APPENDIX A - Detailed Drawings of Project Features
GENERAL NOTES


<table>
<thead>
<tr>
<th>SECONDARY SURVEY MONUMENT</th>
<th>ELEVATION</th>
<th>NORTHING</th>
<th>EASTING</th>
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<td>TL-94-8604</td>
<td>2.89</td>
<td>3,388,314</td>
<td>3,368,501</td>
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</table>

2. MARSH CREATION AREA ELEVATIONS SHOWN ON THE PLANS ARE BASED ON THE SURVEYS PERFORMED IN FEBRUARY 2015 BY PYRUB AND ODOM, INC. FOR THE CTRA. PIPELINE CORRIDOR ELEVATIONS SHOWN ON THE PLANS ARE BASED ON SURVEYS PERFORMED IN FEBRUARY 2015 BY PYRUB AND ODOM, INC.

3. DATA FROM USGS DACE W174865067 AND NOAA STATION W1741752 WAS USED TO CALCULATE THE NHM AND MLW. ELEVATIONS ARE REFERENCED TO NAVD 88 US FEET. NHM = +1.44 AND MLW = +0.27.

4. THE CONTRACTOR SHALL FOLLOW THE SPECIFIED PIPELINE Corridor AND SHALL NOT, AT ANY TIME, TREAD ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT PLAN AREA, AND SHALL NOTIFY LANDOWNERS ACCORDING TO THE LAND RIGHTS MEMORANDUM SHOWN IN THE CONSTRUCTION BID DOCUMENTS. THE ENGINEER OR HIS REPRESENTATIVE SHALL MONITOR THE CONTRACTOR'S LOCATION DURING CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PIPELINE AND UTILITY OPERATORS AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF THE WORK. PIPELINES IN OPEN WATER SHALL BE MARKED WITH Buoys BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN BUOYS DURING CONSTRUCTION AND HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THE DREDGE TO AVOID DREDGING IN RESTRICTED AREAS. THE FOLLOWING IS A LIST OF PIPELINE OPERATORS KNOWN TO HAVE PIPELINES IN THE VICINITY. CALL LOUISIANA ONE CALL AT 1-800-672-5000 5 DAYS PRIOR TO EXCAVATION TO LOCATE ANY OTHER PIPELINES OR UTILITIES.

| TEXAS GAS TRANSMISSION LINE, LLC | Contact: Rod Wimmerly | Phone: (210) 855-2221 - Ext. 311 |
| TENNESSEE GAS PIPELINE | Contact: Kurt Cherame | Phone: (931) 629-6760 |
| SHELL / EQUINOL PIPELINES | Contact: Jamie Hines | Phone: (601) 726-6460 |

7. PLANS AND SPECIFICATIONS ARE COMPLEMENTSARY: WHAT IS REQUIRED BY ONE IS BINDING AS IF REQUIRED BY ALL. CLARIFICATIONS AND INTERPRETATIONS OF DRAWINGS OR NOTIFICATIONS OF MINOR VARIATIONS AND DAMAGES IN THE CONTRACT DOCUMENTS, WILL BE ISSUED BY THE ENGINEER.

8. 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.

9. THE MARSH CREATION AREAS AND BORROW AREAS MAY BE REIOSERED BY THE ENGINEER AT THE TIME OF CONSTRUCTION TO REFLECT CHANGES IN FIELD CONDITIONS.

10. ESTIMATED MARSH CREATION QUANTITIES SHOWN ARE FOR BIDDING PURPOSES ONLY AND WERE CALCULATED ACCORDING TO CONDITIONS SURVEYED IN MAY 2011. QUANTITIES WERE CALCULATED USING THE AVERAGE END AREA METHOD OF SECTION. THE OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES OF ANY BID ITEM HIGHER OR LOWER WITHOUT ADJUSTMENT OF THE UNIT PRICE.

11. THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY OF THE BORROW AREA AND THE FILL AREAS AS WELL AS ANY OTHER EXCAVATION SPOTS PRIOR TO EXCAVATION. DRAWINGS SHOWING THE TRACK LINES, ANY MAGNETOMETER HITS, COORDINATES, AMPLITUDE, SIGNATURE TYPE, AND SIGNATURE WIDTH OF ALL MAGNETOMETER HITS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO EXCAVATION AS PER 19-2. CONSTRUCTION SURVEYS OF THE SPECIFICATIONS.

12. THE CONTRACTOR IS RESPONSIBLE FOR CONTAINING ALL DREDGED MATERIAL WITHIN THE BOUNDARIES OF THE PROPOSED MARSH CREATION AREAS.

