MEMORANDUM OF AGREEMENT
BETWEEN
THE BUREAU OF OCEAN ENERGY MANAGEMENT
OF THE DEPARTMENT OF THE INTERIOR
AND THE
U.S. ARMY CORPS OF ENGINEERS

REGARDING THE USE OF OUTER CONTINENTAL SHELF SAND RESOURCES FOR THE MISSISSIPPI COASTAL IMPROVEMENTS PROGRAM COMPREHENSIVE BARRIER ISLAND RESTORATION PROJECT, GULF ISLANDS NATIONAL SEASHORE, MISSISSIPPI

BOEM Negotiated Agreement No. OCS-G 35929

Title I. Explanatory Recitals

A. The United States Department of the Interior (DOI), acting through the Bureau of Ocean Energy Management (BOEM; or collectively with DOI, as the "Lessor"), enters into this Memorandum of Agreement (MOA) with the U.S. Army Corps of Engineers (USACE; as the "Lessee"), providing for the use of up to 19.6 million cubic yards of Outer Continental Shelf sand resources ("OCS sand resources") to complete the Mississippi Coastal Improvements Program Comprehensive Barrier Island Restoration Project ("the Project"), under the authority of Section 8(k)(2) of the Outer Continental Shelf Lands Act (OCSLA) (43 U.S.C. § 1337(k)(2)).

B. The term "OCS sand resources" means sand, gravel, and shell resources found on or below the surface of the seabed on the Outer Continental Shelf (OCS), as defined in Section 2(a) of the OCSLA (43 U.S.C. § 1331(a)).

C. Prior to the notice-to-proceed with construction, USACE will procure lands, easements, and rights-of-way (collectively, "Land Rights") as necessary from upland landowners, other property rights holders, and other persons and entities of appropriate scope and duration to facilitate the Project.

Title II. Purpose and Authority

A. This MOA authorizes USACE to use up to 19.6 million cubic yards of OCS sand resources from Petit Bois Pass OCS West 1 and 3-6, and Petit Bois Pass OCS East 1-5 (also referred to as the "Borrow Areas"), as designated and delineated in Tables 1-10 and on the attached maps, (Attachment 1) and to transport those sand resources to shore, in accordance with the terms of this MOA. After removal of the sand resources from the OCS and placement of those resources as specified in this MOA, BOEM has no jurisdiction over those sand resources unless they return to the OCS.

Table 1. Petit Bois Pass OCS East 1 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	240620.40	1130436.97
2	241337.99	1130766.36
3	240579.22	1132003.89
4	240587.87	1132031.25
5	240346.85	1132526.09
6	240321.60	1132525.37
7	239610.67	1133019.21
8	239080.04	1132975.35
9	239333.41	1132176.59
10	240037.76	1132213.31
11	240327.14	1131861.24
12	240348.33	1131863.77
13	240207.62	1131280.01

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 2. Petit Bois Pass OCS East 2 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	235816.31	1131548.90
2	236615.96	1132321.74
3	234426.82	1134285.25
4	234945.03	1134919.83
5	233348.53	1137400.69
6	232913.41	1137153.91
7	232596.85	1137463.73
8	231767.81	1138850.70
9	231106.70	1138623.70
10	231905.14	1136970.99
11	232230.63	1136497.79
12	232166.95	1136156.07
13	232338.44	1135252.97
14	232258.20	1134985.78
15	233326.50	1132944.38
16	233367.12	1132983.50

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 3. Petit Bois Pass OCS East 3 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	233560.29	1141213.61
2	233821.47	1141438.63
3	233524.67	1142090.05
4	233129.13	1142563.27
5	232848.89	1142713.05
6	232084.54	1142808.33
7	231892.10	1142508.45
8	232395.40	1141946.49

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 4. Petit Bois Pass OCS East 4 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	231059.31	1141636.19
2	231556.69	1141792.15
3	231402.65	1142138.23
4	231536.67	1142241.98
5	230958.81	1143514.28
6	230146.62	1144051.61
7	229962.34	1143741.03
8	230416.26	1143219.53

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 5. Petit Bois Pass OCS East 5 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	232824.81	1138600.03
2	233273.73	1138978.08
3	232759.27	1139641.97
4	231984.05	1140157.33
5	231445.34	1140508.62
6	231224.00	1140286.81
7	231709.23	1139765.19
8	232470.61	1139046.23

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 6. Petit Bois Pass OCS West 1 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	235548.45	1096673.62
2	236485.89	1097571.71
3	235981.75	1099731.60
4	232656.93	1103831.33
5	231724.08	1104974.34
6	230458.95	1103957.18
7	231084.65	1102538.62
8	234138.14	1098503.74

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 7. Petit Bois Pass OCS West 3 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	236606.42	1113721.28
2	237093.63	1116141.41
3	236353.50	1116603.33
4	235882.87	1116509.03
5	235660.50	1116265.04
6	234942.27	1115166.66
7	236447.38	1113860.83

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 8. Petit Bois Pass OCS West 4 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	233997.95	1110853.25
2	235019.89	1111176.25
3	235101.44	1111145.20
4	235690.99	1111339.37
5	234337.02	1115241.72
6	233727.20	1115058.78
7	232998.34	1116327.06
8	232205.97	1116107.90

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 9. Petit Bois Pass OCS West 5 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	230328.20	1119315.92
2	231052.66	1119658.65
3	230537.73	1120794.70
4	231003.40	1121012.59
5	229775.62	1123653.84
6	229369.77	1124558.29
7	227853.55	1124066.10
8	228344.32	1123094.69
9	229788.36	1120470.95

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

Table 10. Petit Bois Pass OCS West 6 Borrow Area Coordinates

PT.	NORTHING	EASTING
1	225158.59	1128932.17
2	227759.12	1128934.76
3	225094.90	1132244.24
4	223787.23	1131937.61

Note: Coordinates are relative to the State Plane Coordinate System, Mississippi East Zone, NAD83, in U.S. Survey feet.

B. BOEM, under the authority delegated by the Secretary of the Interior, is authorized, pursuant to Section 8(k)(2) of the OCSLA (43 U.S.C. § 1337(k)(2)), to enter into this MOA concerning the potential use of OCS sand resources. BOEM has determined that the Project meets the requirements of Section 8(k)(2)(A)(i) of the OCSLA. Therefore, in accordance with Section 8(k)(2), and subject to the terms and conditions contained herein, BOEM hereby authorizes the use of OCS sand resources from the Petit Bois Pass OCS Borrow Areas located in Mobile Area Blocks 819, 861, 862, 863 and 864, as identified in Tables 1-10, for the construction undertaken in furtherance of the Project. The parties acknowledge that, under the terms of Section 8(k)(2)(B), BOEM will not assess any fee against USACE for the use of the OCS sand resources described herein. In consideration of the provision of OCS sand resources for the Project, USACE will provide to BOEM survey results and other data as provided herein, which will, among other things, give BOEM valuable information on the Borrow Areas and use of Federal OCS mineral resources. Nothing in this MOA is intended to abrogate or diminish the Secretary of the Interior's authority under the OCSLA to oversee and regulate the removal of OCS sand resources.

C. The USACE is undertaking this Project pursuant to authority granted to it in accordance with the MsCIP Congressional authorization and enters into this MOA in compliance with the requirements of Sections 8(k)(2)(A)(i) and 8(k)(2)(D) of the OCSLA. Nothing in this MOA is intended to impede or hinder USACE's ability to complete the Project or abrogate or diminish either Party's authority or responsibilities under applicable law, including, but not limited to, the

National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Marine Mammal Protection Act (MMPA), National Historic Preservation Act (NHPA), Migratory Bird Treaty Act (MBTA), or the Coastal Zone Management Act (CZMA).

Title III. Project Description

Following Hurricane Katrina, USACE's Mobile District prepared the Mississippi Coastal Improvements Program (MsCIP) Comprehensive Plan and Integrated Programmatic Environmental Impact Statement (Programmatic EIS) in 2009. The plan was developed to support the long-term recovery of Hancock, Harrison, and Jackson Counties from the devastation caused by Hurricane Katrina and other storm events. Additionally, the plan seeks to make the coast more resilient against damage from future storms and to mitigate the effects of past navigational dredging and disposal activities that have altered sediment availability and transport along the barrier islands.

The selected plan outlined within the MsCIP Programmatic EIS represented the USACE's initial plan for barrier island restoration. It served as the basis for development of the final design for implementing the authorized construction project as determined through additional detailed studies conducted under the Mississippi Barrier Island Restoration component of the MsCIP Comprehensive Plan. At the programmatic level, the initial analysis of alternatives assumed that borrow areas would be available within the immediate project area; however, later cost and environmental evaluations concluded that OCS sand resources would be needed to provide sufficient quantities to achieve project requirements. The USACE's 2016 Supplemental Environmental Impact Statement (Supplemental EIS) addresses site-specific restoration project components and specific borrow source locations in State and Federal waters.

The project area includes the mainland coast of Mississippi (i.e., Hancock, Harrison, and Jackson Counties), the Mississippi Sound, the Mississippi-Alabama barrier islands, and the northern Gulf of Mexico to about 8 miles (13 kilometers) seaward of the barrier islands. A chain of sandy barrier islands located from 6 to 12 miles (10 to 19 kilometers) offshore separates the Mississippi Sound from the northern Gulf of Mexico. From east to west, the islands are Dauphin Island in Alabama and Petit Bois, Sand, Horn, East Ship, West Ship, and Cat Islands in Mississippi. With the exception of portions of Cat Island, all of the Mississippi islands are part of the Gulf Islands National Seashore, which is under jurisdiction of the National Park Service.

The project area offshore of the islands includes portions of the OCS, which are under BOEM's jurisdiction for leasing and regulating the recovery of minerals. Borrow Site Option 4 in the Supplemental EIS is the selected USACE alternative involving the use of sand from 18 specific borrow locations within 5 geographic areas located in the State waters of Mississippi and Alabama, 10 of which are located on the OCS. The borrow sites on the OCS include Petit Bois Pass OCS West 1 and 3-6, and Petit Bois Pass OCS East 1-5 from which USACE is requesting to utilize a total of 19.6 million cubic yards of sand.

Transportation of OCS sand resources from the OCS to the Restoration Area may involve establishing temporary staging or "pumpout" areas on the OCS or in State waters offshore of the Restoration Area. If utilized, hopper dredges or scow barges used to transport sand from the Borrow Areas will anchor and/or spud and unload at these sites. A temporary facility with pumpout capability, which is anchored or spudded within the pumpout area, might also be used during construction. Sand will be transported through a temporary dredge pipeline (floating and/or submerged) that will extend from the pumpout area to the Restoration Area along an established conveyance corridor. No dredging will occur within the pumpout areas on the OCS or along the corridors.

Sand from these borrow sites on the OCS will be used for the restoration of Ship Island, which includes the closure of Camille Cut and restoration of the shoreline of the current East Ship Island. This restoration would be accomplished in five phases over an approximately 2.5-year period.

To restore East Ship Island and West Ship Island to a single elongated barrier island, the approximately 3.5-mile-long Camille Cut would be filled with approximately 13.5 million cubic yards of sand. The newly formed island segment would be constructed as a low-level dune system connecting existing West Ship Island and East Ship Island. Under the proposed design template, the constructed Camille Cut closure would be approximately 1,100 feet (305 meters) wide. The fill would tie into the existing island shoreline just below the frontal dune line at an elevation of approximately +7 feet (2 meters) North American Vertical Datum of 1988 (NAVD88) with a 1V:12H (vertical:horizontal) slope to the mean high water line (MHWL) and an approximate 1V:20H slope below the MHWL. The fill at its western and eastern ends would tie into the existing berm along the eastern end of West Ship Island and transition into the proposed East Ship Island placement.

As sand placement in Camille Cut progresses, sand fencing will be constructed and native dune vegetative species, including sea oats and/or other grasses and forbs, will be planted along the newly created island segment to enhance dune formation and restore dune habitat.

The restoration of East Ship Island would consist of the placement of approximately 5.5 million cubic yards of sand along the southern shoreline. In addition to restoring the southern shoreline, placement of sand in this area would add material to the newly restored Camille Cut fill and therefore support the overall replenishment of the littoral sand budget as identified in the sediment budget analysis and sediment transport modeling. The construction template for the restored southern shoreline would consist of an average berm crest width of approximately 1,200 feet (366 meters) at an elevation of +6 feet (2 meters) NAVD88 with a 1V:12H to 1:20 slope from the seaward edge of the berm to the toe of the fill (intersection with the existing water bottom).

