

PROJECT AREA

MALCOLM PIRNIE
ARCADIS

The Water Division of ARCADIS
3850 N. CAUSEWAY BLVD, SUITE 1600
METairie, LOUISIANA 70002
T: 504.832.4174 | F: 504.832.2145

APPLICATION BY:
OFFICE OF COASTAL PROTECTION AND RESTORATION
1440 TIGER DRIVE, SUITE 50
THIBODOAUX, LOUISIANA 70081

DRAWN BY: CAK

OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH
450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DESIGNED BY: EAC

APPROVED BY: DLF

BRADY CANAL HYDROLOGIC RESTORATION
TERREBONNE PARISH, LA

STATE PROJECT NUMBER: 2503-10-32

FEDERAL PROJECT NUMBER:

OVERALL MAINTENANCE PLAN
PROJECT AREA

DATE: FEBRUARY 11, 2011

SHEET 1 OF 15

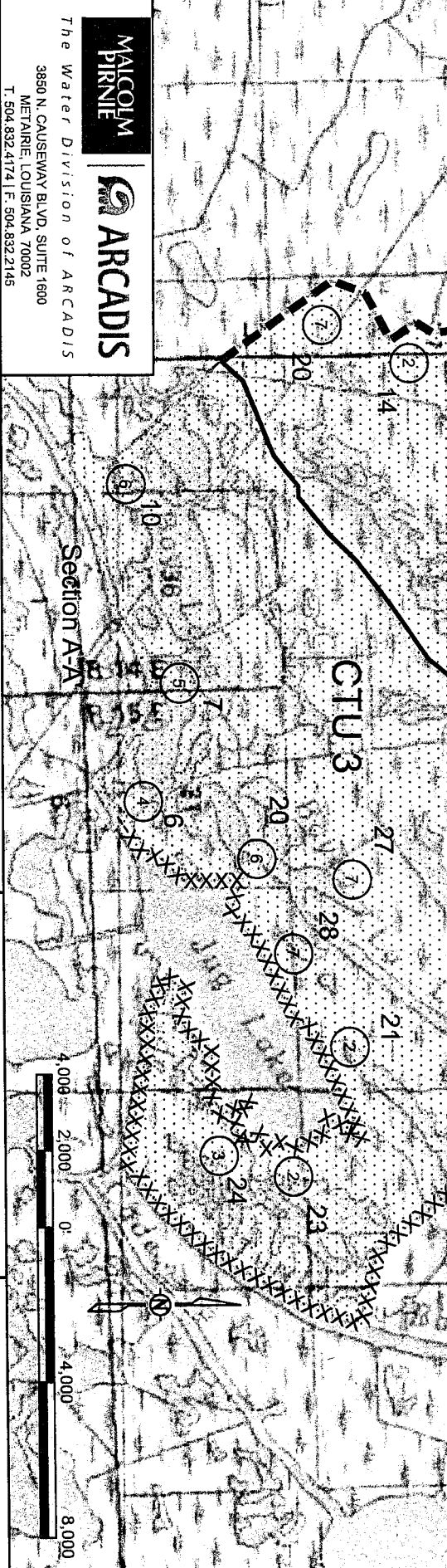
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90 57

BRADY CANAL HYDROLOGIC RESTORATION (PTE-26B)

- 1 BULKHEAD W/ BOAT BAY AND FLAPGATE STOPLOG SECTION
- 2 FIXED CREST WEIR W/VARIABLE CREST SECTION(S)
- 3 FIXED CREST WEIR
- 4 FIXED CREST WEIR W/BARGE BAY
- 5 ROCK PLUG
- 6 STABILIZED CHANNEL CROSS-SECTION
- 7 EXISTING WEIR

- OVERFLOW BANK
- EMBANKMENT CONSTRUCTION
- SHORELINE MAINTENANCE
- EVALUATION SITE #
- CTU BOUNDARY

See Drawings for Sections A-A', B-B', and C-C'.



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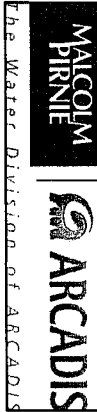
OVERALL MAINTENANCE PLAN
PROJECT LAYOUT

DATE: FEBRUARY 11, 2011

SHEET 2 OF 15

| Evaluation Site | Channel | | Pre-Construction Features | | | As-Built Features | | |
|-----------------|------------|------------|--|--------------------------|------------------|---|---------------------------------|------------------|
| | Width (ft) | Depth (ft) | Type | Crest Elevation (ft BML) | Crest Width (ft) | Type | Crest Elevation (ft BML) | Crest Width (ft) |
| 1 | 112 | 20 | Timber Bulkhead Boat Bay | 0.5 -5.0 | 60 9 | Bulkhead Boat Bay Flap Gates/Stop log | 0.5 -5.0 From 0.5 to -5.0 | 120 10 12 |
| 3 | | | Var. Crest Weir | From 0 - 1.4 | 12 | | | |
| 6 | 285 | 8.4 | | | | Fixed Crest Weir Barge Bay | -0.5 -8.0* | 145 70 |
| 7 | 315 | 8 | | | | Rock Plug | | |
| 10 | 225 | 10.9 | | | | Channel Armor | | |
| 14 | 40 | 7.8 | Fixed Crest Weir | -1.0 | 33 | Fixed Crest Weir Var. Crest Section | -1.0 From -1.0 to -6.0 | 30 6 |
| 20 | 160 | 9 | | | | Channel Armor | | |
| 21 | | | Fixed Crest Weir | -1.0 | 48 | Fixed Crest Weir Var. Crest Section | -1.0 From -1.0 to -6.0 | 30 18 |
| 22 | | | Earthen Plug | | | | | |
| 23 | | | Fixed Crest Weir Var. Crest Section | -1.0 | 40 16 | Fixed Crest Weir Var. Crest Section | -1.0 From -1.0 to -6.0 | 46 12 |
| 24 | | | Fixed Crest Weir Section 1 Section 2 | -1.0 -2.5 | 30 50 | Fixed Crest Weir Section 1 Section 2 | -1.0 -2.5 | 30 50 |
| 25 | | | 60" Pipe Sluice Gate Flap Gate | | | | | |
| 26 | | | Fixed Crest Weir | -0.5 | 16 | | | |
| 27 | | | 42" Pipe V. Crest Weir Inlet Flap Gate | From 0 to 3.5 | 6 | | | |
| 28 | | | 42" Pipe V. Crest Weir Inlet Flap Gate | From 0 to -3.5 | 6 | | | |

* Below mean low water.



