



LOUISIANA NATURAL AND SCENIC RIVERS SYSTEM

# PERMIT APPLICATION

Permit # 957 (Assigned by Department)

The Louisiana Department of Wildlife and Fisheries' Scenic Rivers program is authorized by LRS title 56, Chapter 9 Part II. This law requires permits authorizing activities in or affecting rivers that have been designated by the Louisiana Legislature as Natural and Scenic. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary, however, the data requested is necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

## APPLICANT INFORMATION

Name of Applicant	Iberville Parish Government	Name of Agent (if any)	Rob Van Vrancken
Address	P.O. Box 389	Address	43177 E. Pleasant Ridge Rd.
City, State, Zip	Plaquemines, LA 70765-0389	City, State, Zip	Hammond, LA 70403
Phone		Phone	985-662-5501
Email Address		Email Address	robvan@ldecew.com

## DESCRIPTION OF THE PROPOSED ACTIVITY

Brief summary of the description and purpose of the proposed activity (details to be attached as a separate document)

with Alligator Bayou: Description of existing or proposed control structure on the left bank of Bayou Manchac at a distance of approximately 1/2 mile upstream from the intersection of the Bayou Manchac and the Bayou de l'Est. The structure is a concrete structure with a gate, located on a natural levee. Supervisory Control and Data Acquisition (SCADA) communications equipment, and auxiliary power are also located on the left bank of the Bayou Manchac. The proposed structure will be used to maintain the flow of the control structure and gate during operations in Alligator Bayou.

Is any portion of the activity complete? YES or  NO (if yes, indicate month and year of completion)

## LOCATION OF PROPOSED ACTIVITY

Stream Name	Bayou Manchac
Address	
City, State, Zip	St. Gabriel, LA, 70778
Parish	Iberville
Sec/Township/Range	S28, T08S, R02E
Latitude/Longitude	30d 19' 15.75"N, 91d 1' 15.14"W

## ADJACENT LANDOWNERS

Name, Address, Phone Numbers of Adjacent Landowners
Dennis R. Curoco, 10917 Malcom Dr., Baton Rouge LA, 70911
Frank Bonifay, 38225 Shadow Wood Ln., Prairieville LA, 70759

## ENVIRONMENTAL ASSESSMENT

Must be a separate document. See the attached instruction sheet for completing the assessment.

## CONFIRMATION OF INFORMATION ACCURACY

Application is hereby made for a Scenic River Permit to authorize the activities described herein. I certify that I am familiar with the information contained in this application and that, to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities, or I am acting as the duly authorized agent of the applicant.

Signature

3/17/16  
Date

Alligator Bayou Drainage  
and Backwater Flooding Reduction Project

Permit Application

**Project Description**

This project includes the proposed improvement of an existing water control structure and its associated features. Erosion protection will be installed on the north bank of Bayou Manchac where discharge from Alligator Bayou has caused erosion. Demolition of a single undersized 8' x 8' reinforced concrete box culvert will take place to allow for the installation of two 8' x 8' reinforced concrete box culverts with automated flood control gates and operators. To run the gates and operators, construction of a control tower and related supervisory control, and data acquisition (scada) communication equipment with an auxiliary power generator for operation of scada and automated gate closure equipment operations in times of power outage will also be installed. The platform for the scada and generator equipment will be located in the parking area elevated above Base Flood Elevation. Also, being proposed under this permit is the removal of a deteriorated, existing water access ramp and the construction of a new ramp that will provide access into Alligator Bayou and Bayou Manchac. Perimeter fencing and a parking lot area will be implemented to provide access to the ramp.

**List of all local, state and federal permits required for this project**

- U.S. Army Corps of Engineers- Section 10/404 permit
- Department of Environmental Quality- Water Quality Certification
- Louisiana Department of Wildlife and Fisheries- Scenic Streams Permit

**Applicants compliance history and project alternatives**

The applicant has no record of violation under the Scenic Rivers Act and is submitting the enclosed information in an effort to comply with all requirements imposed under this act. The proposed project is needed to prevent backwater flooding from Bayou Manchac into Alligator Bayou. Due to the location of the existing control structure; no alternative locations exist for the project.

**Impact minimization to scenic streams**

The proposed project will be implemented in a manner that will minimize impacts on Bayou Manchac, a scenic stream protected under the Louisiana Scenic Streams Program. Demolition of a single undersized 8' x 8' reinforced concrete box culvert will take place to allow for the installation of two 8' x 8' reinforced concrete box culverts with automated flood control gates and operators. The expansion of the floodgate, along with erosion control structures, will alleviate scouring of the channel and along the north bank of Bayou Manchac. No riparian wetlands will be impacted by the project and BMPs will be implemented to reduce stormwater runoff into the bayou, thus preventing impacts from turbidity and discharge of pollutants.

Alligator Bayou Drainage  
and Backwater Flooding Reduction Project  
Environmental Assessment

**1. Existing Land Use:** The existing land use along the south bank of Bayou Manchac from Alligator Bayou to Interstate 10 (I-10) includes an open lot on the west bank of Alligator Bayou, a commercial establishment on the east with cleared parking lot between two municipal water control structures, and a residential subdivision approximately 1,800 feet to the northeast. These properties are accessed by a two-lane road that is located on the south bank of the bayou. The north bank also contains an extensive subdivision approximately 1,500 feet north of the proposed project. The land directly across Bayou Manchac from the existing Alligator Bayou water control structure is relatively undeveloped containing camp and outbuilding structures, gravel roads, and ATV trails. None of these land uses will be affected by the proposed project. The proposed erosion control structure will stabilize the north bank and prevent land loss.

**2. Wilderness Qualities:** The wilderness qualities of the reach of Bayou Manchac from Alligator Bayou to I-10 are limited due to the road on top of the south bank, a commercial establishment with large parking area, existing water control structures, and surrounding residential development. The south riparian corridor is sparsely vegetated, access to the bayou is direct off the bank, and the bayou is visible from automobiles and bicycles that use the road. The riparian area on the north bank is covered with native vegetation and more primitive with access only by an unpaved trail, but scour has opened up the bayou at this location and will continue to erode the north bank, undermining the natural course of the stream. Although the erosion control structure will reduce the wilderness values at the scour location by introducing a man-made structure where there is none, this structure will prevent further loss of the canopy that contributes to the wilderness feel of the area.

**3. Scenic/Aesthetic Values:** The scenic values of Bayou Manchac are derived from natural landscapes that are dominated by forested riparian areas and the free flow of the bayou, which has not been de-snagged in many years. These scenic values are less robust at the Alligator Bayou water control structure due to the presence of a commercial establishment, the control structure, and the scour that has created an open pool at the outfall of the structure. However, the canopy in this area is open from scour that has undermined the stability of the north bank and from clearing for the road on the south bank, and views from the roadway are aesthetically pleasing. The proposed project will expand the existing structure at Alligator Bayou and build an erosion control structure on the north bank. The project will not expand the road or induce further development along the bayou that might reduce the natural scenic appeal. Although the erosion control structure will reduce the scenic river quality at the scour location by introducing a man-made structure where there is none and potentially mar the view from the road, this structure will prevent further expansion of the pooled area and stop the loss of the canopy that contributes to the natural scenery.

**4. Ecological Regimes:** Bayou Manchac is a perennial stream from Alligator Bayou to the Amite River. Its channel has been dredged and de-snagged periodically until recently, when this practice was discontinued. The channel of the bayou is constricted at a point just west of Alligator Bayou to the Mississippi River and water flow in is intermittent, having been cut off from the Mississippi River by the federal levee. The original floodplain connected Bayou Manchac to palustrine wetlands on both sides of the channel. However, the natural levee of the bayou on the south side was raised and water exchanges

interrupted, except during intensive storm events, when the floodgates were opened or when water levels overtopped the bank.

