



US Army Corps
of Engineers®

**THIS NOTICE OF AUTHORIZATION MUST BE
CONSPICUOUSLY DISPLAYED AT THE SITE OF WORK.**

A permit to perform work authorized by statutes and regulations of the Department of the Army


at PORTERSVILL BAY, NEAR CODEN, MOBILE COUNTY, ALABAMA

has been issued to ADCNR, STATE LAND DIVISION
MR. CARL FERRARO on AUGUST 18, 2015

Address of Permittee 31115 FIVE RIVERS BOULEVARD, SPANISH FORT, ALABAMA 36527

Permit Number

SAM-2013-00152-DEM



District Commander
Joy B. Earp
Team Leader, South Alabama Branch
Regulatory Division

ENG FORM 4336, Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED (Proponent: CECW-0)



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, AL 36628-0001

August 18, 2015

RECEIVED
AL DEPT OF CONSERVATION

AUG 25 2015

STATELANDS
COASTAL SECTION

South Alabama
Regulatory Division

SUBJECT: Department of the Army Final Permit Number SAM-2013-0152-DEM,
Alabama Department of Conservation and Natural Resources, Marsh Island

Alabama Department of Conservation
and Natural Resources
State Lands Division
Attention: Mr. Carl Ferraro
31115 Five Rivers Boulevard
Spanish Fort, Alabama 36527

Dear Mr. Ferraro:

**PLEASE READ THIS LETTER CAREFULLY AND COMPLY
WITH ITS PROVISIONS**

There is enclosed a Department of the Army permit authorizing you to perform the work specified therein in accordance with the plans shown on the drawings attached thereto. This permit is issued under provision of the Federal laws for the protection and preservation of the navigable waters of the United States. These laws provide that after the proposed work has been approved by issuance of a Department of the Army permit,

**IT SHALL NOT BE LAWFUL TO DEVIATE FROM SUCH PLANS EITHER
BEFORE OR AFTER COMPLETION OF THE WORK,**

unless modification of said plans has previously been submitted to and received the approval of the Department of the Army.

You should study and carefully adhere to all the terms and conditions of the permit. The District must be notified of the commencement and completion of the permitted work. The enclosed cards may be used for that purpose. Also enclosed is a "NOTICE OF AUTHORIZATION" which must be conspicuously displayed at the site during construction of the permitted work. Any inquiries relating to this permit should be directed to the Regulatory Division at phone number (251) 690-2658.

If for any reason it becomes necessary to make a material change in location or plans for this work, revised plans should be submitted promptly to the District Commander in order that the revised plans may receive the approval required by law before work is begun.

Compliance with this and other conditions of the permit is essential. Failure to submit the notices requested may result in its revocation.

Copy of this letter is being sent to Alabama Department of Environmental Management, Mobile Branch, Coastal Section, Attention: Mr. Scott Brown, 3664 Dauphin Street, Suite B, Mobile, Alabama 36608.

For additional information about our Regulatory Program, please visit our web site at www.sam.usace.army.mil/Missions/Regulatory.aspx. Also, please take a moment to complete our customer satisfaction survey located near the bottom of the webpage. Your responses are appreciated and will allow us to improve our services.

Sincerely,



Joy B. Earp
Team Leader, South Alabama Branch
Regulatory Division

Enclosures



REPLY TO
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MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
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South Alabama
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SUBJECT: Department of the Army Final Permit Number SAM-2013-0152-DEM,
Alabama Department of Conservation and Natural Resources, Marsh Island

Alabama Department of Conservation
and Natural Resources
State Lands Division
Attention: Mr. Carl Ferraro
31115 Five Rivers Boulevard
Spanish Fort, Alabama 36527

Dear Mr. Ferraro:

This is in reference to the subject permit which authorizes the restoration of Marsh Island, Portersville Bay area of the Mississippi Sound, near Coden, Mobile County, Alabama. The permit's Special Condition number 6 reads: The permittee shall implement the *Marsh Island (Portersville Bay) Restoration Project Monitoring Plan* dated March 17, 2015. Please include the attached copy of the above referenced monitoring plan as an enclosure to the subject permit.

A copy of this letter and enclosure is being furnished to the Alabama Department of Environmental Management, Mobile Branch, Coastal Section, Attention: Mr. Scott Brown, 3664 Dauphin Street, Suite B, Mobile, Alabama 36608 and also to Thompson Engineering, Inc., Attention: Mr. John B. McFadyen, 2970 cottage Hill Road, Suite 190, Mobile, Alabama 36606.

Sincerely,

Donald E. Mroczko
Project Manager
South Alabama Branch
Regulatory Division

Enclosure

Marsh Island (Portersville Bay) Restoration Project

Monitoring Plan

March 17, 2015

1. Introduction

The Marsh Island (Portersville Bay) Restoration Project is being implemented by the Alabama Department of Conservation and Natural Resources (ADCNR) as part of the Deepwater Horizon Oil Spill Phase I Early Restoration Plan. This project involves the creation of salt marsh along Marsh Island, a state-owned island in the Portersville Bay portion of Mississippi Sound, Alabama. This project will restore approximately 50 acres of salt marsh through the placement of a permeable segmented breakwater, the placement of sediments and the planting of native marsh vegetation. Additionally, the breakwater will provide protection for the existing southern shoreline of Marsh Island, which has been experiencing shoreline loss at the rate of 5-10' per year.

In accordance with Deepwater Horizon Oil Spill Phase I Early Restoration Plan and relevant agreements and statutes, as the implementing trustee, the ADCNR will implement a monitoring plan for the Marsh Island Project. This monitoring plan will determine the post-construction outcomes of the Marsh Island project over the course of the 5 year monitoring program, as described below.

2. Monitoring Methodology

Parameter #1: Marsh Elevation

1. Method: Utilize aerial imagery and photogrammetric analysis to determine marsh elevations. Place and set on-site targets and/or field verify elevations using RTK GPS as needed prior to acquiring aerial imagery. Analyze imagery and import elevation information into a format usable in an ESRI ArcGIS 10.XX environment.
2. Timing and Frequency: Pre-construction (once); Post-construction (Year 0, and late summer for Years 1-5).
3. Sample Size: Entire Project Area
4. Sites: Project Area.
5. Performance Criteria: N/A
6. Corrective action: N/A

Parameter #2: Spatial Extent of Marsh

1. Method: Utilize aerial imagery and photogrammetric analysis to determine marsh spatial extent. Place and set on-site targets and field verify elevations using RTK GPS as needed prior to acquiring aerial imagery. Analyze imagery and import spatial information into a format usable in an ESRI ArcGIS 10.XX environment.
2. Timing and Frequency: Pre-construction (once); Post-construction (Year 0, and late summer for Years 1-5).
3. Sample Size: Entire Project Area.
4. Sites: Project Area.
5. Performance Criteria: N/A
6. Corrective action: N/A

Parameter #3: Survival of Plantings

**Marsh Island (Portersville Bay) Restoration Project
Monitoring Plan
March 17, 2015**

1. Method: Count live and dead transplanted marsh vegetation plugs within 1 m² quadrats within the restored marsh area.
2. Timing and Frequency: Post-construction. Once, One (1) Year Post-Construction.
3. Sample Size: Seventy-five (75) randomly placed 1 m² quadrats within the restored marsh area.
4. Sites: Planted Areas of the Project Site.
5. Performance Criteria: One year-post construction, percent survival is equal to or greater than 90%.
6. Corrective action: Plant/re-plant vegetation to achieve 90% survival.

Parameters #4 and 5: Vegetation Species Composition and Percent Cover.

1. Method: Determine species composition and estimate percent cover of species in 1 m² quadrats within the restored marsh.
2. Timing and Frequency: Post-construction, Late Summer Years 1-5.
3. Sample Size: Seventy-five (75) randomly placed 1 m² quadrats within the restored marsh area.
4. Sites: Planted Areas of the Project Site.
5. Performance Criteria: N/A
6. Corrective action: N/A

Parameter #6: Presence of Undesirable Vegetation (e.g., invasive species)

1. Method: Visual inspection during vegetation surveys.
2. Timing and Frequency: Pre-Construction and Post-construction (Year 0, and late summer for Years 1-5).
3. Sample Size: N/A; Entire project site.
4. Sites: Project Area.
5. Performance Criteria: N/A
6. Corrective action: N/A

Parameter #7: Erosional Effects on Adjacent Islands

1. Method: Geospatial survey utilizing aerial photogrammetry, other available GIS sources.
2. Timing and Frequency: Pre-construction (once); Post-construction (Year 0, and late summer for Years 1-5).
3. Sample Size: 7-8 Cross-Shore Transects Along Selected Adjacent Shorelines
4. Sites: Project Area and Selected Adjacent Shorelines.
5. Performance Criteria: N/A
6. Corrective action: N/A

Utilize existing or acquired aerial imagery to determine shoreline loss rates along adjacent shorelines during the post-construction monitoring period. Potential erosional effects of project components will be evaluated by comparing pre-project erosion rates, utilizing all available baseline data, to those seen post-project. Special considerations will be given to comparison of pre-and post-project conditions, as well as the first-year

Marsh Island (Portersville Bay) Restoration Project
Monitoring Plan
March 17, 2015

comparison so that natural and/or man-made responses are not minimized by averaging data (shoreline rate of change) over longer periods.

