



# Fall 2016 Congressional Update

## THE PONTCHARTRAIN LEVEE DISTRICT PROGRESS REPORT



- LAUREL RIDGE LEVEE EXTENSION PROJECT
- AMITE RIVER AND TRIBUTARIES, BAYOU MANCHAC PROJECT
- BAYOU CONWAY & PANAMA CANAL DRAINAGE IMPROVEMENT PROJECT
- ST. JAMES-ASCENSION STORM SURGE FLOOD PROTECTION PROJECT
- AMITE RIVER DIVERSION CANAL WIER REHABILITATION PROJECT
- WEST SHORE - LAKE PONTCHARTRAIN, LA HURRICANE AND STORM DAMAGE RISK REDUCTION PROJECT

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## September, 2016

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## Pontchartrain Levee District Board of Commissioners

**Steven C. Wilson, President**  
At-Large

**Leonard C. "LC" Irvin, Sr., Vice President**  
Representing Illinois Central Railroad

**Henry N. Baptiste**  
Representing East Baton Rouge Parish

**Allen J. St. Pierre, Sr.**  
Representing St. John the Baptist Parish

**Percy Hebert, Jr.**  
Representing Iberville Parish

**Ricky Bosco**  
Representing St. Charles Parish

**Jerry Savoy**  
Representing Ascension Parish

**Monica Salins Gorman**  
Executive Director

**Marty J. Poche**  
Representing St. James Parish

**Mel D. Bush**  
Board Secretary

**Dwight D. Poirrier**  
Special Counsel

## Mission

- To maintain the existing levee systems in a condition that will ensure their integrity and capability to withstand river stages and hurricane tidal surges, as anticipated by their design and condition;
- To improve, by construction or supporting construction by others, of new or enhanced levels of protection as design parameters change or higher levels of protection are authorized; and
- To anticipate weaknesses in the system as and before they develop, and to respond actively with necessary emergency measures when the levees are being subjected to river stages or hurricanes tidal surges that would cause flooding within the jurisdiction of the Pontchartrain Levee District





# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Pontchartrain Levee District

### History of the Pontchartrain Levee District



The Pontchartrain Levee District (PLD) was created by the legislature in 1895. At that time it also included the Baton Rouge Front Levee, and until 1979 it encompassed what is now the East Jefferson Levee District. The PLD headquarters is in Litcher, and the maintenance shop is located at 9620 Highway 44, in the community of Union, two miles downstream from the Sunshine Bridge. Within the Pontchartrain Levee District today are 115 miles of levee along the east bank of Mississippi River, and 10 miles of hurricane protection levee in St. Charles Parish. The Pontchartrain Levee District extends from Baton Rouge to Kenner, La., at the Jefferson Parish line, and runs north from the Mississippi River to reach the Amite River and Lakes Pontchartrain and Maurepas. Portions of six parishes on the east bank of the Mississippi River are included in the Pontchartrain Levee District: East Baton Rouge, Iberville, Ascension, St. James, St. John the Baptist, and St. Charles Parishes.

The Board of Commissioners of the Pontchartrain Levee District is currently comprised of nine (9) board members, consisting of one member from each of the six parishes, two additional board members representing the Illinois Central Railroad, and an at-large member.

The PLD works closely with the Louisiana Coastal Protection and Restoration Authority (CPRA), the U.S. Army Corps of Engineers (Corps) and formerly with Louisiana Department of Transportation and Development (DOTD) to promote and support industrial action and expansion through a program that grants a “no objection” statement to proposed operations that may have an effect on the integrity of the levee system and are compatible with flood control such as the construction of structures, roadways, and pipelines.

The Board of Commissioners is vested with the control and responsibility for assuring the proper monitoring of levees, structures, canals, and related improvements throughout the district. The Commissioners attend one regular monthly meeting, along with various special and committee meetings.

The Pontchartrain Levee District, under the direction of the CPRA and the Corps and acting as its local agent, is responsible for the performance of ordinary maintenance and repair of the levee system, policing to guard against damages to the levee and related structures, and to ensure the integrity of the levee system. The PLD keeps an accurate account of the finances, periodically examines and reviews financial transactions before approving expenditures, and adopts an operating budget. During all times, the PLD patrols the levee system and interrupts operations on or near levees which may be detrimental to the integrity of the flood protection levee.

The entire levee system within the Pontchartrain Levee District was designed and built by the U.S. Army Corps of Engineers. The Pontchartrain Levee District, in its authority to maintain the integrity of the levee, cannot allow any work, any activity, or any alteration to the design of said levees without the approval and consent from the CPRA, DOTD and U.S. Army Corps of Engineers. DOTD is consulted because of the highways that run along the levee and specific DOTD right-of-ways, and the Corps is consulted because as designers and constructors of the levees, they have the ultimate authority over such a system.



## Pontchartrain Levee District

### Facts and Statistics



The Pontchartrain Levee District's current budget is derived principally from a 3.52 mils ad valorem tax on the six-parish area, and from a limited amount of interest and royalties. Of the PLD's projected expenditures for FY 2015-2016, a total of 75% is spent on levee maintenance. There are 48 classified employees, an executive director, an executive assistant to the board, and a board secretary employed by the PLD.

The Pontchartrain Levee District conservatively estimates that its levees protect \$1.2 to \$1.5 billion in assessed taxable property and improvements, as well as highways, bridges, airports, schools, courthouses, and parks. The PLD protects an estimated 500,000 people within its six-parish jurisdiction, and incorporates the primary evacuation routes for 1.1 million people from the southeast (greater New Orleans), and an additional 300,000 people from the southwest via routes U.S. 61, U.S. 90, and Interstates 10 and 310.

The U.S. Army Corps of Engineers is responsible for levee construction and related works under the federal Mississippi River & Tributaries Flood Control Project (MR&T). The Pontchartrain Levee District, as a local assuring agency, works with the Corps to furnish rights-of-way and maintain levees, canals and caving banks. The New Orleans District of the Corps of Engineers continues to work toward completion of the MR&T Project by letting contracts for levee enlargements. These projects are financed through federal appropriations and are completed as part of a total upgrading of the levee system. Bank caving is being solved by a sophisticated "revetment program." Completion of the MR&T Project, which began in 1928, depends solely on availability of federal funds appropriated in the yearly federal budget.

The Pontchartrain Levee District (PLD) is the local sponsor for the projects referenced herein. Currently, there are projects in each of the six parishes comprising the PLD's jurisdiction. As presented in more detail throughout this report, ongoing feasibility studies are underway for many projects, some of which are federally authorized, and many where the PLD has assumed full responsibility at the local level. Additionally, several projects are currently under construction, which when completed, will provide the East Bank community of St. Charles Parish with increased protection from storm induced flooding and rainfall events.

The total cost of these projects is estimated to be in excess of \$750,000,000. The PLD is confident that the findings and recommendations in the ongoing studies will establish the forward path for future construction of critical drainage, coastal restoration, hurricane protection, and flood risk reduction projects. An integral part of several of the local studies includes the incorporation of recreational features which provide economic opportunities and a better quality of life for the citizens residing on the east side of the Mississippi River in the Parishes of St. Charles, St. John the Baptist, St. James, Ascension, Iberville and East Baton Rouge. The PLD appreciates the interest and support of the Congressional Delegation, the U.S. Army Corps of Engineers (Corps), the Coastal Protection and Restoration Authority (CPRA) and various state and local governments with regard to these projects.

