JOINT APPLICATION AND NOTIFICATION
U.S. ARMY CORPS OF ENGINEERS
MISSISSIPPI DEPARTMENT OF MARINE RESOURCES
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY/OFFICE OF POLLUTION CONTROL

Applicant: Jackson County Board of Supervisors - [redacted]

Agent: Compton Engineering, Inc. - [redacted]

Date Submitted:

09/08/2022

DMR Permit Number:
DMR22-000584

Historic DMR Permit Numbers:

DMR-080392

DMR File Number:
080392

Project Location:

82162343
The project includes three locations to be dredged near Davis Bayou in Ocean Springs. One area is the channel approach to Davis Bayou, one area includes the channel approach to GCRL and the GCRL Basin, and the third area is the canal adjacent to Eag
Jackson County
Upper Davis Bayou
Latitude: 30.387
Longitude: -88.7731

Do you still need to enter a Project Location?Yes
How will you identify the project location: I will enter a written description

Project Information:

Project Name or Title: Dredging of Bayous near Davis Bayou, Ocean Springs

Project Description: The JCBOS proposes to maintenance dredge these three areas to maintain design depth and safe navigation for boaters.

Project Purpose and Need: These areas have silted in over the years or were filled in during tropical storm events. They have not been dredged in recent years. Dredging will provide safe navigation for recreational boaters and for the research boats that dock at GCRL.

Intended Use: Public/Government

Will the Proposed Project have a Public Benefit?: Yes
Increased tax base:
Increased employment:
National security benefits:
Improved habitat:
Other: The homeowners on Eagles Nest will have an accessible canal post dredging and will be able to safely access their docks. Dredging the channel approach to Davis Bayou is necessary to prevent boats from running aground in this area. Maintaining design depth is necessary for the research boats at GCRL.

Does Project area contain any marsh Vegetation?: No

What measures will be taken to reduce detrimental off-site effects to the Coastal Wetlands during and after the proposed

activity?: Best Management Practices

Impact Information:

Number of Impact Types	**01**
Impact Type:	**Dredging**
New or Maintenance	Maintenance
Purpose (dredging)	Navigation channel - public
Length	4865
Width	50
Current Depth at MLT	varies
Proposed Depth at MLT	varies
Cubic yards of Material to be Removed (Dredging)	24,700
Dredge Method	01. Mechanical
Type of Material to be Removed (Boat Ramp, Indented Boat Slip, Intake/Outfall structure)	03. Combination of silt and sand
Dredged Material Placement Location (Boat Ramp,Dredging,Indented Boat Slip)	05. Undetermined
Is this a component of a larger project?	No
Is any portion of this impact complete?	No

Additional information relating to the proposed activity

Have any other federal, state, or local agencies issued permits or other types of approvals for the proposed project?: No

Have any other federal, state, or local agencies denied approval for the proposed project?: No

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Project Schedule

Do you know the Proposed Start Date? Yes
01/30/2023

Do you know the Proposed Completion Date? Yes
03/30/2023

Do you know the Estimated Cost of the Project? Yes
$1,000,000.00

Adjacent Property Owners:

Application Certified by: Lisa Morrison

CONTRACT DOCUMENTS

FOR THE

DREDGING OF BAYOUS NEAR DAVIS BAYOU
OCEAN SPRINGS, MS

PREPARED FOR THE

JACKSON COUNTY BOARD OF SUPERVISORS

BOARD OF SUPERVISORS

Barry Cumbest	District 1
Ennit Morris	District 2
Ken Taylor	District 3 - Vice President
Troy Ross	District 4
Randy Bosarge	District 5 - President
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JCBOS - PRJ-000190

REV A - ISSUED FOR REVIEW (08/17/22)

For information regarding
This contract, contact:

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CE JOB No. 222-025

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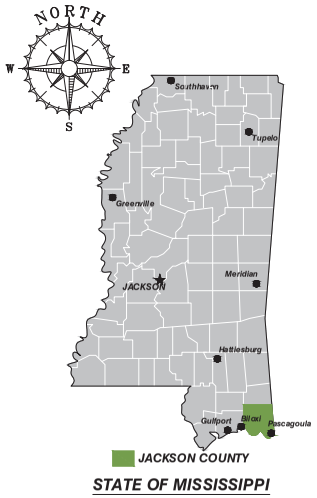
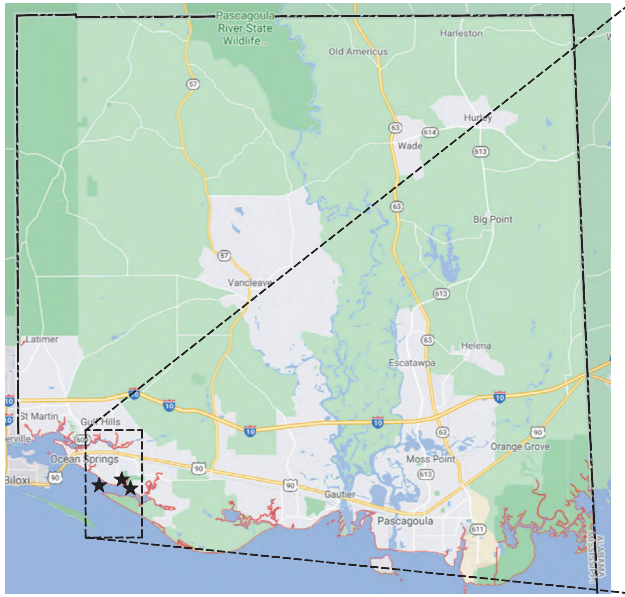
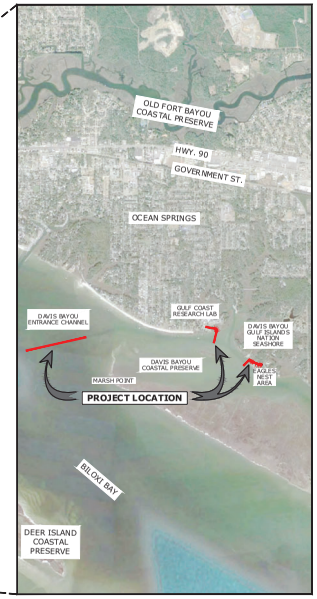


STATE OF MISSISSIPPI



JACKSON COUNTY, MS



DREDGING OF BAYOUS NEAR DAVIS BAYOU

Mississippi 811
protecting Mississippi's vital lines...one call at a time

Phone Numbers: 811 or 1 (800) 227-6477

.....	Color
Electric	Safety Red
Petroleum Product/Hazardous/Flammable/Corrosive/Toxic Materials, Product and Steam Lines, Gas or Gaseous Material	High Visibility Safety Yellow
Telecommunications (including fiber optic) and CATV	Safety Alert Orange
Potable Water, Reclaimed Water, Irrigation	Safety Precaution Blue
Slurry Lines	Purple
Sewer and Drain Lines	Safety Green
Temporary Survey Markings	High Visibility Pink
Proposed Excavation	White

SHEET INDEX:

			REV DATE
1.	G0.0	COVER SHEET	REV A - 08/17/22
2.	G1.0	SHEET INDEX, GENERAL NOTES, AND VICINITY MAP	REV A - 08/17/22
3.	C1.0	DAVIS BAYOU ENTRANCE CHANNEL PROPOSED DREDGING PLAN	REV A - 08/17/22
4.	C1.1	GULF COAST RESEARCH LAB CHANNEL PROPOSED DREDGING PLAN	REV A - 08/17/22
5.	C1.2	EAGLES NEST AREA CHANNEL PROPOSED DREDGING PLAN	REV A - 08/17/22
6.	C2.0	DAVIS BAYOU ENTRANCE CHANNEL PROPOSED DREDGING SECTIONS	REV A - 08/17/22
7.	C2.1	DAVIS BAYOU ENTRANCE CHANNEL PROPOSED DREDGING SECTIONS	REV A - 08/17/22
8.	C2.2	GULF COAST RESEARCH LAB CHANNEL PROPOSED DREDGING SECTIONS	REV A - 08/17/22
9.	C2.3	EAGLE NEST AREA CHANNEL PROPOSED DREDGING SECTIONS	REV A - 08/17/22
10.	C3.0	DAVIS BAYOU ENTRANCE CHANNEL PROPOSED DREDGING PROFILE STA. 10+00 TO 38+89	REV A - 08/17/22
11.	C3.1	GULF COAST RESEARCH LAB CHANNEL PROPOSED DREDGING PROFILES STA. 100+00 TO 112+00	REV A - 08/17/22
12.	C3.2	EAGLE NEST AREA CHANNEL PROPOSED DREDGING PROFILES STA. 200+00 TO 212+00	REV A - 08/17/22

GENERAL NOTES:

1. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO DEFINE THE GENERAL DESIGN AND SCOPE OF THE WORK REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR SHALL INCLUDE ALL COMPONENTS WHICH ARE NORMALLY INCIDENTAL TO THE WORK. THOSE COMPONENTS WHICH ARE NOT SHOWN ON THE DRAWING OR SPECIFIED BUT WHICH ARE REQUIRED AS AN ESSENTIAL AESTHETIC, FUNCTIONAL OR CODE REQUIRED ELEMENT OF THE WORK ARE TO BE INCLUDED. ANY PART OR ITEM OF WORK WHICH IS REASONABLY IMPLIED OR NORMALLY REQUIRED TO MAKE EACH INSTALLATION SATISFACTORILY OPERABLE SHALL BE PERFORMED BY THE CONTRACTOR AND THE EXPENSE THEREOF SHALL BE INCLUDED IN THE APPLICABLE UNIT PRICES OR LUMP SUM PRICES REVIEW FOR THE WORK. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE THE OWNER WITH COMPLETE OPERABLE SYSTEMS, SUBSYSTEMS, AND OTHER ITEMS OF WORK. ALL MISCELLANEOUS APPURTENANCES SHALL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE APPLICABLE UNIT PRICES OR LUMP SUM PRICES REVIEW FOR THE WORK EVEN THOUGH THESE APPURTENANCES AND ITEMS MAY NOT BE SPECIFICALLY CALLED FOR IN THE SPECIFICATIONS.
2. TO ESTABLISH THE COMPLETE SCOPE OF ITS WORK AND TO EFFECT CLOSE COORDINATION WITH THE OTHER TRADES, EACH TRADE SHALL COMPLETELY REVIEW THE PLANS AND SPECIFICATIONS, NOT ONLY FOR ITS RESPECTIVE TRADE, BUT FOR THE WORK OF THE OTHER RELATED TRADES AS WELL. TITLES OF DIVISIONS (AND SECTIONS IN SPECIFICATIONS) IDENTIFYING WORK ARE PROVIDED FOR ORGANIZATIONAL AND REFERENCE PURPOSES AND SHALL NOT BE TAKEN AS AN ABSOLUTE SEPARATION OF THE TRADES OR OF THE UNITS OF MATERIAL AND LABOR.
3. THE CONTRACTOR SHALL COORDINATE AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS OR GUIDELINES FROM GOVERNING REGULATORY AGENCIES BEFORE PROCEEDING WITH ANY ITEMS OF WORK UNDER OR WITHIN SUCH JURISDICTION(S).
4. ALL DIMENSIONS/ELEVATIONS AND TIE-INS GOVERNED BY EXISTING CONDITIONS ARE APPROXIMATE AND ARE NOT GUARANTEED TO BE CORRECT. ALL SUCH DIMENSIONS/ELEVATIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO PROCEEDING WITH ANY WORK. IF CONDITIONS VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH WORK. WHERE DIMENSIONS ARE SHOWN WITH +/- INDICATIONS ADJUSTMENTS MAY BE MADE WITHOUT PRIOR APPROVAL TO SUIT FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, LOCATION OF SERVICES, DIMENSIONS, AND ELEVATIONS OF SITE AND ANY DATA REQUIRED TO CONSTRUCT THE PROJECT WITH THE REQUIRED PRE-SURVEY.
6. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE PROJECT. THE CONTRACTOR SHALL FOLLOW ALL INDUSTRY STANDARDS TO INSURE A SAFE WORKING ENVIRONMENT FOR EMPLOYEES AND SITE VISITORS.
7. WORK IS TO BE COMPLETED IN ACCORDANCE WITH THE MISSISSIPPI DEPARTMENT OF MARINE RESOURCES PERMIT # DMR-130221 AND THE US ARMY CORPS OF ENGINEERS PERMIT SAM-2013-00200-SMZ.
8. DREDGING OPERATIONS SHALL OCCUR BETWEEN THE MONTHS OF MAY AND SEPTEMBER IN ACCORDANCE WITH RECOMMENDATIONS FROM THE MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES AND PARKS.
9. NO SINKS OR SUMPS SHALL BE CREATED IN THE DREDGING PROCESS. DREDGING DEPTH IS LIMITED TO THAT OF THE CONTROLLING NAVIGATIONAL DEPTH OF THE ADJACENT WATERS. A MINIMUM 3:1 (HORIZONTAL: VERTICAL) SIDE SLOPE SHALL BE MAINTAINED IN THE DREDGE AREA:
10. CONTRACTOR SHOULD STAGE DREDGE MATERIAL AT A LOCATION TO BE APPROVED BY THE ENGINEER AND JACKSON COUNTY. CONDITIONS IN THE STAGING AREA SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITIONS UPON COMPLETION OF PROJECT.
11. A MINIMUM DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN THE DREDGE AREA AND ANY WETLANDS;
12. TURBIDITY SHALL BE MINIMIZED AT THE DREDGE SITE BY METHODS SUCH AS USING STAKED FILTER CLOTH, STAGED CONSTRUCTION, AND/OR THE USE OF TURBIDITY SCREENS AROUND THE IMMEDIATE PROJECT SITE;
13. NO DREDGING OF WETLAND, SUBMERGED AQUATIC VEGETATION OR SHELLFISH BEDS IS AUTHORIZED, AND SHALL BE AVOIDED.
14. NO CONSTRUCTION DEBRIS OR UNAUTHORIZED FILL MATERIAL SHALL BE ALLOWED TO ENTER COASTAL WETLANDS OR WATER.
15. BEST MANAGEMENT PRACTICES SHALL BE USED AT ALL TIMES DURING CONSTRUCTION.
16. VEGETATED WETLANDS SHALL NOT BE IMPACTED.
17. NO CREOSOTE MATERIAL SHALL BE USED IN CONSTRUCTION OPERATION.
18. IF YOU DISCOVER ANY PREVIOUSLY UNKNOWN HISTORIC OR ARCHEOLOGICAL REMAINS WHILE ACCOMPLISHING THE ACTIVITY AUTHORIZED BY THIS PERMIT, YOU MUST IMMEDIATELY NOTIFY THIS OFFICE OF WHAT YOU HAVE FOUND. WE WILL INITIATE THE FEDERAL AND STATE COORDINATION REQUIRED TO DETERMINE IF THE REMAINS WARRANT A RECOVERY EFFORT OR IF THE SITE IS ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER OF HISTORIC PLACES.
19. CONTRACTOR SHALL LOCATE PROPERTY LINES AND/OR RIGHT-OF-WAY LINES AS REQUIRED TO AVOID ENCROACHMENT ONTO ADJACENT PROPERTY. CONTRACTOR SHALL INVESTIGATE FOR EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IN THE EVENT OF ANY CONFLICTS.
20. CONTRACTOR TO USE BENCH MARKS (BM) AS SHOWN ON THE PLANS FOR HORIZONTAL AND VERTICAL CONTROL. NOTIFY ENGINEER OF ANY CONFLICTS.
21. CONTRACTOR IS TO COORDINATE ALL WORK WITH THE UTILITY COMPANIES IN ORDER TO PREVENT DAMAGE TO UTILITY LINES AND THE MAKING OF ADJUSTMENTS TO SAME, IF REQUIRED. THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE VARIOUS UTILITY OWNERS PRIOR TO CONSTRUCTION. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THIS INFORMATION AND BE FAMILIAR WITH ALL SITE CONDITIONS (INCLUDING SUB-SURFACE CONDITIONS AND UNDERGROUND CONDITIONS) THIS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, WHETHER OR NOT SHOWN HERON. THE CONTRACTOR CALL 811 48-HOUR TO HAVE NAY UTILITIES LOCATIONS IN ACCORDANCE WITH STATE LAW.
22. COORDINATES FOR THIS PROJECT ARE MISSISSIPPI STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 1983.
23. ELEVATIONS ARE APPROXIMATED BASED UPON CONVERTING ELEVATIONS OBTAINED IN 1988 NAVD DATUM TO MLLW USING NOAA'S VDATUM CONVERSION TOOL.
24. CONTRACTOR SHALL NOT FILL AREAS WITHIN THE BAYOUS THAT ARE BELOW DESIGN SURFACE ELEVATIONS.