3. Monitoring Data Analysis and Report

Monitoring results and any data analysis will be presented in a draft written report within 45 days of completion of field work.

A final report will be completed within 30 days of receiving final comments from the Department. Final report will be provided electronically via email and/or by CD/DVD/Flash-Drive in Adobe® PDF format. Copies of field data forms and QA/QC'd data electronic files must be included.

All geospatial data and GIS products must be collected and/or produced in Geographic WGS 84 coordinate system.

All geo-spatial data and GIS products must be provided in a format usable in an ESRI ArcGIS 10.X environment and must include Federal Geographic Data Committee (FGDC)-compliant metadata records.

4. Monitoring Schedule Matrix

Parameter	Pre-Construction	Year 0 (Post-Construction)	Year 1 (Late Summer)	Year 2 (Late Summer)	Year 3 (Late Summer)	Year 4 (Late Summer)	Year 5 (Late Summer)
Marsh Elevation	XX	XX	XX	XX	XX	XX	XX
Spatial Extent	XX	XX	XX	XX	XX	XX	XX
Survival of Plantings			XX				
Plant Density and Species Composition		XX	XX	XX	XX	XX	XX
Undesirable Species	XX	XX	XX	XX	XX	XX	XX
Erosional Effects on Adjacent Shorelines		XX	XX	XX	XX	XX	XX

COMMENCEMENT CERTIFICATION



**U.S. Army Corps of Engineers
Mobile District**

Permit Number: **SAM-2013-00152-DEM**

Name of Permittee: **ALABAMA DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES**

Date of Issuance: **AUGUST 18, 2015**

Upon commencement of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Mobile District
Regulatory Division
Post Office Box 2288
Mobile, Alabama 36628-0001

Please note that your permitted activity is subject to a commencement inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit, the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has commenced in accordance with the terms and conditions of the said permit, and the required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

COMPLETION CERTIFICATION



**U.S. Army Corps of Engineers
Mobile District**

Permit Number: **SAM-2013-00152-DEM**

Name of Permittee: **ALABAMA DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES**

Date of Issuance: **AUGUST 18, 2015**

Upon completion of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Mobile District
Regulatory Division
Post Office Box 2288
Mobile, Alabama 36628-0001

Please note that your permitted activity is subject to a completion inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit, the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and the required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

AUG 25 2015

STATE LANDS
COASTAL SECTION

DEPARTMENT OF THE ARMY PERMIT

Permittee: ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Permit No: SAM-2013-00152-DEM

Issuing Office: MOBILE DISTRICT

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U. S. Army Corps of Engineers (USACE) having jurisdiction over the permitted activity or the appropriate official of that office is acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Authorization is given for the restoration of salt marsh along Marsh Island, a State-owned island in the Portersville Bay portion of Mississippi Sound, Alabama. Authorization is given for the following work/activities:

Marsh Restoration (North Side of Marsh Island): Approximately 637,000 cubic yards of predominately silty-sand will be hydraulically dredged from approximately 2.96 million square feet (68 acres) of waterbottoms in Borrow Area 3 (BA3) within Portersville Bay. The dredged material will be placed on approximately 2.2 million square feet (51 acres) of waterbottoms in Portersville Bay to restore salt marsh on the north side of Marsh Island. In addition, approximately 5,000 linear feet of tidal creeks will be constructed connecting the newly created marsh to the Mississippi Sound.

Approximately 202,500 native vegetation plugs will be planted within the reconstructed marsh. The principal marsh grass species that will be planted on the 50-acre salt marsh restoration site at Marsh Island are black needlerush (*Juncus roemerianus*) and smooth cordgrass (*Spartina alterniflora*). These two species comprise approximately 50% of the vegetative cover that is naturally occurring on Marsh Island and these taxa have been the primary plants used in other successful salt marsh creation/restoration projects. Any areas on the restored island where the ground elevation is over 2.5 feet above mean tide level after the dredged material has stabilized will be planted with saltmeadow cordgrass (*Spartina patens*).

Marsh containment dike: The marsh fill will be contained by the placement of 25,000 cubic yards of silty-sand to construct a 3,700-foot-long perimeter containment dike. The dike will impact approximately 167,000 square feet (3.8 acres) of waterbottoms and will have a base width of approximately 45 feet, a top width of 5 feet and 6.5 feet in height from the substrate. The dike will extend to elevation +3.5 feet NAVD before consolidation with created marsh uniform elevation with of +2.5 feet.

Breakwater Construction (South side of Marsh Island): Rubble-Mound Breakwater: The breakwater structure will impact approximately 20,000 square feet (0.5 acre) of waterbottoms by the placement of approximately 3,000 cubic yards of armor stone arranged in 30-foot-long sections. The breakwater segments will have a base width of 10 feet, height of 4.5 feet and will extend to a permanent elevation of +2.5 feet NAVD. Eighteen-foot-long gaps will be left between breakwater sections. The total breakwater length will be 3,000 feet.

Dredging of Access Channels: Two access channels will be dredged as follows:

(1) Access Channel to Construction Area (northeast-southwest alignment): In order to provide barge access to the construction site, approximately 42,000 cubic yards of sandy silt will be mechanically dredged from approximately 326,000 square feet (7.5 acres) of waterbottoms to create a 4,654-foot-long by 70-foot-wide by 7-foot-deep channel with the material being side-cast along the southwest side of the channel. Dredged material will be temporarily side-cast on approximately 13.5 acres of waterbottoms. The side-cast material from the northeast-southwest aligned access channel will be returned to the channel cut upon project completion.

(2) Access Channels for Breakwater Construction (east-west alignment): Approximately 40,000 cubic yards of sandy silt will be mechanically dredged from approximately 360,000 square feet (8.3 acres) of waterbottoms to create a 25-foot-wide by 2-foot-deep working channel, 15-foot-wide by 4-foot-deep working channel, and 60-foot-wide by 6.5-foot-deep working channel (total of approximately 120-foot-wide when including 2:1 channel

slopes) for a total of 3,000 feet in length. The dredged material will be side-cast on approximately 372,000 square feet (8.5 acres) along the south side of the channel and left in place to provide additional protection for the island.

Aids to Navigation Markers: Permanent navigational warning signs will be installed on sixteen (16) pilings adjacent to the breakwaters. Twenty (20) additional temporary warning signs will be installed along access channels during the course of construction and removed following project completion.

ATTACHED:

1. Project Plans (11 pages)
2. Alabama Department of Environmental Management (ADEM) Water Quality Certification, dated February 20, 2015 (4 pages)
3. Alabama Standard Manatee Construction Conditions
4. Sea Turtle and Smalltooth Sawfish Construction Conditions
5. Alabama Historic Commission letter dated December 23, 2014.

Project Location: Portersville Bay area of the Mississippi Sound, near Coden, Mobile County, Alabama.
Latitude 30.3208333° North and **Longitude** -88.223055° West.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on August 5, 2020. If you find that you need more time to complete the authorized activity; submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. 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.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. **Compliance with all terms and General and Special Conditions of this Permit is mandatory.**
2. **It is the permittee's responsibility to ensure that the contractors working on this project are aware of all General and Special permit conditions.**
3. **The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to**

the free navigation of the navigable waters, the permittee will be required, upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

4. Should cultural resources be encountered during project activities, work shall cease and the USACE Mobile District and Alabama State Historical Preservation Officer (SHPO) shall be consulted immediately. This stipulation shall be placed on the construction plans, and it is the permittee's responsibility to ensure that contractors are aware of this requirement. USACE contact information: USACE Mobile District, Attention: Mr. Don Mroczko, Post Office Box 2288, Mobile, AL 36628-0001; SHPO contact information: Alabama Historical Commission, Attention: Ms. Amanda McBride, 468 South Perry Street, Montgomery, AL 36130-0900, or telephone (334) 242-3184. The ACH tracking number is 15-0221.

5. The permittee will maintain CWA Section 401(a) Water Quality Certification and Coastal Zone Consistency as required by the ADEM certification letters dated February 20, 2015.

6. The permittee shall implement the *Marsh Island (Portersville Bay) Restoration Project Monitoring Plan* dated February 3, 2015.

