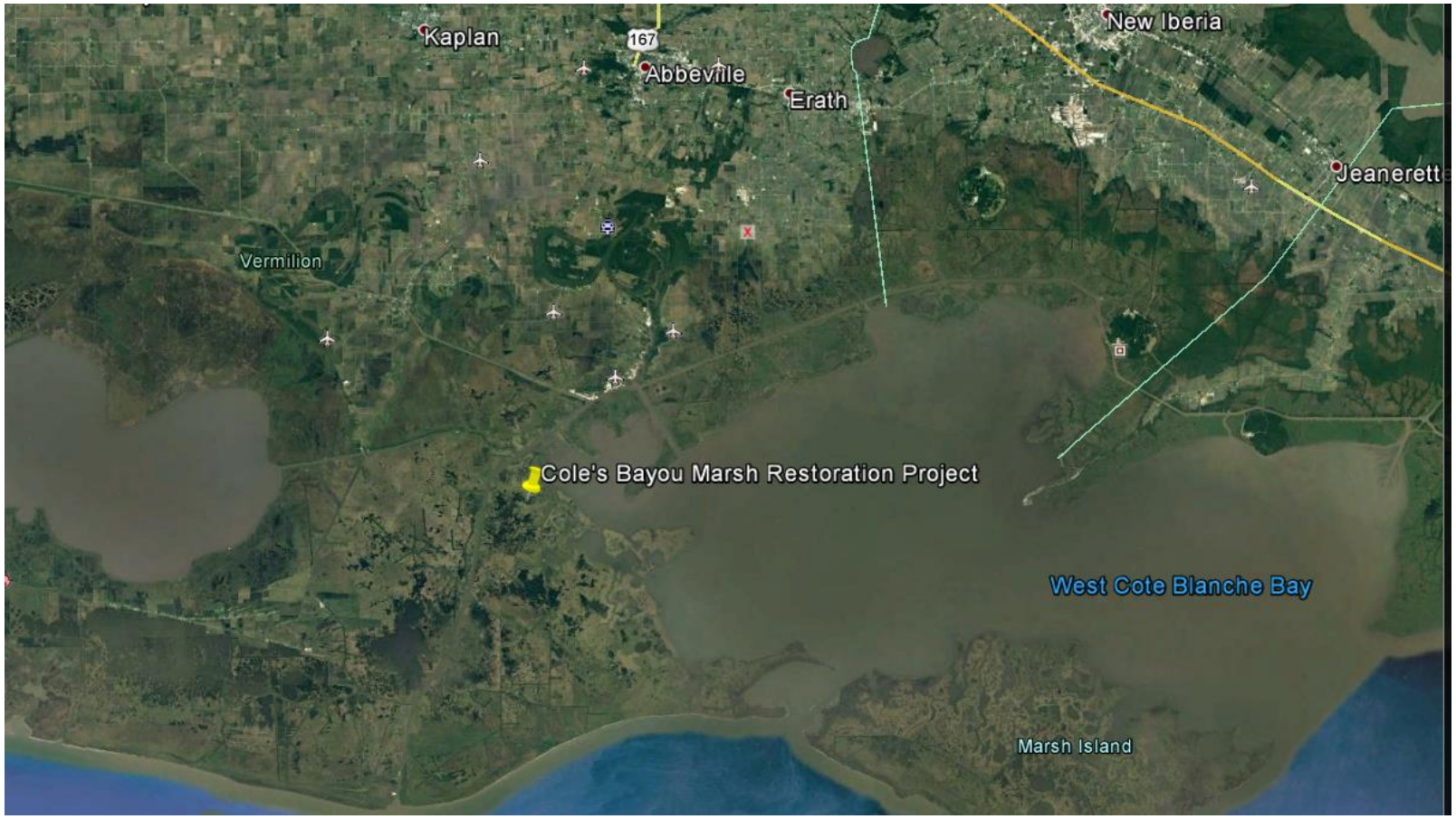
Mandatory Pre-Bid Conference for the Cole's Bayou Marsh Restoration Project (TV-0063)

APRIL 12, 2018, 2:30 PM, CPRA



Prospective bidders must sign in and attend this conference in its entirety in order to bid on this project.

Project Sponsors and Team

- Project Manager: Brad Miller
- Project Engineer: Amanda Taylor, P.E., Shannon Haynes, P.E.
- Construction Manager: Melvin Guidry
- Resident Project Representative: Sellers & Associates

- Federal Project Manager: Patrick Williams

Bid Documents and Addenda

- Complete bid documents and addenda are available for review on the CPRA website.

- Additional data available on CPRA CIMS site: https://cims.coastal.louisiana.gov/outreach/OPL_Full_page.html/

Bidder Questions

- Questions regarding the bid are due **7** days prior to the date for receipt of bids.

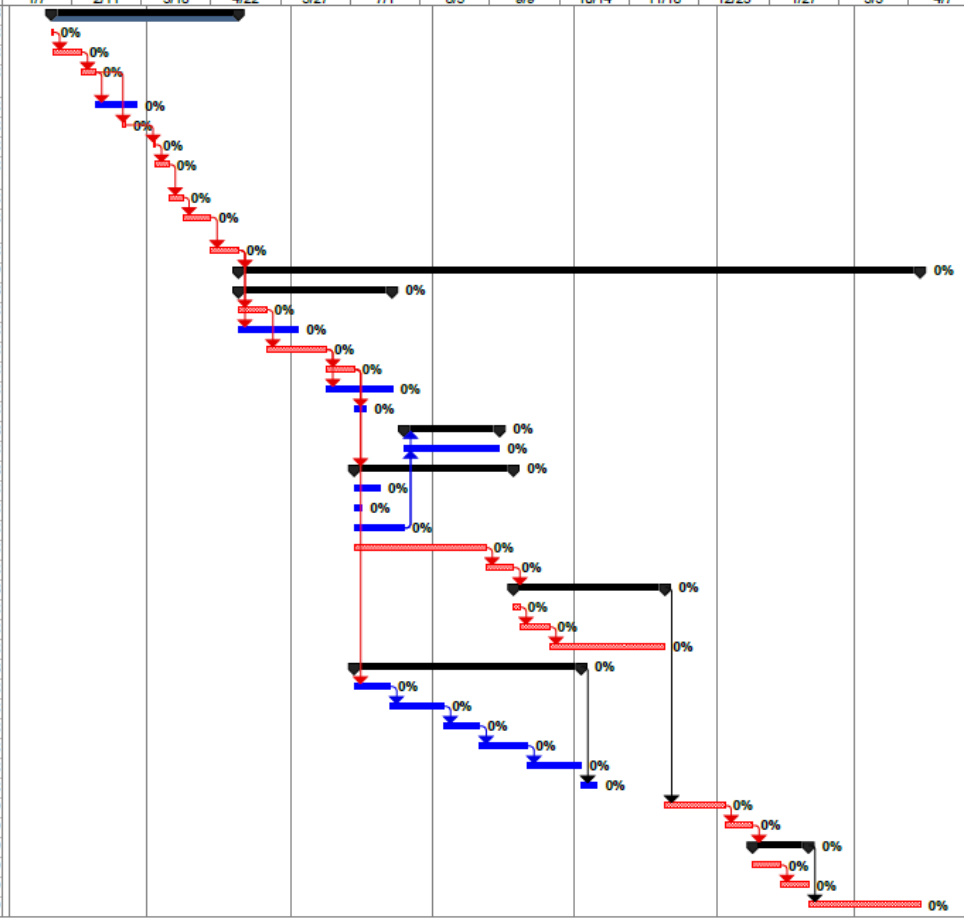
- Questions regarding the bid must be submitted in writing (Via Email) to the CPRA contact listed in the Advertisement for Bids.

- All verbal responses given at this conference are nonbinding.

Contract Time

- The contract time shall be **342** consecutive calendar days.

ID	Task Name	Duration	Start	Finish
1	**TV-63 BID PHASE**	**94 days**	**Thu 2/1/18**	**Sat 5/5/18**
2	Submit Bid Package to Project Support	1 day	Thu 2/1/18	Thu 2/1/18
3	OFPC Review and Provides Dates for Pre-Bid Meeting and Bid Opening	14 days	Fri 2/2/18	Thu 2/15/18
4	Update Bid Package w/ Pre-Bid and Bid Opening Dates and Submit to Project Support for Advertisement	7 days	Fri 2/16/18	Thu 2/22/18
5	Bid Advertisement by OFPC	21 days	Fri 2/23/18	Thu 3/15/18
6	Pre-Bid Meeting (2 weeks after beginning of advertisement)	1 day	Fri 3/9/18	Fri 3/9/18
7	Bid Opening	1 day	Sat 3/24/18	Sat 3/24/18
8	Evaluate Bids and Submit the Request to Award to Project Support for Signature by Executive Director	7 days	Sun 3/25/18	Sat 3/31/18
9	Signed Notice of Award and Bid Package Sent to Contractor	7 days	Sun 4/1/18	Sat 4/7/18
10	Notice of Award and Contract Documents Signed by the Contractor and Returned to CPRA	14 days	Sun 4/8/18	Sat 4/21/18
11	Develop and Send Notice to Proceed	14 days	Sun 4/22/18	Sat 5/5/18
12	**TV-63 CONSTRUCTION PHASE**	**342 days**	**Sun 5/6/18**	**Fri 4/12/19**
13	**Pre-Construction Survey and Mobilization**	**77 days**	**Sun 5/6/18**	**Sat 7/21/18**
14	Preconstruction Meeting and Work Plan Review/Acceptance	14 days	Sun 5/6/18	Sat 5/19/18
15	Application for Notice to Mariners, One Call, and Aids to Navigation	30 days	Sun 5/6/18	Mon 6/4/18
16	Preconstruction Survey (One Call, Field work, processing, review and revise layout)	30 days	Sun 5/20/18	Mon 6/18/18
17	Mobilize Equipment	14 days	Tue 6/19/18	Mon 7/2/18
18	Lay pipe to Fill Areas 1, 2, and 3 (32,300 LF @ 1,000 LF/Day)	33 days	Tue 6/19/18	Sat 7/21/18
19	Settlement Plate Installation (12 at 2/day)	6 days	Tue 7/3/18	Sun 7/8/18
20	**Channel Dredging**	**48 days**	**Sat 7/28/18**	**Thu 9/13/18**
21	Hydraulic Dredge Access Corridor (216,910 CY @ 4,500 CY/day)	48 days	Sat 7/28/18	Thu 9/13/18
22	**Earthen Containment Dike Construction**	**80 days**	**Tue 7/3/18**	**Thu 9/20/18**
23	Fill Area 1 (5,073 LF @ 400 LF/day)	13 days	Tue 7/3/18	Sun 7/15/18
24	Fill Area 1 Armored Dike (805 LF @ 250 LF/day)	4 days	Tue 7/3/18	Fri 7/6/18
25	Fill Area 2 (9,613 LF @ 400 LF/day)	25 days	Tue 7/3/18	Fri 7/27/18
26	Fill Area 3 (26,080 LF @ 400 LF/day)	66 days	Tue 7/3/18	Thu 9/6/18
27	2 Week Dress Up and Survey of Dikes	14 days	Fri 9/7/18	Thu 9/20/18
28	**Hydraulic Dredging (12hr/day)**	**76 days**	**Fri 9/21/18**	**Wed 12/5/18**
29	Fill Area 1 (1 - 24" dredge with Booster- 46,304 CY @ 1,330 CY/HR.)	3 days	Fri 9/21/18	Sun 9/23/18
30	Fill Area 2 (1 - 24" dredge with Booster- 229,528 CY @ 1,330 CY/HR.)	15 days	Mon 9/24/18	Mon 10/8/18
31	Fill Area 3 (1 - 24" dredge with Booster- 914,857 CY @ 1,330 CY/HR.)	58 days	Tue 10/9/18	Wed 12/5/18
32	**Water Control Structure Installation**	**114 days**	**Tue 7/3/18**	**Wed 10/24/18**
33	Excavation (3,450 CY @ 200 CY/day)	18 days	Tue 7/3/18	Fri 7/20/18
34	Timber Pile Installation (3 days/structure)	27 days	Sat 7/21/18	Thu 8/16/18
35	Pipe and Valve Installation (2 days/structure)	18 days	Fri 8/17/18	Mon 9/3/18
36	Fill (2,349 CY @ 100 CY/day)	24 days	Tue 9/4/18	Thu 9/27/18
37	Geotextile and ACM installation (3 days/structure)	27 days	Fri 9/28/18	Wed 10/24/18
38	Earthen Plug Construction	8 days	Thu 10/25/18	Thu 11/1/18
39	As-Built Survey	30 days	Thu 12/6/18	Fri 1/4/19
40	Modifications and Punch List Items	14 days	Sat 1/5/19	Fri 1/18/19
41	**Demobilization**	**28 days**	**Sat 1/19/19**	**Fri 2/15/19**
42	Pick up dredge pipe (32,300 LF @ 2,000 LF/Day)	14 days	Sat 1/19/19	Fri 2/1/19
43	Demobilize Equipment/Clean up	14 days	Sat 2/2/19	Fri 2/15/19
44	Weather Days	56 days	Sat 2/16/19	Fri 4/12/19



