

VICINITY MAP



Date: 02/06/13

Drawn By: CDL

Sheet No.: MOD 1 OF 3

Scale: 1"=200'

Approved By: JMP

File No.: 145220

Revisions

Revision No.: Date: Notes:

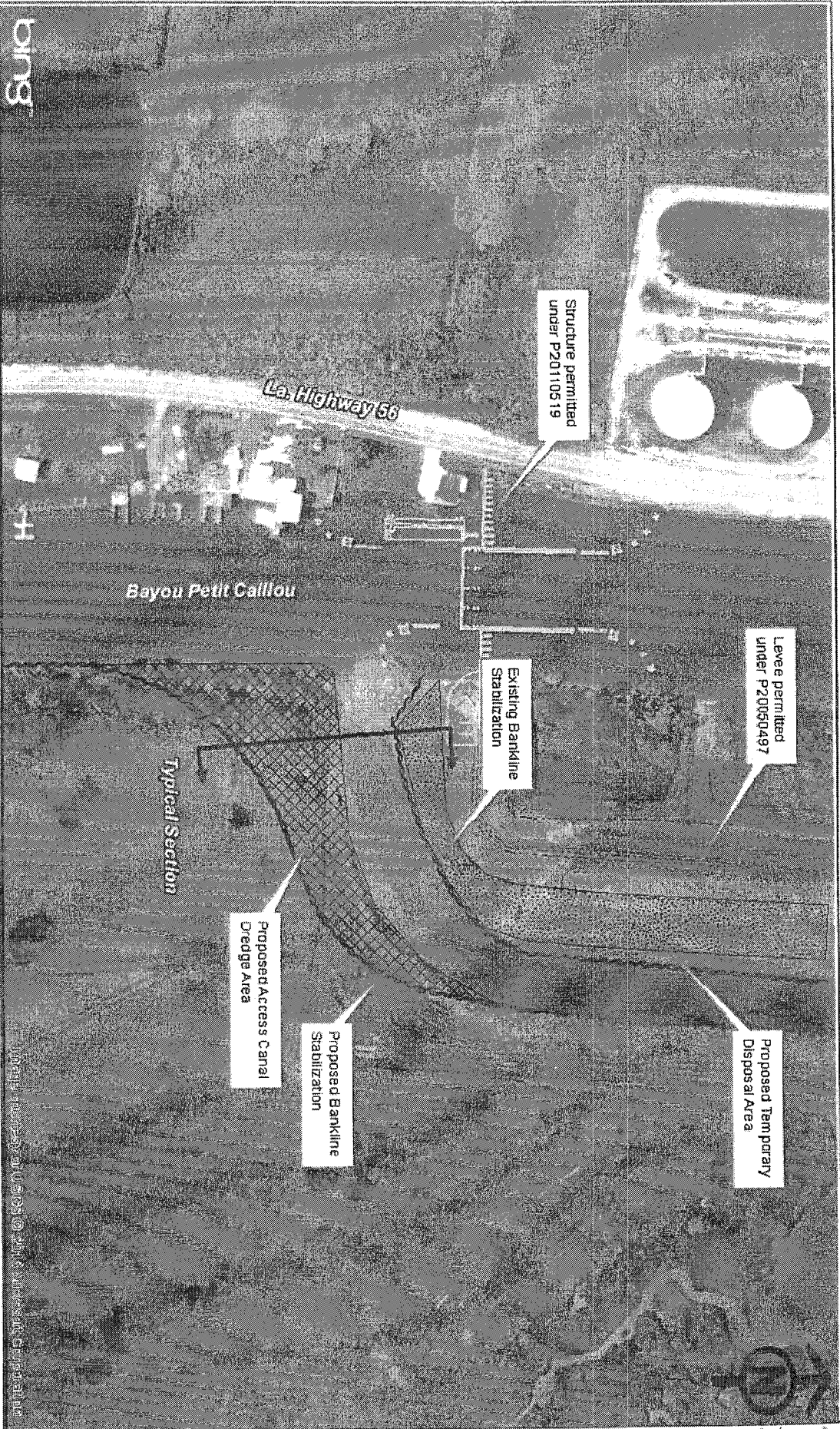
TERREBONNE LEVEE AND CONSERVATION DISTRICT REACH H2/H3 LEVEE AND STRUCTURES - MODIFICATION SECTION 99, T20S - R18E TERREBONNE PARISH, LOUISIANA



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PLAN VIEW



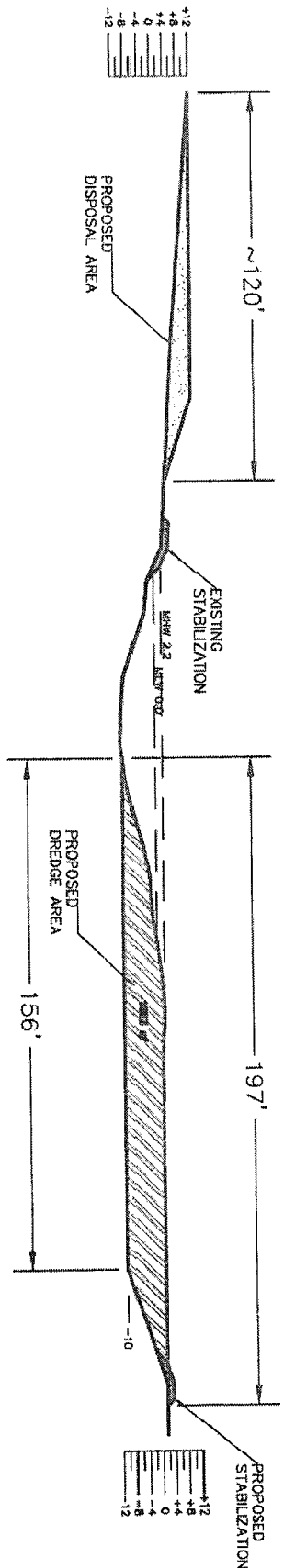
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Scale:	1"=200'	Approved By:	JMP	File No.:	145220

**TERREBONNE LEVEE AND CONSERVATION DISTRICT
REACH H2/H3 LEVEE AND STRUCTURES - MODIFICATION
SECTION 99, T20S - R18E
TERREBONNE PARISH, LOUISIANA**

Revisions	
Revision No.:	Date:



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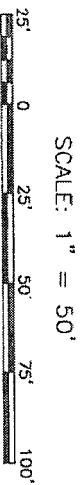


NOTES: APPROXIMATELY 31,000 CUBIC YARDS OF MATERIAL WILL BE REMOVED TO CREATE A COMMERCIAL BOAT ACCESSIBLE ACCESS CANAL. THE MATERIAL WILL BE STOCKPILED ON THE EXISTING REACH H2 LEVEE FOR FUTURE LEVEE IMPROVEMENT.

APPROXIMATELY 1,000 CUBIC YARDS OF RIP RAP WILL BE PLACED ALONG THE BANKLINE FOR EROSION AND STABILIZATION PURPOSES.

APPROXIMATELY 0.4 ACRES OF RIDGE HABITAT AND 0.5 ACRES OF MARSH HABITAT WILL BE IMPACTED BY THIS ACTIVITY.

TYPICAL CROSS SECTION



TERREBONNE LEVEE AND CONSERVATION DISTRICT
REACH H2/H3 LEVEE AND STRUCTURES – MODIFICATION
SECTION 99, T20S–R18E
TERREBONNE PARISH, LOUISIANA

