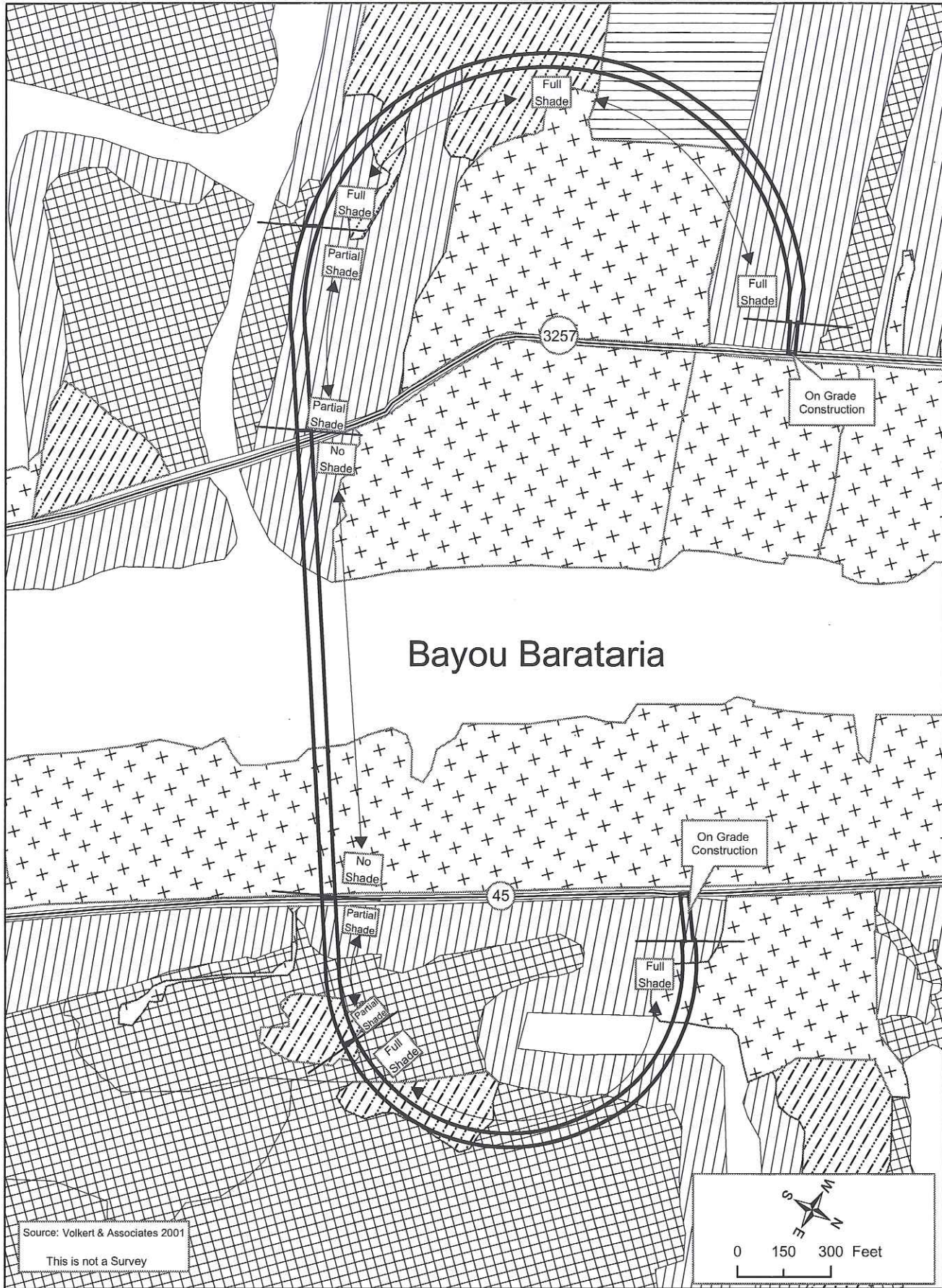
Complete Habitat Shading- based on roadway width of 35 feet in straight sections and 41 feet in curved sections. Potential shading impact is calculated for roadway clearance of 10 feet or less.

Construction Easement- Easement width is based on 25 feet on each side of the structure in straight sections and an additional 25 feet on the inside of curved sections.

Approximately 3.42 acres of existing wetland habitat are located directly beneath the roadway. Permanent shading would impact 1.3 acres of forested wetlands beneath the bridge (0.4 acre on the east side and 0.9 acre on the west side) (Figure 4-4).

A total of 0.91 acres of forested wetland located adjacent to the existing roadways on the east and west side of the bayou would experience partial or no shading impact. However, habitat conversion to scrub-shrub wetland would occur to provide adequate access for structural inspection and maintenance.

On the Paillet North alternative, the proposed alignment crosses an area that is currently being used as pasture. This is not prime farmland but is classified as human-altered wetland. For the purposes of this report, the pasture is considered to be emergent wetland habitat. The total emergent wetland beneath the roadway that is completely shaded is 1.79 acres. The total scrub-shrub wetland that is completely shaded amounts to 0.28 acre.



Legend

Pipeline	Open Water
PEM	PFO
Pasture	PSS
Fill	

Pallet North
Shade Impacts on Wetlands
 117

Figure 4-4

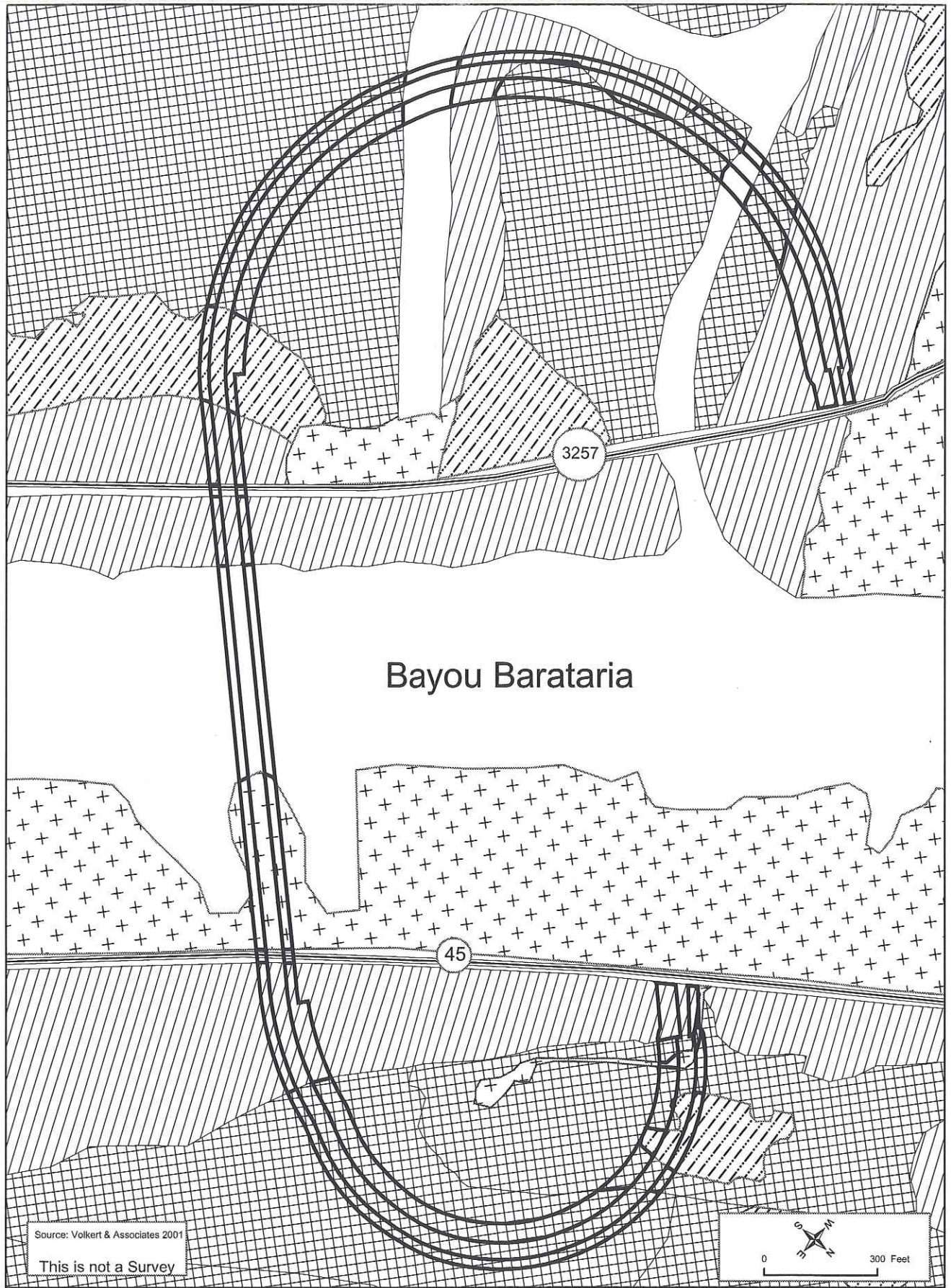
The expected impact to these habitats would be the loss of vegetation beneath the bridge structure and some compaction of soils. Outside of the levee system, these impacts would likely result in the conversion of emergent and scrub-shrub wetlands to mud flats or 0.8 acre on the east bank and 1.28 acre on the west bank. While the west side is within the Paillet basin and considered to be fast lands, some of the existing emergent wetland near the levee appears to be constantly inundated. The wet pasture that is completely shaded will become mud flat. Planned repairs to the Paillet Basin levee would likely change the existing hydrology in this area. Survey access could not be obtained for the entire alignment and would be required prior to submittal of permit applications for this alternative.

Open water habitat crossed on the east side of LA 45 would be permanently shaded and could possibly contain permanent displacement in the form of pilings. The habitat would not otherwise be changed.








Construction easements on this alternative would total 8.27 acres. Of this amount, 4.07 acres of forested wetland would likely be converted to scrub-shrub habitat to permit structural inspection and maintenance. Emergent and scrub-shrub wetland in the construction easements would be restored to pre-construction elevations and conditions.

4.11.4 Paillet South (Selected Alternative)

The Paillet South alternative starts approximately 2,400 feet south of the Pipeline Street alignment and approximately 3,100 feet south of the Fisher Basin levee on the east side of Bayou Baratavia. The alignment crosses the bayou within the Barnett Marine complex, south of the existing buildings. The west side landing of the bridge immediately impacts oak-dominated hardwood hammock community that edges the bayou south of the Paillet Canal (Figure 4-5).



Legend

-  Pipeline
-  PEM
-  Farmland
-  Fill
-  Open Water
-  PFO
-  PSS

**Paillet South
Wetland Impacts**

Figure 4-5

Initial wetland community impacts would be clearing and construction within an impacted successional bottomland hardwood forest community for approximately 150 feet. The next 1,450 feet are located in emergent and scrub-shrub wetland that is constantly inundated with water to as much as three feet deep. Soils here are unconsolidated, and the wetlands are described as a floating wetland (flotant) community (Evers, Holm, and Sasser, 1996).

On the east side of LA 45, directly adjacent to the road, the Louisiana Natural Heritage Program has designated the forested wetland community as a good to excellent example of a coastal live-oak hackberry forest (LDWF, 2001). However, the description of this forest type places it primarily in the western coastal region of Louisiana in the Cheniere plain. Recent field verification of the area would indicate that this forest description might need to be updated prior to construction of the project. The extent of the forest appears to have become smaller due to saltwater intrusion and subsidence. Additionally, the presence of Chinese tallow has increased in the entire project area to become a major component of some forested wetlands.

The final 450 feet on the east side of Bayou Barataria crosses existing fill material. The west side landing point for this alternative traverses unique, oak-dominated, hardwood hammock that edges the bank of Bayou Barataria in this area. This habitat is mostly undisturbed and is rare in the study area. Approximately 300 feet of this habitat is traversed on either side of LA 3257.

The oak hammock habitat gives way to *Sabal minor* (blue-stem palmetto) dominated scrub-shrub wetland for approximately 250 feet before changing completely to emergent wetland dominated by bull tongue (*Sagittaria lancifolia*). The emergent wetland habitat has been mapped as

flotant (Evers, Holm, and Sasser, 1996). Interspersed with the emergent vegetation are numerous dead or dying cypress trees, which are indicative of saltwater intrusion.

On the west side of LA 3257 and continuing along the alignment to the Paillet Canal, the proposed alignment is located within the boundaries of the Jonathan Davis Wetland Restoration Project. Restoration of this area is funded through the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) and managed by the Natural Resources Conservation Service and the DNR. The restoration project is attempting to restore historic hydrological conditions to an intermediate marsh habitat with the aim of protecting existing habitat and potentially increasing freshwater marsh habitat (NRCS, 1995).

Despite the lack of a complete habitat evaluation for any of the alternatives, wetlands within the Jonathan Davis Wetland Restoration Project are considered medium to high quality. Forested wetland habitat does not exist in this area. Trees found in the area are associated with the spoil piles resulting from the dredging of the oil access canals. These spoil piles have resulted in altered hydrology that has adversely affected the wetland habitat.

The last 450 feet of this alternate traverses the same successional forested wetland habitat as is crossed by the Paillet North alternate. The termination of this alternate is located within the Paillet Basin levee system. However, the elevation for the roadway where it crosses the levee is lower than the proposed height for the restructured levee.

Wetland impacts for the Paillet North alternate have been calculated (Table 4-5).

Table 4-5: Paillet South Alternative Wetland Community Impact Areas

Wetland Type	Permanent Fill		Complete Habitat Shading		Construction Easement	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Forested	10,159	0.23	26,650	0.61	206,500	4.74
Scrub-shrub	1,692	0.04	44,075	1.01	97,000	2.23
Emergent	2,000	0.05	66,625	1.53	138,000	3.17
Open Water	1,911	0.04	8,610	0.20	15,750	0.36

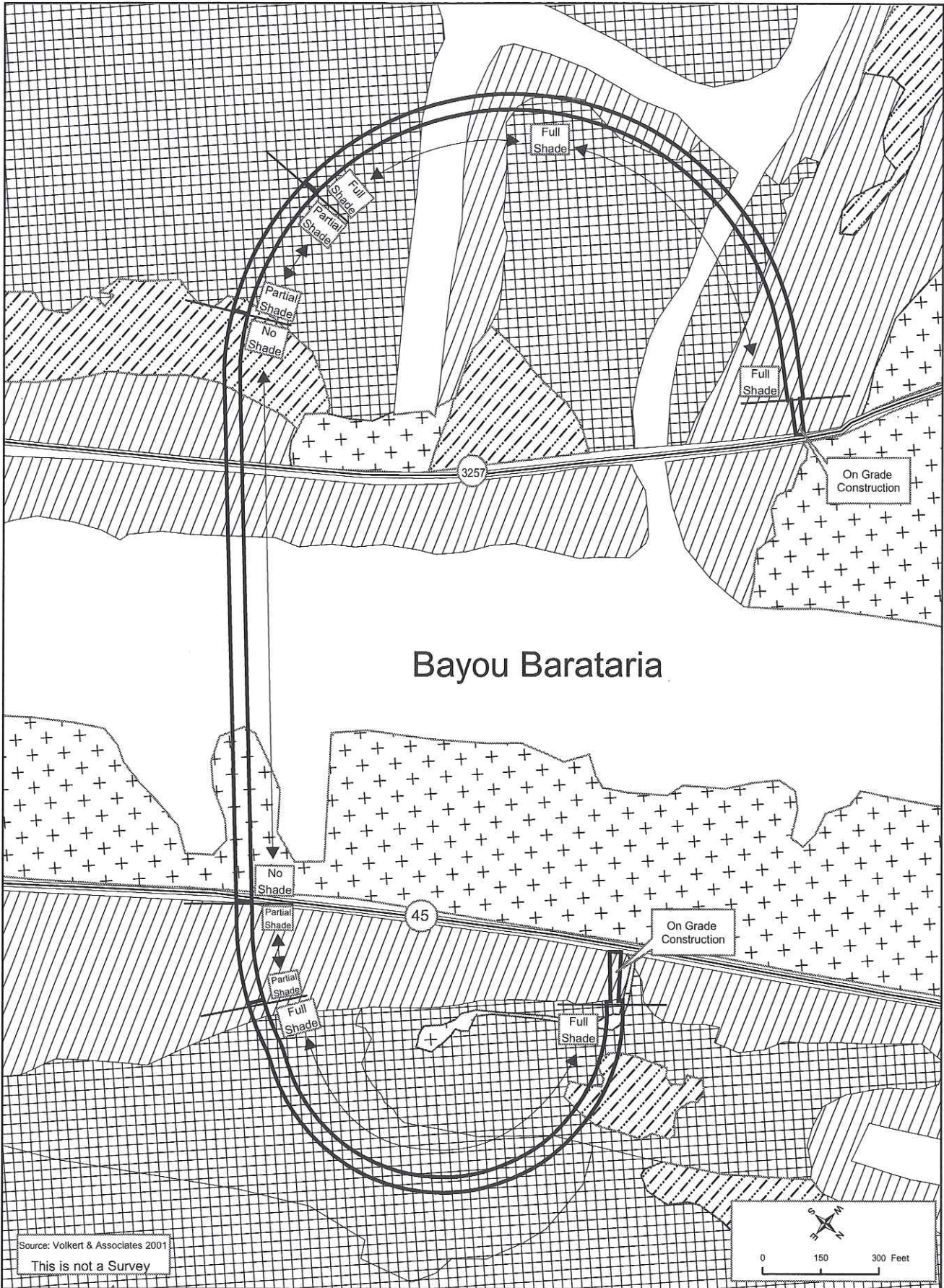
Permanent Fill- Represents pilings and roadway constructed at-grade.

Complete Habitat Shading- based on roadway width of 35 feet in straight sections and 41 feet in curved sections. Potential shading impact is calculated for roadway clearance of 10 feet or less.

Construction Easement- Easement width is based on 25 feet on each side of the structure in straight sections and an additional 25 feet on the inside of curved sections.

For the entire alignment, permanent fill would total 0.36 acre. Permanent fill calculations include bridge support structures extending into the substrate and the proposed approach and exit ramps that would be constructed at-grade.

Complete shading would impact 3.15 acres of wetland habitat (**Figure 4-6**). Forested wetland that is not impacted by shade under the bridge would be converted to scrub-shrub habitat to permit inspection and maintenance. Forested wetlands account for a total of 0.61 acre of permanent wetland habitat shading on this alternative. Permanent shading impacts to emergent and scrub-shrub wetland total 2.54 acres. For this alternative, all permanently shaded habitat types outside of the levee system would likely be converted to open water/mud flat. Open water habitat in the Paillet Canal and the dredged oil access canal on the west side of the bayou would be permanently shaded due to the low clearance of the bridge (0.20 acre).



Legend

Pipeline	Open Water
PEM	PFO
Farmland	PSS
Fill	

**Pallet South
Shade Impacts on Wetlands**

123

Figure 4-6

Construction easement impacts to forested wetlands would total 4.74 acres. This wetland type would be converted from forested wetland to scrub-shrub after construction completion. Emergent and scrub-shrub habitat construction impacts would be 3.17 and 2.23 acres, respectively.

Pre-construction surveys would be performed to determine the substrate elevation throughout the proposed construction easement. Post-construction restoration activities would ensure that construction easement impacts are temporary, except for the permanent conversion of forested wetland.

4.12 Wildlife

Due to the extensive development within the limited area containing the alternative alignments, wildlife impacts for each of the alignments would be similar.

4.12.1 No-Build

The No-Build alternative would not entail direct impacts to existing wildlife populations. The required repairs and upgrades would all occur within the existing ROW and would entail no new impacts to natural habitat.

4.12.2 Alternative Alignments

The proximity of each new alternative alignment to each other and the similarity of habitats traversed by each of the alternatives would cause the impacts to wildlife to be similar in type and extent. Direct impacts to wildlife would be restricted to the areas of ROW that are cleared or otherwise impacted by construction.

Populations of aquatic and terrestrial species would be directly impacted by construction-related activities. The populations of highly mobile

aquatic species, such as fish, would relocate and should not experience mortalities (See Section 4.13.2).

The resident populations of aquatic invertebrates and other slow-moving aquatic animals could experience some mortality during land clearing efforts and initial construction activities. However, recruitment of new populations are expected to occur immediately upon cessation of construction. Populations should recover within the first year as vegetation returns habitat for food production and use for reproduction and protection.

Terrestrial vertebrate species that could be affected by construction impacts include amphibians, reptiles, and small mammals with small home ranges. Terrestrial population impacts would also depend on the ability of species present to move out of the activity zones. Slower moving vertebrates would likely be killed during normal construction-related operations.

The existing wildlife species described in Section 3.4.2 are primarily urban-adapted species that would not lose critical habitat due to any of the construction-related activities. Permanent habitat loss would occur at the intersections for each of the alternatives directly converted to roadway. Temporary habitat functionality changes would occur within the construction ROW. These habitats would become usable again following the reappearance of vegetation.

Habitat functionality changes within the maintained ROW for the new bridge would result in the creation of open and edge spaces that could be exploited by several game and non-game species found in the area.

Secondary impacts to wildlife due to collisions with motor vehicles would be minimal. Because the proposed roadway would be built off-grade, the amount of secondary mortality (road-kill) directly attributable to the road would be limited to areas near the existing roadways and the intersections with the bridge approach ramps. Barrier rails built into the bridge structures would minimize the potential for accidental vehicle-animal encounters. None of the alternatives would present a continuing threat to any of the known populations of wildlife.

This area of the delta is a part of the neo-tropical bird migratory flyway. Migratory bird species that currently use the existing tree and shrub habitat should not be affected by any of the construction-related activities.

4.13 Threatened and Endangered Species

Early coordination with the U.S. Fish and Wildlife Service and the Louisiana Department of Wildlife and Fisheries provided no record of any threatened or endangered species within the entire project area. Both agencies have responded that the project as depicted would have no adverse effect on any state or federally listed species (USFWS, 2000; LDWF, 2001).

4.14 Fisheries

Fisheries in the vicinity of the project consist of both commercial and recreational aspects. Bayou Barataria is a waterway with direct access to the Gulf of Mexico for both types of fishing vessels. Due to the position of Bayou Barataria within the estuary, the current water regime includes components of freshwater and saltwater fishery species.

Within the levee systems, there is no viable fishery. Mosquito fish (*Gambusia affinis*) are the dominant species in the drainage structures.

4.14.1 No-Build

The No-Build alternative would have no direct impact on fisheries in Bayou Barataria or the rest of the basin. However, maintenance and operation of the existing bridge would eventually have a secondary effect on the capability of local marine manufacturing and repair businesses to work on commercial fishing vessels. Information obtained from North American Shipbuilding indicates that manufacturing requests would continue to grow for fishing vessels. If the existing bridge cannot accommodate the newly manufactured vessels, there would be pressure for these vessels to use alternative marine outlets or for the existing business to leave the area.

4.14.2 Alternative Alignments

Initial impacts to the fishery would be related to water quality issues resulting from construction in the adjacent wetlands. Increased turbidity would likely occur. Mobile fish species would move to unimpacted areas. Shrimp species found in the waters near the alternatives would also move out of the area until the turbidity disperses.

Some support and attendant structures for each of the replacement bridge alignments will be placed within open water areas. Based on the final location of these structures, additional fishery habitat could result from the construction of the alternatives. The bridge structure would impact wetlands habitat where the elevation is less than ten feet above the existing grade. In general, these areas will eventually become unvegetated mud flat habitat covered with shallow water. This area would likely provide some refuge habitat for small and immature fishery species and could provide improved recreational catch opportunities for the local area. However, in south Louisiana vegetated wetlands, especially emergent and scrub-shrub, provide important habitat for fishery species. Any loss of vegetated wetlands will adversely affect resident fish species. No

permanent adverse impacts to fishery species will occur as a result of the construction of any of the alternatives. These impacts will include loss of wetland habitat that provides food in the form of detritus and decaying vegetative matter. The structure of vegetated wetlands provides some protection from predation for small and immature species. Loss of this protection could increase predation. Secondary impacts to the fisheries could include improved localized recreational fishing near the water structures, especially for predatory species.

