



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

CESAM-RD-A
PUBLIC NOTICE NO. SAM-2013-0152-DEM

November 6, 2013

JOINT PUBLIC NOTICE
U.S. ARMY CORPS OF ENGINEERS AND
STATE OF ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

**REQUEST FOR AUTHORIZATION TO DREDGE AND PLACE FILL IN WATERS OF THE U.S.
TO RESTORE 50 ACRES OF TIDAL MARSH AT MARSH ISLAND,
PORTERSVILLE BAY, MOBILE COUNTY, ALABAMA**

TO WHOM IT MAY CONCERN: This District has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403). Please communicate this information to interested parties.

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

AGENT: Thompson Engineering, Inc.
Attention: Mr. John McFadyen
2970 Cottage Hill Road, Suite 190
Mobile, AL 36606

WATERWAY/LOCATION: Portersville Bay area of the Mississippi Sound, near Coden, Mobile County, Alabama. Latitude 30°-19'-15" North and Longitude 88°-13'-23" West.

PROJECT PURPOSE: The "Basic Project Purpose" is the restoration and preservation of salt marsh at Marsh Island. For the purposes of the Clean Water Act Section 404(b)(1) Guidelines, this basic project purpose defines the project as a "water-dependent" activity. The "Overall Project Purpose" is: (1) to protect the southern shoreline of Marsh Island to reduce and/or prevent further erosion of the existing salt marsh; and (2) to re-create salt marsh in the open-water areas north of the remainder of the island. Marshes in Mississippi Sound were oiled by the spill, although the oil did not come ashore on Marsh Island itself. As part of the Deepwater Horizon "Framework Agreement" the project is an initial step toward the restoration of natural resources injured by the Deepwater Horizon spill. For additional information see the Deepwater Horizon Oil Spill Phase I Early Restoration Plan and Environmental Assessment at <http://www.gulfspillrestoration.noaa.gov/wp-content/uploads/Final-ERP-EA-041812.pdf>. The applicant has applied for State Water Quality Certification (WQC) in accordance with

Section 401 (a)(1) of the Clean Water Act, and for Coastal Zone (CZ) Consistency in accordance with the State Coastal Zone Management Program. Upon completion of the required advertising and public comment review, a determination relative to WQC and CZ consistency will be made by the Alabama Department of Environmental Management.

WORK: The applicant proposes to perform the following work:

Marsh Restoration (North Side of Marsh Island): Approximately 637,000 cubic yards of predominately silty-sand would be hydraulically dredged from one or two borrow sites (BA 2 and BA 3) within Portersville Bay. The dredged material would be placed on 2.2 million square feet of waterbottoms in Portersville Bay to restore approximately 50 acres of salt marsh on the north side of Marsh Island.

Marsh containment dike: The marsh fill would be contained by the placement of 25,000 cubic yards of silty-sand to construct a 3,800-foot-long perimeter containment dike. The dike would impact approximately 167,000 square feet of waterbottoms and would have a base width of approximately 44 feet, a top width of 5 feet and 6.5 feet in height from the substrate. The dike would extend to elevation +3.5 feet NAVD.

Breakwater Construction (South side of Marsh Island): The applicant has proposed two breakwater designs as described below:

Alternative 1 - Rubble-Mound Breakwater: This alternative would impact approximately 13,000 square feet of waterbottoms by the placement of armor stone arranged in 27-foot-long sections. The breakwater segments would have a base of 10 feet, height of 4 feet and would extend to elevation +2.0 feet NAVD. Eighteen-foot-long gaps would be left between breakwater sections. The total breakwater length would be 3,000 feet. See Figures 3 and 5.

Alternative 2 - Wave-Attenuator Breakwater: This alternative would impact approximately 40,000 square feet of waterbottoms by the placement of prefabricated concrete wave attenuators arranged in 34-foot-long sections. This alternative would have a base of 24 feet, height of 6 feet and extend to elevation +4.5 feet NAVD. Thirty-foot-long gaps would be left between breakwater sections. The total breakwater length would be 3,000 feet. See Figures 6 and 7. Final selection of the breakwater design (Alternative 1 or 2) will be made after a review of the bids.

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

(1) Access channel to breakwater construction area (north-south alignment): In order to provide barge access to the construction site, approximately 42,000 cubic yards of sandy silt would be mechanically dredged from approximately 326,000 square feet of waterbottoms to create a 4,654-foot-long by 60-foot-wide by 6.5-foot-deep channel with the material being side-cast along the southeast side of the channel. See Figures 2 and 13 for the channel location.

The side-cast material from the north-south aligned access channel would be returned to the channel cut upon project completion (Figure 13).

(2) Access channels for breakwater construction (east-west alignment): Approximately 40,000 cubic yards of sandy silt would be mechanically dredged from approximately 342,000 square feet of waterbottoms to create a 60-foot-wide by 6.5-foot-deep access channel, a 15-foot-wide by 4-foot-deep flotation channel, and a 39-foot-wide by 2-foot-deep working channel. All channels would be 3,000 feet in length. The dredged material would be side-cast along the south side of the channel and left in place to provide additional protection for the island. See below for details of the proposed secondary sand berm and also Figure 3 (attached).

Construction of Secondary Sand Breakwater: Approximately 40,000 cubic yards of excavated material would be placed on 300,000 square feet of waterbottoms to create a secondary sand breakwater. The sand berm would be 3,000 feet long with a base of 100 feet, height of 4 feet and extend to elevation +1 foot NAVD.

This public notice is being distributed to all known interested persons in order to assist in developing facts on which a decision by the U.S. Army Corps of Engineers (Corps) can be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition. The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; Federal, State and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state with particularity, the reasons for holding a public hearing. Evaluation of the probable impacts involving deposits of dredged

or fill material into waters of the United States will include the application of guidelines established by the Administrator of the U.S. Environmental Protection Agency.

This notice reinitiates the ongoing Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. By e-mail dated February 2, 2012, the National Oceanic and Atmospheric Administration (NOAA) Restoration Center submitted an EFH Assessment to the NOAA Southeast Regional Office for EFH consultation. The EFH assessment determined that the proposed action would not adversely affect EFH, would likely benefit federally managed fisheries species overall. By Memorandum dated February 14, 2012, the NOAA Assistant Regional Administrator, Habitat Conservation Division, stated that after review of the NOAA Restoration Center EFH Assessment "...we do not have any EFH Conservation Recommendations to provide pursuant to Section 305(b)(2) of the Magnuson-Stevens Act at this time." Project dredging and filling for marsh restoration and breakwater erosion protection will impact 129 acres (64 acres dredged and 65 acres filled) of Essential Fish Habitat for managed species in the Gulf of Mexico. Approximately 74 acres (50 acres restored and 24 acres protected) of Essential Fish Habitat will be restored and protected. Our initial determination is that the proposed wetland restoration action would not have a substantial net-adverse impact on EFH or Federally managed fisheries. Our final determination relative to project impacts to EFH and the need for mitigation measures are subject to review by and coordination with the National Marine Fisheries Service and the Gulf of Mexico Fishery Management Council.

The National Register of Historic Places will be consulted for properties listed in or eligible for the National Register, which are known to exist and would be affected by the proposed work. Additionally in April 2013, a report titled *A Phase I Cultural Resources Assessment of the Proposed Restoration of Marsh Island in Portersville Bay; Mobile County, Alabama* was submitted to the State Historic Preservation Officer (SHPO) for review and determination of effect on cultural resources. By letter dated April 17, 2013, the Deputy State Historic Preservation Officer stated that "... Upon review of the cultural resources assessment submitted by Barry A. Vittor and Associates, we have determined that project activities will have no adverse effect on cultural resources eligible for or listed on the National Register of Historic Places." **The tracking number assigned by SHPO is AHC13-0691.** Side-scan sonar and magnetometer data of the proposed borrow areas are being evaluated at this time and will be coordinated with the SHPO. Additional notification will be furnished to the State Historic Preservation Officer via this Public Notice. This review constitutes the full extent of cultural resources investigations unless comment to this notice is received documentation that significant sites or properties exist which may be affected by this work, or that adequately documents that a potential exists for the location of significant sites or properties within the permit area. Copies of this notice are being sent to the State Historic Preservation Officer and the U.S. Department of the Interior, National Park Service and Division of Archeological Services.

Preliminary review of this application and the U.S. Department of the Interior List of Endangered and Threatened Wildlife and Plants indicate that the proposed activity may affect listed species, or their critical habitat. This notice and application will be coordinated with the U.S. Fish and Wildlife Service (FWS) to assess if the proposed activity will affect

CESAM-RD-A
Public Notice No. SAM-2013-0152-DEM

November 6, 2013

listed endangered or threatened species, or their critical habitat. Further coordination with the FWS will be performed as a result of this notice.

By letter dated January 19, 2012, the NOAA Restoration Program submitted a Biological Assessment (BA) and Determination of Effect on Threatened and Endangered Species or Critical Habitats, for the Phase I Early Restoration Projects to the NOAA Southeast Regional Office to initiate Section 7 Endangered Species Act inform consultation. The BA concluded that the proposed project *"....could potentially affect sea turtles, but the affects[sic] would be very brief and only minor, and are not likely to adversely affect them."* The BA stated the Marsh Island (Portersville Bay) Project is not located within designated gulf sturgeon critical habitat. By letter dated April 2, 2012, the NOAA Regional Administrator, Southeastern Regional Office stated that *"....all effects of this project on sea turtles and Gulf Sturgeon will be discountable and insignificant."*

Correspondence concerning this Public Notice should refer to SAM-2013-0152-DEM and should be mailed to the District Commander, U.S. Army Engineer District Mobile, Attention: Regulatory Division (Mroczko), Post Office Box 2288, Mobile, Alabama 36628-0001, with a copy furnished to the Alabama Department of Environmental Management, Mobile Branch, Coastal Section, 3664 Dauphin Street, Suite B, Mobile Alabama 36608.

All Comments should be received no later than 30 days from the date of this Public Notice. If you have any questions concerning this publication, you may contact the project manager, Mr. Don Mroczko at (251) 690-3185 or by email at donald.e.mroczko@usace.army.mil. Please refer to the Public Notice Number SAM-2013-0152-DEM.

For additional information about our Regulatory Program, please visit our web site at www.sam.usace.army.mil/Missions/Regulatory.aspx.

MOBILE DISTRICT
U.S. Army Corps of Engineers

Enclosures

Alabama Department of Conservation and Natural Resources
Deepwater Horizon Oil Spill Phase I Early Restoration Plan
Marsh Island Marsh Creation Project
Portersville Bay Portion of Mississippi Sound Mobile County, Alabama

U.S. Army / Alabama Department of Environmental Management
Joint Application and Notification - Additional Information
ADEM Form 1668-02

5. Project Description

The Marsh Island (Portersville Bay) Marsh Creation Project involves the restoration of salt marsh along Marsh Island, a state-owned island in the Portersville Bay portion of Mississippi Sound, Alabama. See Figures 1 and 2 for site location. This project will restore a minimum of 50 acres of salt marsh and at least 5,000 linear feet of tidal creeks through the construction of a permeable segmented breakwater, the dredging and placement of sediments, and the planting of native marsh vegetation. Additionally, the breakwater will provide protection for the existing 24 acres of Marsh Island, which has been experiencing shoreline loss at the rate of 5-to-10 feet per year.