Date: 02/06/13

Drawn By: COL

Sheet No.: MOD 3 of 3

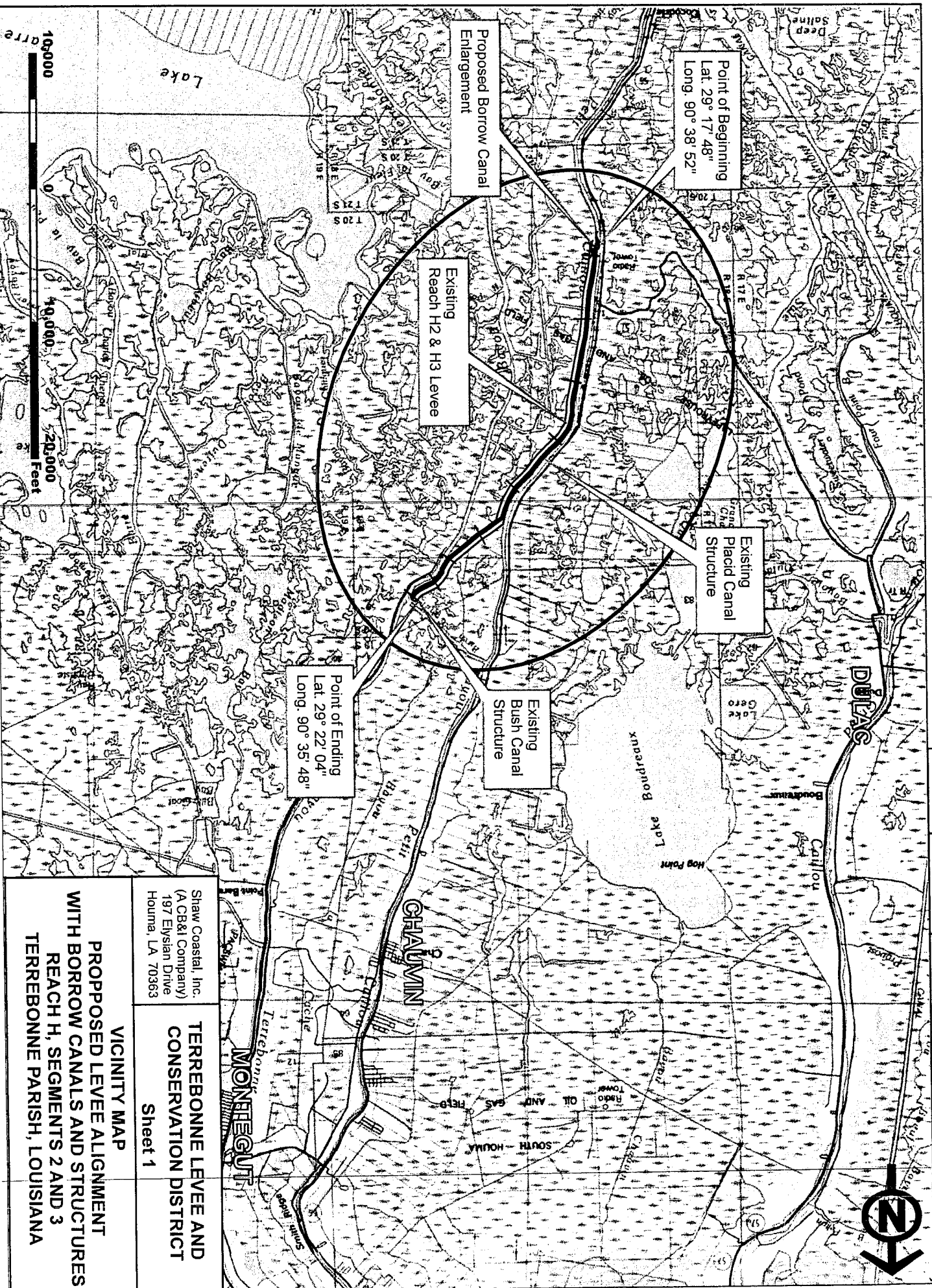
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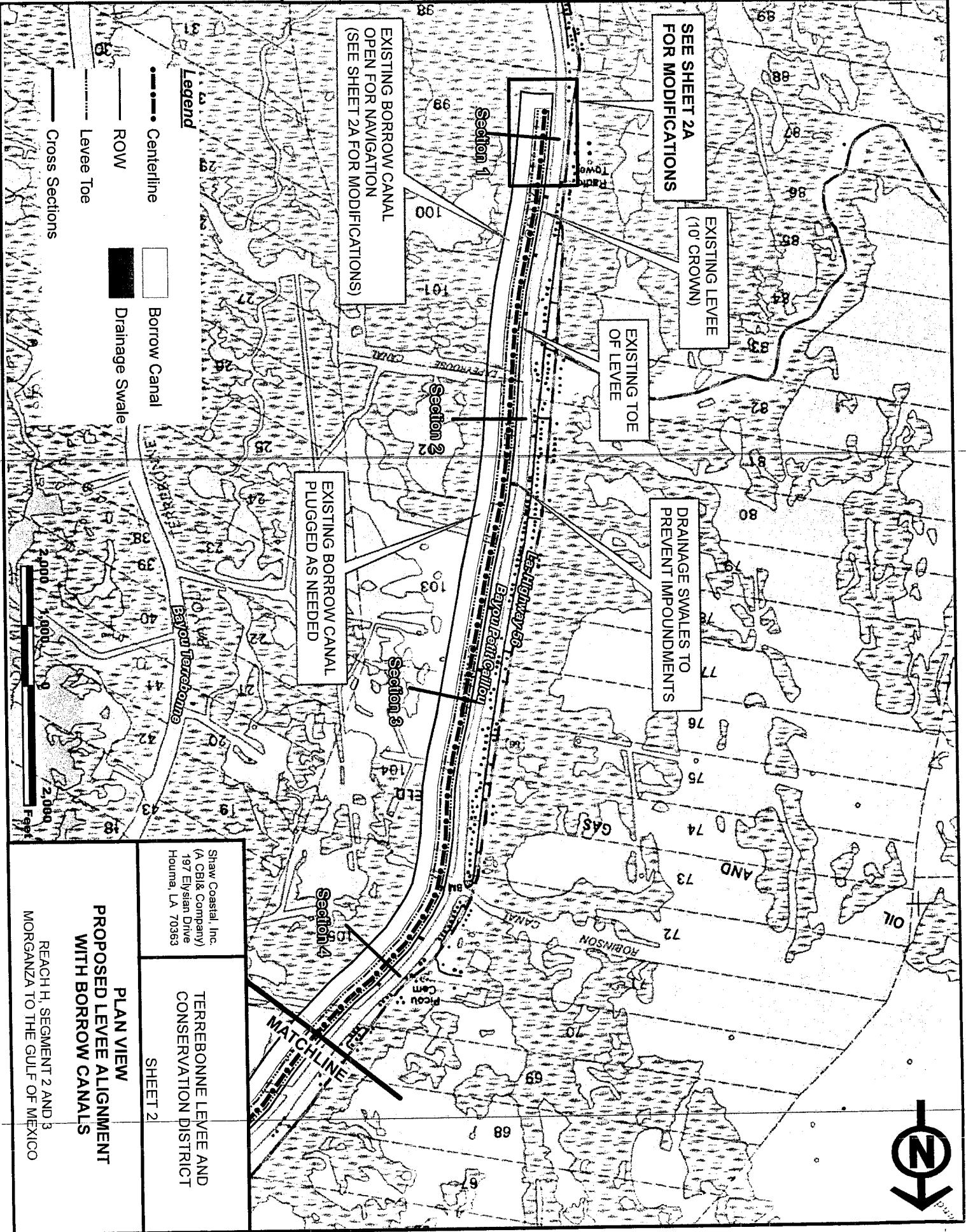
Approved By: JLP

File No.: 145220

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Cliner	JPena	05/01/08; 07/15/09; 03/06/13	145220/Sheet1



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HOUMA	C.Liner 03/01/05	J.PENA 03/01/05	03/06/13	145220/SHEET2