Periodic opening of the gates after flooding resulted in high energy flows from Alligator Bayou into Bayou Manchac, causing scour in the immediate area of the floodgate and on the north bank. Backwater flooding from the east backing up at the constricted reach has added to the scour, and a deep pool in front of the floodgate has resulted along with erosion on the north bank.

Despite anthropogenic influences, Bayou Manchac remains a dynamic riverine system with stable banks, diverse native vegetation communities, and aquatic habitats worthy of protection. In 2009, operations of the Alligator Bayou floodgates were modified. The gates are kept open except during occasional backwater flooding events. The new operational plan will continue under the proposed project. The partial restoration of the hydrology has caused a well-documented recovery of the palustrine forests of the Spanish Lake subbasin. Partial re-establishment of the links between Bayou Manchac and the Spanish Lake Basin swamps is also expected to improve ecological functions in Bayou Manchac in the vicinity of the project.

**5. Recreational Use/Opportunities:** The reach of Bayou Manchac from Alligator Bayou to Bayou Fountain is part of the Baton Rouge paddle trail system, but channel depths and obstructions do not accommodate power boating. The route ends at the Alligator Bayou structure, presumably because navigability from that point to the Mississippi River is poor, even for paddling. No boat launches are available at the proposed project location; the closest public launch is a canoe launch at Manchac Park near Louisiana Highway (LA) 73, approximately 2.75 miles to the northeast. Recreational opportunities on the south bank of the bayou include bank fishing, biking, and wildlife viewing. Average game hunting exists in the surrounding swamps, but is limited by private land ownership. The north bank is located on private property that includes an ATV trail. The proposed project will not impact the use of the bayou for these activities over the long-term. Short-term impacts will result from construction, but only in the immediate area of the proposed project.

**6. Fish and Other Aquatic Life:** Bayou Manchac and Alligator Bayou provide habitat to many common freshwater aquatic species found throughout the southeastern United States. The ebb and flow of water through these bayous ensures species diversity and allows for the movement of aquatic life from the deeper waters of the Amite River into the shallower waters of the Spanish Lake basin. Likely species found in Bayou Manchac and Alligator Bayou would include blue catfish, bluegill, redear sunfish, bowfin, red swamp crawfish, redeared slider turtles, warmouths, and common carp.

Temporary impacts to fish species may be caused by construction activities. Fish species spawn in shallow reaches of the bayou and connecting waterbodies. The area in front of the proposed project is deep with steep banks and not likely to be selected for spawning, but the water behind the structure in Alligator Bayou is shallow (now that the structure is kept open). Mature fish are mobile and will avoid the area during construction. Temporary impacts to fish species during construction will be minimized through the use of best management practices (BMPs) that will reduce runoff. Aquatic conditions will return to normal after construction; therefore, no permanent impacts to fish are anticipated.

**7. Wildlife:** Wildlife along Alligator Bayou and Bayou Manchac would include white-tailed deer, squirrels, rabbits, opossums, nutria, raccoons, and a large variety of reptiles and birds. These species

are mobile and will avoid the area during construction. No permanent impacts are expected from the project.

#### **8. Historical, Archaeological, and Other Cultural Resources**

Bayou Manchac is a historical river used by indigenous peoples as a trade route and Europeans after them. In the 20<sup>th</sup> century, man-made modifications in the project area were implemented to protect oil and gas operations and agriculture south of the bayou from flooding. The natural levee on was elevated, a road was built on top of it, and the Alligator Bayou water control structure was constructed. These developments and those that have followed have impaired the integrity of potential archaeological sites along the bayou.

In 2014, a cultural resources survey was conducted in the project area that discovered no archaeological sites. Archaeological site 16AN11 is an ineligible prehistoric site located on the east bank of Alligator Bayou that has been destroyed by development. No other cultural resources are located within 500 feet of the project area and no cultural resources will be impacted by the project.

**9. Geological Resources:** Bayou Manchac in the vicinity of the proposed project runs through the center of the Spanish Lake subbasin. This subbasin was shaped by the shifting of the Mississippi River and deposition of sediment into a network of shallow swamps and natural low ridges. The greatest relief in the area is on the south bank of the bayou, where the natural levee was elevated for flood control and topped with a local road. None of these features will be impacted by the project.

The project proposes to expand the existing water control structure, which is located under the road. A geotechnical analysis was performed to explore the subsurface conditions at the site of the proposed project. The analysis concluded that the project was geotechnically feasible.

**10. Botanical Resources (Vegetation):** Botanical resources include both the abundance and distribution of different vascular and non-vascular plant species. This region contains a mix of cypress and such hardwood varieties as water oak, hickory, and hackberry. In the areas of lower elevation that are affected by alluviation, species such as palmetto and water willow grow in abundance. Other flora are rich and varied and include broomsedges, briars, and poison ivy. The goal of the proposed project is to improve hydrologic functions while maintaining existing conditions of all ecological resources, botanical included, along Bayou Manchac and Alligator Bayou. It is not expected that any portion of the proposed project will have adverse impacts to the vegetation found along these bayous. Additionally, BMPs will ensure that these botanical resources maintain their existing conditions to the fullest extent. Heavy activity will be completed in areas where botanical resources are not likely to exist, those being paved/gravel areas and open water areas.

**11. Water Quality:** The Louisiana Department of Environmental Quality (LDEQ) classifies Bayou Manchac as not supportive of Primary Contact Recreation, Secondary Contact Recreation, and Fish and Wildlife Propagation. Suspected sources of impairment are "site clearance (land development or redevelopment), on-site treatment systems (septic systems and similar decentralized systems), sanitary sewer overflows (collection systems failures), and unknown sources." The proposed project will not change or increase these impairments.

Bayou Manchac is currently connected to Alligator Bayou through the water control structure, which is kept open except during major backwater flooding from Bayou Manchac. The ecological health of the

Spanish Lake subbasin has been improving since revised floodgate operations have allowed for cyclical water level fluctuations. Restoration of the forested swamps has begun to improve water quality and should have a positive effect on water quality downstream in Bayou Manchac.

**12. Hydrology:** The purpose of the proposed project is to reduce flood stages in the Spanish Lake subbasin, which is normally upstream of Bayou Manchac. Bayou Manchac is a tributary of the Amite River and a former distributary of the Mississippi River. The bayou was altered by construction of the Mississippi River Levee in the 1920s, and in the 1950s implementation of water control structures at Alligator and Frog Bayous within a levee topped with a local road. Generally, Alligator and Frog Bayous are tributaries to Bayou Manchac, but periodic rising water levels in the Amite River, Lake Maurepas, and Lake Pontchartrain causes backwater flooding, reversing the flow in Bayou Manchac and its tributaries. When the floodgates are open during backwater flooding, Bayou Manchac waters flow into Alligator Bayou and Frog Bayou and then into the Spanish Lake subbasin.

The reversing flow of waters through Bayou Manchac and Alligator and Frog Bayous was part of the natural hydrologic regime, which until 2009, was effectively eliminated by keeping the floodgates closed and impounding water in the southern part of the Spanish Lake subbasin. The impoundment not only prevented baldcypress from germinating and caused bottomland hardwood forests to die off, it also reduced flood storage capacity by 3-5 feet. In 2009, the gates were opened and operated as originally intended, closing only to prevent backwater from entering Alligator Bayou during major storm events. While it is unknown what effects the revised operations plan has had on Bayou Manchac, the partial restoration of the natural hydrological regime has caused a well-documented recovery of the swamps of the Spanish Lake subbasin.