Rev. No. A

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JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU

SHEET INDEX, GENERAL NOTES, AND VICINITY MAP

SCALE: AS NOTED
JOB NO.: 222-025
DATE:
DSGN.: WAD
DWG. BY:
CHK. BY: WAD
APVD.:

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ADJUST SCALES ACCORDINGLY

0 1"

G1.0

DATE	DESCRIPTION	BY	APVD
08/17/22	ISSUED FOR REVIEW	JDL	WAD

DATE	DESCRIPTION	BY	APVD
08/17/22	ISSUED FOR REVIEW	DJL	MAD

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JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU
DAVIS BAYOU ENTRANCE CHANNEL
PROPOSED DREDGING PLAN

SCALE:	AS NOTED
JOB NO.:	222-025
DATE:	
DSGN.:	WAD
DWG. BY:	JDL
CHK.:	WAD
APVD.:	

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

0 1"

C1.0

REV. NO. A

STATIONING NOTE:

1. GULF COAST RESEARCH LAB CHANNEL = 100+00 - 111+56

LEGEND:

AREA TO BE DREDGED

1 / C1.1 GULF COAST RESEARCH LAB CHANNEL
PROPOSED DREDGING PLAN
SCALE: 1" = 50'

Rev. No. A

DATE	DESCRIPTION	BY	APVD
08/17/22	ISSUED FOR REVIEW	JDL	WAD

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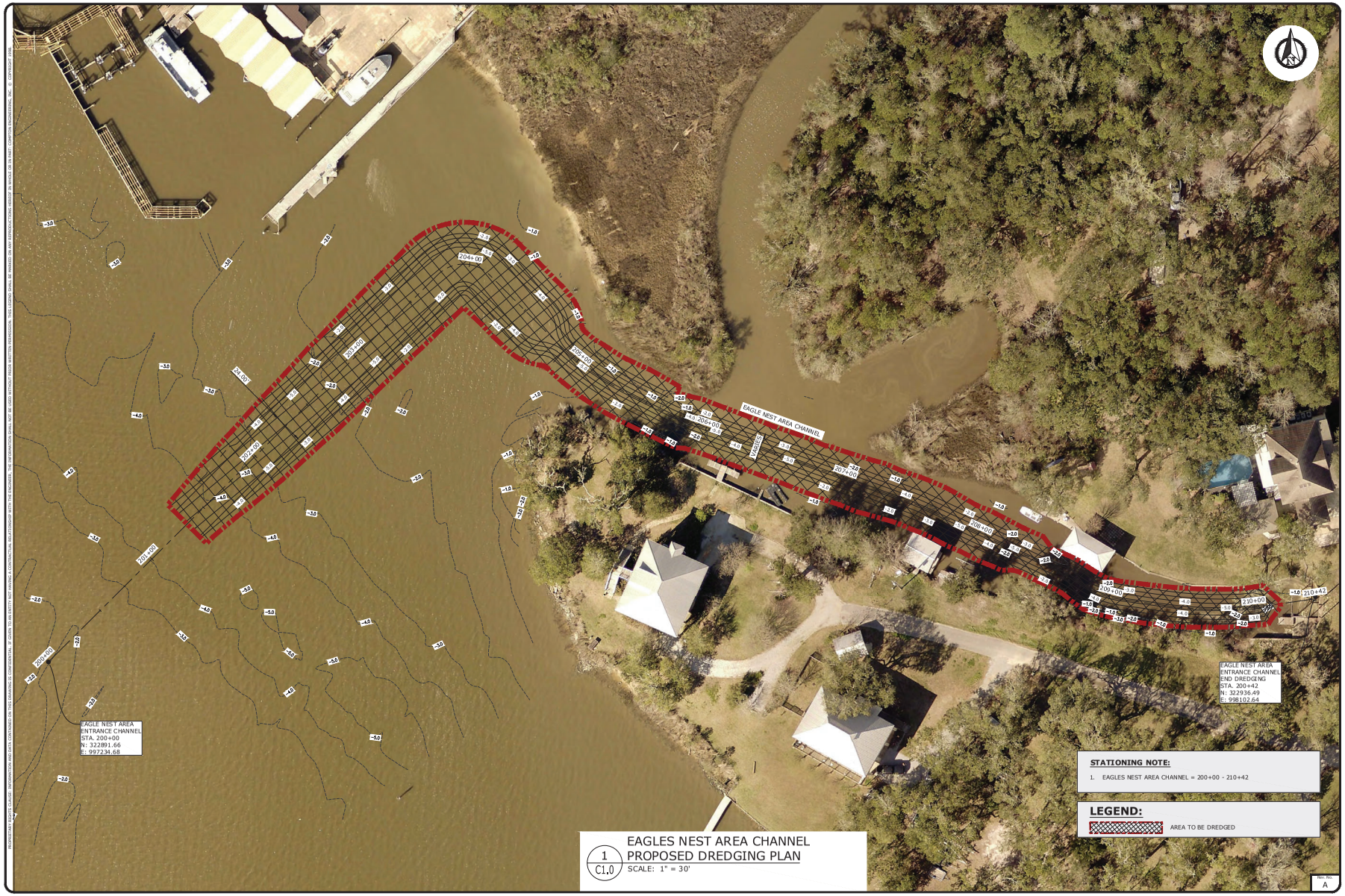
DREDGING OF BAYOUS NEAR DAVIS BAYOU

GULF COAST RESEARCH LAB CHANNEL
PROPOSED DREDGING PLAN

SCALE: AS NOTED
JOB NO.: 222-025
DATE:
DSGN.: WAD
DWN.: JDL
CHK.: WAD
APVD.:

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH THEN ADJUST SCALES ACCORDINGLY.
0 1"

C1.1



1 / C1.0 EAGLES NEST AREA CHANNEL
PROPOSED DREDGING PLAN
SCALE: 1" = 30'

Rev. No. A

DATE	DESCRIPTION	BY	APVD
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DREDGING OF BAYOUS NEAR DAVIS BAYOU

EAGLES NEST AREA CHANNEL
PROPOSED DREDGING PLAN

SCALE: AS NOTED
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DWN.: JDL
CHK.: WAD
APVD.:

VERIFY SCALES
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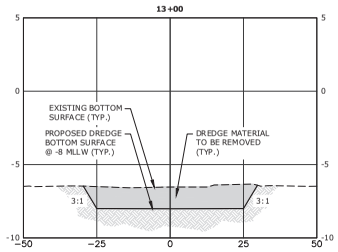
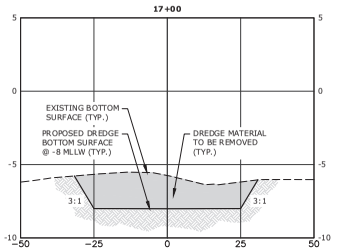
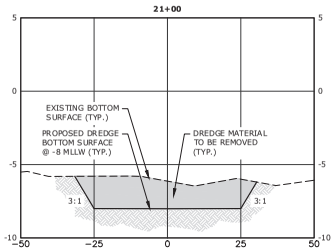
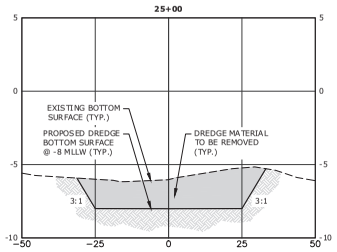
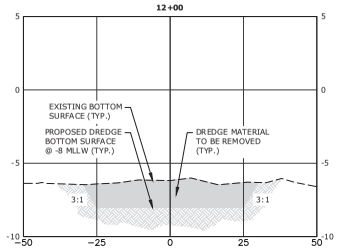
C1.2

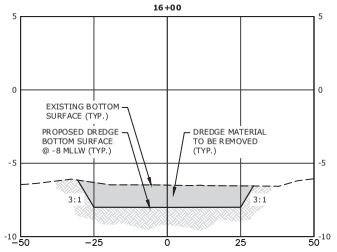


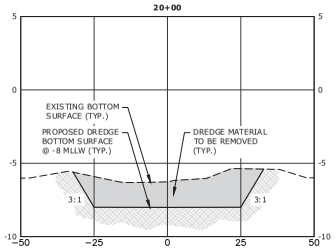


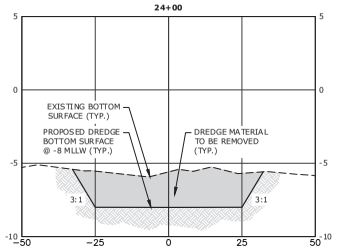


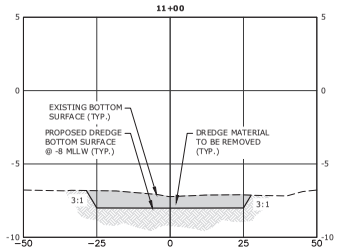


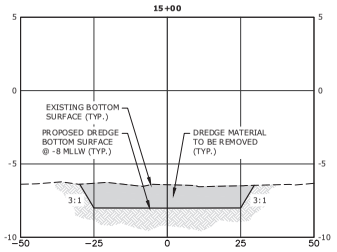


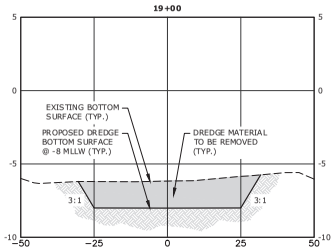


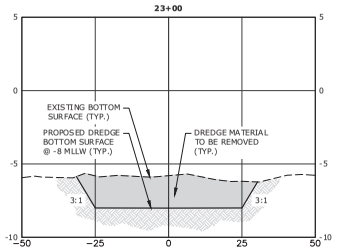


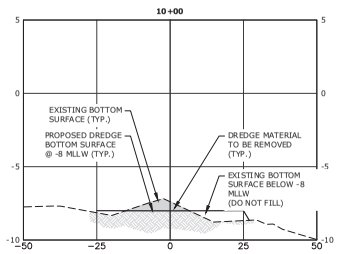


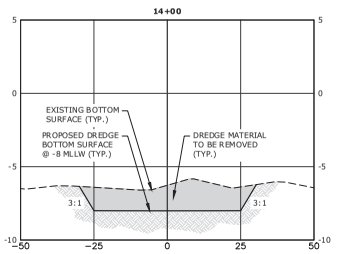


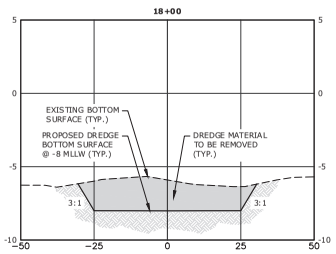


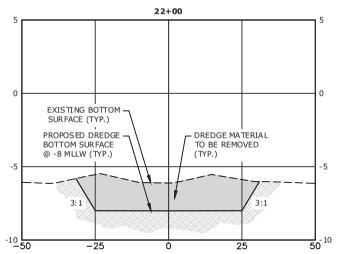












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JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU

DAVIS BAYOU ENTRANCE CHANNEL
PROPOSED DREDGING SECTIONS

SCALE: 1:20H/1:5V
JOB NO.: 222-025
DATE:
DSGN.: WAD
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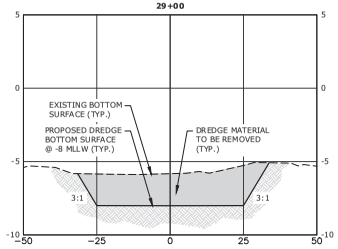
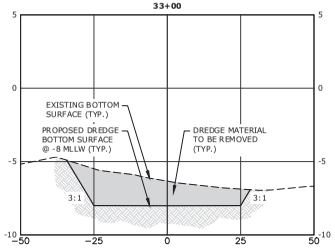
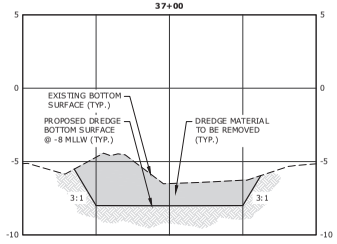
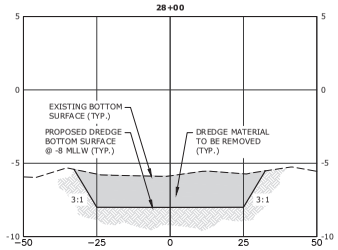
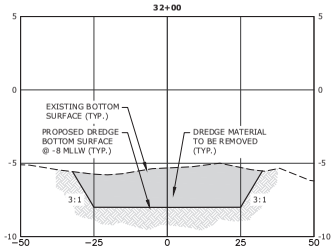
C2.0

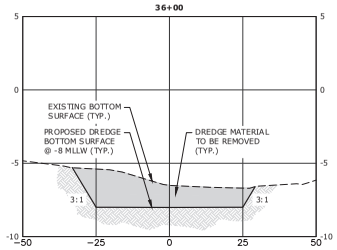


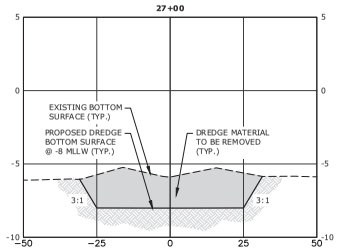


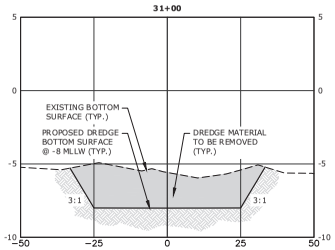


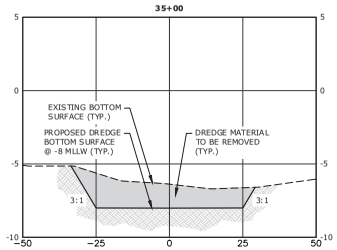


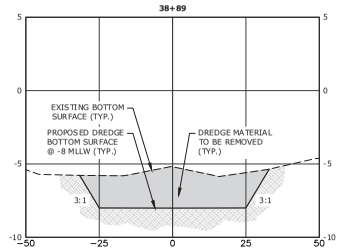


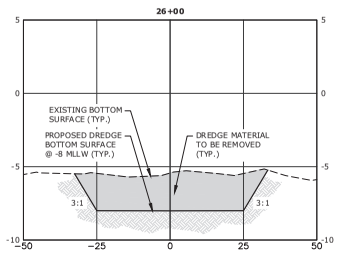


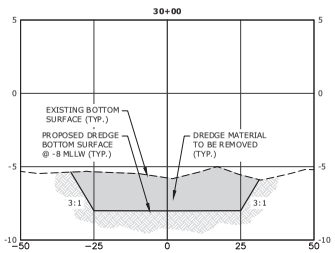


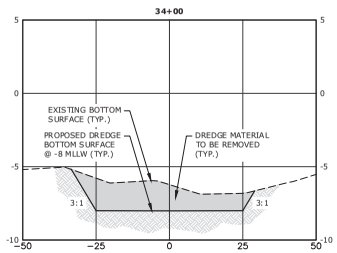


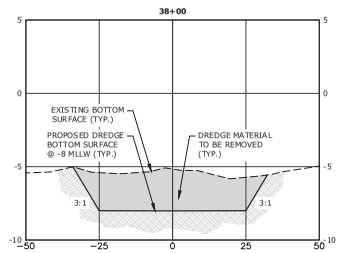












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JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU

DAVIS BAYOU ENTRANCE CHANNEL
PROPOSED DREDGING SECTIONS

SCALE: 1:20H/1:5V
JOB NO.: 222-025
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DSGN.: WAD
DWG. BY:
CHK. BY: WAD
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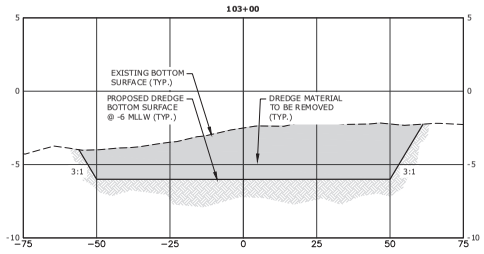
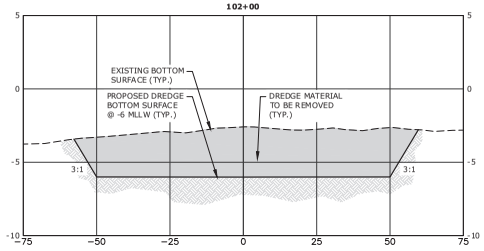
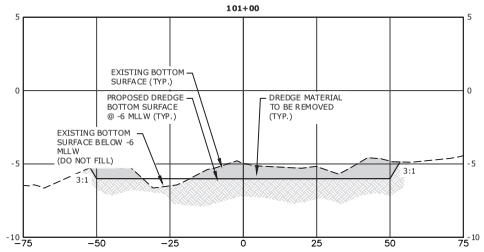
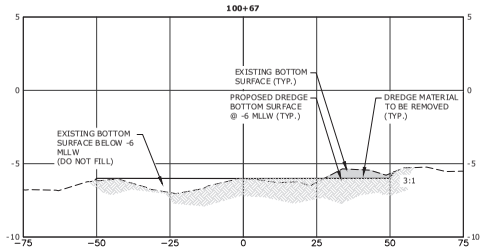
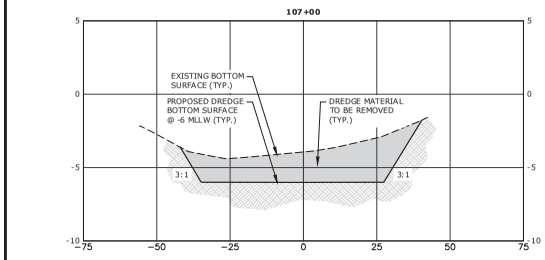
C2.1