Legend

Centerline

ROW

Levee Toe

Cross Sections

Borrow Canal

Drainage Swale

PLAN VIEW

PROPOSED LEVEE ALIGNMENT WITH BORROW CANALS

REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

SHEET 2

TERREBONNE LEVEE AND
CONSERVATION DISTRICT

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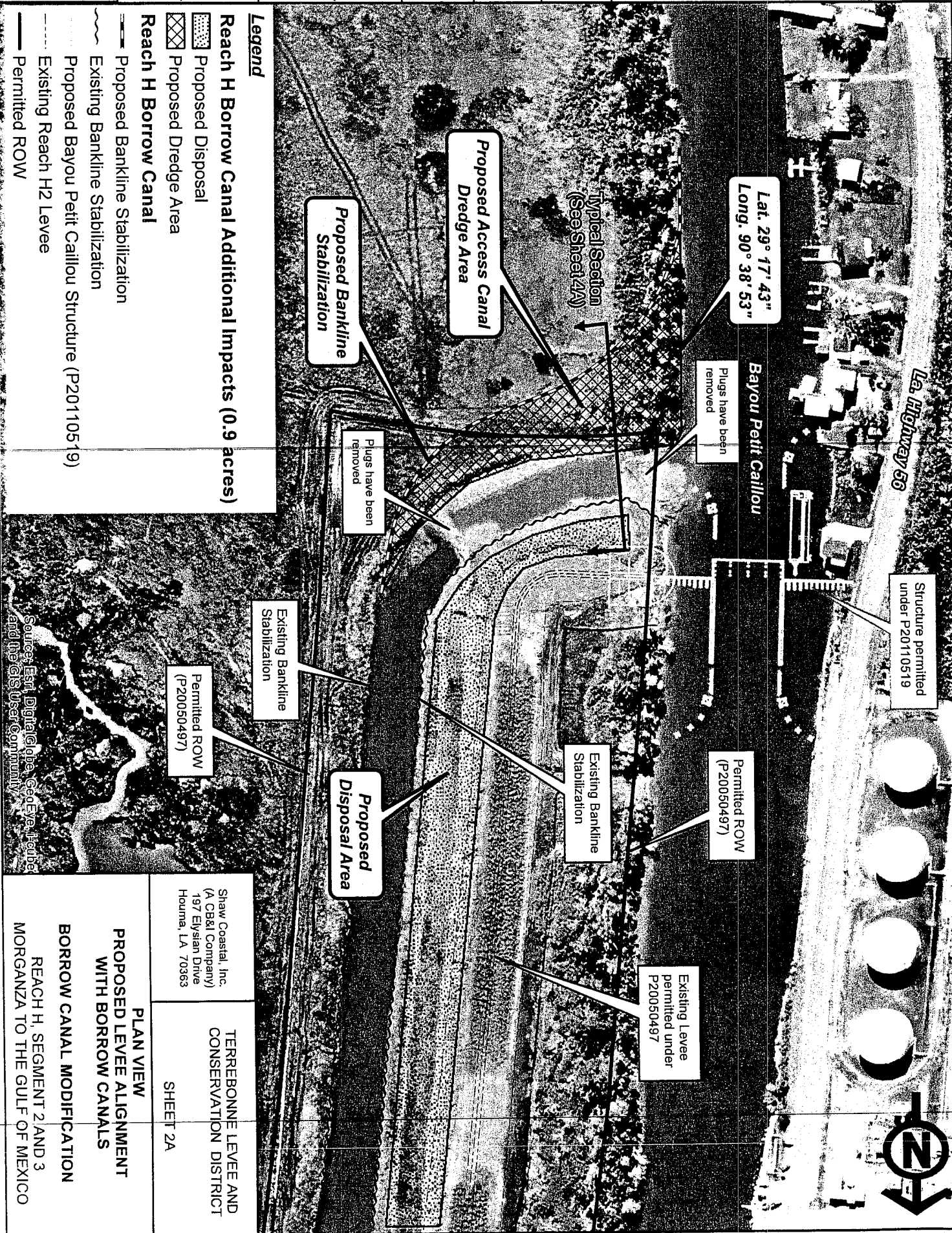
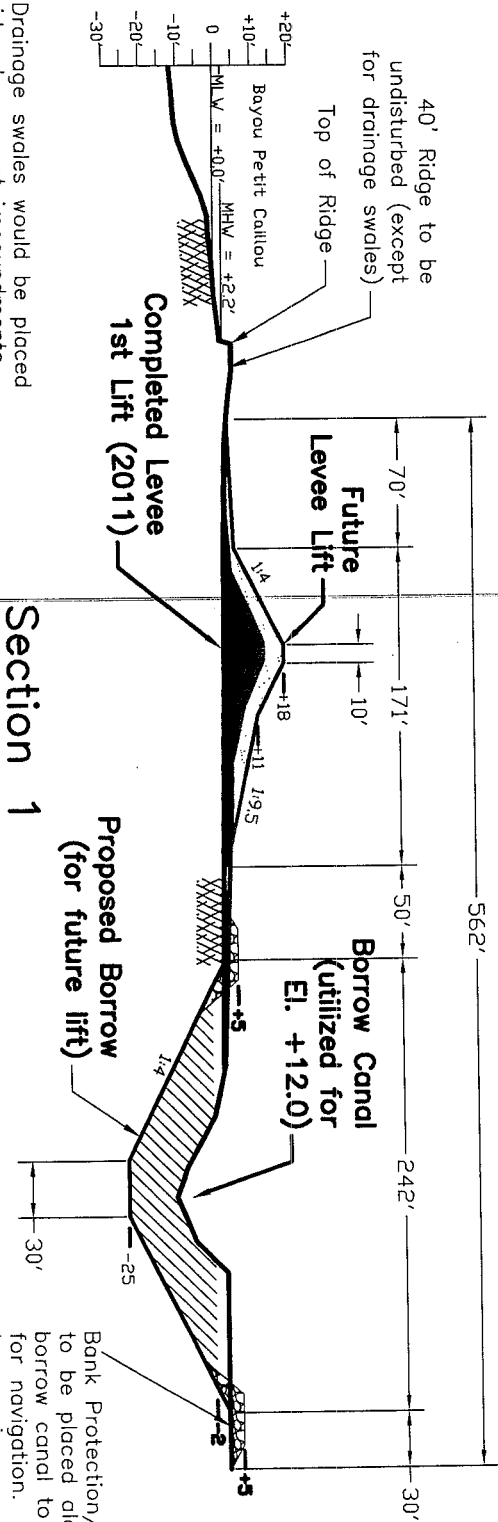
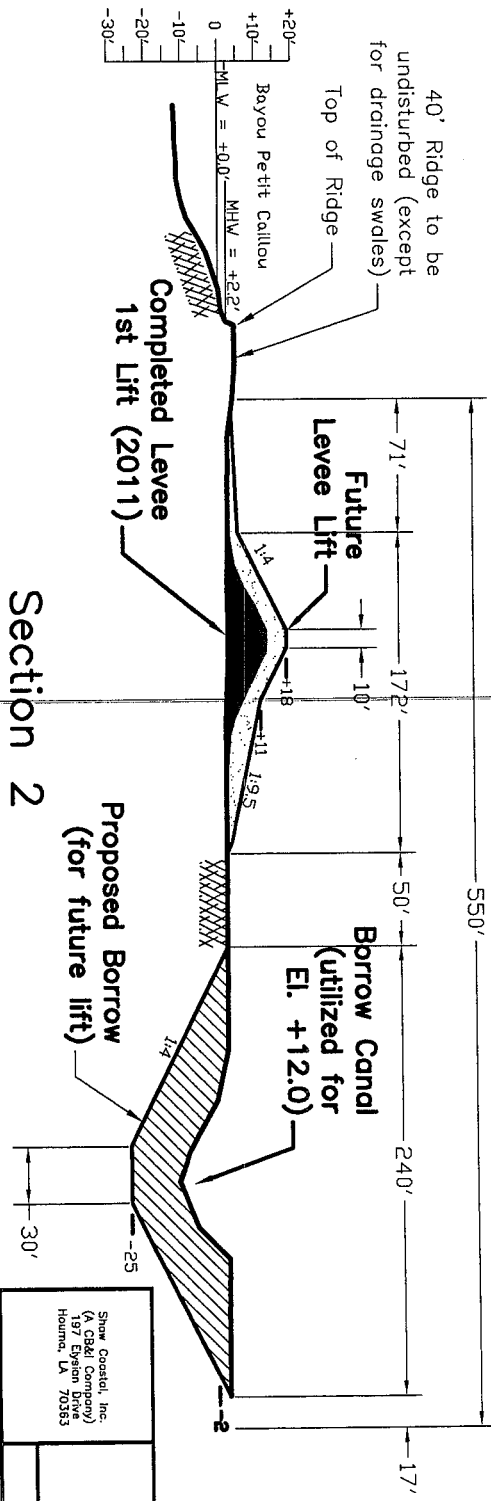


IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	REVISED DATE:	DRAWING NUMBER
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					03/06/13	145220/CROSS SECTIONS



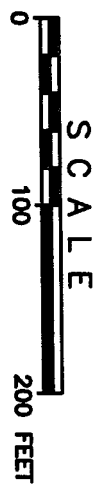
Note: Drainage swales would be placed in the ridge to prevent impoundments between the ridge and levee. They would be placed at approx. 1,000' intervals or as needed.



Bank Protection/Armor to be placed along portion of borrow canal to remain open for navigation. The borrow canal to remain open for navigation in that portion from Bayou Petit Caillou to Lapeyrouse Canal only. Armoring would be installed during the lifts, as needed.

Section 2

Section 1



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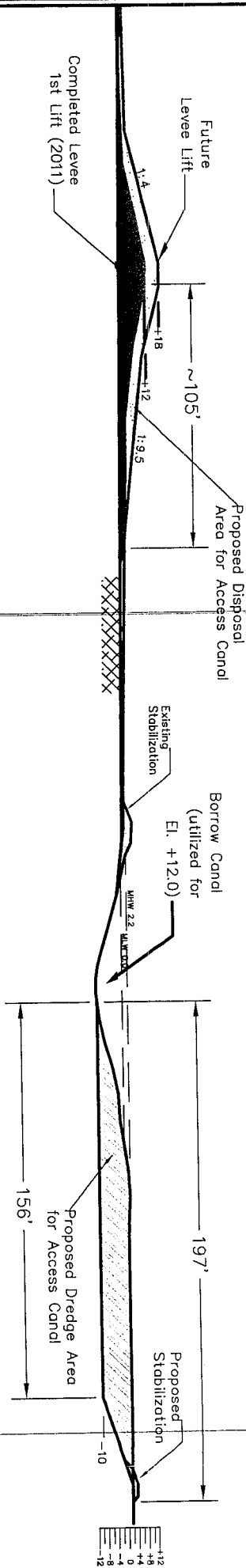
TERREBONNE LEVEE AND
CONSERVATION DISTRICT
CHAUVIN, LOUISIANA

SHEET 4

CROSS-SECTIONS
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS
REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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---	---	HOUMA	CLINER	03/01/05	07/14/09	145220/borrow canal
				JPEWA	03/06/13	NUMBER typical section.dwg



NOTES: APPROXIMATELY 31,000 CUBIC YARDS OF ADDITIONAL MATERIAL WILL BE REMOVED TO CREATE A COMMERCIAL BOAT ACCESSIBLE ACCESS CANAL. THE MATERIAL WILL BE STOCKPILED ON THE EXISTING REACH H2 LEVEE FOR FUTURE LEVEE IMPROVEMENT.

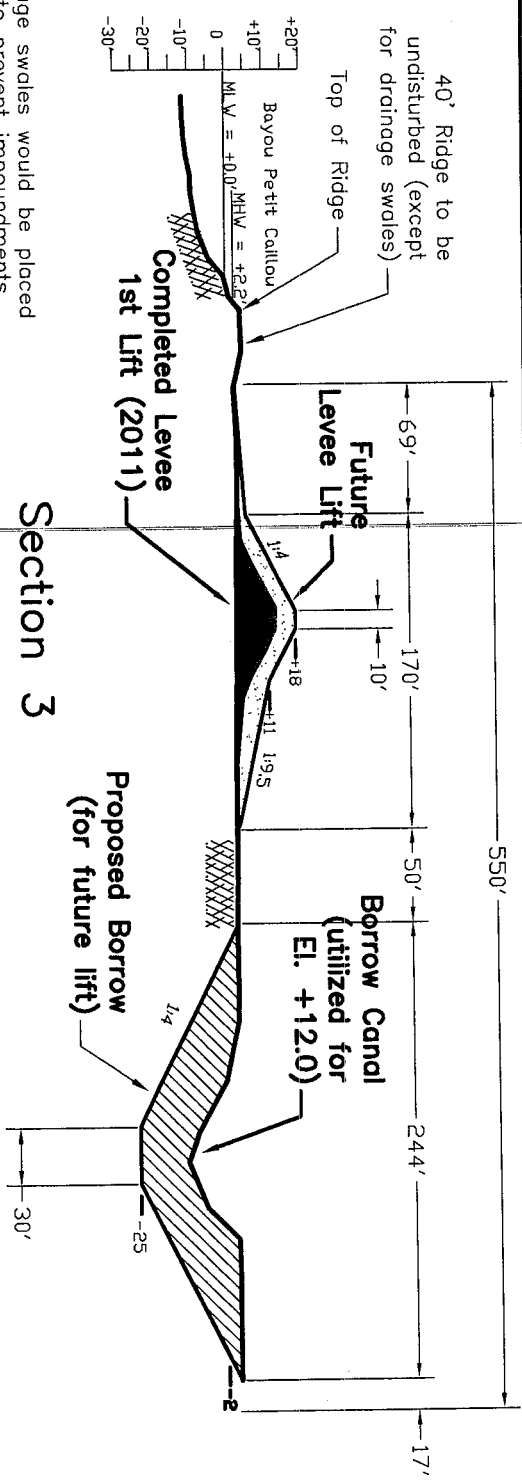
APPROXIMATELY 1,000 CUBIC YARDS OF ADDITIONAL RIP RAP WILL BE PLACED ALONG THE BANKLINE FOR EROSION AND STABILIZATION PURPOSES.