7. The permittee shall adhere to the 100-foot-buffer requirements for the anomalies as described in the SHPO concurrence letter dated December 23, 2014.

8. If it is determined that the project is causing an unacceptable adverse impact on adjacent shorelines, then additional monitoring and/or corrective actions may be necessary as determined by the USACE.

9. This permit does not authorize impacts to wetlands, natural shellfish beds, or submerged aquatic vegetation.

10. An as-built survey of the project shall be conducted and furnished to the USACE Mobile District upon completion.

11. Construction activities shall not infringe upon navigation on the waterway. A clear channel shall at all times be left open to permit free and unobstructed navigation by all types of vessels and tows normally using the various waterways.

12. The applicant shall implement the U.S. Fish and Wildlife (FWS) Standard Manatee Construction Conditions and the NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions. Any observation of a Florida Manatee or Gulf Sturgeon within the project area during operations shall be reported to this office. Any collision with and/or injury to a sea turtle shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344)

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.


b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the USACE will normally give favorable consideration to a request for an extension of this time limit.


Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit, SAM-2013-0152-DEM.


(PERMITTEE) ADCNR – STATE LANDS DIVISION
ATTENTION: MR. CARL FERRARO
31115 FIVE RIVERS BOULEVARD
SPANISH FORT, ALABAMA 36527

08/12/15
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

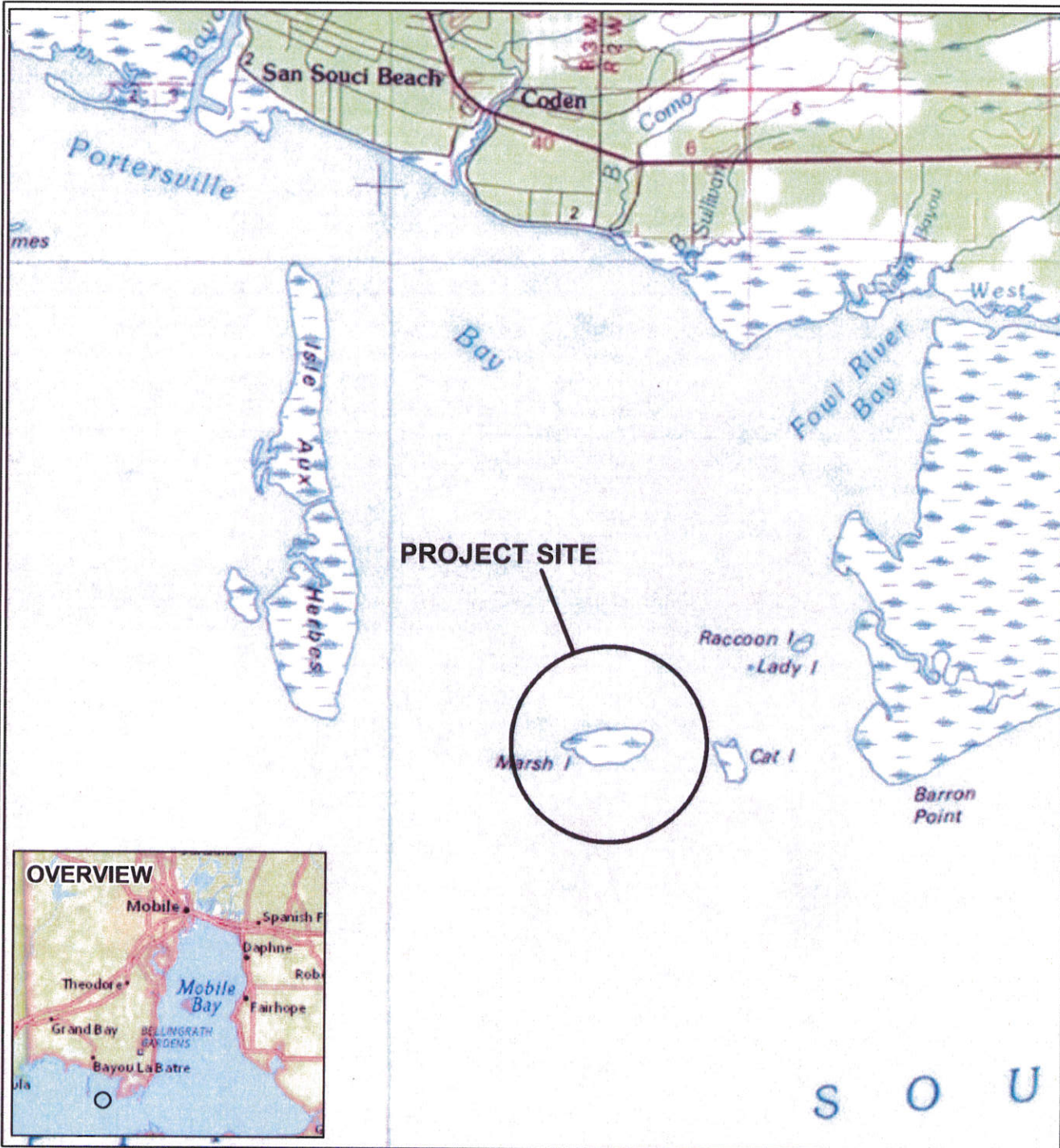
JON J. CHYTKA
COLONEL, U.S. ARMY CORPS OF ENGINEERS
DISTRICT COMMANDER

BY:  August 18, 2015
JOY B. EARP (DATE)
TEAM LEADER, SOUTH ALABAMA BRANCH
REGULATORY DIVISION

When the structures or work authorized by this permit (SAM-2013-00152-DEM) are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFeree)

(DATE)



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National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC

ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
PHASE I NRDA EARLY RESTORATION PROJECT
MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA



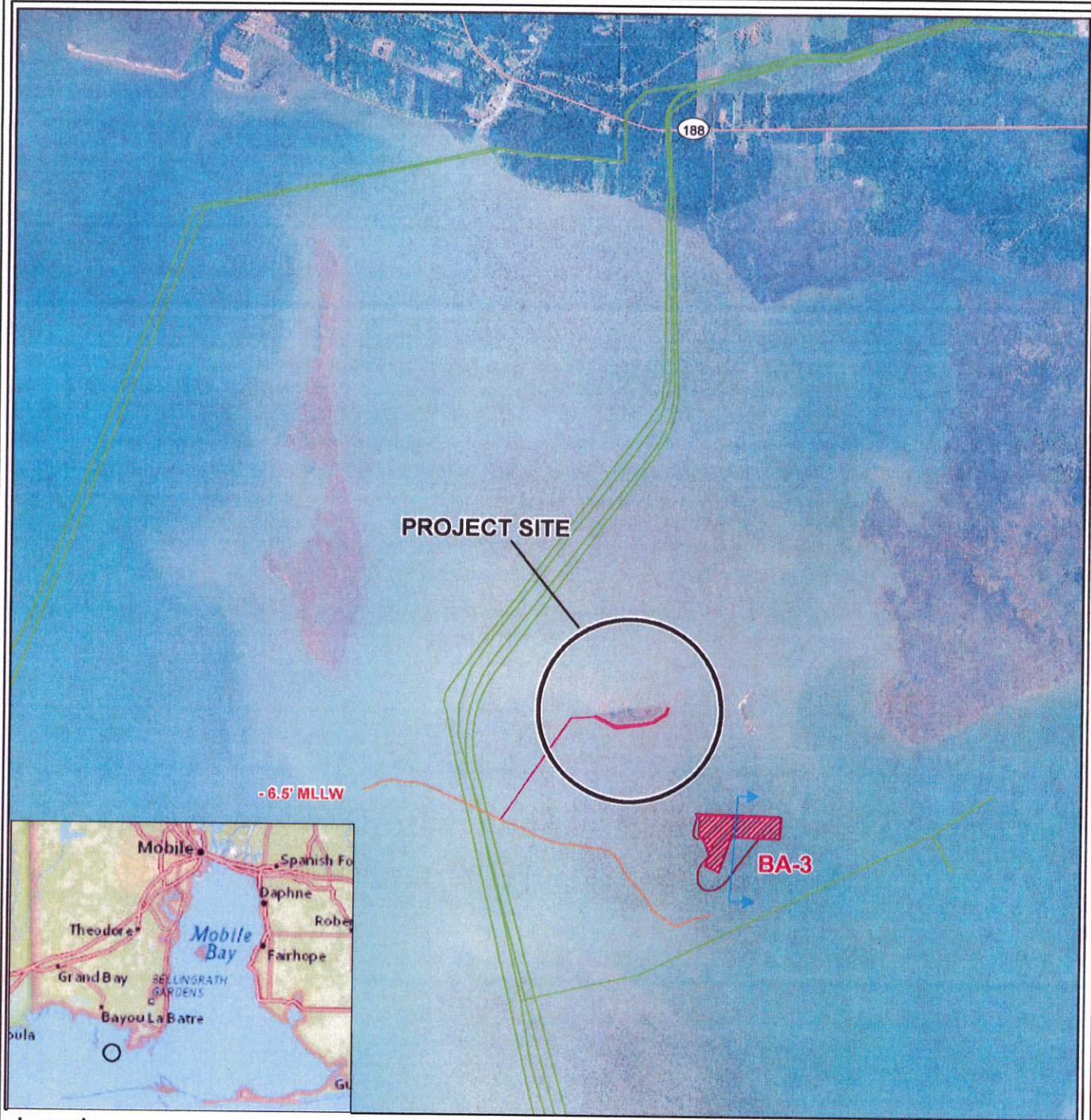
FIGURE 1
SITE VICINITY

PROJECT NO.:
12-2111-0091

DATE:
SEPTEMBER 2013

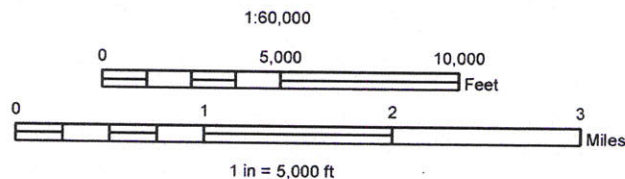
SAM-2013-00152-DEM
DEPT. OF THE ARMY

P:\2012\2011\12-2111-0091-Marsh Island Restoration\Drawings\MXD\FIG2_WaterOCertification.mxd



Legend

- Borrow Area (BA) 3
- Final Dredge Area
- Access Channel
- 6.5' MLLW Hydrographic Countour Line
- Offshore Pipelines (OGB)
- Typical Cross-Section -See Figs.10 and 11



2011 NAIP IMAGERY - 1 Meter Resolution

ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
PHASE I NRDA EARLY RESTORATION PROJECT
MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA



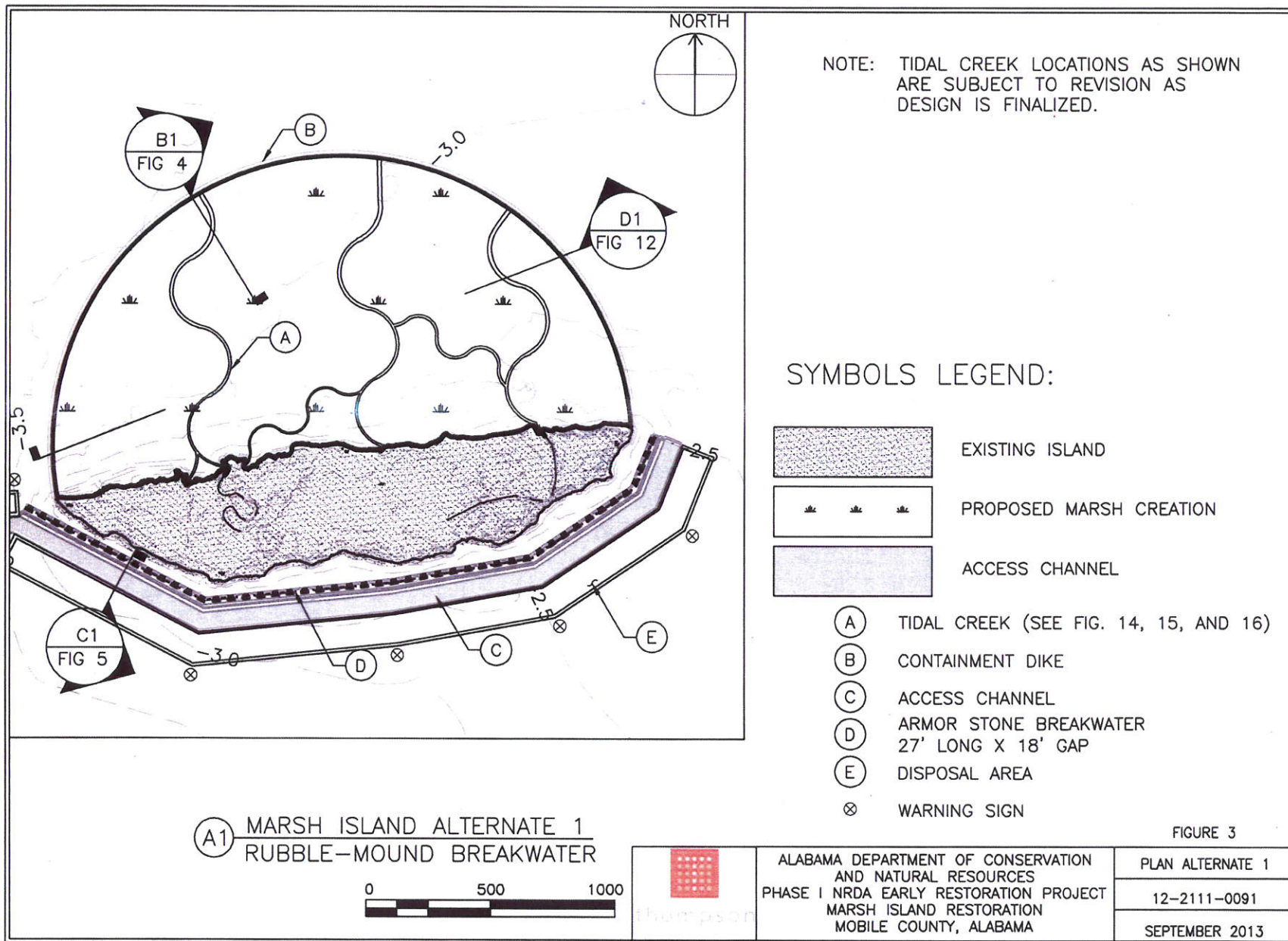
FIGURE 2
Imagery with Project Features and Pipelines