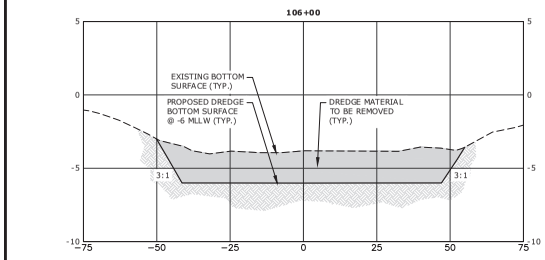


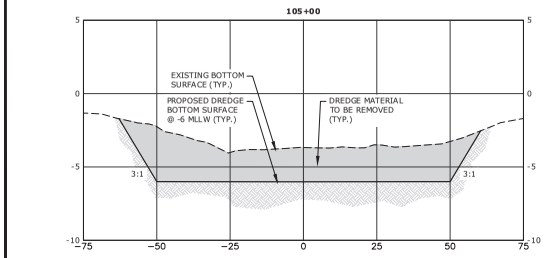


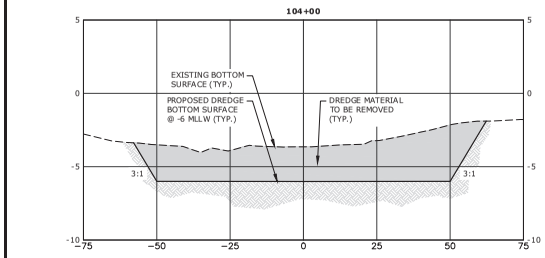


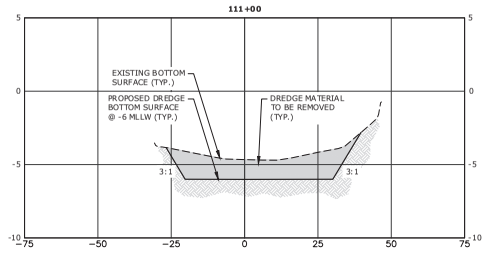


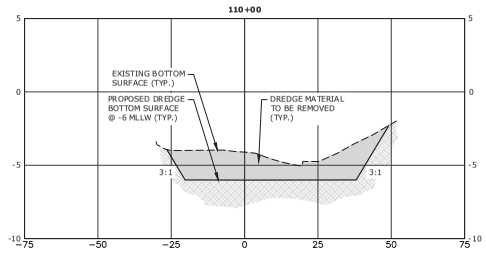


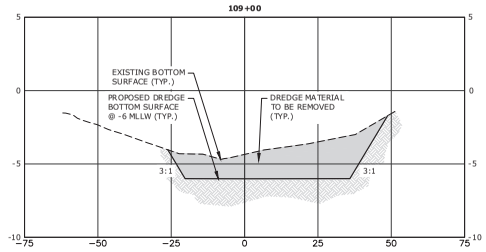


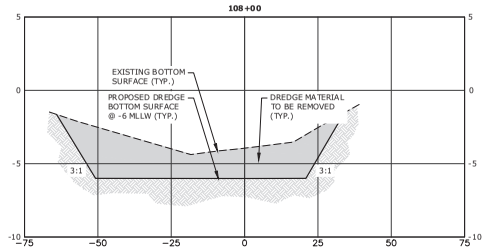












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JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU

GULF COAST RESEARCH LAB CHANNEL
PROPOSED DREDGING SECTIONS

SCALE: 1:20H/1:5V
JOB NO.: 222-025
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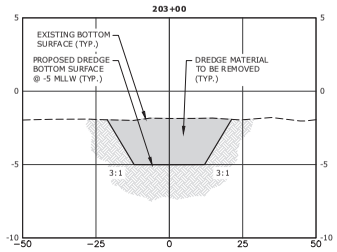
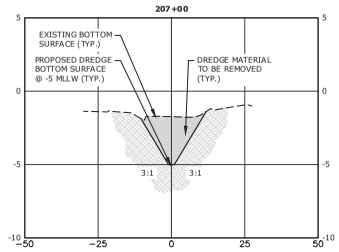
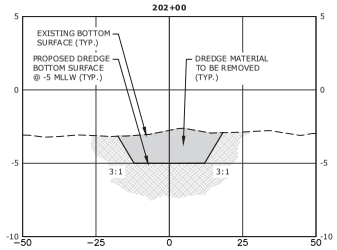
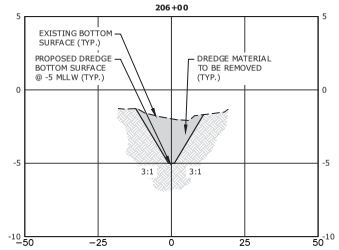
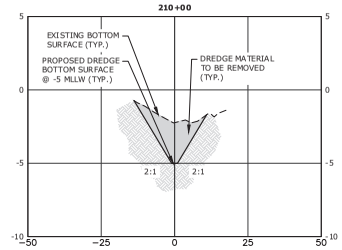
C2.2

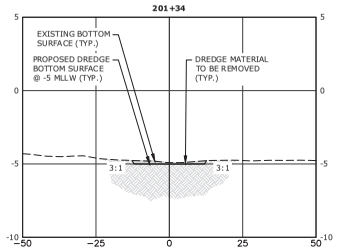


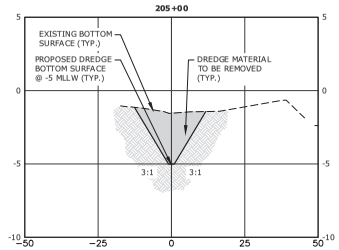


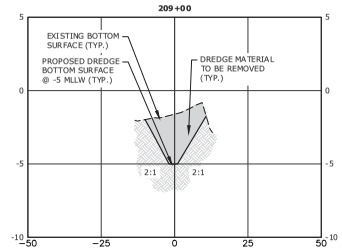


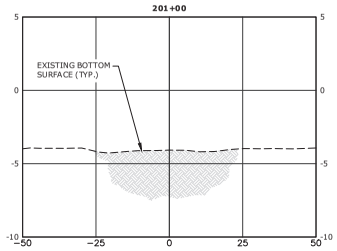


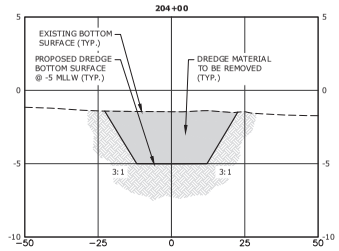


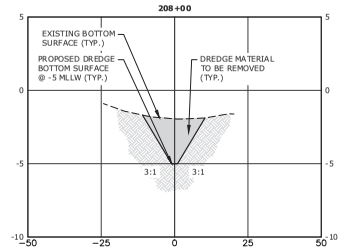












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JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU

EAGLE NEST AREA CHANNEL
PROPOSED DREDGING SECTIONS

SCALE: 1:20H/1:5V
JOB NO.: 222-025
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VERIFY SCALES
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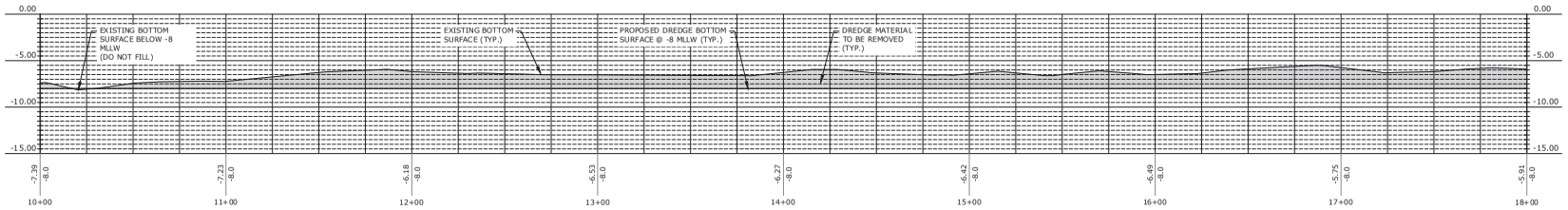
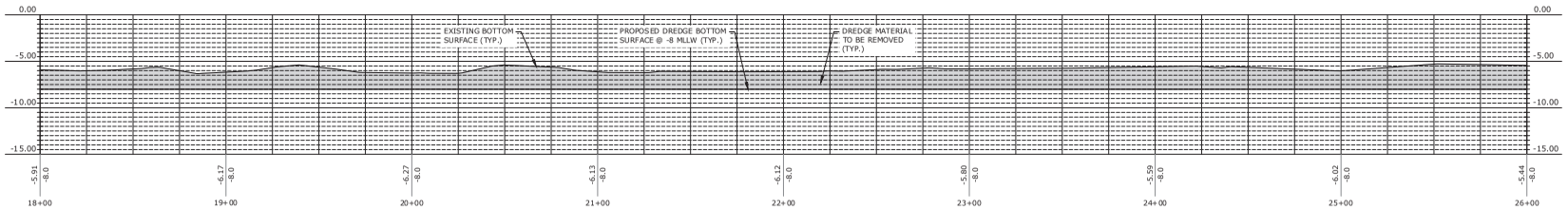
C2.3



1 / C3.0 DAVIS BAYOU ENTRANCE CHANNEL PROPOSED DREDGING PROFILES - STA 10+00 - STA. 18+00
SCALE: 1:30H/1:5V



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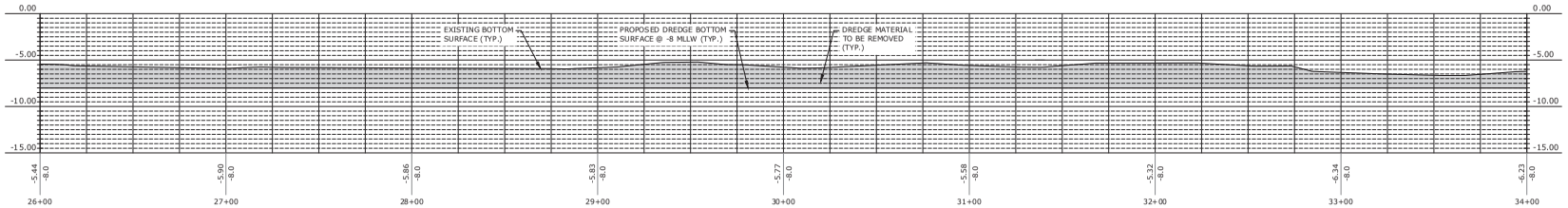
SCALE: 1:30H/1:5V



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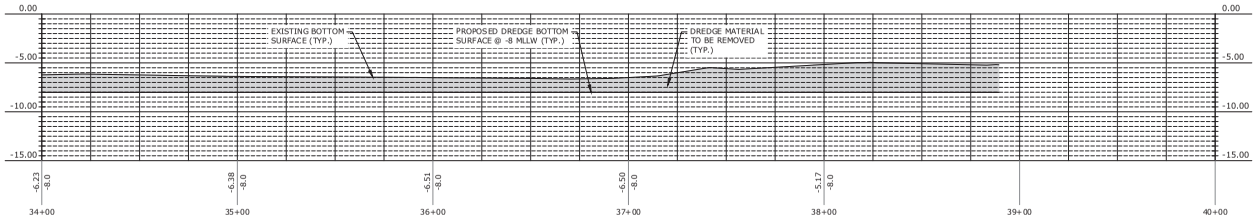
SCALE: 1:30H/1:5V