4.15 Essential Fish Habitat

EFH for the project area has been detailed in a separate report and is included as an appendix to this document (Volkert, 2001e). In general, EFH within the proposed alternative impact areas is of variable quality with EFH on the west side of the bayou providing better habitat for the growth and development of species for which EFH has been designated in Louisiana. Those federally-managed species which occur in the area include: *Penaeus aztecus* (brown shrimp), *P. setiferus* (white shrimp) and *Sciaenops ocellatus* (redfish) (National Marine Fisheries Service (NMFS), 2001). General mapping data available from NMFS indicates that the juvenile life stage for all of the species listed is common to highly abundant in the project area all year. No site-specific surveys were performed for the presence or absence of any of the listed species.

Each of the alternatives has been evaluated to minimize wetland and EFH impacts. Final mitigation for the impacts will be determined through agreement with the NMFS. The total amount of required mitigation for each alternative will be based on the evaluation of habitat quality and the quantity of direct, permanent impacts. A complete mitigation plan will be developed and submitted as part of the completion of a Section 404 permit application.

As part of the triumvirate objectives for wetland impacts (avoidance, minimization, and mitigation), impacts to EFH have also undergone similar

examination to limit the amount of permanent impact. These measures are detailed in the Essential Fish Habitat Assessment (Volkert, 2001e). Additionally, each of the alternatives has been examined to determine the extent of impacts attributable to permanent fill, permanent shading, and construction impacts.

Table 4-6 summarizes the impacts to EFH for each alternative.

Table 4-6: Essential Fish Habitat Impacts

Alternate	Permanent Fill		Complete EFH Shading		Construction Easement	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Pipeline Street	2,734	0.06	35,260	0.81	53,250	1.22
Paillet North	2,036	0.05	40,975	0.94	80,875	1.86
Paillet South	4,433	0.10	115,415	2.65	210,000	4.82

4.15.1 No-Build

The No-Build alternative would have no impact on EFH. Operation and maintenance of the existing bridge would have no effect outside of the confines of the existing ROW. No EFH exists in this location except that represented by the bayou itself.

4.15.2 Pipeline Street

The Pipeline Street alternative would entail a total of 0.06 acre of permanent displacement impacts. Additional impacts would total 2.03 acres. Of this total, 1.22 acres would be temporary construction impacts, and 0.81 acre would be permanent shading (See **Table 4-6**). Construction impacts over open water are not included in this calculation because barges would be used as construction platforms.

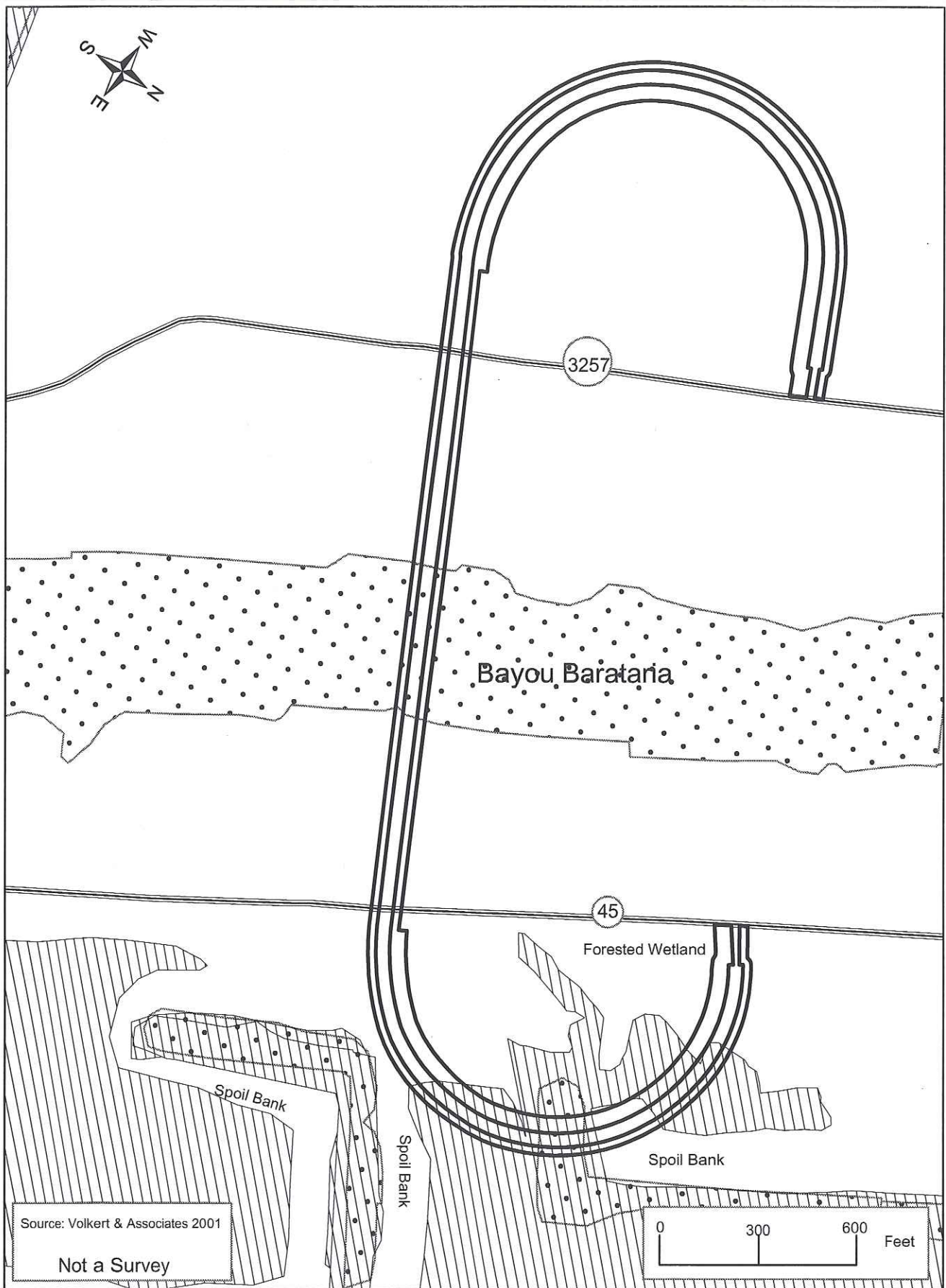
All of the EFH impacts on the Pipeline Street alternative are located on the east side of LA 45 (**Figure 4-7**). In the location of this proposed alternative, the east side of LA 45 contains oil and gas distribution facilities and oil well access canals. The quality of EFH available on the

east side of the bayou is considered to be lower than that found on the west side of Bayou Barataria outside of the levee.





This alternative crosses or impacts three areas of open water. A small pond internal to an emergent marsh would be impacted within the first 500 feet of the alignment. This impact would be primarily construction-related and could be minimized with proper construction techniques and an effective restoration plan. With no direct contact to open water, this pond provides no accessible habitat for any of the EFH-listed species.

The oil access canal crossing does not include the potential for shading impacts. While the canal is within the area of the alignment that is designated as being fully shaded, the predominantly north/south orientation will minimize actual shading. Any additional shading impacts are primarily defined by their effect on vegetation. The canal contains no submerged aquatic vegetation. Construction-related impacts within the open-water area would be restricted only to displacements from the bridge support structures. Construction in open water would be from floating barges. The canal provides suitable habitat for juvenile redfish, juvenile brown shrimp, and juvenile white shrimp. Any support structures placed in this canal would provide additional vertical complexity to existing EFH.

The third open water body crossed by this alignment is Bayou Barataria. The only permanent impacts to EFH in this water body would be the displacement of support structures, the bridge fendering system, and the main operation towers for the bascule. No adverse impacts to EFH within the banks of the bayou would occur. The added structures should provide some additional vertical complexity for all fish species.



Legend

-  Pipeline
-  Essential Fish Habitat
-  Water
-  Roads

**Pipeline Street
Essential Fish Habitat Impacts**

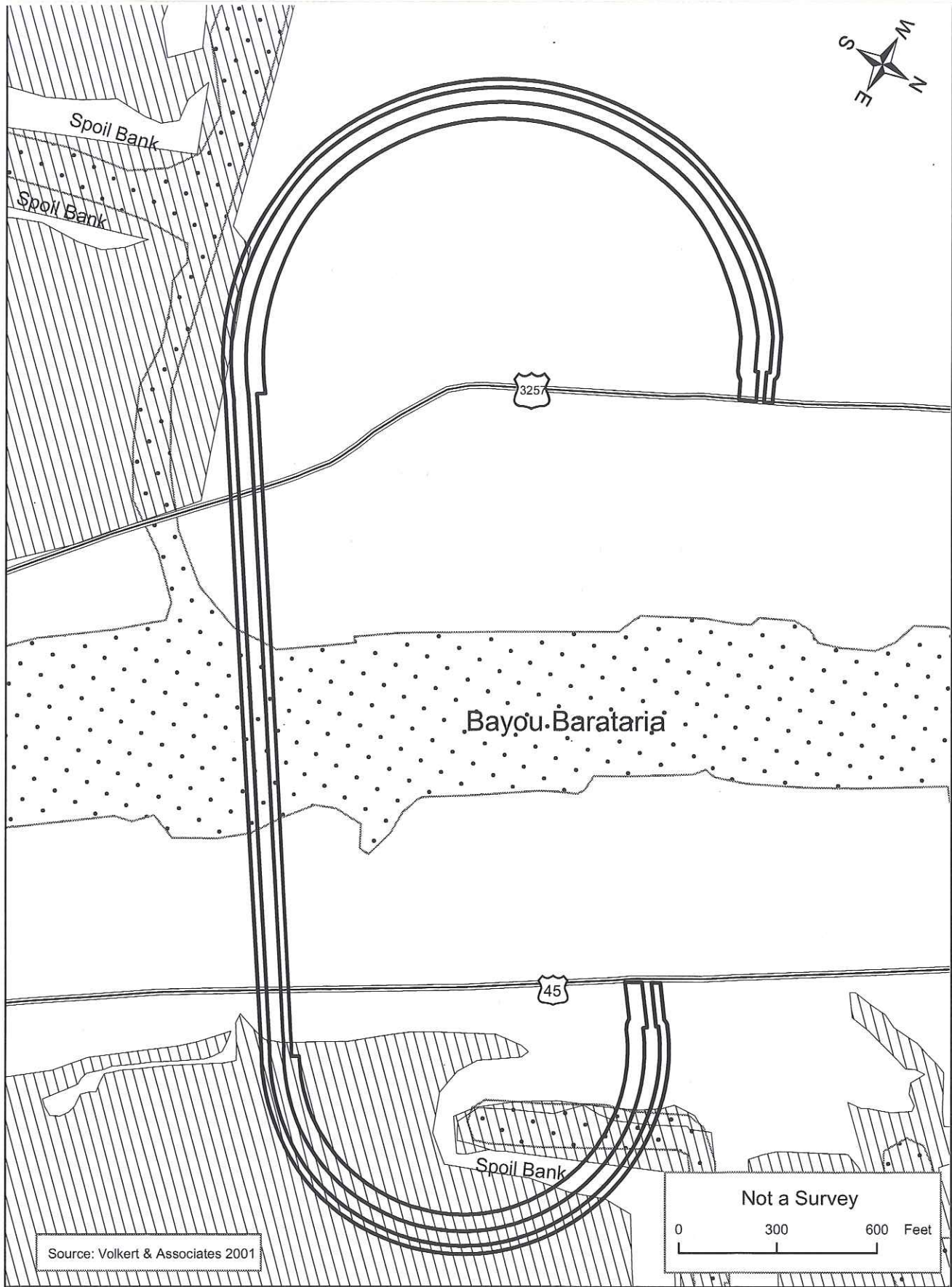
Figure 4-7

The scrub-shrub vegetation south of the access canal is adjacent to fill material placed to provide a platform for the oil and gas distribution facility to the west. Spoil piles resulting from the creation of the access canal have intercepted normal hydrologic sheet flow and have resulted in a severed connection to prime EFH for this wetland area. While this area retains some shallow water in places, this area is generally only inundated during high water events. Although this area is designated as EFH, the edge habitat presented by the spoil banks is minimal, and the scrub-shrub habitat is considered to be of marginal quality for EFH.

No EFH is found on the west side of Bayou Barataria for this alternative. The west side alignment is contained within the Pallet Basin levee.

4.15.3 Pallet North

The Pallet North alternative would entail a total of 0.05 acre of permanent displacement impacts. Additional impacts would total 2.8 acres. Of this total, 1.86 acres would be temporary construction impacts, and 0.94 acre would be permanent shading (See **Table 4-6**). All EFH impacts for this alternative would be located on the east side of LA 45 (**Figure 4-8**).



Legend	
	Pallet North
	Essential Fish Habitat
	Water
	Roads

**Pallet North
Essential Fish Habitat Impacts**

Figure 4-8

This alternative crosses open water at two locations. The first crossing occurs at the oil access canal located adjacent to the oil and gas distribution facility. The oil access canal crossing does not include the potential for shading impacts. While there will be some permanent shading of the water surface, there is no submerged aquatic vegetation (SAV) in the area. The primary concern for shading impacts in open water habitat is related to the loss of SAV. Construction-related impacts within this open water area would be restricted only to displacement from the bridge support structures. Construction in open water would be from floating barges. The canal provides suitable habitat for juvenile redfish, juvenile brown shrimp, and juvenile white shrimp. Any support structures placed in this canal would provide additional vertical complexity to existing EFH.

Crossing of Bayou Barataria would be similar to that described in the previous subsection. Neither of the canals has oyster reef material or submerged aquatic vegetation.

The emergent and scrub-shrub habitat on the east side of the bayou that is impacted by this alignment is considered marginal quality EFH. The available habitat is primarily freshwater marsh that has no direct connection to nearby open water. The oil access canal has been dredged with vertical banks, and the dredge spoil has been deposited along the edge of the canal. These spoil piles prevent tidal exchange into the adjacent wetlands and have interrupted surface water flow from the wetlands in the canal. Because of the physical barrier set up by the spoil banks, no edge marsh exists here. With no tidal exchange there is no direct export of nutrients or detritus. This wetland provides no direct habitat access for any of the species for which EFH has been designated in Louisiana.

No EFH is found on the west side of Bayou Barataria for this alternative. The west side of the alignment is within the Paillet Basin levee.

4.15.4 Paillet South (Selected Alternative)

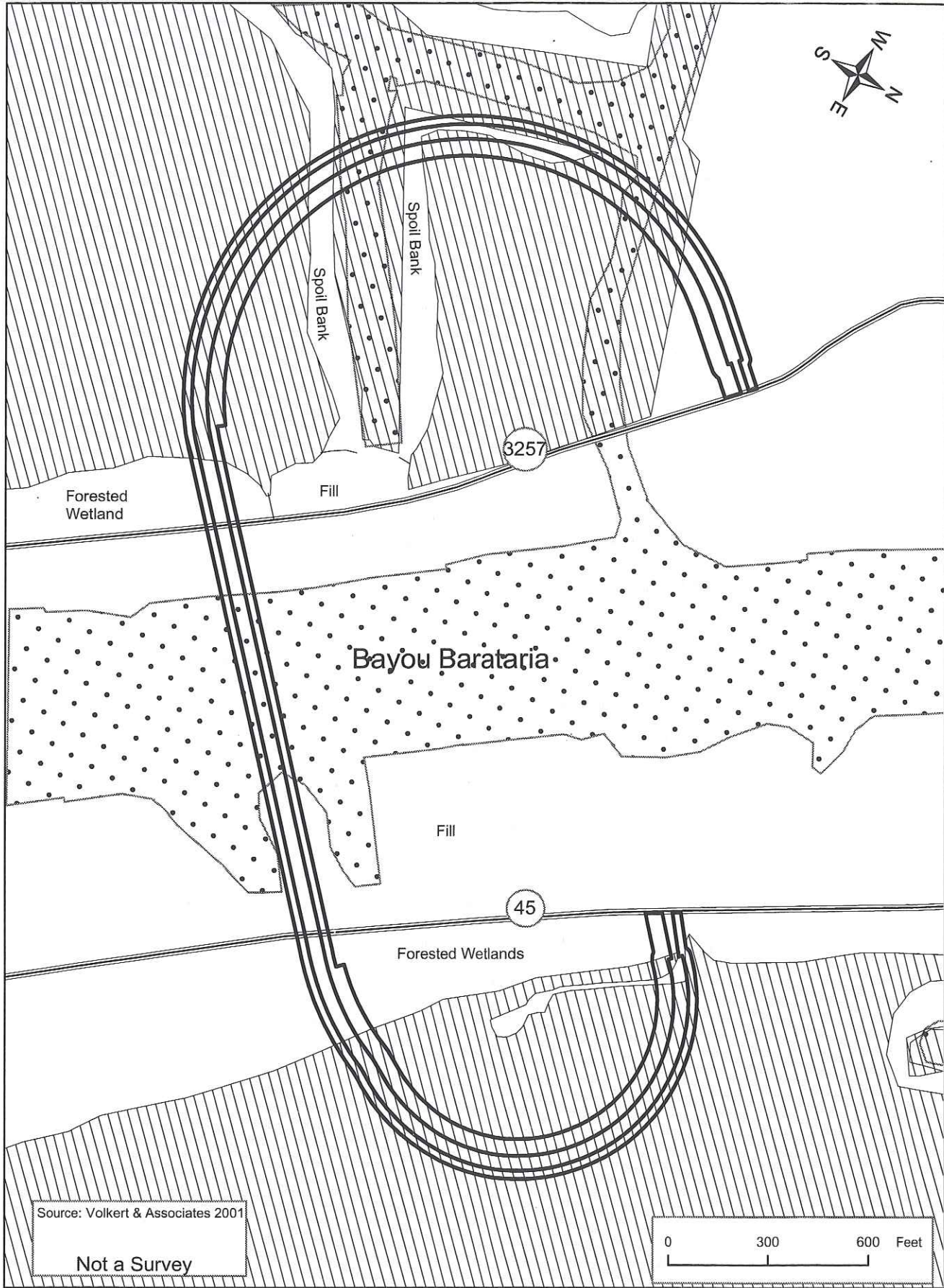
The Paillet South alternative would entail a total of 0.1 acre of permanent displacement impacts. Additional impacts would total 7.47 acres. Of this total, 4.82 acres would be temporary construction impacts, and 2.65 acres would be permanent shading (See **Table 4-6**).

The alternative crosses or impacts three areas of open water. The first open water crossing is Bayou Barataria. Crossing impacts and benefits are detailed in Section 4.15.2.

The other water crossings occur at artificial canals dug to access the West Barataria Oil and Gas Field. These crossings are located on the west side of LA 3257 and are included in the Jonathan Davis Wetland Restoration project. The Paillet Canal is a main artery for the myriad canals in this area. The Paillet Canal eventually intersects the ICWW.

Open water crossing impacts would be similar to those described in the previous subsections. Both canal crossings would provide only 2.5 feet of clearance above the normal water level and would entail complete shading. Neither of the canals has oyster reef or submerged aquatic vegetation.

Emergent and scrub-shrub habitat that are considered EFH are located on both sides of the bayou for this alternative (**Figure 4-9**). EFH on the east side is not directly connected to open water. Normal hydrologic conditions have been altered by the creation of oil access canals. The spoil banks associated with the canals have limited the amount of water



Legend	
	Pallet South
	Essential Fish Habitat
	Water
	Roads

Pallet South
Essential Fish Habitat Impacts
 136

Figure 4-9

exchanged between these wetland types and make them inaccessible to any of the species for which EFH has been designated in Louisiana. While these wetlands provide some organic material to the wetland system, it is unlikely that there is any direct contribution to areas frequented by species for which EFH has been designated in Louisiana. EFH on the west side of the bayou is more directly connected to existing open water and provides both organic material and edge habitat suitable to EFH species. However, normal hydrologic flow has been altered through these wetlands as well. The emergent wetland adjacent to the unnamed canal south of the Pallet Canal is part of a large area that is transitioning from a cypress dominated forested wetland to an inundated emergent wetland with numerous channels and open water. This area consists of high quality habitat for brown and white shrimp, but it is unlikely to be prime habitat for redfish (GMFMC, 1998).

The emergent wetlands adjacent to the Pallet Canal provide for direct export of organic materials into the open water and some areas of channelization favored by brown shrimp. The forested spoil piles associated with both of the wetland areas do restrict complete connection to open water but are incomplete or have been breached.

4.15.5 Impact Mitigation Requirements

As part of the implementation strategy for EFH requirements, NMFS has produced two documents that detail the implementation strategies and regulatory statutes applicable to agency actions (GMFMC, 1998; NMFS, 1999). For this project, information obtained from the regional NMFS office has also been used in the development of impact mitigation requirements.

Construction impacts are considered temporary for this analysis. Specific construction techniques would be determined prior to completion of the Section 404 permit application.

Specific requirements by NMFS concerning construction impacts would be the performance of pre- and post-construction topographic surveys. The purpose of the surveys is to ensure that the impacted areas are restored to original grade and elevation. For the intermediate emergent and scrub-shrub marshes located in the alternative locations, it is expected that revegetation by natural recruitment would occur. Construction-related impacts should be monitored for a year, including a complete growing season. If construction impacts have recovered sufficiently to meet permit success criteria, no additional mitigation would be required.

Some mitigation could be required for shading and displacement impacts for any of the alternatives. However, impacts to EFH for the Pipeline and Paillet North alternatives would be minimal. The Paillet South shading impacts would potentially provide additional channelized habitat for listed EFH species and provide the potential for improved hydrologic connection.

Final decisions concerning the required mitigation for EFH impacts should be made closer to initiation of the project construction to determine if EFH designations have changed.

4.16 Water Body Modification

Water body modifications would entail the placement of a new bridge operation mechanism and the associated bridge fendering system within the banks of Bayou Barataria. No channel relocations or dredging would be associated with the construction of any of the alternatives. Culvert placement associated with the improvements to LA 45 would not change any of the flow characteristics of the existing roadside ditch systems.

Maintenance dredging of the existing Bayou Barataria Waterway channel is not part of this project. However, once the new bridge is built, the channel at the old bridge location would require dredging to conform to the rest of the channel.

Removal of the old bridge structure following completion of the construction of the replacement bridge would involve the removal of support structures within the bayou. These structures would be cut off below the mud line. The depth of removal would be determined by coordination with the regulatory agencies responsible for dredging and maintaining the existing navigation channel. The selected depth should provide enough clearance with the channel to permit dredging to the maintained depth or some future planned depth for the bayou. Complete removal of the pilings and other remaining structures is considered unnecessary and would entail additional time and expense.

4.17 Navigation Impacts

Navigation impacts would occur within all open water channels crossed by any of the alternatives. The replacement bridge would provide a more reliable means to traverse Bayou Barataria compared to the existing bridge.

4.17.1 No-Build

Current navigation conditions for Bayou Barataria presented by the existing bridge restrict the free passage of existing and future marine traffic. While the majority of the Bayou Barataria waterway is maintained as a 125-foot wide channel, the bridge at LA 302 provides for only a 75-foot wide channel. Many barge assemblies equal or exceed this width.

The existing fender system protecting the bridge structure has been damaged by numerous impacts (reported and unreported) and can be upgraded or repaired. New fender system designs are available that could minimize the potential for direct impact to the existing bridge.

Continued service on Bayou Barataria with the existing swing bridge would maintain the current 75-foot horizontal navigational constraint (**Figure 1-2**). This constraint is inherent in the swing-type bridge and cannot be avoided. The main navigation channel for Bayou Barataria and the ICWW is maintained at 150 feet. Nearby spans at Larose and Crown Point both have 150-foot horizontal navigational clearances.

The existing swing bridge presents no vertical limit for navigation. Nearby structures at Larose and Crown Point have fixed vertical clearances of 73 feet. An unobstructed vertical clearance is required to be maintained at Bayou Barataria to ensure that existing and future marine development is not impaired.

Retention of the existing bridge would provide pressure for the development of a bypass channel through Bayou Perot and Bayou Rigolettes that has been unofficially used in the past when LA 302 was inoperable. Attempts have been made to obtain a permit to dredge a channel through those water bodies (New Orleans Times Picayune, 1998). No permits have been issued to dredge a new channel in this area.

4.17.2 Alternative Alignments

The construction of any alternative bridge would have similar navigation impacts. Construction of the replacement alternatives would entail the placement of support structures in the main channel of Bayou Barataria. These structures would include support pilings, protective fenders, and the large structures that would contain the bridge lift mechanism.