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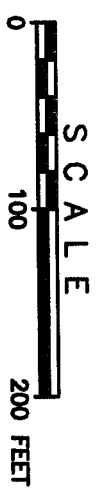
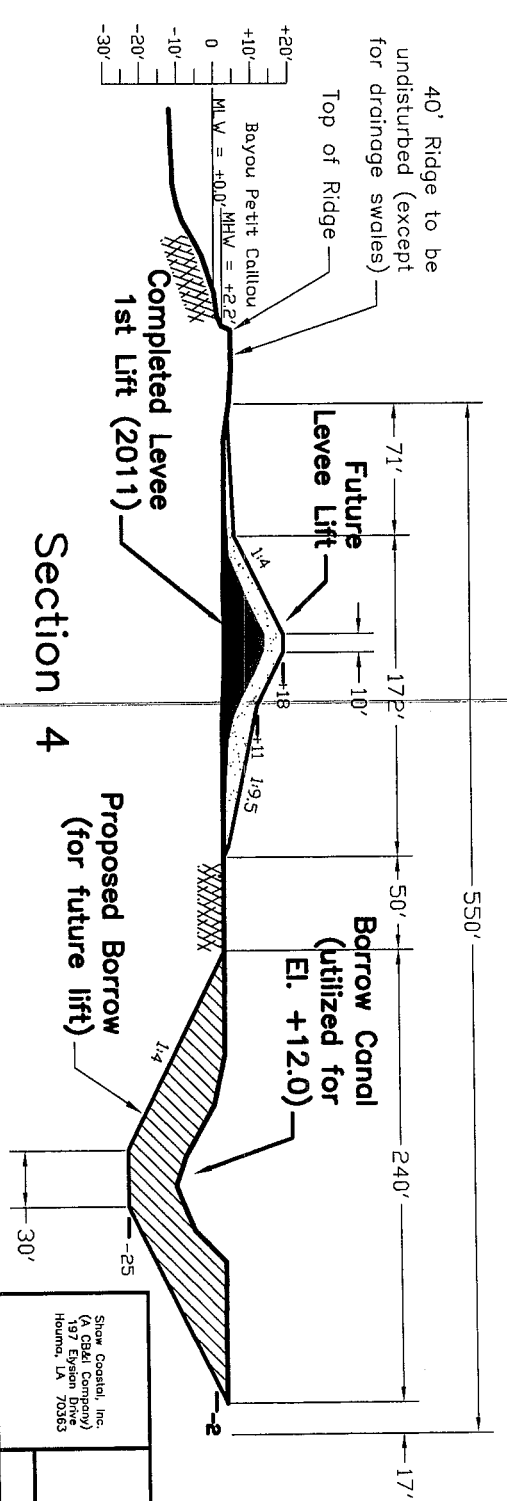
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SHEET 4A	

CROSS-SECTIONS:
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS
REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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---	---	HOU/MA	C. LINER	J. PENA	03/01/05 07/14/09 03/06/13	145220/CROSS SECTIONS



Note: Drainage swales would be placed in the ridge to prevent impoundments between the ridge and levee. They would be placed at approx. 1,000' intervals or as needed.



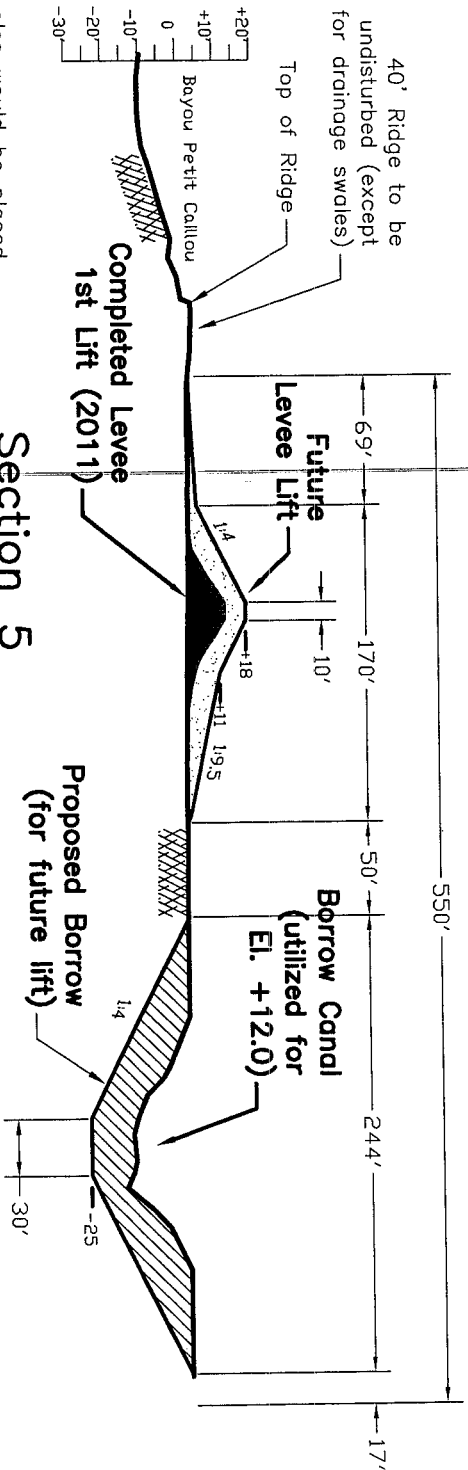
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SHEET 5	

**CROSS-SECTIONS
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS**

REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

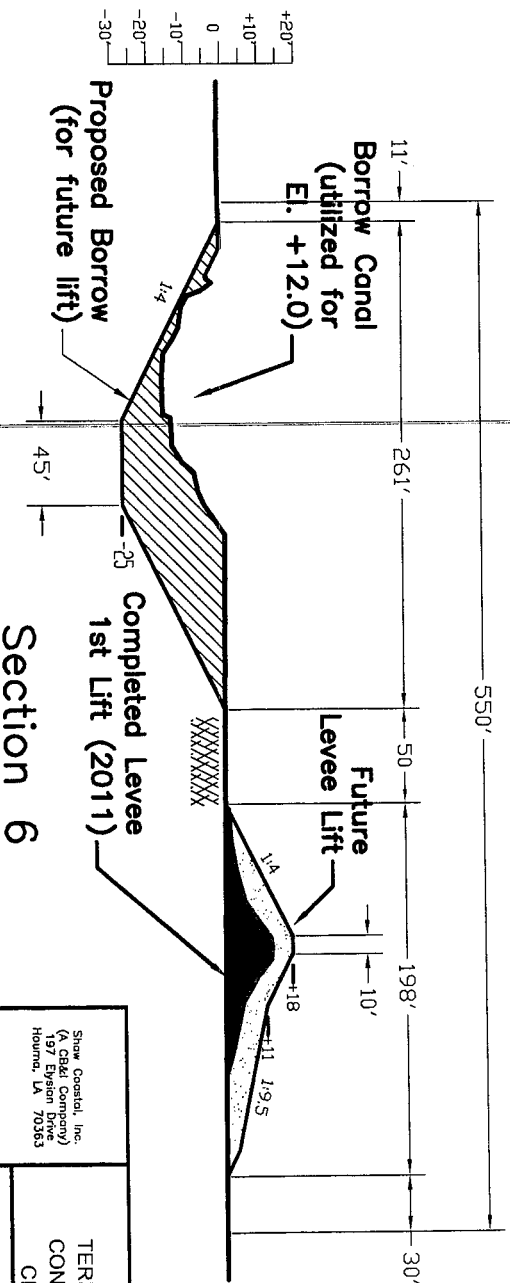
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					03/06/13	
						145220/CROSS SECTIONS



Note: Drainage swales would be placed in the ridge to prevent impoundments between the ridge and levee. They would be placed at approx. 1,000' intervals or as needed.

