

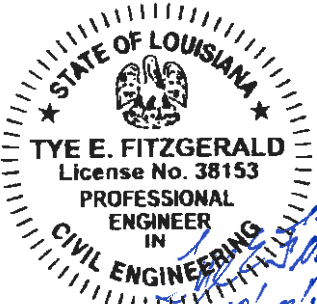
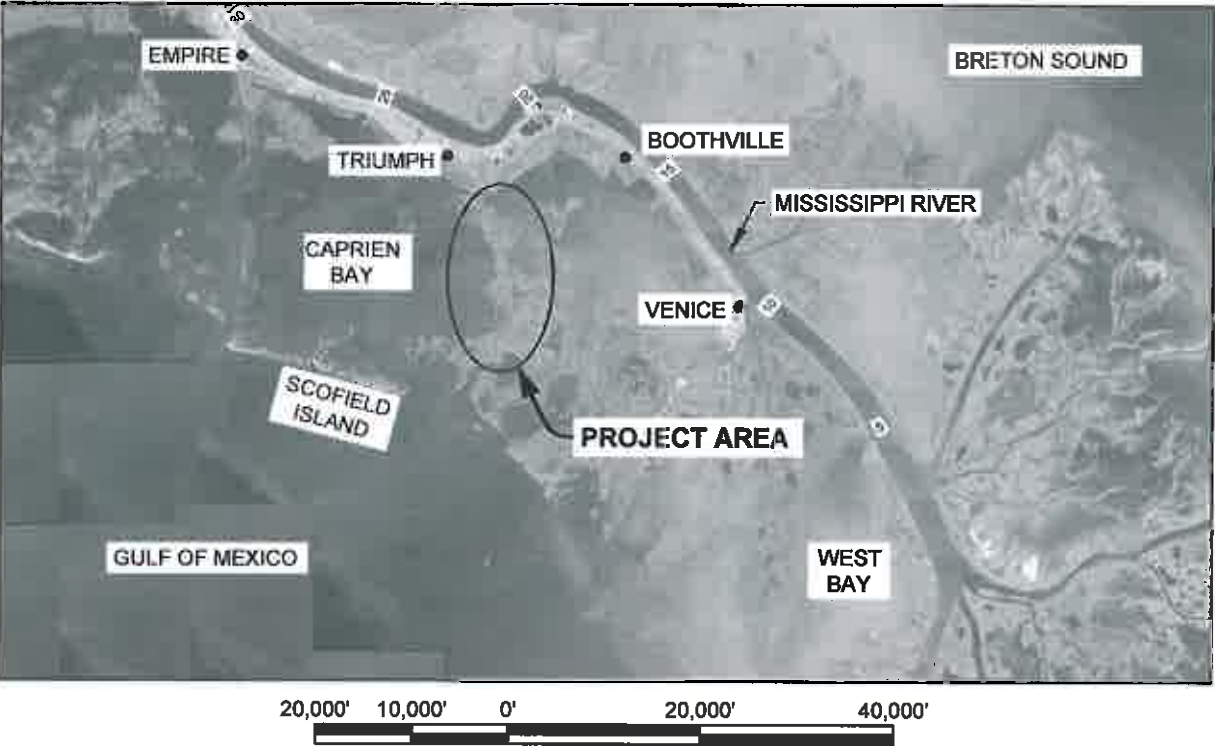
STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

INDEX TO SHEETS

SHEET NO. DESCRIPTION

1	TITLE SHEET
2	GENERAL NOTES
3	ACCESS ROUTE
4	BORROW AREA LAYOUT
5	MARSH CREATION AREA LAYOUT
6	MARSH CREATION AREA A LAYOUT
7	MARSH CREATION AREA B LAYOUT
8	MARSH CREATION AREA C & D LAYOUT
9	CONSTRUCTION/ACCESS DREDGING & BORROW AREA TYPICAL SECTIONS
10	MARSH CREATION AREA A - TYPICAL SECTION D-D'
11	MARSH CREATION AREA B - TYPICAL SECTION E-E'
12	MARSH CREATION AREA C - TYPICAL SECTION F-F'
13	MARSH CREATION AREA D - TYPICAL SECTION G-G'
14	EARTHEN CONTAINMENT DIKE DETAILS
15	EARTHEN RIDGE DETAILS
16	SC-11 SHEET PILE CLOSURE DETAILS
17	SC-12 SHEET PILE CLOSURE DETAILS
18	SC-13 SHEET PILE CLOSURE DETAILS
19	SC-14 SHEET PILE CLOSURE DETAILS
20	SC-15 SHEET PILE CLOSURE DETAILS
21	SC-16 SHEET PILE CLOSURE DETAILS
22	SC-17 SHEET PILE CLOSURE DETAILS
23	SC-18 SHEET PILE CLOSURE DETAILS
24	GRADE STAKE AND SETTLEMENT PLATE DETAILS
25	BORROW AREA DESIGN SURVEY & BORING LAYOUT
26 - 27	BORROW AREA PRE-CONSTRUCTION/PROCESS SURVEY LAYOUT
28	MARSH CREATION SURVEY & BORING LAYOUT
29	CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SURVEY LAYOUT
30	EMPIRE WATERWAY ACCESS SURVEY LAYOUT
31 - 33	BORROW AREA SECTIONS
34 - 42	MARSH CREATION AREAS SECTIONS
43 - 46	BAYOU SECTIONS
47 - 50	CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SECTIONS
51 - 54	EMPIRE WATERWAY ACCESS PROFILE

GRAND LIARD MARSH AND
RIDGE RESTORATION
BA-68
PLAQUEMINES PARISH



[Signature]
CHIEF, ENGINEERING DIVISION

[Signature]
ENGINEER MANAGER

[Signature]
ENGINEER SUPERVISOR

[Signature]
PROJECT ENGINEER



LICENSURE CLASSIFICATION REQUIREMENTS
MAJOR CLASSIFICATION: HEAVY CONSTRUCTION

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION	TITLE SHEET
						STATE PROJECT NUMBER: BA-68	
						FEDERAL PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
						APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 1 OF 54
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.		

GENERAL NOTES

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) GEOID 03 (2004.65), 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 MONUMENTS:

SECONDARY MONUMENT	ELEVATION	NORTHING	EASTING
CRMS BA-SM-14	2.27'	275,747.40	3,881,961.78
N 367	0.97'	314,850.54	3,878,540.64
C 279	-0.93'	318,589.90	3,846,907.90
J370	-4.20'	302,488.49	3,900,689.99

2. MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) WERE CALCULATED FROM THE GAGE CRMS0163 LOCATED 4 MILES SOUTH OF VENICE. DATA FROM JUNE 25, 2007 TO JUNE 22, 2010 WAS USED. ELEVATIONS ARE REFERENCED TO NAVD 88, US FEET. MHW=1.35' AND MLW =0.30'.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING SAFE ACCESS TO THE PROJECT AND FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT AREA. ALL EQUIPMENT SHALL BE FLOATING AT ALL TIMES DURING TRANSIT TO AND FROM THE PROJECT SITE. THE CPRA CONSTRUCTION ENGINEER OR THEIR REPRESENTATIVE SHALL MONITOR THE LOCATION OF EQUIPMENT DURING CONSTRUCTION.

4. THE CONTRACTOR SHALL NOT, AT ANYTIME, TRAVERSE EXISTING MARSH OR VEGETATIVE WETLANDS OUTSIDE FILL AREAS UNLESS OTHERWISE DIRECTED BY THE CPRA CONSTRUCTION ENGINEER.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PIPELINE OPERATORS THREE (3) WORKING DAYS IN ADVANCE OF THE WORK. ALL PIPELINES SHALL BE MARKED BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN BUOYS DURING CONSTRUCTION AND HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THE DREDGE TO AVOID DREDGING IN RESTRICTED AREAS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE CLEARANCES FROM THE PIPELINES SET FORTH IN THE PLANS AND SPECIFICATIONS. SEE SP-11 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL NOT ANCHOR OR EXCAVATE WITHIN 50 FEET OF ANY PIPELINE. CALL LOUISIANA ONE CALL AT 1-800-272-3020 48 HOURS PRIOR TO ANY EXCAVATION AND/OR DREDGING TO LOCATE ALL PIPELINES OR UTILITIES.

GULF SOUTH PIPELINE
HAROLD SILL
(504) 415-1864

TEXAS EASTERN TRANSMISSION
JEROME SNYDER
(985) 876-6761 EXT. 6851

TENNESSEE GAS PIPELINE
PAT ADAMS
(985) 223-6139

CHEVRON PIPELINE
KEITH SCHAUBHUT
PARADIS DIVISION
(507) 415-0593

COLUMBIA GULF TRANSMISSION
DARREN DUHON
INTEGRITY MANAGEMENT
(337) 266-4672

LOUISIANA STATE GAS CORP.
MORRIS P. HEBERT
(985) 879-2731

SOUTHERN NATURAL GAS
KURT CHERAMIE
EMPIRE DIVISION
(985) 233-6417

HILCORP ENERGY COMPANY
GEORGE MOSS
(985) 397-1325

6. 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.

7. 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.

8. MARSH CREATION AREA ELEVATIONS SHOWN ON THE PLANS ARE BASED ON THE SURVEYS PERFORMED BETWEEN AUGUST 05, 2010 AND SEPTEMBER 23, 2010 BY SIGMA CONSULTING GROUP, INC. FOR THE CPRA. BORROW AREA ELEVATIONS SHOWN ON THE PLANS ARE BASED ON THE SURVEYS PERFORMED BETWEEN FEBRUARY 2, 2010 AND FEBRUARY 4, 2010 BY COASTAL PLANNING & ENGINEERING, INC. FOR THE CPRA. AN UPDATED PRE-CONSTRUCTION SURVEY SHALL BE PERFORMED AS PART OF THIS CONTRACT PER TS-2.3 OF THE SPECIFICATIONS.

9. THE EARTHEN RIDGE, EARTHEN CONTAINMENT DIKES, MARSH CREATION AREAS, OFFSHORE BORROW AREAS, AND SHEET PILE CLOSURE STRUCTURES MAY BE REVISED BY THE CPRA CONSTRUCTION ENGINEER AT THE TIME OF CONSTRUCTION TO REFLECT CHANGES IN FIELD CONDITIONS.

10. ESTIMATED HYDRAULIC DREDGING QUANTITIES SHOWN ARE FOR BIDDING PURPOSES ONLY AND WERE CALCULATED ACCORDING TO CONDITIONS SURVEYED FROM 08-05-2010 TO 09-23-2010. QUANTITIES WERE CALCULATED USING AUTOCAD AND AERIAL PHOTOGRAPHY FOR SECTIONS 20+00 THROUGH 190+50.

11. THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY OF THE BORROW AREAS AND ALL PROPOSED ACCESS CORRIDORS PRIOR TO MOBILIZATION FOR CONSTRUCTION. DRAWINGS SHOWING THE TRACK LINES, ANY MAGNETOMETER HITS, COORDINATES, AMPLITUDE, SIGNATURE TYPE, AND SIGNATURE WIDTH OF ALL MAGNETOMETER HITS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO MOBILIZATION. ADDITIONAL TRACK LINES SHALL BE RUN IN ACCORDANCE WITH TS-2.3.9 OF THE SPECIFICATIONS.

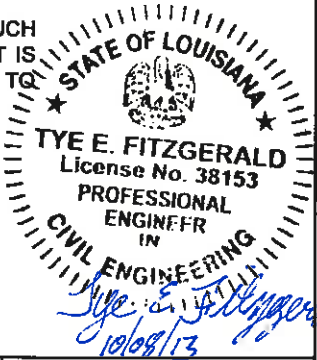
12. THE GEOTECHNICAL INVESTIGATION AND ANALYSES WERE PERFORMED FROM JANUARY 2010 THROUGH SEPTEMBER 2011 BY GEOENGINEERS, INC. AND COASTAL PLANNING AND ENGINEERING, INC. THE LOCATIONS OF THE SOIL BORINGS ARE SHOWN ON SHEET 28. THE GEOTECHNICAL BORING LOGS CAN BE FOUND IN APPENDIX H OF THE SPECIFICATIONS.

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

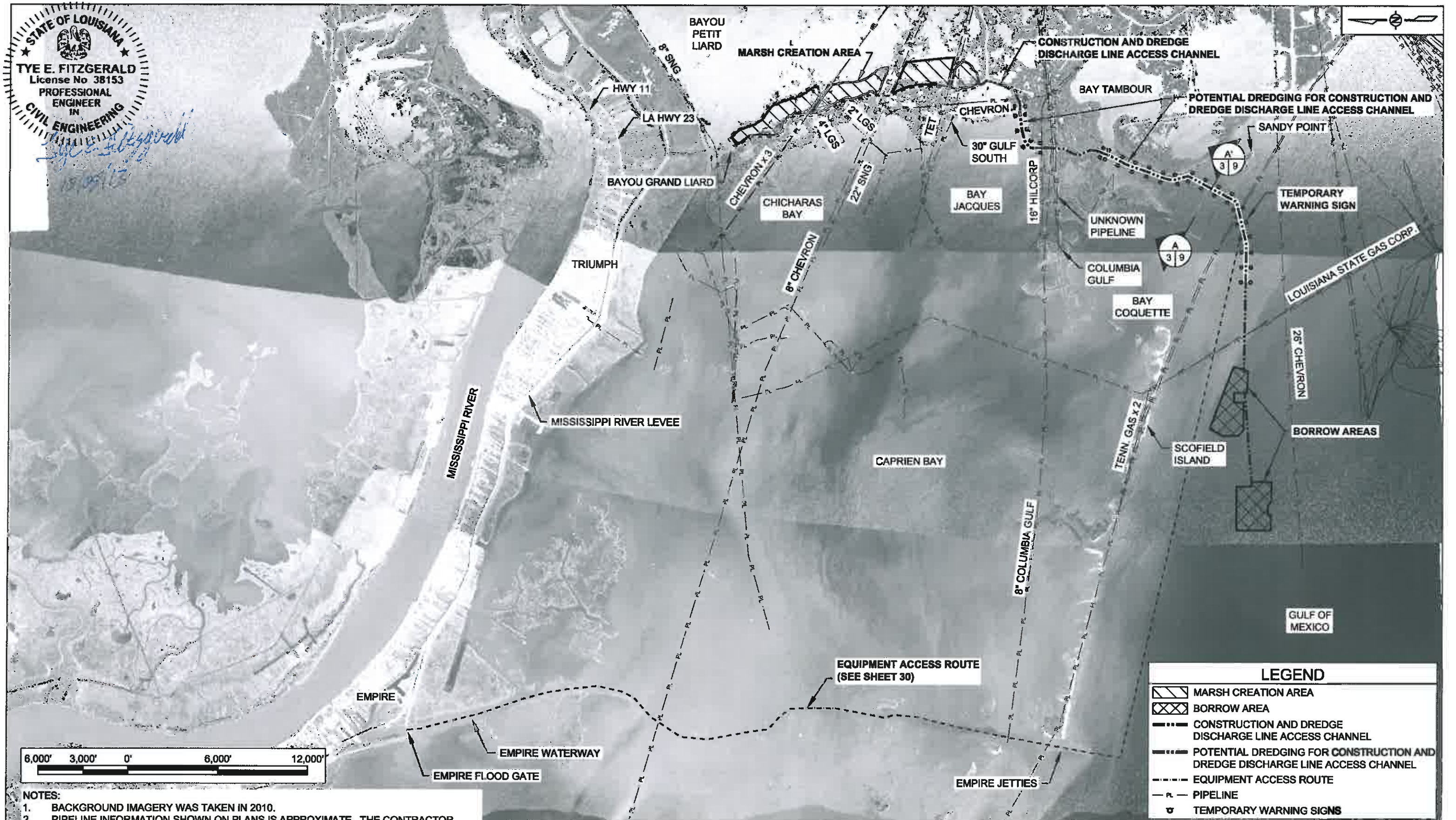
SUMMARY OF ESTIMATED QUANTITIES

ITEM No.	DESCRIPTION	UNIT	ESTIMATED ³ QUANTITY
1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	1
2	CLEARING AND GRUBBING	LUMP SUM	1
3	MARSH CREATION HYDRAULIC DREDGING (BORROW CUT VOLUME) ²	CUBIC YARDS	3,442,824
4	EARTHEN CONTAINMENT DIKES ¹	LINEAR FOOT	29,275
5	EARTHEN RIDGE ¹	LINEAR FOOT	16,780
6	CONSTRUCTION SURVEYS	LUMP SUM	1
7	STEEL SHEET PILING	SQUARE FOOT	45,626
8	SAND FILL	CUBIC YARDS	22,569
9	SETTLEMENT PLATES	EACH	11
10	ACCESS DREDGING	LUMP SUM	1
11	PIPELINE REMOVAL	LUMP SUM	1

1. THE LINEAR FOOTAGE OF EARTHEN CONTAINMENT DIKES AND EARTHEN RIDGE WAS ESTIMATED FOR CONSTRUCTION USING AERIAL PHOTOGRAPHY, FIELD SURVEYS, AND AUTOCAD. THE OWNER RESERVES THE RIGHT TO REQUEST THAT ADDITIONAL EARTHEN CONTAINMENT DIKES AND EARTHEN RIDGE BE BUILT FOR CONSTRUCTION AT THE CONTRACTOR'S BID PRICE/LINEAR FOOT.
2. THE HYDRAULIC DREDGING QUANTITIES FOR THE MARSH CREATION AREAS ARE BASED ON THE OFFSHORE BORROW AREA CUT VOLUME. ACTUAL QUANTITIES FOR PAYMENT WILL BE BASED ON SURVEYS PERFORMED AS PART OF THIS CONTRACT AS REQUIRED IN TS-2 "CONSTRUCTION SURVEYS" OF THE SPECIFICATIONS.
3. WHERE THE QUANTITY OF WORK WITH RESPECT TO ANY ITEM IS COVERED BY A UNIT PRICE, SUCH QUANTITIES ARE ESTIMATED QUANTITIES TO BE USED WHEN COMPARING BIDS AND THE RIGHT IS RESERVED BY THE OWNER TO INCREASE/DECREASE SUCH QUANTITIES AS MAY BE NECESSARY TO COMPLETE THE WORK AND/OR REMAIN WITHIN FUNDING LIMITS.



				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		GENERAL NOTES
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-36		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



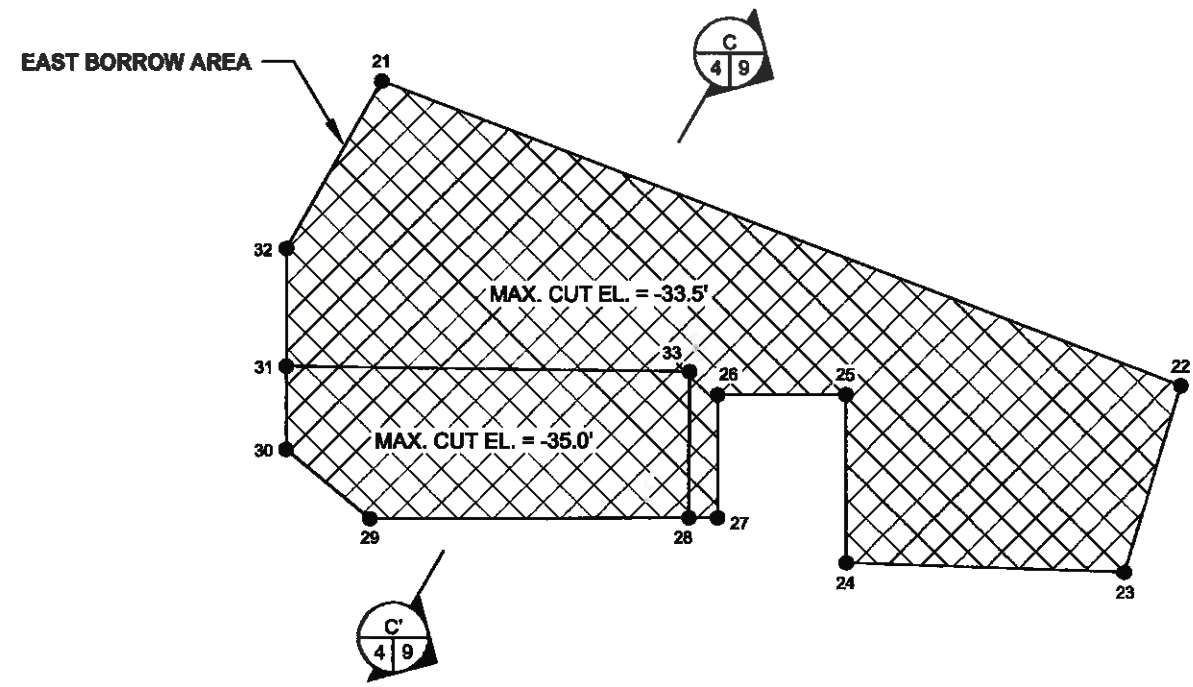
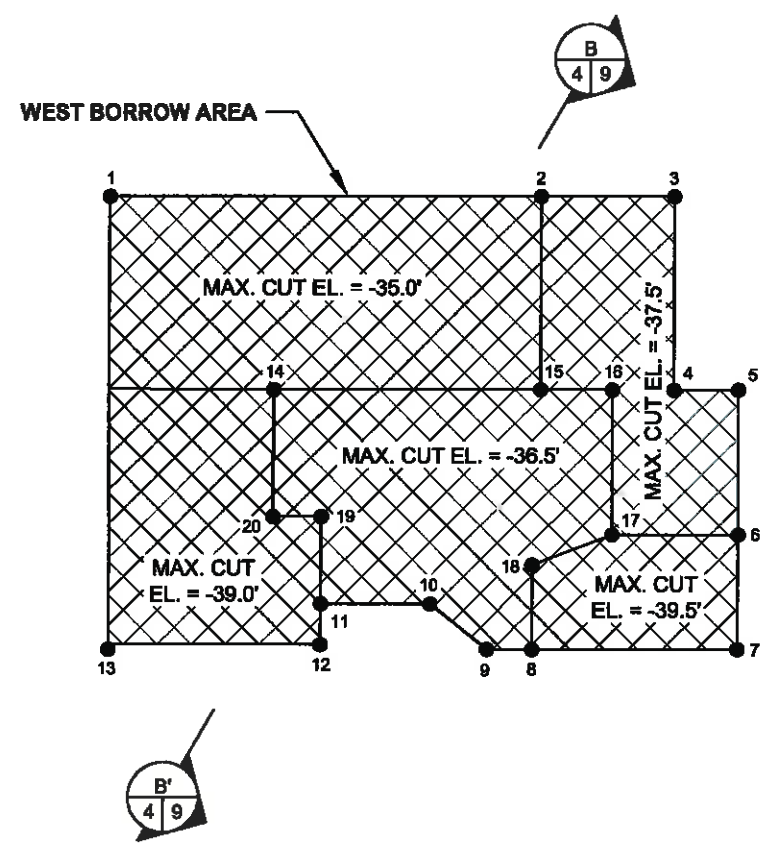
NOTES:

1. BACKGROUND IMAGERY WAS TAKEN IN 2010.
2. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
3. PIPELINE LOCATIONS ARE BASED ON USGS DATABASE AND IS NOT GUARANTEED TO BE ACCURATE.
4. ALL PIPELINES LOCATED WITHIN 150' OF THE EARTHEN RIDGE AND DIKE ALIGNMENTS, MARSH CREATION AREAS, BORROW AREAS, AND SHEET PILE CLOSURES SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SP-11 OF THE SPECIFICATIONS FOR ADDITIONAL DETAILS.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		ACCESS ROUTE
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 3 OF 54
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.		

WEST BORROW AREA		
	NORTHING	EASTING
1	267,055.94	3,845,785.04
2	267,055.96	3,848,029.68
3	267,055.94	3,848,723.04
4	266,048.61	3,848,723.04
5	266,048.61	3,849,056.64
6	265,294.95	3,849,056.83
7	264,698.11	3,849,055.36
8	264,698.11	3,847,989.13
9	264,698.77	3,847,755.37
10	264,934.53	3,847,458.71
11	264,935.39	3,846,889.33
12	264,723.34	3,846,888.60
13	264,698.16	3,845,785.04
14	266,050.28	3,846,642.26
15	266,049.27	3,848,029.68
16	266,048.91	3,848,402.96
17	265,294.95	3,848,403.01
18	265,138.60	3,847,990.03
19	265,389.54	3,846,890.88
20	265,389.61	3,846,641.27

EAST BORROW AREA		
	NORTHING	EASTING
21	268,861.16	3,852,624.70
22	267,266.13	3,856,785.51
23	266,296.16	3,856,488.54
24	266,349.82	3,855,039.86
25	267,224.70	3,855,039.86
26	267,224.70	3,854,371.88
27	266,584.86	3,854,371.88
28	266,584.86	3,854,222.63
29	266,584.86	3,852,584.14
30	266,946.00	3,852,128.69
31	267,379.60	3,852,128.69
32	267,991.93	3,852,128.69
33	267,345.73	3,854,227.40

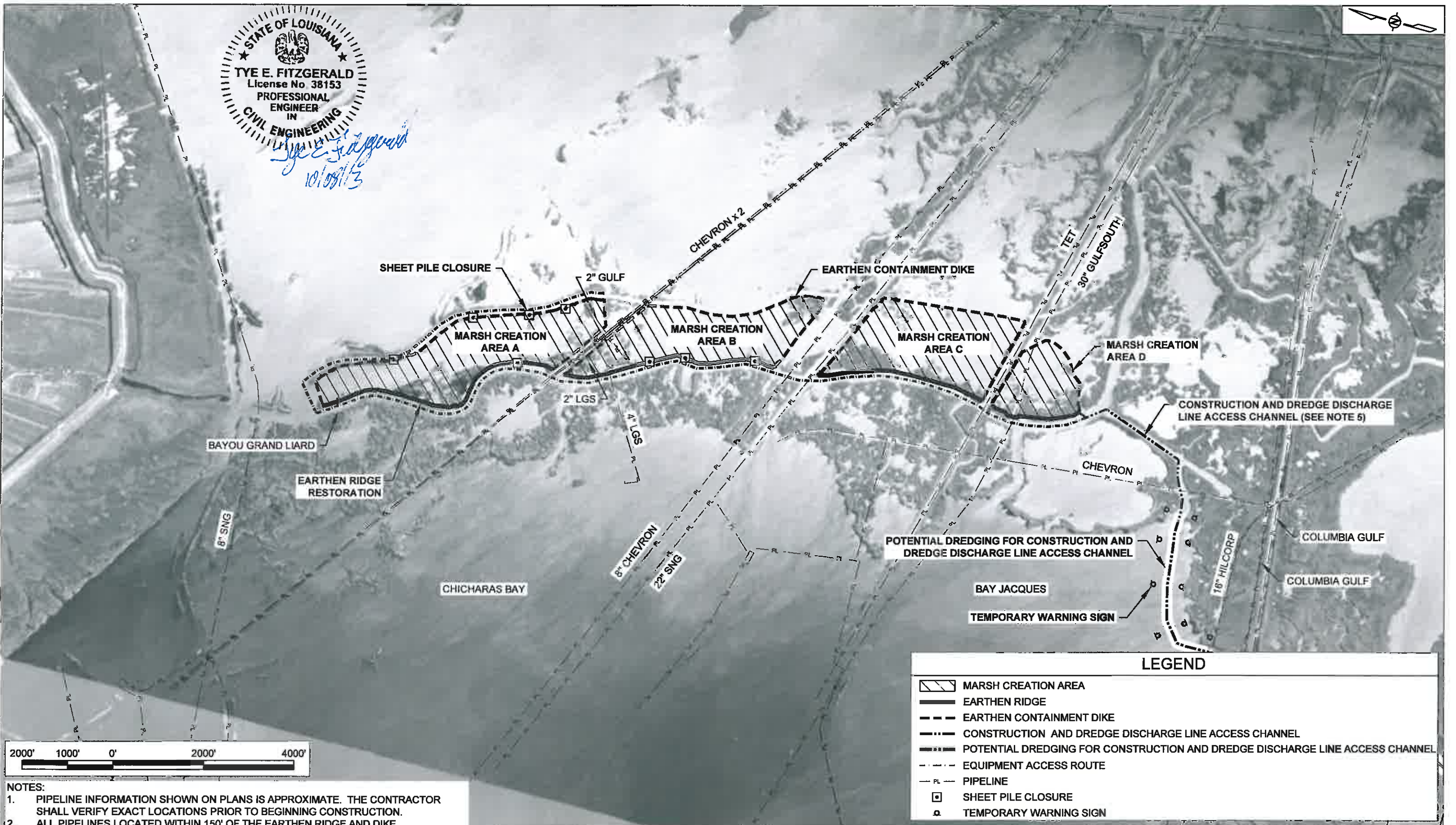
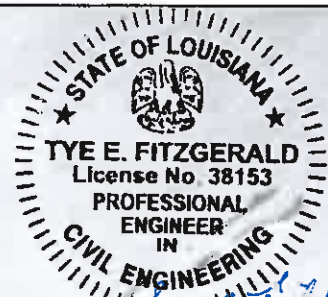


STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
ENGINEER
IN
CIVIL ENGINEERING
10/08/13



- NOTES:
1. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
 2. ALL PIPELINES LOCATED WITHIN 150' OF THE BORROW AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SP-11 OF THE SPECIFICATIONS FOR DETAILS.
 3. THE WEST BORROW AREA CONTAINS APPROXIMATELY 4.01 M CUBIC YARDS OF MATERIAL.
 4. THE EAST BORROW AREA CONTAINS APPROXIMATELY 4.31 M CUBIC YARDS OF MATERIAL.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION		BORROW AREA LAYOUT
						STATE PROJECT NUMBER: BA-68		
						FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY			DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



NOTES:

1. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
2. ALL PIPELINES LOCATED WITHIN 150' OF THE EARTHEN RIDGE AND DIKE ALIGNMENTS, FILL AREAS, BORROW AREA, OR SHEET PILE CLOSURES SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SP-11 OF THE SPECIFICATIONS FOR DETAILS.
3. NO EXCAVATION SHALL OCCUR WITHIN 50.0' OF A PIPELINE.
4. THE CONTRACTOR SHALL CONSTRUCT THE MARSH CREATION AREAS IN A TWO CONSTRUCTION LIFT SEQUENCE AS SPECIFIED IN TS-8.5.
5. THE DREDGE DISCHARGE LINE MAY BE LAID WITHIN THE EQUIPMENT ACCESS ROUTE.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREA LAYOUT	
					STATE PROJECT NUMBER: BA-68			
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 5 OF 54

ESTIMATED MECHANICAL DREDGING VOLUMES	QTY. (CU. YD.)
EARTHEN RIDGE: BAYOU BORROW	44,013
EARTHEN RIDGE: INTERIOR BORROW	119,961
EARTHEN CONTAINMENT: BAYOU BORROW	98,328
EARTHEN CONTAINMENT: INTERIOR BORROW	24,690



SHEET PILE CLOSURE SC-11
(SEE SHEET 16 FOR DETAILS)

EARTHEN CONTAINMENT DIKE
(SEE SHEET 14 FOR DETAILS)

SURVEY TRANSECT

20+00

25+00

30+00

35+00

40+00

45+00

50+00

55+00

60+00

65+00

70+00

75+00

80+00

85+00

90+00

95+00

100+00

105+00

110+00

115+00

120+00

125+00

130+00

135+00

140+00

145+00

150+00

155+00

160+00

165+00

170+00

175+00

EARTHEN RIDGE & CONTAINMENT
DIKE SECONDARY BORROW AREA
(SEE NOTE 5)

25+00

30+00

35+00

40+00

45+00

50+00

55+00

60+00

65+00

70+00

75+00

80+00

85+00

90+00

95+00

100+00

105+00

110+00

115+00

120+00

125+00

130+00

135+00

140+00

145+00

150+00

155+00

160+00

165+00

170+00

175+00

180+00

185+00

EARTHEN RIDGE
(SEE SHEET 15
FOR DETAILS)

EQUIPMENT ACCESS/EARTHEN
RIDGE PRIMARY BORROW AREA
(SEE NOTE 5)

SHEET PILE CLOSURE SC-12
(SEE SHEET 17 FOR DETAILS)

SHEET PILE CLOSURE SC-13
(SEE SHEET 18 FOR DETAILS)

SHEET PILE CLOSURE SC-14
(SEE SHEET 19 FOR DETAILS)

MARSH CREATION
AREA A

SHEET PILE CLOSURE SC-15
(SEE SHEET 20 FOR DETAILS)

NO ACCESS DREDGING ALLOWED
AVG. EL. = -12.0'
(SEE NOTE 3)

CHEVRON X 3

BAYOU GRAND LIARD

2" GULF
TO BE REMOVED
(SEE NOTE 7)

4" LGS
TO BE REMOVED
(SEE NOTE 7)

SETTLEMENT PLATES		
	NORTHING	EASTING
S1	298,974.97	3,872,339.85
S2	298,047.05	3,873,483.87

MARSH CREATION AREA A		
	NORTHING	EASTING
1	300,607.96	3,871,666.97
2	300,692.41	3,871,693.73
3	300,979.87	3,872,149.14
4	300,578.71	3,872,586.41
5	299,941.66	3,872,871.51
6	299,630.15	3,872,974.80
7	299,399.97	3,872,997.41
8	299,198.56	3,873,185.45
9	298,937.62	3,873,348.63
10	298,424.84	3,874,083.00
11	298,273.57	3,874,259.16
12	298,106.81	3,874,353.66
13	297,950.57	3,874,351.46
14	297,844.63	3,874,417.81
15	297,701.34	3,874,520.02
16	296,993.55	3,874,766.83
17	296,846.09	3,874,743.42
18	296,675.57	3,874,782.73
19	296,571.86	3,874,906.99
20	296,383.78	3,874,969.64
21	296,189.97	3,875,096.54
22	296,064.92	3,875,094.45
23	295,947.73	3,875,171.05
24	295,904.60	3,875,283.38
25	295,559.33	3,875,521.02
26	295,220.75	3,875,586.17
27	295,008.21	3,874,997.03
28	295,912.71	3,873,756.03
29	296,115.71	3,873,800.93
30	296,557.26	3,873,748.15
31	296,689.23	3,873,813.30
32	296,832.75	3,873,764.66
33	296,879.68	3,873,670.03
34	297,128.65	3,873,560.96
35	297,343.14	3,873,393.69
36	297,518.34	3,873,146.05
37	297,579.46	3,872,874.44
38	297,618.75	3,872,590.51
39	297,679.76	3,872,467.80
40	297,765.95	3,872,421.68
41	297,826.20	3,872,423.32
42	297,865.77	3,872,378.98
43	297,953.37	3,872,342.50
44	298,308.22	3,872,298.96
45	298,954.32	3,872,338.49
46	299,219.90	3,872,326.14
47	299,467.75	3,872,315.65
48	299,555.85	3,872,316.49
49	299,600.47	3,872,293.63
50	299,820.68	3,872,225.11
51	299,955.97	3,872,132.42
52	300,336.11	3,871,830.71

NOTES:

- PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
- ALL PIPELINES LOCATED WITHIN 150' OF THE EARTHEN RIDGE AND DIKE ALIGNMENTS, FILL AREAS, BORROW AREA, OR SHEET PILE CLOSURES SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SP-11 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- NO EXCAVATION SHALL OCCUR WITHIN 50.0' OF A PIPELINE.
- DREDGING OF EQUIPMENT ACCESS/BORROW CHANNEL EAST OF FILL AREA A WILL BE PERFORMED FOR EQUIPMENT ACCESS AND SHALL NOT EXCEED THE TEMPLATE SHOWN ON SHEET 14. SPOIL SHALL BE USED TO CONSTRUCT THE EASTERN EARTHEN CONTAINMENT DIKE ALIGNMENT OF MARSH CREATION FILL AREA A.
- THE CONTRACTOR SHALL CONSTRUCT THE EARTHEN RIDGE AND EARTHEN CONTAINMENT DIKES BY DREDGING FROM BOTH PRIMARY AND SECONDARY BORROW AREAS. SEE TS-6.2 AND TS-7.2 OF THE SPECIFICATIONS FOR MORE DETAILS.
- ESTIMATED BORROW VOLUMES SHOWN FOR THE EARTHEN RIDGE AND EARTHEN CONTAINMENT DIKES ARE FOR INFORMATIONAL PURPOSES ONLY.
- THE 2" GULF SOUTH AND 4" LOUISIANA STATE GAS CORPORATION PIPELINES SHALL BE CUT AND REMOVED BY THE CONTRACTOR. SEE TS-3 OF THE SPECIFICATION AND SHEET 7 FOR MORE DETAILS.

LEGEND

	MARSH CREATION AREA		EARTHEN RIDGE
	EQUIPMENT ACCESS/PRIMARY BORROW AREA FOR EARTHEN RIDGE & CONTAINMENT DIKE		EARTHEN CONTAINMENT DIKE
	SECONDARY BORROW AREA FOR EARTHEN RIDGE & EARTHEN CONTAINMENT DIKE		SHEET PILE CLOSURE
	SOLE BORROW AREA FOR CONTAINMENT DIKE		EQUIPMENT ACCESS ROUTE
			PIPELINE
			PIPELINE REMOVAL
			SURVEY TRANSECT
			SETTLEMENT PLATE

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

FEDERAL PROJECT NUMBER: BA-68

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

MARSH CREATION AREA A LAYOUT

DATE: OCTOBER 2013

SHEET 6 OF 54

REV.	DATE	DESCRIPTION	BY
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DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

MARSH CREATION AREA B		
	NORTHING	EASTING
54	295,620.54	3,873,756.03
55	294,278.89	3,875,876.90
56	293,379.59	3,875,861.69
57	292,890.82	3,875,852.49
58	292,396.88	3,875,834.06
59	291,897.55	3,876,146.08
60	291,431.08	3,876,493.14
61	291,239.17	3,876,668.24
62	290,943.97	3,876,792.46
63	290,535.37	3,876,829.47
64	290,564.87	3,876,548.30
65	291,181.87	3,875,110.36
66	291,490.34	3,875,135.48
67	291,592.21	3,875,233.54
68	291,736.47	3,875,230.78
69	291,826.20	3,875,134.35
70	292,156.07	3,875,023.43
71	292,646.85	3,874,818.21
72	292,860.77	3,874,771.89
73	293,119.46	3,874,811.67
74	293,135.84	3,874,829.07
75	293,187.32	3,874,830.95
76	293,203.00	3,874,816.37
77	293,346.92	3,874,823.63
78	293,843.66	3,874,560.32
79	293,876.65	3,874,569.94
80	293,953.43	3,874,527.81
81	293,964.15	3,874,491.03
82	294,758.31	3,874,004.92
83	294,964.12	3,873,911.27
84	295,144.20	3,873,816.75
85	295,368.59	3,873,768.14

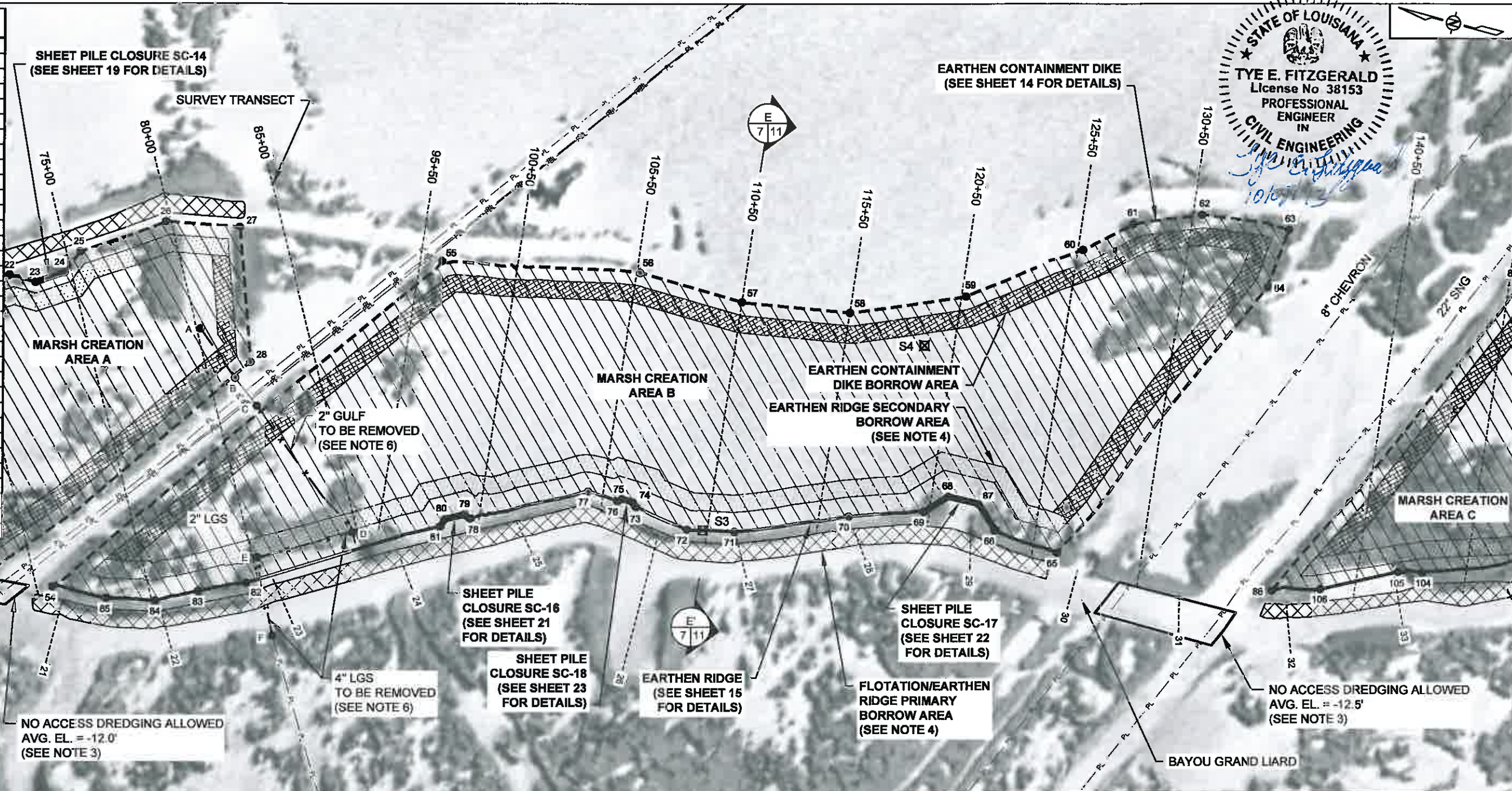
SETTLEMENT PLATES		
	NORTHING	EASTING
S3	292,792.34	3,874,786.26
S4	292,024.04	3,875,878.98

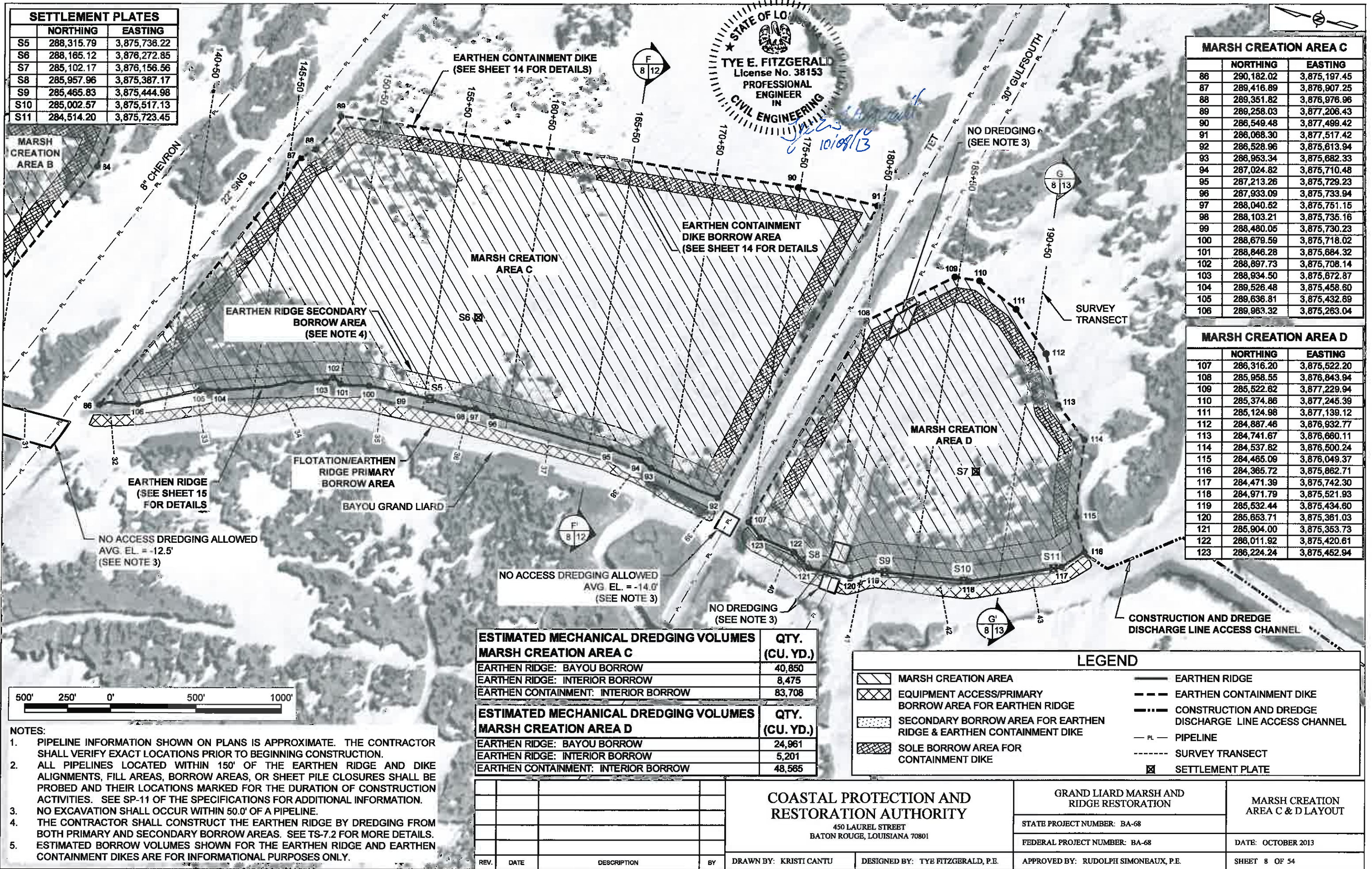
PIPELINE REMOVAL		
	NORTHING	EASTING
A	295,271.69	3,875,085.87
B	295,056.97	3,874,907.98
C	294,927.93	3,874,808.28
D	294,347.66	3,874,357.75
E	294,741.54	3,874,131.98
F	294,577.90	3,873,799.67

- NOTES:
- PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
 - ALL PIPELINES LOCATED WITHIN 150' OF THE EARTHEN RIDGE AND DIKE ALIGNMENTS, FILL AREAS, BORROW AREA, OR SHEET PILE CLOSURES SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SP-11 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - NO EXCAVATION SHALL OCCUR WITHIN 50.0' OF A PIPELINE.
 - THE CONTRACTOR SHALL CONSTRUCT THE EARTHEN RIDGE BY DREDGING FROM BOTH PRIMARY AND SECONDARY BORROW AREAS. SEE TS-7.2 OF THE SPECIFICATIONS FOR MORE DETAILS.
 - ESTIMATED BORROW VOLUMES SHOWN FOR THE EARTHEN RIDGE AND EARTHEN CONTAINMENT DIKES ARE FOR INFORMATIONAL PURPOSES ONLY.
 - THE 2" GULF SOUTH AND 4" LOUISIANA STATE GAS CORPORATION PIPELINES SHALL BE CUT AND REMOVED BY THE CONTRACTOR. SEE TS-3 OF THE SPECIFICATIONS FOR MORE DETAILS.

