

# DEPARTMENT OF THE ARMY PERMIT

Permittee: Coastal Protection and Restoration Authority

Permit No. MVN-2013-00266-WOO

Issuing Office: New Orleans District

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

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

Project Description: Excavate, deposit fill, and install a pipeline, all to create a beach and dune marsh habitat on Whiskey Island (TE-100) in accordance with drawings attached in 20 sheets, dated December 17, 2013.

Project Location: Restoration area on Whiskey Island; two (2) borrow areas located in the Gulf of Mexico, approximately 8.2 nautical miles (NM) to the southwest of the island on the outer continental shelf in Ship Shoal Block 88, and the mixed sediment source located approximately 4.2 NM to the southeast of the island in state-owned waters; and two (2) conveyance corridors connecting the borrow areas to the restoration area.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **June 30, 2019**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions: Page 4 - 11**

Further Information:

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

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- Section 404 of the Clean Water Act (33 U.S.C. 1344).
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

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

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.

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

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

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

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

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

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

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

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

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

X *[Signature]*  
(PERMITTEE)

X 6/12/2014  
(DATE)

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

*Darrell S. Barbara*

6/18/2014  
(DATE)

Darrell S. Barbara, Chief Western Evaluation Section

for Richard L. Hansen, District Commander

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

\_\_\_\_\_  
(TRANSFEREE)

\_\_\_\_\_  
(DATE)

SPECIAL CONDITIONS: MVN-2013-00266-WOO

7. Any alterations or modifications to the permitted plan must be submitted to the US Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch, for re-evaluation prior to beginning work.
8. The permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
9. You must install and maintain, at your expense, any safety lights and signals prescribed by the US Coast Guard, through regulations or otherwise, on your authorized facilities.
10. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
11. If the proposed project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the U.S. Coast Guard so that a Notice to Mariners, if required, may be prepared. Notification, with a copy of your permit approval and drawings, should be mailed to the U.S. Coast Guard, Sector New Orleans Command Center, 201 Hammond Highway, Metairie, Louisiana 70005, about 1 month before you plan to start work. Telephone inquiries can be directed to (504) 671-2107.
12. That structures will not be placed across any state-owned water bottoms without approval of the Louisiana Division of Administration, State Lands Office. The permittee will be responsible for contacting the State Lands Office to ascertain if the structure will be placed over state-owned water bottoms.
13. Barriers will be visible to the boating public both day and night so as to reduce the possibility of boat collision with the barriers.
14. The permittee shall follow Reasonable and Prudent Measures (RPM) as detailed in the U. S. Fish and Wildlife Service (USFWS) Biological Opinion (43440-2010-F-2769) for the Louisiana Coastal Area – Terrebonne Basin Barrier Shoreline Restoration Project dated September 23, 2010, pages 47 and 48.
  - a) A baseline piping plover survey shall be conducted within the migrating and wintering season immediately prior to initial construction within the action area. As part of that survey, the project footprint should be delineated using a global position system (GPS) unit and appropriately marked/flagged for future survey reference and data collection.
  - b) A survey of the intertidal benthic prey species community shall be conducted within the migrating and wintering season immediately prior to initial construction, at the same time as the plover distribution surveys, in order to establish a baseline of benthic prey species diversity and abundance.
  - c) Piping plover monitoring surveys shall be conducted during the migrating and wintering seasons throughout initial project construction and three consecutive years following

completion of initial construction.

- d) To confirm re-establishment of suitable foraging habitat for migrating and wintering plovers, monitoring surveys of the intertidal benthic prey species community shall be conducted each year following completion of initial construction for three consecutive years, preferably at the same time as the bird surveys.
- e) The Service shall be notified in writing at least 3 months prior to a renourishment event for each island. If renourishment events are conducted during the migrating and wintering season, piping plover monitoring surveys shall be conducted for the duration of construction activities following the survey schedule outlined in Appendix B.
- f) A comprehensive report describing the actions taken to implement the RPMs and terms and conditions associated with this incidental take statement (including data sheets from surveys conducted) shall be submitted to this office and the Service by June 1 of the year following completion of all required surveys.

15. In order to be exempt from the prohibitions of section 9 of the Endangered Species Act, the permittee shall execute the following terms and conditions, which implement the RPMs described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary. The following Terms and Conditions are detailed in the USFWS Biological Opinion (43440-2010-F-2769) for the Louisiana Coastal Area – Terrebonne Basin Barrier Shoreline Restoration Project dated September 23, 2010, pages 48 and 49:

### **Monitoring Requirements**

#### **1. Requirements for piping plover surveys**

- a) A survey schedule (with dates) is listed in Appendix B and the recommendation is for at least 3 survey dates per month; this schedule should be followed as closely as possible. If conditions require a deviation from the recommended survey schedule, such information should be carefully documented, including an explanation why any deviation from the recommended schedule was deemed necessary. The Service recognizes that given the remoteness of the project area and the potential for inclement weather conditions during the plover wintering season, three survey dates per month may be difficult to achieve in Louisiana. Therefore, the Service will require a minimum of two survey dates per month.
- b) Piping plover identification, especially when in non-breeding plumage, can be difficult. Qualified professionals with shorebird/habitat survey experience must conduct the required survey work. Piping plover monitors must be capable of detecting and recording locations of roosting and foraging plovers, and documenting observations in legible, complete field notes. Aptitude for monitoring includes keen powers of observation, familiarity with avian biology and behavior, experience observing birds or other wildlife for sustained periods, tolerance for adverse weather, experience in data collection and management, and patience.
- c) Binoculars, a GPS unit, a 10-60x spotting scope with a tripod, and the Service datasheet (Appendix B) must be used to conduct the surveys.
- d) Negative (i.e., no plovers seen) and positive survey data shall be recorded and reported.
- e) Piping plover locations shall be recorded with a GPS unit set to record in decimal degrees in universal transverse mercator (UTM) North American Datum 1983 (NAD83).

- f) Habitat, landscape, and substrate features used by piping plovers when seen shall be recorded. Such features are outlined on the Service data sheet in Appendix B.
- g) Behavior of piping plovers (e.g., foraging, roosting, preening, bathing, flying, aggression, walking) shall be documented on the Service data sheet in Appendix B.
- h) Color-bands seen on piping plovers shall also be carefully documented, and should also be reported according to the information found at the following websites. Information regarding color-band observations can be found at: [http://www.fishwild.vt.edu/piping\\_plover/Protocols\\_final\\_draft.pdf](http://www.fishwild.vt.edu/piping_plover/Protocols_final_draft.pdf), [http://www.waterbirds.umn.edu/Piping\\_Plovers/piping2.htm](http://www.waterbirds.umn.edu/Piping_Plovers/piping2.htm), and <http://www.fws.gov/northeast/pipingplover/pdf/BahamasBandReporting2010.pdf>.

## 2. Requirements for surveying benthic prey species

- a) A qualified professional with sediment/macrobenthic sampling experience must conduct the required benthic prey species surveys.
- b) A baseline macroinvertebrate survey will be conducted at the same time of the initial piping plover survey during the migrating/wintering season immediately prior to construction. Additional surveys will be conducted during the migrating/wintering season each year post- construction for three consecutive years to determine benthic prey species recovery. Such surveys shall be conducted at the same time as the plover surveys.
- c) Sampling will be conducted using a basic before and after control and impact design method. Sampling will be coordinated with piping plover foraging observations based on low tide surveys.
- d) In addition to recording benthic species abundance and diversity, a qualitative measure of sediment characteristics (sand, shell, mud) will also be recorded.
- e) A detailed sampling methodology shall be developed in coordination with this office, the Service and LDWF prior to initiating surveys.

## 3. Requirements for surveying pelicans, wading birds and shorebirds

- a) Monitoring will be conducted in accordance with section 4.6.3 of the Biological Assessment conducted with the USFWS.
- b) In addition, the permittee will follow the migratory bird abatement plan developed with the USFWS.

### *Reporting Requirements*

1. Incorporate all data collected into an appropriate database, preferably one for piping plovers and one for benthic prey species.
2. Annual update reports shall be provided to this office, the Service and LDWF by June 30 of each calendar year once construction begins. Annual update reports should include data sheets, maps, a copy of the database, and the progress and initial findings

of piping plover and benthic community surveys, as well as any problematic issues that may hinder future survey efforts.

3. If the Corps foresees any problematic issues that would require a change in the recommended survey schedule due to work conditions or project delays, the Corps will immediately notify the Service so that we can resolve/correct any such issues.
4. A final comprehensive report should be provided to this office, the Service and LDWF by June 30 following the third year of surveys. That final report should include an analysis of all data results from the piping plover and benthic community surveys.
5. At least six months prior to mobilization, the Corps should notify the Service in writing prior to each proposed renourishment event. That notification should include whether there are any changes in the proposed amount of renourishment per island.

16. Upon locating a dead or injured piping plover that may have been harmed or destroyed as a direct or indirect result of the proposed project, the permittee and/or contractor shall be responsible for notifying the Service's Lafayette, Louisiana, Field Office (337/291-3100) and the LDWF's Natural Heritage Program (225/765-2821). Care shall be taken in handling an injured piping plover to ensure effective treatment or disposition and in handling dead specimens to preserve biological materials in the best possible state for later analysis.

17. To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- a) For colonies containing nesting wading birds (i.e. herons, egrets, night-herons, ibis, and roseate spoonbills), anhingas, and/or cormorants, all activity occurring within 1,000 feet of a rookery should be restricted to the non-nesting period (i.e., September 1 through February 15, exact dates may vary within this window depending on species present).
- b) For colonies containing nesting gulls, terns, and/or black skimmers, all activity occurring within 650 feet of a rookery should be restricted to the non-nesting period (i.e., September 16 through April 1, exact dates may vary within this window depending on species present).

18. Guidelines for Activities in Proximity to Manatees and Their Habitat:

- a) All personnel associated with the project shall be informed of the potential presence of manatees, manatee speed zones, and the need to avoid collisions with and injury to manatees. Such personnel instruction shall also include a discussion of the civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- b) All contract and/or construction personnel are responsible for observing water-related activities for the presence of manatee(s).
- c) Temporary signs shall be posted prior to and during all construction/dredging activities to remind personnel to be observant for manatees during active construction/dredging operations or within vessel movement zones (i.e., work area),

- and at least one sign shall be placed where it is visible to the vessel operator.
- d) Siltation barriers, if used, shall be made of material in which manatees could not become entangled, and should be properly secured and regularly monitored. Barriers shall not impede manatee movement.
  - e) If a manatee is sighted within 100 yards of the active work zone, special operating conditions shall be implemented, including: no operation of moving equipment within 50 feet of a manatee; all vessels shall operate at no wake/idle speeds within 100 yards of the work area; and siltation barriers, if used, shall be re-secured and monitored. Once the manatee has left the 100-yard buffer zone around the work area on its own accord, special operating conditions are no longer necessary, but careful observations would be resumed.
  - f) Any manatee sighting shall be immediately reported to the U.S. Fish and Wildlife Service's (Service) Lafayette, Louisiana, Field Office (337/291-3100) and the Louisiana Department of Wildlife and Fisheries (LDWF), Natural Heritage Program (225/765-2821).

19. The Chitimacha Tribe of Louisiana has stated that the project area is part of the aboriginal Chitimacha homelands. If during the course of work at the site, prehistoric and/or historic aboriginal cultural materials are discovered, the permittee will contact the Chitimacha Tribe of Louisiana at P.O. Box 661, Charenton, LA 70523, and the CEMVN. CEMVN will initiate the required Federal, State, and Tribal coordination to determine the significance of the cultural materials and the need, if applicable, for additional cultural resource investigations.

20. Prior to the initiation of the proposed project, CPRA shall notify Vaughan McDonald, with LDWF, in writing, of their intent to begin the project and give a brief outline of the project schedule. Upon receipt of this notification, LDWF may request a pre-project meeting with CPRA to coordinate project details.

21. CPRA shall notify Mr. Cassidy Lejeune, at 337/373-0032 prior to any activities within Isle Dernieres Barrier Island Refuge.

22. The permittee shall coordinate with the U.S. Coast Guard, attn: Chief Aaron Hemme at 501-252-8854, regarding dredging protocol, for areas affected by the Deepwater Horizon oil spill.



Migratory Bird Abatement Plan  
For Shorebirds  
Caillou Lake Headlands Restoration (TE-100)

The Caillou Lakes Headlands Restoration is proposed to be constructed in an area where shorebird nesting may occur. These bird species are considered to be migratory, and therefore, are protected by the U.S. Fish and Wildlife Service (Service). Development and adherence to an abatement plan will serve to decrease the risks associated with project construction. The nesting period for these bird species along with other species encountered in beach/back dune habitats are noted on the attached list. Please note that the nesting season for brown pelican is much longer than other seabirds/shorebirds, so if brown pelicans are nesting within the project area an abatement plan specific to that species will need to be developed.

The Migratory Bird Treaty Act prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the U.S. Department of the Interior. While the Act has no provision for allowing unauthorized take, the Service realizes that some birds may be harassed, harmed or killed due to project construction even if all reasonable measures to protect birds are implemented. The Service's Office of Law Enforcement (LE) carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries that have taken effective steps to minimize their impacts on migratory birds, and by encouraging others to enact such programs. As such, LE focuses their resources on investigating and prosecuting individuals and companies that take migratory birds without regard for their actions or without consideration of Service conservation and/or impact minimization measures to avoid take.