This area was identified as a top priority for coastal restoration by the State of Alabama and its natural resource partners, and has been the focus of a number of recent restoration projects. The Marsh Island (Portersville Bay) Marsh Creation Project site specifically has experienced tremendous loss of emergent wetlands. An analysis of National Oceanic and Atmospheric Administration (NOAA) shoreline vectors and historic aerial imagery conducted by the Alabama Department of Conservation and Natural Resources (ADCNR) indicates that Marsh Island has decreased in size by approximately 50% since 1958.

For a detailed description of the important biological and ecological resources found on the island (including a floristic inventory and mapping of terrestrial vegetation), see the enclosed Barry A. Vittor & Associates report titled *Characterization and Mapping of Vegetation on Marsh Island*, dated January 2013. See Attachment 1.

The primary goals of the Marsh Island (Portersville Bay) Marsh Creation Project are to:

- Protect the southern shoreline of the island to reduce and/or prevent further erosion of the existing salt marsh, and
- Re-create salt marsh in the open-water areas north of the remainder of the island.

This will be accomplished by creating a structurally robust, emergent salt marsh designed to provide maximum ecological benefits as soon as practicable. To implement these goals, the proposed design for the project is to:

- (1) Install approximately 3,000 linear feet of breakwater on the south side of Marsh Island.

- (2) Fill open water areas north of Marsh Island with dredged material to create a minimum of 50 acres of salt marsh.
- (3) Plant approximately 202,500 native vegetation plugs, and
- (4) Connect existing tidal creeks to the newly created marsh and to Mississippi Sound by creating at least 5,000 linear feet of tidal creeks.

The restored marsh will provide compensation for salt marsh habitat services lost in Alabama due to the Deep Horizon Oil Spill. Marshes in Mississippi Sound were oiled by the spill, although the oil did not come ashore on Marsh Island itself. The budgetary cost of the restoration project is \$11.28 million.

For a complete description of the Deepwater Horizon Oil Spill Phase I Early Restoration Plan (including the subject Marsh Island Marsh Creation Project), see the *Deepwater Horizon Oil Spill Phase I Early Restoration Plan and Environmental Assessment* ((ERP/EA), prepared by the Deepwater Horizon Natural Resource Trustees. A copy of the document can be found at <http://www.gulfspillrestoration.noaa.gov/wp-content/uploads/Final-ERP-EA-041812.pdf> . A copy of the Executive Summary and sections specific to the Marsh Island project are included for ready reference. See Attachment 2.

Subsequent to finalization of the ERP/EA, detailed investigations and design were initiated (including identification and testing of borrow material sites), and preliminary design plans are described as follows:

Three Marsh Island restoration/protection designs were evaluated. In all three designs, the approximate 50-acre marsh restoration component is located on the north side of the existing Marsh Island in a semicircular shape with an east-west axis. See Figure 3. More than 5,000 linear feet of tidal creeks (see Figures 14, 15, and 16) will connect the northern perimeter of the restored marsh with existing Marsh Island tidal creeks. See Figures 3 and 12. Approximately 637,000 cubic yards of predominately silty sand will be hydraulically dredged from one or two borrow sites (BA 2 and BA 3) to form the marsh fill area, within a 3,800-foot-long perimeter containment dike. BA3 is the preferred borrow site, with BA2 intended as an alternate site if needed. The initial nominal marsh grade (before consolidation) will be elevation +2.5 feet, North American Vertical Datum (NAVD). The target nominal marsh elevation after consolidation is +1.5 feet NAVD. The containment dike will be approximate 5 feet high with a base width of approximately 40 feet and a top width of 5 feet. See Figure 2 for the borrow site BA 2 and BA 3 locations and Figure 4 for a typical section of the marsh fill, containment dike and containment dike borrow areas. Existing water depths at BA 2 are from -7 to -8 feet mean low water (mlw) and at BA 3 from -5 to -6 feet mlw. The anticipated maximum dredge cut at either borrow area would be 8 feet, with 2 feet of allowable over depth. See Figures 10 and 11. A buried gas pipeline which traverses borrow area BA 2 will be avoided by limiting dredging to the area south of the pipeline (no dredging north of the pipeline) and maintaining a minimum no-dredge buffer area of 200 feet south of the pipeline. See Figure 11. See Attachment 3 for borrow site evaluation reports. Marsh vegetation planting details are contained in Attachment 4.

The three alternative Marsh Island designs differ in the island's south-side breakwater configuration and are described follows:

Alternative 1. Rubble-Mound Breakwater: This alternative would utilize armor stone arranged in 27-foot-long sections extending to elevation +2.0 feet, NAVD. Eighteen-foot-long gaps would be left between breakwater sections. The total breakwater length would be 3,000 feet. See Figures 3 and 5.

In order to provide barge access to the construction site a 4,654-foot-long by 60-foot-wide by 6.5-foot-deep channel would be mechanically excavated with the material deposited along the northwest side of the channel. See Figures 2 and 13 for the channel location. Construction access along the breakwater alignment would be provided by an excavated 60-foot-wide by 6.5-foot-deep access channel, a 15-foot wide by 4-foot deep flotation channel, and a 39-foot-wide by 2-foot-deep working channel. Both would be 3,000 feet in length. Dredged material would be deposited along the south side of the channel. Approximately 82,000 cubic yards of material would be excavated for the access and working channels. See Figures 2, 3, 5 and 13 for channel locations and typical cross sections. Dredged material from the north-south aligned portion of the access channel (Figure 13) would be returned to the channel cut upon project completion. Dredged material from the east-west aligned portion of the access channel (see Figure 3) would be left in place to provide additional protection for the island.

Alternative 2. Wave-Attenuator Breakwater: This alternative would utilize prefabricated concrete wave attenuators arranged in 34-foot-long sections extending to elevation +4.5 feet, NAVD. Thirty-foot-long gaps would be left between breakwater sections. The total breakwater length would be 3,000 feet. See Figures 6 and 7.

In order to provide barge access to the construction site, a 4,654-foot-long by 60-foot-wide by 6.5-foot-deep channel would be mechanically excavated with the material deposited along the northwest side of the channel. See Figures 2 and 13 for the channel location. Construction access along the breakwater alignment would be provided by an excavated 60-foot-wide by 6.5-foot-deep access channel, a 15-foot wide by 4-foot deep flotation channel, and a 39-foot-wide by 2-foot-deep working channel. Both would be 3,000 feet in length. Dredged material would be deposited along the south side of the channel. Approximately 82,000 cubic yards of material would be excavated for the access and working channels. See Figures 2, 6, 7 and 13 for channel locations and typical cross sections. Dredged material from the north-south aligned portion of the access channel (Figure 13) would be returned to the channel cut upon project completion. Dredged material from the east-west aligned portion of the access channel (see Figure 6) would be left in place to provide additional protection for the island.

Alternative 3. Sand-Berm Breakwater: This alternative would utilize a continuous 3,000-foot-long sand berm constructed from 120,000 cubic yards of material dredged from the designated borrow sites. The berm would cover an area of 32 acres with a crest elevation of + 1.0 feet, NAVD, and a crest width of 40 feet. See Figures 8 and 9 for plan, typical cross section, and details.

Alternative 3 was eliminated from consideration because of increased cost and increased uncertainty regarding the level of erosion protection by a sand berm.

No Action Alternative: The ERP/EA also considered the No Action Alternative, which consisted of not implementing the early restoration projects, including the Marsh Island Creation

project. Under this alternative, the Trustees would not implement the early restoration projects and would rely solely on natural recovery to restore natural resources and associated services until the Natural Resource Damage Assessment (NRDA) and final restoration are complete. Following the intent of the Framework Agreement and public comment on the Draft ERP/EA, the Trustees selected and are moving forward with the early restoration projects, including the Marsh Island Creation project. Selection of the No Action Alternative for this permit action would be counter to the above-referenced actions and would prevent implementation of the Marsh Island Creation project.

Request for construction bids will include both Alternatives 1 and 2. Final selection of the breakwater design (Alternative 1 or 2) will be made after a review of the bids.

Avoidance, Minimization and Compensation of Impacts to Waters of the U.S. [(33 CFR 325.1 (d)(7))]:

Pursuant to Section 2706 of the Oil Pollution Act Title 33 U.S.C. Section 2701, the purpose of the project is to provide an initial step toward the restoration of natural resources injured by the *Deepwater Horizon* spill. As such, implementation of the project will provide a beneficial impact to waters of the U.S., including wetlands. Potentially adverse impacts to waters of the U.S. associated with construction have been minimized in the project site selection and design process. Further minimization of potentially adverse impacts will be accomplished during construction by the use of appropriate construction methods, equipment, and best management practices. The proposed project will not adversely impact wetlands, submerged aquatic vegetation, oyster reefs, or State-established fishing reefs. While more than 50 acres of Essential Fish Habitat (estuarine water column and mud bottom) will be filled to restore and protect eroding salt marsh habitat, the NOAA Restoration Center Essential Fish Habitat (EFH) assessment determined that the proposed action would not adversely affect EFH, and would likely benefit federally managed fisheries species overall. Because the project purpose is the restoration and preservation of salt marsh at Marsh Island, compensatory mitigation for short-term impacts to waters of the U.S. during construction is not proposed.

During construction warning signs and/or buoys will be deployed to warn navigational interests of the ongoing construction hazards and other potential dangers. Dredging equipment and pipelines will be marked and lighted in accordance with Coast Guard Navigational Rules. Notices to mariners will be published and broadcasts by the Coast Guard and Corps of Engineers, as required. After construction, permanent warning signs will be installed and maintained as required.

Pre-application Agency Coordination (See Attachment 5 for details.)

Coastal Consistency Determination. By letter dated February 15, 2012, the National Ocean Service and Atmospheric Administration (NOAA) and the Department of Interior. ...*"found that the proposed Projects appear to be consistent with the ACAMP to the maximum extent practical to the extent that these activities have been defined by the current level of planning and design contained in the Phase 1 DERP."* Copy enclosed in Attachment 5.

By letter dated March 13, 2012, Mr. Steven O. Jenkins, Chief, Field Operations Division, Alabama Department of Environmental Management, concurred"*...with the NOAA's determination that the proposal is consistent with the enforceable policies of the Alabama Coastal Area Management Program to the extent that these activities have been defined by the current level of planning and design contained in the Phase 1 DERP.*" Copy enclosed in Attachment 5.

Essential Fish Habitat (EFH). By e-mail dated February 2, 2012, the NOAA Restoration Center submitted an EFH Assessment to the NOAA Southeast Regional Office for EFH consultation. The EFH assessment determined that the proposed action would not adversely affect EFH, would likely benefit federally managed fisheries species overall. Copy enclosed in Attachment 5.