ESTIMATED MECHANICAL DREDGING VOLUMES		QTY.
MARSH CREATION AREA B		(CU. YD.)
EARTHEN RIDGE: BAYOU BORROW		77,785
EARTHEN RIDGE: INTERIOR BORROW		12,111
EARTHEN CONTAINMENT: INTERIOR BORROW		122,433

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREA B LAYOUT	
						STATE PROJECT NUMBER: BA-68			
						FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU		DESIGNED BY: TYE FITZGERALD, P.E.		APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 7 OF 54





SETTLEMENT PLATES		
	NORTHING	EASTING
S5	288,315.79	3,875,738.22
S6	288,185.12	3,876,272.85
S7	285,102.17	3,876,156.56
S8	285,957.96	3,875,387.17
S9	285,465.83	3,875,444.98
S10	285,002.57	3,875,517.13
S11	284,514.20	3,875,723.45

MARSH CREATION AREA C		
	NORTHING	EASTING
86	290,182.02	3,875,197.45
87	289,416.89	3,876,907.25
88	289,351.82	3,876,976.96
89	289,258.03	3,877,206.43
90	286,549.48	3,877,498.42
91	286,068.30	3,877,517.42
92	286,528.96	3,875,613.94
93	286,953.34	3,875,682.33
94	287,024.82	3,875,710.48
95	287,213.28	3,875,729.23
96	287,933.09	3,875,733.94
97	288,040.52	3,875,751.15
98	288,103.21	3,875,735.16
99	288,480.05	3,875,730.23
100	288,679.59	3,875,718.02
101	288,846.28	3,875,684.32
102	288,897.73	3,875,708.14
103	288,934.50	3,875,672.87
104	289,526.48	3,875,458.60
105	289,636.81	3,875,432.89
106	289,983.32	3,875,253.04

MARSH CREATION AREA D		
	NORTHING	EASTING
107	286,316.20	3,875,522.20
108	285,958.55	3,876,843.94
109	285,522.62	3,877,229.94
110	285,374.86	3,877,245.39
111	285,124.98	3,877,139.12
112	284,887.46	3,876,932.77
113	284,741.67	3,876,660.11
114	284,537.82	3,876,500.24
115	284,465.09	3,876,049.37
116	284,365.72	3,875,862.71
117	284,471.39	3,875,742.30
118	284,971.79	3,875,521.93
119	285,532.44	3,875,434.60
120	285,653.71	3,875,381.03
121	285,904.00	3,875,353.73
122	288,011.92	3,875,420.61
123	286,224.24	3,875,452.94

ESTIMATED MECHANICAL DREDGING VOLUMES		QTY.
MARSH CREATION AREA C		(CU. YD.)
EARTHEN RIDGE: BAYOU BORROW		40,850
EARTHEN RIDGE: INTERIOR BORROW		8,475
EARTHEN CONTAINMENT: INTERIOR BORROW		83,708
ESTIMATED MECHANICAL DREDGING VOLUMES		QTY.
MARSH CREATION AREA D		(CU. YD.)
EARTHEN RIDGE: BAYOU BORROW		24,961
EARTHEN RIDGE: INTERIOR BORROW		5,201
EARTHEN CONTAINMENT: INTERIOR BORROW		48,565

LEGEND	
	MARSH CREATION AREA
	EARTHEN RIDGE
	EARTHEN CONTAINMENT DIKE
	CONSTRUCTION AND DREDGE DISCHARGE LINE ACCESS CHANNEL
	PIPELINE
	SURVEY TRANSECT
	SETTLEMENT PLATE

- NOTES:
- PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
 - ALL PIPELINES LOCATED WITHIN 150' OF THE EARTHEN RIDGE AND DIKE ALIGNMENTS, FILL AREAS, BORROW AREAS, OR SHEET PILE CLOSURES SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SP-11 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - NO EXCAVATION SHALL OCCUR WITHIN 50.0' OF A PIPELINE.
 - THE CONTRACTOR SHALL CONSTRUCT THE EARTHEN RIDGE BY DREDGING FROM BOTH PRIMARY AND SECONDARY BORROW AREAS. SEE TS-7.2 FOR MORE DETAILS.
 - ESTIMATED BORROW VOLUMES SHOWN FOR THE EARTHEN RIDGE AND EARTHEN CONTAINMENT DIKES ARE FOR INFORMATIONAL PURPOSES ONLY.

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

FEDERAL PROJECT NUMBER: BA-68

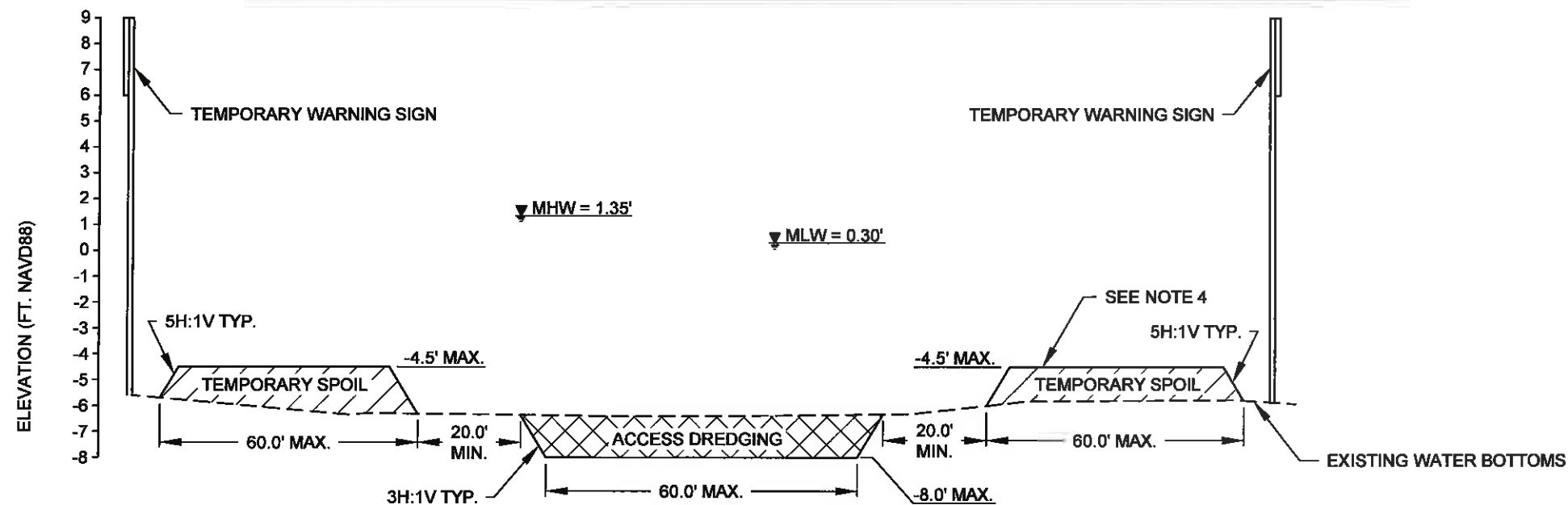
APPROVED BY: RUDOLPH SIMONBAUX, P.E.

MARSH CREATION AREA C & D LAYOUT

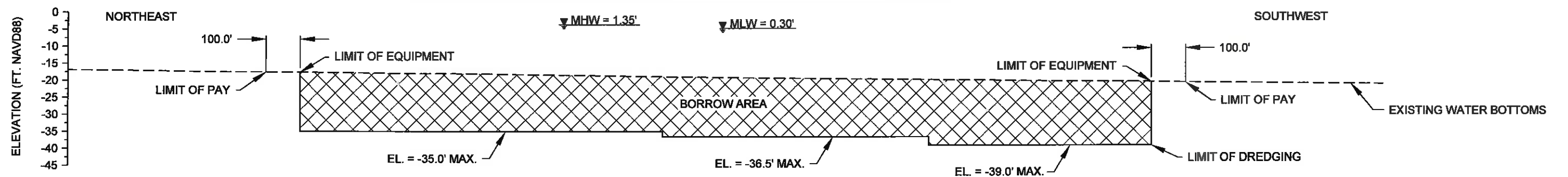
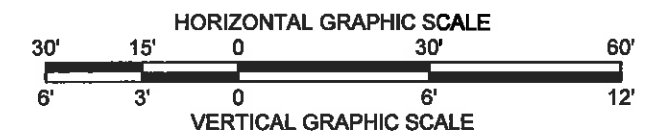
DATE: OCTOBER 2013

SHEET 8 OF 54

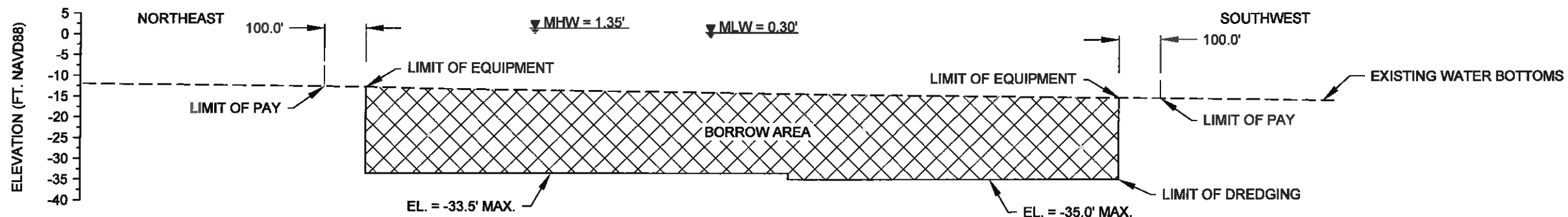
STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING



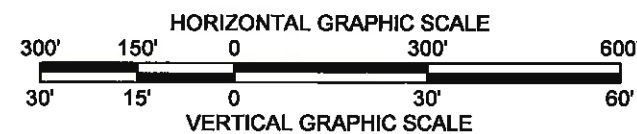
**TYPICAL SECTION - POTENTIAL DREDGING
FOR CONSTRUCTION AND DREDGE
DISCHARGE LINE ACCESS CHANNEL**



**TYPICAL SECTION - WEST BORROW AREA
TRANSECT WEST 3**



**TYPICAL SECTION - EAST BORROW AREA
TRANSECT EAST 7**

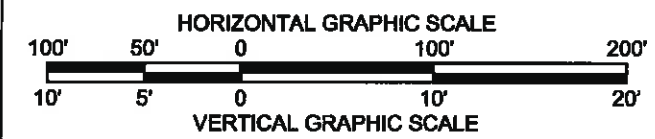
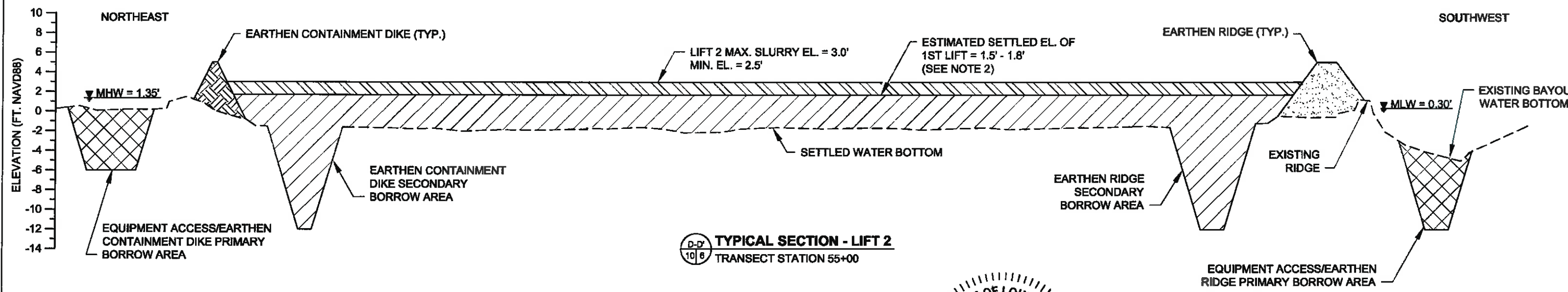
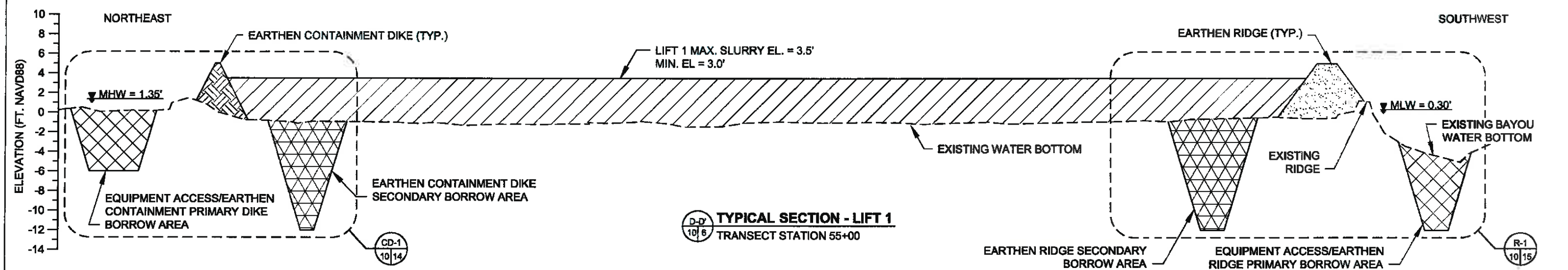


NOTES:

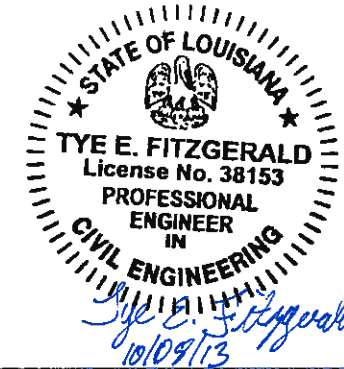
1. THE WEST BORROW AREA CONTAINS APPROXIMATELY 4.01 M. CUBIC YARDS OF MATERIAL.
2. THE EAST BORROW AREA CONTAINS APPROXIMATELY 4.31 M. CUBIC YARDS OF MATERIAL.
3. SEE SHEETS 4, 25, 26, AND 27 FOR PLAN VIEWS OF BORROW AREA LAYOUT.
4. ACCESS CHANNEL SHALL BE BACKFILLED IN ACCORDANCE WITH TS-5 AND MARKED IN ACCORDANCE WITH TS-16 OF THE SPECIFICATIONS.
5. DEPENDING ON DRAFT REQUIREMENTS OF THE CONTRACTOR'S EQUIPMENT, ACCESS DREDGING MAY NOT BE REQUIRED AT ALL LOCATIONS SHOWN. PERMITTED DEPTHS AND WIDTHS ARE AS SHOWN. IT IS NOT MANDATORY THAT THE CONTRACTOR DREDGE OR EXCAVATE TO THE FULL DEPTHS AND WIDTHS.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		CONSTRUCTION/ACCESS DREDGEING & BORROW AREA TYPICAL SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



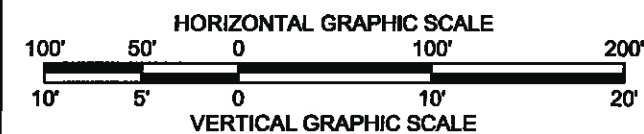
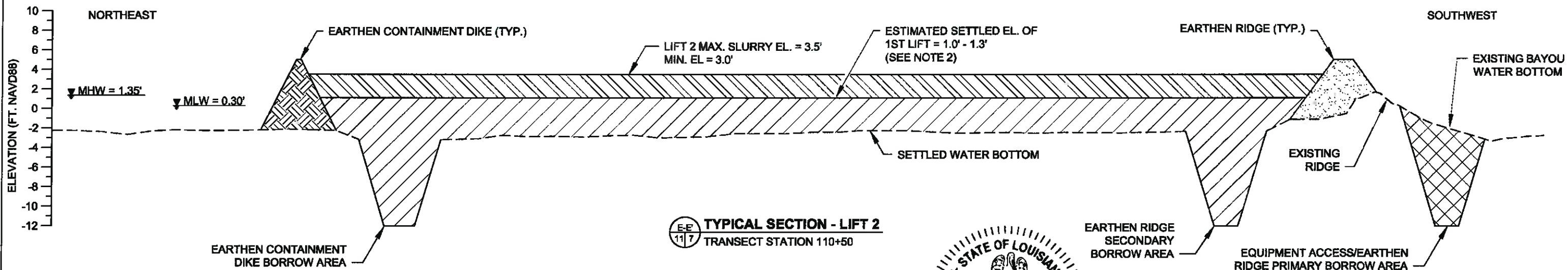
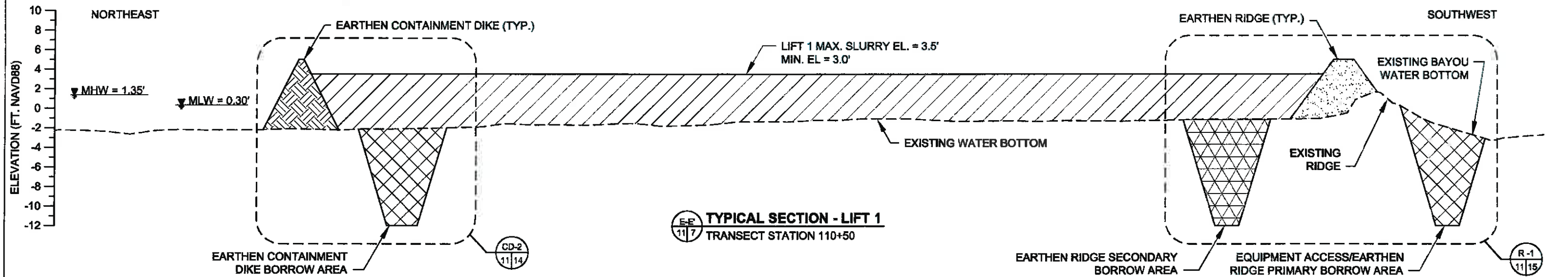


- NOTES:
1. BASED ON RECOMMENDATIONS FROM THE GEOTECHNICAL ANALYSIS A TWO LIFT SYSTEM IS REQUIRED TO MEET THE LONG TERM TARGET ELEVATIONS.
 2. THE CONTRACTOR SHALL CONSTRUCT THE MARSH CREATION AREAS IN THE TWO CONSTRUCTION LIFT SEQUENCE AS SPECIFIED IN TS-8.5 OF THE SPECIFICATIONS.
 3. ALL MARSH CREATION AREAS SHALL BE DEWATERED IN ACCORDANCE WITH TS-13 OF THE SPECIFICATIONS.



LEGEND			
	EARTHEN CONTAINMENT DIKE		MARSH FILL - LIFT 1
	EARTHEN RIDGE		MARSH FILL - LIFT 2
	BORROW AREA		EXISTING WATER BOTTOM
	SECONDARY BORROW AREA		

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREA A TYPICAL SECTION D-D'
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



- NOTES:
1. BASED ON RECOMMENDATIONS FROM THE GEOTECHNICAL ANALYSIS A TWO LIFT SYSTEM IS REQUIRED TO MEET THE LONG TERM TARGET ELEVATIONS.
 2. THE CONTRACTOR SHALL CONSTRUCT THE MARSH CREATION AREAS IN THE TWO CONSTRUCTION LIFT SEQUENCE AS SPECIFIED IN TS-8.5 OF THE SPECIFICATIONS.
 3. ALL MARSH CREATION AREAS SHALL BE DEWATERED IN ACCORDANCE WITH TS-13 OF THE SPECIFICATIONS.

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU

DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

FEDERAL PROJECT NUMBER: BA-68

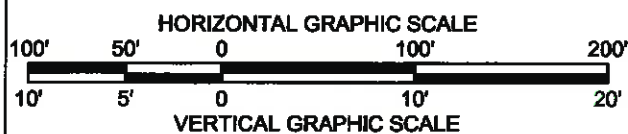
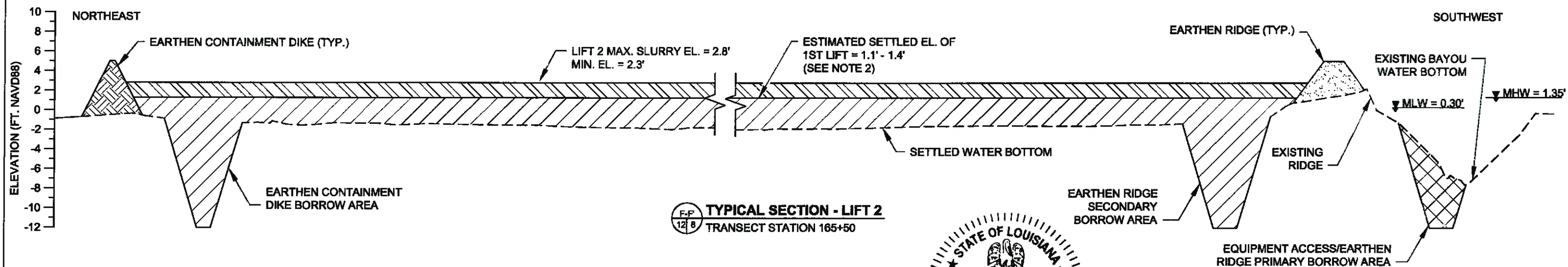
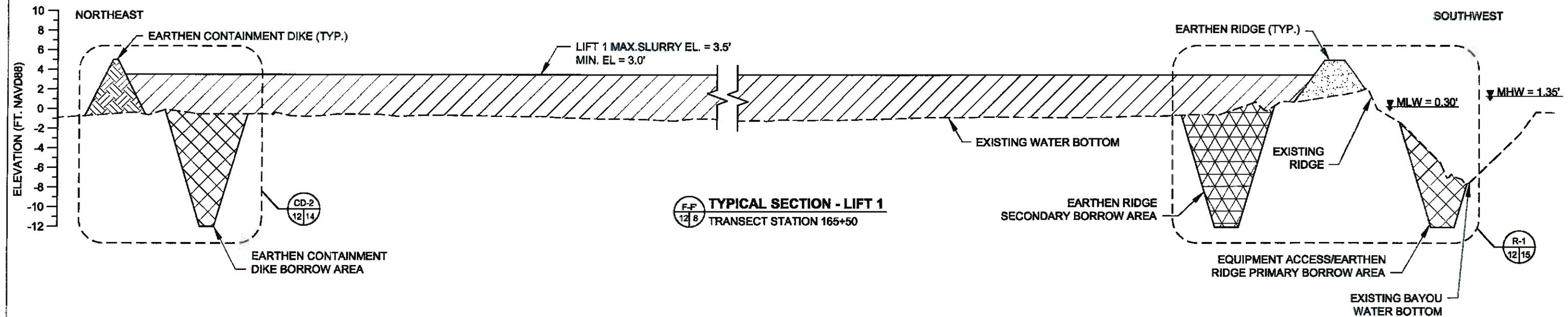
APPROVED BY: RUDOLPH SIMONEAUX, P.E.

MARSH CREATION AREA B TYPICAL SECTION E-E'

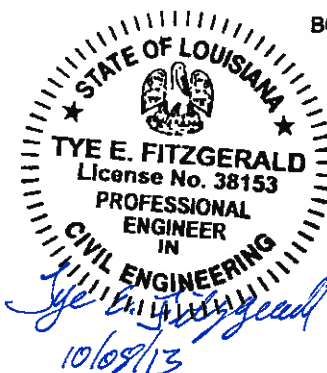
DATE: OCTOBER 2013

SHEET 11 OF 54

LEGEND	
	EARTHEN CONTAINMENT DIKE
	EARTHEN RIDGE
	BORROW AREA
	SECONDARY BORROW AREA
	MARSH FILL - LIFT 1
	MARSH FILL - LIFT 2
	EXISTING WATER BOTTOM

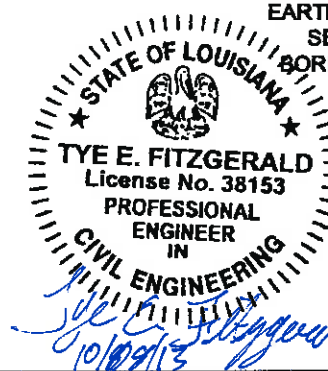
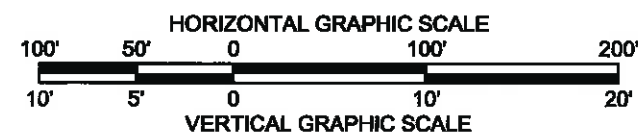
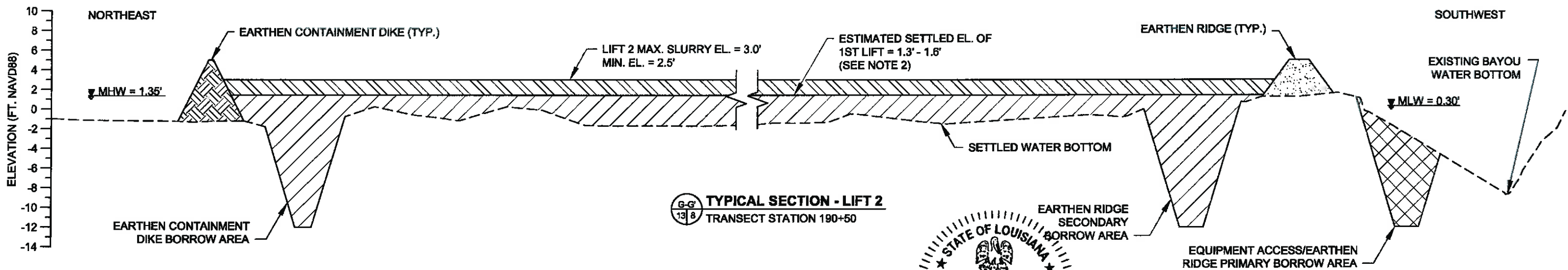
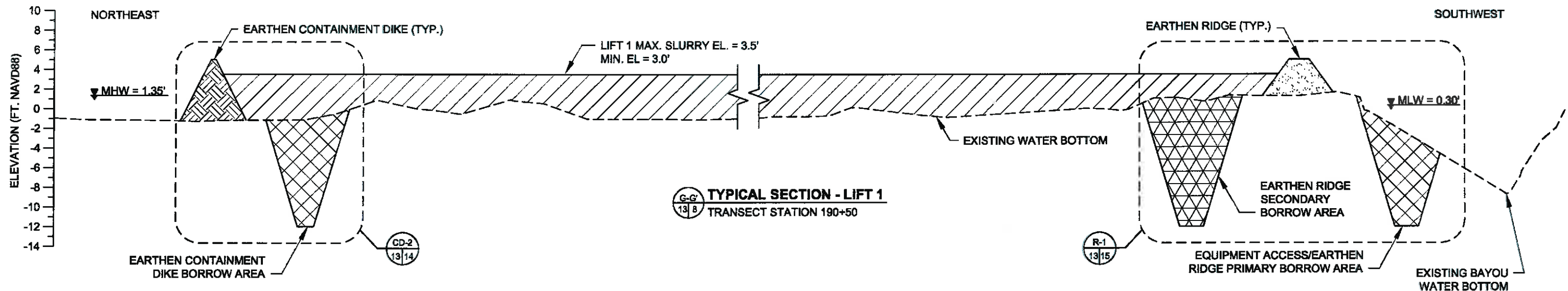


- NOTES:
1. BASED ON RECOMMENDATIONS FROM THE GEOTECHNICAL ANALYSIS A TWO LIFT SYSTEM IS REQUIRED TO MEET THE LONG TERM TARGET ELEVATIONS.
 2. THE CONTRACTOR SHALL CONSTRUCT THE MARSH CREATION AREAS IN THE TWO CONSTRUCTION LIFT SEQUENCE AS SPECIFIED IN TS-8.5 OF THE SPECIFICATIONS.
 3. ALL MARSH CREATION AREAS SHALL BE DEWATERED IN ACCORDANCE WITH TS-13 OF THE SPECIFICATIONS.



LEGEND			
	EARTHEN CONTAINMENT DIKE		MARSH FILL - LIFT 1
	EARTHEN RIDGE		MARSH FILL - LIFT 2
	BORROW AREA		EXISTING WATER BOTTOM
	SECONDARY BORROW AREA		

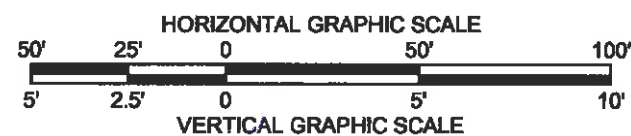
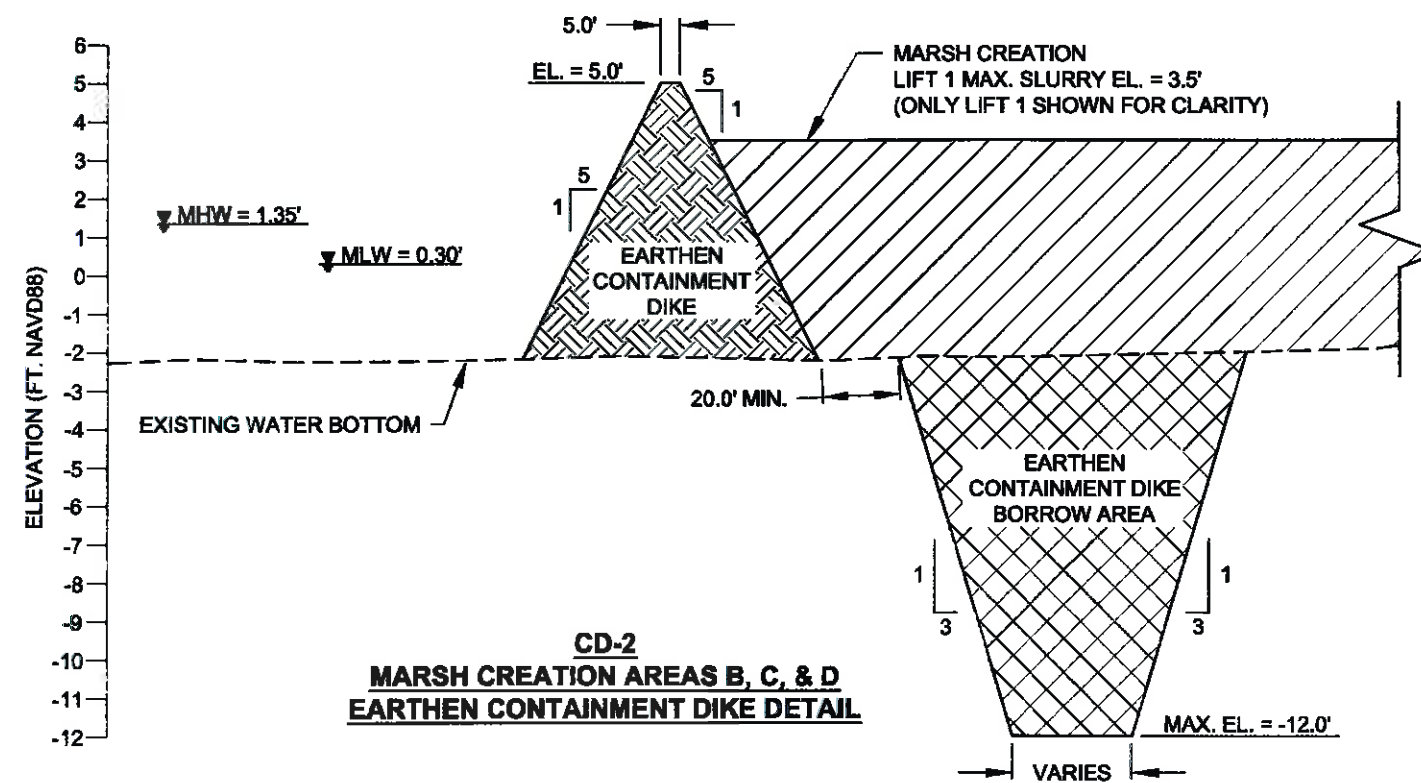
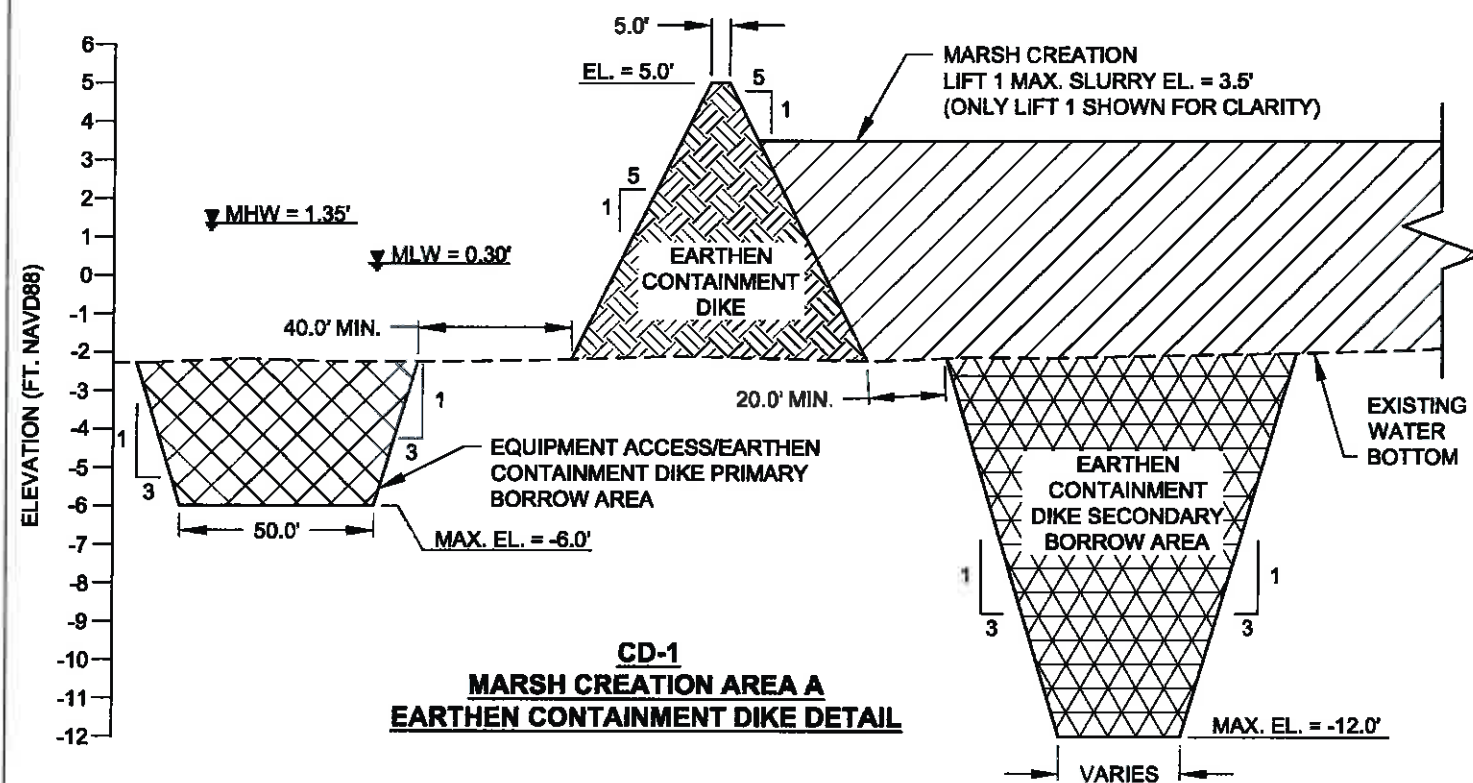
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREA C TYPICAL SECTION F-F'
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	DATE: OCTOBER 2013	
								SHEET 12 OF 54



LEGEND			
	EARTHEN CONTAINMENT DIKE		MARSH FILL - LIFT 1
	EARTHEN RIDGE		MARSH FILL - LIFT 2
	BORROW AREA		EXISTING WATER BOTTOM
	SECONDARY BORROW AREA		

- NOTES:**
1. BASED ON RECOMMENDATIONS FROM THE GEOTECHNICAL ANALYSIS A TWO LIFT SYSTEM IS REQUIRED TO MEET THE LONG TERM TARGET ELEVATIONS.
 2. THE CONTRACTOR SHALL CONSTRUCT THE MARSH CREATION AREAS IN THE TWO CONSTRUCTION LIFT SEQUENCE AS SPECIFIED IN TS-8.5 OF THE SPECIFICATIONS.
 3. ALL MARSH CREATION AREAS SHALL BE DEWATERED IN ACCORDANCE WITH TS-13 OF THE SPECIFICATIONS.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREA D TYPICAL SECTION G-G'
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



NOTES:

1. THE EARTHEN CONTAINMENT DIKES SHALL BE CONSTRUCTED USING IN-SITU MATERIAL. SEE SHEETS 6-8 FOR EARTHEN CONTAINMENT DIKE LOCATIONS.
2. THE LENGTHS OF EACH EARTHEN CONTAINMENT DIKE WERE ESTIMATED USING AUTOCAD AND AERIAL PHOTOGRAPHY.
3. THE OWNER RESERVES THE RIGHT TO REQUEST ADDITIONAL LINEAR FEET OF EARTHEN CONTAINMENT DIKE FOR CONSTRUCTION AT THE CONTRACTOR'S UNIT BID PRICE.

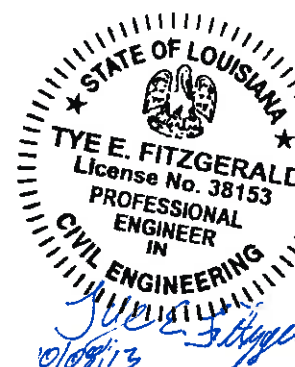
REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU

DESIGNED BY: TYE FITZGERALD, P.E.



LEGEND

- EARTHEN CONTAINMENT DIKE
- BORROW AREA
- SECONDARY BORROW AREA
- MARSH FILL - LIFT 1
- EXISTING WATER BOTTOM

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

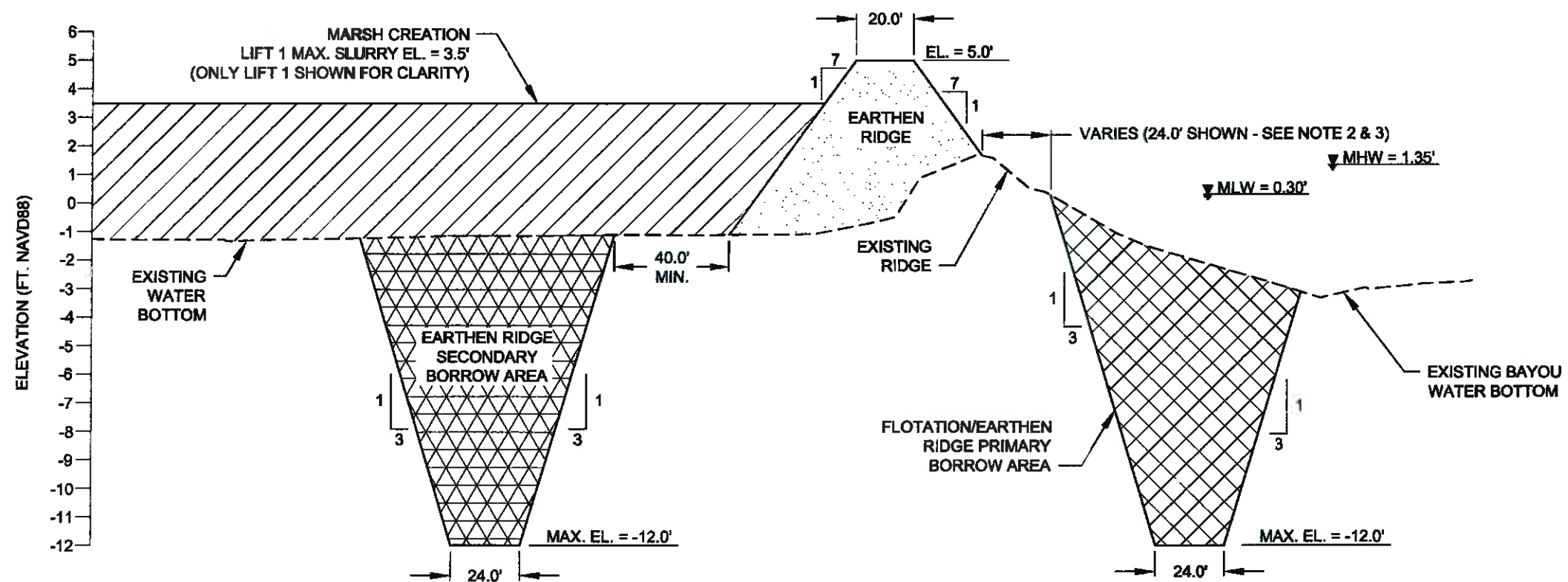
FEDERAL PROJECT NUMBER: BA-68

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

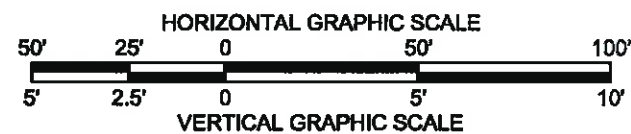
EARTHEN CONTAINMENT DIKE DETAILS

DATE: OCTOBER 2013

SHEET 14 OF 54



**R-1
EARTHEN RIDGE DETAIL**



NOTES:

1. THE EARTHEN RIDGE SHALL BE CONSTRUCTED USING IN-SITU MATERIAL. SEE SHEETS 6-8 FOR EARTHEN RIDGE LOCATIONS.
2. THE MINIMUM DISTANCE FROM THE EARTHEN RIDGE TOE TO THE FLOTATION/EARTHEN RIDGE PRIMARY BORROW AREA IS 20.0' FOR MARSH CREATION AREAS A AND C.
3. THE MINIMUM DISTANCE FROM THE EARTHEN RIDGE TOE TO THE FLOTATION/EARTHEN RIDGE PRIMARY BORROW AREA IS 35.0' FOR MARSH CREATION AREAS B AND D.
4. THE LENGTHS OF EACH EARTHEN RIDGE WERE ESTIMATED USING AUTOCAD AND AERIAL PHOTOGRAPHY.
5. THE OWNER RESERVES THE RIGHT TO REQUEST ADDITIONAL EARTHEN RIDGE MATERIAL BE PLACED FOR CONSTRUCTION AT THE CONTRACTOR'S UNIT BID PRICE.



LEGEND	
	EARTHEN RIDGE
	BORROW AREA
	SECONDARY BORROW AREA
	MARSH FILL - LIFT 1
	EXISTING WATER BOTTOM

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		EARTHEN RIDGE DETAILS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.