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BRADY CANAL HYDROLOGIC RESTORATION
TERREBONNE PARISH, LA

OVERALL MAINTENANCE PLAN
PROJECT FEATURE TABLE

STATE PROJECT NUMBER: 2503-10-32

DATE: FEBRUARY 11, 2011

DRAWN BY: CAK

DESIGNED BY: EAC

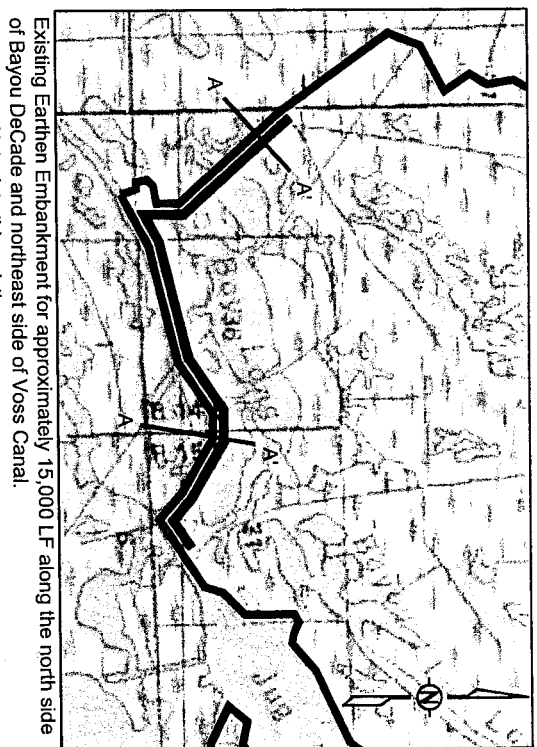
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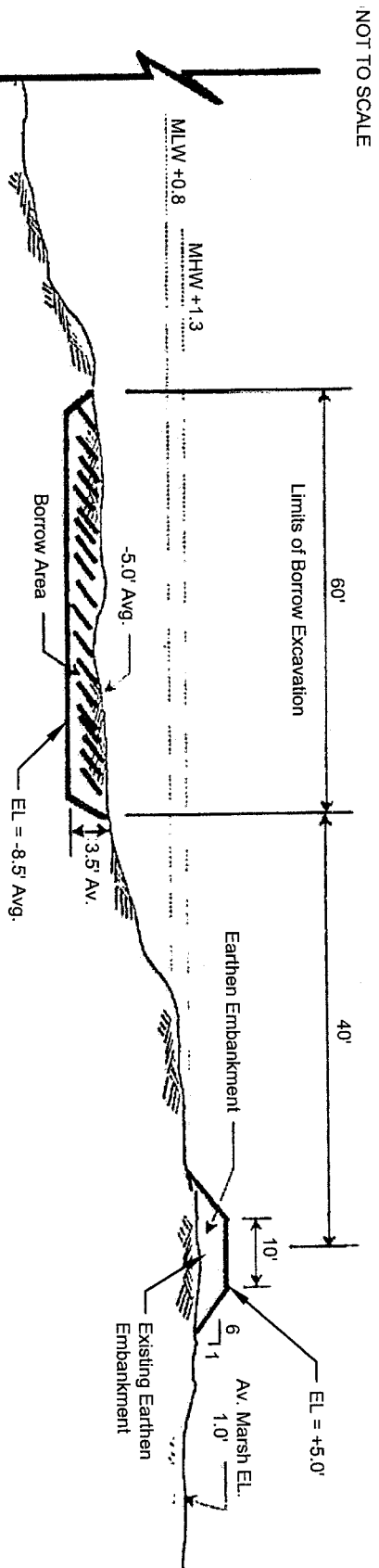
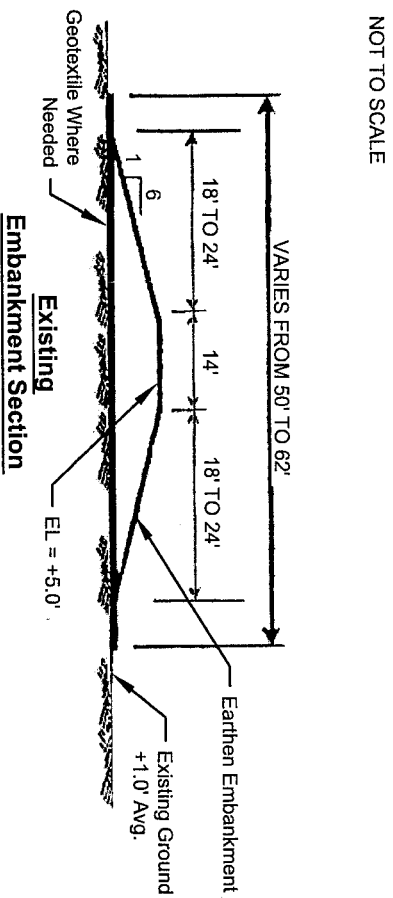
SHEET 3 OF 15

SPOIL BANK MAINTENANCE SECTION A - A'

LOCATION MAP



Existing Earthen Embankment for approximately 15,000 LF along the north side of Bayou DeCade and northeast side of Voss Canal.
Section A - A' depicts this existing measure.



Typical Section A - A'

- Notes:
1. All Elevations Shown in N.A.V.D. 88.
 2. Total Length of Earthen Embankment - 15,000 Feet.
 3. Estimated Annual Volume of Maintenance Earthen Fill - 3,643 cubic yards.
 4. Borrow Material to be Taken from Bayou Decade and Voss Canal.

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TERREBOUNNE PARISH, LA

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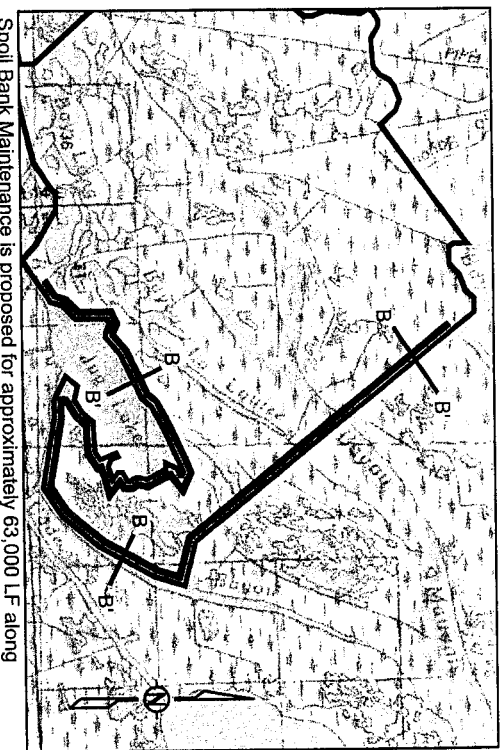
OVERALL MAINTENANCE PLAN
EARTHEN EMBANKMENT
SECTION A - A'

DATE: FEBRUARY 11, 2011

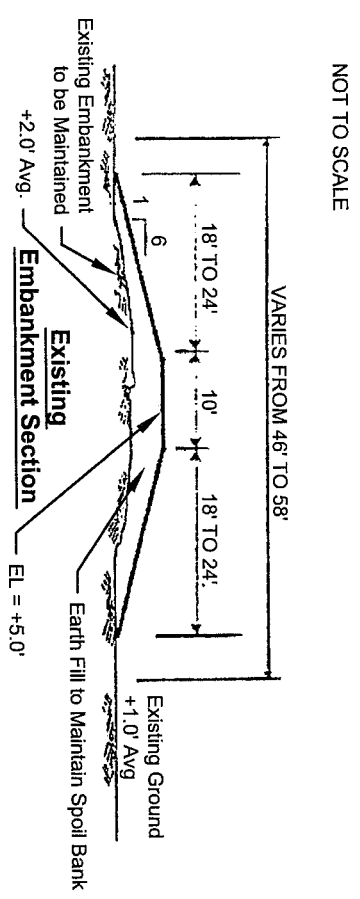
SHEET 4 OF 15

SPOIL BANK MAINTENANCE SECTION B - B'