Title IV. Provisions

A. BOEM authorizes the use of up to 19.6 million cubic yards of OCS sand resources from the Borrow Areas delineated in Tables 1-10 in Petit Bois Pass OCS West 1 and 3-6 and Petit Bois

Pass OCS East 1, 2, 3, 4 and 5, and the transportation of the sand resources off the OCS to the Restoration Area. The USACE or its contractor(s) may only extract, transport, and place such OCS sand resources from the Borrow Areas in accordance with the terms and conditions set forth below and in accordance with applicable regulations and permits. Except as provided above, the parties agree that all other aspects of the Project's execution and completion must be carried out as described in the USACE's Supplemental SEIS.

B. All written notifications, requests, submissions, and deliverables, unless otherwise stated, should be sent to BOEM at the address below:

Michael Miner (MS 623E)
Marine Minerals Program
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

All electronic notifications, submissions, and deliverables to BOEM should be sent to dredgeinfo@boem.gov and michael.miner@boem.gov.

All written notifications, requests, submissions, and deliverables to the USACE should be sent to the address below:

Susan Ivester Rees, Ph.D.
Program Manager
Coastal Resiliency Program
U.S. Army Corps of Engineers, Mobile District
PO Box 2288
Mobile, AL 36628

If a new point of contact (POC) is assigned during the term of this MOA, the Parties agree to send written notification within 7 working days.

C. This MOA applies only to the extraction, transportation, and placement of OCS sand resources as described above. This MOA will terminate or expire (a) upon USACE sending written notice that it has obtained sufficient OCS sand resources to complete the Project, up to 19.6 million cubic yards; (b) the expiration, termination, or revocation of the National Park Service's Gulf Islands National Seashore Special Use permit; or (c) five (5) years from the date of execution of this MOA, whichever occurs first. Upon request by USACE, the Parties may agree to extend the terms of this MOA as necessary to provide USACE and its contractor(s) with additional time to complete the Project. The Parties acknowledge that there may be a need for future OCS sand resources for periodic maintenance, augmentation, or construction purposes. BOEM and

USACE may enter into subsequent agreements, for the use of additional OCS sand resources for the Project, consistent with each Party's responsibilities under applicable law.

D. BOEM and USACE recognize that planning and coordination will ensure that responsibilities under the OCSLA, other applicable Federal laws, and this Congressionally authorized Project are carried out and accommodated in an efficient and timely manner so that the Project schedule will not be unnecessarily delayed or compromised. The USACE recognizes that BOEM, as a Bureau in the DOI, has certain responsibilities for the orderly, timely, and efficient recovery of OCS minerals using the best available technology while ensuring environmental stewardship and compliance. Moreover, BOEM recognizes that USACE has certain stewardship and environmental compliance responsibilities that are separate and distinct from the responsibilities of BOEM. To these ends, and with respect to the Project, BOEM and USACE agree to the following terms:

1. Plans and Performance Requirements

The USACE will include this MOA as a reference document in the advertised "Construction Solicitation and Specifications Plan" (hereinafter referred to as the "Plan") or as an advertised amendment. The USACE will ensure that all operations at the Borrow Areas, pumpout areas, and along the temporary conveyance corridors are conducted in accordance with the final approved Plan and all terms and conditions in this MOA, as well as all applicable statutes, regulations, orders, guidelines, and directives are upheld. The USACE will send BOEM a copy of the plans and any modifications prior to construction.

The dredging method for removing and transporting sand from the OCS will be consistent with those methods evaluated in the NEPA documents prepared in conjunction with the Project and approved in any authorizing documents or project permits. The USACE will allow BOEM to review and comment on modifications to the Plan that may affect the Borrow Areas, pumpout areas, or pipeline corridors on the OCS, including the use of submerged or floated pipelines to directly convey sediment from the Borrow Areas or offshore pumpout areas to the placement site. Said comments will be delivered in a timely fashion so as to not unnecessarily delay USACE's construction contract or schedule.

If dredging and/or conveyance methods are not wholly consistent with those evaluated in relevant NEPA documents, environmental, and cultural resource consultations additional environmental review may be necessary. If the additional NEPA analysis, consultations, or permit modifications would impact or otherwise require modification to the provisions of this MOA, an amendment may be required.

Any areas where bottom disturbing (e.g., spudding, anchoring, submerged pipeline installation, etc.) might occur that have not already been cleared by cultural resource surveys and coordination with the State Historic Preservation Officer and BOEM will require clearance from those parties before work can be conducted. This may include requiring

additional surveys where bottom disturbing is anticipated. Clearance surveys and associated reports for areas where bottom disturbing will occur but has yet to be cleared must be submitted to BOEM's POC for review and concurrence before any bottom disturbing can occur. BOEM will require 10 working days for review.

Prior to the commencement of construction, USACE must electronically provide BOEM with a summary of the construction schedule. The USACE, at the reasonable request of BOEM, must allow access, at the site of any operation subject to safety regulations, to any authorized Federal inspector and will provide BOEM any documents and records that are pertinent to occupational or public health, safety, environmental protection, conservation of natural resources, or other use of the OCS, as BOEM requests. The USACE agrees to facilitate access to the site of any operation, including, but not limited to, dredges and support equipment, fill areas, turtle relocation trawlers, etc., for scientists conducting sampling or observations associated with research conducted or funded by BOEM.

2. Environmental Responsibilities and Environmental Compliance

The USACE is the lead Federal agency on behalf of the Federal Government to ensure that activities comply with applicable environmental laws, including, but not limited to, the Endangered Species Act, Magnuson-Stevens Fishery Management and Conservation Act, Migratory Bird Treaty Act, National Historic Preservation Act, and Coastal Zone Management Act. The USACE has assumed the role of lead Federal agency for Endangered Species Act Section 7 compliance concerning threatened and endangered species under the purview of Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS). Likewise, USACE has assumed the role of lead Federal agency for complying with Section 305 of the Magnuson-Stevens Fishery Management and Conservation Act, Section 106 of the National Historic Preservation Act, and Section 307 of the Coastal Zone Management Act. The USACE will instruct the contractor(s) to implement the mitigation terms, conditions, and measures required by FWS and NMFS, pursuant to applicable Federal and State laws and regulations. The required mitigation terms, conditions, and measures are reflected in the Biological Opinions, Conservation Recommendations, and State Coastal Permits/Coastal Zone Management requirements. Electronic copies of all relevant correspondence, monitoring data, and reports related to the activities covered by this MOA, will be provided electronically to BOEM within 14 days of issuance (including observer,, and dredging reports).

Specific mitigation, monitoring, and reporting required by BOEM are incorporated into this MOA, as described in the USACE's SEIS. Mitigating measures were identified to reduce potential effects to habitat and sand resources in reference to construction areas, borrow areas, water quality, and cultural resources. In addition to BOEM's requirements, all of the FWS, NMFS, and State requirements are incorporated into the MsCIP Monitoring and Adaptive Management Plan.

3. Pre-Construction Notification of Activity in or near the Borrow Areas, Dredge Pumpout Areas, and Conveyance Areas

The USACE will invite BOEM to attend a pre-construction meeting that describes the USACE's and/or its contractors' or agents' plan and schedule to construct the Project.

The USACE will notify the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC at least 72 hours prior to the commencement, and within 24 hours after termination, of operations on the OCS. This requirement includes any temporary demobilization from the OCS that exceeds 14 days in duration. BOEM will electronically notify USACE in a timely manner of any OCS activity within the jurisdiction of the DOI that may adversely affect USACE's ability to use OCS sand for the Project.

4. Dredge Positioning

During all phases of the Project, USACE will ensure that the dredge and any bottom-disturbing equipment are outfitted with an onboard global positioning system (GPS) capable of maintaining and recording location within a horizontal accuracy range of no more than plus or minus 10 feet (3 meters). The GPS must be installed as close to the excavator ("cutter head" or drag head) as is practicable or must use appropriate instrumentation to accurately represent the position of the excavator. Whenever dredging operations are underway, the location of the dredge will be continuously monitored and its position within the borrow area will be recorded in real time, in North American Datum of 1983 (NAD83), at intervals not to exceed 2 minutes. During dredging operations, USACE will immediately notify BOEM electronically if dredging occurs outside of the approved Borrow Area. Such notification will be made as soon as possible after the time USACE becomes aware of dredging outside of the approved Borrow Area.

Anchoring, spudding, or other bottom-disturbing activities on the OCS are not authorized outside of the approved Borrow Area with the exception of cutterhead dredge swing anchors within the approved anchor area zones as shown in the maps in Attachment 1, in areas that have been cleared and approved by BOEM to conduct activities associated with transportation of sand resources from the OCS, or when there are immediate concerns of safety, navigation risks, or emergency situations. Anchoring, spudding, temporary dredge pipeline installations, or other bottom-disturbing activities on the OCS associated with dredge pumpout areas and conveyance corridors is authorized on the condition that BOEM must approve compliance submittals from USACE as discussed in Term No. 1 above.

The USACE will electronically provide BOEM all dredge positioning and production data acquired during the Project using procedures agreed upon in writing by BOEM and USACE prior to dredging. This would include, but is not limited to, dredging quality management (DQM) data using procedures jointly developed by USACE's National DQM Data Program Support Center and BOEM. The USACE will submit the DQM data to BOEM at dredgeinfo@boem.gov and the designated BOEM, Gulf of Mexico OCS Region, Marine

Minerals Program POC on a biweekly basis. These biweekly dredge reports will also include a summary of dredge excavator (cutterhead and/or drag head) track lines, outlining any deviations from the original Plan. A color-coded plot of the excavator locations will be submitted, showing any horizontal or vertical dredge violations. A plot will also be used to show dredge status as described in Term No. 6 below. Map(s) will be provided in Adobe PDF format. A complete dataset (dredge position and status) will be submitted within 45 days of completion of the Project. If available, USACE will also submit Automatic Identification System (AIS) data for vessels qualifying under the International Maritime Organization's (IMO) International Convention for the Safety of Life at Sea.

5. Dredge Operation

Dredging will be performed so that the dredge excavates OCS sand resources to an overall cut depth not to exceed that approved in the Project borrow design plan (the "overdredge" limit as shown in Attachment 1).

6. Submittal of Production and Volume Information

The USACE, in cooperation with the dredge operator, must submit to BOEM every 2 weeks a summary report of dredge activity including the dredge track lines, outlining any deviations from the original Plan. A color-coded plot of the dragheads (port and starboard), cutterhead, or other hydraulic or mechanical dredging device will be submitted for all dredging and transport activity on the OCS, showing any horizontal or vertical dredge violations. Transiting/unloading tracks will also be shown for hopper dredges and scow barges. The dredge track lines must show dredge status, i.e., hoteling, dredging (pump on/off), transiting, or unloading. This map will be provided in PDF format.

The USACE will provide at least a biweekly update of the construction progress, including estimated volumetric production rates from the OCS Borrow Areas (both cumulative and for the reporting period) to BOEM. The biweekly deliverables will be provided electronically to BOEM at dredgeinfo@boem.gov and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC. The Project completion report, as described below, will also include production and volume information, including Daily Operational Reports.

7. Local Notice to Mariners

The USACE will require its contractor(s) for the Project to place a notice in the U.S. Coast Guard's Local Notice to Mariners regarding the timeframe and location of dredging, pumpout areas, pipeline conveyance corridor, and construction operations in advance of commencement of dredging.

8. Marine Pollution Control and Contingency Plan

The USACE will require its contractor(s) and subcontractor(s) to prepare for and take all necessary precautions to prevent discharges of oil and releases of waste and hazardous

materials that may impair water quality. In the event of a discharge, notification and response will be in accordance with applicable requirements of 40 CFR part 300. All dredging and support operations must be compliant with the U.S. Coast Guard's regulations and the U.S. Environmental Protection Agency's Vessel General Permit, as applicable. The USACE will notify BOEM of any occurrences and remedial actions and provide copies of reports of the incident and resultant actions at dredgeinfo@boem.gov and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC.

9. Encounter of Ordnance

If any ordnance is encountered while conducting dredging activities, the USACE will report the discovery within 24 hours to dredgeinfo@boem.gov and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC.