Additionally, each of the alternatives would cross one of the several small oil access canals on either side of the bayou. In most instances, pilings would be placed in the open water that did not have any obstructions. The amount of pilings and the exact placement would depend on geometric requirements for the selected alternative. Calculations of displacement within a particular canal are based on the general design of the proposed bridge types. Specific locations would be determined upon completion of final design of the selected alternative.

Bridge clearance for each of the alternatives would also be similar. All of the alternatives would cross the bayou at an elevation of 45 feet above water surface. Any crossing of access canals on the east side of LA 45

would provide a clearance above normal water level at approximately 5.5 feet. This clearance would restrict access in the eastern canals to small boats.

On the west side of LA 3257, the base roadway elevation would be four feet. With the structure depth, the clearance above the navigable canals would be 2.5 feet above normal water level. This clearance would severely restrict access beneath the bridge or through boat traffic at the bridge crossings.

A secondary impact of the replacement bridge would be the removal of the existing bridge and all in-water structures.

A protective fender system would be installed parallel to the shoreline on both sides of the bayou. The fenders would be placed at the edges of the 150-foot navigation channel beneath the bridge. The fender system would be approximately 165 feet long. It would consist of creosote-treated timber pilings that would be anchored approximately 60 feet into the existing sediments and would extend nearly 15 feet above normal water level. While these pilings represent additional in-water obstruction, they would not present any navigational obstruction to existing docks (personal or business) or bulkhead piers.

4.18 Floodplain Impacts

All three bridge alternatives being studied are located on Panel 125 of the Flood Insurance Rate Map (FIRM) from the Federal Emergency Management Agency (FEMA). The map number for this panel is 22051C0125E and has an effective date of March 23, 1995. All of the areas shown on this panel are located in Flood Zones AE and VE. The three proposed bridge sites are primarily located in Zone AE with a flood elevation of eight feet. Most of the flooding in this area is caused by tidal surges produced by hurricanes and tropical storms; therefore, it is not believed that a bridge structure would impact the flood plain.

One of the benefits of the bridge would be to provide an improved evacuation route during hurricanes or high water events. If LA 45 is to service this need, it would need to be constructed at an elevation of eight feet. The entrance to the bridge for the selected alternative would need to be constructed at the same elevation to provide an evacuation route above the 100-year flood. This elevation would be required until LA 45 intersects the levee at the south end of Jean Lafitte. Jean Lafitte is in an AE Zone with a levee elevation of seven feet.

4.19 Coastal Zone Impacts

Authorization for the issuance of a Coastal Use Permit (CUP) by the DNR is consistent with the State and Local Coastal Resources Management Act of 1978, Act 361 of 1978, as amended (R.S. 49:214.21-214.40). Under a public notice requirement for issuance of a CUP, the LDWF and the DEQ are state advisory agencies that can comment on a pending CUP (State of Louisiana, 1996). A CUP is valid for two years after issuance until initiation of the project and five years to completion. The CUP contains the same information that is included in the Section 404 permit and any additional information required by the DNR.

Issuance of the CUP would fulfill the requirement for coastal zone consistency determination required by NEPA and the Section 404 permit. Mitigation for impacts to coastal zone habitat would be determined at the time of permit application and review. A complete and approved compensatory mitigation plan would be required prior to issuance of a CUP.

Impacts to state regulated coastal zone lands are defined as those areas outside of the existing levees. Fast lands within the levees are considered to have no direct or significant impact on coastal waters. Non-fast land impacts have been calculated for each of the alternatives.

Coastal Zone impact mitigation is generally understood to include the replacement of habitat value, as defined by the determination of a habitat suitability index. This value is derived from use of the USFWS Habitat Evaluation Procedures as applied to the impacted areas.

The following subsections detail impacts for the No-Build and other alternatives.

4.19.1 No-Build

The No-Build alternative would have no impacts on the coastal zone. Maintenance and repair of the existing bridge would not entail any additional impact to lands outside the existing levee basins.

4.19.2 Pipeline Street

The Pipeline Street alternative would impact coastal wetlands only on the east side of Bayou Barataria. Wetlands on the east side of LA 45 are affected by existing infrastructure and the presence of dredged oil access canals. Placement of spoil along the side of the canals has permanently affected the normal hydrologic sheet flow in the coastal wetlands.

The Pipeline Street alternative would have a total of 0.11 acre of permanent fill in coastal wetlands (Table 4-7). Shading of coastal wetlands would total 1.18 acres; all of these acres of this impact are considered total shading. No loss of wetlands would occur. However, wetland functionality would change beneath the bridge.

Table 4-7: Impacted Acres Of Non-Fast Lands For Pipeline Alternative

Wetland Type	Permanent Fill	Complete Shading	Construction Easement	Functional Change
Forested	0.1	0.51	1.10	1.70
Scrub-Shrub	0.01	0.39	0.71	N/A
Emergent	0	0.28	0.52	N/A

Construction easement impacts would total 2.33 acres. A total of 1.7 acres of forested wetland would be permanently changed to scrub-shrub habitat as part of the maintained ROW for the bridge.

Following completion of construction and site restoration, the construction impacts would be monitored for a period of one full year, including a full growing season in order to ensure that revegetation has met all permit success criteria. If the success criteria are met within this period, no further mitigation of the construction easement would be required.

4.19.3 Pailet North

The Pailet North alternative would impact coastal wetlands only on the east side of Bayou Barataria. Wetlands on the east side of LA 45 are affected by existing infrastructure and the presence of dredged oil access canals. Placement of spoil along the side of the canals has permanently affected the normal hydrologic sheet flow in the coastal wetlands.

The Pailet North alternative would have a total of 0.13 acre of permanent fill in coastal wetlands (Table 4-8). Shading of coastal wetlands would total 1.18 acres. No loss of wetlands would occur. However, wetland functionality would change beneath the bridge.

Table 4-8: Impacted Acres Of Non-Fast Land For Pailet North Alternative

Wetland Type	Permanent Fill	Complete Shading	Construction Easement	Functional Change
Forested	0.12	0.37	0.97	1.51
Scrub-Shrub	0	0.30	0.66	N/A
Emergent	0.01	0.51	1.19	N/A

Construction easement impacts would total 2.82 acres. A total of 1.51 acres of forested wetland would be permanently changed to scrub-shrub habitat as part of the maintained ROW for the bridge.

Following completion of construction and site restoration, the construction impacts would be monitored for a period of one full year, including a full

growing season to ensure that revegetation has met all permit success criteria. If the success criteria are met within this time, no further mitigation of the construction easement would be required.

4.19.4 Paillet South (Selected Alternative)

The Paillet South alternative would impact coastal wetlands on both sides of Bayou Barataria. Wetlands on the east side of LA 45 are affected by some oil field related infrastructure, but it is mostly unaffected by dredged canals. Coastal wetlands on the west side of the bayou include some high quality emergent wetlands that are part of the Jonathan Davis Wetland Restoration Project. Two oil access canals have been cut into this area as well. Dredge spoil placed along the sides of the canals has permanently affected the normal hydrologic sheet flow in these coastal wetlands.

The Paillet South alternative would have a total of 0.25 acre of permanent fill in coastal wetlands (Table 4-9). Complete shading of coastal wetlands will total 2.16 acres. No wetlands loss would occur. However, wetland functionality would change beneath the bridge.

Table 4-9: Impacted Acres Of Non-Fast Lands For Paillet South Alternative

Wetland Type	Permanent Fill	Complete Shading	Construction Easement	Functional Change
Forested	0.16	0.31	1.70	3.25
Scrub-Shrub	0.04	1.01	2.23	N/A
Emergent	0.05	0.84	3.17	N/A

Construction easement impacts would total 7.1 acres. A total of 3.25 acres of forested wetland would be permanently changed to scrub-shrub habitat as part of the maintained ROW for the bridge.

Following completion of construction and site restoration, the construction impacts would be monitored for a period of one year, including a full growing season in order to ensure that revegetation has met all permit

success criteria. If the success criteria are met within this period, no further mitigation of the construction easement would be required.

4.20 Historic and Archaeological Preservation

An intensive cultural resources survey was performed for this project by Earth Search, Inc. (ESI). Results of the survey are detailed in two separate reports (ESI, 2001a; 2001b). The activities performed as part of the intensive cultural resources survey included for each of the proposed alternatives: a literature search in the SHPO's office; archaeological survey of the APE; a standing structure survey in the APE; and a marine survey of Bayou Barataria near the proposed alignments.

The APE for each of the proposed bridge alignments was subdivided into discrete survey blocks (**Figure 4-10**). The size and shape of each block varied according to property limits or physical obstructions (canals, swamps, etc.).

Shovel tests were performed at approximately 100-foot intervals along transects spaced 100 feet apart. Positive shovel tests or surface scatters were designated as potential sites. These sites were further investigated according to standard survey procedures.

DOTD considered the field investigation results with the Louisiana State Historic Preservation Officer (SHPO) during the completion of this project. The Management Summary and Cultural Resources Survey reports were submitted to SHPO on July 2, 2002 and September 17, 2001, respectively (ESI 2001a; 2001b). DOTD also submitted the DEIS to SHPO for comment on January 16, 2002 and received comments from SHPO on February 19, 2002. All comments and concerns have been addressed in this FEIS, and the relevant correspondence is included in the Correspondence section.

4.20.1 No-Build Alternative

No impacts to cultural resources will result from the maintenance, operation, and repair of the existing bridge.

4.20.2 Alternate Alignments

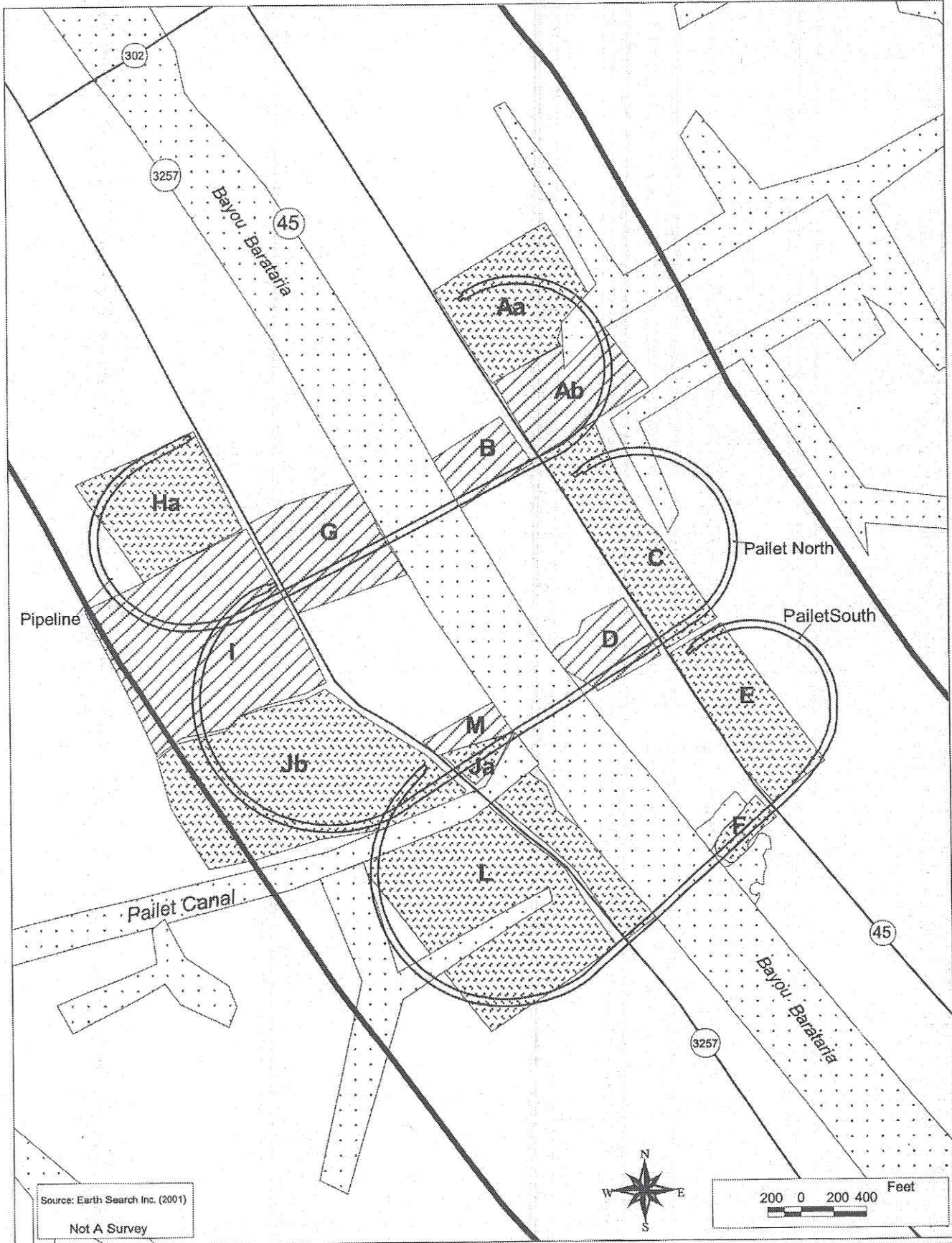
Two archaeological sites (16JE297 and 16JE298) and one isolated find were identified as a result of the pedestrian survey. None of the sites were determined to have either integrity or research potential; therefore, none of the archaeological sites were found to be eligible for the NRHP.






The marine survey found no significant submerged cultural resources. There were no standing structures determined to be eligible for the National Register of Historic Places (NRHP) within the APE for each alignment. Additionally, the existing bridge has been determined to be ineligible for nomination to the NRHP.

Due to the denial of right-of-entry to many properties within the APE, several survey blocks were not archaeologically investigated (**Figure 4-10**). Primarily, these areas correspond to land near Pipeline Street on both sides of the bayou and, to a lesser extent, the banks of the bayou near the Paillet Canal. All property within the APE for the selected alternative has been surveyed, and no archaeological sites or standing structures eligible for the NRHP were identified.

4.21 Hazardous Waste Sites

A Phase I Environmental Site Assessment was performed for this project and is included as an appendix to this document. Based upon site reconnaissance, historic information, aerial photography, site interviews, environmental database searches, and engineering judgment, it has been determined that the relative risk of an encounter with hazardous waste in amounts warranting the intervention of health and safety upgrades to the levels of Personal Protection Equipment (PPE) greater than Level D, as specified in 29 CFR 1910.120 is moderately low throughout the study corridor. The risk for unexpected actions associated with environmental regulations pertaining to the handling, storage, disposal, or ownership of impacted soils and/or construction debris is also moderately low over the study corridor, with the exception of the following:



-  Roads
-  Project Area
-  Water
-  Unsurveyed
-  Surveyed

Archaeological Survey Blocks

Figure 4-10

Central Crude, Inc./ Alpine Exploration facilities on LA 3257, 150 feet north of Paillet South 1 alternate;

- Waste oil pit located 300 feet west of Paillet South 1 crown, east of LA 45;
- Louisiana gas compressor and associated piping immediately below Pipeline 2 alternate; and
- Abandoned gas and oil wells within the study area.

4.22 Visual Impacts

The delta of Louisiana is primarily flat land with little topographic relief. The introduction of an elevated structure would have an impact on the view shed for both Jean Lafitte and Barataria. Construction of any of the alternatives will impact the local viewshed. The visual impact would be similar to that existing at Crown Point resulting from the fixed-elevation bridge across the ICWW.

4.22.1 No Build Alternative

The No Build Alternative will have no visual impacts on the project corridor. The existing bridge does have an established visual profile that is visible from both the adjacent housing and along the waterway.

4.22.2 All Alternatives

Construction of a structure that reaches an overall height greater than the surrounding forests and residences will provide a landmark that will be visible from most of the residences in both communities along Bayou Barataria.

Land-based visual impacts would be most prominently attributable to the overpass structures for LA 45 and LA 3257. Housing along both sides of the bayou would mean few unobstructed views of the bridge structure except in close proximity to the bridge location. The return ramps for both sides of the proposed bridge alignment would return to near grade soon after crossing the main roads.

Construction of a bridge with a roadway clearance of 45 feet over the bayou would have a visual impact on the waterway as well. Support and control structures are expected to be approximately 60 feet high. When the bridge is open, the bascule spans would be approximately 110 feet high. These structures would be visible within the waterway from a point near the existing bridge to a point near the Bayou Perot access canal. Near the proposed bridge locations, the west bank of the bayou is lined with trees to the south that are nearly 45 feet high.

4.23 Energy

Construction of the proposed project would have direct and indirect energy impacts. Direct impacts include energy consumed by vehicles that would use the replacement bridge and road network (LA 45 and LA 3257). Indirect energy impacts include construction and changes in vehicle use resulting from the completion of the project.

The proposed project, while it is a new roadway, does not actually entail an additional main transportation corridor. The replacement bridge would be a larger structure with a total length of approximately 6,000 feet. The current bridge is approximately 700 feet long with approach roads that bring the total distance from LA 45 to LA 3257 to approximately 1,500 feet.

4.23.1 No-Build

The No-Build alternative would entail the continued expenditure of fuel resulting from the numerous openings of the existing bridge. The vessel height study concluded that the bridge opens an average of 27 times per day for eight minutes per opening. These openings result in traffic being stopped for 3.6 hours per day waiting for the bridge to open and close. Because the opening time is relatively short, it is expected that the vehicles waiting to cross the bridge would not shut down their motors during the wait.

The No-Build alternative would not change traffic patterns. No indirect energy use would result from the No-Build alternative.

4.23.2 Alternatives

Direct energy expenditures for each of the alternatives would be similar. The reduction of average daily openings from 27 to 4 would result in an average of 32 minutes per day for traffic spent waiting on the opening/closing of the bridge. Each alternative will thus contribute to a relative reduction in fuel consumption by 85 percent. Because the location of all bridge alternatives are within one-half mile of each other, the changed traffic pattern for each would be similar. Residents in the northern portion of the project study area would experience some additional trip miles. However, this would be offset by the reduction of trip miles experienced by the southern portion of the study area.

All alternatives would entail a similar amount of indirect energy expenditure due to the similarity of construction materials and similar structural components. However, alternatives built over wetlands and/or unconsolidated soils require more energy expenditure due to additional requirements for the placement of working platforms. The construction technique for the platforms would vary depending on the substrate. No energy will be expended for dredging new construction access canals or to modify existing canals.

4.24 Construction Impacts

Construction of the alternatives would have similar impacts to the environmental quality of Jean Lafitte and Barataria. These impacts are considered temporary and limited to the actual construction period. The following construction-related impacts are expected as part of this project. The controls that would be used to mitigate or eliminate these impacts will be explained in following subsections.

1. Water quality, air quality, and background noise would be degraded during construction.
2. Traffic patterns would be disrupted.

3. Public health and safety could be affected.
4. Temporary disruption of utilities.

4.24.1 Water Quality Construction Impacts

Specific details concerning water quality impacts are discussed in Section 4.9. Generally, erosion and sediment controls would be used to minimize impacts to water quality due to construction. A site-specific erosion control plan would be developed for the selected alternate. All erosion control plans would include Best Management Practices and implementation specifications.

4.24.2 Air Quality Construction Impacts

Specific details concerning air quality are discussed in Section 4.7. Carbon monoxide and particulate emissions would increase during construction. However, violations of air quality parameters resulting from the project are not expected.

Clearing operations for the bridge and access roads would likely entail some limited burning of woody vegetation. Burning would be limited and would comply with parish and local ordinances.

4.24.3 Construction Noise Impacts

Details concerning noise impacts from the project are discussed in Section 4.8. Noise specifically attributable to construction is considered unavoidable. Construction noise would be temporary and spatially limited to areas adjacent to the construction site.

Construction-related noise impacts would result from earth moving, structural placement, filling, paving, grading, and clean up. The level of noise and location would vary according to the operations occurring over a period of time. While some construction would occur in undeveloped areas, noise impacts to sensitive receptors could present instances of high levels of transient noise.

Noise abatement measures would be employed in accordance with Section 107.14 of the Louisiana Standard Specifications of Roads and Bridges.

These measures include:

1. Adequate and operational muffling for all construction equipment.
2. Location of access roads away from sensitive receptors.
3. Locate noisy stationary equipment away from sensitive receptors.
4. Limit hours of heavy construction to coincide with normal work schedules.
5. In severe cases, erect temporary noise barriers near sensitive receptors.

4.24.4 Maintenance and Control of Traffic

The maintenance of traffic, construction sequencing, and detouring would be planned and scheduled to minimize impacts to local residents, businesses, and the traveling public. Access to residences and businesses impacted by construction would be maintained by the construction of temporary driveways or temporary roadway connections. Detours, where required, would be constructed and properly marked.

All attempts would be made to prevent the disruption of community or emergency services. Major road intersections would be grade separated or relocated to allow continuous accessibility. Local police and fire departments would be notified in advance of any construction-related activities to permit alternative planning and reroute identification.

4.24.5 Public Health and Safety

During construction, the contractor would comply with all applicable federal, state, parish, and local laws governing general public safety, health, and sanitation. All reasonable safety precautions would be taken to ensure the life and health of employees, safety of the public, and protection of property.

In the event that hazardous materials or hazardous waste are encountered during construction, personnel trained in the proper handling and disposal of these materials will provide support. If hazardous materials are used during construction, all proper storage, use, and handling protocols will be followed. Material safety data sheets for all hazardous materials will be available on-site.

4.24.6 Utility Impacts

Utilities in the potential area of construction include water, electric, sewer, telephone, and oil and gas distribution facilities. Prior to initiating construction in the vicinity of a known utility ROW, the contractor or his representative would notify all utility owners and/or managers.

4.24.7 Other Construction Impacts

Land clearing, vegetation grubbing, and disposal of construction materials would be conducted in accordance to the applicable local, parish, and state regulations. The construction, maintenance, and removal of access roads would be coordinated through the appropriate regulatory agency. Where possible, existing vegetation will not be removed from the construction area. Instead, efforts will be made to keep all vegetation on-site as a seedbank and root stock source for natural revegetation.

4.25 Relationship of Local Short-Term Uses versus Long-Term Productivity

Construction of the proposed project would have some short-term impacts to the human and natural environments. Human impacts would include traffic delays related to construction as it affects LA 45 and LA3257. Improvements to LA 45 would also result in some traffic delays. Short-term natural resource impacts would include construction-related water quality issues. Erosion and sedimentation impacts would be minimized through the implementation of an effective sediment control plan. This plan would be developed as part of the Section 404 permit application and would conform to state and federal requirements. Wildlife impacts would be small and would result in temporary displacement of some species during construction.

Long-term impacts of the project to the human environment would be the increase in potential for growth and development. Employment is expected to increase as a result of the removal of the maritime restriction presented by the existing bridge.

Long-term impacts to the natural environment would include the placement of pilings and bridge support structures in wetlands. Additionally, shading impacts would occur within essential fish habitat. Mitigation would be coordinated through the USACE and LDNR to ensure that wetland impacts are sufficiently minimized and mitigation is completed. Long-term conversion of vegetated cover would occur beneath the bridge structure.

This project is important to the continued growth and development of the project area, and it would positively affect employment potential outside of the project area.

4.26 Irreversible or Irrecoverable Commitments of Resources

The project, as proposed, would entail the commitment of a range of natural, physical, human, and financial resources. In general, these materials are considered expendable and not irretrievable. The land can be converted to another use if the bridge is no longer needed in the future. Given the present roadway configurations, a reconversion of land use is not expected.

Labor, fuel, and various materials would be used during construction of the project. In general, these materials are considered expendable and irretrievable. These materials are not considered to be in short supply, and use of these materials would not constitute an adverse impact on the continued availability of these resources and materials.

The financial commitment for this project would require federal and state funds. Funds appropriated for this project would not be committed to the construction or maintenance of another facility.

4.27 Selected Alternative

As part of the completion of this project, the DOTD and FHWA have adhered to the procedures contained in the Interagency NEPA and 404/10 Concurrent Process Agreement for Transportation Projects. The process was implemented to ensure that transportation projects are designed to protect, conserve, and enhance natural resources while providing safe and efficient highway transportation to the public (FHWA, et al., 1996). Signatory agencies of that agreement include the FHWA, the EPA, the USACE, the USFWS, and the NMFS.

As a continuation of that interagency process, periodic meetings have included additional reviewing agencies as follows: U.S. Coast Guard; Louisiana Department of Natural Resources, Coastal Management Division; and Louisiana Department of Environmental Quality.