LOCATION MAP



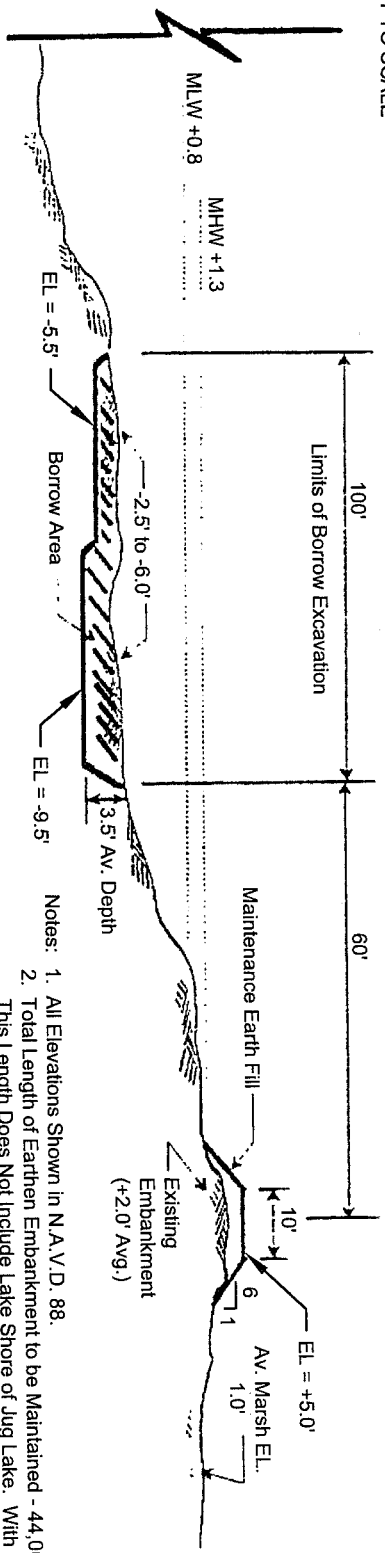
Spoil Bank Maintenance is proposed for approximately 63,000 LF along Superior Canal, Turtle Bayou, Bayou Decade, and Jug Lake. Section B - B' depicts this proposed measure.



NOT TO SCALE

VARIES FROM 46' TO 58'

NOT TO SCALE



Typical Section B - B'

- Notes:
1. All Elevations Shown in N.A.V.D. 88.
 2. Total Length of Earthen Embankment to be Maintained - 44,000 Feet. This Length Does Not Include Lake Shore of Jug Lake. With Jug Lake Shoreline - Total Length Approximately 63,000 Feet.
 3. Estimated Annual Volume of Maintenance Earth Fill - 15,300 Cubic Yards.
 4. Borrow Material to be Taken from Superior Canal, Bayou Decade, Turtle Bayou, Jug Lake and Voss Canal.

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BRADY CANAL HYDROLOGIC RESTORATION
TERREBONNE PARISH, LA

OVERALL MAINTENANCE PLAN
SPOIL BANK MAINTENANCE
SECTION B - B'

STATE PROJECT NUMBER: 2503-10-32

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DESIGNED BY: EAC

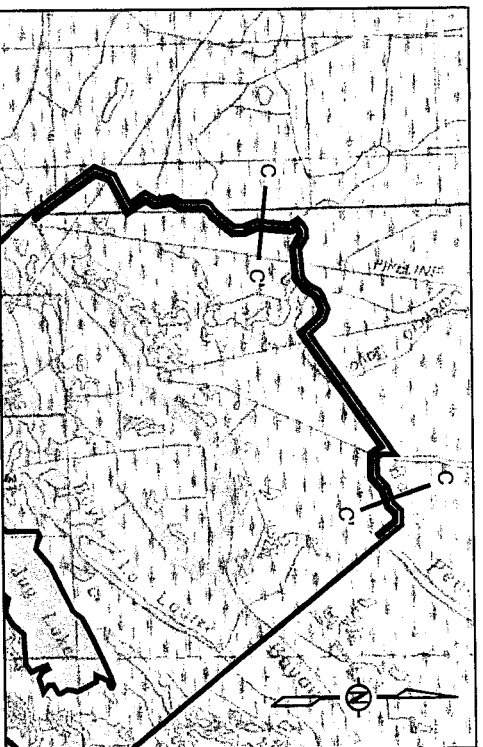
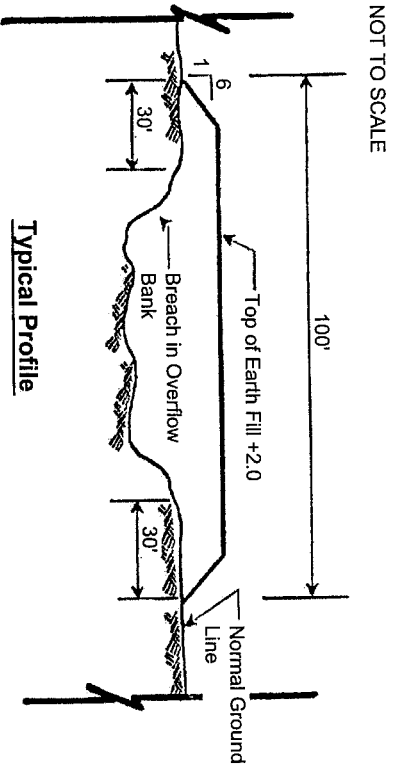
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FEDERAL PROJECT NUMBER:

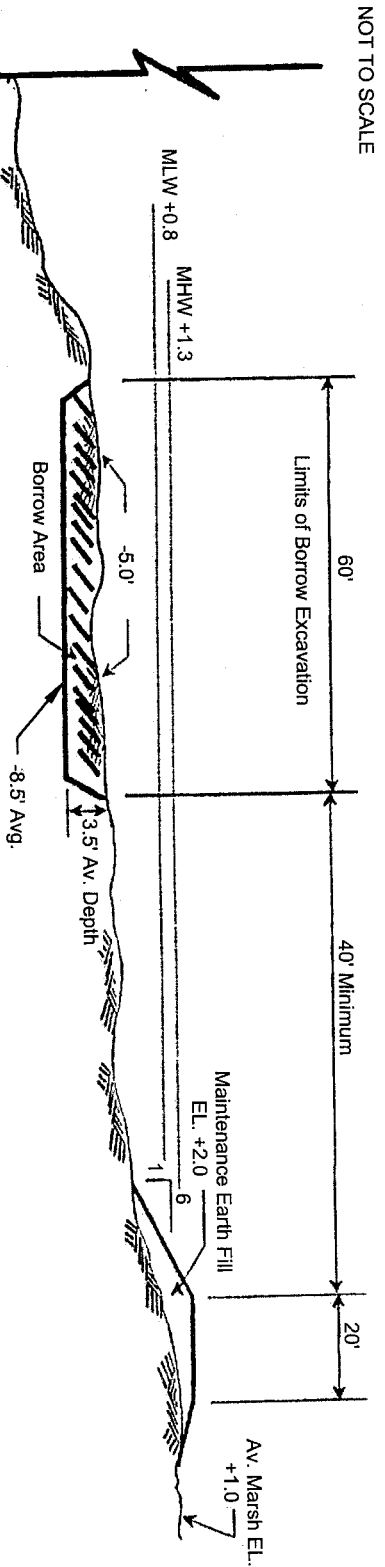
SHEET 5 OF 15

OVERFLOW BANK MAINTENANCE SECTION C - C'