10. Bathymetric Surveys

The USACE will provide BOEM with pre- and post-dredging bathymetric surveys of the borrow area. BOEM recommends that the pre-dredging survey of the Borrow Area be conducted within 90 days prior to dredging for each Borrow Area. However, the surveys will not be conducted before a notice to proceed is issued by USACE to the dredge contract for work in each Borrow Area. The post-dredging survey of each borrow area will be conducted within 30 days after the completion of dredging. BOEM recommends that USACE conduct additional bathymetric surveys of the Borrow Area as part of the MsCIP Monitoring and Adaptive Management Program five (5) and ten (10) years after the completion of dredging to document borrow area evolution and provide information to inform future decisions and consultations regarding the use of OCS sand resources. Surveys, error analysis, and reporting will be performed in accordance with the most recent edition of USACE's Hydrographic Surveying Manual EM 1110-2-1003 unless specified otherwise. For bathymetric surveys, 100 percent coverage using interferometric swath or multibeam bathymetric survey methods is required. All bathymetric data will be roll, pitch, heave, and tide corrected using best practices. Sound velocity corrections will be applied based on measurements made during and throughout the duration of the survey using a profiling sound velocity meter to obtain water column sound velocities with casts that log the entire water column to the seafloor. Survey lines of the specific dredge area will be established at intervals necessary to provide 100 percent coverage. All survey lines will extend at least 100 meters (328 feet) beyond the edge of the Borrow Area's limits (including Allowable Anchorage Area; Attachment 1) as defined in this MOA. All data will be collected in such a manner that post-dredging bathymetric surveys are compatible with the pre-dredging bathymetric survey data to enable the latter to be subtracted from the former to calculate the volume of material removed, shape of the excavation, and nature of post-dredging bathymetric change. Pre-dredge bathymetric survey transects will be reoccupied during the post-dredging surveys.

Surveys will be conducted using kinematic GPS referenced to a GPS base station occupying an established (NAVD 88 vertical control) monument within 15 kilometers (9 miles) of the survey area, a National Geodetic Survey real-time network, or a water-level gauge deployed within the vicinity of the Borrow Area and referenced to an established monument (NAVD 88 vertical control), unless alternative methods are approved by BOEM. Pre- and post-dredging surveys will be referenced to the same water-level gauge, tide gauge, real-time network, benchmark, or BOEM-approved method. An uncertainty or error analysis will be conducted on the bathymetric dataset. This analysis will quantify (vertical) uncertainty for each survey based on best management practices. This is typically based on the calculated differences of measured elevations (depths) at all transect crossings or overlap data coverage between adjacent transects (also note that other best practices typically employed to identify potential error or quantify uncertainty, such as daily bar-checks, will be conducted and documented). Alternative methods for quantifying uncertainty must be approved by BOEM. A methods and uncertainty analysis report, field notes, and metadata must be submitted to BOEM with the processed bathymetric data products.

BOEM reserves the right to require additional surveys if a hurricane passes within 100 miles (161 kilometers) of the borrow areas or in the case of extended demobilizations (in excess of 180 days) from the borrow area.

Copies of processed pre-dredging and post-dredging bathymetric data will be submitted to BOEM via dredgeinfo@boem.gov and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC within 30 days after each survey is completed. Pre-dredging bathymetric survey results and attendant products must be provided to BOEM for approval, and BOEM must review and deem them acceptable prior to commencement of dredging activity. If data accuracy, coverage, quality, or other parameters for either pre- or post-dredging surveys are not sufficient to provide for accurate comparisons between the pre-dredge and post-dredge surveys (e.g., do not meet specifications and standards discussed or referenced above), BOEM may require that a new survey (at the pre-dredge and/or post-dredge phase) be conducted.

The delivery format for bathymetry data submission is an ASCII file containing x, y, z data and a digital elevation model in a format agreed upon between BOEM and USACE in writing. The horizontal data will be provided in the NAD83 Mississippi State Plane East, U.S. survey feet. Vertical data will be provided in the NAVD 88, U.S. survey feet unless otherwise specified. A plan view plot of the pre- and post-construction data will be provided showing the survey vessel navigation tracks, as well as contour lines at appropriate elevation intervals. A plot of the digital elevation model will also be provided. These plots will be provided in Adobe PDF format.

11. Oil and Gas Infrastructure

Along and within the dredge pipeline conveyance corridor, the Project Technical Specifications will require best management practices for temporary dredge pipeline installation, maintenance, and removal to avoid impacts when the OCS sand resource pipeline crosses oil and gas pipelines. BOEM has provided USACE with information delineating the locations of oil and gas pipelines based on the survey documentation provided to the Bureau of Safety and Environmental Enforcement by pipeline operators at the time of pipeline installation. The USACE or their contractor(s) will conduct a pre-dredging hazards survey using a marine magnetometer within 90 days prior to mobilization of equipment to the OCS. This survey can be conducted simultaneously with the pre-dredge bathymetry survey and must be submitted to BOEM for approval prior to commencement of bottom-disturbing activities.

It is incumbent upon USACE to request a current list of all owners of oil and gas infrastructure including, but not limited to, rights-of-way (ROW) holders from BOEM at the above contact in order to comply with the MOA no sooner than 120 days before dredging begins. The USACE will notify the current oil and gas pipeline ROW permit holder(s) four (4) weeks prior to the commencement of dredging operations so that the ROW permit holder(s) may take precautions to mark its pipeline segment if they choose to do so. Documentation and the outcome of communication between pipeline companies and/or current ROW holders and the USACE must be provided to BOEM at dredgeinfo@boem.gov and to the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC. BOEM must reply with concurrence before the commencement of dredging on the OCS.

During all dredging and OCS sand resource conveyance operations, USACE will require its contractor to observe a minimum “no dredge” and no bottom-disturbing activity (including anchoring and spudding) setback distance of 1,000 feet (305 meters) from existing pipelines and all other oil- and gas-related infrastructure. The USACE will immediately notify the Regional Supervisor, Office of Environment, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region at 504-736-2963 and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC if any oil and gas infrastructure on the OCS is disturbed during the course of the Project.

BOEM reserves the right to require additional shallow hazards surveys to locate the position of existing pipelines and other seabed infrastructure in the wake of a severe storm event, horizontal or vertical dredge violations, or other bottom-disturbing activity by USACE or their contractors outside of approved bottom-disturbing areas in this MOA, or availability of new information suggesting that there may be hazards in the area.

12. Archaeological Resources

Onshore Prehistoric or Historic Resources

If the USACE discovers any previously unknown historic or archaeological resources while accomplishing the activities related to the Project onshore, USACE will notify BOEM of any finding. The USACE will initiate the Federal and State coordination required to determine if the discovered resources warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places. All Parties will follow NHPA Section 106 guidelines to determine and implement future actions that may include data recovery or resource avoidance.

Offshore Prehistoric or Historic Resources

Areas on the OCS where bottom disturbing (e.g., anchoring, spudding, temporary pipeline installations, etc.) is anticipated must be surveyed using a marine magnetometer towed at 30 meters (98 feet) maximum survey transect spacing and side-scan sonar with 100-percent bottom coverage, analyzed by a Registered Professional Archeologist, and submitted for review and concurrence by BOEM before any bottom-disturbing activities can occur.

In the event that USACE and/or their contractors discover any archaeological resource while conducting operations on the OCS or along dredge pipeline corridors, or in the vicinity of pump-out operations, USACE must require that dredge and/or pump-out operations be halted immediately within 305 meters (1,000 feet) of the area of discovery. The USACE must then immediately report the discovery to the Regional Supervisor, Office of Environment, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region at 504-736-2963 and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC. If investigations determine that the resource is significant, the Parties will together determine how best to protect it.

13. Post-Construction Site Clearance

All construction equipment and material related to the Project, including, but not limited to, all temporary dredge pipe sections, or fittings, or other related obstructions, and debris, shall be promptly removed within 30 days following culmination of OCS borrow activities (confirmed by acceptance at the project fill site by USACE). The USACE will, within the same 30-day time period, conduct a site-clearance verification survey with their contractor that covers all OCS project areas. Survey techniques are described in Term No. 10 above. A report documenting the site-clearance inspection survey results will be provided to BOEM for review and concurrence at dredgeinfo@boem.gov and the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC and included in the Project Completion Report (Term No. 15 below).

14. Disclaimers; Contingencies

BOEM does not warrant that the OCS sand resources used in this Project are suitable for the purpose for which they are intended by USACE. BOEM's responsibility under this Project is limited to the authorization of use of OCS sand resources from the Borrow Areas delineated in Tables 1-10, as described in this MOA, and therefore, BOEM disclaims any and all responsibility for the physical and financial activities undertaken by other Parties in pursuit of the Project.

15. Project Completion Report

A project completion report will be submitted by USACE to BOEM within 120 days following completion of the activities authorized under this MOA. This report and supporting materials must be sent to the designated BOEM, Gulf of Mexico OCS Region, Marine Minerals Program POC and to dredgeinfo@boem.gov. The report must contain, at a minimum, the following information:

- the names and titles of the project managers overseeing the effort (for USACE, the engineering firm [if applicable] and the contractor), including contact information (i.e., telephone numbers, mailing addresses, and email addresses);
- the location and description of the project, including the final total volume of OCS sand resources extracted from the Borrow Area and the volume of OCS sand resources actually placed on the beach or shoreline (including a description of the volume calculation method used to determine these volumes);
- ASCII files containing the x, y, z and time stamp of the cutterhead locations;
- a narrative describing the final, as-built features, boundaries, and acreage, including the restored beach/marsh width and length;
- a table, an example of which is illustrated below, showing the various key project cost elements;

Project Cost Element	Cost Incurred as of Construction Completion ($)
Construction	
Engineering and Design	
Inspections/Contract Administration	
Total	

- a table, an example of which is illustrated below, showing the various items of work construction, final quantities, and monetary amounts;

Item No.	Item	Estimated Quantity	Final Quantity
1	Mobilization and Demobilization		
2	Beach Fill		
3	Any Beach or Offshore Hard Structure Placed or Removed		

- a listing of construction and construction oversight information, including the prime and subcontractor(s), contract costs, etc.;
- a list of all major equipment used to construct the project;
- a narrative discussing the construction sequences and activities, and, if applicable, any problems encountered and solutions;
- a list and description of any construction change orders issued, if applicable;
- a list and description of any safety-related issues or accidents reported during the life of the project;
- a narrative and any appropriate tables describing any environmental or compliance surveys or efforts associated with the project and costs associated with these surveys or efforts;
- a table listing significant construction dates beginning with bid opening and ending with final acceptance of the project by USACE;
- digital appendices containing the as-built drawings, beach-fill cross-sections, and survey data; and
- any additional pertinent comments.

16. Sharing of Information

Consistent with the purpose stipulated by the Parties in Title II, and to the extent allowed by law, policy, and regulation, USACE and BOEM agree to (1) share all information needed for or generated from the Project, including the sharing of implementation and other applicable schedules; (2) provide such information to the requesting agency as expeditiously as possible; and (3) work to ensure that all required completion report information is received.

The Parties to this MOA acknowledge that information and reports required by and/or exchanged pursuant to the Project that is the subject of this MOA may include confidential business information, trade secrets, or other sensitive information that is entitled to protection from disclosure by the Freedom of Information Act.

Any Party, contractor, or agent of one of the Parties requesting that information or reports provided pursuant to this MOA be treated as confidential will, at the time the information is submitted, prominently mark the information and report as “Confidential,” along with the bases for the claim of confidentiality. Any covering correspondence submitted with the

information or report will likewise note the claim of confidentiality being asserted. To the extent practicable, a Party to this MOA may only request information that has been marked as "Confidential" and is in the possession of another Party to this MOA if the information is needed by the requesting Party to carry out its obligations under this MOA or if the information is necessary for the requesting Party to fulfill its obligations under the law. The Party in possession of the information requested may work with the requesting Party to determine if the information can be shared without waiving the confidential nature of the material.

The Parties further agree that they will immediately and timely notify the other Parties in writing of any request by any person seeking the release or disclosure of information marked "Confidential" in whole or in part, including, but not limited to, requests pursuant to Court orders, discovery, subpoenas, or other compulsory process, or public access request under applicable Federal or State law. Notification will be considered timely if it provides the Parties or individuals claiming the information or report is confidential a reasonable opportunity to seek a Court order to prevent release or disclosure. Any disputes regarding requests for information or the confidential nature of the information requested will be resolved according to applicable law. If the Party or individual claiming the information or report is confidential fails timely to obtain a Court order preventing the release or disclosure of the information, the Party in possession of the information will release it as and to the extend required by applicable law.

