STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

BAYOU BONFOUCA MARSH CREATION PROJECT
PO-104
ST. TAMMANY PARISH

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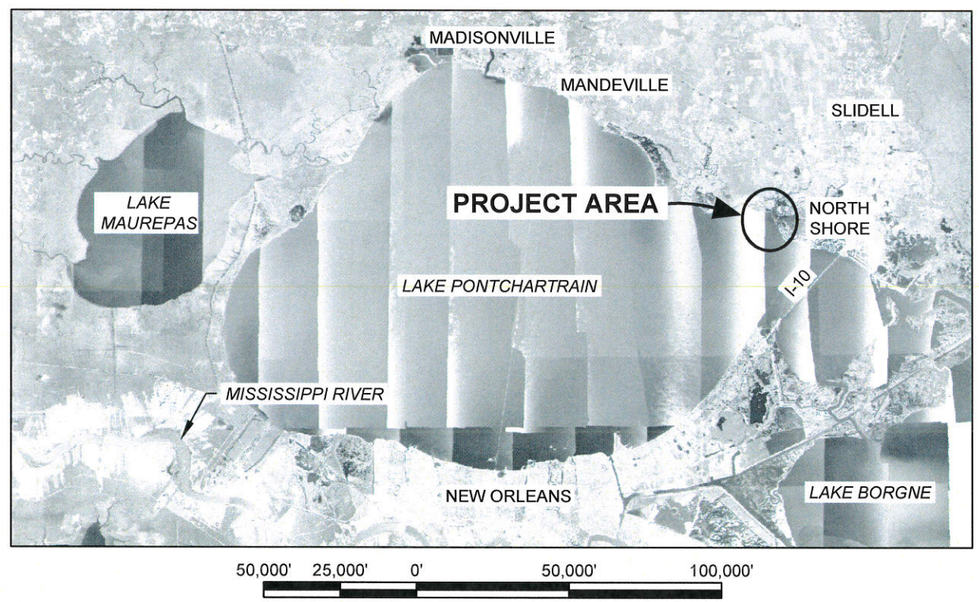

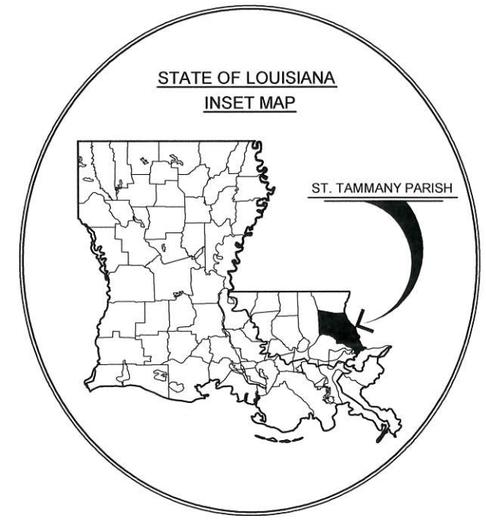

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

CHIEF - ENGINEERING DIVISION

ENGINEER MANAGER

PROJECT ENGINEER

LICENSURE CLASSIFICATION REQUIREMENTS

MAJOR CLASSIFICATION: HEAVY CONSTRUCTION

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

TITLE SHEET
DATE: FEBRUARY 2016
SHEET 1 OF 40

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOT, AT ANYTIME, TRAVERSE EXISTING MARSH OR VEGETATIVE WETLANDS OUTSIDE MARSH CREATION AREAS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING SAFE ACCESS TO THE PROJECT SITE AND FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT SITE. THE ENGINEER OR HIS REPRESENTATIVE SHALL MONITOR THE LOCATION OF EQUIPMENT DURING CONSTRUCTION.
3. THE HYDRAULIC DREDGE SHALL ACCESS THE BORROW AREA THROUGH NAVIGABLE WATERWAYS AND SHALL NOT DISTURB EXISTING WATER BOTTOMS UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL MAINTAIN ADEQUATE NAVIGATIONAL EQUIPMENT ON THE HYDRAULIC DREDGE TO AVOID DREDGING IN RESTRICTED AREAS.
4. PIPELINES AND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL LOCATE AND MARK ALL PIPELINES AND UTILITIES LOCATED WITHIN 150 FT. OF THE WORK PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THESE MARKERS DURING CONSTRUCTION.
5. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY; WHAT IS REQUIRED BY ONE IS BINDING AS IF REQUIRED BY ALL. CLARIFICATIONS AND INTERPRETATIONS OF, OR NOTIFICATIONS OF MINOR VARIATIONS AND DEVIATIONS IN THE CONTRACT DOCUMENTS, WILL BE ISSUED IN WRITING BY THE ENGINEER.
6. 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.
7. THE MARSH CREATION AREAS AND BORROW AREA MAY BE REVISED BY THE ENGINEER THROUGHOUT THE PERFORMANCE OF THE WORK TO REFLECT CHANGES IN FIELD CONDITIONS.
8. THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY OF THE BORROW AREA, DREDGE PIPELINE ALIGNMENT, PIPELINE AND EQUIPMENT CORRIDORS, AND CONTAINMENT DIKE BORROW AREAS PRIOR TO EXCAVATION AND DREDGING. THE PRECONSTRUCTION SURVEY SHALL SHOW THE TRACK LINES OF THIS MAGNETOMETER SURVEY AND INCLUDE THE COORDINATES, AMPLITUDE, SIGNATURE TYPE AND SIGNATURE WIDTH OF ALL MAGNETOMETER HITS.
9. THE CONTRACTOR IS RESPONSIBLE FOR CONTAINING ALL DREDGED MATERIAL WITHIN THE BOUNDARIES OF THE MARSH CREATION AREAS. ALL DREDGED MATERIAL DISPLACED FROM THE MARSH CREATION AREAS SHALL BE RETURNED TO THE MARSH CREATION AREA AT NO COST TO THE OWNER.
10. BACKGROUND IMAGERY WAS TAKEN IN 2012.

NOTIFICATIONS:

1. THE CONTRACTOR SHALL NOTIFY LOUISIANA ONE CALL AT 1-800-272-3020 TO LOCATE PIPELINES AND UTILITIES AT LEAST FIVE(5) WORKING DAYS PRIOR TO PERFORMING THE WORK. THE CONTRACTOR SHALL ALSO NOTIFY THE FOLLOWING PIPELINE OPERATOR AT LEAST FIVE (5) WORKING DAYS PRIOR TO PERFORMING THE WORK:

   COLLINS PIPELINE
   JOSH BRISCOE
   CELL PHONE: (504) 250-2431

2. LAND RIGHTS AGREEMENTS ARE PROVIDED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY ALL OF THE LANDOWNERS AT LEAST FIVE (5) WORKING DAYS PRIOR TO PERFORMING THE WORK:
3. THE CONTRACTOR SHALL CONTACT THE MANAGER OF THE BIG BRANCH MARSH NATIONAL WILDLIFE REFUGE AT (985) 882-2000 AND OBTAIN A SPECIAL USE PERMIT PRIOR TO MOBILIZATION.
4. THE CONTRACTOR SHALL NOTIFY THE SCENIC RIVER COORDINATOR WITH THE LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES AT (225) 225-765-2819 AT LEAST FIVE (5) WORKING DAYS PRIOR TO PLACING FILL MATERIAL INTO MARSH CREATION AREA 2.

ENVIRONMENTAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH THE SPECIAL PROVISION FOR PROTECTED SPECIES IN THE SPECIFICATIONS.

DESIGN NOTES:

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. SURVEY FEET. ALL HORIZONTAL COORDINATES ARE GIVEN IN THE NORTH AMERICAN DATUM OF 1983 (NAD 83, LOUISIANA STATE PLANE SOUTH ZONE U.S. FEET). ELEVATIONS ARE BASED ON THE FOLLOWING SECONDARY SURVEY MONUMENT:

SECONDARY MONUMENT	ELEVATION	NORTHING	EASTING
876 1534 B TIDAL	2.60'	631,798.38	3,748,804.16

2. THE EXISTING ELEVATIONS SHOWN ON THE PLANS ARE BASED ON BATHYMETRIC AND TOPOGRAPHIC SURVEYS PERFORMED BETWEEN NOVEMBER 2011 AND AUGUST 2014, BY C&C TECHNOLOGIES, INC.
3. DATA FROM NOAA GAGE CR3667 WAS USED TO CALCULATE THE MEAN HIGH WATER (+1.10') AND MEAN LOW WATER (+0.50'.)
4. A GEOTECHNICAL INVESTIGATION WAS PERFORMED BY GEOENGINEERS IN AUGUST 2012. THE SOIL BORING LOCATIONS ARE SHOWN ON THE PLANS. THE GEOTECHINICAL INVESTIGATION REPORT IS PROVIDED IN THE SPECIFICATIONS.

SUMMARY OF ESTIMATED QUANTITIES

ITEM No.	DESCRIPTION	UNIT	QUANTITY[1]
1	HYDRAULIC DREDGE MOBILIZATION AND DEMOBILIZATION (TS-100)	LUMP SUM	1
2	DREDGE PIPELINE MOBILIZATION, INSTALLATION AND DEMOBILIZATION (TS-101)	LUMP SUM	1
3	GENERAL MOBILIZATION AND DEMOBILIZATION (TS-102)	LUMP SUM	1
4	SURVEYS (TS-210)	LUMP SUM	1
5	GRADE STAKES (TS-220)	EACH	73
6	SETTLEMENT PLATES (TS-250)	EACH	8
7	EARTHEN CONTAINMENT DIKES (TS-300)	LINEAR FOOT	57,773
8	EARTHEN CONTAINMENT DIKE DEGRADATION (TS-350)	LINEAR FOOT	5,699
9	TEMPORARY EARTHEN PLUG (TS-390)	LUMP SUM	1
10	HYDRAULIC DREDGING AND MARSH CREATION (TS-400)[2]	CUBIC YARD	3,454,569
11	CIAP FUNDING SIGN (TS-850)	LUMP SUM	1

1. QUANTITIES SHOWN ARE FOR BID PURPOSES ONLY AND WERE CALCULATED ACCORDING TO THE CONDITIONS SURVEYED IN NOVEMBER 2011 AND AUGUST 2014. THE OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES 25% HIGHER OR LOWER WITHOUT ADJUSTMENT OF THE UNIT PRICE.
2. QUANTITY IS BASED ON THE DREDGE CUT VOLUME OF THE BORROW AREA. PAYMENT QUANTITIES WILL BE BASED ON PROCESS SURVEYS OF THE BORROW AREA.

STATE OF LOUISIANA
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PROFESSIONAL ENGINEER
IN
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2/29/16

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

GENERAL NOTES
DATE: FEBRUARY 2016
SHEET 2 OF 40

ESTIMATED QUANTITIES

AVAILABLE BORROW

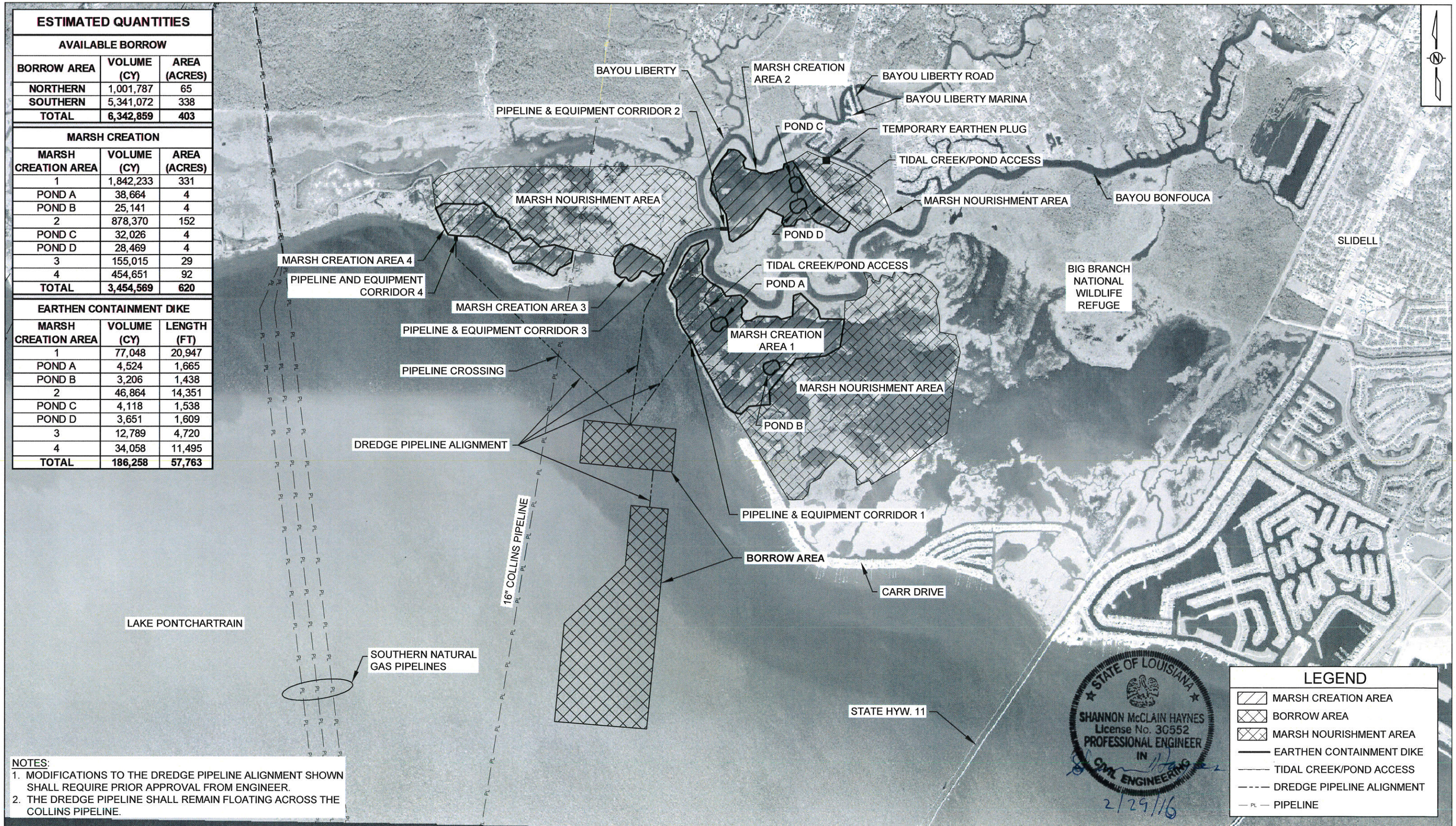
BORROW AREA	VOLUME (CY)	AREA (ACRES)
NORTHERN	1,001,787	65
SOUTHERN	5,341,072	338
TOTAL	6,342,859	403

MARSH CREATION

MARSH CREATION AREA	VOLUME (CY)	AREA (ACRES)
1	1,842,233	331
POND A	38,664	4
POND B	25,141	4
2	878,370	152
POND C	32,026	4
POND D	28,469	4
3	155,015	29
4	454,651	92
TOTAL	3,454,569	620

EARTHEN CONTAINMENT DIKE

MARSH CREATION AREA	VOLUME (CY)	LENGTH (FT)
1	77,048	20,947
POND A	4,524	1,665
POND B	3,206	1,438
2	46,864	14,351
POND C	4,118	1,538
POND D	3,651	1,609
3	12,789	4,720
4	34,058	11,495
TOTAL	186,258	57,763



NOTES:
1. MODIFICATIONS TO THE DREDGE PIPELINE ALIGNMENT SHOWN SHALL REQUIRE PRIOR APPROVAL FROM ENGINEER.
2. THE DREDGE PIPELINE SHALL REMAIN FLOATING ACROSS THE COLLINS PIPELINE.

3,000' 1,500' 0' 3,000' 6,000'

REV.	DATE	DESCRIPTION	BY

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

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BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104

FEDERAL PROJECT NUMBER: PO-104

APPROVED BY: RUSS JOFFRION, P.E.

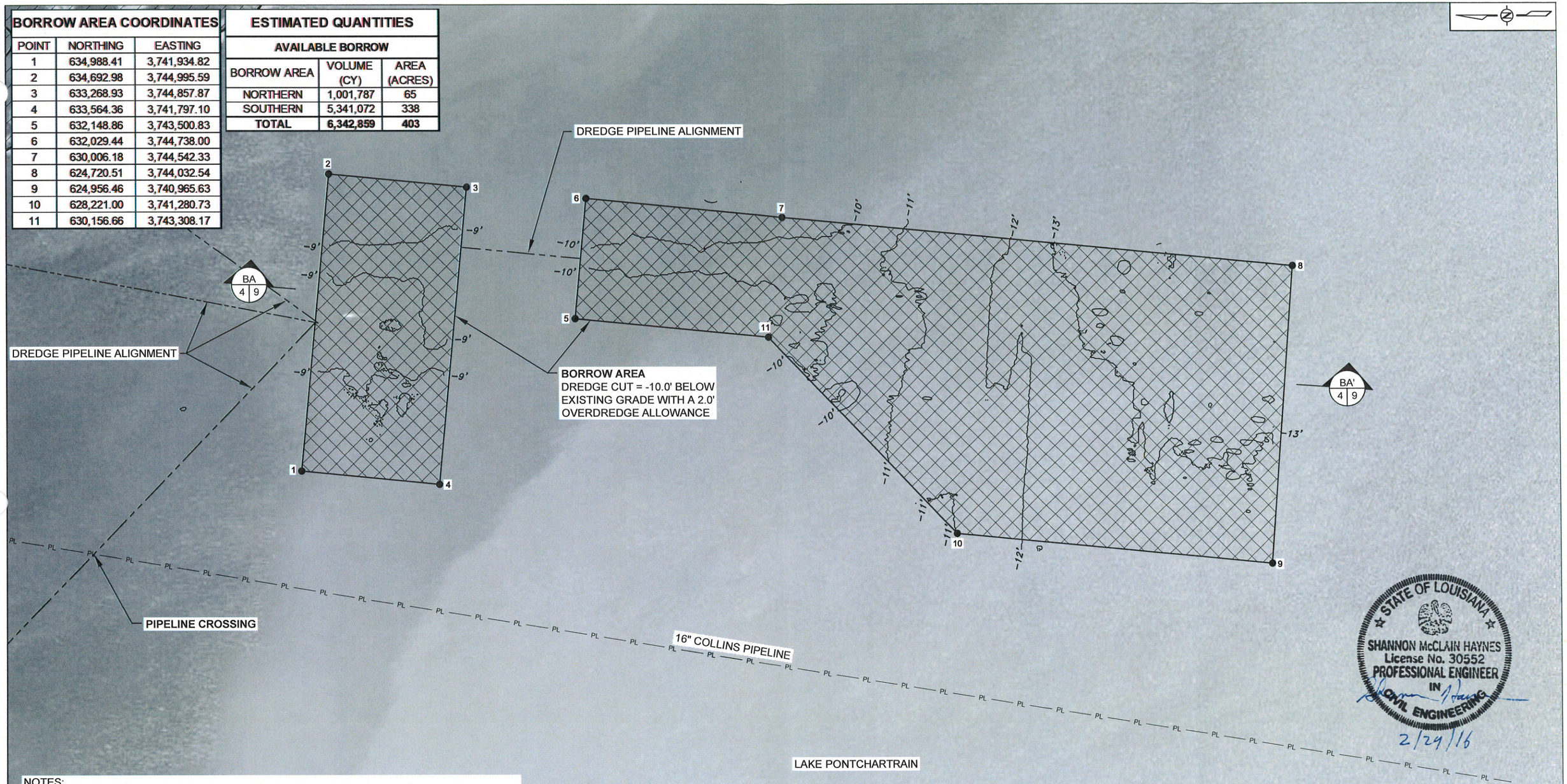
PROJECT LAYOUT

DATE: FEBRUARY 2016

SHEET 3 OF 40

BORROW AREA COORDINATES		
POINT	NORTHING	EASTING
1	634,988.41	3,741,934.82
2	634,692.98	3,744,995.59
3	633,268.93	3,744,857.87
4	633,564.36	3,741,797.10
5	632,148.86	3,743,500.83
6	632,029.44	3,744,738.00
7	630,006.18	3,744,542.33
8	624,720.51	3,744,032.54
9	624,956.46	3,740,965.63
10	628,221.00	3,741,280.73
11	630,156.66	3,743,308.17

ESTIMATED QUANTITIES		
AVAILABLE BORROW		
BORROW AREA	VOLUME (CY)	AREA (ACRES)
NORTHERN	1,001,787	65
SOUTHERN	5,341,072	338
TOTAL	**6,342,859**	**403**



STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
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PROFESSIONAL ENGINEER
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2/24/16

NOTES:
1. MAGNETOMETER AND BATHYMETRIC SURVEYS SHALL BE CONDUCTED ON THE BORROW AREA ACCORDING TO THE SPECIFICATIONS.
2. THE MAXIMUM PERMITTED DEPTH FOR DREDGING IN THE BORROW AREA IS 10.0' FROM EXISTING GRADE WITH A 2.0' OVERDREDGE ALLOWANCE.
3. MODIFICATIONS TO THE DREDGE PIPELINE ALIGNMENT SHOWN SHALL REQUIRE PRIOR APPROVAL FROM ENGINEER.
4. THE DREDGE PIPELINE SHALL REMAIN FLOATING ACROSS THE COLLINS PIPELINE.

LEGEND
- BORROW AREA
- PL — PIPELINE
- DREDGE PIPELINE ALIGNMENT

1000' 500' 0' 1000' 2000'

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

BORROW AREA LAYOUT

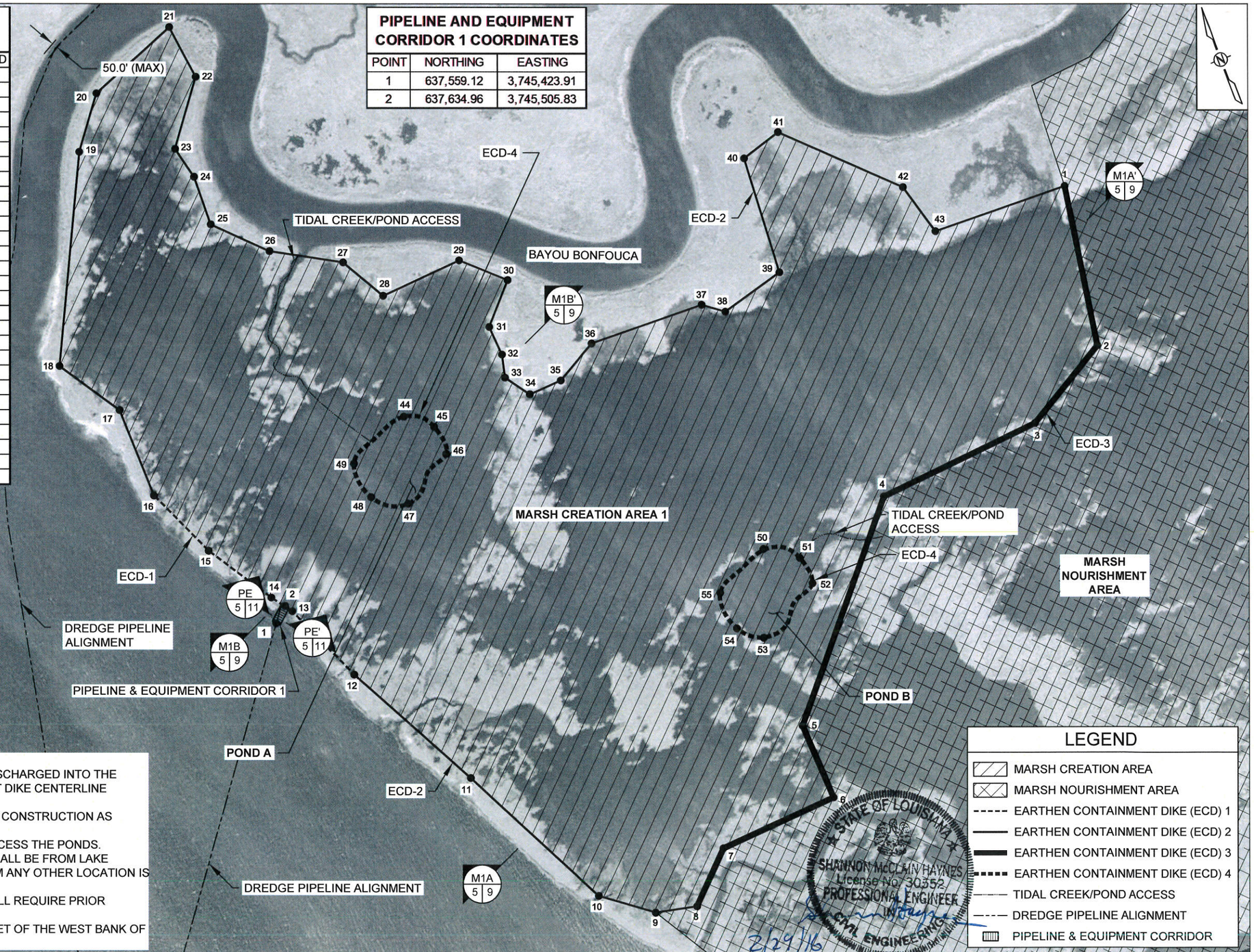
DATE: FEBRUARY 2016
SHEET 4 OF 40

EARTHEN CONTAINMENT DIKE (ECD) CENTERLINE COORDINATES

POINT	NORTHING	EASTING	ECD	POINT	NORTHING	EASTING	ECD
1	638,363.12	3,750,579.49	3	29	639,159.36	3,747,140.58	2
2	637,437.17	3,750,442.43	3	30	638,957.46	3,747,364.00	2
3	637,142.34	3,749,948.11	3	31	638,740.63	3,747,172.80	2
4	637,045.07	3,748,980.11	3	32	638,566.53	3,747,187.06	2
5	635,966.27	3,748,084.75	3	33	638,435.88	3,747,157.22	2
6	635,517.94	3,748,112.43	3	34	638,297.37	3,747,258.87	2
7	635,460.31	3,747,413.73	3	35	638,311.22	3,747,452.93	2
8	635,199.15	3,747,156.99	3	36	638,450.41	3,747,692.63	2
9	635,246.50	3,746,919.70	2	37	638,441.09	3,748,367.94	2
10	635,448.82	3,746,643.35	2	38	638,357.68	3,748,482.62	2
11	636,336.58	3,746,183.73	2	39	638,463.54	3,748,855.39	2
12	637,124.67	3,745,754.08	2	40	639,148.63	3,748,888.70	2
13	637,588.04	3,745,545.57	1	41	639,223.63	3,749,124.60	2
14	637,703.43	3,745,458.99	1	42	638,678.83	3,749,696.19	2
15	638,080.70	3,745,212.23	1	43	638,376.54	3,749,784.89	2
16	638,487.06	3,745,026.45	1	44	638,428.09	3,746,519.61	4
17	639,015.56	3,745,011.55	2	45	638,312.87	3,746,664.78	4
18	639,372.85	3,744,773.18	2	46	638,142.34	3,746,677.33	4
19	640,491.43	3,745,302.50	2	47	637,948.45	3,746,372.23	4
20	640,774.29	3,745,511.08	2	48	638,055.91	3,746,184.04	4
21	640,990.16	3,746,032.53	2	49	638,271.16	3,746,157.26	4
22	640,670.08	3,746,077.22	2	50	637,002.75	3,748,209.35	4
23	640,320.23	3,745,823.95	2	51	636,882.53	3,748,390.27	4
24	640,132.51	3,745,871.26	2	52	636,720.75	3,748,408.99	4
25	639,842.16	3,745,868.03	2	53	636,521.67	3,748,036.83	4
26	639,581.74	3,746,133.30	2	54	636,625.57	3,747,909.54	4
27	639,377.26	3,746,507.46	2	55	636,850.91	3,747,888.02	4
28	639,118.45	3,746,657.46	2				

PIPELINE AND EQUIPMENT CORRIDOR 1 COORDINATES

POINT	NORTHING	EASTING
1	637,559.12	3,745,423.91
2	637,634.96	3,745,505.83



ESTIMATED QUANTITIES

MARSH CREATION AREA	VOLUME (CY)	AREA (ACRES)
1	1,842,233	331
POND A	38,664	4
POND B	25,141	4
TOTAL	**1,906,038**	**339**

EARTEN CONTAINMENT DIKE	VOLUME (CY)	LENGTH (FT)
ECD-1	6,098	1,550
ECD-2	35,574	13,995
ECD-3	35,376	5,403
ECD-4 POND A	4,524	1,665
ECD-4 POND B	3,206	1,438
TOTAL	**84,778**	**24,050**

NOTES:
1. DECANTED WATER FROM THE MARSH CREATION AREA SHALL BE DISCHARGED INTO THE ADJACENT NOURISHMENT AREA THROUGH EARTHEN CONTAINMENT DIKE CENTERLINE COORDINATES 1-8.
2. THE ALIGNMENT OF THE TIDAL CREEKS SHALL BE FIELD-FIT DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL USE THE TIDAL CREEK ALIGNMENT TO ACCESS THE PONDS.
4. PIPELINE AND EQUIPMENT ACCESS TO MARSH CREATION AREA 1 SHALL BE FROM LAKE PONTCHARTRAIN THROUGH THE CORRIDOR SHOWN. ACCESS FROM ANY OTHER LOCATION IS STRICTLY PROHIBITED.
5. MODIFICATIONS TO THE DREDGE PIPELINE ALIGNMENT SHOWN SHALL REQUIRE PRIOR APPROVAL FROM ENGINEER.
6. THE ALIGNMENT OF THE DREDGE PIPELINE SHALL BE WITHIN 50 FEET OF THE WEST BANK OF BAYOU BONFOUCA.