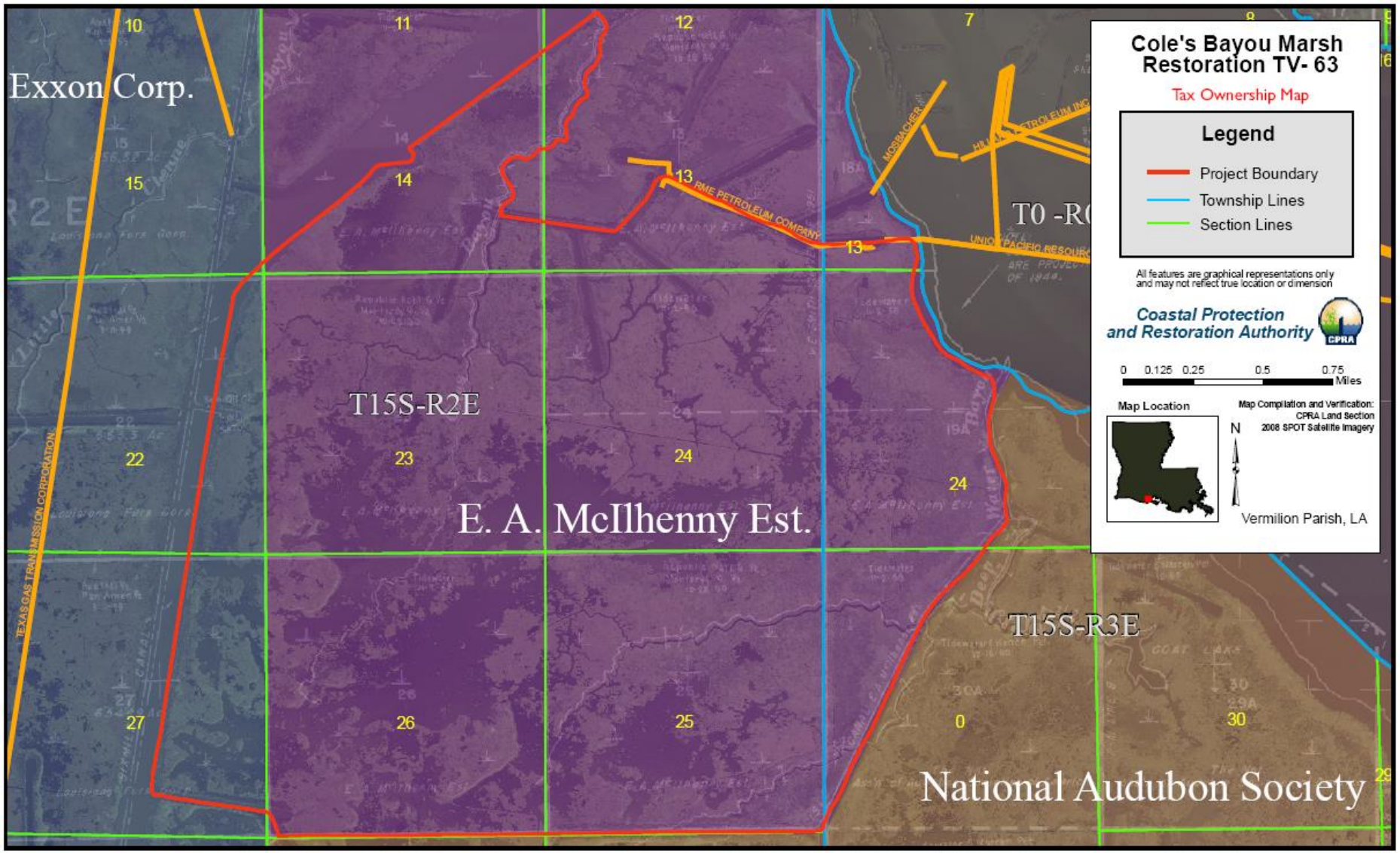
Liquidated Damages

- Liquidated damages in the sum of **$5,470.00** shall be deducted from any money due to the Contractor for each consecutive calendar day the Work remains incomplete beyond the Contract Time or as amended by Change Order

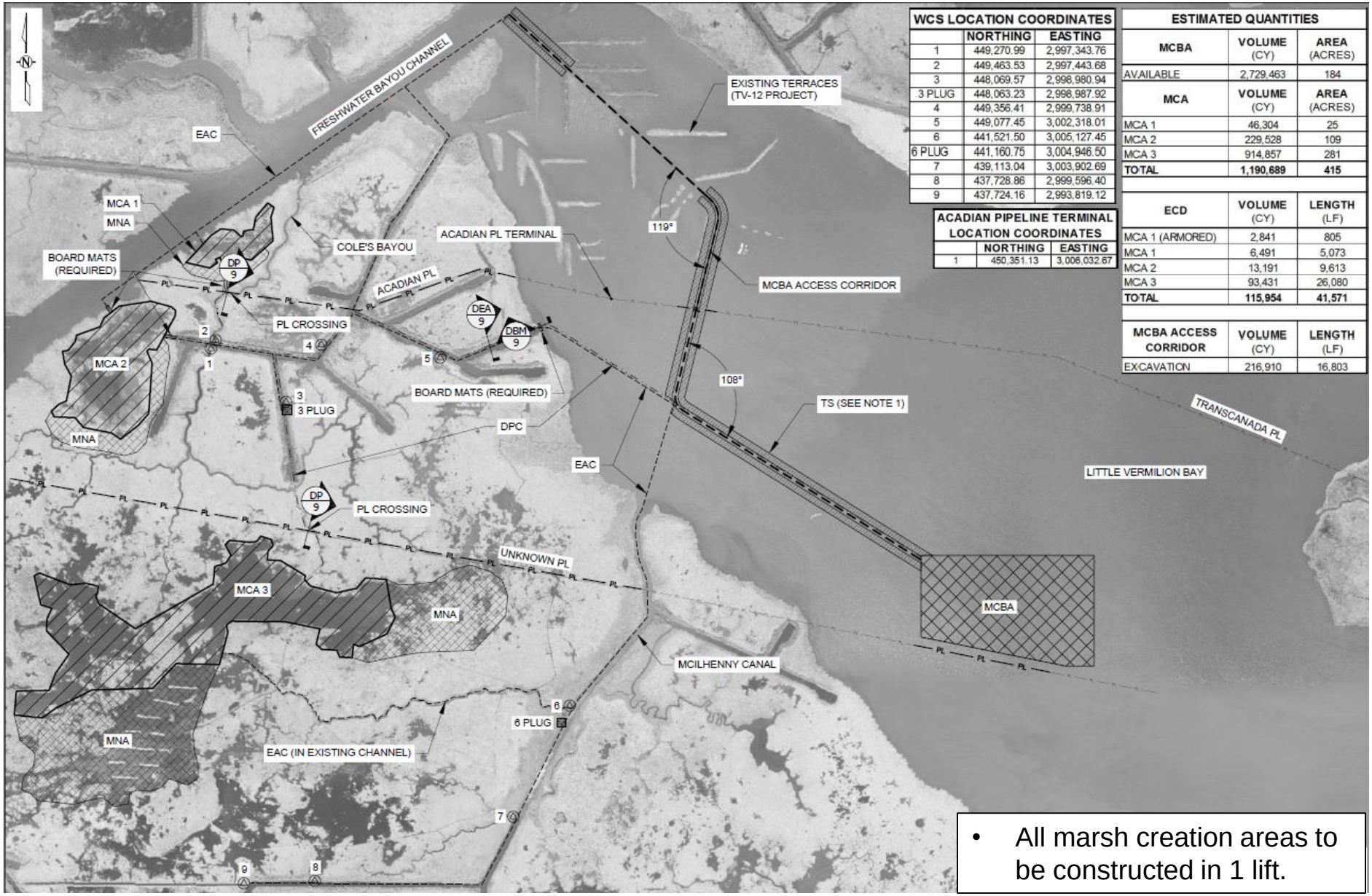
Retainage

- In addition to any Ratio of Effort and Withholdings, a retainage of 5% will be withheld for a minimum of 45 days after Final Acceptance to ensure that all liens are released.

Land Rights Map



Project Plan



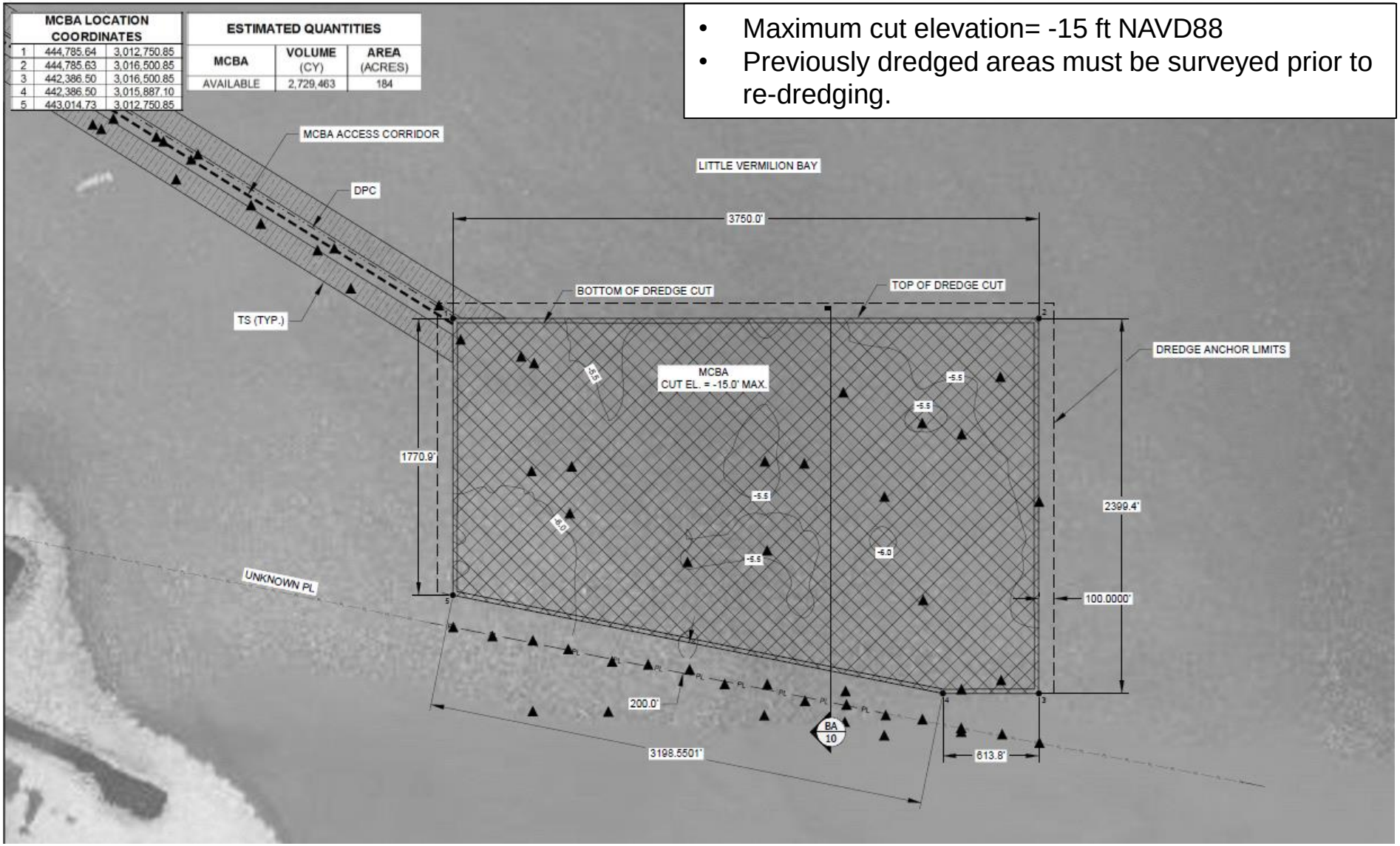
WCS LOCATION COORDINATES	NORTHING	EASTING
1	449,270.99	2,997,343.76
2	449,463.53	2,997,443.68
3	448,069.57	2,998,980.94
3 PLUG	448,063.23	2,998,987.92
4	449,356.41	2,999,738.91
5	449,077.45	3,002,318.01
6	441,521.50	3,005,127.45
6 PLUG	441,160.75	3,004,946.50
7	439,113.04	3,003,902.69
8	437,728.86	2,999,596.40
9	437,724.16	2,993,819.12

ACADIAN PIPELINE TERMINAL LOCATION COORDINATES	NORTHING	EASTING
1	450,351.13	3,006,032.67

ESTIMATED QUANTITIES		
MCBA	VOLUME (CY)	AREA (ACRES)
AVAILABLE	2,729,463	184
MCA	VOLUME (CY)	AREA (ACRES)
MCA 1	46,304	25
MCA 2	229,528	109
MCA 3	914,857	281
TOTAL	1,190,689	415
ECD	VOLUME (CY)	LENGTH (LF)
MCA 1 (ARMORED)	2,841	805
MCA 1	6,491	5,073
MCA 2	13,191	9,613
MCA 3	93,431	26,080
TOTAL	115,954	41,571
MCBA ACCESS CORRIDOR	VOLUME (CY)	LENGTH (LF)
EXCAVATION	216,910	16,803

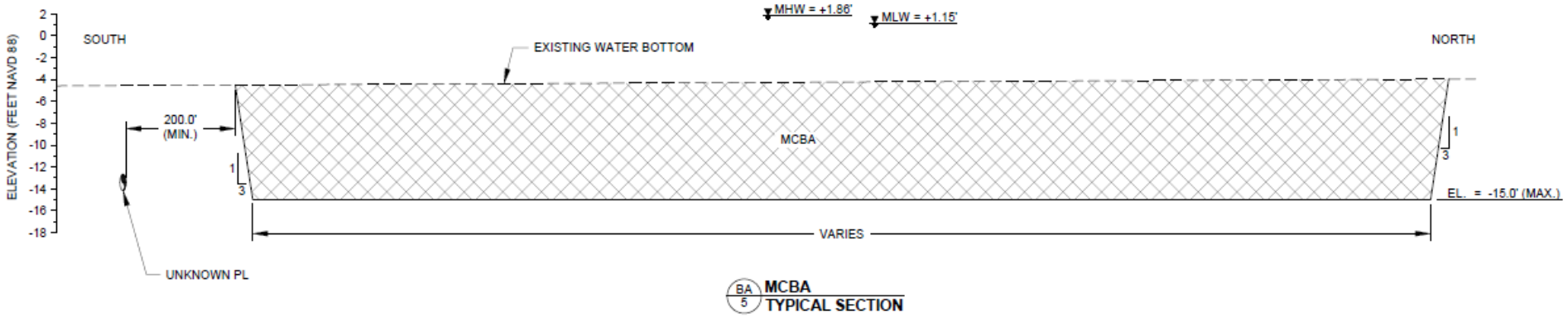
- All marsh creation areas to be constructed in 1 lift.

Borrow Area Layout



- Maximum cut elevation= -15 ft NAVD88
- Previously dredged areas must be surveyed prior to re-dredging.