The 2009 operational plan will continue under the proposed project. A hydrologic and hydraulic study was conducted for the proposed project that demonstrates that under the current operation plan will reduce water levels by two feet during 100-year storm events in Alligator Bayou and cause no significant change to water levels in Frog Bayou. The duration of flooding in both bayous will be reduced significantly by the proposed project.

### **13. Economic Impact of Project**

The proposed project will reduce public expenditures related to flooding by reducing flood stages and duration of flooding in the Spanish Lake subbasin south of Bayou Manchac. Economic benefits include savings on emergency response operations, reduced damage to public and private properties, and reduced flood insurance rates. Operations and maintenance costs will also be reduced by upgrading the operational mechanisms, communication systems, and access facilities.



State of Louisiana

BOBBY JINDAL  
GOVERNOR

DEPARTMENT OF WILDLIFE AND FISHERIES

ROBERT J. BARHAM  
SECRETARY

Dear Scenic River Permit Applicant:

Please review and concur on the following statement regarding the issuance of permits by the Louisiana Department of Wildlife and Fisheries. This agreement must be signed and returned before a Scenic River Permit can be issued.

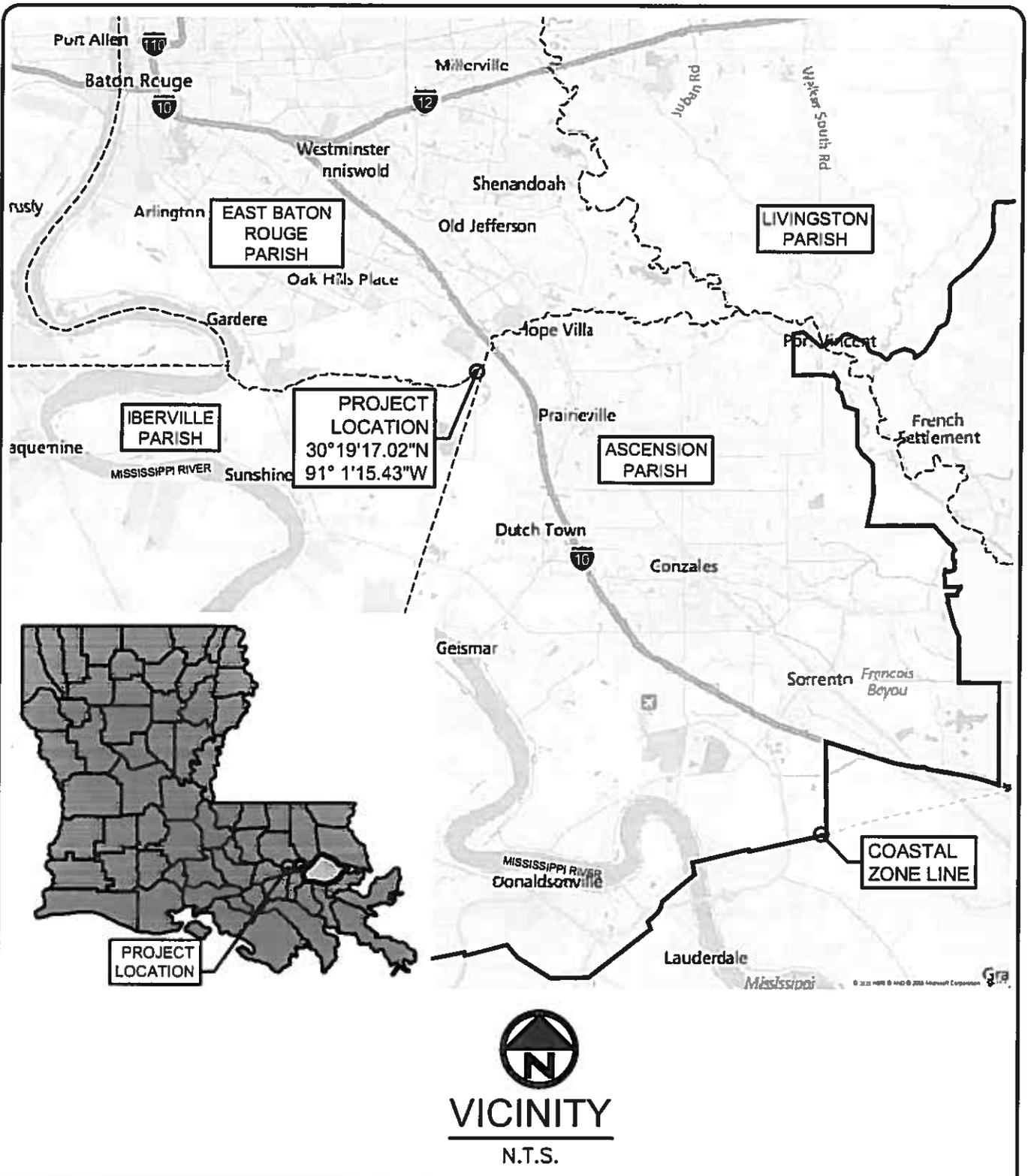
"I have been advised and do understand that by applying for and accepting a Scenic Rivers permit issued by the Louisiana Department of Wildlife and Fisheries, I am being allowed to engage in an activity which would otherwise be prohibited by law or for which a permit is required. I understand that the permit is not a license and confers no property right upon me. I specifically agree to abide by all State and Federal fish and wildlife laws and regulations, and all State and Federal laws and regulations which relate to this permit or the permitted activity, and by all other terms and conditions of this permit. I understand that the permit for which I am applying may be suspended, annulled, withdrawn or revoked and that I may be assessed civil penalties, all in accordance with the provision of the Louisiana Administrative Procedure Act, and that I may be denied future permits as a consequence of my failure to fully and completely comply with the terms and conditions of the permit, as well as other laws and regulations pertinent thereto. If served with or notified of a cease and desist order signed by the Scenic Rivers Administrator, I agree to immediately and without delay cease all activities and operations which relate to the permitted activity or which are impacting the Scenic River, until such time as the matter can be resolved in an adjudicatory hearing pursuant to the Louisiana Administrative Procedure Act. I understand and agree that any permit issued to me by the Louisiana Department of Wildlife and Fisheries is in the nature of a privilege which is being voluntarily extended to me by the Department and the failure on my part to cooperate with the Department can result in the loss of the privilege conferred and the denial of future requests for permits. By accepting this permit, I evidence my agreement to be bound by all conditions and stipulations set forth herein."