PROJECT NO.:
12-2111-0091

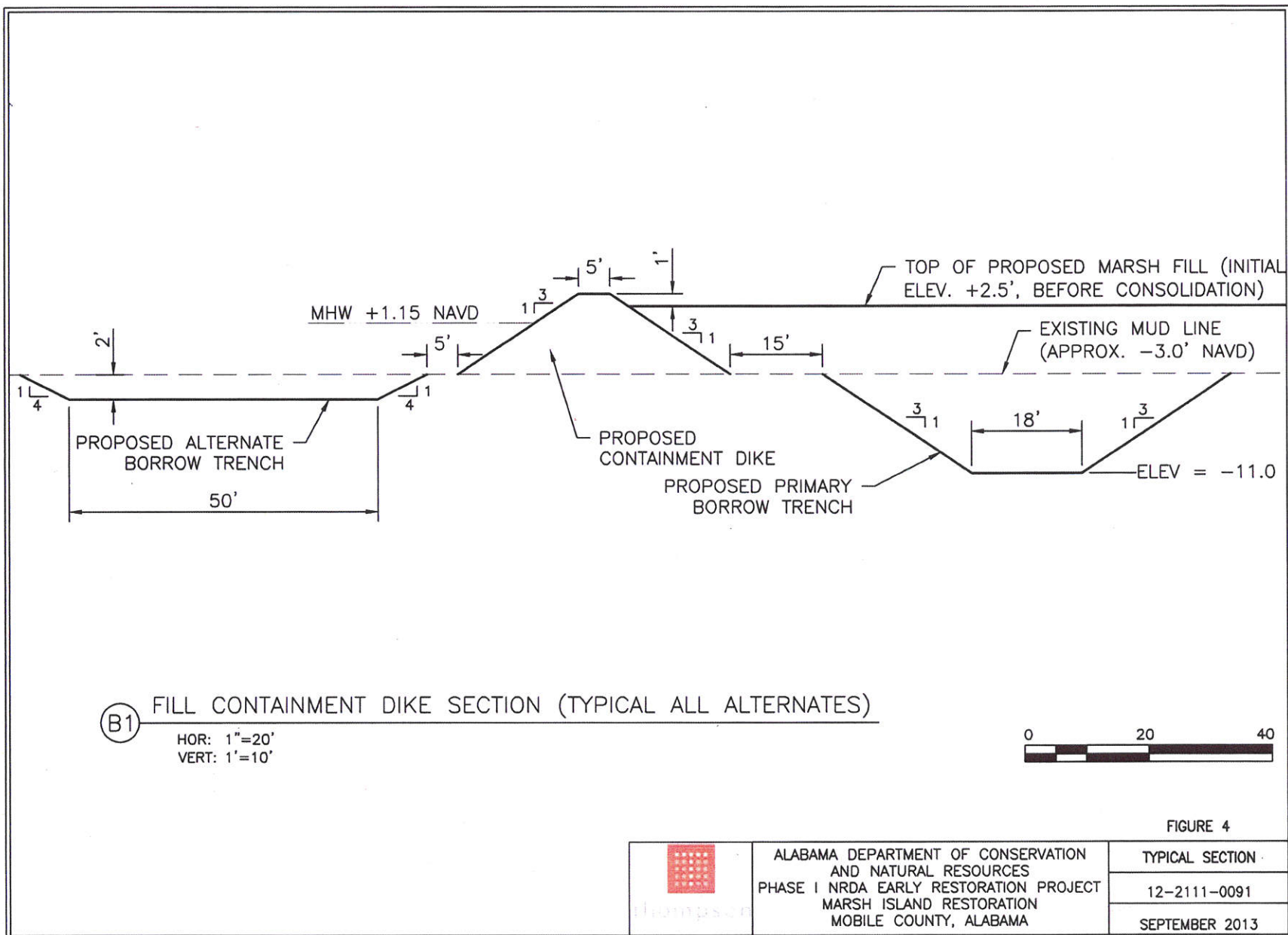
DATE:
FEBRUARY 2015

SAM-2013-00152-DEM
DEPT. OF THE ARMY

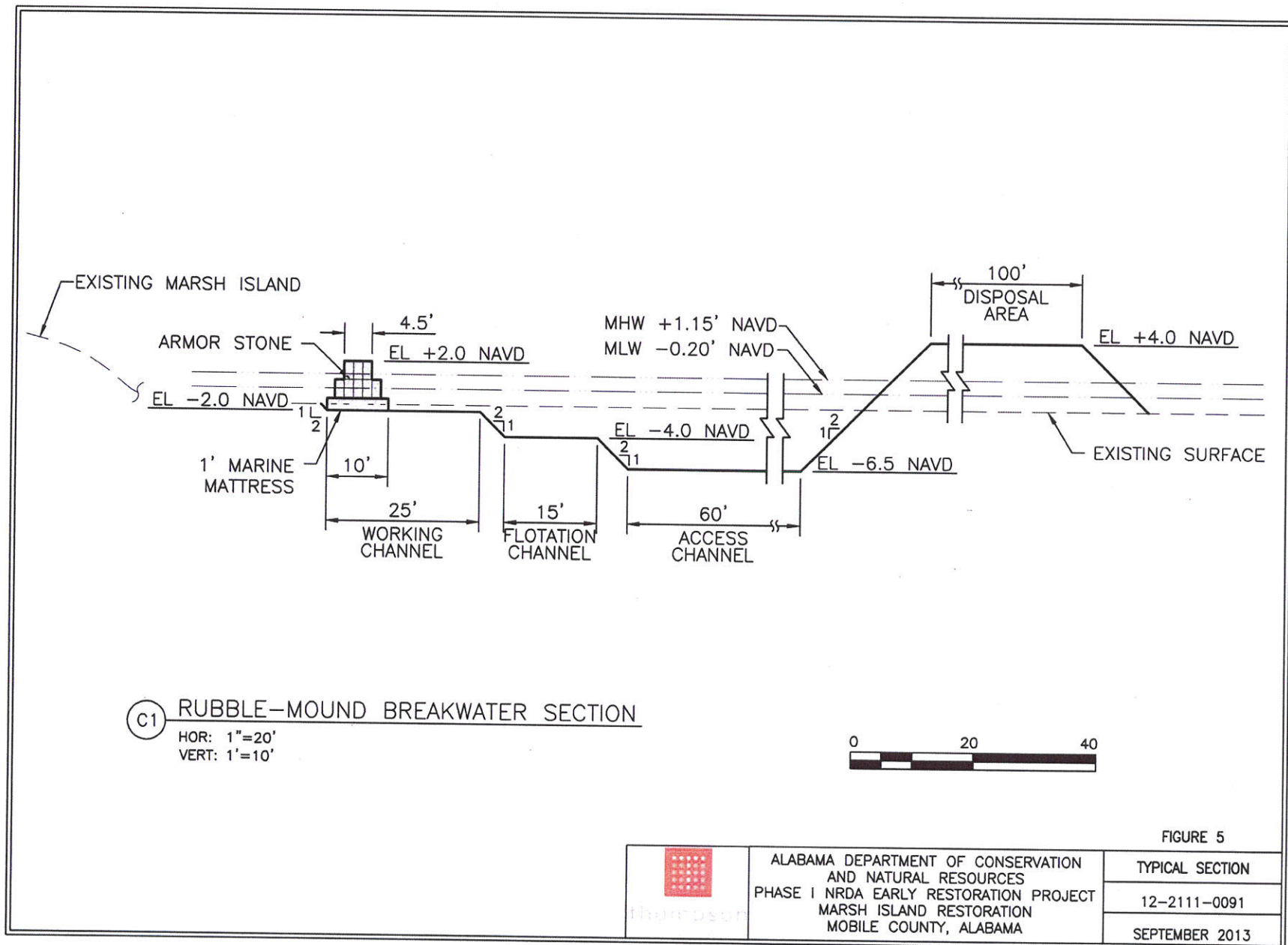
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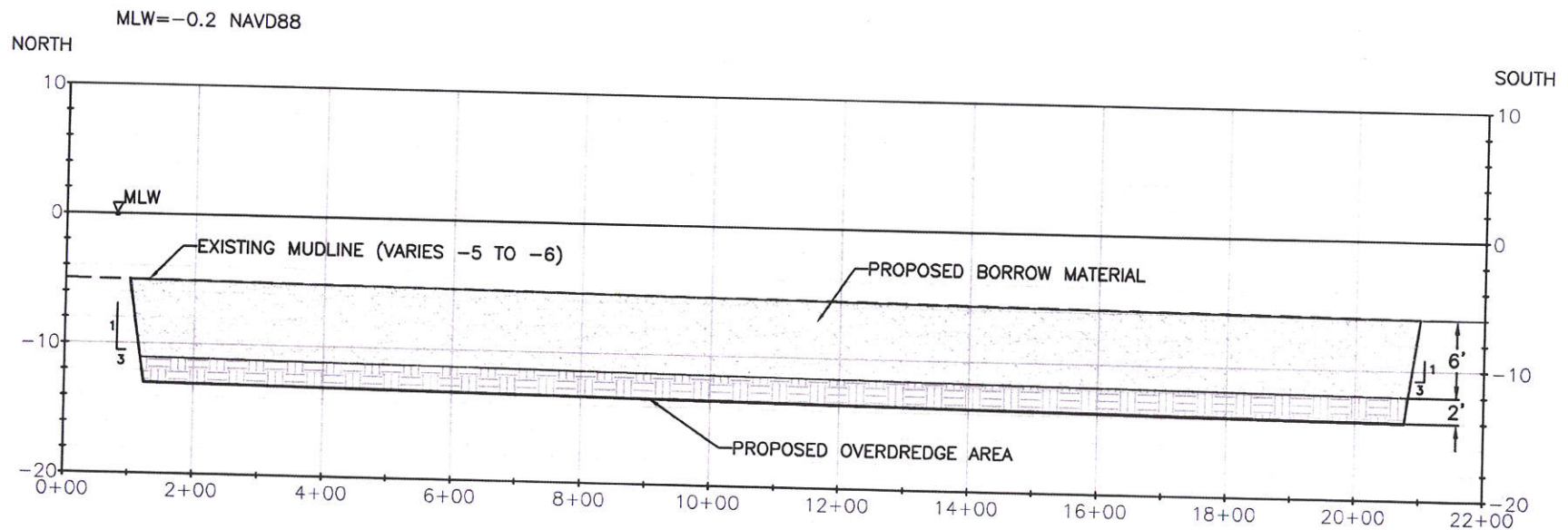
SAM-2013-00152-DEM
DEPT. OF THE ARMY



SAM-2008-00152-DEM
DEPT. OF THE ARMY




SAM-2013-00152-DEM
DEPT. OF THE ARMY



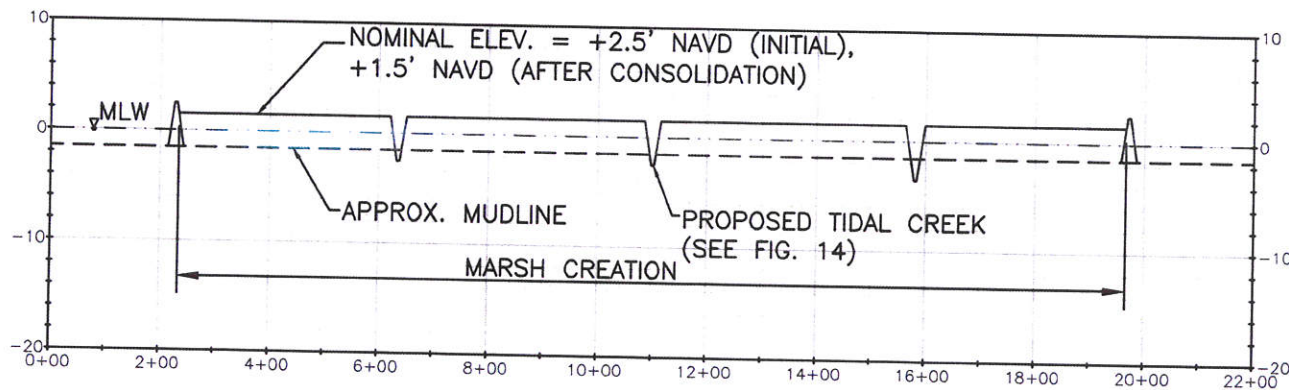
BORROW AREA (BA-3) DREDGE CUT - TYPICAL SECTION

NTS: VERTICAL SCALE EXAGGERATED 20:1 FOR VISUAL CLARITY.