If construction is to occur any time during the shorebird nesting season (March 15<sup>th</sup> to September 15<sup>th</sup>), the following abatement protocol should be adhered to:

Pre-Construction Monitoring

Twice a month surveys conducted in coordination with wintering bird monitoring will be used to provide information on potential nesting shorebird species activity and populations as they build in the spring. Ongoing winter bird surveys can be used as a part of this monitoring requirement as long as those doing the monitoring are trained to look for breeding behavior. Starting March 1st, a radius of 1,000 feet from the project work site should be evaluated once a week by personnel qualified to identify shorebird species and their breeding behavior. The monitoring effort should include unvegetated or sparsely vegetated sand flats and overwash areas which are prime nesting habitat. Weekly monitoring work shall continue thru July 15<sup>th</sup>, at which time the status of construction along with bird activity, and nesting initiation will be used to determine if more surveys are required. Monitoring will continue until the active construction period (i.e., when heavy machinery is operating and personnel are onsite daily). On large project areas, monitoring in areas not being affected by ongoing construction activities will need to continue until the threat of nesting has subsided (July 15<sup>th</sup>).

### Monitoring During Active Construction

To minimize impacts to migratory birds, personnel familiar with protected birds shall be employed to allow for easy identification of birds encountered during the execution of active work. Monitoring shall be conducted continuously throughout the period of construction, or until the period of nest initiation is over. On large project areas, monitoring in areas not being affected by ongoing construction activities will need to continue until the threat of nesting has subsided (July 15<sup>th</sup>). If no evidence of nesting behavior is observed during the period of March 1<sup>st</sup> to July 15<sup>th</sup>, it can be assumed that the area will not be utilized by nesting birds.

### Abatement Procedure

If work is to occur in areas of known historic nesting, it is advised that passive and/or active abatement techniques be deployed before the onset of the nesting season regardless of whether monitoring reveals active bird use.

In the event that initiation of nesting birds (i.e., courtship and/or copulation) is discovered, then the Service shall be contacted and abatement measures should be altered to include more active methods. Passive measures such as the placement of filter cloth or orange fencing material on the beach may deter birds from nesting. If unsuccessful, other measures such as dogs or continual human presence shall be used. More aggressive methods of hazing (i.e., cannons, flares) could also be used if necessary. Timing, persistence, organization, and diversity of abatement measures are crucial in deterring birds from establishing active nests.

All abatement measures shall be conducted under the supervision of personnel who are familiar with wading bird and shorebird ecology and are familiar with the proposed abatement methods, and shall be coordinated with the Service prior to use. To increase the effectiveness of the nesting prevention program, a combination of abatement measures shall be employed. Additionally, the types of abatement measures, as well as their spatial and temporal deployment, shall be changed frequently to reduce the chances that birds become habituated to the abatement methods. The use of habitat altering techniques such as furrowing will need to be cleared with the Service in those areas identified as critical habitat for federally listed species and in areas known to support listed species.

**Any evidence of nests or eggs of any protected bird species, the work shall immediately cease in the vicinity (650) of the nest and the Service shall be notified.**

### Reporting

Monitoring the effectiveness of the abatement methods and adaptive management are extremely important to ensuring that the nesting prevention program is successful. Once construction is underway, daily reports will contain information on bird monitoring activities that include locations of surveys, personnel, equipment, results, and any indications of shorebird activity levels and species. Additionally, once abatement procedures have been initiated, reports will contain information on locations, level of effort, techniques employed and effectiveness.

Results of all bird monitoring and minimization measures shall be recorded and summarized in a post-construction report, which may provide valuable information for future construction projects. A copy of that summary report shall be provided to the Service.

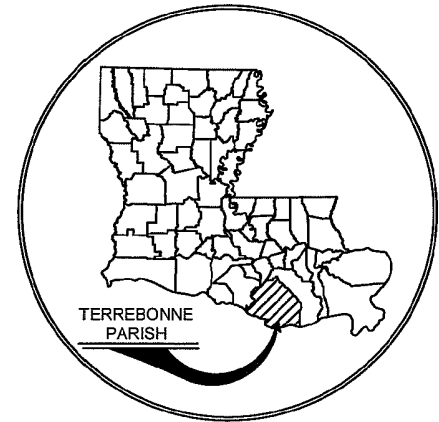
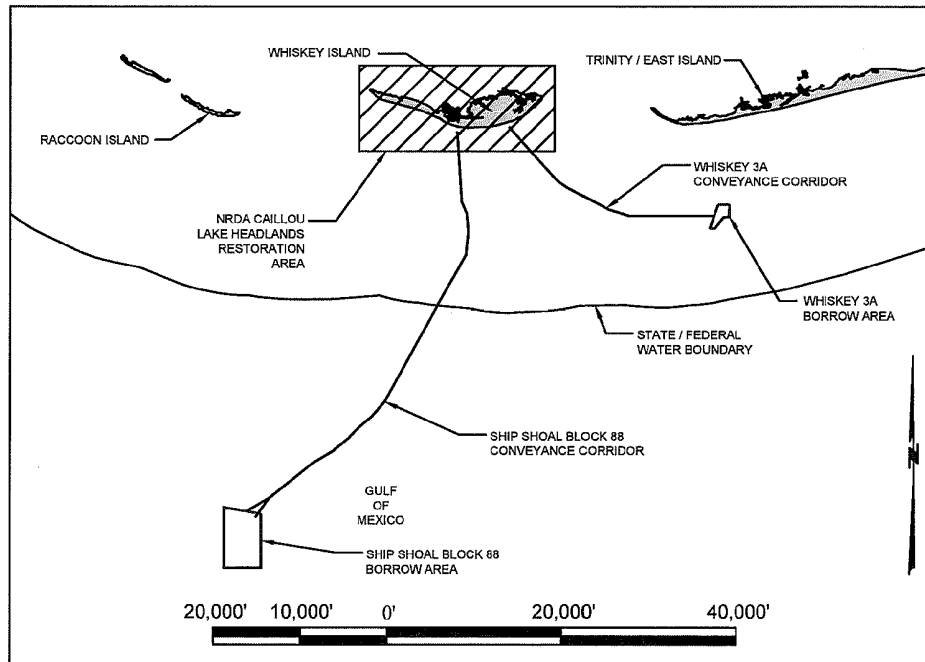
## Breeding Periods for Louisiana Coastal Birds

<u>Species</u>	<u>Breeding Period</u>
Brown Pelican	November 1 to September 1
Black Skimmer	May 1 to September 15
American Oystercatcher	April 1 to September 15
Wilson's Plover	April 1 to August 1
Snowy Plover	April 1 to August 1
Killdeer	March 15 to September 1
Willet	April 15 to August 1
Black-necked Stilt	April 15 to August 15
Laughing Gull	April 1 to August 1
Gull-billed Tern	May 1 to August 1
Caspian Tern	May 11 to September 15
Royal Tern	April 1 to September 1
Sandwich Tern	April 1 to September 15
Forster's Tern	March 15 to August 1
Least Tern	April 15 to September 15
Clapper Rail	April 15 to September 1
Seaside Sparrow	March 15 to July 3
Common Nighthawk	May 15 to September 1


STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY

NRDA CAILLOU LAKE HEADLANDS  
STATE PROJECT NO. TE-100  
TERREBONNE PARISH, LOUISIANA  
PERMIT (MVN-2013-00266-WOO)

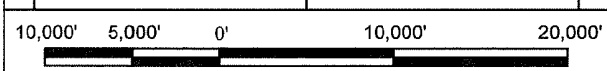
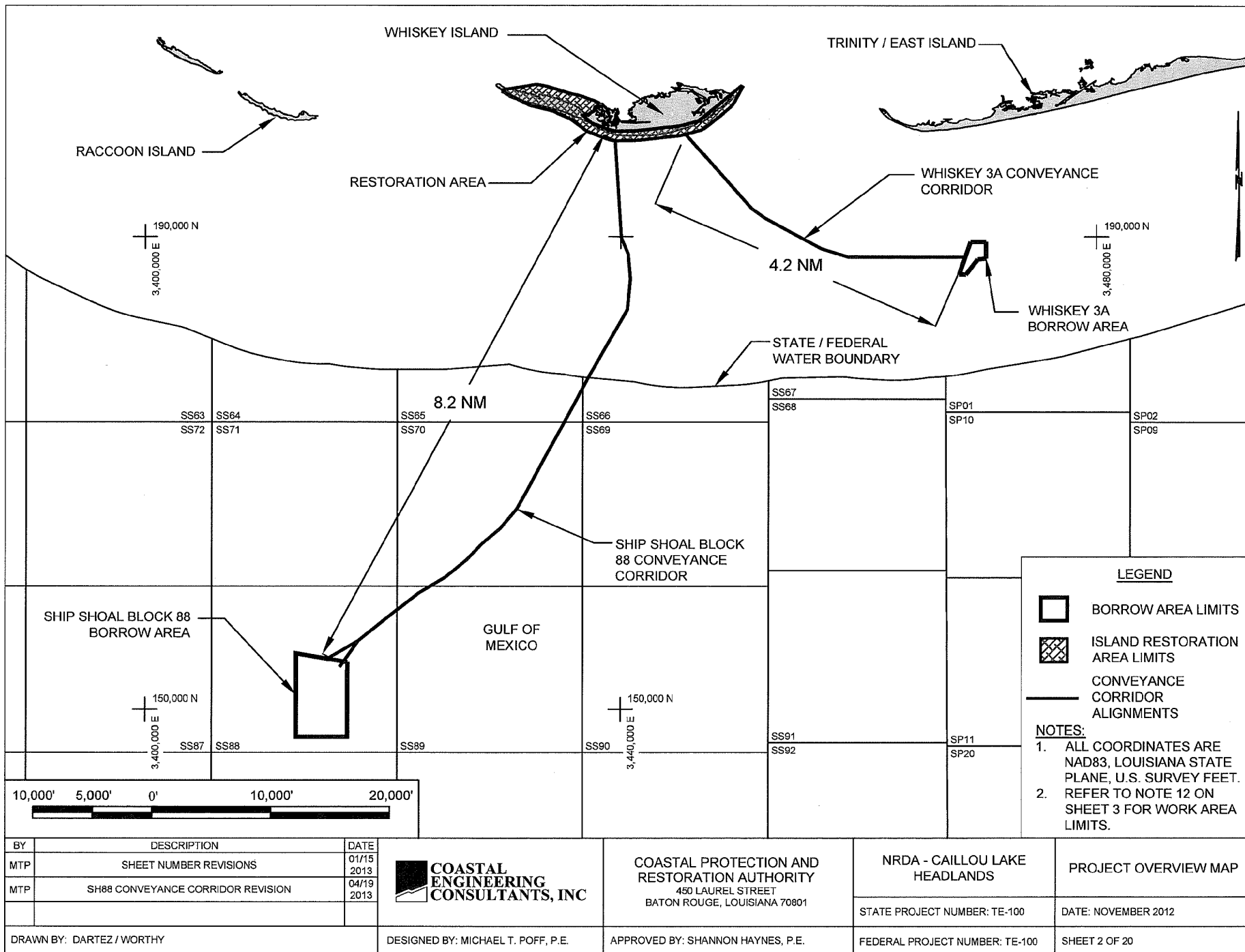
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**NOTES:**  
1. NOT TO BE USED FOR CONSTRUCTION.  
2. RETAIN ENTIRE SET AS ONE, INDIVIDUAL SHEETS SHOULD NOT BE REMOVED.

BY	DESCRIPTION	DATE			NRDA - CAILLOU LAKE HEADLANDS	TITLE SHEET
MTP	UPDATE TO SHEET INDEX AND SHEET NUMBER REVISIONS	01/15 2013	 <b>COASTAL ENGINEERING CONSULTANTS, INC</b>	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
MTP	SH88 CONVEYANCE CORRIDOR REVISION	04/19 2013				FEDERAL PROJECT NUMBER: TE-100
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.		

DWH-AR0233644



BY	DESCRIPTION	DATE
MTP	SHEET NUMBER REVISIONS	01/15 2013
MTP	SH88 CONVEYANCE CORRIDOR REVISION	04/19 2013

**COASTAL ENGINEERING CONSULTANTS, INC**

COASTAL PROTECTION AND RESTORATION AUTHORITY  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

NRDA - CAILLOU LAKE HEADLANDS

PROJECT OVERVIEW MAP

STATE PROJECT NUMBER: TE-100

DATE: NOVEMBER 2012

DRAWN BY: DARTEZ / WORTHY

DESIGNED BY: MICHAEL T. POFF, P.E.

APPROVED BY: SHANNON HAYNES, P.E.