# 2016

## THE PONTCHARTRAIN LEVEE DISTRICT PROGRESS REPORT



**PONTCHARTRAIN LEVEE DISTRICT  
JURISDICTIONAL BOUNDARIES**

**gcr**  
Geographic Consulting Resources  
Problem? Solve it.







# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Laurel Ridge Levee Extension Project, Ascension Parish

### Project Location:

The Laurel Ridge Levee Extension Project is located in the north east corner of Ascension Parish along the Amite River.

### Project Description:

The Laurel Ridge Levee Extension Project consists of extending the existing Laurel Ridge Levee to protect additional properties along/within the Amite River floodplain from backwater flooding and high water on the Amite River. The proposed levee extension will begin at the ending point of the existing Laurel Ridge Levee, and is proposed to terminate at the eastern end of Wall Cemetery Road.

The Laurel Ridge Levee Extension, as currently proposed, will be approximately 4.5 miles long and constructed to an elevation of 15.0 NAVD. The construction will require approximately 405,000 cubic yards of fill material.

The proposed project will reduce flood stages by several feet and provide protection for a population of approximately 750 residents and approximately 1,300 structures.

### Project Status

The initial reconnaissance level investigation was completed during the summer of 2011. The Reconnaissance Study investigated the feasibility of the project and helped determine some of the project features, modeling results, and design criteria. In May of 2013, the project scope changed from a project of approximately 3.3 miles long to a total project length of approximately 4.5 miles to provide flood risk reduction to additional residents within the Amite River Flood Plain located along LA 431. This revision required additional surveying and preliminary engineering to incorporate into the original project. Three alignments were considered.

Alignments 1 & 3 were investigated to minimize environmental impacts to the jurisdictional wetlands. Because of the increased levee lengths and the necessity for multiple pump stations for both alignments, Alignment 1 & 3 were deemed too expensive (\$32 and \$35 million, respectively) to construct, compared to the benefits that they would have provided.

Alignment 2 is the preferred alignment due to the reduced estimated cost (\$24 million) for providing the same benefits and level of protection as Alignments 1 & 3. Alignment 2 would utilize the existing swamp as retention for the internal drainage while the Amite River is at flood stage. This alignment does not require the construction of pump stations. Also the gravity-driven internal drainage will be handled by a flood gate system. This will allow the swamp area on the protected side of the levee to be used as storm water storage until the Amite River floodwaters recede. The proposed levee is approximately 25,300 feet long with a crest elevation of 15.0. Because the gated system will be operated in an open condition, and only closed during a backwater flooding event from the Amite River, there will be minimal environmental impacts to the wetlands on the protected side. This alignment allows a shorter levee length.

Additionally, Alignment 2 has been considered

with more detail, and minor alignment modifications have been investigated resulting in fewer impacted wetlands and a more efficient alignment.

### Project Breakdown

#### Phase I: Reconnaissance Study

This effort was an investigation into the general project concept. Engineering parameters, project costs, project benefits were investigated to determine whether the project was worthy of consideration. The results for the construction of Alternative Alignment #2 were deemed favorable. This study was completed during the summer of 2011.

#### Phase II: Preliminary Design and Permitting

This effort consists of the data collection necessary to perform the preliminary design required to better define the project parameters before design and permitting application submitted. Topographical Survey Services were required to better define the termination point of the proposed levee. The proposed project structures were more closely investigated for site requirements and alignments. A wetlands delineation was performed to determine the boundary of the areas impacted by the proposed improvements, and to assist in the permit submittals.

This effort was completed during the summer of 2014.

#### Phase III: Permitting

The permitting will be critical to the successful completion of this project. The permitting requires submittal of the preliminary design documents, and the approval of the proposed plan. An operation plan for the flood gates will be developed and approved that will dictate the specific ownership impacted and operation parameters for the flood gates. Also, the environmental impacts will have to be identified, and a wetlands mitigation and monitoring plan will have to be established for impacted areas.





# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Laurel Ridge Levee Extension Project, Ascension Parish

Once these concerns have been addressed, the various entities having jurisdiction will have an opportunity to accept the proposed improvements.

The permitting efforts are currently underway, and are estimated to be completed in December 2016.

### **Phase IV: Final Design / Specifications**

After completion of Phase III, the final design and the necessary construction documents will be developed. Once the final design is completed, a revised construction cost estimate will be calculated and provided.

### **Phase V: Real Estate Services & Environmental**

This phase will include the acquisition of all necessary real estate right-of-ways and easements and wetland mitigation. The real estate right-of-ways, easements and wetland mitigation will be accomplished according to the permitting requirements. The final design documents will then be completed and approved. Once these steps are completed, and the construction funds are in place, then the project can be advertised for bid.

### **Phase VI: Construction Administration & Inspection Services**

The construction administration and inspection services will be performed to ensure that the Contractor is constructing the levee and structures in accordance the construction documents, and to protect the interests of the owner. This effort will include the day-to-day management of the project, the inspection of the construction progress, the verification (geotechnical and survey) of the construction materials and quantities, progress meetings, approval of pay applications, processing of change orders, owner updates and reports, and various other construction administration services.



# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Project Schedule

### Phase I: Reconnaissance Study – COMPLETE

Began: 9/29/2008

Status: Completed - Spring 2011

### Phase II: Preliminary Design and Permitting – COMPLETE

Began: 7/5/2012

Status: Complete

### Phase IIa: Additional Data Collection and Design Revision – COMPLETE

Began: September 2013

Status: Completed 2/2014

### Phase III: Permitting – ONGOING

Projected Begin: 10/2014

Projected Completion: 12/2016\*

*\*Dependent on LADNR & USACE Review/Approval Schedule*

### Phase IV: Final Design/Specifications – ONGOING

Estimated Duration: 6 Months

Projected Begin: 5/2016

Projected Completion: 12/2016\*

*\*Dependent on LADNR & USACE Review/Approval Schedule*

### Phase V: Real Estate Services, Wetland Mitigation – ONGOING

Estimated Duration: 12 Months

Projected Begin: 5/2016

Projected Completion: 5/2017

### Phase VI: Construction - Estimated Construction Cost \$20M

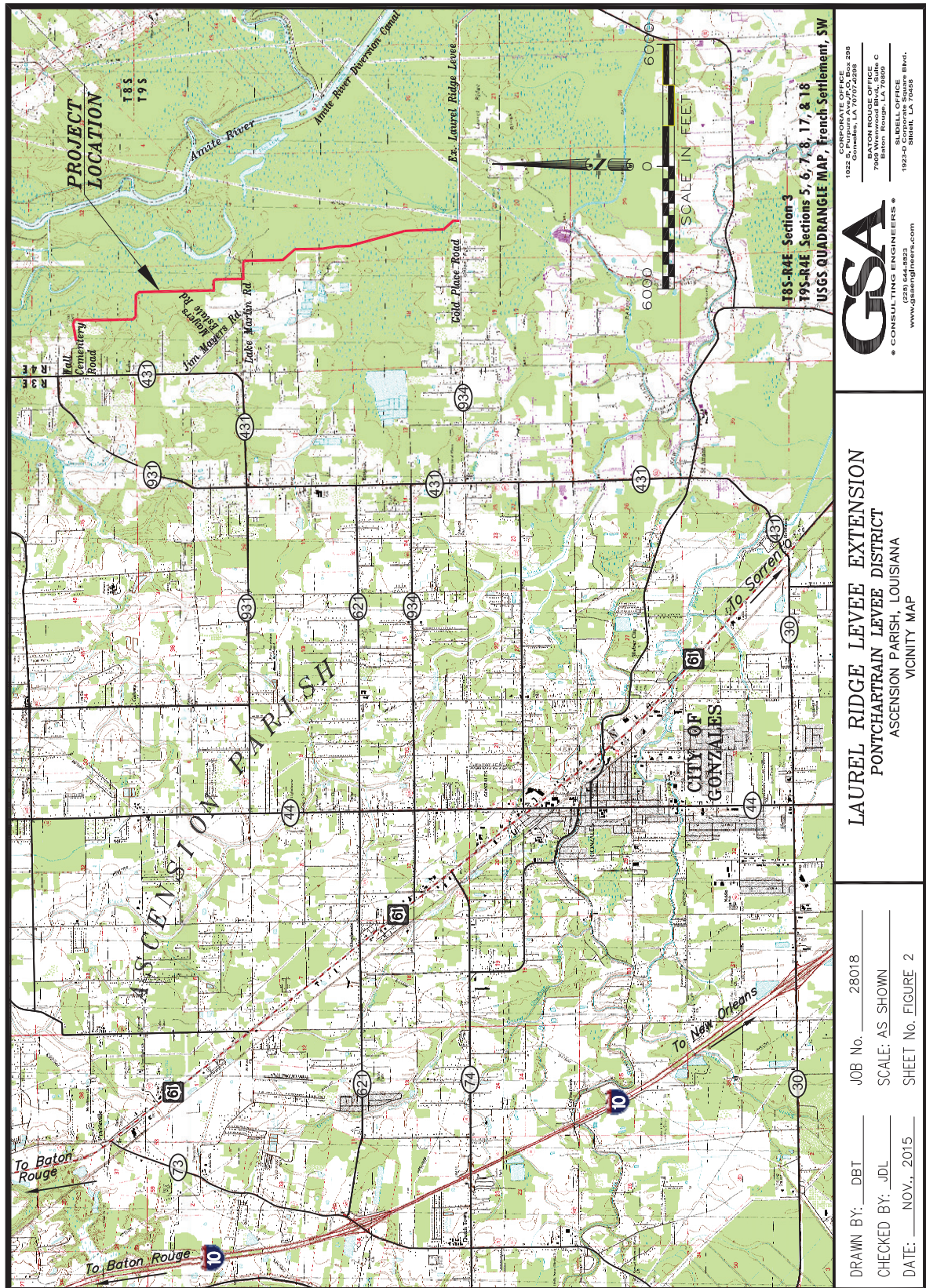
Estimated Duration: 12 Months

Projected Begin: 6/2017

Projected Completion: 6/2018

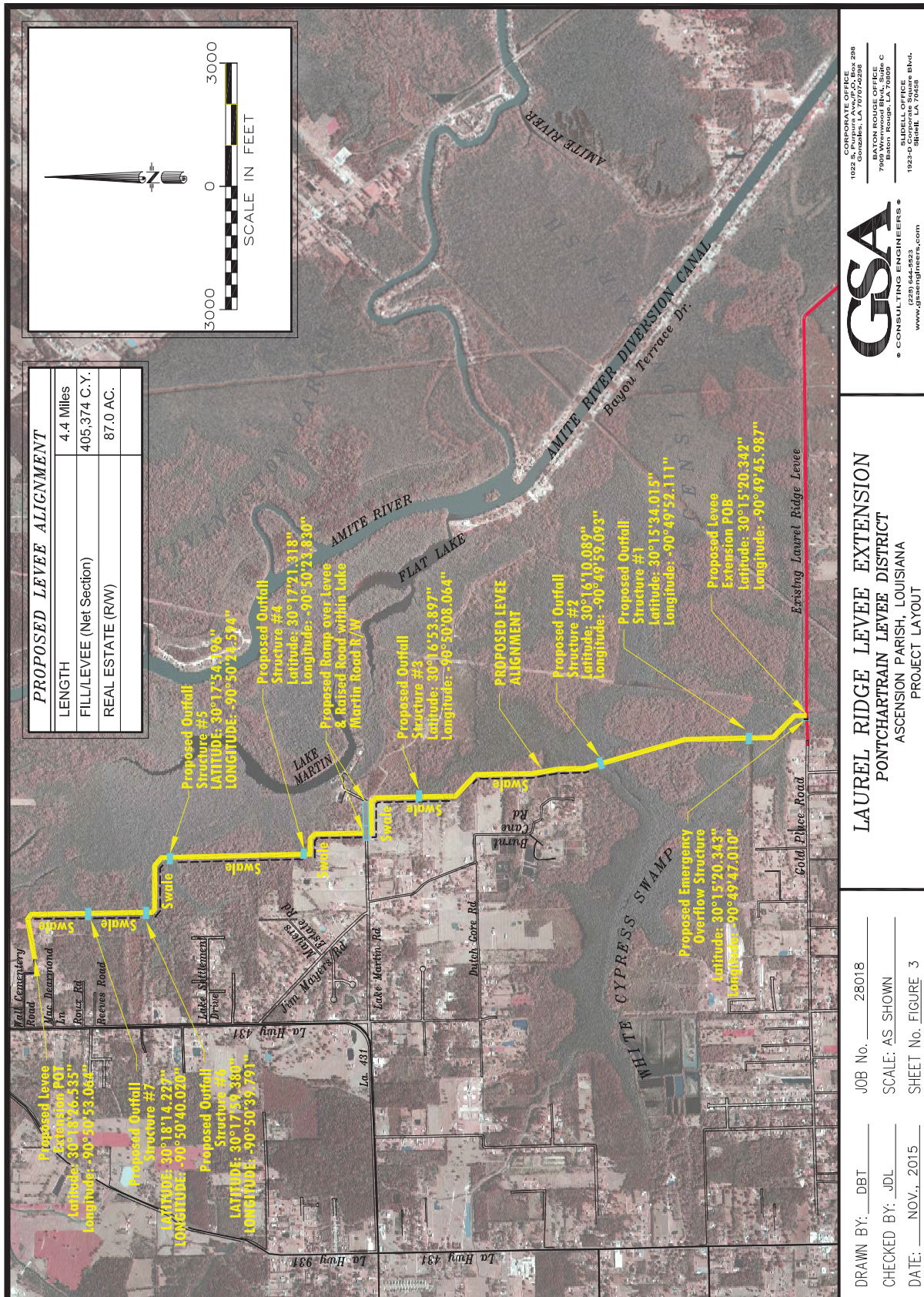
**Total Estimated Project Cost:**      \$24M