17. Resolution of Disputes

The Parties agree to make every attempt to settle any disputes regarding this MOA at the lowest operational level. In the case of (1) a substantial disagreement between BOEM and USACE with respect to any aspect of BOEM's authorization of the use of OCS sand resources in accordance with the terms and conditions as specified or (2) any alleged breach by a Party of the terms and conditions as specified herein, the undersigned will designate a senior management official in their respective agencies to state the area(s) of disagreement or alleged breach in writing and present such statement to the other Party for consideration. If resolution is not reached within 60 days, the undersigned may request the active participation of the USACE District Commander, Mobile District and BOEM's Regional Supervisor, Office of Environment, Gulf of Mexico OCS Region.

18. Notices

Except as otherwise provided herein, all notices relating to this MOA or activities authorized hereunder by or among the Parties must be provided to the following addresses:

To BOEM
Michael Miner (MS 623E)
Marine Minerals Coordinator
Bureau of Ocean Energy Management

Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394
michael.miner@boem.gov
504-736-2700

All electronic notifications, submissions, and deliverables to BOEM should be sent to dredgeinfo@boem.gov and michael.miner@boem.gov.

To USACE
Susan Ivester Rees, Ph.D.
Program Manager
Coastal Resiliency Program
U.S. Army Corps of Engineers, Mobile District
P.O. Box 2288
Mobile, AL 36628

19. Miscellaneous

This MOA will not affect any pre-existing or independent relationships or obligations among DOI, BOEM, and USACE, including any other relationships or obligations between BOEM and USACE, or any other units of such Parties.

All rights in the Borrow Area not expressly granted to USACE are hereby reserved to BOEM. BOEM reserves the right to authorize other uses in the Borrow Area that will not unreasonably interfere with activities authorized under this MOA. BOEM will allow USACE to review and comment on any proposed authorizations for the use of OCS sand resources in the Borrow Area while this MOA is in effect.

Nothing herein is intended to conflict with current State or Federal laws, rules, regulations, or local ordinances. If the terms of this MOA are inconsistent with existing laws, rules, or regulations of or applicable to any of the Parties entering into this MOA, then those portions of this MOA that are determined to be inconsistent will be invalid, but the remaining terms and conditions not affected by the inconsistency will remain in full force and effect. At the first opportunity for review of the MOA once such inconsistency is identified, all necessary changes will be accomplished either by an amendment to this MOA or by entering into a new MOA, whichever is deemed expedient to the interest of the Parties.

***

This agreement may be executed in two (2) or more counterparts, each of which will be deemed an original. The signatures to this agreement may be executed on separate pages, and when attached to this MOA will constitute one complete document.

MEMORANDUM OF AGREEMENT
BETWEEN
THE BUREAU OF OCEAN ENERGY MANAGEMENT
OF THE DEPARTMENT OF THE INTERIOR
AND THE
U.S. ARMY CORPS OF ENGINEERS

REGARDING THE USE OF OUTER CONTINENTAL SHELF
SAND RESOURCES FOR THE MISSISSIPPI COASTAL IMPROVEMENTS PROGRAM
COMPREHENSIVE BARRIER ISLAND RESTORATION PROJECT,
GULF ISLANDS NATIONAL SEASHORE, MISSISSIPPI

BOEM Negotiated Agreement No. OCS-G 35929

Signatory Page

_____

James A. DeLapp
Colonel, U.S. Army
District Commander

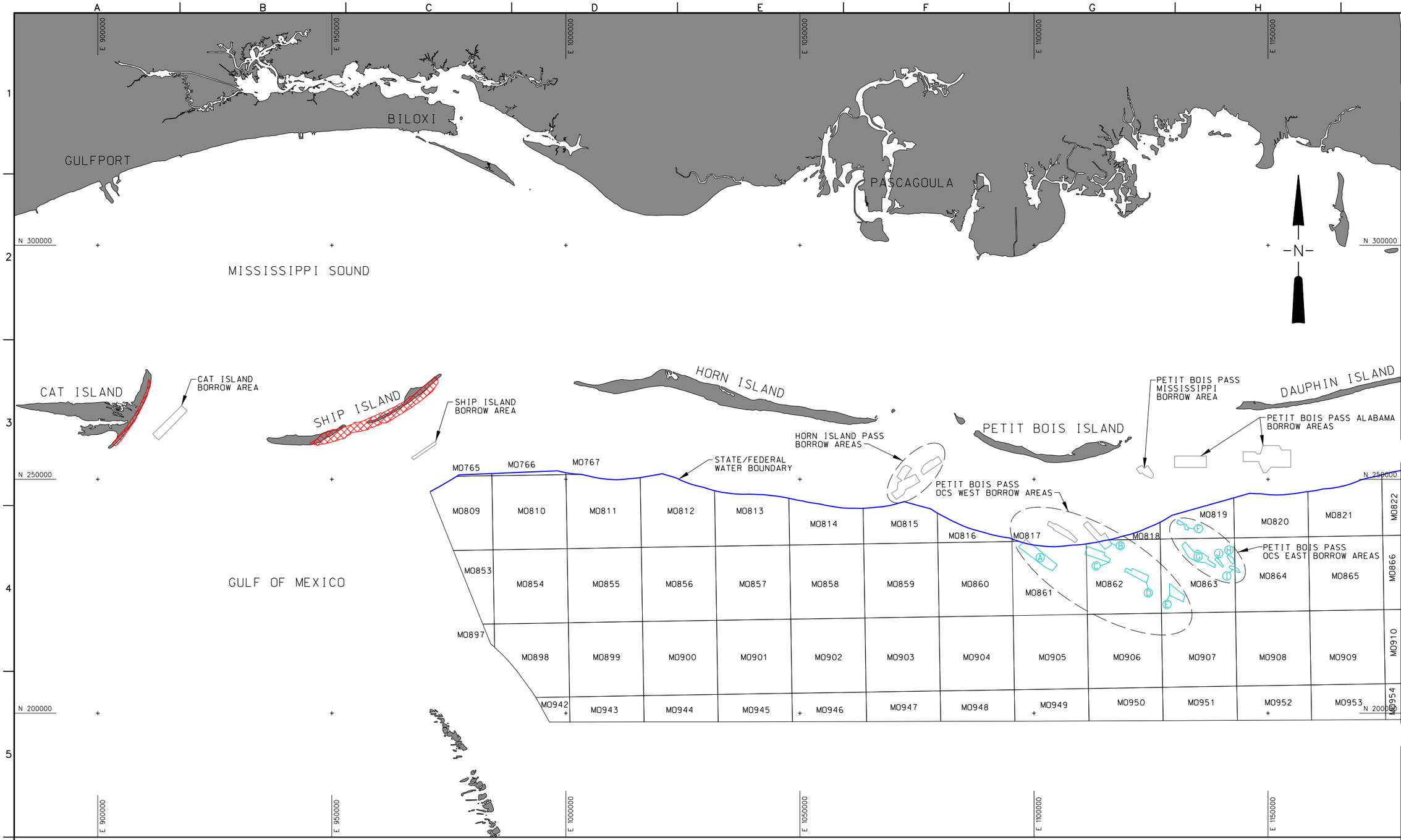
Date: _____

_____

Michael A. Celata
Regional Director
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region

Date: _____

ATTACHMENT 1



US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

LEGEND

- RESTORATION AREA LIMITS
- MO943 — OCS LEASE BLOCKS
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED IN STATE WATERS
- BORROW AREA LOCATED IN FEDERAL WATERS

SCALE 1"=10,000'
10,000' 0 10,000' 20,000'

BORROW AREA LEGEND

- Ⓐ OCS WEST 1
- Ⓑ OCS WEST 3
- Ⓒ OCS WEST 4
- Ⓓ OCS WEST 5
- Ⓔ OCS WEST 6
- Ⓕ OCS EAST 1
- Ⓖ OCS EAST 2
- Ⓗ OCS EAST 3
- Ⓘ OCS EAST 4
- Ⓙ OCS EAST 5

NOTES:

1. COORDINATES ARE REFERENCED TO MISSISSIPPI STATE PLANE COORDINATE SYSTEM 83 DATUM EAST ZONE.

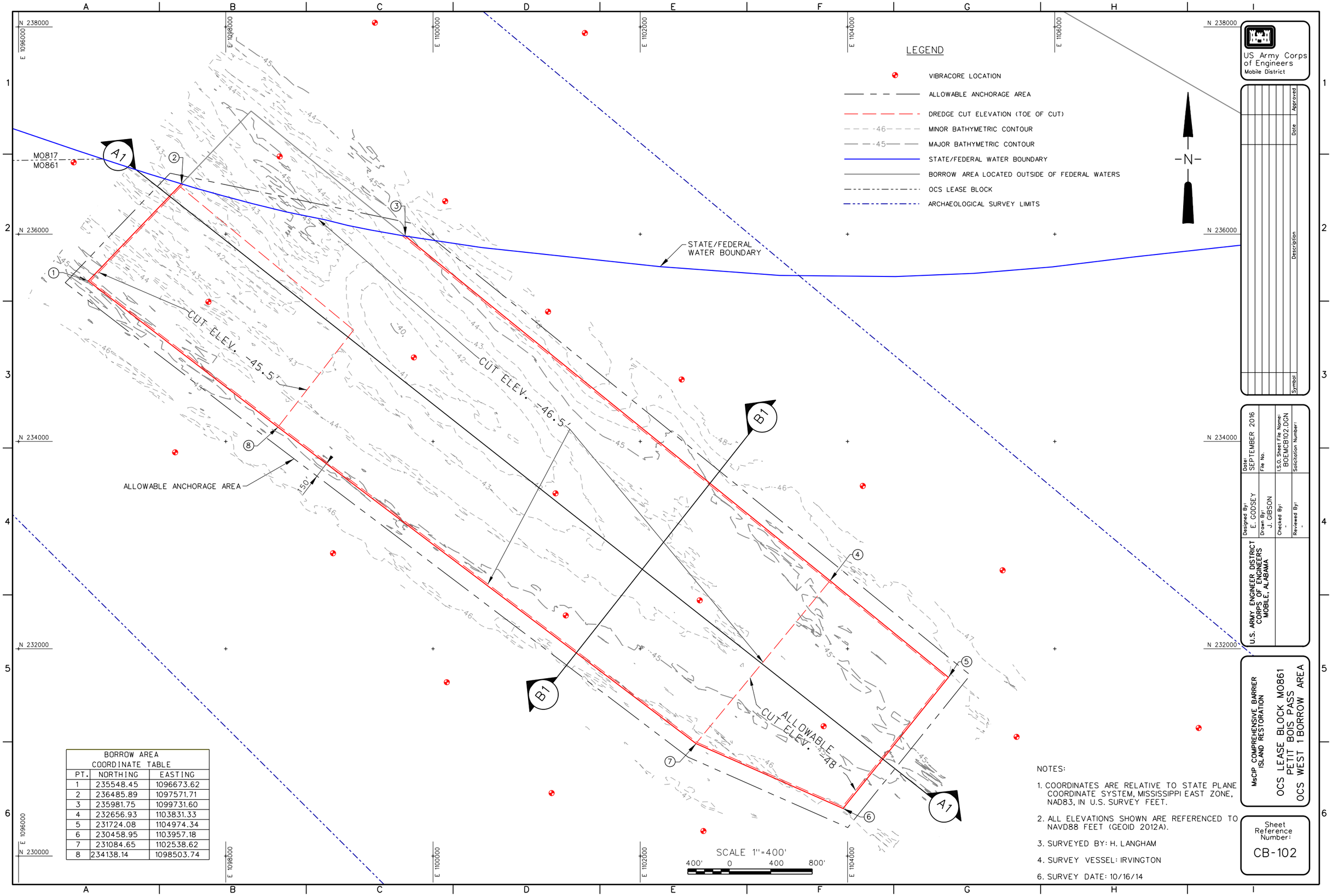
Date:	SEPTEMBER 2016
File No.	
I.S.O. Sheet File Name:	BOEMCB101.DGN
Solicitation Number:	
Designed By:	E. GODSEY
Drawn By:	J. GIBSON
Checked By:	-
Reviewed By:	-

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

PROJECT OVERVIEW MAP

Sheet Reference Number:
CB-101



BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	235548.45	1096673.62
2	236485.89	1097571.71
3	235981.75	1099731.60
4	232656.93	1103831.33
5	231724.08	1104974.34
6	230458.95	1103957.18
7	231084.65	1102538.62
8	234138.14	1098503.74

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED BY: H. LANGHAM
4. SURVEY VESSEL: IRVINGTON
6. SURVEY DATE: 10/16/14