A handwritten signature in blue ink that reads "J. Michael Russo Jr." written over a horizontal line.  
Authorized Signature

3-22-16  
Date

REV. 12/798

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**IBERVILLE PARISH, LA**  
**ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS**  
**VICINITY MAP – T8SR2E**

2015.10.27

SHEET 1 OF 11



No Existing Erosion Control

Bayou Manchac

Alligator Bayou Road

Control Structure

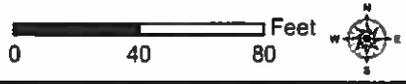
Manchac Road

Alligator Bayou

Boat Launch

Gate

Parking Area



**Legend:**

--- Roads

Sheet 2 of 11



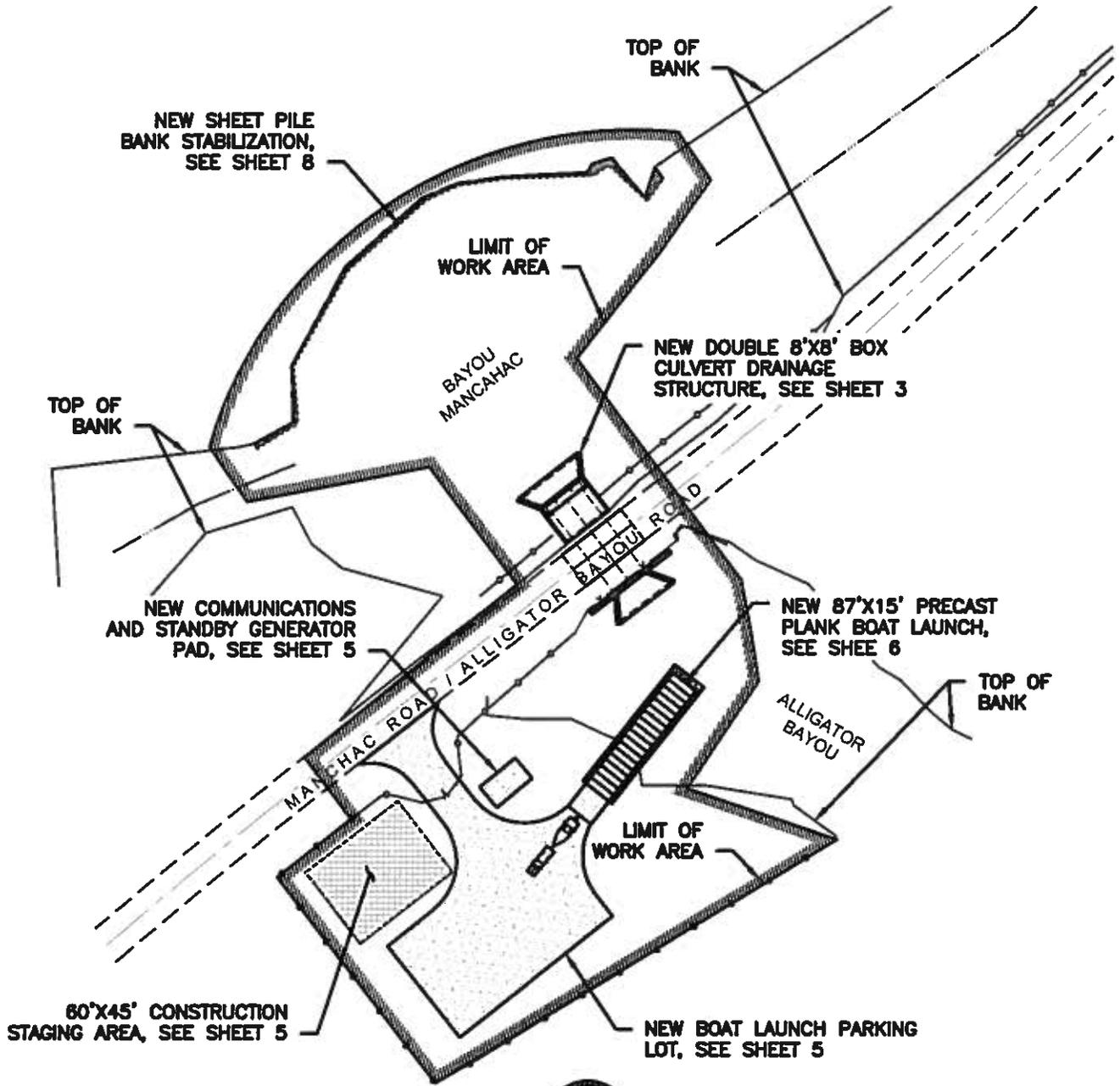
43177 East Pleasant Ridge Road  
Hammond, Louisiana 70403  
P. 985-882-5501 F. 985-882-5504

Alligator Bayou Drainage Improvements Existing Conditions

**Iberville Parish, LA**

Map prepared from public and proprietary spatial data. Elos Environmental, LLC does not warrant its accuracy or completeness. This map should not be used to establish legal boundaries or specific locations.

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PLAN

1" = 80'

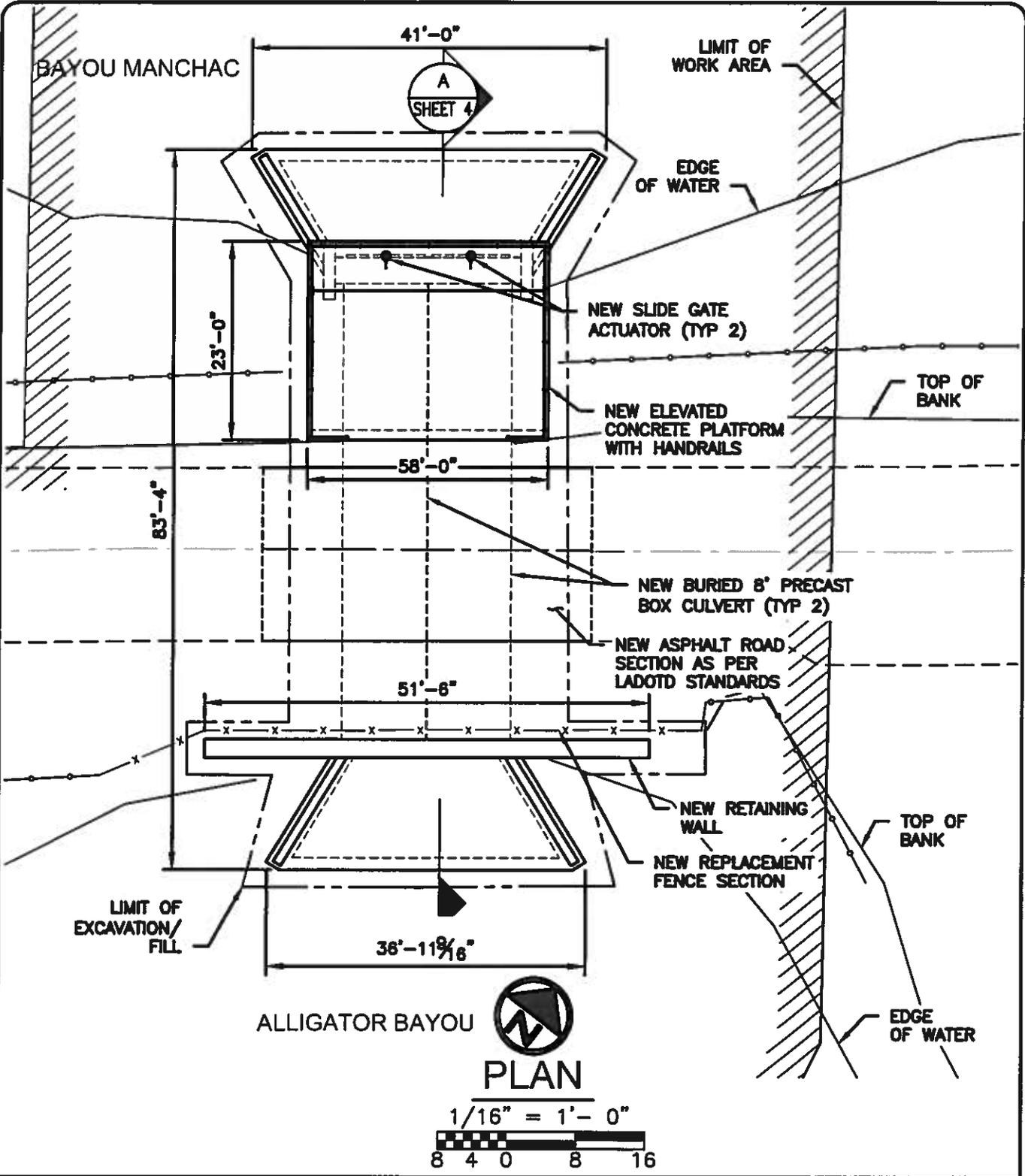


IBERVILLE PARISH, LA  
 ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
 NEW SITE PLAN