By Memorandum dated February 14, 2012, Ms. Virginia M. Fay, Assistant Regional Administrator, Habitat Conservation Division, stated that after review of the NOAA Restoration Center EFH Assessment"*... we do not have any EFH Conservation Recommendations to provide pursuant to Section 305(b)(2) of the Magnuson-Stevens Act at this time.*" Copy enclosed in Attachment 5.

Section 7 Endangered Species Act. By letter dated January 19, 2012, the NOAA Restoration Program submitted a Biological Assessment (BA) and Determination of Effect on Threatened and Endangered Species or Critical Habitats, for the Phase I Early Restoration Projects to the NOAA Southeast Regional Office to initiate Section 7 Endangered Species Act inform consultation. The BA concluded that the proposed project "*....could potentially affect sea turtles, but the affects [sic] would be very brief and only minor, and are not likely to adversely affect them.*" The BA stated the Marsh Island (Portersville Bay) Project is not located within designated gulf sturgeon critical habitat. Copy enclosed in Attachment 5.

By letter dated April 2, 2012, Dr. Roy E. Crabtree, Regional Administrator, Southeastern Regional Office stated that"*....all effects of this project on sea turtles and Gulf Sturgeon will be discountable and insignificant.*" Copy enclosed in Attachment 5.

Section 106 National Historic Preservation Act. By letter dated January 9, 2013, Mr. Stephen M. O'Hearn, P.G., Senior Project Manager, Thompson Engineering, Inc. requested Alabama State Historic Preservation Office (SHPO) Section 106 review of the Marsh Island project. The letter also included a preliminary "Management Summary" of cultural resource assessment performed by Barry A. Vittor & Associates. Copy enclosed in Attachment 5.

By e-mail dated January 31, 2013, Mr. Larry E. Murphy, PRA, Historic Properties Specialist Officer, Section 106 Review, Deep Water Horizon MC-252 forwarded a Section 106 Consultation Sheet dated January 30, 2013 to Mr. Justin Stickler, State Historic Preservation Officer (SHPO) Representative and Mr. Ken Carleton, Tribal Representative for review and signature. The signed document concurred with the proposed activities subject to the following constraints: *The existing island land area should receive a pedestrian archeological survey with judgmental shovel tests as necessary prior to burial to determine if there are historic properties present. There are two areas of cultural sensitivity containing historic properties on the eastern tip of the island. These areas should be covered with geotextile prior to burial with clean sediment in such a manner so as not to disturb existing sediments with dredge overflow. There*

may be other historic properties discovered during the pedestrian survey, these should also be covered. No tidal creeks should be placed through protected areas containing historic properties. An archeologist and tribal monitor must be present to monitor placement of geotextile and dredge sediments. Both the areas immediately around the island and the dredged borrow areas are to be hydrographically surveyed prior to disturbance to determine whether cultural materials are present and reviewed by a qualified archeologists prior to dredging operations. Copy enclosed in Attachment 5.

In April 2013, a report titled *A Phase I Cultural Resources Assessment of the Proposed Restoration of Marsh Island in Portersville Bay, Mobile County, Alabama* prepared by Barry A. Vittor & Associates, Inc. was submitted to the SHPO for review and determination of effect on cultural resources. By letter dated April 17, 2013 Ms. Elizabeth Ann Brown, Deputy State Historic Preservation Officer stated that ... *Upon review of the cultural resources assessment submitted by Barry A. Vittor and Associates, we have determined that project activities will have no adverse effect on cultural resources eligible for or listed on the National Register of Historic Places.* The tracking number assigned by SHPO is AHC13-0691. Copy enclosed in Attachment 5.

By e-mail dated April 11, 2013 Mr. Larry E. Murphy, PRA, Historic Properties Specialist Officer, Section 106 Review, Deep Water Horizon MC-252 forwarded a Section 106 Consultation Sheet dated April 10, 2013 which superseded the January 30, 2013 Consultation Sheet. The updated Consultation Sheet eliminated the requirement for onsite monitoring. Copy enclosed in Attachment 5.

Interagency Pre-application Consultation Meeting. On December 19, 2012 an interagency permit pre-application meeting was held at the Five Rivers Conference Center in Spanish Fort, Alabama. Representatives from the Alabama Department of Conservation and Natural Resources, Alabama Department of Environmental Management; U.S. Army Corps of Engineers, Regulatory Division; National Marine Fisheries Service (Panama City Office); and the U.S. Fish and Wildlife Service, Daphne Office participated in the meeting. The applicant described the project and received verbal comments from the various participants.

9. Project Purpose and Public Benefit

Basic Purpose: The basic purpose of the project is the restoration and preservation of salt marsh at Marsh Island. For the purposes of the Clean Water Act Section 404(b)(1) Guidelines, this basic project purpose defines the project as a "water-dependent" activity.

Overall Project Purpose and Need: The overall project purpose is: (1) to protect the southern shoreline of Marsh Island to reduce and/or prevent further erosion of the existing salt marsh; and (2) to re-create salt marsh in the open-water areas north of the remainder of the island. The project is needed as an initial step toward the restoration of natural resources injured by the *Deepwater Horizon* spill.

Public Benefit: As part of the *Deepwater Horizon* "Framework Agreement" the project is an initial step toward the restoration of natural resources injured by the *Deepwater Horizon* spill.

Figures:

- Figure 1. Site Vicinity Map
- Figure 2. Imagery with Project Features and Pipelines
- Figure 3. Site Plan – Alternative 1, Rubble-Mound Breakwater
- Figure 4. Cross Section – Fill Containment Dike Section (typical for all alternatives)
- Figure 5. Cross Section – Alternative 1, Rubble-Mound Breakwater
- Figure 6. Site Plan – Alternative 2, Wave-Attenuator Breakwater
- Figure 7. Cross Section – Alternative 2, Wave-Attenuator Breakwater
- Figure 8. Site Plan – Alternative 3, Sand-Berm Breakwater
- Figure 9. Cross Section – Alternative 3, Sand-Berm Breakwater
- Figure 10. Cross Section – Borrow Area BA-3
- Figure 11. Cross Section – Borrow Area BA-2
- Figure 12. Cross Section – Marsh Fill with Tidal Creeks
- Figure 13. Construction Access Channel Plan and Typical Section
- Figure 14. Tidal Creek Details
- Figure 15. Tidal Creek Details
- Figure 16. Tidal Creek Details

Attachments:

ATTACHMENT 1. CHARACTERIZATION AND MAPPING OF VEGETATION ON MARSH ISLAND, BY BARRY A. VITTOR & ASSOCIATES, JANUARY 2013

ATTACHMENT 2. DEEPWATER HORIZON OIL SPILL PHASE I EARLY RESTORATION PLAN AND ENVIRONMENTAL ASSESSMENT, EXECUTIVE SUMMARY & MARSH ISLAND MARSH CREATION SECTIONS (FINAL)

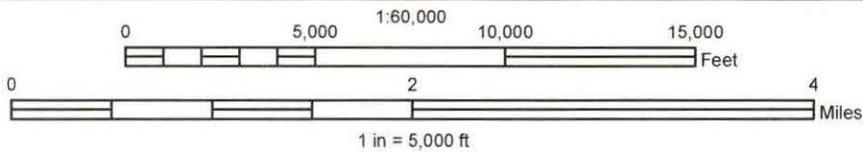
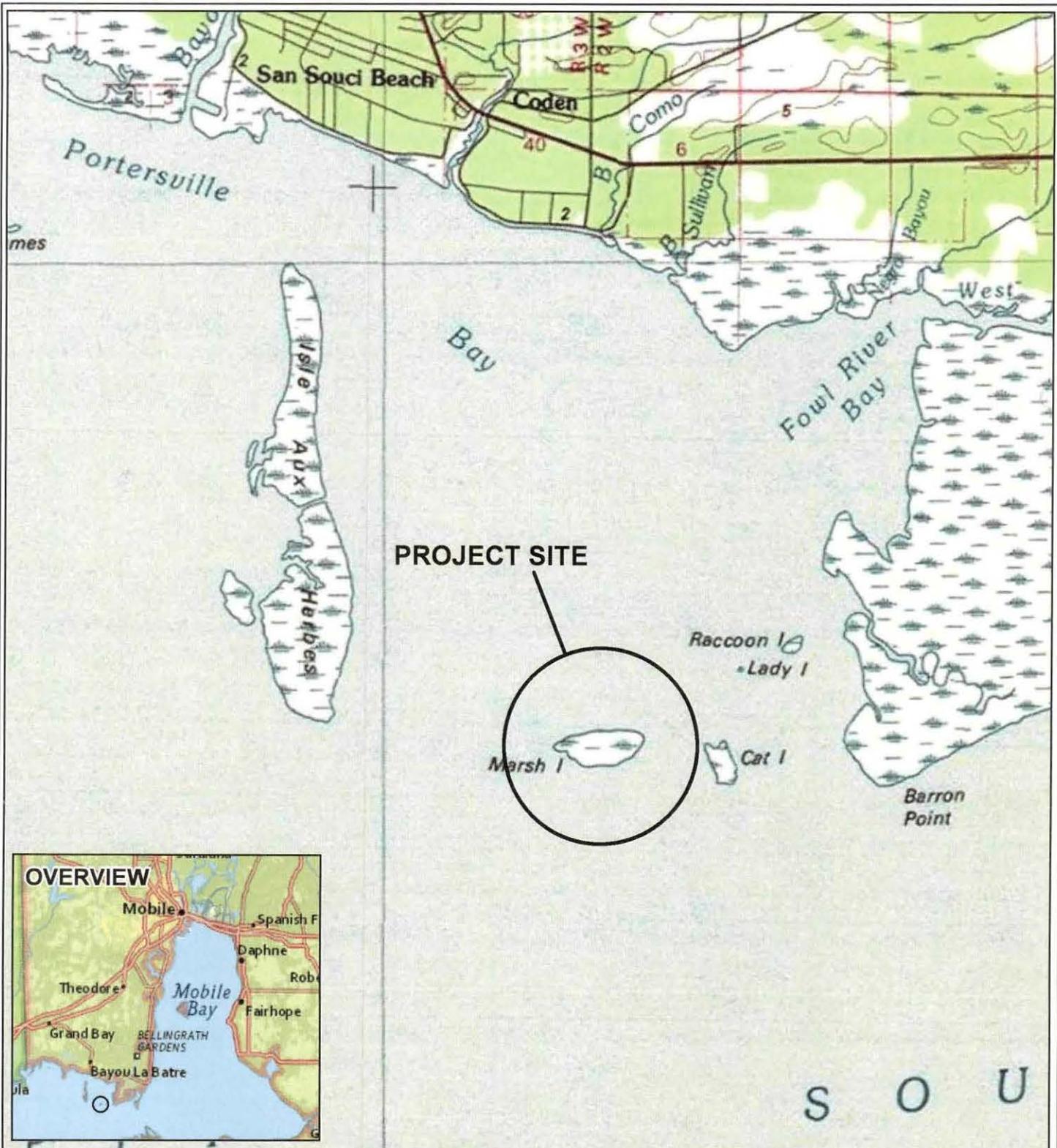
ATTACHMENT 3. SUMMARY OF BORROW AREA EVALUATIONS, BY THOMPSON ENGINEERING, INC., SEPTEMBER, 2013