SC-11 SHEET PILE ALIGNMENT

	NORTHING	EASTING
1	299,399.97	3,872,997.41
2	299,317.74	3,873,054.32

MARSH CREATION FILL NOT SHOWN FOR CLARITY

SC-11 SHEET PILE PLAN VIEW

1" = 30'



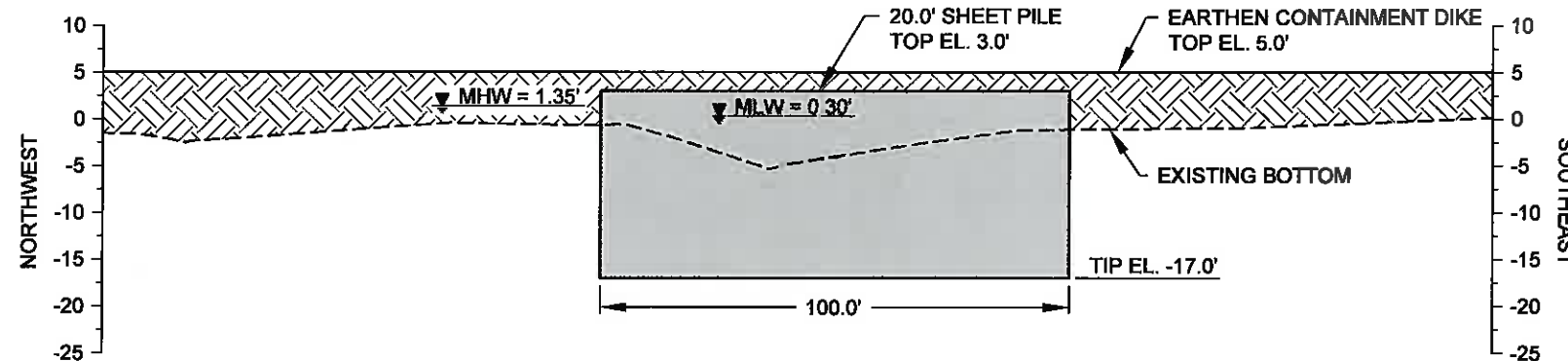
SHEET PILE CLOSURE

EARTHEN CONTAINMENT DIKE TOE

EQUIPMENT ACCESS/EARTHEN CONTAINMENT DIKE BORROW

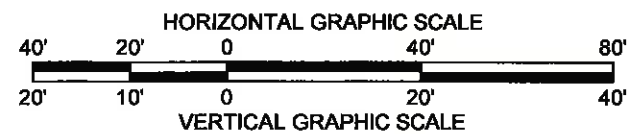
EARTHEN CONTAINMENT DIKE CENTERLINE

EXISTING MARSH



SC-11 SHEET PILE PROFILE

1" = 40' HORIZONTAL
1" = 20' VERTICAL



NOTES:

- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN³/FT., MOMENT OF INERTIA: 184.20 IN⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
- STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
- SEE SHEET 6 FOR SHEET PILE LOCATION.

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU

DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

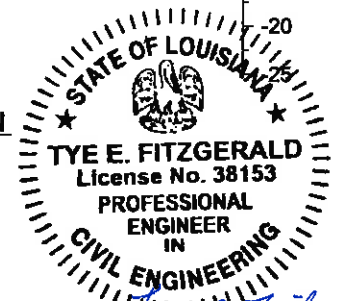
FEDERAL PROJECT NUMBER: BA-68

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

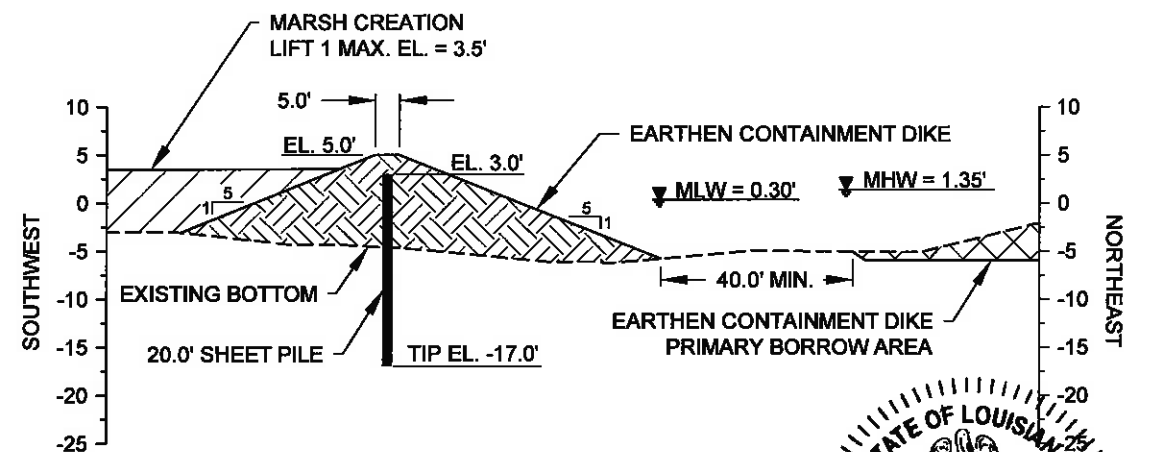
SC-11 SHEET PILE CLOSURE DETAILS

DATE: OCTOBER 2013

SHEET 16 OF 54



Tye E. Fitzgerald
10/09/13



SC-11 SHEET PILE SECTION

1" = 40' HORIZONTAL
1" = 20' VERTICAL

SC-12 SHEET PILE ALIGNMENT

	NORTHING	EASTING
1	297,950.57	3,874,351.46
2	297,844.63	3,874,417.81

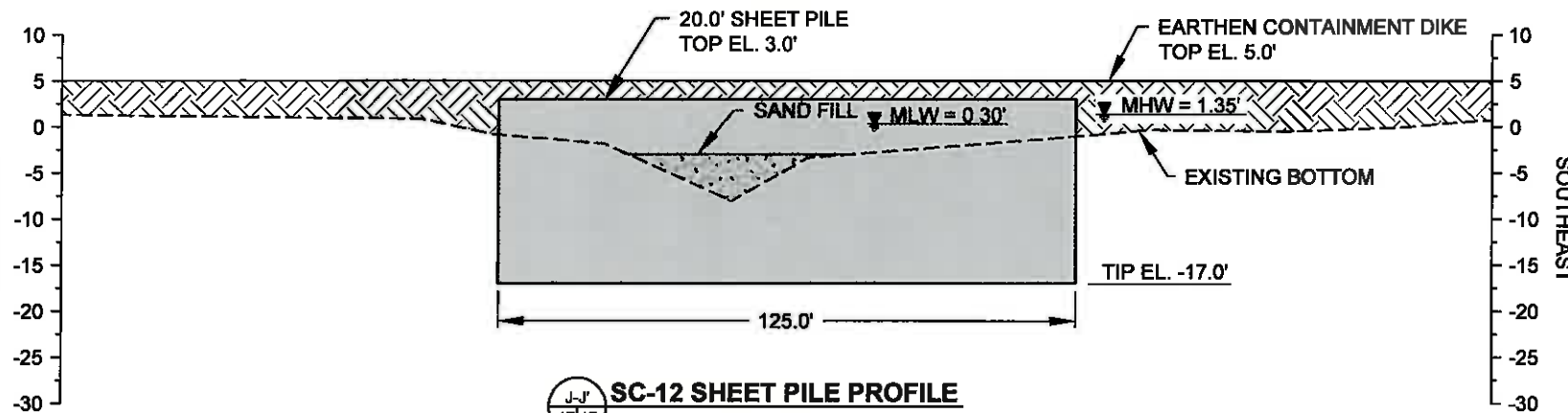
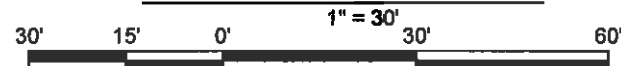
TOE OF SAND FILL

	NORTHING	EASTING
A	297,955.04	3,874,362.90
B	297,916.77	3,874,403.31
C	297,873.63	3,874,411.45
D	297,881.67	3,874,385.17
E	297,897.48	3,874,363.47
F	297,943.95	3,874,345.57

MARSH CREATION FILL NOT SHOWN FOR CLARITY

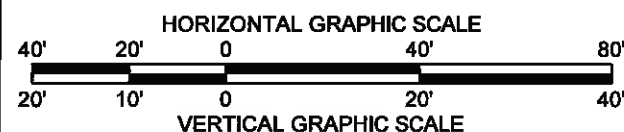
EXISTING MARSH

SC-12 SHEET PILE PLAN VIEW



SC-12 SHEET PILE PROFILE

1" = 40' HORIZONTAL
1" = 20' VERTICAL



NOTES:

- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN.³/FT., MOMENT OF INERTIA: 184.20 IN.⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
- STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
- SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
- SEE SHEET 6 FOR SHEET PILE LOCATION.

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU

DESIGNED BY: TYE FITZGERALD, P.E.

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION

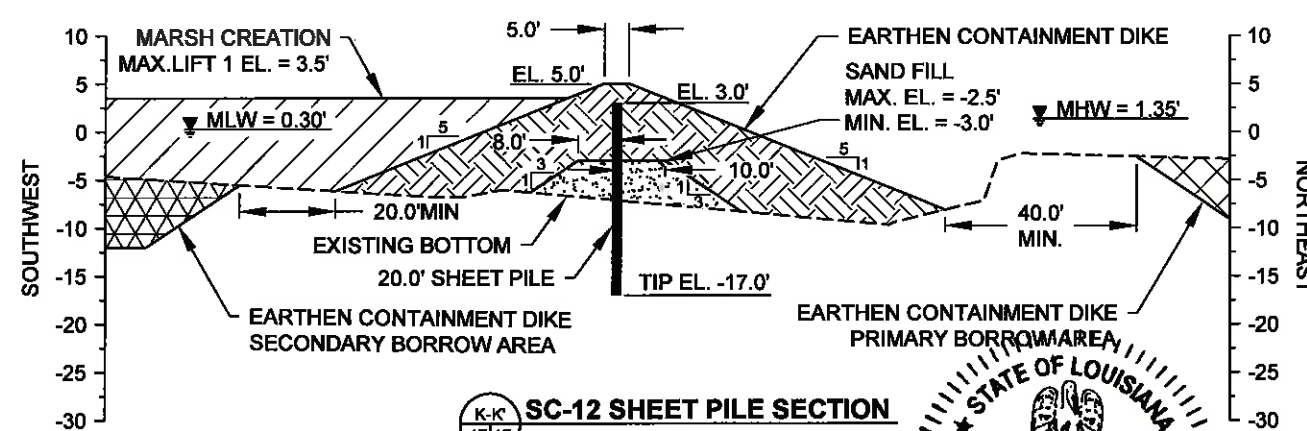
STATE PROJECT NUMBER: BA-68

FEDERAL PROJECT NUMBER: BA-68

SC-12 SHEET PILE CLOSURE DETAILS

DATE: OCTOBER 2013

SHEET 17 OF 54



SC-12 SHEET PILE SECTION

1" = 40' HORIZONTAL
1" = 20' VERTICAL

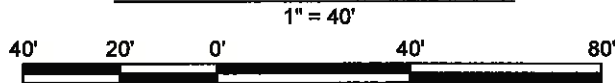


SC-13 SHEET PILE ALIGNMENT		
	NORTHING	EASTING
1	296,846.09	3,874,743.42
2	296,675.57	3,874,782.73

TOE OF SAND FILL		
	NORTHING	EASTING
A	296,815.19	3,874,734.30
B	296,810.02	3,874,777.39
C	296,781.40	3,874,811.92
D	296,751.73	3,874,820.05
E	296,712.11	3,874,810.53
F	296,701.60	3,874,761.52
G	296,711.73	3,874,744.93
H	296,732.86	3,874,731.68
I	296,768.82	3,874,721.74

MARSH CREATION FILL NOT SHOWN FOR CLARITY

SC-13 SHEET PILE PLAN VIEW



EXISTING MARSH

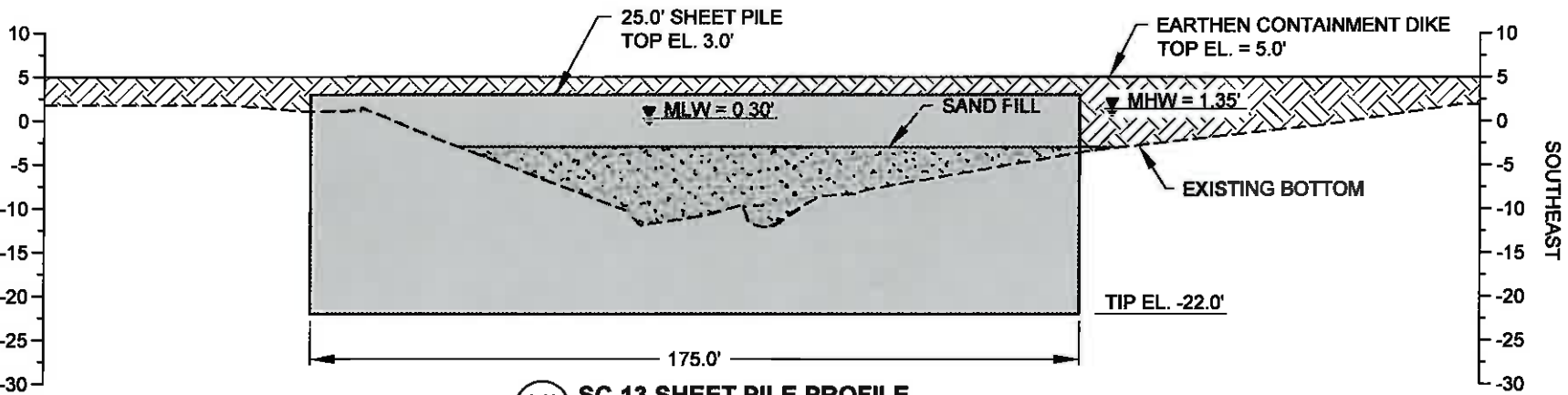
SAND FILL TOE

EARTHEN CONTAINMENT DIKE TOE

EQUIPMENT ACCESS/EARTHEN CONTAINMENT DIKE BORROW

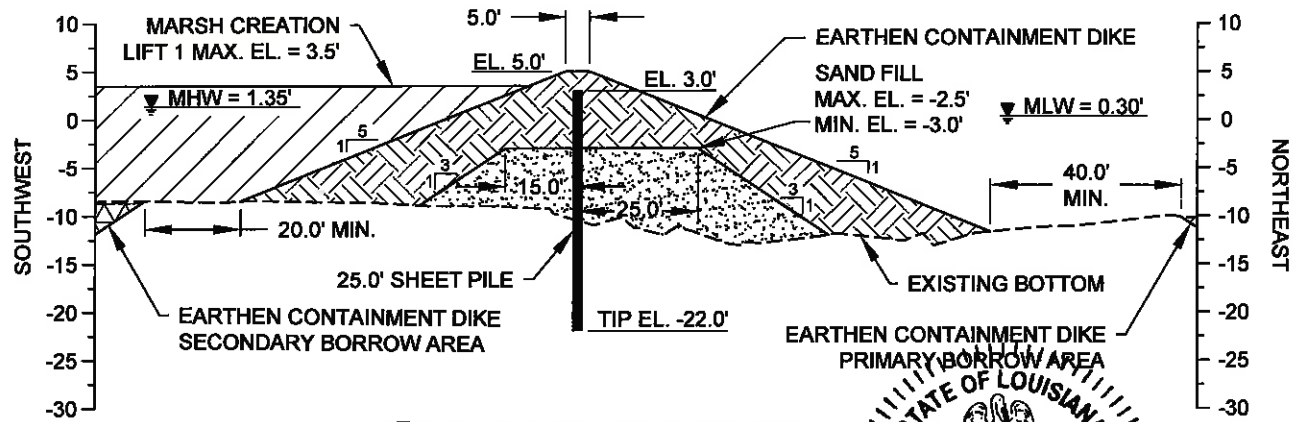
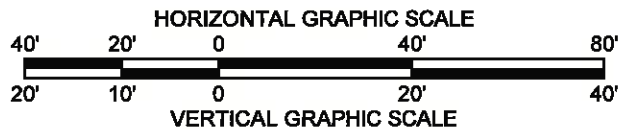
SHEET PILE CLOSURE

EARTHEN CONTAINMENT DIKE CENTERLINE



SC-13 SHEET PILE PROFILE

1" = 40' HORIZONTAL
1" = 20' VERTICAL



SC-13 SHEET PILE SECTION

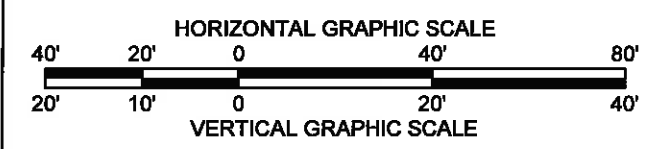
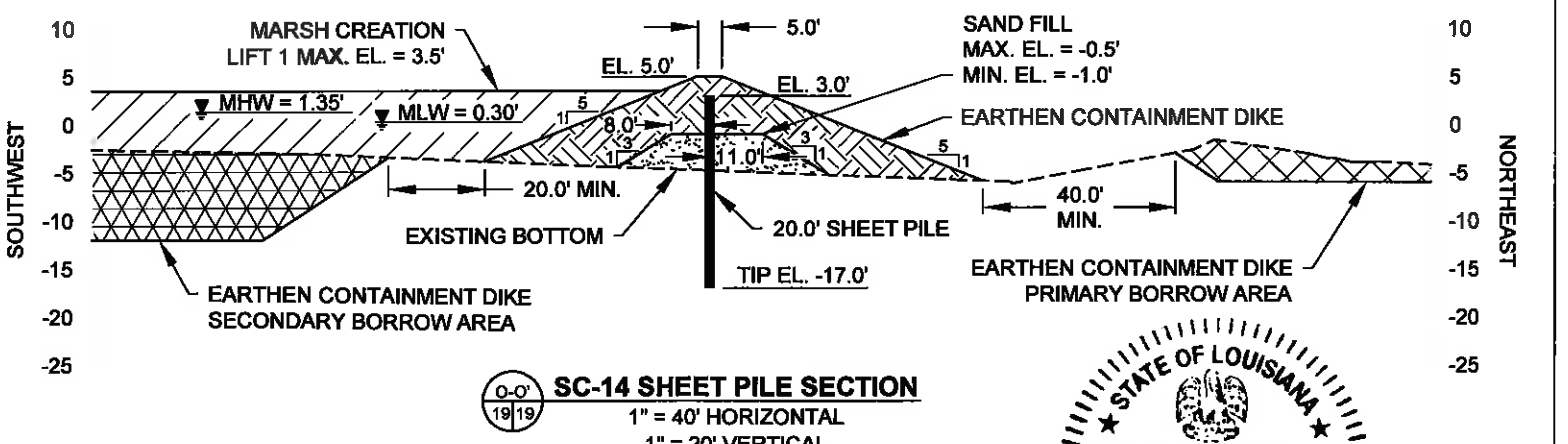
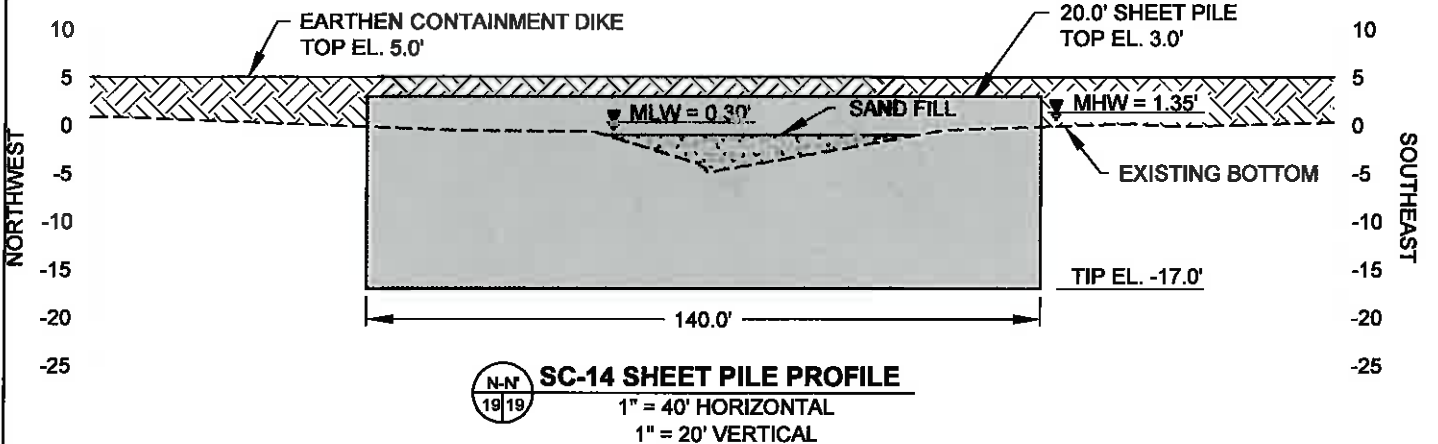
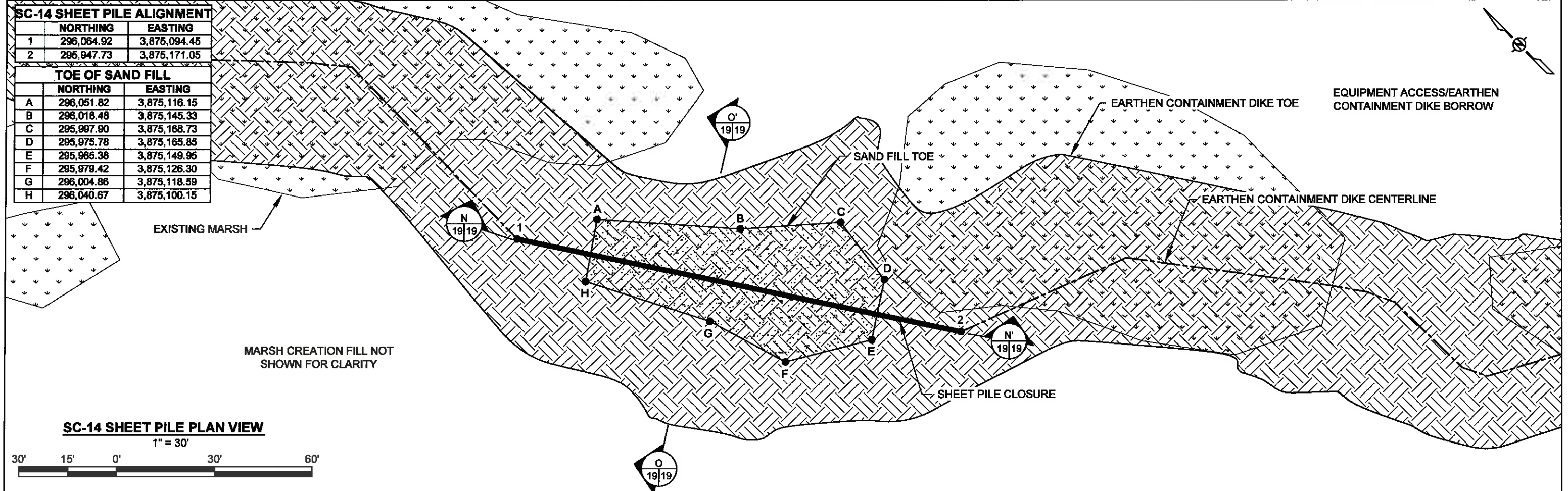
1" = 40' HORIZONTAL
1" = 20' VERTICAL



NOTES:

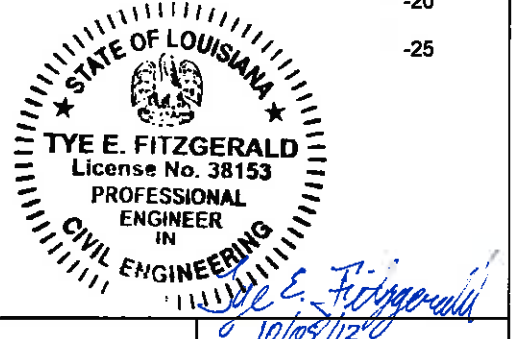
- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN.³/FT., MOMENT OF INERTIA: 184.20 IN.⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
- STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
- SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
- SEE SHEET 6 FOR SHEET PILE LOCATION.

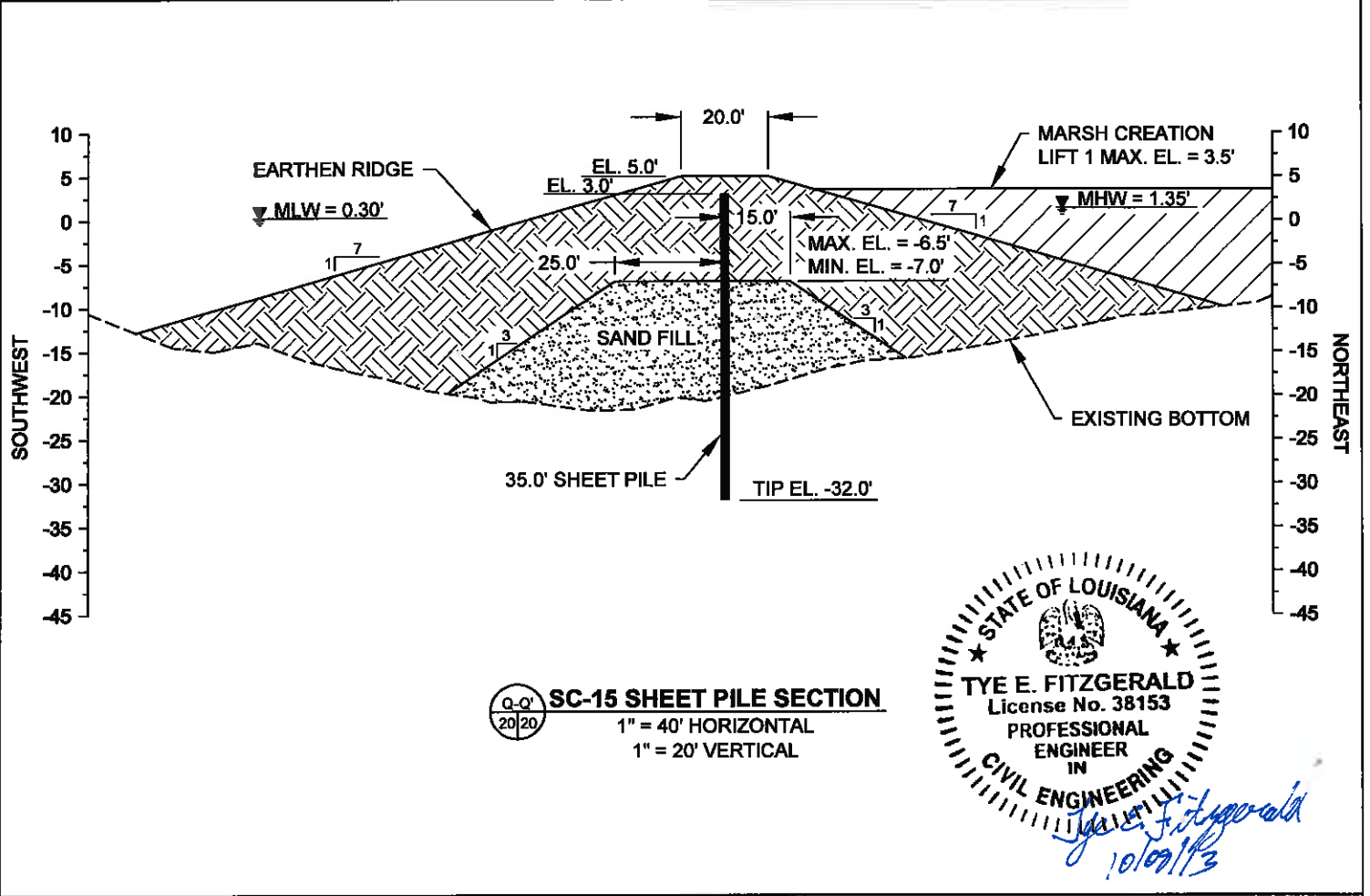
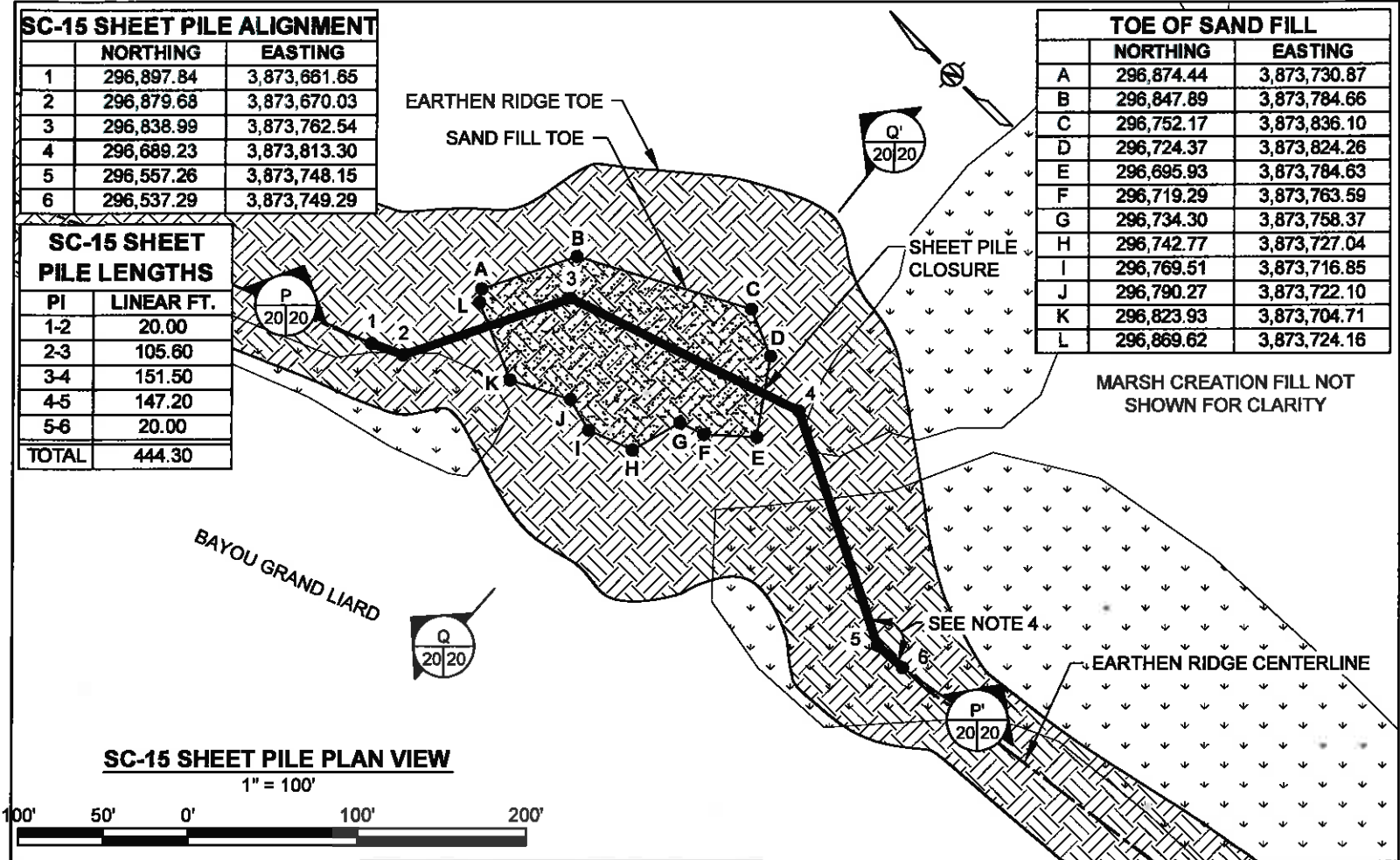
				COASTAL PROTECTION AND RESTORATION AUTHORITY		GRAND LIARD MARSH AND RIDGE RESTORATION		SC-13 SHEET PILE CLOSURE DETAILS	
				450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		STATE PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
				DRAWN BY: KRISTI CANTU		DESIGNED BY: TYE FITZGERALD, P.E.		APPROVED BY: RUDOLPH SIMONEAUX, P.E.	
				FEDERAL PROJECT NUMBER: BA-68		SHEET 18 OF 54			



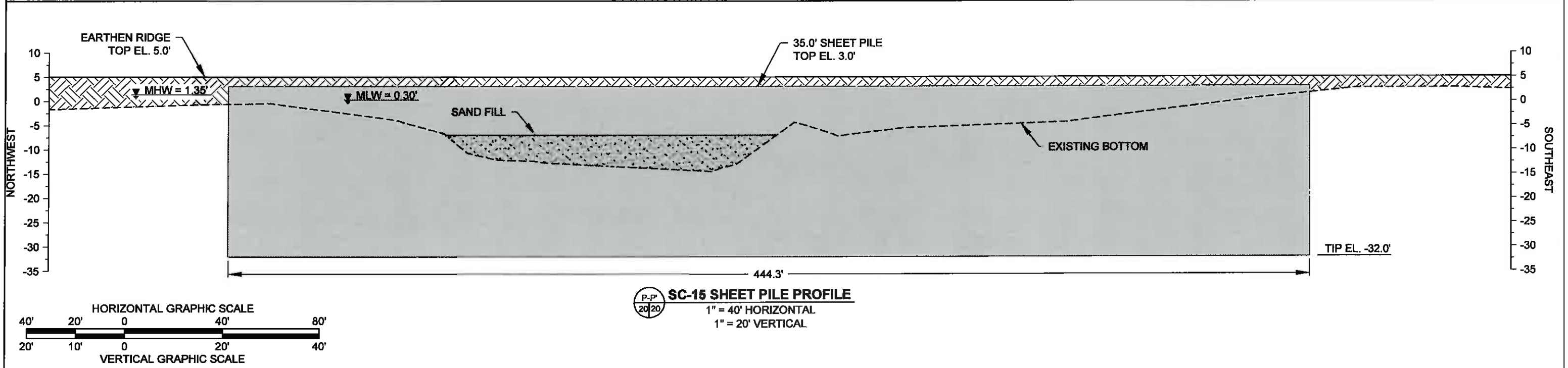
- NOTES:
- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN³/FT., MOMENT OF INERTIA: 184.20 IN⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
 - STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
 - SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
 - SEE SHEET 6 FOR SHEET PILE LOCATION.

				COASTAL PROTECTION AND RESTORATION AUTHORITY		GRAND LIARD MARSH AND RIDGE RESTORATION		SC-14 SHEET PILE CLOSURE DETAILS	
				450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		STATE PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
				DRAWN BY: KRISTI CANTU		DESIGNED BY: TYE FITZGERALD, P.E.		APPROVED BY: RUDOLPH SIMONEAUX, P.E.	
				REV. DATE DESCRIPTION BY		FEDERAL PROJECT NUMBER: BA-68		SHEET 19 OF 54	





STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
ENGINEER
IN
CIVIL ENGINEERING
10/09/13



- NOTES:
- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN³/FT., MOMENT OF INERTIA: 184.20 IN⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
 - STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
 - SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
 - ALL INTERIOR SHEET PILE ANGLES ARE 135°.
 - SEE SHEET 6 FOR SHEET PILE LOCATION.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		SC-15 SHEET PILE CLOSURE DETAILS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 20 OF 54
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	

SC-16 SHEET PILE ALIGNMENT

	NORTHING	EASTING
1	293,981.74	3,874,481.51
2	293,964.15	3,874,491.03
3	293,953.43	3,874,527.81
4	293,876.65	3,874,569.94
5	293,843.66	3,874,560.32
6	293,826.13	3,874,569.94

SC-16 SHEET PILE LENGTHS

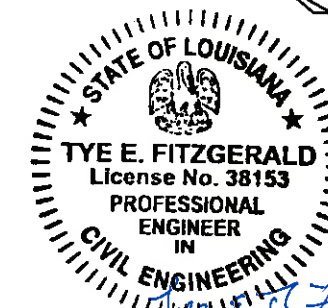
PI	LINEAR FT.
1-2	20.00
2-3	38.30
3-4	87.60
4-5	34.40
5-6	20.00
TOTAL	200.30

TOE OF SAND FILL

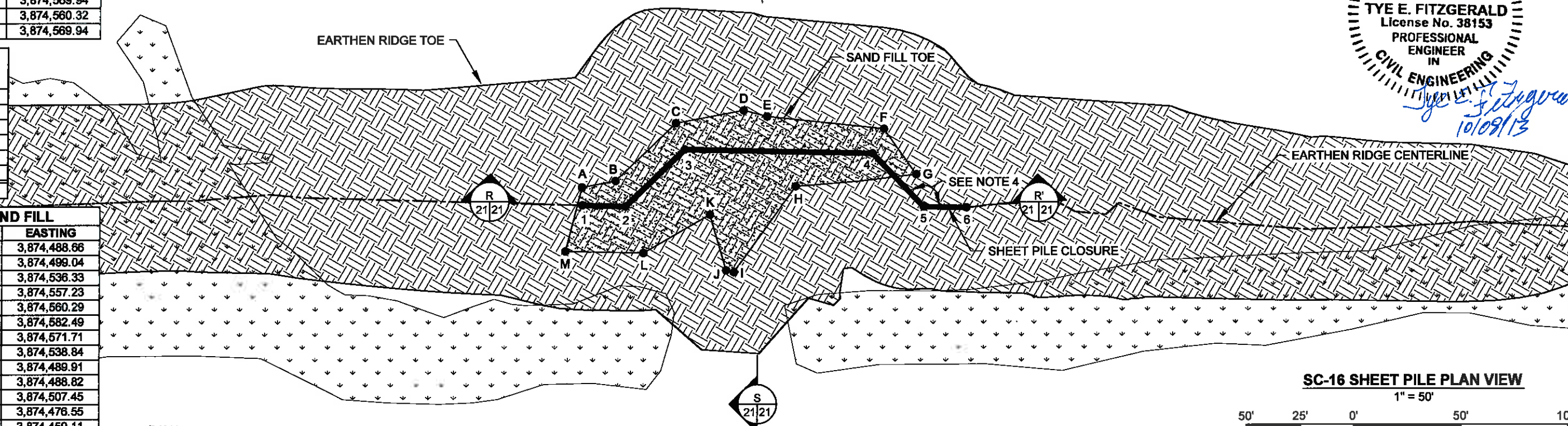
	NORTHING	EASTING
A	293,986.08	3,874,488.66
B	293,974.07	3,874,499.04
C	293,963.14	3,874,538.33
D	293,938.81	3,874,557.23
E	293,927.86	3,874,560.29
F	293,877.77	3,874,582.49
G	293,854.16	3,874,571.71
H	293,899.97	3,874,538.84
I	293,905.06	3,874,489.91
J	293,908.57	3,874,488.82
K	293,928.06	3,874,507.45
L	293,946.02	3,874,476.55
M	293,977.73	3,874,459.11

BAYOU GRAND LIARD

MARSH CREATION FILL NOT SHOWN FOR CLARITY

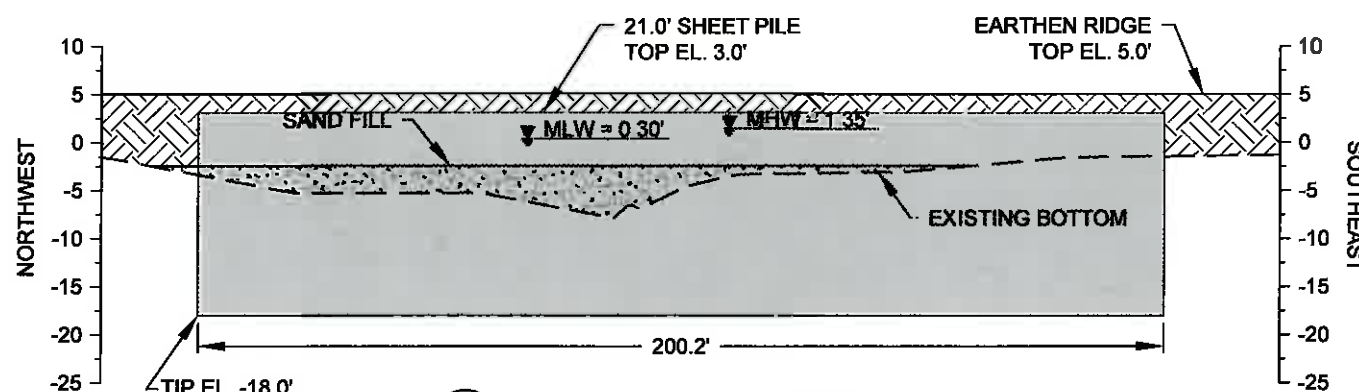


Tye E. Fitzgerald
10/09/13



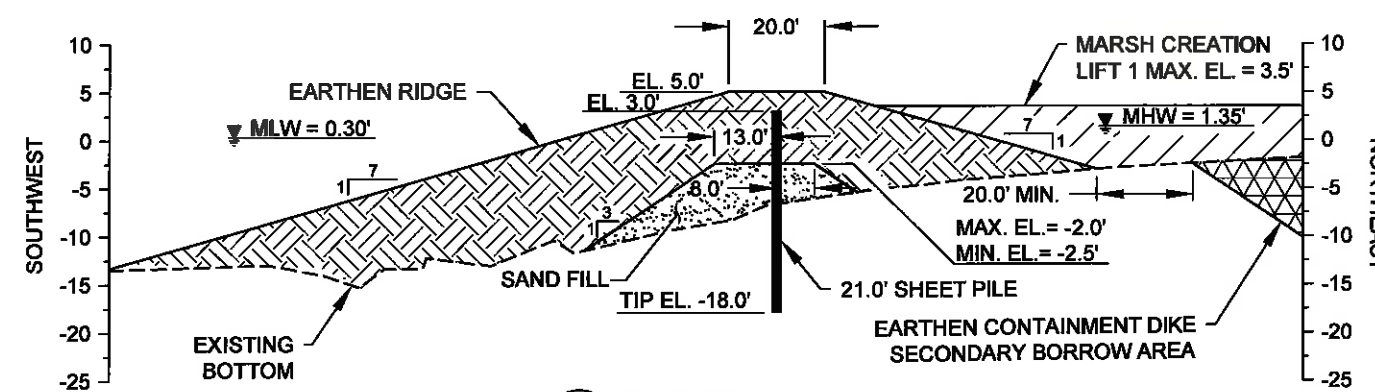
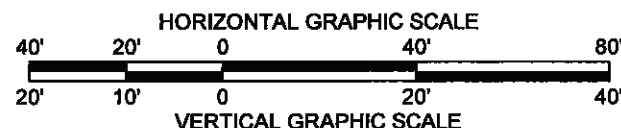
SC-16 SHEET PILE PLAN VIEW

1" = 50'