LEGEND

- MARSH CREATION AREA
- MARSH NOURISHMENT AREA
- EARTHEN CONTAINMENT DIKE (ECD) 1
- EARTHEN CONTAINMENT DIKE (ECD) 2
- EARTHEN CONTAINMENT DIKE (ECD) 3
- EARTHEN CONTAINMENT DIKE (ECD) 4
- TIDAL CREEK/POND ACCESS
- DREDGE PIPELINE ALIGNMENT
- PIPELINE & EQUIPMENT CORRIDOR

600' 300' 0' 600' 1200'

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

MARSH CREATION AREA 1 LAYOUT

DATE: FEBRUARY 2016
SHEET 5 OF 40

EARTHEN CONTAINMENT DIKE (ECD) CENTERLINE COORDINATES

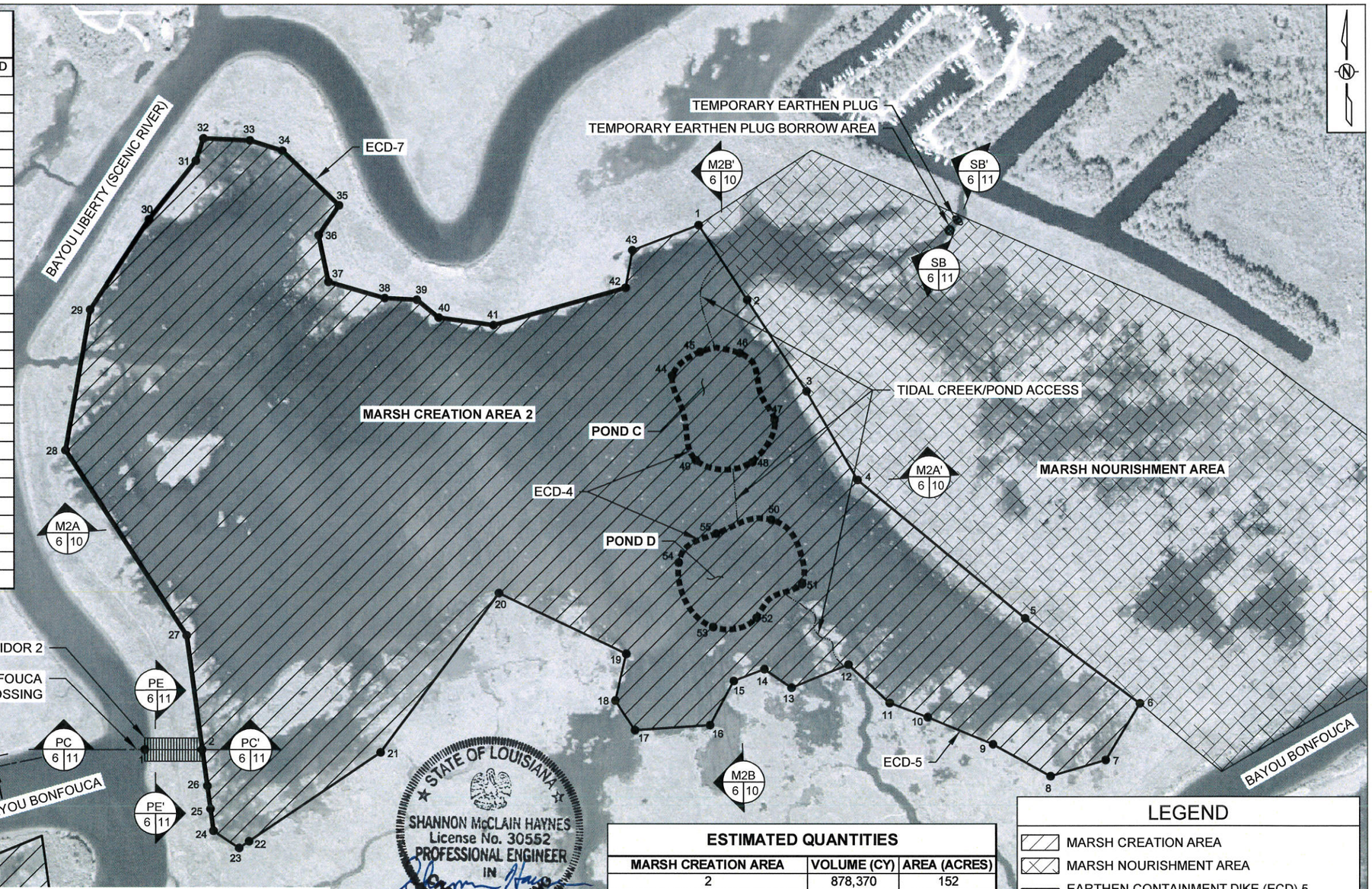
POINT	NORTHING	EASTING	ECD	POINT	NORTHING	EASTING	ECD
1	643,625.28	3,748,863.77	5	29	643,259.81	3,746,240.37	7
2	643,303.08	3,749,074.28	5	30	643,648.69	3,746,496.11	7
3	642,909.67	3,749,331.31	5	31	643,901.82	3,746,697.70	7
4	642,527.80	3,749,549.99	5	32	643,998.13	3,746,730.27	7
5	641,930.10	3,750,274.44	5	33	643,989.34	3,746,930.40	7
6	641,562.21	3,750,770.26	5	34	643,944.79	3,747,069.58	7
7	641,318.48	3,750,621.23	5	35	643,709.48	3,747,312.61	7
8	641,248.75	3,750,384.02	5	36	643,581.17	3,747,224.74	7
9	641,386.50	3,750,134.79	5	37	643,379.76	3,747,266.62	7
10	641,503.55	3,749,851.52	5	38	643,310.32	3,747,509.86	7
11	641,564.82	3,749,687.17	5	39	643,303.30	3,747,648.12	7
12	641,730.29	3,749,509.51	5	40	643,226.33	3,747,742.34	7
13	641,630.55	3,749,264.50	5	41	643,194.06	3,747,977.47	7
14	641,710.60	3,749,146.59	5	42	643,355.18	3,748,546.85	5
15	641,659.87	3,749,013.41	5	43	643,517.54	3,748,576.39	5
16	641,468.76	3,748,910.20	5	44	642,976.61	3,748,746.12	4
17	641,447.39	3,748,584.80	5	45	643,078.67	3,748,868.30	4
18	641,575.28	3,748,499.48	5	46	643,074.16	3,749,040.57	4
19	641,776.26	3,748,548.23	5	47	642,787.40	3,749,192.52	4
20	642,038.14	3,747,999.70	5	48	642,603.98	3,749,095.93	4
21	641,350.42	3,747,490.71	5	49	642,611.86	3,748,849.75	4
22	640,967.13	3,746,924.14	5	50	642,355.86	3,749,176.92	4
23	640,937.98	3,746,881.05	5	51	642,077.32	3,749,310.49	4
24	641,011.95	3,746,770.82	7	52	641,932.39	3,749,113.16	4
25	641,106.66	3,746,757.95	7	53	641,891.93	3,748,923.62	4
26	641,205.75	3,746,744.48	7	54	642,170.37	3,748,774.82	4
27	641,854.88	3,746,656.25	7	55	642,295.58	3,748,937.27	4
28	642,653.73	3,746,134.61	7				

PIPELINE AND EQUIPMENT CORRIDOR 2 COORDINATES

POINT	NORTHING	EASTING
1	641,361.92	3,746,474.94
2	641,361.92	3,746,474.94

TEMPORARY EARTHEN PLUG COORDINATES

FEATURE	NORTHING	EASTING
PLUG	643,645.97	3,749,985.69
BORROW	643,603.31	3,749,950.97



STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

BIG BRANCH NATIONAL WILDLIFE REFUGE

NOTES:
1. DECANTED WATER FROM THE MARSH CREATION AREA SHALL BE DISCHARGED INTO THE ADJACENT NOURISHMENT AREA THROUGH EARTHEN CONTAINMENT DIKE CENTERLINE COORDINATES 1-2.
2. THE ALIGNMENT OF THE TIDAL CREEKS SHALL BE FIELD-FIT DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL USE THE TIDAL CREEK ALIGNMENT TO ACCESS THE PONDS.
4. PIPELINE AND EQUIPMENT ACCESS TO MARSH CREATION AREA 2 SHALL BE FROM BAYOU LIBERTY THROUGH THE CORRIDOR SHOWN. ACCESS FROM ANY OTHER LOCATION IS STRICTLY PROHIBITED.
5. INSTALLATION AND REMOVAL OF DREDGE PIPELINE SHALL NOT IMPEDE NAVIGATION.
6. ECD-7 SHALL BE DEGRADED AFTER ACCEPTANCE OF MARSH CREATION AREA 2 AS SHOWN ON THE TYPICAL SECTION.
7. MODIFICATIONS TO THE DREDGE PIPELINE ALIGNMENT SHOWN SHALL REQUIRE PRIOR APPROVAL FROM ENGINEER.
8. THE ALIGNMENT OF THE DREDGE PIPELINE SHALL BE WITHIN 50 FEET OF THE WEST BANK OF BAYOU BONFOUCA.

ESTIMATED QUANTITIES

MARSH CREATION AREA	VOLUME (CY)	AREA (ACRES)
2	878,370	152
POND C	32,026	4
POND D	28,469	4
TOTAL	938,865	160

EARTHEN CONTAINMENT DIKE	VOLUME (CY)	LENGTH (FT)
ECD-5	25,877	8,662
ECD-7	20,987	5,699
ECD-4 POND C	4,118	1,538
ECD-4 POND D	3,651	1,609
TOTAL	54,633	17,508

LEGEND

- MARSH CREATION AREA
- MARSH NOURISHMENT AREA
- EARTHEN CONTAINMENT DIKE (ECD) 5
- EARTHEN CONTAINMENT DIKE (ECD)-7
- EARTHEN CONTAINMENT DIKE (ECD) 8
- TIDAL CREEK/POND ACCESS
- DREDGE PIPELINE ALIGNMENT
- PIPELINE AND EQUIPMENT CORRIDOR
- TEMPORARY EARTHEN PLUG
- TEMPORARY EARTHEN PLUG BORROW AREA

500' 250' 0' 500' 1000'

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

MARSH CREATION AREA 2 LAYOUT
DATE: FEBRUARY 2016
SHEET 6 OF 40

EARTHEN CONTAINMENT DIKE (ECD) CENTERLINE COORDINATES

POINT	NORTHING	EASTING	ECD	POINT	NORTHING	EASTING	ECD
1	640,417.45	3,742,993.52	6	13	639,942.87	3,743,958.79	6
2	640,767.02	3,743,265.51	6	13	639,942.87	3,743,958.79	6
3	640,848.45	3,743,481.33	6	14	639,946.11	3,743,850.76	6
4	640,684.33	3,743,813.99	6	15	639,763.22	3,743,724.28	6
5	640,670.73	3,743,923.71	6	16	639,619.21	3,743,515.55	6
6	640,566.79	3,744,052.60	6	17	639,629.07	3,743,430.26	6
7	640,397.78	3,744,426.55	6	18	639,743.80	3,743,341.42	6
8	640,335.29	3,744,494.27	6	19	639,737.93	3,743,157.47	6
9	640,147.72	3,744,596.98	6	20	639,882.64	3,742,975.47	6
10	639,875.21	3,744,522.60	6	21	640,080.14	3,742,961.77	6
11	639,821.31	3,744,426.17	6	22	640,206.54	3,742,926.05	6
12	639,795.50	3,744,216.27	6				

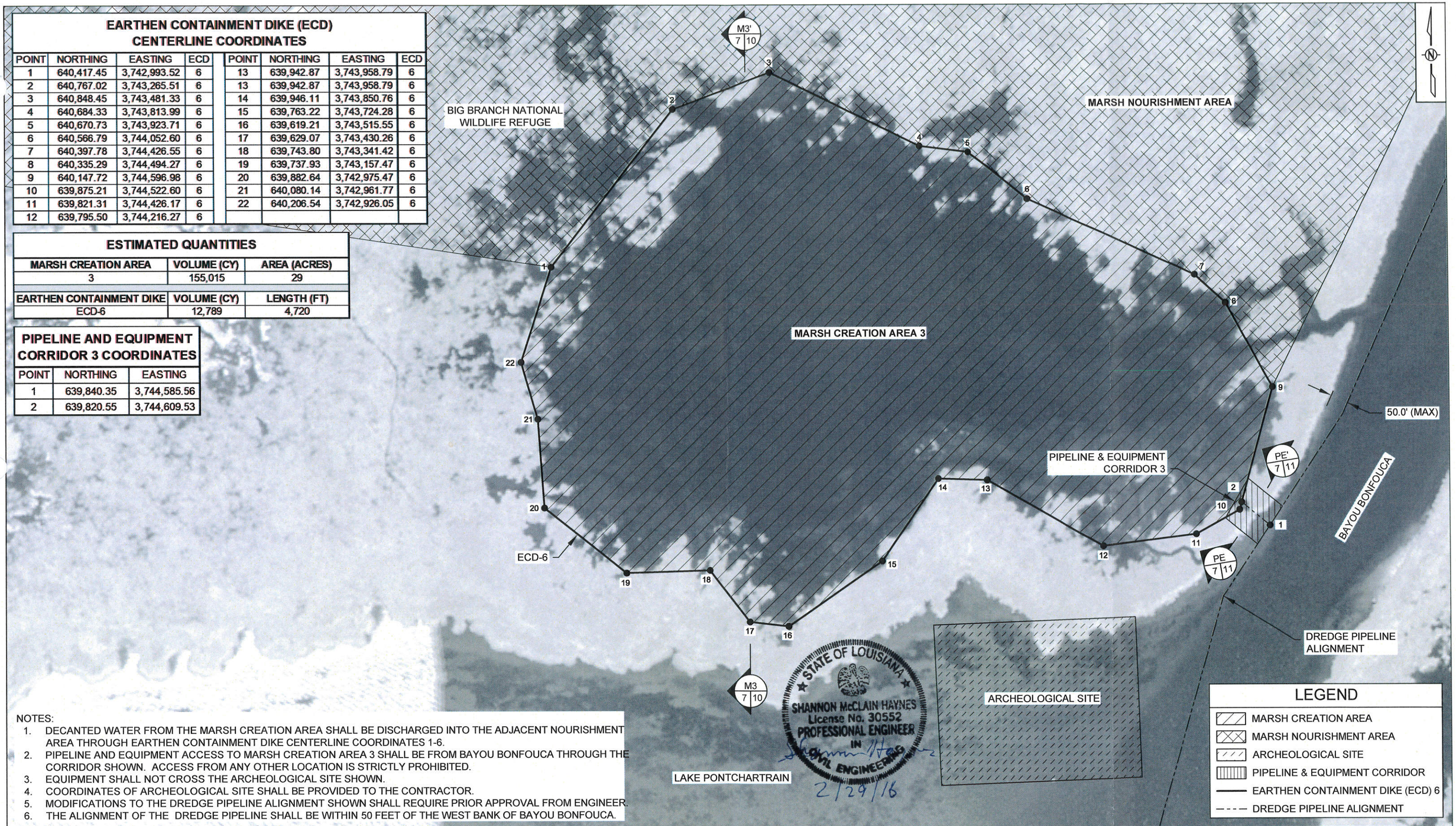
ESTIMATED QUANTITIES

MARSH CREATION AREA	VOLUME (CY)	AREA (ACRES)
3	155,015	29

EARTHEN CONTAINMENT DIKE	VOLUME (CY)	LENGTH (FT)
ECD-6	12,789	4,720

PIPELINE AND EQUIPMENT CORRIDOR 3 COORDINATES

POINT	NORTHING	EASTING
1	639,840.35	3,744,585.56
2	639,820.55	3,744,609.53



NOTES:

1. DECANTED WATER FROM THE MARSH CREATION AREA SHALL BE DISCHARGED INTO THE ADJACENT NOURISHMENT AREA THROUGH EARTHEN CONTAINMENT DIKE CENTERLINE COORDINATES 1-6.
2. PIPELINE AND EQUIPMENT ACCESS TO MARSH CREATION AREA 3 SHALL BE FROM BAYOU BONFOUCA THROUGH THE CORRIDOR SHOWN. ACCESS FROM ANY OTHER LOCATION IS STRICTLY PROHIBITED.
3. EQUIPMENT SHALL NOT CROSS THE ARCHEOLOGICAL SITE SHOWN.
4. COORDINATES OF ARCHEOLOGICAL SITE SHALL BE PROVIDED TO THE CONTRACTOR.
5. MODIFICATIONS TO THE DREDGE PIPELINE ALIGNMENT SHOWN SHALL REQUIRE PRIOR APPROVAL FROM ENGINEER.
6. THE ALIGNMENT OF THE DREDGE PIPELINE SHALL BE WITHIN 50 FEET OF THE WEST BANK OF BAYOU BONFOUCA.

200' 100' 0' 200' 400'

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

MARSH CREATION AREA 3 LAYOUT

DATE: FEBRUARY 2016
SHEET 7 OF 40

EARTHEN CONTAINMENT DIKE CENTERLINE COORDINATES

POINT	NORTHING	EASTING	ECD	POINT	NORTHING	EASTING	ECD
1	640,630.79	3,741,568.30	5	16	642,173.03	3,737,929.37	5
2	640,234.59	3,741,501.52	5	17	642,148.61	3,738,429.79	5
3	640,046.65	3,741,112.65	5	18	642,213.16	3,738,588.43	5
4	639,980.19	3,741,054.40	5	19	642,063.92	3,738,812.36	5
5	639,902.59	3,741,022.63	5	20	641,749.01	3,739,040.53	5
6	639,846.28	3,741,017.65	5	21	641,670.66	3,739,314.72	5
7	639,790.43	3,740,901.96	5	22	641,489.30	3,739,457.10	5
8	640,195.25	3,740,176.95	5	23	641,354.15	3,739,471.06	5
9	640,202.37	3,739,592.15	5	24	641,315.04	3,739,538.53	5
10	640,549.45	3,739,424.90	5	25	641,290.14	3,739,646.90	5
11	641,084.44	3,738,397.94	5	26	640,953.88	3,739,934.31	5
12	641,143.27	3,737,427.78	5	27	641,056.25	3,740,143.34	5
13	641,355.54	3,737,317.04	5	28	640,742.10	3,740,473.22	5
14	642,030.79	3,737,006.95	5	29	640,818.58	3,740,939.19	5
15	642,179.27	3,737,284.13	5				

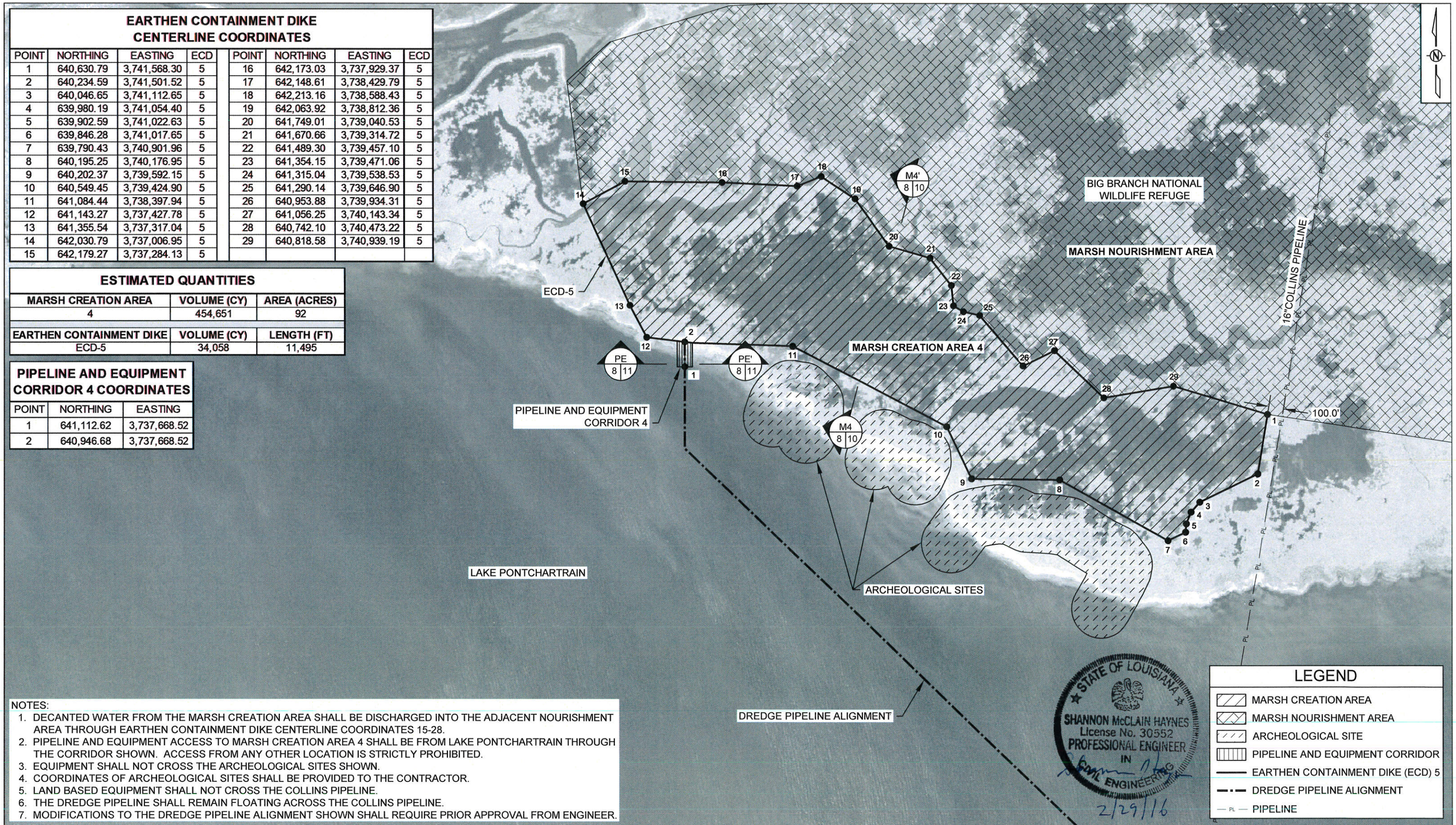
ESTIMATED QUANTITIES

MARSH CREATION AREA	VOLUME (CY)	AREA (ACRES)
4	454,651	92

EARTHEN CONTAINMENT DIKE	VOLUME (CY)	LENGTH (FT)
ECD-5	34,058	11,495

PIPELINE AND EQUIPMENT CORRIDOR 4 COORDINATES

POINT	NORTHING	EASTING
1	641,112.62	3,737,668.52
2	640,946.68	3,737,668.52



NOTES:

1. DECANTED WATER FROM THE MARSH CREATION AREA SHALL BE DISCHARGED INTO THE ADJACENT NOURISHMENT AREA THROUGH EARTHEN CONTAINMENT DIKE CENTERLINE COORDINATES 15-28.
2. PIPELINE AND EQUIPMENT ACCESS TO MARSH CREATION AREA 4 SHALL BE FROM LAKE PONTCHARTRAIN THROUGH THE CORRIDOR SHOWN. ACCESS FROM ANY OTHER LOCATION IS STRICTLY PROHIBITED.
3. EQUIPMENT SHALL NOT CROSS THE ARCHEOLOGICAL SITES SHOWN.
4. COORDINATES OF ARCHEOLOGICAL SITES SHALL BE PROVIDED TO THE CONTRACTOR.
5. LAND BASED EQUIPMENT SHALL NOT CROSS THE COLLINS PIPELINE.
6. THE DREDGE PIPELINE SHALL REMAIN FLOATING ACROSS THE COLLINS PIPELINE.
7. MODIFICATIONS TO THE DREDGE PIPELINE ALIGNMENT SHOWN SHALL REQUIRE PRIOR APPROVAL FROM ENGINEER.

500' 250' 0' 500' 1000'

REV.	DATE	DESCRIPTION	BY

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

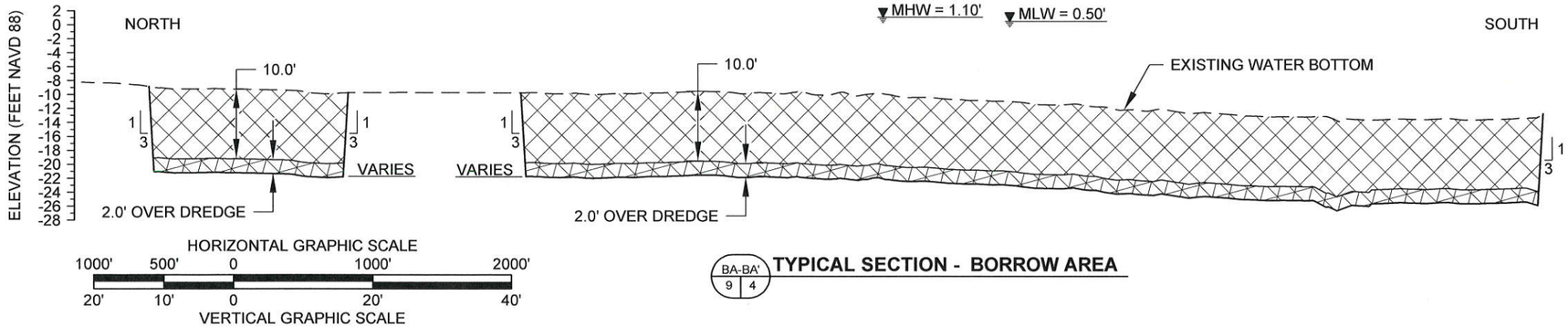
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

MARSH CREATION AREA 4 LAYOUT

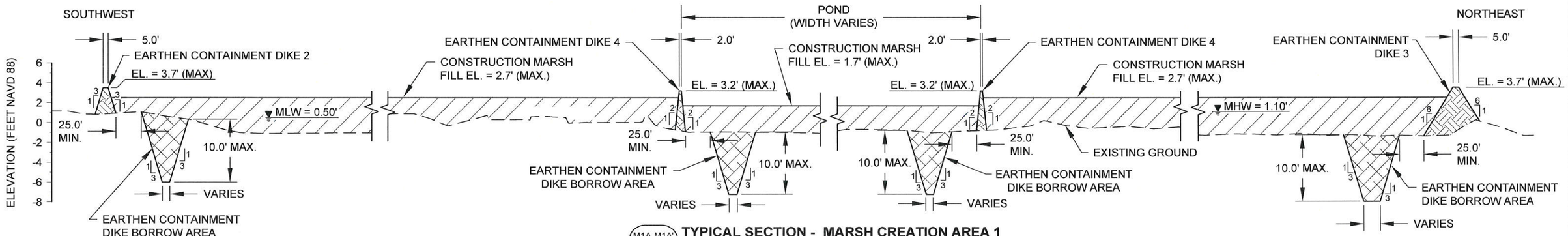
DATE: FEBRUARY 2016
SHEET 8 OF 40



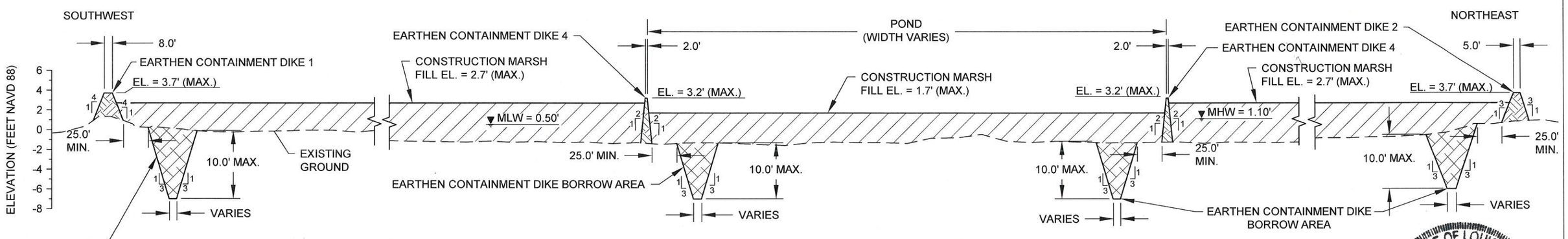
BA-BA' 9 4 **TYPICAL SECTION - BORROW AREA**

EARTHEN CONTAINMENT DIKE (ECD) AND BORROW AREA GEOMETRIES

ECD	MARSH CREATION AREA	DIKE			BORROW		
		CREST WIDTH (FT)	CREST HEIGHT (FT)	SIDE SLOPES (RISE:RUN)	DIKE OFFSET (FT)	TROUGH WIDTH (FT)	TROUGH DEPTH (FT)
1	1	8	3.7 (MAX)	1:4	25 (MIN)	VARIES	10 (MAX)
2	1	5	3.7 (MAX)	1:3	25 (MIN)	VARIES	10 (MAX)
3	1	5	3.7 (MAX)	1:6	25 (MIN)	VARIES	10 (MAX)
4	1, 2	2	3.2 (MAX)	1:2	25 (MIN)	VARIES	10 (MAX)
5	2, 4	5	3.7 (MAX)	1:3	25 (MIN)	VARIES	10 (MAX)
6	3	5	3.5 (MAX)	1:3	25 (MIN)	VARIES	10 (MAX)



M1A-M1A' 9 5 **TYPICAL SECTION - MARSH CREATION AREA 1**



M1B-M1B' 9 5 **TYPICAL SECTION - MARSH CREATION AREA 1**

LEGEND

- BORROW AREA
- OVER DREDGE
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- MARSH CREATION FILL
- EXISTING GROUND

NOTES:
1. THE VERTICAL TOLERANCE FOR THE MARSH FILL AND CONTAINMENT DIKE CREST ELEVATIONS SHALL BE -6 INCHES FROM MAXIMUM.
2. THE DREDGE DEPTH AND SLOPE OF THE BORROW AREA SHALL BE RELATIVE TO EXISTING GRADE.