2015.10.27

SHEET 3 OF 11

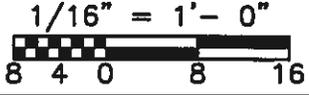
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ALLIGATOR BAYOU



**PLAN**

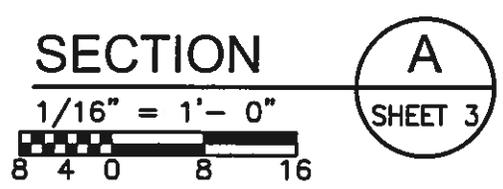
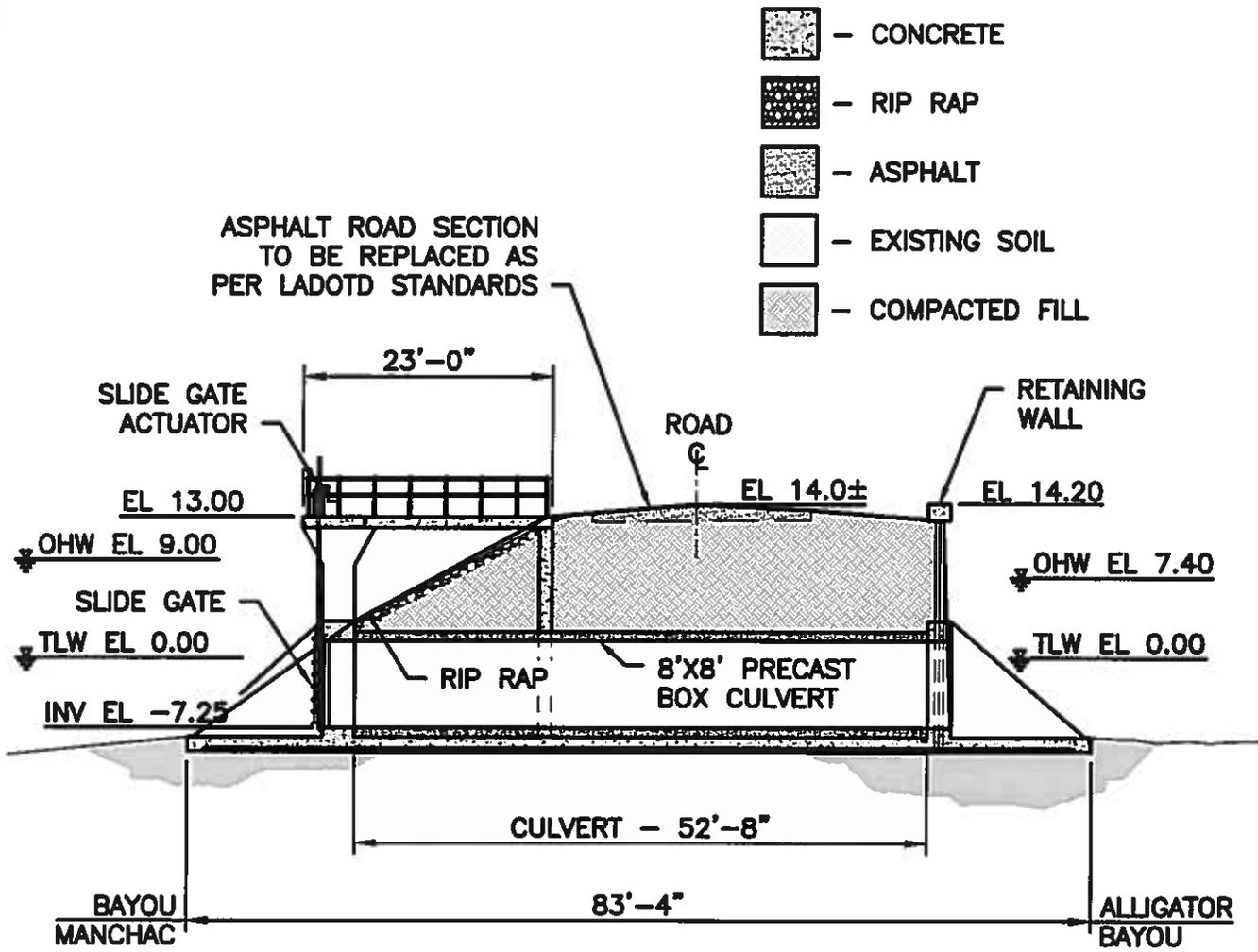


IBERVILLE PARISH, LA  
 ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
 DRAINAGE STRUCTURE – PLAN

2015.10.27

SHEET 4 OF 11

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NOTE: ALL ELEVATIONS ARE NAV88