SC-16 SHEET PILE PROFILE

1" = 40' HORIZONTAL
1" = 20' VERTICAL



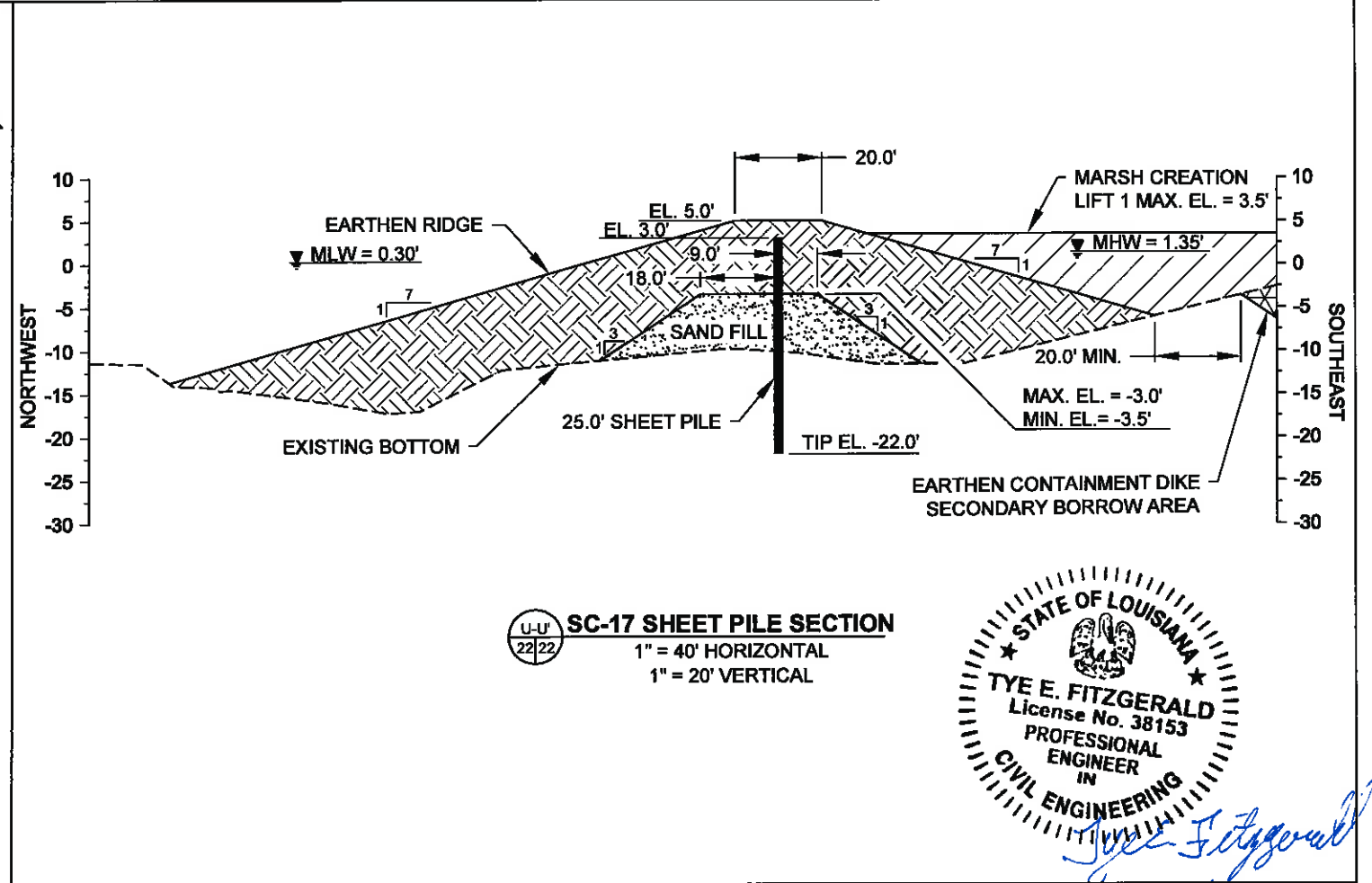
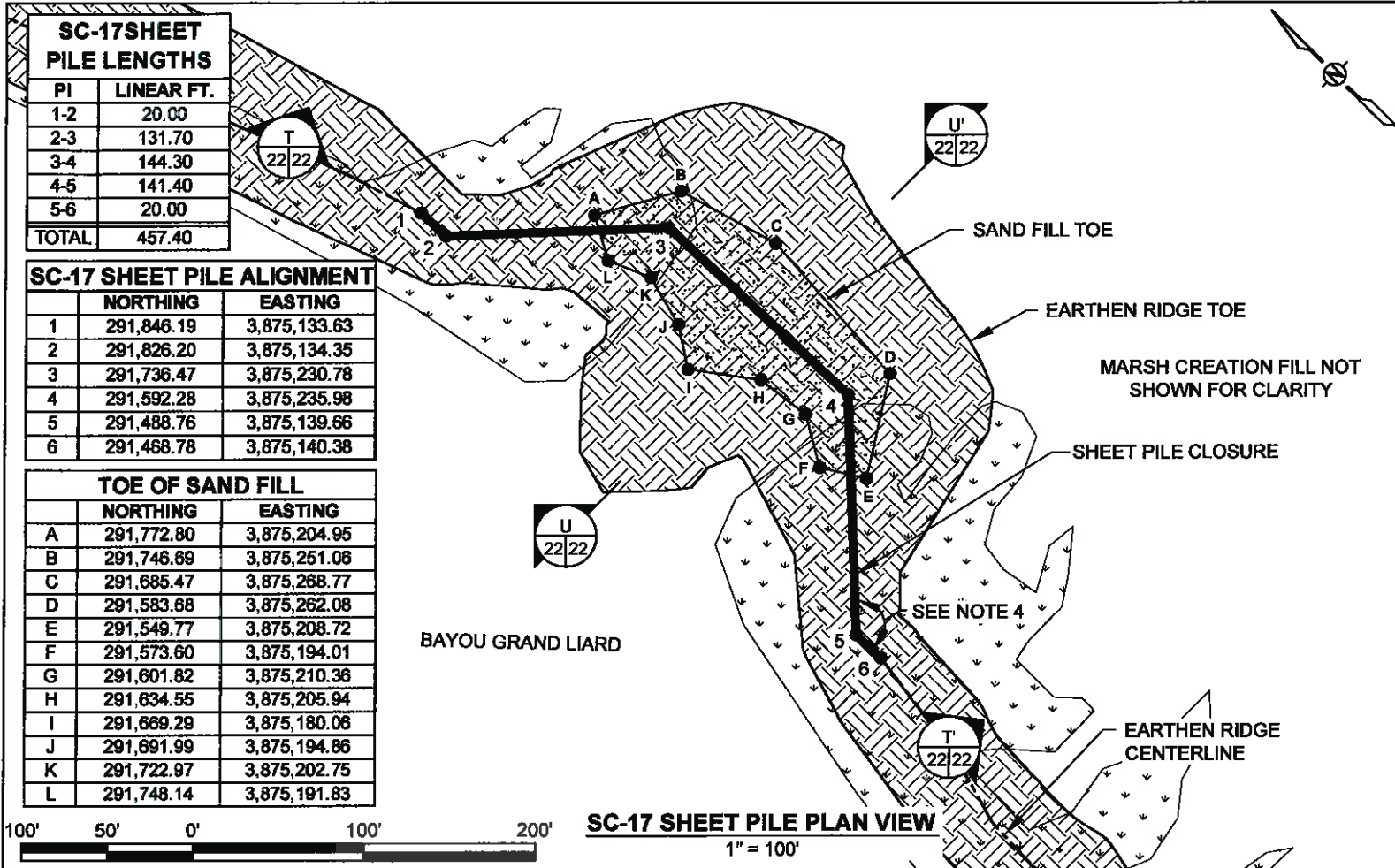
SC-16 SHEET PILE SECTION

1" = 40' HORIZONTAL
1" = 20' VERTICAL

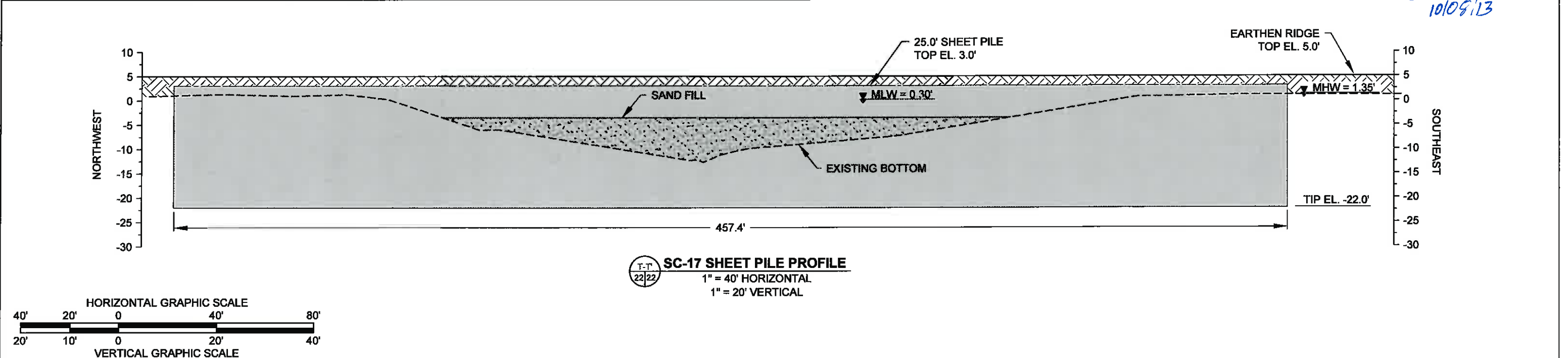
NOTES:

- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN.³/FT., MOMENT OF INERTIA: 184.20 IN.⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
- STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
- SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
- ALL INTERIOR SHEET PILE ANGLES ARE 135°.
- SEE SHEET 7 FOR SHEET PILE LOCATION.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		SC-16 SHEET PILE CLOSURE DETAILS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		
					DATE: OCTOBER 2013		
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 21 OF 54



STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
ENGINEER
IN
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10/09/13



- NOTES:**
- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN.³/FT., MOMENT OF INERTIA: 184.20 IN.⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
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 - SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
 - ALL INTERIOR SHEET PILE ANGLES ARE 135°.
 - SEE SHEET 7 FOR SHEET PILE LOCATION.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		SC-17 SHEET PILE CLOSURE DETAILS	
					STATE PROJECT NUMBER: BA-68			
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 22 OF 54

SC-18 SHEET PILE ALIGNMENT

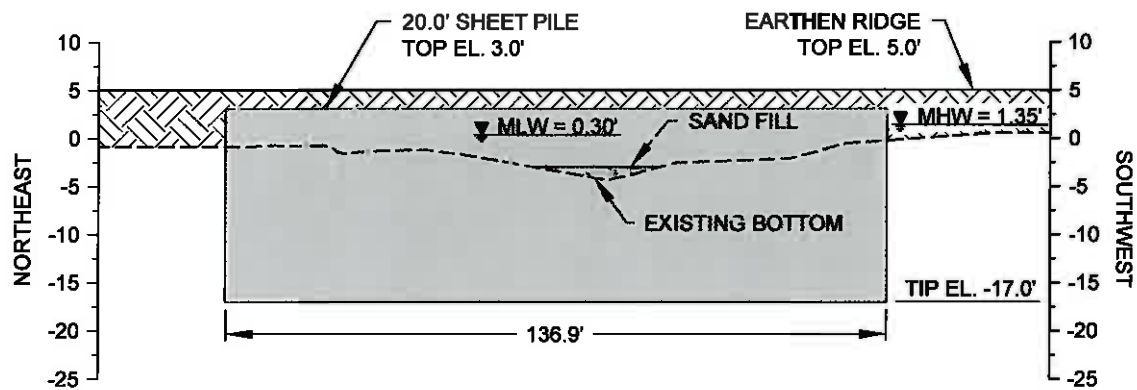
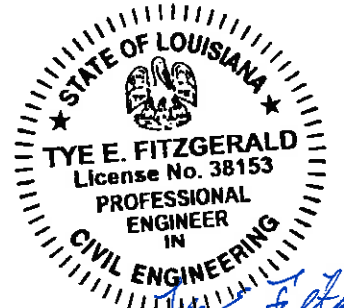
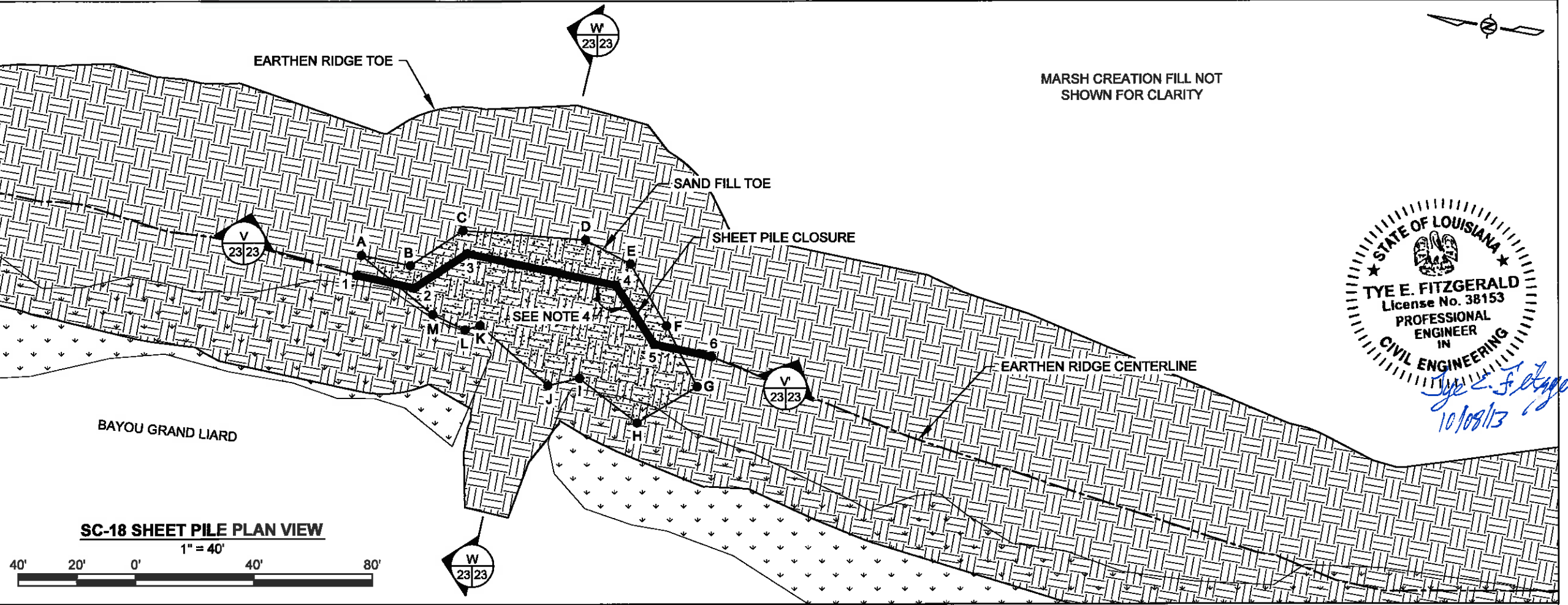
	NORTHING	EASTING
1	293,222.99	3,874,817.16
2	293,203.00	3,874,816.37
3	293,187.32	3,874,830.95
4	293,135.64	3,874,829.07
5	293,119.46	3,874,811.67
6	293,099.47	3,874,810.88

SC-18 SHEET PILE LENGTHS

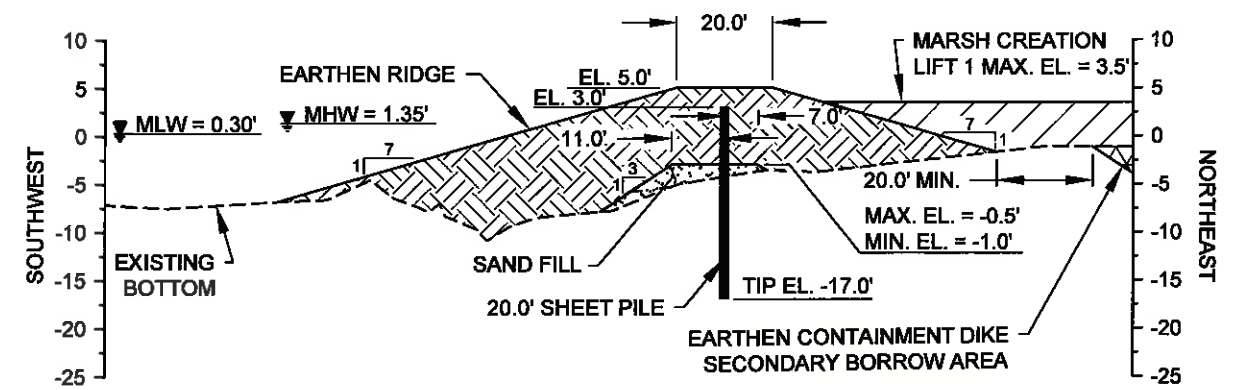
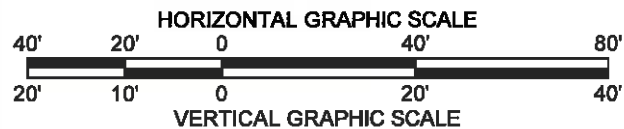
PI	LINEAR FT.
1-2	20.00
2-3	21.40
3-4	51.70
4-5	23.80
5-6	20.00
TOTAL	136.90

TOE OF SAND FILL

	NORTHING	EASTING
A	293,222.62	3,874,824.15
B	293,205.68	3,874,823.59
C	293,190.14	3,874,838.37
D	293,148.53	3,874,842.46
E	293,132.10	3,874,837.08
F	293,116.30	3,874,818.55
G	293,102.48	3,874,799.99
H	293,120.44	3,874,784.39
I	293,142.32	3,874,795.94
J	293,152.36	3,874,791.66
K	293,178.67	3,874,807.73
L	293,183.48	3,874,805.31
M	293,195.25	3,874,808.56



SC-18 SHEET PILE PROFILE
1" = 40' HORIZONTAL
1" = 20' VERTICAL

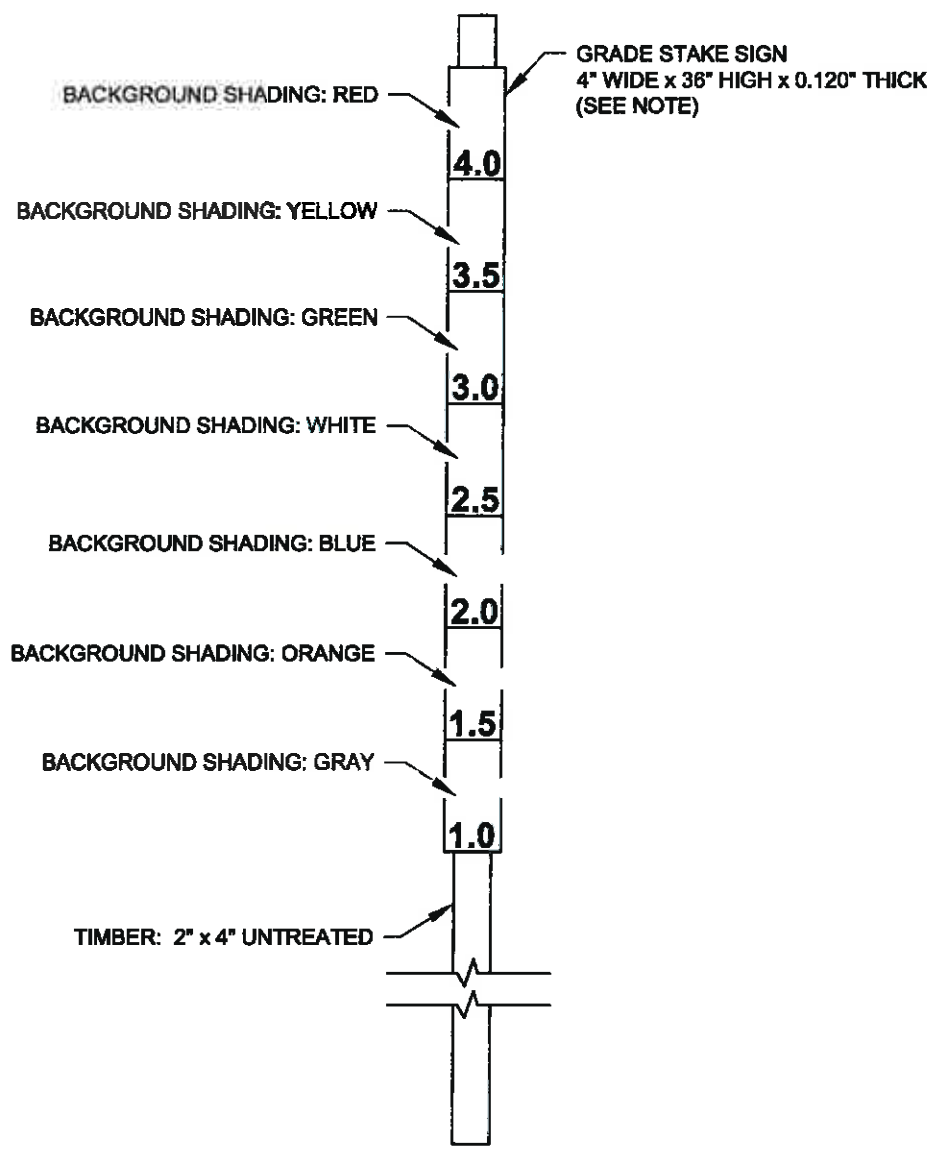


SC-18 SHEET PILE SECTION
1" = 40' HORIZONTAL
1" = 20' VERTICAL

NOTES:

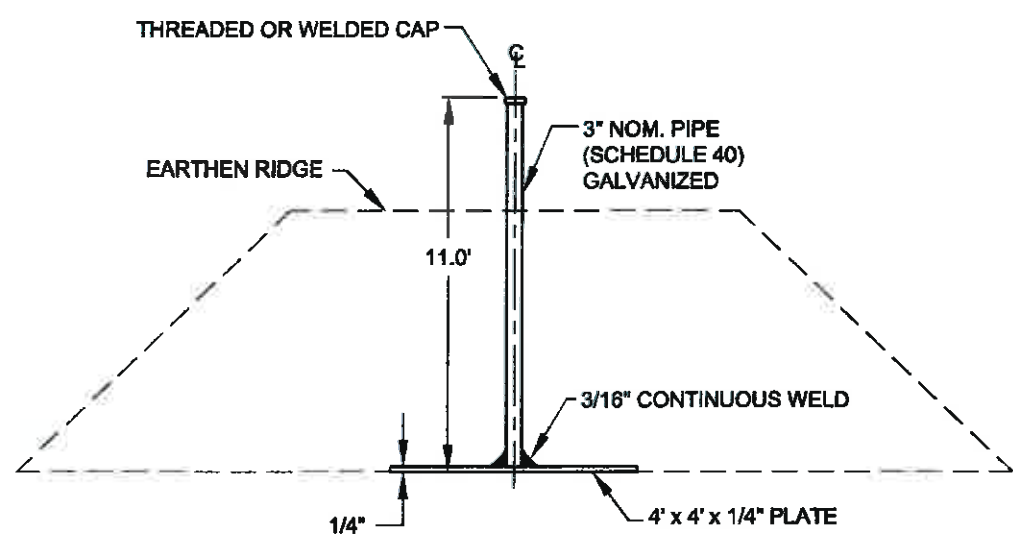
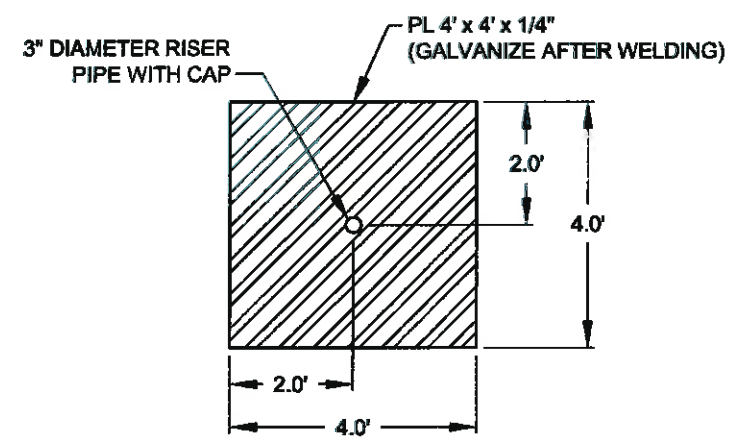
- ALL STEEL SHEET PILES SHALL BE PZ-27 (MINIMUM SECTION MODULUS: 30.20 IN³/FT., MOMENT OF INERTIA: 184.20 IN⁴/FT.) OR ENGINEER APPROVED EQUIVALENT.
- STEEL SHEET PILES SHALL BE ENCAPSULATED WITH IN-SITU MATERIAL AS SPECIFIED IN TS-10.7 OF THE SPECIFICATIONS.
- SAND FILL SHALL BE BARGED IN FROM AN OFFSITE BORROW SOURCE. SEE TS-9 OF THE SPECIFICATIONS FOR MORE INFORMATION.
- ALL INTERIOR SHEET PILE ANGLES ARE 135°.
- SEE SHEET 6 FOR SHEET PILE LOCATION.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		SC-18 SHEET PILE CLOSURE DETAILS	
					STATE PROJECT NUMBER: BA-68			
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 23 OF 54

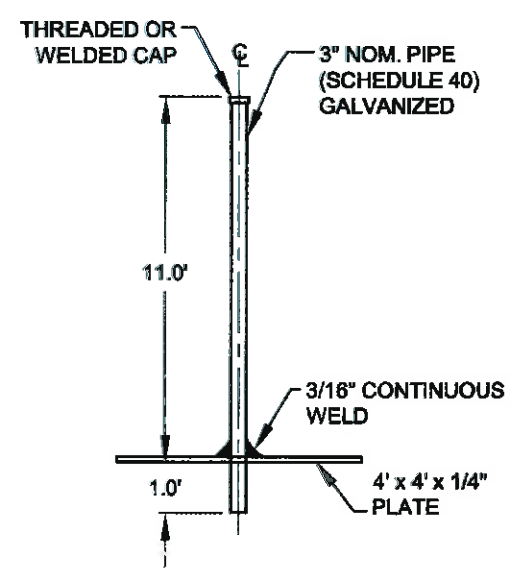


**MARSH CREATION AREA
GRADE STAKE DETAIL**
NOT TO SCALE

GRADE STAKE SIGN NOTE:
THE GRADE STAKE SIGN SHALL BE CONSTRUCTED USING A RIGID
SUBSTRATE WITH ENGINEER-GRADE REFLECTIVE SHEETING.
SEE TS-8.9 OF THE SPECIFICATIONS FOR ADDITIONAL DETAILS.



**EARTHEN RIDGE
SETTLEMENT PLATE**
(SEE NOTE 2)
NOT TO SCALE



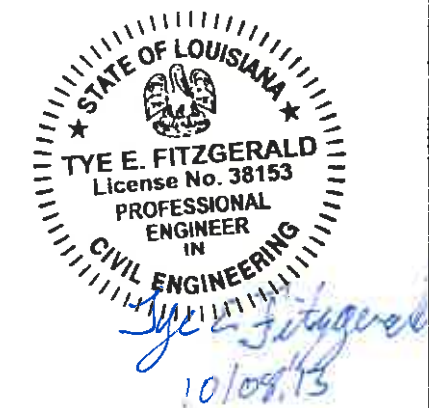
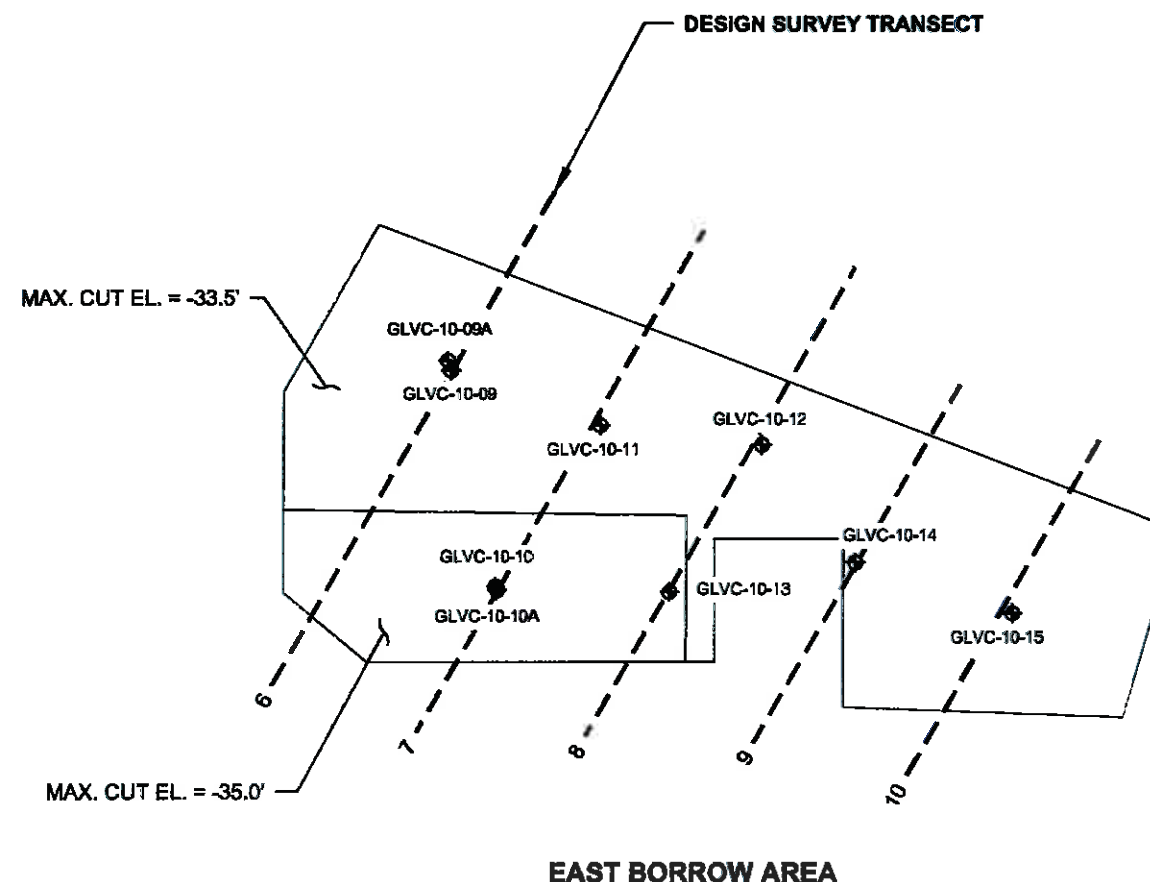
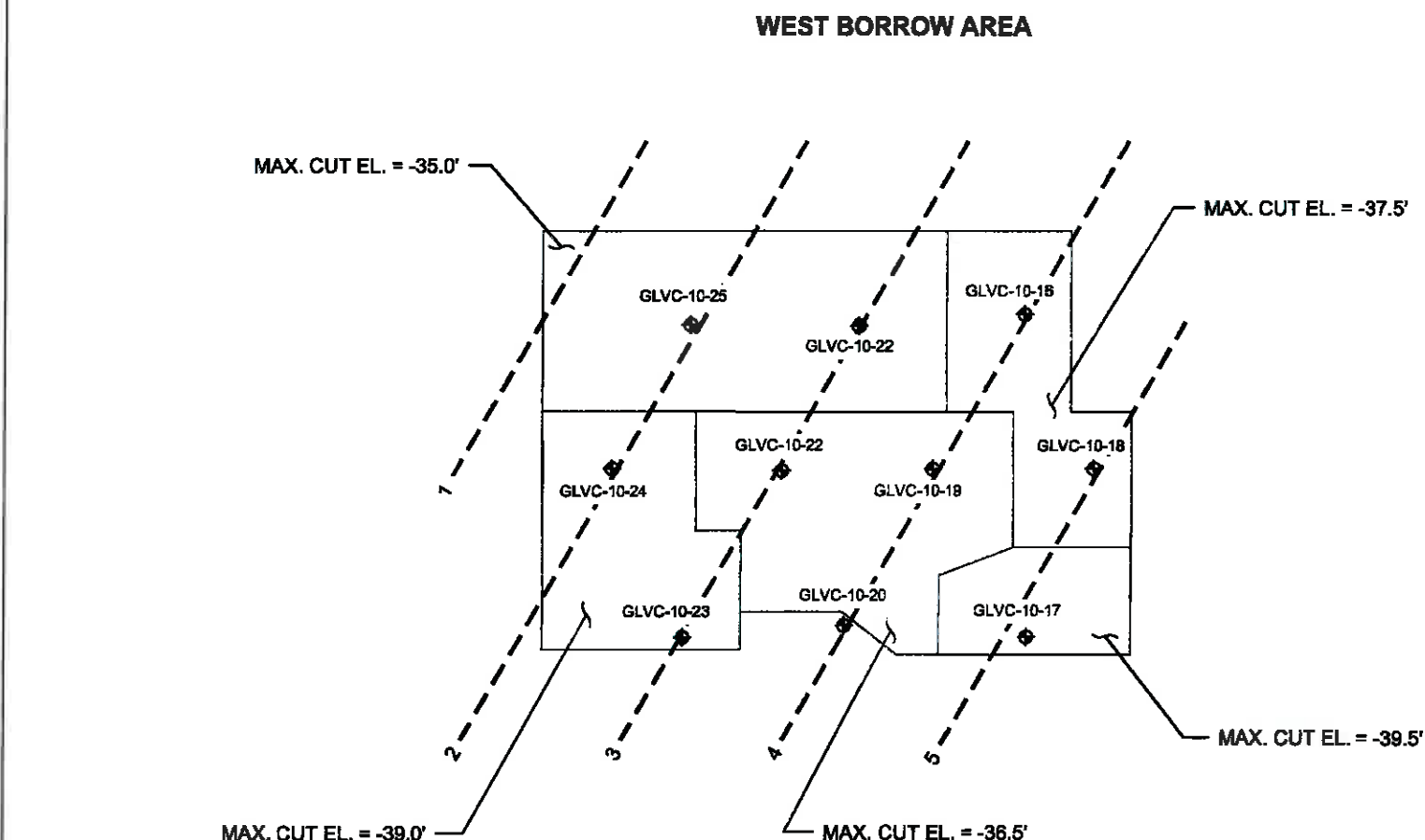
**MARSH CREATION
SETTLEMENT PLATE**
NOT TO SCALE

SETTLEMENT PLATE NOTES:
1. SETTLEMENT PLATES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
2. LOCATION AND ELEVATION WILL BE RECORDED AS SPECIFIED IN TS-2.0.



				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		GRADE STAKE AND SETTLEMENT PLATE DETAIL
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 24 OF 54
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	

SOIL BORINGS					
WEST BORROW AREA			EAST BORROW AREA		
BORING	NORTHING	EASTING	BORING	NORTHING	EASTING
GLVC-10-16	266,592	3,848,463	GLVC-10-09	268,102	3,852,999
GLVC-10-17	264,798	3,848,476	GLVC-10-09A	268,152	3,852,984
GLVC-10-18	265,732	3,848,849	GLVC-10-10	266,978	3,853,230
GLVC-10-19	265,731	3,847,954	GLVC-10-10A	266,959	3,853,238
GLVC-10-20	264,860	3,847,466	GLVC-10-11	267,816	3,853,779
GLVC-10-21	265,722	3,847,116	GLVC-10-12	267,714	3,854,618
GLVC-10-22	266,529	3,847,544	GLVC-10-13	266,949	3,854,137
GLVC-10-23	264,794	3,846,569	GLVC-10-14	267,103	3,855,103
GLVC-10-24	265,733	3,846,174	GLVC-10-15	266,837	3,855,919
GLVC-10-25	266,533	3,846,609			



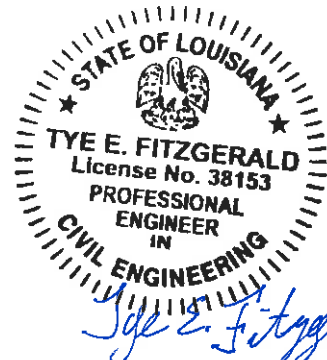
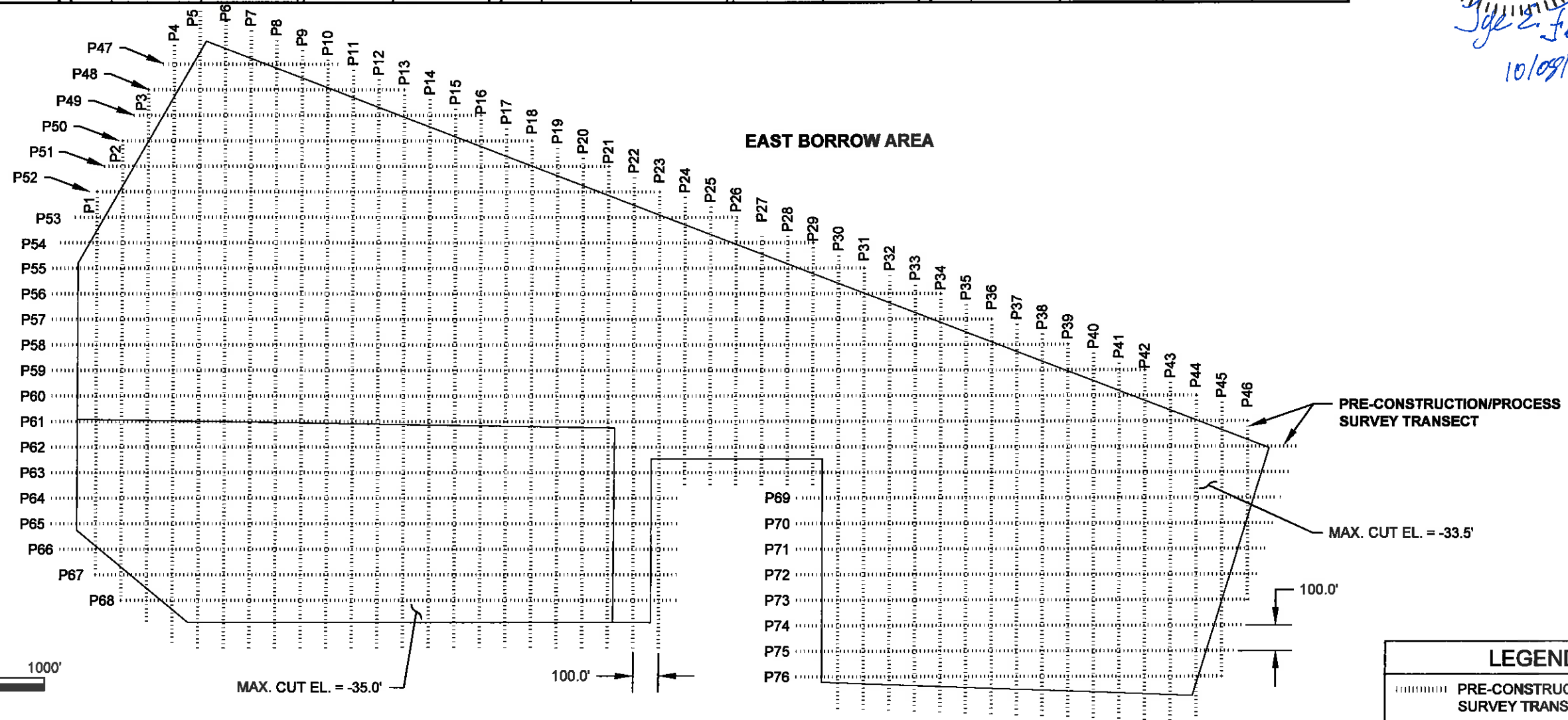
- NOTES:
1. SURVEY CROSS-SECTIONS POINT FILES ARE AVAILABLE UPON REQUEST.
 2. SEE APPENDIX H OF THE SPECIFICATIONS FOR BORING LOG INFORMATION.
 3. TRANSECTS 1 THROUGH 10 REPRESENT DATA FROM THE DESIGN SURVEY TAKEN IN FEBRUARY 2010 BY CP&E.
 4. SEE SHEETS 31 - 33 FOR CROSS-SECTIONS 1 THROUGH 10.
 5. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. SURVEY FEET.

DESIGN SURVEY TRANSECTS				
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	267,555.90	3,846,355.58	265,693.59	3,845,286.17
2	267,555.98	3,847,249.21	264,223.49	3,845,335.70
3	267,555.94	3,848,142.91	264,223.40	3,846,229.33
4	267,555.94	3,849,036.59	264,223.32	3,847,122.96
5	266,548.56	3,849,351.85	264,198.64	3,848,002.47
6	269,030.81	3,853,538.13	266,465.48	3,852,065.09
7	268,826.59	3,854,314.55	266,220.01	3,852,817.82
8	268,639.62	3,855,100.87	266,196.88	3,853,698.22
9	268,027.53	3,855,643.08	266,164.15	3,854,573.10
10	267,739.12	3,856,371.15	265,996.20	3,855,370.34

LEGEND	
---	DESIGN SURVEY TRANSECTS
◆	SOIL BORING

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		BORROW AREA DESIGN SURVEY & BORING LAYOUT
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		
					DATE: OCTOBER 2013		
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 25 OF 54

PROCESS SURVEY TRANSECTS																			
	BEGINNING		ENDING			BEGINNING		ENDING			BEGINNING		ENDING			BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING		NORTHING	EASTING	NORTHING	EASTING		NORTHING	EASTING	NORTHING	EASTING		NORTHING	EASTING	NORTHING	EASTING
P1	268,271.16	3,852,200.61	266,771.16	3,852,201.86	P20	268,402.52	3,854,100.50	266,484.94	3,854,102.09	P39	267,673.92	3,856,001.11	266,214.10	3,856,002.32	P58	267,671.16	3,852,028.69	267,673.92	3,856,001.11
P2	268,471.16	3,852,300.44	266,671.16	3,852,301.94	P21	268,371.16	3,854,200.53	266,485.03	3,854,202.09	P40	267,635.58	3,856,101.14	266,210.40	3,856,102.32	P59	267,571.16	3,852,028.69	267,571.16	3,856,301.19
P3	268,671.16	3,852,400.28	266,589.41	3,852,402.01	P22	268,325.82	3,854,300.56	266,484.86	3,854,302.09	P41	267,597.23	3,856,201.17	266,206.69	3,856,202.33	P60	267,471.16	3,852,028.69	267,471.16	3,856,501.27
P4	268,844.60	3,852,500.13	266,506.41	3,852,502.08	P23	268,271.16	3,854,400.61	266,484.94	3,854,402.09	P42	267,571.16	3,856,301.19	266,202.99	3,856,302.33	P61	267,371.16	3,852,028.69	267,371.16	3,856,701.36
P5	268,977.72	3,852,600.02	266,484.86	3,852,602.09	P24	268,249.13	3,854,500.63	267,124.70	3,854,501.56	P43	267,520.54	3,856,401.23	266,199.28	3,856,402.33	P62	267,271.16	3,852,028.69	267,271.16	3,856,891.63
P6	268,939.38	3,852,700.05	266,484.86	3,852,702.09	P25	268,210.78	3,854,600.66	267,124.87	3,854,601.56	P44	267,471.16	3,856,501.27	266,195.58	3,856,502.34	P63	267,171.16	3,852,028.69	267,171.16	3,856,861.02
P7	268,901.03	3,852,800.08	266,484.86	3,852,802.09	P26	268,172.44	3,854,700.69	267,124.78	3,854,701.56	P45	267,443.84	3,856,601.30	266,371.16	3,856,602.19	P64	267,071.16	3,852,028.69	267,071.16	3,854,471.88
P8	268,862.68	3,852,900.12	266,484.94	3,852,902.09	P27	268,134.09	3,854,800.72	267,124.62	3,854,801.56	P46	267,371.16	3,856,701.36	266,671.16	3,856,701.94	P65	266,971.16	3,852,028.69	266,971.16	3,854,471.88
P9	268,824.34	3,853,000.15	266,485.03	3,853,002.09	P28	268,095.74	3,854,900.75	267,124.70	3,854,901.56	P47	268,771.16	3,852,458.22	268,771.16	3,853,138.86	P66	266,871.16	3,852,062.28	266,871.16	3,854,471.88
P10	268,785.99	3,853,100.18	266,484.86	3,853,102.09	P29	268,071.16	3,855,000.78	267,124.78	3,855,001.56	P48	268,671.16	3,852,400.28	268,671.16	3,853,399.72	P67	266,771.16	3,852,201.86	266,771.16	3,854,471.88
P11	268,747.64	3,853,200.21	266,484.94	3,853,202.09	P30	268,019.05	3,855,100.82	266,247.43	3,855,102.29	P49	268,571.16	3,852,344.09	268,571.16	3,853,700.36	P68	266,671.16	3,852,301.94	266,671.16	3,854,471.88
P12	268,709.29	3,853,300.24	266,485.03	3,853,302.09	P31	267,971.16	3,855,200.86	266,243.73	3,855,202.29	P50	268,471.16	3,852,300.44	268,471.16	3,853,900.44	P69	267,071.16	3,854,939.86	267,071.16	3,856,830.40
P13	268,671.16	3,853,399.72	266,487.72	3,853,402.09	P32	267,942.35	3,855,300.88	266,240.03	3,855,302.30	P51	268,371.16	3,852,229.96	268,371.16	3,854,200.53	P70	266,971.16	3,854,939.86	266,971.16	3,856,799.78
P14	268,632.60	3,853,500.31	266,487.80	3,853,502.09	P33	267,904.01	3,855,400.91	266,236.32	3,855,402.30	P52	268,271.16	3,852,200.61	268,271.16	3,854,400.61	P71	266,871.16	3,854,939.86	266,871.16	3,856,769.17
P15	268,594.25	3,853,600.34	266,487.89	3,853,602.09	P34	267,871.16	3,855,500.94	266,232.62	3,855,502.30	P53	268,171.16	3,852,115.83	268,172.44	3,854,700.69	P72	266,771.16	3,854,939.86	266,771.16	3,856,738.55
P16	268,571.16	3,853,700.36	266,487.27	3,853,702.09	P35	267,827.31	3,855,600.98	266,228.92	3,855,602.31	P54	268,071.16	3,852,058.77	268,071.16	3,855,000.78	P73	266,671.16	3,854,939.86	266,671.16	3,856,701.94
P17	268,517.56	3,853,800.40	266,487.35	3,853,802.09	P36	267,771.16	3,855,701.03	266,225.21	3,855,702.31	P55	267,971.16	3,852,028.69	267,971.16	3,855,200.86	P74	266,571.16	3,854,939.86	266,571.16	3,856,677.31
P18	268,471.16	3,853,900.44	266,487.43	3,853,902.09	P37	267,750.62	3,855,801.04	266,221.51	3,855,802.31	P56	267,871.16	3,852,028.69	267,871.16	3,855,500.94	P75	266,471.16	3,854,939.86	266,471.16	3,856,646.70
P19	268,440.87	3,854,000.47	266,484.86	3,854,002.09	P38	267,712.27	3,855,901.07	266,217.80	3,855,902.32	P57	267,771.16	3,852,028.69	267,771.16	3,855,701.03	P76	266,371.16	3,854,939.86	266,371.16	3,856,602.19

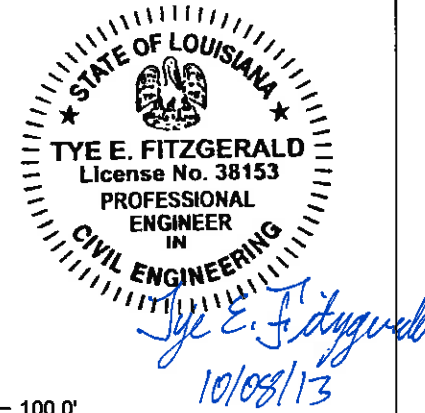
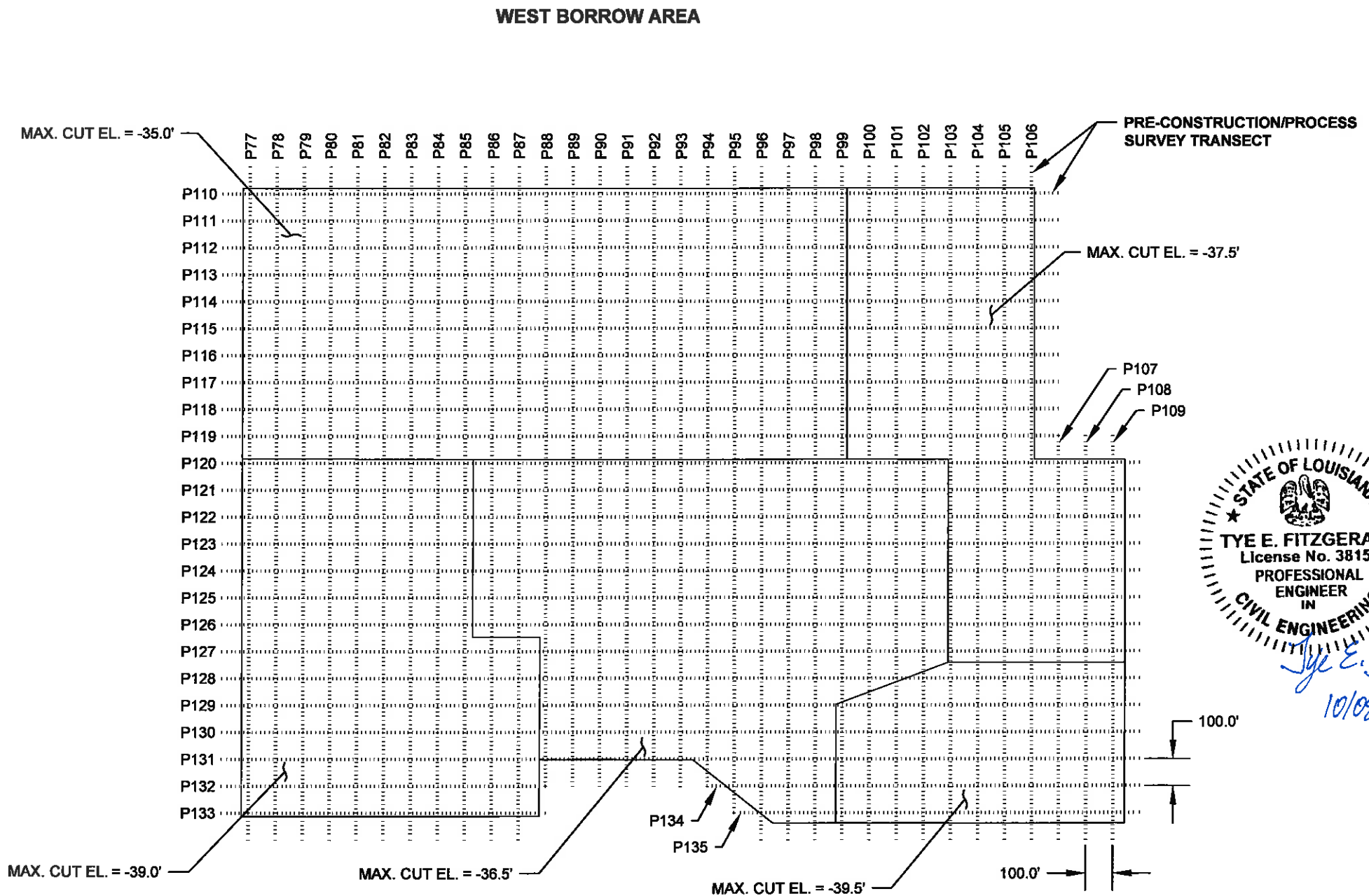


- NOTES:
1. PRE-CONSTRUCTION/PROCESS SURVEY TRANSECTS P1 THROUGH P76, PROVIDE MORE ACCURATE VOLUME ESTIMATES THAN THE DESIGN SURVEY LAYOUT SHOWN ON SHEET 25.
 2. THE PRE-CONSTRUCTION PROCESS SURVEY TRANSECTS SHALL EXTEND A MINIMUM OF A 100.0' PAST THE LIMITS OF PAY.
 3. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. SURVEY FEET.

