STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

STATIC SURVEY OF AT02-SM-01
TOPOGRAPHIC AND BATHYMETRIC SURVEY
ATCHAFALAYA SEDIMENT DELIVERY (AT-02)
BIG ISLAND MINING (AT-03)
ST. MARY PARISH, LOUISIANA

FINAL REPORT

June 3, 2016

DNR Contract No. 2503-15-22

PREPARED BY:

PRELIMINARY COPY

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STATIC SURVEY OF AT02-SM-01
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Survey Report

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FINAL REPORT
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June 3, 2016

1.0 INTRODUCTION

The Coastal Protection and Restoration Authority (CPRA) is responsible for monitoring, maintaining, and operating projects that restore, create, enhance, and maintain coastal wetlands in Louisiana. Tasked with these functions, CPRA periodically evaluates orthometric heights to determine project success and ecosystem sustainability. Analysis of elevation change is especially critical for marsh creation and sediment diversion wetland restoration projects because small changes in elevation can alter the long-term development of these created environments. This Scope of Services will provide for orthometric heights of dredged channels and selected disposal areas for the Atchafalaya Sediment Delivery (AT-02) and Big Island Mining (AT-03) restoration projects. Specifically, previously established cross sections and profile transects were reoccupied and surveyed using Real Time Kinematic (RTK) methods and the Louisiana Coastal Zone (LCZ) GPS Network.

2.0 PROJECT OVERVIEW

The Atchafalaya Sediment Delivery (AT-02) and Big Island Mining (AT-03) projects were built in 1998 and are located within the Louisiana Department of Wildlife and Fisheries (LDWF) administered Atchafalaya Delta Wildlife Management Area (ADWMA), which is positioned at the mouth of the Lower Atchafalaya River Delta in St. Mary Parish, Louisiana. AT-02 occupies approximately 2,181 acres on the eastern portion of the delta while AT-03 occupies approximately 2,765 acres on the western part of the Lower Atchafalaya River Delta. Both projects were constructed in 1998 by dredging channels and depositing dredged materials into defined disposal areas. This survey is to help evaluate the rate of sediment deposition in the dredged canals and the effect of an elevational gradient on vegetation establishment. The work performed consisted of bathymetric surveys conducted along dredged distributary channels. Additionally, topographic surveys were conducted on disposal areas. The location of the specific transects from the 1998 as-built surveys were provided to Morris P. Hebert, Inc. (MPH) prior to the 2008 resurvey. MPH used these same 2008 transect locations in reoccupying AT-02 and AT-03 projects.

3.0 DATA COLLECTION SUMMARY

During the period of March 14, 2016 and March 15, 2016 MPH performed a static resurvey of AT02-SM-01 to verify the horizontal and vertical control on the monument. This included establishing an updated data sheet and conversion factor for previous survey data adjustments. For the purpose of this project, the elevation of the monument "AT02-SM-01" was referenced to Geoid12A.

During the period of March 16, 2016 through May 24, 2016, MPH collected field data throughout AT-02 and AT-03 projects. The field work on the original contract was completed on April 18, 2016. The office work began in advance of the fieldwork. All of the Channel Centerlines, Channel Transect Lines, and Disposal Area Transect Lines were provided by Coastal Protection and Restoration Authority of Louisiana and MPH maintained these lines. The Channel Surveys were completed by our Hydrographic Survey Crew aboard an 18' boat with an outboard marine engine. The Hydrographic Survey Crew mounted a single frequency echo-sounder amidships of the boat, along with an R8 RTK/GPS antenna for positioning and real-time corrections. The Disposal Area Transects were completed by our Conventional Survey Crews using airboats. The Conventional Survey Crews used R8/R10 RTK/GPS antennas for positioning and real-time corrections.

Amendment No. 1 was issued by a cover letter dated May 2, 2016 and the notice to proceed was received by email on May 10, 2016. The fieldwork began on May 16, 2016 and was completed on May 24, 2016. The final report was submitted on June 3, 2016.

3.1 GPS Static Survey

GPS static surveys were completed for the existing survey monument "AT02-SM-01". These surveys were performed on March 14 & 15, 2016 by collecting static GPS data during two (2) six-hour sessions.