HORIZONTAL GRAPHIC SCALE
100' 50' 0 100' 200'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

REV.	DATE	DESCRIPTION	BY

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

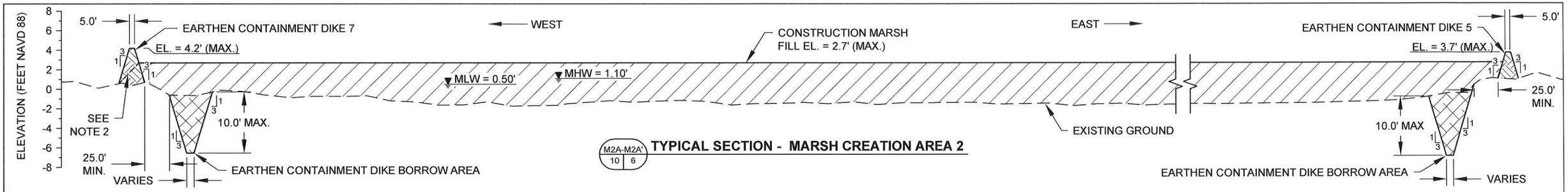
DRAWN BY: KRISTI CANTU | DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

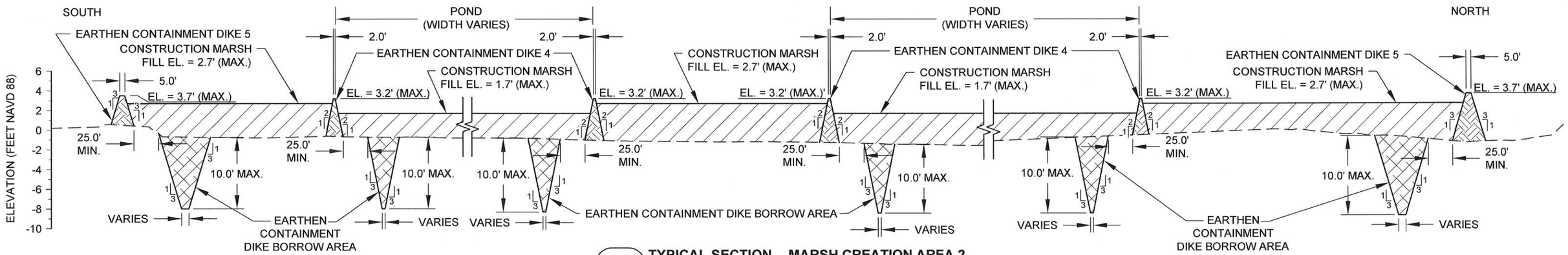
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

TYPICAL SECTIONS

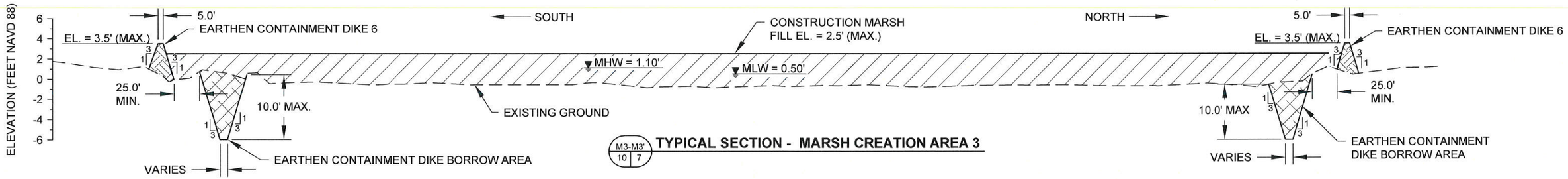
DATE: FEBRUARY 2016
SHEET 9 OF 40



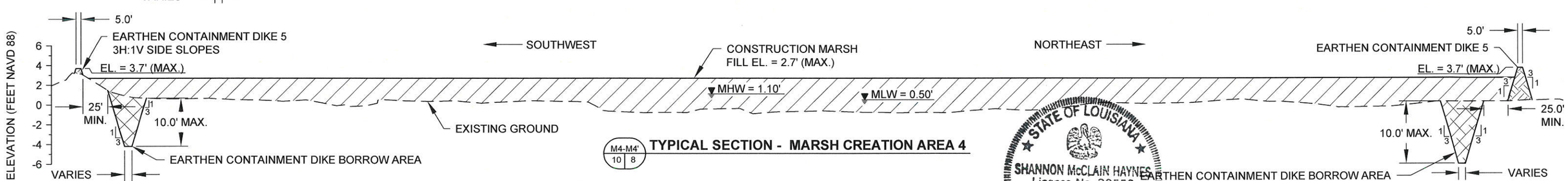
M2A-M2A' 10 6 **TYPICAL SECTION - MARSH CREATION AREA 2**



M2B-M2B' 10 6 **TYPICAL SECTION - MARSH CREATION AREA 2**



M3-M3' 10 7 **TYPICAL SECTION - MARSH CREATION AREA 3**



M4-M4' 10 8 **TYPICAL SECTION - MARSH CREATION AREA 4**

STATE OF LOUISIANA
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2/29/16

NOTES:

1. THE VERTICAL TOLERANCE FOR THE MARSH FILL AND CONTAINMENT DIKE CREST ELEVATIONS SHALL BE -6 INCHES FROM MAXIMUM.
2. EARTHEN CONTAINMENT DIKE 7 SHALL BE DEGRADED FROM CONSTRUCTION MARSH FILL ELEVATION DOWN TO EXISTING GRADE AFTER ACCEPTANCE OF MARSH CREATION AREA 2.
3. THE DIMENSIONS FOR ALL EARTHEN CONTAINMENT DIKES ARE PROVIDED IN TABLE FORMAT ON SHEET 9.

LEGEND

- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- MARSH CREATION FILL
- EXISTING GROUND

HORIZONTAL GRAPHIC SCALE
100' 50' 0 100' 200'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

REV.	DATE	DESCRIPTION	BY

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

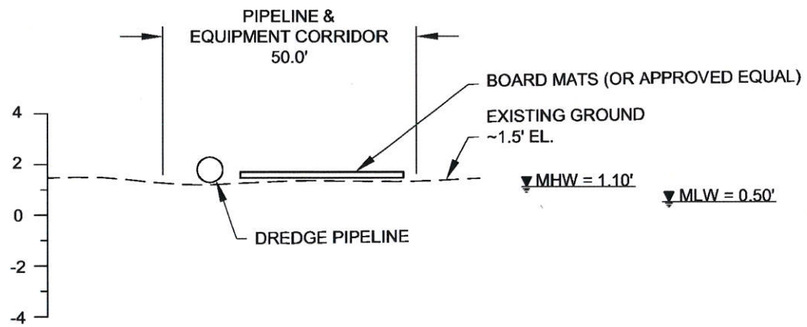
DRAWN BY: KRISTI CANTU | DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA
MARSH CREATION PROJECT

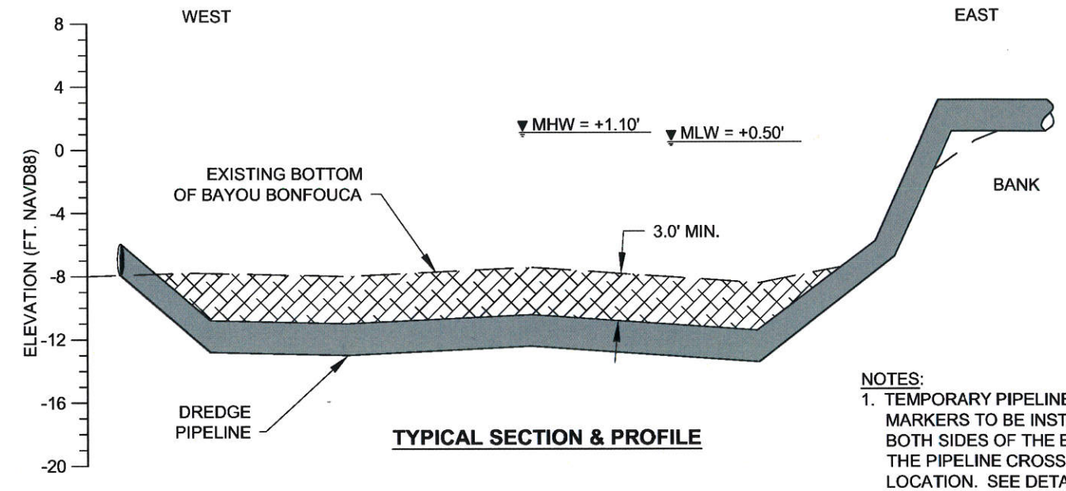
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

TYPICAL SECTIONS

DATE: FEBRUARY 2016
SHEET 10 OF 40



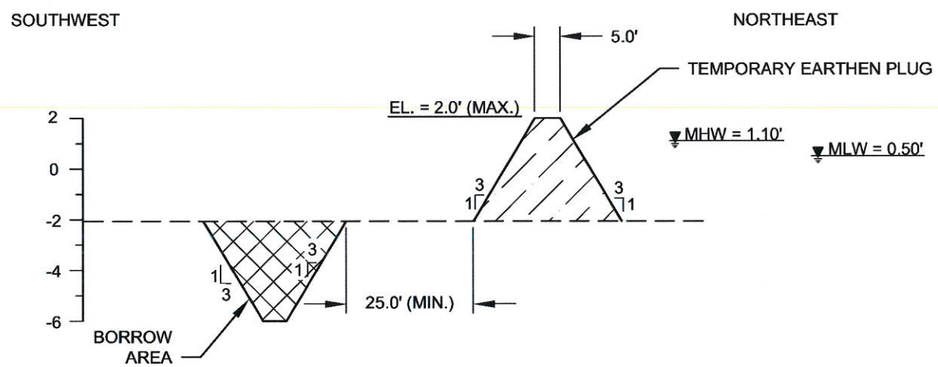
PE-PE' 11 5-8 **PIPELINE & EQUIPMENT CORRIDOR1A, 1B, 2, 3, AND 4 DETAIL**
NTS



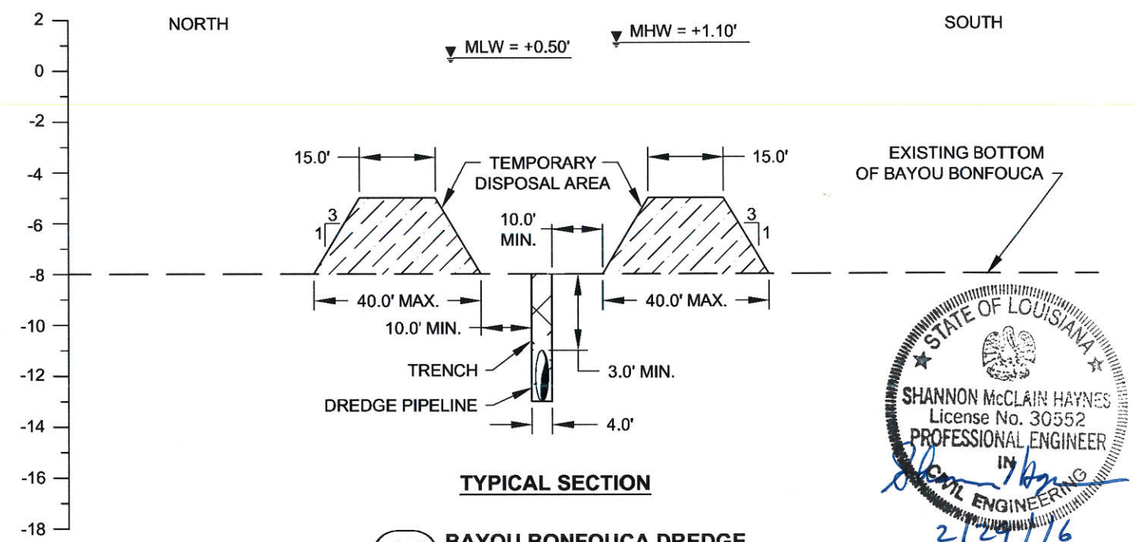
TYPICAL SECTION & PROFILE

HORIZONTAL GRAPHIC SCALE
100' 50' 0 100' 200'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

NOTES:
1. TEMPORARY PIPELINE MARKERS TO BE INSTALLED ON BOTH SIDES OF THE BAYOU AT THE PIPELINE CROSSING LOCATION. SEE DETAIL ON SHEET 12.
2. TEMPORARY SPOIL TO BE BACKFILLED IMMEDIATELY AFTER IINSTALLATION AND REMOVAL OF DREDGE PIPELINE IN TRENCH.



SB-SB' 11 6 **TEMPORARY EARTHEN PLUG DETAIL**
NTS



TYPICAL SECTION

PC-PC' 11 6 **BAYOU BONFOUCA DREDGE PIPELINE CROSSING**

HORIZONTAL GRAPHIC SCALE
30' 15' 0 30' 60'
6' 3' 0 6' 12'
VERTICAL GRAPHIC SCALE

STATE OF LOUISIANA
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2/29/16

LEGEND	
	DREDGE PIPELINE
	TEMPORARY SPOIL
	EXISTING GROUND
	DREDGE PIPELINE

NOTES:
1. PIPELINE AND EQUIPMENT CORRIDORS SHALL EXTEND FROM THE EDGE OF WATER TO THE MARSH CREATION AREAS.
2. TEMPORARY EARTHEN PLUG TO EXTEND ACROSS THE FULL LENGTH OF THE CHANNEL.

HORIZONTAL GRAPHIC SCALE
30' 15' 0 30' 60'
6' 3' 0 6' 12'
VERTICAL GRAPHIC SCALE

REV.	DATE	DESCRIPTION	BY

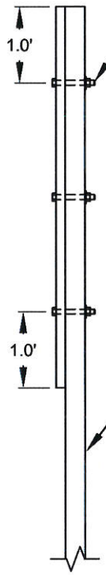
COASTAL PROTECTION AND RESTORATION AUTHORITY
450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

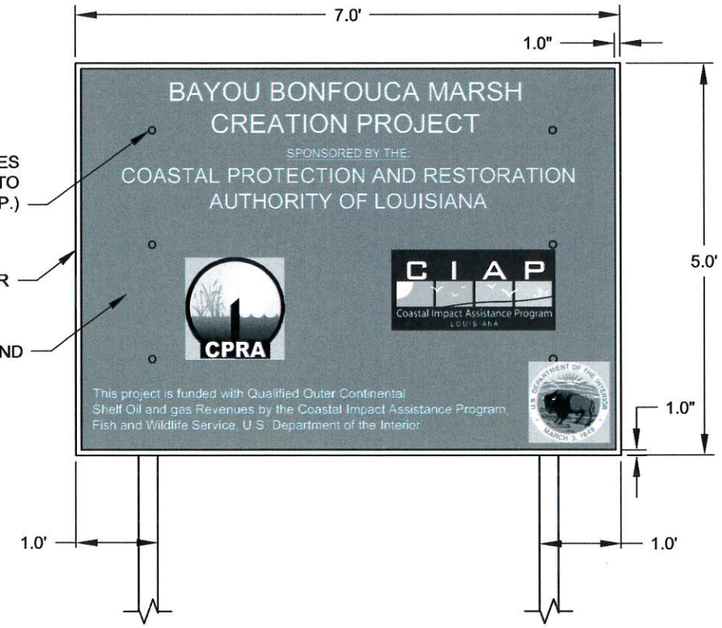
BAYOU BONFOUCA
MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

DETAILS
DATE: FEBRUARY 2016
SHEET 11 OF 40



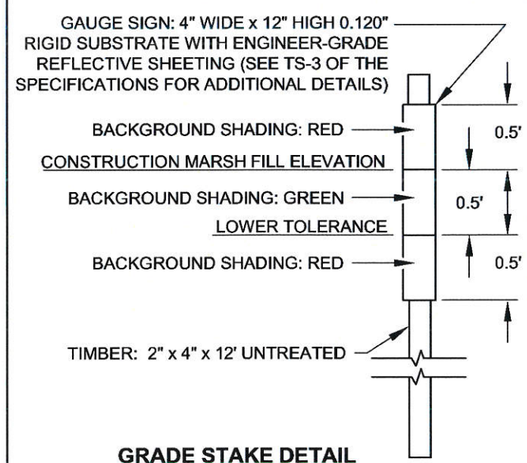
SIDE VIEW
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

SIGNAGE DETAIL
NOT TO SCALE

NOTES:
1. PROJECT FUNDING SIGN SHALL BE MOUNTED ON TWO (2), THREE (3) INCH DIAMETER BY TWENTY (20) FOOT LONG, SCHEDULE 40 GALVANIZED STEEL PIPES EMBEDDED TO A DEPTH OF AT LEAST TEN (10) FOOT. SIGN SHALL BE ATTACHED TO PIPES WITH SIX (6), 3/4" DIA. X 4" A307 (HDG) BOLTS WITH WASHERS AND NUTS.
2. BOTTOM EDGE OF SIGN SHALL BE APPROXIMATELY FIVE (5) FOOT ABOVE THE GROUND.

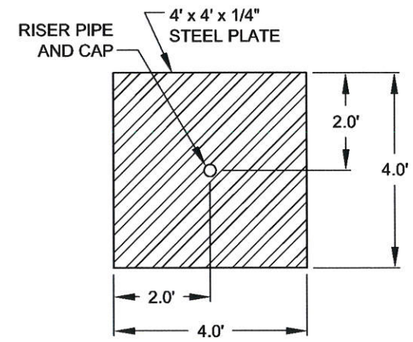


GRADE STAKE DETAIL
NOT TO SCALE

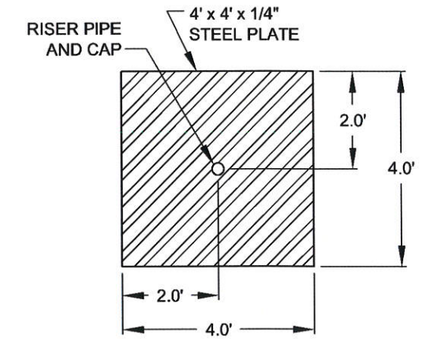
MARSH CREATION AREA	CONSTRUCTION MARSH FILL ELEVATION (NAVD88)
1	+2.7
2	+2.7
3	+2.5
4	+2.7

TEMPORARY PIPELINE MARKER DETAIL
NOT TO SCALE

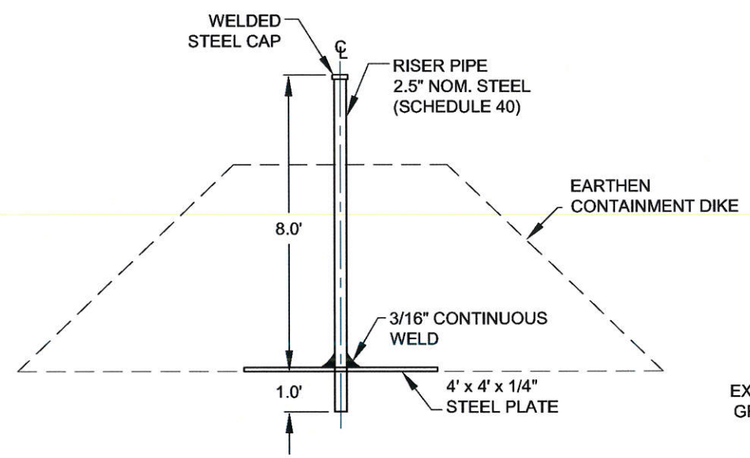
TEMPORARY PIPELINE MARKER DETAIL NOTES:
1. MARKERS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH LADOTD 2006 STANDARD SPECIFICATION 729.
2. A SHOP DRAWING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OF THE MARKERS.
3. MARKERS SHALL BE INSTALLED PRIOR TO INSTALLATION OF THE DREDGE PIPELINE AND REMOVED AFTER THE REMOVAL OF THE DREDGE PIPELINE.
4. MARKERS SHALL BE INSTALLED ON BOTH BANKS OF BAYOU BONFOUCA.



PLAN VIEW
NOT TO SCALE

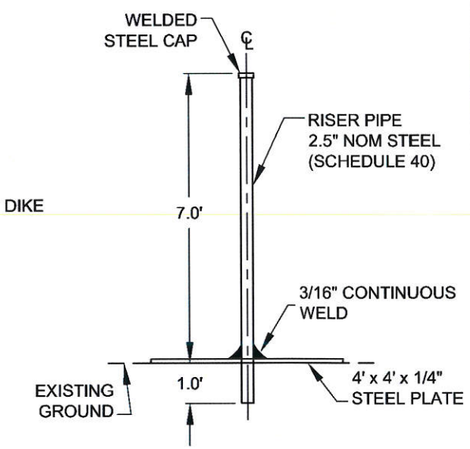


PLAN VIEW
NOT TO SCALE



SECTION VIEW
NOT TO SCALE

EARTHEN CONTAINMENT DIKE SETTLEMENT PLATE
NOT TO SCALE



SECTION VIEW
NOT TO SCALE

MARSH CREATION AREA SETTLEMENT PLATE
NOT TO SCALE

NOTES:
1. SETTLEMENT PLATES SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS.
2. SETTLEMENT PLATES SHALL BE GALVANIZED.

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2/29/16

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU | DESIGNED BY: SHANNON HAYNES, P.E.

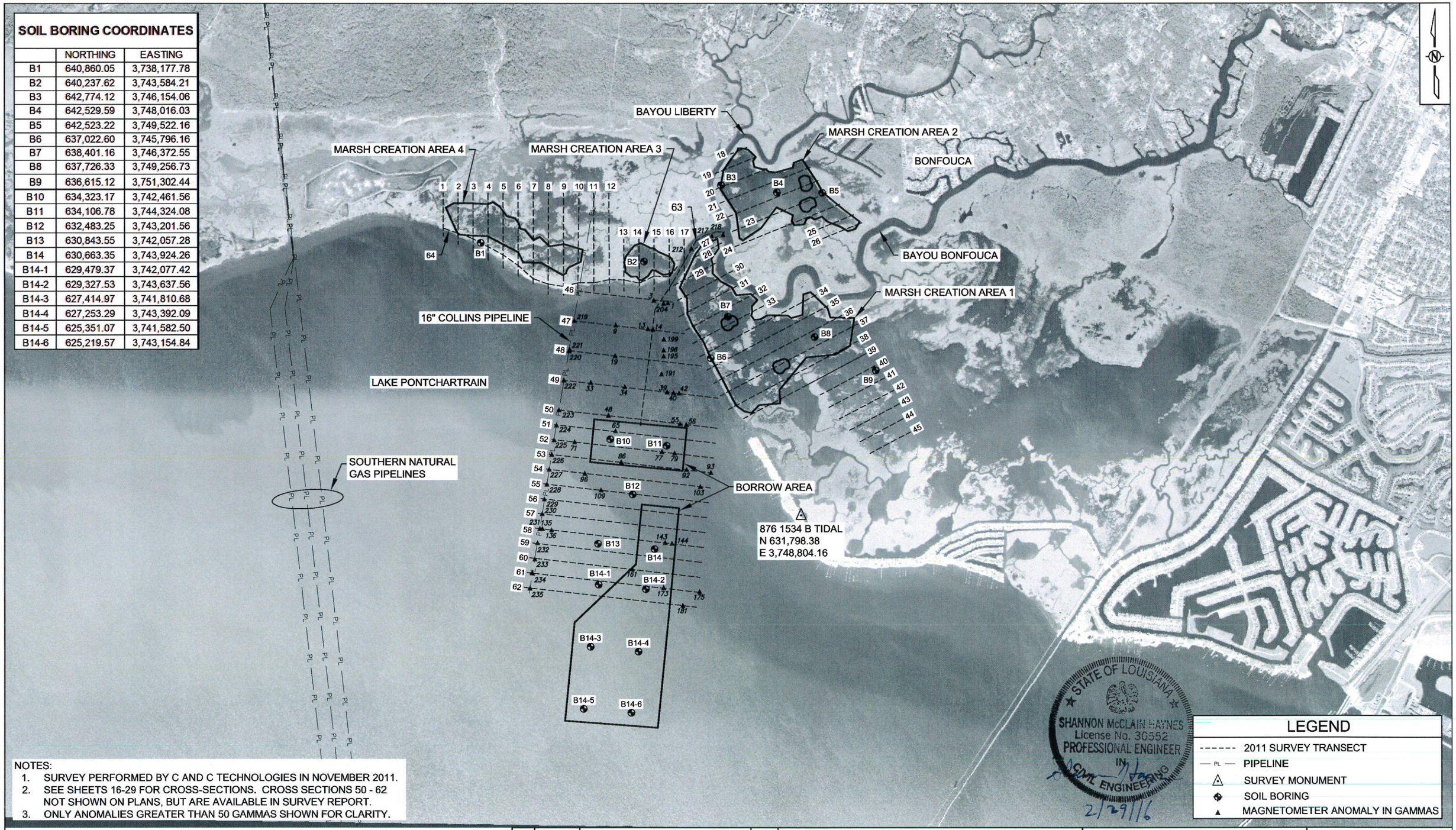
BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

DETAILS
DATE: FEBRUARY 2016
SHEET 12 OF 40

SOIL BORING COORDINATES

	NORTHING	EASTING
B1	640,860.05	3,738,177.78
B2	640,237.62	3,743,584.21
B3	642,774.12	3,746,154.06
B4	642,529.59	3,748,016.03
B5	642,523.22	3,749,522.16
B6	637,022.60	3,745,796.16
B7	638,401.16	3,746,372.55
B8	637,726.33	3,749,256.73
B9	636,615.12	3,751,302.44
B10	634,323.17	3,742,461.56
B11	634,106.78	3,744,324.08
B12	632,483.25	3,743,201.56
B13	630,843.55	3,742,057.28
B14	630,663.35	3,743,924.26
B14-1	629,479.37	3,742,077.42
B14-2	629,327.53	3,743,637.56
B14-3	627,414.97	3,741,810.68
B14-4	627,253.29	3,743,392.09
B14-5	625,351.07	3,741,582.50
B14-6	625,219.57	3,743,154.84



NOTES:
1. SURVEY PERFORMED BY C AND C TECHNOLOGIES IN NOVEMBER 2011.
2. SEE SHEETS 16-29 FOR CROSS-SECTIONS. CROSS SECTIONS 50 - 62 NOT SHOWN ON PLANS, BUT ARE AVAILABLE IN SURVEY REPORT.
3. ONLY ANOMALIES GREATER THAN 50 GAMMAS SHOWN FOR CLARITY.