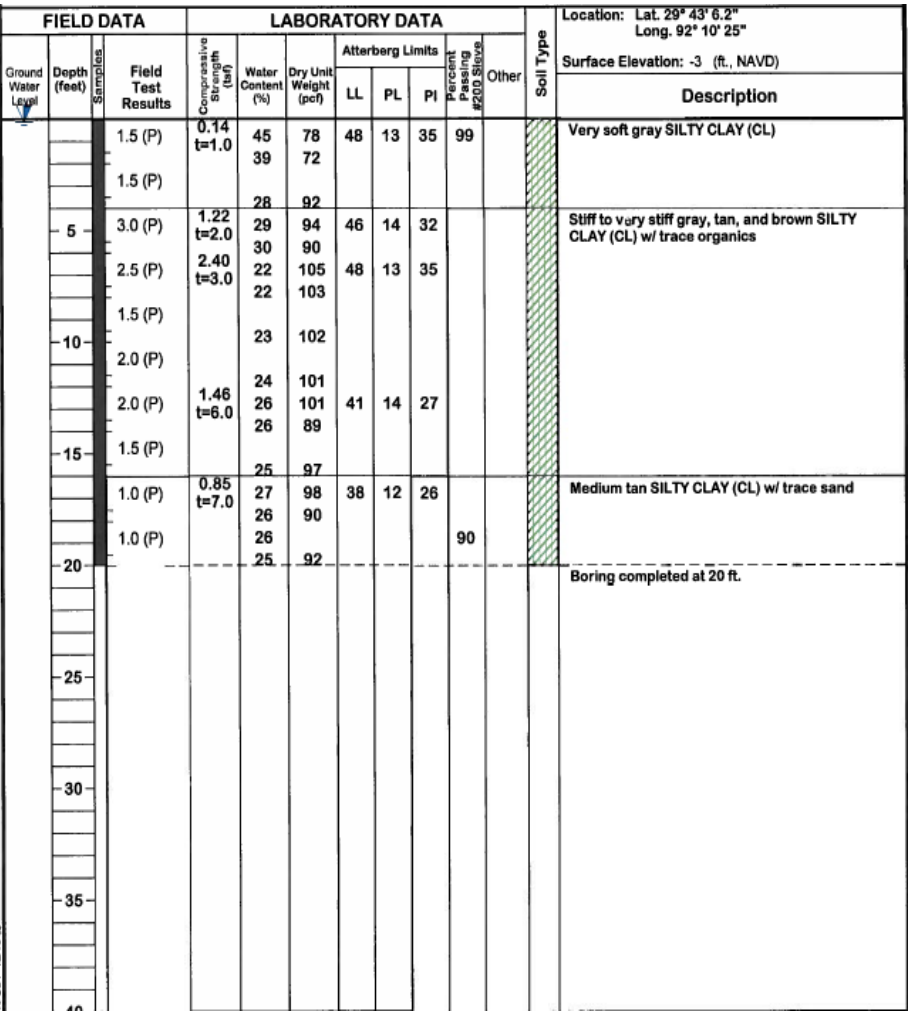
Borrow Area Typical Section



- Permitted and design maximum elevation is minus fifteen feet (-15ft) NAVD88.

Borrow Area Boring Logs

B-19 (West)

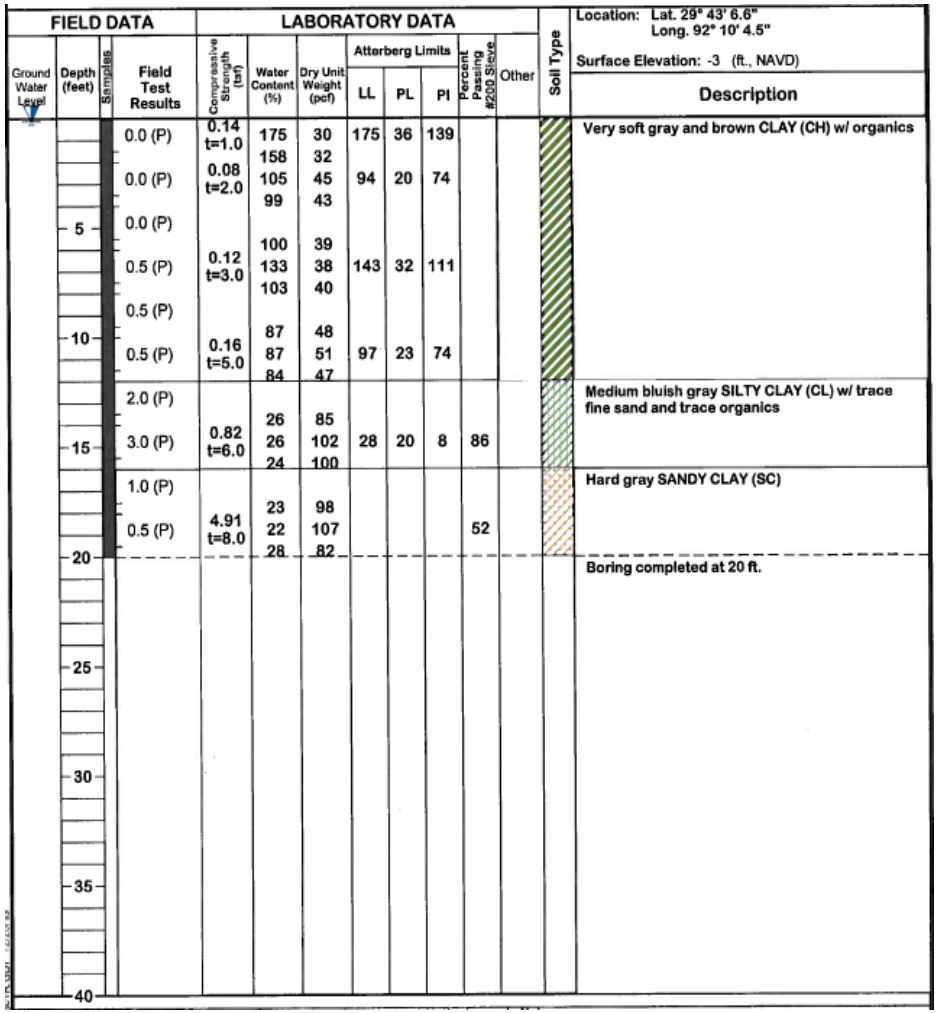


Depth (feet)	Field Test Results	Compressive Strength (tsf)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI	Percent Passing #200 Sieve	Other	Description
	1.5 (P)	0.14 t=1.0	45	78	48	13	35	99		Very soft gray SILTY CLAY (CL)
	1.5 (P)		39	72						
			28	92						
5	3.0 (P)	1.22 t=2.0	29	94	46	14	32			Stiff to very stiff gray, tan, and brown SILTY CLAY (CL) w/ trace organics
			30	90						
	2.5 (P)	2.40 t=3.0	22	105	48	13	35			
			22	103						
	1.5 (P)									
10			23	102						
	2.0 (P)									
			24	101						
	2.0 (P)	1.46 t=6.0	26	101	41	14	27			
			26	89						
15	1.5 (P)									
			25	97						
	1.0 (P)	0.85 t=7.0	27	98	38	12	26			Medium tan SILTY CLAY (CL) w/ trace sand
	1.0 (P)		26	90						
			26					90		
20			25	92						
										Boring completed at 20 ft.

Location: Lat. 29° 43' 6.2" Long. 92° 10' 25"

Surface Elevation: -3 (ft., NAVD)

B-21 (East)



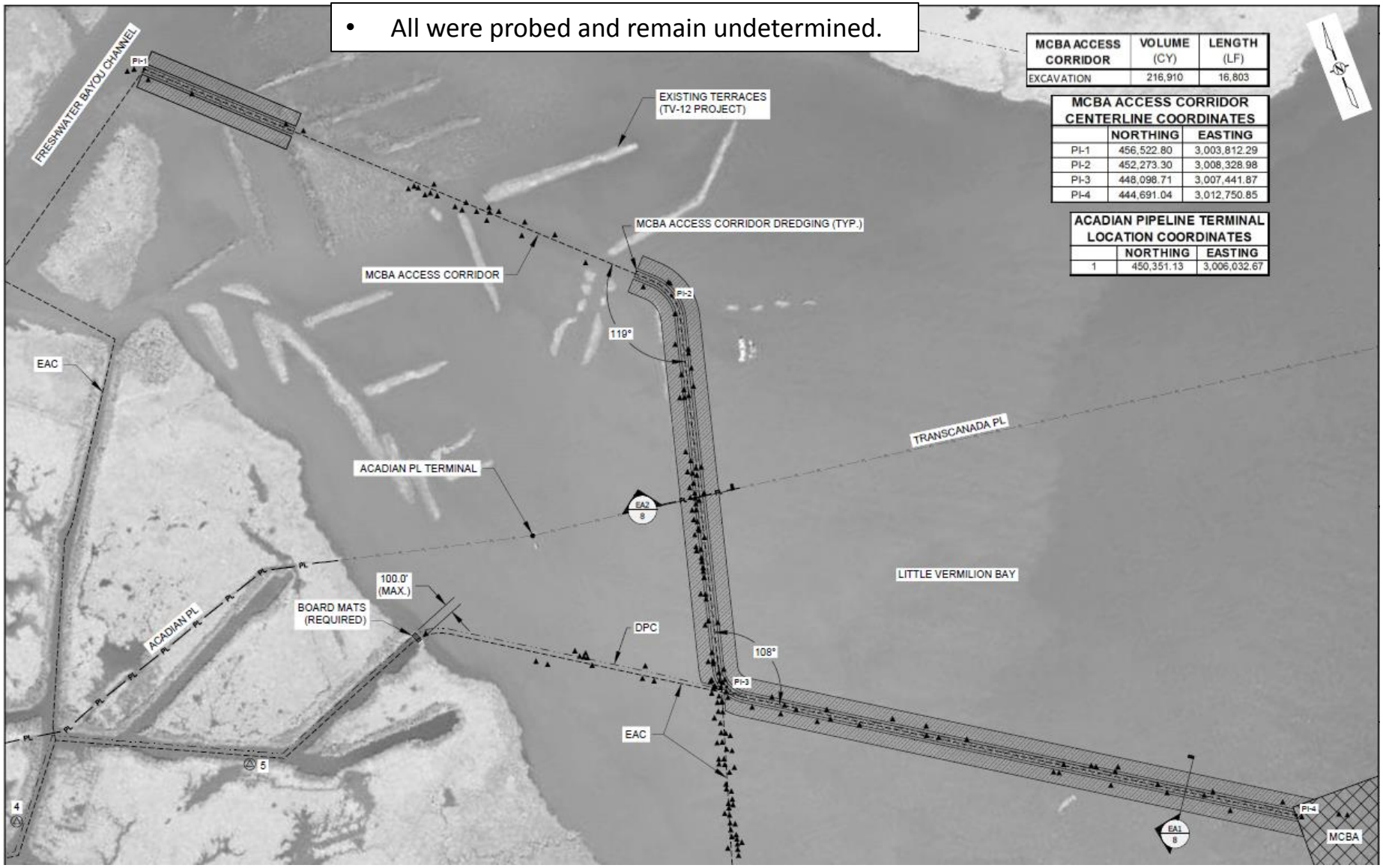
Depth (feet)	Field Test Results	Compressive Strength (tsf)	Water Content (%)	Dry Unit Weight (pcf)	Atterberg Limits LL	Atterberg Limits PL	Atterberg Limits PI	Percent Passing #200 Sieve	Other	Description
	0.0 (P)	0.14 t=1.0	175	30	175	36	139			Very soft gray and brown CLAY (CH) w/ organics
			158	32						
	0.0 (P)	0.08 t=2.0	105	45	94	20	74			
			99	43						
5	0.0 (P)									
			100	39						
	0.5 (P)	0.12 t=3.0	133	38	143	32	111			
			103	40						
	0.5 (P)									
10			87	48						
	0.5 (P)	0.16 t=5.0	87	51	97	23	74			
			84	47						
	2.0 (P)									Medium bluish gray SILTY CLAY (CL) w/ trace fine sand and trace organics
			26	85						
15	3.0 (P)	0.82 t=6.0	26	102	28	20	8	86		
			24	100						
	1.0 (P)									Hard gray SANDY CLAY (SC)
			23	98						
	0.5 (P)	4.91 t=8.0	22	107				52		
20			28	82						
										Boring completed at 20 ft.

Location: Lat. 29° 43' 6.6" Long. 92° 10' 4.5"

Surface Elevation: -3 (ft., NAVD)

Marsh Creation Borrow Area Access Corridor

- All were probed and remain undetermined.



MCBA ACCESS CORRIDOR	VOLUME (CY)	LENGTH (LF)
EXCAVATION	216,910	16,803

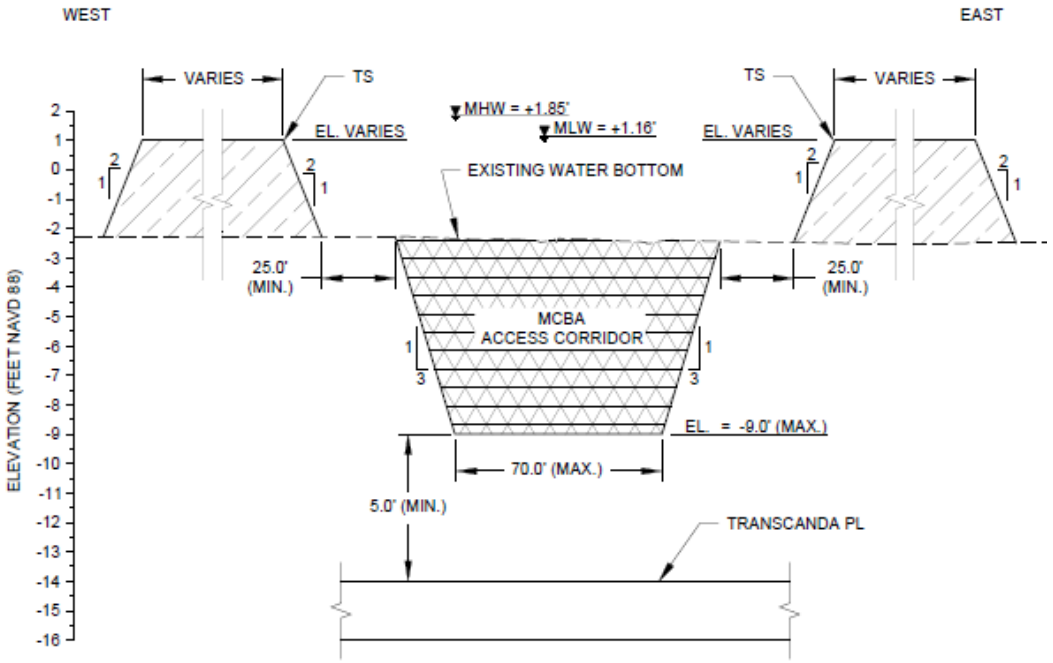
MCBA ACCESS CORRIDOR CENTERLINE COORDINATES

	NORTHING	EASTING
PI-1	456,522.80	3,003,812.29
PI-2	452,273.30	3,008,328.98
PI-3	448,098.71	3,007,441.87
PI-4	444,691.04	3,012,750.85