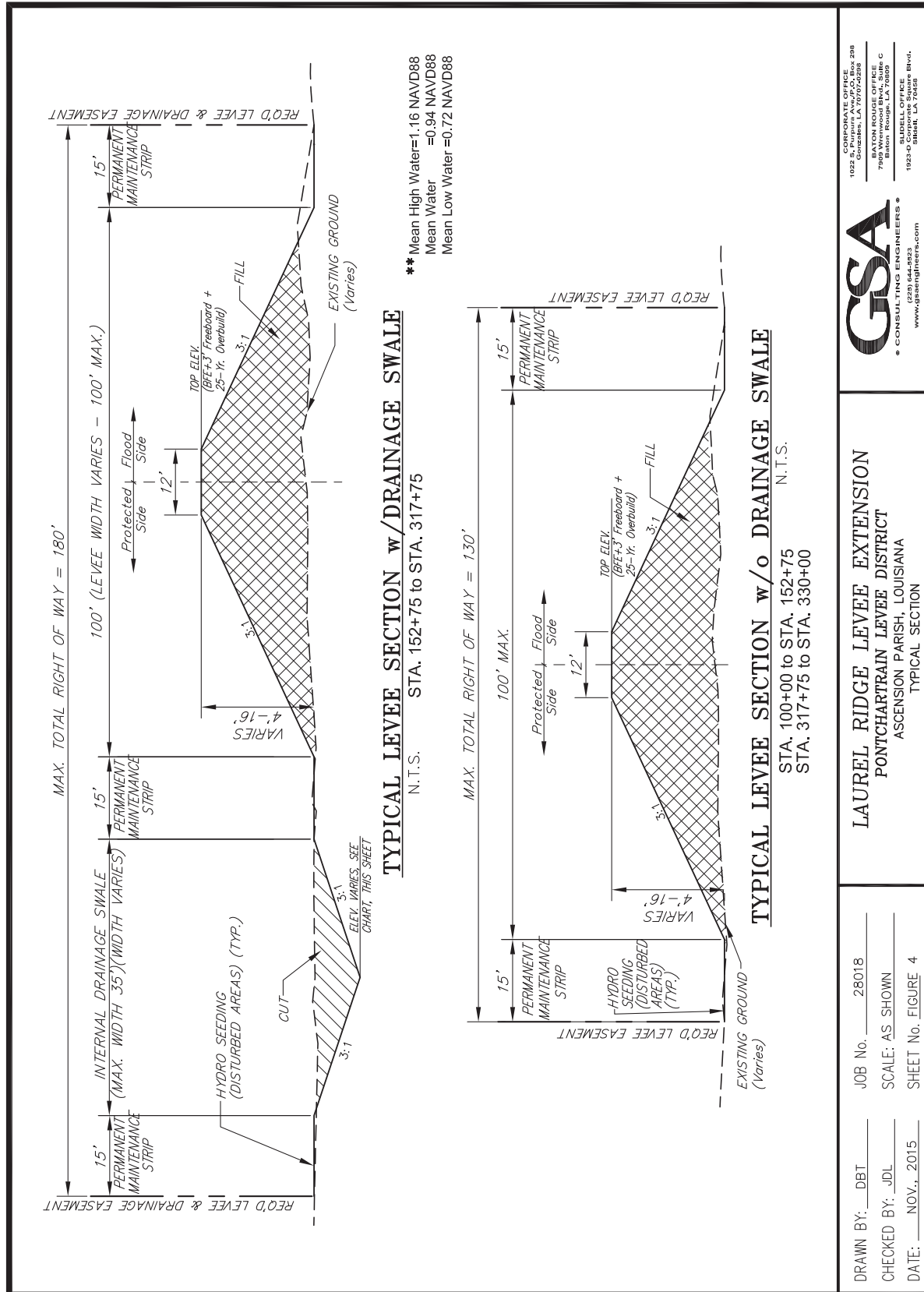
### Laurel Ridge Levee Extension Project, Ascension Parish





## Laurel Ridge Levee Extension Project, Ascension Parish





## Laurel Ridge Levee Extension Project, Ascension Parish



# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Amite River and Tributaries, Bayou Manchac Project East Baton Rouge, Iberville and Ascension Parishes

### Project:

Amite River and Tributaries, Bayou  
Manchac Project

### Project Description:

The Amite River and Tributaries, Bayou Manchac, Louisiana feasibility study has evaluated alternatives and developed a Tentatively Selected Plan (TSP) to provide for flood risk reduction and facilitate ecosystem restoration in the Bayou Manchac watershed. The TSP includes watershed management and replacement of antiquated floodgates with more efficient structures and dredging of Alligator Bayou to remove sediment that has accumulated over the last 60 years in the Bayou.

PLD would like to expand the scope of this project to include protection for two (2) vital, security facilities overseen by the Louisiana Department of Corrections. Located within this project area is the LA DOC- Elayn Hunt Correctional Center (Hunt Prison) and the Louisiana Correctional Institute for Women (LCIW). Additional components need to be added to this project to ensure protection of these vital security facilities which was consumed with flood waters after Bayou Manchac overtopped Alligator Bayou Road/Manchac Road emptying those rising water levels into the Spanish Lake Basin.

### Project Location

The project is in Southeastern Louisiana on the east bank of the Mississippi River and includes portions of East Baton Rouge, Iberville and Ascension parishes.

### Project History

The Amite River and Tributaries, Bayou Manchac, Louisiana feasibility study began as a cost-shared study under the Feasibility Cost Share Agreement that was executed between the Pontchartrain Levee District (PLD) and the U.S. Army Corps of Engineers (Corps) on November 29, 2001. In April 2008 the Pontchartrain Levee District Board of Commissioners voted to pursue the study under Section 211 because the study was not progressing at an acceptable rate. The Corps recommended Section 211 as a means of expediting the effort. The Secretary of the Army was notified of the PLD's intent to pursue the project under Section 211 of WRDA 96 and approval was granted in July 2008. In July 2008 the study was converted to a Section 211 project when the PLD was not satisfied with the progress of the study due to funding constraints at the Federal level. Shaw Coastal, Inc. as Consultant to the PLD and all project related efforts are in compliance with the Corps Federal project process, to the extent possible, since the intent is for this to become a federally authorized project in which the PLD will seek reimbursement for the equivalent of what would have been the Federal share in accordance with existing laws. The work performed under the previous feasibility cost sharing agreement between the PLD and the Corps is serving as the basis for the

Section 211 study effort. During the cost-shared effort, scoping and stakeholder meetings were held and a preliminary screening of alternatives was accomplished. Surveys have been completed and data has been submitted and reviewed by the Corps for the use in both the Amite River Ecosystem and Bayou Manchac studies.

### Description of the Tentatively Selected Plan:

#### Alligator and Frog Bayous

Replace the existing water control structure (Floodgates) at Alligator Bayou and Frog Bayou with improved higher capacity floodgates. Dredge Alligator Bayou, beginning at the floodgate structures and extending approximately 7,550 feet upstream. Acquire a 1.25 acre construction staging area that will also accommodate equipment storage. Bank protection will also be placed opposite the Alligator Bayou and Frog Bayou floodgates to prevent additional bank erosion.

#### Ward Creek

(This part of the plan would be primarily on the lower part of the BREC Fairgrounds Park.) Reroute the lower reach of Ward Creek. Construct closures at the upper and lower ends of the abandoned channel to provide bank protection. Construct a backwater flood restriction structure in Bayou Manchac with a boat ramp for operational purposes; A low levee to prevent backwater from overflowing Ward Creek into Bayou Manchac. Also a minor redesign is needed where protection ties in to the Santa Maria Golf Course.



# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## **Amite River and Tributaries, Bayou Manchac Project East Baton Rouge, Iberville and Ascension Parishes**

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### **Project Study Results**

The proposed plan would lower stages and reduce the flood risk for 3,750 structures in the Bayou Fountain, Spanish Lake and Bluff Swamp watersheds. 964 structures would be removed from the 200-year floodplain and 66 repetitive loss structures in the floodplain would benefit. Engineering & design is estimated at \$2M and the construction cost is estimated at \$22 M.





# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Amite River and Tributaries, Bayou Manchac Project East Baton Rouge, Iberville and Ascension Parishes







# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Bayou Conway & Panama Canal Drainage Improvement Project Ascension and St. James Parish

### Project Location:

Bayou Conway and the Panama Canal drainage basin is located in southern Ascension Parish and northern St. James Parish, along the proposed Ascension Parish alignments of the Lake Pontchartrain West Shore Hurricane Protection Levee Project.

### Project Description:

The purpose of the Bayou Conway and Panama Canal Drainage Improvement Project is to provide a reduction in the risk of flooding for the drainage basin that includes the area near the boundary between Ascension and St. James Parishes.

The modeling component of the project was utilized in the West Shore Hurricane Protection Levee project for the Bayou Conway crossing of the proposed Levee Alignment D. It now appears that Alignment D has effectively been removed as an alternative from consideration for the West Shore Hurricane Protection Levee. The modeling results are being utilized to make improvements to the gravity conveyance system (channel improvements) within the watershed, and to consider the potential for a forced drainage system (levees and pump stations) in the future.

The Bayou Conway watershed encompasses the Mississippi River Levee at the 81 mile point (mile marker 180) to its confluence with Blind River, and travels a distance of approximately 23.5 miles. The Panama Canal is an 8.3 mile diversion relief channel that cuts a more direct channel to the downstream end of Bayou Conway. The Conway/Panama System serves as the major conveyance channel for the southeastern portion of Ascension Parish and a portion of St. James Parish. The drainage basin encompasses an area of approximately 65 square miles, of which a large portion lies along the Mississippi River corridor. The entire drainage basin lies outside of the area served by the Marvin J. Braud Pump station located at McElroy, and its protection levees, which are located in Ascension Parish. The results of the Bayou Conway/Panama Canal Drainage Study are being utilized for proposed channel improvements, so that the risk of flooding can be reduced within the basin. The study and modeling efforts also form the basis for future basin planning and watershed management.

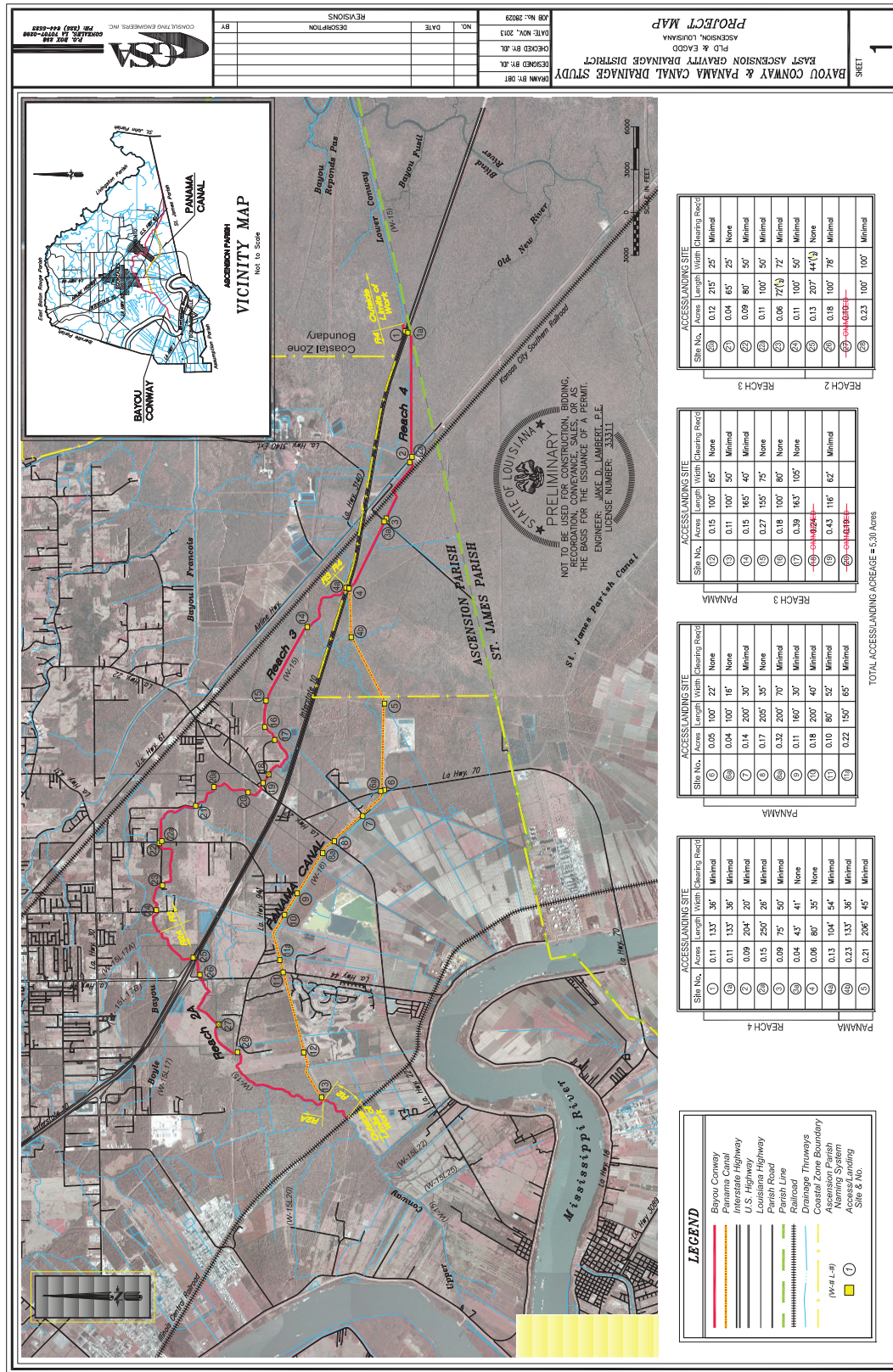
### Project Status

The hydraulic analysis/study was completed in July 2011. The study determined the existing conditions within the basin based on varying downstream conditions and proposed necessary improvements to the channels to reduce the risk of flooding within the watershed. Downstream conditions were determined utilizing the existing data from existing gage data, FEMA Studies, and data generated from the Amite River Tributaries and Lake Pontchartrain West Shore projects. As a result of this investigation, channel maintenance and a dredging regime is recommended to provide the needed channel capacity for the gravity conveyance improvements within the Bayou Conway and Panama Canal watershed.

Permits for the Snagging and Clearing of the channels were received in the summer of 2014 to facilitate the drainage improvements. The actual improvements were completed by the fall of 2014, resulting in over 1,500 "targets" (logs, snags, lay-downs, etc.) being removed from the channels.

The next phase of work to the implementation of the proposed channel maintenance dredging. The proposed improvements consist of five phases of work that will open up the silted/clogged channels and provide needed capacity for the drainage system. The phases of work were divided by assessing the most urgent priorities determined in the modeling efforts.

Additionally, the potential for a forced drainage system including levees and pumps are being considered for future efforts.



### Bayou Conway/Panama Canal Drainage Study Ascension and St. James Parish





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THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## St. James-Ascension Storm Surge Flood Protection Project

### Project Location:

The St. James-Ascension Storm Surge Flood Protection Project study area is located in St. James Parish and a portion of Ascension Parish. The project route starts at the upper end of the West Shore Lake Pontchartrain, LA Hurricane Storm Damage Risk Reduction Project, continues westward through St. James Parish and then northerly toward the New River Canal in Ascension Parish. This project will provide protection to the communities of Gramercy, Lutchet, Grand Point, Convent, Romeville, Union, Burnside, and Sorrento. Please see attached map.