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SCALE: 1:30H/1:5V

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LLI

JACKSON COUNTY BOARD OF SUPERVISORS
DREDGING OF BAYOUS NEAR DAVIS BAYOU

DAVIS BAYOU ENTRANCE CHANNEL PROPOSED DREDGING PROFILES STA. 10+00 TO 40+00

SCALE: 1:30H/1:5V
JOB NO.: 222-025
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CHK.: WAD
APVD.: WAD

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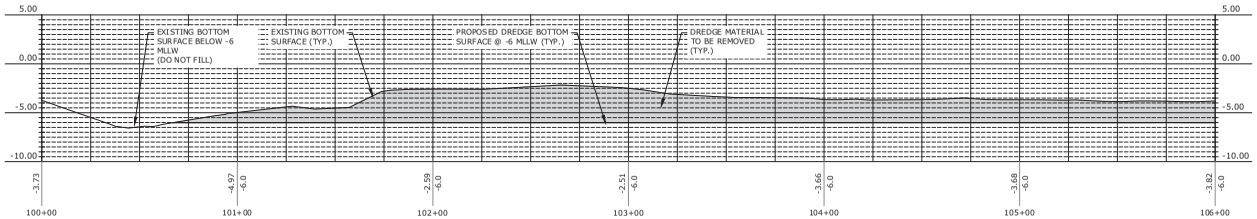
C3.0



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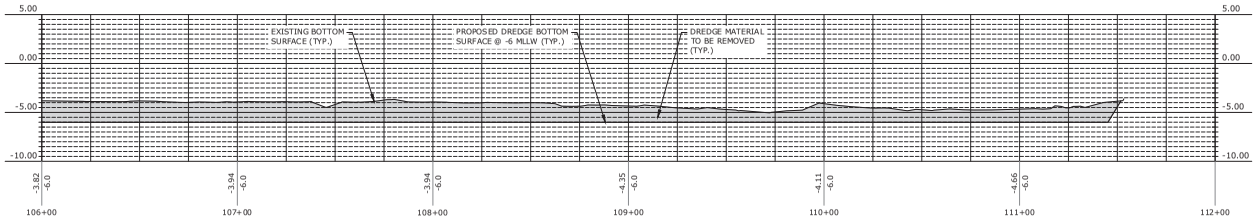

1 / C3.1 GULF COAST RESEARCH LAB CHANNEL PROPOSED DREDGING PROFILES - STA 106+00 - STA. 112+00

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DREDGING OF BAYOUS NEAR DAVIS BAYOU

GULF COAST RESEARCH LAB CHANNEL PROPOSED DREDGING PROFILES STA. 100+00 TO 112+00

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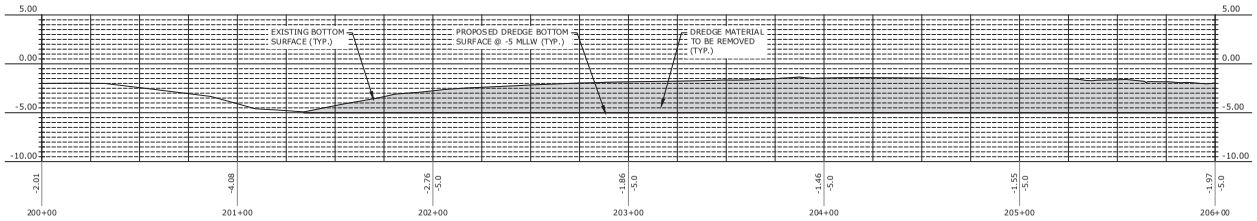

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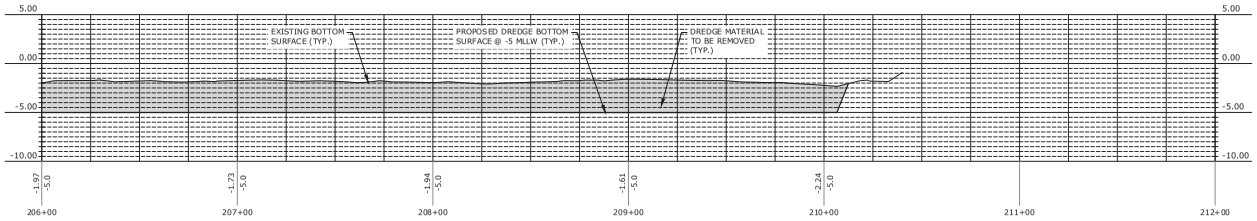

1 / C3.0 EAGLES NEST AREA CHANNEL PROPOSED DREDGING PROFILES - STA 206+00 - STA. 212+00

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JACKSON COUNTY BOARD OF SUPERVISORS
DAVIS BAYOU ENTRANCE CHANNEL

EAGLES NEST AREA CHANNEL PROPOSED DREDGING PROFILES STA. 200+00 TO 212+00

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C3.2

Eagles Nest

August 22, 2022

Parcels
PrimaryRoads
Major
CenterLines

1:1,200

0 0.01 0.02 0.04 mi

0 0.01 0.03 0.06 km

Jackson County GIS , 1

ENVIRONMENTAL ASSESSMENT

for

CHANNEL DREDGING
NEAR DAVIS BAYOU, NEAR GCRL AND NEAR EAGLES NEST
OCEAN SPRINGS, MS

On behalf of

Jackson County Board of Supervisors

by

COMPTON ENGINEERING, INC.
Engineering, Surveying, and Environmental Services

156 Nixon Street
Biloxi, MS 39530
(228) 432-2133

AUGUST 2022

TABLE OF CONTENTS

1.0 PROJECT DESCRIPTION 1

2.0 PROJECT PURPOSE AND NEED 1

3.0 DESCRIPTION OF THE SURROUNDING AREA 2

4.0 ALTERNATIVES CONSIDERED 2

5.0 PROJECT IMPACTS 2
- 5.1 Wetlands 2
- 5.2 Submerged Aquatic Vegetation
- 5.3 Water Quality 3
- 5.4 Cultural Resources 3
- 5.5 Threatened and Endangered Species 3
- 5.6 Critical Habitat 4
- 5.7 Essential Fish Habitat 4
- 5.8 Oyster Beds 4

6.0 Mitigation 5

FIGURES

1 Site Location Topo Map
2 Drawings – Footprints and Profiles

APPENDICES

A SAV Survey Report

Environmental Assessment
Dredging Project
NEAR DAVIS BAYOU, NEAR GCRL AND NEAR EAGLES NEST
Ocean Springs, MS
August 2022

1.0 Project Description

The Jackson County Board of Supervisors proposes to dredge several channels that have silted in over time. The channels are in the Davis Bayou area and include the channel approach to Davis Bayou, the channel approach and basin at GCRL and the canal adjacent to Eagles Nest Drive as shown on the attached drawing. The main channel of Davis Bayou and several side bayous are being addressed under permits DMR-200238-1 and SAM-2007-02055-MJF. The permitted project is funded by FEMA. This additional bayou project is funded by Jackson County. The project location is shown on Figure 1. The proposed depth for the Davis Bayou entrance channel is -8.0 feet MLLW, the proposed depth for the GCRL channel is -6 feet MLLW, and the proposed depth for the Eagles Nest channel is -5.0 feet. The bottom width vary depending on location. A 3:1 slope will be maintained along the channel sides.

2.0 Project Purpose and Need

The purpose of the proposed project is to allow for safe boating and provide continued access within the channels for residences located along the channels as well as for safe access for boaters and fishermen and to maintain access to the boat launch and docks for the boats at the Gulf Coast Research Lab. The existing channels have silted in over the years and a large influx of sediment was deposited as a result of Hurricane Nate in 2017.

3.0 Description of the Surrounding Area

The proposed project is located in Ocean Springs, MS. It is within Sections 32 and 33, Township 7 South, Range 8 West of Jackson County. The approximate center point of the project is at latitude 30.392211, longitude -88.797018. The channels are surrounded by estuarine wetlands dominated by black needle rush (Juncus romerianus), saltmeadow cordgrass (Spartina patens) and smooth cordgrass (Spartina alterniflora). Saltmarsh bulrush (Scirpus robustus) and saltgrass (Distichlis spicata) can also be found in the adjoining marsh habitats. The channels were originally natural drainage ways that developed in the marsh habitats and were dredged to increase access for homeowners, boaters and fishermen.

The marsh habitat is bordered by forested uplands that has been developed with residential properties. Areas to the south and west have been set aside as a preserve.