ACADIAN PIPELINE TERMINAL LOCATION COORDINATES

	NORTHING	EASTING
1	450,351.13	3,006,032.67

Marsh Creation Borrow Area Access Corridor Section

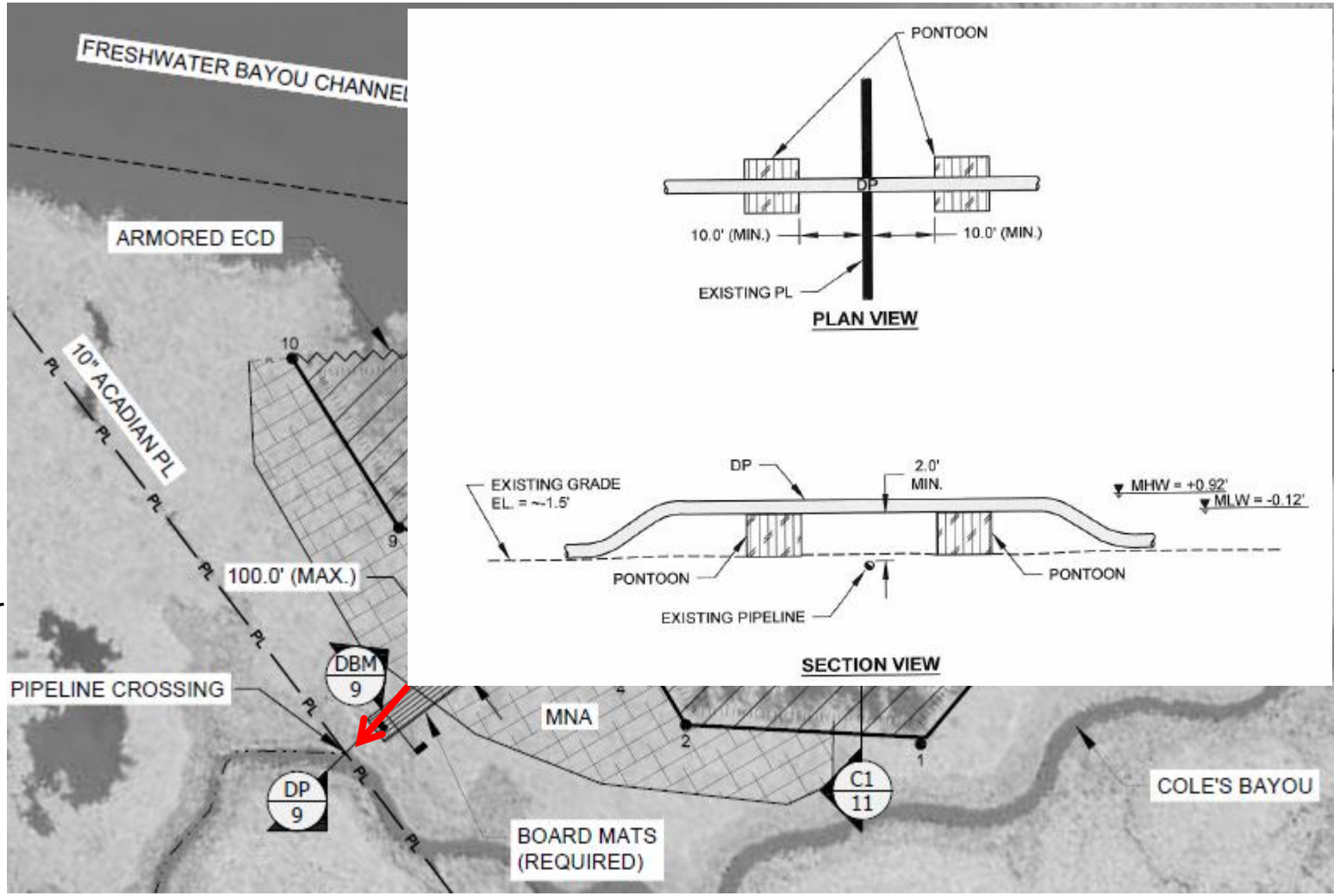


MCBA ACCESS CORRIDOR
ACROSS TRANSCANADA PIPELINE
TYPICAL SECTION

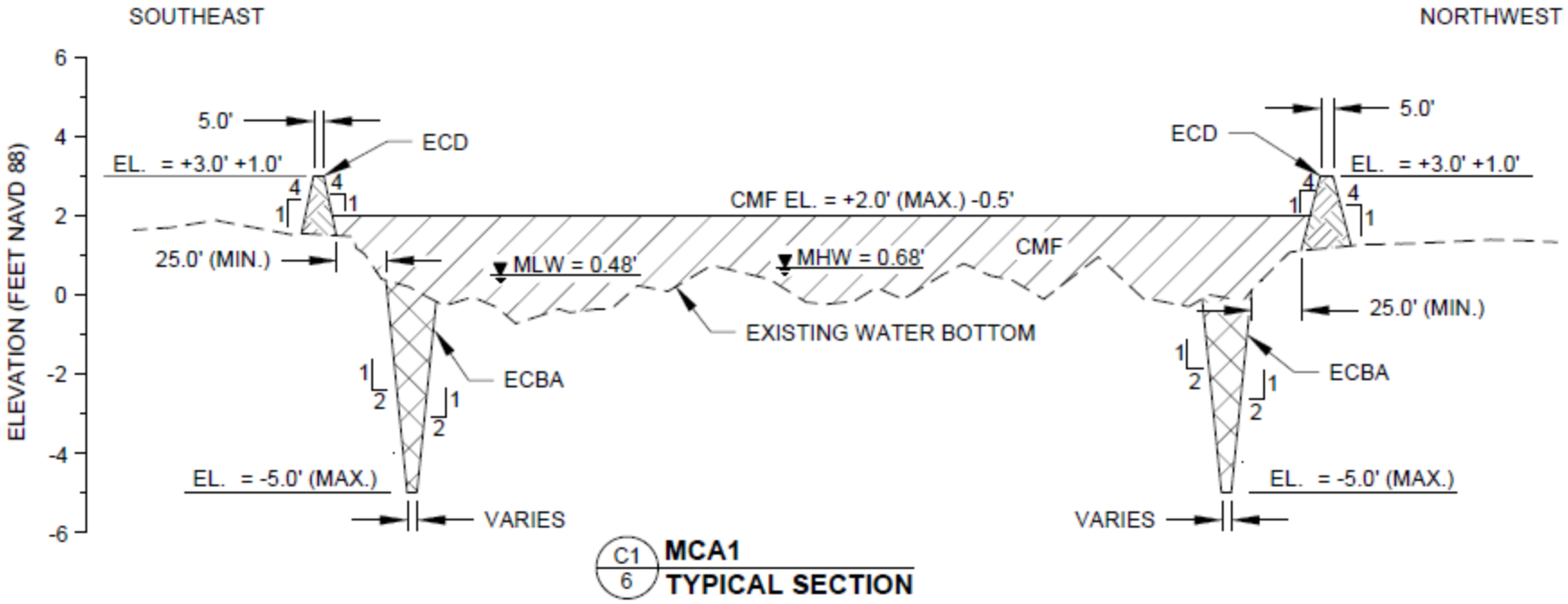
- Permitted and design maximum elevation is minus nine feet (-9ft) NAVD88.
- Transcanada Pipeline crosses corridor
  - Must maintain a minimum of 5 foot of cover over Transcanada Pipeline

Marsh Creation Area 1 Plan

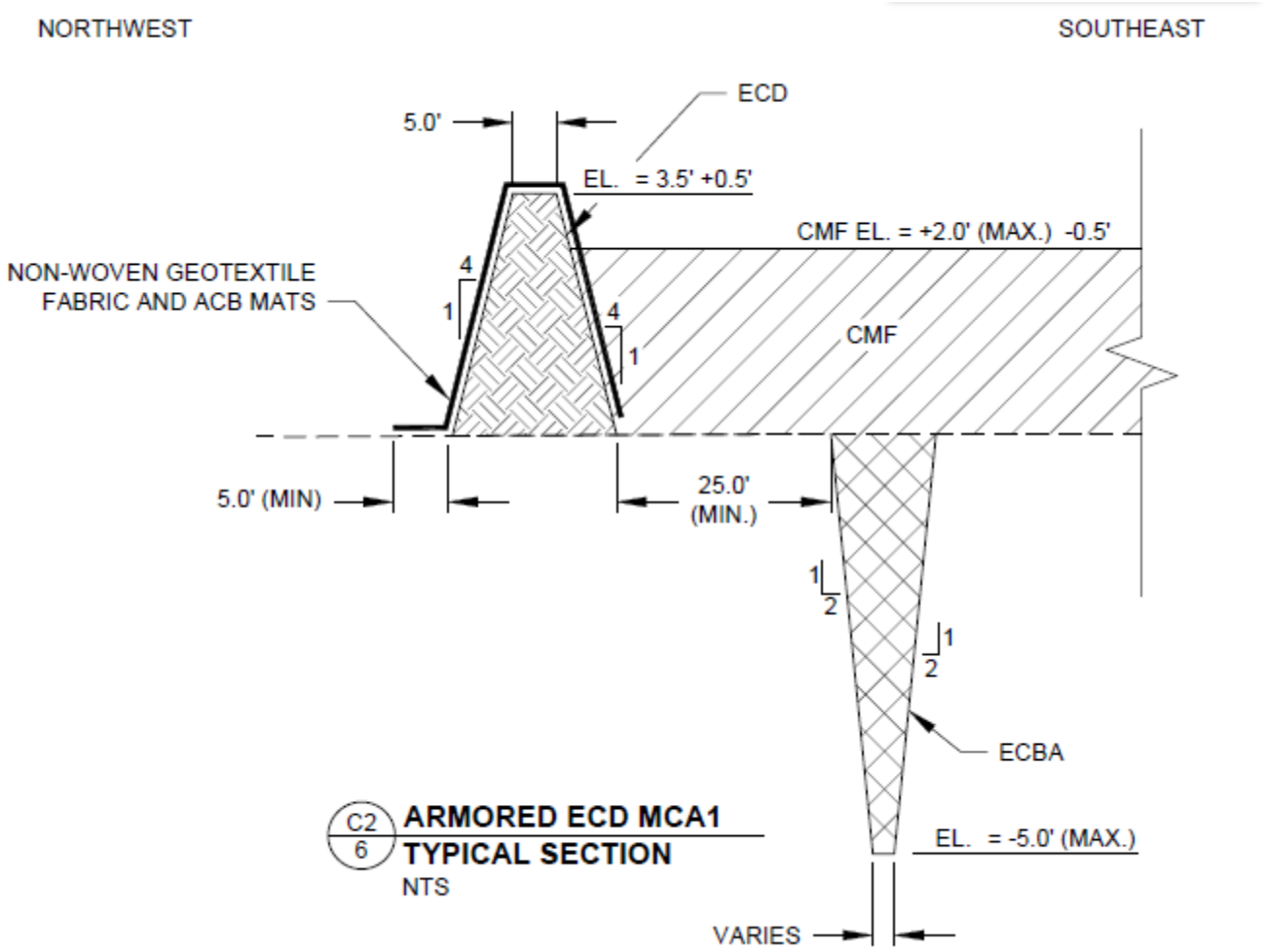
- 2 dike geometries
- Armored dike along Freshwater Bayou
- Board mats to be used on dredge pipeline and equipment access corridors crossing existing marsh.
- Decanted water shall be discharged to adjacent marsh nourishment area.
- Acadian Pipeline Crossing