LOCATION MAP



Overflow Bank Maintenance is proposed for approximately 29,600 LF along Bayou Carenco, L. Bayou Carenco, Brady Canal, and Bayou Penchant. Section C - C' depicts this proposed measure.



Typical Section C - C'

Notes: 1. All Elevations Shown in N.A.V.D. 88.

2. Total Length of Earthen Embankment to be Maintained - Approx. 29,600 Feet. Along Bayou Carenco, Little Bayou Carenco, Brady Canal, and Bayou Penchant.
3. Estimated Annual Volume of Maintenance Earth Fill For Overflow Banks - 1590 Cubic Yards Base on Repairing 300' of Bank per Year.
4. Borrow Material to be Taken from Adjacent Canal or Bayou.

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BRADY CANAL HYDROLOGIC RESTORATION
TERREBOUNNE PARISH, LA

OVERALL MAINTENANCE PLAN
OVERFLOW BANK MAINTENANCE
SECTION C - C'

STATE PROJECT NUMBER: 2503-10-32

DATE: FEBRUARY 11, 2011

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SHEET 6 OF 15

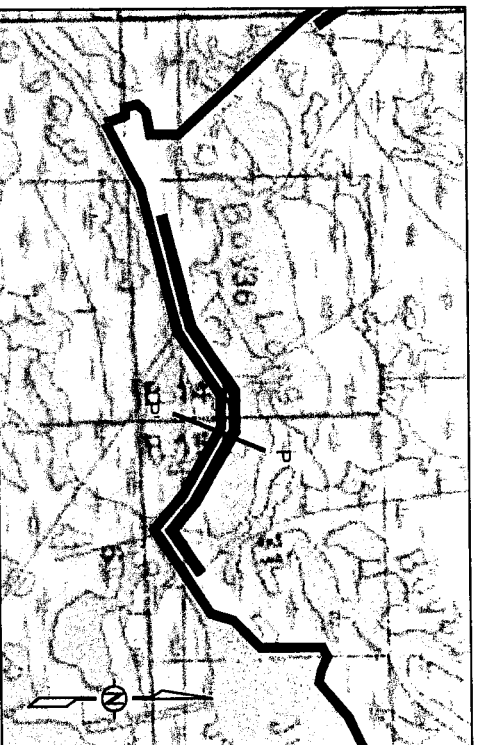
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DESIGNED BY: EAC

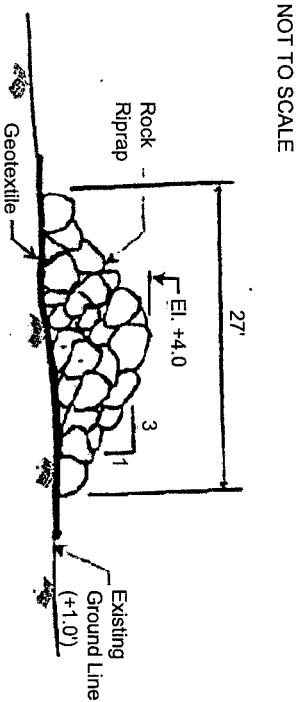
APPROVED BY: DLF

EXISTING ROCK RIPRAP EMBANKMENT SECTION P - P'

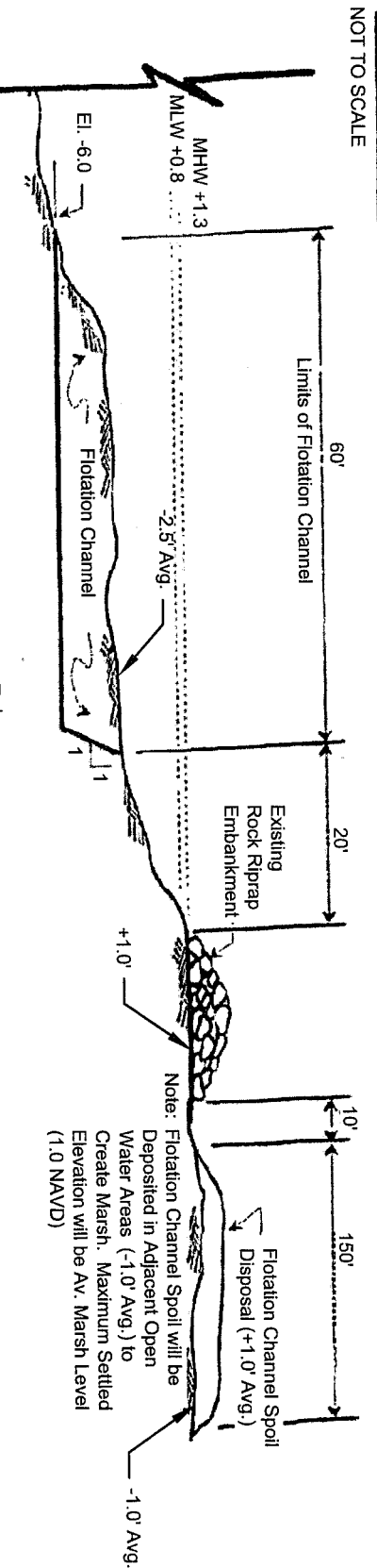
LOCATION MAP



Existing Rock Embankment for approximately 8,645 LF along the north side of Bayou Decade west of Evaluation Site 6.
Section P - P' depicts this existing measure.



