

## **APPENDIX F**

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### **Conveyance Corridor Survey – Upland Segment**

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# **CONVEYANCE CORRIDOR SURVEY – UPLAND SEGMENT**

## **1.0 INTRODUCTION**

The Conveyance Corridor Survey – Upland Segment (Survey) was completed in support of the Feasibility Study and Preliminary Design Phases for the Riverine Sand Mining / Scofield Island Restoration Project (Project). The Project is sponsored by the Louisiana Department of Natural Resources (LDNR), State of Louisiana Office of Coastal Protection and Restoration (OCPR), and NOAA Fisheries. The Project design is funded and authorized in accordance with the provisions of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) (16 U.S.C.A., Sections 3951-3956) and has been approved by the Public Law 101-646 Task Force. The Project's CWPPRA designation is BA-40.

The purpose of the Survey was to collect design data for the Upland Segment of the Conveyance Corridor, which shall serve as the corridor for the sediment pipeline to transport sand excavated from Mississippi River Borrow Areas to Scofield Island as fully described in the Preliminary Design Main Report and Conveyance Corridor Design Analysis (Appendix I).

The scope of services included establishment of the survey control network, topographic surveys, infrastructure locations, and channel bottom elevation measurements within the canals from the Mississippi River batture to the Empire Waterway. The survey was conducted by SJB Group, LLC. (SJB) and reviewed by Coastal Engineering Consultants, Inc. (CEC).

## **2.0 PROJECT AREA AND LOCATION**

The Conveyance Corridor Upland Segment is approximately 1,120 feet wide and extends approximately one mile from the western bank of the Mississippi River in Empire, Plaquemines Parish, southwest to the rock breakwater at the Empire Locks as presented in Figure 1.

## **3.0 HORIZONTAL AND VERTICAL CONTROL**

Due to a lack of horizontal and vertical control in the Project area, three (3) new deep rod Class B monuments, BA40-SM-01, BA40-SM-02, and BA40-SM-03, were constructed and modernized into LDNR's Louisiana Coastal Zone GPS Network. Four (4) LDNR primary monuments were used to establish a horizontal and vertical position on the new monuments. The monuments used were LAFITTE 2, H359, 876 1724 C TIDAL, and 876 0849 A TIDAL. One (1) secondary LDNR monument was utilized within the network, BAFS-SM-09H. Static GPS sessions were conducted simultaneously at each of the 8 monuments, thereby establishing a network. Figure 2 depicts this network. Datasheets for each monument within the network are presented in Annex F1.