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION	BORROW AREA PRE-CONSTRUCTION/ PROCESS SURVEY LAYOUT
						STATE PROJECT NUMBER: BA-68	
						FEDERAL PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 26 OF 54

PROCESS SURVEY TRANSECTS				
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
P77	267,135.94	3,845,809.97	264,635.94	3,845,812.05
P78	267,135.94	3,845,909.97	264,635.94	3,845,912.05
P79	267,135.94	3,846,009.97	264,635.94	3,846,012.05
P80	267,135.94	3,846,109.97	264,635.94	3,846,112.05
P81	267,135.94	3,846,209.97	264,635.94	3,846,212.05
P82	267,135.94	3,846,309.97	264,635.94	3,846,312.05
P83	267,135.94	3,846,409.97	264,635.94	3,846,412.05
P84	267,135.94	3,846,509.97	264,635.94	3,846,512.05
P85	267,135.94	3,846,609.97	264,635.94	3,846,612.05
P86	267,135.94	3,846,709.97	264,635.94	3,846,712.05
P87	267,135.94	3,846,809.97	264,635.94	3,846,812.05
P88	267,135.94	3,846,909.97	264,635.94	3,846,911.88
P89	267,135.94	3,847,009.97	264,635.50	3,847,011.88
P90	267,135.94	3,847,109.97	264,635.06	3,847,111.88
P91	267,135.94	3,847,209.97	264,635.14	3,847,211.88
P92	267,135.94	3,847,309.97	264,635.22	3,847,311.88
P93	267,135.94	3,847,409.97	264,634.60	3,847,411.89
P94	267,135.94	3,847,509.97	264,634.69	3,847,511.88
P95	267,135.94	3,847,609.97	264,735.94	3,847,611.97
P96	267,135.94	3,847,709.97	264,635.94	3,847,712.05
P97	267,135.94	3,847,809.97	264,635.94	3,847,812.05
P98	267,135.94	3,847,909.97	264,635.94	3,847,912.05
P99	267,135.94	3,848,009.97	264,635.94	3,848,012.05
P100	267,135.94	3,848,109.97	264,635.94	3,848,112.05
P101	267,135.94	3,848,209.97	264,635.94	3,848,212.05
P102	267,135.94	3,848,309.97	264,635.94	3,848,312.05
P103	267,135.94	3,848,409.97	264,635.94	3,848,412.05
P104	267,135.94	3,848,509.97	264,635.94	3,848,512.05
P105	267,135.94	3,848,609.97	264,635.94	3,848,612.05
P106	267,135.94	3,848,709.97	264,635.94	3,848,712.05
P107	266,135.94	3,848,810.80	264,635.94	3,848,812.05
P108	266,135.94	3,848,910.80	264,635.94	3,848,912.05
P109	266,135.94	3,849,010.80	264,635.94	3,849,012.05
P110	267,035.94	3,845,710.05	267,035.94	3,848,810.06
P111	266,935.94	3,845,710.14	266,935.94	3,848,810.14
P112	266,835.94	3,845,710.22	266,835.94	3,848,810.22
P113	266,735.94	3,845,710.30	266,735.94	3,848,810.30
P114	266,635.94	3,845,710.39	266,635.94	3,848,810.39
P115	266,535.94	3,845,710.47	266,535.94	3,848,810.47
P116	266,435.94	3,845,710.55	266,435.94	3,848,810.55
P117	266,335.94	3,845,710.64	266,335.94	3,848,810.64
P118	266,235.94	3,845,710.72	266,235.94	3,848,810.72
P119	266,135.94	3,845,710.80	266,135.94	3,848,810.80
P120	266,035.94	3,845,710.89	266,035.94	3,849,110.89
P121	265,935.94	3,845,710.97	265,935.94	3,849,110.97
P122	265,835.94	3,845,711.05	265,835.94	3,849,111.05
P123	265,735.94	3,845,711.13	265,735.94	3,849,111.14
P124	265,635.94	3,845,711.22	265,635.94	3,849,111.22
P125	265,535.94	3,845,711.30	265,535.94	3,849,111.30
P126	265,435.94	3,845,711.38	265,435.94	3,849,111.39
P127	265,335.94	3,845,711.47	265,335.94	3,849,111.47
P128	265,235.94	3,845,711.55	265,235.94	3,849,111.55
P129	265,135.94	3,845,711.63	265,135.94	3,849,111.64
P130	265,035.94	3,845,711.72	265,035.94	3,849,111.72
P131	264,935.94	3,845,711.80	264,935.94	3,849,111.80
P132	264,835.94	3,845,711.88	264,835.94	3,846,911.88
P133	264,735.94	3,845,711.97	264,735.94	3,846,911.97
P134	264,834.69	3,847,511.88	264,835.94	3,849,111.88
P135	264,735.94	3,847,611.97	264,735.94	3,849,111.97

- NOTES:
1. PRE-CONSTRUCTION/PROCESS SURVEY TRANSECTS P77 THROUGH P135, PROVIDE MORE ACCURATE VOLUME ESTIMATES THAN THE DESIGN SURVEY LAYOUT SHOWN ON SHEET 25.
 2. THE PRE-CONSTRUCTION PROCESS SURVEY TRANSECTS SHALL EXTEND A MINIMUM OF A 100.0' PAST THE LIMITS OF PAV.
 3. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. SURVEY FEET.



LEGEND	
	PRE-CONSTRUCTION/PROCESS SURVEY TRANSECTS

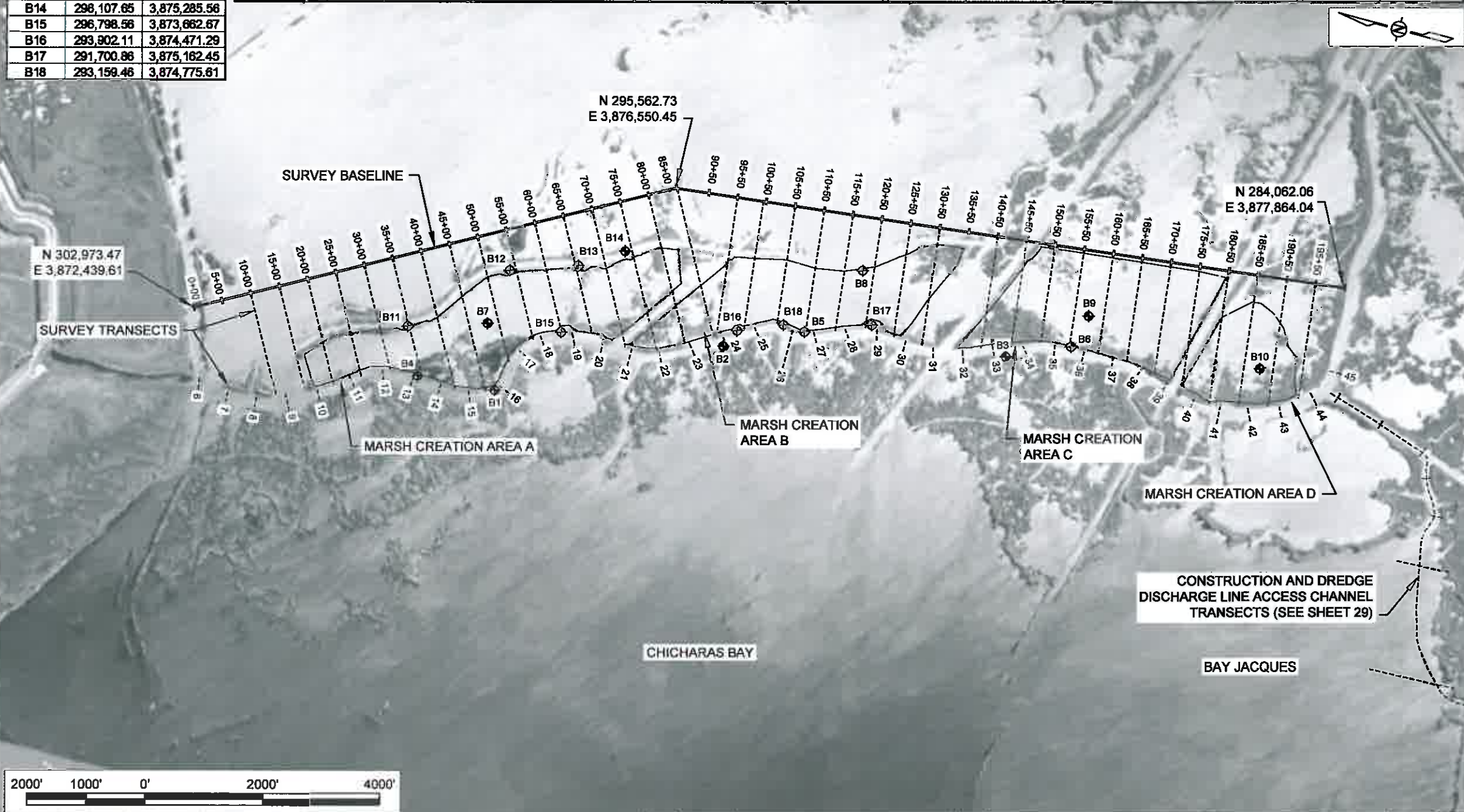


				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION		BORROW AREA PRE-CONSTRUCTION/ PROCESS SURVEY LAYOUT	
						STATE PROJECT NUMBER: BA-68			
						FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
						DRAWN BY: KRISTI CANTU		DESIGNED BY: TYE FITZGERALD, P.E.	
						APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 27 OF 54	
REV.	DATE	DESCRIPTION	BY						

SOIL BORING		
BORING	NORTHING	EASTING
B1	297,634.93	3,872,405.57
B2	294,063.77	3,874,155.11
B3	289,356.78	3,875,232.29
B4	298,977.86	3,872,300.06
B5	292,785.03	3,874,750.65
B6	288,315.79	3,875,686.22
B7	298,047.05	3,873,483.87
B8	292,097.00	3,876,023.00
B9	288,185.12	3,876,272.85
B10	285,102.17	3,876,156.56
B11	299,355.21	3,873,081.04
B12	297,922.80	3,874,459.07
B13	296,817.70	3,874,840.10
B14	298,107.65	3,875,285.56
B15	296,798.58	3,873,682.67
B16	293,902.11	3,874,471.29
B17	291,700.86	3,875,162.45
B18	293,159.46	3,874,775.61

MARSH CREATION TRANSECTS														
TRANSECT	BEGINNING		ENDING		TRANSECT	BEGINNING		ENDING		TRANSECT	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING		NORTHING	EASTING	NORTHING	EASTING		NORTHING	EASTING	NORTHING	EASTING
10+00	302,098.83	3,872,924.90	301,229.68	3,871,357.53	70+00	296,859.46	3,875,848.29	295,671.04	3,873,705.89	140+50	290,025.00	3,877,196.06	289,805.30	3,875,272.69
15+00	301,661.77	3,873,167.23	300,774.90	3,871,568.44	75+00	296,422.22	3,876,090.83	295,136.89	3,873,774.35	145+50	289,528.23	3,877,254.80	289,318.71	3,875,420.45
20+00	301,231.81	3,873,422.89	300,322.96	3,871,784.48	80+00	295,984.99	3,876,333.37	294,716.50	3,874,046.83	150+50	289,031.46	3,877,311.54	288,838.22	3,875,619.67
25+00	300,750.62	3,873,586.19	299,895.19	3,872,044.07	85+00	295,539.15	3,876,568.24	294,328.08	3,874,366.14	155+50	288,534.69	3,877,368.28	288,340.15	3,875,665.00
30+00	300,357.34	3,873,907.97	299,456.93	3,872,284.76	95+50	294,495.93	3,876,687.39	294,234.57	3,874,399.16	160+50	288,037.92	3,877,425.02	287,839.19	3,875,885.10
35+00	299,920.10	3,874,150.51	298,896.81	3,872,305.78	100+50	294,048.84	3,876,738.48	293,796.87	3,874,532.70	165+50	287,541.15	3,877,481.76	287,335.56	3,875,881.77
40+00	299,482.87	3,874,393.05	298,297.06	3,872,255.36	105+50	293,502.39	3,876,800.87	293,271.08	3,874,775.66	170+50	287,044.38	3,877,538.50	286,825.37	3,875,821.01
45+00	299,045.63	3,874,635.59	297,777.15	3,872,348.85	110+50	293,005.62	3,876,857.61	292,762.89	3,874,732.45	175+50	286,547.61	3,877,595.24	286,312.80	3,875,539.45
50+00	298,606.40	3,874,878.13	297,522.36	3,872,920.29	115+50	292,508.85	3,876,914.35	292,279.91	3,874,909.90	180+50	286,050.84	3,877,651.98	285,787.66	3,875,347.83
55+00	298,171.16	3,875,120.67	297,226.51	3,873,417.70	120+50	292,012.08	3,876,971.09	291,797.17	3,875,089.47	185+50	285,554.07	3,877,708.72	285,296.82	3,875,456.46
60+00	297,733.93	3,875,363.21	296,787.22	3,873,656.54	125+50	291,515.31	3,877,027.84	291,292.04	3,875,073.06	190+50	285,057.30	3,877,765.46	284,806.48	3,875,569.48
65+00	297,296.69	3,875,605.75	296,302.13	3,873,812.61	130+50	291,018.54	3,877,084.58	290,786.79	3,875,055.56	195+50	284,560.53	3,877,822.20	284,334.06	3,875,839.36

BAYOU TRANSECTS							
TRANSECT	BEGINNING			ENDING			
	NORTHING	EASTING		NORTHING	EASTING		
6	302,556.85	3,871,299.68		302,523.06	3,871,099.96		
7	302,043.07	3,871,278.96		302,020.70	3,871,024.94		
8	301,550.40	3,871,322.16		301,523.18	3,871,064.48		
9	301,084.56	3,871,414.61		300,944.99	3,871,154.29		
10	300,574.04	3,871,821.32		300,482.04	3,871,453.30		
11	300,088.95	3,871,980.23		299,968.63	3,871,838.37		
12	299,576.77	3,872,236.14		299,516.21	3,872,080.29		
13	299,036.97	3,872,269.93		299,046.31	3,872,109.26		
14	298,552.27	3,872,263.67		298,552.25	3,872,095.77		
15	298,064.43	3,872,277.52		297,988.22	3,872,100.98		
16	297,582.95	3,872,495.96		297,407.46	3,872,432.83		
17	297,426.75	3,873,170.01		297,277.71	3,873,110.46		
18	297,124.34	3,873,505.28		297,026.27	3,873,373.71		
19	296,617.90	3,873,702.75		296,516.54	3,873,502.65		
20	296,071.18	3,873,731.71		296,054.48	3,873,500.35		
21	295,556.27	3,873,703.82		295,553.41	3,873,409.75		
22	295,095.56	3,873,763.58		295,011.98	3,873,620.96		
23	294,641.78	3,874,054.75		294,497.87	3,873,876.99		
24	294,100.20	3,874,295.09		294,011.66	3,874,175.25		
25	293,630.02	3,874,602.63		293,523.33	3,874,481.82		
26	292,982.44	3,874,716.32		292,975.79	3,874,067.74		
27	292,629.33	3,874,790.46		292,536.93	3,874,626.07		
28	292,121.98	3,874,973.87		292,030.16	3,874,851.11		
29	291,594.48	3,875,105.91		291,552.12	3,874,932.26		
30	291,070.06	3,875,057.03		291,068.17	3,874,872.54		
31	290,587.78	3,875,065.62		290,547.02	3,874,900.52		
32	290,066.72	3,875,153.86		290,019.21	3,874,941.99		
33	289,670.63	3,875,461.68		289,651.22	3,875,199.75		
34	289,125.47	3,875,469.97		289,034.30	3,875,372.97		
35	288,589.88	3,875,641.20		288,559.76	3,875,469.53		
36	288,076.16	3,875,667.30		288,074.40	3,875,495.76		
37	287,576.26	3,875,679.52		287,560.47	3,875,551.56		
38	287,042.93	3,875,662.43		287,097.06	3,875,517.89		
39	286,557.43	3,875,517.77		286,611.79	3,875,384.30		
40	286,058.74	3,875,365.81		286,072.72	3,875,223.32		
41	285,591.37	3,875,392.60		285,569.15	3,875,054.20		
42	285,129.19	3,875,455.19		285,029.58	3,875,249.98		
43	284,619.88	3,875,636.31		284,529.69	3,875,449.35		
44	284,164.83	3,875,986.49		284,003.07	3,875,811.45		
45	283,941.18	3,876,425.92		283,743.57	3,876,425.92		



- NOTES:
1. SURVEY CROSS-SECTION POINT FILES ARE AVAILABLE UPON REQUEST.
 2. SEE APPENDIX H OF THE SPECIFICATIONS FOR BORING LOG INFORMATION.
 3. SEE APPENDIX F OF THE SPECIFICATIONS FOR BENCHMARK DATA SHEETS.
 4. SEE SHEETS 34-42 FOR MARSH CREATION CROSS-SECTIONS 10+00 THROUGH 190+50 AND SHEETS 43-46 FOR BAYOU CROSS-SECTIONS 6 THROUGH 45.

COASTAL PROTECTION AND RESTORATION AUTHORITY				GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION SURVEY & BORING LAYOUT	
450 LAUREL STREET BATON ROUGE, LOUISIANA 70801				STATE PROJECT NUMBER: BA-68			
				FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
				APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 28 OF 54	
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU		DESIGNED BY: TYE FITZGERALD, P.E.	

DREDGE PIPELINE CORRIDOR/ ACCESS CENTERLINE PROFILE		
S1	NORTHING	EASTING
0+00	283,838.43	3,876,010.16
20+00	281,971.71	3,875,348.99
PI-1	281,638.55	3,874,288.79
PI-2	281,610.20	3,873,602.98
40+00	281,576.77	3,873,417.84
PI-3	281,305.93	3,871,918.13
60+00	281,004.78	3,871,549.46
PI-4	280,952.77	3,871,485.79
PI-5	280,268.68	3,871,485.10
80+00	279,036.89	3,871,435.71
100+00	277,186.12	3,871,228.58
PI-6	276,174.96	3,871,159.28
120+00	275,322.47	3,870,760.94
PI-7	274,722.12	3,870,480.41
140+00	273,469.78	3,870,011.24
PI-8	272,831.88	3,869,772.20
PI-9	272,313.79	3,869,559.10
PI-10	271,636.66	3,869,351.82
160+00	271,590.88	3,869,351.82
PI-11	271,336.90	3,869,313.41
PI-12	270,650.14	3,869,496.42
PI-13	270,347.93	3,869,584.33
180+00	269,707.91	3,869,248.51
200+00	267,946.33	3,868,301.48
PI-14	267,098.43	3,867,848.57
220+00	266,858.55	3,868,837.93
PI-15	266,418.58	3,864,984.34
240+00	266,420.34	3,864,889.44
260+00	266,457.41	3,862,889.79
PI-16	266,480.52	3,862,457.30
280+00	266,494.48	3,860,890.13
300+00	266,531.55	3,858,890.48
320+00	266,568.61	3,856,890.82
325.01	266,577.90	3,856,390.04

DREDGE PIPELINE CORRIDOR/ACCESS CROSS-SECTION TRANSECTS				
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
S2	283,714.64	3,875,930.06	283,654.15	3,876,107.04
S3	270,580.66	3,869,366.93	270,719.62	3,869,625.91
S4	271,637.70	3,869,209.21	271,635.62	3,869,494.43
S5	273,558.51	3,868,968.21	272,699.73	3,869,918.16
S6	275,435.10	3,869,481.20	274,465.81	3,870,839.62
S7	276,285.99	3,871,105.76	276,162.85	3,871,378.58
S8	277,218.89	3,871,089.28	277,348.36	3,871,361.35
S9	279,741.26	3,871,342.17	279,737.08	3,871,626.96
S10	281,948.08	3,871,678.80	280,458.39	3,871,727.29
S11	281,979.19	3,873,586.61	281,077.15	3,873,626.62
S12	281,651.00	3,874,487.69	281,411.91	3,874,495.99
S13	281,936.27	3,875,049.42	281,792.15	3,875,108.12
S14	282,085.90	3,875,405.80	282,013.22	3,875,588.32
S15	282,883.54	3,875,691.48	282,840.26	3,875,840.45



NOTES:

1. SURVEY CROSS-SECTION POINT FILES ARE AVAILABLE UPON REQUEST.
2. SEE SHEETS 47-50 FOR ACCESS CENTER LINE PROFILE, S1, AND CROSS-SECTIONS S2 THROUGH S15.
3. THE CONTRACTOR WILL HAVE SUFFICIENT DEPTH TO TRAVERSE FROM EAST TO WEST BORROW AREA.
4. SEE OYSTER ACQUISITION MAP IN APPENDIX I FOR ADDITIONAL DETAILS ON ACQUIRED AND EXTINGUISHED OYSTER LEASES.

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

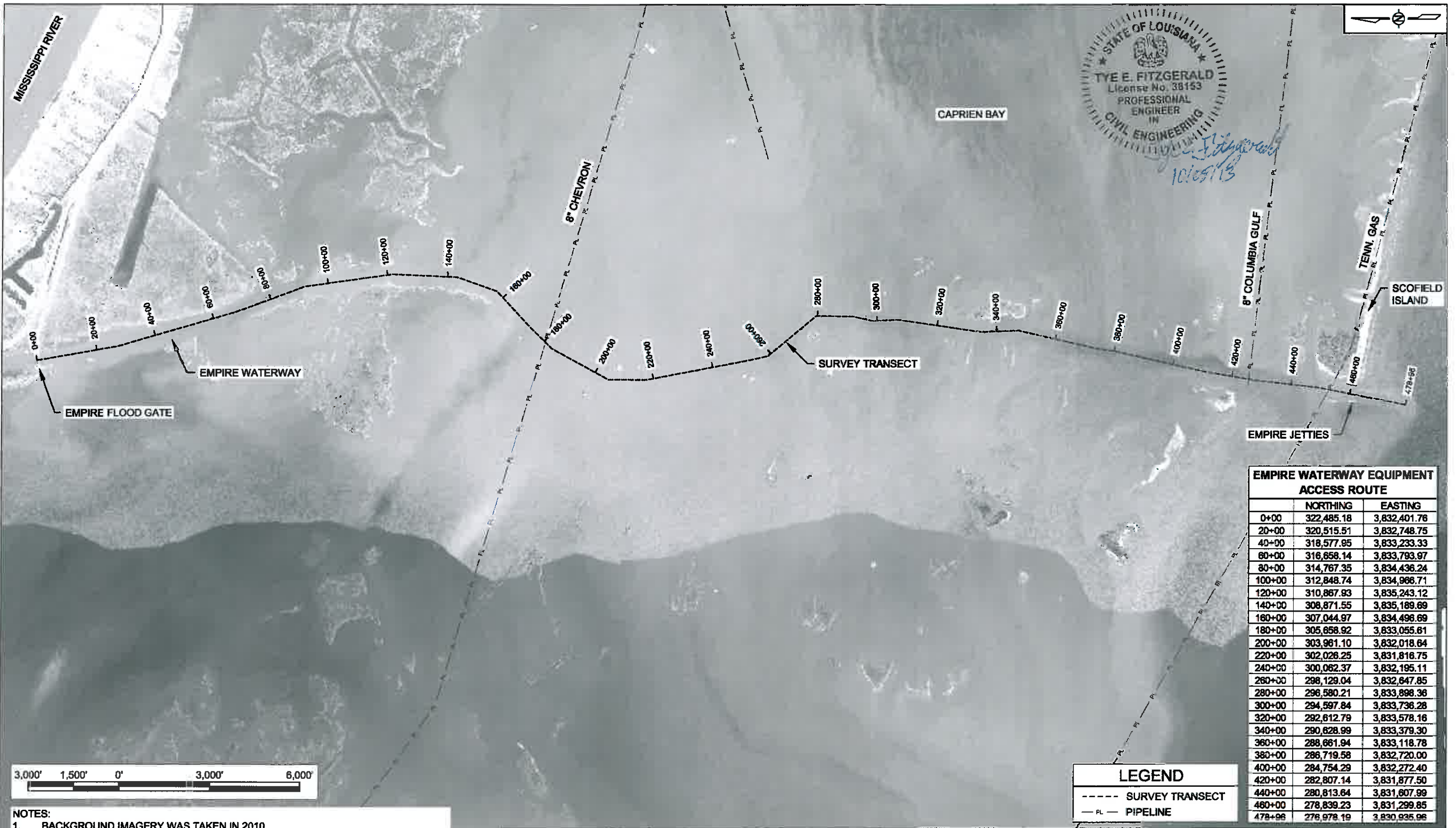
FEDERAL PROJECT NUMBER: BA-68

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SURVEY LAYOUT

DATE: OCTOBER 2013

SHEET 29 OF 54



STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
ENGINEER
IN
CIVIL ENGINEERING
Tye E. Fitzgerald
10/05/13

EMPIRE WATERWAY EQUIPMENT ACCESS ROUTE		
	NORTHING	EASTING
0+00	322,485.18	3,832,401.76
20+00	320,515.51	3,832,748.75
40+00	318,577.95	3,833,233.33
60+00	316,658.14	3,833,793.97
80+00	314,767.35	3,834,436.24
100+00	312,848.74	3,834,966.71
120+00	310,867.93	3,835,243.12
140+00	308,871.55	3,835,189.69
160+00	307,044.97	3,834,496.69
180+00	305,658.92	3,833,055.61
200+00	303,961.10	3,832,018.64
220+00	302,026.25	3,831,816.75
240+00	300,062.37	3,832,195.11
260+00	298,129.04	3,832,647.85
280+00	296,580.21	3,833,898.36
300+00	294,597.84	3,833,736.28
320+00	292,612.79	3,833,578.16
340+00	290,628.99	3,833,379.30
360+00	288,661.94	3,833,118.78
380+00	286,719.58	3,832,720.00
400+00	284,754.29	3,832,272.40
420+00	282,807.14	3,831,877.50
440+00	280,813.64	3,831,607.99
460+00	278,839.23	3,831,299.85
478+96	276,978.19	3,830,935.96

LEGEND	
-----	SURVEY TRANSECT
— PL —	PIPELINE



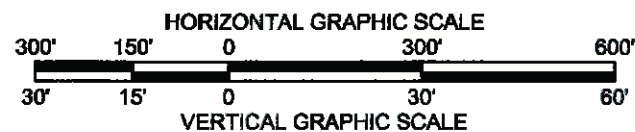
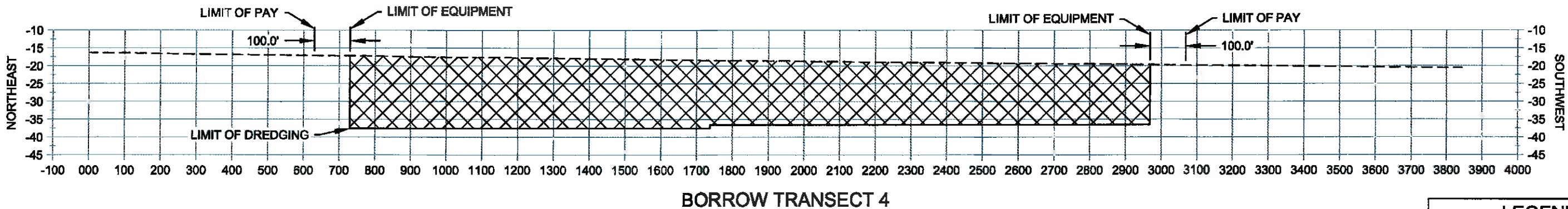
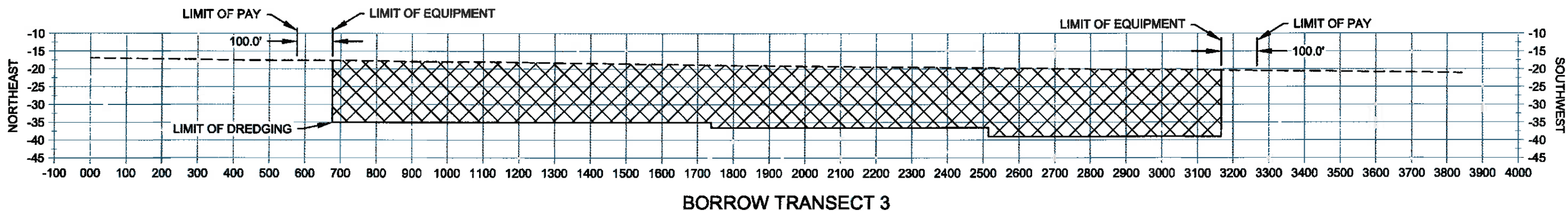
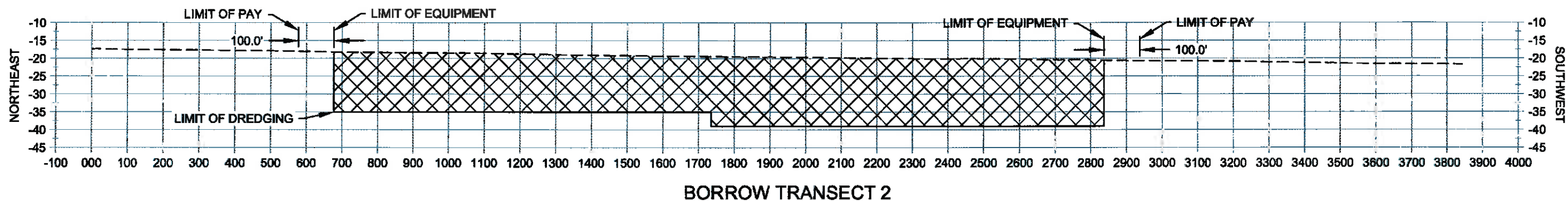
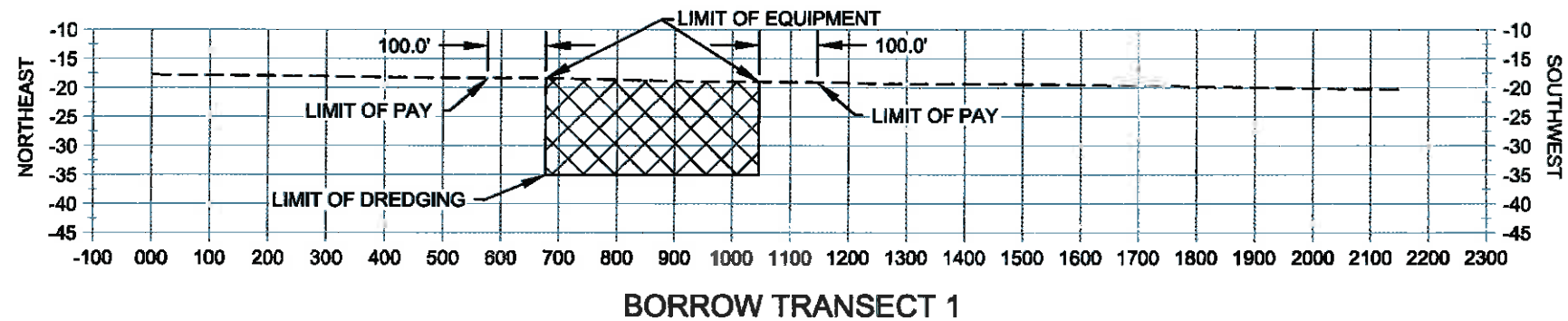
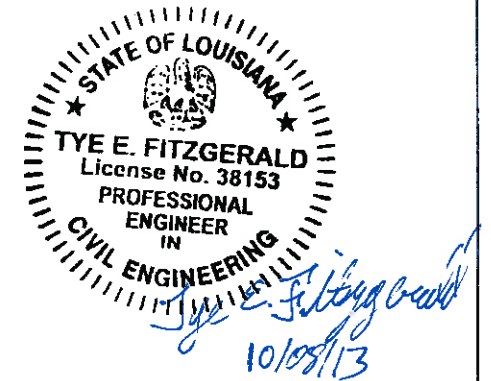
- NOTES:
1. BACKGROUND IMAGERY WAS TAKEN IN 2010.
 2. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
 3. PIPELINE LOCATIONS ARE BASED ON USGS DATABASE AND IS NOT GUARANTEED TO BE ACCURATE.
 4. SURVEY POINT FILES ARE AVAILABLE UPON REQUEST.
 5. SEE SHEETS 51 - 54 FOR THE PROFILE OF THE EMPIRE WATERWAY EQUIPMENT ACCESS ROUTE.

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION	EMPIRE WATERWAY ACCESS SURVEY LAYOUT
STATE PROJECT NUMBER: BA-68	
FEDERAL PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 30 OF 54



NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

REV.	DATE	DESCRIPTION	BY

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

DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND
RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

FEDERAL PROJECT NUMBER: BA-68

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

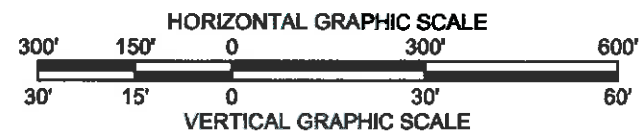
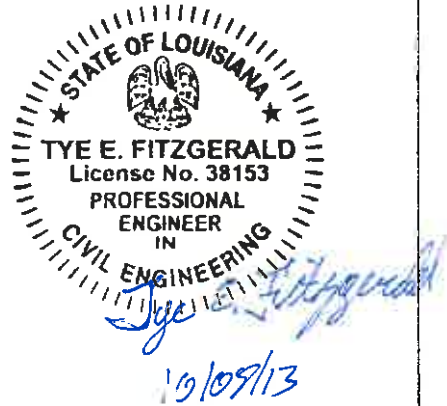
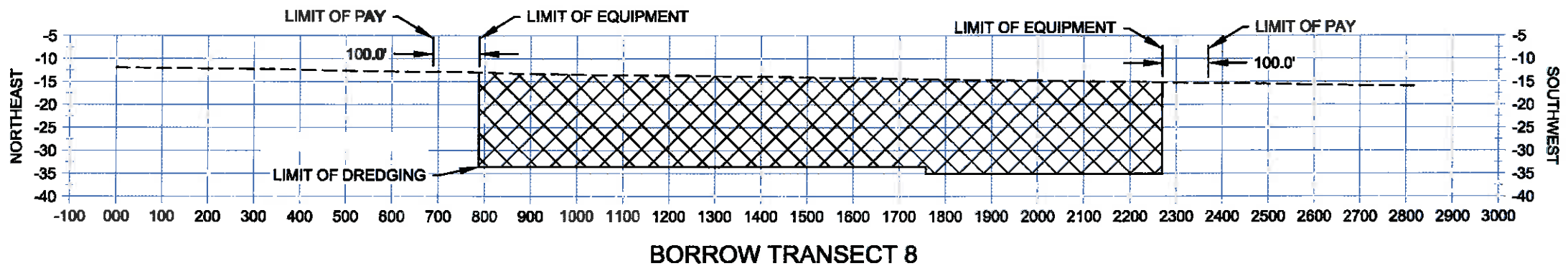
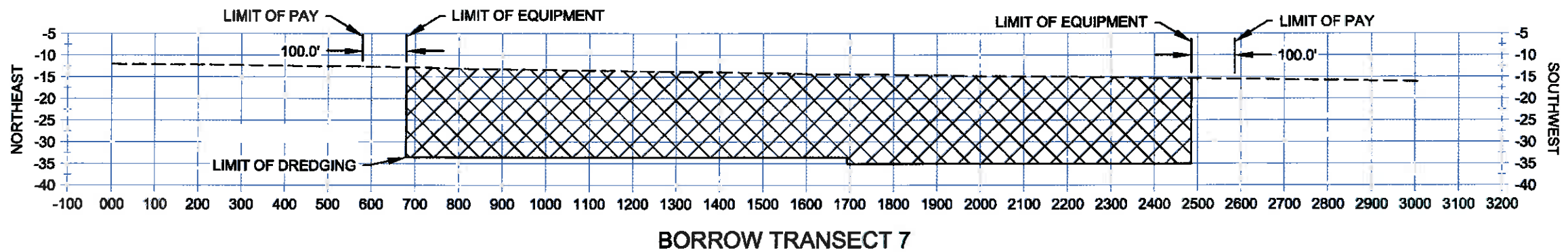
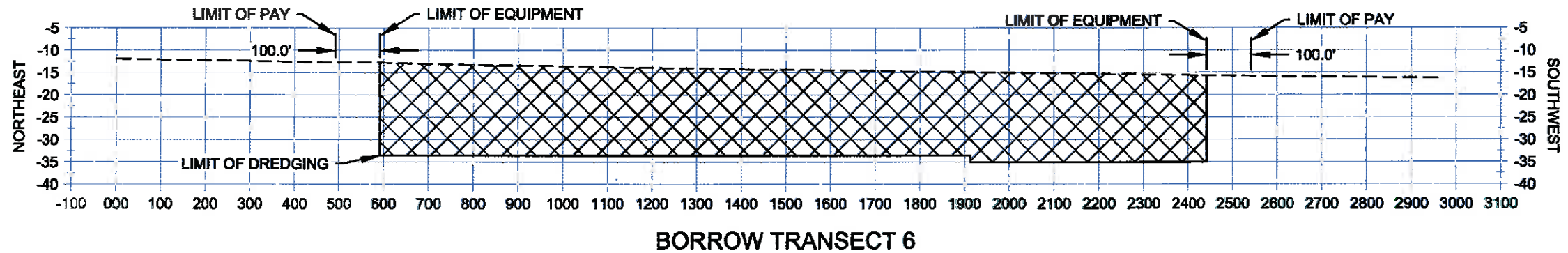
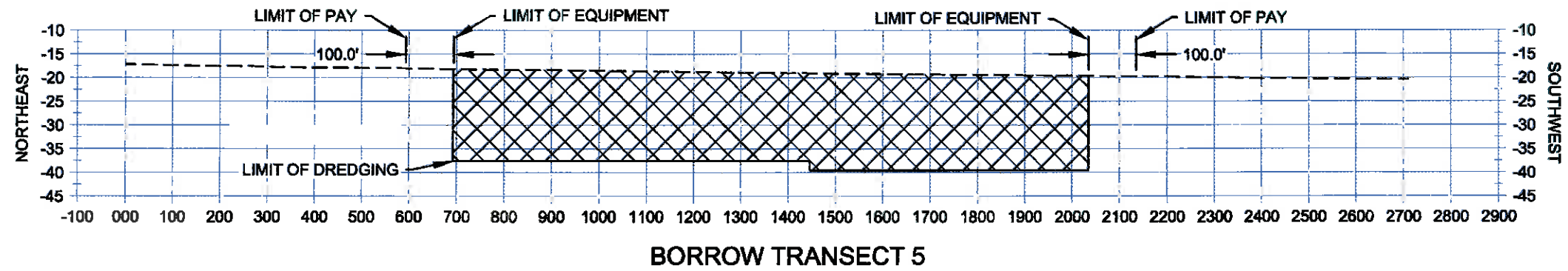
LEGEND

- BORROW AREA
- EXISTING WATER BOTTOM

BORROW AREA
SECTIONS

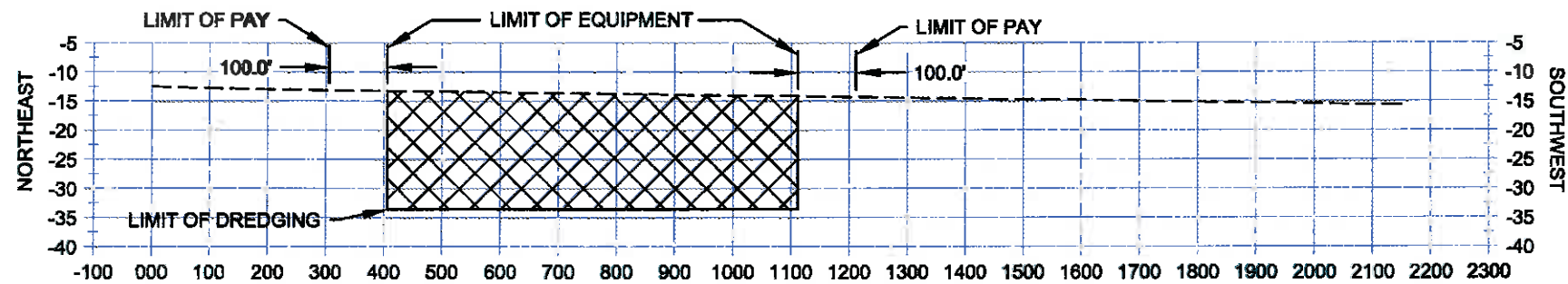
DATE: OCTOBER 2013

SHEET 31 OF 54

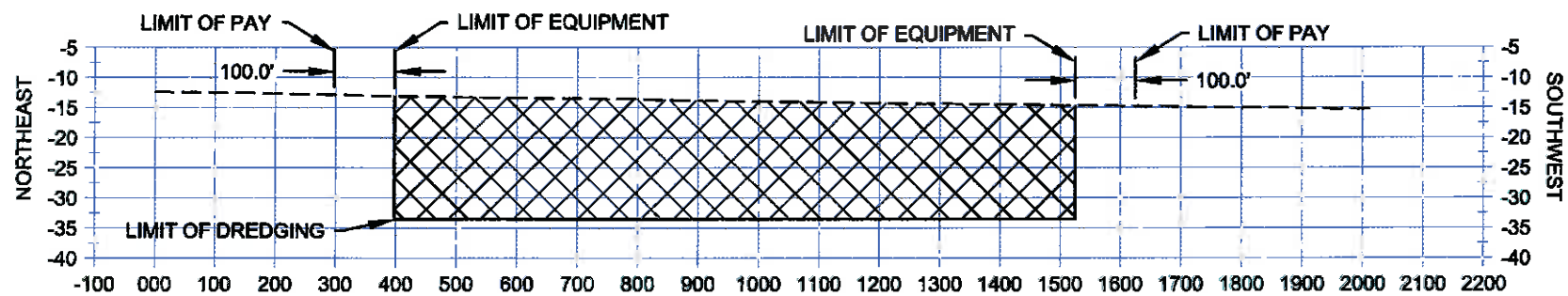


NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

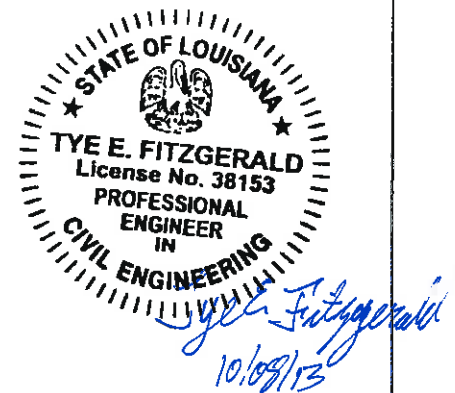
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					STATE PROJECT NUMBER: BA-68	
					FEDERAL PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E. SHEET 32 OF 54