FEDERAL PROJECT NUMBER: TE-100

SHEET 2 OF 20

DWH-AR0233645

**GENERAL NOTES:**


1. ANY EXCAVATED MATERIAL WILL BE, TO THE BEST OF KNOWLEDGE, FREE OF CONTAMINANTS AND/OR WILL BE DISPOSED OF IN AN APPROVED LANDFILL.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE, CONSTRUCTION PLANS, AND CONTRACT DOCUMENTS AND SHALL CONDUCT WORK IN STRICT ACCORDANCE WITH ALL PERMITS AND APPROVALS OBTAINED FOR THIS PROJECT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ERRORS OR DISCREPANCIES IN THE PLANS PRIOR TO BIDDING.
3. ALL AERIAL IMAGERY FROM LOUISIANA DEPARTMENT OF HOMELAND SECURITY AND EMERGENCY PREPAREDNESS, 2010 AND MAY NOT BE INDICATIVE OF CURRENT CONDITIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PIPELINE AND UTILITY OPERATORS AT TIME OF CONSTRUCTION. ALL PIPELINES AND UNDERGROUND UTILITIES SHALL BE FIELD LOCATED AND MARKED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOUISIANA ONE CALL SYSTEM (1-800-272-3020) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION (DIGGING, DREDGING, JETTING, ETC.) OR DEMOLITION ACTIVITY. THE CONTRACTOR SHALL ALSO NOTIFYING PIPELINE AND UTILITY OPERATORS 72 HOURS PRIOR TO ANY EXCAVATION.
6. THE WATER BOTTOM SHALL NOT BE DISTURBED DURING ACCESS TO THE PROPOSED WORK LOCATION, OR BY THE AUTHORIZED ACTIVITIES WHETHER IT BE BY DREDGING, WHEEL WASHING , PROPWASHING, JETTING, MUCKING, PLOWING, BULL DOZING OR ANY MEANS OF MOVING BOTTOM MATERIAL, EXCEPT AS DEPICTED ON THE PERMIT SHEETS. POWERED VESSELS SHALL BE OPERATED SO AS NOT TO DISTURB THE WATER BOTTOM BY PROPELLER OR JET ACTION.
7. ALL LOGS, STUMPS, AND OTHER DEBRIS UNEARTHED DURING DREDGING SHALL BE REMOVED TO AN APPROVED OFFSITE DISPOSAL AREA.
8. THE CONTRACTOR MUST INSTALL AND MAINTAIN ANY SAFETY LIGHTS, SIGNS, AND SIGNALS PRESCRIBED BY THE U.S. COAST GUARD, THROUGH REGULATIONS OR OTHERWISE ON THE AUTHORIZED FACILITIES.
9. ANY DAMAGE TO EXISTING U.S. COAST GUARD NAVIGATION AIDS OR PRIVATE NAVIGATION AIDS SHALL BE REPAIRED BY THE CONTRACTOR TO U.S. COAST GUARD STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
10. PIPELINES IN OPEN WATER AND/OR NAVIGABLE WATERS SHALL BE MARKED WITH BUOYS BY THE CONTRACTOR IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN BUOYS DURING CONSTRUCTION OR HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THE DREDGE TO AVOID DREDGING IN RESTRICTED AREAS.
11. THE PROPOSED PROJECT AND ANY FUTURE MAINTENANCE WORK INVOLVING THE USE OF FLOATING CONSTRUCTION EQUIPMENT (BARGE MOUNTED CRANES, BARGE MOUNTED PILE DRIVING EQUIPMENT, FLOATING DREDGE EQUIPMENT, DREDGE DISCHARGE PIPELINES, ETC.) IN FEDERAL WATERS, SHALL NOTIFY THE U.S. COAST GUARD SO THAT A NOTICE TO MARINERS, IF REQUIRED, MAY BE PREPARED. NOTIFICATION, WITH A COPY OF THE PERMIT APPROVAL AND DRAWINGS, SHALL BE MAILED TO THE U.S. COAST GUARD, SECTOR NEW ORLEANS COMMAND CENTER, 201 HAMMOND HIGHWAY, METAIRIE, LOUISIANA 70005, 30 DAYS BEFORE COMMENCEMENT OF WORK.
12. THE WORK AREA SHALL CONSIST OF THE BORROW AREAS, CONVEYANCE CORRIDORS, ACCESS CHANNELS, BORROW CHANNELS, CONTAINMENT DIKE CONSTRUCTION AREAS, BEACH AND DUNE FILL TEMPLATE, AND THE MARSH FILL TEMPLATE. THE CONTRACTOR SHALL BE REQUIRED TO CONFINE HIS/HER PLANT, EQUIPMENT, AND OPERATIONS OF PERSONNEL WITHIN THE LIMITS OF THE WORK AREA, AREAS PERMITTED BY LAW, ORDINANCES, PERMITS, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT UNREASONABLY ENCUMBER THE PREMISES WITH PLANT OR EQUIPMENT.
13. THE CONTRACTOR SHALL FOLLOW CONVEYANCE CORRIDORS, ACCESS CHANNELS, AND / OR FILL TEMPLATES, AND SHALL NOT, AT ANY TIME, TRAVEL ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS SPECIFIED IN THE PERMIT OR THROUGH WRITTEN DIRECTION FROM ENGINEER.
14. THE CONTRACTOR SHALL WORK COOPERATIVELY WITH THE OWNER TO ADDRESS THE NOTIFICATION AND COORDINATION REQUIREMENTS WITH THE LANDOWNERS, UTILITY OPERATORS, AND PIPELINE COMPANIES.
15. AS-BUILT DRAWINGS AND/OR PLATS SHALL HAVE WRITTEN ON THEM THE DATE OF COMPLETION OF SAID ACTIVITIES AND SHALL BE SUBMITTED TO THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, OFFICE OF COASTAL MANAGEMENT, P.O. BOX 44487, BATON ROUGE, LA 70804-4487 WITHIN 30 DAYS FOLLOWING PROJECT COMPLETION.
16. ALL STRUCTURES, FACILITIES, WELL AND PIPELINE/FLOWLINES OCCURRING IN OPEN WATER AREAS OR IN OILFIELD CANALS OR SLIPS SHALL BE REMOVED WITHIN 120 DAYS OF ABANDONMENT OR THE FACILITIES FOR THE HEREIN PERMITTED USE UNLESS PRIOR WRITTEN APPROVAL TO LEAVE SUCH STRUCTURES IN PLACE IS RECEIVED FROM THE OFFICE OF COASTAL MANAGEMENT. THIS CONDITION DOES NOT PRECLUDE THE NECESSITY FOR REVISING THE CURRENT PERMIT OR OBTAINING A SEPARATE COASTAL USE PERMIT, SHOULD ONE BE REQUIRED.
17. THIS DRAWING SET IS FOR PERMITTING PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.

**SURVEY NOTES:**

1. ALL COORDINATES ARE NORTH AMERICAN DATUM OF 1983 (NAD 83 - GEOID 2009), LOUISIANA STATE PLANE, SOUTHERN ZONE, U.S. SURVEY FEET. ALL RESTORATION AREA ELEVATIONS ARE BASED ON NATIONAL GEODETIC SURVEY AND LOUISIANA DEPARTMENT OF NATURAL RESOURCES MONUMENTS.

<u>MONUMENTS</u>	<u>ELEVATION</u>	<u>NORTHING</u>	<u>EASTING</u>
TBBSR-SM-01	3.30'	199,122.52	3,444,226.48
TE14-SM-01	2.29'	199,323.20	3,438,609.45

2. ALL ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - 2004.65), U.S. SURVEY FEET UNLESS OTHERWISE SPECIFIED.
3. ALL BORROW AREA AND CONVEYANCE CORRIDOR SURVEYS PERFORMED BY OCEAN SURVEYS, INC., 2012.
4. ALL HEADLAND SURVEYS PERFORMED BY EMC, INC., 2012.
5. INFORMATION SHOWN HERE IN REFLECTS CONDITIONS AS THEY EXISTED ON THE SURVEY DATE SHOWN AND CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS AT THAT TIME.

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC</b> COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	GENERAL NOTES
MTP	GENERAL NOTES AND SHEET NUMBER REVISIONS	01/15 2013			
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100
					SHEET 3 OF 20

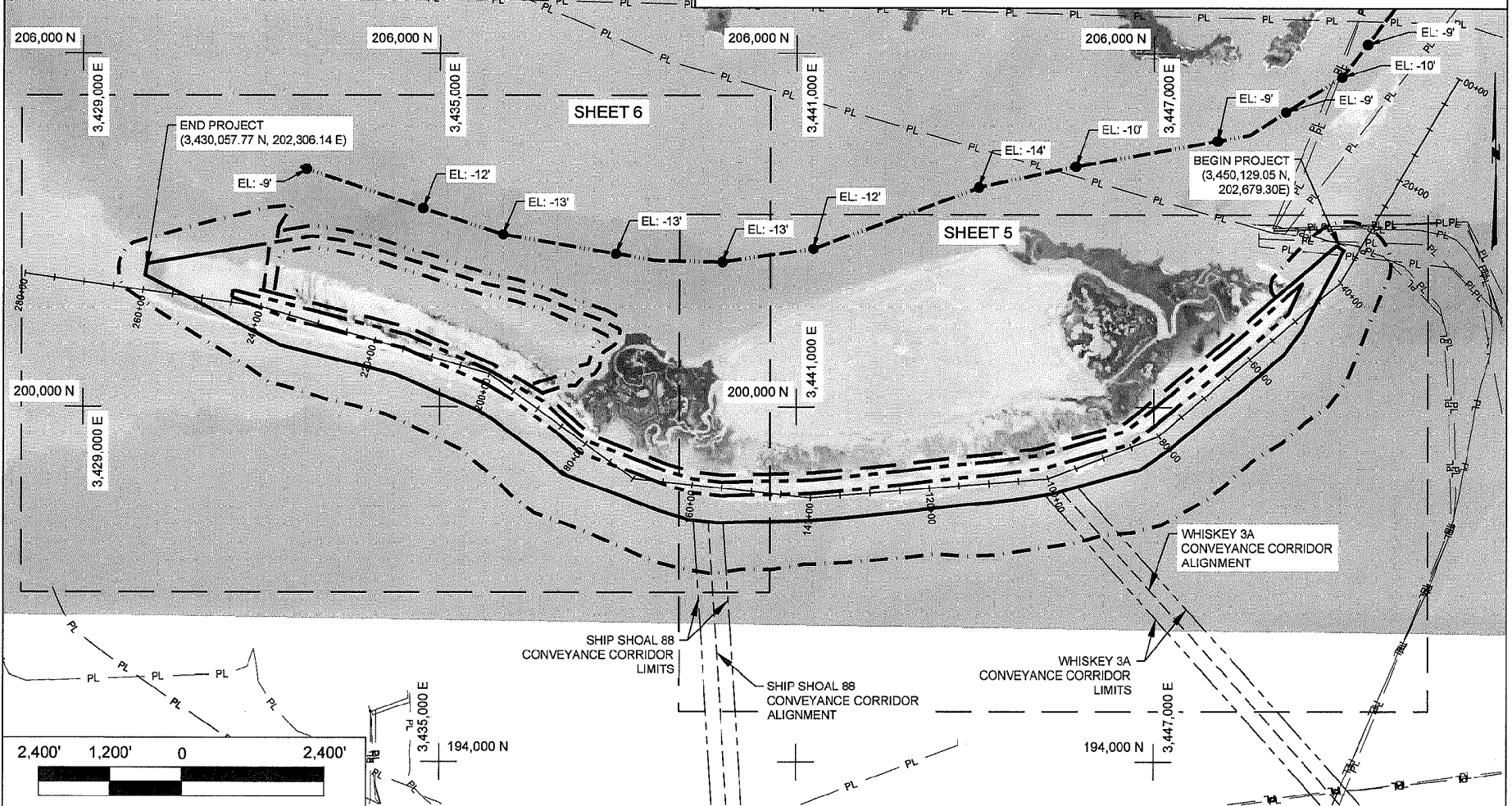
DWH-AR0233646

**NOTES:**

1. AERIAL IMAGE FROM LOUISIANA DEPARTMENT OF HOMELAND SECURITY AND EMERGENCY PREPAREDNESS, 2010.
2. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE SOUTH ZONE, U.S. SURVEY FEET.
3. SEE SHEETS 5 THROUGH 9 FOR DESIGN DETAILS.
4. PROBABLE PIPELINES FROM COASTAL MANAGEMENT DIVISION, LOUISIANA DEPARTMENT ON NATURAL RESOURCES, 2010.
5. REFER TO NOTE 12 ON SHEET 3 FOR WORK AREA LIMITS.

**LEGEND**

- BEACH CREST ALIGNMENT
- - - BEACH TOE ALIGNMENT
- · - · - DUNE TOE ALIGNMENT
- +— PROJECT BASELINE
- PL — PROBABLE PIPELINES
- · - · - DEEP WATER ACCESS
- - - MARSH FILL CONTAINMENT
- - - DIKE ALIGNMENT
- · - · - INTERIOR / EXTERIOR CONTAINMENT
- - - DIKE BORROW CHANNEL ALIGNMENT
- - - BEACH FILL CONTAINMENT
- - - DIKE ALIGNMENT
- - - CONVEYANCE CORRIDORS