### Project Goals

The Initial Phase of the project will provide storm damage risk reduction equivalent to the West Shore Lake Pontchartrain, LA Hurricane Storm Damage Risk Reduction Project. This protection will be accomplished by constructing levees, floodwalls, floodgates, gravity drainage gates, and stormwater pumping stations to prevent extreme high tides or storm surges from flooding the developed areas within the Blind River, Bayou Conway, and Panama Canal basins. The proposed levee will be constructed to the 2020 Design Year 0.01% Probability Storm surge levels. The proposed structures will be built to the 2070 Design Year 0.01% Probability Storm surge levels. Wherever possible, existing infrastructure, such as highways, may be used to lower the initial construction costs. If raising the level of the existing roadways equivalent to the 2020 Design Year elevation is nominal, then the construction of floodgates and floodwall may be delayed to the next phase.

The Intermediate Construction Phase will also be equivalent to the West Shore Lake Pontchartrain, LA Hurricane Storm Damage Risk Reduction Project for the 2045 Design Year. If new levees are required due to the 2045 Design Year surge levels, then these levees will be constructed in lifts to the 2045 Design Year elevation. Existing levees will be lifted to the 2045 Design Year elevations. Floodgates and floodwalls will be constructed as required to meet the 2070 Design Year elevations.

The Future Construction Phase will also be equivalent to the West Shore Lake Pontchartrain, LA Hurricane Storm Damage Risk Reduction Project for the 2070 Design Year. Existing levees will be lifted to the 2070 Design Year elevations.

### Status of Work

The levee alignment study of the Initial Phase for St. James Parish has been completed. Three alignment alternatives were evaluated for the St James portion of the project. The recommended alignment is to follow the existing spoil banks from the Parish canal network. Order of Magnitude estimates were developed for all three alternatives.

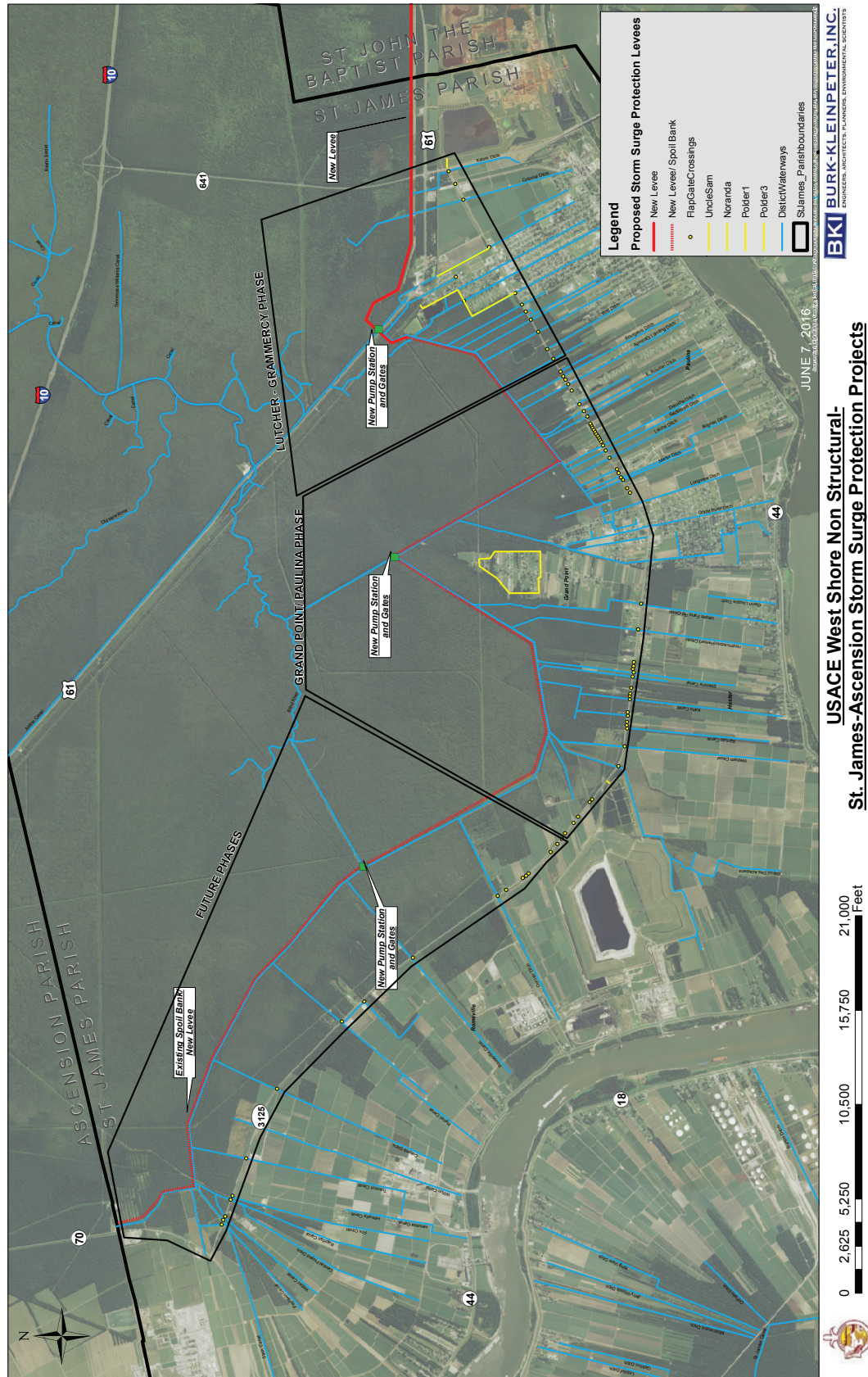
# THE PONTCHARTRAIN LEVEE DISTRICT PROGRESS REPORT