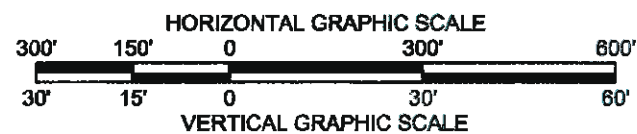
BORROW TRANSECT 9



BORROW TRANSECT 10

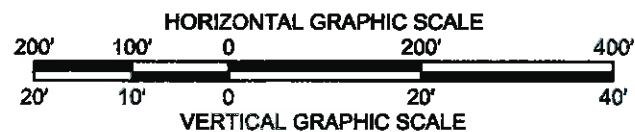
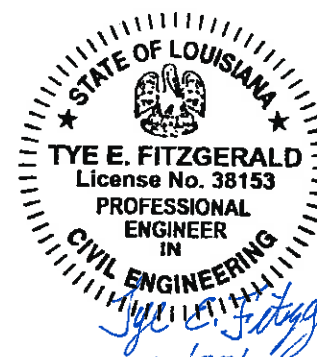
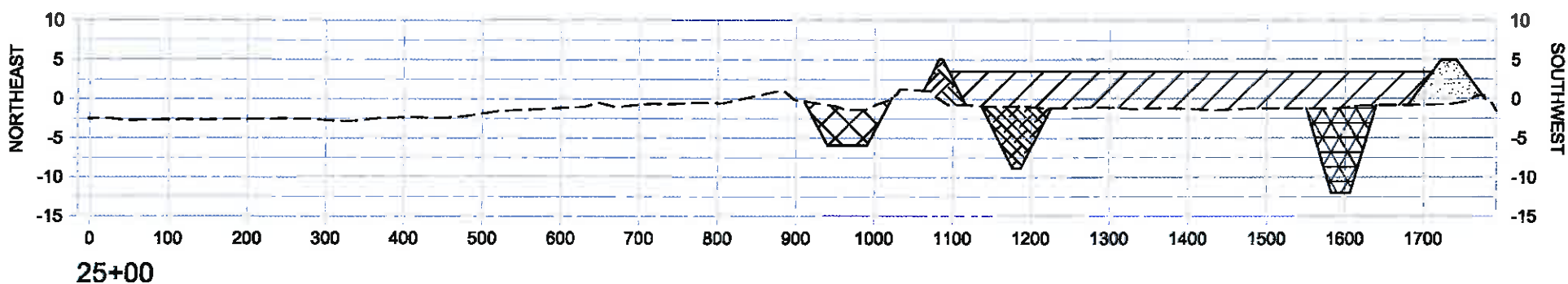
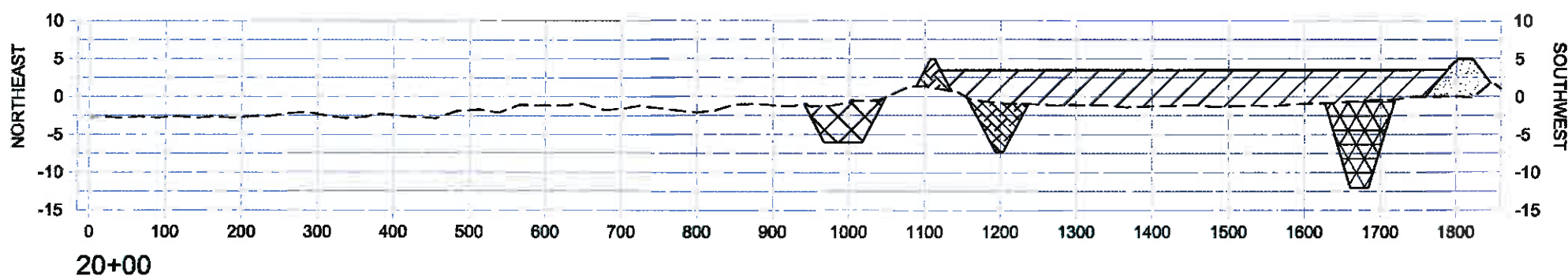
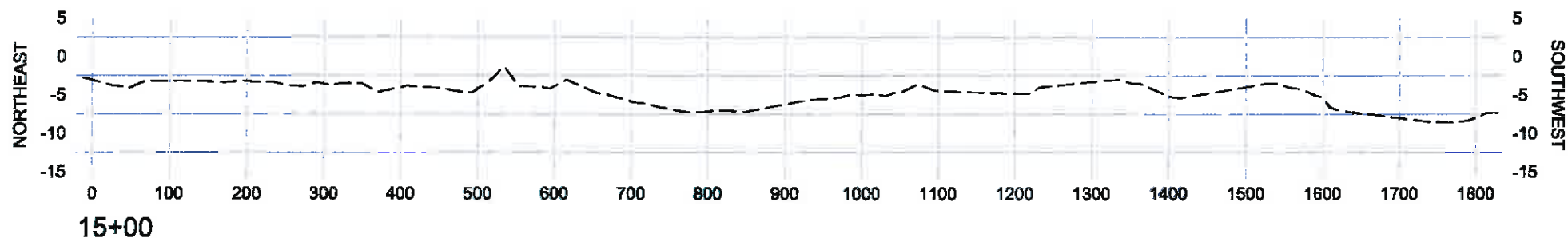
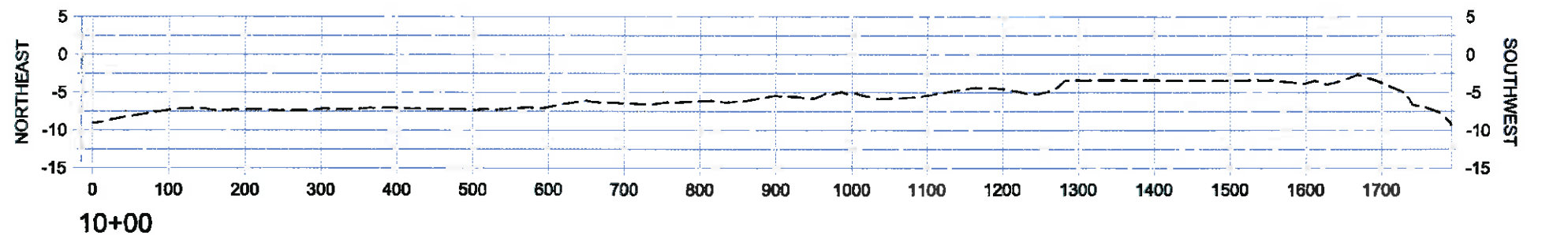


LEGEND	
	BORROW AREA
	EXISTING WATER BOTTOM



NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		BORROW AREA SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU

DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

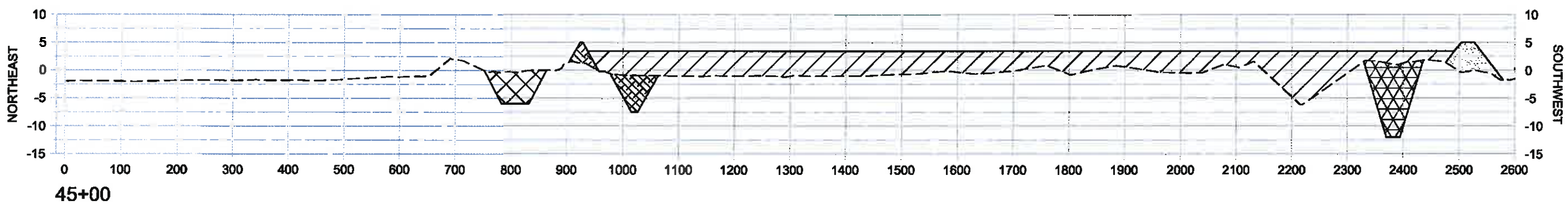
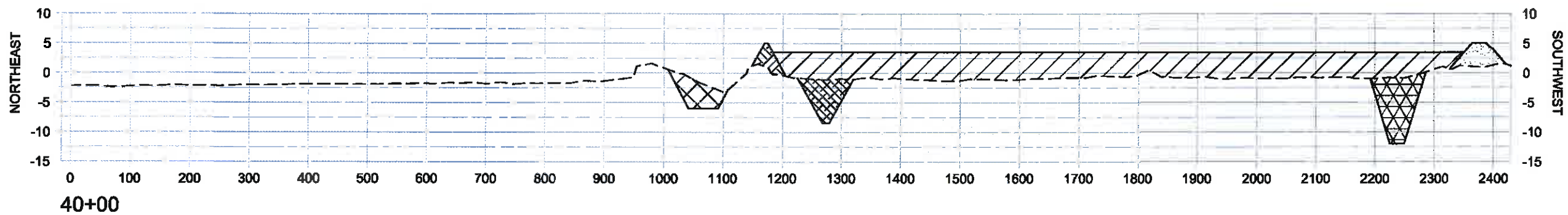
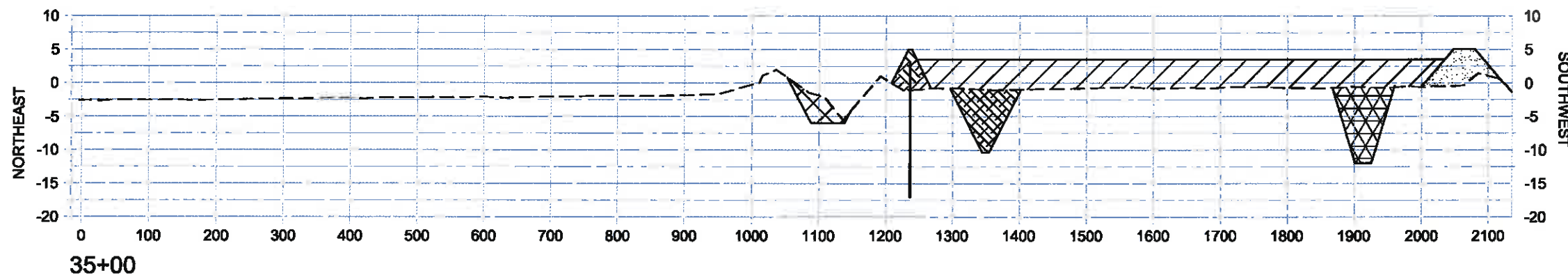
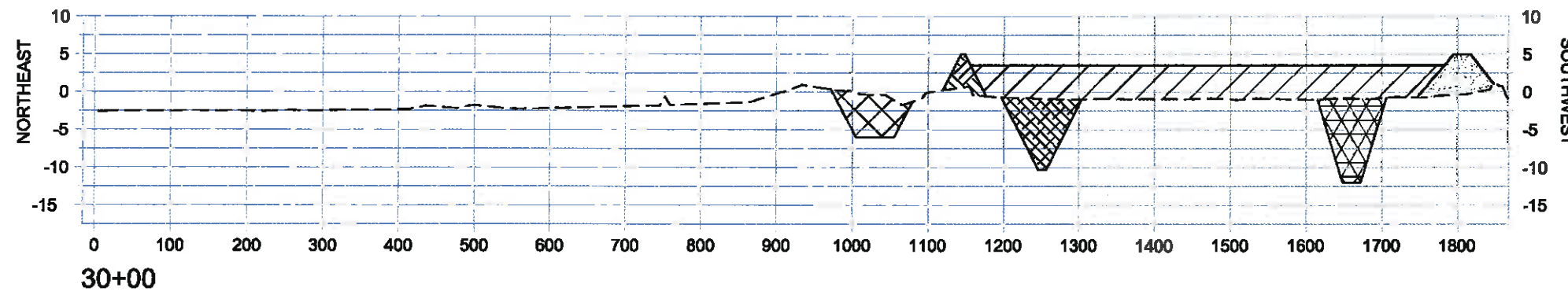
FEDERAL PROJECT NUMBER: BA-68

APPROVED BY: RUDOLPH SIMONEAUX, P.E.

MARSH CREATION AREAS SECTIONS

DATE: OCTOBER 2013

SHEET 34 OF 54



STATE OF LOUISIANA
 TYE E. FITZGERALD
 License No. 38153
 PROFESSIONAL ENGINEER
 IN
 CIVIL ENGINEERING
Tye E. Fitzgerald
 10/09/13

LEGEND

- MARSH CREATION AREA
- EARTHEN RIDGE
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE PRIMARY BORROW AREA
- EARTHEN CONTAINMENT DIKE SECONDARY BORROW AREA
- EARTHEN RIDGE SECONDARY BORROW AREA
- EXISTING GROUND
- SHEET PILE CLOSURE

NOTE:
 ALL ELEVATIONS ARE
 GIVEN IN THE NORTH
 AMERICAN VERTICAL
 DATUM OF 1988 (NAVD 88).

REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

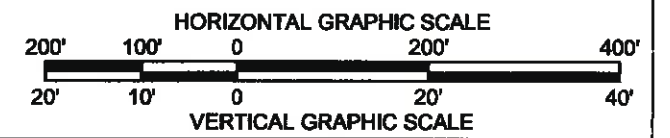
DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

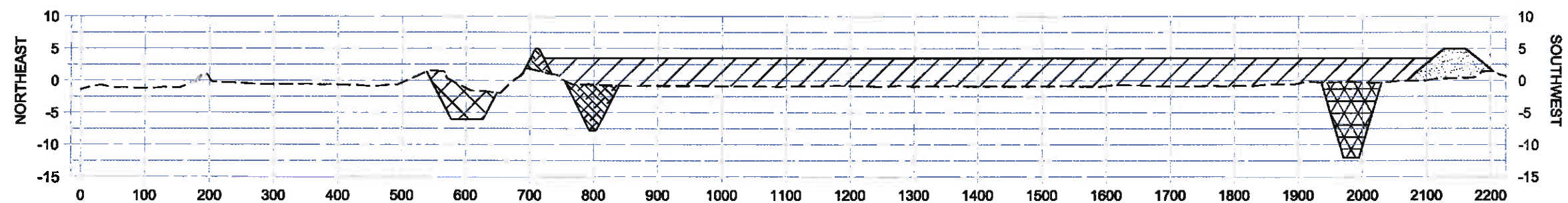
GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68
 FEDERAL PROJECT NUMBER: BA-68
 APPROVED BY: RUDOLPH SIMONEAUX, P.E.

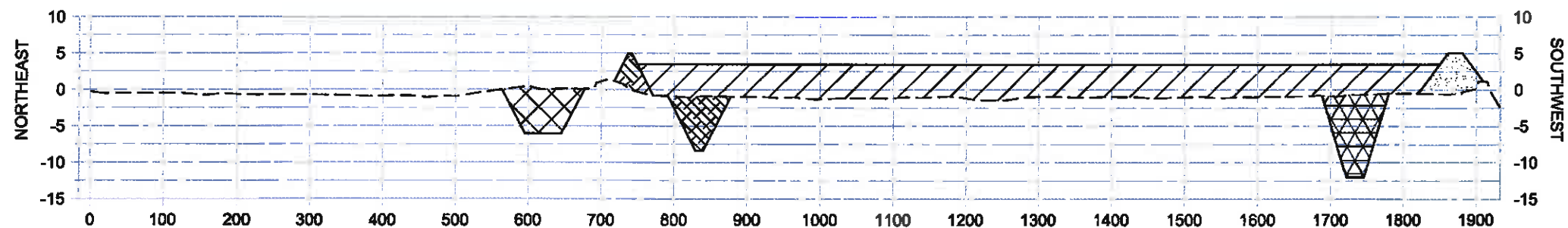
MARSH CREATION AREAS SECTIONS

DATE: OCTOBER 2013
 SHEET 35 OF 54

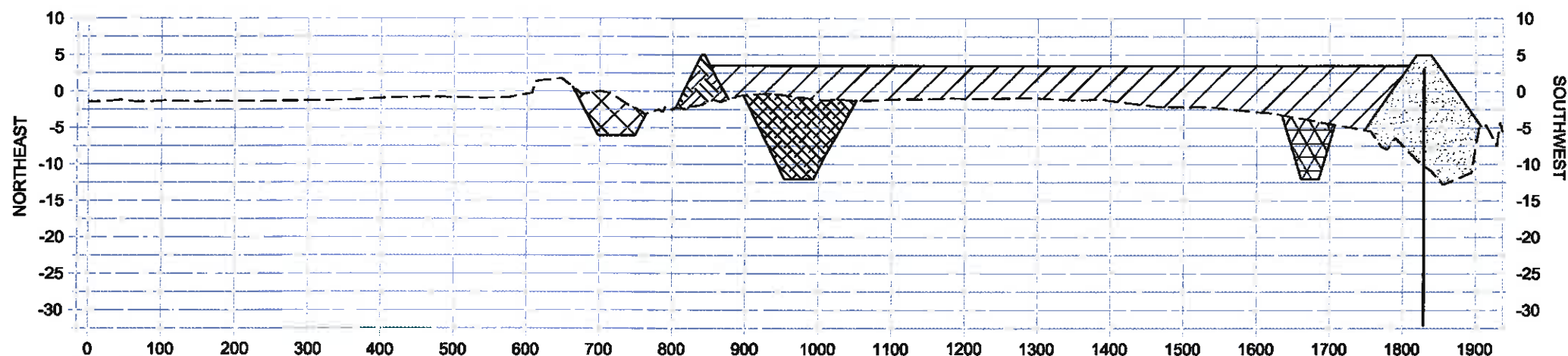




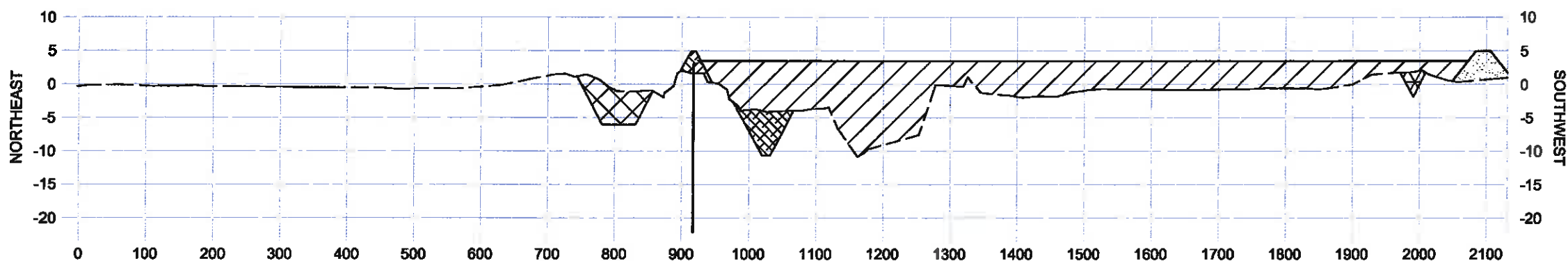
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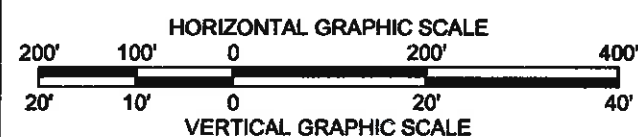
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60+00



65+00



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REV.	DATE	DESCRIPTION	BY

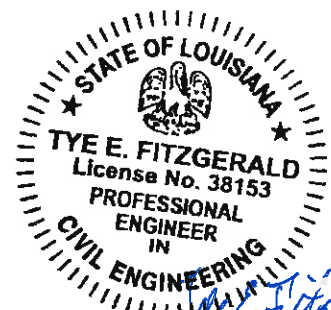
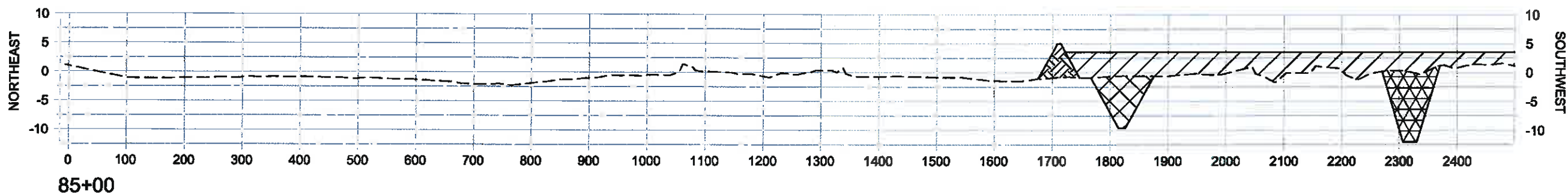
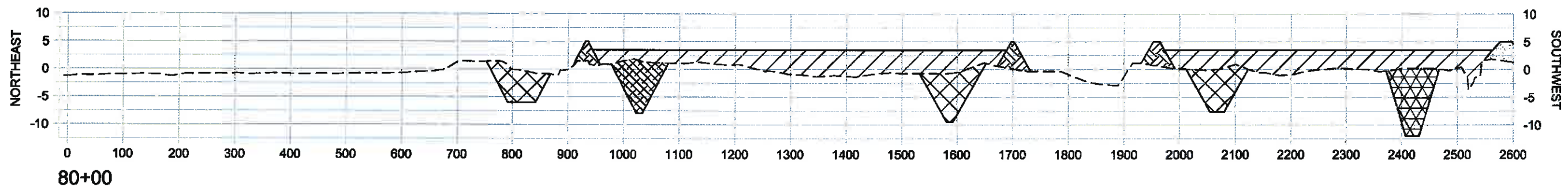
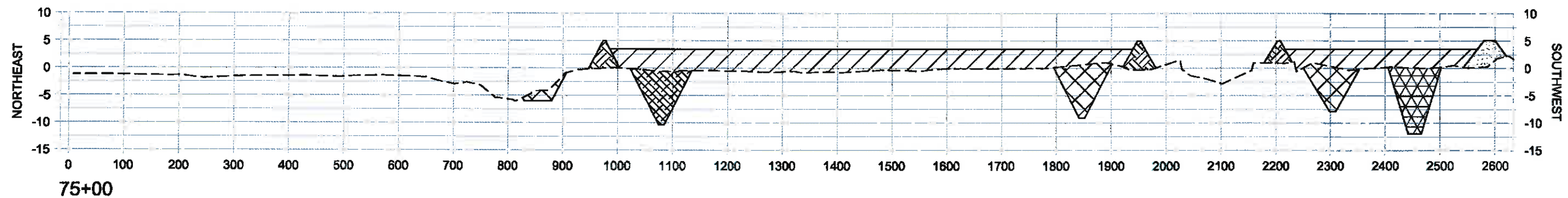
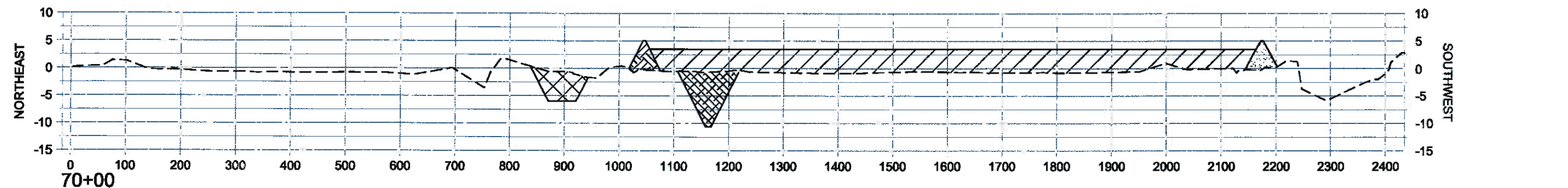
COASTAL PROTECTION AND RESTORATION AUTHORITY
450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

LEGEND	
	MARSH CREATION AREA
	EARTHEN RIDGE
	EARTHEN CONTAINMENT DIKE
	EARTHEN CONTAINMENT DIKE PRIMARY BORROW AREA
	EARTHEN CONTAINMENT DIKE SECONDARY BORROW AREA
	EARTHEN RIDGE SECONDARY BORROW AREA
	EXISTING GROUND
	SHEET PILE CLOSURE

GRAND LIARD MARSH AND RIDGE RESTORATION	MARSH CREATION AREAS SECTIONS
STATE PROJECT NUMBER: BA-68	
FEDERAL PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 36 OF 54

STATE OF LOUISIANA
★
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
ENGINEER
IN
CIVIL ENGINEERING
Tye E. Fitzgerald
10/08/13



LEGEND

- MARSH CREATION AREA
- EARTHEN RIDGE
- EARTHEN CONTAINMENT DIKE
- EARTHEN CONTAINMENT DIKE PRIMARY BORROW AREA
- EARTHEN CONTAINMENT DIKE SECONDARY BORROW AREA
- EARTHEN RIDGE SECONDARY BORROW AREA
- EXISTING GROUND

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COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

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DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION

STATE PROJECT NUMBER: BA-68

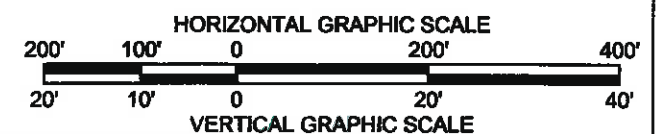
FEDERAL PROJECT NUMBER: BA-68

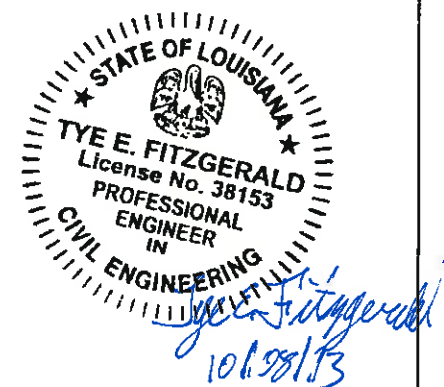
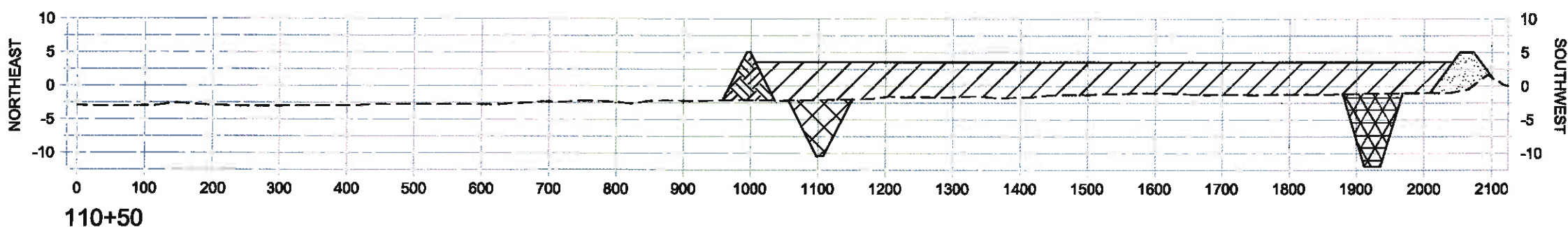
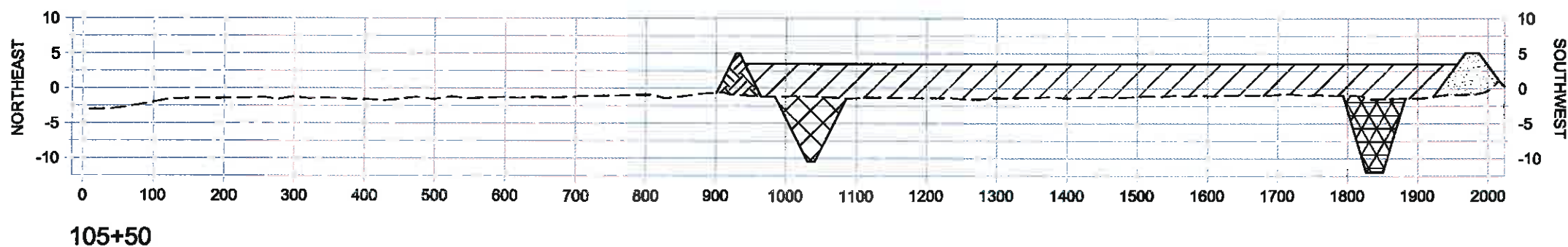
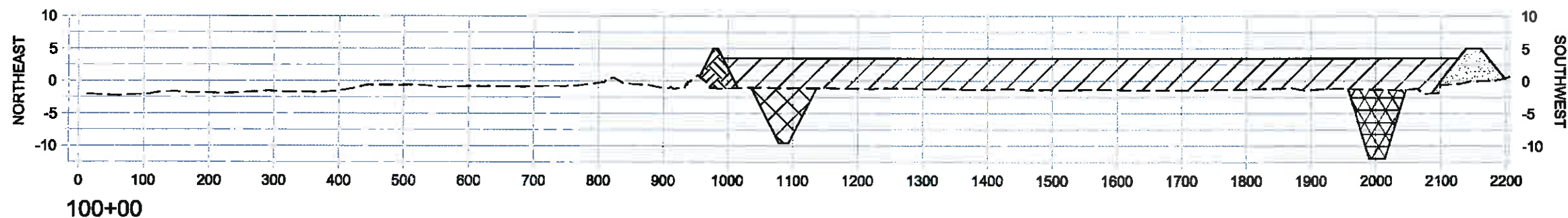
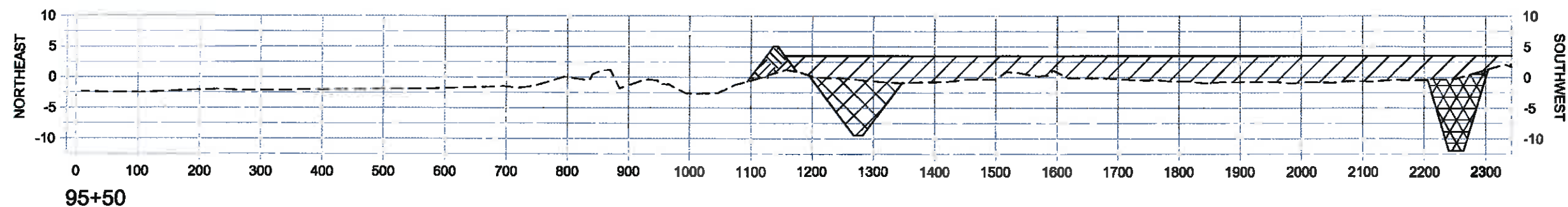
APPROVED BY: RUDOLPH SIMONEAUX, P.E.

MARSH CREATION AREAS SECTIONS

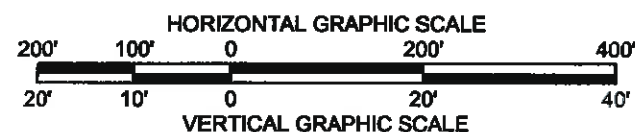
DATE: OCTOBER 2013

SHEET 37 OF 54



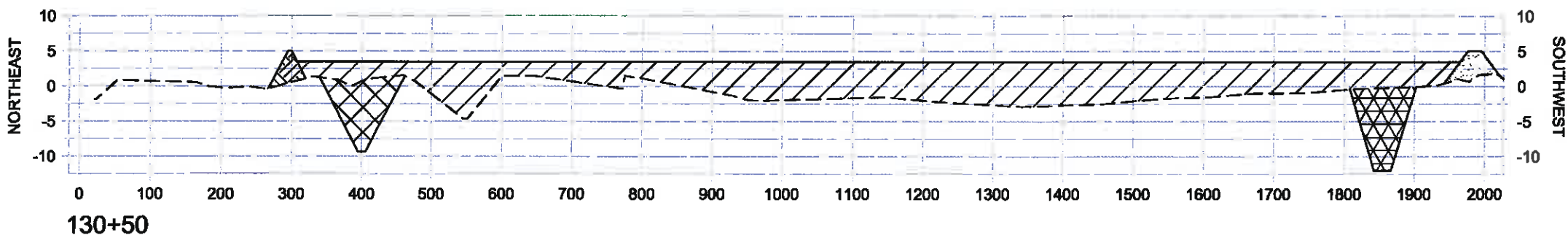
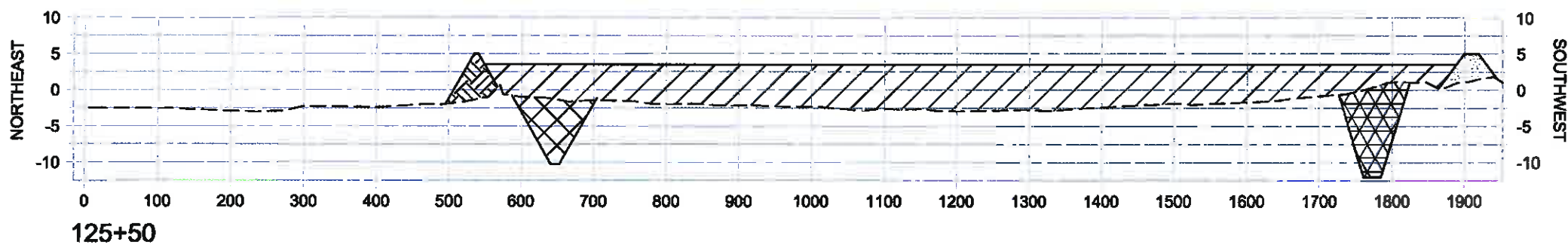
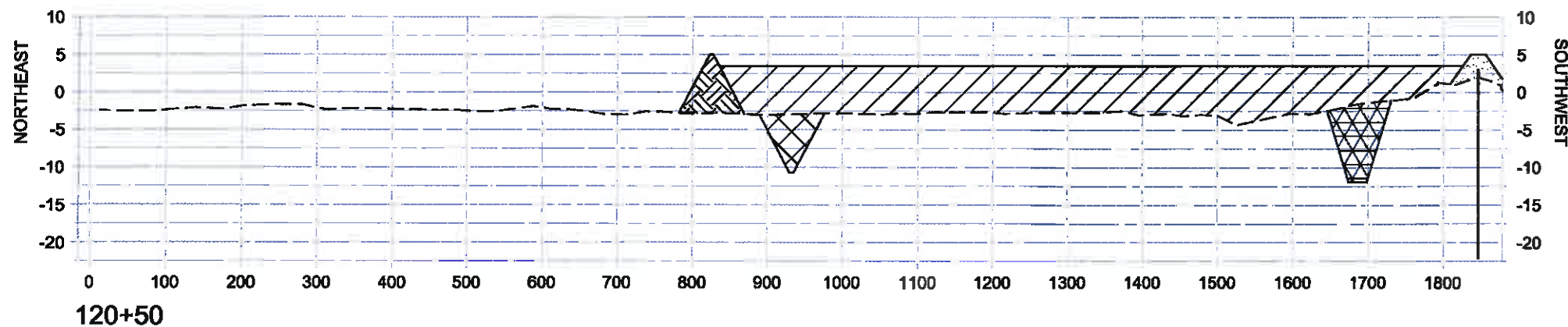
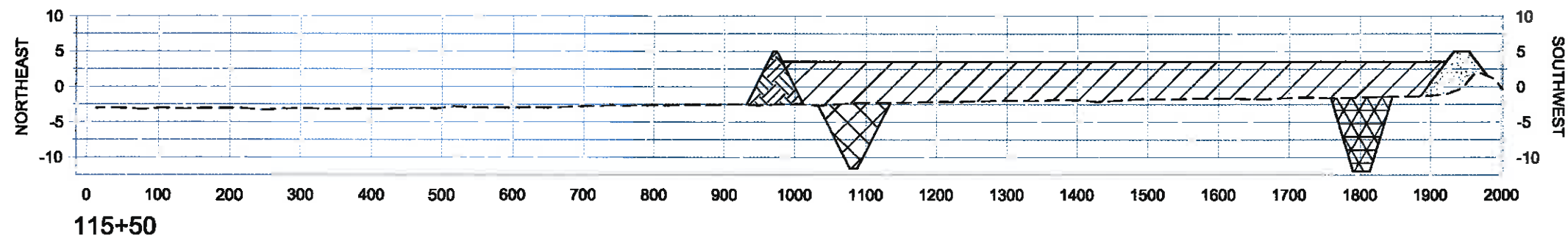


LEGEND	
	MARSH CREATION AREA
	EARTHEN RIDGE
	EARTHEN CONTAINMENT DIKE
	EARTHEN CONTAINMENT DIKE BORROW AREA
	EARTHEN RIDGE SECONDARY BORROW AREA
	EXISTING GROUND

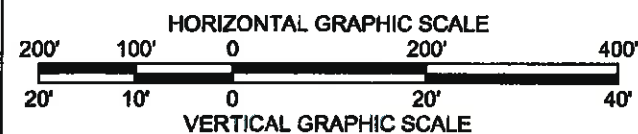


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				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREAS SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 38 OF 54
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	



LEGEND	
	MARSH CREATION AREA
	EARTHEN RIDGE
	EARTHEN CONTAINMENT DIKE
	EARTHEN CONTAINMENT DIKE BORROW AREA
	EARTHEN RIDGE SECONDARY BORROW AREA
	EXISTING GROUND
	SHEET PILE CLOSURE



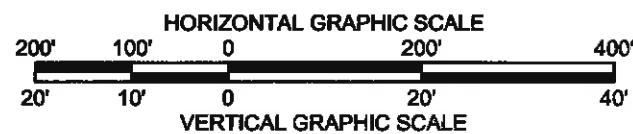
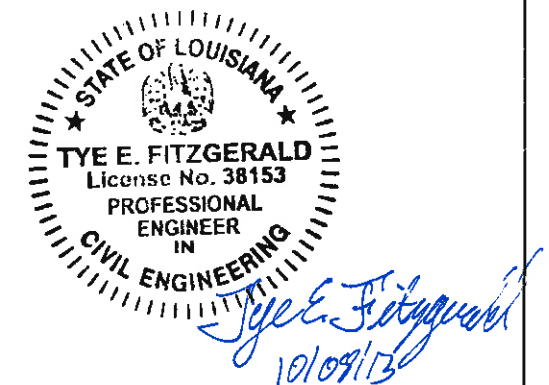
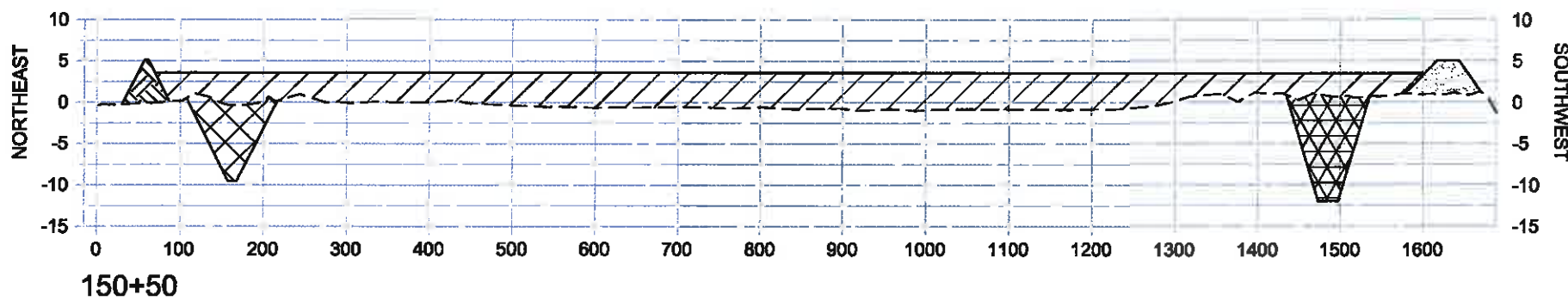
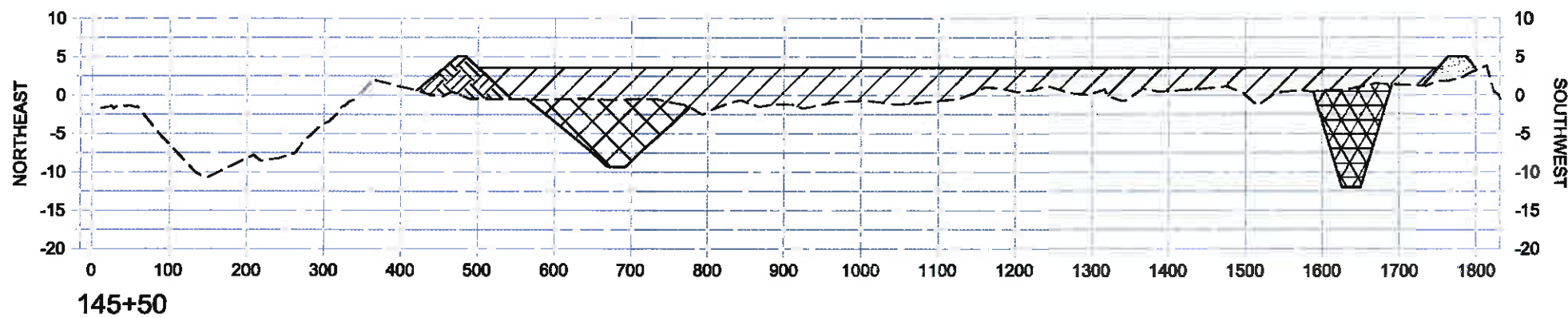
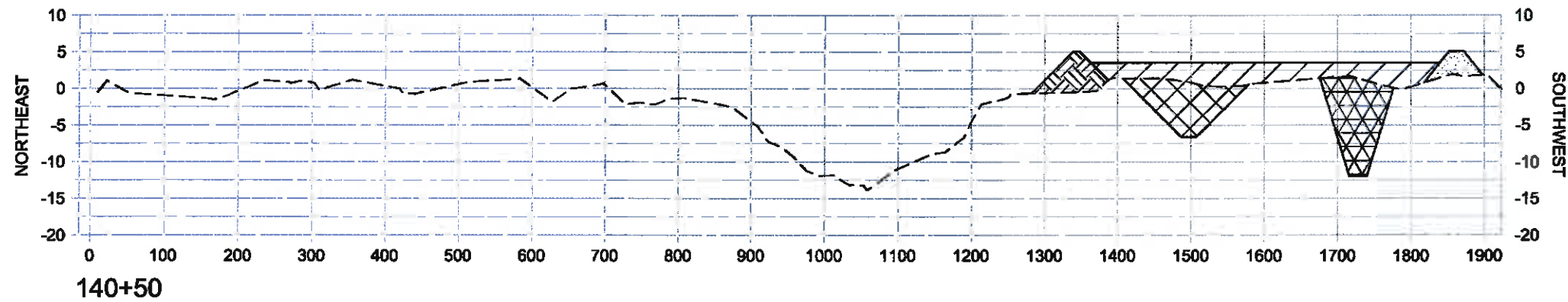
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REV.	DATE	DESCRIPTION	BY

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

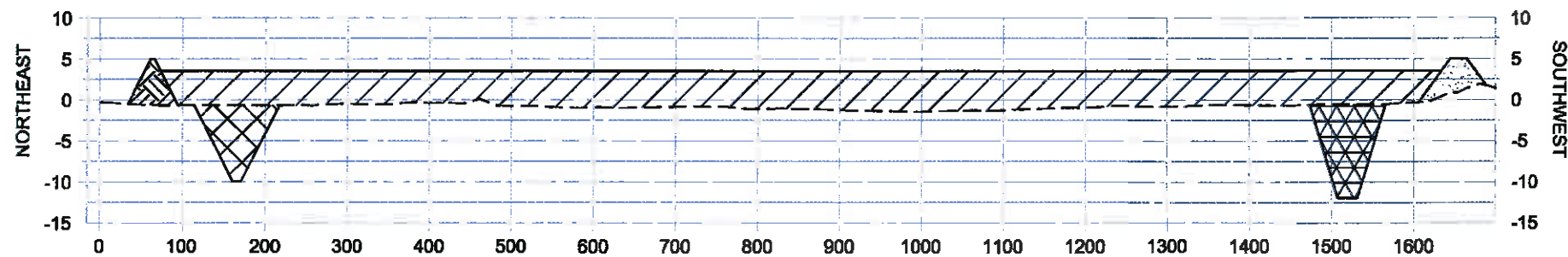
DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREAS SECTIONS
STATE PROJECT NUMBER: BA-68		
FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 39 OF 54