DREDGED MATERIAL EVALUATION REPORT, BORROW AREA 2, BY THOMPSON ENGINEERING, INC., SEPTEMBER, 2013

DREDGED MATERIAL EVALUATION REPORT, BORROW AREA 3, BY THOMPSON ENGINEERING, INC., SEPTEMBER, 2013

ATTACHMENT 4. MARSH VEGETATION PLANTING DETAILS, BY BARRY A. VITTOR & ASSOCIATES, INC., AUGUST 22, 2013

ATTACHMENT 5. AGENCY COORDINATION AND CORRESPONDENCE



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

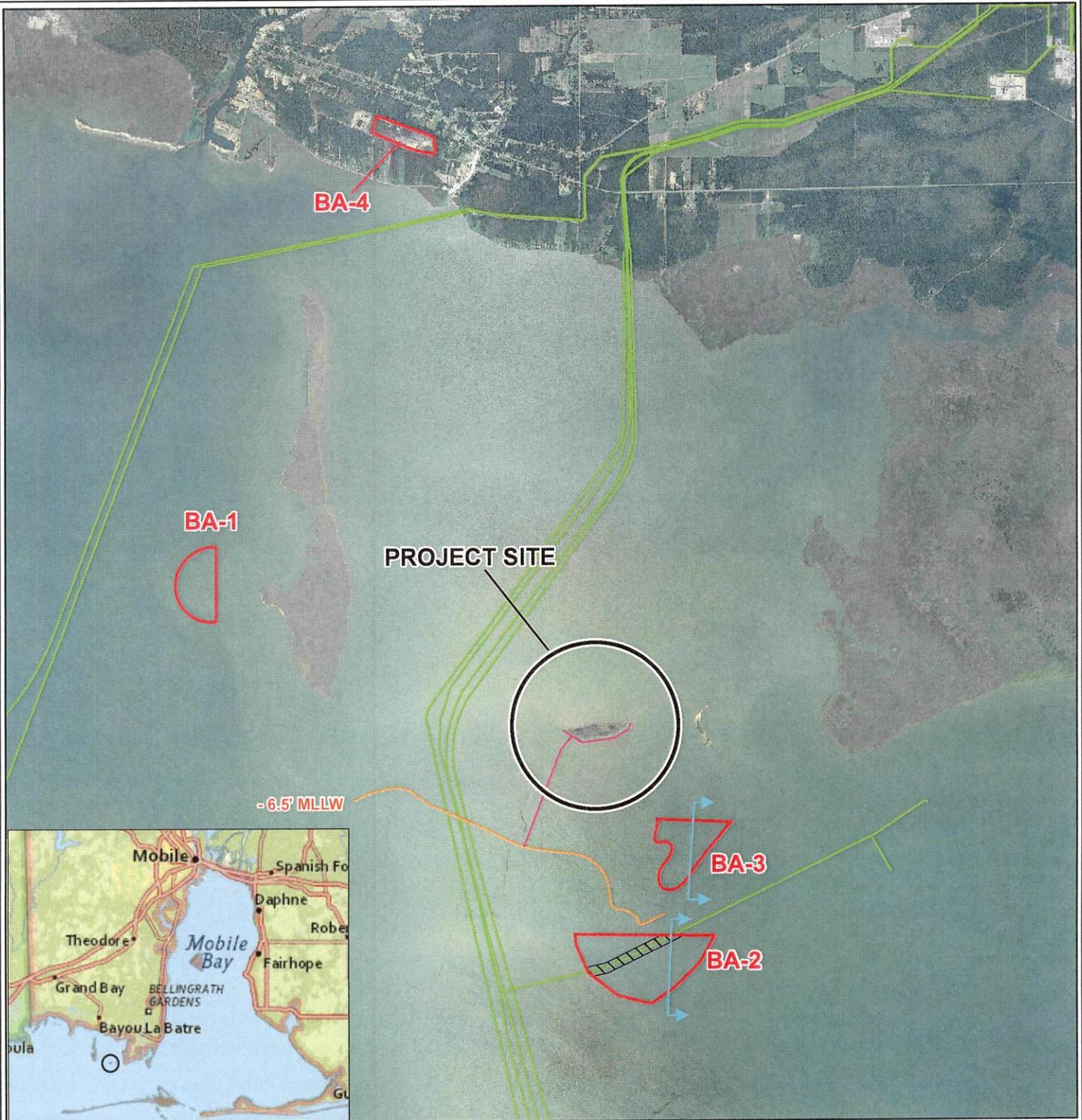


FIGURE 1
 SITE VICINITY

PROJECT NO.:
 12-2111-0091

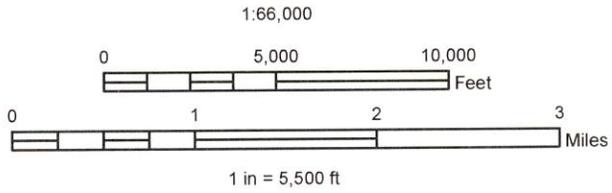
DATE:
 SEPTEMBER 2013

P:\2012\121111\12-2111-0091-Marsh Island Restoration\Drawings\MXD\FIG2_Potential Borrow_Sites.mxd



Legend

- Borrow Area (BA)
- Proposed 400' Buffer Zone
- Offshore Pipelines (OGB)
- 6.5' MLLW Hydrographic Countour Line
- Access Channel
- ↔ Typical Cross-Section -See Figs.10 and 11



2011 NAIP IMAGERY - 1 Meter Resolution

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MOBILE COUNTY, ALABAMA



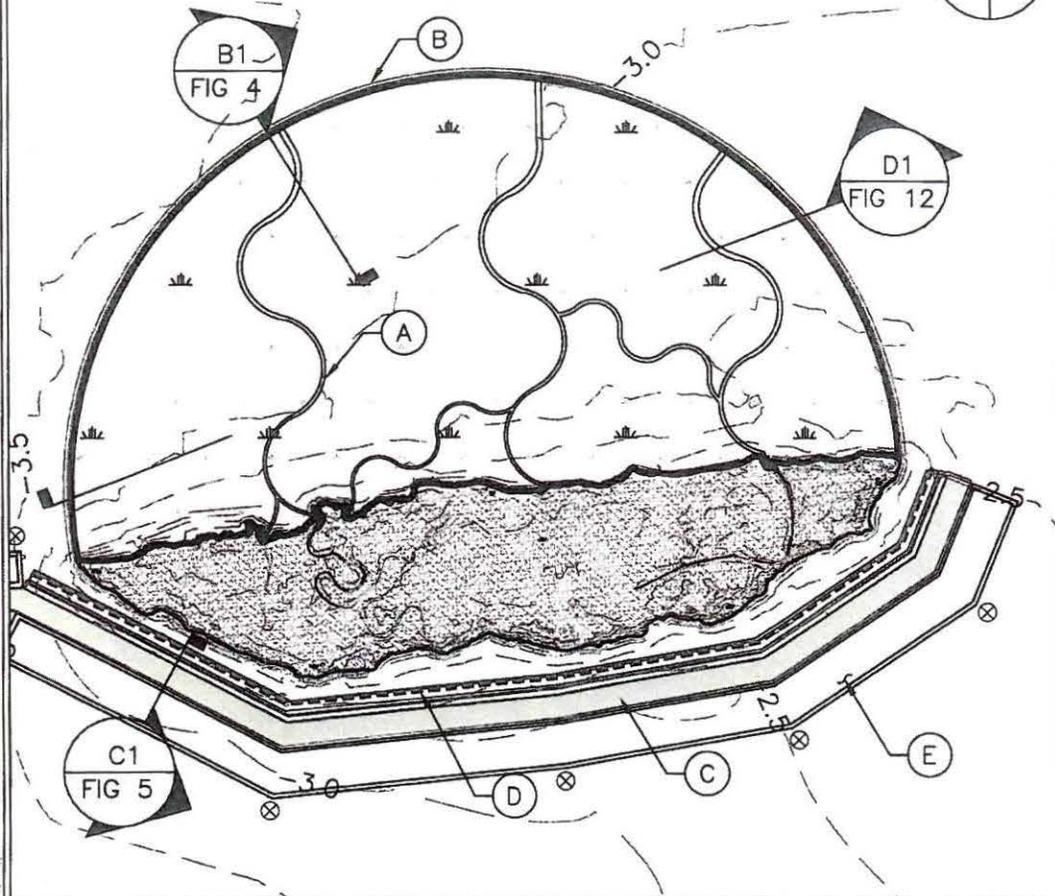
FIGURE 2
Imagery with Project Features and Pipelines

PROJECT NO.:
12-2111-0091

DATE:
SEPTEMBER 2013



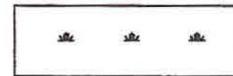
NOTE: TIDAL CREEK LOCATIONS AS SHOWN ARE SUBJECT TO REVISION AS DESIGN IS FINALIZED.



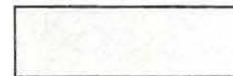
SYMBOLS LEGEND:



EXISTING ISLAND



PROPOSED MARSH CREATION



ACCESS CHANNEL



TIDAL CREEK (SEE FIG. 14, 15, AND 16)