4.0 METHODOLOGY

4.1 Static GPS Network Planning

The Static GPS Network was designed to incorporate three (3) CORS "Continuously Operating Reference Stations" from the Center for GeoInformatics at LSU. The three CORS used for this survey were "AMER", "FSHS", and "HOUM". They are located in Atchafalaya Delta, Franklin, and Houma respectively. Since these stations are continuously collecting data, simultaneous data was collected for all three CORS during the time of the static survey of the monument. This schedule allowed the Static GPS Survey to be completed over a period of two days, which included

redundant observations for each baseline. The GPS Session Schedule can be seen in Appendix 3. A map of the project area can be seen in Appendix 2.

4.2 GPS Static Survey

The GPS Static Survey was performed using Trimble R8/R10 GPS receivers equipped with fixed height tripods. The GPS receivers were set to collect L1 and L2 data at a 15 second epoch rate with a 10-degree elevation mask. Static GPS data was collected at the benchmark for a minimum of 6 hours per session. A total of two data collection sessions were performed on different days and at different times of the day. Field personnel documented each data collection setup on GPS field log sheets. These log sheets contain the date, start time, stop time, station name, GPS receiver serial number, weather conditions, etc. A copy of the field log sheets can be seen in Appendix 4.

4.3 Data Processing and Network Adjustment

The static GPS data was downloaded from the receiver and imported into Trimble Business Center (TBC) for processing and QA/QC. Each setup was checked to verify that the antenna height and station name matched the corresponding field log sheet. GPS data files were also sent to OPUS to determine approximate position. These OPUS positions were checked against the log sheet to determine any setup errors.

Each baseline was processed using a 15-degree elevation mask and all baselines achieved a fixed solution with no editing. Next, a 3-D minimally constrained least squares (free) adjustment was performed holding monument "AMER" fixed in latitude, longitude, and ellipsoid height. This adjustment used Geoid12A as the basis for determining orthometric heights of adjusted ellipsoid heights. The network was found to fit existing control within acceptable limits, and all primary control was found to be consistent with respect to differences in published and computed elevation values. The Initial and Weighted Free Adjustment Report can be seen in Appendix 6. Once the Free Adjustment passed the Chi Square Test, a fully constrained least squares adjustment was performed holding all CORS fixed in latitude, longitude, and ellipsoid height. The Fully Constrained Network Adjustment report and final adjusted positions can be seen in Appendix 7. A summary of the residuals of adjusted positions versus OPUS positions can be seen in Appendix 5.

5.0 SURVEY CONTROL

Benchmarks used as a control are tied into the CPRA – Louisiana Coastal Zone (LCZ) GPS Network. MPH conducted all surveying activities using the "AT02-SM-01" AND "AT03-SM-01" monuments, which were statically surveyed into the LCZ GPS network using the Geoid12A model. These benchmarks are identified by the Louisiana State Plane Coordinate System (South Zone), the North American

Horizontal Datum of 1983 (NAD 83), and the North American Vertical Datum of 1988 (NAVD88). Benchmark names, locations and coordinates were provided by CPRA. Due to MPH only having a -0.03 feet vertical difference with John Chance Land Surveys, Inc. on monument "AT02-SM-01" the John Chance Land Surveys, Inc. Data Sheet for our control was used for the AT02 Sediment Delivery transects. MPH also used monument "AT03-SM-01" which was established by John Chance Land Surveys, Inc. for our control for the AT03 Big Island Mining transects. MPH calculated a height difference of -0.17 feet at monument AT03-SM-01 from John Chance Land Surveys, Inc. (JCLS) data sheet. However, MPH believes that the position is unreliable due to the significant tree and foliage growth in the area of the monument as shown on the survey monument visibility obstruction diagram, which can be seen in Appendix 4. This vegetation caused interference in the satellite tracking which resulted in degradation of the GPS data; this belief is borne out by a thorough analysis of the OPUS statistics as well as the baseline processing reports for the sessions on this monument. MPH therefore opted to use the JCLS data sheet information for the AT03 Big Island Mining transects.

6.0 GENERAL

MPH conducted a topographic and bathymetric survey for the Atchafalaya Sediment Delivery (AT-02) and Big Island Mining (AT-03) projects as per the January 2013 version of the Contractors Guide to Minimum Standards as required by the Coastal Protection and Restoration Authority (CPRA) of Louisiana. MPH furnished the necessary equipment, software, supplies, labor and transportation, including fuel, needed to complete the work as outlined in the Coastal Protection and Restoration Authority provided Scope of Services.