# LEGEND

CONVEYANCE CORRIDOR -  
UPLAND SEGMENT SURVEY AREA

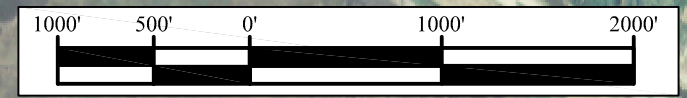


FIGURE 1: CONVEYANCE CORRIDOR  
UPLAND SEGMENT LOCATION MAP



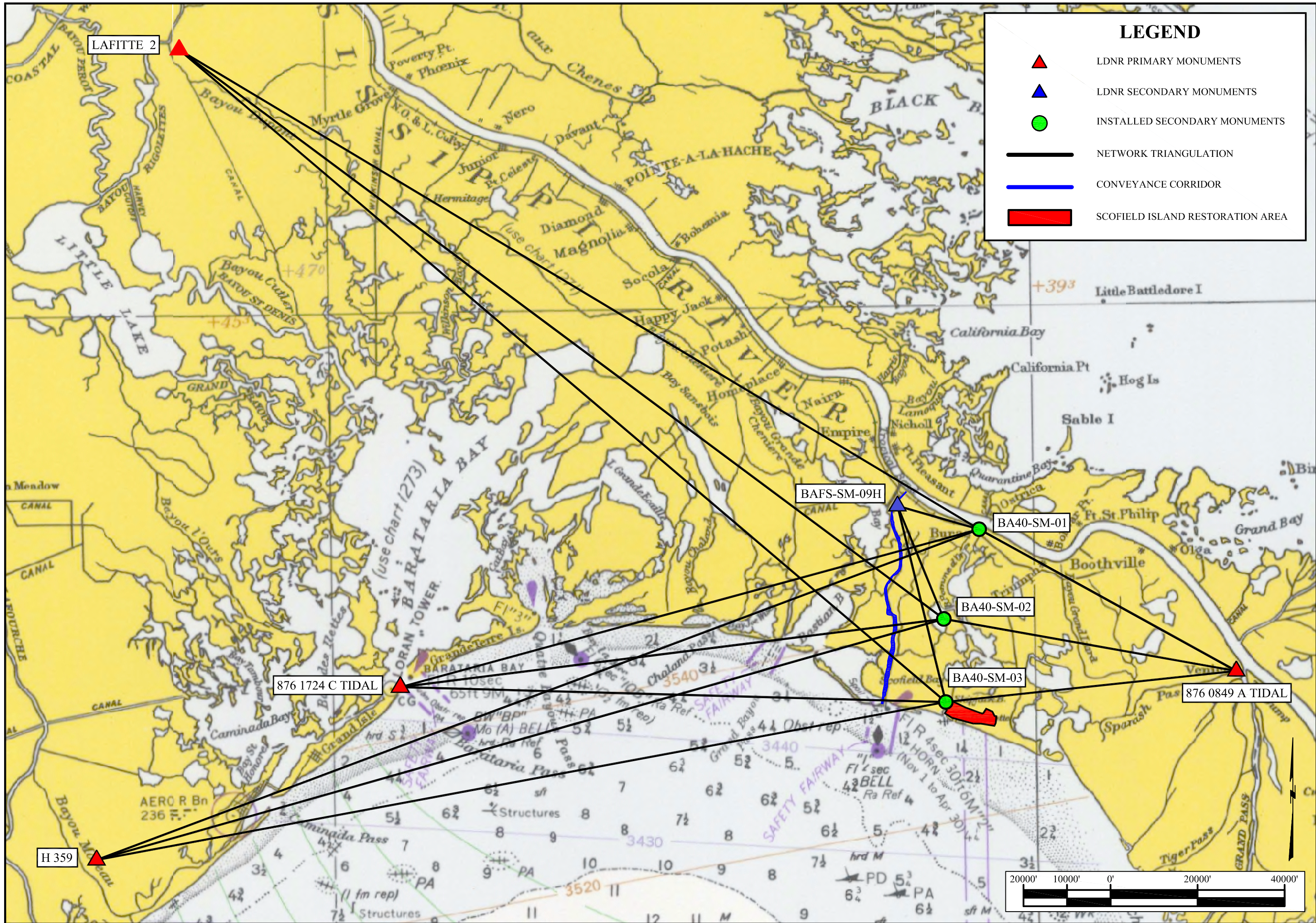


FIGURE 2: PROJECT MONUMENTATION

## **4.0 TOPOGRAPHIC SURVEY**

### **4.1 Obtain Access for Performing Surveys**

Plaquemines Parish Government owns the land in which the Empire Waterway Route is proposed to cross. Permission to access the property was granted prior to any surveys performed.

### **4.2 Survey Description**

A Professional Land Surveyor licensed in Louisiana, pursuant to applicable regulations by the LSBPELS, conducted the topographic survey. The survey was performed in November 2008 utilizing GPS static and real time kinematic (RTK) dual frequency technology.

Prior to the survey, utility providers including CMA Cablevision, Entergy (electricity), Severn Trent (water), Atmos Energy (natural gas), and AT&T Distribution (telephone) were contacted for infrastructure location marking. Pipeline companies included in the Louisiana One-Call (an underground utilities notification agency) notice were Louisiana State Gas, Southern Natural Gas, and Shell Pipeline Company. Additionally, the Plaquemines Parish Government was contacted in an effort to obtain maps showing sewer lines in the area.

Structures within the corridor, including buildings, marina infrastructure, fences, sidewalks, roads, power and utility poles, as well as visible drains, fire hydrants, gas meters, water valves, pipeline markers, sewer manholes and any other structural features that may aid in the determination of the location of existing underground utilities were located.

Moving southwesterly from the batture of the Mississippi River, nine distinct areas or structural features were identified. These included the Mississippi River Levee, Highway 11 (Parish Highway), Empire Pit (Hurricane Katrina landfill), Navigational Canal, Empire Boat Harbor, LA 23, Hurricane Protection Levee, a saltwater marsh, and a rock breakwater at the edge of the Empire Waterway.

#### **4.2.1 Mississippi River Batture, Levee, and Highway 11**

Five (5) 800-foot transects at 250-foot intervals were surveyed from near the Mississippi River, across the Mississippi River Levee and Highway 11, to the Empire Pit.

#### **4.2.2 Empire Pit**

Five (5) transects were surveyed across the landfill at 250-foot intervals in a southwesterly direction to the edge of a local drainage ditch located between the landfill and the Navigation

Canal. The apparent property boundaries were located on the northwest and southwest sides of the landfill. Three (3) additional transects were surveyed at 400-foot intervals from the northwest property line to the southeast property line.

#### **4.2.3 Conveyance Corridor - Navigation Canal**

Three (3) cross-sections approximately 250 feet apart were surveyed across the Navigation Canal to the Empire Boat Harbor.

#### **4.2.4 Conveyance Corridor - Empire Boat Harbor**

From the southeast edge of Empire Boat Harbor, three (3) 600-foot cross-sections, approximately 300 feet apart, were run northwesterly from the approximate property line across the boat slip to the southeast edge of the limestone road on the center of the peninsula between the boat slips. From the northwest side of the marina, five (5) 200-foot transects spaced approximately 250 feet apart were run southeast to the northernmost boat slip.

#### **4.2.5 Conveyance Corridor - Highway 23 and Hurricane Protection Levee**

Nine transects at 100-foot spacing and approximately 900 feet in length, were run in a southwesterly direction across Louisiana Highway 23 from near the edge of the boat harbor slips to the western toe of the Hurricane Protection Levee.

#### **4.2.6 Conveyance Corridor - Saltwater Marsh to Rock Breakwater**

Elevations were surveyed at four representative points in the marsh. The centerline of the rock breakwater was surveyed and bathymetric data was collected in the pond between the marsh and breakwater.

### **4.3 Survey Results**

The results of the Survey are presented in the survey drawing set (Annex F2).

## **ANNEX F1**

### **SURVEY MONUMENTATION DATA SHEETS**



## **ANNEX F2**

# **CONVEYANCE CORRIDOR SURVEY DRAWING SET UPLAND SEGMENT**