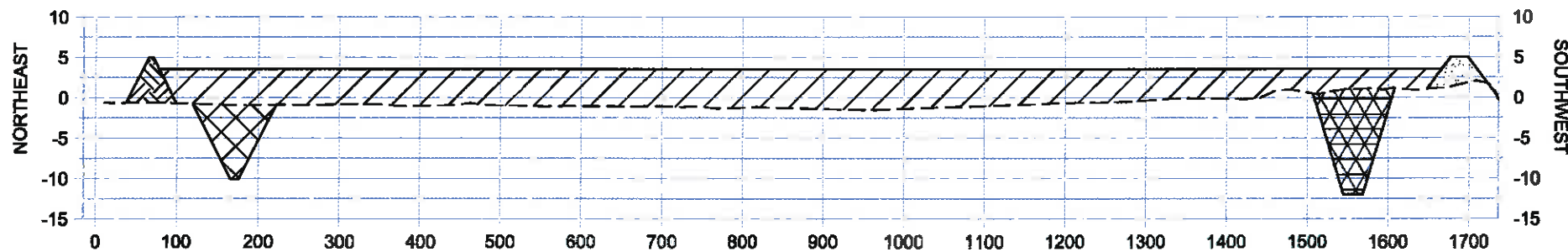


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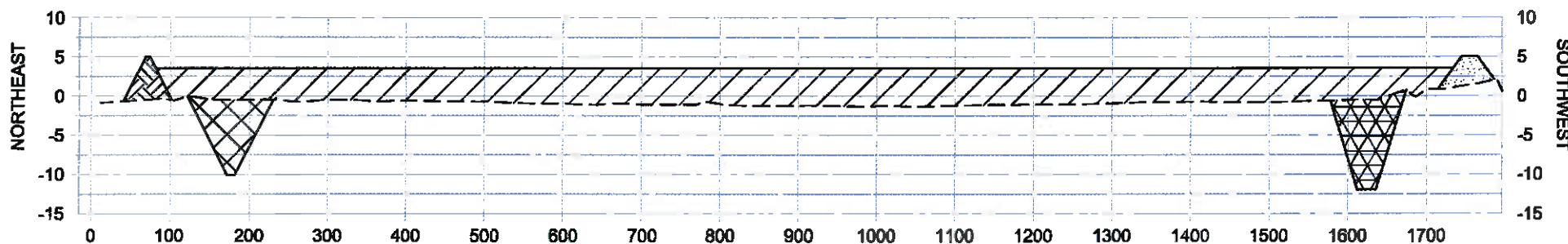
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						STATE PROJECT NUMBER: BA-68			
						FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY			DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 40 OF 54



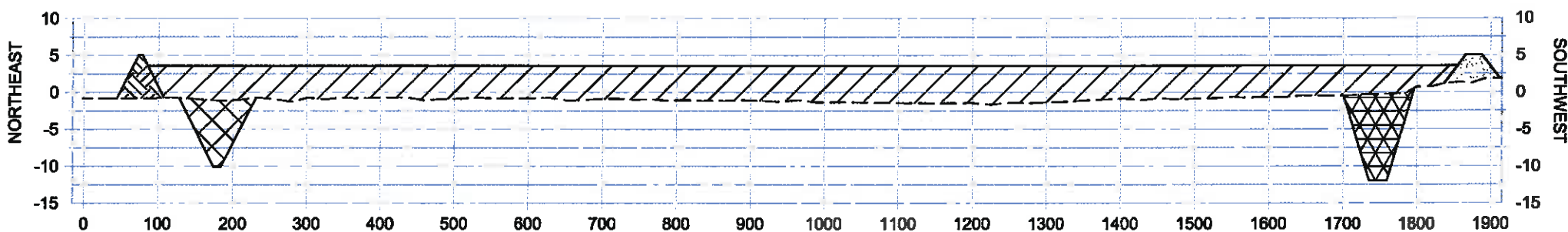
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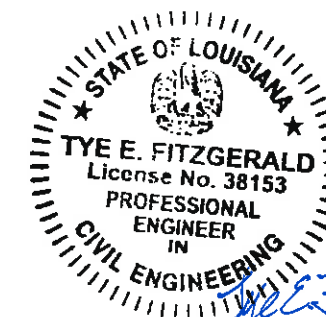
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165+50

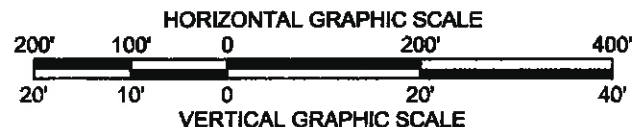


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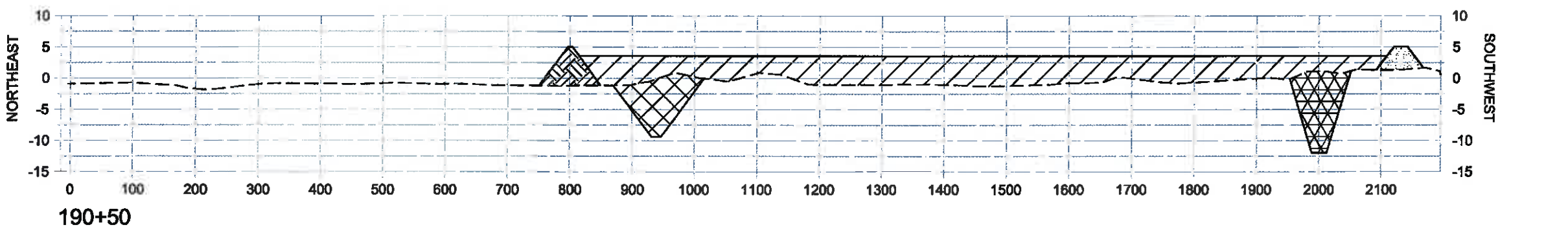
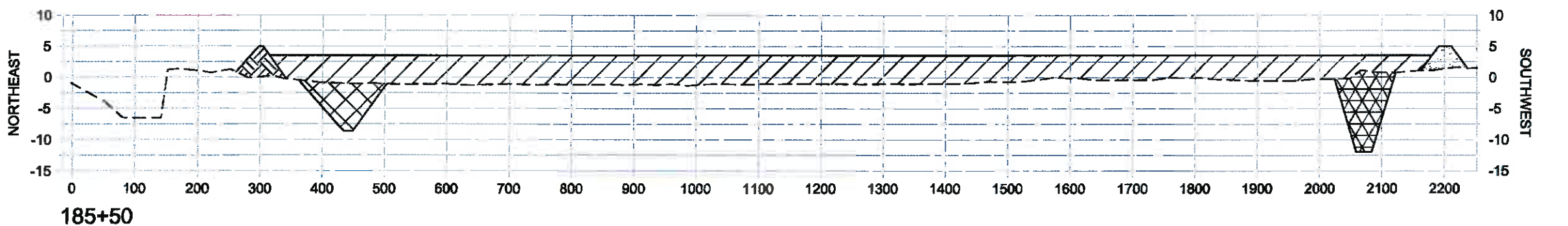
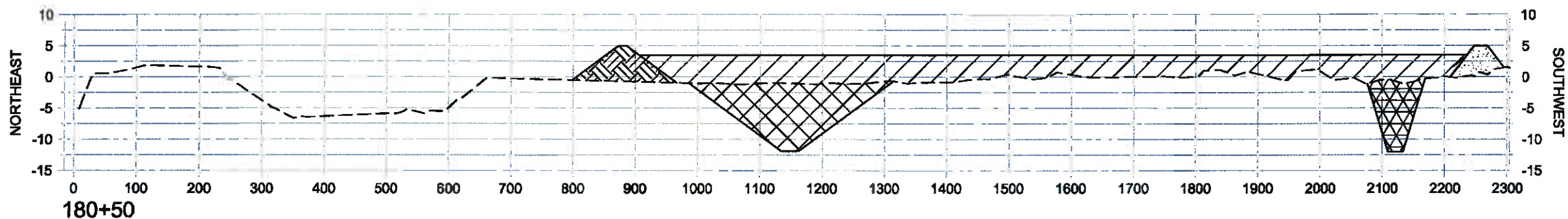
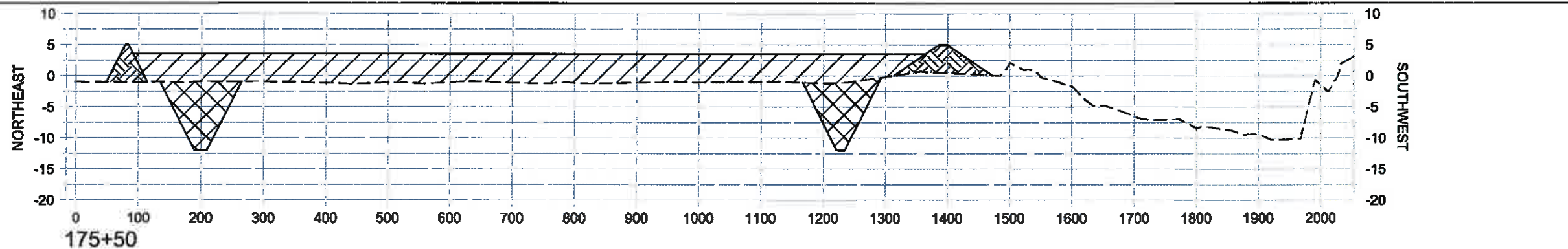
Tye E. Fitzgerald
10/09/13

LEGEND	
	MARSH CREATION AREA
	EARTHEN RIDGE
	EARTHEN CONTAINMENT DIKE
	EARTHEN CONTAINMENT DIKE BORROW AREA
	EARTHEN RIDGE SECONDARY BORROW AREA
	EXISTING GROUND



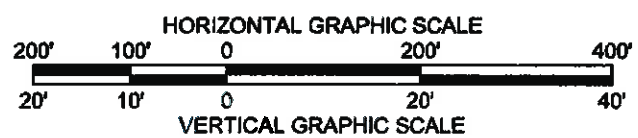
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				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		MARSH CREATION AREAS SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 41 OF 54
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	



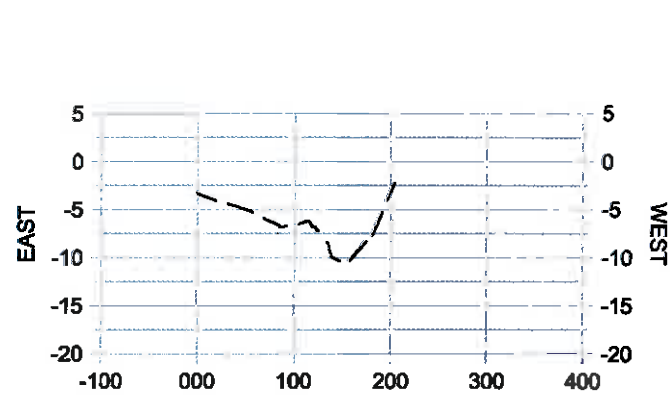
STATE OF LOUISIANA
 TYE E. FITZGERALD
 License No. 38153
 PROFESSIONAL
 ENGINEER
 IN
 CIVIL ENGINEERING
Tye E. Fitzgerald
10/08/13

LEGEND	
	MARSH CREATION AREA
	EARTHEN RIDGE
	EARTHEN CONTAINMENT DIKE
	EARTHEN CONTAINMENT DIKE BORROW AREA
	EARTHEN RIDGE SECONDARY BORROW AREA
	EXISTING GROUND

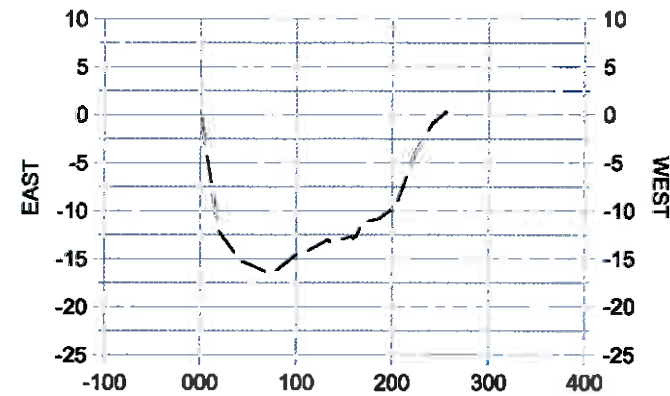


NOTE:
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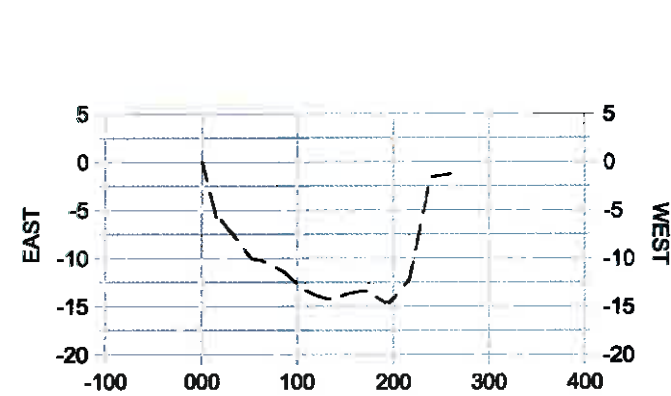
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					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 42 OF 54
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	



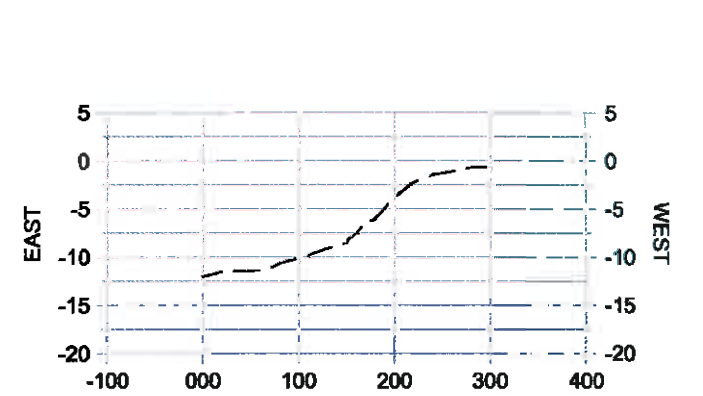
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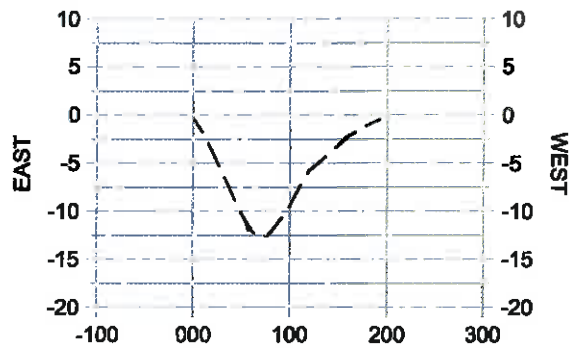
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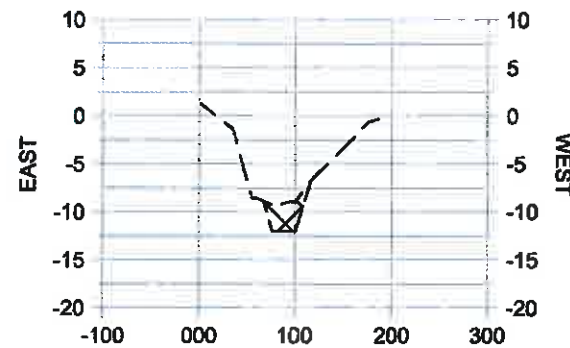
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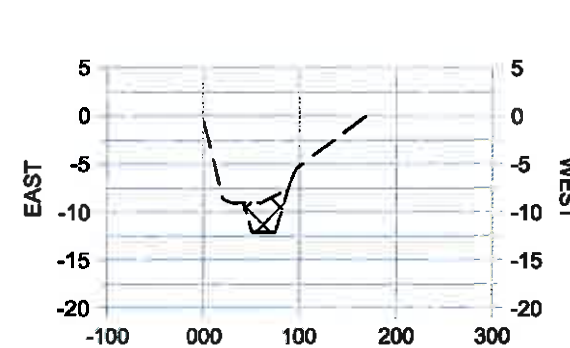
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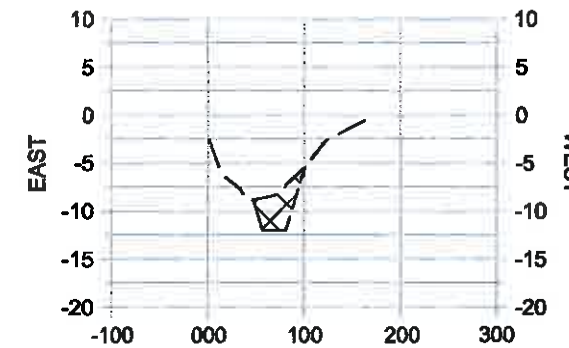
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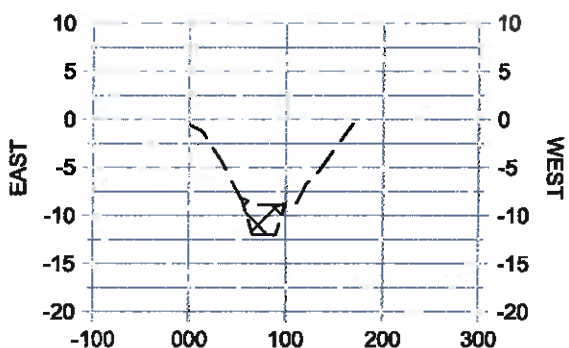
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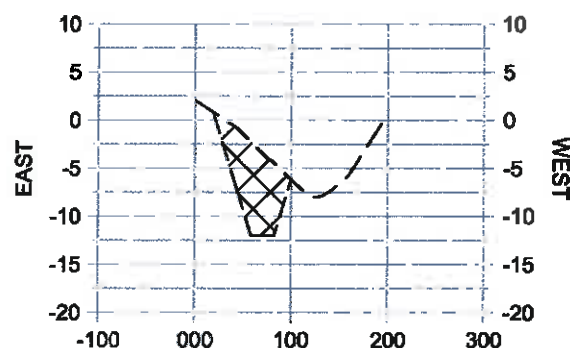
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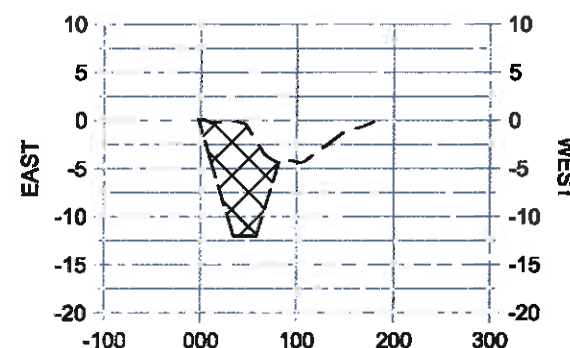
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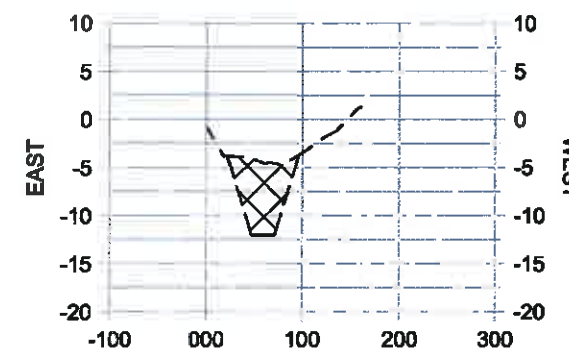
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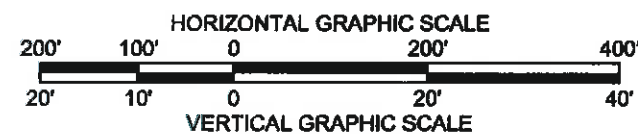
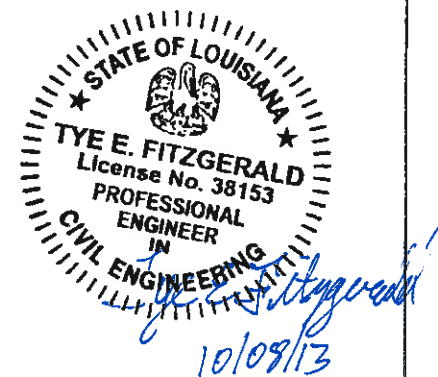
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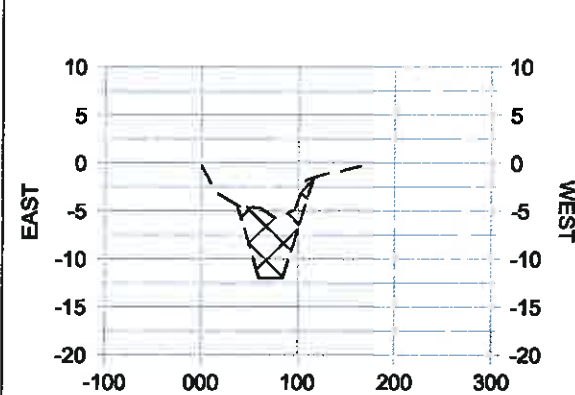
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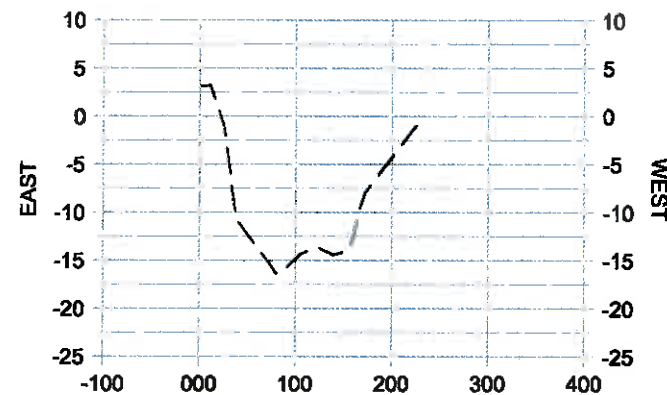
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					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 43 OF 54
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.		

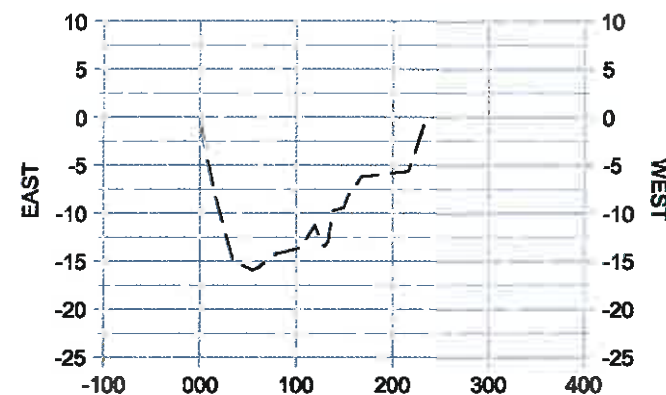
LEGEND	
	FLOTATION/BORROW AREA
	EXISTING GROUND



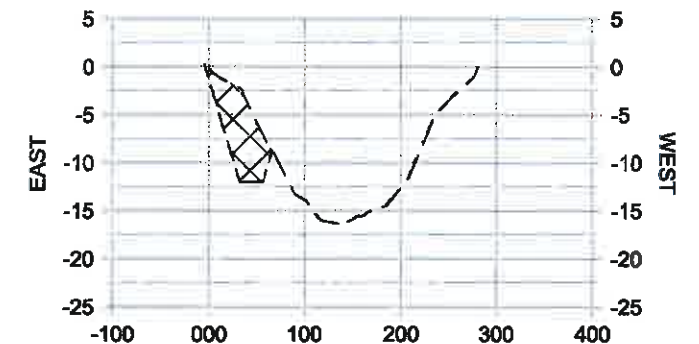
BAYOU TRANSECT 18



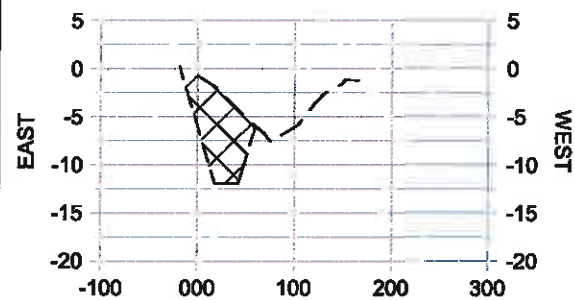
BAYOU TRANSECT 19



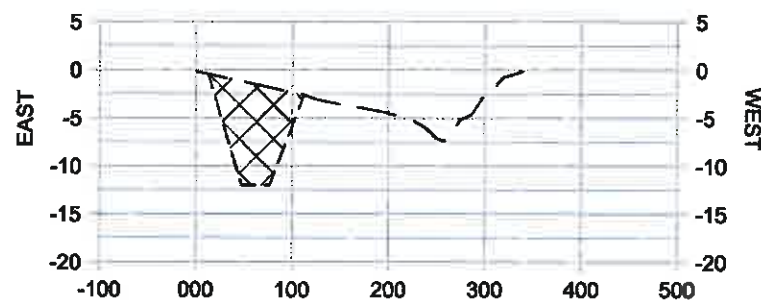
BAYOU TRANSECT 20



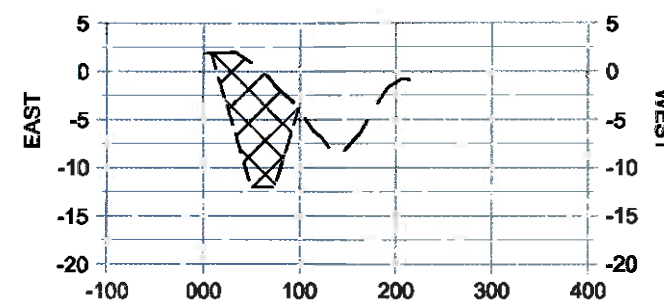
BAYOU TRANSECT 21



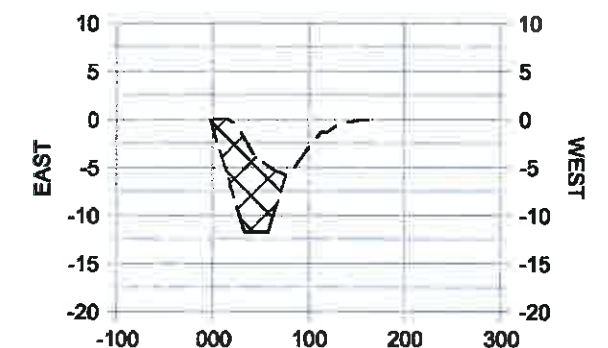
BAYOU TRANSECT 22



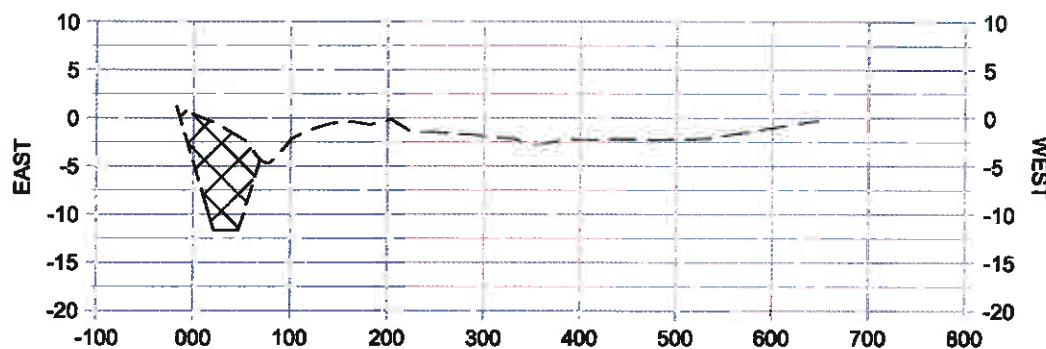
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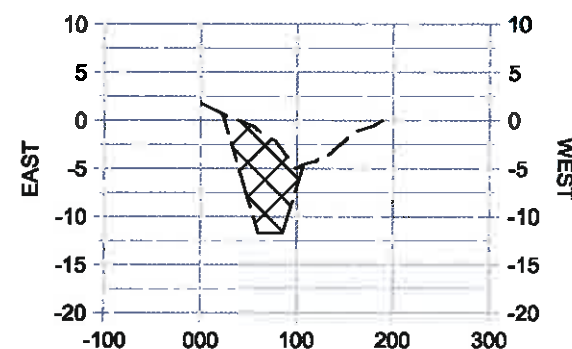
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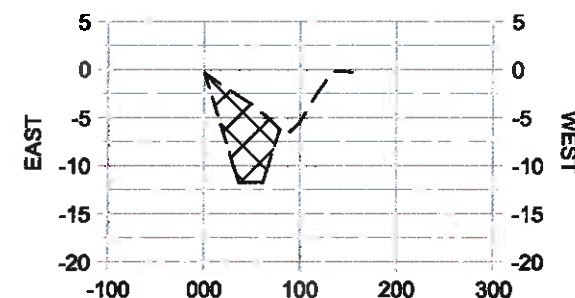
BAYOU TRANSECT 25



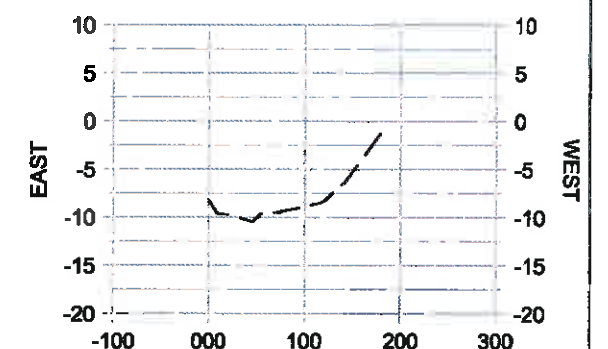
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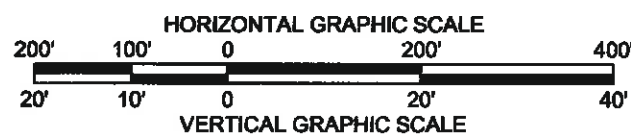
BAYOU TRANSECT 27



BAYOU TRANSECT 28



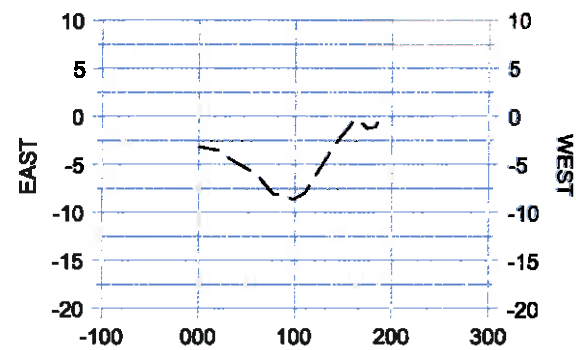
BAYOU TRANSECT 29



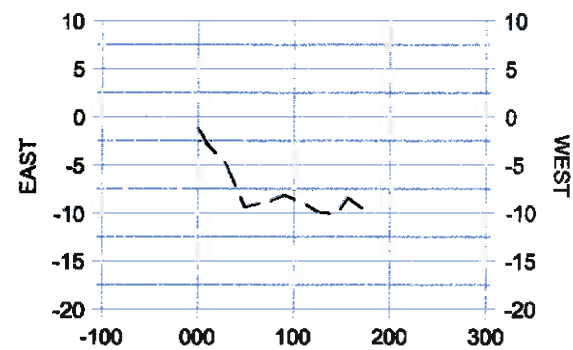
NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGEND	
	FLOTATION/BORROW AREA
	EXISTING GROUND

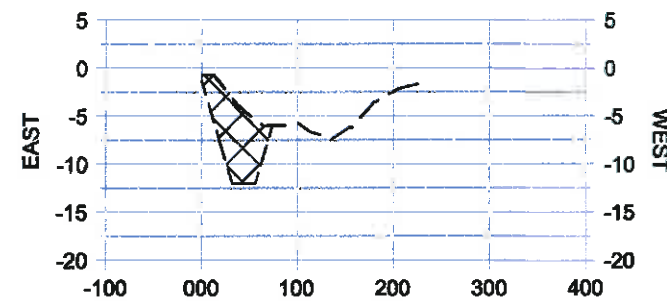
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		BAYOU SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 44 OF 54
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	



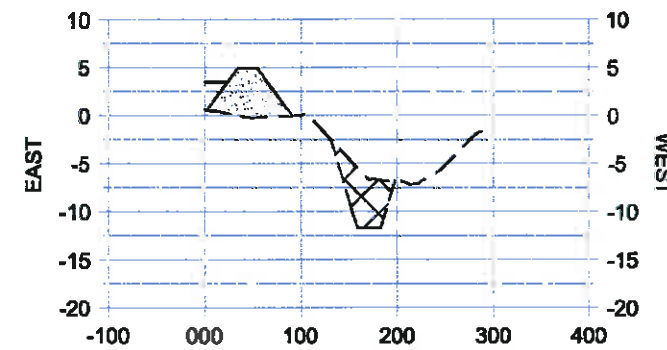
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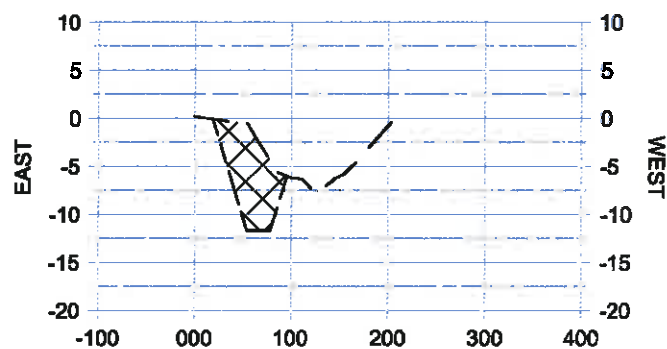
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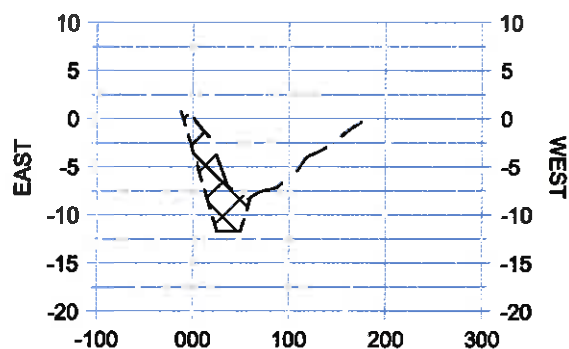
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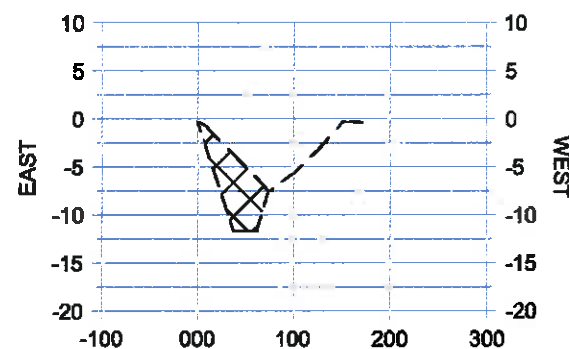
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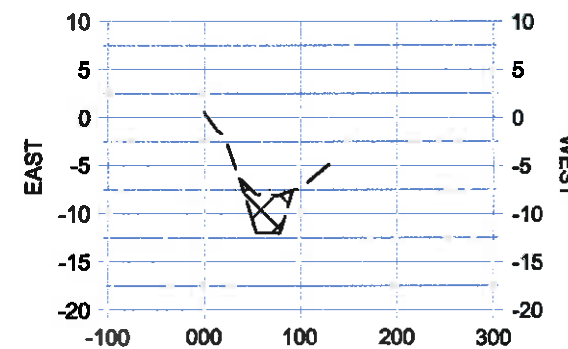
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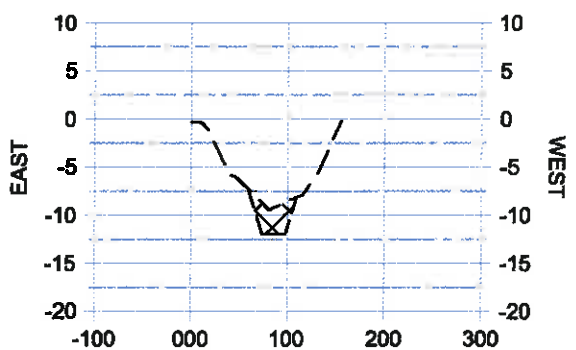
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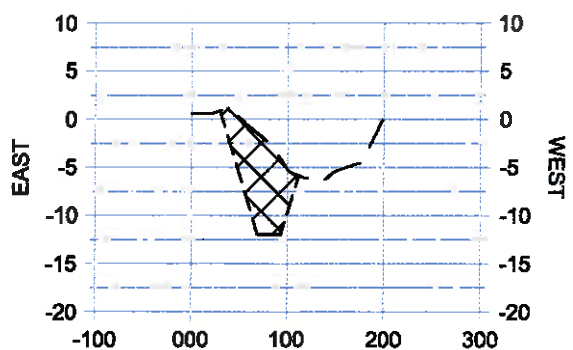
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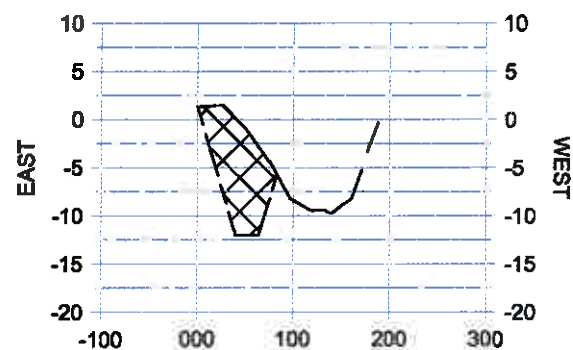
BAYOU TRANSECT 37



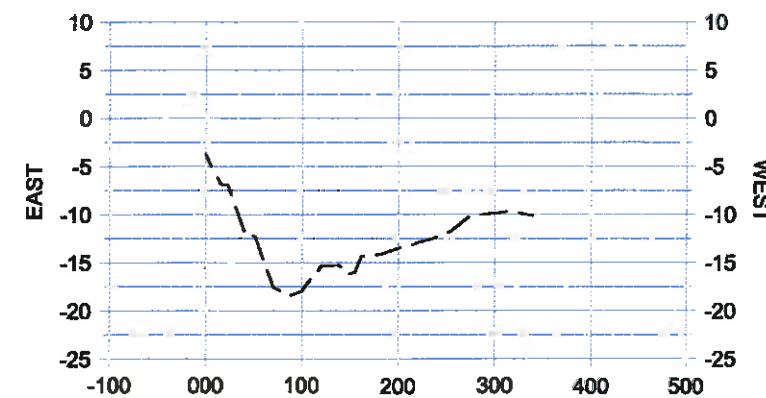
BAYOU TRANSECT 38



BAYOU TRANSECT 39

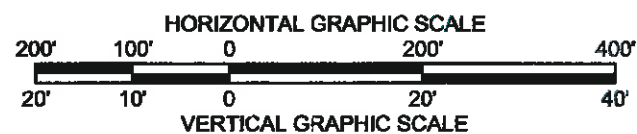


BAYOU TRANSECT 40



BAYOU TRANSECT 41

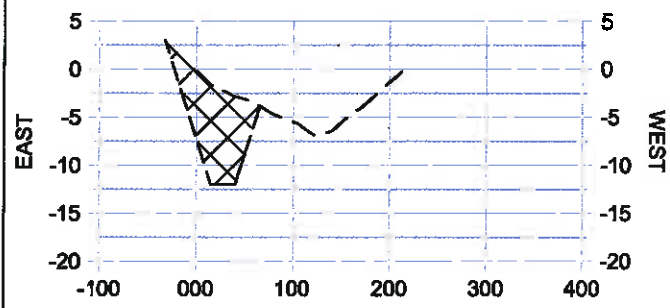
STATE OF LOUISIANA
 TYE E. FITZGERALD
 License No. 38153
 PROFESSIONAL
 ENGINEER
 IN
 CIVIL ENGINEERING
 10/09/13



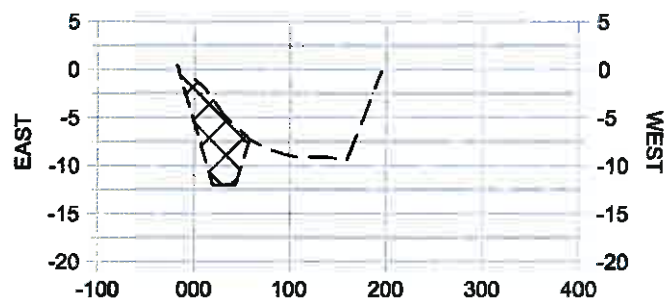
NOTE:
 ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGEND	
	FLOTATION/BORROW AREA
	EXISTING GROUND

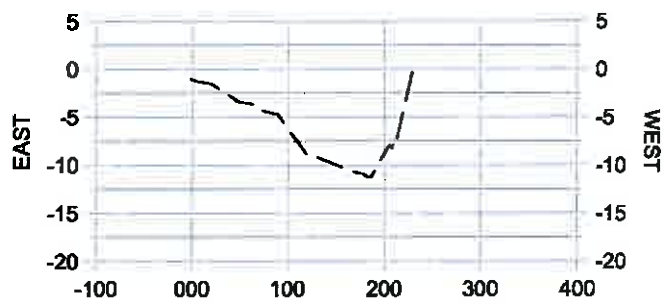
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		BAYOU SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
					APPROVED BY: RUDOLPH SIMONBAUX, P.E.		SHEET 45 OF 54
REV.	DATE	DESCRIPTION	BY	DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.		