BY	DESCRIPTION	DATE
MTP	ADDITION OF DEEP WATER ACCESS ALIGNMENT, SHEET NUMBER REVISIONS	01/15 2013

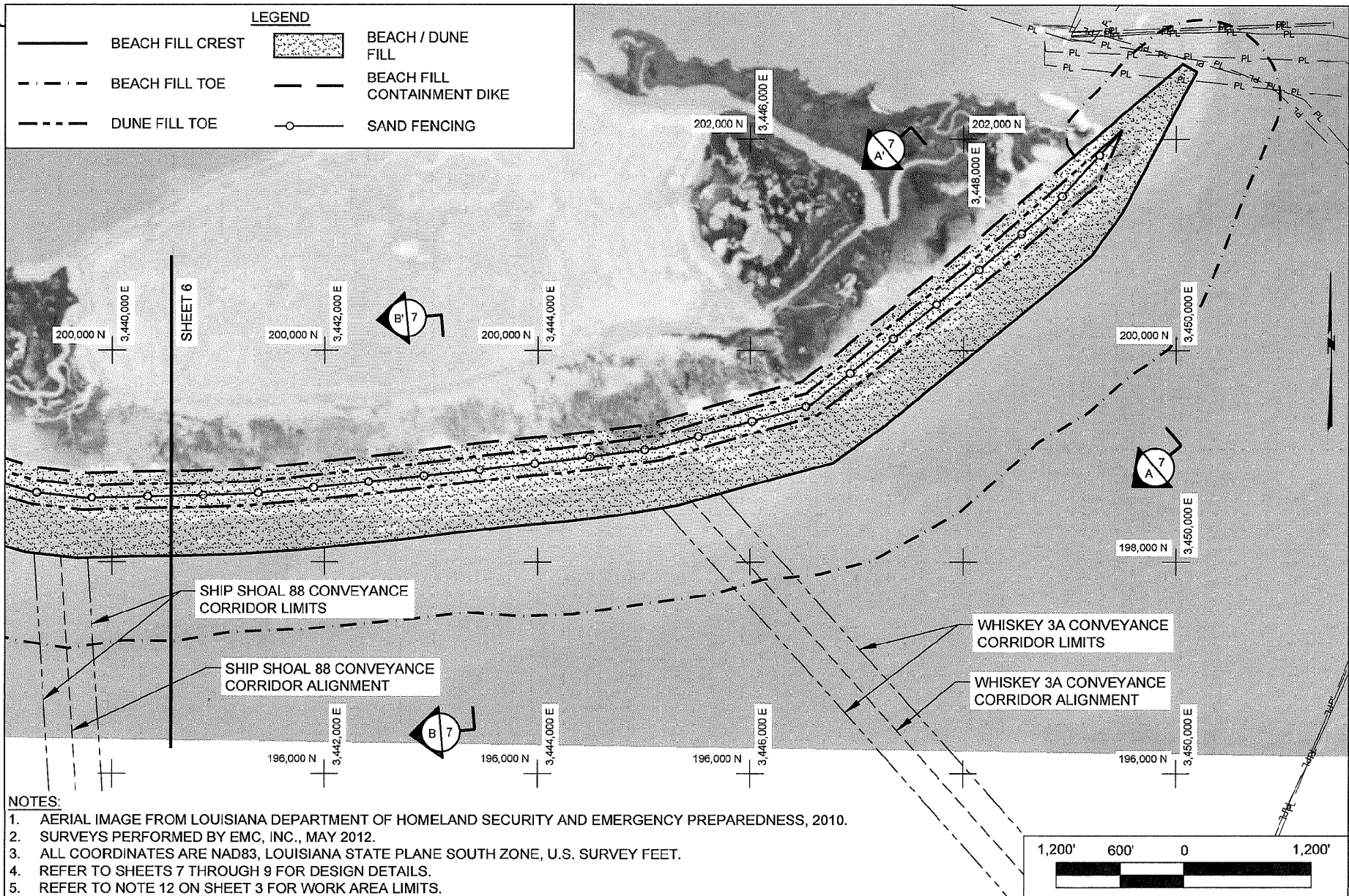
**COASTAL ENGINEERING CONSULTANTS, INC**

COASTAL PROTECTION AND RESTORATION AUTHORITY  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

NRDA - CAILLOU LAKE HEADLANDS	RESTORATION AREA PLAN VIEW
STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
FEDERAL PROJECT NUMBER: TE-100	SHEET 4 OF 20

DRAWN BY: DARTEZ / WORTHY

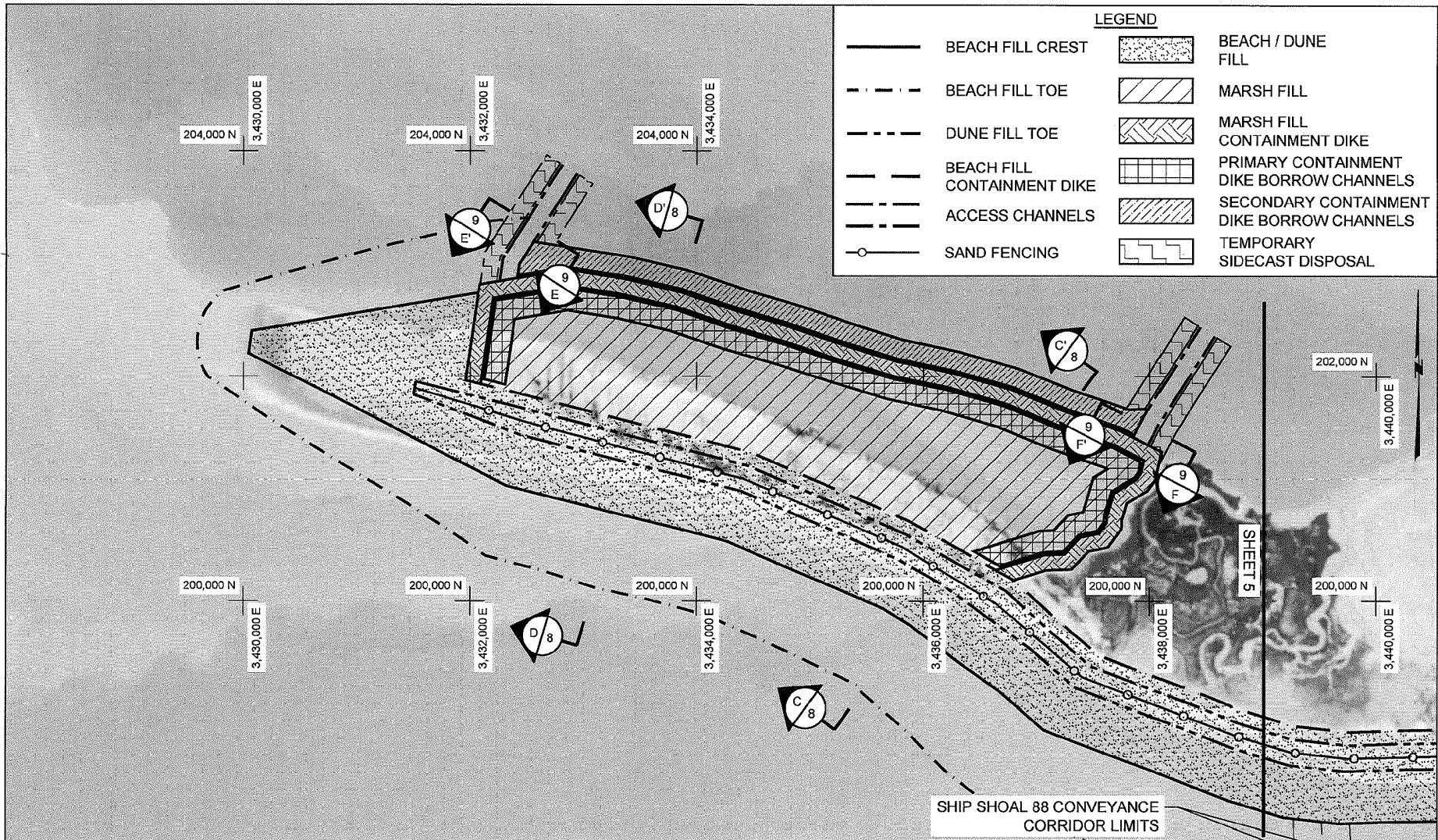
DESIGNED BY: MICHAEL T. POFF, P.E.      APPROVED BY: SHANNON HAYNES, P.E.



BY	DESCRIPTION	DATE	<b>COASTAL ENGINEERING CONSULTANTS, INC</b>	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	<b>NRDA - CAILLOU LAKE HEADLANDS</b>	<b>RESTORATION AREA PLAN VIEW INSET</b>
MTP	ADDITION OF INSET PLAN VIEW SHEET AND SAND FENCING ALIGNMENT, SHEET NUMBER REVISIONS	01/15 2013				STATE PROJECT NUMBER: TE-100
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	SHEET 5 OF 20

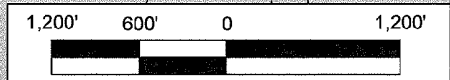
DWH-AR0233648





- NOTES:**
1. AERIAL IMAGE FROM LOUISIANA DEPARTMENT OF HOMELAND SECURITY AND EMERGENCY PREPAREDNESS, 2010.
  2. SURVEYS PERFORMED BY EMC, INC., MAY 2012.
  3. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE SOUTH ZONE, U.S. SURVEY FEET.
  4. REFER TO SHEETS 7 THROUGH 9 FOR DESIGN DETAILS.
  5. REFER TO NOTE 3 ON SHEET 12 FOR WORK AREA LIMITS.







SHIP SHOAL 88 CONVEYANCE CORRIDOR LIMITS  
 SHIP SHOAL 88 CONVEYANCE CORRIDOR ALIGNMENT



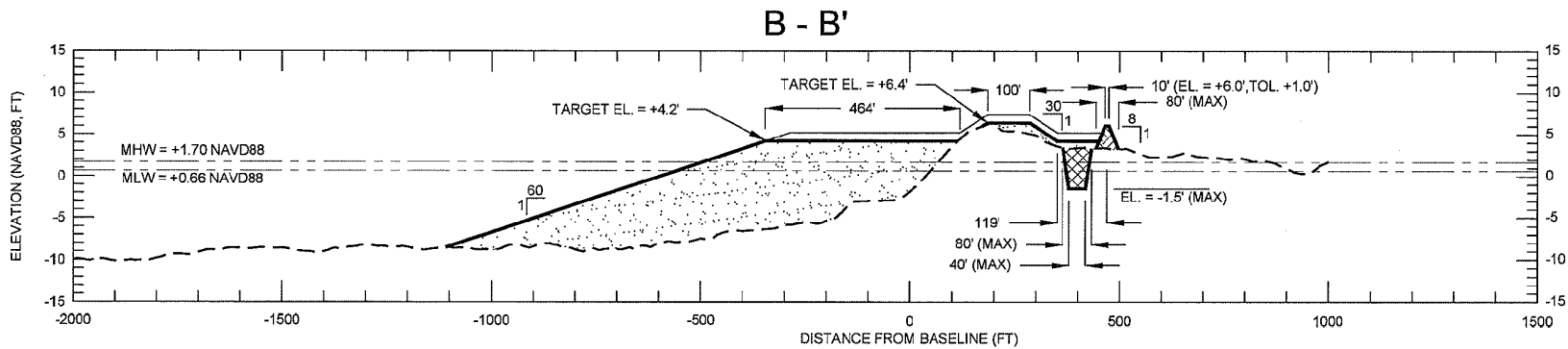
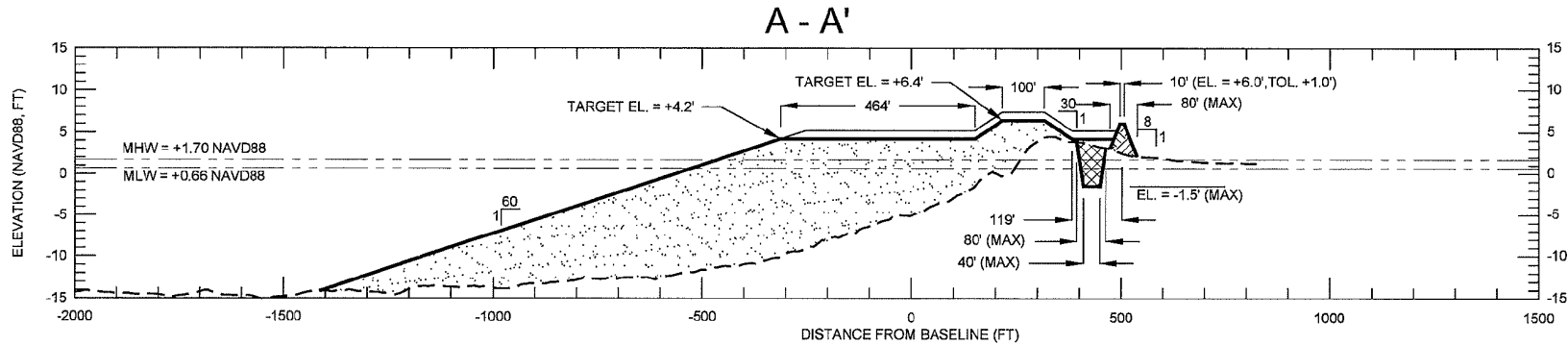
BY	DESCRIPTION	DATE	<b>COASTAL ENGINEERING CONSULTANTS, INC</b>	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	<b>NRDA - CAILLOU LAKE HEADLANDS</b>	<b>RESTORATION AREA PLAN VIEW INSET</b>
MTP	ADDITION OF SAND FENCING ALIGNMENT, SHEET NUMBER REVISIONS	01/15 2013				STATE PROJECT NUMBER: TE-100
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	SHEET 6 OF 20

DWH-AR0233649

LEGEND:


 BEACH / DUNE FILL	 BEACH SEPARATION DIKE
 EXISTING GRADE (2012)	 BEACH SEPARATION DIKE BORROW CHANNEL
 DESIGN	 CONSTRUCTION TOLERANCE (SEE NOTE 3)

SCALE:  
H: 1" = 400'  
V: 1" = 20'



NOTES:

1. SECTIONS ARE VIEWED AS LOOKING WEST.
2. SURVEY PERFORMED BY EMC, INC. 2012.
3. A ONE FOOT TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION/SETTLEMENT OF THE FILL.