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

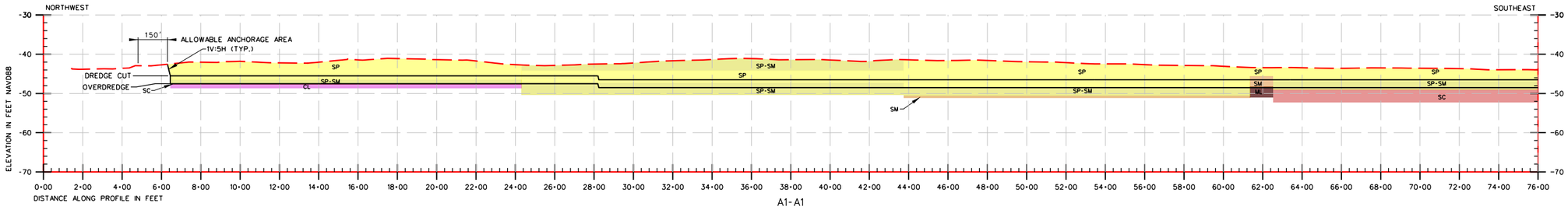
Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB102.DGN
Solicitation Number:
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

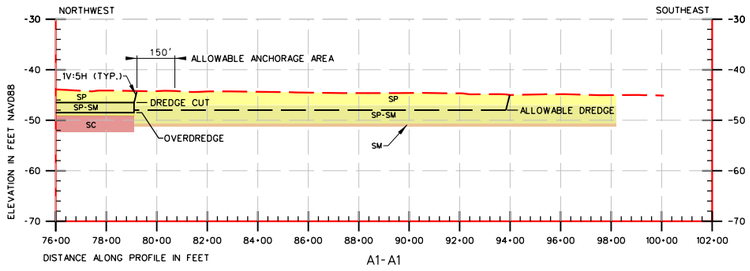
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

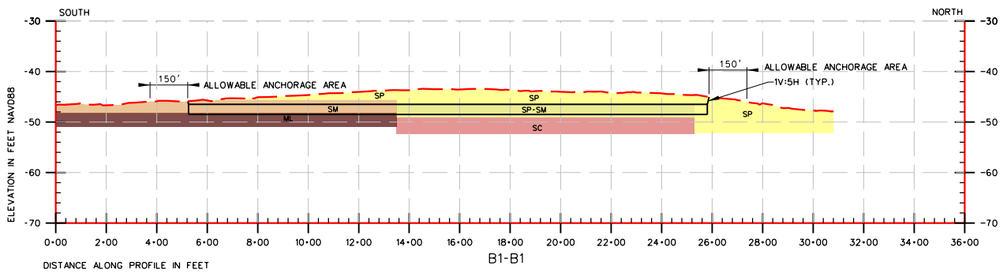
MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO861
PETIT BOIS PASS
OCS WEST 1 BORROW AREA

Sheet Reference Number:
CB-102







LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB301.DGN
Solicitation Number:

Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO861 OCS WEST 1 TYPICAL SECTIONS

Sheet Reference Number:
CB-301

BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	233997.95	1110853.25
2	235019.89	1111176.25
3	235101.44	1111145.20
4	235690.99	1111339.37
5	234337.02	1115241.72
6	233727.20	1115058.78
7	232998.34	1116327.06
8	232205.97	1116107.90

STATE/FEDERAL WATER BOUNDARY

TOP SLOPE OF EXCAVATION

CUT ELEV. -62.5'

CUT ELEV. -49'

ALLOWABLE ANCHORAGE AREA

A2

B2

MO861
MO862

150'

N

SCALE 1"=300'
300' 0 300 600'

LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- MO861 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEY VESSEL: IRVINGTON
4. SURVEYED BY: B. TABB & H. STANELY
5. SURVEY DATES: 12/17/14 & 12/18/14

US Army Corps of Engineers
Mobile District

Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

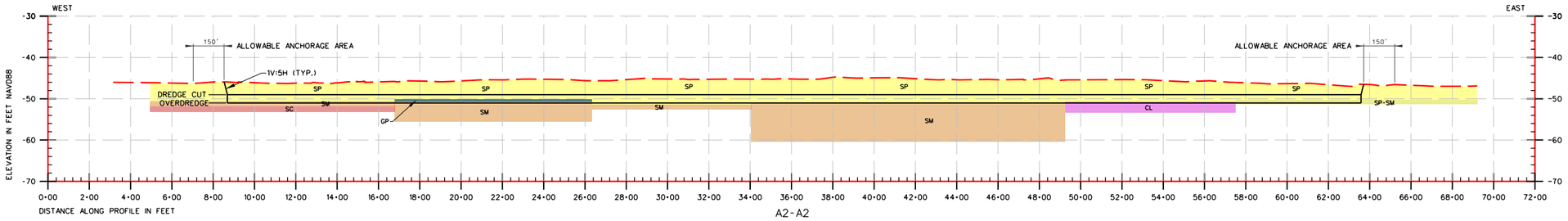
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

Date: SEPTEMBER 2016
File No.
I.S.O. Sheet File Name: BOEMCB103.DGN
Solicitation Number:

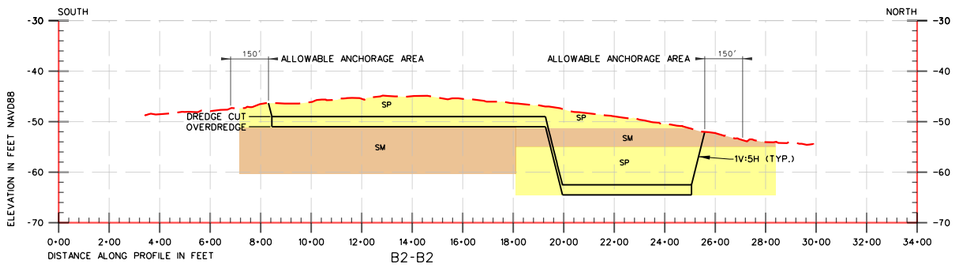
MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCKS MO861 AND MO862 PETIT BOIS PASS OCS WEST 4 BORROW AREA

Sheet Reference Number:
CB-103



A2-A2



B2-B2

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB302.DGN
Solicitation Number:

Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCKS MO861 AND MO862, OCS WEST 4 TYPICAL SECTIONS

Sheet Reference Number:
CB-302

BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	236606.42	1113721.28
2	237093.63	1116141.41
3	236353.50	1116603.33
4	235882.87	1116509.03
5	235660.50	1116265.04
6	234942.27	1115166.66
7	236447.38	1113860.83

LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- MO818 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

OCS WEST 2

OCS WEST 3

OCS WEST 4

MO818
MO862

MO861
MO862

STATE/FEDERAL
WATER BOUNDARY

ALLOWABLE ANCHORAGE AREA

CUT ELEV. -64.0

CUT ELEV. -65.5

150'

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED BY: H. LANGHAM
4. SURVEY VESSEL: IRVINGTON
6. SURVEY DATE: 10/29/14

SCALE 1"=400'
400' 0 400 800'

US Army Corps of Engineers
Mobile District

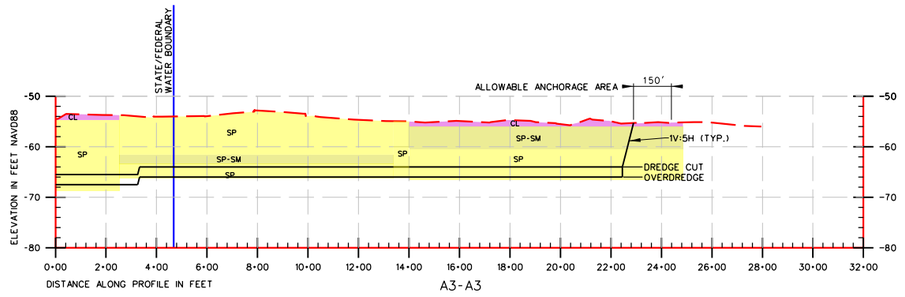
Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA	Designed By: E. GODSEY	Date: SEPTEMBER 2016	
	Drawn By: J. GIBSON	File No.	I.S.O. Sheet File Name: BOEMCB104.DGN
	Checked By: -		Solicitation Number:
	Reviewed By: -		

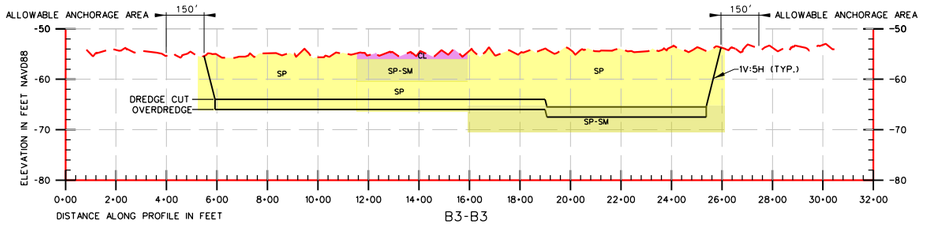
MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO862
PETIT BOIS PASS
OCS WEST 3 BORROW AREA

Sheet Reference Number:
CB-104



A3-A3



B3-B3

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

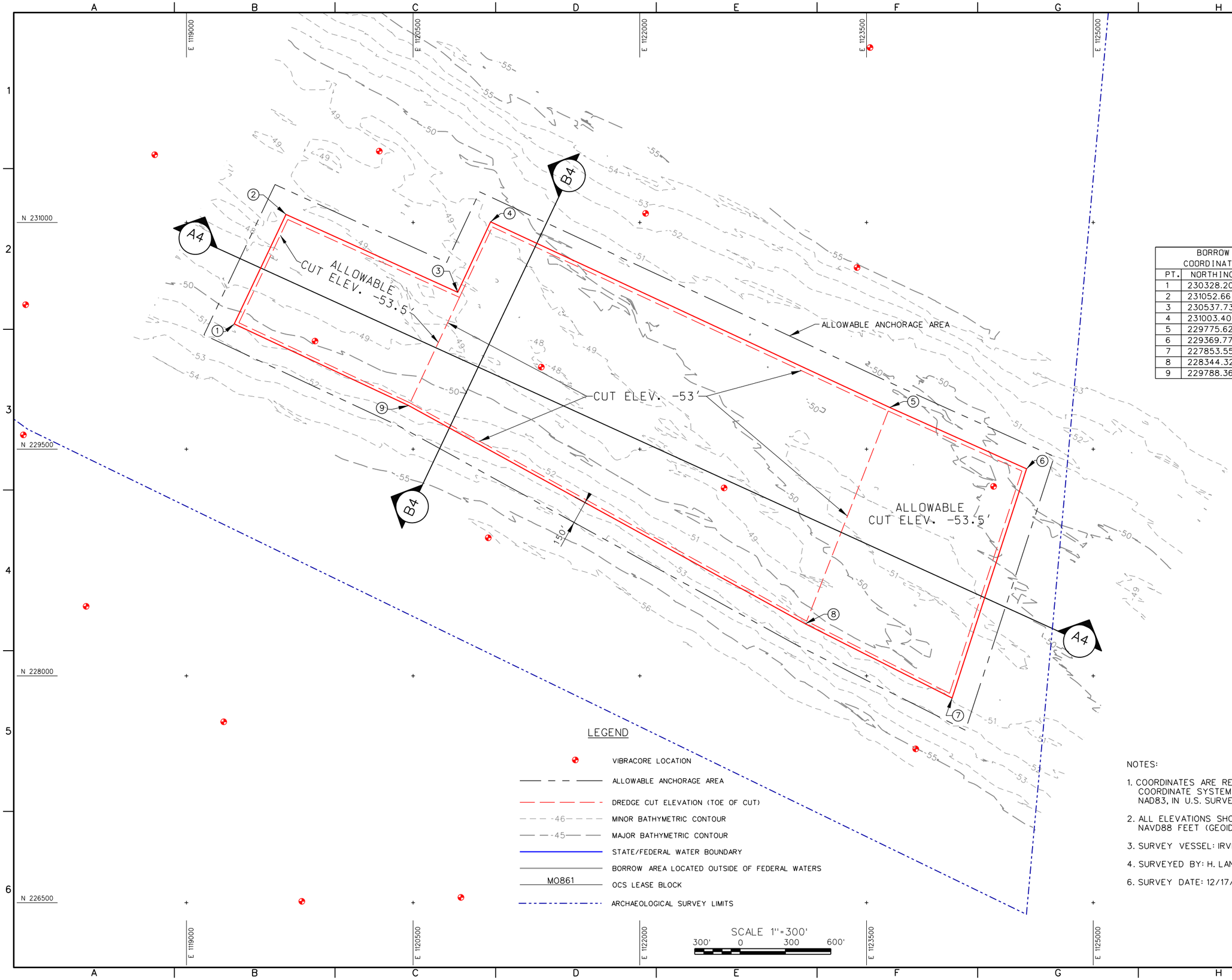
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA	Designed By: E. GODSEY	Date: SEPTEMBER 2016	
	Drawn By: J. GIBSON	File No.	
	Checked By: -	I.S.O. Sheet File Name: BOEMCB303.DGN	
	Reviewed By: -	Solicitation Number:	