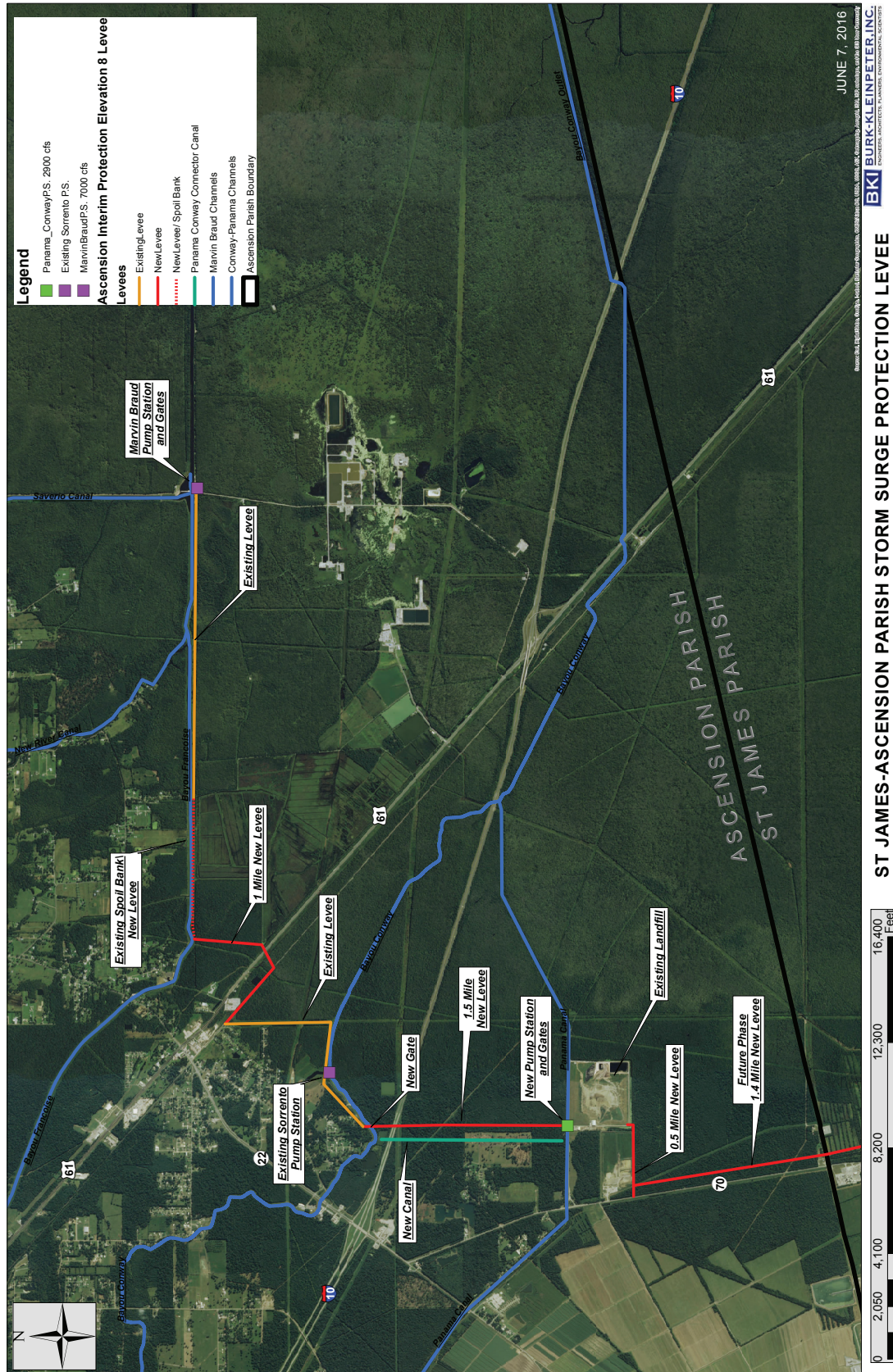
**Pontchartrain Levee District-United States Army Corps of Engineers Westshore Levee (St. John Parish) - Non Structural (St. James Parish) Plans, St. James Parish - Ascension Parish Surge Protection Plans**

**BKI** BURK-KLEINPETER, INC.  
EQUIPMENT AND SERVICE FOR THE CONCRETE INDUSTRY













# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## Amite River Diversion Canal Weir Rehabilitation Ascension and Livingston Parishes

### Project Location:

The project is located at the north head of the Amite Diversion Canal and the Amite River in Ascension Parish and adjacent to Livingston Parish.

### Project Description:

The existing weir is proposed to be raised in order to re-establish the desired flow distribution between the Lower Amite River and the Amite River Diversion Canal. The current flows to the Lower Amite River have substantially been reduced by the degradation of the weir. This weir rehabilitation project will involve rebuilding the existing stone weir and reshaping the existing boat way in order to obtain a normal flow distribution of water into the Lower Amite River and Diversion Canal. This will assist in restoring the ecosystem balance, and slow the deposition of excess silt in the river.

### Project History

Drainage improvements on the Amite River were authorized by the U.S. Army District, New Orleans entitled Survey of Amite River and Tributaries, Louisiana and approved by Public Law 274.84, 84th Congress, August 1955.

The U.S. Army Corps of Engineers (USACE), New Orleans District submitted to the Lower Mississippi Valley Division, Vicksburg, Mississippi, the Amite River and Tributaries, Louisiana Design Memorandum NO. 1, General Design dated November 15, 1956. This document provided the design criteria for the Control Weir (Amite River Diversion Canal Weir). The General Design Memorandum describes a control weir with a total length of 1,500 feet at elevation 0.0 feet mean sea on the right bank of the Amite River at the head of the Diversion canal. The weir was then constructed on the ground prior to the Amite River Diversion Canal being dredged and completed at that location.

The Operation and Maintenance Manual for the Amite River and Tributaries, Louisiana, dated December 1963 states: the plan was modified at the request of the Ascension Parish Police Jury to add a boat way from Amite River to the Amite River Diversion Canal. This document shows the navigation opening (boat lane) as a trapezoid section with a 20-foot bottom width and a 1 vertical and 2 horizontal side slopes with an invert elevation of -5 feet.

In 2007 the U. S. Geological Survey (USGS) performed stream flow measurements on the Amite River upstream of the weir, lower Amite River Downstream of the weir and on the Amite River Diversion Canal. The USGS measured flow for high flow is 75% Amite River Diversion Canal (ARDC) and 23% Lower Amite River. The low measured flow distribution is 94% ARDC and -4% Lower Amite River. In March 2015, The Amite River Drainage and Water Conservation

District contracted with the firm GEC to perform a hydraulic design of the weir and a hydraulic analysis of flood events. The USGS measurements and the GEC modeled HEC-RAS analysis shows the existing weir does not meet the design requirements to retain a greater percentage of normal and low flows in the natural outlet of the Amite River.

GEC's hydraulic analysis resulted in a recommendation of a 10 foot wide weir with 3:1 slopes on the River side and 6:1 slopes on the Canal side of the weir. GEC modeled different boat lane open sizes and shapes to obtain normal flow distribution into the Lower Amite River. The resulting model indicated that a 20 wide bottom with 3:1 side slopes and a -6 foot elevation will produce the normal flow distribution needed to restore flow to the Lower Amite River.

The Pontchartrain Levee District (PLD) then contracted with Volkert, Inc. to implement the recommendations of the hydraulic analysis performed by GEC.

### Description of Current Plan

The current project plan is to leave the existing structure in place and construct the new weir over the remaining stone. The current stone will serve as the filter layer for the new rock weir.

The current project modifies the boat lane to -6 invert elevation with a 20 foot wide bottom and 1 vertical and 3 horizontal side slopes as recommended in the hydraulic analysis. The 1700 foot weir will be at elevation 1.5 feet, 10 wide at the top with 3:1 side slopes on the river side and 6:1 sides slopes on the canal sides. A large scour hole on the Canal side of the boat lane was discovered and is being stabilized to prevent undermining of the new boat way and weir.

A geotechnical study of the weir area is to be performed by PSI, Inc., under contract to Ascension Parish, to provide a geotechnical opinion on the stability of the boat lane and proposed weir area. At the time of this report the geotechnical study has not been completed.