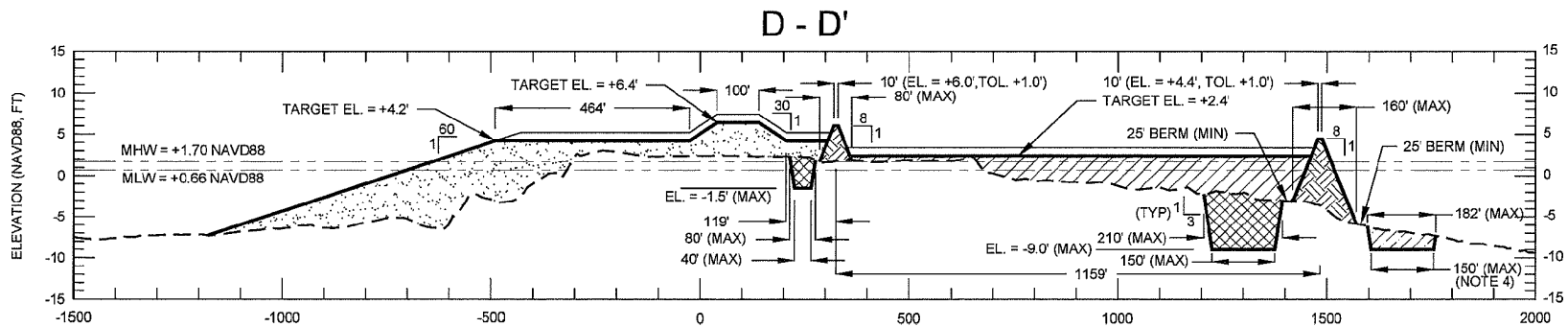
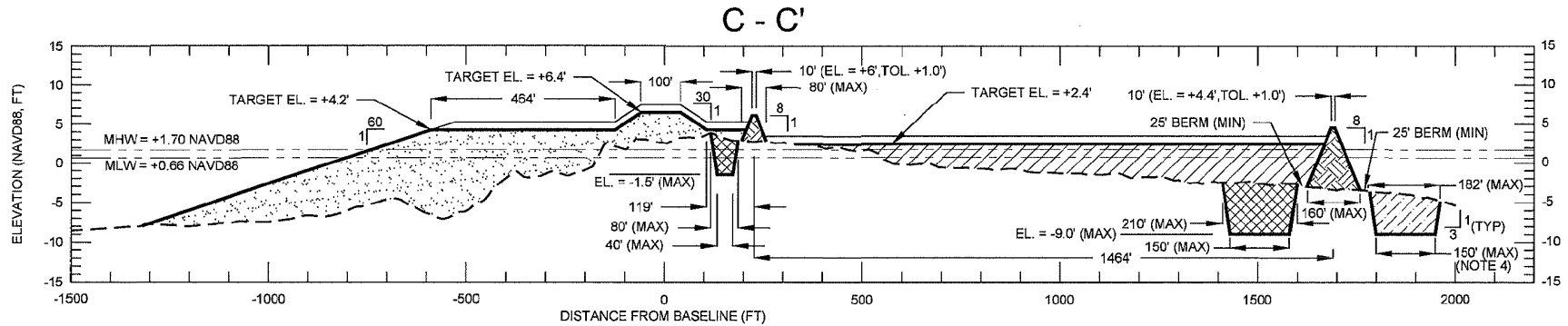
BY	DESCRIPTION	DATE		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	RESTORATION AREA TYPICAL SECTIONS
MTP	UPDATE TO CHANNEL AND DIKE DIMENSIONS, SHEET NUMBER REVISIONS	01/15 2013			STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	SHEET 7 OF 20

DWH-AR0233650

LEGEND:

	BEACH / DUNE FILL		BEACH SEPARATION DIKE / MARSH CONTAINMENT DIKE
	MARSH FILL		PRIMARY SEPARATION / CONTAINMENT DIKE BORROW CHANNELS
	EXISTING GRADE (2012)		SECONDARY CONTAINMENT DIKE BORROW CHANNELS
	DESIGN		CONSTRUCTION TOLERANCE (SEE NOTE 3)

SCALE:  
H: 1" = 400'  
V: 1" = 20'








NOTES:

1. SECTIONS ARE VIEWED AS LOOKING WEST.
2. SURVEY PERFORMED BY EMC, INC. 2012.
3. A ONE FOOT TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION/SETTLEMENT OF THE FILL.
4. EXTERIOR CONTAINMENT DIKE BORROW CHANNEL MAXIMUM BOTTOM OF CUT WIDTH IS 150' EXCEPT AT INTERSECTION TO ACCESS CHANNELS.

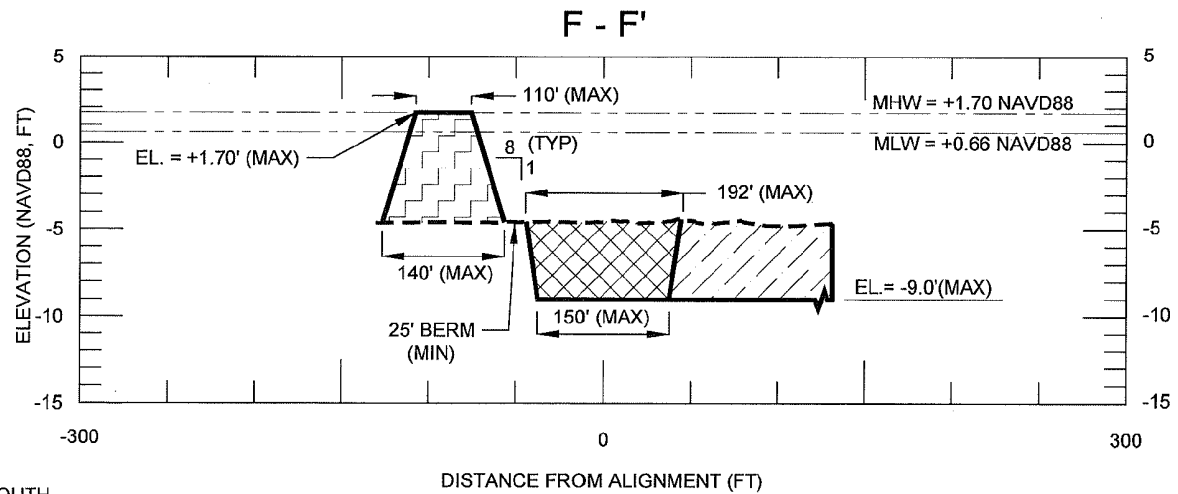
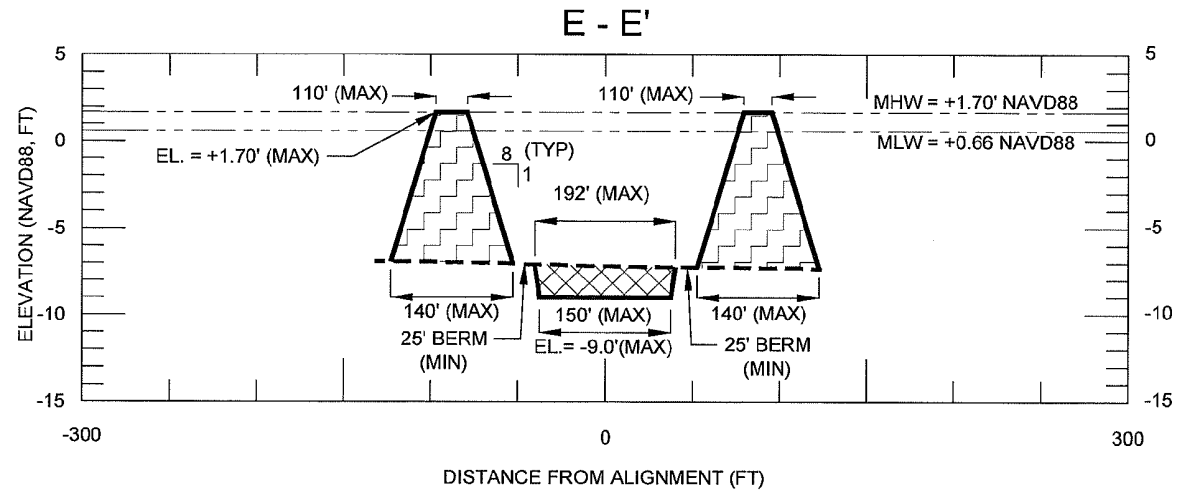
BY	DESCRIPTION	DATE		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	RESTORATION AREA TYPICAL SECTIONS
MTP	UPDATE TO CHANNEL AND DIKE DIMENSIONS, SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 8 OF 20

DWH-AR0233651

LEGEND:


-  ACCESS CHANNEL
-  TEMPORARY SIDECAST DISPOSAL
-  SECONDARY CONTAINMENT DIKE  
BORROW CHANNELS
-  EXISTING GRADE (2012)
-  DESIGN

SCALE:  
H: 1" = 200'  
V: 1" = 10'

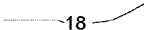
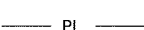


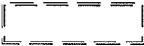
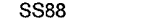





NOTES:

1. SECTIONS ARE VIEWED AS LOOKING SOUTH.
2. SURVEY PERFORMED BY EMC, INC. 2012.

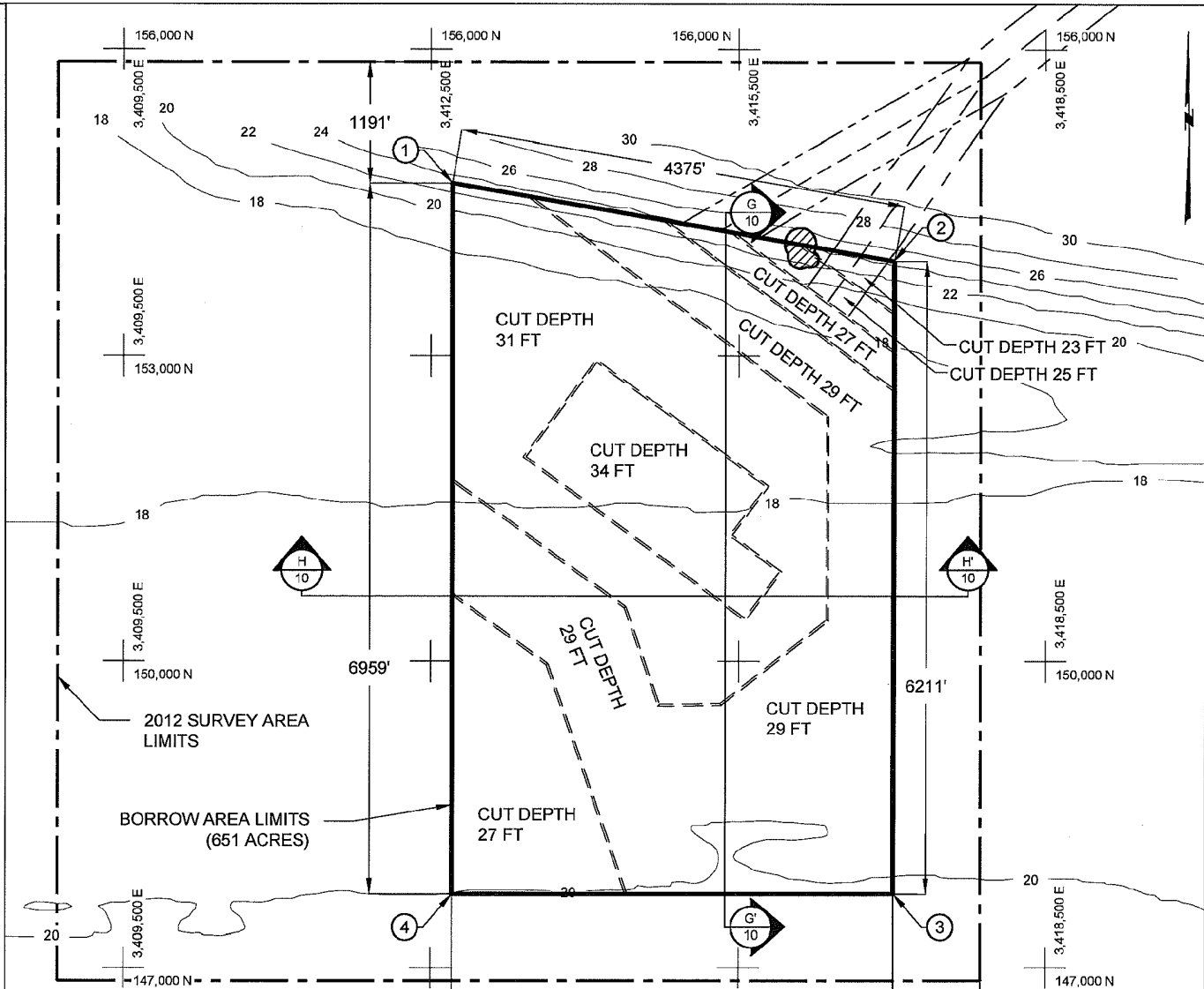
BY	DESCRIPTION	DATE			
MTP	UPDATE TO CHANNEL AND TEMPORARY DISPOSAL DIMENSIONS. SHEET NUMBER REVISIONS	01/15 2013		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS
					ACCESS CHANNEL TYPICAL SECTIONS
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-100 DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100 SHEET 9 OF 20

**LEGEND**

-  BATHYMETRIC CONTOUR (2003)
-  PROBABLE PIPELINE (NOTE 4)
-  2012 SURVEY AREA LIMITS
-  BORROW AREA LIMITS
-  DREDGE CUT DEPTH CHANGE
-  BOEM LEASE BLOCK
-  SHIP SHOAL BLOCK 88 CONVEYANCE CORRIDOR
-  CONVEYANCE CORRIDOR ALTERNATE SPUR
-  AVOIDANCE AREA (2012)

**NOTES:**

1. ALL COORDINATES ARE IN NAD83, STATE PLANE - LOUISIANA SOUTH, U.S. SURVEY FEET.
2. ALL UNITS ARE U.S. SURVEY FEET.
3. DEPTHS ARE SHOWN IN MEAN LOWER LOW WATER.
4. PROBABLE PIPELINES FROM BUREAU OF OCEAN ENERGY MANAGEMENT, 2007 AND COASTAL MANAGEMENT DIVISION, LOUISIANA DEPARTMENT OF NATURAL RESOURCES, 2010.
5. SURVEY PERFORMED BY C&C TECHNOLOGIES, 2003.
6. SEE SHEET 20 FOR BORROW AREA BOUNDARY COORDINATES.
7. REFER TO NOTE 12 ON SHEET 3 FOR WORK AREA LIMITS.