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO862 OCS WEST 3 TYPICAL SECTIONS

Sheet Reference Number:

CB-303



BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	230328.20	1119315.92
2	231052.66	1119658.65
3	230537.73	1120794.70
4	231003.40	1121012.59
5	229775.62	1123653.84
6	229369.77	1124558.29
7	227853.55	1124066.10
8	228344.32	1123094.69
9	229788.36	1120470.95

LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- M0861 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

SCALE 1"=300'
300' 0 300 600'

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEY VESSEL: IRVINGTON
4. SURVEYED BY: H. LANGHAM
6. SURVEY DATE: 12/17/14

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

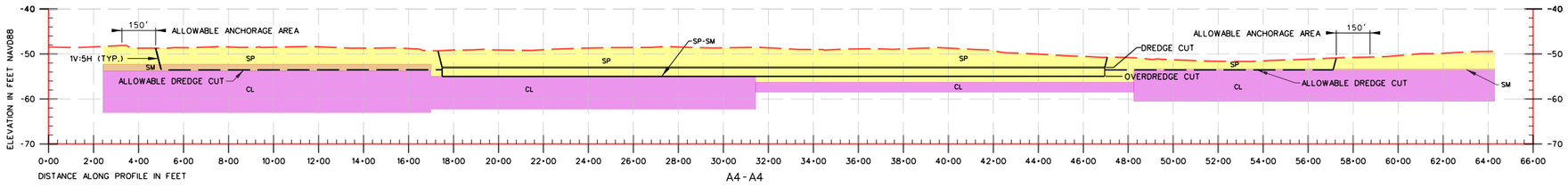
Designed By: E. GODSEY	Date: SEPTEMBER 2016	I.S.O. Sheet File Name: BOEMCB105.DGN	
Drawn By: J. GIBSON	File No.		Solicitation Number:
Checked By: -			
Reviewed By: -			

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

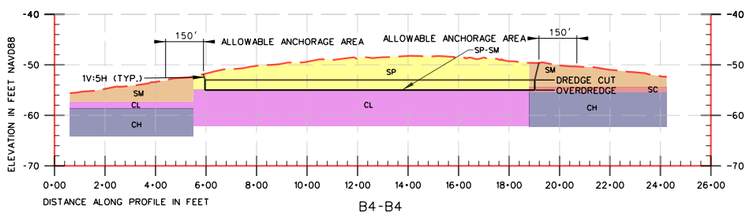
MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE
BLOCK M0862
PETIT BOIS PASS
OCS WEST 5 BORROW AREA

Sheet Reference Number:
CB-105



A4-A4



B4-B4

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB304.DGN
Solicitation Number:

Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

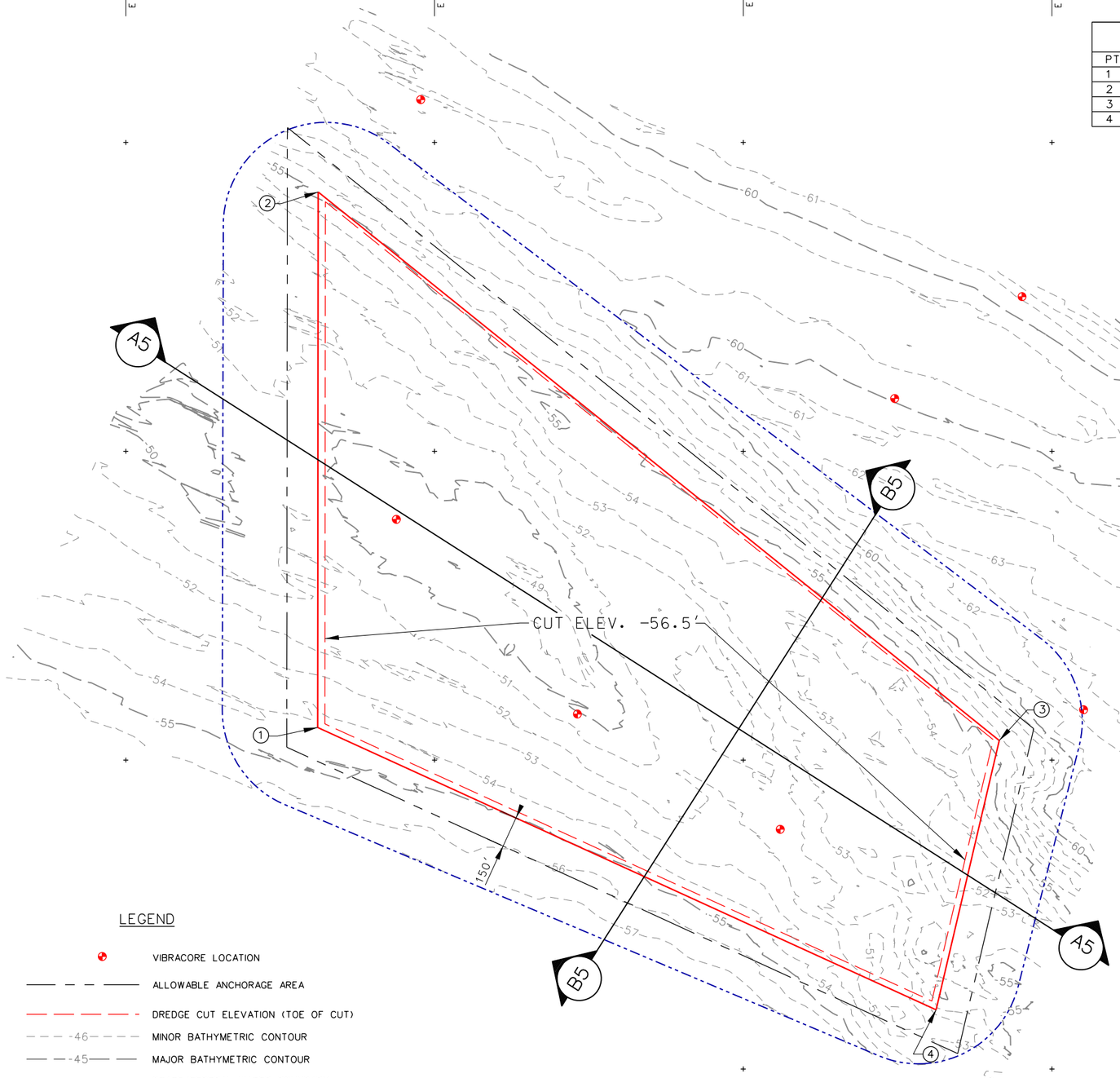
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO862 OCS WEST 5 TYPICAL SECTIONS

Sheet Reference Number:
CB-304

BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	225158.59	1128932.17
2	227759.12	1128934.76
3	225094.90	1132244.24
4	223787.23	1131937.61



LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- M0861 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

SCALE 1"=300'
300' 0 300 600'

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED BY: H. LANGHAM
4. SURVEY VESSEL: IRVINGTON
6. SURVEY DATE: 12/17/14

US Army Corps of Engineers
Mobile District

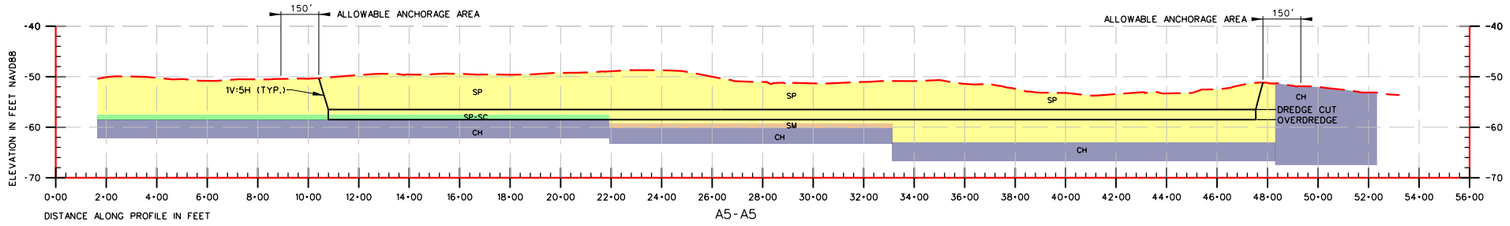
Symbol	Description	Date	Approved

Designed By: E. GODSEY	Date: SEPTEMBER 2016		
Drawn By: J. GIBSON	File No.	I.S.O. Sheet File Name: BOEMCB106.DGN	Solicitation Number:
Checked By: -			
Reviewed By: -			

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION
OCS LEASE
BLOCK M0863
PETIT BOIS PASS
OCS WEST 6 BORROW AREA

Sheet Reference Number:
CB-106



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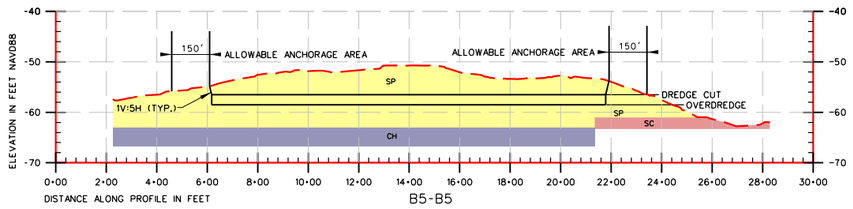


B5-B5

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA	Designed By: E. GODSEY	Date: SEPTEMBER 2016	
	Drawn By: J. GIBSON	File No.	
	Checked By: -	I.S.O. Sheet File Name: BOEMCB305.DGN	
	Reviewed By: -	Solicitation Number:	

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863 OCS WEST 6 TYPICAL SECTIONS

Sheet Reference Number:

CB-305

STATE/FEDERAL WATER BOUNDARY

BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	240620.40	1130436.97
2	241337.99	1130766.36
3	240579.22	1132003.89
4	240587.87	1132031.25
5	240346.85	1132526.09
6	240321.60	1132525.37
7	239610.67	1133019.21
8	239080.04	1132975.35
9	239333.41	1132176.59
10	240037.76	1132213.31
11	240327.14	1131861.24
12	240348.33	1131863.77
13	240207.62	1131280.01

LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- MO818 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

-N-

CUT ELEV. -49.5'

CUT ELEV. -54'

150'

ALLOWABLE ANCHORAGE AREA

SCALE 1"=200'
200' 0 200 400'

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED APRIL 23, 24, & 26, 2014.

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB107.DGN
Solicitation Number:

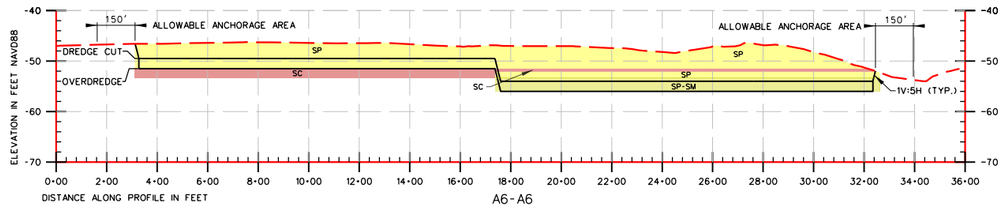
Designed By: E. CODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO819
PETIT BOIS PASS
OCS EAST 1 BORROW AREA

Sheet Reference Number:
CB-107



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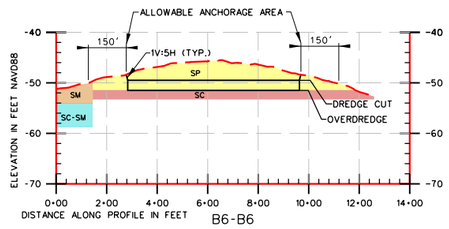


B6-B6

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Designed By: E. CODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -
Date: SEPTEMBER 2016
File No.
I.S.O. Sheet File Name: BOEMCB306.DGN
Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK M0819
OCS EAST 1
TYPICAL SECTIONS

Sheet Reference Number:
CB-306

BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	235816.31	1131548.90
2	236615.96	1132321.74
3	234426.82	1134285.25
4	234945.03	1134919.83
5	233348.53	1137400.69
6	232913.41	1137153.91
7	232596.85	1137463.73
8	231767.81	1138850.70
9	231106.70	1138623.70
10	231905.14	1136970.99
11	232230.63	1136497.79
12	232166.95	1136156.07
13	232338.44	1135252.97
14	232258.20	1134985.78
15	233326.50	1132944.38
16	233367.12	1132983.50

CUT ELEV. -53'

CUT ELEV. -54'

CUT ELEV. -56'

OCS EAST 5
CUT EL. -56.5'

150'

ALLOWABLE ANCHORAGE AREA

A7

B7

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED APRIL 23, 24, & 26, 2014.

LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- ARCHAEOLOGICAL SURVEY LIMITS

SCALE 1"=300'
300' 0 300 600'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB108.DGN
Solicitation Number:

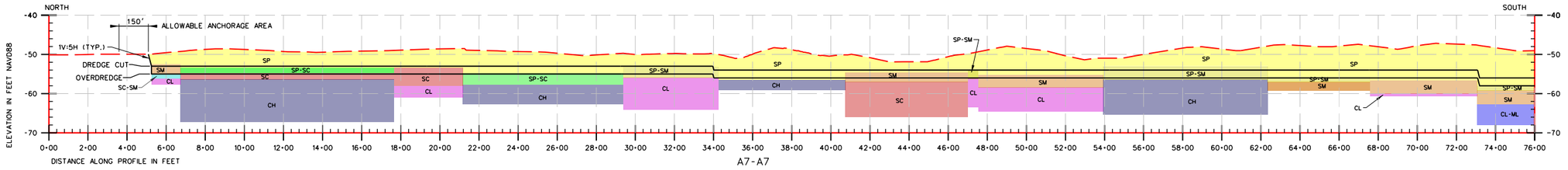
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

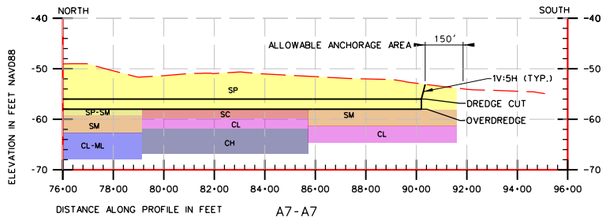
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

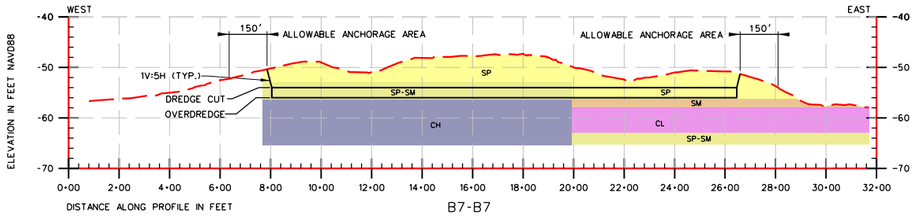
MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863
PETIT BOIS PASS
OCS EAST 2 BORROW AREA

Sheet Reference Number:
CB-108







LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY

H: SCALE 1"=200'
200' 0 200 400'

V: SCALE 1"=10'
10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB307.DGN
Solicitation Number:

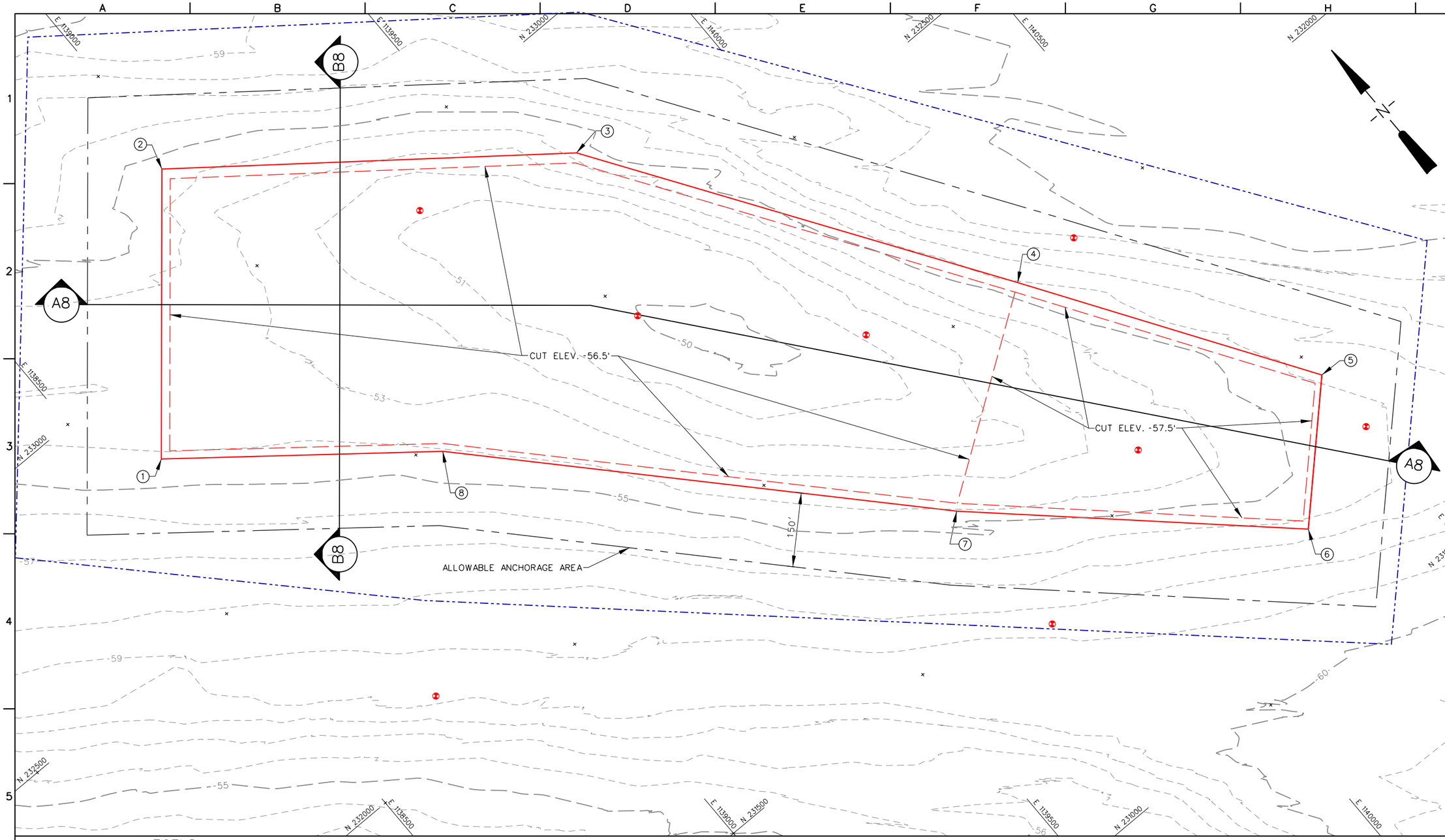
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863 OCS EAST 2 TYPICAL SECTIONS

Sheet Reference Number:
CB-307



LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- MO818 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

BORROW AREA COORDINATE TABLE

PT.	NORTHING	EASTING
1	232824.81	1138600.03
2	233273.73	1138978.08
3	232759.27	1139641.97
4	231984.05	1140157.33
5	231445.34	1140508.62
6	231224.00	1140286.81
7	231709.23	1139765.19
8	232470.61	1139046.23

SCALE 1"=100'
100' 0 100 200'

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED APRIL 23, 24, & 26, 2014.

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

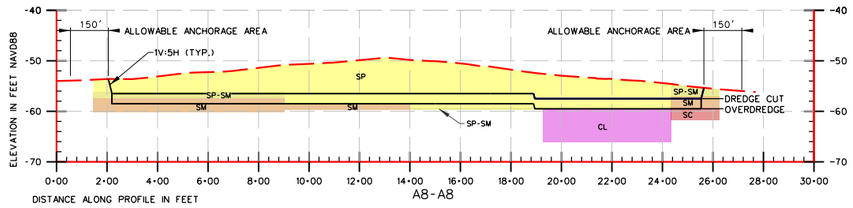
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -
Date: SEPTEMBER 2016
File No.
I.S.O. Sheet File Name: BOEMCB109.DGN
Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863
PETIT BOIS PASS
OCS EAST 5 BORROW AREA

Sheet Reference Number:
CB-109



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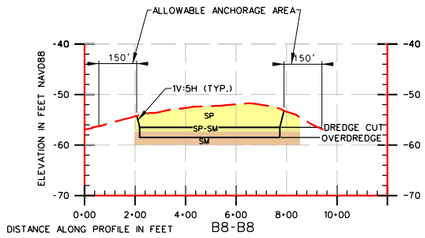


B8-B8

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'

200' 0 200 400'

V: SCALE 1"=10'

10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

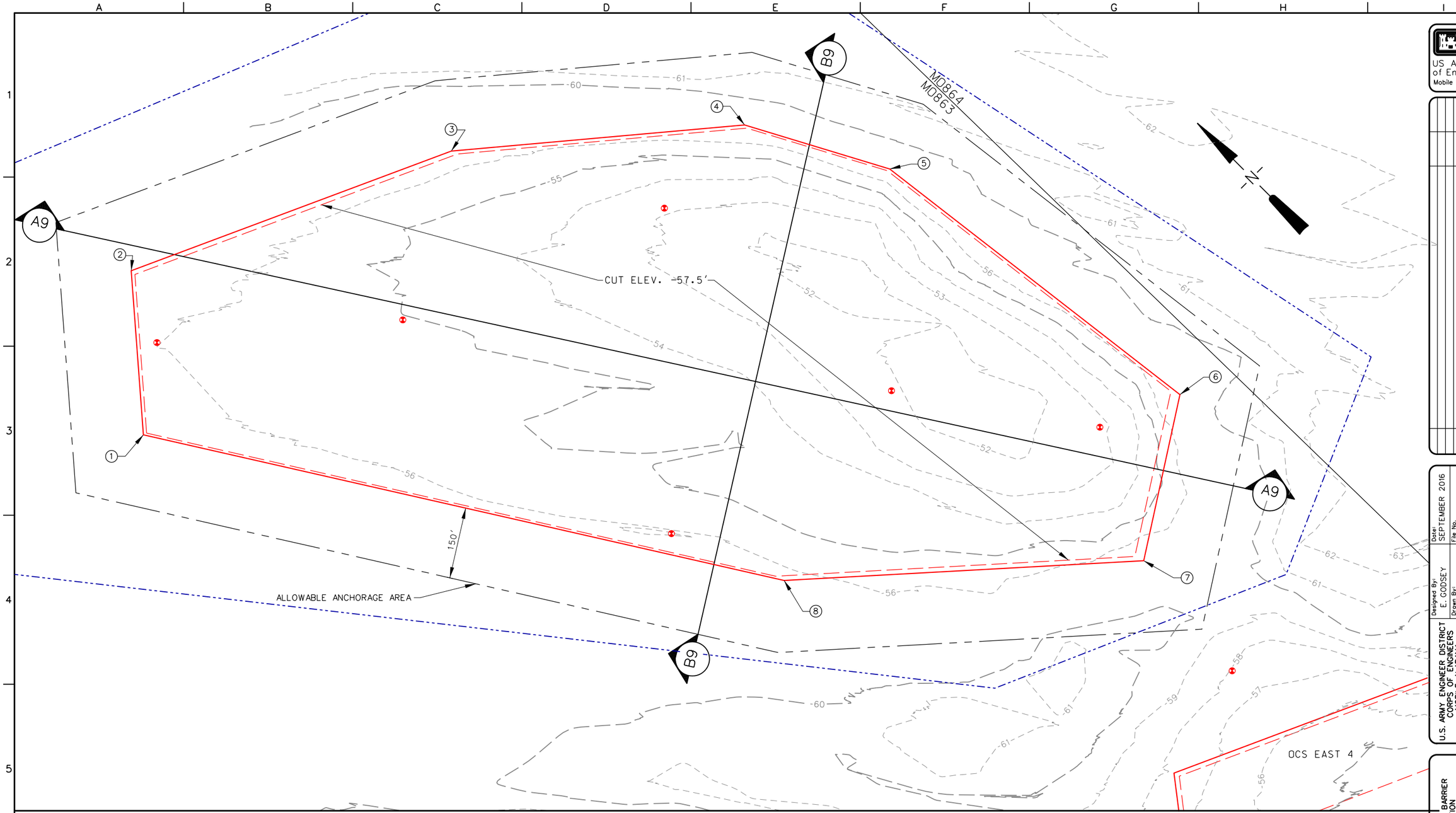
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA	Designed By: E. GODSEY	Date: SEPTEMBER 2016	
	Drawn By: J. GIBSON	File No.	
	Checked By: -	I.S.O. Sheet File Name: BOEMCB308.DGN	
	Reviewed By: -	Solicitation Number:	

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863 OCS EAST 5 TYPICAL SECTIONS

Sheet Reference Number:

CB-308



LEGEND

- VIBRACORE LOCATION
- ALLOWABLE ANCHORAGE AREA
- DREDGE CUT ELEVATION (TOE OF CUT)
- -46- MINOR BATHYMETRIC CONTOUR
- -45- MAJOR BATHYMETRIC CONTOUR
- STATE/FEDERAL WATER BOUNDARY
- BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS
- MO818 OCS LEASE BLOCK
- ARCHAEOLOGICAL SURVEY LIMITS

SCALE 1"=100'

100' 0 100 200'

BORROW AREA COORDINATE TABLE		
PT.	NORTHING	EASTING
1	233560.29	1141213.61
2	233821.47	1141438.63
3	233524.67	1142090.05
4	233129.13	1142563.27
5	232848.89	1142713.05
6	232084.54	1142808.33
7	231892.10	1142508.45
8	232395.40	1141946.49

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED APRIL 23, 24, & 26, 2014.