2000' 1000' 0' 2000' 4000'

REV.	DATE	DESCRIPTION	BY

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

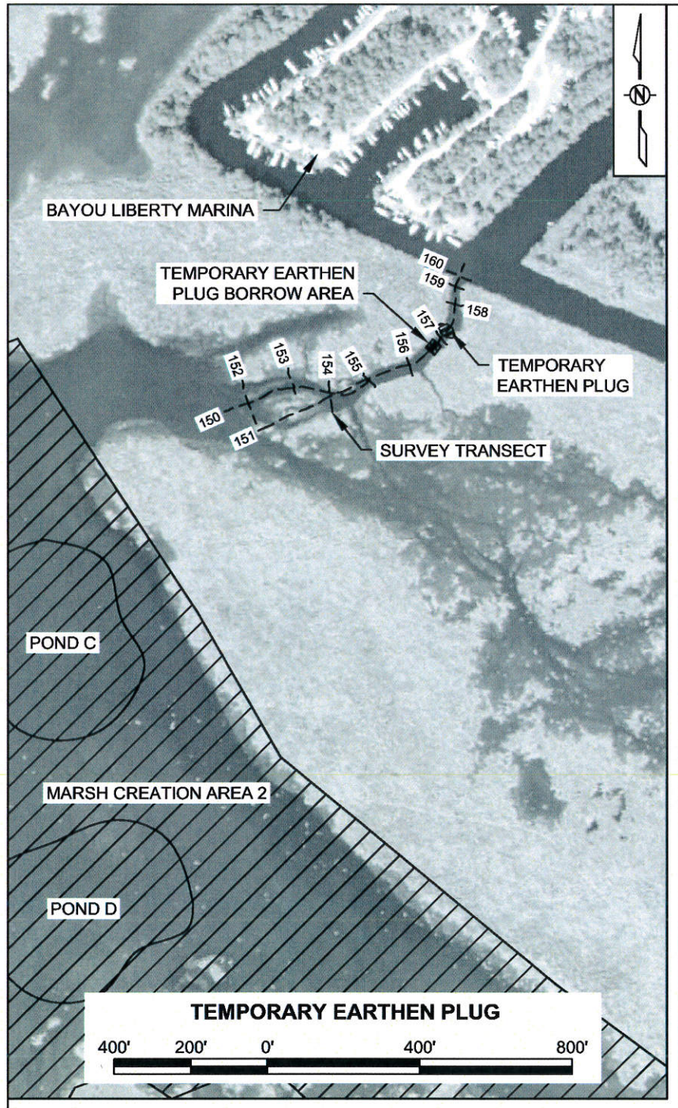
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

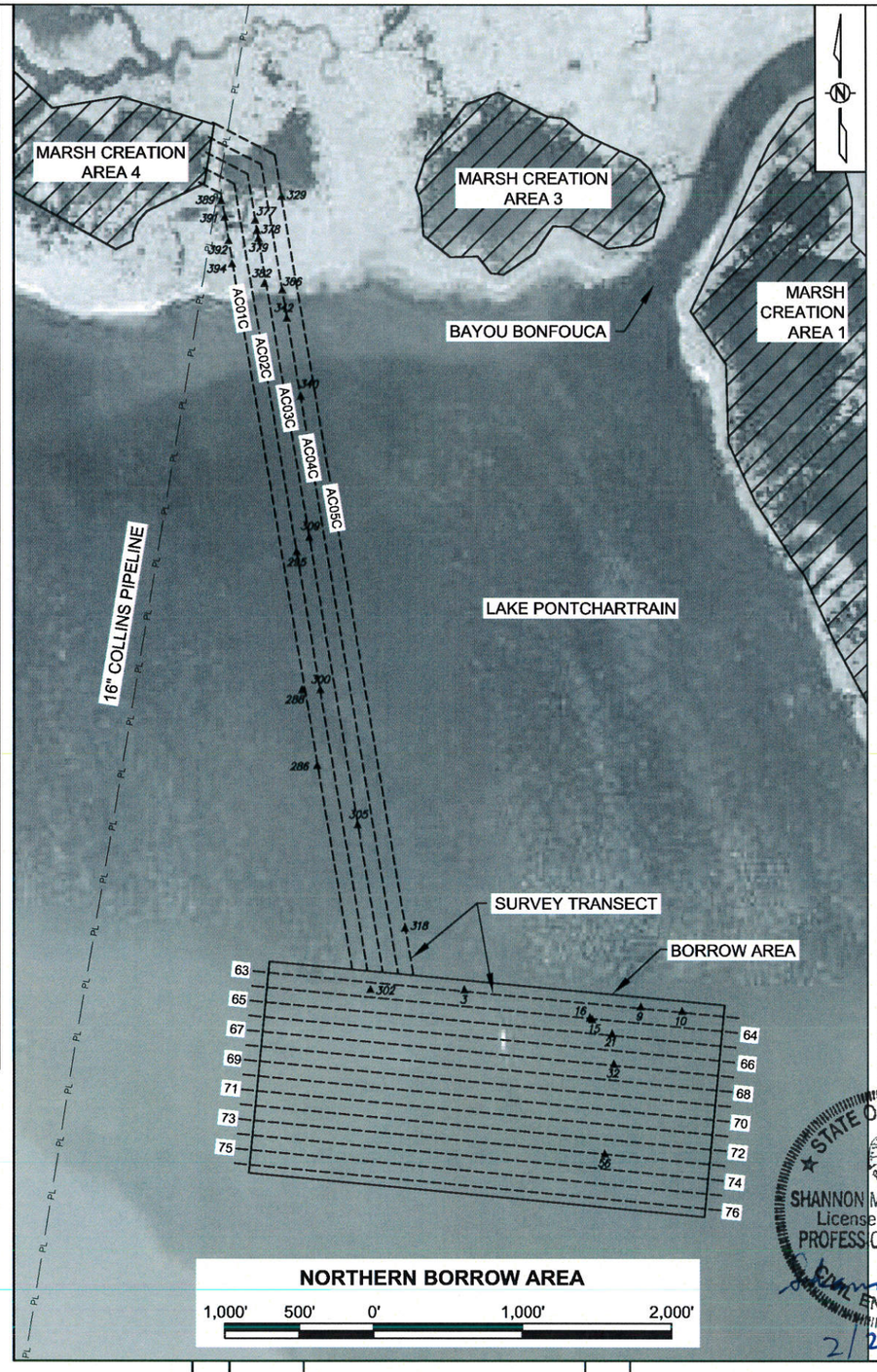
BAYOU BONFOUCA MARSH CREATION PROJECT

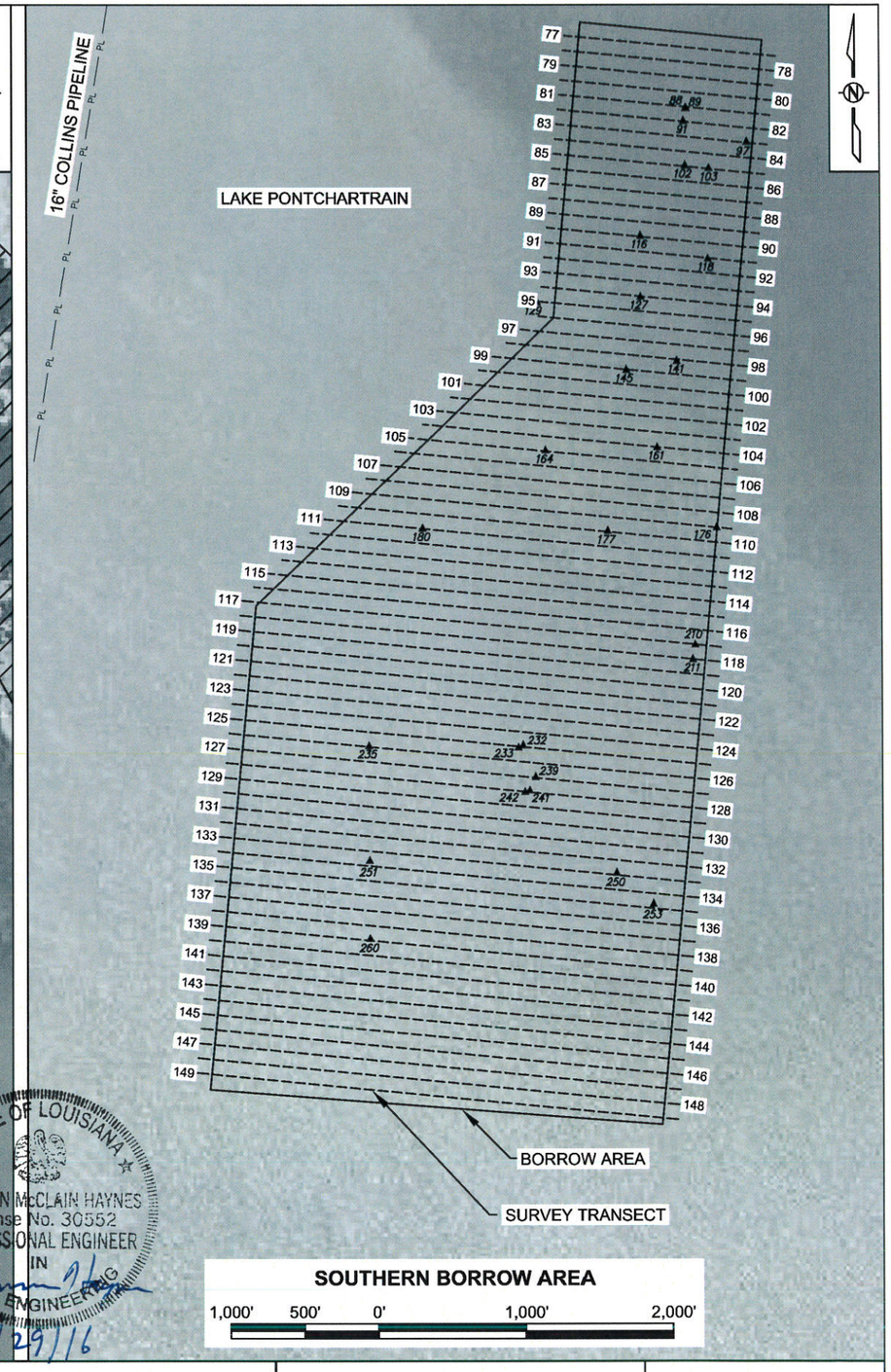
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

2011 DESIGN SURVEY AND SOIL BORING LAYOUT

DATE: FEBRUARY 2016
SHEET 13 OF 40







NOTES:
1. SURVEY PERFORMED BY C AND C TECHNOLOGIES IN AUGUST 2014.
2. SEE SHEETS 27- 40 FOR CROSS-SECTIONS.
3. ONLY ANOMALIES GREATER THAN 50 GAMMAS SHOWN FOR CLARITY.

LEGEND

- 2014 SURVEY TRANSECT
- PIPELINE
- MARSH CREATION FILL
- MAGNETOMETER ANOMALY IN GAMMAS
- TEMPORARY EARTHEN PLUG
- TEMPORARY EARTHEN PLUG BORROW AREA

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2/29/16

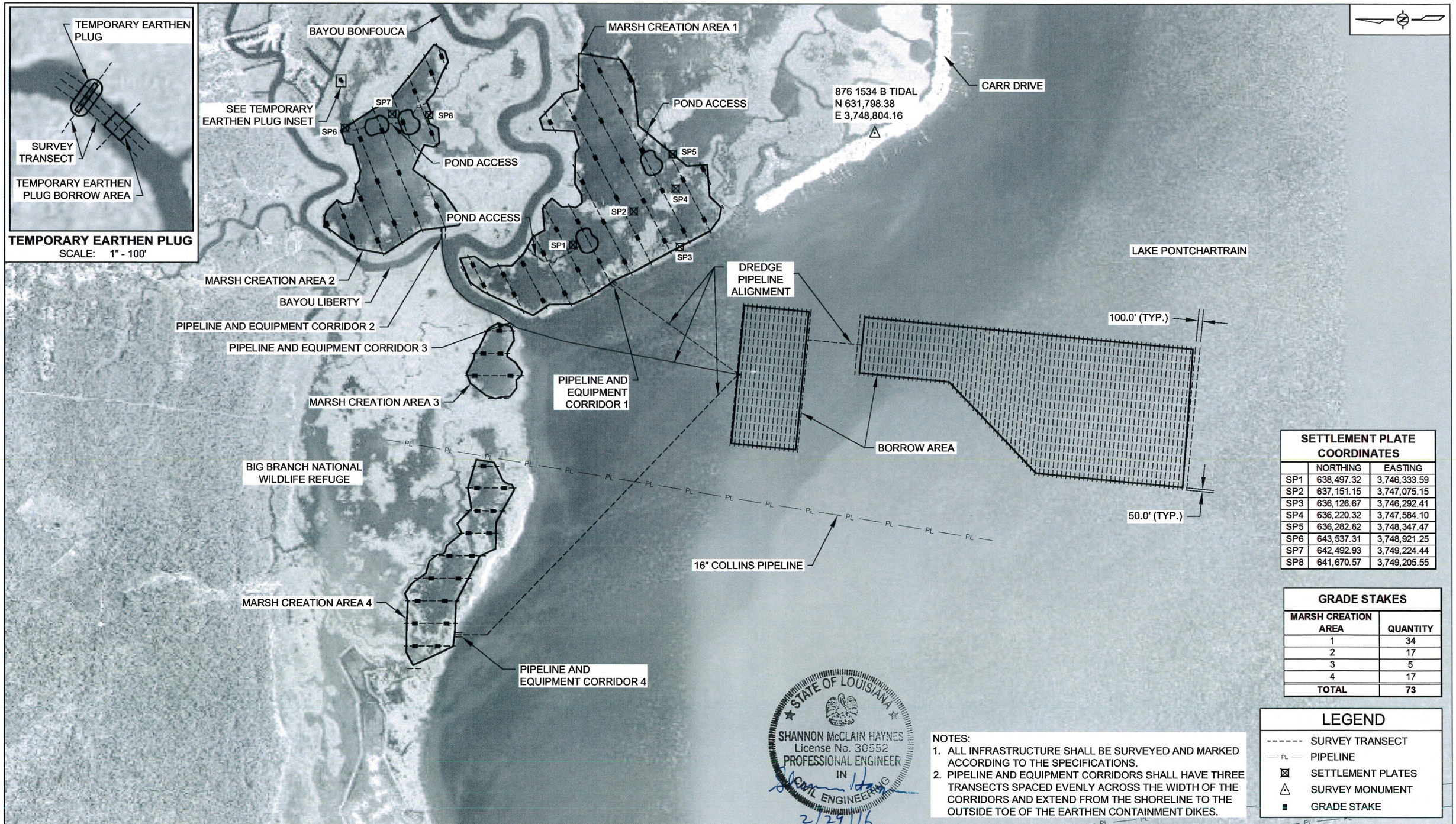
REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

2014 DESIGN SURVEY LAYOUT
DATE: FEBRUARY 2016
SHEET 14 OF 40



SETTLEMENT PLATE COORDINATES

	NORTHING	EASTING
SP1	638,497.32	3,746,333.59
SP2	637,151.15	3,747,075.15
SP3	636,126.67	3,746,292.41
SP4	636,220.32	3,747,584.10
SP5	636,282.82	3,748,347.47
SP6	643,537.31	3,748,921.25
SP7	642,492.93	3,749,224.44
SP8	641,670.57	3,749,205.55

GRADE STAKES

MARSH CREATION AREA	QUANTITY
1	34
2	17
3	5
4	17
TOTAL	73

NOTES:
1. ALL INFRASTRUCTURE SHALL BE SURVEYED AND MARKED ACCORDING TO THE SPECIFICATIONS.
2. PIPELINE AND EQUIPMENT CORRIDORS SHALL HAVE THREE TRANSECTS SPACED EVENLY ACROSS THE WIDTH OF THE CORRIDORS AND EXTEND FROM THE SHORELINE TO THE OUTSIDE TOE OF THE EARTHEN CONTAINMENT DIKES.

LEGEND

- SURVEY TRANSECT
- PIPELINE
- SETTLEMENT PLATES
- SURVEY MONUMENT
- GRADE STAKE

2000' 1000' 0' 2000' 4000'

REV.	DATE	DESCRIPTION	BY

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

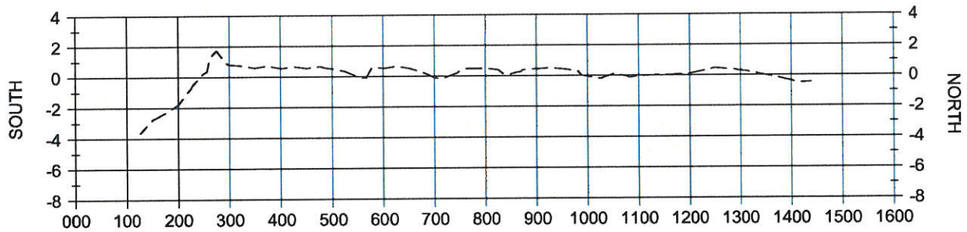
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

CONSTRUCTION SURVEY LAYOUT

DATE: FEBRUARY 2016
SHEET 15 OF 40



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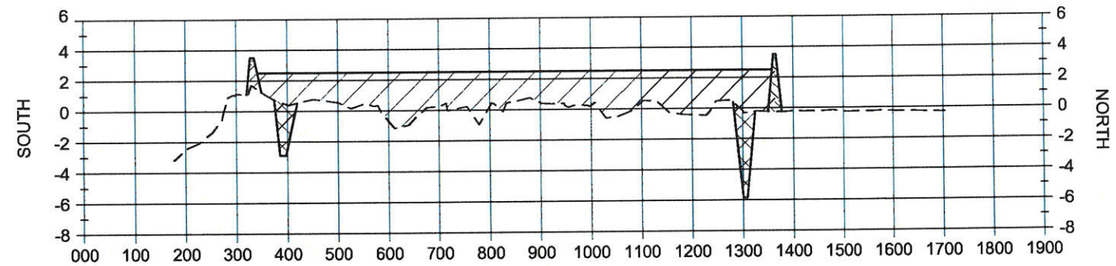

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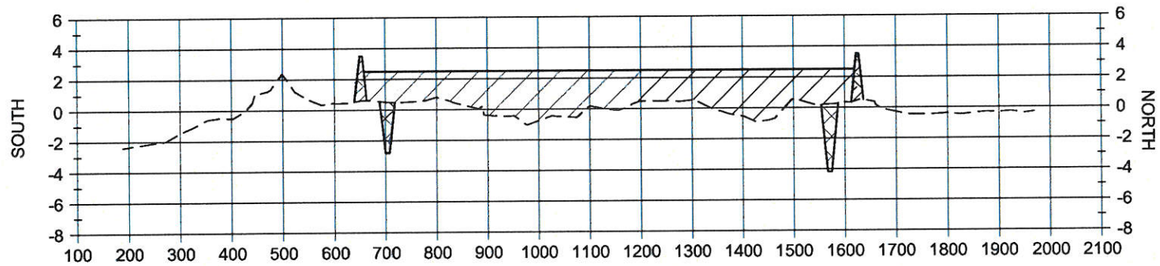

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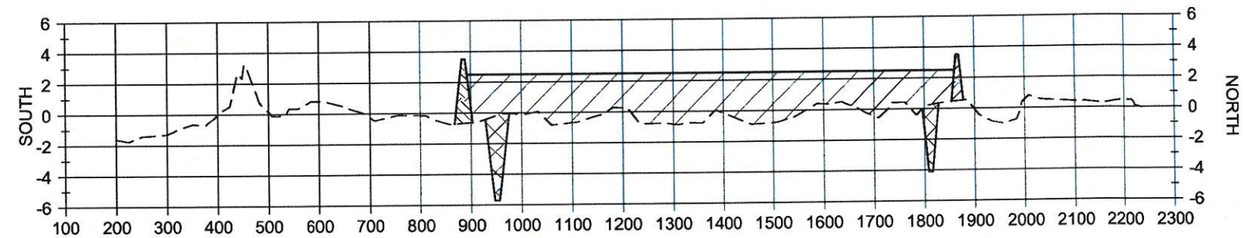

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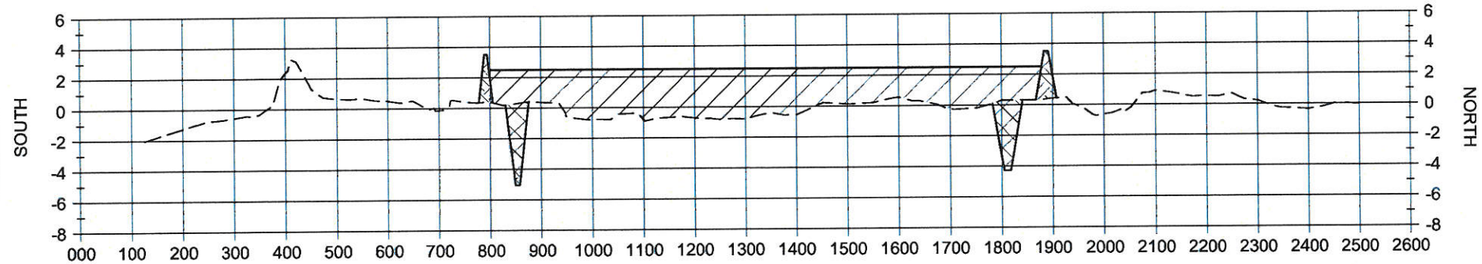

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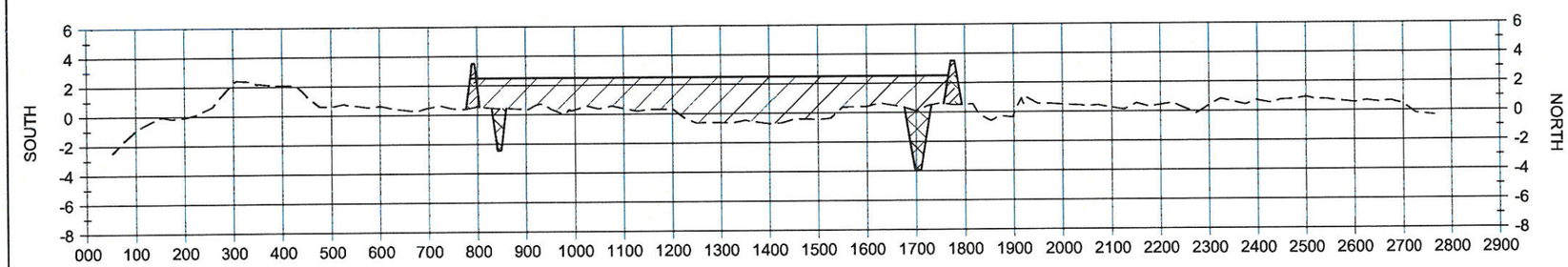


SECTION 6

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

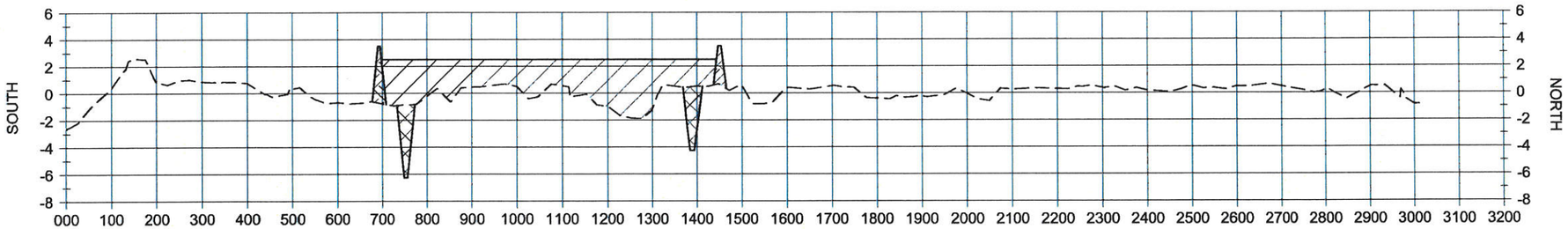
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 16 OF 40



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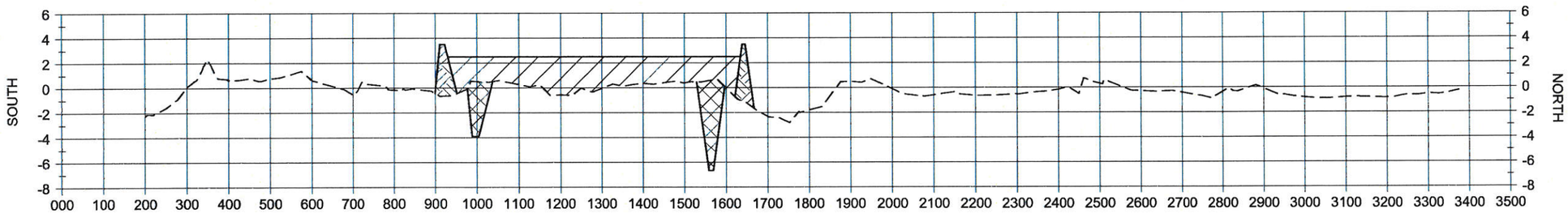

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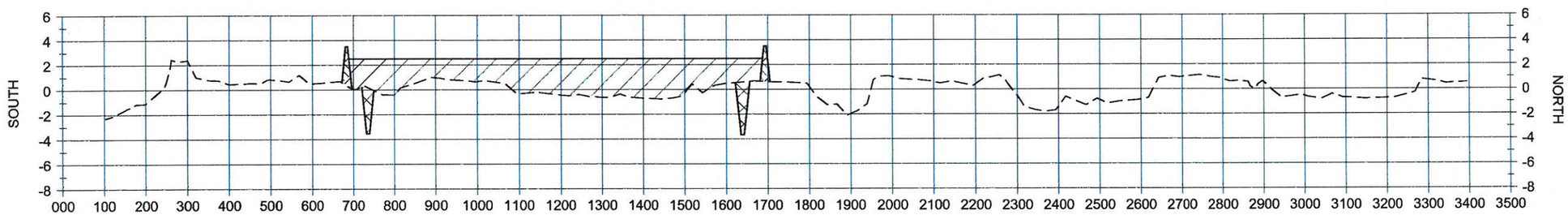

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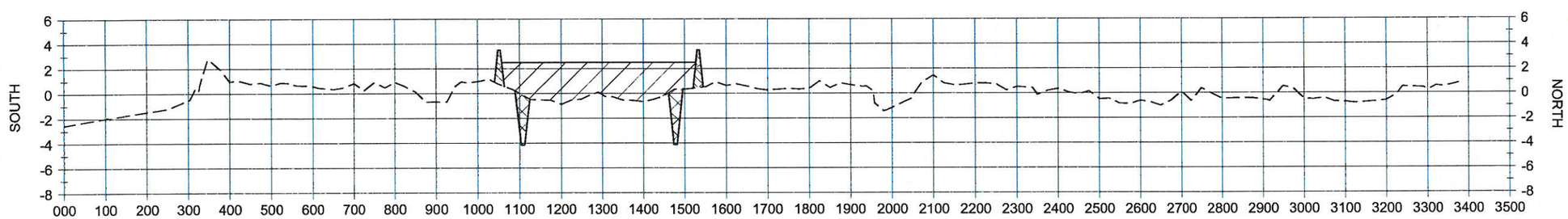

SECTION 10

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
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REV.	DATE	DESCRIPTION	BY

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

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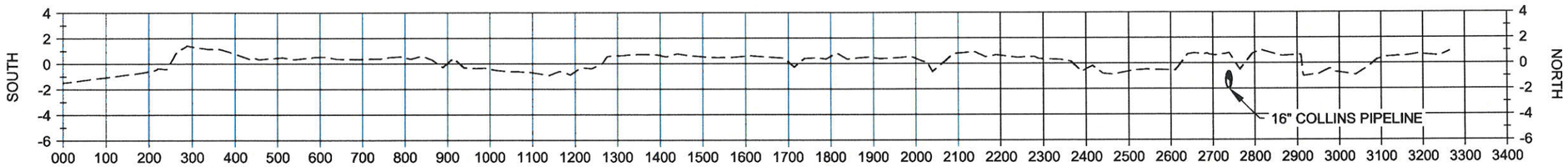
BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 17 OF 40