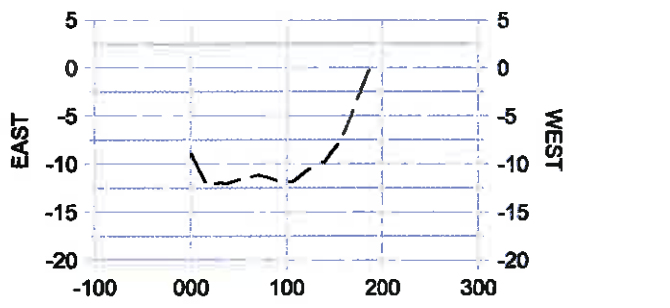
BAYOU TRANSECT 42



BAYOU TRANSECT 43

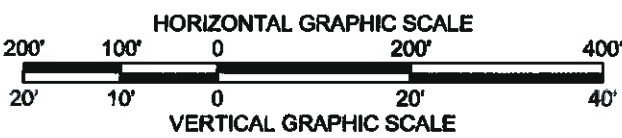


BAYOU TRANSECT 44



BAYOU TRANSECT 45

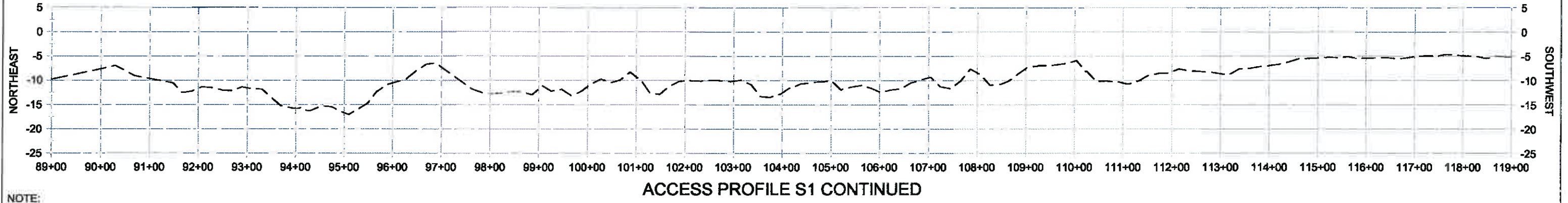
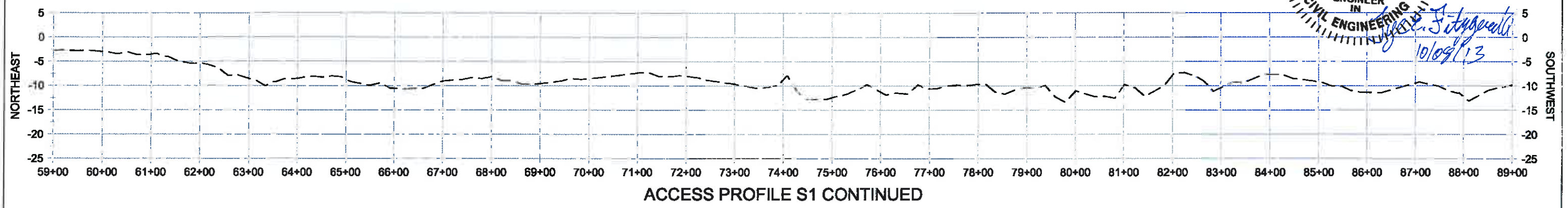
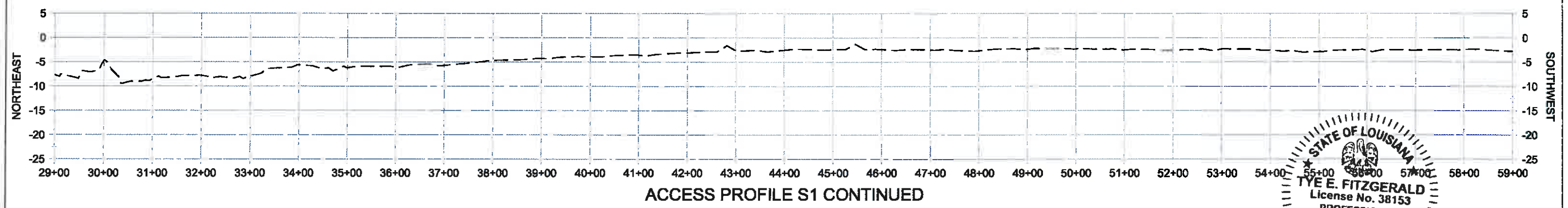
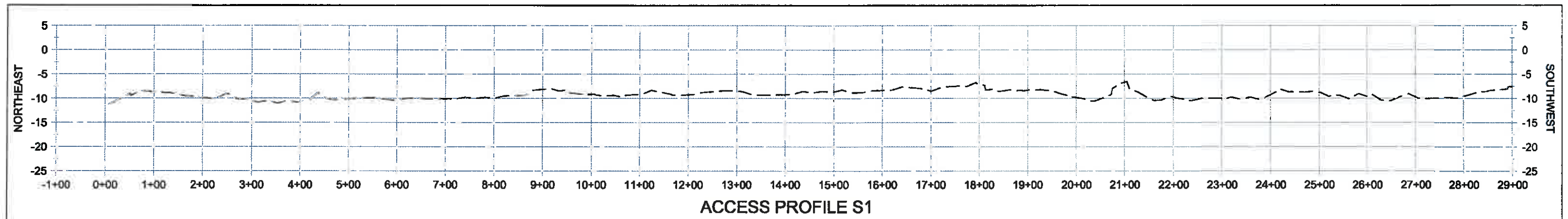
STATE OF LOUISIANA
 TYE E. FITZGERALD
 License No. 38153
 PROFESSIONAL
 ENGINEER
 IN
 CIVIL ENGINEERING
Tye E. Fitzgerald
 10/09/13



NOTE:
 ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGEND	
	FLOTATION/BORROW AREA
	EXISTING GROUND

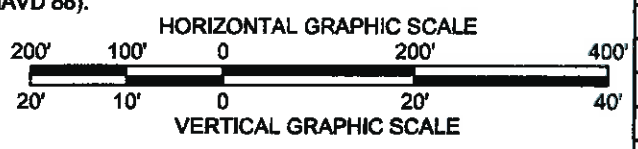
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		BAYOU SECTIONS	
					STATE PROJECT NUMBER: BA-68			
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 46 OF 54



STATE OF LOUISIANA
 TYE E. FITZGERALD
 License No. 38153
 PROFESSIONAL
 ENGINEER
 IN
 CIVIL ENGINEERING
Tye E. Fitzgerald
 10/09/13

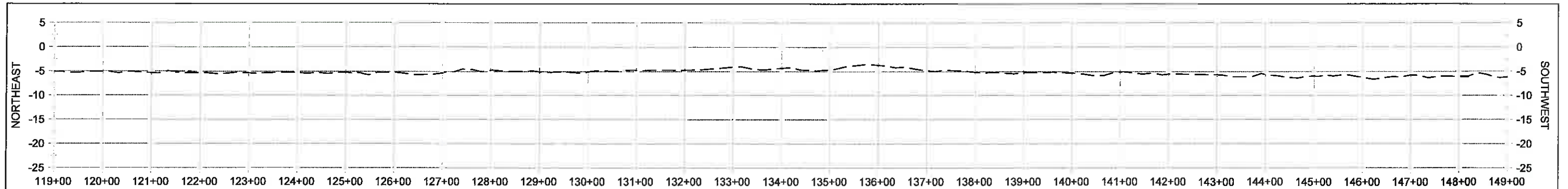
NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH
AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGEND	
---	EXISTING GROUND

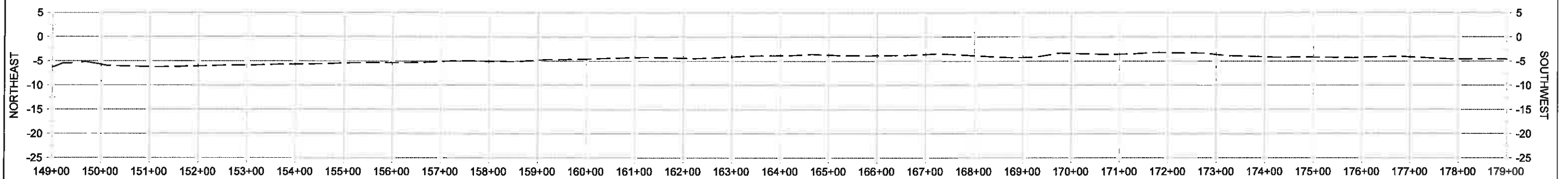


REV.	DATE	DESCRIPTION	BY

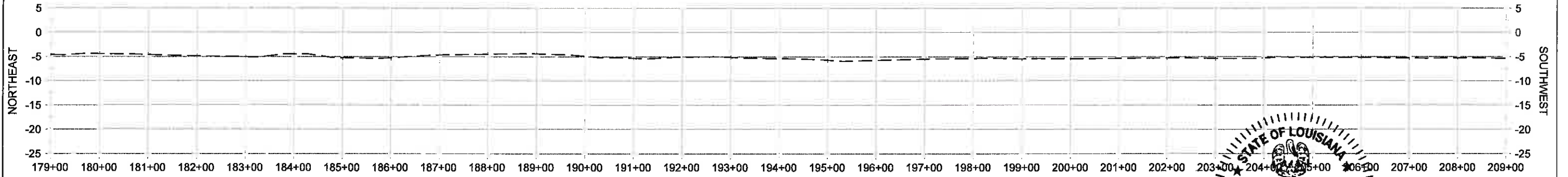
COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION	CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SECTIONS
		STATE PROJECT NUMBER: BA-68	
		FEDERAL PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 47 OF 54



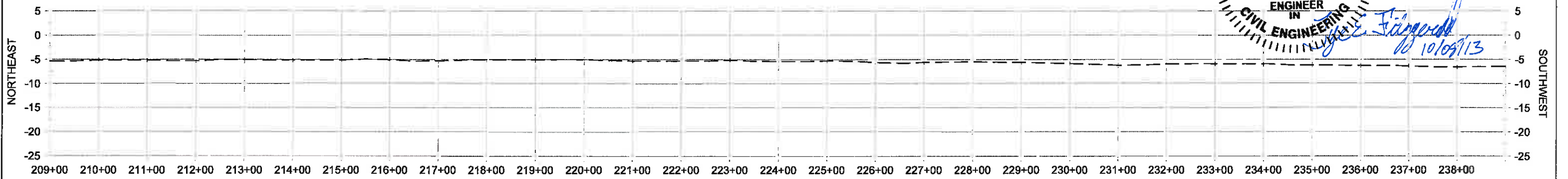
ACCESS PROFILE S1 CONTINUED



ACCESS PROFILE S1 CONTINUED



ACCESS PROFILE S1 CONTINUED

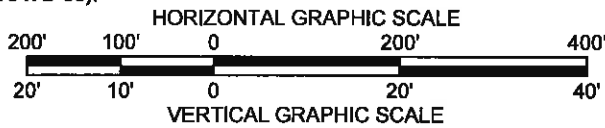


ACCESS PROFILE S1 CONTINUED

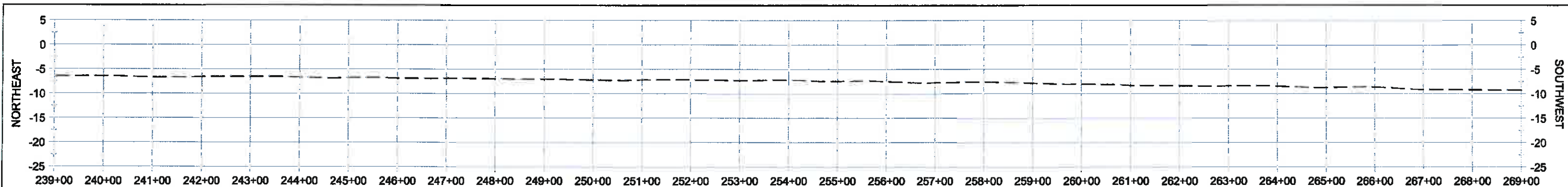
STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
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IN
CIVIL ENGINEERING
10/09/13

NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH
AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

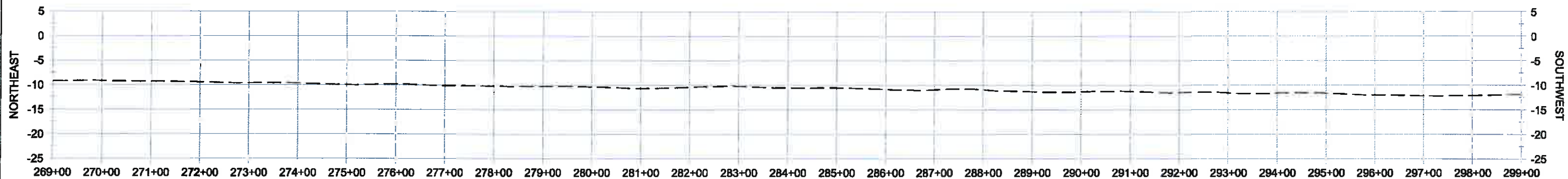
LEGEND	
---	EXISTING GROUND



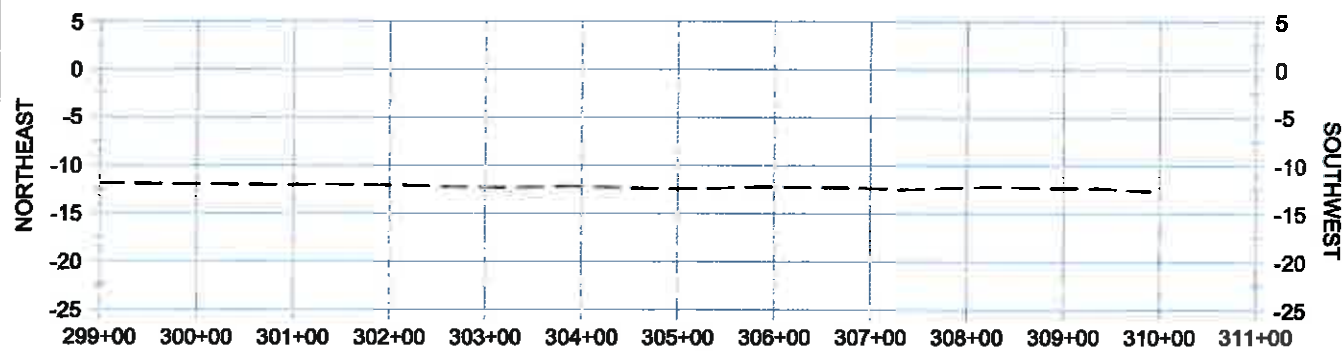
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION		CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SECTIONS
						STATE PROJECT NUMBER: BA-68		
						FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY			DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



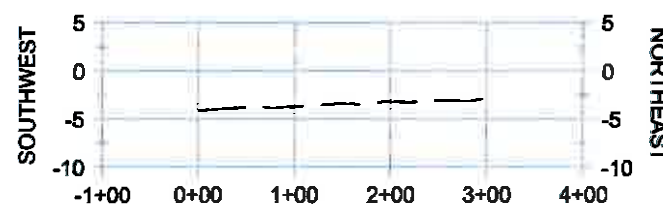
ACCESS PROFILE S1 CONTINUED



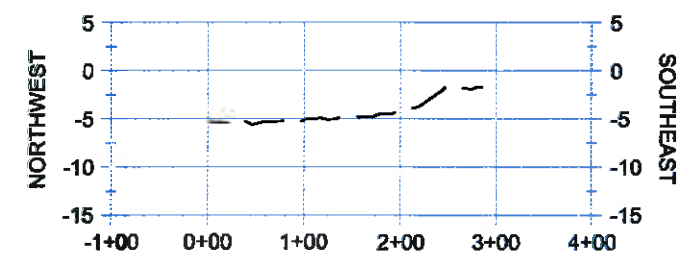
ACCESS PROFILE S1 CONTINUED



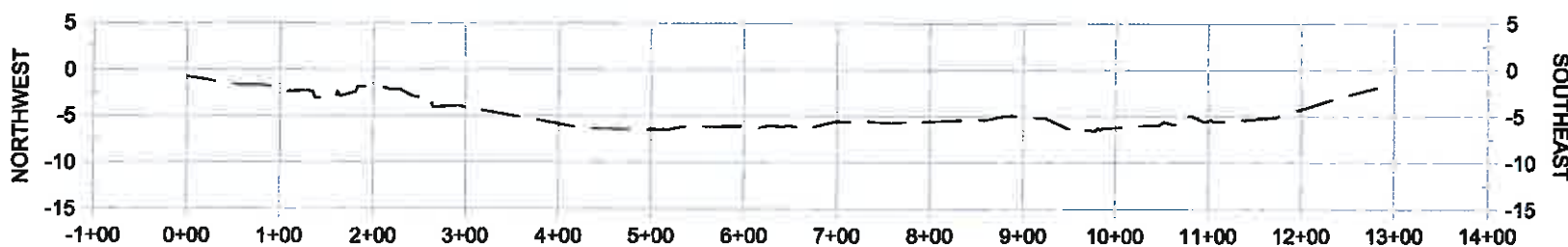
ACCESS PROFILE S1 CONTINUED



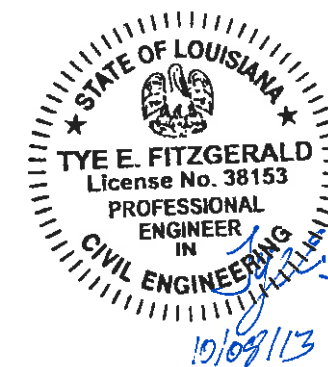
S2 PROFILE



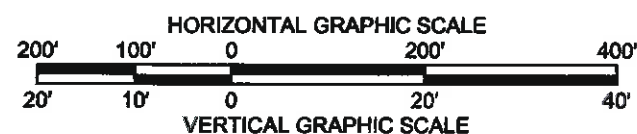
S3 PROFILE



S4 PROFILE

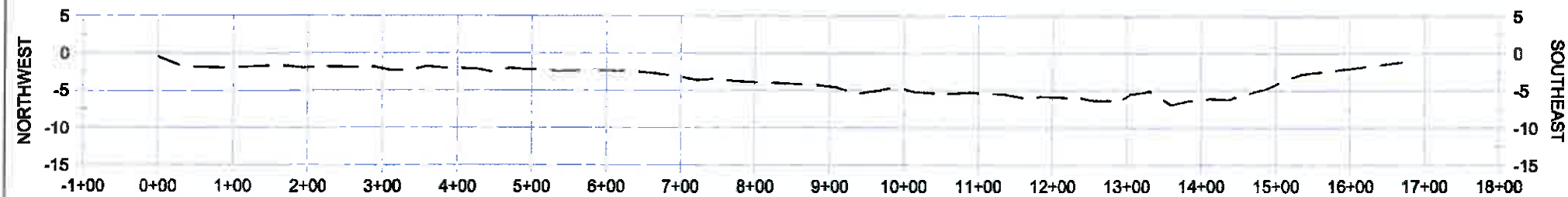


LEGEND
--- EXISTING GROUND

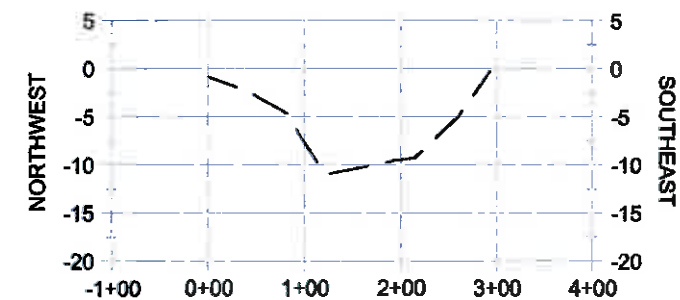


NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

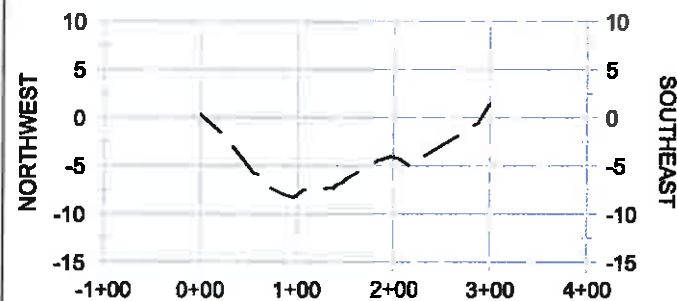
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SECTIONS	
					STATE PROJECT NUMBER: BA-68			
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 49 OF 54



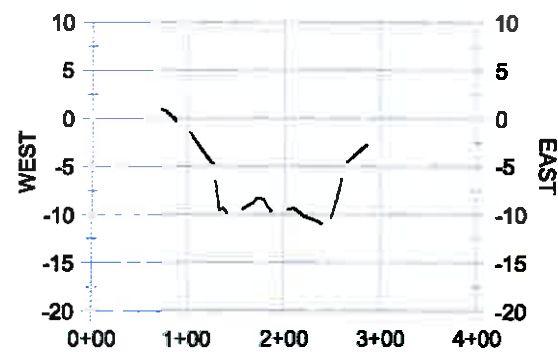
S5 PROFILE



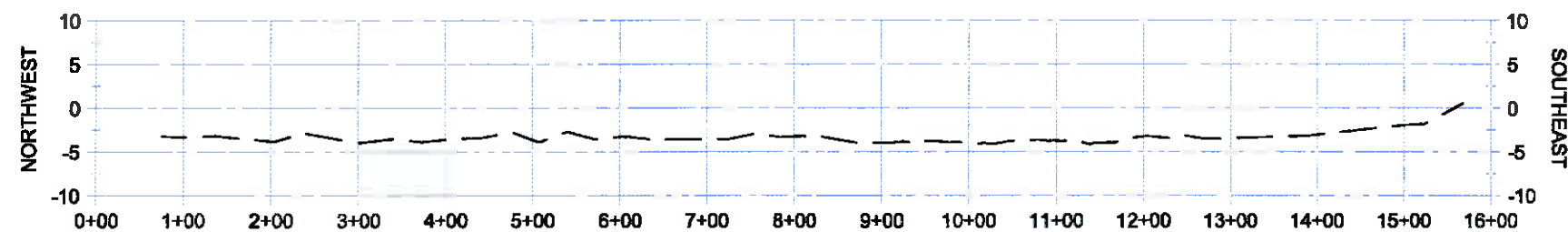
S6 PROFILE



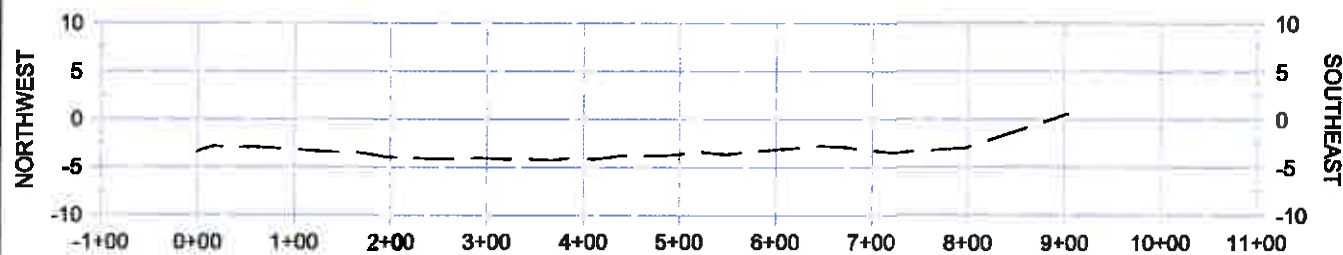
S7 PROFILE



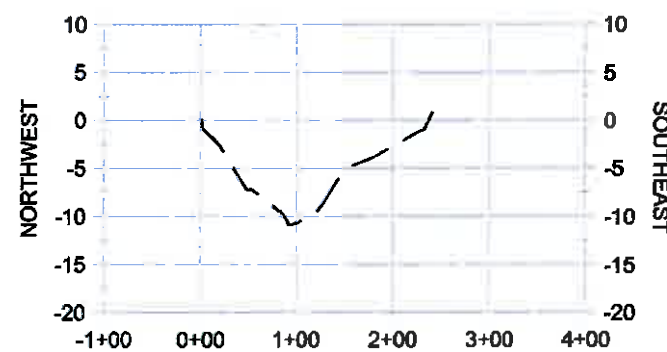
S8 PROFILE



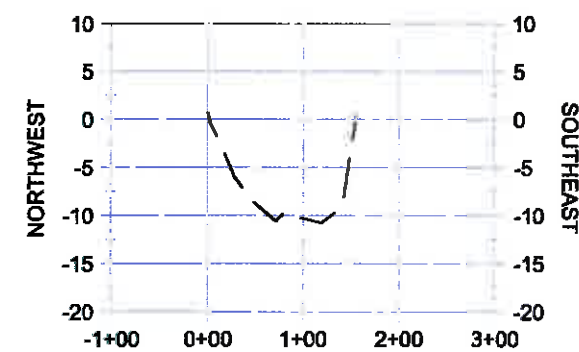
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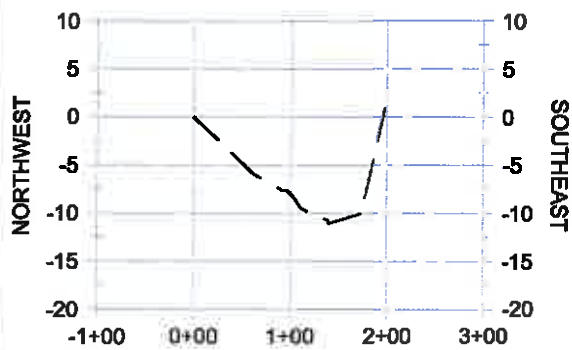
S10 PROFILE



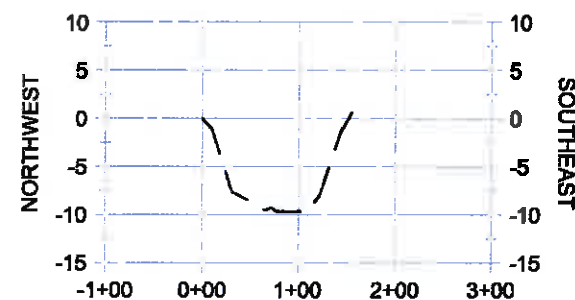
S11 PROFILE



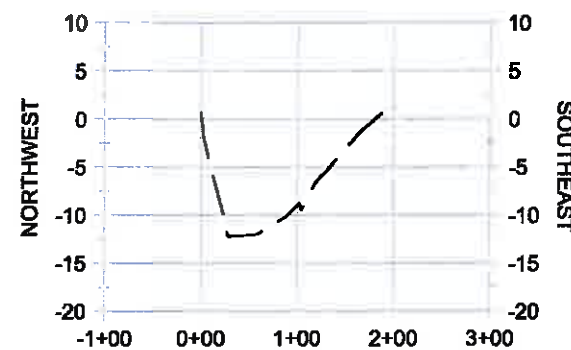
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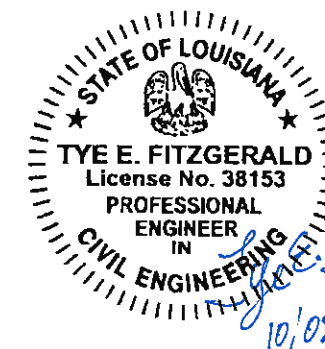
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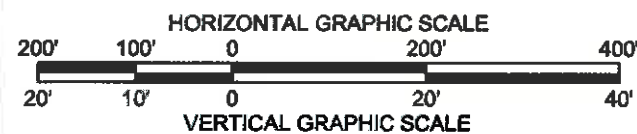
S14 PROFILE



S15 PROFILE

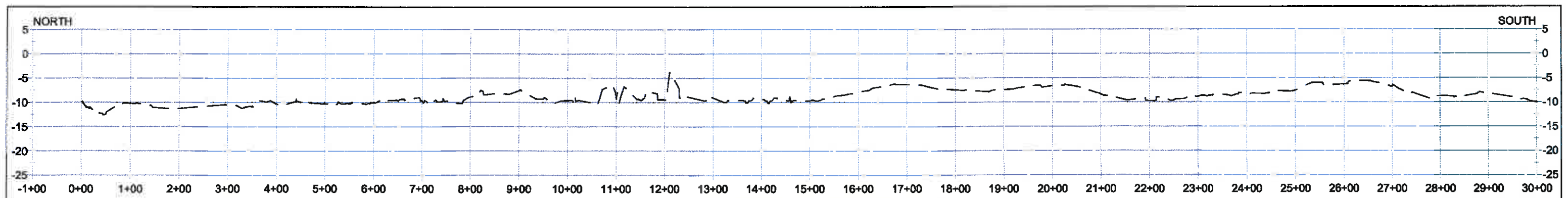


LEGEND
--- EXISTING GROUND

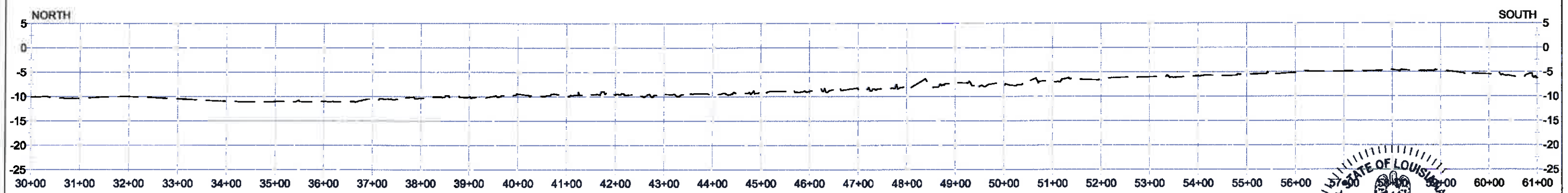


NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

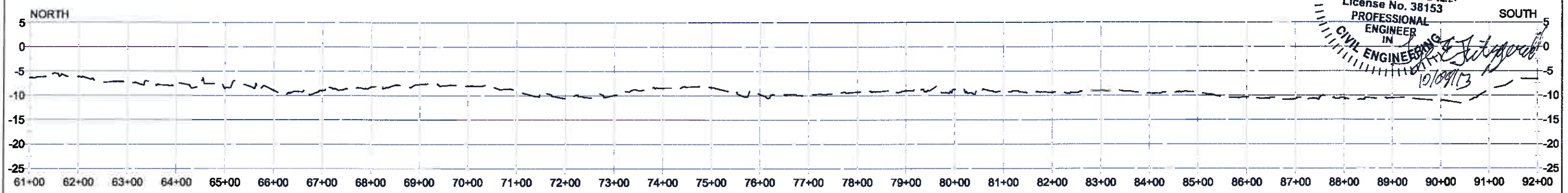
				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	GRAND LIARD MARSH AND RIDGE RESTORATION		CONSTRUCTION & DREDGE DISCHARGE LINE ACCESS CHANNEL SECTIONS
					STATE PROJECT NUMBER: BA-68		
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.



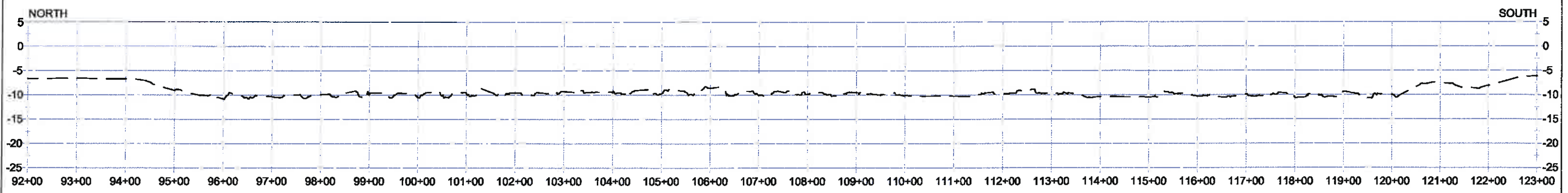
EMPIRE WATERWAY ACCESS PROFILE



EMPIRE WATERWAY ACCESS PROFILE CONTINUED



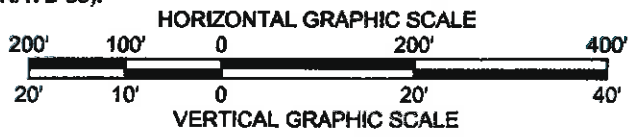
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



EMPIRE WATERWAY ACCESS PROFILE CONTINUED

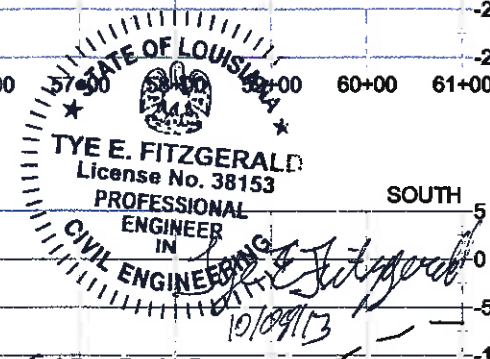
NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH
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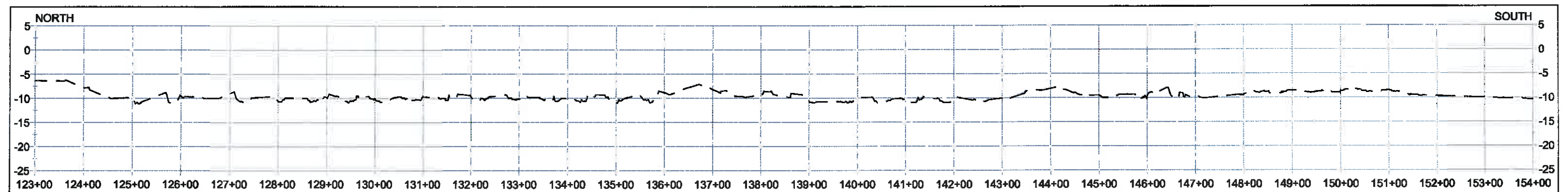
LEGEND	
---	EXISTING GROUND



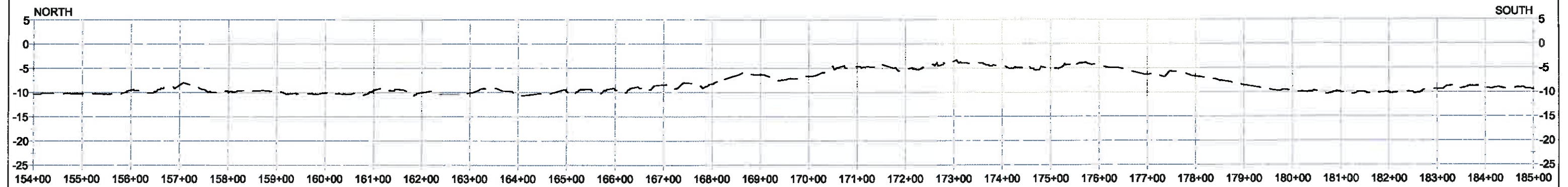
REV.	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION		EMPIRE WATERWAY ACCESS PROFILE
		STATE PROJECT NUMBER: BA-68		
				FEDERAL PROJECT NUMBER: BA-68
DRAWN BY: KRISTI CANTU		DESIGNED BY: TYE FITZGERALD, P.E.		APPROVED BY: RUDOLPH SIMONEAUX, P.E.
				SHEET 51 OF 54

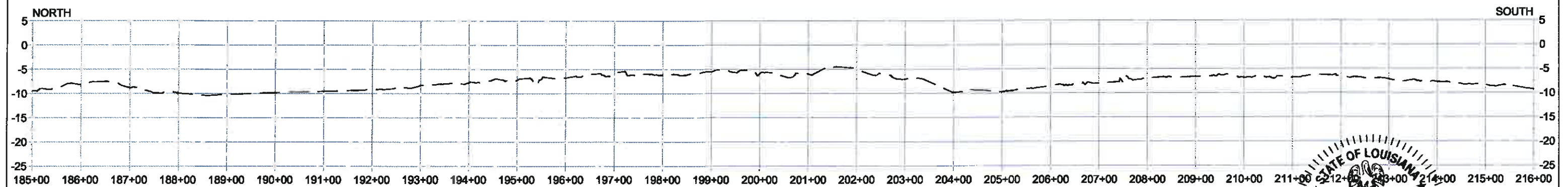




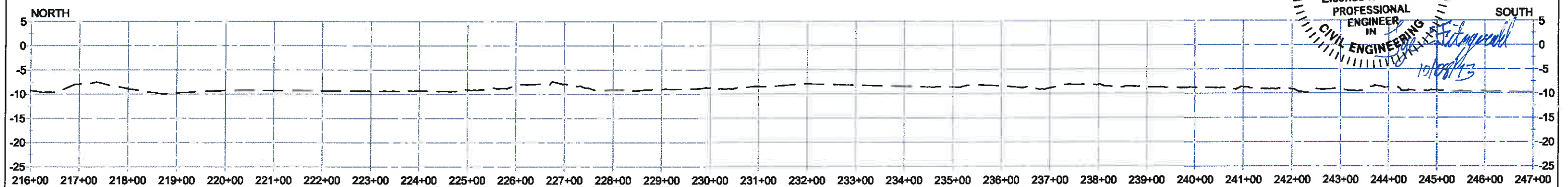
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



EMPIRE WATERWAY ACCESS PROFILE CONTINUED



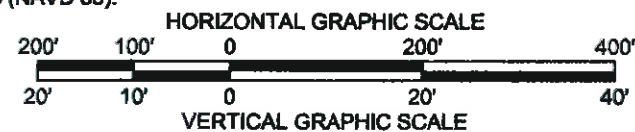
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



EMPIRE WATERWAY ACCESS PROFILE CONTINUED

NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH
AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGEND	
---	EXISTING GROUND

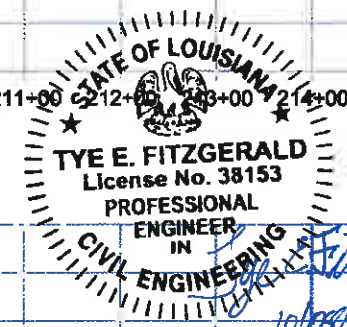


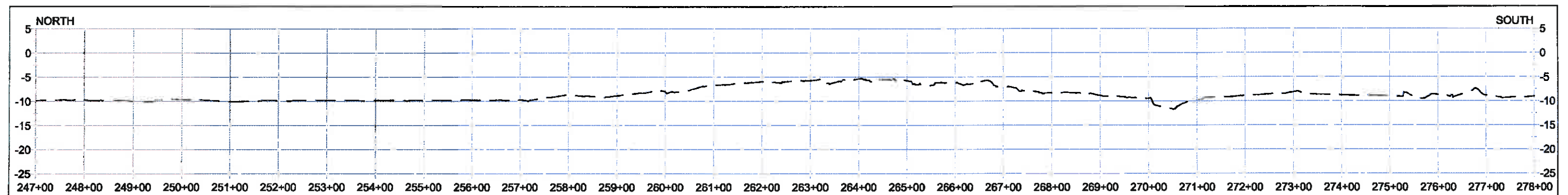
REV.	DATE	DESCRIPTION	BY

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

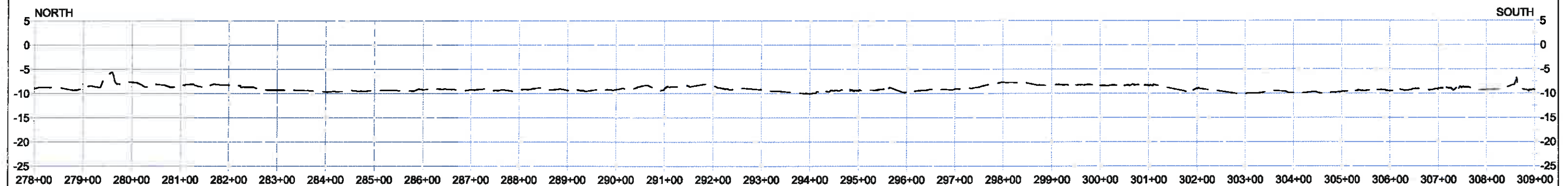
GRAND LIARD MARSH AND RIDGE RESTORATION		EMPIRE WATERWAY ACCESS PROFILE
STATE PROJECT NUMBER: BA-68		
FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013
APPROVED BY: RUDOLPH SIMONEAUX, P.E.		SHEET 52 OF 54

DRAWN BY: KRISTI CANTU DESIGNED BY: TYE FITZGERALD, P.E.

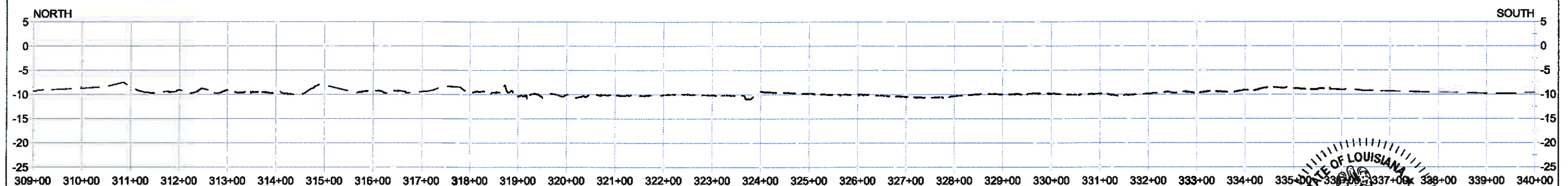




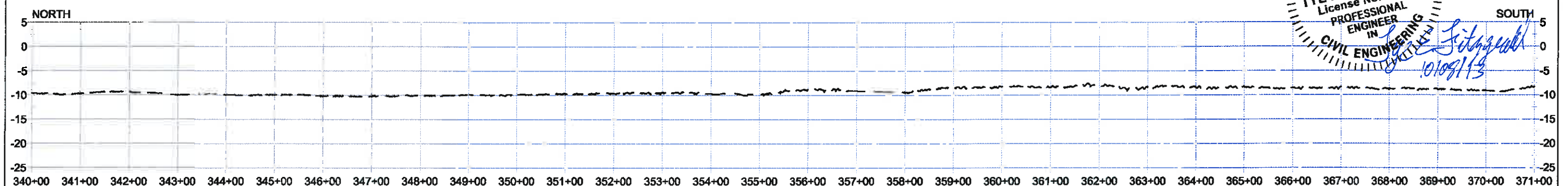
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



EMPIRE WATERWAY ACCESS PROFILE CONTINUED



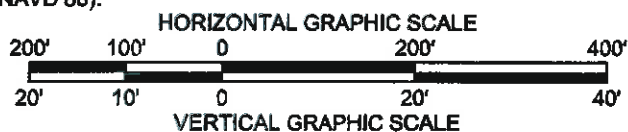
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



STATE OF LOUISIANA
TYE E. FITZGERALD
License No. 38153
PROFESSIONAL
ENGINEER
IN
CIVIL ENGINEERING
10/08/13

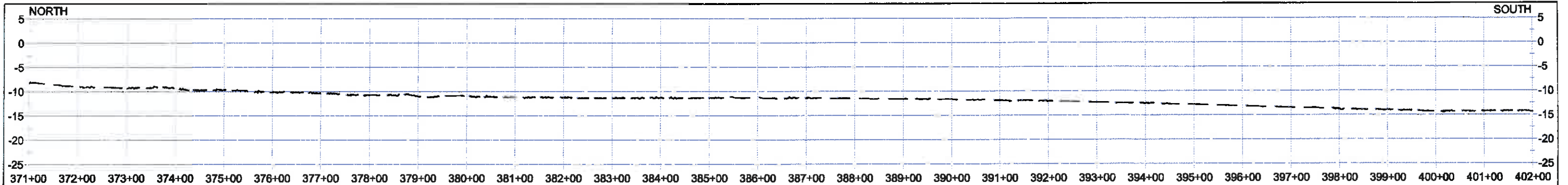
NOTE:
ALL ELEVATIONS ARE GIVEN IN THE NORTH
AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGEND
--- EXISTING GROUND

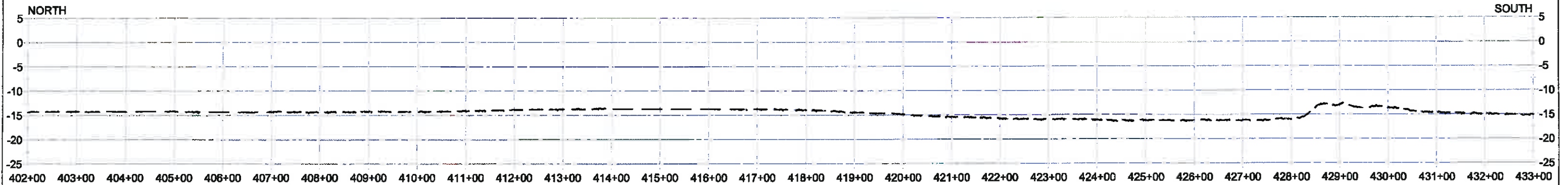


EMPIRE WATERWAY ACCESS PROFILE CONTINUED

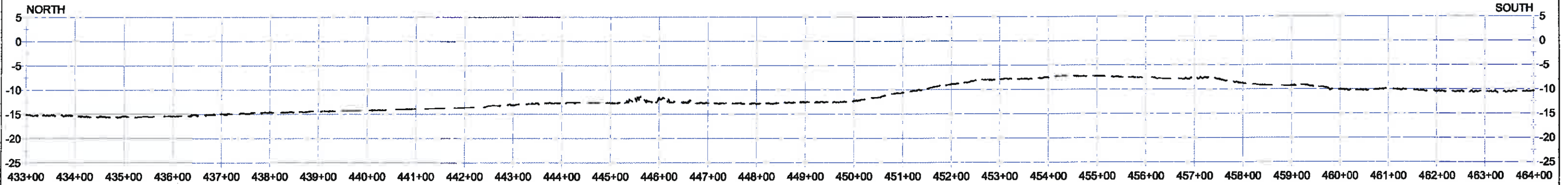
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					STATE PROJECT NUMBER: BA-68			
					FEDERAL PROJECT NUMBER: BA-68		DATE: OCTOBER 2013	
REV.	DATE	DESCRIPTION	BY		DRAWN BY: KRISTI CANTU	DESIGNED BY: TYE FITZGERALD, P.E.	APPROVED BY: RUDOLPH SIMONEAUX, P.E.	SHEET 53 OF 54



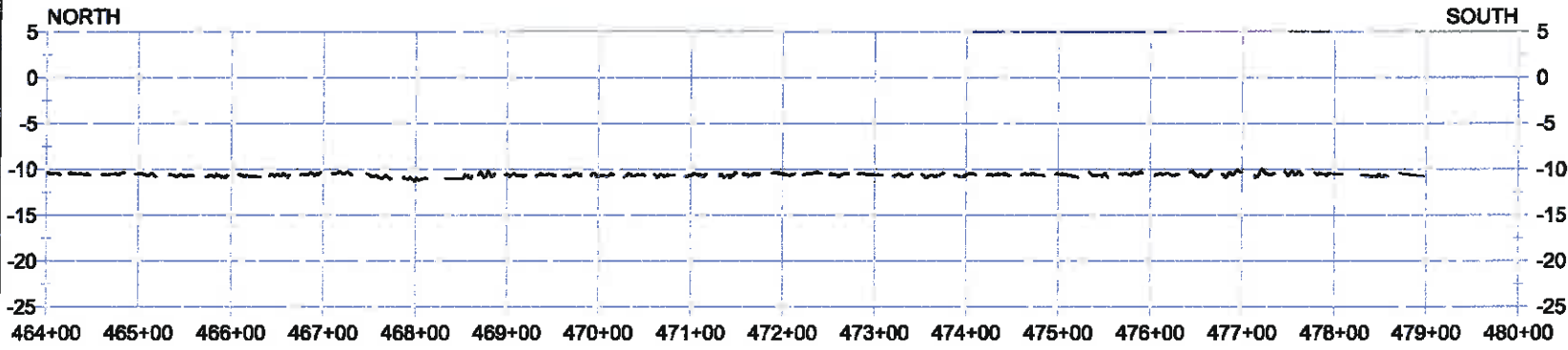
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



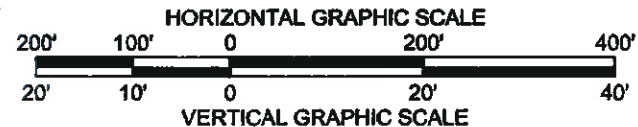
EMPIRE WATERWAY ACCESS PROFILE CONTINUED



EMPIRE WATERWAY ACCESS PROFILE CONTINUED



EMPIRE WATERWAY ACCESS PROFILE CONTINUED



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LEGEND
--- EXISTING GROUND

				COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		GRAND LIARD MARSH AND RIDGE RESTORATION	EMPIRE WATERWAY ACCESS PROFILE
				DRAWN BY: KRISTI CANTU		STATE PROJECT NUMBER: BA-68	DATE: OCTOBER 2013
				DESIGNED BY: TYE FITZGERALD, P.E.		FEDERAL PROJECT NUMBER: BA-68	
				APPROVED BY: RUDOLPH SIMONEAUX, P.E.			SHEET 54 OF 54
REV.	DATE	DESCRIPTION	BY				