FIGURE 10


 Thompson	ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES PHASE I NRDA EARLY RESTORATION PROJECT MARSH ISLAND RESTORATION MOBILE COUNTY, ALABAMA	
	PROJECT NO:	12-2111-0091
	DATE:	FEBRUARY 2015

NOTE: TIDAL CREEK LOCATIONS AS SHOWN
ARE SUBJECT TO REVISION AS
DESIGN IS FINALIZED.



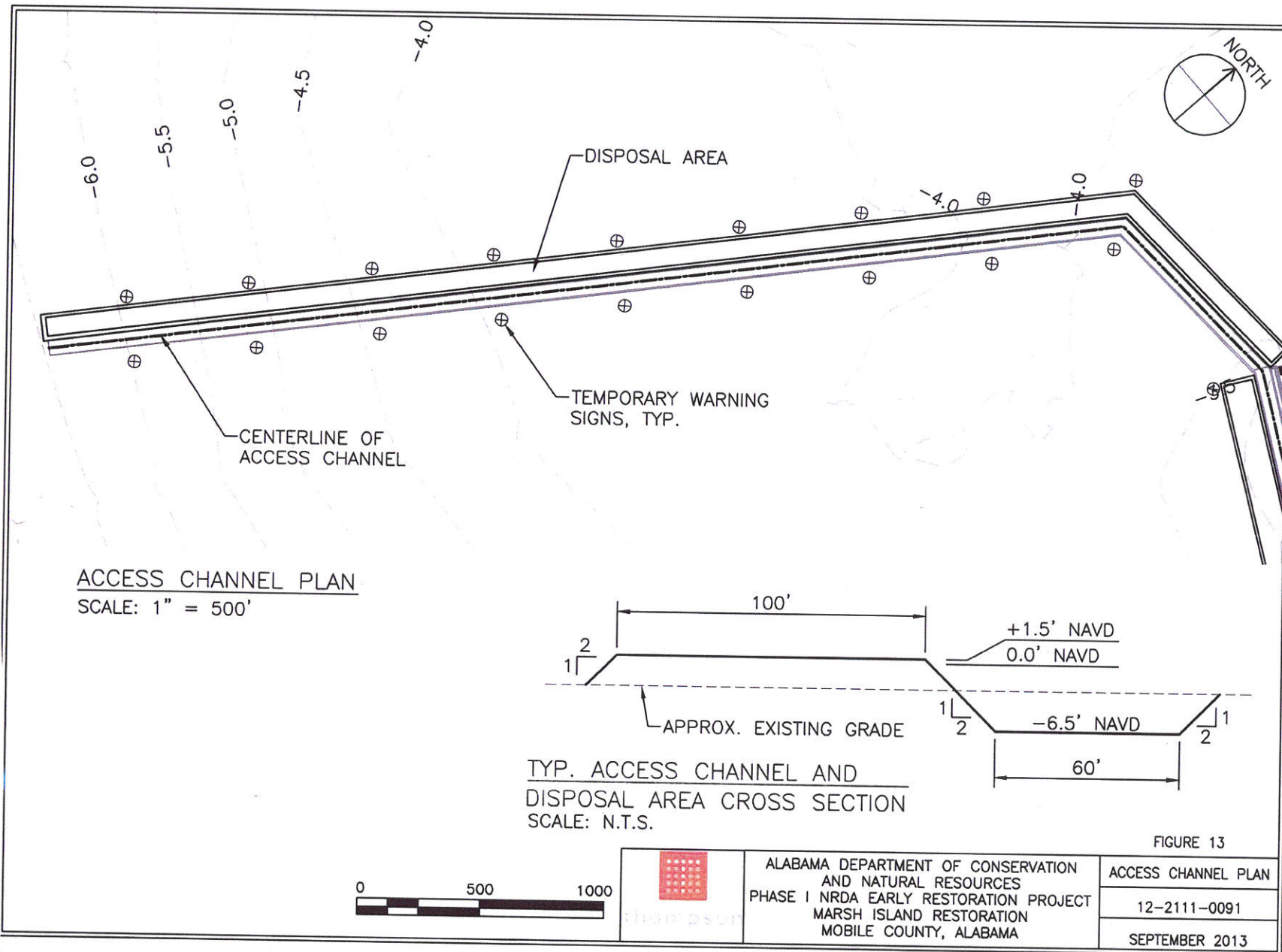
D1 MARSH FILL SECTION (TYPICAL ALL ALTERNATES)
SCALE: N.T.S. (VERTICAL SCALE EXAGGERATED FOR VISUAL CLARITY)

FIGURE 12

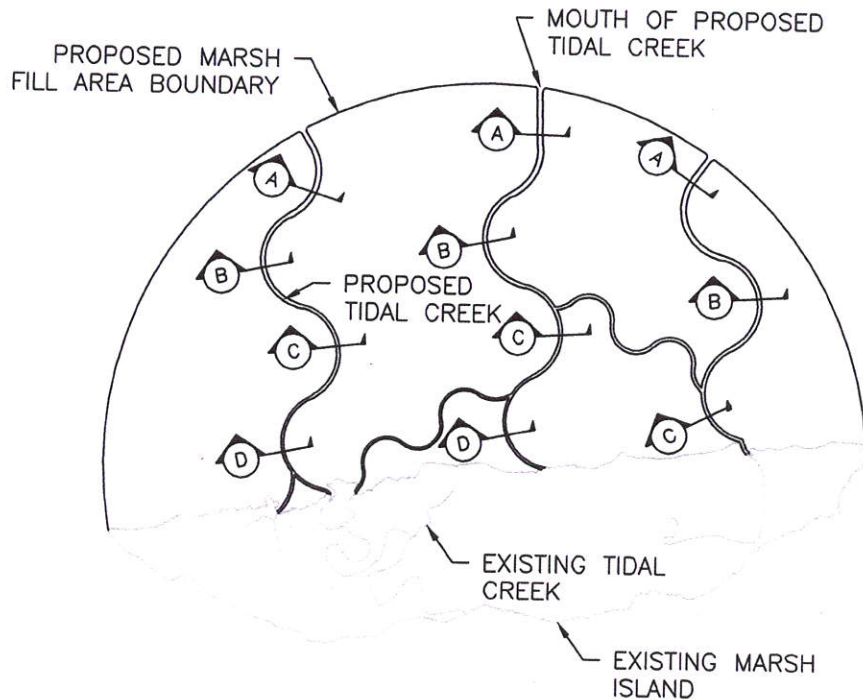
	ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES	
	PHASE I NRDA EARLY RESTORATION PROJECT	
	MARSH ISLAND RESTORATION MOBILE COUNTY, ALABAMA	
	PROJECT NO:	12-2111-0091
	DATE:	SEPTEMBER 2013

SAM-2013-00153-DEM
DEPT. OF THE ARMY

SAM-2013-00152-DEM
DEPT. OF THE ARMY



SAM-2013-00152-DEM
DEPT. OF THE ARMY



NOTES:

1. TIDAL CREEK LOCATIONS AS SHOWN ARE SUBJECT TO REVISION AS DESIGN IS FINALIZED.
2. SEE FIGURES 15 AND 16 FOR SECTIONS

PROPOSED TIDAL CREEK DESIGN:

SCALE: 1"=500'