The original field survey work commenced on March 14, 2016 and was completed on April 18, 2016. The office work began in advance of the fieldwork. As mentioned above in 3.0 DATA COLLECTION SUMMARY an Amendment No. 1 was issued. The amendment field work began on May 16, 2016 and was completed on May 25, 2016. The final report was submitted on June 3, 2016.

7.0 HORIZONTAL AND VERTICAL CONTROL

MPH performed a GPS survey utilizing RTK OTF methods. The GPS Total Station survey equipment included the use of a Trimble R10 Dual Frequency receiver as a rover and a Trimble R8 Model 3 Dual Frequency receiver as a base. The base station occupied LDNR Louisiana Coastal Zone (LCZ) benchmark monuments "AT02-SM-01" and "AT03-SM-01" and rover units were used to collect horizontal and vertical data along the transects. For quality control, the GPS Base Receiver was set up on an existing project control point with an established horizontal position and elevation while the Rover Receiver was used to observe the other existing project control point.

This observed position was checked against the established position of the control point to verify that it was within an accepted tolerance. This QA/QC process was performed twice daily throughout the duration of the project. Survey data was downloaded and processed utilizing Trimble Business Center. The complete RTK Total Station survey method yields nominal accuracies of 1 cm horizontal and 2 cm vertical. Monuments "AT02-SM-01" and "AT03-SM-01", which were used for control, are referenced to the Lambert Conformal Conic Projection, Louisiana State Plane Coordinate System (South Zone), the North American Datum of 1983 (NAD83) and the North American Vertical Datum of 1988 (NAVD88).

8.0 RTK TOPOGRAPHIC & BATHYMETRIC SURVEY

MPH developed a topographic and bathymetric survey plan based on as-built drawings of the channel baseline (1998) provided by LDNR/CRD (CPRA). The as-built drawings (1998) were geo-rectified and forty-four (44) cross sectional transects were established using AutoCAD 2008 during the 2008 MPH survey across the 5 disposal areas. The northing and easting coordinates for the survey data are based on the Louisiana Coordinate System (South Zone) NAD83. The elevations are based on the NAVD88 datum.

9.0 SURVEY TRANSECTS

MPH performed the topographic survey of the dredged canals and the various dredge disposal areas that were constructed in 1998. Topographic points were collected along 44 cross sectional transects that traverse the following disposal areas:

<u>AT-02</u>
Natal Channel disposal area #1
Natal Channel disposal area #4
Castille Pass disposal area

<u>AT-03</u>
Disposal area #1
Disposal area #5

All topographic points were collected along the transects at a minimum of 50-ft intervals and at any significant changes in grade using Real Time Kinematic (RTK) GPS survey methods.

10.0 BATHYMETRIC SURVEY

MPH performed a bathymetric survey along the sub-aqueous portion of the project area. Bathymetric points were collected along the centerline of the channels and along the transects perpendicular to the centerline at 500-ft intervals. Transects were run along each channel from shoreline to shoreline. The bathymetric survey points were collected utilizing Trimble R8 RTK/GPS and Odom HydroTrac Echo sounder in conjunction with the Hypack software. A sampling rate of 5 Hz (5 points/second) was used during data collection.

MPH performed a bathymetric survey as described above for the following channels:

AT-03-Channel A

Bathymetric points were collected commencing at the intersection of Channel A and the Atchafalaya River. Thence continued Southwesterly every 500 foot until the end of Channel A has been reached utilizing the geo-rectified as-built drawing files to locate and re-establish the survey transects.

AT-03-Channel B

Bathymetric points were collected commencing at the intersection of Channel B and Channel A. Thence continued Northwesterly every 500 foot until the end of Channel B has been reached utilizing geo-rectified as-built drawings to locate and re-establish the survey transects.

AT-03-Channel C

Bathymetric points were collected commencing at the intersection of Channel C and Channel A. Thence continued Southwesterly every 500 foot until the end of Channel C has been reached utilizing geo-rectified as-built drawings to locate and re-establish the survey transects.