BY	DESCRIPTION	DATE
MTP	NOTES AND SHEET NUMBER REVISIONS	01/15 2013
MTP	SH88 CONVEYANCE CORRIDOR REVISION	04/19 2013

**COASTAL ENGINEERING CONSULTANTS, INC**

COASTAL PROTECTION AND RESTORATION AUTHORITY  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

NRDA - GAILLOU LAKE HEADLANDS

SHIP SHOAL BLOCK 88 BORROW AREA PLAN VIEW

STATE PROJECT NUMBER: TE-100

DATE: NOVEMBER 2012

DRAWN BY: DARTEZ / WORTHY

DESIGNED BY: MICHAEL T. POFF, P.E.




APPROVED BY: SHANNON HAYNES, P.E.

FEDERAL PROJECT NUMBER: TE-100

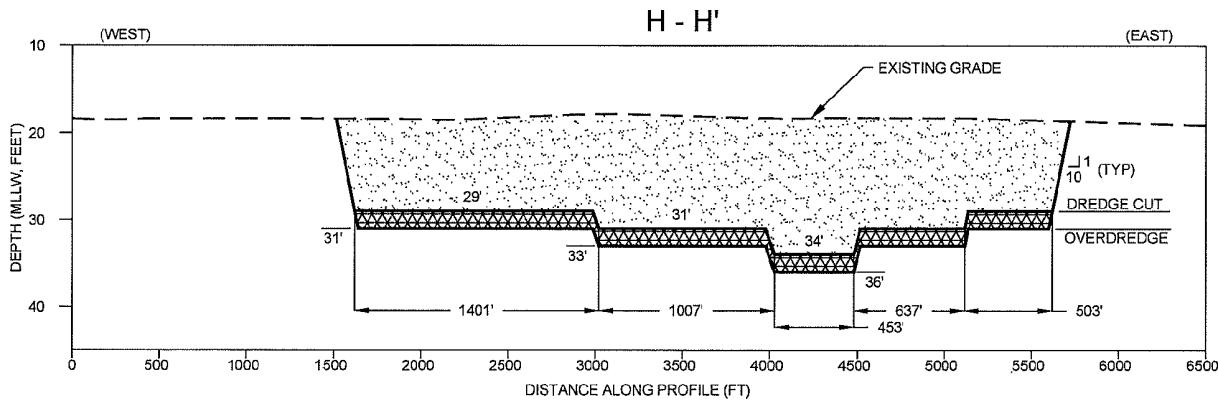
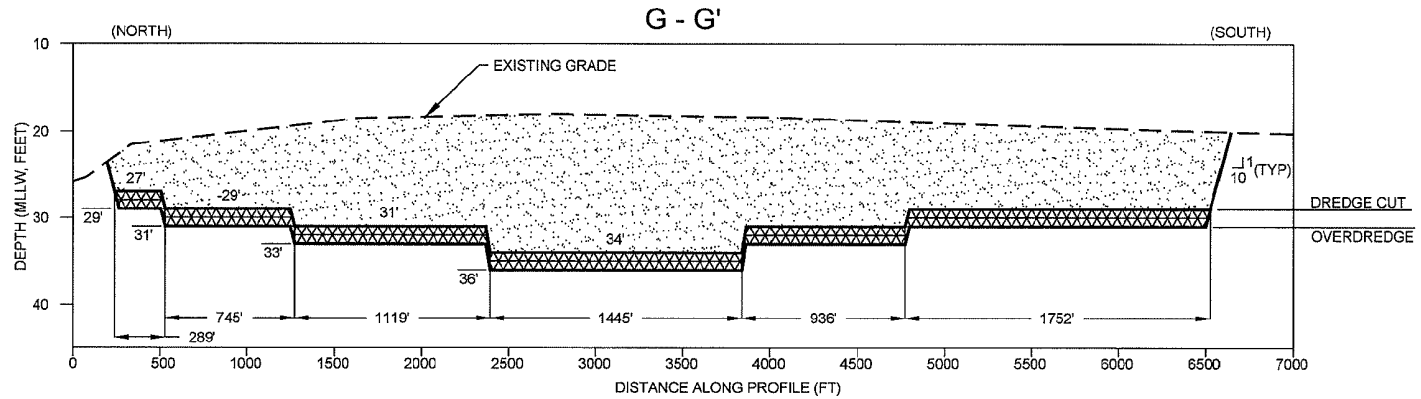
SHEET 10 OF 20

DWH-AR0233653

LEGEND:


-  DESIGN CUT
-  OVERDREDGE TOLERANCE
-  EXISTING GRADE (2003)

SCALE:  
 H: 1" = 1000'  
 V: 1" = 20'





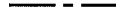



NOTES:

1. ELEVATIONS ARE SHOWN IN MEAN LOWER LOW WATER (MLLW).
2. BATHYMETRIC SURVEY CONDUCTED BY C&C, 2003.
3. MEAN HIGH WATER = 1.05' (MLLW), MEAN LOW WATER = +0.01' (MLLW)

BY	DESCRIPTION	DATE		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	SHIP SHOAL BLOCK 88 BORROW AREA TYPICAL SECTIONS
MTP	SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY					DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.

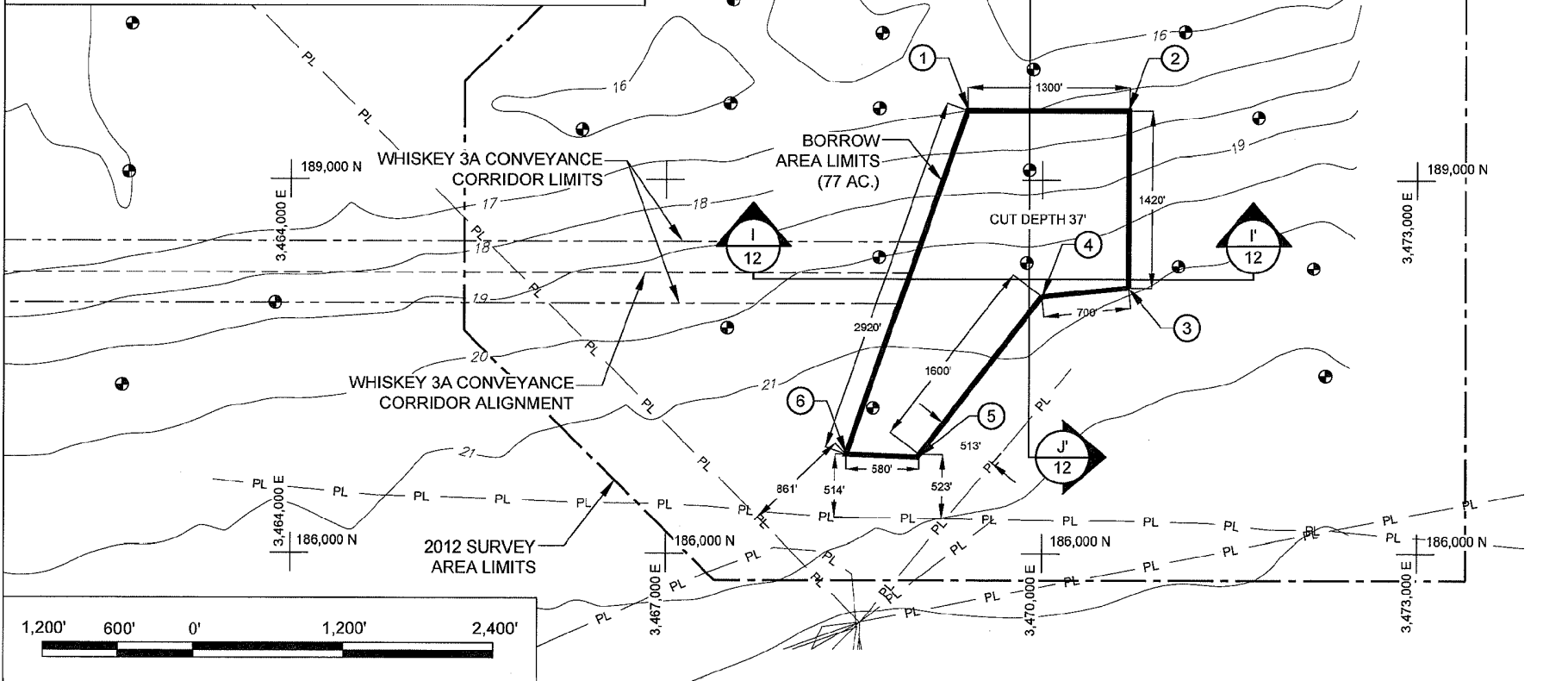
DWH-AR0233654


**LEGEND**

-  BORROW AREA LIMITS
-  VIBRACORE (2006)
-  2012 SURVEY AREA LIMITS
-  20 BATHYMETRIC CONTOUR MLLW (2006)
-  PL PROBABLE PIPELINE (NOTE 4)
-  WHISKEY 3A CONVEYANCE CORRIDOR

**NOTES:**




1. ALL COORDINATES ARE IN NAD83, STATE PLANE - LOUISIANA SOUTH, U.S. SURVEY FEET.
2. ALL UNITS ARE U.S. SURVEY FEET.
3. DEPTHS ARE SHOWN IN MEAN LOWER LOW WATER.
4. PROBABLE PIPELINES FROM BUREAU OF OCEAN ENERGY MANAGEMENT, 2007 AND COASTAL MANAGEMENT DIVISION, LOUISIANA DEPARTMENT OF NATURAL RESOURCES, 2010.
5. PLATFORMS FROM BUREAU OF OCEAN ENERGY MANAGEMENT, 2007.
6. SURVEY PERFORMED BY OSI, 2006.
7. SEE SHEET 20 FOR BORROW AREA BOUNDARY COORDINATES.
8. REFER TO NOTE 12 ON SHEET 3 FOR WORK AREA LIMITS.



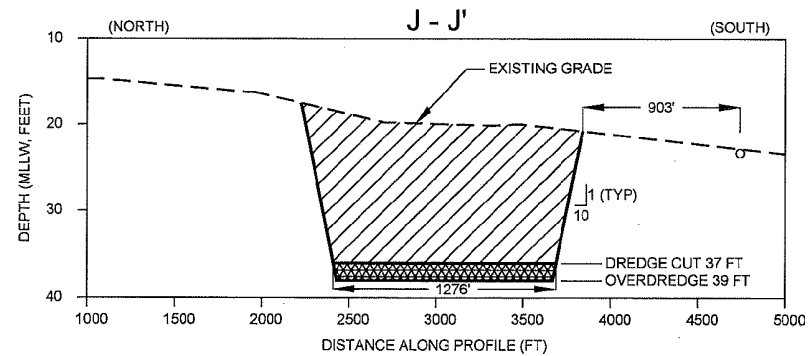
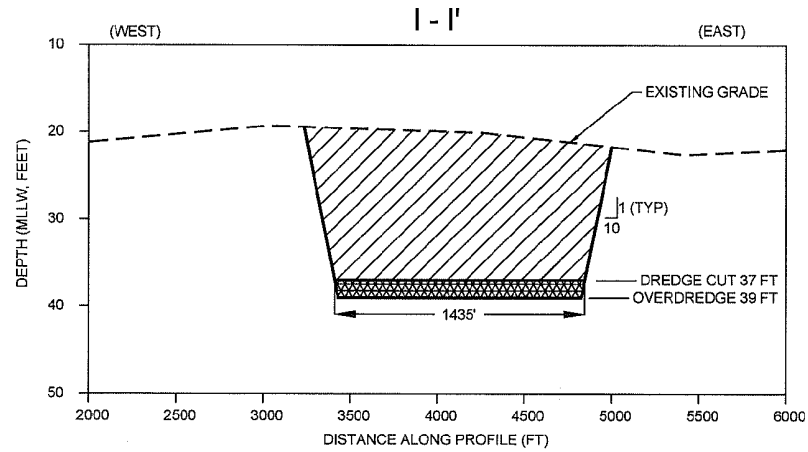
<b>BY</b>	<b>DESCRIPTION</b>	<b>DATE</b>	 <b>COASTAL ENGINEERING CONSULTANTS, INC</b>	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	<b>NRDA - CAILLOU LAKE HEADLANDS</b>	<b>WHISKEY 3A BORROW AREA PLAN VIEW</b>
MTP	GENERAL NOTES AND SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 12 OF 20

DWH-AR0233655

LEGEND:


-  DESIGN CUT
-  OVERDREDGE TOLERANCE
-  EXISTING GRADE (2003)

SCALE:  
H: 1" = 1000'  
V: 1" = 20'



NOTES:

1. ELEVATIONS ARE SHOWN IN MEAN LOWER LOW WATER (MLLW).
2. BATHYMETRIC SURVEY CONDUCTED BY OSI, 2006.
3. MEAN HIGH WATER = 1.05' (MLLW), MEAN LOW WATER = +0.01' (MLLW)

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC</b>	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	WHISKEY 3A BORROW AREA TYPICAL SECTIONS
MTP	SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	SHEET 13 OF 20