Marsh Creation Area 1 Profile

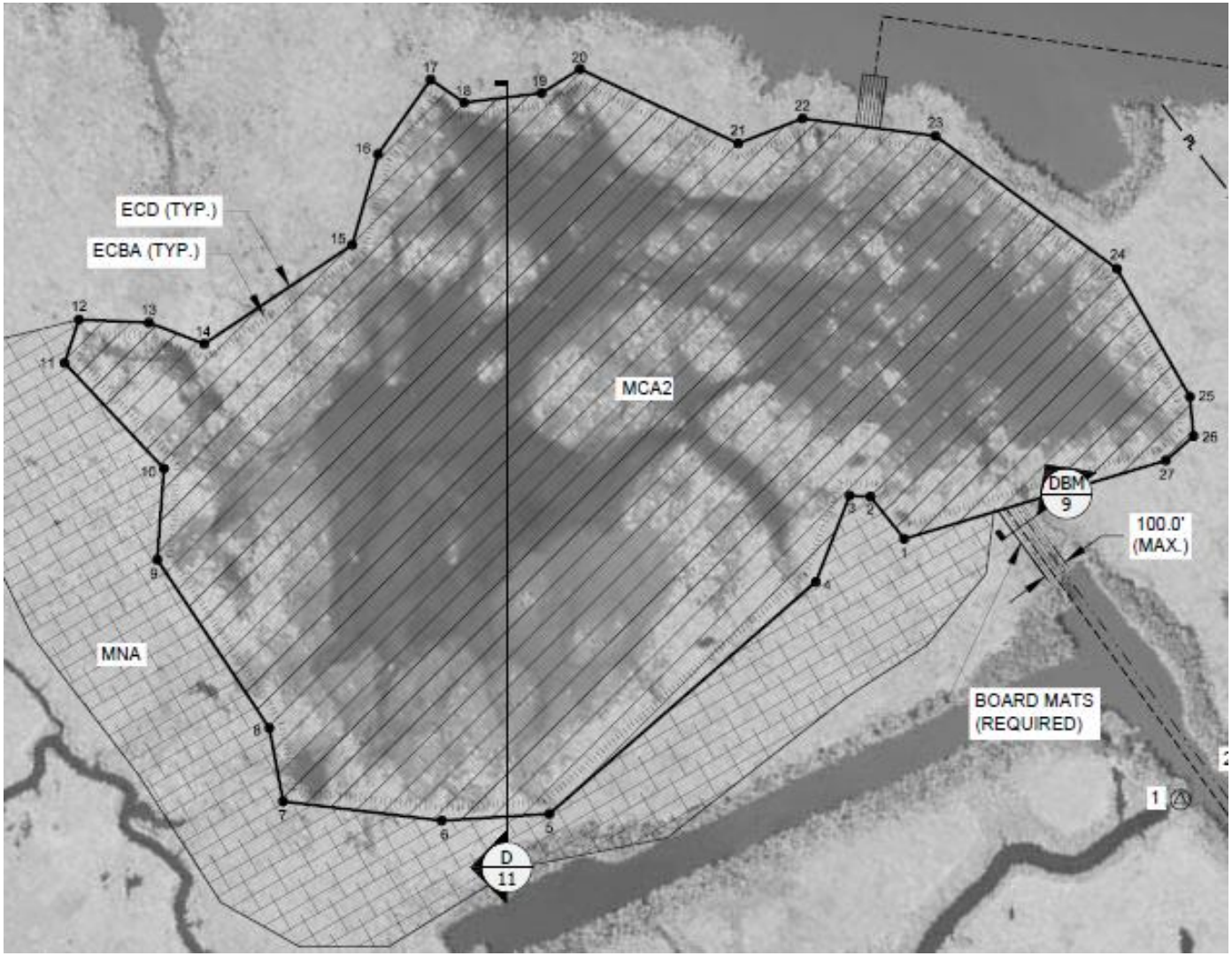


Marsh Creation Area 1 Armored ECD

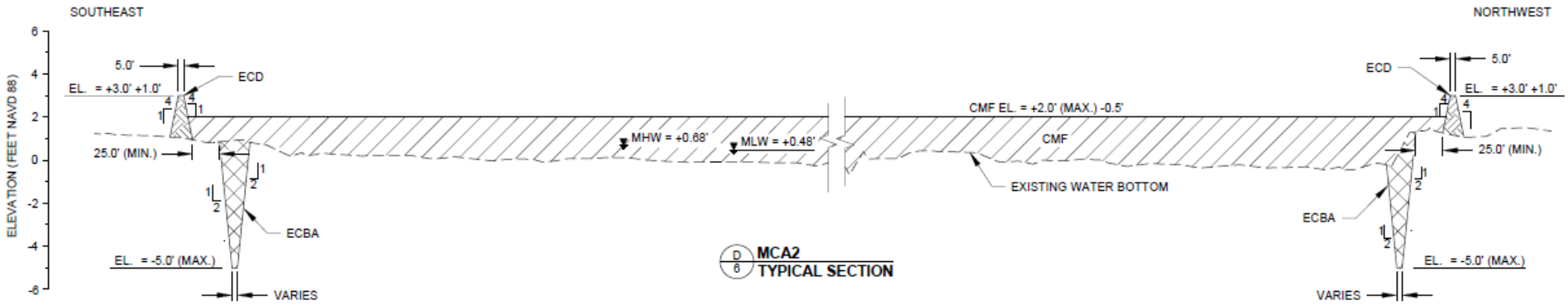


Marsh Creation Area 2 Plan

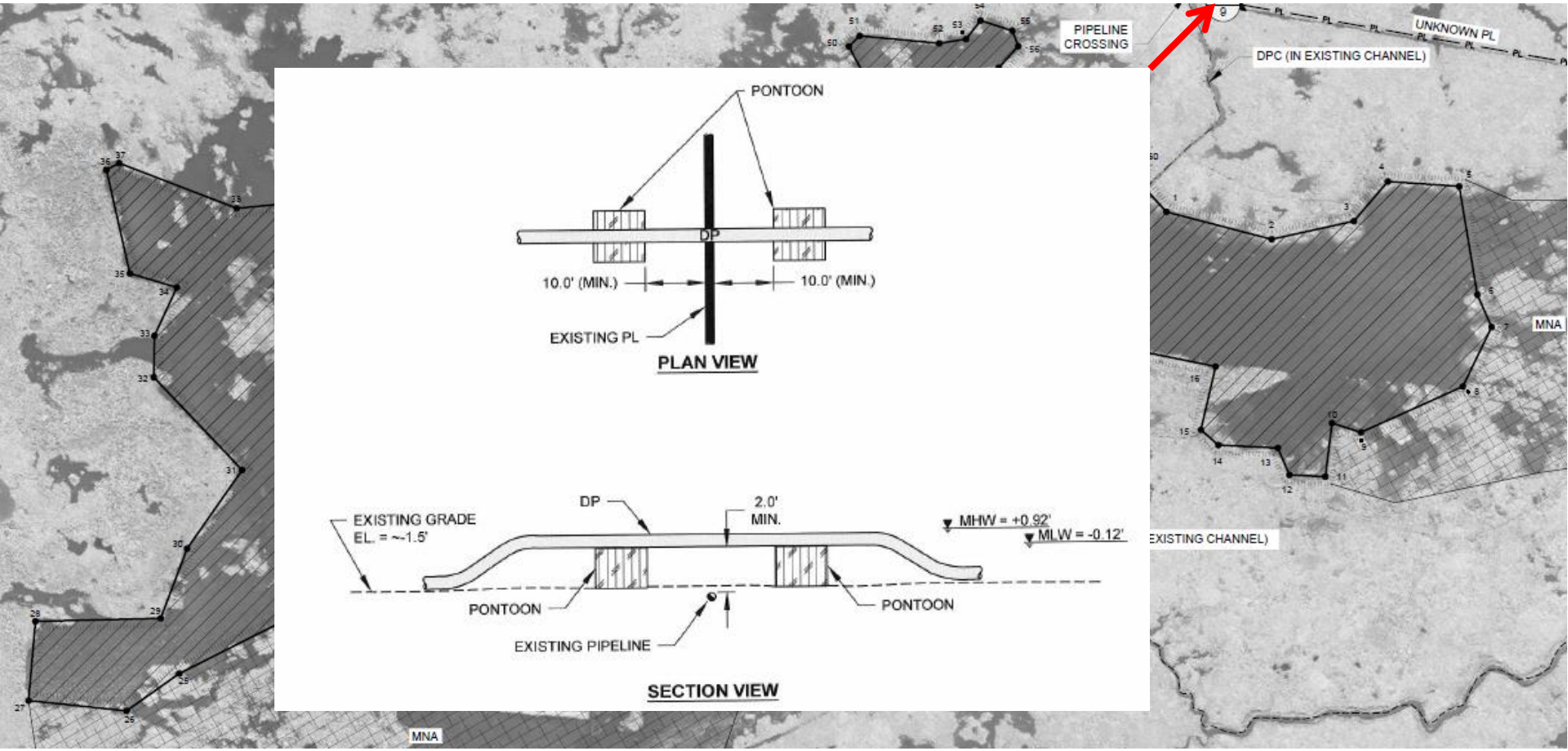
- 1 dike geometry
- Board mats shall be used on pipeline and equipment access corridor crossing existing marsh.
- Decanted water shall be discharged to adjacent marsh nourishment area.



Marsh Creation Area 2 Profile



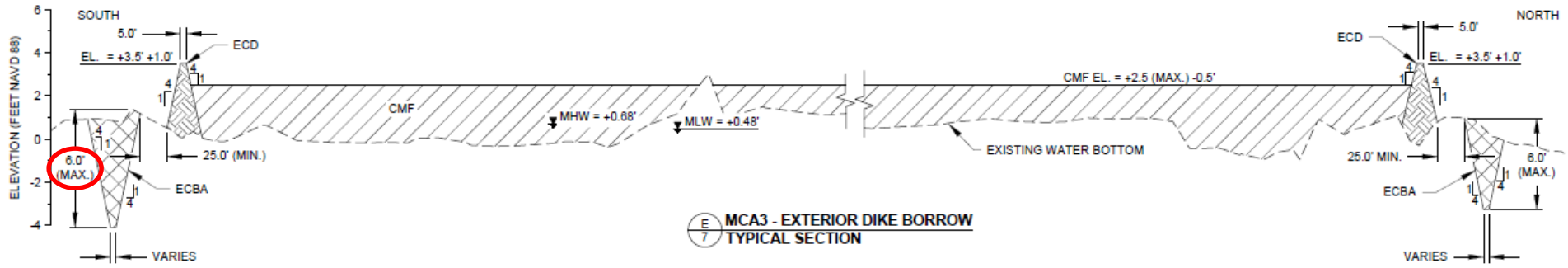
Marsh Creation Area 3 Plan



- 1 dike geometry
- Borrow shall be from the inside of the fill area on west side and outside of the fill area on east side.
- Decanted water shall be discharged to adjacent marsh nourishment area.
- Unknown Pipeline Crossing

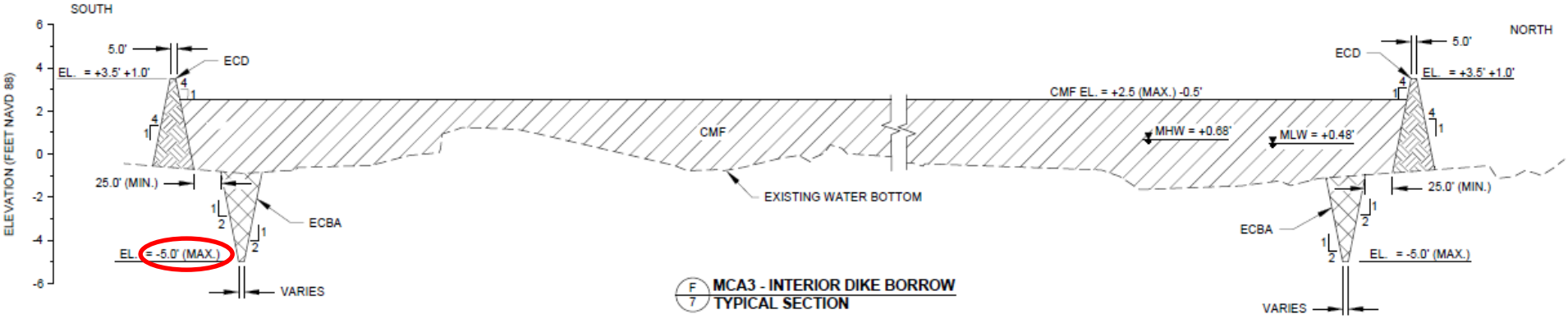
Marsh Creation Area 3 Profiles

Exterior (East) Borrow



E/7 MCA3 - EXTERIOR DIKE BORROW TYPICAL SECTION

Interior (West) Borrow



F/7 MCA3 - INTERIOR DIKE BORROW TYPICAL SECTION

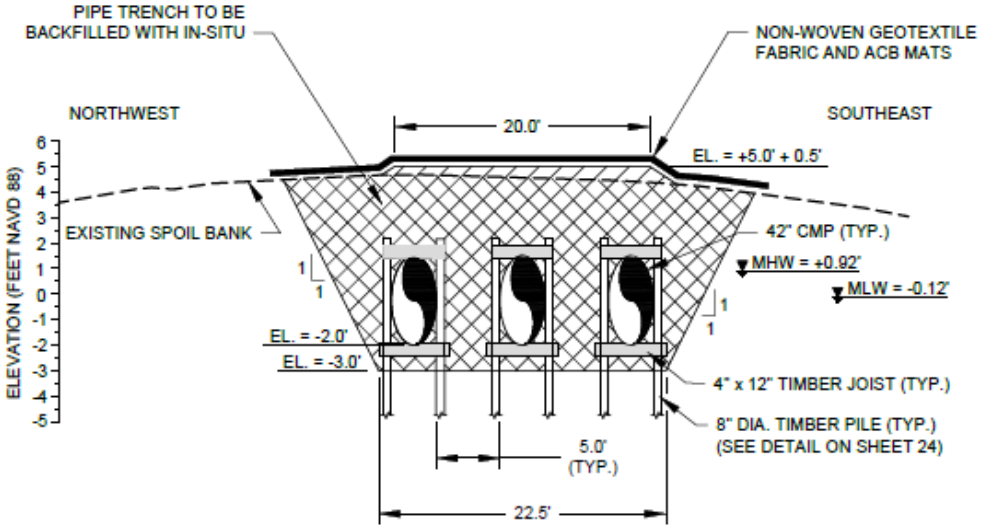
Marsh Fill Construction Elevations

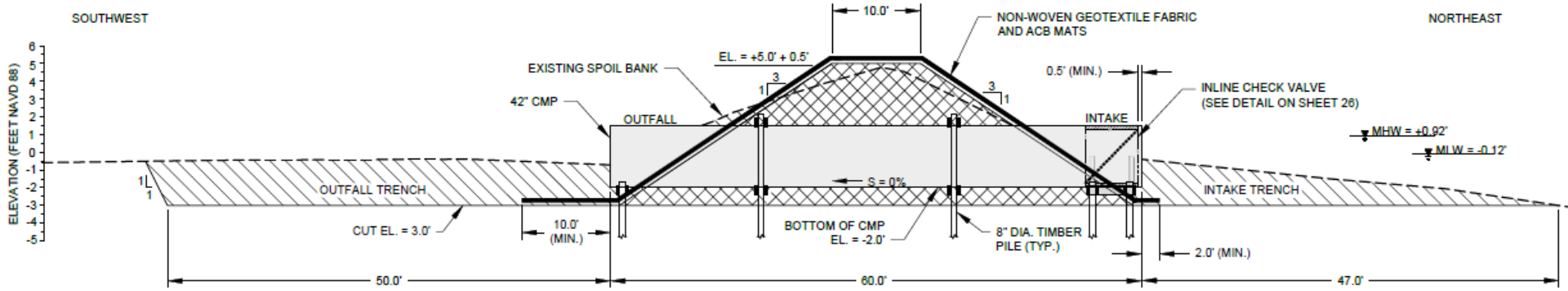
Marsh Creation Fill Area	Construction Marsh Fill Elevation (Feet. NAVD 88)	Vertical Tolerance (Feet)
1	+2.0	-0.5 from maximum
2	+2.0	-0.5 from maximum
3	+2.5	-0.5 from maximum

Water Control Structures

Water Control Structures

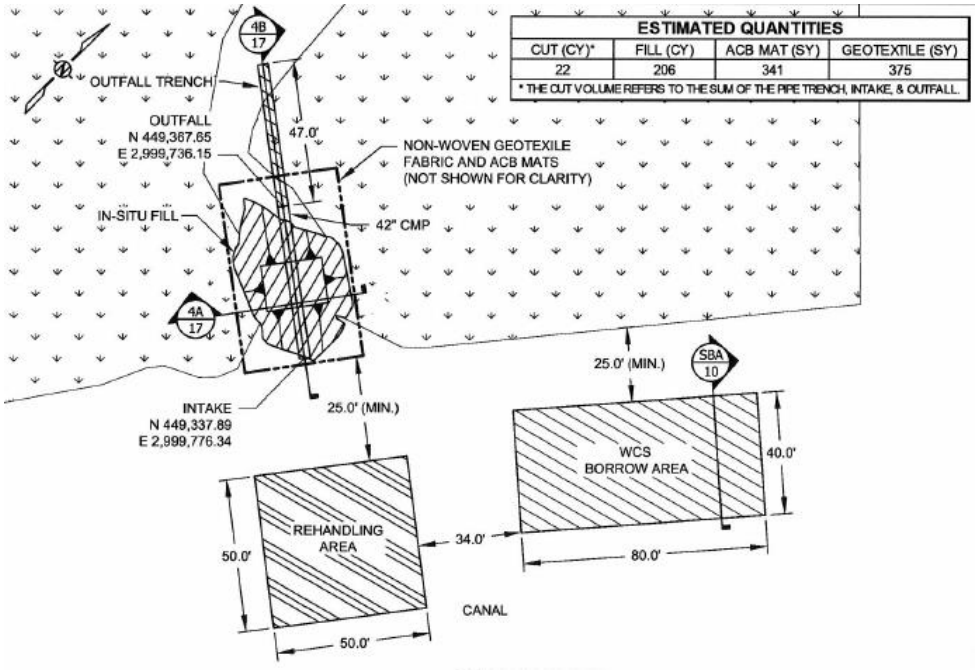
- 9 water control structures
  - 1-3 pipes per structure
  - 10 timber piles/cradles per pipe
- Backfilled with in-situ fill
- Berm capped with non-woven geotextile fabric and articulated concrete block mats
  - Field cut at pipe locations