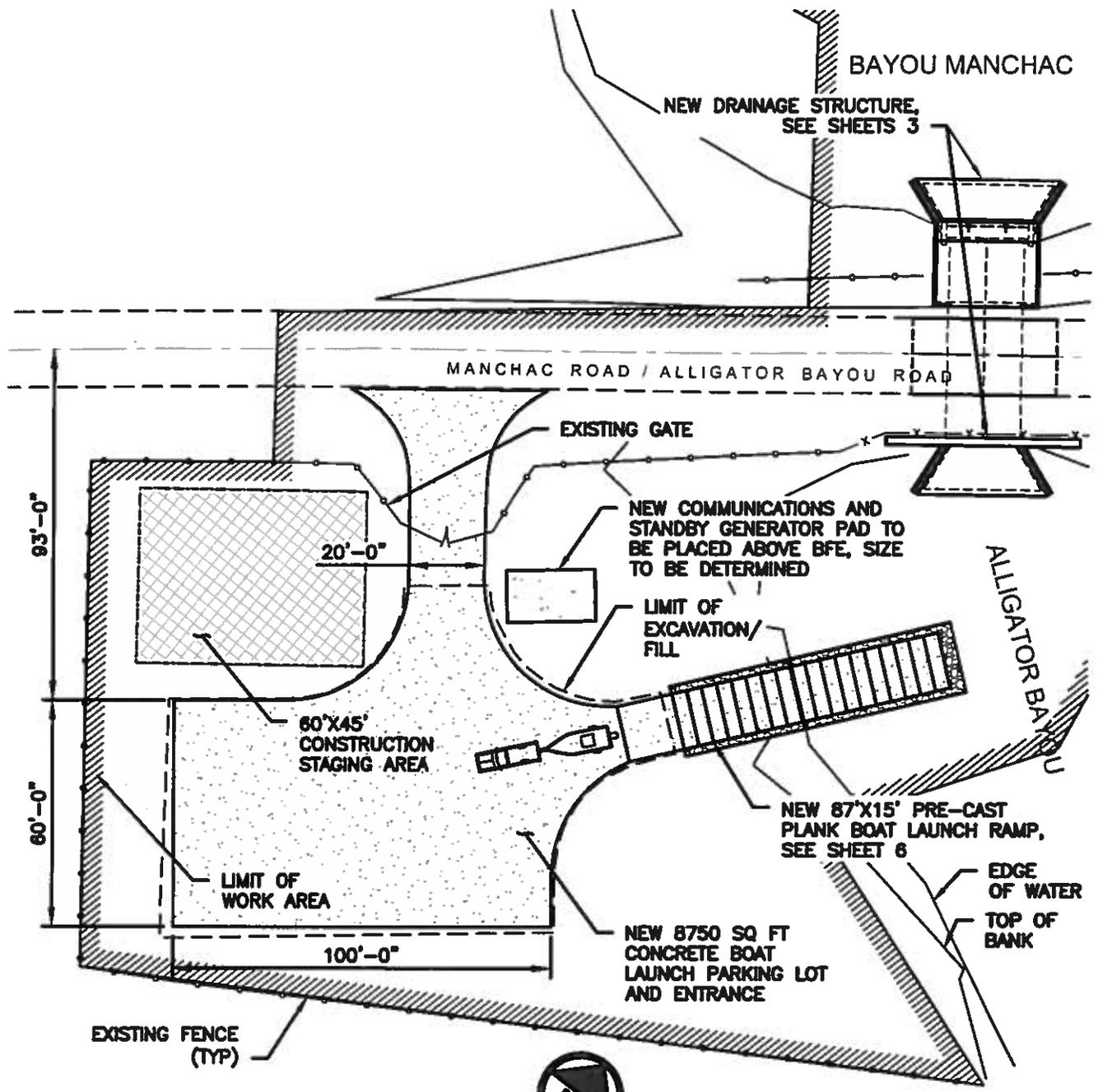


IBERVILLE PARISH, LA  
 ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
 DRAINAGE STRUCTURE – SECTION

2015.10.27

SHEET 5 OF 11

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PLAN

1" = 40'

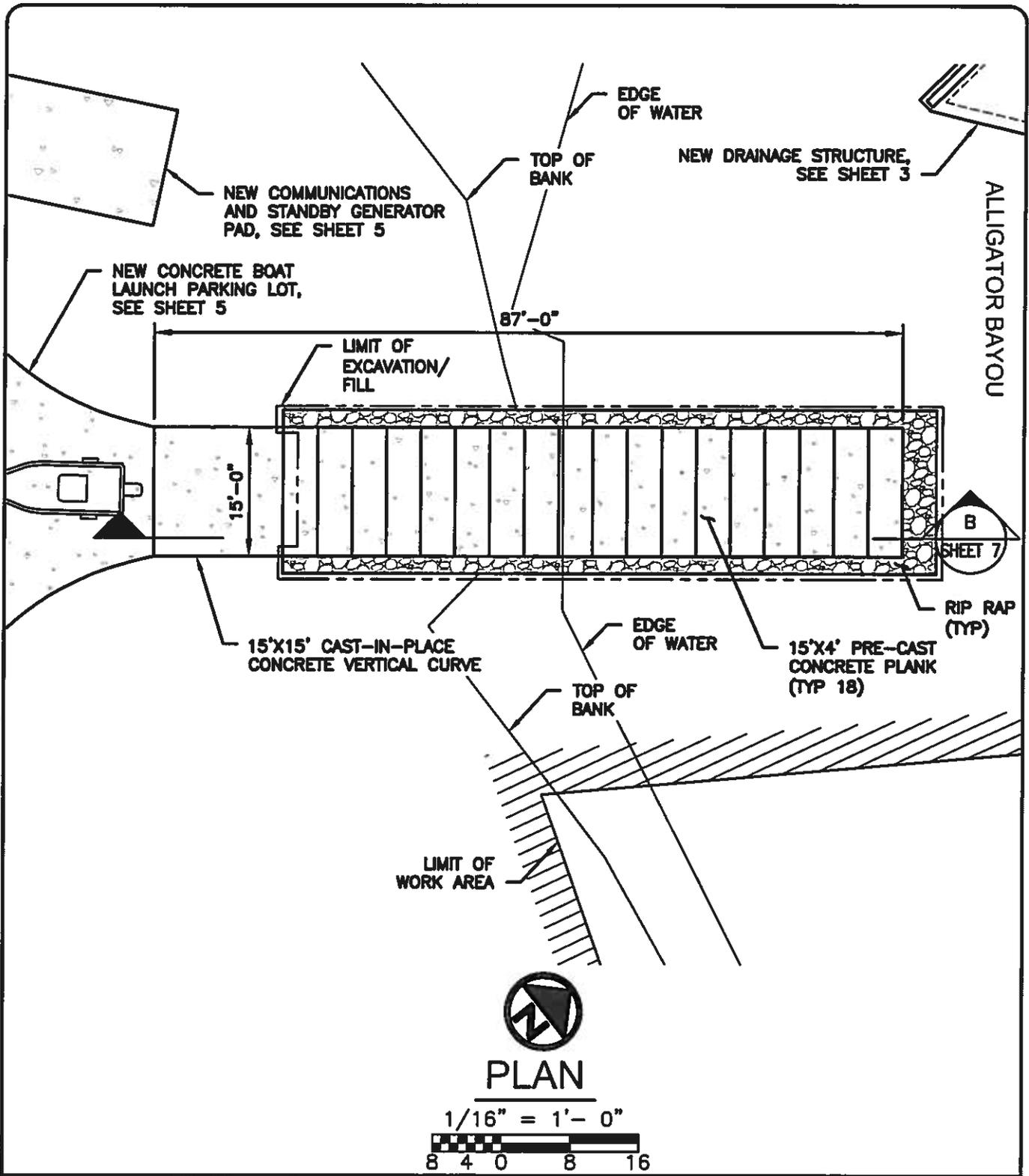


IBERVILLE PARISH, LA  
 ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
 NEW BOAT LAUNCH PARKING SITE PLAN

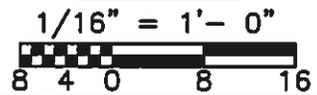
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SHEET 6 OF 11