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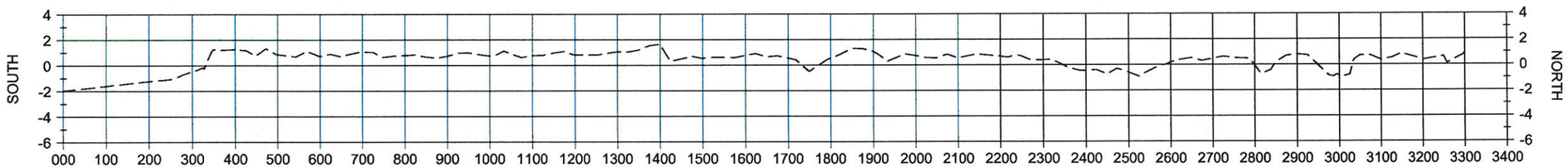

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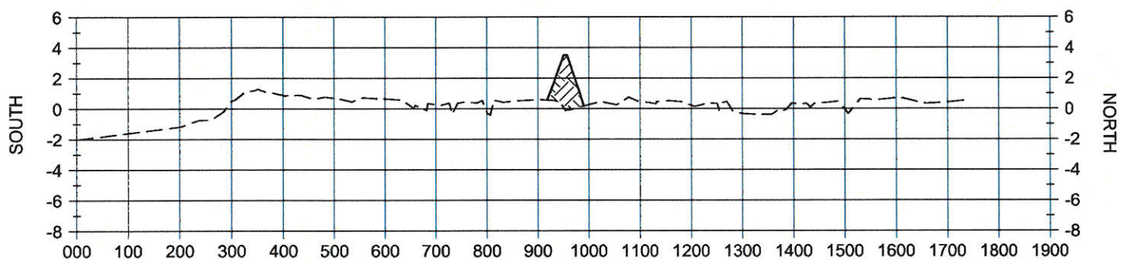

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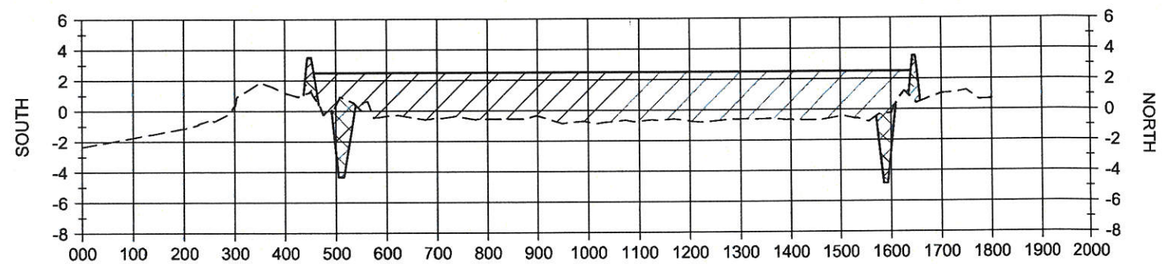

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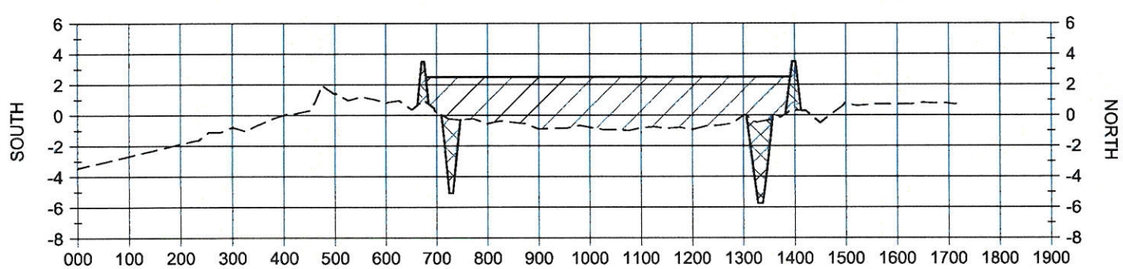

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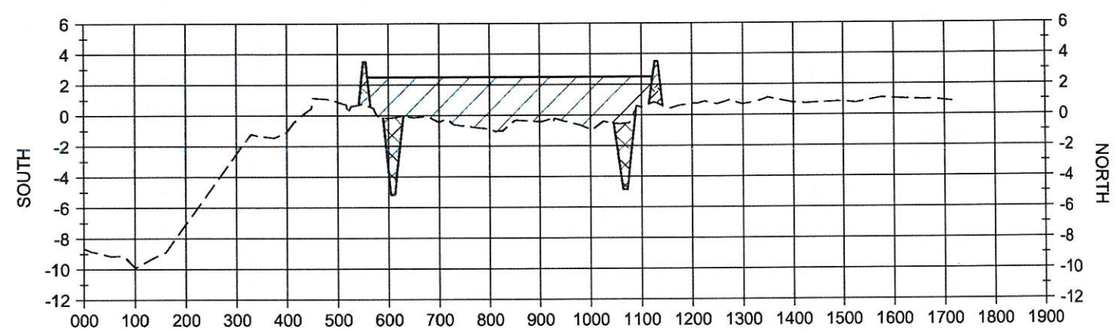

SECTION 16

HORIZONTAL GRAPHIC SCALE

300' 150' 0 300' 600'

10' 5' 0 10' 20'

VERTICAL GRAPHIC SCALE

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING GROUND

NOTES:

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
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REV.	DATE	DESCRIPTION	BY

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

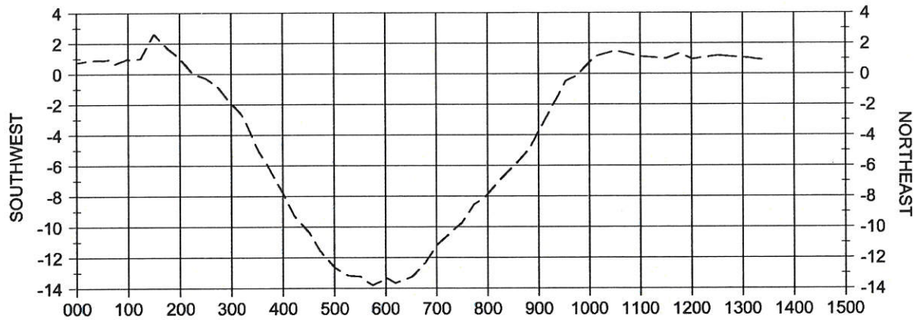
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 18 OF 40



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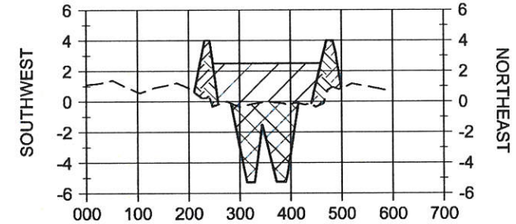

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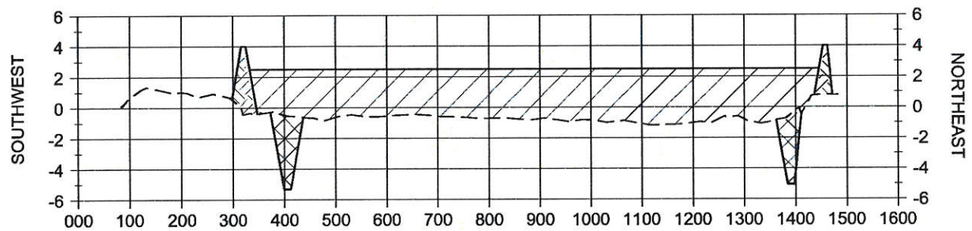

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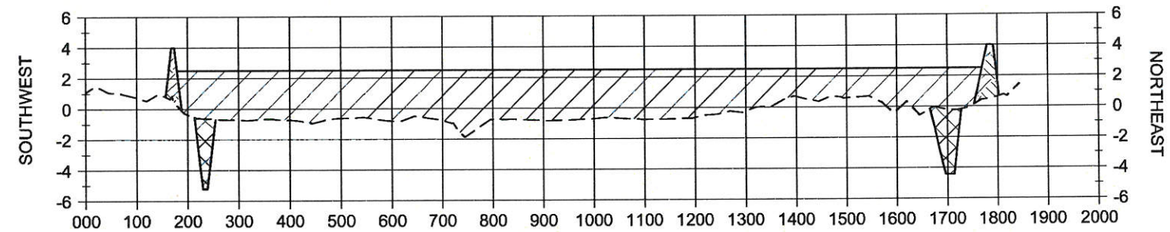

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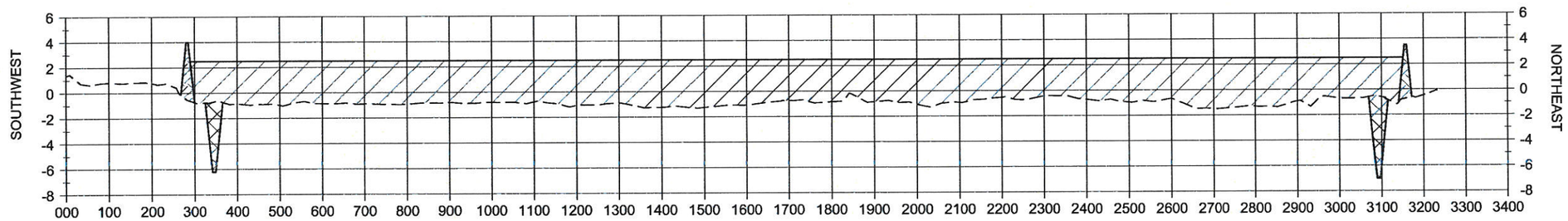

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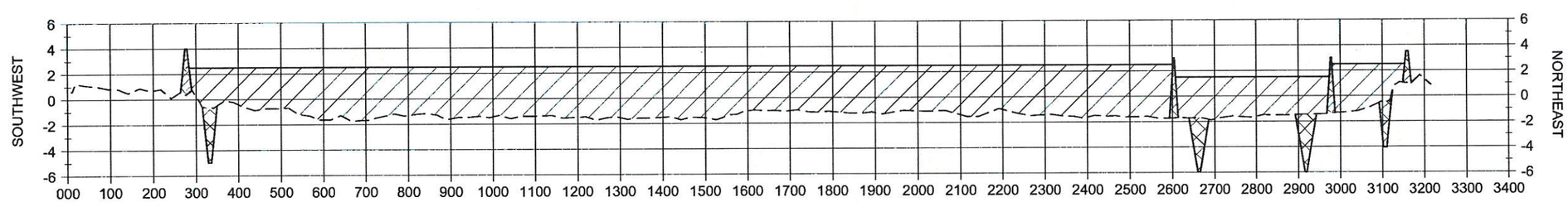

SECTION 22

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
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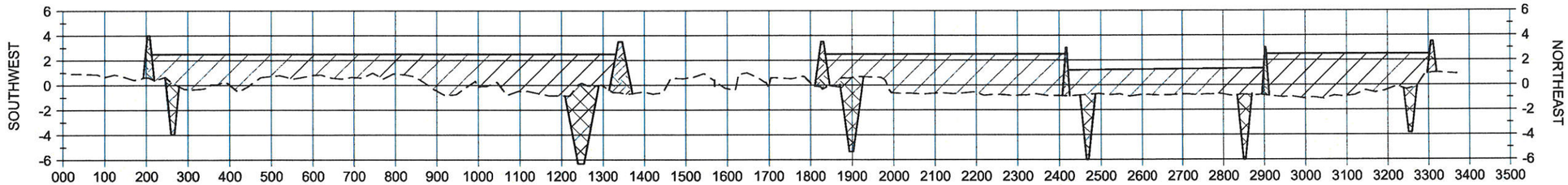
REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS
DATE: FEBRUARY 2016
SHEET 19 OF 40



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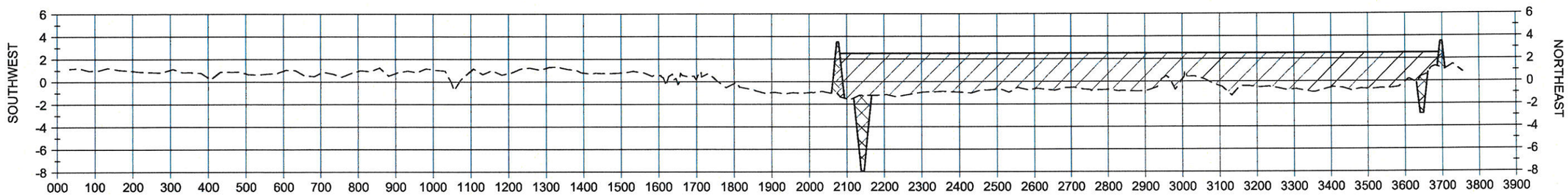

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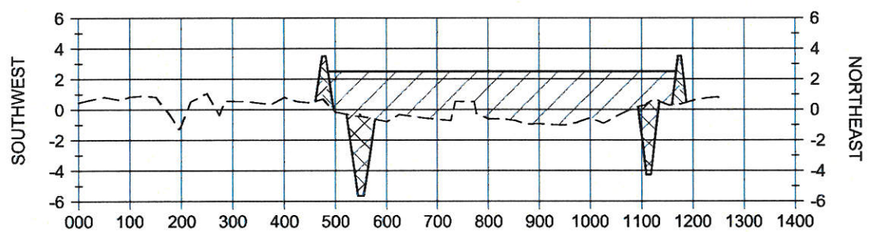

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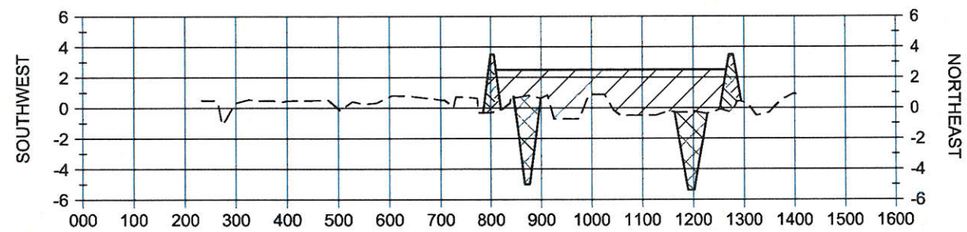

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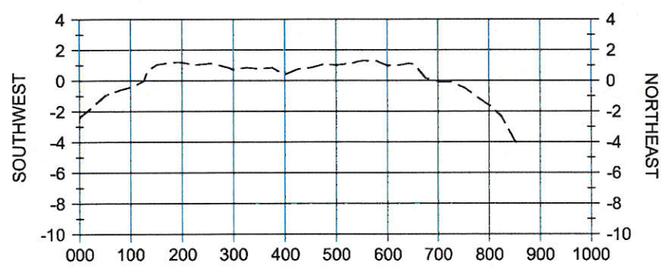

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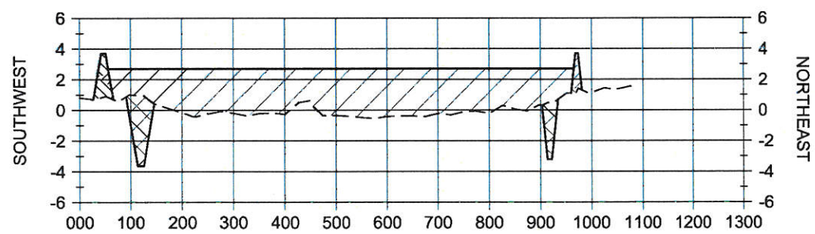


SECTION 28

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30852
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

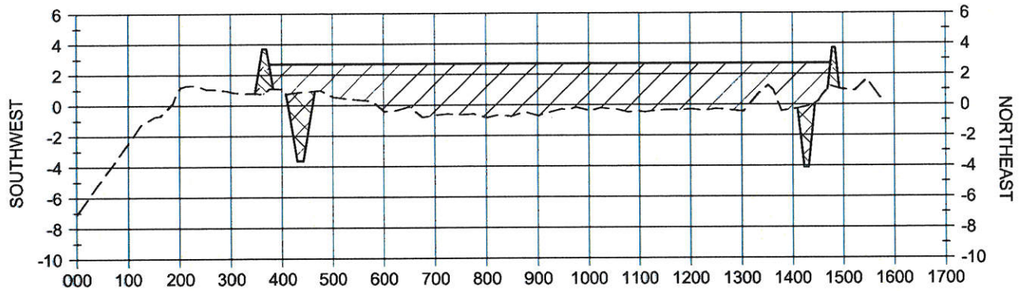
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

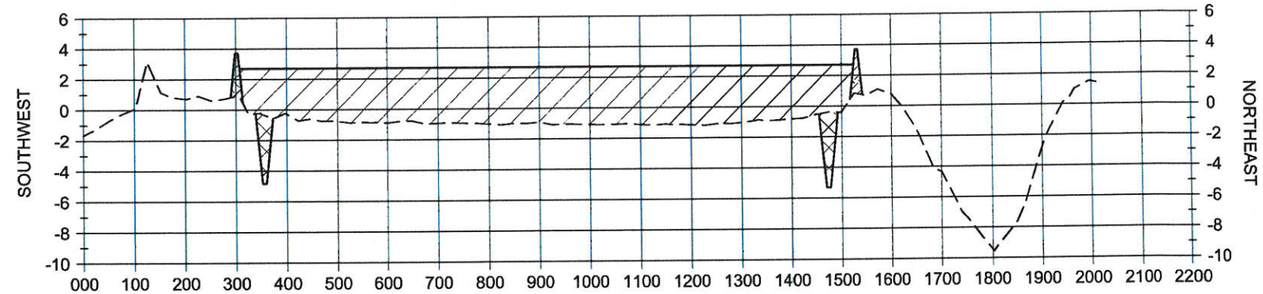
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

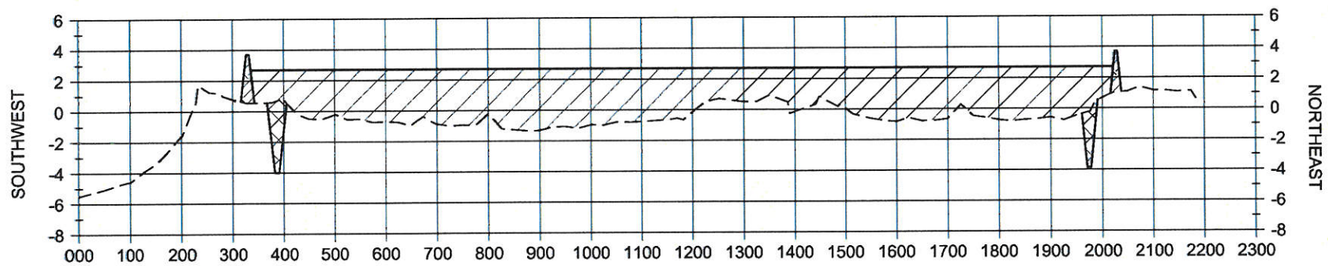
DATE: FEBRUARY 2016
SHEET 20 OF 40



SECTION 29



SECTION 30



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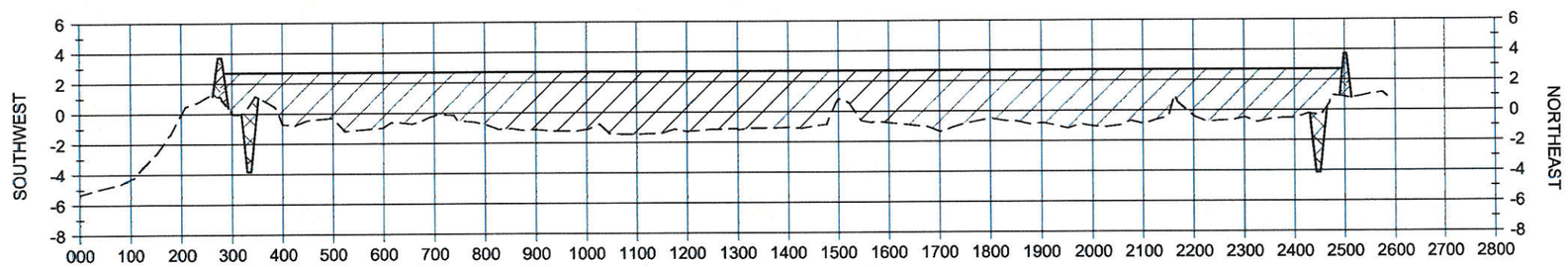
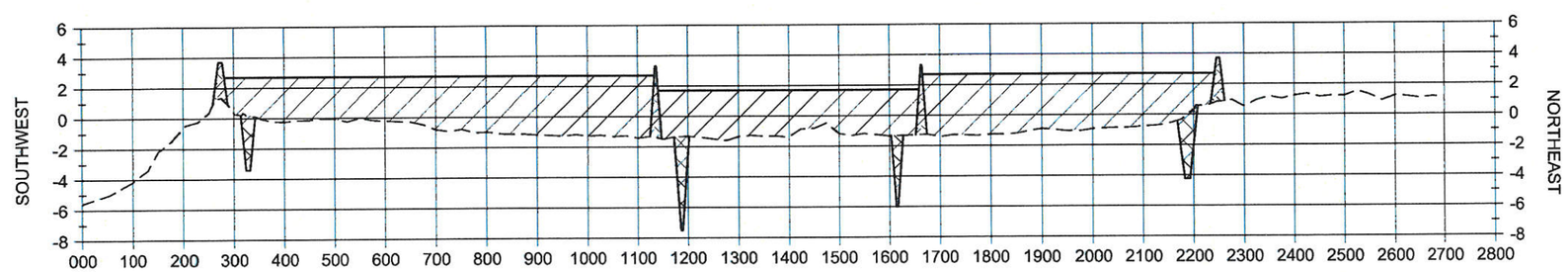


SECTION 32



SECTION 33

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- ------ EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

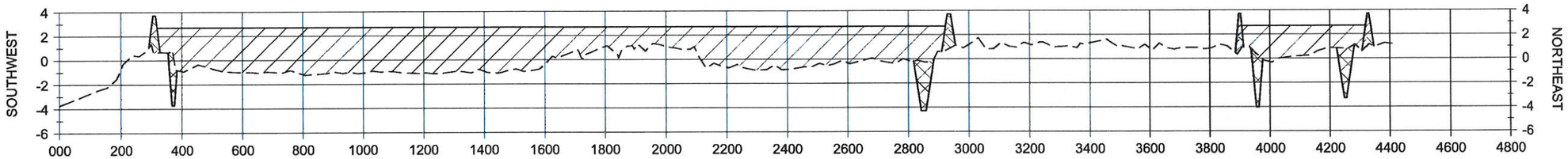
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

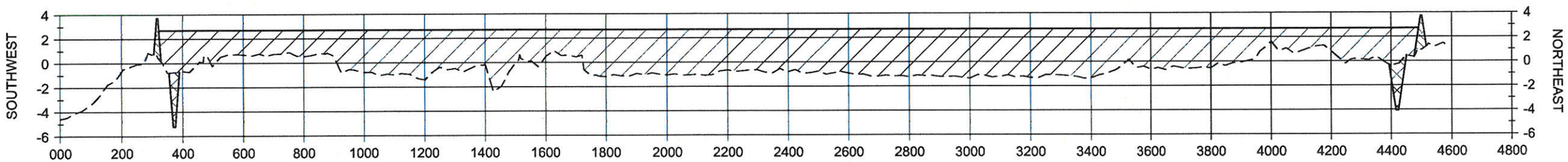
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

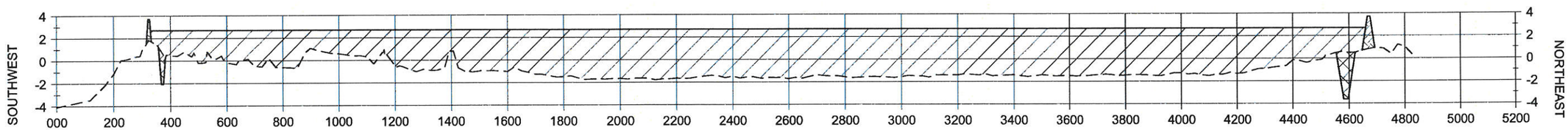
DATE: FEBRUARY 2016
SHEET 21 OF 40



SECTION 34



SECTION 35



SECTION 36

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE

400' 200' 0 400' 800'

10' 5' 0 10' 20'

VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- ------ EXISTING GROUND

NOTES:

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

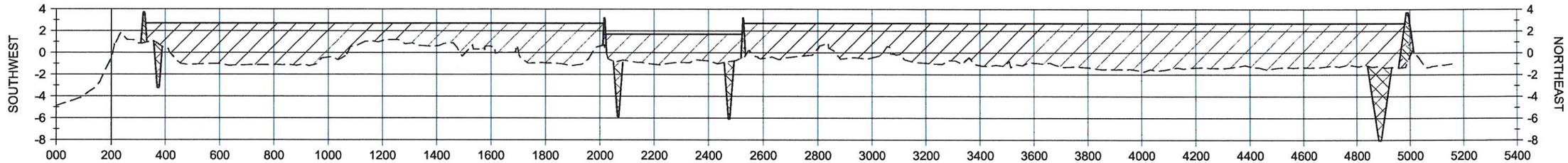
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

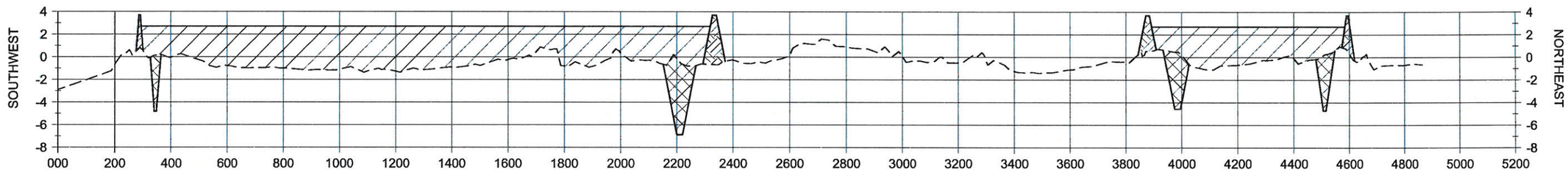
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

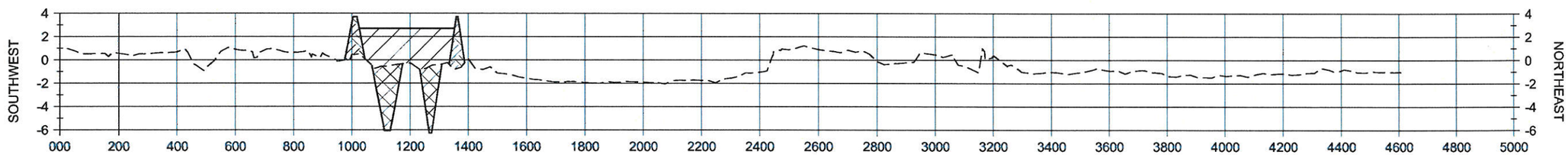
DATE: FEBRUARY 2016
SHEET 22 OF 40



SECTION 37



SECTION 38



SECTION 39

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
400' 200' 0 400' 800'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- ------ EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

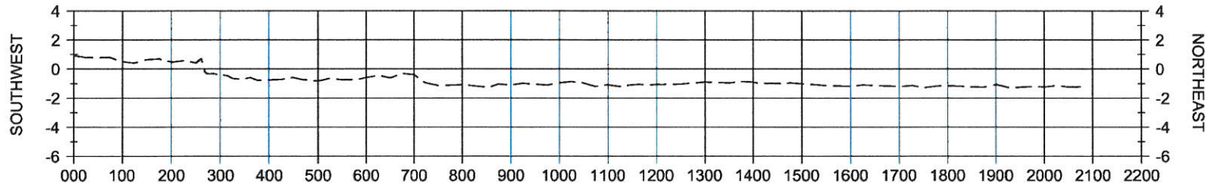
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 23 OF 40



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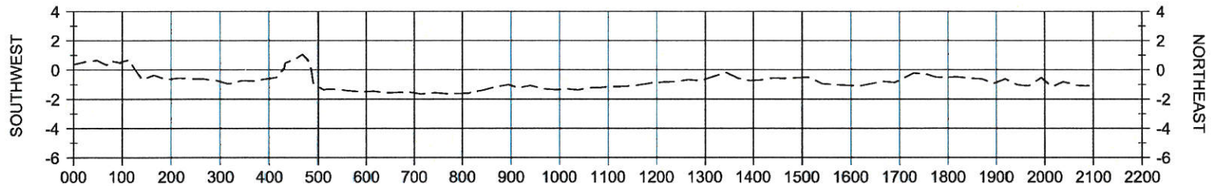