CONTAINMENT DIKE



ACCESS CHANNEL



ARMOR STONE BREAKWATER
27' LONG X 18' GAP



DISPOSAL AREA



WARNING SIGN

(A1) MARSH ISLAND ALTERNATE 1
RUBBLE-MOUND BREAKWATER



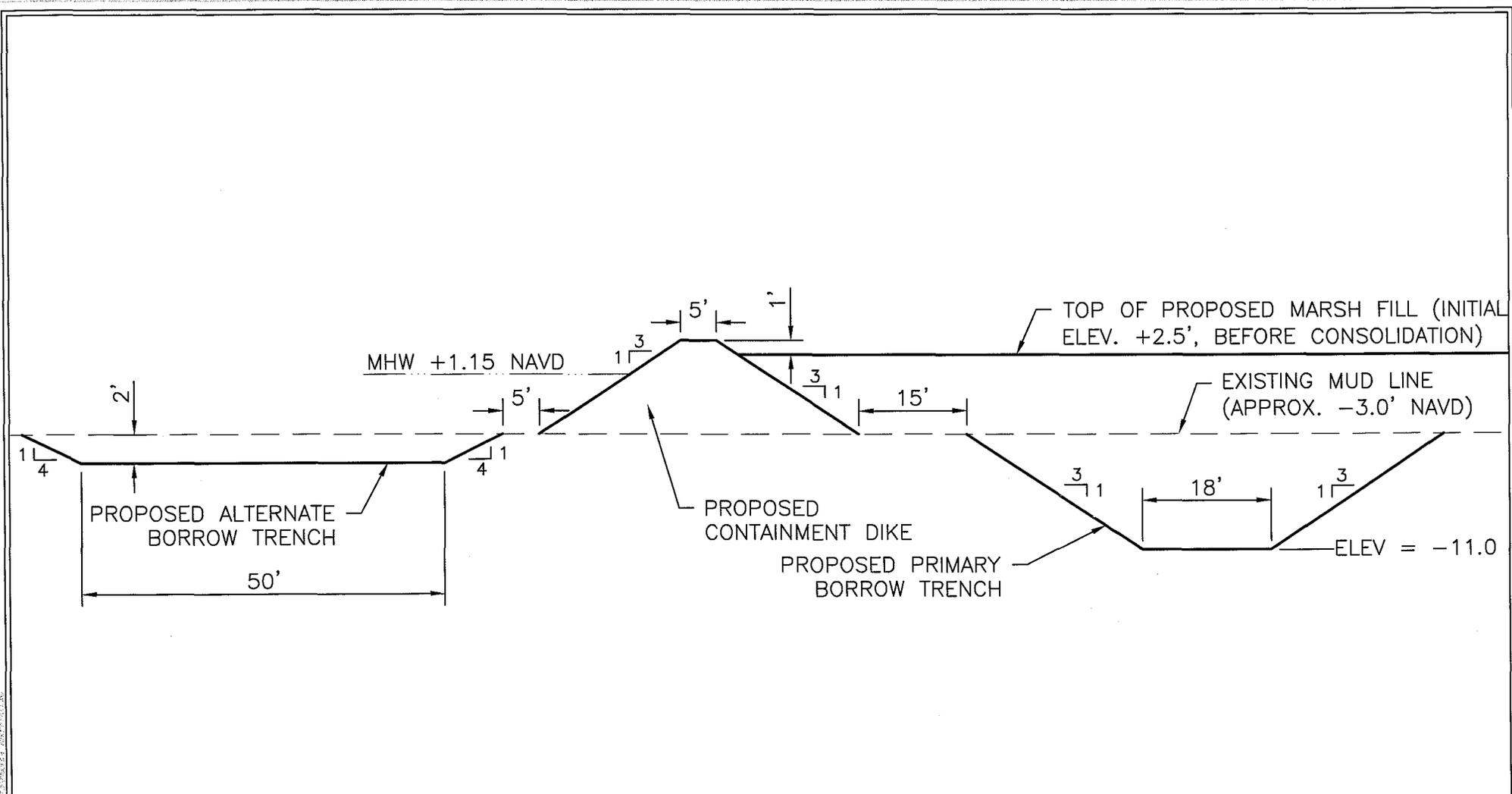
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MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

FIGURE 3

PLAN ALTERNATE 1

12-2111-0091

SEPTEMBER 2013



B1 FILL CONTAINMENT DIKE SECTION (TYPICAL ALL ALTERNATES)

HOR: 1"=20'
 VERT: 1'=10'

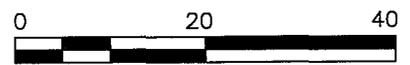
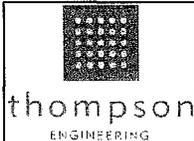
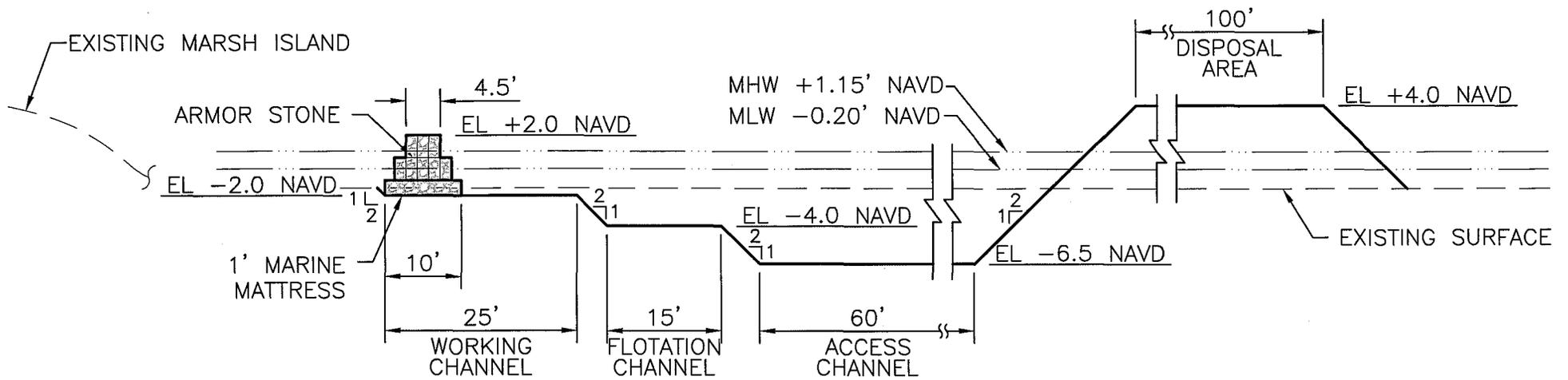


FIGURE 4

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



C1 RUBBLE-MOUND BREAKWATER SECTION

HOR: 1"=20'
VERT: 1"=10'

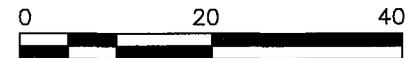
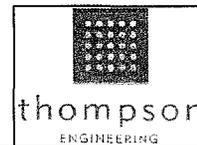
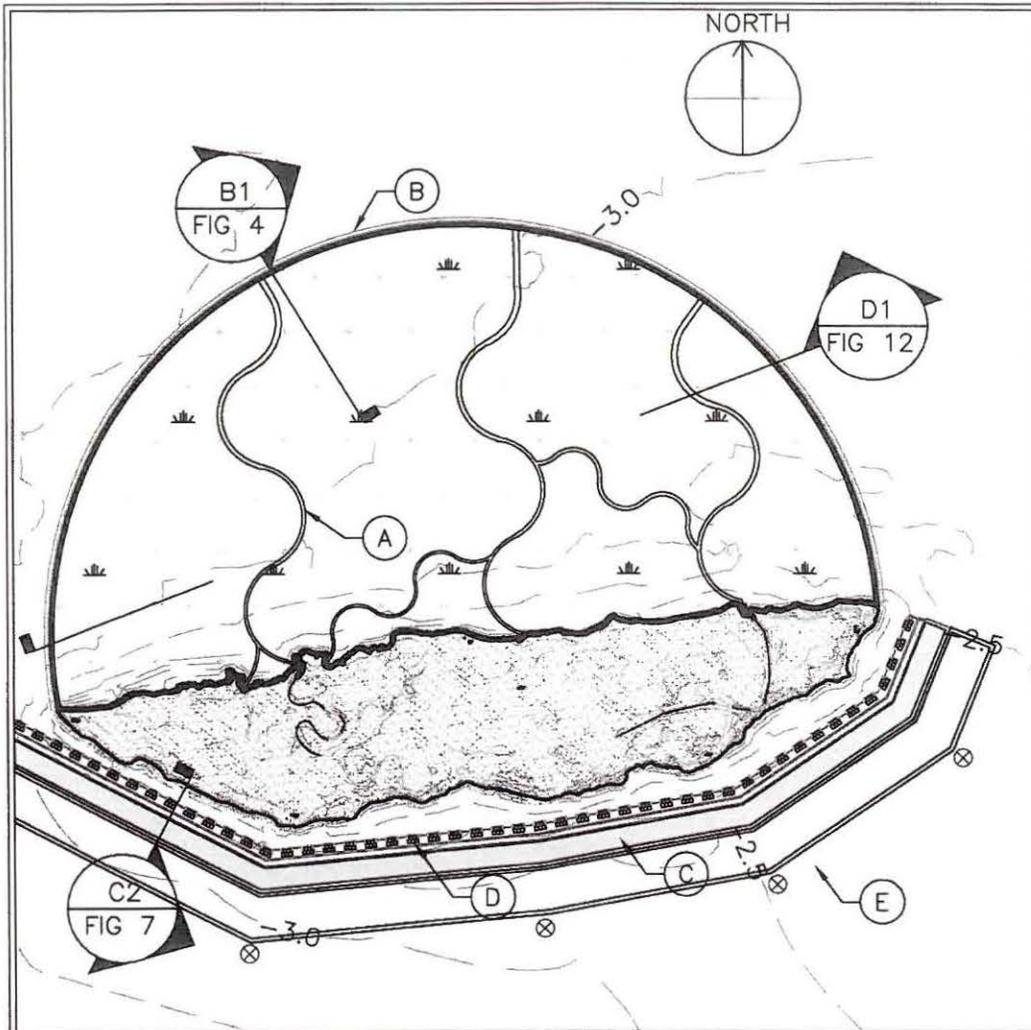


FIGURE 5



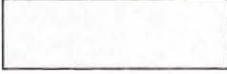
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MOBILE COUNTY, ALABAMA

TYPICAL SECTION	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013



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

SYMBOLS LEGEND:

-  EXISTING ISLAND
-  PROPOSED MARSH CREATION
-  ACCESS CHANNEL
- (A) TIDAL CREEK (SEE FIG. 14, 15, AND 16)
- (B) CONTAINMENT DIKE
- (C) ACCESS CHANNEL
- (D) WAVE-ATTENUATOR BREAKWATER
34' LONG X 30' GAP
- (E) DISPOSAL AREA
- ⊗ WARNING SIGN