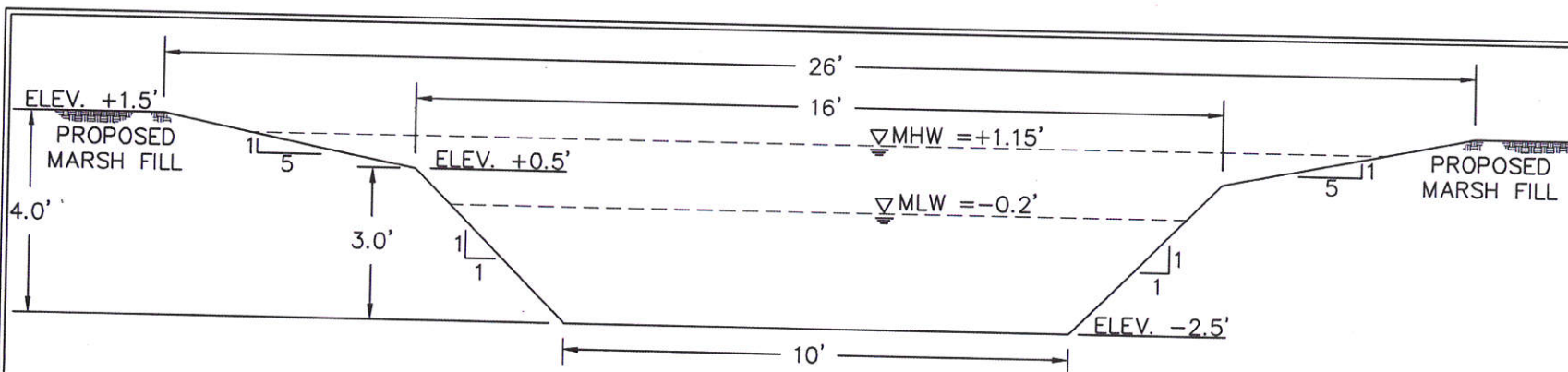


ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
PHASE I NRDA EARLY RESTORATION PROJECT
MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

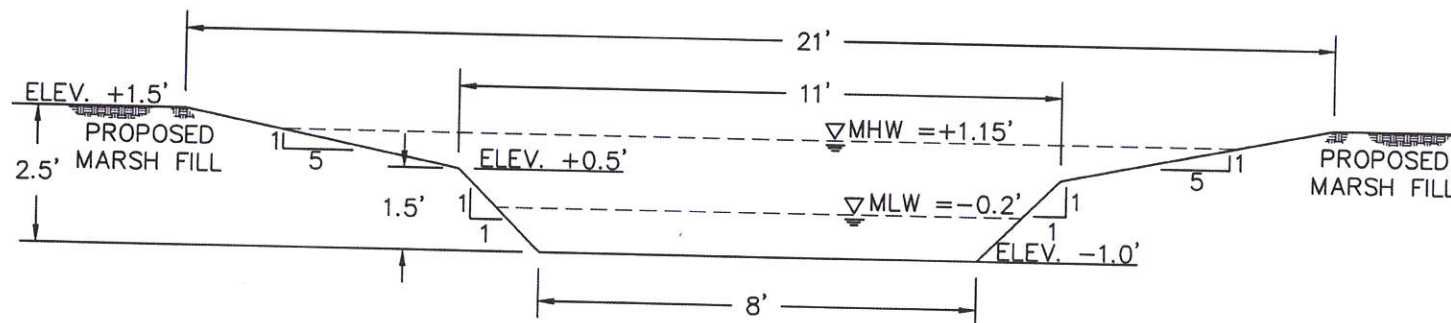
FIGURE 14

TIDAL CREEK DETAILS
12-2111-0091
SEPTEMBER 2013

SAM-2013-00152-DEM
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TYPICAL SECTION A
SCALE: 1"=3'



TYPICAL SECTION B
SCALE: 1"=3'

NOTES:

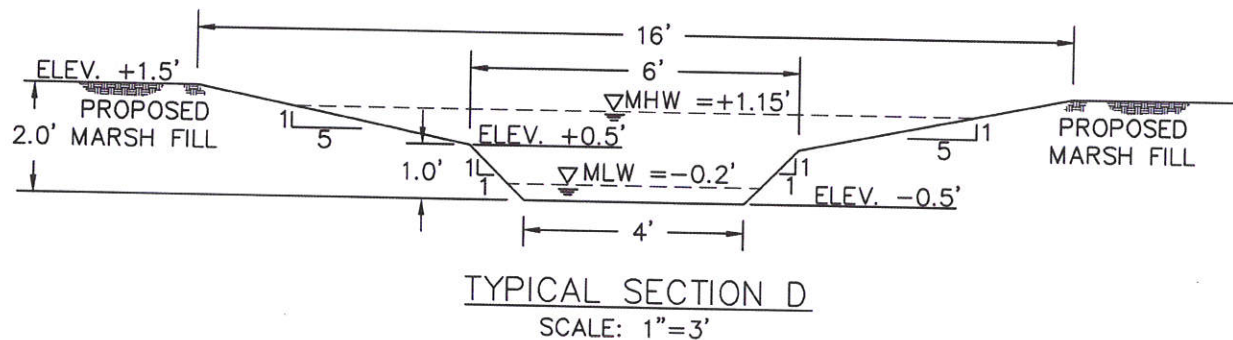
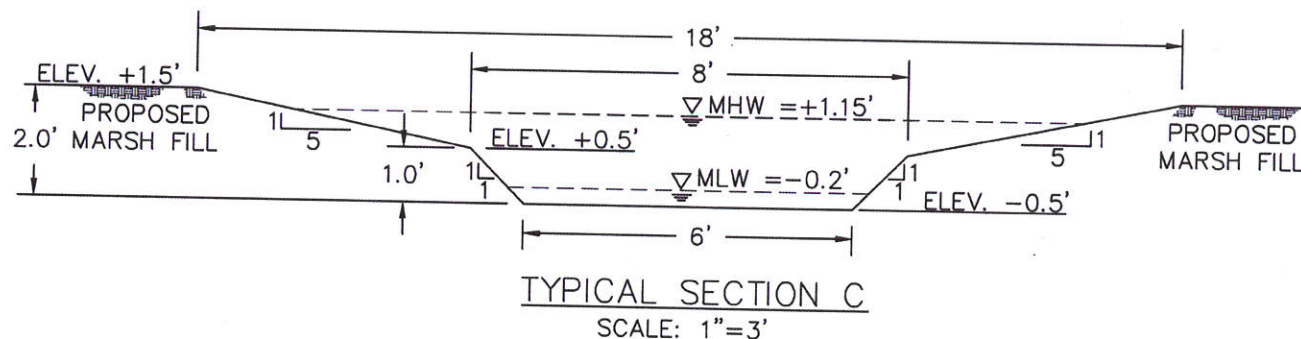
1. ELEVATIONS SHOWN ARE ESTIMATED FOR AFTER CONSOLIDATION (NAVD).
2. ELEVATIONS AND SLOPES OF TIDAL CREEKS ARE PRELIMINARY PENDING FINALIZATION OF DESIGN.



ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
PHASE I NRDA EARLY RESTORATION PROJECT
MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

FIGURE 15

TIDAL CREEK SECTION
12-2111-0091
SEPTEMBER 2013



NOTES:

1. ELEVATIONS SHOWN ARE ESTIMATED FOR AFTER CONSOLIDATION (NAVD).
2. ELEVATIONS AND SLOPES OF TIDAL CREEKS ARE PRELIMINARY PENDING FINALIZATION OF DESIGN.



ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
PHASE I NRDA EARLY RESTORATION PROJECT
MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

FIGURE 16

TIDAL CREEK SECTIONS

12-2111-0091

SEPTEMBER 2013

SAM-2013-00152-DEM
DEPT. OF THE ARMY

LANCE R. LEFLEUR
DIRECTOR



Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

ROBERT J. BENTLEY
GOVERNOR

February 20, 2015

State of Alabama
Department of Conservation and Natural Resources (ADCNR)
State Lands Division
Attn: N. Gunter Guy, Jr., Commissioner
31115 Fiver Rivers Blvd.
Spanish Fort, Alabama 36527

RE: State of Alabama Coastal Consistency Concurrence
Marsh Island Restoration Project
Portersville Bay, Mobile County, Alabama
United States Army Corps of Engineers (USACE) Permit: SAM-2012-0152-DEM
Alabama Department of Environmental Management (ADEM) Tracking Code: 2014-020-COE-CZM

Dear Commissioner Guy:

The ADEM has completed its review of associated materials related to ADCNR's application to dredge and fill state waterbottoms in Portersville Bay area of the Mississippi Sound, near Coden, Mobile County, Alabama. The central GPS coordinates for the project are latitude 30° 19' 15" North and longitude 88° 13' 23" West.

The ADEM understands that the Marsh Island Restoration project will include dredging and filling of state waterbottoms to restore 51-acres of salt marsh in the open water areas north of the remainder of Marsh Island in Portersville Bay. In addition, a series of breakwaters will be placed along the southern shoreline of Marsh Island to reduce and/or prevent further erosion of the existing salt marsh. Permanent warning signs will be installed on 16 pilings adjacent to the breakwaters. The overall project will result in 82-acres of dredging and 63-acres of filling impacts to State waterbottoms. In addition, temporary impacts will occur on 13-acres of State waterbottoms from dredging and filling activities. A summary of project components is reiterated in Table 1; the overall site design is shown in the enclosed final site plans for the project (11 pages).