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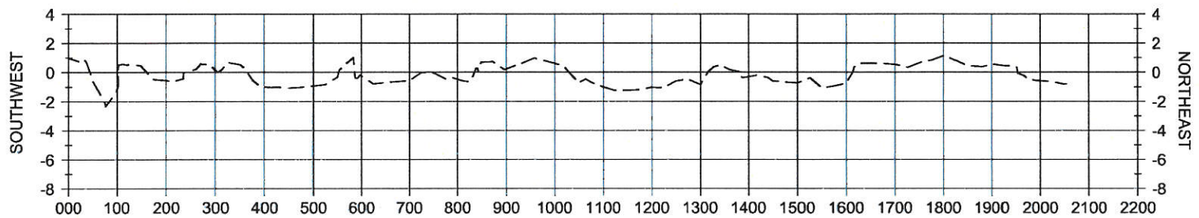

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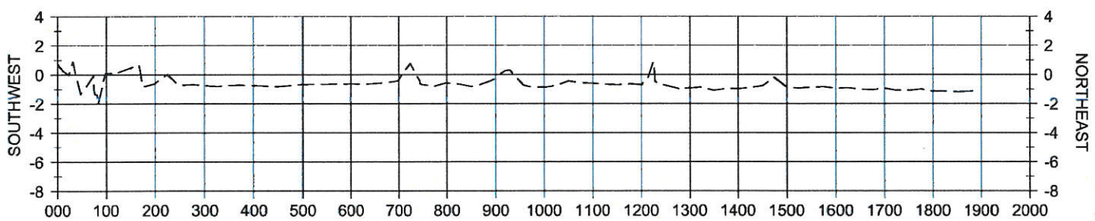
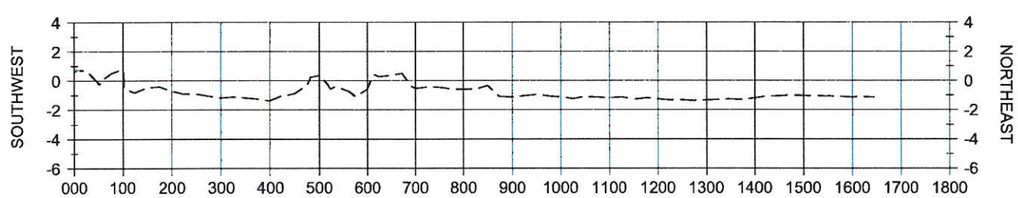
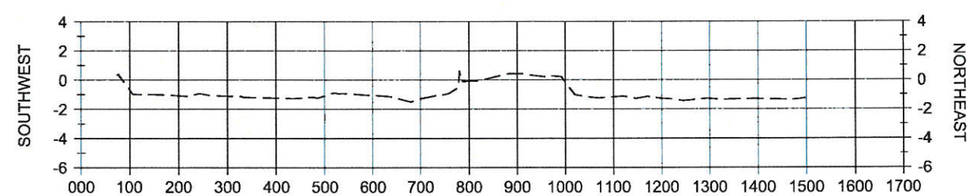


SECTION 43



SECTION 44



SECTION 45

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30952
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

LEGEND
------ EXISTING GROUND

REV.	DATE	DESCRIPTION	BY

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

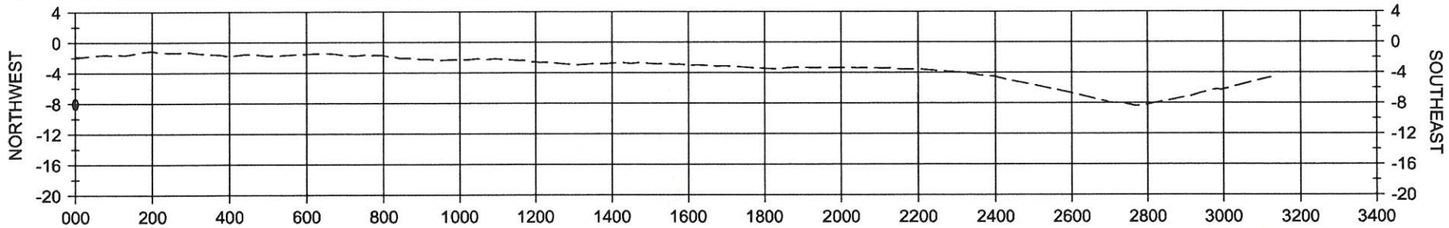
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 24 OF 40



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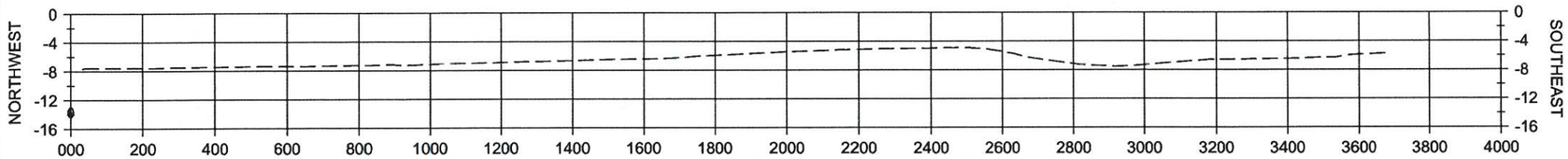

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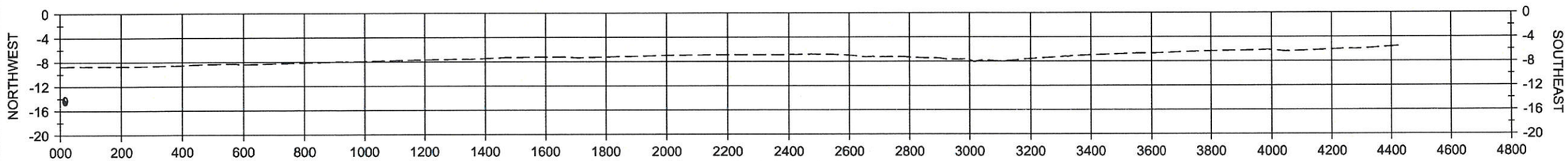

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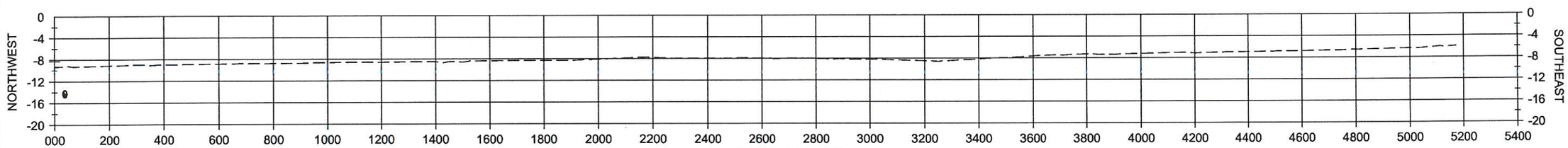
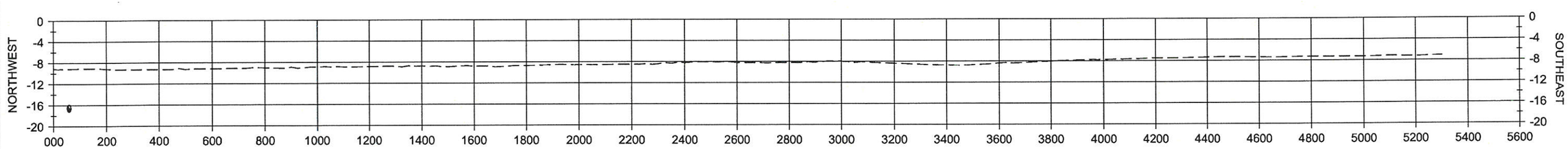


SECTION 49



SECTION 50

HORIZONTAL GRAPHIC SCALE
400' 200' 0 400' 800'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

LEGEND
------ EXISTING GROUND

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

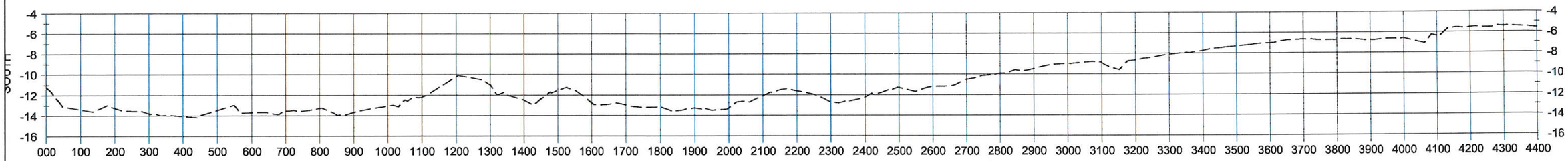
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

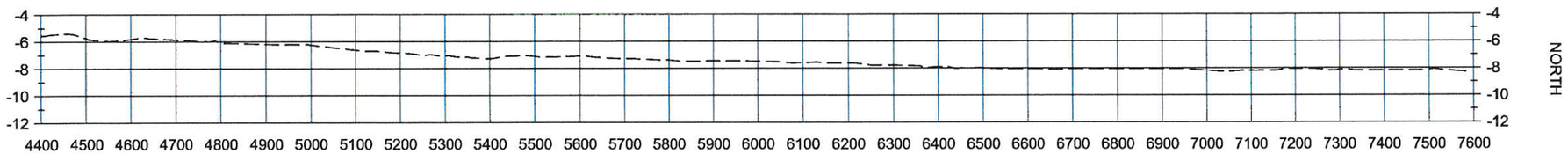
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 25 OF 40



SECTION 63



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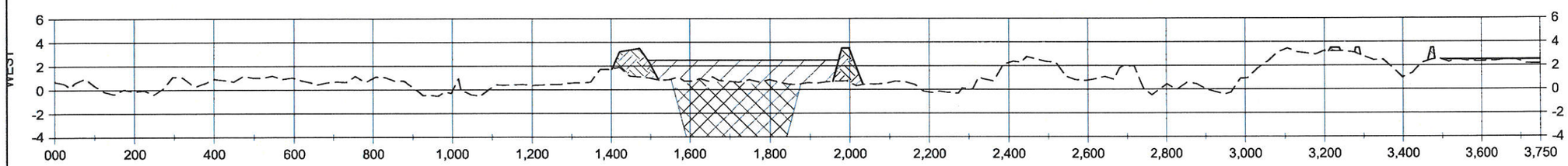

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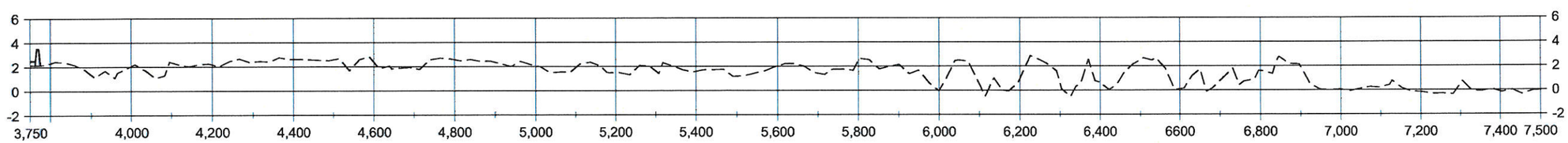
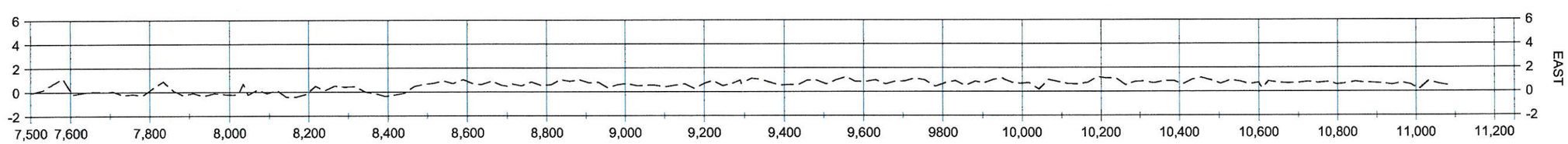


SECTION 64



SECTION 64

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

2/29/16

LEGEND

- MARSH CREATION AREA
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE BORROW AREA
- EXISTING GROUND

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2011 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

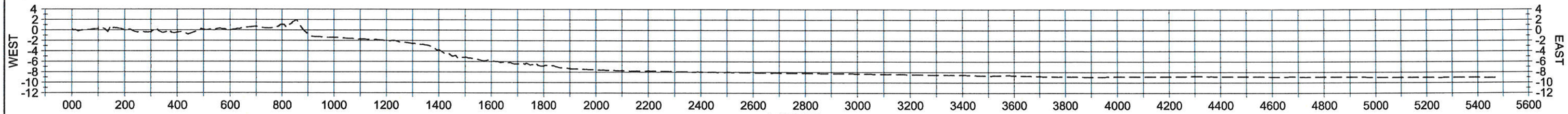
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 26 OF 40



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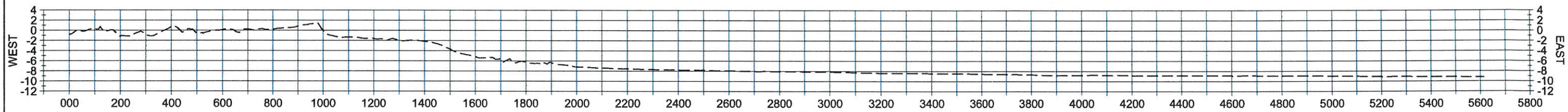

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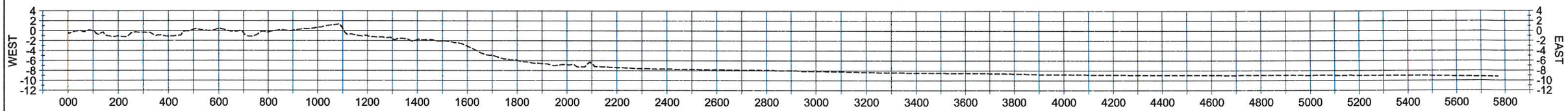

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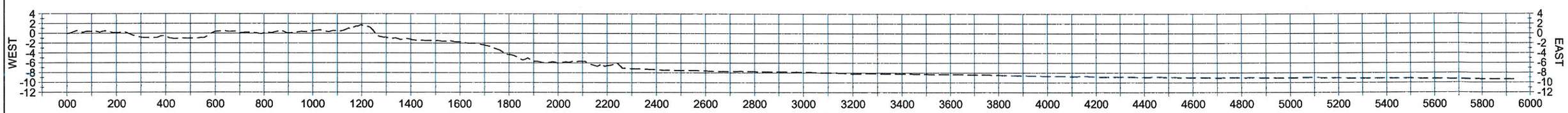

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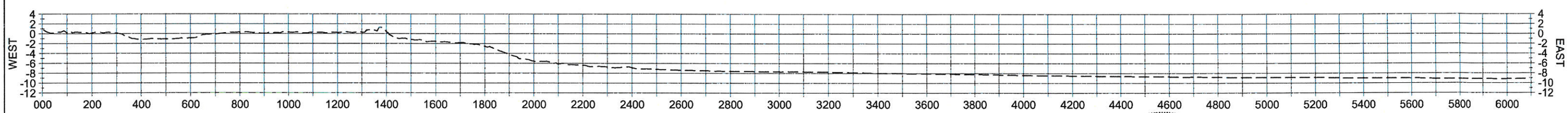


AC05C

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE

400' 200' 0 400' 800'

20' 10' 0 20' 40'

VERTICAL GRAPHIC SCALE

LEGEND
------ EXISTING GROUND

NOTES:

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2014 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

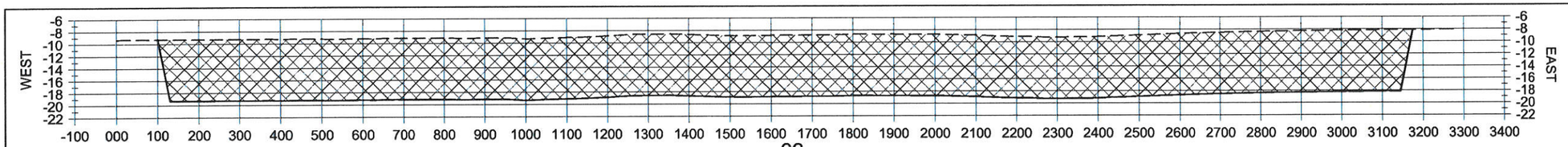
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 27 OF 40



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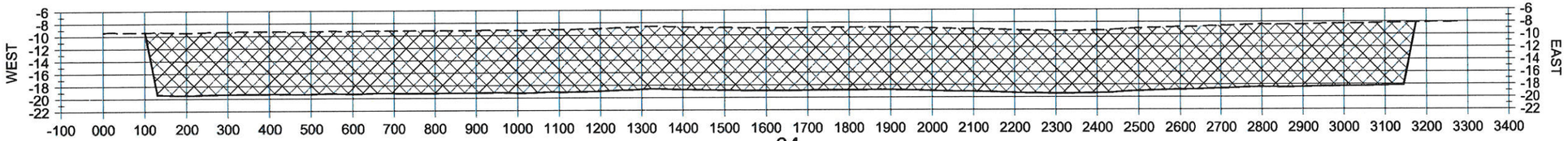

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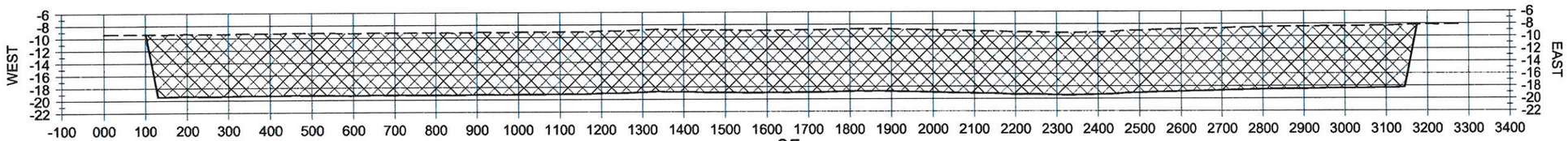

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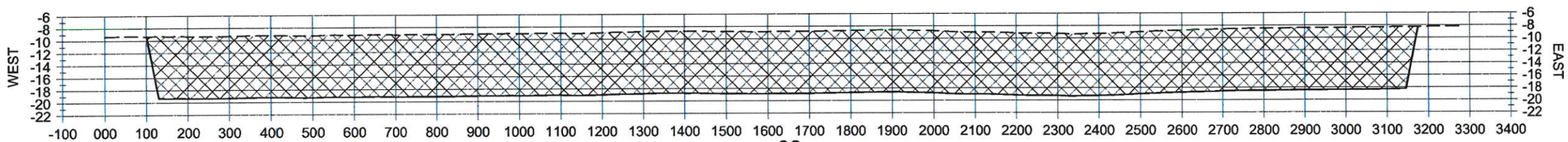

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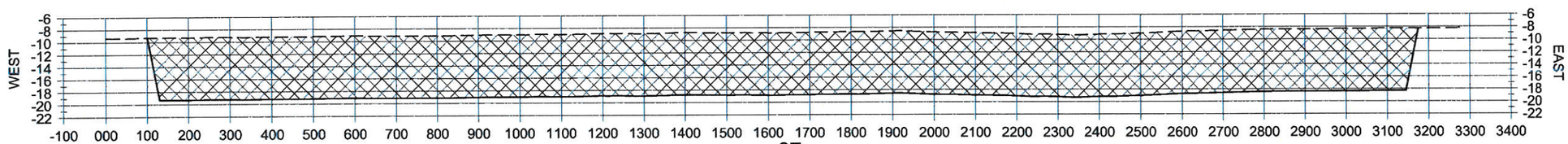

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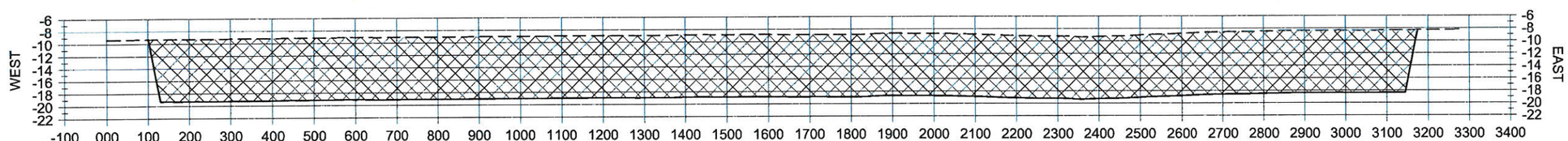

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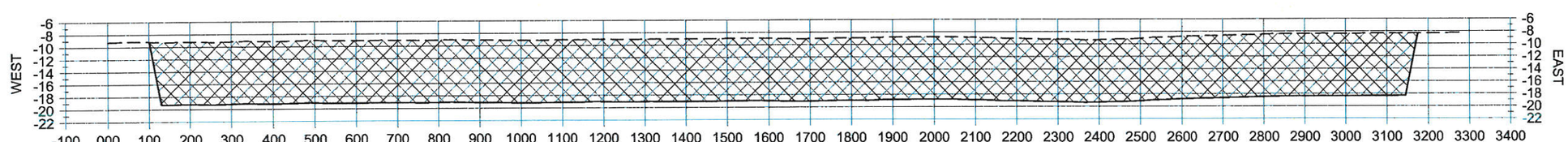

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
- BORROW AREA

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2014 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

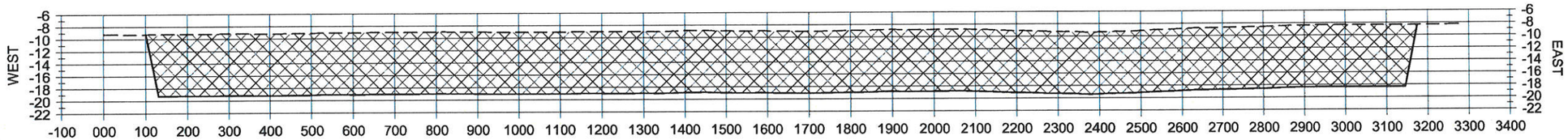
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 28 OF 40



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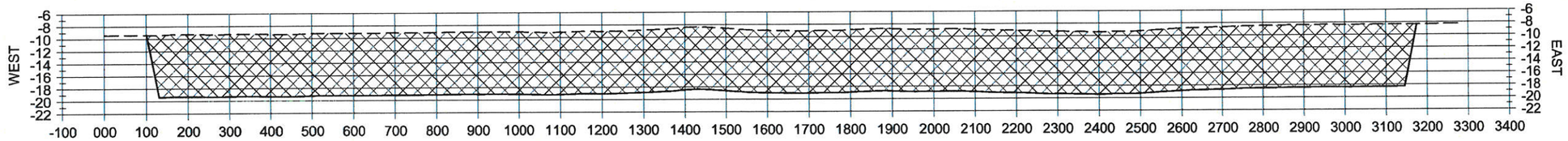

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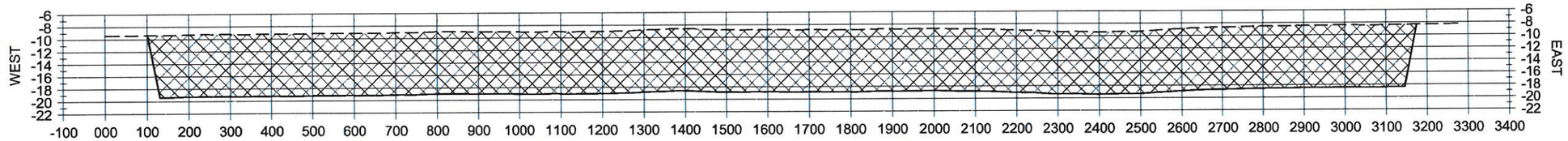

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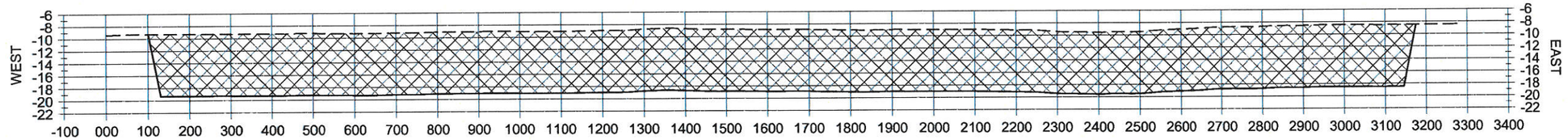

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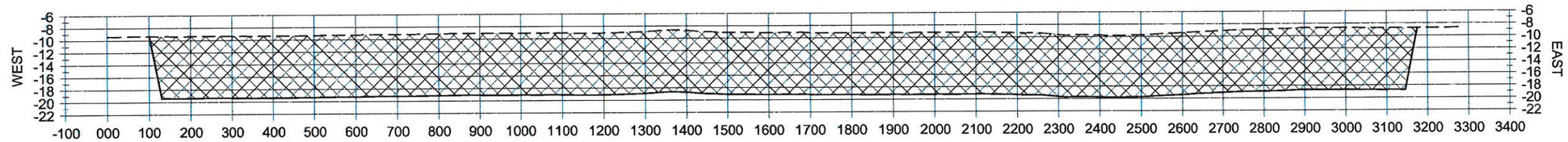

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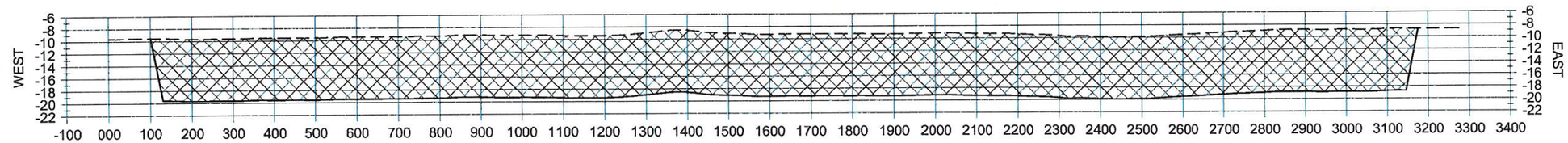


75

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
- BORROW AREA

NOTES:

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2014 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

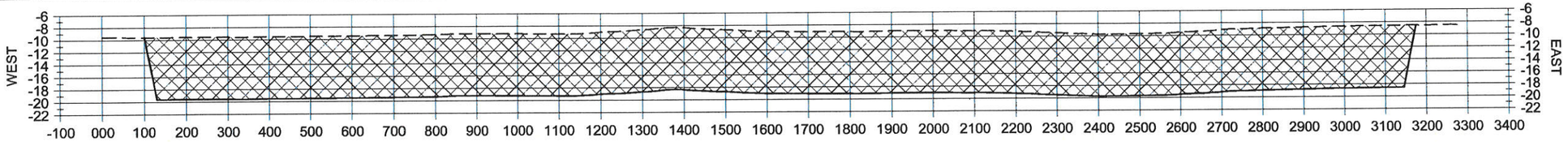
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 29 OF 40



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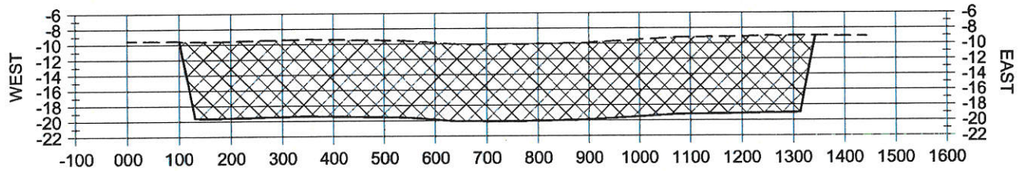

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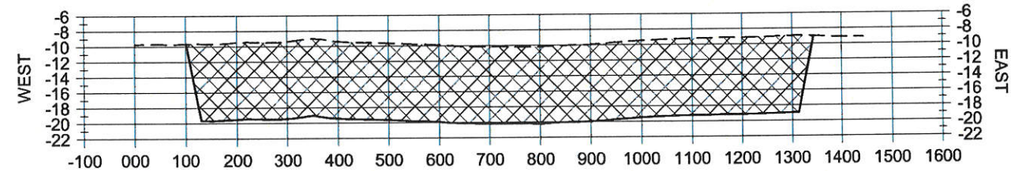