AT-03-Channel D

Bathymetric points were collected commencing at the intersection of Channel D and Channel A. Thence continued Northwesterly every 500 foot until the end of Channel D has been reached utilizing geo-rectified as-built drawings to locate and re-establish the survey transects.

AT-03-Channel E

Bathymetric points were collected commencing at the intersection of Channel E and Channel A. Thence continued Southeasterly every 500 ft until the end

of Channel E has been reached utilizing geo-rectified as-built drawings to locate and re-establish the survey transects.

AT-03-Channel F

Bathymetric points were collected commencing at the intersection of Channel F and Channel A. Thence continued Northwesterly every 500 foot until the end of Channel F has been reached utilizing geo-rectified as-built drawings to locate and re-establish the survey transects.

AT-02-Natal Channels No. 1 & No. 2

Bathymetric points were collected commencing at the intersection of Natal Channel and East Pass Channel. Thence continued Southeasterly every 500 ft until the end of Natal Channel No. 1. Bathymetric points were also collected commencing at the intersection of Natal Channel No. 2 & Natal Channel No. 1. Thence continued Southeasterly every 500 foot until the end of Natal Channel No. 2. These were reached utilizing the geo-rectified as-built drawing files to locate and re-establish the survey transects.

AT-02-Castille Pass Channel

Bathymetric points were collected commencing at the intersection of Castille Pass Channel and East Pass Channel. Thence continued Southeasterly every 500 foot until the end of Castille Pass Channel has been reached utilizing the geo-rectified as-built drawing files to locate and re-establish the survey transects.

AMENDMENT No. 1

AT-03-Channel A1 & Channel A2

Bathymetric points were collected commencing at the end of the original Channel A which is the beginning of Channel A1. Thence continued Northwesterly every 500 foot until the end of Channel A1. Bathymetric points were also collected commencing at the end of the original Channel A which is also the beginning of Channel A2. Thence continued Southwesterly every 500 foot until the end of Channel A2. These were reached utilizing the shapefiles provided on the email request for proposal and scope of services for the additional work under Amendment No. 1 dated April 22, 2016.

AT-02-Northeast Diversion Channels No. 1 & No. 2

Bathymetric points were collected commencing at the intersection of Northeast Diversion Channel No. 1 and Natal Channel No. 1. Thence continued Easterly and Northerly every 500 foot until the end of Northeast Diversion Channel No. 1. Bathymetric points were also collected commencing at the intersection of the Northeast Diversion Channel No. 2 & Northeast Diversion Channel No. 1. Thence continued Easterly every 500 foot until the end of Northeast Diversion Channel No. 2. These were reached utilizing the shapefiles provided on the email request for proposal and scope of services for the additional work under Amendment No. 1 dated April 22, 2016.

AT-02-Natal Channel No. 2 Extension & Natal Channel No. 2A

Bathymetric points were collected commencing at the end of the original Natal Channel No. 2. Thence continued Southeasterly every 500 foot until the end of Natal Channel No. 2 Extension. Bathymetric points were also collected commencing at the intersection of Natal Channel No. 2A and Natal Channel No. 2 Extension. Thence continued Southeasterly every 500 foot until the end of Natal Channel No. 2A. These were reached utilizing the shapefiles provided on the email request for proposal and scope of services for the additional work under Amendment No. 1 dated April 22, 2016.