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PLAN

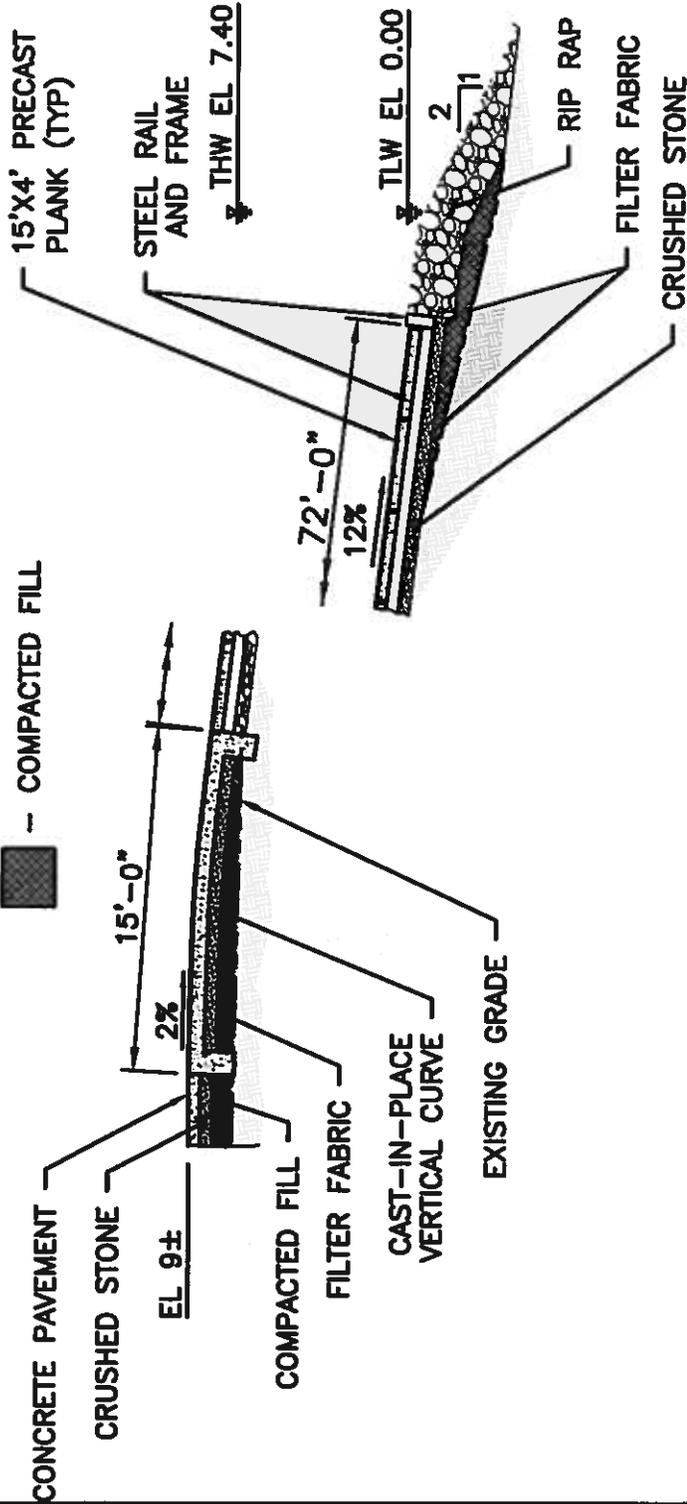


IBERVILLE PARISH, LA  
 ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
 BOAT LAUNCH – PLAN

2015.10.27

SHEET 7 OF 11

- CONCRETE
- RIP RAP
- CRUSHED STONE
- EXISTING SOIL
- COMPACTED FILL



SECTION B

SHEET 6

1/8" = 1'-0"

NOTE: ALL ELEVATIONS ARE NAV88

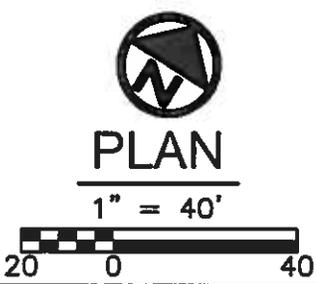
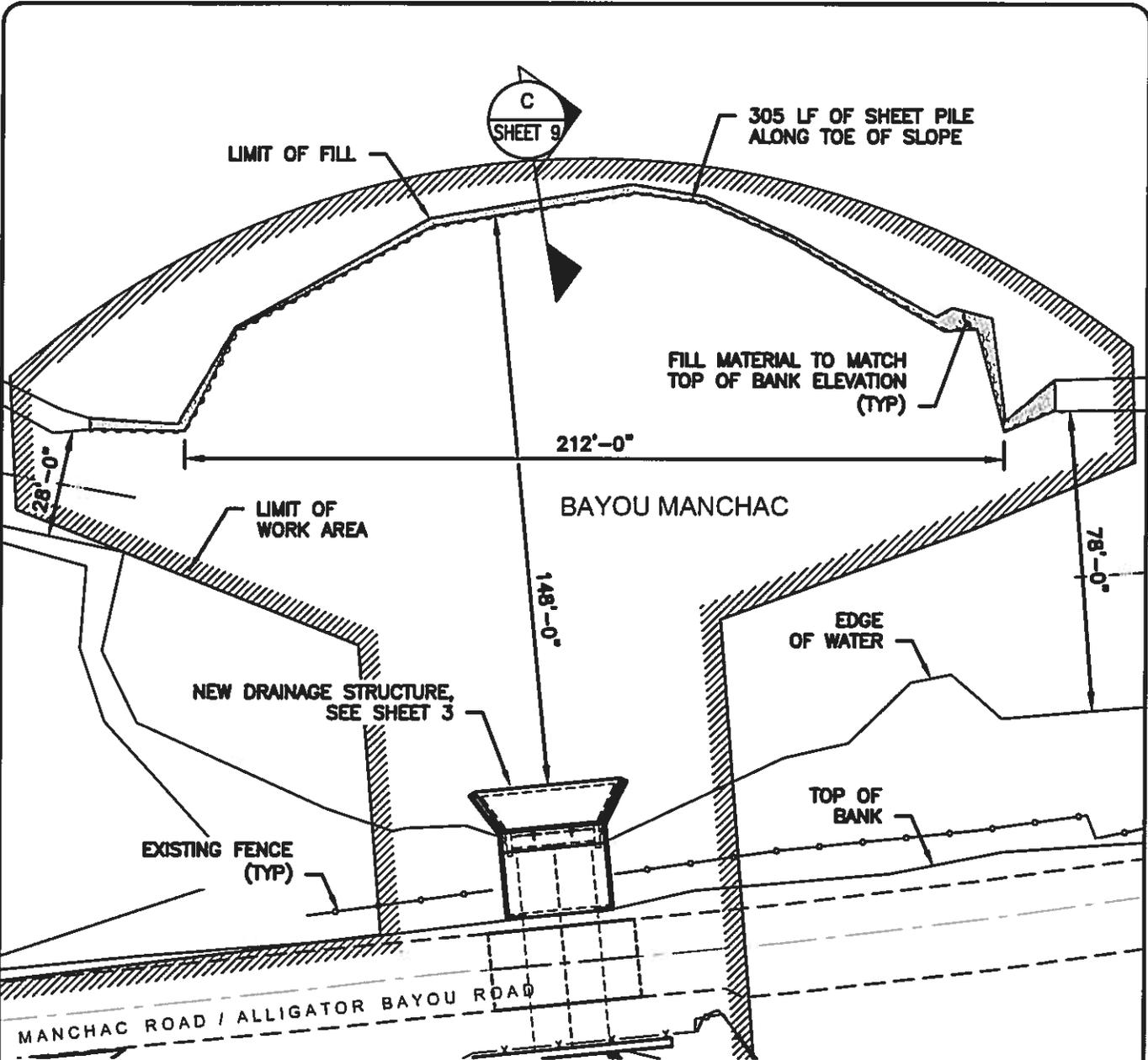


IBERVILLE PARISH, LA  
ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
BOAT LAUNCH – SECTION