Section 5



Section 6



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Houma, LA 70363

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CONSERVATION DISTRICT
CHAUVIN, LOUISIANA

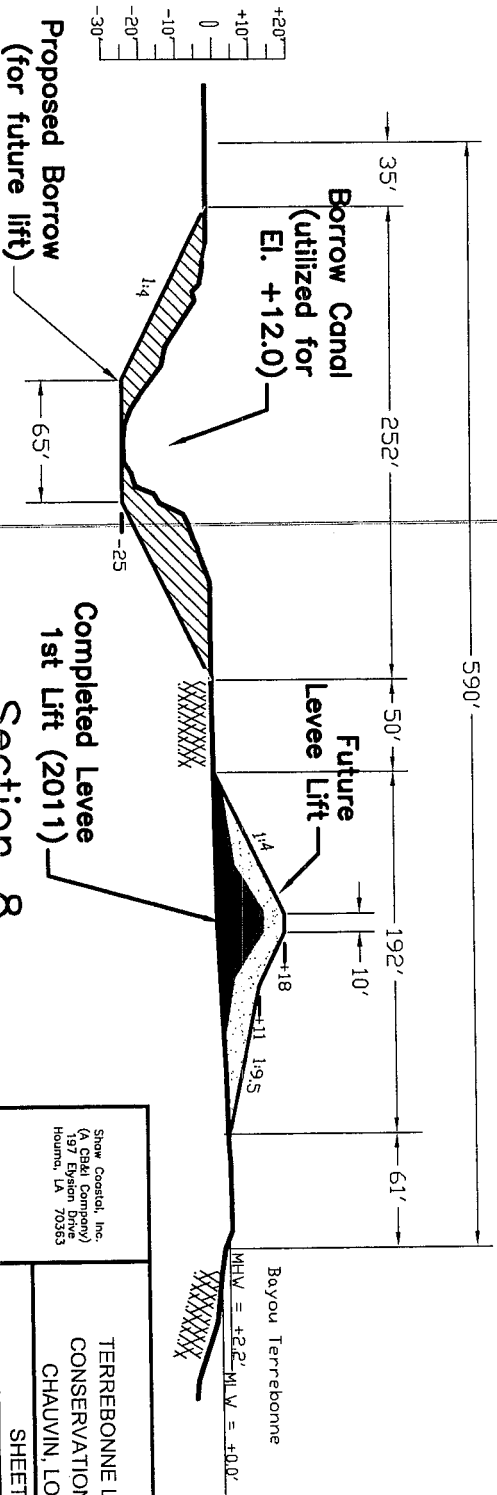
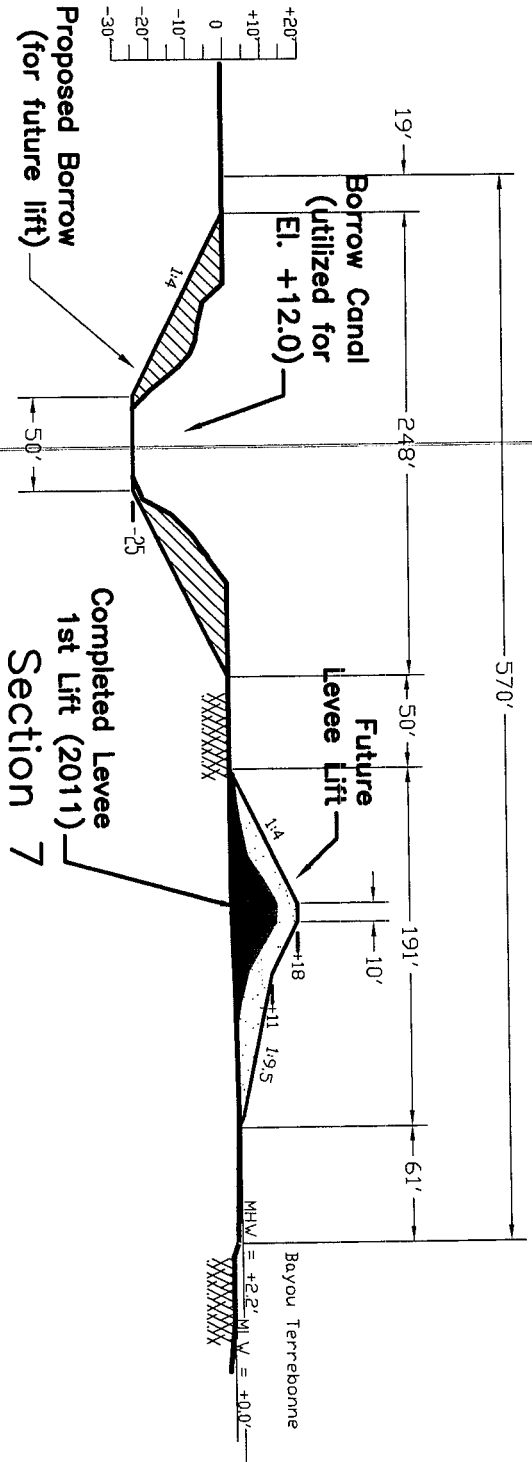
SHEET 6

CROSS-SECTIONS
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS

REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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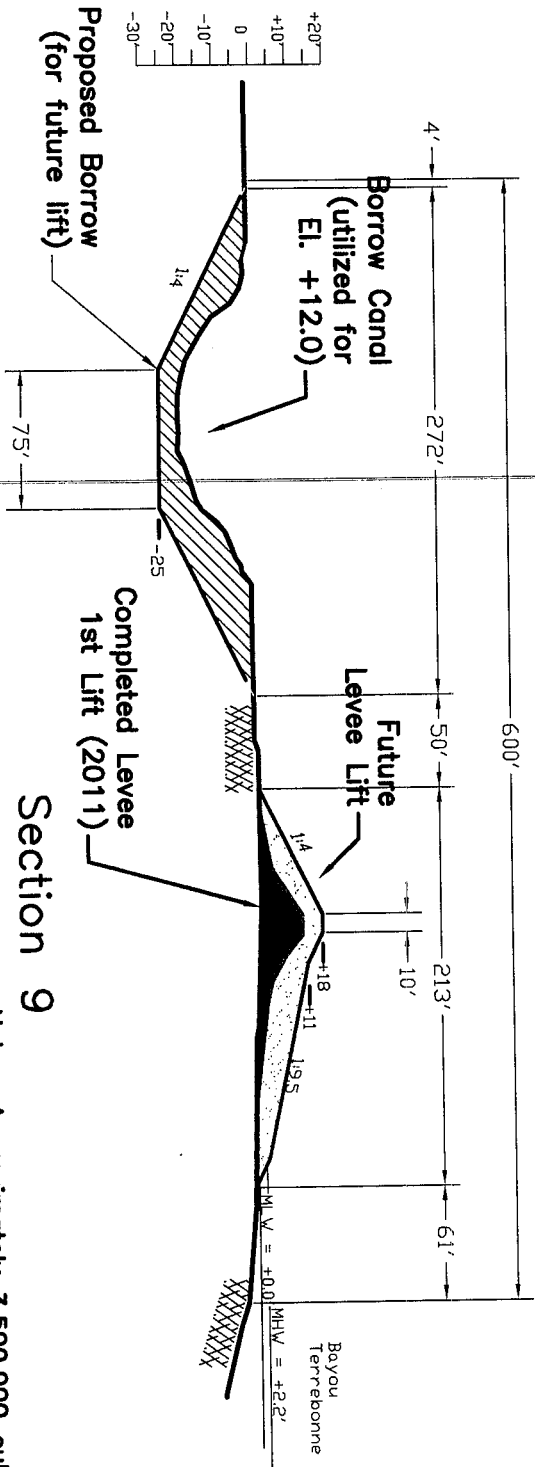
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**CROSS-SECTIONS
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS**

REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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					07/14/09	03/06/13



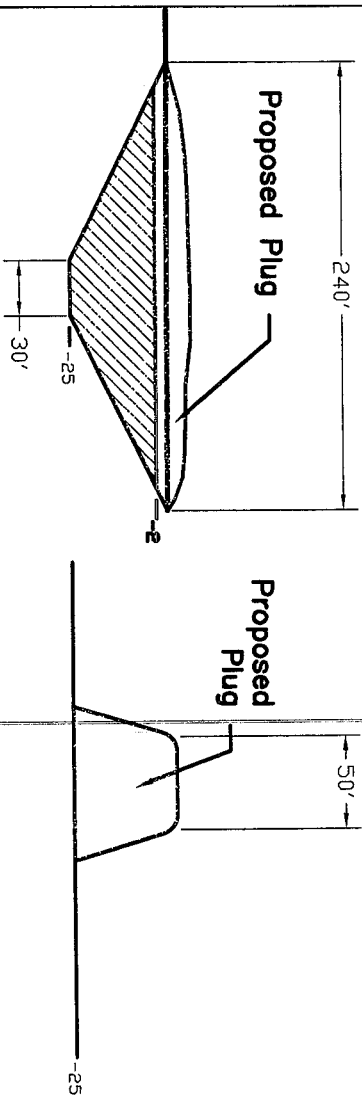
Section 9

Note: Approximately 3,500,000 cubic yards of material will be borrowed and placed as levee alignment.

Borrow canal to be plugged at approximately 2,000' intervals or as needed as part of the design requirements and would be armored as needed.

Levee is being constructed in lifts.

Bank protection to be placed on all structures as needed to prevent erosion.



Typical Plug Sections
(Armored As Needed)
(Not To Scale)