DWH-AR0233656

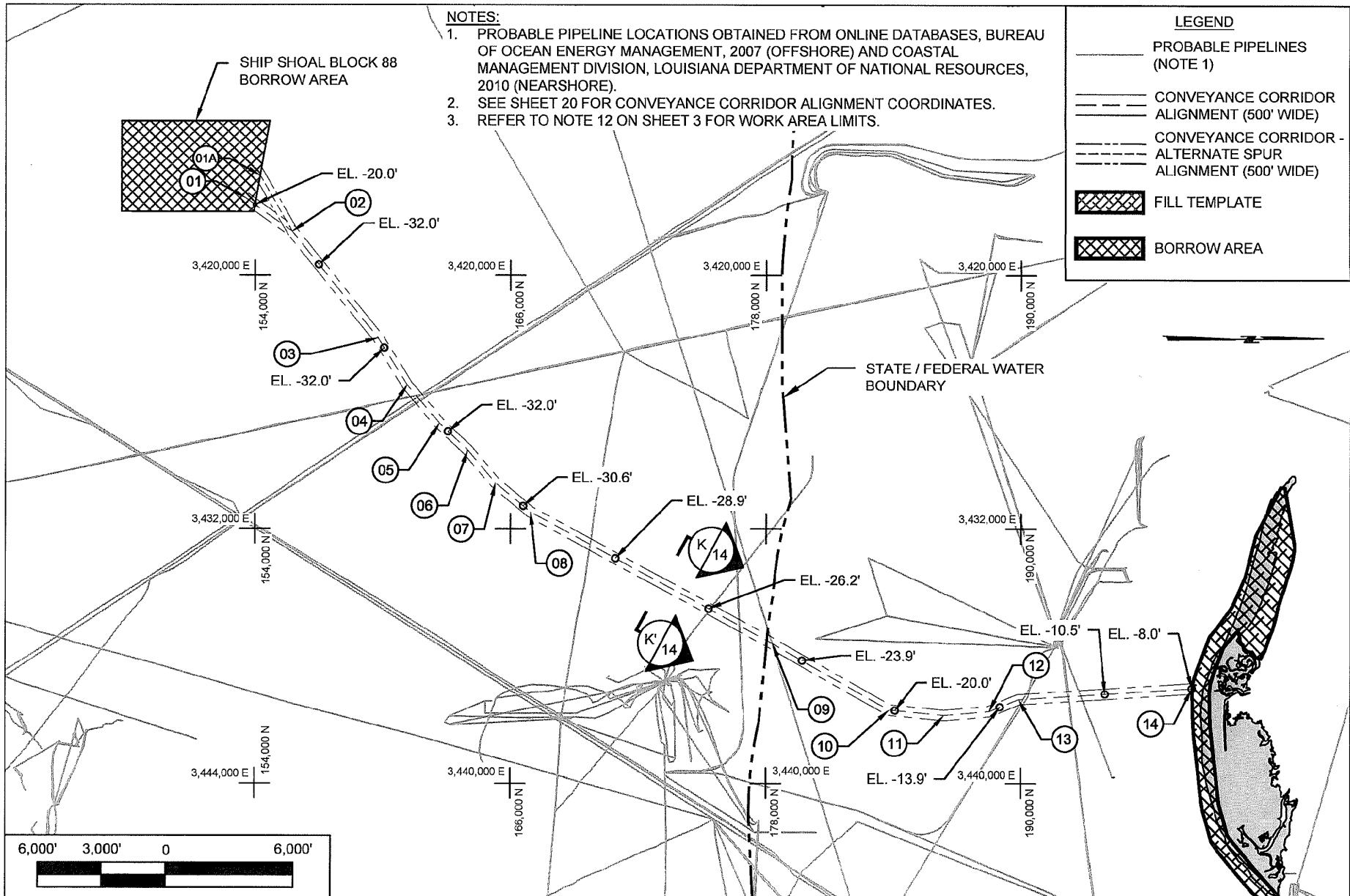


**NOTES:**

1. PROBABLE PIPELINE LOCATIONS OBTAINED FROM ONLINE DATABASES, BUREAU OF OCEAN ENERGY MANAGEMENT, 2007 (OFFSHORE) AND COASTAL MANAGEMENT DIVISION, LOUISIANA DEPARTMENT OF NATIONAL RESOURCES, 2010 (NEARSHORE).
2. SEE SHEET 20 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
3. REFER TO NOTE 12 ON SHEET 3 FOR WORK AREA LIMITS.


**LEGEND**

- PROBABLE PIPELINES (NOTE 1)
- CONVEYANCE CORRIDOR ALIGNMENT (500' WIDE)
- - - CONVEYANCE CORRIDOR - ALTERNATE SPUR ALIGNMENT (500' WIDE)
-  FILL TEMPLATE
-  BORROW AREA



BY	DESCRIPTION	DATE
MTP	GENERAL NOTES AND SHEET NUMBER REVISIONS	01/15 2013
MTP	SH88 CONVEYANCE CORRIDOR REVISION	04/19 2013

DRAWN BY: DARTEZ / WORTHY

 **COASTAL ENGINEERING CONSULTANTS, INC**

DESIGNED BY: MICHAEL T. POFF, P.E.

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

APPROVED BY: SHANNON HAYNES, P.E.

**NRDA - CAILLOU LAKE HEADLANDS**

STATE PROJECT NUMBER: TE-100

FEDERAL PROJECT NUMBER: TE-100

**SHIP SHOAL BLOCK 88 CONVEYANCE CORRIDOR PLAN VIEW**

DATE: NOVEMBER 2012

SHEET 14 OF 20

DWH-AR0233657

LEGEND:

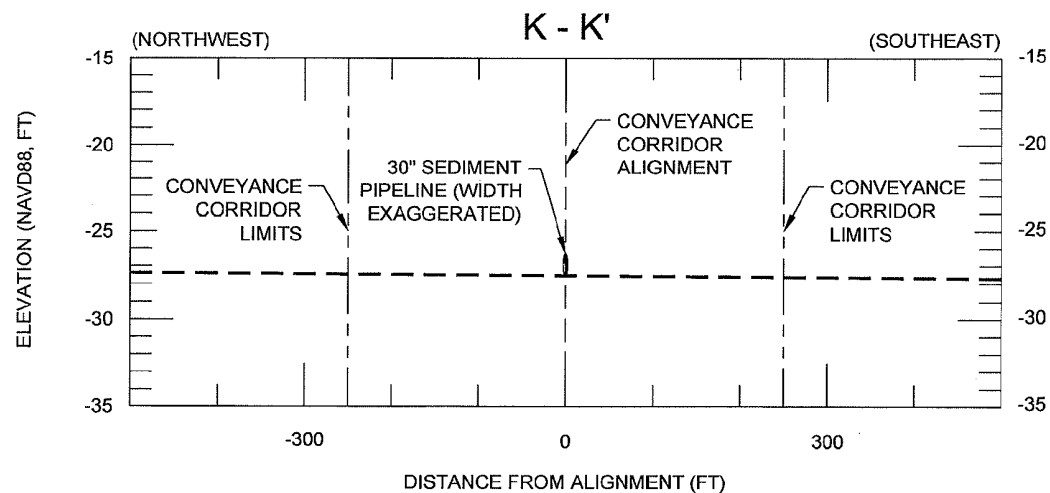


EXISTING GRADE (2012)



SUBMERGED SEDIMENT PIPELINE

SCALE:  
H: 1" = 200'  
V: 1" = 10'

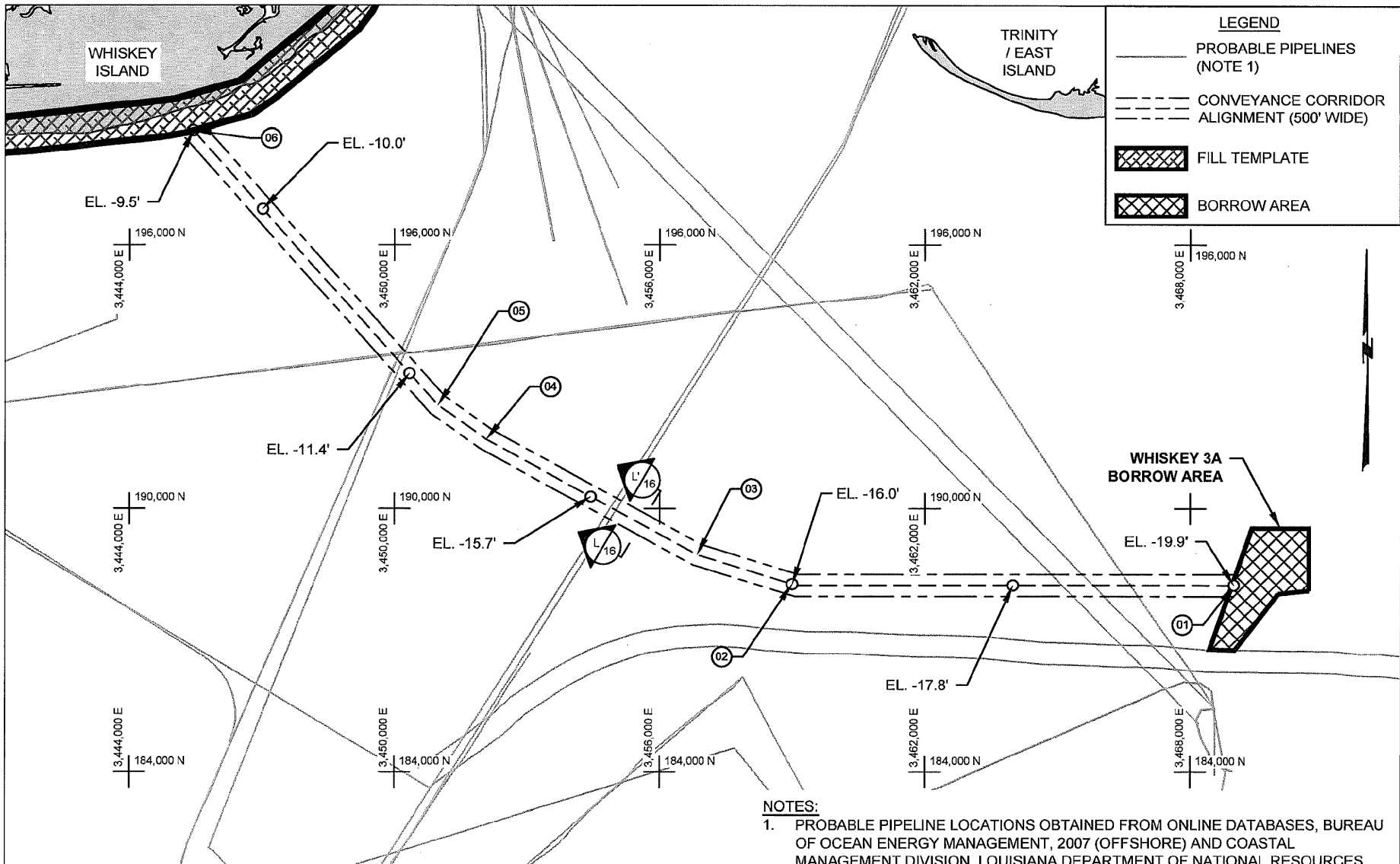


NOTES:

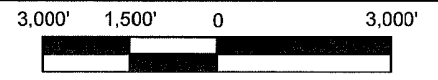
1. SURVEY PERFORMED BY OSI, 2012.
2. NO EXCAVATIONS OR FILLS ARE REQUIRED FOR THE CONVEYANCE CORRIDOR.
3. SEDIMENT PIPELINE SHALL BE LIGHTED AND MARKED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.
4. SECTION IS VIEWED AS LOOKING NORTHEAST.
5. MEAN HIGH WATER = +1.70' NAVD88, MEAN LOW WATER = +0.66' NAVD88.

BY	DESCRIPTION	DATE	<p><b>COASTAL ENGINEERING CONSULTANTS, INC</b></p>	<p>COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801</p>	<p>NRDA - CAILLOU LAKE HEADLANDS</p>	<p>SHIP SHOAL BLOCK 88 CONVEYANCE CORRIDOR TYPICAL SECTION</p>
MTP	SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	SHEET 15 OF 20

DWH-AR0233658



- NOTES:**
1. PROBABLE PIPELINE LOCATIONS OBTAINED FROM ONLINE DATABASES, BUREAU OF OCEAN ENERGY MANAGEMENT, 2007 (OFFSHORE) AND COASTAL MANAGEMENT DIVISION, LOUISIANA DEPARTMENT OF NATIONAL RESOURCES, 2010 (NEARSHORE).
  2. SEE SHEET 20 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
  3. REFER TO NOTE 12 ON SHEET 3 FOR WORK AREA LIMITS.