This FEIS has undergone several review and concurrence procedures in order to provide the best analysis of all viable alternatives and to ensure that all cooperating agencies have had adequate input in the process. Regulatory agency meetings that included cooperating agencies, NEPA Merger Agreement signatory agencies, and other reviewing agencies, have provided valuable information for design changes and alternative locations that contributed to minimizing natural resource impacts.

The Purpose and Need, Alternatives, and Recommended Alternative sections of the EIS were provided to the cooperating and commenting agencies prior to the completion of the EIS to ensure that all of the concerned government entities were informed about the project development. Review of these sections provided a method for each agency to address their individual needs and regulatory responsibilities. Separate reports concerning potential contamination sites, impacts to EFH, impacts to wetlands, and noise impacts to existing population centers were submitted separately to DOTD and included as an appendix to the DEIS.

Completion of the FEIS has included addressing specific agency concerns, comments on the DEIS from the cooperating agencies, and public comments.

After consideration of the impacts of each of the alternatives, including the No-Build alternative, a mid-level bascule bridge at the Paillet South location was chosen as the preferred alternative. The preferred alternative was presented to the cooperating and commenting agencies at a meeting on May 29, 2002. No representatives objected to the preferred alternative. Verbal agreement on the recommended alternative was obtained from all agencies present. All agencies, those in attendance and those not in attendance, received a Resume of the Meeting to ensure continued communication and enable each agency to express remaining concerns. Written concurrence was obtained from each of the cooperating agencies. As a result of this process, the Paillet South alternative was then designated as the selected alternative.

The selected alternative (Paillet South) does not have the lowest cost of the alternatives, but the additional cost provides for improved hurricane evacuation by raising LA 45 for an additional 3,200 feet to the south. Public comments have been overwhelmingly in favor of Paillet South. The final summary of comments received after the Public Hearing indicated that 107 out of 108 people preferred Paillet South. The selected alternative (Paillet South) has more potential impacts to wetlands and EFH; however, the magnitude of difference in impacts between the alternatives is similar. The selected alternative (Paillet South) has a minimal impact to existing neighborhoods and farms. This reduction in the impact to the social community was the primary consideration in the selection of the preferred alternative (Paillet South). Permanent fill for the selected alternative (Paillet South) will be less than 0.4 acre. Shading impacts to EFH for the selected alternative (Paillet South) will be 2.65 acres after restoration of the construction site to pre-construction elevations.

SECTION 5.0
COMMENTS & COORDINATION



5.0 COMMENTS AND COORDINATION

5.1 Coordination

A request for publication of the Notice of Intent for this project was submitted by the FHWA on July 21, 2000. The Notice of Intent for this project was published in the Federal Register on August 3, 2000. Agency coordination for this project began with a scoping meeting held at the Department of Transportation and Development Headquarters Building in Baton Rouge, Louisiana on October 18, 2000. The scoping meeting was held to provide project information to agencies with legal jurisdiction. At the meeting, elements of the project consisted of the design criteria, the potential bridge elevations (low, medium, and high) and four potential bridge types (swing, bascule, vertical lift, and fixed span). Preliminary studies of the wetlands and cultural resources had been performed and were made available at the meeting. Based on the data collected, three potential locations for a replacement bridge were presented.

Invitations to the scoping meeting were sent to: the Louisiana Department of Environmental Quality, the Louisiana Department of Administration, the Louisiana Department of Wildlife and Fisheries, US Environmental Protection Agency, USCG, the Louisiana Department of Natural Resources, the US Fish and Wildlife Service, USDA National Resource Conservation Service, Louisiana Natural Heritage Program, Jefferson Parish Coastal Management Program, Barataria-Terrebonne Estuary Program, and the USACE. However, the only attendees were DOTD, FHWA, and consultant personnel. No agencies attended the scoping meeting.

The USACE and the USCG are the cooperating agencies on this project.

5.2 Public Involvement

Two Public Meetings were held for this project. The dates for these meetings were October 26, 2000 and March 20, 2001. Both meetings were conducted via a brief presentation of maps and project status followed by a brief recess during which the public could interact with project representatives and view detailed

maps and exhibits. The meetings concluded with a formal question and answer session. The question and answer session was officially recorded on the transcripts for the meetings. Attendees were encouraged to provide written comments and information regarding the project. **Table 5-1** summarizes the date, location, attendance, and written comments received for the public involvement process. Copies of the transcripts for both meetings are available at the local library in Jean Lafitte.

Table 5-1: Public Involvement Summary

Dates	Location	Total Attendance	Comments	
			Written	Oral
October 26, 2000	Jean Lafitte	126	8	22
March 20, 2001	Jean Lafitte	67	18	11

*The comment period extends for ten days following the meeting.

The October 26, 2000 Public Meeting was held at the Jean Lafitte Auditorium in Jean Lafitte, Louisiana. The purpose of the meeting was to present information concerning the proposed project and to receive comments from the population affected by the project. The meeting was well-attended, and comments from the attendees were considered during the conceptual development of bridge designs.

Citizens mentioned concerns about the maintenance of the existing bridge, such as the lack of pedestrian and bicycle lanes, the lack of grid on the grid plate, and the slick surface of the bridge. Attendees suggested setting a curfew for the bridge in order to limit the number of times the bridge could be opened and thus potentially prevent traffic problems resulting from bridge openings. Six citizens stated that they would like for the new bridge to be a high-level, fixed-span bridge in order to aid in emergency evacuations and to eliminate the need for opening the bridge for marine traffic. Several citizens commented on the positive economic impact that would result from the construction of a new bridge by allowing marine industries to be more competitive in the area and by bringing more people and business to the Barataria area. The Jefferson Parish Economic Development Commission found that the Harvey Canal would have an increase of at least \$50 million per year due to improved access created by the bridge. Citizens voiced their preferences that the new bridge be built in a location utilizing ROW already

owned by the state. Generally, the citizens agreed that a new bridge is needed. They also mentioned the problem of flooding in the area due to a lack of levee protection.

Subsequent to the Public Meeting, several preliminary concepts for replacement bridge types and locations were presented to the DOTD and the FHWA. The designs were primarily based on engineering criteria using the existing ROW configurations and considered projected traffic increases into the design year of 2025. During this process, several potential concepts were approved that considered variations in bridge height, design speed, and residential relocations.

The second Public Meeting was held on March 20, 2001 in the Jean Lafitte Auditorium in Jean Lafitte, Louisiana. The purpose of the meeting was to present the results of engineering studies and environmental considerations. The reasoning for the elimination of specific bridge clearances and bridge types that did not meet the project purpose and need were presented.

During this Public Meeting, specific bridge types were discussed. A "Bridge Location and Configuration Location Opinion Poll" was distributed. Of the twenty-six received polls, twenty-five citizens preferred a vertical lift bridge, and twenty-two people were strongly in favor of Paillet South 1 for the location of the bridge. However, oral comments from the meeting reflect that of the people who commented on the preferred bridge type, eleven wanted a bascule bridge. Oral comments also reflected that eighteen people who made comments preferred the Paillet South 1 alignment.

A Public Hearing was held in the Jean Lafitte Auditorium in Jean Lafitte, Louisiana on April 4, 2002. One goal of the hearing was to obtain public comments on the four alternatives under consideration: Pipeline Street, Paillet North, Paillet South, and the No-Build alternative. The oral and written statements received as part of the official transcript of the hearing influenced the selection of Paillet South as the preferred alternative. Of the 118 written and oral comments

received, 115 chose Paillet South as the preferred alternative. One person preferred Pipeline.

Table 5-2: Public Hearing Comments

Name	Comment	Response
1. Mayor Timothy Kerner	I will support the alternative that the majority of the people choose.	Comment noted.
2. Fred Hurt	I prefer Paillet South.	Comment noted.
3. Jim Barse	I represent the Barnett Yard. The owner is concerned about the affect of the alignment on his property value.	Comment noted.
4. Harold Clark	The Paillet South site seems to be the best for the majority of the people.	Comment noted.
5. Louis Hatty	The bridge designs are currently in the conceptual phase and may be adjusted one way or another, if necessary.	Comment noted.
6. Anthony LaSalle	The Paillet South One alignment that was voted on last week is not the same as the Paillet South alternative shown tonight.	Comment noted.
7. Jennifer Victoriano	I support the Paillet South alignment.	Comment noted.
8. Eric Bourgeois	I am in favor of Paillet South.	Comment noted.
9. Bernadette Falcon	Paillet South is great. Paillet North is unacceptable.	Comment noted.
10. Christopher Areas	I prefer Pipeline.	Comment noted.
11. Shane Morris, Sr.	I recommend the Paillet South tract.	Comment noted.
12. Joseph Arabie	I would like the Paillet South site.	Comment noted.
13. Caroletta S. Arabie	I would like the Paillet South site.	Comment noted.
14. L.W. Adams	Favor Paillet South	Comment noted.
15. Carol Adams	Favor Paillet South	Comment noted.
16. Dan Atzenhoffur	Prefer Paillet South	Comment noted.
17. Peggy Bourgeois	I would like the Paillet South site.	Comment noted.
18. Tod Bourgeois	I would like the Paillet South site.	Comment noted.
19. Joseph Bourgois	Favor the Paillet South	Comment noted.
20. Brent Bowman	I would like the Paillet South site.	Comment noted.
21. Jacqueline Bourgeois	I would like the Paillet South site.	Comment noted.
22. Rose Boudoir	I prefer the Paillet South location.	Comment noted.
23. Clark Barrios, Sr.	I prefer the Paillet South location.	Comment noted.
24. Linda Bowers	I prefer the Paillet South location.	Comment noted.

Name	Comment	Response
25. Walter Bowers	I prefer the Paillet South location.	Comment noted.
26. Florence Bourgeois	Favor Paillet South	Comment noted.
27. Joseph Bourgeois	I would like the Paillet South proposal.	Comment noted.
28. Sidney Bourgeois	Favor Paillet South	Comment noted.
29. Dianne Burtchell	Paillet South plan is good.	Comment noted.
30. Nick Burtchell	Go with Paillet South.	Comment noted.
31. Elias Basse, Jr.	I would like Paillet South.	Comment noted.
32. Lenora Basse	I would like Paillet South.	Comment noted.
33. Marion Bourg	Like Paillet South	Comment noted.
34. Camille Bourg	We like the Paillet South location.	Comment noted.
35. Megan Burgess	South Paillet Canal site	Comment noted.
36. Arviton Bailey	I recommend the Paillet South tract.	Comment noted.
37. Carline Bailey	I recommend the Paillet South tract.	Comment noted.
38. Jessica Coulon	I would like the Paillet South site.	Comment noted.
39. Adrian Cryer	I prefer Paillet South.	Comment noted.
40. Alline Clark	I recommend the Paillet South tract.	Comment noted.
41. Harold Clark	I recommend the Paillet South tract.	Comment noted.
42. Anna Chiasson	Prefer Paillet South	Comment noted.
43. Greg Chiasson	Prefer Paillet South	Comment noted.
44. Denise Dupre	I recommend the Paillet South tract.	Comment noted.
45. Robert Dufrene	Favor Paillet South	Comment noted.
46. Janette Dufrene	Favor Paillet South	Comment noted.
47. Bernadette Falcon	Pipeline is first choice. Paillet South is second choice.	Comment noted.
48. Edmund Fisher	I would like the Paillet South location.	Comment noted.
49. Terry Francois, Jr.	Favor Paillet South	Comment noted.
50. Ed Foote	I recommend Paillet South.	Comment noted.
51. Natalie Francois	Favor Paillet South	Comment noted.
52. Delana Fairman	I recommend the Paillet South tract.	Comment noted.
53. Jerry Fairman, Sr.	I recommend the Paillet South tract.	Comment noted.
54. Jerry Fairman, Jr.	I recommend the Paillet South tract.	Comment noted.
55. Carl Galliano	I recommend Paillet South.	Comment noted.
56. Dr. Carol Galliano	I recommend Paillet South.	Comment noted.
57. Sonya Gaines	I recommend the Paillet South tract.	Comment noted.

Name	Comment	Response
58. Gregory Gaines, Sr.	I recommend the Paillet South tract.	Comment noted.
59. Shavannah Gaines	I recommend the Paillet South tract.	Comment noted.
60. Gregory Gaines, Jr.	I recommend the Paillet South tract.	Comment noted.
61. Nick Huth	I recommend Paillet South.	Comment noted.
62. Tammy Helmer	Paillet South would be the best choice.	Comment noted.
63. Rusty Helmer, Sr.	Paillet South	Comment noted.
64. Rusty Helmer, Jr.	I strongly recommend Paillet South.	Comment noted.
65. Althea Harrington	I recommend the Paillet South tract.	Comment noted.
66. Earl Harrington	I recommend the Paillet South tract.	Comment noted.
67. Travis Johnson	Do Paillet South.	Comment noted.
68. Sherman Joiner	I favor Paillet South.	Comment noted.
69. James Juhansz	I would like to see the bridge on the south side.	Comment noted.
70. Clarence Johnson	I recommend the Paillet South tract.	Comment noted.
71. Brenda Johnson	I recommend the Paillet South tract.	Comment noted.
72. JoAnn Keriges	I would prefer the Paillet South proposal.	Comment noted.
73. D. Landry	South Paillet Canal bridge site.	Comment noted.
74. Brandon Landry	I favor Paillet South.	Comment noted.
75. Marlene Lobue	My vote is for Paillet South.	Comment noted.
76. Vincet Lobur, Sr.	Paillet South is the place to go.	Comment noted.
77. Stephanie Landry	South Paillet Canal	Comment noted.
78. Robert Landry	South Paillet Canal	Comment noted.
79. Dariel LeBoeuf	South Paillet Canal	Comment noted.
80. Anthony LaSalle	I recommend the Paillet South tract.	Comment noted.
81. Yvonne LaSalle	I recommend the Paillet South tract.	Comment noted.
82. Catherine Manor	Paillet South is the best idea.	Comment noted.
83. Lydoy Manor	Paillet South would be the best for all involved.	Comment noted.
84. Ray Maus	South Paillet Canal	Comment noted.
85. Cynthia Mathorne	South Paillet Canal	Comment noted.
86. Chiquita Benendez	The farthest site south would be the best location.	Comment noted.
87. Freddie Prestenbach	I would like the Paillet South site.	Comment noted.
88. Dorinda Prestenbach	I would like the Paillet South site.	Comment noted.

Name	Comment	Response
89. Ella Prestenbach	I would like the Paillet South site.	Comment noted.
90. Edwin Pizam	I favor the south side.	Comment noted.
91. Duane and Cinfy Perez	Favor Paillet South	Comment noted.
92. Ernetha Petty	I recommend the Paillet South tract.	Comment noted.
93. Claudette Perrin	Paillet South location for the new bridge is the most favorable.	Comment noted.
94. Adrian Ruttley	I like Paillet South.	Comment noted.
95. Brandon Randus	South Paillet Canal	Comment noted.
96. A.J. Ruttley	I like Paillet South.	Comment noted.
97. Conrad Schexnayder	I prefer Paillet South.	Comment noted.
98. Indecipherable name	Prefer Paillet South	Comment noted.
99. Nicholas Sporan	South Paillet bridge	Comment noted.
100. Roland Thibodeaux	Paillet South is preferred.	Comment noted.
101. Verona Tilliman	Paillet South	Comment noted.
102. Leon Thomas	I recommend the Paillet South tract.	Comment noted.
103. Indecipherable name	I recommend the Paillet South tract.	Comment noted.
104. G.D. Wiley	I prefer Paillet South project.	Comment noted.
105. Jean Williamson	I like Paillet South.	Comment noted.
106. Antoine Wright, Sr.	I recommend the Paillet South tract.	Comment noted.
107. Patrina Wright	I recommend the Paillet South tract.	Comment noted.
108. Antoine Wright, Jr.	I recommend the Paillet South tract.	Comment noted.
109. Gail Wright	I recommend the Paillet South tract.	Comment noted.
110. Ryan Wright	I recommend the Paillet South tract.	Comment noted.
111. Amber Wright	I recommend the Paillet South tract.	Comment noted.
112. Bryan Wright	I recommend the Paillet South tract.	Comment noted.
113. Antoine Wright, III	I recommend the Paillet South tract.	Comment noted.
114. Donna Wright	I recommend the Paillet South tract.	Comment noted.
115. Christian Warrick	I recommend the Paillet South tract.	Comment noted.
116. Pearl Wright	I recommend the Paillet South tract.	Comment noted.
117. Modeste Aflen	I recommend the Paillet South tract.	Comment noted.

Name	Comment	Response
118. Elouise Dreatto	I recommend the Paillet South tract.	Comment noted.

5.3 Agency Involvement

Three agency coordination meetings were held for the project. The first agency coordination meeting was held at the New Orleans Headquarters of the USACE on February 15, 2001. The purpose of the meeting was to bring all of the interested agencies up-to-date on the status of the project, provide background on the project purpose and need, and to present the approved concepts for further analysis. Several concepts that met engineering criteria were presented. Agency representatives were able to provide constructive critiques of the various bridge designs and locations based on specific regulatory concerns.

Agency comments received during the meeting resulted in the eventual change to bridge location and concept designs. The discussion included issues related to navigation and the applicable regulatory restrictions for construction of a bridge across a navigable waterway. Agency representatives also requested that an additional bridge location be considered that would eliminate the potential for residential relocations. Some suggested design changes were aimed at minimizing potential wetland impacts.

As a result of this meeting, the following suggested changes were considered:

1. Reduce the bridge/ramp design speeds from 60/45 mph to 45/30 mph;
2. Eliminate construction of the approach roadway on-grade through wetland areas;
3. Consider a bridge location south of Paillet Canal; and
4. Present and potential navigation uses cannot be limited.

The second agency coordination meeting was held on May 22, 2001 at the USACE District Headquarters in New Orleans. The purpose of the meeting was to present the results of conceptual design changes implemented after the

February meeting and to present some preliminary analysis of the proposed bridge locations.

During this meeting, the concepts of EFH and shading were discussed in detail. One attendee was concerned that the Draft EIS should address the concepts of both the vertical lift bridge and the bascule bridge that were considered for the project. A comparison of both the time of opening and closing of the vertical lift bridge and the bascule bridge was mentioned. It was determined that the timing of opening and closing is totally dependent on the mechanical means of moving the bridge. The difference in cost between the vertical lift and the bascule bridge was also discussed, and although cost estimates were not complete at the time of the meeting, the bascule bridge appeared to be less expensive.

At the time of the meeting, the supplemental vessel height study around the LeBlanc Seafood location was underway. The survey was performed at the request of the owner of LeBlanc Seafood in order to determine if the bridge location south of LeBlanc would adversely impact the business. It was also used to determine how many vessels traveled to and from LeBlanc per day. These numbers were seasonally adjusted to obtain a more accurate vessel count. A discussion of minor alignment changes, such as shifting the alignment north of LeBlanc Seafood, occurred. It was determined that a northern shift in the alignment was not possible because of the development that exists north of LeBlanc. Such a shift would require residential relocations and impacts, which the public stressed as undesirable.

Other concerns regarding the alignments were raised. First, there were comments that the agencies would likely require end-on construction of the Paillet South alignment because of the habitat potentially impacted. The impacts could require extensive mitigation and up to 20 years of follow-up monitoring. In response, it was stated that the existing canals in the area could likely assist in the construction of the new bridge by minimizing access roads and by providing a means to transport material to the construction site. Also, the Paillet South alignment would likely reduce traffic in the area by 20 to 30 percent. It was also

mentioned that the Paillet North alignment would be within the existing levee system and should be permittable.

Finally, it was determined that no NRHP eligible cultural resources were found on the west side of the bayou. The hazardous materials investigation included a database search of the entire corridor.

An agency concurrence meeting was held at the USACE Headquarters in New Orleans on May 29, 2002 to select the preferred alternative. The purpose of the meeting was to ensure that all agency comments and/or objections were voiced and addressed adequately. No objections were made, and concurrence was obtained from each agency on the preferred alternative (Paillet South).

Table 5-3 summarizes agency comments and responses.

Table 5-3: Agency Comments

COMMENT	RESPONSE
National Marine Fisheries Service (NMFS)	
1. NMFS had no "recommended revisions to the DEIS." They prefer Pipeline Street and Paillet North alignments.	1. Comment noted.
Louisiana State Historic Preservation Officer (SHPO)	
1. Site numbers should be used whenever archaeological site is referenced. (Refer to the discussion of historic and cultural features on pp. 50-52).	1. Per Jill-Karen Yakubik of Earth Search, Inc.: "The only two sites were 16JE297 and 16JE298. We didn't request a site number on the isolated find (that's customary)."
2. Correspondence is missing from the SHPO in the Correspondence section.	2. SHPO correspondence is included in the Correspondence section.
3. Once a final alternative has been selected, intensive archaeological investigations should be conducted in any unsurveyed areas.	3. The survey has been accomplished for all areas of the selected alternate.
U.S. Environmental Protection Agency (US EPA)	
1. Need to include pollution prevention measures in the document. (See comments for specific suggestions).	1. Comment noted.