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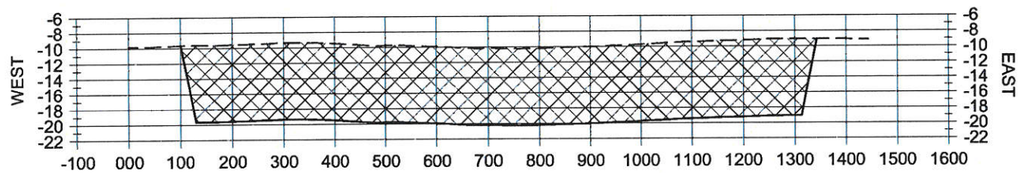

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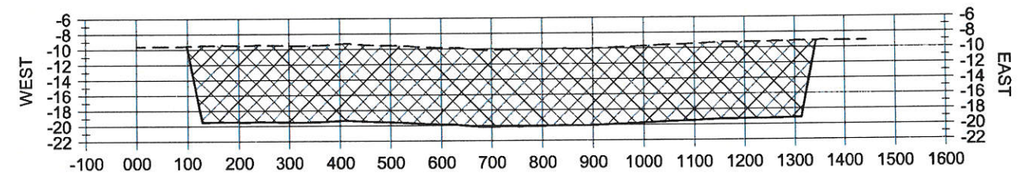

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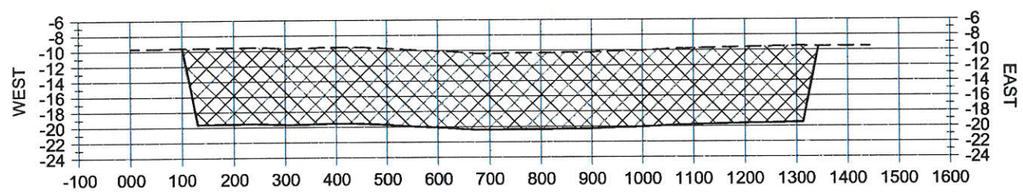

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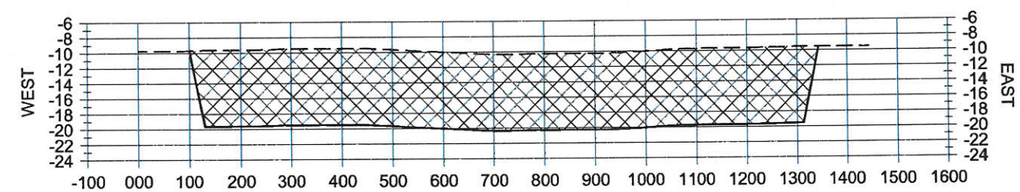

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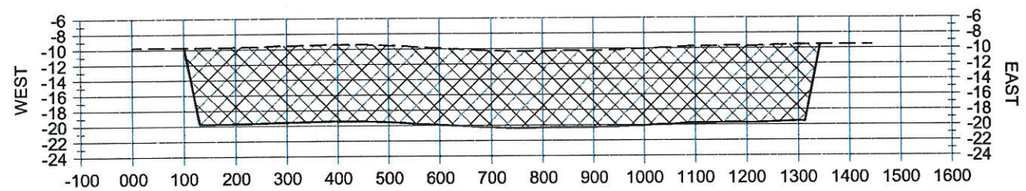

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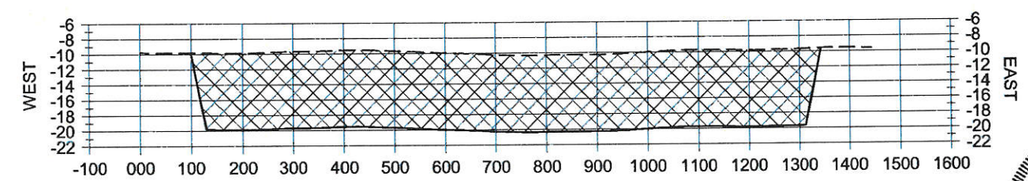

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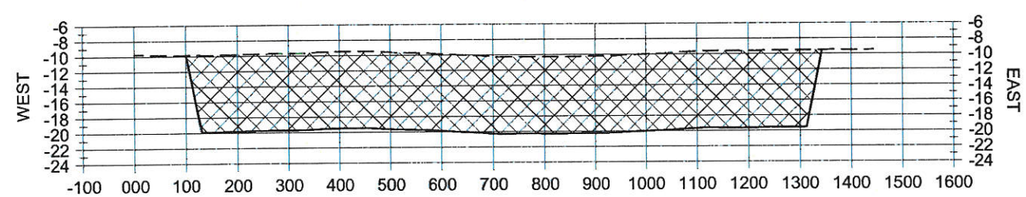

85

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
- BORROW AREA

NOTES:

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REV.	DATE	DESCRIPTION	BY

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

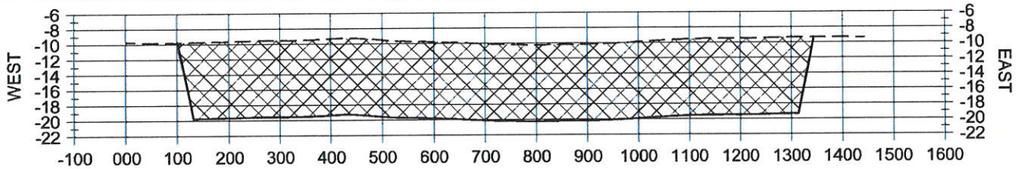
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 30 OF 40



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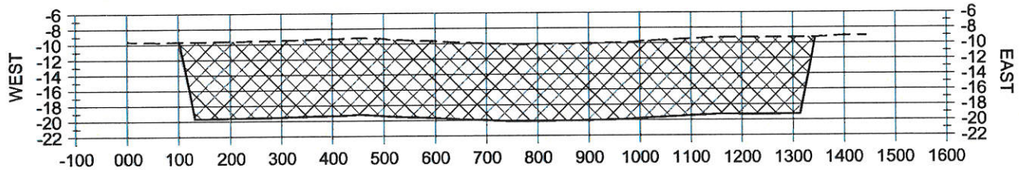

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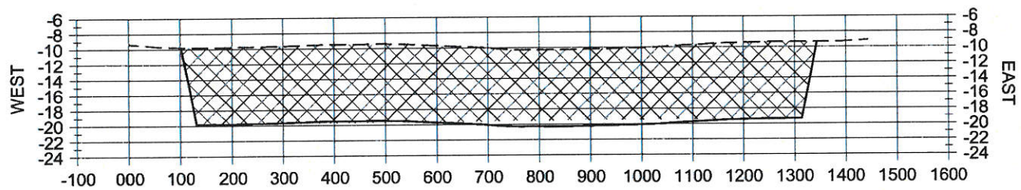

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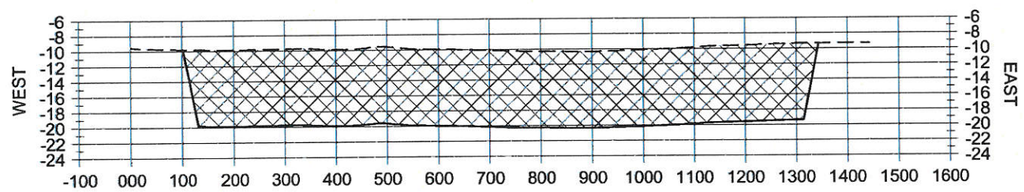

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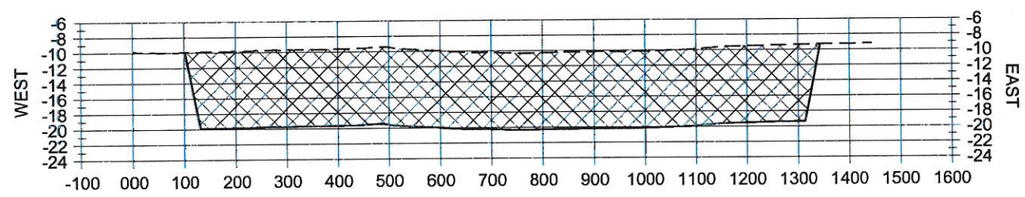

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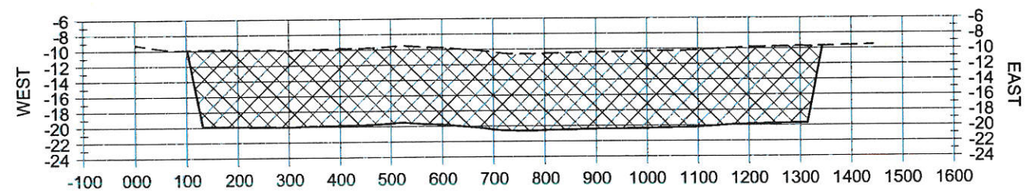

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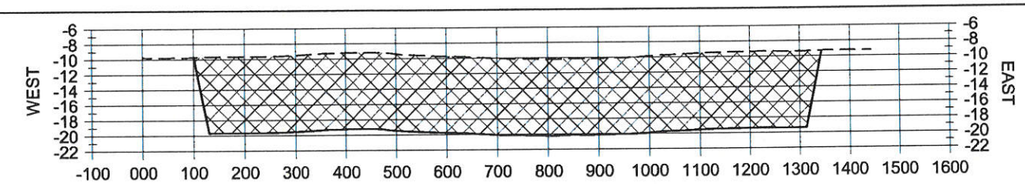

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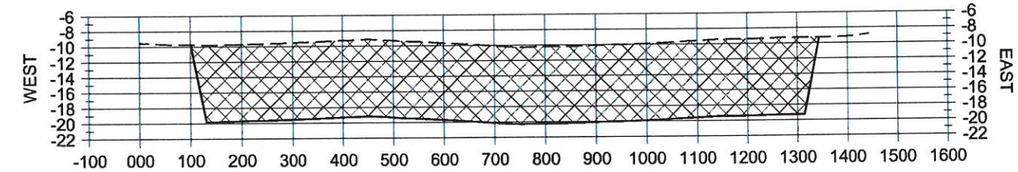

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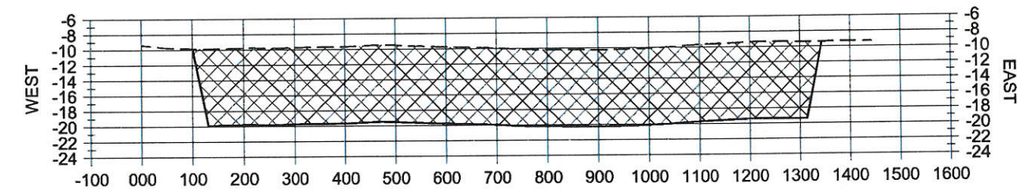

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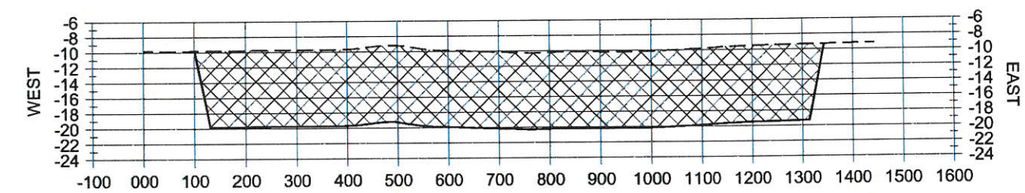

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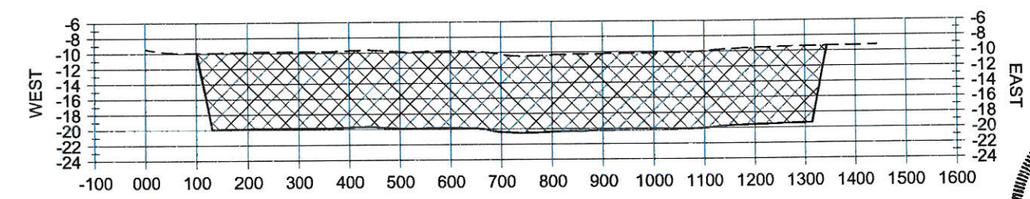

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND	
----	EXISTING GROUND
▨	BORROW AREA

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2014 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

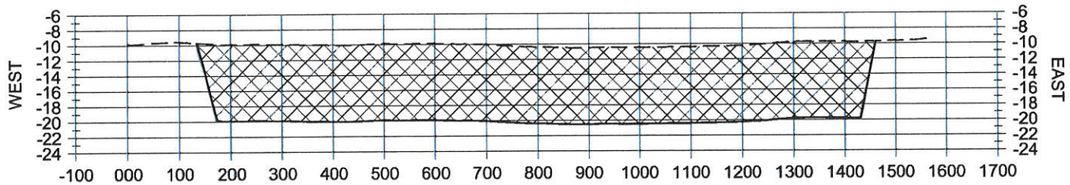
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 31 OF 40



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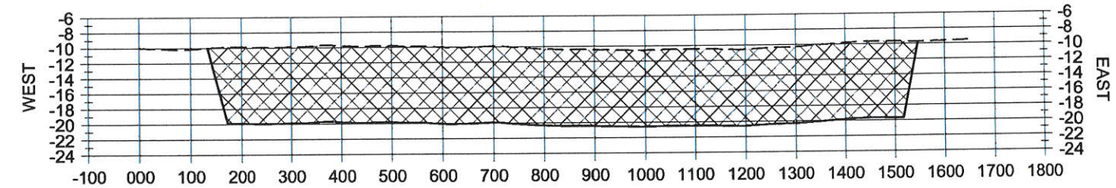

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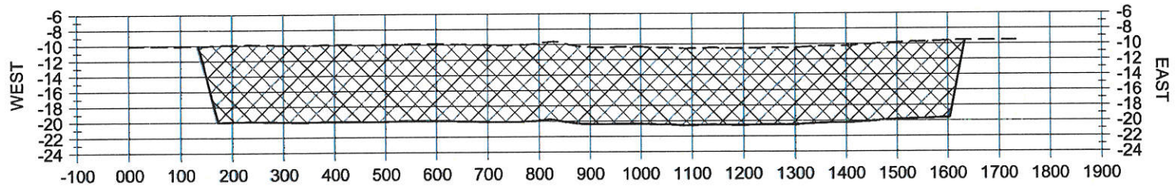

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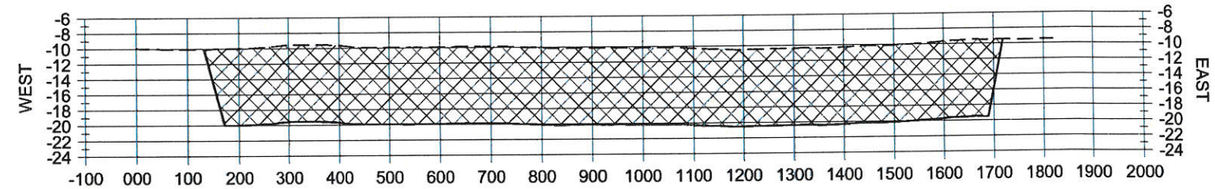

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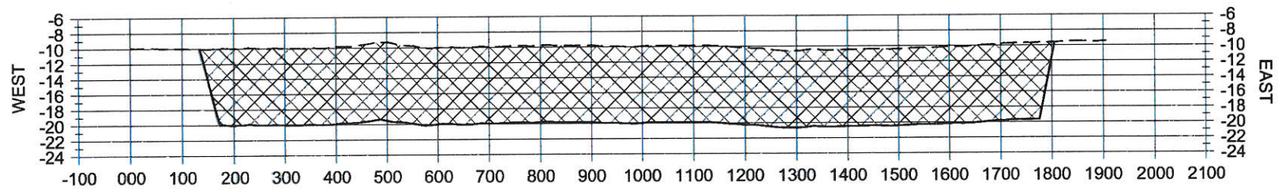

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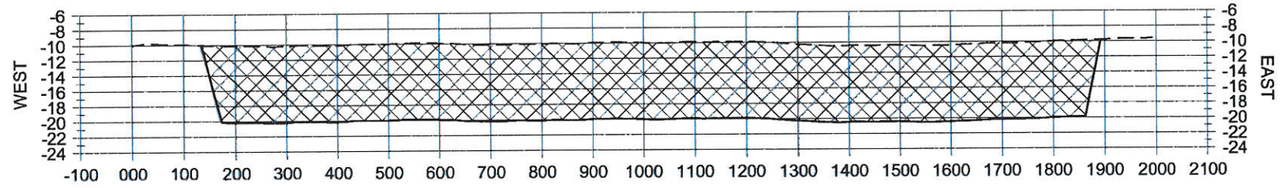

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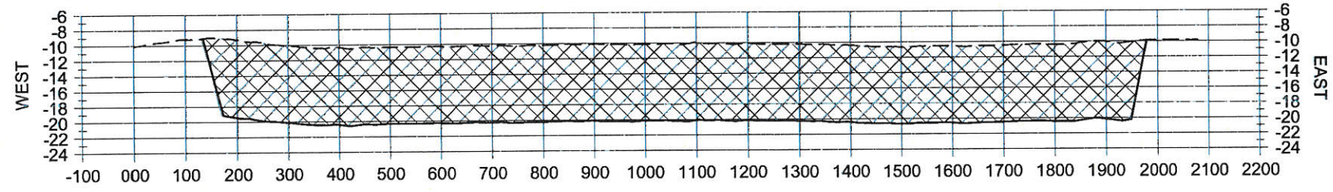

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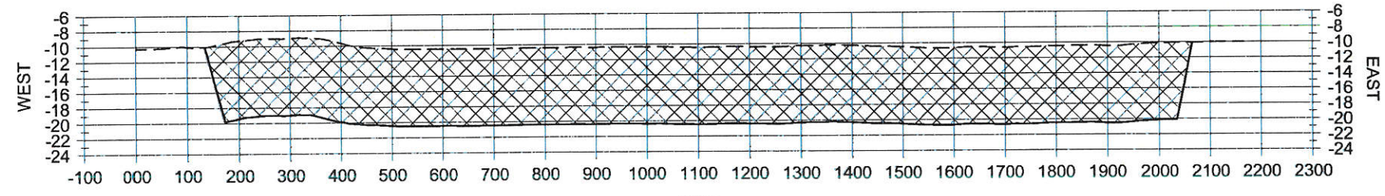

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
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NOTES:
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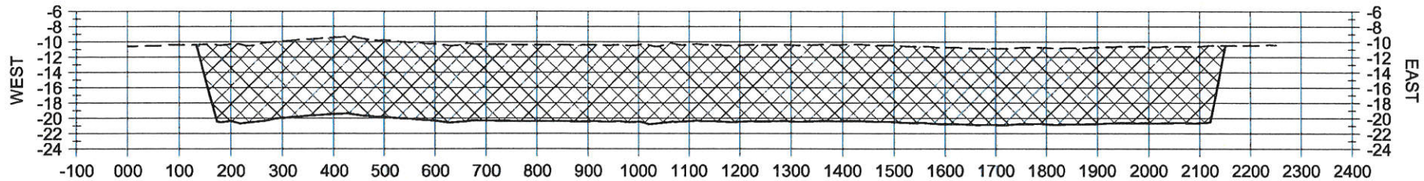
REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT
STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS
DATE: FEBRUARY 2016
SHEET 32 OF 40



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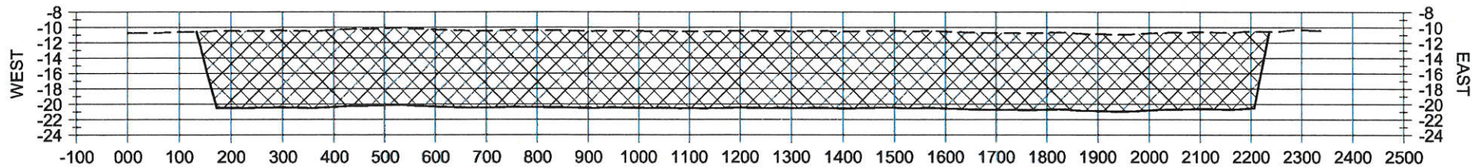

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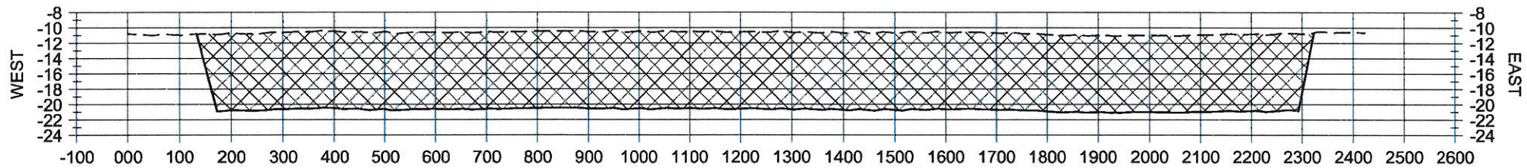

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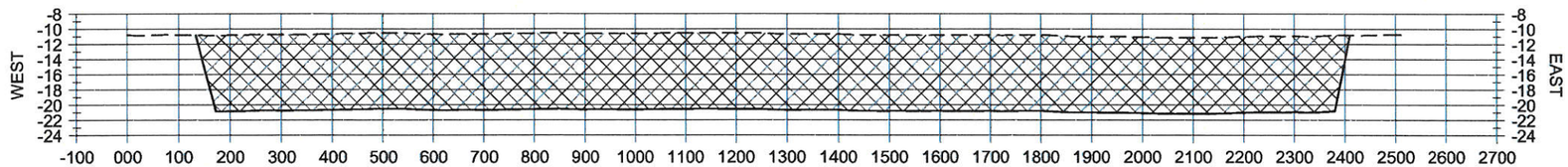

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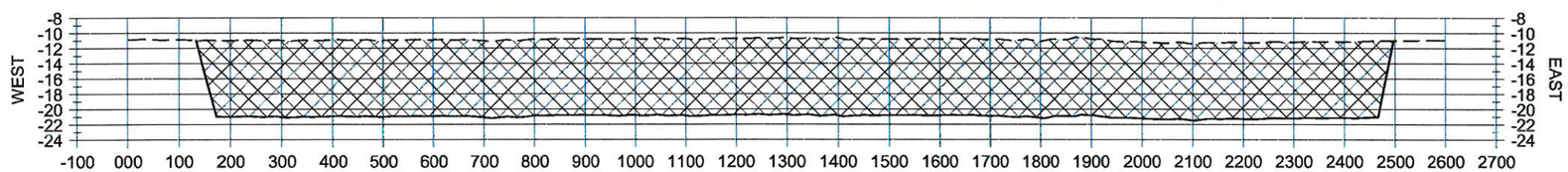

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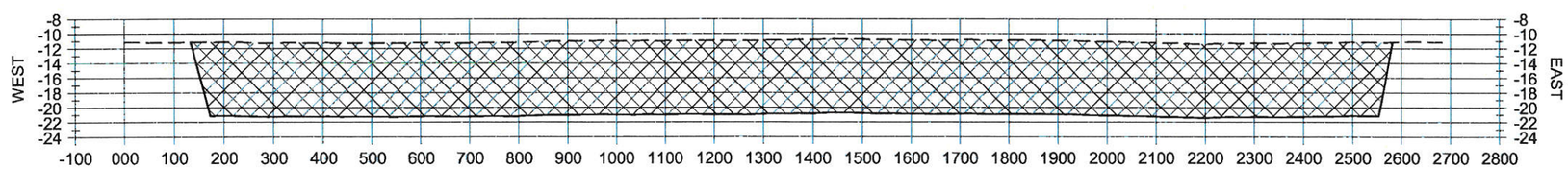

110

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND	
----	EXISTING GROUND
▨	BORROW AREA

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

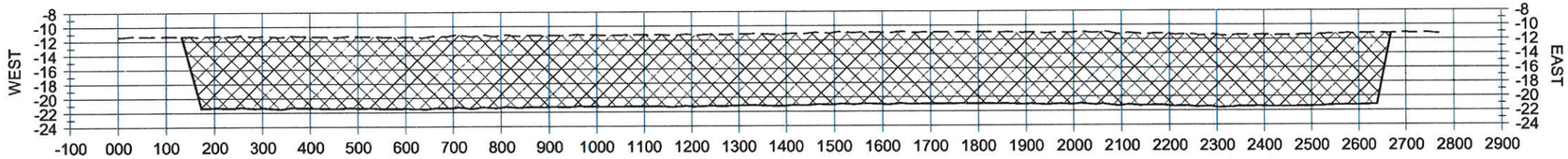
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 33 OF 40



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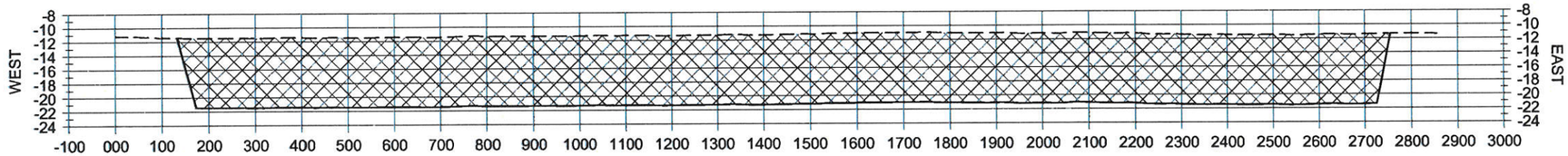

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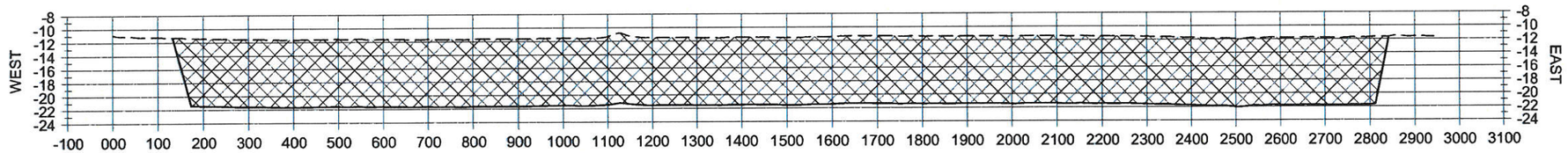

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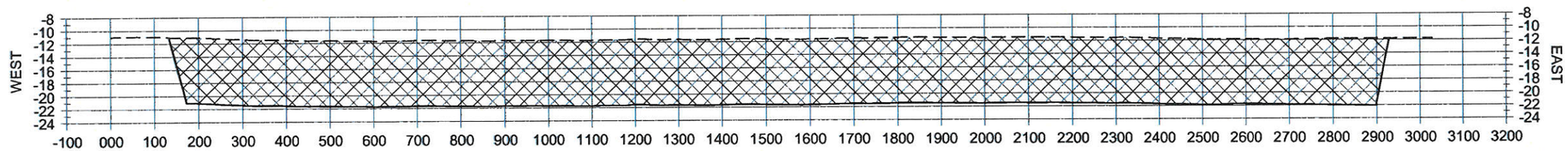

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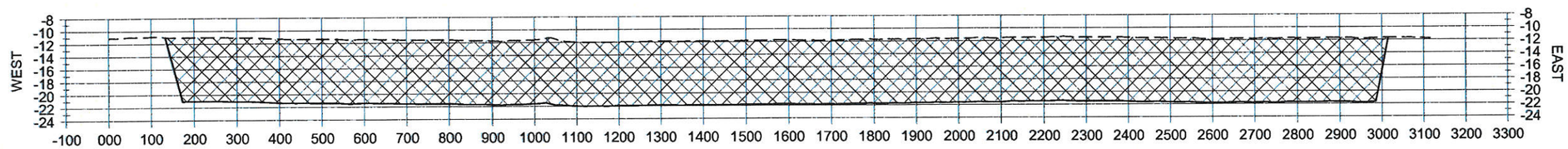

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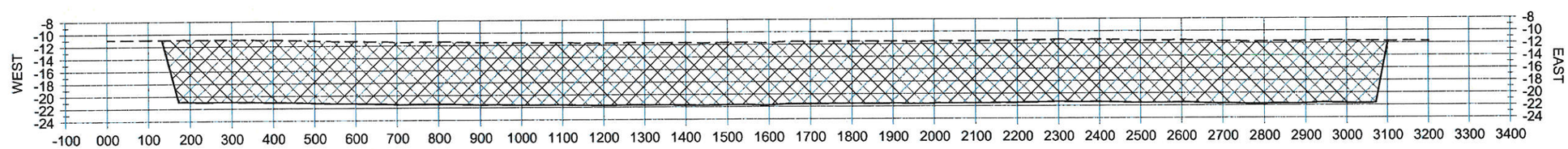