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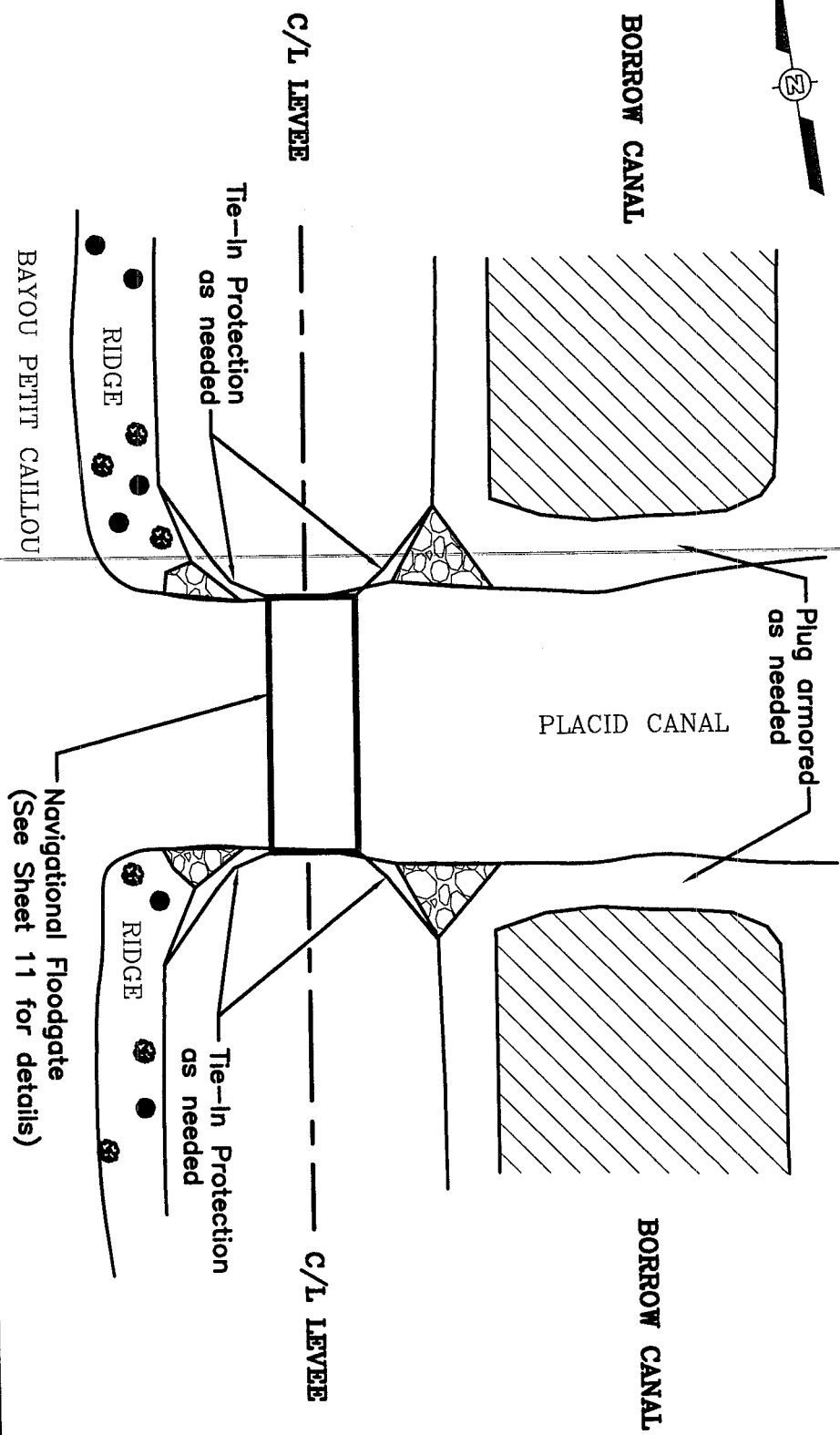
TERREBONNE LEVEE AND
CONSERVATION DISTRICT
CHAUVIN, LOUISIANA

SHEET 8

CROSS-SECTIONS
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS
REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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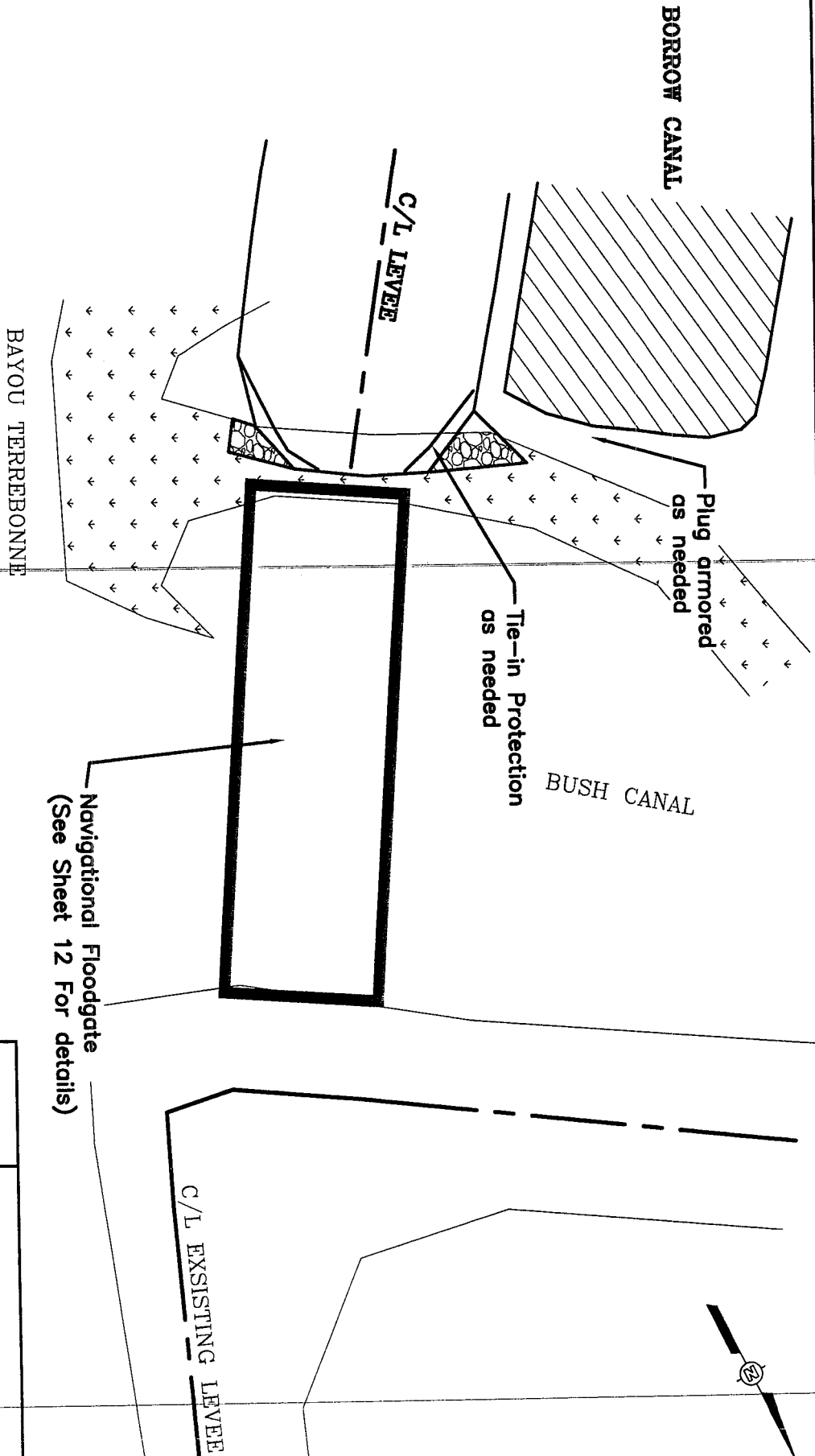
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Houma, LA 70363

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SHEET 9

TYPICAL FLOODGATE PLAN VIEW
PROPOSED LEVEE ALIGNMENT
WITH BORROW CANALS
REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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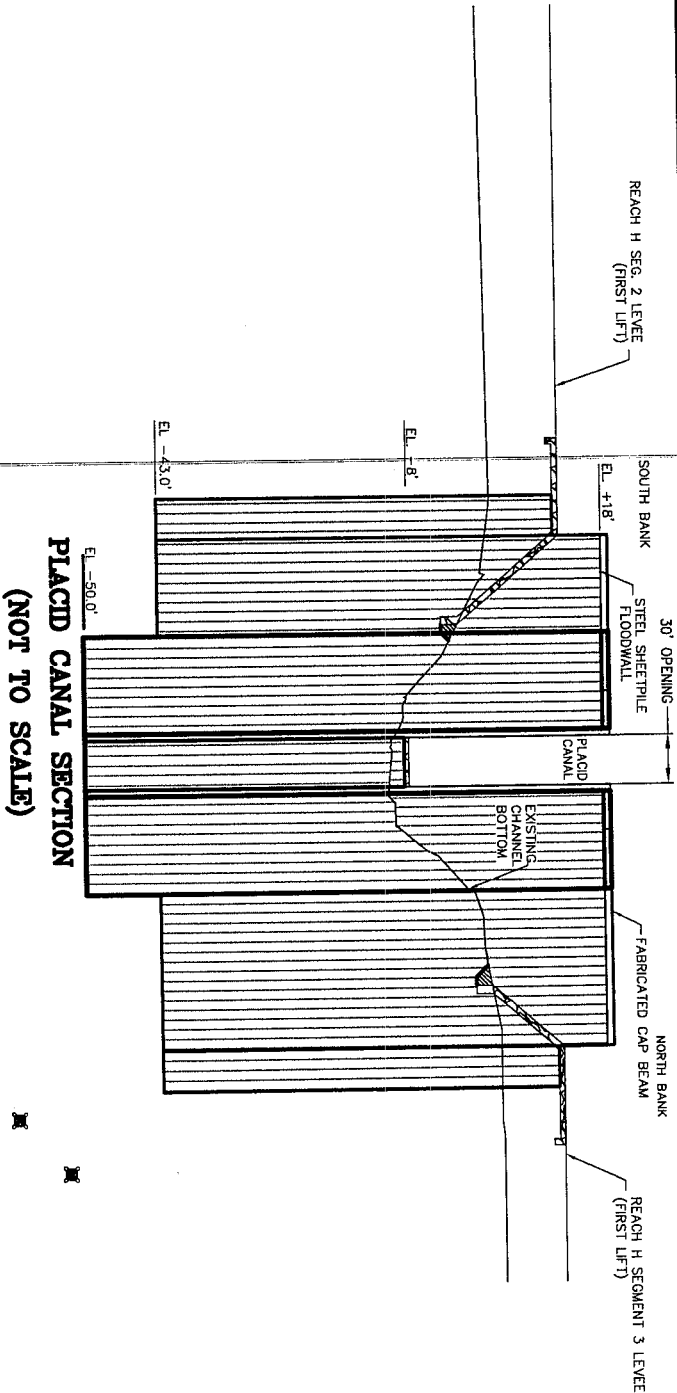