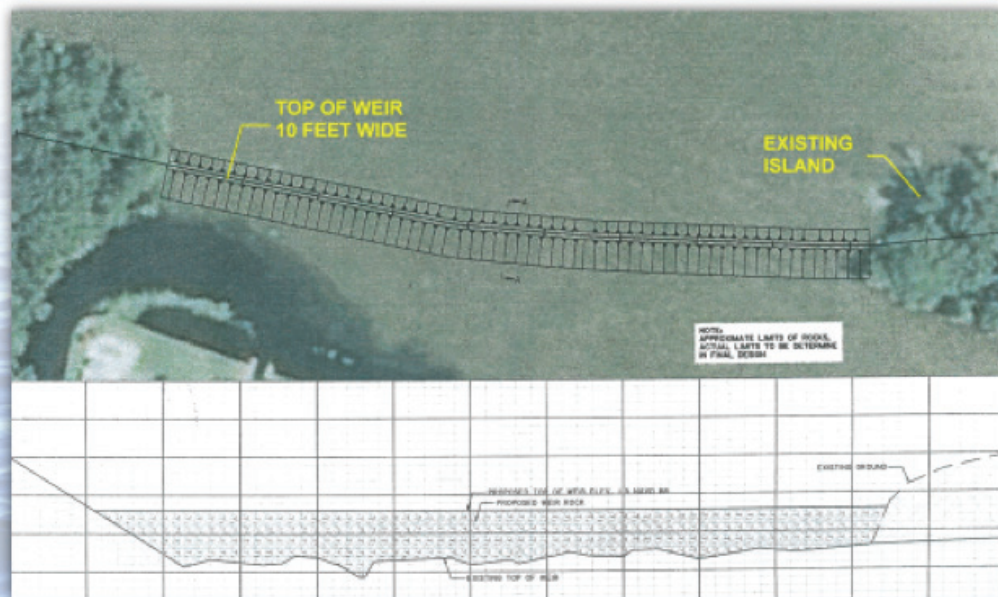


## Existing Amite River Diversion Canal Weir

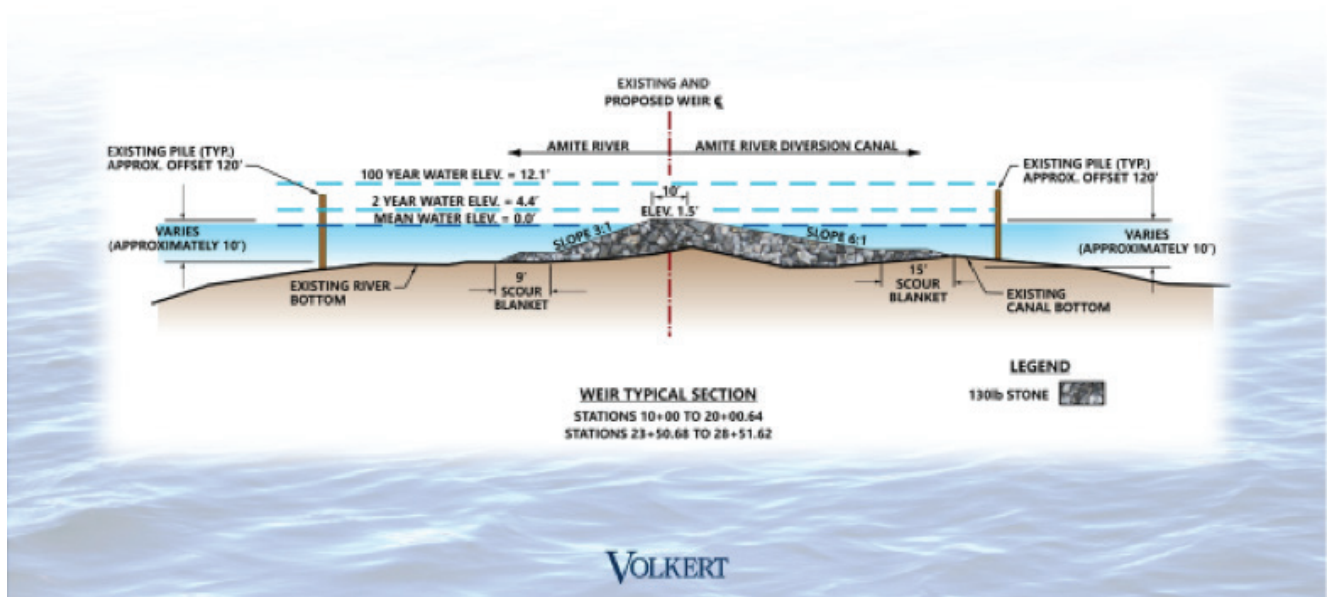


VOLKERT

## WEIR PLACEMENT



### Preliminary Design Of The Weir



VOLKERT

### Existing Boatway on South End







# 2016

THE PONTCHARTRAIN LEVEE DISTRICT  
PROGRESS REPORT

## West Shore – Lake Pontchartrain, LA Hurricane and Storm Damage Risk Reduction Project

### Project Description and Purpose:

In September 1965, Hurricane Betsy struck the greater New Orleans area causing severe flooding in the Lower 9th Ward of Orleans Parish and almost all of St. Bernard Parish. Through the Flood Control Act of 1965, Congress authorized the U.S. Army Corps of Engineers (Corps) to design and construct the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project. In 1970, St. John the Baptist Parish (St. John) raised objections to the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project based upon the lack of hurricane protection levees west of the Bonnet Carré Spillway. St. John argued that the development of hurricane protection levees from Orleans Parish to St. Charles Parish would funnel the storm surge to St. John thus consequently sacrificing the area for the benefit of other Parishes.

In July 1971, a resolution was passed by the House of Representatives Committee on Public Works authorizing the Corps to include the remaining portion of St. Charles Parish (from the Bonnet Carré Spillway Upper Guide Levee to the Parish line) and St. John in the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project. In September 1974, a resolution was passed by the Senate Committee on Public Works authorizing the Corps to include St. James Parish in the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project.

### Project Location:

The West Shore – Lake Pontchartrain, Louisiana Hurricane and Storm Damage Risk Reduction Project (Project) study area is located in portions of St. Charles, St. John, and St. James Parishes. As delineated on the maps immediately following this section, the Project begins at the Upper Guide Levee of the Bonnet Carré Spillway and continues westward toward the Hope Canal providing protection to the communities of Montz, LaPlace, Reserve, Garyville, Mount Airy, Gramercy, Lutchet, and Grand Point. Please see attached maps.

### Status of Work:

The work on the Feasibility Study Report was cost-shared evenly between the Corps and the Pontchartrain Levee District (PLD). There were three alignments being reviewed; one alignment that followed the wet-dry interface with the wetlands from the Upper Guide Levee to Hope Canal (Environmentally Preferred Alignment); a second alignment that followed the petroleum pipeline right-of-way from the Upper Guide Levee to Hope Canal then turning south toward the Mississippi River (Pipeline Avoidance and Storage Capacity Alignment); and a third alignment that followed the Interstate-10 route from the Upper Guide Levee to the Marvin Braud Pump Station in Ascension Parish (Locally Preferred Alignment). The Environmentally Preferred and Pipeline Avoidance and Storage Capacity Alignments took into consideration protection for the St. James Parish communities via non-structural methods such as ring levees and property elevations. The Pipeline Avoidance and Storage Capacity Alignment was recommended as the Tentatively Selected Plan in June 2013. The Pipeline Avoidance and Storage Capacity Alignment (Alignment C) was approved as the Tentatively Selected Plan during the Agency Decision Milestone Meeting in November

2013. The Corps and PLD finalized the Feasibility Study Report and Appendices and submitted the report for Division and Headquarters review in September 2014. The Feasibility Study Report was approved by the Civil Works Review Board in December 2014 and distributed to the State of Louisiana and Federal Agencies for review in January 2015. The Comment Resolution was completed in April 2015 and the approved Chief's Report was issued on June 12, 2015. Draft language for authorization of the Project was submitted to Congress and is included in the current version of the Water Resources Development Act (WRDA) of 2016.



# THE PONTCHARTRAIN LEVEE DISTRICT PROGRESS REPORT