Detail Section - Existing Rock Embankment



Typical Section P - P'

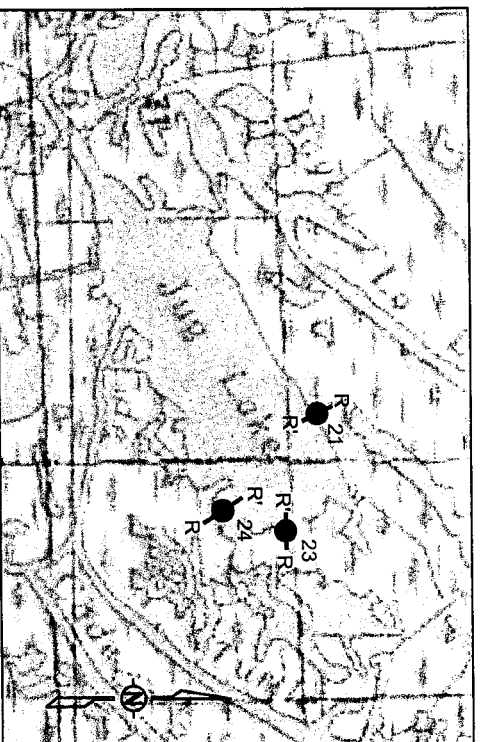
(Not to Scale)

- Notes:
1. All Elevations Shown in N.A.V.D. 88.
 2. Maximum Length of Rock Embankment - 8,645 Feet.
 3. Estimated Volume of Rock Embankment Maintenance for Life of Project - 55,000 cubic yards.
 4. Estimated Volume of Maintenance Flotation Channel Disposal Over Life of Project - 98,100 Cubic Yards.

| | | | | | |
|--|---|---|----------------------------------|--|--|
| MALCOLM PIRNIE ARCADIS <i>The Water Division of ARCADIS</i> | 3850 N. CAUSEWAY BLVD, SUITE 1600 METAIRIE, LOUISIANA 70002 T. 504.832.4174 F. 504.832.2145 | OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | | BRADY CANAL HYDROLOGIC RESTORATION TERREBOUNNE PARISH, LA | OVERALL MAINTENANCE PLAN ROCK RIPRAP EMBANKMENT SECTION P - P' |
| APPLICATION BY: OFFICE OF COASTAL PROTECTION AND RESTORATION 1400 TIGER DRIVE, SUITE B THIBODAUX, LOUISIANA 70301 | DESIGNED BY: EAC | | STATE PROJECT NUMBER: 2503-10-32 | DATE: FEBRUARY 11, 2011 | |
| DRAWN BY: CAK | APPROVED BY: DLF | | FEDERAL PROJECT NUMBER: | SHEET 7 OF 15 | |

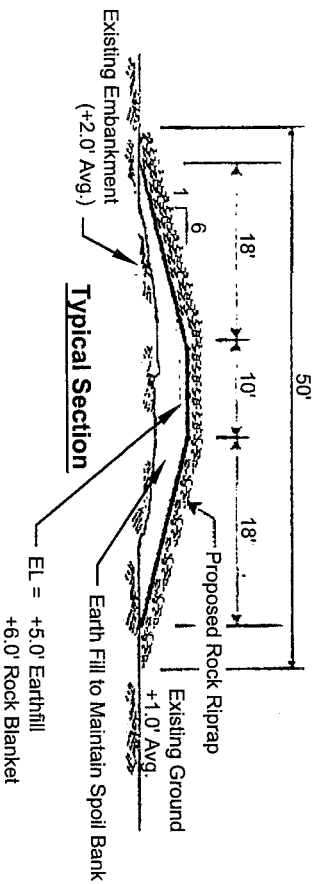
ROCK RIPRAP ARMORING SECTION R - R'

LOCATION MAP

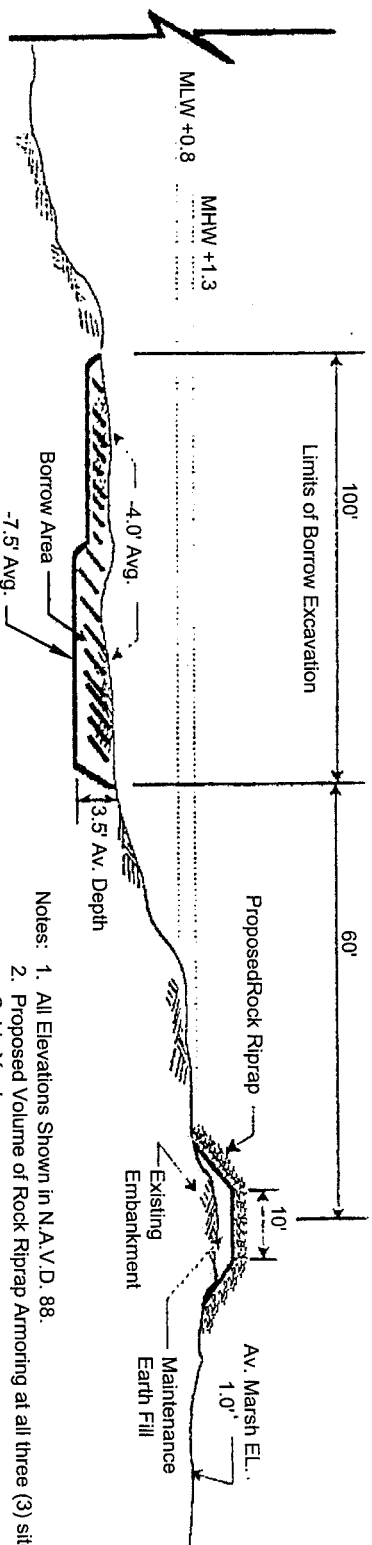


Rock Riprap Armoring is proposed for 100' on both sides of Existing Structures 21, 23, and 24.
Section R - R' depicts this proposed measure.

NOT TO SCALE



NOT TO SCALE



- Notes: 1. All Elevations Shown in N.A.V.D. 88.
2. Proposed Volume of Rock Riprap Armoring at all three (3) sites - 5,300 Cubic Yards

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**OFFICE OF COASTAL PROTECTION & RESTORATION
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450 LAUREL STREET
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BRADY CANAL HYDROLOGIC RESTORATION
TERREBONNE PARISH, LA

OVERALL MAINTENANCE PLAN
ROCK RIPRAP ARMORING
SECTION R - R'