(A2) MARSH ISLAND ALTERNATE 2
WAVE-ATTENUATOR BREAKWATER



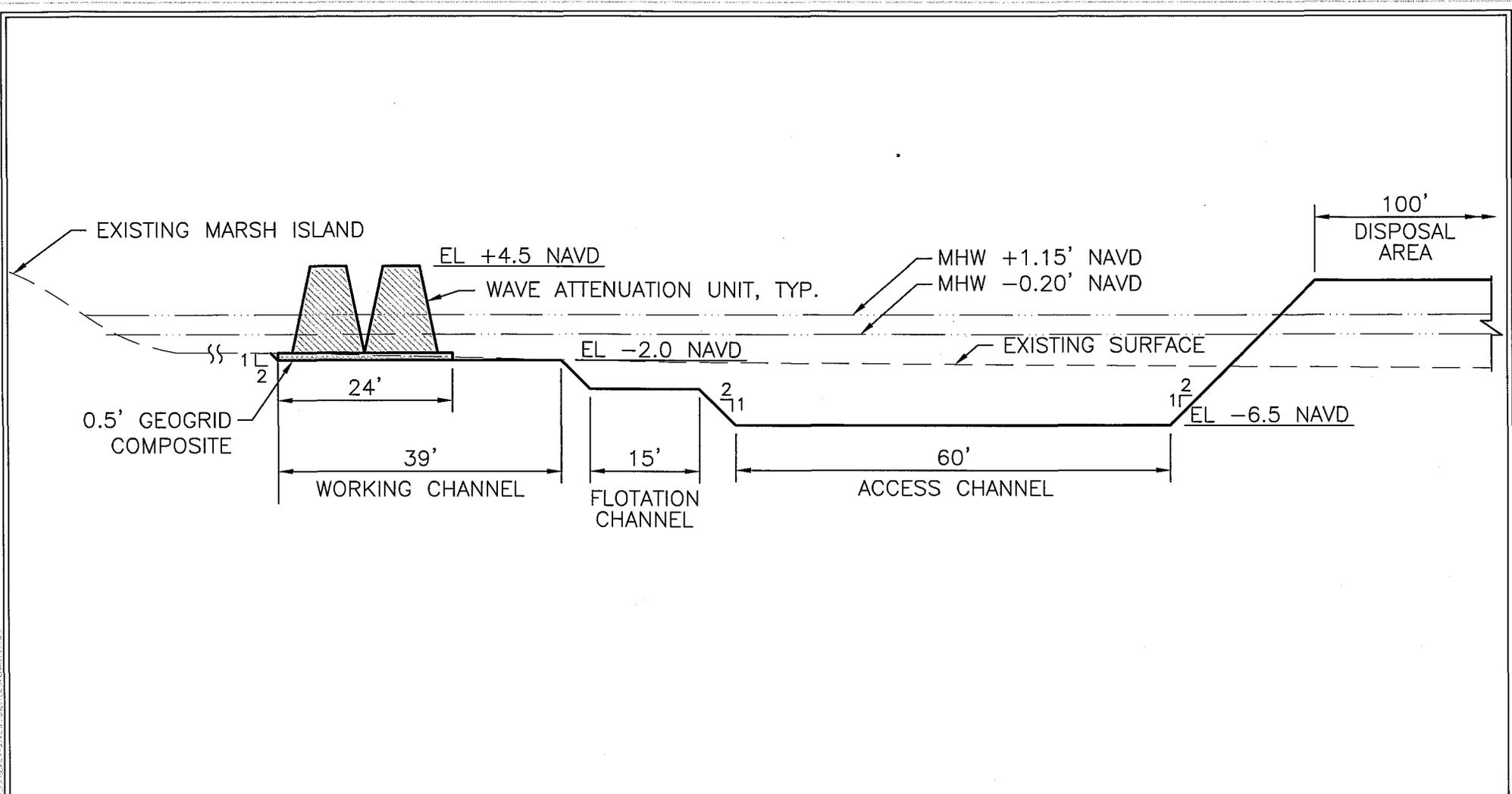
ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
PHASE I NRDA EARLY RESTORATION PROJECT
MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

FIGURE 6

ALTERNATE 2

12-2111-0091

SEPTEMBER 2013



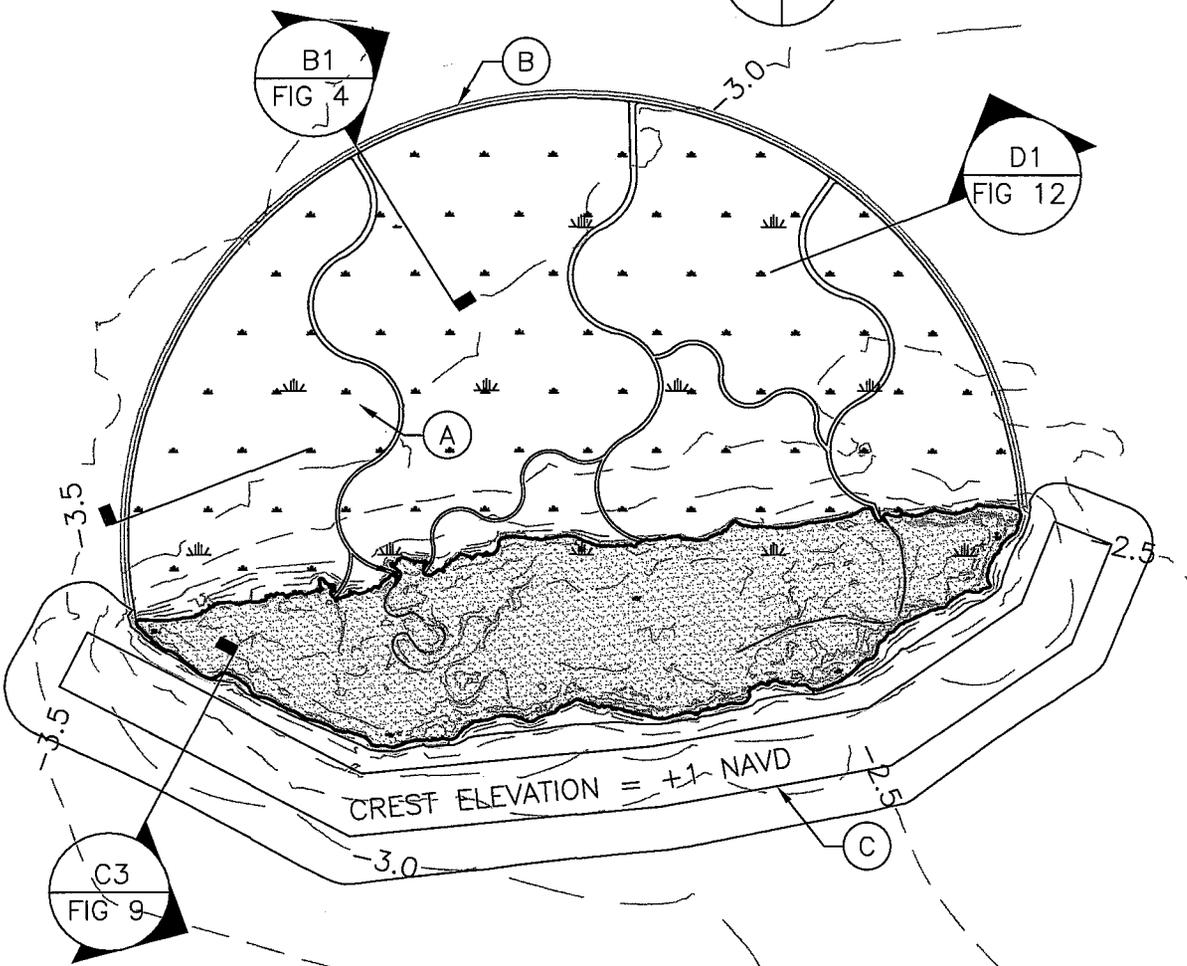
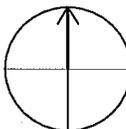
C2 WAVE-ATTENUATOR BREAKWATER SECTION
 HOR: 1"=20'
 VERT: 1'=10'



FIGURE 7

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

NORTH



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

SYMBOLS LEGEND:



EXISTING ISLAND



PROPOSED MARSH CREATION



TIDAL CREEK (SEE FIG. 14, 15, AND 16)

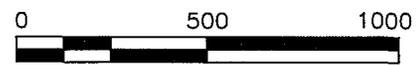


CONTAINMENT DIKE (TYP.)



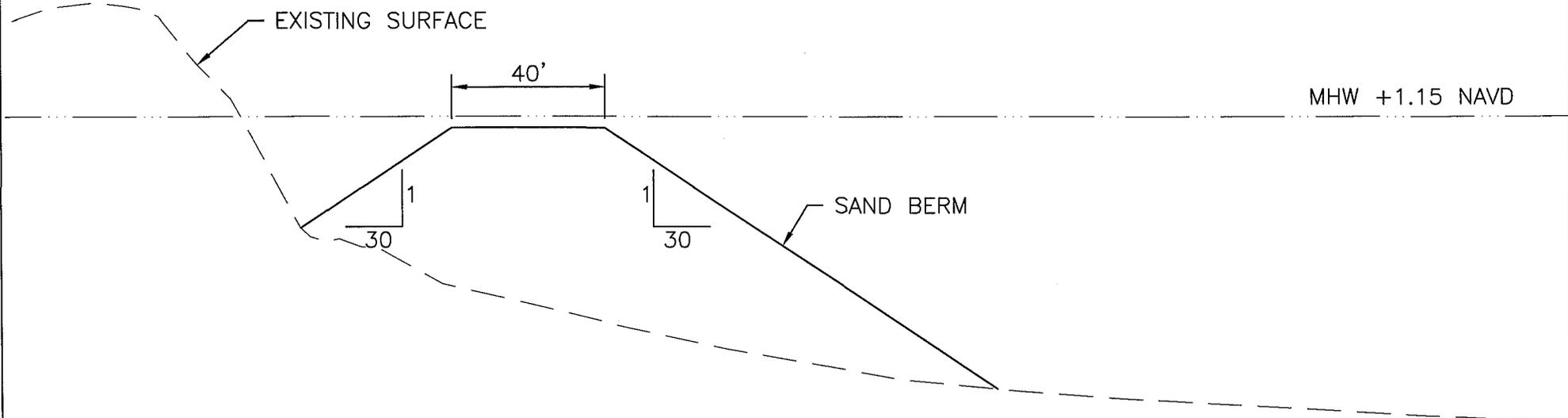
SAND-BERM BREAKWATER

A3 MARSH ISLAND ALTERNATE 3 SAND-BERM BREAKWATER



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

FIGURE 8	
ALTERNATE 3	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013



C3

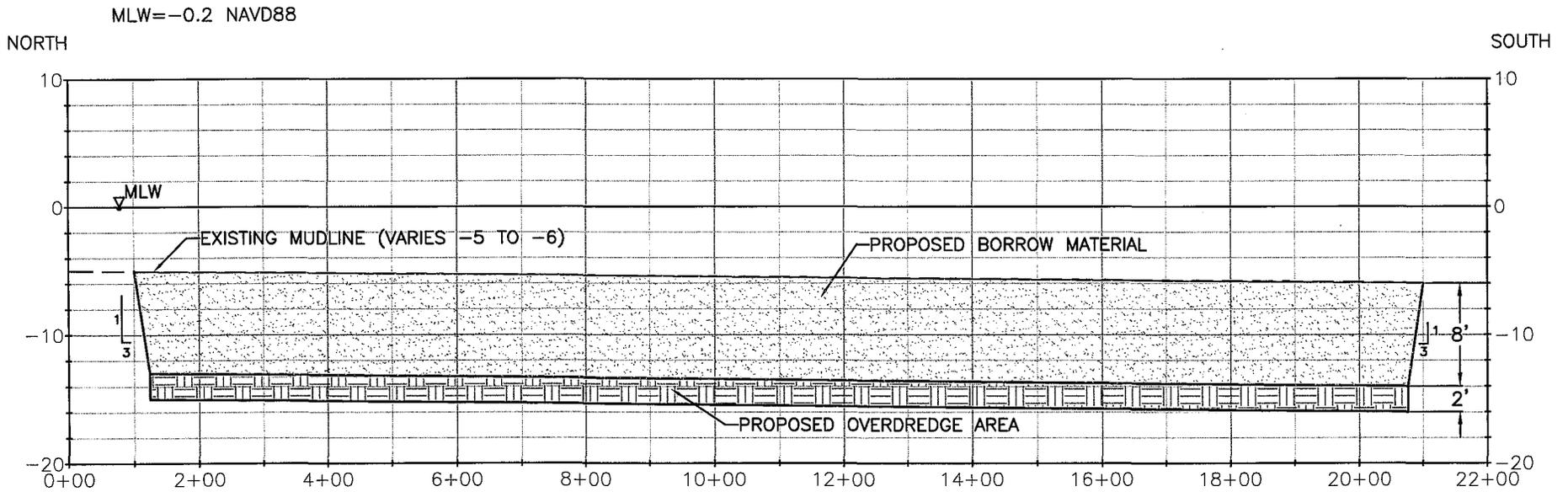
SAND BERM BREAKWATER SECTION

HOR: 1"=40'
 VERT: 1'=2'