COMMENT	RESPONSE
<p>2. Section 4.0: The FEIS should include a more balanced evaluation of the alternatives for each resource area, clarifying the nature and degree of impacts. If there are impacts that are considered to be basically the same at each bridge location, they should be clarified for each alternative rather than referred to collectively as the “new bridge.” Need to include more impacts analysis for impacts of No Build alternative.</p> <p>It would be helpful to maintain the no action and three bridge alternative formay for Sections 4.3, 4.5, 4.8, 4.10, 4.16, 4.21, and 4.22.</p> <p>Including a matrix addressing direct, indirect, and cumulative impacts for each alternative would be helpful.</p>	<p>2. Comment noted.</p>
<p>3. The FEIS would be strengthened by including a high-level, fixed bridge alternative to enable the decision-maker to compare the environmental impacts and cost differences with the proposed movable bridge. The impact analysis should compare the potential public health and safety benefits of a high-level, fixed bridge in providing uninterrupted east-west traffic, including pedestrian and non-motorized, with the impacts on maritime travel.</p>	<p>3. This alternate was considered and eliminated at an early stage. The alternative was eliminated because it presented an obstruction to existing navigation and is inconsistent with regulatory requirements. Section 2.4 addressees clearance needs based on marine traffic. Section 2.6.3 addresses the limitations of a high-level fixed bridge.</p>
<p>4. The degree and extent of short-term impacts on water quality can be a direct function of construction practices and the use of BMPs at construction sites. To help reduce or mitigate potential adverse impacts at construction sites of five acres or larger, the FEIS should include the applicability of EPA’s NPDES storm water general permit.</p>	<p>4. Section 4.10, page 102 – LPDES Construction General Permit. Applicable language has been added.</p>

COMMENT	RESPONSE
<p>5. The FEIS would be improved by moving the construction (direct) impacts presented in Section 4.24 to the impact analyses for each applicable resource area. If needed, we suggest limiting Section 4.24 to “adverse impacts which cannot be avoided.”</p>	<p>5. Comment noted. Construction impacts have been identified. We believe it is appropriate to discuss construction impacts as a separate issue. Prior to the formulation of site-specific plans, construction impacts can only be generalized, and reiteration for each alternative would be redundant.</p>
<p>6. page v – The statement “that permanent fill impacts to wetlands from all of the proposed alternatives would be less than 0.1 acre” conflicts with Tables 4.3, 4.4, and 4.5 regarding permanent fill (acres) in forested wetlands.</p>	<p>6. This has been checked and corrected. The sentence reads “... less than 0.5 acre.”</p>
<p>7. page 88, paragraphs 4.3.2 and 4.3.3 – It is unclear why the four alternative format was not maintained. Considering the importance of the proposed project in regard to highway and traffic safety, and public health and safety, the impact analysis is very limited.</p> <p>The FEIS would be strengthened by evaluating the short-term and long-term impacts of the four options, including the projected timing of using the existing bridge while a new one is being constructed.</p>	<p>7. Text has been changed. Since the project area has only one entrance road (LA45) and traffic across the bridge will not change with location, there is no need to present any traffic impact analysis specific to any alternative.</p> <p>Funding to construct this project is not available at the present time. As a result, it is hard to quantify or identify the short-term and long-term impacts.</p>
<p>8. Section 4.3 (page 86) – Should include an Environmental Justice evaluation, pursuant to Executive Order 12898. The FEIS should clarify whether any of the bridge alternatives, including the preferred site, would result in a disproportionate impact on minority and low-income groups. Also in addition to what appear to be direct or construction impacts, the evaluation should also address the indirect and cumulative effects on churches, schools, recreation areas, businesses, or non-profit organizations.</p>	<p>8. Comment noted. Text has been changed. Section 4.4 also details the relocation impacts for each alternative. Section 4.5 details positive economic benefit to the communities.</p> <p>Selection of Paillet South moves all construction and ROW impacts away from any low-income neighborhoods and all other areas of concern.</p>

COMMENT	RESPONSE
<p>9. page 87 – The impact analysis on marine traffic should also compare the pros and cons between the 125 and 150-foot horizontal widths to accommodate larger marine vessels, as well as, any differences between alternatives regarding impacts from straight vs. curved alignments on navigation.</p>	<p>9. Coast Guard and maritime interests have agreed upon 150-foot width to meet regulatory and maritime needs.</p> <p>Page 18, Section 2.5 addresses the need for 150 feet clearance. Page 24, Section 2.8.2 – Fleming Canal alignment in curved portion of BBW is incompatible with navigation regulations. This location presents a collision hazard for shipping.</p>
<p>10. page 91, paragraph 3 – Clarify what type of mitigation is envisioned to reduce impacts on the referenced single-family residence. Also suggest including this site at the westward end of A. Dufrene Street on Figure 2-11 for the Paillet North #1 alternative.</p>	<p>10. The first choice is to avoid relocation of residents. The final choice is to acquire the property and relocate residents. Relocation is performed in accordance with the Uniform Relocation Act. The text in Section 4.4.3 has been revised to reflect no relocation impacts. Also, with the relocation of Paillet South, there is no need for an extensive analysis of relocation impacts.</p>
<p>11. page 92 – Economic impacts should evaluate the differences between the alternatives, including no action, based on the costs comparison in Table 2-4.</p>	<p>11. The no-build cost was not tabulated because these costs are not easily quantifiable. Each element of the purpose and need would have to be quantified from an economic standpoint to evaluate the full cost of the no-build alternative.</p> <p>No text change.</p>
<p>12. page 92- The FEIS should include a citation for the air screening analysis referenced in paragraph 4-7, and include a brief summary of the methodology used in concluding “the project passed.”</p>	<p>12. Section 4.7 has been revised.</p>

COMMENT	RESPONSE
<p>13. A complete noise assessment should not be limited to only those impacts considered worthy of mitigation (i.e., exceed existing noise levels by 10 dBA). If a receptor is affected by a noise increase below 10 dBA , this should be included in the evaluation in order to provide full disclosure of potential impacts.</p> <p>Also, the FEIS should include noise contour maps for each of the alternatives to demonstrate the extent of modeled increases for short-term (construction) and long-term (operation) noise levels.</p>	<p>13. No noise sensitive receptors were identified in the Noise Study using the approved DOTD procedures. A complete noise analysis and stand-alone report was submitted to DOTD as part of the project documentation. The results are summarized for the FEIS. A copy of the noise study is included in the appendix for the DEIS.</p> <p>No revisions to the text were made.</p> <p>The preliminary analysis did not indicate any noise impacts from any of the bridge alternatives. Therefore, noise contours were not developed.</p> <p>No analysis of short-term noise impacts was performed for this project.</p>
<p>14. page 98- Include applicability of EPA's NPDES storm water general permit.</p>	<p>14. Revised text to show LPDES authority.</p>
<p>15. page 102, next to last paragraph- The FEIS should include written documentation of the NMFS's concurrence that the preferred alternative will not adversely impact EFH, pursuant to the EFH final rule.</p>	<p>15. Text included.</p> <p>A concurrence letter from NMFS is included in the Correspondence section of this document.</p>
<p>16. Section 4.19 – This coastal zone impact discussion appears to be redundant, since it was covered to a large extent in previous resource areas, including wetlands and permits.</p>	<p>16. Some redundancy is unavoidable. However, this section states that issuance of a CUP meets consistency requirements at the state and local levels.</p>

COMMENT	RESPONSE
<p>17. page 147, second paragraph – The FEIS should include the MOU developed with the SHPO for compliance with Section 106 of the National Historic Preservation Act, was or will be executed (as a signatory) by the Advisory Council on Historic Preservation (ACHP). The FEIS should address any potential Native American issues, and the MOU should also include that consultation with SHPO and ACHP considered tribal representatives as potential interested and/or concurring parties.</p>	<p>17. The MOU in this case addresses procedures to be followed in additional archaeological procedures that will be used in completing the Final EIS. The MOA would actually be an agreement for impacts to historic properties. No historic properties have been identified within the APE. A MOU is different from a MOA and does not require circulation to the ACHP. Also note that the Draft EIS was sent to the Chitimacha Tribe. No comment was received from the tribe. All of the selected alternative has been surveyed for historic properties, so a MOU with the SHPO will not be necessary for this project.</p>
<p>18. page 147, paragraph 4.21 – The FEIS should include that construction and operation activities associated with the proposed project will follow the label instructions for proper storage, use, and disposal of hazardous materials.</p>	<p>18. This information is more appropriate for Section 4.24.5 Public Health and Safety. Text has been revised.</p>
<p>19. page 149, paragraph 4.22 – The FEIS should provide a comparison of impacts between the no action and different alternative sites, including aesthetics.</p>	<p>19. Aesthetics are an element that is hard to quantify, and thus, it was not included in the table. Comparison between alternates is included in Table 2.4.</p> <p>Sections 4.22.1 and 4.22.2 have been added to the text.</p>
<p>U.S. Army Corps of Engineers (USACE), New Orleans</p>	
<p>1. Did not have time to thoroughly review, but did not find any deficiencies or changes necessary.</p>	<p>1. Comment noted.</p>

5.4 List of Agencies, Organizations, and Persons to Whom Copies of the Environmental Impact Statement are Sent

The following is a list of agencies, organizations, and persons to whom copies of the Draft Environmental Impact Statement are sent:

Federal Agencies

- U.S. Army Corps of Engineers, New Orleans District- New Orleans, Louisiana
- U.S. Department of the Interior, Fish and Wildlife Service- Lafayette, Louisiana

U.S. Department of the Interior, National Park Service- Santa Fe, New Mexico
 U.S. Department of the Interior, National Resources Conservation Service-
 Alexandria, Louisiana
 U.S. Department of the Interior, Regional Environmental Office- Albuquerque,
 New Mexico
 U.S. Department of the Interior, Geological Survey- Baton Rouge, Louisiana
 U.S. Environmental Protection Agency, Federal Activities BR (6E-F)- Dallas,
 Texas
 U.S. Environmental Protection Agency, Office of Groundwater- Dallas, Texas
 U.S. Environmental Protection Agency, Marine and Wetlands Section- Dallas,
 Texas
 U.S. Federal Emergency Management Agency
 U.S. Department of Transportation, Federal Aviation- Fort Worth, Texas
 U.S. Department of Housing and Urban Development- Fort Worth, Texas
 FEMA, Region VI- Denton, Texas

U.S. Department of Commerce, Economic Development Administration- Austin,
 Texas
 Advisory Council/Historic Preservation- Lakewood, Colorado
 National Park Service- New Orleans, Louisiana
 National Park Service, Rivers, Trails, and Conservation- Baton Rouge, Louisiana
 U.S. Coast Guard, Eighth District- New Orleans, Louisiana
 National Marine Fisheries Service, Habitat Conservation Division- Baton Rouge,
 Louisiana

State Agencies

Office of the Governor of Louisiana- Baton Rouge, Louisiana
 Louisiana Department of Culture, Recreation and Tourism, Division of
 Archaeology- Baton Rouge, Louisiana
 Louisiana Department of Environmental Quality, Hazardous Waste Division-
 Baton Rouge, Louisiana
 Louisiana Department of Environmental Quality, Inactive and Abandoned Sites
 Division- Baton Rouge, Louisiana
 Louisiana Department of Transportation and Development, District Headquarters-
 Bridge City, Louisiana
 Louisiana Department of Transportation and Development, Floodplain
 Management Program- Baton Rouge, Louisiana
 Louisiana Department of Wildlife and Fisheries, Ecological Studies Section-
 Baton Rouge, Louisiana
 Louisiana Department of Natural Resources, Coastal Management Division-
 Baton Rouge, Louisiana
 Louisiana Department of Natural Resources, Office of Conservation- Baton
 Rouge, Louisiana
 Department of Economic Development, Office of Commerce and Industry- Baton
 Rouge, Louisiana
 Louisiana Forestry Association- Alexandria, Louisiana

Department of Agriculture and Forestry, Office of Forestry- Baton Rouge,
Louisiana
Department of Agriculture and Forestry, Office of Soil/Water Conservation
Department of Public Safety, Highway Safety Commission- Baton Rouge,
Louisiana
Louisiana Good Roads Association- Baton Rouge, Louisiana
State Planning Office- Baton Rouge, Louisiana
Louisiana Health and Human Resources Administration, Bureau of
Environmental Services- New Orleans, Louisiana
Louisiana Natural Heritage Program, Louisiana Department of Wildlife and
Fisheries- Baton Rouge, Louisiana
Louisiana State Mineral Board- Baton Rouge, Louisiana
State Land Office- Baton Rouge, Louisiana
Louisiana State Attorney General- Baton Rouge, Louisiana
Environmental Assessment, Sierra Club/Delta Chapter- New Orleans, Louisiana
Office of State Parks, Department of Culture, Recreation, and Tourism- Baton
Rouge, Louisiana
Louisiana State University, Sea Grant Legal Program- Baton Rouge, Louisiana
Department of Health and Hospitals, Division of Environmental Health- Baton
Rouge, Louisiana
Department of Emergency Preparedness, Emergency Coordinator- Hahnville,
Louisiana
Office of Emergency Management- New Orleans, Louisiana

Local Agencies

Jefferson Parish Council- Jefferson, Louisiana
St. Charles Parish Planning and Zoning Commission- Hahnville, Louisiana
Chamber of Commerce, New Orleans and the River Region- New Orleans,
Louisiana
The Port of New Orleans, Managing Director- New Orleans, Louisiana
Jefferson Parish, Office of the Council- Gretna, Louisiana
City of Kenner, Planning Department- Kenner, Louisiana
Jefferson Parish Civil Defense- Marrero, Louisiana
Louisiana State Police, Troop B- Kenner, Louisiana
Jefferson Parish Community, Action Program- Harahan, Louisiana
Building Official- Gretna, Louisiana
Jefferson Parish Planning Department, Director- Harahan, Louisiana
Parish President- Gretna, Louisiana
Regional Transit Authority, New Orleans- New Orleans, Louisiana
Jefferson Parish School Board- Harvey, Louisiana
Jefferson Parish Council, Councilman Lloyd Giardina- Gretna, Louisiana
Jefferson Parish Sheriff- Gretna, Louisiana
Crescent Soil and Water, Conservation District- Boutte, Louisiana
Harahan Planning and Zoning Commission- Harahan, Louisiana
Louisiana Department of Natural Resources, Coastal Management Division-
Baton Rouge, Louisiana
Regional Planning Commission- New Orleans, Louisiana

Director of Public Works, Floodplain Administrator- Harahan, Louisiana
Jefferson Parish Transit Authority- Gretna, Louisiana
City of Kenner, Chief Administrative Officer- Kenner, Louisiana

Senators and Representatives

Representative W.J. Tauzin- Houma, Louisiana
Representative Jim McCrery- Shreveport, Louisiana
Congressman Chris John- Lafayette, Louisiana
Representative Richard H. Baker- Baton Rouge, Louisiana
Senator Mary Landrieu- Baton Rouge, Louisiana
Senator John B. Breaux- New Orleans, Louisiana
Representative Jennifer L. Sneed, District 81- Metairie, Louisiana
Representative Thomas Capella, District 88- Metairie, Louisiana
Representative David Vitter- Metairie, Louisiana
Senator Francis C. Heitmeier, District 7- New Orleans, Louisiana
Representative John A. Alario, Jr., District 83- Baton Rouge, Louisiana
Representative Loulan J. Pitre, Jr., District 54- Cut Off, Louisiana
Representative Joseph F. Toomy, District 85- Gretna, Louisiana
Representative Kyle M. Green, District 87- Marrero, Louisiana
Senator Ken Hollis, District 9- Metairie, Louisiana
Senator Chris Ullo, District 8- Harvey, Louisiana
Representative Glenn Ansardi, District 92- Kenner, Louisiana
Senator John J. Hainkel, Jr., District 6- New Orleans, Louisiana
Representative Charles D. Lancaster, Jr., District 80- Metairie, Louisiana
Representative Stephen J. Windhorst, District 86- Terrytown, Louisiana
Representative Shirley Bowler, District 78- Harahan, Louisiana
Senator Lynn B. Dean, District 1- Chalmette, Louisiana
Senator Arthur J. Lentini, District 1- Chalmette, Louisiana
Representative Nuncio Joseph Damico, District 84- Marrero, Louisiana
Representative Steve J. Scalise, District 82, Jefferson, Louisiana
Representative Daniel R. Martiny, District 79- Metairie, Louisiana
Representative Ernest D. Wooton, District 105- Belle Chase, Louisiana

Others

Westside Transit Lines, Inc.- Gretna, Louisiana

LOUISIANA TRANSIT COMPANY- HARAHAH, LOUISIANA

SECTION 6.0

LIST OF PREPARERS

6.0 LIST OF PREPARERS

NAME	TITLE	QUALIFICATIONS
FEDERAL HIGHWAY ADMINISTRATION		
William C. Farr	Program Operations Manager	B.S. in Civil Engineering
Robert Mahoney	Environmental Specialist	M.S. in Civil Engineering
Multidisciplinary Review Team		Review Assistance
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT		
Vincent G. Russo, Jr., P.E.	Environmental Engineer Administrator	B.S. in Civil Engineering
Tony Ducote, P.E.	Assistant to Bridge Design Engineer Administrator	B.S. in Civil Engineering, with over 21 years experience in civil and environmental engineering.
Elizabeth Davoli	Project Coordinator	M.A. in Anthropology, with over ten years experience in Cultural Resource studies and four years of NEPA experience.
Jan Grenfell	Project Manager	B.A. in Anthropology
Michele Deshotels	Project Manager	B.A. in Anthropology, with twenty-one years experience with DOTD, including twenty years experience in NEPA projects
David Miller	Project Manager	B.S. in Civil Engineering, 15 years Civil and Environmental Engineering
Guy Leonard	Project Manager	B.S. in Civil Engineering, 23 years Civil and Environmental Engineering
COOPERATING AGENCIES		
Marcus N. Redford, P.E.	United States Coast Guard	Chief, Bridge Administrative Branch
Ronald J. Ventola	United States Army Corps of Engineers	Chief, Regulatory Branch
VOLKERT & ASSOCIATES, INC.		
J.R. Sute, P.E.	Vice President of Operations	B.S. in Civil Engineering, with over 30 years of civil/structural engineering experience as well as quality assurance.
Patrick J. Wilson, P.E.	Vice President	B.S. in Civil Engineering and M.S. in Structural Engineering, with over 29 years of civil/structural engineering experience.
Paul H. Griggs, P.E.	Project Manager	B.S. in Civil Engineering, with over 29 years experience in engineering.
Kyle E. Parker, P.E.	Civil Engineer Vice President of Environmental Programs	B.S. in Civil Engineering, with over 15 years experience in engineering and environmental programs.
Paul B. Looney, C.E., P.W.S	Environmental Project Manager	M.S. in Biology, with over 11 years experience in managing and coordinating environmental projects, including NEPA compliance and over 11 years experience in an ecologist capacity.
Russell Holland, EI	Design Engineer	B.S. in Civil Engineering, with over one year experience in civil engineering projects.
Scott E. Jackson	Environmental Scientist	M.S. in Soil Science, with over five years experience in environmental programs and environmental documentation.
Michael Taylor	GIS Analyst	M.S. in Geography, with over two years experience in GIS projects.
Missi Moore	Environmental Document Coordinator	Over 2 years experience in NEPA documentation.
HARTMAN ENGINEERING, INC.		
Janet Evans	Principal-in-Charge	M.B.A in Business and B.S. in Civil Engineering, with over 19 years experience in both the public and private sectors.
Manish Mardia, P.E.	Project Engineer	
EARTH SEARCH, INC.		
Jill-Karen Yakubik, Ph.D., RPA	President	Ph.D. in Anthropology, with over eighteen years experience in cultural resources investigations and archaeological projects.
Rhonda Smith	Crew Chief	M.A. in Anthropology, with over five years experience in cultural resources and archaeological investigations.

SECTION 7.0

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- _____. 2001d. Wetland Finding. 26 pp. + Appendices. August 2001.
- _____. 2001e. Noise Study Report. 24 pp. + Appendices. August 2001.
- _____. 2001f. Essential Fish Habitat Assessment. 26 pp. + Appendices. August 2001.
- _____. 2000. Bayou Barataria Bridge, Traffic Study. 15 pp. + 10 Appendices. December 2000.

CORRESPONDENCE

CORRESPONDENCE



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
5304 Flanders Dr. Suite A
BATON ROUGE, LOUISIANA 70808

July 21, 2000

IN REPLY REFER TO
Notice of Intent
FAP NH-TO-21(015)
SP No. 700-26-0239
Kerner Ferry Bridge over
Bayou Barataria
(LA 3257 to LA 45)
Jefferson Parishes

Office of the Federal Register
National Archives and Records Administration
Washington, D.C. 20408

Office of the Federal Register:

Enclosed are three (3) duplicate copies, individually signed, of the Notice of Intent for the above referenced project. We request that you place the enclosed Notice in the Federal Register.

If you have any questions, please contact Mr. Jerry Pitts of my staff at (225) 757-7618.

Sincerely yours,

/s/ William A. Sussmann

William A. Sussmann
Division Administrator

Enclosure

cc:
Project Development Branch, HEV-11
Washington, D.C.

✓ Mr. Vince Russo, LDOTD

[4910-22]

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

ENVIRONMENTAL IMPACT STATEMENT: JEFFERSON PARISH, LOUISIANA

AGENCY: Federal Highway Administration (FHWA), DOT

ACTION: Notice of Intent

SUMMARY: The FHWA is issuing this notice to advise the public that an Environmental Impact Statement will be prepared for a proposed bridge project in Jefferson Parish, Louisiana.

FOR FURTHER INFORMATION CONTACT: William C. Farr, Program Operations Manager, Federal Highway Administration, 5304 Flanders Drive, Suite A, Baton Rouge, Louisiana, 70808, Telephone: (225) 757-7615, Facsimile: (225) 757-7601.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Louisiana Department of Transportation and Development (LDOTD), will prepare an Environmental Impact Statement (EIS) on a proposal to construct a new bridge facility on an alignment to be determined. The proposed project, known locally as the Kerner's Ferry Bridge over Bayou Barataria, is located in the town of Jean Lafitte in Jefferson Parish, Louisiana. The project will connect LA 3257 with LA 45. The approximate distance of the project is 0.27 miles. Final length will depend on the alternative selected.

The proposed improvements would improve the connectivity, travel time, and safety of the area and increase regional access to the area.

The study area encompasses the logical termini, which are LA 302 on the west bank and LA 45 on the east bank of Bayou Barataria. The corridor limits for the project will be one mile north of the existing bridge to five miles south.

Alternatives to be considered are:

- (1) Low level moveable bridge
- (2) Mid level moveable bridge
- (3) High level fixed bridge
- (4) No Action

An agency scoping meeting will be held at a time and place to be determined at a later date. Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, state, and local agencies and to private organizations, including conservation groups and groups of individuals who have expressed interest in the project in the past. At least one public informational meeting will be held in the project area that will be affected. In addition, a Public Hearing will be held. Public notice will be given of the time and place of the public informational meeting(s) and the Public Hearing. The draft EIS will be available for public and agency review and comment prior to the Public Hearing.

To ensure that the full range of issues related to this proposed action are addressed, and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on July 21, 2000



William A. Sussmann,
Division Administrator, FHWA,
Baton Rouge, Louisiana

Secretary	
Deputy	
Asst. Dir.:	
Adm. Serv.	
Ext. Aff.	
Finance & Pers.	
Gen. Inv.	
Ident. & Rec. Mgmt.	
Int. Aff.	
Legal Coun.	
Plan. & Insp.	
Public Aff.	
Res. & Stat.	
Tech. Serv.	
Training	
MFC	
Highway	
Environ.	
Chief	
LT	
DL	
DR	
Pro.	
Eng.	
Low Bidder	
Contract Admin.	
Lab. & Sp.	
Joint Contra.	
Special (Contract Mgmt.)	
Public	
Prog.	
Public Aff.	
Public Aff. (Contract)	
Aviation	
Operations	
Dist. Adm.	
Project Eng.	

VOLKERT & ASSOCIATES, INC.



www.volkert.com

October 3, 2000

4240 Canal Street • First Floor (70119)
P.O. Box 791115
New Orleans, LA 70179-1115
504.486.6312
Fax 504.486.6066

LA Natural Heritage Program
LA Department of Wildlife & Fisheries
P O Box 98000
Baton Rouge, LA 70898-9000

**RE: State Project No. 700-26-0239
Bayou Barataria Bridge
Route LA 302
Jefferson Parish
Agency Scoping Meeting**

Ladies and Gentlemen:

On behalf of the Louisiana Department of Transportation and Development (DOTD), Volkert & Associates, Inc. (Volkert) is pleased to invite you to participate in the LA-302 project, Bayou Barataria Bridge. Volkert has been retained by the DOTD to perform a Location and Feasibility Study and an Environmental Impact Statement (EIS).

As part of this study, Volkert will be investigating the environmental, socioeconomic, and engineering issues related to the proposed highway facility. A scoping meeting will be held at 10:00 a.m. on October 18, 2000, in the sixth floor conference room of the Department of Transportation and Development Headquarters Building, 1201 Capital Access Road, Baton Rouge, Louisiana. The purpose of this meeting is to discuss the study process and to identify specific issues you may have relative to your area of expertise.

Your participation in providing current, relevant information will insure the development of a comprehensive Environmental Impact Statement (EIS). We look forward to meeting with you and to your continued input throughout the duration of this project. If you would like to contact us in advance, please do so at (504) 486-6312.

Sincerely,

Volkert & Associates, Inc.

Patrick J. Wilson, P.E.
Vice President

KEP/rcm

c: Michele Deshotels, DOTD

Office Locations:

Birmingham, Alabama • New Orleans, Louisiana • Ft. Walton Beach, Miami, Tampa, Florida • Dalton, Georgia
Knoxville, Tennessee • Alexandria, Virginia • Washington, D.C.