2015.10.27

SHEET 8 OF 11

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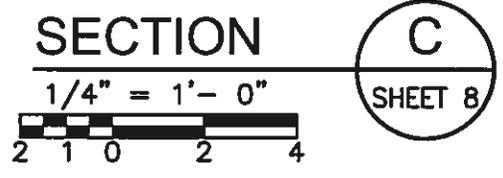
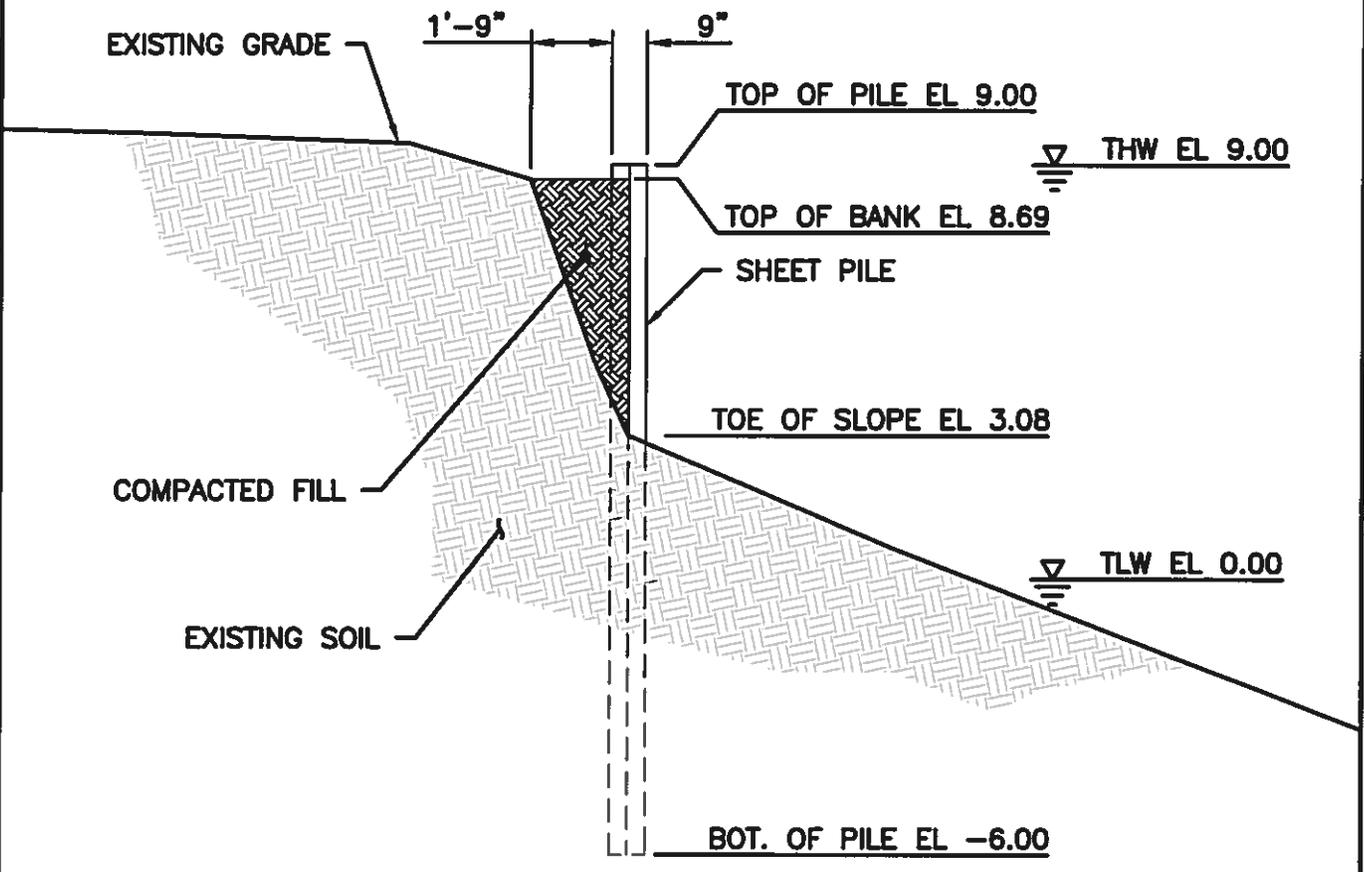
IBERVILLE PARISH, LA  
 ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
 BANK STABILIZATION – SHEET PILE PLAN

2015.10.27

SHEET 9 OF 11

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-  - EXISTING SOIL
-  - COMPACTED FILL



**NOTE: ALL ELEVATIONS ARE NAV88**



**IBERVILLE PARISH, LA**  
**ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS**  
**BANK STABILIZATION – SHEET PILE SECTION**

2015.10.27

SHEET 10 OF 11

## ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS PROJECT EXCAVATION AND FILL QUANTITIES

LOCATION	EXCAVATION (CUBIC YARDS)	FILL (CUBIC YARDS)	EXCAVATION (ACRES)	FILL (ACRES)
DRAINAGE STRUCTURE	945	530	0.081	0.081
BOAT LAUNCH	43	16	0.031	0.002
BOAT LAUNCH PARKING LOT		89		0.184
BANK STABILIZATION		76		0.015
<b>TOTALS</b>	<b>988</b>	<b>711</b>	<b>0.112</b>	<b>0.282</b>

**NOTES:**

- 1) SUITABLE EXCAVATED MATERIAL TO BE USED AS FILL.
- 2) ALL EXCESS MATERIALS WILL BE HAULED TO A NON-WETLAND LOCATION.



**IBERVILLE PARISH, LA**  
ALLIGATOR BAYOU DRAINAGE IMPROVEMENTS  
EXCAVATION AND FILL QUANTITY TABLE

2015.10.27

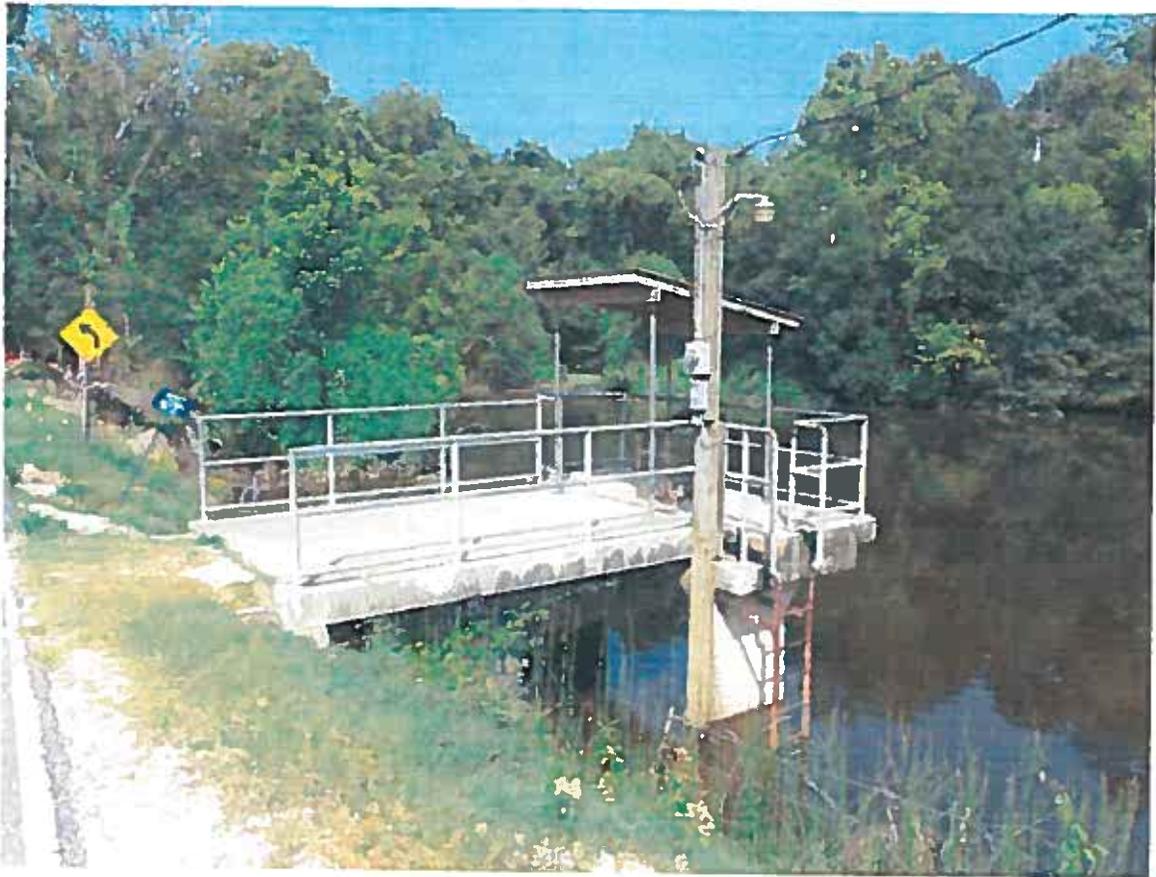
SHEET 11 OF 11



**South bank of Bayou Manchac, looking southwest.**



**Bayou Manchac, looking northwest.**



**Flood gate structure, facing NW.**



**Existing flood gate structure along Bayou Manchac, facing north.**



**Flood gate from north side of Alligator Bayou, facing NW.**