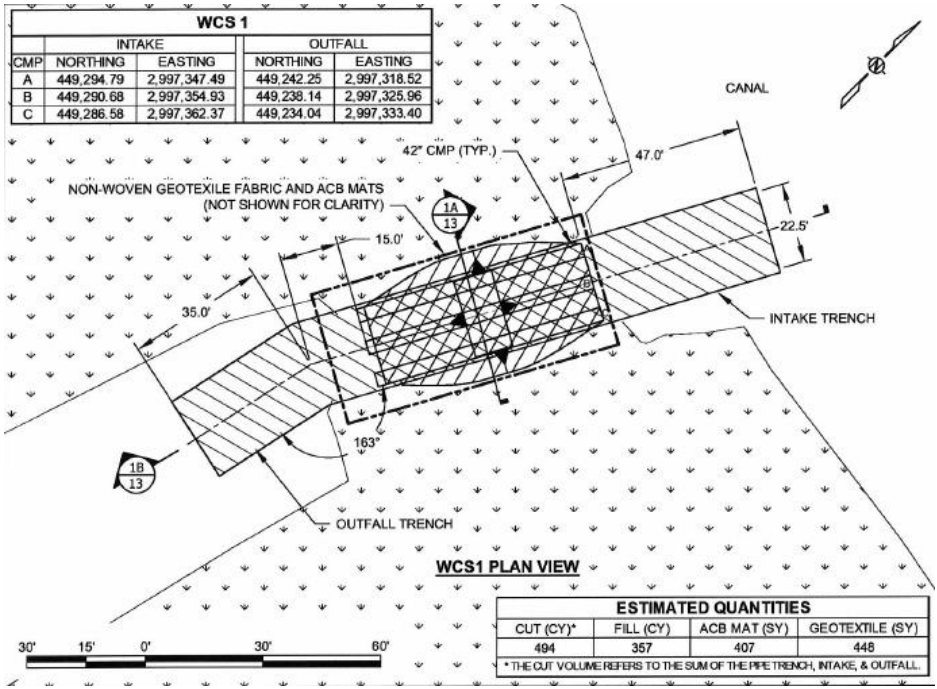




Water Control Structures

- 7 locations with existing berm
- Excavated material temporarily stockpiled on each side of pipe trench

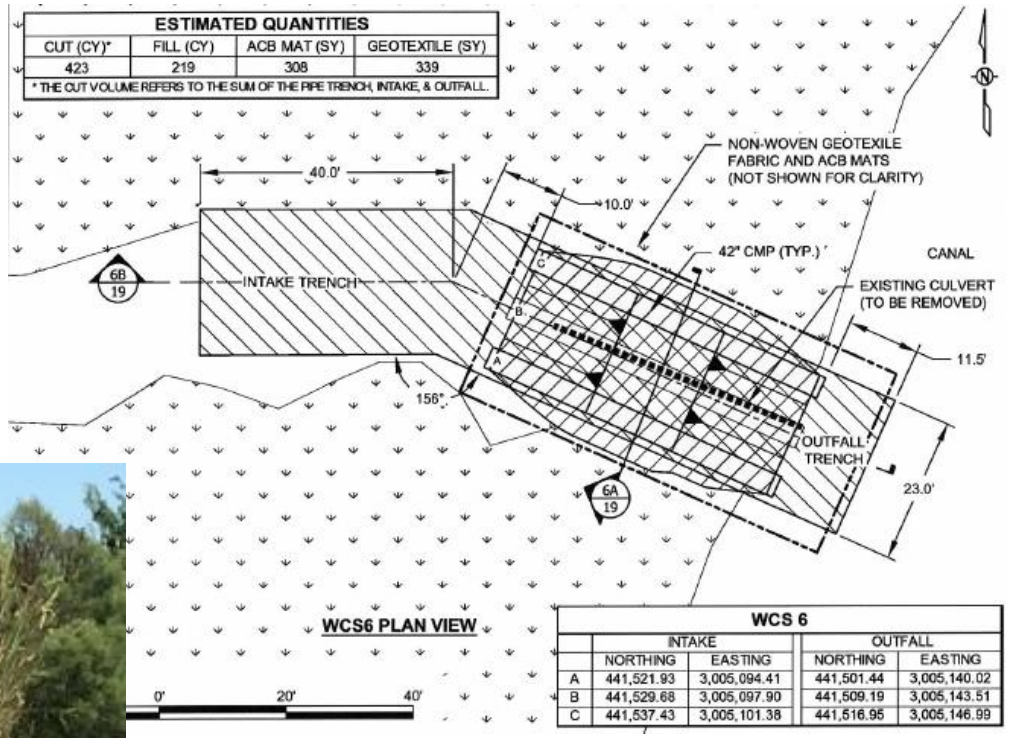




- 2 locations with existing breach
- Backfill material from borrow area in oil field canal
  - WCS 4 has a rehandling area to stockpile material

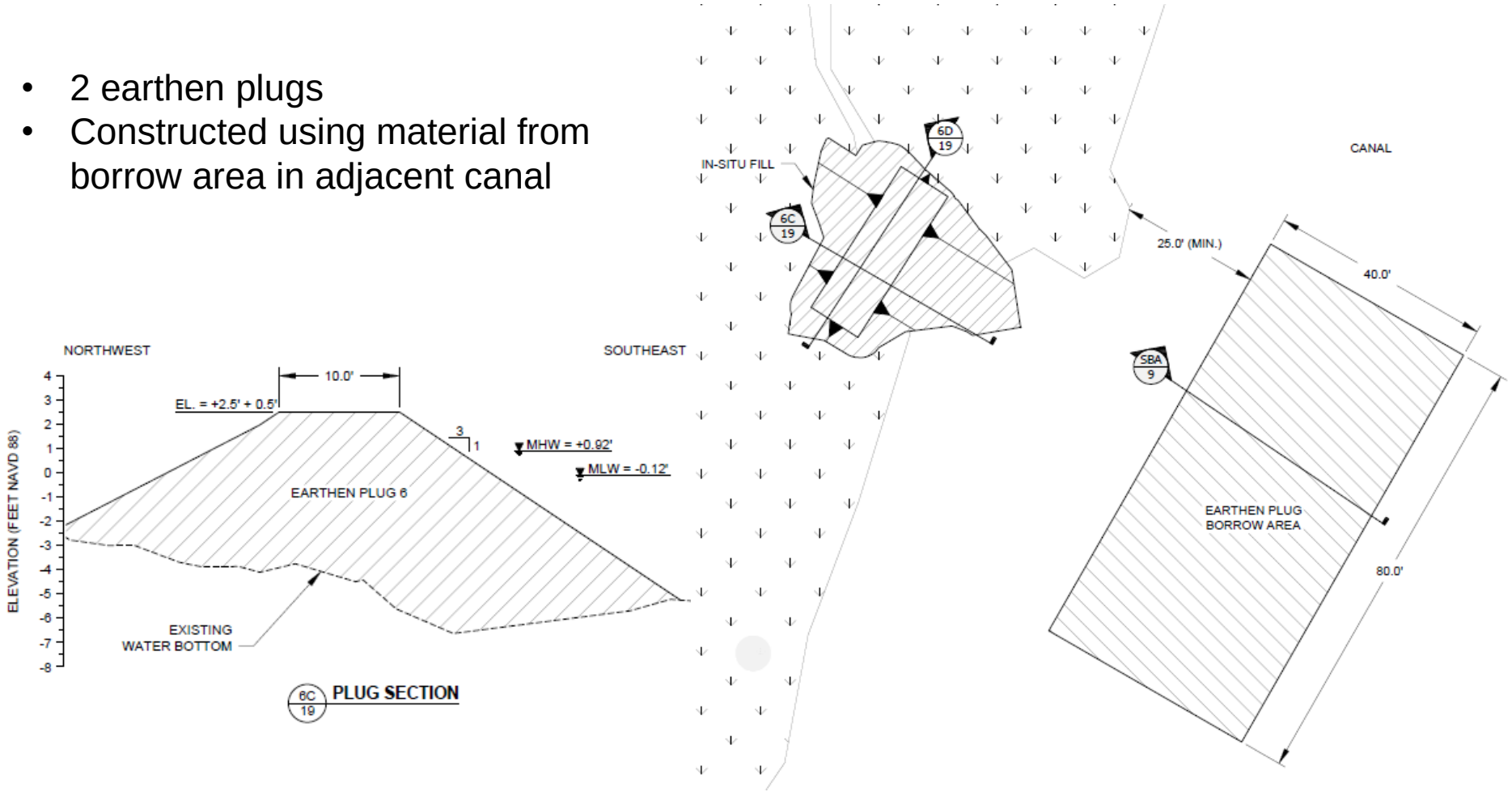
Water Control Structures

- WCS 6 has existing culvert to be removed
- Access from McIlhenny Canal



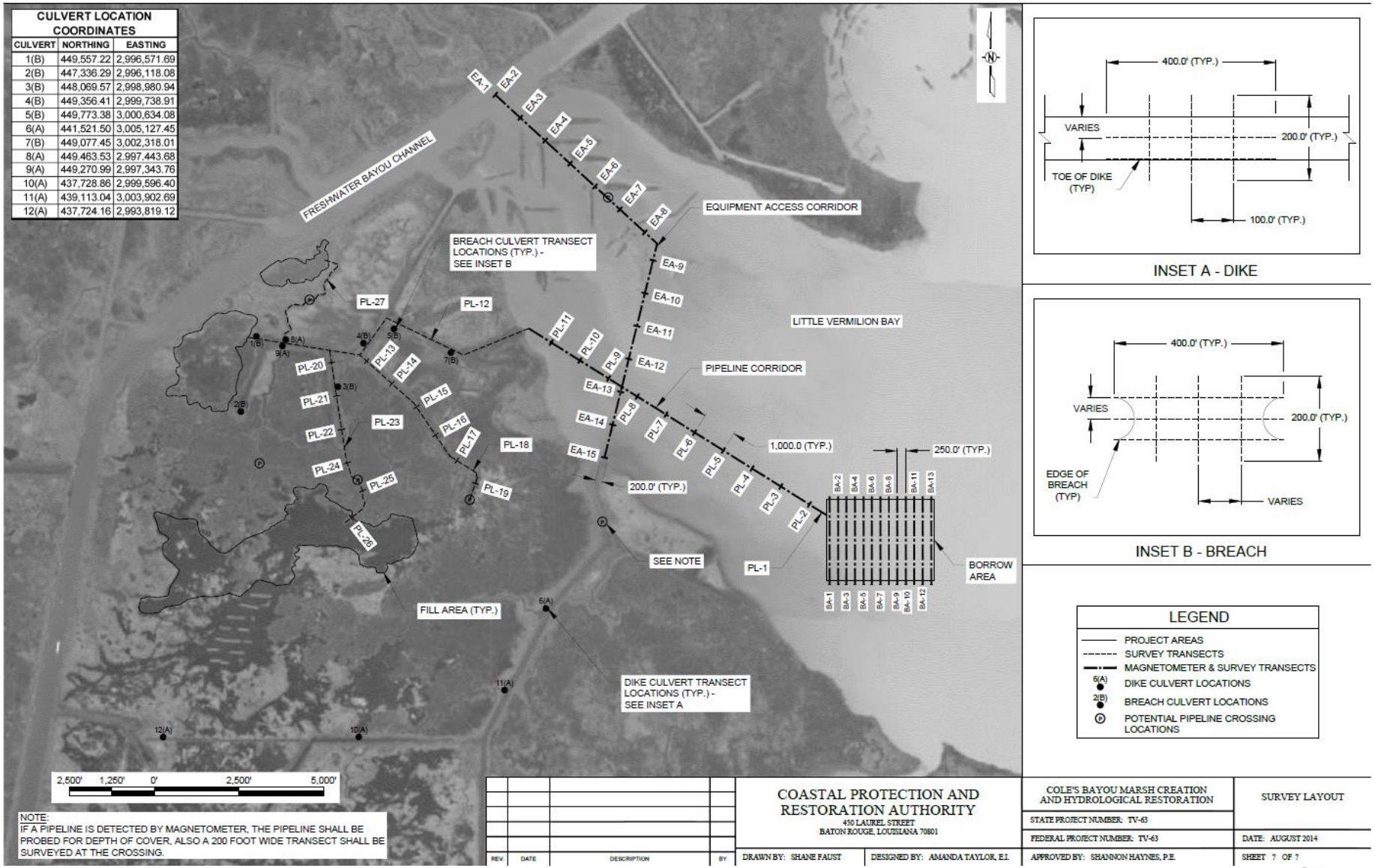
Earthen Plugs

- 2 earthen plugs
- Constructed using material from borrow area in adjacent canal