PI	FNAME	LNAME	SUFFIX	TITLE	3ENCL	ADDRESS1	ADDRESS2	CITY	ST	ZIP
Mr.	James	Donelon		Representative, District 88	Representative, District 88	P O Box 6993	Suite 201	Metairie	LA	70009
Ms.	Jennifer L.	Sneed		Representative, District 81	Representative, District 81	131 Airline Drive		Metairie	LA	70001
Senator	Francis C.	Hellmeier		Senator, District 7	Senator, District 7	3709 General Degaulle		New Orleans	LA	70114
Mr.	John A.	Alario	, Jr.	Representative, District 83	Representative, District 83	P O Box 94062		Baton Rouge	LA	70804-9062
Mr.	Loulan J.	Pitre	, Jr.	Representative, District 54	Representative, District 54	104 West 65th Street		Cut Off	LA	70345
Mr.	Joseph F.	Toomy		Representative, District 85	Representative, District 85	P O Box 163		Gretna	LA	70054
Mr.	Michael J.	Kinler		Department of Emergency Preparedness	Department of Emergency Preparedness	P O Box 302		Hahnville	LA	70057
Mr.	Aaron F.	Broussard		Emergency Coordinator	Emergency Coordinator	121 Elmwood Park Boulevard #802		Jefferson	LA	70123
				Chairman	Chairman	and Zoning Commission	P O Box 302	Hahnville	LA	70057
Mr.	Kyle M.	Green		St. Charles Parish Planning	St. Charles Parish Planning	N O and the River Region	P O Box 30240	Hahnville	LA	70190
Senator	Ken	Hollis		Representative, District 87	Representative, District 87	931 Westwood Drive		New Orleans	LA	70190
				Senator, District 9	Senator, District 9	P O Box 6522		Marrero	LA	70072
Senator	Chris	Ullo		The Port of New Orleans	The Port of New Orleans	P O Box 60046	2800 Veterans Boulevard, Suite 365	Metairie	LA	70009
				Senator, District 08	Senator, District 08	2150 Westbank Expressway	Suite 705	New Orleans	LA	70160
Mr.	Glenn	Ansardi		Department of The Army	Department of The Army	N O District Corps of Engineers	P O Box 60267	Harvey	LA	70058
Senator	John J.	Hainkel	, Jr.	Representative, District 92	Representative, District 92	1940 I-10 Service Road #125		New Orleans	LA	70160-0267
				Senator, District 6	Senator, District 6	704 Carondelet Street		Kenner	LA	70065
				Office of Emergency Management	Office of Emergency Management	9E01 City Hall		New Orleans	LA	70130
				Jefferson Parish	Jefferson Parish	Office of the Council	P O Box 9	New Orleans	LA	70112
				City of Kenner	City of Kenner	Planning Department		Gretna	LA	70054
				Jefferson Parish Civil Defense	Jefferson Parish Civil Defense	1887 Ames Boulevard	1801 Williams Boulevard	Kenner	LA	70062
				Louisiana State Police	Louisiana State Police	Troop B		Marrero	LA	70073
				City of Westwego	City of Westwego	419 Avenue A	2101 I-10 Service Road	Kenner	LA	70065
Mr.	Lynn Ed	Coyne		Jefferson Parish Community Action Program	Jefferson Parish Community Action Program	1221 Elmwood Park Boulevard #402		Westwego	LA	70094
				Building Official	Building Official	P O Box 404		Harahan	LA	70123
Mr.	Tim	Coulon		Jefferson Parish Planning Department	Jefferson Parish Planning Department	1221 Elmwood Park Boulevard		Gretna	LA	70054
				Director	Director	P O Box 9		Harahan	LA	70123
				Parish President	Parish President	6700 Plaza Drive		Gretna	LA	70054
				New Orleans Regional Transit Authority	New Orleans Regional Transit Authority	501 Manhattan Boulevard		New Orleans	LA	70127-2677
				Jefferson Parish School Board	Jefferson Parish School Board	Habitat Conservation Division		Harvey	LA	70058
Mr.	Lloyd F.	Giardina		National Marine Fish Service	National Marine Fish Service	P O Box 9	LSU Center for Wetland Res	Baton Rouge	LA	70803-7535
Mr.	Charles D.	Lancaster	, Jr.	Jefferson Parish Council	Jefferson Parish Council	2201 Vets Memorial Boulevard #200		Gretna	LA	70053
				Representative, District 80	Representative, District 80	P O Box 531		Metairie	LA	70002
Mr.	Stephen J.	Windhorst		Crescent Soil & Water Conservation District	Crescent Soil & Water Conservation District	1601 Belle Chasse Highway	Suite 201	Boutte	LA	70039
				Representative, District 86	Representative, District 86	Coastal Management Division	P O Box 4487	Terrytown	LA	70056
				LA Department of Natural Resources	LA Department of Natural Resources	Masonic Temple Boulevard	333 St. Charles Avenue #1 100	Baton Rouge	LA	70804
				Regional Planning Commission	Regional Planning Commission	Director of Public Works	1221 Elmwood Parkway Boulevard	New Orleans	LA	70130-3120
				Floodplain Administrator	Floodplain Administrator	6700 Plaza Drive		Harahan	LA	70123
Ms.	Shirley	Bowler		Regional Transit Authority	Regional Transit Authority	1939 Hickory Avenue	Suite 10	New Orleans	LA	70127
Ms.	Pat	Johnson		Representative, District 78	Representative, District 78	21 Westbank Expressway		Harahan	LA	70123
Mr.	Rick	Jones		Jefferson Parish Transit Administration	Jefferson Parish Transit Administration	P O Box 304	90 First Street	Gretna	LA	70053
				Westside Transit Lines, Inc.	Westside Transit Lines, Inc.			Gretna	LA	70054

LaDOTD Jefferson Parish Mail List

Ms.	Charlotte	Burnell	Chief Administrative Officer	City of Kenner	1801 Williams Boulevard	Kenner	LA	70062
Mr.	Kent	Mitchell	President	LA Transit Company	P O Box 23247	Harahan	LA	70183-0237
Senator	Lynn B.	Dean	Senator, District 01	8201 West Judge Peréz Drive		Chalmette	LA	70040
Senator	Arthur J. Nuncio	Lentini	Senator, District 10	2551 Metairie Road		Metairie	LA	70001
Mr.	Joseph	Damico	Representative, District 84	740 Lydia Court		Marrero	LA	70072
Mr.	Steve J.	Scallise	Representative, District 82	P O Box 10595		Jefferson	LA	70181
Mr.	Daniel R.	Martiny	Representative, District 79	131 Airline Highway	Suite 201	Metairie	LA	70001
Mr.	Ernest D.	Wootton	Representative, District 105	104 New Orleans Street		Belle Chasse	LA	70037
			Harahan Planning & Zoning Commission	6437 Jefferson Highway		Harahan	LA	70123
			Jefferson Parish Sheriff	P O Box 327		Gretna	LA	70054

REF ID	NAME	TITLE	AGENCY	ADDRESS1	ADDRESS2	ADDRESS3	CITY	ST	ZIP
Mr.	W. J. Tauzin	Representative	Department of Transportation	Federal Aviation	Attention ASW-472		Ft Worth	TX	76193
			Department of Wildlife & Fisheries	Ecological Studies Section	P O Box 98000		Baton Rouge	LA	70898-900
				107 Federal Building			Houma	LA	70360
Mr.	Jim McCrery	Executive Director Representative	Department Economic Development	Office of Commerce & Industry	P O Box 94185		Baton Rouge	LA	70804-918
Mr.	Chris John	Congressman	LA Forestry Association	P O Drawer 5067			Alexandria	LA	71301
			Department of Agriculture & Forestry	6425 Youree Drive #350			Shreveport	LA	71101-460
Mr.	David Witter	Representative	Department of Agriculture & Forestry	Office of Forestry	P O Box 1628		Baton Rouge	LA	70821
			Federal Activities Br (6E-F)	800 Lafayette Street Suite 1400			Lafayette	LA	70501
			Department of Agriculture & Forestry	US Environ Protection Agency	1445 Ross Avenue		Dallas	TX	75202-273
			Department of Culture Recreation & Tourism	Office of Soil/Water Conservation	P O Box 3554		Baton Rouge	LA	70821-355
			Department of Public Safety	2800 Veterans Memorial Boulevard #201			Metairie	LA	70002-613
Mr.	Richard Baker	Representative	Department of Environment Quality	Division of Archaeology	P O Box 44247	Capitol Annex 3rd	Baton Rouge	LA	70804
Ms.	Lisa Miller		Department of Environment Quality	Highway Safety Commission	P O Box 66336		Baton Rouge	LA	70896
Mr.	William Jefferson	Representative	Department of Environment Quality	5757 Corporate Boulevard	Suite 104		Baton Rouge	LA	70808
			LA Department of Natural Resources	P O Box 82231			Baton Rouge	LA	70884-223
Mr.	Curtis Hoglan		LAF ECON	501 Magazine Street	Suite 1012		New Orleans	LA	70130
Mr.	Maurice Watson		Department of Wildlife & Fisheries	Office of Conservation	P O Box 94275	625 North 4th	Baton Rouge	LA	70804-927
Mr.	Preston Eggers		LA Good Roads Association	211 Devalcourt Street			Lafayette	LA	70506-412
Mr.	Donald Gohmert		State Planning Office	P O Box 98000			Baton Rouge	LA	70898-900
			Natural Resources	656 North Street			Baton Rouge	LA	70802
			LA Health & Human Resources Admin.	P O Box 94095			Baton Rouge	LA	70804-409
			US Department of Housing/Urban Dev.	Conservation Service	3737 Government Street	2nd Floor	Alexandria	LA	71302
			LA Natural Heritage Program	Bureau of Environmental Services	P O Box 60630		New Orleans	LA	70160
Mr.	Michael Jansky	Region Environmental Officer	6ENXP	P O Box 2905			Fort Worth	TX	76113
			US Department of the Interior	LA Department of Wildlife & Fisheries	P O Box 98000		Baton Rouge	LA	70898-900
			LA State Mineral Board	Environmental Protection Agency	1445 Ross Avenue		Dallas	TX	75202-273
			Division of Administration	National Park Service	P O Box 728		Santa Fe	NM	87504-072
			US Department of the Interior	P O Box 2827			Baton Rouge	LA	70821-282
			Department Interior/Geological Survey	State Land Office	P O Box 44124		Baton Rouge	LA	70804
			Louisiana State Attorney General	Regional Environmental Office	P O Box 649		Albuquerque	NM	87103
Senator	Mary Landrieu	Senator		3535 South Sherwood Forest	Suite 120		Baton Rouge	LA	70806
			US Fish & Wildlife Service	P O Box 94095			Baton Rouge	LA	70804-909
Mr.	Greg Solvey	Senator	FEMA Region VI	Room 326		707 Florida Boulevard	Baton Rouge	LA	70801
Senator	John Breaux	Senator	Environmental Assessment	646 Cajun Dome Boulevard			Lafayette	LA	70506
			Office of State Parks	800 North Loop 288			Denton	TX	76201
			US Department of Commerce	501 Magazine Street	Suite 1005		New Orleans	LA	70130
			Department of Wildlife & Fisheries	Sierra Club/Della Chapter	P O Box 19469		New Orleans	LA	70179-046
			DH/HP Public Health/Sanitarian	Department of Culture Recreation & Tourism	P O Box 44426-CAP ANN 3rd		Baton Rouge	LA	70804
Mr.	Frank Delfes			Economic Development Administration	327 Congress Avenue	Suite 200	Austin	TX	78701
				P O Box 98000			Baton Rouge	LA	70898
				Room 210			New Orleans	LA	70160

LADOTD State of Louisiana Mail List

Ms.	Claudia Nissley	Director	Advisory Council	Historic Preservation	12136 W Bayaud Avenue #830	Lakewood	CO	80228-211-
			National Park Service	Superintendent	365 Canal Street	New Orleans	LA	70130
			US Environmental Protection Agency	Office of Groundwater	1445 Ross Avenue	Dallas	TX	75202-273
			Louisiana State University	Sea Grant Legal Program	170 Law Center LSU	Baton Rouge	LA	70803-101
		Commander	Comm/8th Coast Guard District	Hale Boggs Federal Building	501 Magazine Street	New Orleans	LA	70130-339
			Rivers, Trails & Conservation Asst	National Park Service	8857 B Sullivan Road	Baton Rouge	LA	70803
Mr.	Morton Wakeland		Marine & Wetlands Section	(6WQ-EM)	US Environmental Protection Agency	Dallas	TX	75202-273
Dr.	Eric Kalivoda	Deputy Assistant Secretary	Planning & Programming	Floodplain Management Program	DOTD-P.O Box 94245	Baton Rouge	LA	70804-924
Mr.	Michael Bourgeois		Department of Health and Hospitals	Division of Environmental Health	Section 01, Room 102	Baton Rouge	LA	70810
Mr.	Doug Vincent	Chief Engineer	Department of Health and Hospitals	Division of Environmental Health	Section 01, Room 102	Baton Rouge	LA	70810
Mr.	Mark S. Davis	Executive Director	Coalition to Restore Coastal LA	200 Lafayette Street Suite 500		Baton Rouge	LA	70801-120

November 10, 2000

Contract No. 008500.12

Project Development and Environmental (PD&E) Study
Bayou Barataria Bridge Replacement
Jefferson Parish, LA

RESUME OF CONFERENCE

DATE: October 18, 2000
LOCATION: LDOTD office in Baton Rouge
PURPOSE: Familiarization of environmental agency staff with project and required permitting.

<u>ATTENDANCE:</u>	<u>AFFILIATION:</u>	<u>TELEPHONE:</u>
Mrs. Liz Davoli	DOTD/28	(225) 248-4184
Mr. Robert Willmer	LADOTD	(225) 379-1313
Mrs. Rohnda Smith	Earth Search	(504) 865-8723
Mrs. Jill Yakubik	Earth Search	(504) 865-8723
Mrs. Michele Deshotels	DOTD	(225) 248-4192
Mrs. Janet Evans	Hartman Engineering	(504) 466-5667
Mr. Fred Swindle	David Volkert & Associates, Inc. (Volkert)	(334) 342-1070
Mr. Patrick Wilson	David Volkert & Associates, Inc. (Volkert)	(504) 486-6312
Mr. Paul Griggs	David Volkert & Associates, Inc. (Volkert)	(334) 342-1070
Mr. Kyle Parker	David Volkert & Associates, Inc. (Volkert)	(334) 342-1070
Mr. Eric Buckelew	David Volkert & Associates, Inc. (Volkert)	(334) 342-1070

DISCUSSION:

The meeting was held to familiarize State and Federal environmental agency staff with the project site and potential impacts, and to discuss the permitting requirements for each agency. The project involves a PD&E Study addressing roadway improvements associated with the replacement of the existing Bayou Barataria Bridge in Jean Laffitte. These improvements are needed to improve traffic flow, and may involve widening or relocating the existing SR 45 and SR 3257. Volkert is conducting the PD&E Study for the Louisiana Department of Transportation (LDOT).

Paul Griggs opened the meeting by describing the project and the bridge design criteria, particularly the vertical clearance requirements. He produced graphics which depict each bridge design, and discussed the merits and limitations of each design.

Several State and Federal agencies were invited to attend the meeting, including the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service. However, none of the agencies were able to send representatives to the presentation. The decision was made to proceed with the meeting, with the hope of addressing individual environmental concerns. The following issues were given consideration:

ENVIRONMENTAL CONSIDERATIONS

- **SOCIAL – POPULATION DISTRIBUTION**
ECONOMIC AND MINORITY ISSUES, ENVIRO JUSTICE, COMMUNITY IMPACT ASSESSMENT PROCESS, USE FLORIDA – FOCUS ON COMMUNITY IMPACT, NOT JUST “ENVIRO JUSTICE”
- **SALTWATER INTRUSION – COASTAL 2050**
- **HURRICANE EVACUATION**
CORPS? EVACUATION STUDY, BOAT TRAFFIC, VEHICULAR TRAFFIC, AND CARS PULLING BOATS, POSSIBLE FROM CORPS, JEFFERSON PARISH, OFFICE OF ENVIRONMENTAL PREPAREDNESS, “BASIN EFFECT”
- **FLOOD**
DR FAHADIA, L50 OFFICE OF ENVIRO STORM SURGE MODELING
WATER QUALITY—JEFFERSON, ORLEANS PARISH WEB SITE
CORPS HAS STORM SURGE AND WATER IMPACT SPEED OF EVACUATION FROM RISING WATER EITHER FLOOD OR WIND DRIVEN
GET NAMED STORMS: GEORGES, ANDREW @ HOUMA
- **LOUISIANA IRIS**
“AREA KNOWN” DATA
ENDANGERED OR THREATENED
SENSITIVE TO SALTWATER INTRUSION
- **LEVEE**
JEFFERSON PARISH – FISHER SCHOOL LEVEE
CORPS HAS A SIMILAR PROJECT ON BARATRIA SIDE, ONLY IN DISCUSSION
- **HISTORIC SITES**
CHECK BRIDGE FOR HISTORIC 52-YEARS-OLD
NUMEROUS SITES HAVE PRELIMINARY REPORT, UNDEWATER @ BRIDGE LOCATION AND APE-EXTENDED BECAUSE OF POTENTIAL FOR INCREASED TRAFFIC DUE TO ACCESS OF SITES, EROSION (WHICH IS ON-GOING) AND DEVELOPMENT AND DESTRUCTION
- **WATERFRONT BUSINESSES**
PUBLIC MEETING WILL BE ACTIVE
MAKE SHIPYARDS, REPAIR AND RENOVATION FACILITIES
- **LAND USE IMPACTS**
RESIDENTIAL
- **FARMLAND IMPACTS**
FLEMING PLANTATION
CATTLE AND CANE
FARMLAND IMPACT FORM
TIMBER HARVESTING
PORTABLE SAW MILLS?
- **SOCIAL IMPACTS**
COMMUNITY ASSESSMENT

- **RELOCATION IMPACTS**
RELOCATION ANALYSIS – VOLKERT TO DO
JIM DUSAY, REAL ESTATE ADMINISTRATION
- **ECONOMIC IMPACTS**
COST OF BRIDGE, SECONDARY DEVELOPMENT, _____
- **CONSIDERATIONS RELATED TO PEDESTRIANS AND BICYCLISTS**
DOUBLE CHECK STUDENTS, SCHOOL BUS ROUTES
WILL HAVE TO BE ADDRESSED
EASY TO CROSS BY PEDESTRIANS
NEGATIVE IMPACT IF BICYCLES USE BRIDGE, THEN APPROPRIATE
- **AIR QUALITY CAL 3 ANALYSIS**
- **NOISE ANALYSIS**
STATE POLICY
STAMINA TNM-CALL
- **WATER QUALITY IMPACTS**
WETLANDS AND DISCHARGE
- **PERMITS**
YES
CORPS
COAST GUARD
WATER QUALITY
PUBLIC EASEMENT
- **WETLAND IMPACTS**
1987 MANUAL
- **WATER BODY MODIFICATIONS**
CANALS
NAVIGABLE
- **FLOODPLAIN ASSESSMENT**
- **WILDLIFE RESOURCE IMPACTS**
RIVER SPECIES
- **THREATENED AND ENDANGERED SPECIES**
RARE FERN 15 YEARS AGO - BIG ISSUE
- **HISTORIC AND ARCHAEOLOGICAL PRESERVATION**
- **HAZARDOUS MATERIALS**

FARMS, UST STATIONS
CORPS _____ STUDY FOR THIS AREA
LAND USE HISTORY DATA
ASTM "REASONABLE JUDGEMENT" NOT DIRECT INTERVIEWS OF PROPERTY OWNERS
- **VISUAL/AESTHETIC IMPACTS**

YES, BRIDGE MORE OBVIOUS, HISTORIC VISUAL
AVOID VIEW SHED FROM FLEMING PLANTATION
VIEW STRAIGHTOUT TO LAKE ES
FLEMING CEMETERY SAME PROTECTION OF EXISTING VIEW SHED
OTHER CEMETERIES HAVE LIMITED PROTECTION OF TRADITIONAL
LANDSCAPE
EXISTING SCENE IS OF HOME DEV

- **CONSTRUCTION IMPACTS**

SPOIL

WAYNE AMOND

BARGE CONSTRUCTION CHANNEL

NO -- EVALUATE CONSTRUCTION TECHNIQUES

- **MINERAL RESOURCES**

OIL AND GAS - JIM SUSAY, LAND OWNER

- **ENERGY IMPACTS**

GENERALLY

- **MITIGATION**

CORPS - ACTIVE PRIMATE

COMMERCIAL WETLAND BANKS MITIGATION \$2K & \$3K/ACRE

MARSH IMPACTS

HABITAT RESTORATION

PERSONAL DISLIKE FOR CHINESE TALLOW POPCORN

MITIGATE IMPACTS OUT OR INSIDE OF LEVEE

WATERWAY USERS, TRAVEL CANALS, ACCESS TO GULF AND _____ (TO
WHERE)?

WHAT VESSELS ARE USED OVER 70-FOOT HEIGHT, _____ BARGES, CRANES,
JACK-UP DRILLING PLATFORMS, ETC. WHAT ELSE?

20-FOOT MINIMUM VERTICAL BASQUILE BRIDGE

CAN DROP MID-LEVEL VERTICAL BRIDGE OF 40-FOOT BASQUILE IS
WORKABLE

LANEAGE BASED ON HIGHWAY CAPACITY _____

NEED VOLUME OF TRAFFIC TO GO FROM 2 LANES TO 4 LANES

Hinds		Rouge	7998	
Marnie Winter	Jeff. Parish	Jefferson	(504)736-6443	mwinter@jeffparish.net
Jerry Pitts	FHWA	Baton Rouge	(225)757-7618	jerry.pitts@fhwa.dot.gov
Virgil Page	FHWA	Baton Rouge	(225)757-7622	

State of Louisiana

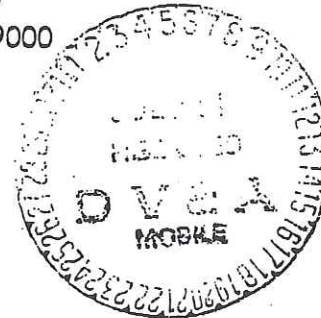


James H. Jenkins, Jr.
Secretary

Department of Wildlife & Fisheries
Post Office Box 98000
Baton Rouge, LA 70898-9000
(225) 765-2800

M.J. "Mike" Foster, Jr.
Governor

June 25, 2001



Mr. Kyle E. Parker
Volkert & Associates, Inc.
P.O. Box 791115
New Orleans, LA 70179-1115

RE: Bayou Barataria Bridge Replacement and Roadway Improvements, Route LA302, LA Dept. of Transportation and Development, Jefferson Parish, Jean Lafitte, LA

Dear Mr. Parker:

Personnel of the Habitat Section of the Fur and Refuge Division have reviewed the preliminary data for the captioned project. Your project area is in the coastal zone. Contact the State of Louisiana Department of Natural Resources Coastal Management Division to determine if a coastal use permit is required. Proposed construction will impact Bayou Barataria forest, a coastal live oak-hackberry site on the East bank of Bayou Barataria. The occurrence was ranked AB, when the site was last visited by the LNHP ecologist on 3-15-88. A rank of "AB" is defined as Good to Excellent, this rank represents a comparative evaluation summarizing factors such as quality, condition, viability and defensibility. No current information on the condition of Bayou Barataria forest is available from the database. In reviewing our database, no other rare, threatened, or endangered species or critical habitats were found within the area of the captioned project that lies in Louisiana. 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 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. They 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. The Louisiana Natural Heritage Program requires that this office be acknowledged in all reports as the source of all data provided here. If you have any questions or need

additional information, please call Louisiana Natural Heritage Program Data Manager Jill Kelly at 225-765-2643.

Sincerely,

A handwritten signature in cursive script that reads "Gary Lester".

Gary Lester, Coordinator
Natural Heritage Program

GDL:gdl

enclosure: Invoice # 01062502

Contract No. 008500.10
 State Project No. 700-26-0239
 Bayou Barataria Bridge
 (LA 3257 to LA 45)
 Jefferson Parish

RESUME OF CONFERENCE

DATE: February 15, 2001
LOCATION: U. S. Army Corps of Engineers, New Orleans
PURPOSE: Agency Coordination Meeting

<u>ATTENDANCE:</u>	<u>AFFILIATION:</u>	<u>TELEPHONE:</u>
Michele Deshotels	LADOTD	(225) 248-4192
Liz Davoli	LADOTD	(225) 248-4184
Jan Grenfell	LADOTD	(225) 248-4183
David Miller	LADOTD	(225) 379-1309
Robert M. Willmer	LADOTD	(225) 379-1313
Gary LeBlanc	LADOTD	(225) 379-1370
Bob Mahoney	FHWA	(225) 757-7624
Roger Swindler	COE Permit	(504) 862-2278
David Frank	U.S. Coast Guard Bridge Branch	(504) 589-2965
Brian Haase	NMFS	(225) 389-0508
Rick Hartman	NMFS	(225) 389-0508
Bill Pittman	Permit Coordinator/CMD	(225) 342-6461
Fred Dunham	LA Dept of Wildlife & Fish (Biologist)	(225) 765-2367
Rocky Hinds	DNR/CMD	(225) 342-7998
Gregory J. DuCote	LDNR/CMD	(225) 342-5052
Patti Holland	U.S. Fish & Wildlife Service	(337) 291-3121
Jason Smirh	Jefferson Par Dept Environmental Aff.	(504) 731-4612
Patrick Wilson	Volkert & Associates	(504) 486-6312
Paul Griggs	Volkert & Associates	(504) 486-6312
Kyle Parker	Volkert & Associates	(334) 342-1070
Fred Swindle	Volkert & Associates	(334) 342-1070
Paul Looney	Volkert & Associates	(334) 342-1070
Jan Evans	Hartman Engineering, Inc.	(504) 466-5667
Dan Judlin	Hartman Engineering, Inc.	(504) 466-5667

DISCUSSION:

Twenty-four (24) individuals were present with representatives from the LADOTD, US Army Corps of Engineers (COE), NMFS, FHWA, Jefferson Parish Department of Environmental Affairs, Volkert, Hartman Engineering, the CDM biologists, U.S. Coast Guard (USCG), DNR/CDM, U.S. Fish and Wildlife Service (USFWS). There was no one in attendance representing the EPA.