STATE PROJECT NUMBER: 2503-10-32

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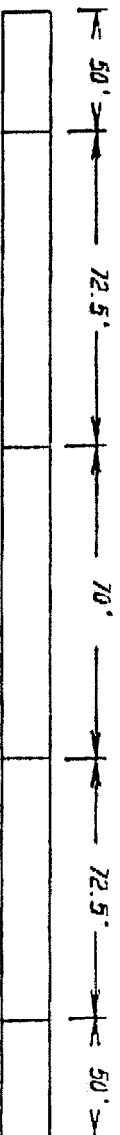
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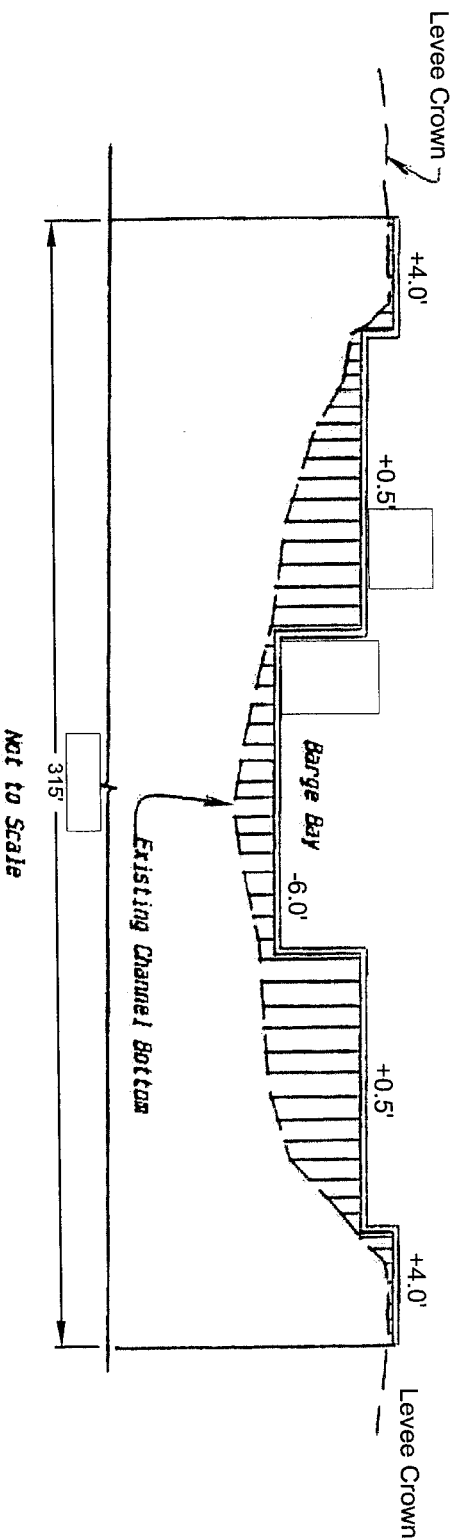
SHEET 8 OF 15

TYPICAL DRAWING

EXISTING FIXED CREST WEIR WITH BARGE BAY



Plan View



**MALCOLM
PIRNIÉ** | **ARCADIS**

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TERREBONNE PARISH, LA

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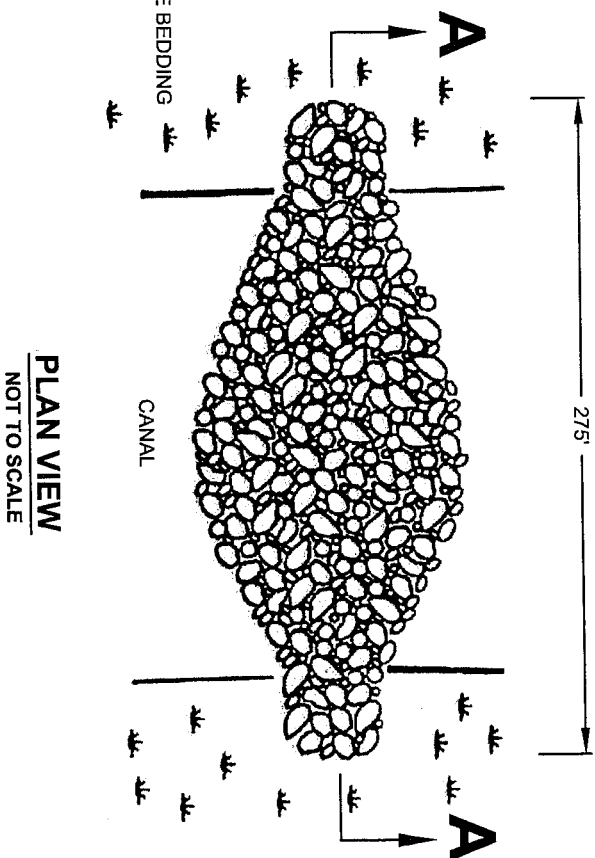
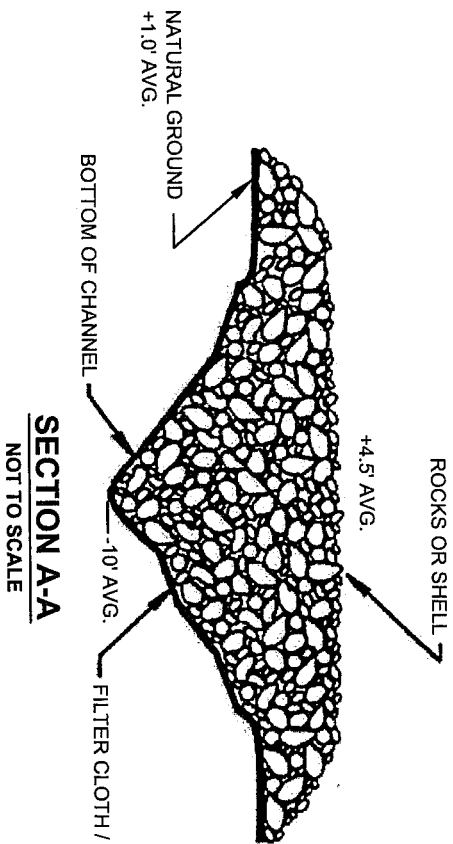
OVERALL MAINTENANCE PLAN
EXISTING FIXED CREST WEIR
W/BARGE BAY (STRUCTURE 6)

DATE: FEBRUARY 11, 2011

SHEET 9 OF 15

TYPICAL DRAWING

EXISTING ROCK PLUG



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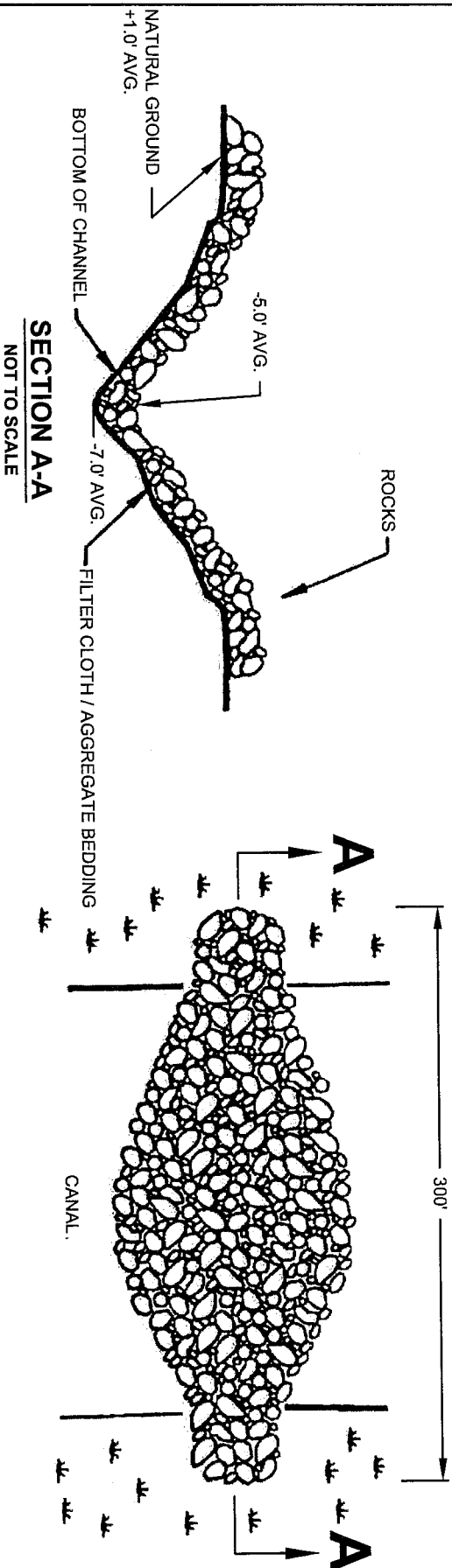
OVERALL MAINTENANCE PLAN
EXISTING ROCK RIPRAP PLUG
(STRUCTURE 7)