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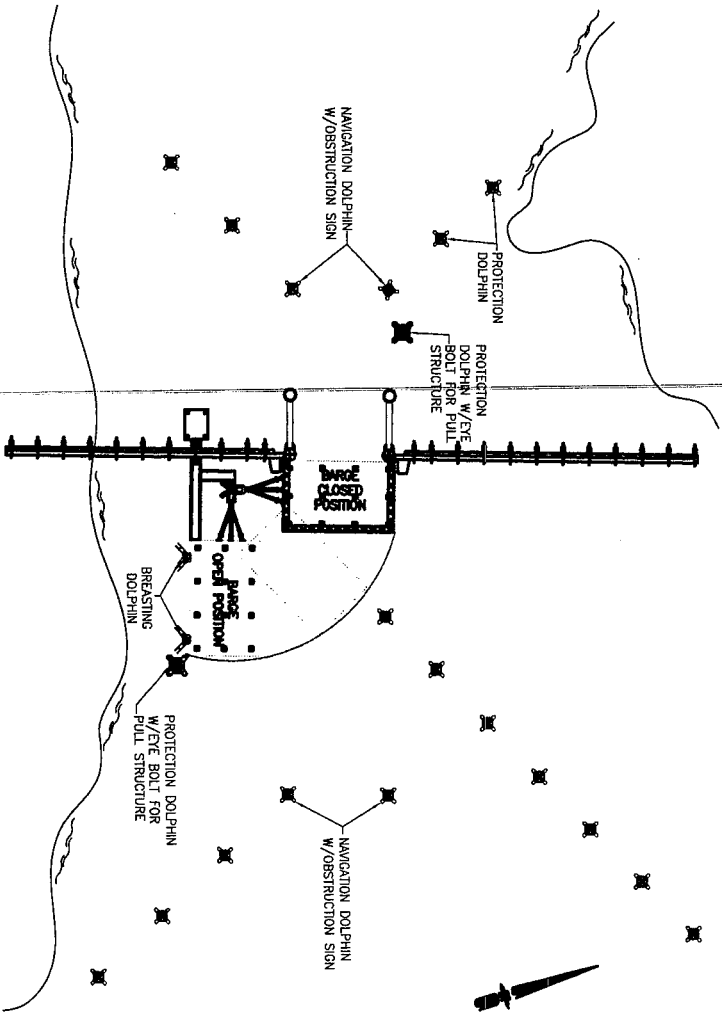
DRAWING NOT TO SCALE

TYPICAL FLOODGATE PLAN VIEW PROPOSED LEVEE ALIGNMENT WITH BORROW CANALS REACH H, SEGMENT 2 AND 3 MORGANZA TO THE GULF OF MEXICO	Showl Coastal, Inc. (A G&B Company) 11750 Highway 101 Houma, LA 70353	TERREBONNE LEVEE AND CONSERVATION DISTRICT CHAUVIN, LOUISIANA
		SHEET 10

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HOUMA	CLINER	HUT/TO	03/06/13	145220/Reach H1 Borrow
	07/15/09	07/15/09		drawings/Rev 022013



PLACID CANAL PLAN (NOT TO SCALE)



In regards to flood protection measures, all floodgates are to remain open at all times except during tropical storm events, including hurricanes or other extreme tidal events. Tide gauges will be installed on each gate and will be monitored closely. When water levels at the gates approach the EL. +2.5', the floodgates shall be closed until the water recedes. If a "named" storm is in the Gulf of Mexico and a sudden rise in water level due to storm surge is expected, the gates may be closed at the EL. +2.0'.

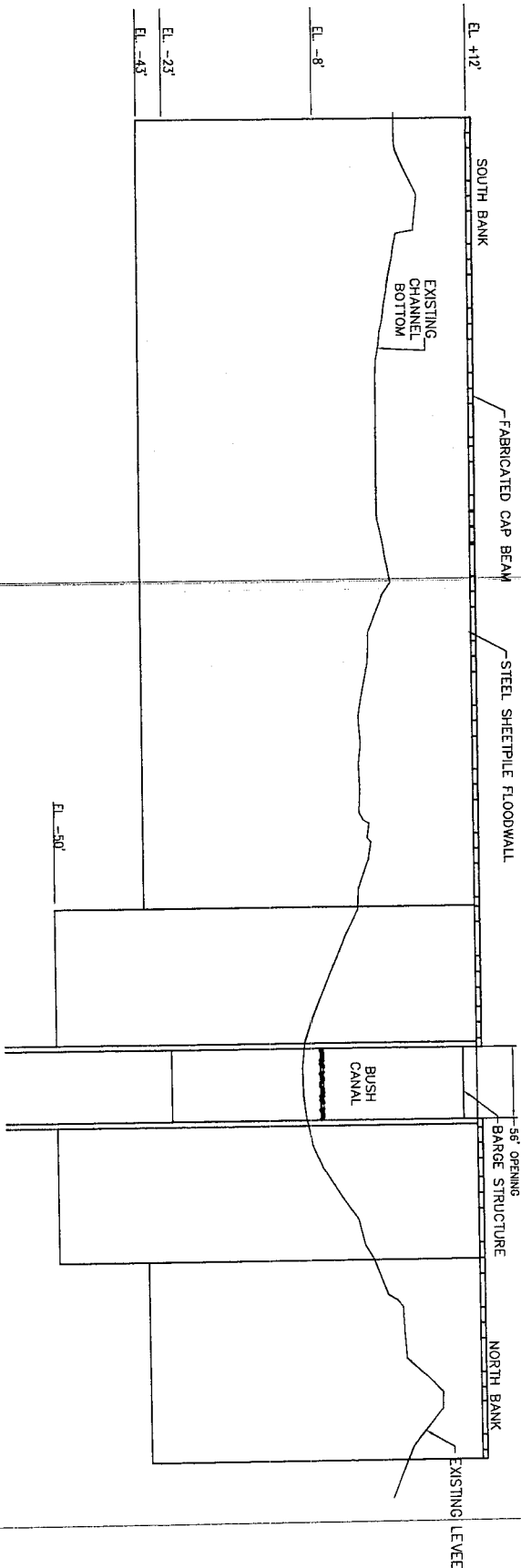
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SHEET 11

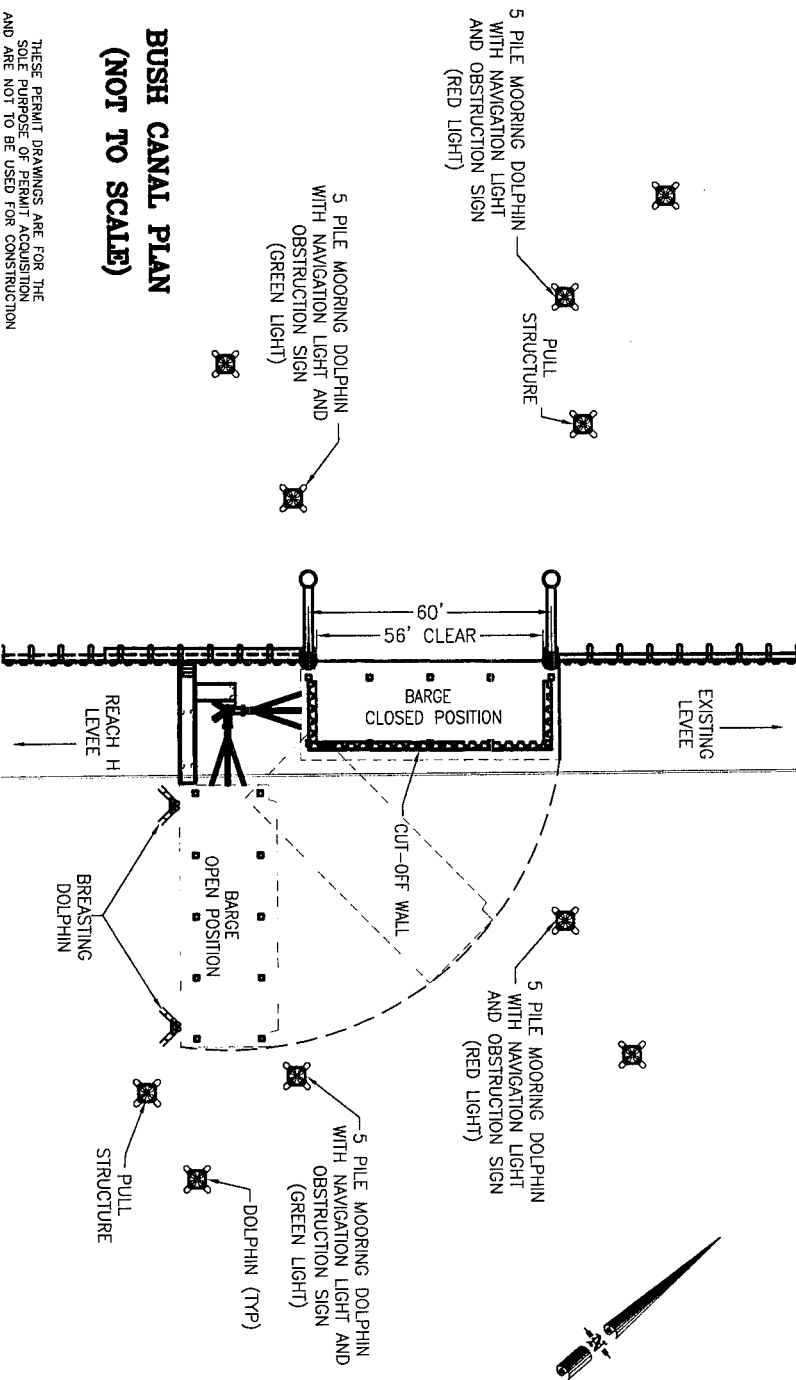
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CONSERVATION DISTRICT
CHAUVIN, LOUISIANA

NAVIGATIONAL FLOODGATE DETAIL
PROPOSED LEVEE ALIGNMENT
AND BORROW CANALS
REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

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			07/15/09	NUMBER
				drawings\Rev 022013



BUSH CANAL SECTION
(NOT TO SCALE)



In regards to flood protection measures, all floodgates are to remain open at all times except during tropical storm events, including hurricanes or other extreme tidal events. Tide gauges will be installed on each gate and will be monitored closely. When water levels at the gates approach the EL. +2.5', the floodgates shall be closed until the water recedes. If a "named" storm is in the Gulf of Mexico and a sudden rise in water level due to storm surge is expected, the gates may be closed at the EL. +2.0'.