FIGURE 9

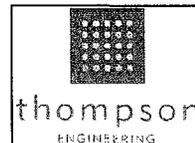
 thompson ENGINEERING	ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES PHASE I NRDA EARLY RESTORATION PROJECT MARSH ISLAND RESTORATION MOBILE COUNTY, ALABAMA	TYPICAL SECTION
		PROJECT NO: 12-2111-0091
		DATE: SEPTEMBER 2013



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

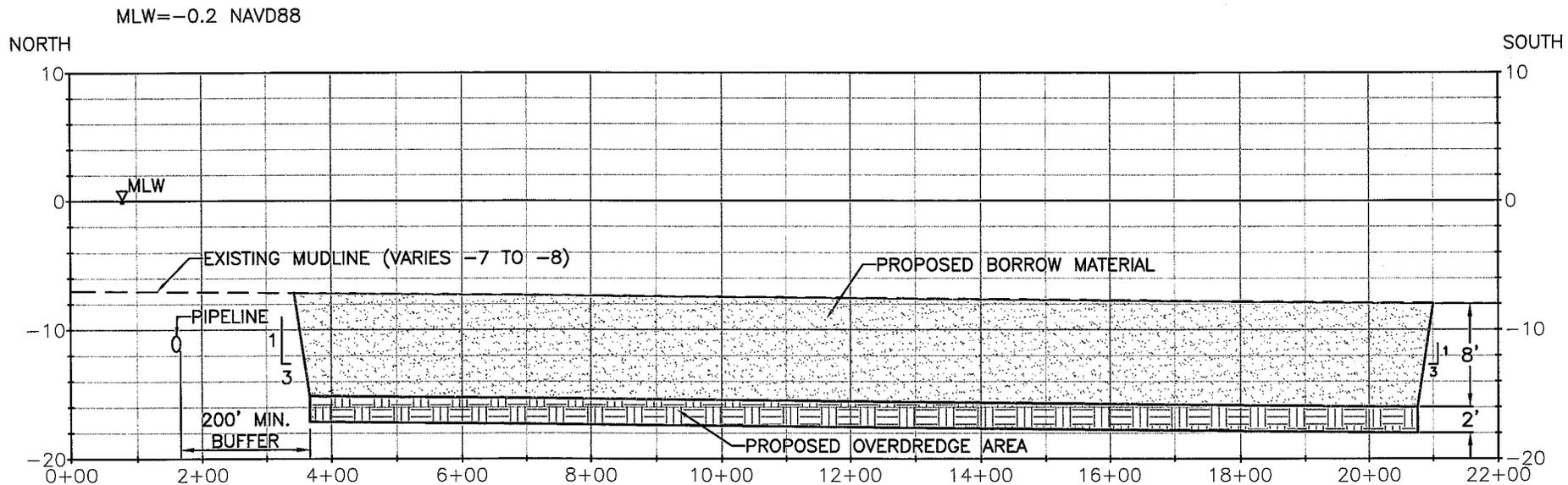
NTS: VERTICAL SCALE EXAGGERATED 20:1 FOR VISUAL CLARITY.

FIGURE 10



ALABAMA DEPARTMENT OF CONSERVATION
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MOBILE COUNTY, ALABAMA

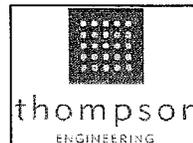
TYPICAL SECTION	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013



BORROW AREA (BA-2) DREDGE CUT – TYPICAL SECTION

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

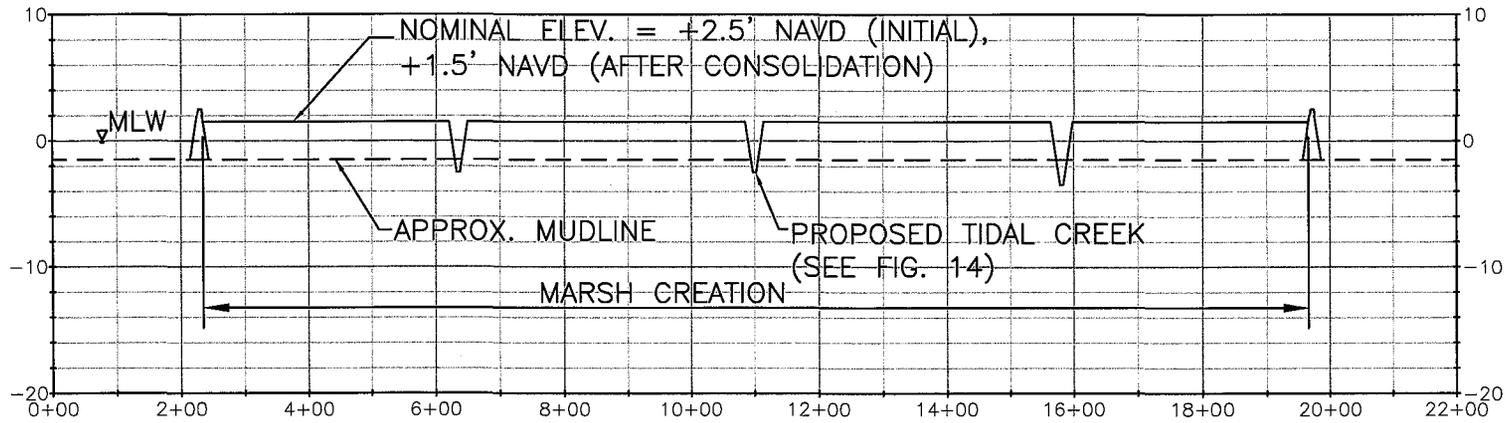
FIGURE 11



ALABAMA DEPARTMENT OF CONSERVATION
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MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

TYPICAL SECTION
PROJECT NO: 12-2111-0091
DATE: SEPTEMBER 2013

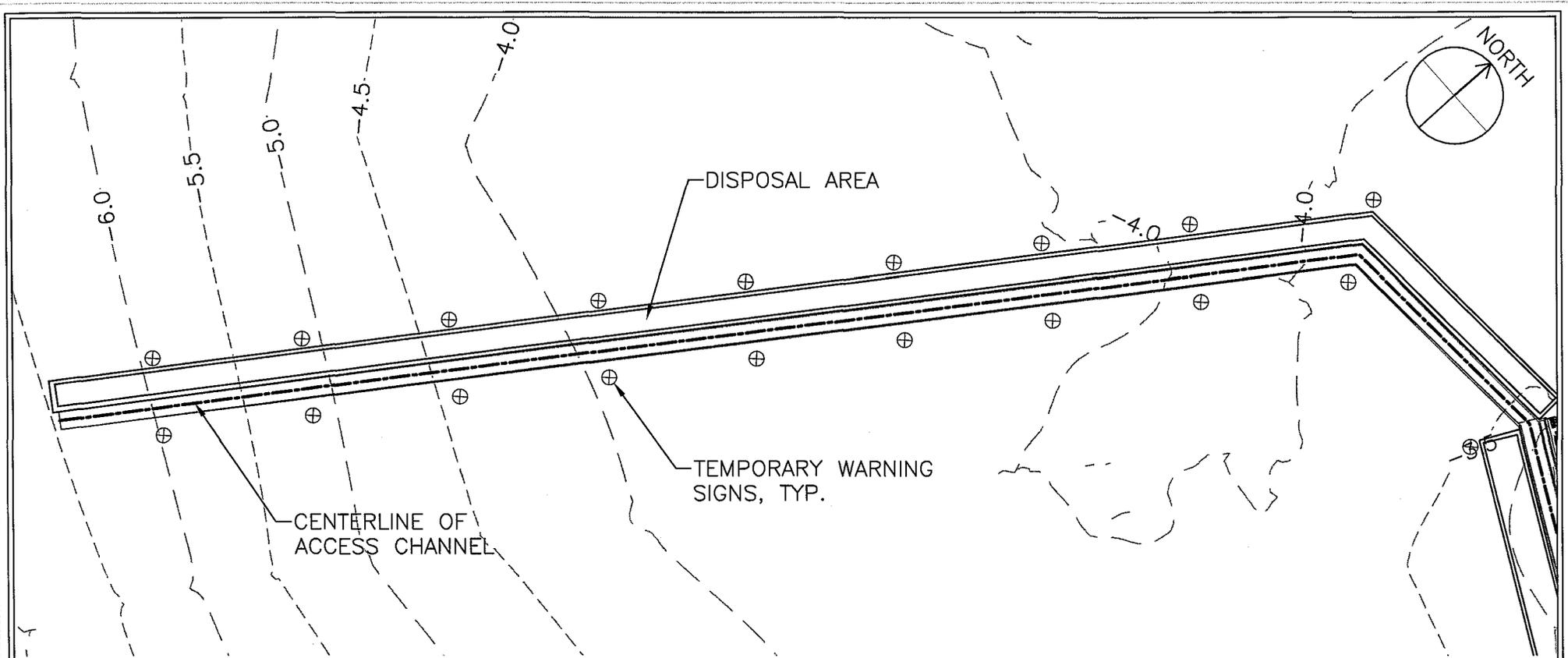
NOTE: TIDAL CREEK LOCATIONS AS SHOWN ARE SUBJECT TO REVISION AS DESIGN IS FINALIZED.