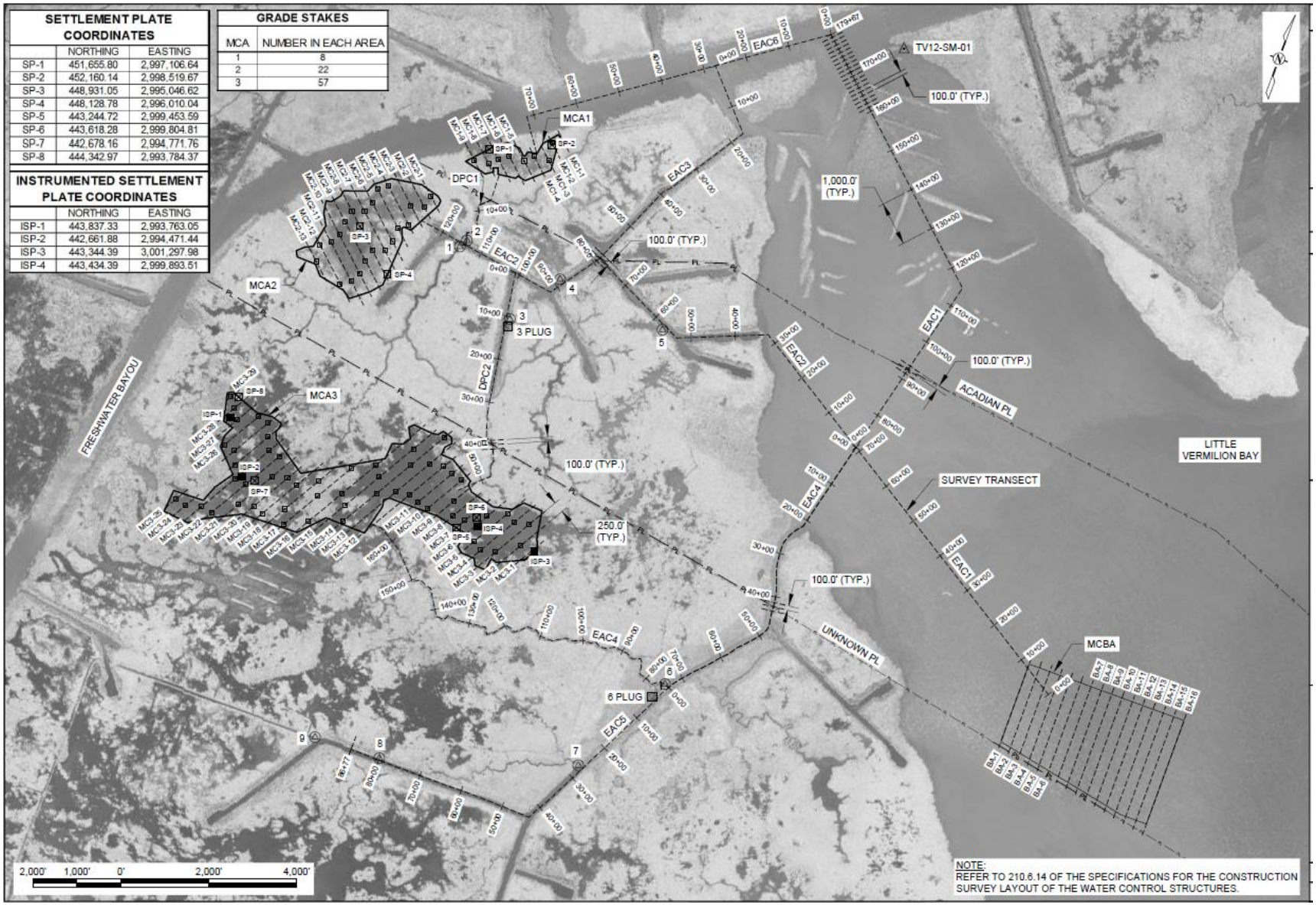


2013 Design Survey Layout

2014 Design Survey Layout



Construction Survey Layout



Bid Item 1 (TS-100)
Hydraulic Dredge Mobilization and Demobilization

1. Includes the cost for booster pump (If utilized)
2. Operating and maintenance costs of the dredge and booster pump are included in TS-400.
3. Hydraulic Dredge Data Sheet for each proposed dredge must be submitted in Bid.
4. Equipment Data Sheet for each proposed booster pump must be submitted in Bid.
5. Payment = Lump Sum
6. Ratio of Effort = 60% mobilization and 500 CY dredged / 40% Acceptance of Marsh Creation Areas and demobilization.

Bid Item 2 (TS-101)

Dredge Pipeline Mobilization, Installation and Demobilization

1. Includes installation, maintenance and removal.
2. Includes installation of protection (board mats) on dredge pipeline and equipment access corridors.
3. Payment = Lump Sum
4. Ratio of Effort = 45% mobilization / 45% installation (to Marsh Creation Area 1) / 10% removal of dredge pipeline and Acceptance of Marsh Creation Areas.

Bid Item 3 (TS-102)
General Mobilization and Demobilization

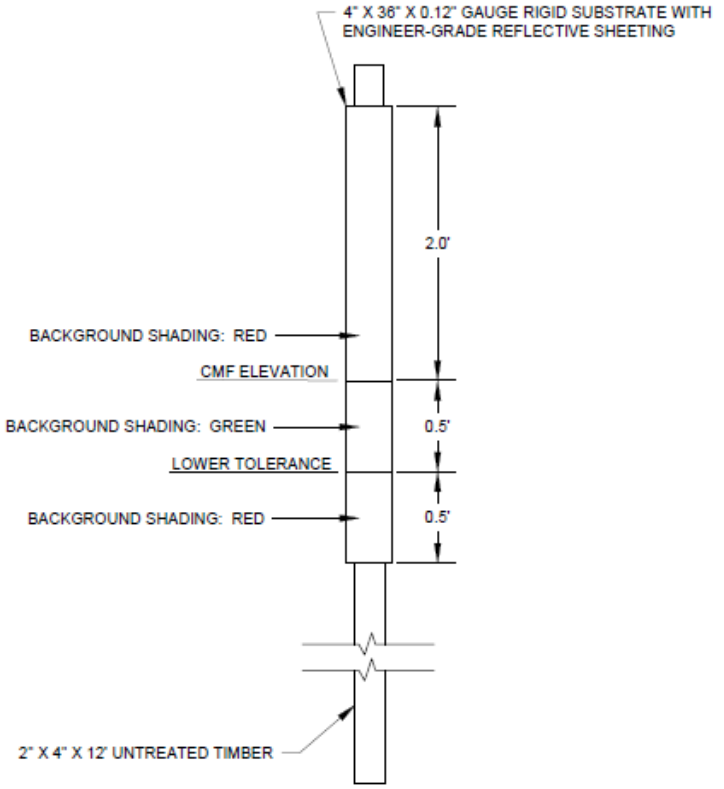
1. Includes all other labor, equipment, supplies, bonds, insurance and all other incidentals.
2. Payment = Lump Sum
3. Ratio of Effort = 60% mobilization of equipment and materials other than those specified in TS-100 and TS-101 / 40% demobilization and Acceptance of all project features.

Bid Item 4 (TS-210)
Construction Surveys

1. Pre-Construction: Marsh Creation Borrow Area (Bathy and Mag), Marsh Creation Areas (Topo), Containment Dikes (Topo), Containment Dike Borrow Areas (Topo and Mag), Dredge Pipeline Alignment (Bathy/Topo and Mag), MCBA Access Corridor (Bathy and Mag), Equipment Access Alignments (Bathy/Topo and Mag), Aids to Navigation, Temporary Bench Marks, Settlement Plates and Grade Stakes. Ratio of effort = 40%.
2. Process: Performed for payment and Acceptance. Similar layout to Pre-Construction Survey. Ratio of effort = 40%. Dikes surveyed every 2 weeks during fill placement and until Acceptance of respective marsh creation fill area.
3. As-Built: Performed for Acceptance of all Work. Ratio of effort = 20%.
4. Payment = Lump Sum

Bid Item 5 (TS-220)
Grade Stakes

1. Payment = Each
2. Ratio of Effort = 50% installation / 50% Removal and Acceptance of Marsh Creation Areas.

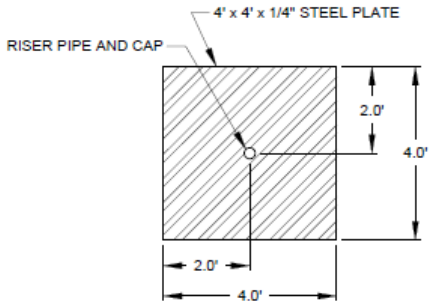


GRADE STAKE
NTS

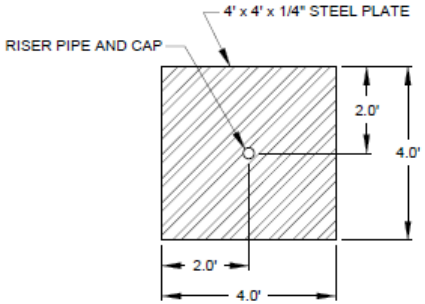
GRADE STAKES	
MCA	CMF ELEVATION (NAVD88)
1	+2.0
2	+2.0
3	+2.5

Bid Item 6 (TS-250)
Settlement Plates

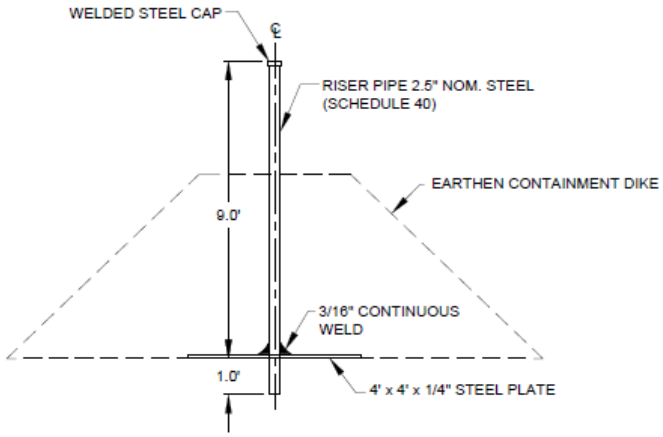
1. Contractor to install settlement plates in marsh creation areas and within earthen containment dikes.
2. Payment = Each
3. Ratio of Effort = 50% installation / 50% Acceptance of Marsh Creation Areas.



PLAN VIEW

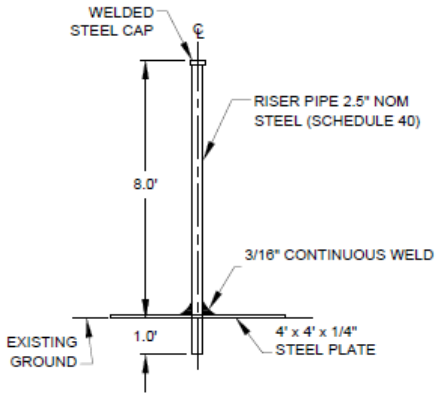


PLAN VIEW



PROFILE VIEW

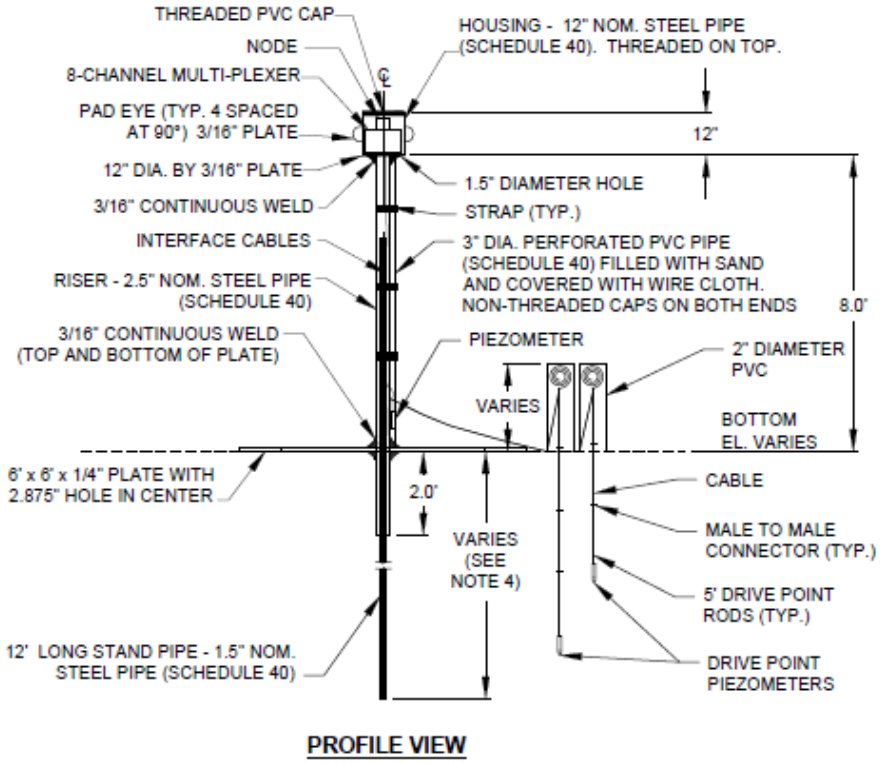
ECD SP
NTS

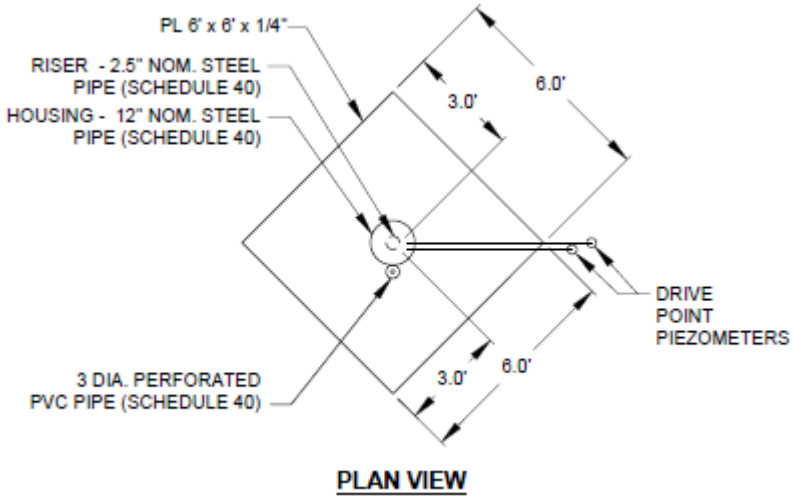


PROFILE VIEW

MCA SP
NTS

Bid Item 7 (TS-251)
Instrumented Settlement Plates



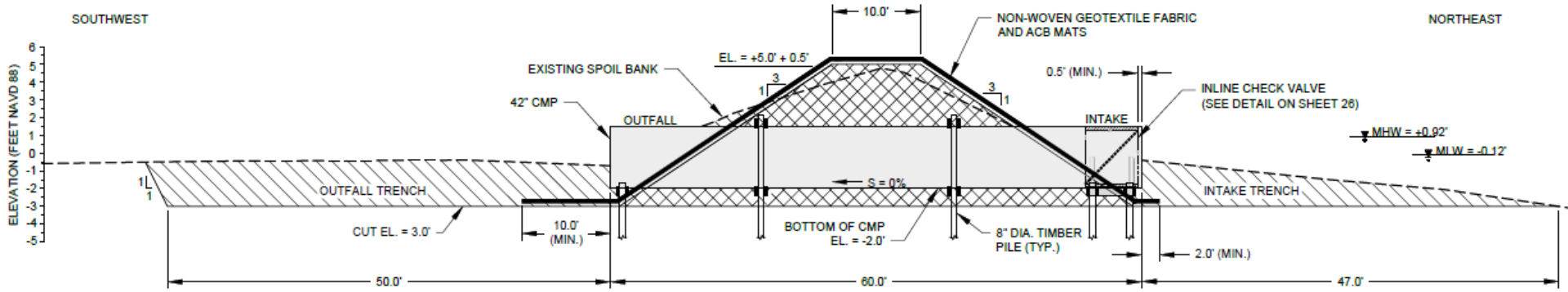


1. Contractor to fabricate and install 4 instrumented settlement plates in Marsh Creation Area 3, and to furnish instrumentation. CPRA to assemble instrumentation onto the settlement plates during installation with assistance from Contractor.
2. Payment = Lump Sum
3. Ratio of Effort = 50% installation / 50% Acceptance of Marsh Creation Areas.