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND	
----	EXISTING GROUND
▨	BORROW AREA

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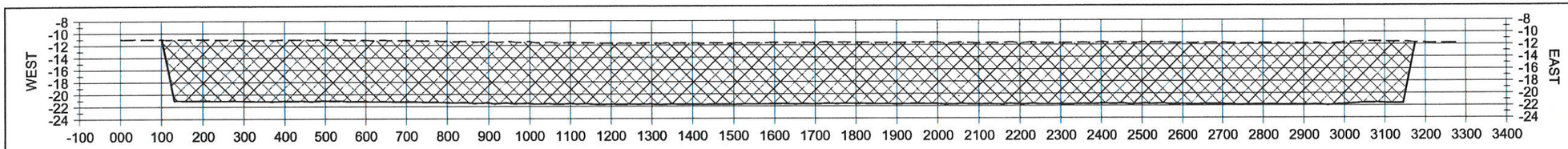
BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 34 OF 40



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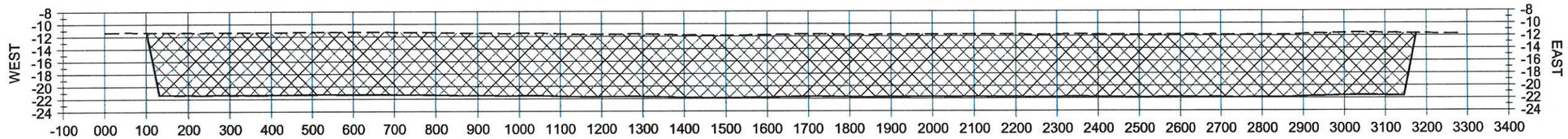

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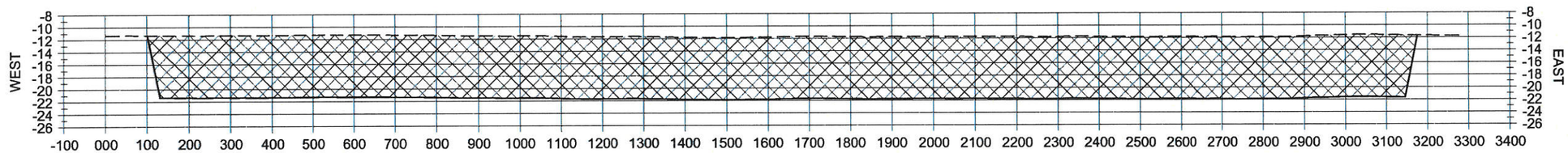

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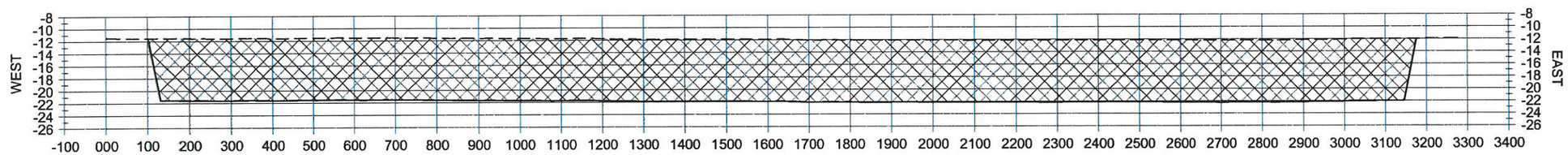

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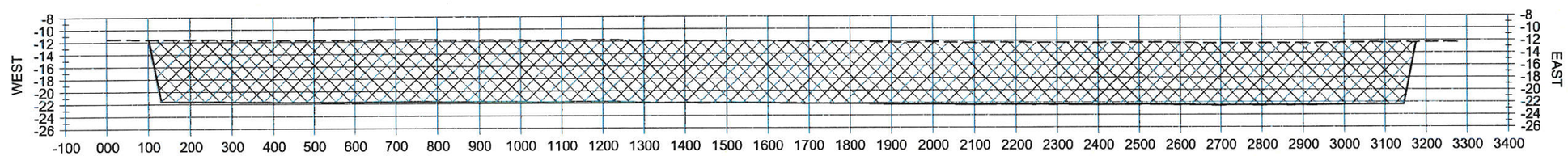

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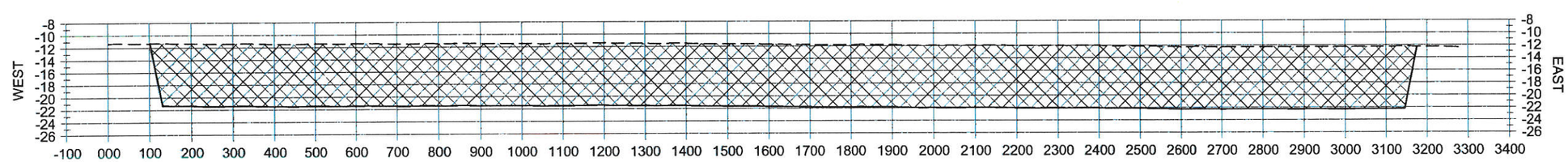

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
- BORROW AREA

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. SECTIONS OVERLAYED ONTO 2014 DESIGN SURVEY.

REV.	DATE	DESCRIPTION	BY

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

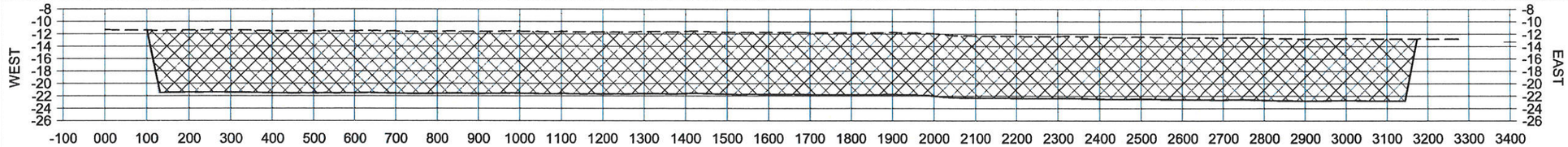
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 35 OF 40



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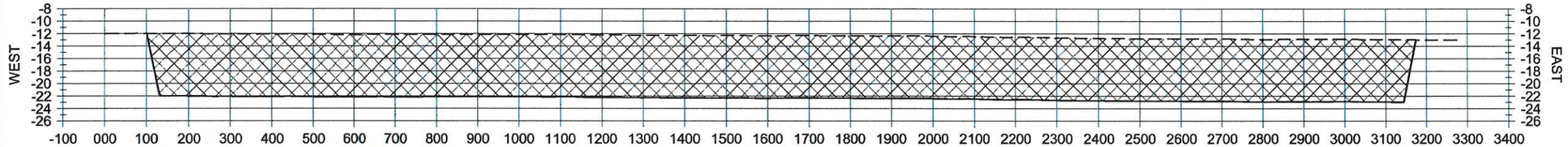

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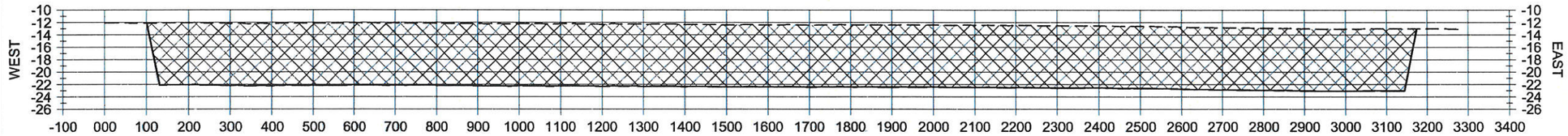

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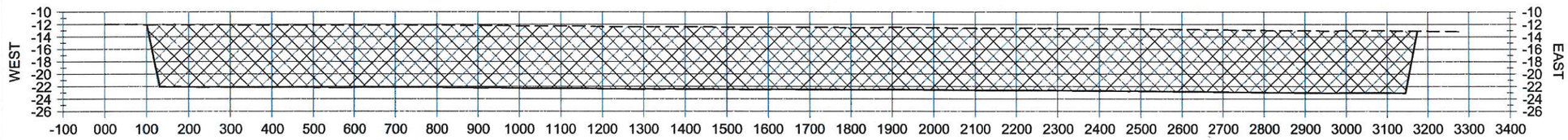

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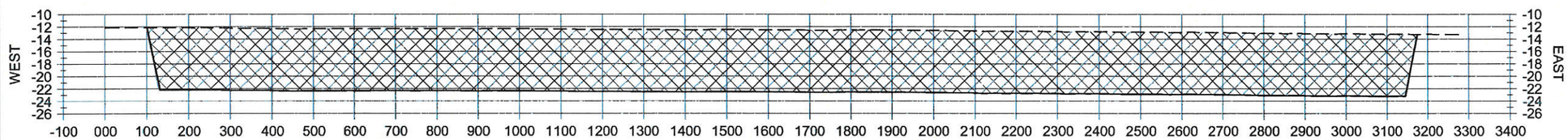

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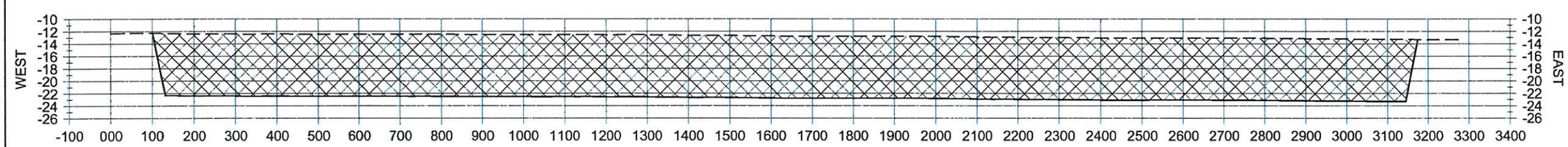

128

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND	
----	EXISTING GROUND
	BORROW AREA

NOTES:
1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
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REV.	DATE	DESCRIPTION	BY

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

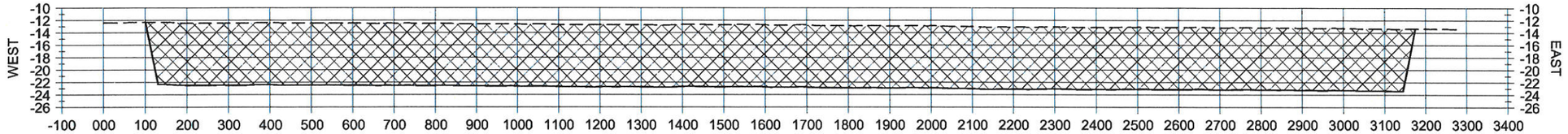
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 36 OF 40



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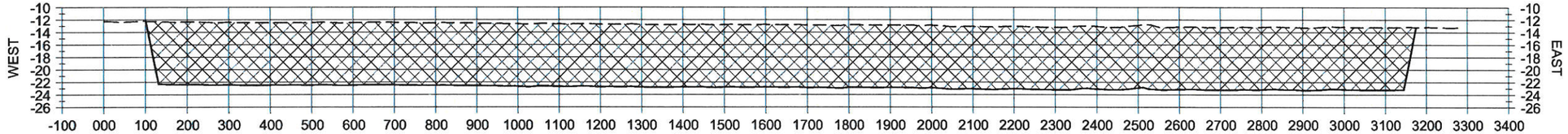

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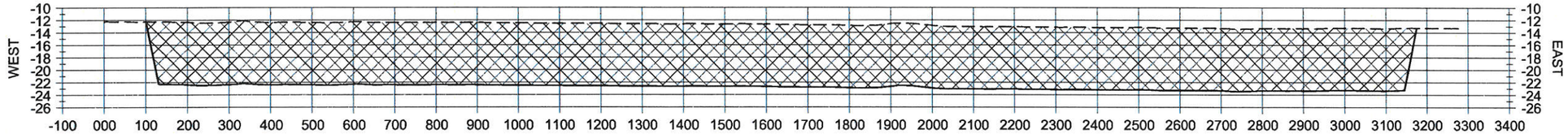

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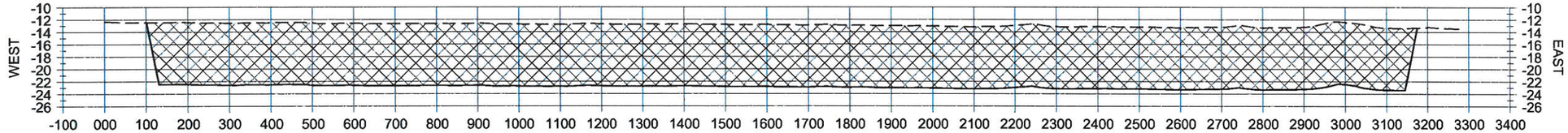

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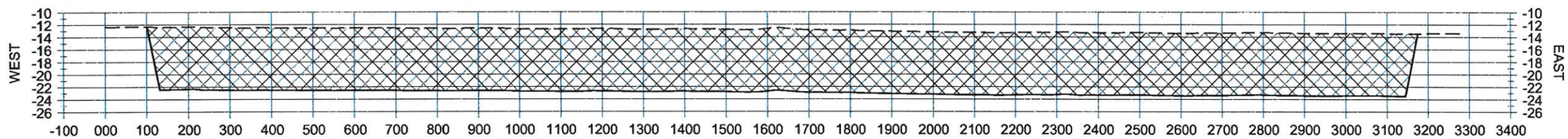

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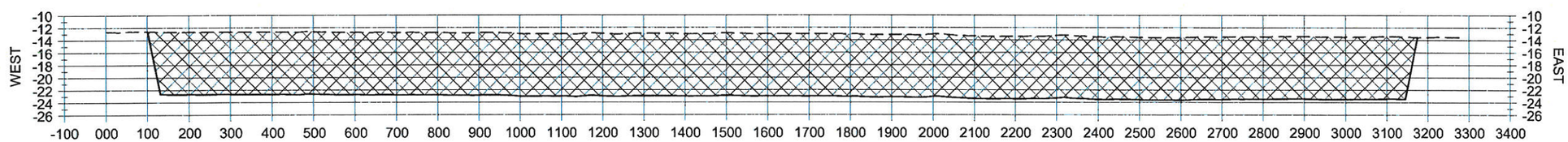

134

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND	
----	EXISTING GROUND
	BORROW AREA

NOTES:
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REV.	DATE	DESCRIPTION	BY

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

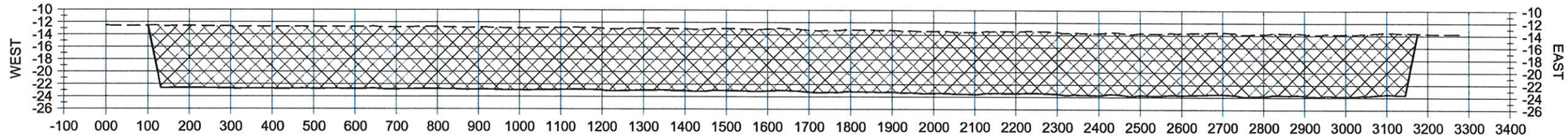
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 37 OF 40



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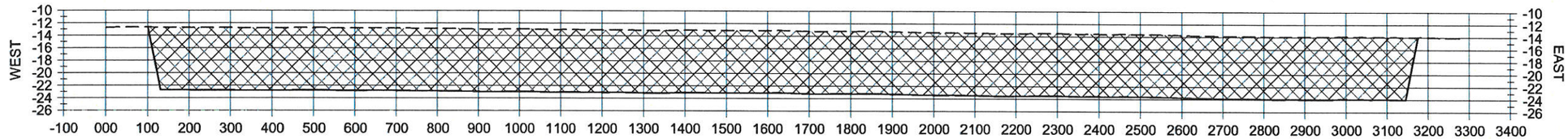

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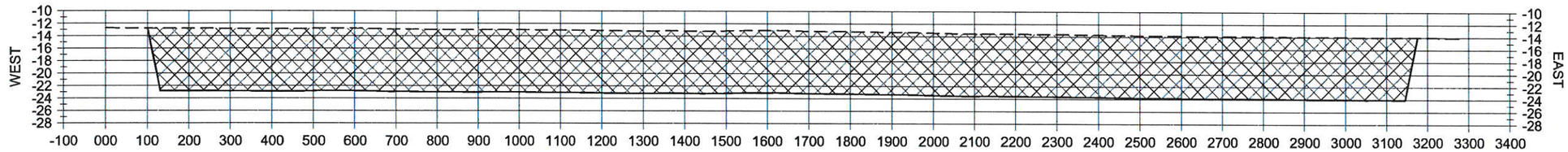

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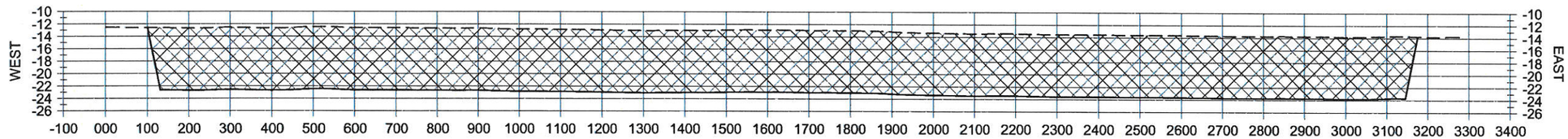

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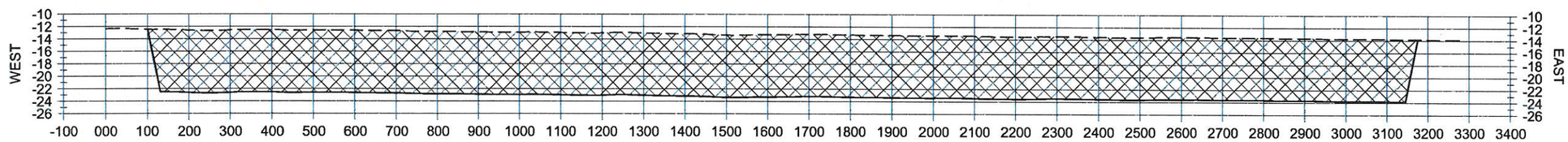

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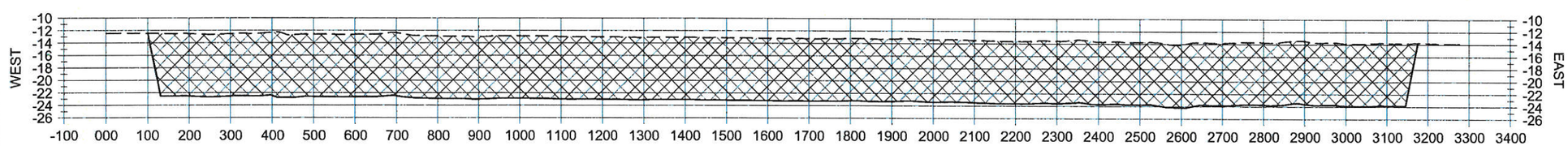

140

STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
- BORROW AREA

NOTES:
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REV.	DATE	DESCRIPTION	BY

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

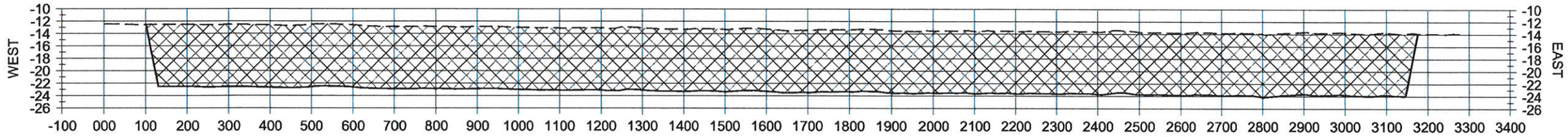
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 38 OF 40



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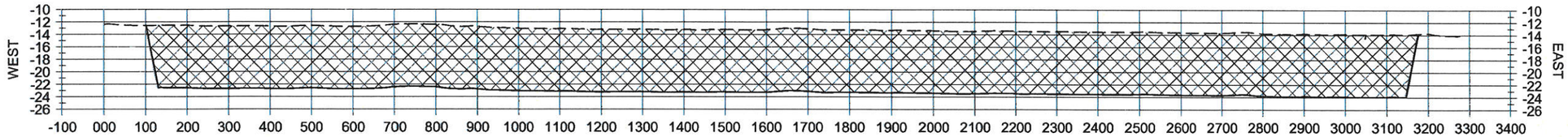

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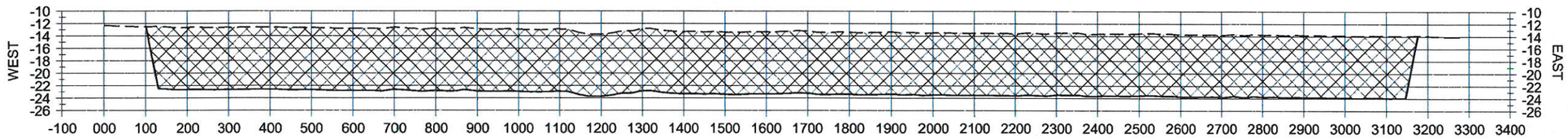

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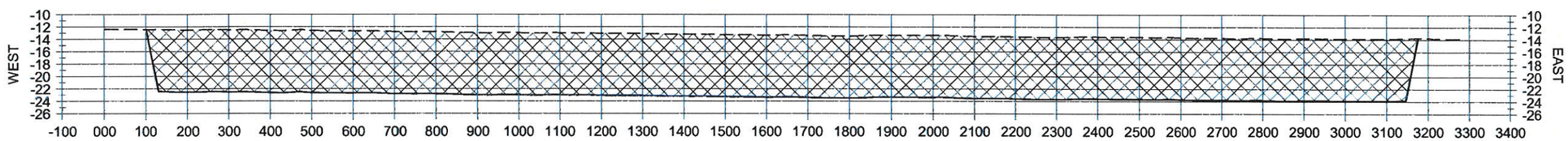

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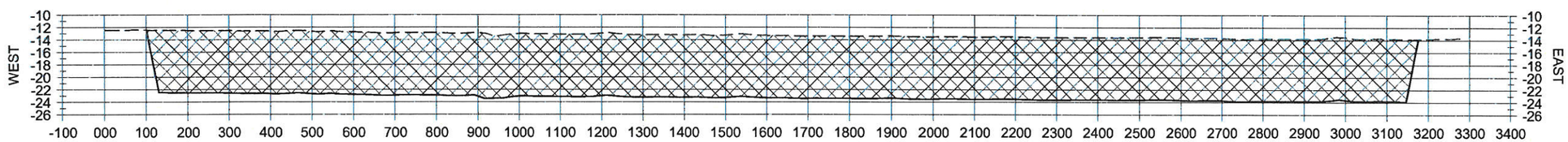

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CHAL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE
300' 150' 0 300' 600'
10' 5' 0 10' 20'
VERTICAL GRAPHIC SCALE

LEGEND	
----	EXISTING GROUND
	BORROW AREA

NOTES:
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REV.	DATE	DESCRIPTION	BY

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

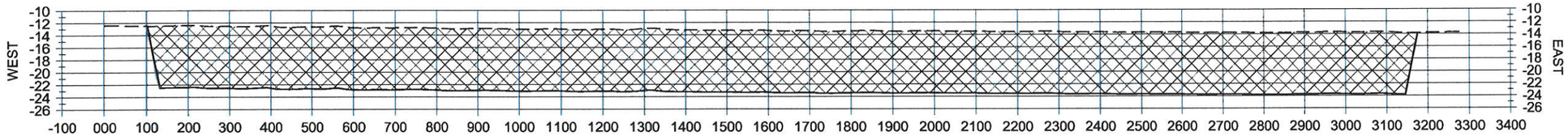
DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104
FEDERAL PROJECT NUMBER: PO-104
APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016
SHEET 39 OF 40



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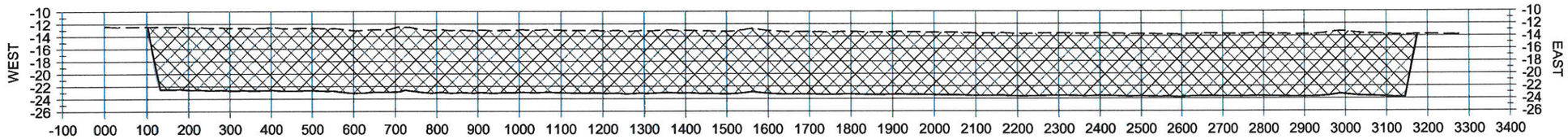

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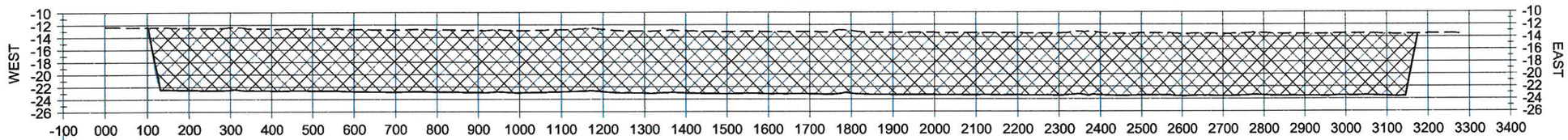

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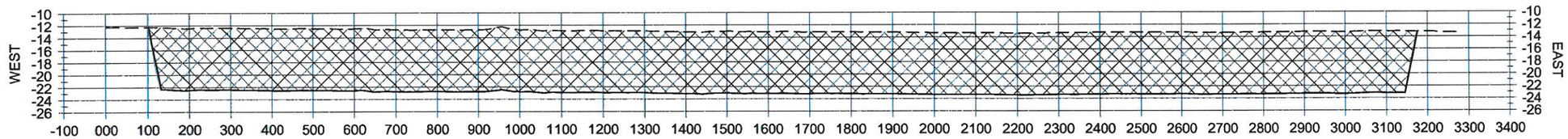

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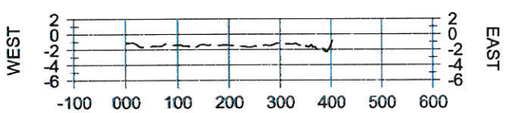

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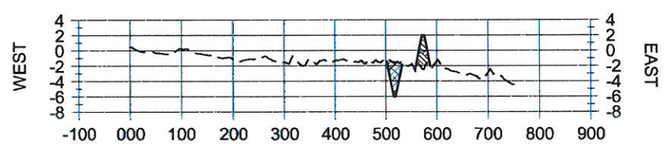

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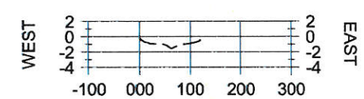

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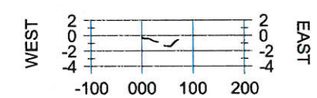

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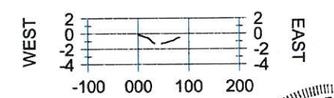

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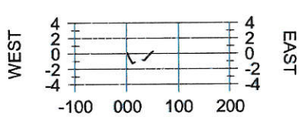

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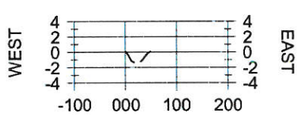

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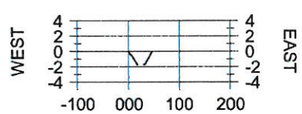

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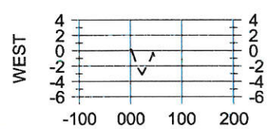

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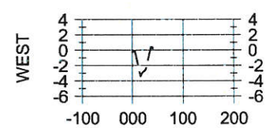

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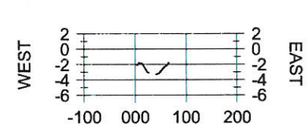

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STATE OF LOUISIANA
SHANNON McCLAIN HAYNES
License No. 30552
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2/29/16

HORIZONTAL GRAPHIC SCALE

300' 150' 0 300' 600'

10' 5' 0 10' 20'

VERTICAL GRAPHIC SCALE

LEGEND

- EXISTING GROUND
- BORROW AREA
- EARTHEN PLUG
- EARTHEN PLUG BORROW AREA

NOTES:

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REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU
DESIGNED BY: SHANNON HAYNES, P.E.

BAYOU BONFOUCA MARSH CREATION PROJECT

STATE PROJECT NUMBER: PO-104

FEDERAL PROJECT NUMBER: PO-104

APPROVED BY: RUSS JOFFRION, P.E.

SECTIONS

DATE: FEBRUARY 2016

SHEET 40 OF 40