BY	DESCRIPTION	DATE	<b>COASTAL ENGINEERING CONSULTANTS, INC</b>	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	WHISKEY 3A CONVEYANCE CORRIDOR PLAN VIEW
MTP	GENERAL NOTES AND SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 16 OF 20

DWH-AR0233659

LEGEND:

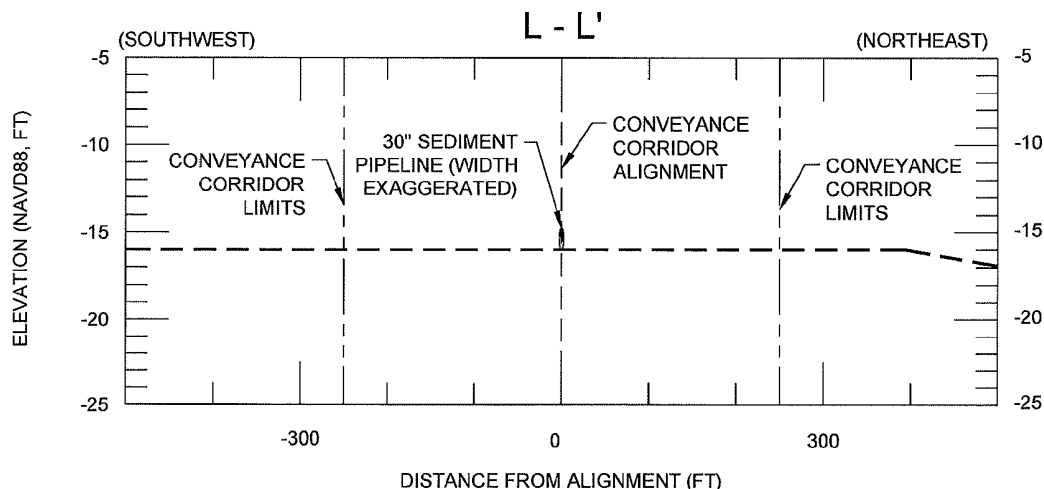


EXISTING GRADE (2012)




SUBMERGED SEDIMENT PIPELINE

SCALE:  
H: 1" = 200'  
V: 1" = 10'

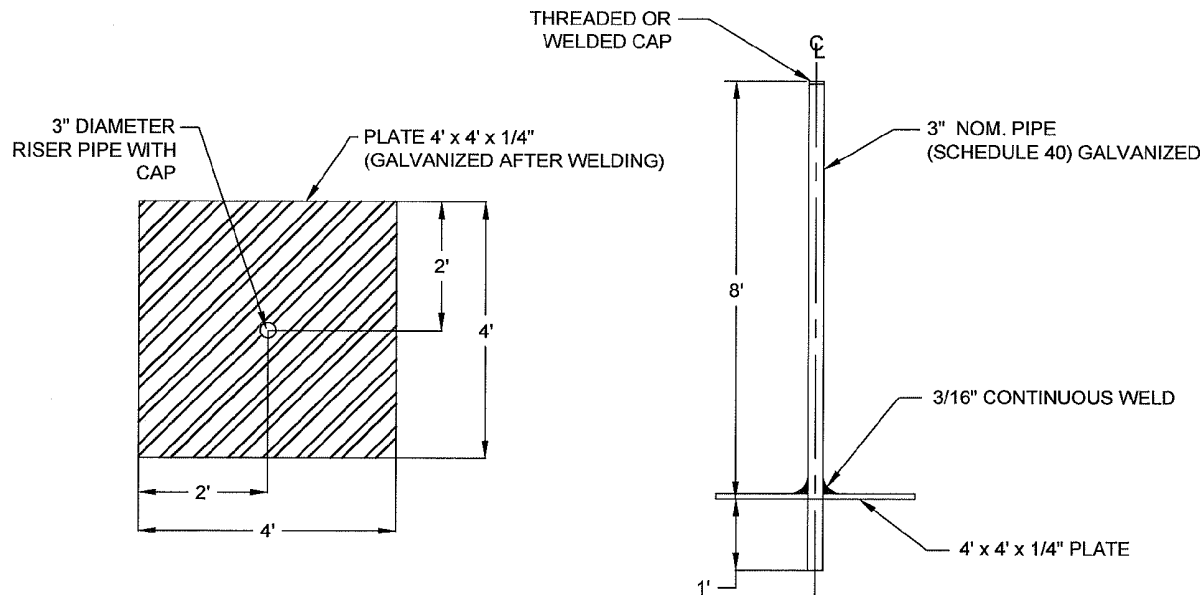


NOTES:

1. SURVEY PERFORMED BY OSI, 2012.
2. NO EXCAVATIONS OR FILLS ARE REQUIRED FOR THE CONVEYANCE CORRIDOR.
3. SEDIMENT PIPELINE SHALL BE LIGHTED AND MARKED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.
4. SECTION IS VIEWED AS LOOKING NORTHWEST.
5. MEAN HIGH WATER = +1.70' NAVD88, MEAN LOW WATER = +0.66' NAVD88.

BY	DESCRIPTION	DATE		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	WHISKEY 3A CONVEYANCE CORRIDOR TYPICAL SECTION
MTP	SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 17 OF 20


DWH-AR0233660



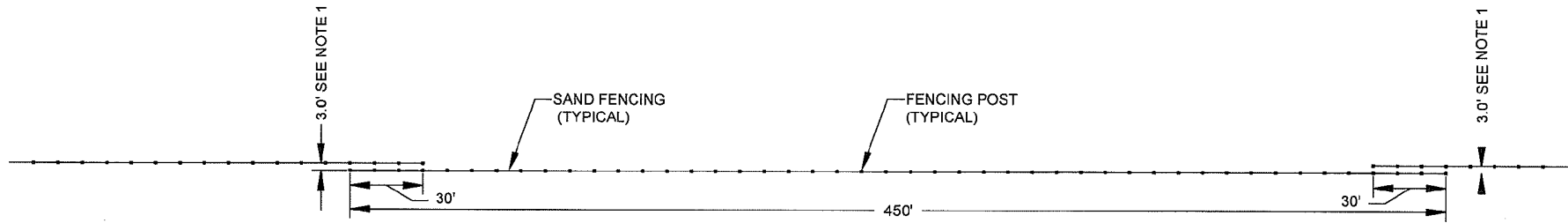
**SETTLEMENT PLATE**  
NOT TO SCALE

**NOTES:**

1. SETTLEMENT PLATES SHALL BE CONSTRUCTED USING ASTM A36 STEEL AND HOT-DIPPED GALVANIZED AFTER FABRICATION.
2. ALL SETTLEMENT PLATES SHALL BE SURVEYED UNDER THE SUPERVISION OF THE RESIDENT PROJECT REPRESENTATIVE WITHIN A DAY OF INSTALLATION AND WEEKLY THROUGHOUT THE DURATION OF THE PROJECT.
3. ALL SETTLEMENT PLATES MUST BE INSTALLED AND MAINTAINED WITHIN 10.5 DEGREES OF VERTICAL.
4. ALL SETTLEMENT PLATES SHALL BE MARKED WITH SURVEY FLAGGING.
5. LENGTH OF THE SETTLEMENT PLATE RISER PIPE SHALL BE SUCH THAT THE ELEVATION OF THE TOP CAP BE NO LESS THAN 4 FEET ABOVE MAXIMUM FINAL DESIGN GRADE FOR ITS LOCATION.

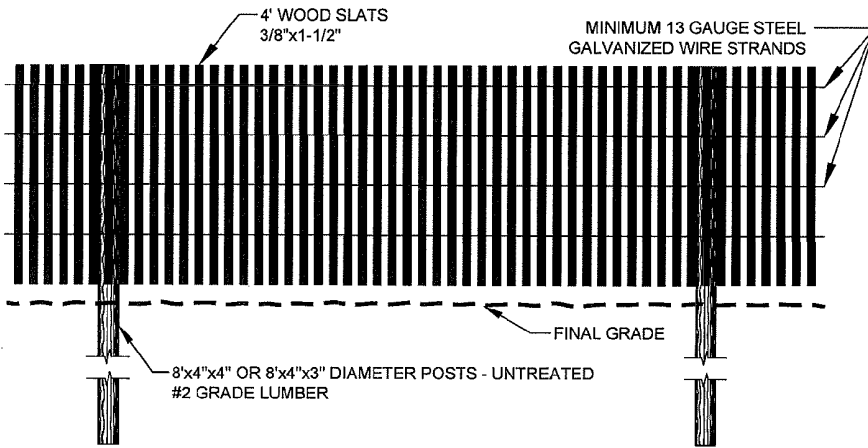
BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC</b>	COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	SETTLEMENT PLATE DETAIL
MTP	SHEET NUMBER REVISIONS	01/15 2013			STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 18 OF 20
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.		

DWH-AR0233661

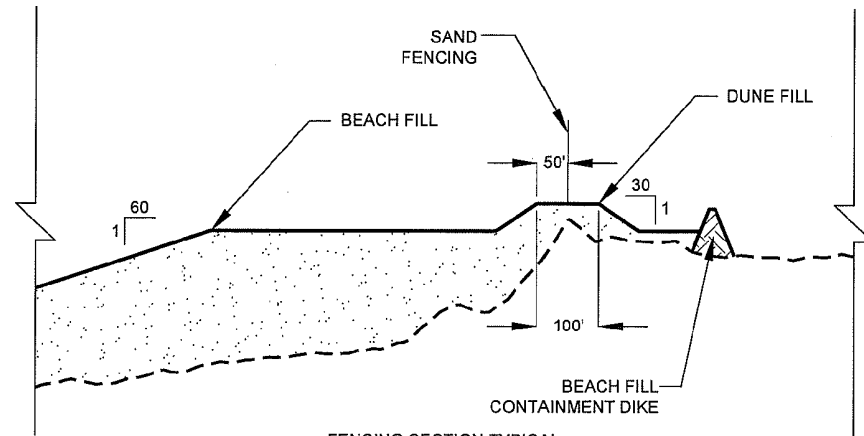


**NOTES:**  
 1. THE DISTANCE BETWEEN FENCES SHALL BE INCREASED FROM 3.0' TO 8.0' AT EVERY FIFTH GAP TO ALLOW ALL-TERRAIN VEHICLE ACCESS.


**FENCING GAPPING DIMENSIONS**  
 NOT TO SCALE



**FENCING DETAIL**  
 NOT TO SCALE



**FENCING SECTION TYPICAL**  
 NOT TO SCALE

BY	DESCRIPTION	DATE		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	SAND FENCING DETAIL
MTP	SHEET NUMBER REVISIONS	01/15 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 19 OF 20

DWH-AR0233662


WHISKEY 3A BORROW AREA BOUNDARY				
POINT NO.	NORTHING	EASTING	LATITUDE	LONGITUDE
01	189555.02	3469399.83	29° 01' 11.57" N	90° 44' 36.24" W
02	189555.02	3470694.04	29° 01' 11.50" N	90° 44' 21.67" W
03	188135.02	3470691.98	29° 00' 57.44" N	90° 44' 21.77" W
04	188063.22	3469995.68	29° 00' 56.77" N	90° 44' 29.62" W
05	186774.18	3469002.65	29° 00' 44.06" N	90° 44' 40.88" W
06	186798.10	3468439.03	29° 00' 44.33" N	90° 44' 47.22" W

WHISKEY 3A CONVEYANCE CORRIDOR					
POINT NO.	STATION	NORTHING	EASTING	LATITUDE	LONGITUDE
01	0+00.00	188255.41	3466889.77	29° 00' 58.83" N	90° 45' 04.59" W
02	99+00.00	188255.16	3459089.77	29° 00' 59.21" N	90° 46' 32.43" W
03	122+50.00	188955.23	3456846.47	29° 01' 06.25" N	90° 46' 57.66" W
04	177+00.00	191569.00	3452064.14	29° 01' 32.35" N	90° 47' 51.38" W
05	190+25.00	192336.59	3450984.12	29° 01' 40.00" N	90° 48' 03.50" W
06	273+75.00	198583.27	3445443.24	29° 02' 42.08" N	90° 49' 05.60" W

SHIP SHOAL 88 BORROW AREA BOUNDARY				
POINT NO.	NORTHING	EASTING	LATITUDE	LONGITUDE
01	154681.43	3412709.17	28° 55' 28.80" N	90° 55' 16.14" W
02	153933.47	3417019.92	28° 55' 21.24" N	90° 54' 27.66" W
03	147722.32	3417009.71	28° 54' 19.76" N	90° 54' 28.04" W
04	147722.32	3412709.17	28° 54' 19.91" N	90° 55' 16.42" W

SHIP SHOAL 88 CONVEYANCE CORRIDOR					
POINT NO.	STATION	NORTHING	EASTING	LATITUDE	LONGITUDE
01	-27+00.00	153536.92	3416373.84	28° 55' 17.34" N	90° 54' 34.95" W
02	0+00.00	155743.29	3417930.10	28° 55' 39.12" N	90° 54' 17.35" W
03	64+50.00	159784.83	3422956.87	28° 56' 18.94" N	90° 53' 20.61" W
04	91+00.00	161156.89	3425224.01	28° 56' 32.44" N	90° 52' 55.03" W
05	114+50.00	162651.75	3427037.27	28° 56' 47.16" N	90° 52' 34.56" W
06	132+75.00	163984.18	3428284.37	28° 57' 00.30" N	90° 52' 20.47" W
07	153+00.00	165288.72	3429833.18	28° 57' 13.16" N	90° 52' 02.97" W
08	174+50.00	166935.78	3431215.10	28° 57' 29.40" N	90° 51' 47.34" W
09	304+00.00	178310.10	3437405.99	28° 59' 21.74" N	90° 50' 37.12" W
10	367+25.00	183800.86	3440545.62	29° 00' 15.96" N	90° 50' 01.50" W
11	393+25.00	186388.36	3440800.24	29° 00' 41.57" N	90° 49' 58.50" W
12	414+50.00	188505.60	3440618.85	29° 01' 02.53" N	90° 50' 00.44" W
13	429+50.00	189890.94	3440043.65	29° 01' 16.27" N	90° 50' 06.85" W
14	511+00.00	198024.21	3439521.68	29° 02' 36.81" N	90° 50' 12.33" W

SHIP SHOAL 88 CONVEYANCE CORRIDOR - ALTERNATE SPUR					
POINT NO.	STATION	NORTHING	EASTING	LATITUDE	LONGITUDE
01A	-30+25.00	154224.09	3415314.25	28° 55' 24.18" N	90° 54' 46.84" W
02	0+00.00	155743.29	3417930.10	28° 55' 39.12" N	90° 54' 17.35" W

BY	DESCRIPTION	DATE		COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	NRDA - CAILLOU LAKE HEADLANDS	ALIGNMENT TABLES
MTP	SHEET NUMBER REVISIONS	01/15 2013				
MTP	SH88 CONVEYANCE CORRIDOR REVISION	04/19 2013				
DRAWN BY: DARTEZ / WORTHY			DESIGNED BY: MICHAEL T. POFF, P.E.	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: TE-100	DATE: NOVEMBER 2012
					FEDERAL PROJECT NUMBER: TE-100	SHEET 20 OF 20

DWH-AR0233663