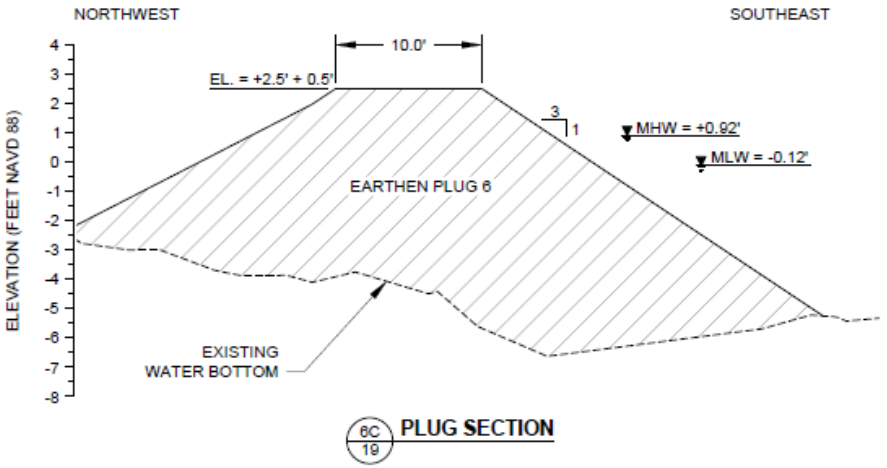
Bid Item 8 (TS-300)
Earthen Containment Dikes

1. ECDs to be constructed around perimeter of Marsh Creation Areas 1, 2, and 3.
2. Maintained until the Marsh Creation Areas are Accepted.
3. Payment = Linear Foot
4. Ratio of Effort = 90% Acceptance of ECDs / 10% Acceptance of Marsh Creation Areas and As-Built survey.

Bid Item 9 (TS-310)
Earthwork



1. Excavation and placement of material at 9 water control structure locations and 2 earthen plug locations.
2. Temporary dewatering structures included if utilized
3. Payment = Lump Sum



Bid Item 10 (TS-330)
Marsh Creation Borrow Area Access Corridor

1. Material from Marsh Creation Borrow Area Access Corridor to be temporarily side cast into Temporary Disposal Areas.
2. Access channel shall be maintained until the hydraulic dredge is demobilized from the Marsh Creation Borrow Area.
3. Backfilled upon demobilization of hydraulic dredge.
4. Payment= Lump Sum
5. Ratio of Effort = 50% Excavation of Marsh Creation Borrow Area Access Corridor / 50% Backfilling the corridor and As-Built Survey of the Marsh Creation Borrow Area Access Corridor

Bid Item 11 (TS-400)
Hydraulic Dredging and Marsh Fill

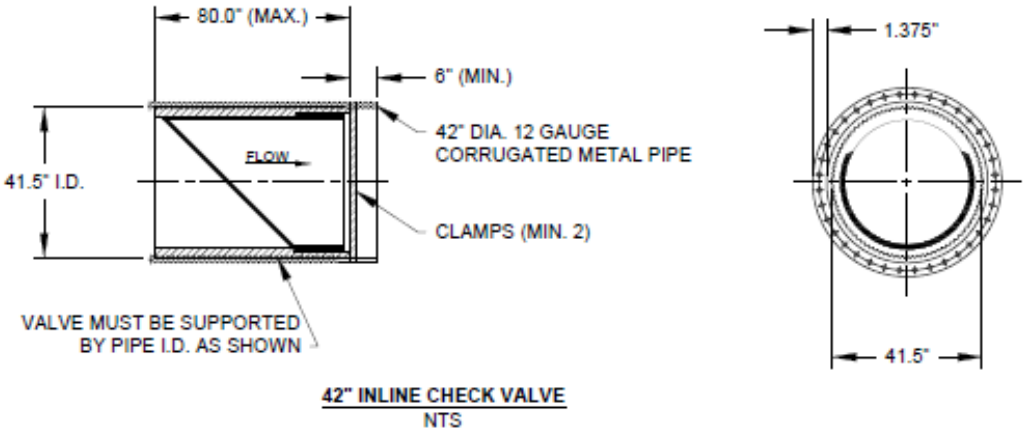
1. Marsh Creation Areas 1, 2, and 3 shall be constructed in 1 lift.
2. Dewatering shall be directed to the permitted marsh nourishment areas.
3. Payment will be made on total Cubic Yards dredged from the Marsh Creation Borrow Area (“Pay on the cut”).
4. Ratio of effort for payment: 80% Acceptance of marsh creation areas / 20% As-Built Surveys of marsh creation areas.

Bid Item 12 (TS-510)
Corrugated Metal Pipe

1. Installed at each of the water control structure locations shown on the Plans.
2. Payment= Linear Foot.

Bid Item 13 (TS-520)
Inline Check Valve

1. Check valves shall be installed within the CMP as per the Manufacturer's recommendations
2. Corrugations around valve shall be filled with hydraulic cement or approved equal
3. Payment= Each.



42" INLINE CHECK VALVE
NTS

NOTE:
CONTRACTOR TO COORDINATE WITH IN-LINE VALVE MANUFACTURER PRIOR TO PROCUREMENT.

Bid Item 14 (TS-630)
Non-Woven Geotextile Fabric

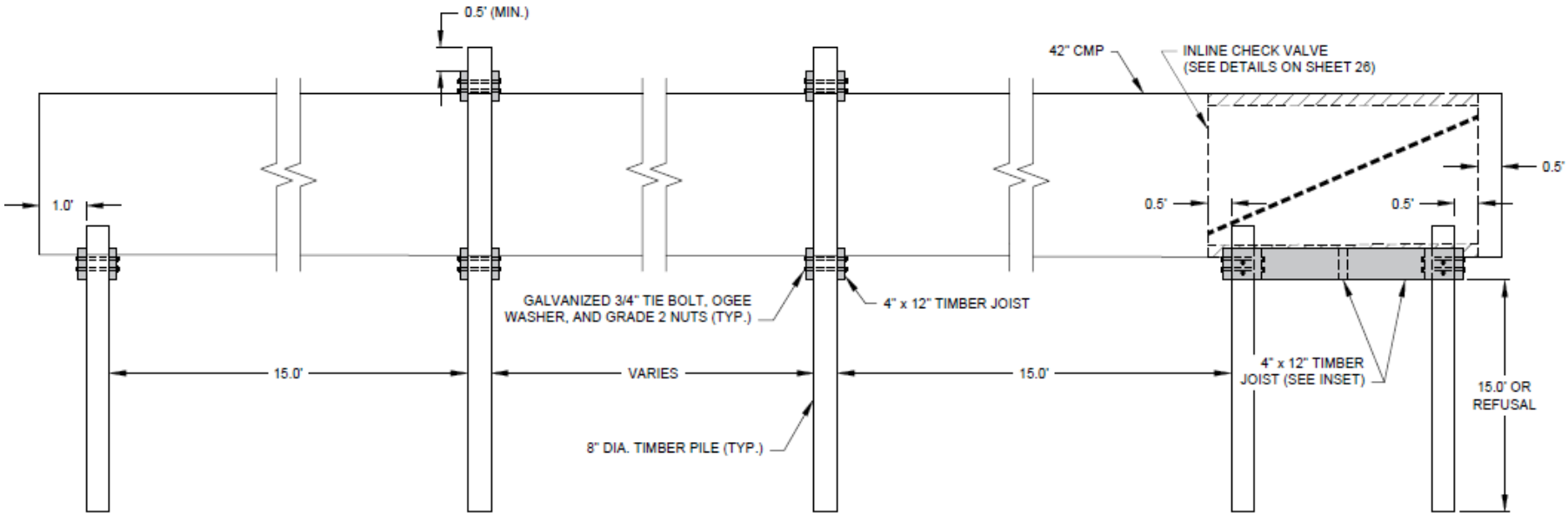
1. Installed over earthen containment dike along Freshwater Bayou in Marsh Creation Area 1.
2. Installed over earthen berm at all water control structures.
3. Payment= Square Yards
4. Ratio of effort for payment: 45% after installation at Marsh Creation Area 1, 45% after installation at all water control structures, 10% after Acceptance at Marsh Creation Area 1 and all water control structures

Bid Item 15 (TS-750)
Articulated Concrete Block Mats

1. Installed over geotextile fabric on earthen containment dike at Freshwater Bayou in Marsh Creation Area 1.
2. Installed over geotextile fabric on earthen berms at all water control structures.
3. Payment= Square Yard
4. Ratio of effort for payment: 45% after installation at Marsh Creation Area 1, 45% after installation at all water control structures, 10% after Acceptance at Marsh Creation Area 1 and all water control structures

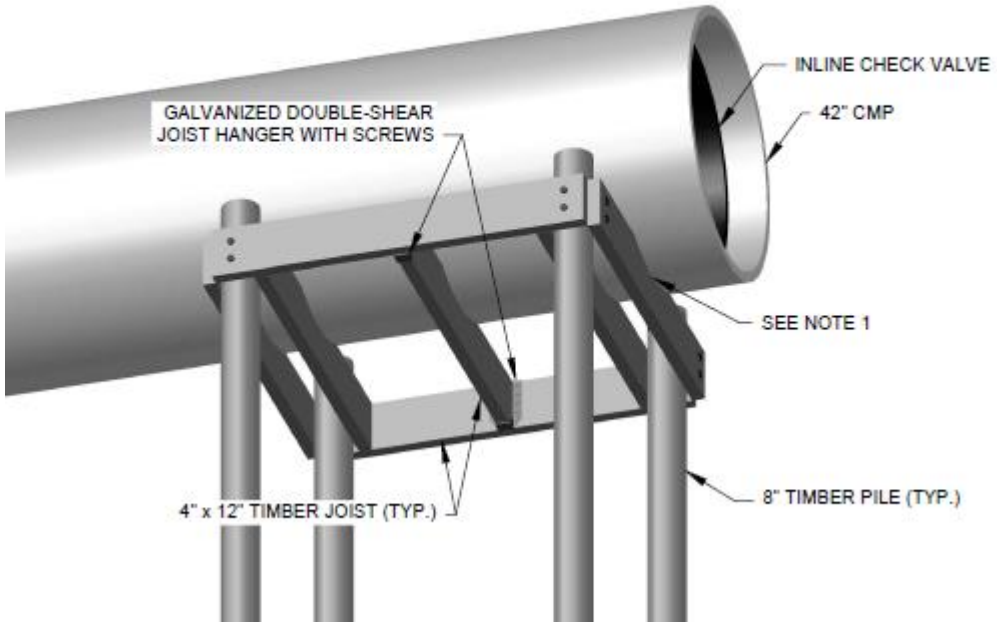
Bid Item 16 (TS-950)
Treated Timber Piles

1. Installed along each pipe as shown on the Plans
2. Installed using mechanical equipment
3. Vibratory Hammers will not be allowed
4. Payment= Each



Bid Item 17 (TS-955)
Treated Timber

1. Includes furnishing lumber of the sizes and grade specified.
2. Installed as shown on the Plans.
3. Payment= Thousand Board-Feet (MFBM)



Work Plan

1. Progress Report and Progress Meeting Format;
2. Hurricane and Health and Safety Plan;
3. Dredge data sheet(s);
4. Equipment data sheets;
5. Layout and schedule of all work (Surveys, equipment routes, pipeline alignments, staging areas, etc.) ;
6. **Dike breach repair procedures and communications protocol**.

- Payment for Mobilization will not be made until Acceptance of the Work Plan.

Permits

- Owner has secured the following permits:
  - Department of the U.S. Army Permit;
  - Consistency Determination from the LDNR;
  - Fill Permit from the LDWF.

Contractor Notifications

1. Land owners, utility operators and Louisiana One-Call prior to construction;
2. Engineer before performing surveys and after field work is complete;
3. Engineer regarding noncompliance with permit conditions (Marsh Creation Borrow Area, etc.);
4. Engineer regarding dike breaches;
5. Engineer regarding discovery of historical or cultural artifacts;

Notice to Mariners and Navigation

1. A copy of the Notice to Mariners shall be provided to the Engineer prior to excavation or dredging.

2. After consultation with the USCG, the Contractor shall provide the type and location of any necessary aids to navigation to the Engineer.
    - Signage in Little Vermilion Bay along MCBA Access Corridor

Other Available Data

- Survey and geotechnical reports are provided on the CPRA CIMS website

Schedule of Bid Items

Item No.	Work or Material	Quantity	Unit
1	Hydraulic Dredge Mobilization and Demobilization (TS-100)	1	LS
2	Dredge Pipeline Mobilization, Installation, and Demobilization (TS-101)	1	LS
3	General Mobilization and Demobilization (TS-102)	1	LS
4	Surveys (TS-210)	1	LS
5	Grade Stakes (TS-220)	87	Each
6	Settlement Plates (TS-230)	8	Each
7	Instrumented Settlement Plates (TS-251)	1	LS
8	Earthen Containment Dikes (TS-300)	41,571	LF
9	Earthwork (TS-310)	1	LS
10	Marsh Creation Borrow Area Access Corridor (TS-330)	1	LS
11	Hydraulic Dredging and Marsh Creation (TS-400)	1,190,689	CY
12	Corrugated Metal Pipe (TS-510)	1,240	LF
13	Inline Check Valve (TS-520)	21	Each
14	Non-woven Geotextile Fabric (TS-640)	8,120	SY
15	Articulated Concrete Block Mat (TS-750)	7,390	SY
16	Treated Timber Piles (TS-950)	220	Each
17	Treated Timber (TS-955)	7.8	MFBM

Bids

- Sealed bids will be received for the State of Louisiana by the Coastal Protection and Restoration Authority, 150 Terrace Avenue, 4th Floor Conference Center, Baton Rouge, Louisiana 70802 until **2:00 P.M. April 24, 2018.**

- Bidder Questions are due by COB on **April 17, 2018**.