SUMMARY OF ESTIMATED QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>ESTIMATED QUANTITY</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>MOBILIZATION AND DEMOBILIZATION</td>
<td>LUMP SUM</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>SURVEYS</td>
<td>LUMP SUM</td>
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<tr>
<td>3</td>
<td>EARTHEN CONTAINMENT D.Embeds</td>
<td>LINEAR FOOT</td>
<td>50,004</td>
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<tr>
<td>4</td>
<td>BANK STABILIZATION D.Embeds</td>
<td>LINEAR FOOT</td>
<td>9,000</td>
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<tr>
<td>5</td>
<td>EARTHEN TERRACES</td>
<td>LINEAR FOOT</td>
<td>30,000</td>
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<td>6</td>
<td>HYDRAULIC DREDGING (BORROW CUM VOLUME)</td>
<td>QUAD YARD</td>
<td>3,247,946</td>
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<td>7</td>
<td>WATER CONTROL STRUCTURES</td>
<td>EACH</td>
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<td>8</td>
<td>GRADE STAKES</td>
<td>EACH</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>SETTLEMENT PLATES</td>
<td>EACH</td>
<td>5</td>
</tr>
</tbody>
</table>

* THE LINEAR FOOTAGE FOR THE EARTHEN CONTAINMENT D.Embeds AND THE EARTHEN TERRACES WERE ESTIMATED USING AERIAL PHOTOGRAPHY, FIELD SURVEYS, AND AUTOCAD. THE OWNER RESERVES THE RIGHT TO REQUEST ADDITIONAL D.Embeds AND/OR EARTHEN TERRACES BE BUILT FOR CONSTRUCTION AT THE CONTRACTOR'S BID UNIT PRICE PER LINEAR FOOT.

* HYDRAULIC DREDGING QUANTITIES FOR MARSH CREATION ARE BASED ON CUT VOLUME.
NOTES:
1. **A TWO-LIFT SYSTEM IS REQUIRED TO MEET THE MARSH FILL DESIGN HEIGHT.**
2. **A MINIMUM WAITING PERIOD OF THIRTY (30) DAYS FROM THE COMPLETION OF MARSH FILL LIFT 1 SHOULD OCCUR PRIOR TO THE PLACEMENT OF THE MARSH FILL OF LIFT 2.**
3. **THE CONTRACTOR SHALL SUBMIT A Dewatering PLAN IN THE WORK PLAN FOR APPROVAL.**
4. **THE CONTRACTOR SHALL USE IN-SITU MATERIAL AS SHOWN ON THE PLANS TO CONSTRUCT THE EARTHEN CONTAINMENT DIKE.**
TYPICAL MARSH NOURISHMENT AREA 3 SECTION

NOTES:
1. THE CONTRACTOR SHALL SUBMIT A Dewatering PLAN IN THE WORK PLAN FOR APPROVAL.
2. THE CONTRACTOR SHALL USE INSITU MATERIAL AS SHOWN ON THE PLANS TO CONSTRUCT THE BANK STABILIZATION CONTAINMENT DIKE.
GRADING STAKES

BACKGROUND SHADING: RED
2ND LIFT MAX. EL. = 3.5
2ND LIFT MIN. EL. = 3.0

BACKGROUND SHADING: GREEN
1ST LIFT MAX. EL. = 1.7

BACKGROUND SHADING: YELLOW
1ST LIFT TARGET EL. = 1.5

BACKGROUND SHADING: GREEN
1ST LIFT MIN. EL. = 1.3

BACKGROUND SHADING: BLUE

TIMBER: 2" x 4" NON-PRESSURE TREATED PINE OR FIR

GAUGE SIGN: 4" WIDE x 24" HIGH 5.125" TFR SUBSTRATE WITH ENGINEER-GRADE REFLECTIVE SHEETING

PLATE 4" x 4" x 1/4"
(GALVANIZED AFTER WELDING)

3" DIAMETER RIBBER PIPE WITH CAP

THREADED OR WELDED CAP

3" NOM. PIPE (SCHEDULE 40)
(GALVANIZED)

3/16" CONTINUOUS WELD

4" x 4" x 1/4" PLATE

EARTHEN CONTAINMENT DIKE

SETTLEMENT PLATE

(SEE NOTE 2)

NOT TO SCALE

MARSH CREATION AREA

SETTLEMENT PLATE

NOT TO SCALE

SETTLEMENT PLATE NOTES:
1. SETTLEMENT PLATES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
2. LOCATION AND ELEVATION WILL BE RECORDED DURING AS-BUILT SURVEY.

COASTAL PROTECTION AND RESTORATION AUTHORITY

LOST LAKE MARSH CREATION
AND HYDROLOGIC RESTORATION

GRADE STAKE AND SETTLEMENT PLATE DETAILS

REV. DATE DESCRIPTION RV

DRAWN BY: MILTON L. LANGLEY
DESIGNED BY: TRAVIS KELLEY P.E.
APPROVED BY: JASON LANGLAY P.E.

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