Attendees were introduced, and the LADOTD offered opening comments and then turned the meeting over to Volkert for a presentation. The presentation concluded with the alignments being described on aerial photograph and other mapping.

Comments from different attendees that were present concerning the project are as follows:

1. Mr. David Frank (USCG) stated that the new bridge would not likely be permitted within 0.5 mile of a bend in the bayou such as there is near the Fleming Canal location. Any alternate would have to totally span the bayou at that location. They would permit a new bridge within 70 feet of the existing bridge so as to allow unimpeded operation of the existing bridge while the new bridge is being built. USCG also pointed out the limitations of a horizontal lift bridge. This includes limitation of vessel air draft to the maximum lift of the bridge, and the aesthetic impact of the necessary 130' towers for the lift mechanism.
2. Ms. Patti Holland (USFWS) was concerned by the footprint being presented for several of the bridge/roadway options. She was assured that several of the designs being shown were used to illustrate the impact of 60/45 mph design criteria, and would not be used in a final design. She wanted to know if there was any way that a bridge design at Pipeline Road could avoid crossing the oil/gas canal.
3. Mr. Frank (USCG) inquired as to the limits of the levee on the west side. All alternates terminate within the levee, north of Pallet Canal.
4. Ms. Holland (USFWS) requested clarification at Pallet Canal. USFWS stated that it looked like the 60 mph ramp was again displayed on the 45/30 mps layout. Volkert responded that the 60 mph curve was indeed present, but that it was because the alignment was held this way so that it would not cross the canal twice. Ms. Holland further stated that the wetland migration land in the area of the Pallet Canal does not extend to the east at Bayou Barataria. This was verified by recent field review and was not in the published data.
5. Mr. Frank (USCG) asked clarification by LADOTD whether they were looking at a full-time operator for the 45-foot bascule clearance. LADOTD responded that a part-time operator would be investigated only if a 73-foot vertical clearance bascule was being considered. A part-time operator is not being considered for the 45-foot bascule bridge at this location.

Bridge height was discussed, and the Coast Guard stated that the requirements for navigation are that the clearance must meet the reasonable needs of navigation. If North American Marine or any other waterway user is currently using the waterway with vessels higher than 100 feet air clearance, then this must be considered during the Coast Guard permitting process.

6. Mr. Bob Mahoney (FHWA) thought the numbering system used to identify the bridge alignment options was confusing. It will be simplified by reduction of alternate heights and locations.
7. Mr. Rocky Hinds (LDNR) and Mr. Rick Hartman (NMFS) were concerned about impacts to wetlands for most of the presented alignment options. The agency desire is to avoid all wetland impacts. They wanted to know what mitigation measures were being contemplated. The Jonathan Davis Wetland Restoration project was mentioned as a site near this project. NMFS stated that the J. Davis wetland project was not in the nearby area. Volkert will look into what projects are available for mitigation.
8. Ms. Holland (USFWS) stated that the end-on-construction techniques would be desirable. She also stated the quality of wetlands will vary greatly throughout the project. There are "low-level" quality wetlands. Some areas within the levees are also wetlands.
9. As stated by Mr. Fred Dunham of the Louisiana Department of Wildlife and Fisheries, some areas are considered Essential Fish Habitat (EFH). If there are impacts to fish habitat areas, then formal consultation needs to be initiated. LADOTD stated that formal consultation should be initiated for this project. Volkert was instructed to prepare the documents necessary to begin this process once it has been determined that fish habitat impacts will occur.
10. The bridge cross-section was discussed. Volkert indicated that a two-lane road was required for traffic needs. Typical cross-section would be two twelve foot travel lanes and two ten foot shoulders. This is a total of 44 feet of width. LADOTD discussed that the project may go with a 38-foot cross-section by narrowing the shoulders. (Subsequent to the meeting, LADOTD decided to use a 32-foot cross section for the tangent and movable section of the bridge which is two 12-foot lanes and two 4-foot shoulders in the curves, the inside should will go from 4 foot to 10 foot for sight distance requirements. This is the 38-foot section which is two 12-foot lanes, one 4-foot shoulder and one 10-foot shoulder.)
11. Mr. Frank (USCG) wanted to know what studies had been done to determine marine traffic patterns. He wanted an explanation of what had caused the required bridge height to increase from 25 to 45 feet. Volkert explained the Vessel Height Study and its results.
12. Mr. Rocky Hinds (DNR) stated that Coastal Zone permit requirements are easier to obtain in "fast-land" and "developed land." Volkert was directed to locate and identify areas inside levees where fast-land and developed land may occur. Fast-land was defined as land at 5-foot elevation or isolated under levee with a pumping system in place.
13. Mr. Frank (USCG) requested an alternate south of the existing Pallet Canal to be studied. He stated that there is an economic development potential for the bridge replacement. Economic development is currently limited by the 70-foot existing width of the swing bridge.
14. Ms. Michele Deshotels (LADOTD) said that bridge designs first considered human safety. Ms. Deshotels also stated that input from the Public Meeting had emphasized

the public's desire for a higher elevation than presented by the existing bridge. Ms. Deshotels voiced the public concern that the replacement bridge needs to address viable business needs. This would include a need for unlimited vertical clearance.

15. Mr. Brian Haase (NMFS) asked about flood conditions in the proposed bridge areas. He also wanted to know if the alignments could be repositioned to impact the wooded wetlands rather than the emergent wetlands.
16. Mr. Fred Dunham (Louisiana Department of Wildlife & Fisheries) wanted to ensure that there would be no dredging proposed for any of the bridge alignments.
17. Ms. Holland (USFWS) expressed her agency's concern is that bridge alignment impacts not occur outside the existing roadways to minimize the opportunity for secondary impacts. She also stated that there were no T/E species concerns within the project area.
18. Mr. Haase (NMFS) emphasized that impacts to emergent marsh would be considered as impacting Essential Fish Habitat. If the impacts to emergent marsh are minimized to a couple of acres, there would likely be no mitigation required.
19. Mr. Mahoney (FHWA) asked for clarification to the EFH consultation requirements. FHWA is responsible for initiation of the process. They can delegate the responsibility to LADOTD. FHWA also had SHPO concerns about the project.

Following the meeting, a discussion was held with Ms. Michele Deshotels and Ms. Liz Davoli concerning the use of the Power Point presentation for the Public Involvement Meeting. LADOTD indicated items needed for emphasis.

BAYOU BARATARIA BRIDGE REPLACEMENT ALTERNATES COMPARISON SUMMARY

Alternate	Roadway (length)	Bridge (length)	Total (length)	Noise Sites	Wetlands Affected (acres)	Potential Contamination Sites	Historic Sites		Archaeological Sites		Relocations		
							*NRHP Eligible	*NRHP Potential	*NRHP Undetermined	Bus	Res	NPO**	Farms
Pipeline 2	V	V	V	V	V	H	ES	ES	ES	H	H	H	V
Paillet North 1													
Paillet South 1													

COSTS				
Alternate	Construction	R.O.W.	Utility Relocation	TOTAL
Pipeline 2	V	H	H	
Paillet North 1				
Paillet South 1				

Alternate	LA 45 IMPROVEMENTS	
	Length (feet)	Construction Cost
Pipeline 2	V	V
Paillet North 1		
Paillet South 1		

* NRHP - National Register of Historic Places
 ** NPO - Non-Profit Organization

NOTE: The above is based on a bascule bridge with a closed vertical clearance of 45 feet and an unlimited vertical clearance when open. The bridge will also have a horizontal clearance of 150 feet.

V = VOLKERT AND ASSOCIATES, H = HARTMAN ENGINEERING, ES = EARTHSEARCH

**Summary of the Public Meeting for
State Project No. 700-26-0239
F.A.P. No. HP-TO21 (015)
Bayou Barataria Bridge
(LA 3257 to LA 45)**

The following is a summary of the Public Meeting held on Tuesday, March 20, 2001 for the Bayou Barataria Bridge replacement in Jefferson Parish, Louisiana. The meeting was held in the Jean Lafitte Auditorium in Jean Lafitte, Louisiana.

The meeting was attended by approximately 46 citizens. One media representative and ten people representing the Louisiana Department of Transportation and Development (LDOTD) and the Federal Highway Administration (FHWA) were in attendance. One elected official, Mayor Kerner, was present. Eight people representing the consultants were in attendance. The total turnout was 67 people.

A "Bridge Location and Configuration Location Opinion Poll" was given. Twenty-six completed polls were received. The results of these polls are summarized as follows (also see attached graphs):

- Twenty-five citizens prefer a vertical lift bridge.
- One citizen prefers a bascule bridge.
- One person indicates being **strongly opposed** to Pipeline 1.
- One person indicates being **strongly opposed** to Pipeline 2.
- One person indicates being **strongly in favor** of Paillet North 1.
- One person indicates being **neutral** to Paillet North 2.
- One person indicates being **strongly opposed** to Paillet North 3.
- Two people indicate being **strongly opposed** to Paillet South 1.
- One person indicates being **neutral** to Paillet South 1.
- Twenty-two people indicate being **strongly in favor** of Paillet South 1.
- One person indicates being **neutral** to Paillet South 1.

There were eighteen written comments received concerning the project. There were also oral comments received and recorded during the public meeting.

Specific comments addressed concerning this project include:

- Eleven people stated that they prefer to have a bascule bridge.
- One person preferred a vertical lift bridge.
- Fourteen people stated that they prefer Paillet South 1 for the location of the bridge.
- Four people explained that they prefer Paillet South 1 because this location would affect fewer homes than other locations would.
- Two people commented that they prefer a vertical lift bridge over a bascule bridge because a vertical lift bridge would open and close more quickly than a bascule bridge, thus leaving less waiting time for cars on the bridge.

**Notice
Agency Coordination Meeting
Bayou Barataria Bridge Replacement EIS**

Contact: Roger Swindler – USACE Project Manager – 504.862.2278

Date: Tuesday, May 22, 2001.

Time: 1:00 PM

Location: Room 386
U.S. Army Corps of Engineers Headquarters
7400 Leake Avenue
New Orleans, LA 70118-3651

008570.12

Sponsoring Agency: LaDOTD

Lead Agency: FHWA

The project is a joint effort of the Louisiana Department of Transportation and Development; U.S. Department of Transportation, Federal Highway Administration; U.S. Coast Guard; and the U.S. Army Corps of Engineers.

This is an Agency coordination and update meeting for the Bayou Barataria Bridge replacement EIS. All agencies that have an interest in the project are invited to attend. Of particular concern will be comments and permitting issues related to the project. Based on comments received at the last meeting and considering engineering constraints, several alternate locations and configurations have been determined.

This meeting should address actual impacts involved with each alternative and specific agency concerns for each alternative. LaDOTD is requesting specific agency input into potential concerns at this meeting.

Prior to the meeting alignments for the alternatives will be provided.

Please contact Mr. Swindler or Mr. Kyle Parker (334.342.1070. ext. 109) with any questions concerning this meeting.

PREFIX	FNAME	LNAME	AGENCY	DEPARTMENT	ADDRESS1	ADDRESS2	ADDRESS3	CITY	ST	ZIP
Mr.	Dwight	Bradshaw	Louisiana Department of Environmental Quality		201 Evans Road	Building 4, Suite 420		New Orleans	LA	70123
Mr.	Clay	Carter	Louisiana Department of Administration	State Land Office	PO Box 44124			Baton Rouge	LA	70804
Ms.	Maria	Davidson	Louisiana Department of Wildlife & Fisheries	Habitat Section	PO Box 98000			Baton Rouge	LA	70898
Mr.	Greg	DuCole	Louisiana Department of Natural Resources	Coastal Management Division	Interagency Affairs	PO Box 44487		Baton Rouge	LA	70804-4487
Mr.	Fred	Dunham	Louisiana Department of Wildlife & Fisheries	Habitat Section	PO Box 98000			Baton Rouge	LA	70898
Ms.	Beverly	Eltridge	US Environmental Protection Agency	Marine and Wetlands Section	77 Florida Avenue	Suite B-21		Baton Rouge	LA	70801
Mr.	David	Frank	US Coast Guard	Bridge Administration Branch	8th Coast Guard Division	Hale Boggs Federal Bldg.	501 Magazine Street	New Orleans	LA	70130-3396
Mr.	Bill	Good	Louisiana Department of Natural Resources	Coastal Restoration Division	PO Box 94396			Baton Rouge	LA	70804-9396
Mr.	Rick	Hartman	National Marine Fisheries Service		Louisiana State University			Baton Rouge	LA	70803-7535
Mr.	Rocky	Hinds	Louisiana Department of Natural Resources	Coastal Management Division		PO Box 44487		Baton Rouge	LA	70804-4487
Ms.	Patti	Holland	US Fish and Wildlife Service		646 Cajundome Boulevard			Lafayette	LA	70506
Mr.	Michael	Jansky	US Environmental Protection Agency	Marine and Wetlands Section	1445 Ross Avenue	Suite 1200		Dallas	TX	75202-2733
Mr.	Quin	Kinler	USDA NRCS		PO Box 16030			Baton Rouge	LA	70893
Mr.	Luke	LeBas		Coastal Restoration Division	625 N 4 th Street	PO Box 94396		Baton Rouge	LA	70804-9396
Mr.	Gary	Lester	Louisiana Natural Heritage Program		PO Box 98000			Baton Rouge	LA	70898-9000
Mr.	Richard	Prather	US Environmental Protection Agency	Marine and Wetlands Section	1445 Ross Avenue	Suite 1200		Dallas	TX	75202-2733
Mr.	Marcus	Redford	US Coast Guard	Bridge Administration Branch	8th Coast Guard Division	Hale Boggs Federal Bldg.	501 Magazine Street	New Orleans	LA	70130-3396
Mr.	Jerry	Spohrer			7001 River Road	PO Box 608		Marrero	LA	70072
Mr.	Jason	Smith	Jefferson Parish Coastal Management Program	4901 Jefferson Highway	Suite E			Jefferson	LA	70121
Mr.	Kerry	Sl. Pe	Barataria Terrebonne National Estuary Program	320 Audubon Drive	N Babington Hall Room 105	Nicholls State University		Thibodaux	LA	70301
Mr.	Roger	Swindler	US Army Corps of Engineers	New Orleans District Office	7400 Leake Avenue			New Orleans	LA	70118-3651
Ms.	Mamie	Winter			1221 Elmwood Park Blvd.	Suite 1006	Yennl Building	Jefferson	LA	70123

Contract No. 008500.10
Bayou Barataria Bridge Replacement
Environmental Impact Study

RESUME OF MEETING

DATE: May 22, 2001

LOCATION: U. S. Army Corps of Engineers Conference Room, New Orleans

SUBJECT: Summary of Agency Meeting

Attendees - List Attached

The purpose of the meeting was to present the current status of the project, and answer questions and receive agency comments concerning the alternatives chosen for analysis in the Environmental Impact Statement.

Representatives of the Louisiana Department of Transportation and Development (LaDOTD) and the Federal Highway Administration (FHWA) representatives were present. Representatives from the cooperating agencies (USACE and USCG) were present.

Agency representatives who attended were from Louisiana DNR, Louisiana Department of Wildlife and Fisheries, National Marine Fisheries Service, and Jefferson Parish. EPA was not represented.

Presentation of the project progress to date was given by Kyle Parker. He also presented information concerning the habitats likely to be impacted by the project.

The floor was opened for questions.

David Frank (U.S. Coast Guard [USCG]) requested that all previous alternatives be discussed in the EIS, especially the alternatives from the public involvement meetings. Additionally he requested that the analysis of alternatives be included in the EIS, especially with explanations addressing the reason alternatives were not selected for analysis.

Bob Willmer (DOTD) – Wanted to know what Essential Fish Habitat was. D. Frank also wanted to know what shading impacts were. The question was deferred to P. Looney. Because Bren Haase (NMFS) was present, P. Looney deferred to him.

Bren Haase (NMFS) explained the concept of Essential Fish Habitat as protected areas for certain fish species based on Gulf of Mexico Fisheries Management Plans. (This usually includes nursery habitat in the project area). He then explained the basic concept of shading as it applies to sea grasses and that shading impacts would be different in emergent wetlands. NMFS would be more concerned with an east-west

oriented structure. Curves will present less potential for shading. He was unsure of the actual shading impacts in emergent wetlands. Paul Looney requested information concerning the scientific literature on shading in wetland areas.

Bob Willmer wanted to ensure that the EIS alternatives analysis included treatment of both the vertical lift and the bascule bridge concepts. Paul Griggs (Volkert) explained that the vertical lift and the bascule options were presented in the public involvement meeting.

Jerry Pitts (FHWA) asked about the cost difference between the bascule and the vertical lift bridge types. David Miller (DOTD) said that the cost estimates had not been completed, but the bascule appeared to be cheaper. Mr. Pitts then asked if the bascule is cheaper, why not eliminate the vertical lift. Mr. Miller said that would likely be the case. David Frank suggested that the Leeville mid-level vertical-lift bridge on Bayou Lafourche could be used as an example of some project impacts expected from this bridge type.

David Frank asked about the potential for increased vessel use at any of the proposed locations with the upgraded facility. Paul Griggs explained that it was very likely that the vessel use had been already covered in the existing vessel height survey report. Paul Griggs then explained the situation at LeBlanc seafood. The owner's contention is that the new bridge location would adversely affect his business. Volkert is currently doing a supplemental vessel height survey around the LeBlanc location.

Some discussion of minor alignment changes followed concerning location of the bridge north of LeBlanc Seafood. Paul Griggs stated that there appears to be no viable alternative location north of those proposed for further study due to development. Northern locations would have impacts on the residents. At each public meeting, family relocations were stressed as undesirable.

Rocky Hinds (LaDNR/CMD) spoke about the agency concerns for the Paillet south alignment. He stated that it would be likely that agencies would require end-on construction of that particular alignment because of the habitat potentially impacted. He also stated that the impacts in that location could require extensive mitigation and as much as 20 years of follow-up monitoring. David Miller said that end-on construction would be a consideration if the costs are reasonable. He said that impacts to sensitive locations would be considered. He believed that costs for end-on construction at the curves would be very difficult.

At this point Kyle Parker (Volkert) specifically requested a discussion of construction impacts. Regarding the Paillet South alternative, Paul Griggs stated that he thought the existing canals in the area could assist in the construction by minimizing access roads and providing a means to transport material to the construction site.

Kyle Parker pointed out that the west side of the Paillet North alignment would be within the existing levee system and should be permissible. Paul Griggs stated that the Paillet South alignment would eliminate 50% of the traffic through the neighborhood north of the Paillet Canal. D. Frank pointed out that there would be increased traffic north. Paul Griggs revised his estimate to be a net loss of 20-30% traffic in the area.

Jan Grenfell (DOTD) emphasized that public input has been considered in the proposed alignments throughout the process.

David Frank suggested that there could be some type of notification process for bridge openings, possibly specific opening times and dates. Pat Wilson (Volkert) stated that any bridge opening restrictions would adversely affect LeBlanc seafood. David Frank then asked whether the bridge could be flipped so the structure was north of LeBlanc Seafood. Paul Griggs emphasized that development north of the proposed locations was so developed that there were no other locations available. He emphasized that the current locations also had the advantage of no housing relocations. Bob Willmer stated that the public made it clear in the public involvement meetings that they did not want relocations.

David Miller (DOTD) asked when the new vessel height data would be completed. Paul Griggs said that the data was still being completed and would be available by the end of the week. This was followed by a discussion of the potential for higher vessels to lower their booms to access the bridge without opening it (Lowerable appurtenances).

Another issue was raised concerning the potential difference in timing for opening and closing of the bascule vs. the vertical lift bridges. David Miller said that the timing really was dependent on the mechanical means of moving the bridge works.

David Frank asked if there had been any consideration of buying out LeBlanc Seafood and relocating them. Pat Wilson pointed out that it was a fairly large operation and this could be cost prohibitive.

Jan Evans asked whether there was going to be any consideration for those vessels using LeBlancs continuing north. Paul Griggs said that the existing and new data would provide data that would allow for some interpretation of the already existing vessel counts. While there would potentially be more than five openings per day, there would definitely be less than what is currently experienced.

Jerry Pitts asked if there had been any attempt to count vessels at the LeBlanc dock facility. Pat Wilson said that the owner did not want anyone on his dock. David Frank asked if we could request business information from LeBlanc to support his claims. He was told that those numbers were not available.

Paul Griggs stated that the vessel numbers found during the current study would be seasonally adjusted. David Miller pointed out that the larger vessels are likely gone for a week or more, David Frank suggested that LaDWF could supply information concerning boats using the bayou.

Jerry Pitts asked if the Pipeline alternative would be cheaper. Kyle Parker stated that while the costs have not been completed, the Pipeline alternative likely could be cheaper. He pointed out the facts that Pipeline was located within the levee on the west side, close to the levee on the east side, and had limited impact to EFH.

Paul Griggs asked for information from Earth Search and Hartman Engineering concerning their individual reports. Rhonda Smith (Earth Search) said that they were nearly finished with their surveys on the west side and there were no areas of concern. Jan Evans (Hartman Engineering), stated that they had performed a data base search for the entire corridor concerning their contamination report and had not limited their search to the three proposed locations.

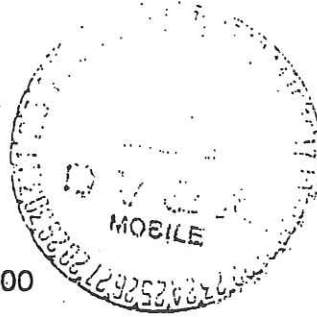
Jerry Pitts wanted to know how far away the project was from the Public hearing. It was stated that the public hearing was not the next step in the NEPA process for this project. David Frank asked if the Purpose and Need for the project had been completed. He was told it had been reviewed internally and would be available soon.

With no further questions, the meeting was dismissed.

cc: Kyle Parker
Pat Wilson

Attendees: Bayou Barataria Bridge Replacement
 Agency Coordination Meeting
 May 22, 2001
 New Orleans, Louisiana

Name	Agency	Location	Phone	Email
Pat Wilson	Volkert and Associates	New Orleans	(504)486-6312	pwilson@volkert.com
David Miller	La DOTD	Baton Rouge	(225)379-1309	dmiller@dotd.state.la.us
Robert M. Willmer	LaDOTD	Baton Rouge	(225)379-1313	rwillmer@dotd.state.la.us
Kirk Zerinque	LaDOTD	Baton Rouge		Kzerin1@hotmail.com
Liz Davoli	LaDOTD	Baton Rouge	(225)248-4184	edavoli@dotd.state.la.us
Jan Grenfell	LaDOTD	Baton Rouge	(225)248-4183	jgrenfell@dotd..state.la.us
Roger Swindler	USACE	New Orleans	(504)862-2278	roger.d.swindler@mvn02.usace.army.mil
Jan Evans	Hartman Engineering	Kenner	(504)466-5667	jevans@harteng.com
Rhonda Smith	Earth Search	New Orleans	(504)865-8723	rsmith@earth-search.com
Bill Farr	FHWA	Baton Rouge	(225)757-7615	William.farr@fhwa.dot.gov
Joe Bloise	FHWA	Baton Rouge	(225)757-7603	Joe.bloise@fhwa.dot.gov
Bren Haase	NMFS	Baton Rouge	(225)389-0508	Bren.haase@noaa.gov
Fred Dunham	LDWF	Baton Rouge	(225)765-2367	Dunham fo@wlf.state.la.us
Jason Smith	Jeff. Parish. Dept. Env. Affairs	Jefferson	(504)731-4612	jsmith@jeffparish.net
Paul Griggs	Volkert & Assoc.	New Orleans	(504)486-6312	pgriggs@volkert.com
David Frank	USCG	New Orleans	(504)589-2965	dfrank@d8.uscg.mil
Paul Looney	Volkert & Assoc.	New Orleans	(504)486-6312	plooney@volkert.com
Kyle Parker	Volkert & Assoc.	New Orleans	(504)486-6312	kparker@volkert.com
Rocky	LaDNR/CMD	Baton	(225)342-	rockyh@dnr.state.la.us



October 23, 2000

www.volkert.com


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P.O. Box 7434
Mobile, Alabama 36670-0434
334.342.1070
Fax 334.342.7962
volkert@volkert.com

#231

Volkert Contract No. 008500.12
Bayou Baritaria Bridge Replacement and roadway improvements
Route LA 302
Jefferson Parish
Jean Lafitte, LA

Mr. David Furge, Field Supervisor
US Fish and Wildlife Service
646 Cajundome Blvd.
Lafayette, LA 70506

**THE PROPOSED ACTIVITIES WOULD NOT
SIGNIFICANTLY AFFECT LISTED OR
PROPOSED THREATENED OR ENDANGERED
SPECIES**


ENDANGERED SPECIES COORDINATOR
U.S. FISH & WILDLIFE SERVICE
LAFAYETTE, LOUISIANA
DATE: NOV 9, 2000

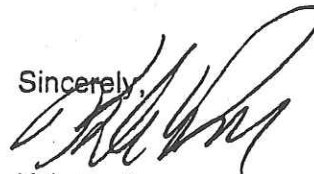
Dear Mr. Furge:

Volkert has been selected to perform engineering and environmental studies for a proposed bridge replacement over Bayou Baritaria and associated roadway improvements to Route LA 302.