DATE: FEBRUARY 11, 2011

SHEET 10 OF 15

TYPICAL DRAWING

EXISTING ROCK CHANNEL LINER



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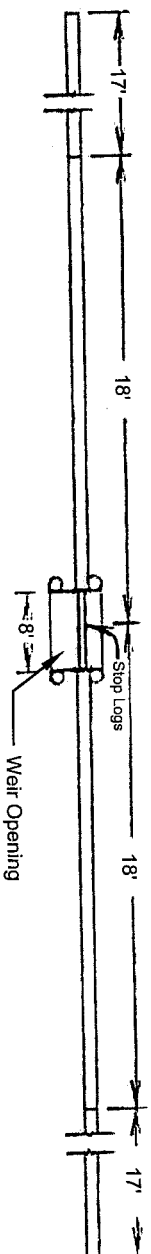
OVERALL MAINTENANCE PLAN
EXISTING ROCK CHANNEL LINER
(STRUCTURES 10 & 20)

DATE: FEBRUARY 11, 2011

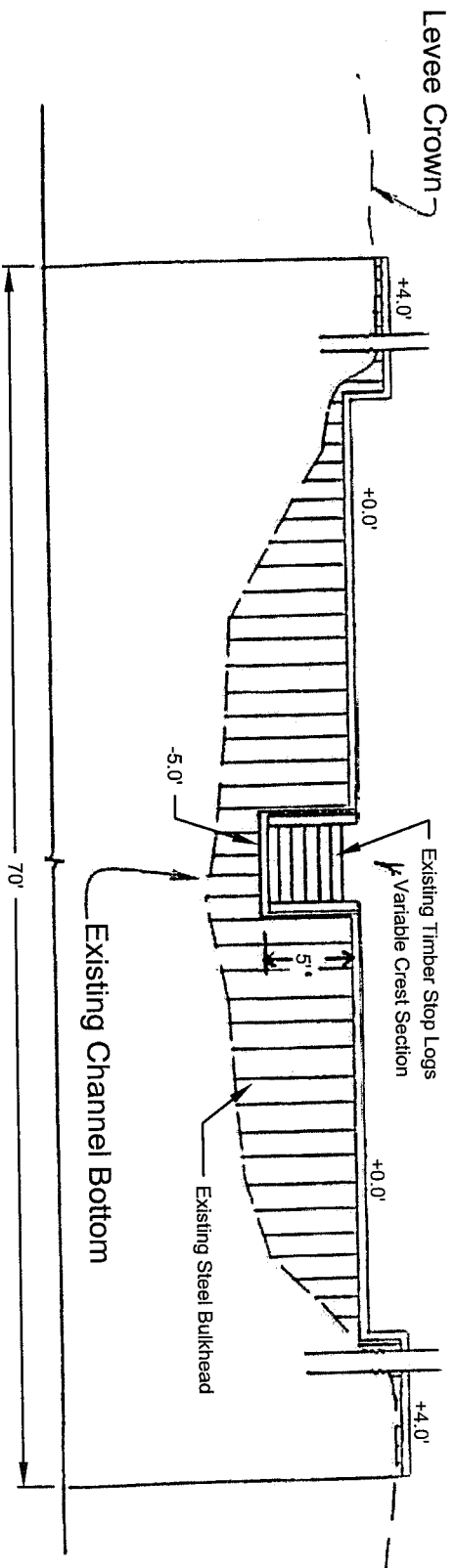
SHEET 11 OF 15

TYPICAL DRAWING

EXISTING WEIR W/VARIABLE CREST SECTION



Plan View



Section

Not to Scale

**MALCOLM
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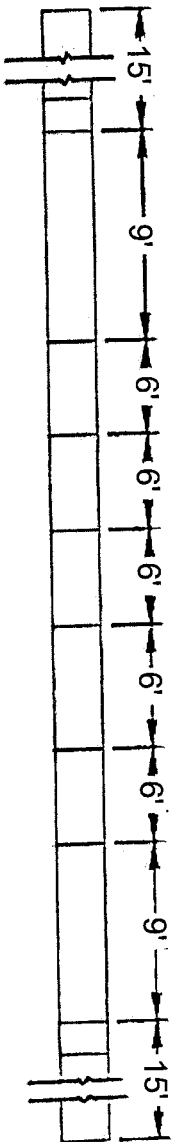
FEDERAL PROJECT NUMBER:

OVERALL MAINTENANCE PLAN
EXISTING WEIR W/VARIABLE
CREST SECTIONS (STRUCTURE 14)