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TERREBOUNNE LEVEE AND
CONSERVATION DISTRICT
CHAUVIN, LOUISIANA

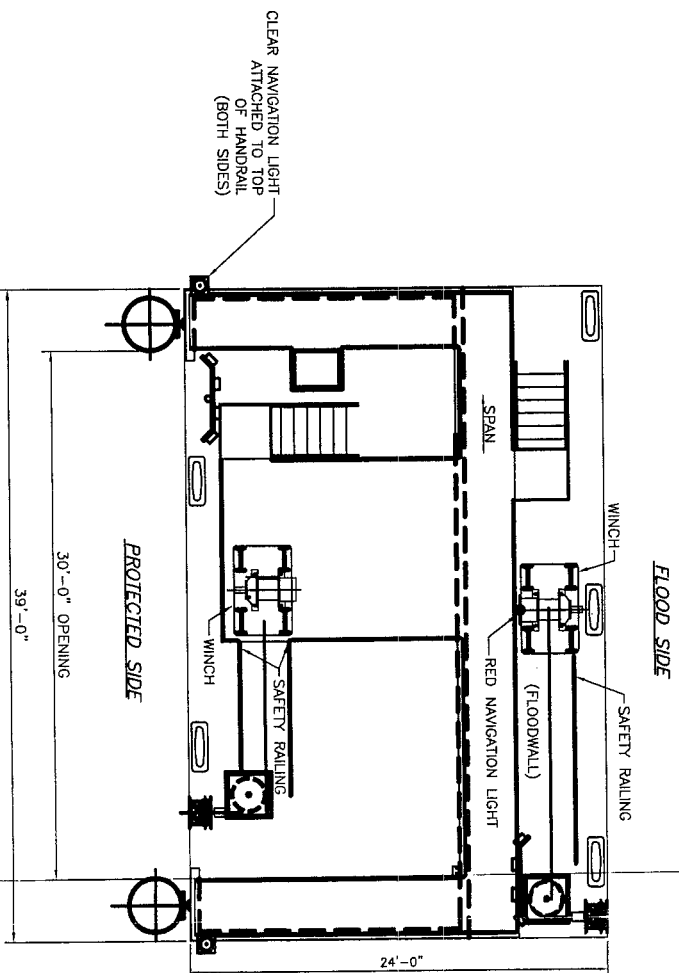
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NAVIGATIONAL FLOODGATE DETAIL
PROPOSED LEVEE ALIGNMENT
AND BORROW CANALS
REACH H, SEGMENT 2 AND 3
MORGANZA TO THE GULF OF MEXICO

BUSH CANAL PLAN
(NOT TO SCALE)

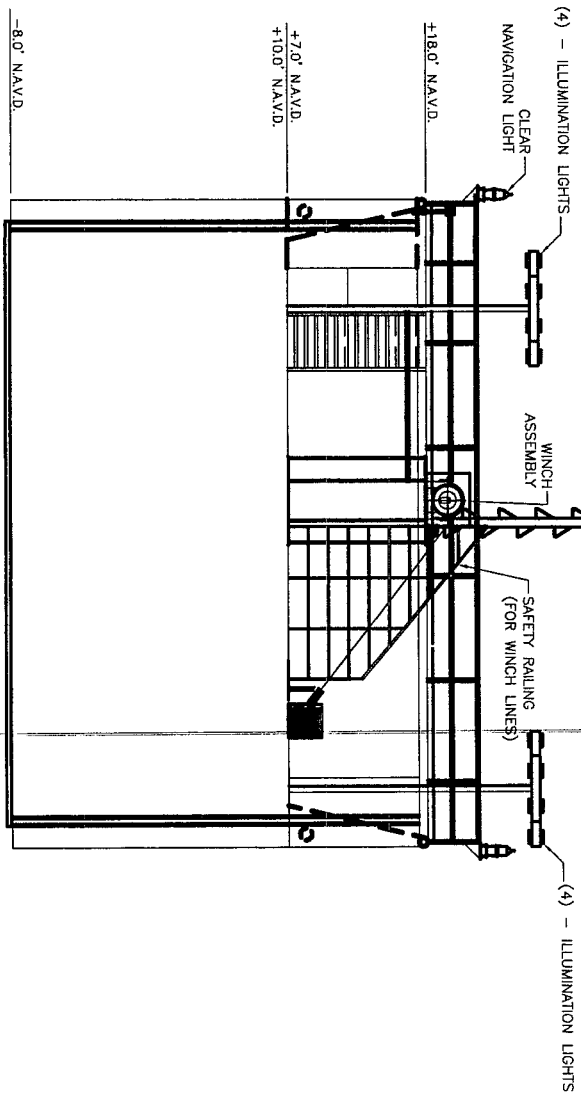
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			07/15/09	Reach H1 Borrow
			03/06/13	NUMBER
				drawings Rev 022013



PLACID CANAL BARGE PLAN VIEW

NOT TO SCALE



PROTECTED SIDE ELEVATION VIEW

NOT TO SCALE

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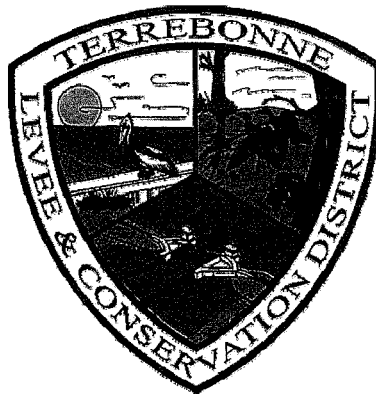
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	SHEET 13

NAVIGATIONAL FLOODGATE DETAIL
PROPOSED LEVEE ALIGNMENT
AND BORROW CANALS
 REACH H, SEGMENT 2 AND 3
 MORGANZA TO THE GULF OF MEXICO

TERREBONNE LEVEE AND CONSERVATION DISTRICT

Reach H, Segments 2 and 3

**Mitigation Plan
Supplement to Revised Plan Dated June 4, 2008**



SCI Project No. 145220

MAY 13, 2013

Prepared by:

**Shaw Coastal, Inc.
(A CB&I Company)
197 Elysian Drive
Houma, LA 70363**

**MORGANZA TO THE GULF, LA
REACH H, SEGMENTS 2 AND 3 PERMITTING**

**MITIGATION PLAN
SUPPLEMENT TO REVISED PLAN DATED JUNE 4, 2008**

PREPARED FOR

TERREBONNE LEVEE AND CONSERVATION DISTRICT

BY

SHAW COASTAL, INC.

MAY 2013

SCI PROJECT No. 145220

CUP NUM: P20050497

COE NUM: MVN-2005-1663-CY

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Figure 1 Revised Marsh Creation Area 5

1.0 Introduction

Reach H, Segments 2 and 3, are a part of the Morganza to the Gulf Hurricane Protection System proposed for Terrebonne Parish, to protect people, infrastructure and the environment (including interior wetlands) from flooding and hurricane storm surge. The segments 2 and 3 consist of dredging approximately 3.5 million cubic yards of material to build approximately eight (8) miles of levee. Additionally, flood control structures would be built in Placid Canal and Bush Canal. Shoreline protection and borrow canal plugs would be placed as needed. The Louisiana Department of Natural Resources permit for this work (CUP No. P20050497) was approved on October 17, 2008 and the U. S. Army Corps of Engineers permit (2005-1663-CY) was approved on November 13, 2008.

Update: Reach H2 and H3 has been constructed to a +12.0' elevation. Bush Canal and Placid Canal Structures are complete and operational.

The below table represents the status of this marsh creation mitigation plan as of January 2013.

Cell Area	Completion %	Notes
A	100%	Fill and Post Construction Survey Complete
B	100%	Fill and Post Construction Survey Complete
C	100%	Fill Complete
D	100%	Fill Complete
E1	100%	Fill and Post Construction Survey Complete
E2	0%	Not in current contract
F1	100%	Fill Complete
F2	0%	Change Order given to Subcontractor
G1	0%	Not in current contract
G2	0%	Not in current contract

2.0 Purpose of Supplement

This supplement has been prepared for additional acreage as identified in Figure 1 based on additional impact area at the southern end of Reach H2 at the Bayou Petit Caillou Structure as described, in Section 3.0 and for required modifications to the during design as described in Section 4.

3.0 Additional Impact Area

Upon construction completion of the first lift of the Reach H2 Levee, it was determined that the entrance of the access canal from Bayou Petit Caillou, just below the levee, should be modified to enlarge the channel at the intersection for boat traffic purposes. The modification will increase the entrance to the access canal from Bayou Petit Caillou just south of the H2 levee. This modification will allow tug boats and barges a safer passage to and from Bayou Petit Caillou and the access canal. This additional construction will impact approximately 0.5 acres of marsh and 0.4 acres of ridge habitat.

4.0 Mitigation

Due to the slight increase in impacts for the modification, the original mitigation plan is being modified to include an additional marsh creation area and potential alternate location. The New Fill Area is approximately 17 additional acres and the alternate location, Area A North, is 12 acres. Also due to the location of nearby pipelines, Area E had to be modified to reduce impacts to those existing pipelines. Figure 1 shows the location of the New Fill Area, Area A North along with the modified Area E. This modified marsh creation areas will create approximately 375 acres of marsh habitat. This total does not include the alternate location labeled as Area A North.

The target marsh complex elevations, vegetative cover, monitoring and other aspects as proposed in the original mitigation plan will remain the same.