Mapping of the proposed project is enclosed. Volkert requests that you review the enclosed information in accordance with the Fish & Wildlife Coordination Act (48 Statute 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act of 1973 (87 Statute 884, as amended; 16 U.S.C. 1531 et seq.) and provide correspondence regarding federally listed species that may occur in the project area.

Thank you in advance for your attention to this matter. If you have any questions, please contact me at (334) 342-1070.

Sincerely,



Kyle Parker
Vice President
Volkert Environmental Group, Inc.

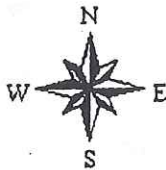
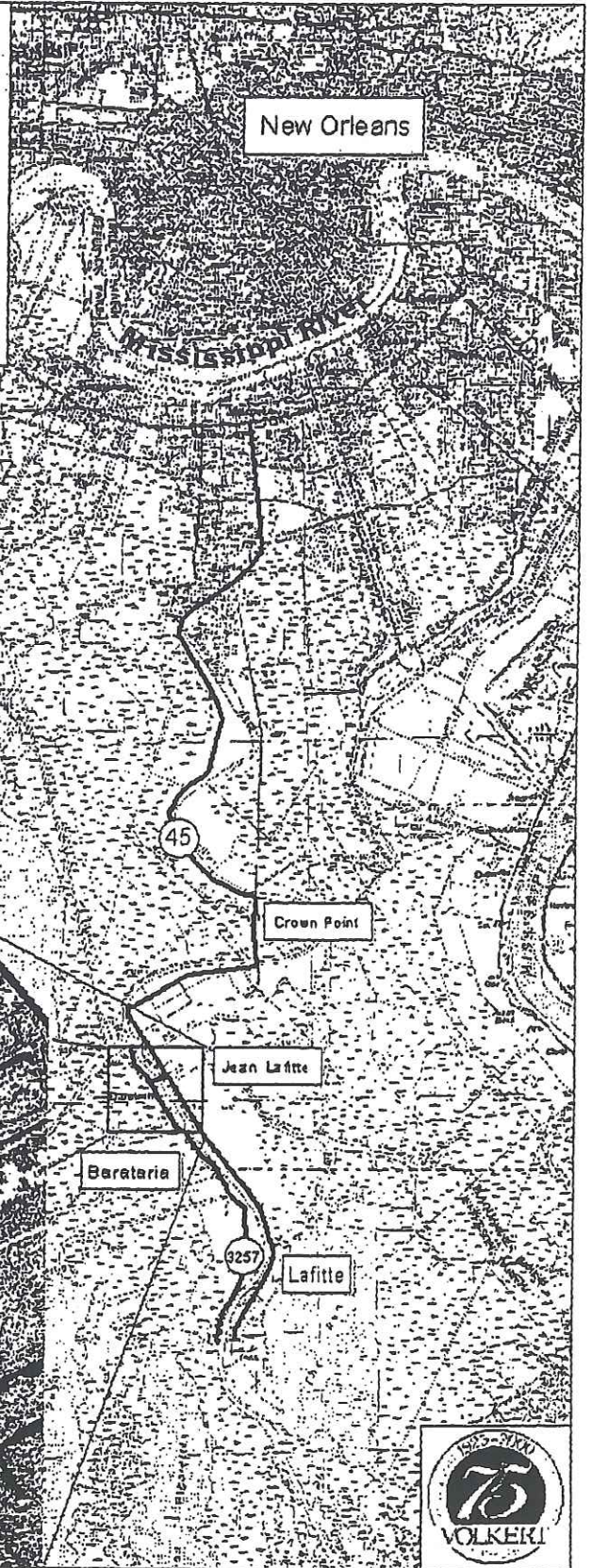
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Enclosures

Office Locations:

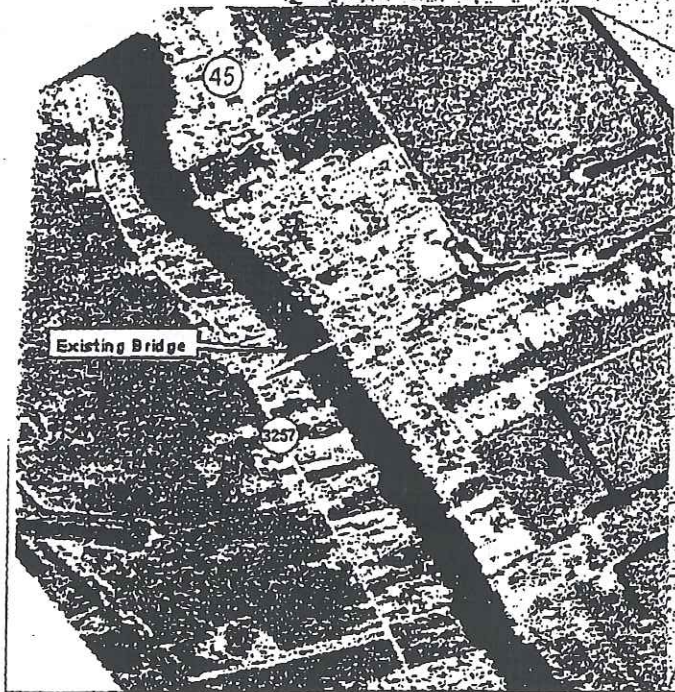
Mobile, Birmingham, Gulf Shores, Alabama • New Orleans, Louisiana • Ft. Walton Beach, Miami, Tampa, Florida • Dalton, Georgia
Chattanooga, Tennessee • Alexandria, Virginia • Washington, D.C.



Vicinity Map
Bayou Baratavia Bridge
State Proj. No. 700-26-0239
Jefferson Parish



Note: Maps Not To Scale



**Summary of the Public Meeting for
State Project No. 700-26-0239
F.A.P. No. HP-TO21 (015)
Bayou Barataria Bridge
(LA 3257 to LA 45)**

The following is a summary of the Public Meeting held on Thursday, October 26, 2000 for the Bayou Barataria Bridge replacement in Jefferson Parish, Louisiana. The meeting was held in the Jean Lafitte Auditorium in Jean Lafitte, Louisiana.

The meeting was attended by approximately 126 citizens. Two elected officials were present. One media representative and nine people representing the Louisiana Department of Transportation and Development (LDOTD) and the Federal Highway Administration (FHWA) were in attendance. Eleven people representing the consultants were in attendance. The total turnout was 149 people.

There were eight written comments received concerning the project. There were also oral comments received and recorded during the public meeting.

Specific comments pertaining to this project can be summarized as follows:

- Seven citizens raised concerns about the maintenance of the current bridge and its condition until a new bridge can be built
- Maintenance issues included no paths for pedestrians and bicyclists, lack of grid on the grid plate, and the smooth steel surface that is especially slick when dew is on the bridge
- Two citizens suggested setting a curfew for the existing bridge in order to limit the number of times the bridge can be opened and thus potentially prevent traffic problems
- Six citizens would like for the new bridge to be a high-span fixed level bridge in order to aid in emergency evacuations and to eliminate the need for opening the bridge for marine traffic to pass through the waterway
- Five citizens commented on the positive economic impact that would result from the construction of a new bridge by allowing marine industries to be more competitive in the area and bringing more people and business to the Barataria area
 - The Jefferson Parish Economic Development Commission found in a preliminary study that the Harvey Canal would have an increase of at least \$50 million per year due to improved access created by the new bridge. The final study will be available in mid-January 2000.
- One citizen disapproved of the project and wanted to spend the money on maintenance of the bridge
- Eight citizens recommended that they preferred to have the bridge built in the original location in order to use the right-of-way already obtained by the state
- Twelve citizens mentioned the need for the new bridge
- Two citizens discussed the flooding that occurs during high tides due to the lack of levee protection
- One citizen stated that the 125 foot horizontal clearance and the 73 foot vertical clearance is critical for marine traffic
- The question of funding was raised by two citizens. It was explained that funding would be 80/20 between the state and the federal governments.

- One citizen voiced concern over why the state was spending so much money on the environmental studies and why the state obtained right-of-way that was wetlands
- Two people said that they would prefer to move the location of the bridge further south because more people live on that side
- One citizen asked why new studies have to be performed if they were done approximately fifteen years ago when the Larose/Lafitte project was underway
- Two citizens asked why it took so long for the state to begin a project for the construction of a new bridge when the right-of-way was already obtained so many years ago
- One citizen sent in a written comment supporting a high-rise, fixed span bridge at Site 1 for the following reasons:
 1. Cost effective because it uses land already owned by the state, would have no operating costs and very little maintenance, would prevent all crossing delays, and would be best for evacuations and emergency situations
 2. Best location because there is less flooding at this site, less boat and marine traffic, and it would not require the purchase of new land.

The maintenance issues of the existing bridge have been forwarded to the maintenance department of the Louisiana Department of Transportation and Development through Michele Deshotels.

Another Public Meeting will be held in reference to this project and a Public Hearing will be held at the conclusion of the Design/Environmental Assessment phase.

FILE

**Notice
Agency Coordination Meeting
Bayou Barataria Bridge Replacement EIS**

Contact: Roger Swindler – USACE Project Manager – 504.862.2278

Date: Thursday, February 15, 2001. 10:00 AM

Location: Meeting in Room 278
U.S. Army Corps of Engineers Headquarters
7400 Leake Avenue
New Orleans, LA 70118-3651

Sponsoring Agency: LaDOTD

Lead Agencies: FHWA

The project is a joint effort of the Louisiana Department of Transportation and Development; U.S. Department of Transportation, Federal Highway Administration; U.S. Coast Guard; and the U.S. Army Corps of Engineers.

As part of the agency coordination aspect of the Bayou Barataria Bridge replacement EIS, a meeting has been scheduled between the affected agencies and the Louisiana DOTD. All agencies that have an interest in the project are invited to attend. This includes state and federal agencies responsible for permitting issues or agencies that have comment responsibility for potential impacts to natural and human environments. Sufficient study has been accomplished to determine impacts associated with the types and locations of potential bridge replacement alternates. Therefore, LaDOTD is requesting specific agency input into the process.

This meeting is being held to determine any objections to the project and to coordinate efforts in providing all interested agencies with information about the project and the expected impacts.

Please contact Mr. Swindler or Mr. Kyle Parker (334.342.1070, ext. 109) with any questions concerning this meeting.

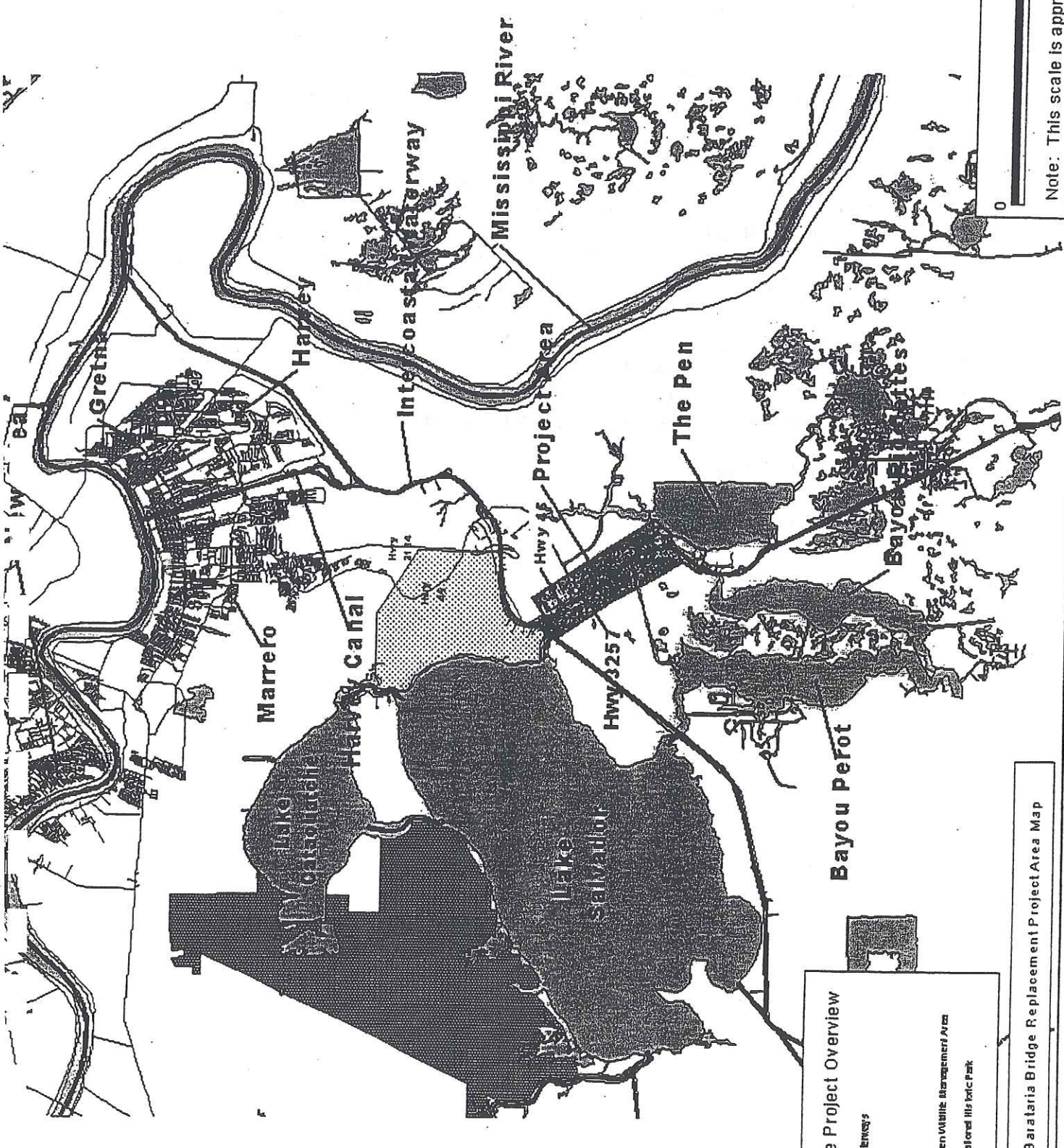
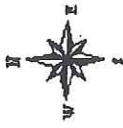
Attachments: Project Description
Project Site Map

Bayou Barataria Bridge
State Project No. 700-26-0239

The Bayou Barataria Bridge Replacement project consists of a Location/Feasibility Study and Environmental Impact Statement for a replacement for the existing bridge across Bayou Barataria (LA 302) at Jean Lafitte, in Jefferson Parish. The existing bridge is a 204-foot long steel truss bridge, which pivots about a pier located near the center of the waterway. When closed the existing bridge provides only 5-7 feet of vertical clearance for marine traffic and therefore must open for virtually all watercraft. When open, the bridge provides 70 feet of horizontal clearance. The existing bridge is the only obstruction to marine traffic from the Intracoastal Waterway to the Gulf of Mexico via the Barataria Waterway. The existing bridge is also the only means of vehicular access to the Barataria (west) side of Bayou Barataria.

The study for the location of a replacement bridge will extend from one-mile north to five miles south of the existing bridge. Vessel height requirements for the maritime traffic will be studied to determine vertical clearance for the replacement bridge. The horizontal clearance will be 125 feet. Alternative structures for the replacement bridge will be evaluated as follows:

- low level movable bridge (bascule)
- mid level movable bridge (vertical lift)
- high level fixed bridge



Barataria Bridge Project Overview

- Navigable Waterways
- Roads
- Water Bodies
- Submerged/Threatened Wildlife Management Area
- Jean Lafitte National Historical Park

Figure 1-1: Bayou Barataria Bridge Replacement Project Area Map

PREFIX	FNAME	LNAME	AGENCY	DEPARTMENT	ADDRESS1	ADDRESS2	ADDRESS3	CITY	ST	ZIP
Mr.	Dwight	Bradshaw	Louisiana Department of Environmental Quality		201 Evans Road	Building 4, Suite 420		New Orleans	LA	70123
Mr.	Clay	Carter	Louisiana Department of Administration	State Land Office	PO Box 44124			Baton Rouge	LA	70804
Ms.	Maria	Davidson	Louisiana Department of Wildlife & Fisheries	Habitat Section	PO Box 98000			Baton Rouge	LA	70898
Mr.	Greg	DuCole	Louisiana Department of Natural Resources	Coastal Management Division	Interagency Affairs	PO Box 44487		Baton Rouge	LA	70804-4487
Mr.	Fred	Dunham	Louisiana Department of Wildlife & Fisheries	Habitat Section	PO Box 98000			Baton Rouge	LA	70898
Ms.	Beverly	Ethridge	US Environmental Protection Agency	Marine and Wetlands Section	77 Florida Avenue	Suite B-21		Baton Rouge	LA	70801
Mr.	David	Frank	US Coast Guard	Bridge Administration Branch	8th Coast Guard Division	Hale Boggs Federal Bldg.	501 Magazine Street	New Orleans	LA	70130-3396
Mr.	Bill	Good	Louisiana Department of Natural Resources	Coastal Restoration Division	PO Box 94396			Baton Rouge	LA	70804-9396
Mr.	Rick	Hartman	National Marine Fisheries Service	Coastal Management Division	Louisiana State University			Baton Rouge	LA	70803-7535
Mr.	Rocky	Hinds	Louisiana Department of Natural Resources	Coastal Management Division		PO Box 44487		Baton Rouge	LA	70804-4487
Ms.	Patti	Holland	US Fish and Wildlife Service		646 Cajundome Boulevard			Lafayette	LA	70506
Mr.	Michael	Jansky	US Environmental Protection Agency	Marine and Wetlands Section	1445 Ross Avenue	Suite 1200		Dallas	TX	75202-2733
Mr.	Quin	Kinler	USDA NRCS		PO Box 16030			Baton Rouge	LA	70893
Mr.	Luke	LeBas		Coastal Restoration Division	625 N 4 th Street	PO Box 94396		Baton Rouge	LA	70804-9396
Mr.	Gary	Lester	Louisiana Natural Heritage Program		PO Box 98000			Baton Rouge	LA	70898-9000
Mr.	Richard	Prather	US Environmental Protection Agency	Marine and Wetlands Section	1445 Ross Avenue	Suite 1200		Dallas	TX	75202-2733
Mr.	Marcus	Redford	US Coast Guard	Bridge Administration Branch	8th Coast Guard Division	Hale Boggs Federal Bldg.	501 Magazine Street	New Orleans	LA	70130-3396
Mr.	Jerry	Spohrer			7001 River Road	PO Box 608		Marrero	LA	70072
Mr.	Jason	Smith	Jefferson Parish Coastal Management Program	4901 Jefferson Highway	Suite E			Jefferson	LA	70121
Mr.	Kerry	St. Pe	Barataria-Terrebonne National Estuary Program	320 Audubon Drive	N Babington Hall Room 105	Nicholls State University		Thibodeaux	LA	70301
Mr.	Roger	Swindler	US Army Corps of Engineers	New Orleans District Office	7400 Leake Avenue			New Orleans	LA	70118-3651
Ms.	Mamie	Winter			1221 Elmwood Park Blvd.	Suite 1006	Yennl Building	Jefferson	LA	70123

LOOK AT BUSINESSES ON BARATARIA SIDE

Although none of the invited environmental agencies were able to send representatives, the meeting was beneficial in explaining the project, gaining insight on potential environmental issues and concerns, and determining jurisdictions, responsibilities and permitting requirements.

C: Guy O'Connor
005700.12/0057001.10 Files

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JEDCO

Jefferson Parish Economic Development Commission

Business Outreach Incubators Financing Port/Transportation

November 17, 2000

Mr. Patrick J. Wilson
Volkert & Associates
4240 Canal Street
First Floor
New Orleans, LA 70119

COPY



Dear Pat:

We have received a preliminary draft of our Harvey Canal Economic Impact Study. Dr. Tim Ryan of the University of New Orleans did a survey of Harvey Canal businesses to determine what effect improved access to the Canal would have on annual revenues. Dr. Ryan estimates that Canal business could increase by at least \$50 million per year with improved access. Most of this savings would be realized by replacing the Kerner Bridge in Lafitte.

We should have a final draft of the study available by mid-January, and will provide you with a copy at that time. Please consider these results when studying the economic impact of this important bridge replacement project.

Sincerely,

Peter Chocheles
Port Director

- cc: Sen. Ullo
- Mayor Kerner
- Scott Adams
- Michele Deshotels
- Dan Judlin
- Matthew Morelan
- Johnny Sanchez
- Jean Schliem

FARMLAND CONVERSION IMPACT RATING



FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request 7/10/2001			
Name of Project State Project No. 700-26-0239		Federal Agency Involved Federal Highway Administration			
Proposed Land Use Replacement of LA 302		County and State Jefferson Parish, Louisiana			
PART II (To be completed by SCS)		Date Request Received By SCS 7/23/01			
Does the site contain prime, unique, statewide or local important farmland? If no, the FPPA does not apply - do not complete additional parts of this form.)		Yes x	No <input type="checkbox"/>	Acres Irrigated 0	Average Farm Size 117
Major Crop(s) Pasture, vegetables, (soybeans)	Farmable Land in Govt. Jurisdiction Acres 39458 % 9.5	Amount of Farmland as Defined in FPPA Acres 39458 % 9.5			
Name of Land Evaluation System Used Jefferson	Name of Local Site Assessment System none	Date Land Evaluation Returned by SCS 7/23/01			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Pipeline St.	Paillet North	Paillet South	Site D
A. Total Acres To Be Converted Directly		4.25	5.27	4.69	
B. Total Acres To Be Converted Indirectly		0	0	0	
C. Total Acres In Site		4.25	5.27	4.69	
PART IV (To be completed by SCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		0.65	1.22	0.34	
B. Total Acres Statewide And Local Important Farmland		0	0	0	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.002	0.003	0.0009	
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		100	100	100	
PART V (To be completed by SCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		88	88	88	
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b).)		Maximum Points			
1. Area In Non-urban Use		15	0	0	0
2. Perimeter In Non-urban Use		10	5	5	5
3. Percent Of Site Being Farmed		20	0	0	0
4. Protection Provided By State And Local Governments		20	0	0	0
5. Distance From Urban Builtup Area		15	0	0	0
6. Distance To Urban Support Services		15	0	0	0
7. Size Of Present Farm Unit Compared To Average		10			
8. Creation Of Non-farmable Farmland		10	0	0	0
9. Availability Of Farmland Support Services		5	0	0	0
10. On-Farm Investments		20	0	3	0
11. Effects Of Conversion On Farm Support Services		10	0	0	0
12. Compatibility With Existing Agricultural Use		10	3	3	3
TOTAL SITE ASSESSMENT POINTS		160	8	11	8
PART VII (To be completed by Federal Agency) Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or a local site assessment)		160	8	11	8
TOTAL POINTS (Total of above 2 lines)		260	96	99	96
Site Selected:		Date of Selection:		Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Reason for Selection:					

(See Instructions on Following Page)

Form AD-1006 (10-83)