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

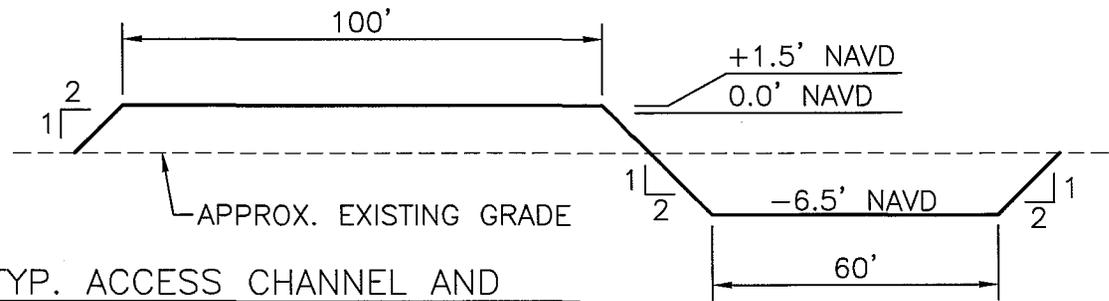
FIGURE 12

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



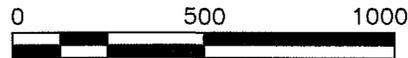
ACCESS CHANNEL PLAN

SCALE: 1" = 500'



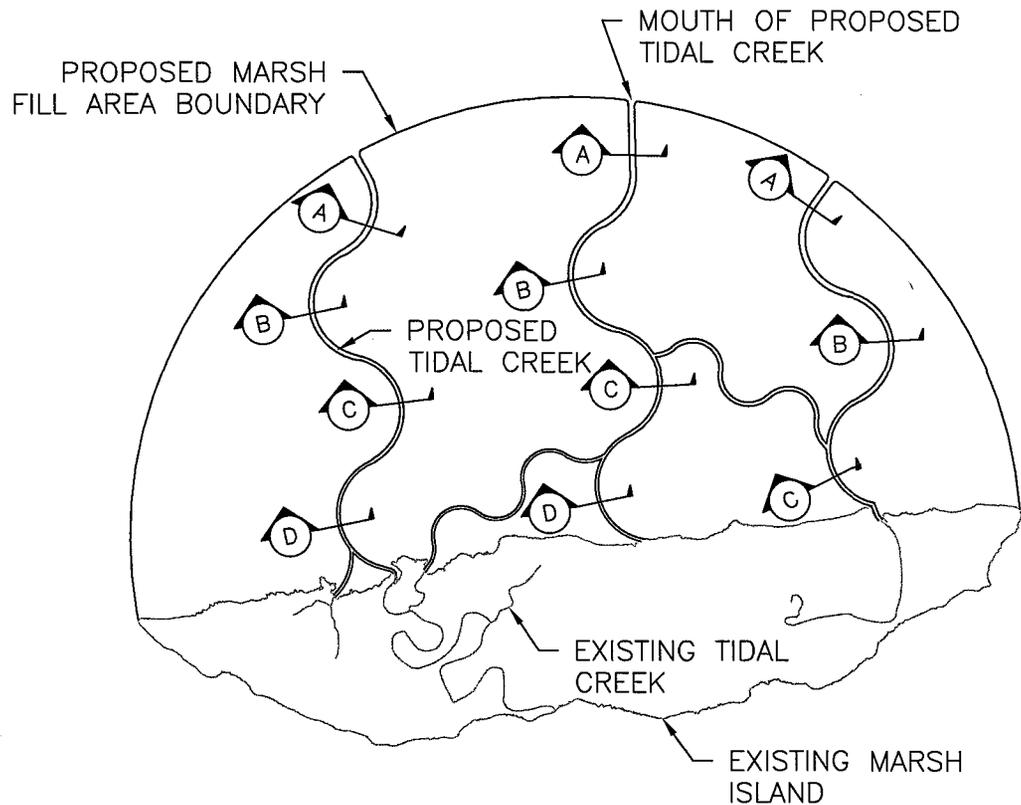
TYP. ACCESS CHANNEL AND DISPOSAL AREA CROSS SECTION
SCALE: N.T.S.

FIGURE 13



ALABAMA DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES
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MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

ACCESS CHANNEL PLAN	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013

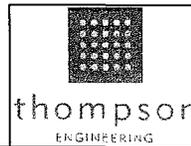
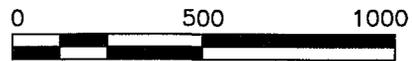


NOTES:

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:

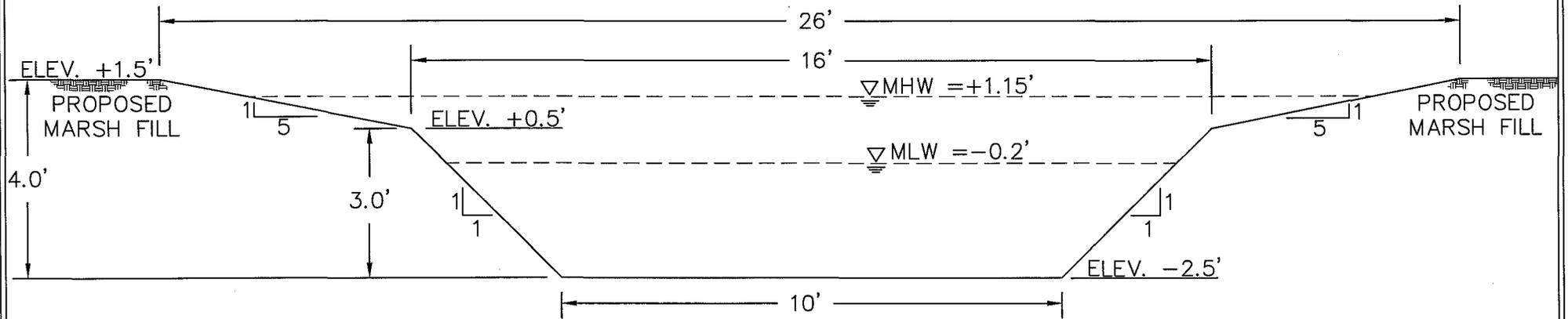
SCALE: 1"=500'



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MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

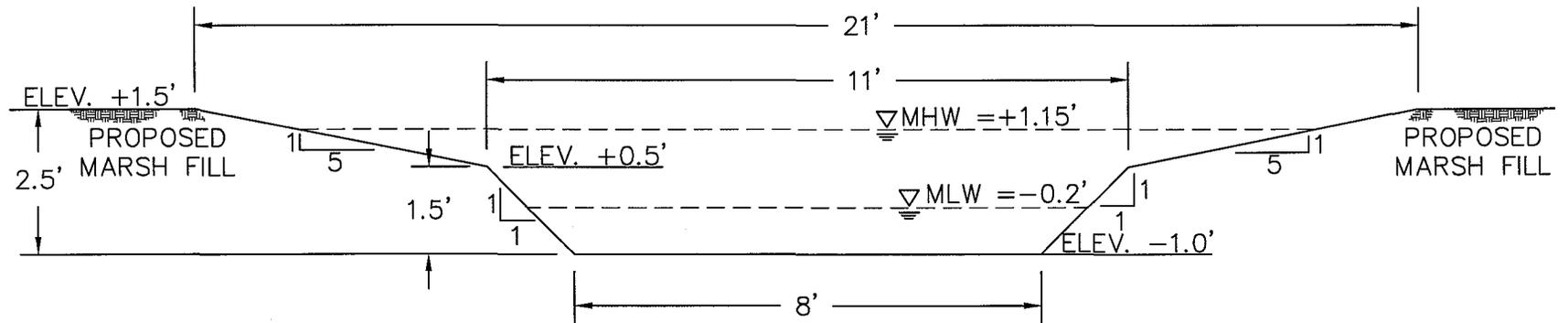
FIGURE 14

TIDAL CREEK DETAILS	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013



TYPICAL SECTION A

SCALE: 1"=3'



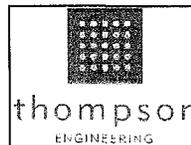
TYPICAL SECTION B

SCALE: 1"=3'

NOTES:

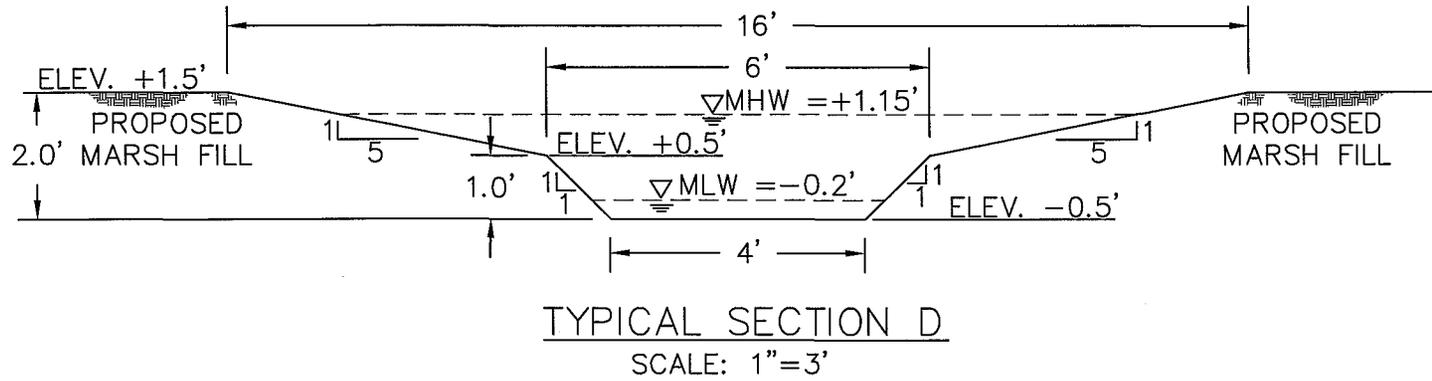
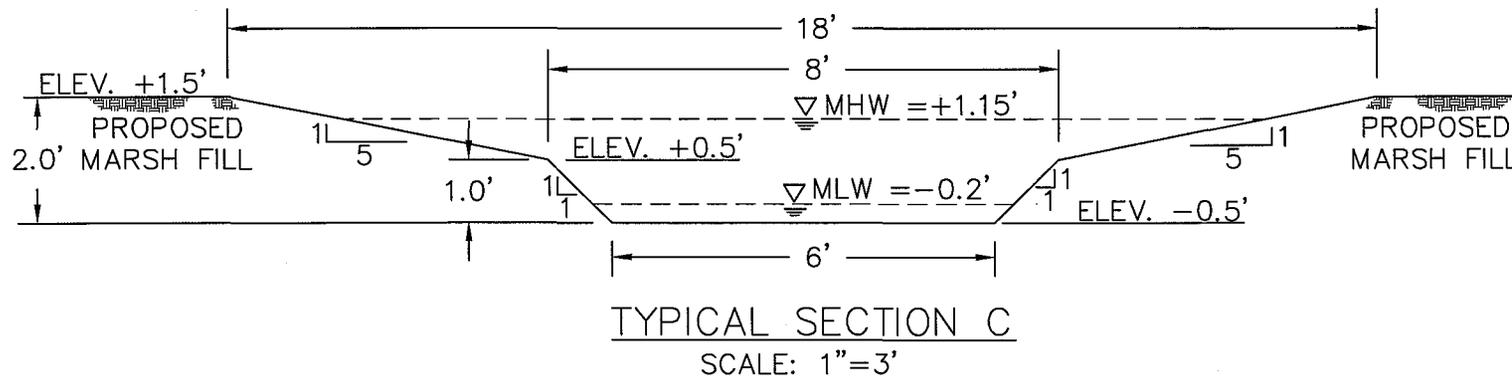
1. ELEVATIONS SHOWN ARE ESTIMATED FOR AFTER CONSOLIDATION (NAVD).
2. ELEVATIONS AND SLOPES OF TIDAL CREEKS ARE PRELIMINARY PENDING FINALIZATION OF DESIGN.

FIGURE 15



ALABAMA DEPARTMENT OF CONSERVATION
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MARSH ISLAND RESTORATION
MOBILE COUNTY, ALABAMA

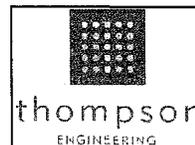
TIDAL CREEK SECTION	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013



NOTES:

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

FIGURE 16



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

TIDAL CREEK SECTIONS	
PROJECT NO:	12-2111-0091
DATE:	SEPTEMBER 2013