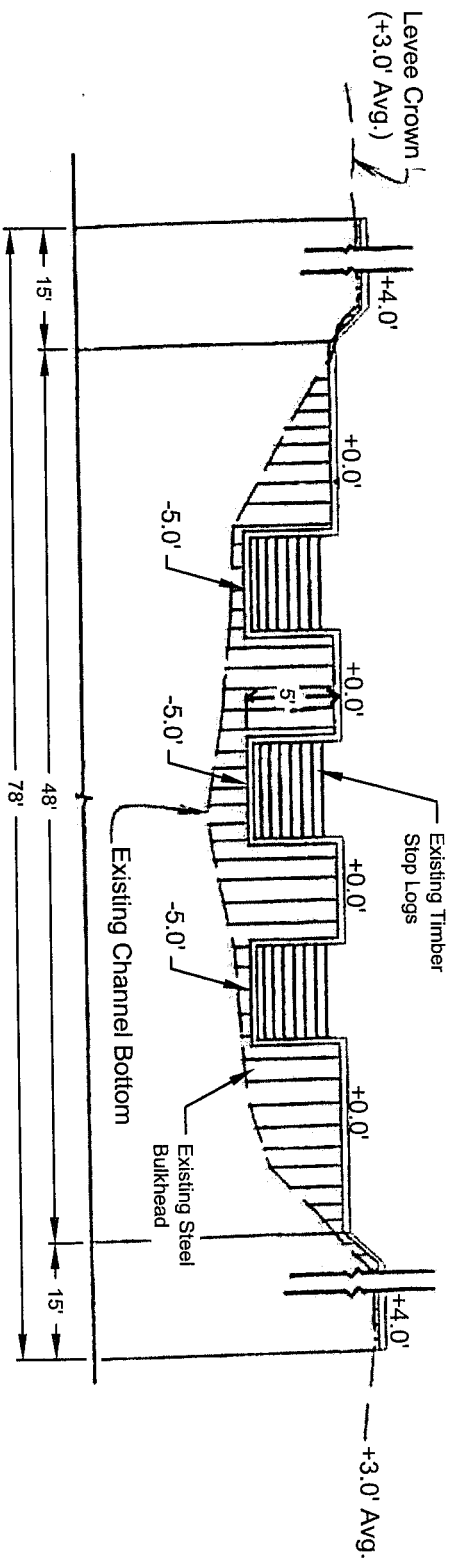
DATE: FEBRUARY 11, 2011

SHEET 12 OF 15

EXISTING WEIR WITH VARIABLE CREST SECTIONS



Plan View



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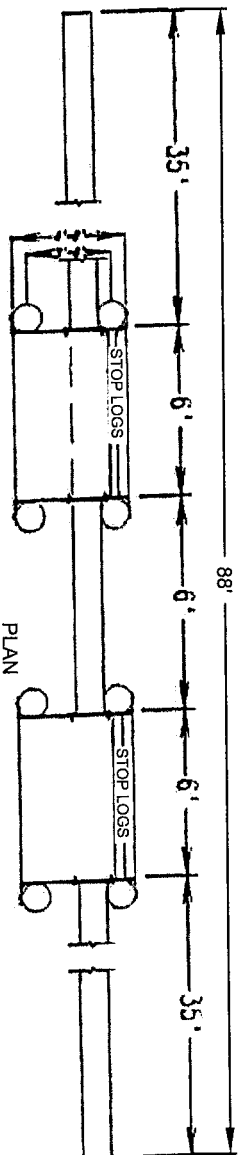
OVERALL MAINTENANCE PLAN
EXISTING WEIR W/VARIABLE
CREST SECTIONS (STRUCTURE 21)

DATE: FEBRUARY 11, 2011

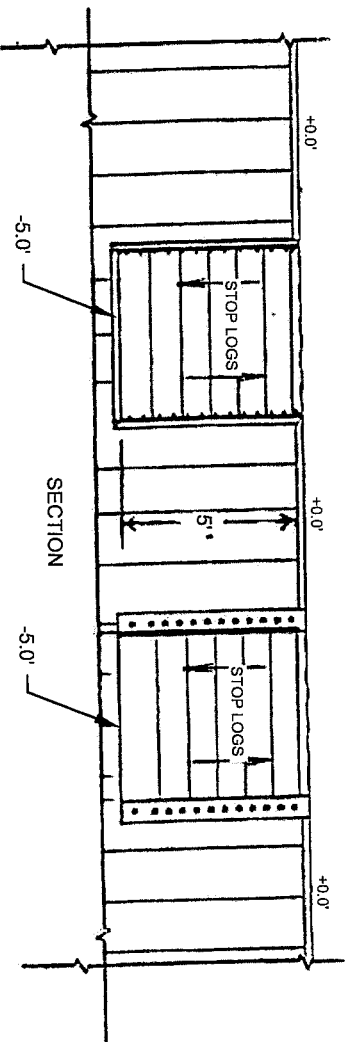
SHEET 13 OF 15

TYPICAL DRAWING

EXISTING WEIR W/VARIABLE CREST SECTIONS



Variable Crest Sections



NOT TO SCALE

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APPLICATION BY:
OFFICE OF COASTAL PROTECTION AND RESTORATION
1420 TIGER DRIVE, SUITE B
THIBODAUX, LOUISIANA 70301

DRAWN BY: CAK

**OFFICE OF COASTAL PROTECTION & RESTORATION
ENGINEERING BRANCH**

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DESIGNED BY: EAC

APPROVED BY: DLF

BRADY CANAL HYDROLOGIC RESTORATION
TERREBONNE PARISH, LA

STATE PROJECT NUMBER: 2503-10-32

FEDERAL PROJECT NUMBER:

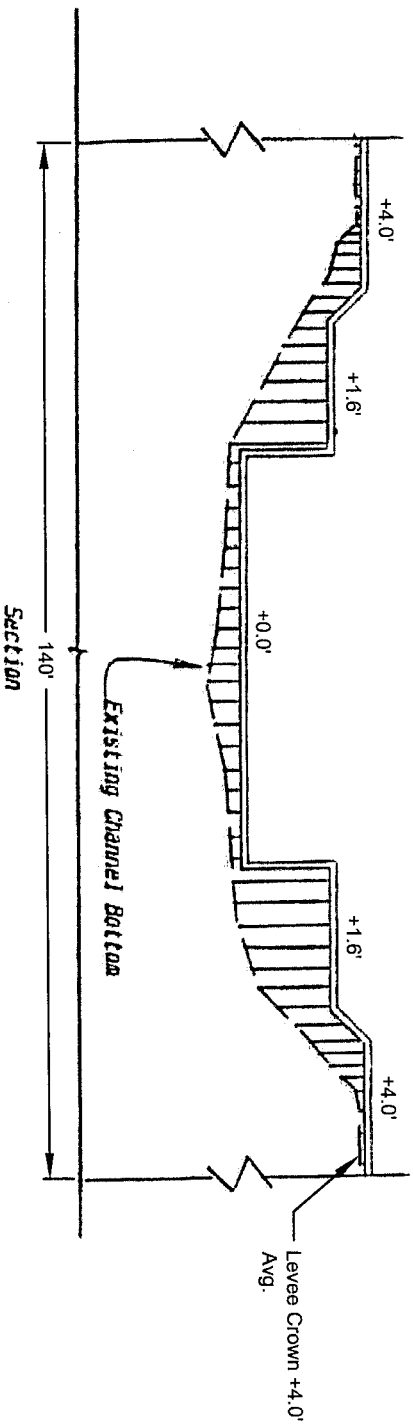
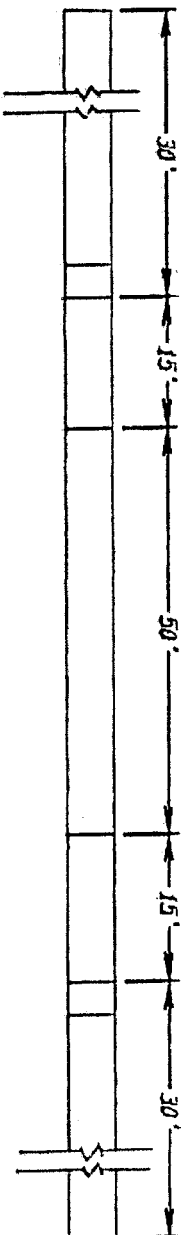
OVERALL MAINTENANCE PLAN
EXISTING WEIR W/VARIABLE
CREST SECTIONS (STRUCTURE 23)

DATE: FEBRUARY 11, 2011

SHEET 14 OF 15

TYPICAL DRAWING

EXISTING FIXED CREST WEIR



MALCOLM
PIRNIE

ARCADIS

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APPLICATION BY:

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1440 TIGER DRIVE, SUITE B
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BRADY CANAL HYDROLOGIC RESTORATION
TERREBONNE PARISH, LA

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OVERALL MAINTENANCE PLAN
EXISTING FIXED CREST WEIR
(STRUCTURE 24)

DATE: FEBRUARY 11, 2011

DRAWN BY: CAK

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APPROVED BY: DLF

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SHEET 15 OF 15