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MOBILE, ALABAMA

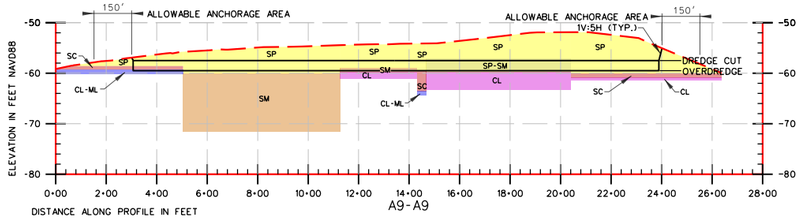
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB110.DGN
Solicitation Number:

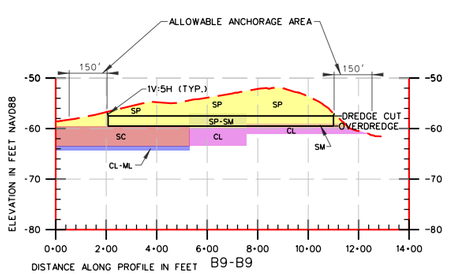
MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863
PETIT BOIS PASS
OCS EAST 3 BORROW AREA

Sheet Reference Number:
CB-110



A9-A9



B9-B9

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
- SM: SILTY SAND
- SC: CLAYEY SAND
- SC-SM: CLAYEY SAND/SILTY SAND
- CL: LOW PLASTICITY CLAY
- CL-ML: LOW PLASTICITY CLAY WITH SILT
- CH: HIGH PLASTICITY CLAY
- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'

200' 0 200 400'

V: SCALE 1"=10'

10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

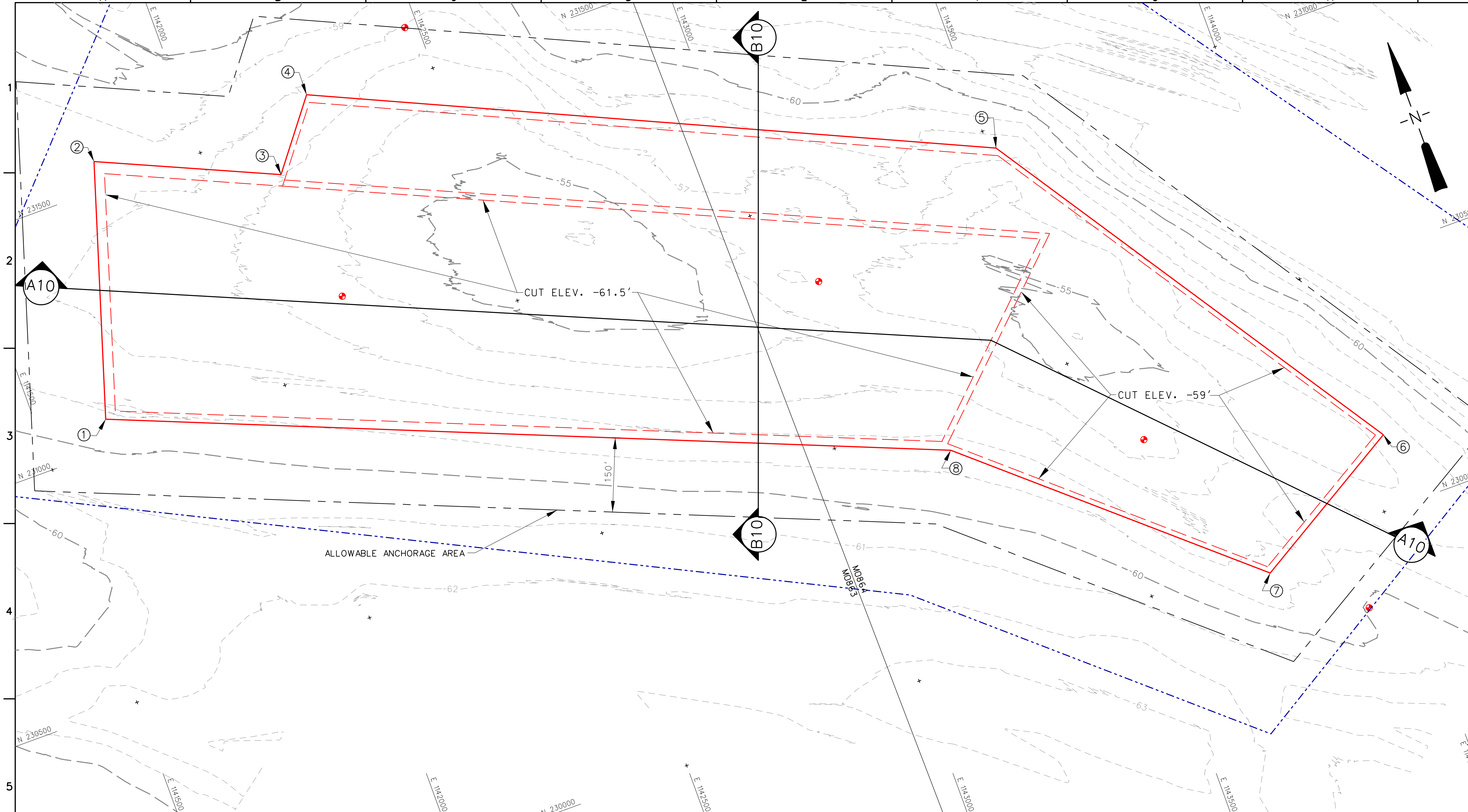
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA	Designed By: E. GODSEY	Date: SEPTEMBER 2016	
	Drawn By: J. GIBSON	File No.	I.S.O. Sheet File Name: BOEMCB309.DGN
	Checked By: -		Solicitation Number:
	Reviewed By: -		

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCK MO863 OCS EAST 3 TYPICAL SECTIONS

Sheet Reference Number:

CB-309



LEGEND

VIBRACORE LOCATION	ARCHAEOLOGICAL SURVEY LIMITS
ALLOWABLE ANCHORAGE AREA	
DREDGE CUT ELEVATION (TOE OF CUT)	
-46 MINOR BATHYMETRIC CONTOUR	
-45 MAJOR BATHYMETRIC CONTOUR	
STATE/FEDERAL WATER BOUNDARY	
BORROW AREA LOCATED OUTSIDE OF FEDERAL WATERS	
MO818 OCS LEASE BLOCK	

BORROW AREA COORDINATE TABLE

PT.	NORTHING	EASTING
1	231059.31	1141636.19
2	231556.69	1141792.15
3	231402.65	1142138.23
4	231536.67	1142241.98
5	230958.81	1143514.28
6	230146.62	1144051.61
7	229962.34	1143741.03
8	230416.26	1143219.53

SCALE 1"=100'

100' 0 100 200'

NOTES:

1. COORDINATES ARE RELATIVE TO STATE PLANE COORDINATE SYSTEM, MISSISSIPPI EAST ZONE, NAD83, IN U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO NAVD88 FEET (GEOID 2012A).
3. SURVEYED APRIL 23, 24, & 26, 2014.

US Army Corps of Engineers
Mobile District

Symbol | Description | Date | Approved

Date: SEPTEMBER 2016
File No.:
I.S.O. Sheet File Name: BOEMCB111.DGN
Solicitation Number:

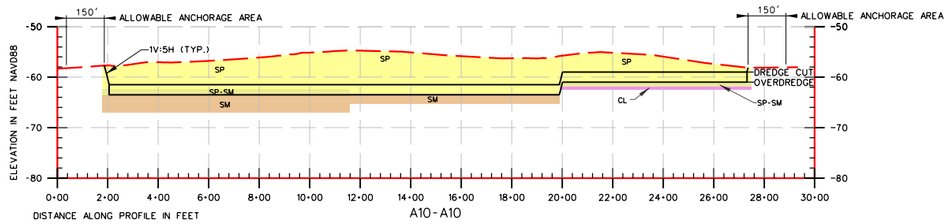
Designed By: E. GODSEY
Drawn By: J. GIBSON
Checked By: -
Reviewed By: -

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCKS MO863 AND MO864, PETIT BOIS PASS OCS EAST 4 BORROW AREA

Sheet Reference Number: CB-111



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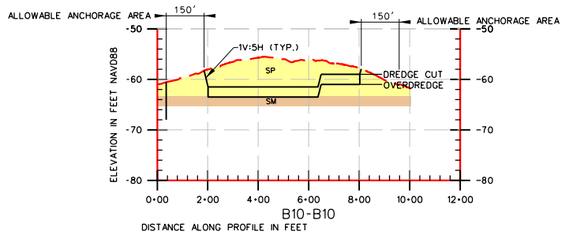

B10-B10

LEGEND

- EXISTING GRADE (APRIL 2014)
- SP: POORLY GRADED SAND
- SP-SM: POORLY GRADE SAND WITH SILT
- SP-SC: POORLY GRADED SAND WITH CLAY
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- ML: SILT
- GP: GRAVEL

H: SCALE 1"=200'

200' 0 200 400'

V: SCALE 1"=10'

10' 0 10' 20'

US Army Corps of Engineers
Mobile District

Symbol	Description	Date	Approved

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MOBILE, ALABAMA	Designed By: E. GODSEY	Date: SEPTEMBER 2016	
	Drawn By: J. GIBSON	File No.	
	Checked By: -	I.S.O. Sheet File Name: BOEMCB310.DGN	
	Reviewed By: -	Solicitation Number:	

MsCIP COMPREHENSIVE BARRIER ISLAND RESTORATION

OCS LEASE BLOCKS MO863 AND MO864, OCS EAST 4 TYPICAL SECTIONS

Sheet Reference Number:

CB-310

MEMORANDUM OF AGREEMENT
BETWEEN
THE BUREAU OF OCEAN ENERGY MANAGEMENT
OF THE DEPARTMENT OF THE INTERIOR
AND THE
U.S. ARMY CORPS OF ENGINEERS

REGARDING THE USE OF OUTER CONTINENTAL SHELF SAND RESOURCES FOR THE MISSISSIPPI COASTAL IMPROVEMENTS PROGRAM COMPREHENSIVE BARRIER ISLAND RESTORATION PROJECT, GULF ISLANDS NATIONAL SEASHORE, MISSISSIPPI

BOEM Negotiated Agreement No. OCS-G 35929

Signatory Page

DELAPP.JAMES.ANDREW.1087484218

Digitally signed by DELAPP.JAMES.ANDREW.1087484218
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=DELAPP.JAMES.ANDREW.1087484218
Date: 2016.11.28 15:44:18 -06'00'

James A. DeLapp
Colonel, U.S. Army
District Commander

Date: 28 November 2016

Michael A. Celata
Regional Director
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region

Date: 01 December 2016