4.0 Alternatives Considered

The Board of Supervisors considered alternatives to limit the project size and expense. JCBOS considered dredging only a portion of the proposed dredge area, dredging in stages and limitations on the dredge footprint width and depth. Dredging only portions of the project area would result in some areas remaining shallow and subject to boats hitting bottom which could result in ruts or sinks in these areas and would limit access for some homeowners. Dredging in stages would result in a lengthier construction period, remobilization for the later phases, and increased costs. Limiting the proposed dredge depth and width could limit boater traffic and result in the need to dredge again sooner. JCBOS determined that dredging all of the areas as proposed would result in the best preservation of uses, access and protection of the habitat.

The No Action Alternative would allow the channels to continue silting in with access becoming more difficult.

5.0 Project Impacts

The proposed project will be constructed in existing channels. Impacts associated with this project include impacts to water bottoms and temporary increase in turbidity during dredging. Impacts during dredging will be temporary.

The dredge area and quantity vary depending on channel as presented below.

Location	Proposed Length and Width	Proposed Depth	Proposed Quantity (cubic yards)
Approach to Davis Bayou	2,900, 50'	-8	13,500
GCRL basin and access	1,100, +-100'	-6.0	9,000
Eagles Nest Canal	880, 24'	-5.0	2,200

The proposed dredge area footprints and profiles are shown on the attached drawings C1.0, through C3.2. The proposed total quantity is 24,700 cubic yards.

5.1 Wetlands

Areas adjacent to the proposed project are identified as estuarine and marine wetlands. None of these wetlands will be impacted by the dredging project. At least 10 feet will remain between any dredging activities and the marsh wetlands along the sides of the channels.

5.2 Submerged Aquatic Vegetation

A Submerged Aquatic Vegetation (SAV) Survey was conducted on July 18, 2022 to look for areas where SAV beds may be present. The SAV survey was conducted from a boat for the entire project area. A SAV Report was prepared and is attached in Appendix A. No SAV beds were observed during the survey.

5.3 Water Quality

The proposed project will temporarily increase turbidity however, stormwater best management practices (bmp's) will be used during construction to protect all waters downstream and down gradient of work areas. Turbidity curtains may be utilized if needed.

5.4 Cultural Resources

No cultural resources are known to exist within the project footprint. The project is entirely within existing channels. Therefore it is not foreseen that any impacts to such resources will occur.

5.5 Threatened and Endangered Species

Federally listed threatened or endangered species thought to occur within Jackson County are:

Group	Scientific Name	Common Name	Federal Status
Amphibians	*Rana sevosa*	Dusky gopher frog	endangered
Birds	*Charadrius melodus*	Piping plover	endangered
Birds	*Calidris canutus*	Red knot	threatened
Birds	*Grus canadensis pulla*	Mississippi sandhill crane	endangered
Birds	*Picoides borealis*	Red-cockaded woodpecker	endangered
Birds	*Calidris canutus rufa*	Red knot	threatened
Ferns and Allies	*Isoetes louisianensis*	Louisiana quillwort	endangered
Fishes	*Acipenser oxyrinchus desotoi*	Gulf sturgeon	threatened
Fishes	*Percina aurora*	Pearl darter	candidate
Mammals	*Trichechus manatus*	West Indian manatee	endangered
Mammals	*Ursus americanus luteolus*	Louisiana black bear	threatened
Reptiles	*Chelonia mydas*	Green sea turtle	threatened
Reptiles	*Dermochelys coriacea*	Leatherback sea turtle	endangered
Reptiles	*Eretmochelys imbricata*	Hawksbill sea turtle	endangered
Reptiles	*Gopherus polyphemus*	Gopher tortoise	threatened
Reptiles	*Graptemys flavimaculata*	Yellow-blotched map turtle	threatened
Reptiles	*Lepidochelys kempii*	Kemp's ridley sea turtle	endangered
Reptiles	*Pituophis melanoleucus lodingi*	Black pine snake	candidate
Reptiles	*Caretta caretta*	Loggerhead sea turtle	threatened
Reptiles	*Pseudemys alabamensis*	Alabama red-belly turtle	endangered

The project area consists of existing open water channel and dredged canals. Based on the project location the project area is not likely to provide suitable habitat for terrestrial

threatened or endangered species that may be found in Jackson County. Aquatic species that may be in the area will be able to avoid the area during dredging operations. The gulf sturgeon is not known to inhabit the Davis Bayou area. In addition, sea turtles and the West Indian Manatee are not likely to travel to the project area due to water depths and geography.

5.6 Critical Habitat

The Mississippi Sound and the rivers that discharge into the sound are considered critical habitat for the gulf sturgeon. Gulf sturgeon, are anadromas fish, inhabiting coastal rivers from Louisiana to Florida during the warmer months, and the Gulf of Mexico and its estuaries and bays in the cooler months. Gulf sturgeon are bottom feeders, and eat primarily macroinvertebrates, including brachiopods, mollusks, worms, and crustaceans. All foraging occurs in brackish or marine waters of the Gulf of Mexico and its estuaries; sturgeon do not forage in riverine habitat. Gulf sturgeon migrate into rivers to spawn in the spring; spawning occurs in areas of clean substrate comprised of rock and rubble.

Riverine habitats where the healthiest populations of Gulf sturgeon are found include long, spring-fed, free-flowing rivers, typically with steep banks, a hard bottom, and an average water temperature of 60-72° F. Gulf sturgeon initiate movement up to the rivers between February and April and migrate back out to the Gulf of Mexico between September and November.

The project area is not located near one of the major rivers of the gulf coast and is not an area suitable for spawning. Gulf sturgeon may use the area for foraging, however, they are known to frequent the area closer to the barrier islands. Gulf sturgeon would be able to avoid the area during construction.

The West Indian Manatee has recently been observed in the harbors in Ocean Springs, Mississippi, approximately 4 nautical miles west of Davis Bayou. It is not likely that the manatee would enter Davis Bayou due to the shallow entrance to the area. In addition, manatees could avoid the area during dredging operations.

The project area is not located within or near critical habitat for any other federally listed species. No impacts to critical habitat are foreseen as a result of this project.

5.7 Essential Fish Habitat

Davis Bayou and the associated secondary and side bayous are generally considered essential fish habitat which is defined as the habitat necessary for managed fish to complete their life cycle, thus contributing to a fishery that can be harvested sustainably. EFH applies to each life stage of approximately 1,000 managed species. Different life stages of the same species often use different habitats. Based on review of the NOAA Essential Fish Habitat Mapper, the area is considered EFH for Coast Migratory Pelagics, Red Drum, Reef Fish and Shrimp. Since the project will only impact existing channels

and no marsh habitat will be affected, it does not appear that the project will have a negative impact on EFH.

5.8 Oyster Beds

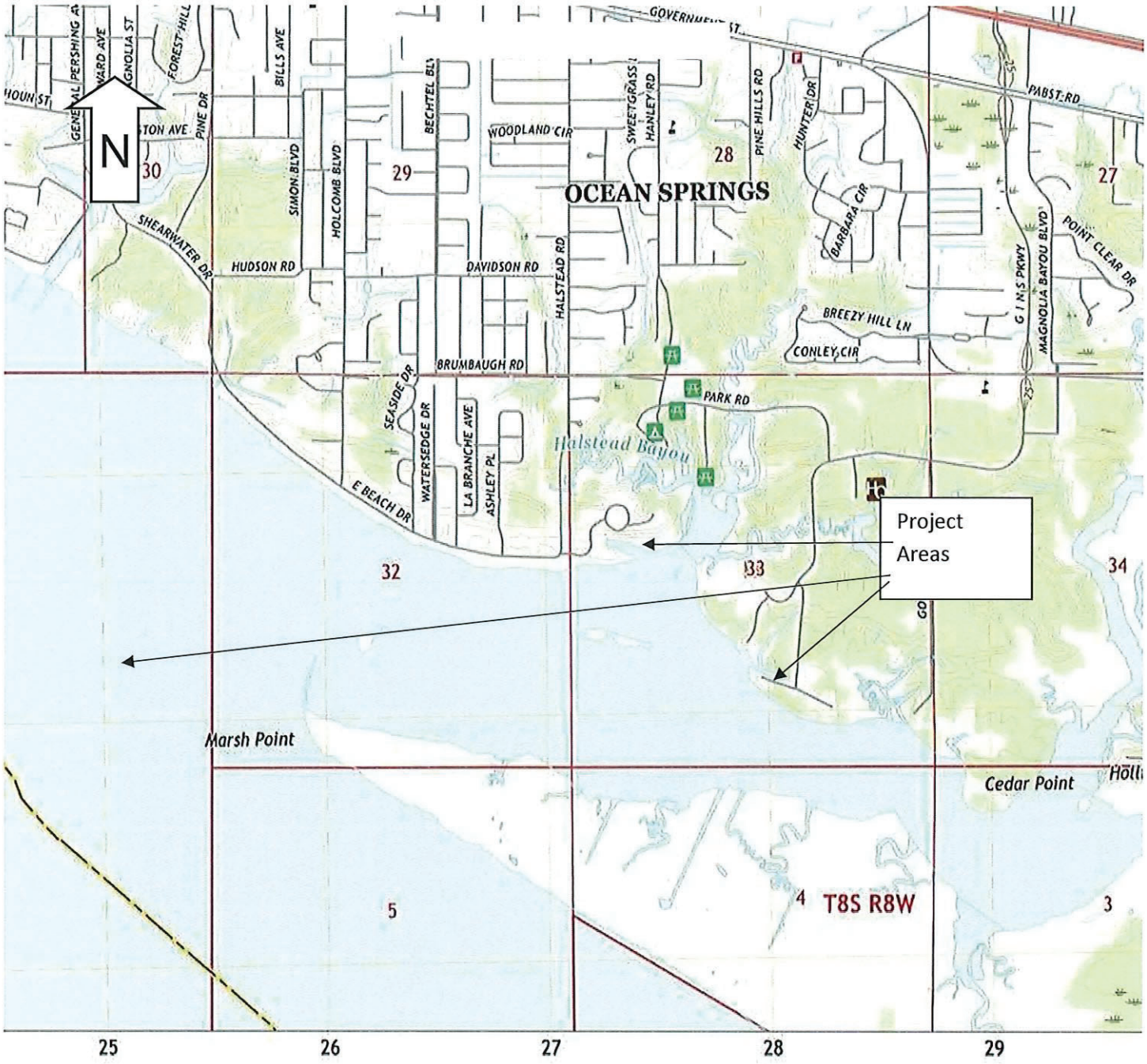
A survey for oyster beds was conducted at the same time as the SAV survey. The substrate was dragged with a small rake to look for hard bottom or shells. No oyster beds were found during the course of the survey, and no impacts to any beds are proposed by this project.