The USACE's advertisement of this project by joint public notice with ADEM has been completed.

The ADEM **concurs** with ADCNR's Coastal Consistency Certification. This concurrence does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws.

To ensure continued compliance with the ACAMP, the following conditions must be incorporated as part of **SAM-2012-0152-DEM**:

1. Pursuant to the requirements of ADEM Admin. Code r. 335-8-2-.02(5), all materials used as fill shall be non-toxic, non-leaching, non-acid forming, and free of solid waste or other debris.
2. Pursuant to the requirements of ADEM Admin. Code r. 335-8-2-.01, construction activities must cease and ADCNR and/or its contractors must notify the ADEM and the Alabama Historical Commission immediately of any historical, cultural, or archaeological resources that are discovered during project implementation. This condition should be placed on the site construction plans to ensure contractors are aware of it.

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)



Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)


SAM-2012-0152-DEM
 DEPT. OF THE ARMY
 ADEM (4 pages)

ADCNR
February 20, 2015
Page 2 of 2

3. All conditions as stated in the ADEM 401(a) Water Quality Certification should be followed to ensure continued compliance with the ADEM Admin. Code r. 335-8-2-.02 (1) (d).

Contact the Mobile-Coastal office anytime with questions. Always include the ADEM tracking code above when corresponding on this matter.

Sincerely,



A. Scott Hughes, Chief
Field Operations Division

ASH/jsb

File: CZCERT/227

Enclosures: Final Site Plans (11 Pages)

cc: Carl Ferraro, ADCNR Coastal Section
Rosemary Hall, EPA Region 4
Don Mroczko, USACE Mobile District
John McFadyen, Thompson Engineering

91 7108 2133 3936 7226 1323

LANCE R. LEFLEUR
DIRECTOR



Alabama Department of Environmental Management
adem.alabama.gov

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Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

ROBERT J. BENTLEY
GOVERNOR

February 20, 2015

State of Alabama
Department of Conservation and Natural Resources (ADCNR)
State Lands Division
Attn: N. Gunter Guy, Jr., Commissioner
31115 Fiver Rivers Blvd.
Spanish Fort, Alabama 36527

RE: State of Alabama Water Quality Certification (WQC) Pursuant to Clean Water Act (CWA) §401(a)
Marsh Island Restoration Project
Portersville Bay, Mobile County, Alabama
United States Army Corps of Engineers (USACE) Permit: SAM-2012-0152-DEM
Alabama Department of Environmental Management (ADEM) Tracking Code: 2014-020-COE-WQC

Dear Commissioner Guy:

The ADEM has completed its review of associated materials related to ADCNR's application to dredge and fill state waterbottoms in Portersville Bay area of the Mississippi Sound, near Coden, Mobile County, Alabama. The central GPS coordinates for the project are latitude 30° 19' 15" North and longitude 88° 13' 23" West.

The ADEM understands that the Marsh Island Restoration project will include dredging and filling of state waterbottoms to restore 51-acres of salt marsh in the open water areas north of the remainder of Marsh Island in Portersville Bay. In addition, a series of breakwaters will be placed along the southern shoreline of Marsh Island to reduce and/or prevent further erosion of the existing salt marsh. Permanent warning signs will be installed on 16 pilings adjacent to the breakwaters. The overall project will result in 82-acres of dredging and 63-acres of filling impacts to State waterbottoms. In addition, temporary impacts will occur on 13-acres of State waterbottoms from dredging and filling activities. The overall site design is shown in the enclosed final site plans for the project (11 pages).

The USACE's advertisement of this project by joint public notice with ADEM has been completed. Action pertinent to Water Quality Certification is required by CWA §401(a)(1), 33 U.S.C. §1251, *et. seq.* If conducted in accordance with the conditions prescribed herein, the ADEM hereby **grants** official certification that there is reasonable assurance that the discharge resulting from the approved activity will not violate applicable water quality standards established under §303 of the CWA and §22-22-9(g), *Code of Alabama* (1975). This certification terminates coincidentally with the expiration of **SAM-2012-0152-DEM**, but in no case shall this ADEM certification exceed a maximum of five (5) years from the date the USACE issues the permit unless specifically authorized in response to a written request for same. Deviation from the approved project design must not be implemented without coordination with the ADEM.

ADEM certifies that there are no applicable effluent limitations under §§ 301 and 302 nor applicable standards under §§ 306 and 307 of the CWA in regard to the activities specified. However, regulations promulgated by the EPA requiring discharge permits for storm water runoff (i.e. NPDES permits) from individual and commercial facilities may be applicable. This certification does not address the requirements of those regulations.

This certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws.

Birmingham Branch
110 Vulcan Road
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(205) 942-6168
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(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

DWH-AR0308879

To protect water quality, the following conditions must be incorporated as part of **SAM-2012-0152-DEM**:

1. To minimize turbidity impacts, appropriate BMPs must be implemented. Turbidity generated by the activity must not cause substantial visible contrast nor result in an increase of more than fifty (50) Nephelometric turbidity units [above background] in surface waters more than two-hundred (200) feet from the activity. If turbidity generated from project exceeds acceptable levels, operations should cease until turbidity is restored to acceptable levels. The ADEM Coastal/Facility Section at (251) 304-1176 should be notified of resultant work stoppage.
2. Water quality monitoring is a part of this project as indicated by the dissolved oxygen monitoring plan - submitted as Appendix 2 of a September 22, 1014 Thompson Engineering document. All data and pertinent site observations collected/made under the plan should be provided to the ADEM's Mobile-Coastal office.
3. Effective solid waste management practices should be implemented. All construction debris (e.g. excess construction materials, packaging material, trash, garbage, etc.) must be contained while on-site and regularly removed and disposed of in an approved manner.
4. All materials used as fill shall be non-toxic, non-leaching, non-acid forming, and free of solid waste or other debris.

Contact the Mobile-Coastal office anytime with questions. Always include the ADEM tracking code above when corresponding on this matter.

Sincerely,



A. Scott Hughes, Chief
Field Operations Division

ASH/jsb

File: 401WQ/227

Enclosures: Final Site Plans (11 Pages)

cc: Carl Ferraro, ADCNR Coastal Section
Rosemary Hall, EPA Region 4
Don Mroczko, USACE Mobile District
John McFadyen, Thompson Engineering

**ALABAMA
STANDARD MANATEE CONSTRUCTION CONDITIONS**

- a. The lessee/grantee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatees.
- b. The lessee/grantee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to, or exit from, essential habitat.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- e. If manatees are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure their protection. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- f. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).
- g. Temporary signs concerning the manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the lessee/grantee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 8½" by 11" which reads *Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service in Daphne (251-441-5181).*

SAM-2013-00152 - DEM
DEPT. OF THE ARMY (2 pages)

CAUTION

MANATEE HABITAT

**IDLE SPEED IS REQUIRED IF OPERATING A VESSEL IN
THE CONSTRUCTION AREA.**

**ALL EQUIPMENT MUST BE SHUTDOWN IF A MANATEE
COMES WITHIN 50 FEET OF OPERATION.**

**ANY COLLISION WITH AND/OR INJURY TO A MANATEE SHALL BE
REPORTED IMMEDIATELY TO THE U.S. FISH AND WILDLIFE
SERVICE IN DAPHNE AT
251-441-5181**



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc



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STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

FRANK W. WHITE
EXECUTIVE DIRECTOR

December 23, 2014

TEL: 334-242-3184
FAX: 334-240-3477

Don Mroczko
Regulatory Division
Mobile District USACE
Post Office Box 2288
Mobile, Alabama 36628-0001

Re: AHC 2015-0221
SAM 2012-0152-DEM
Dredging State Owned Water Bottoms
Fill for Reconstruction of Marsh Island
Mobile County

Dear Mr. Mroczko:

Upon review of the above referenced project, we have determined that Agree with COE comments. The anomaly cluster identified in the vicinity of the southeastern shoreline of Marsh Island requires avoidance. No work is to be conducted within a 100 foot buffer of these anomalies. The avoidance area will include both a maritime and terrestrial buffer. If avoidance is not feasible, additional testing will be necessary. Research proposals and a Maritime Permit under AUCRA will be necessary prior to commencement of project activities.

We appreciate your commitment to helping us preserve Alabama's historic archaeological and architectural resources. Should you have any questions, please contact Amanda McBride at 334.230.2692 or Amanda.McBride@preserveala.org. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/SGH/amh