6.0 Mitigation

There will be no loss of habitat created by the project, therefore mitigation will not be required.

FIGURES

Figure 1 Site Location Topo Map



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Site: Dredging Near Davis Bayou, GCRL and Eagles Nest
Ocean Springs, Jackson County, MS

Figure Title: **Topographic Map** (Map Source: USGS, 2012)

Appendix ID: A

Figures Drawings – Footprints and Profiles

APPENDIX A

SAV Survey Report

SUBMERGED AQUATIC VEGETATION SURVEY

for

DREDGING OF BAYOUS NEAR GCRL AND EAGLES NEST DRIVE PROJECT

PROJECT NUMBER 222-025

On behalf of

Jackson County Board of Supervisors
2915 Canty Street
Pascagoula, MS 39568

by

COMPTON ENGINEERING, INC.
Engineering, Surveying, and Environmental Services

156 Nixon Street
Biloxi, MS 39530
(228) 432-2133

JULY 2022

TABLE OF CONTENTS

INTRODUCTION 1

SITE CHARACTERISTICS AND HABITAT DESCRIPTIONS 1

SUBMERGED AQUATIC VEGETATION 2

SURVEY METHODS 3

CONCLUSION 3

LITERATURE CITED 4

FIGURES

Site Location Topographic Map

APPENDICES

Appendix A – Site Photos

Submerged Aquatic Vegetation Survey
Dredging of Bayous near GCRL and Eagles Nest
Jackson County, Mississippi
July 2022

Introduction

The Jackson County Board of Supervisors proposes to remove sediment that accumulated in the navigable waterway channel in the open water channel near Marsh Island, near the GCRL harbor and the channel adjacent to Eagles Nest Drive. The current water depth ranges from approximately 3.0 to 5.5 feet and the desired dredge depth is 6 feet below mean low tide.

Submerged aquatic vegetation (SAV) is known to occur at various locations along the Mississippi Gulf Coast, however, no reports of SAV being observed near GCRL and within Davis Bayou and associated side bayous were identified. The proposed project occurs in an area that has been historically and continues to be impacted by humans. The bayou has been dredged for navigational purposes and segments of shoreline have been armored or otherwise altered by development.

Site Characteristics and Habitat Descriptions

The proposed project includes the natural bayous identified as GCRL Harbor and the side channel near Eagles Nest Drive. The surveyed segments total approximately 4,200 feet of the channels. Figure 1 indicates the limits of the survey.

The project area is located within the lower portion of the Halstead Bayou and consists of open water areas and marsh habitat made largely of needle rush (*Juncus roemerianus*) dominated marshes, with disjunct bands of smooth cordgrass (*Spartina alterniflora*) along the minor creek edges and saltmeadow cordgrass (*Spartina patens*) bands occur adjacent to the uplands. The water quality during the survey was murky.

There are residential properties along Eagles Nest Drive. The shoreline adjacent to the residential lots is intermittently armored with wood or concrete bulkheads. Several boat houses, docks and dredged boat slips are present along the channel.

See Appendix A for photos of the site taken during site reconnaissance.

The substrate within the survey area consists of unconsolidated fine sandy material with a significant amount of organics. Aquatic organisms such as striped mullet, bream and catfish were noted during the survey.

Submerged Aquatic Vegetation

SAV includes a wide variety of species and occur in fresh, brackish, and salt water. The colonies of SAV, commonly referred to as beds, provide a unique spawning, foraging, and cover habitat for many finfish, shellfish and other marine invertebrates. SAV is particularly sensitive to minor changes in salinity, turbidity, and substrate composition. The greatest factor in productivity of SAV is sunlight availability. According to Cho and Biber, 2010, known species of SAV in south Mississippi include:

Scientific Name	**Common Name**
Vallisneria americana	eelgrass, water celery
Zannichellia palustris	horned pondweed
Ruppia maritima	widgeon grass
Eleocharis parvula	dwarf spikerush
Halodule wrightii	shoal grass
Ruppia maritima	wigeon grass
Myriophyllum spicatum	spiked watermilfoil
Najas guadelupensis	southern waternymph
Potamogeton pusillus	small pondweed
Callitriche heterophylla	large water starwort
Ceratophyllum demersum	coon tail
Eichhornia crassipes	water hyacinth
Eleocharis robbinsii	Robbins spikesedge
Heterantheria dubia	water stargrass
Hydrilla verticillata	hydrilla
Ludwidia spp	water primrose
Myriophyllum aquaticum	parrot's feather water milfoil
Nuphar luteum	yellow pond lilly
Numphaea oderata	water lilly

Survey Methods

Background investigation for this survey included research for historical and recent surveys within and near the project area and research of habitat requirements, life cycle, and ecology of potentially present species. This is necessary to evaluate the probability of finding certain species onsite, and to prioritize onsite investigation to those areas which would be the most likely suitable habitat and those areas which are known to historically possess populations of SAV.

Optimum growth of SAV is from summer to fall, although higher tidal ranges and windier conditions during this time of year can make it difficult to survey. Little to no above-substrate vegetative structure is present during the winter months although extreme low tides allow for easy access to the area. Site reconnaissance was conducted on July 18, 2022. The survey was completed from a boat using visual examination of the substrate

and bottom sampling using a rake. The water depth for the survey area ranged from two to four feet outside of the existing dredged channel and from approximately 3.0 to 5.5 feet within the channel. Shallower areas were surveyed thoroughly by transects paralleling the nearest shoreline at maximum transect spacing of 15'. The entire project area was surveyed in this manner.

No SAV beds were observed.

Conclusion

SAV beds were not found within the survey area during the July 18, 2022 survey. Based on the lack of SAV beds in the survey area, it does not appear that there are any limitations to dredging in the project area to avoid SAV.

Literature Cited

Cho, H.J., P. Biber, M. Poirrier, and J. Graner. 2010. Aquatic Plants of Mississippi Coastal River Systems. Journal of the Mississippi Academy of Sciences, Volume 55, Number 4. October 2010.

USDA Plants Database as https://plants.usda.gov/core/profile?symbol=ZAPA

FIGURES

Site Location – Surveyed Segments

APPENDICES

Appendix A – Site Photos

Photo 1: View of entrance to GCRL boat basin.

Photo 2: Another view near GCRL.

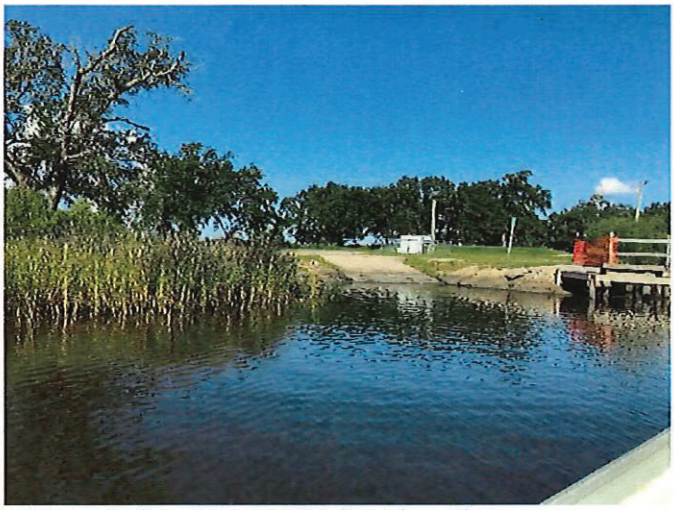

Photo 3: Area near GCRL boat launch.

Photo 4: Channel outside of GCRL basin. .

Photo 5: View of marsh island.

Photo 6: Another view of marsh island, northeast end.

Photo 7: View of marsh near dredge area at GCRL.

Photo 8: Marsh at Eagles Nest channel.

Photo 9: View looking north at Eagles Nest channel.

Photo 10: Another area near Eagles Nest channel.