11.0 Chronological Summary of Work

Chronological Summary of Work					
Project #	Group	Date	Project #	Group	Date
AT02/AT03	STATIC GPS SURVEY	3/14/2016	AT-03	CHANNEL E	4/6/2016
AT02/AT03	STATIC GPS SURVEY	3/15/2016	AT-03	CHANNEL F	4/6/2016
AT-03	DISPOSAL AREA #5	3/16/2016	AT-02	NATAL CHANNEL	4/7/2016
AT-03	DISPOSAL AREA #5	3/17/2016	AT-02	CASTILLE PASS CHANNEL	4/7/2016
AT-03	DISPOSAL AREA #5	3/22/2016	AT-02	NATAL CHANNEL	4/8/2016
AT-03	DISPOSAL AREA #5	3/23/2016	AT-03	CHANNEL A	4/11/2016
AT-03	DISPOSAL AREA #5	3/24/2016	AT-03	CHANNEL D	4/11/2016
AT-03	DISPOSAL AREA #1	3/28/2016	AT-03	CHANNEL A	4/18/2016
AT-03	DISPOSAL AREA #5	3/28/2016	AT-03	CHANNEL C	4/18/2016
AT-03	DISPOSAL AREA #1	3/29/2016	AT-03	CHANNEL E	4/18/2016
AT-03	DISPOSAL AREA #5	3/29/2016	AT-03	CHANNEL F	4/18/2016
AT-03	CHANNEL A	3/29/2016	AT-03	CHANNEL A1	5/16/2016
AT-03	CHANNEL B	3/29/2016	AT-03	CHANNEL A2	5/16/2016
AT-03	CHANNEL C	3/29/2016	AT-02	NE DIVERSION CHANNEL 1	5/16/2016
AT-03	CHANNEL E	3/29/2016	AT-02	NE DIVERSION CHANNEL 2	5/16/2016
AT-03	CHANNEL F	3/29/2016	AT-02	NATAL CHANNEL 2 EXTENSION	5/16/2016
AT-02	DISPOSAL AREA #1	3/30/2016	AT-02	NATAL CHANNEL 2A	5/16/2016
AT-03	CHANNEL A	3/30/2016	AT-03	DISPOSAL AREA # 5	5/19/2016
AT-03	CHANNEL D	3/30/2016	AT-03	CHANNEL C	5/19/2016
AT-02	DISPOSAL AREA #4	3/31/2016	AT-03	CHANNEL E	5/19/2016
AT-02	CASTILLE PASS DISPOSAL AREA	3/31/2016	AT-03	CHANNEL A1	5/19/2016
AT-03	CHANNEL A	4/4/2016	AT-03	CHANNEL A2	5/19/2016
AT-03	CHANNEL D	4/4/2016	AT-02	NATAL CHANNEL 2 EXTENSION	5/23/2016
AT-02	CASTILLE PASS DISPOSAL AREA	4/4/2016	AT-02	NATAL CHANNEL 2A	5/23/2016
AT-02	NATAL CHANNEL	4/4/2016	AT-02	NATAL CHANNEL SEDIMENT AREA	5/23/2016
AT-02	CASTILLE PASS CHANNEL	4/4/2016	AT-02	NE DIVERSION CHANNEL 1	5/23/2016
AT-02	CASTILLE PASS DISPOSAL AREA	4/5/2016	AT-02	NE DIVERSION CHANNEL 1	5/24/2016
AT-03	CHANNEL A	4/5/2016	AT-02	NE DIVERSION CHANNEL 2	5/24/2016
AT-03	CHANNEL B	4/5/2016	AT-02	NE DIVERSION CHANNEL SEDIMENT AREA	5/24/2016
AT-03	CHANNEL A	4/6/2016			
AT-03	CHANNEL C	4/6/2016			

12.0 DELIVERABLES

As requested in the CPRA of Louisiana Scope of Services the following deliverables are being submitted:

12.1 A report describing the survey methodology employed in the field.

12.2 Four sets of 11" x 17" size plan view drawings showing an overlay of the Lambert Conformal Conic Projection Louisiana State Plane Coordinate System South Zone NAD 83 and drawings showing all survey control points utilized in the survey. Four sets of 11" x 17" size plan and profile drawings, depicting the results of the topographic and bathymetric surveys.

12.3 Four digital copies of drawing files on separate CD disks in AutoCAD (*.dwg) format.

12.4 Four copies to the XYZ survey data on separate CD disks in coma-delimited ASCII format. MPH provided the maximum amount of survey data requested by CPRA that the equipment used would allow. MPH also included additional survey data relevant to the scope of work that was not requested by CPRA. The data is referenced to the Louisiana Coordinate System (South Zone) and North American Datum of 1983 (NAD 83) in U.S. Survey Feet. Elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88) in feet.

12.5 Four printed copies of the survey data.

12.6 Four printed copies of the field notebook records.

13.0 CERTIFICATION

I hereby certify that the report, data and drawings referenced herein were prepared from a field survey conducted on the ground by me or under my direct supervision and control and that the report, data and drawings accurately depict the result of said survey.

Morris P. Hebert, Inc.
283 Corporate Drive
Houma, LA 70360

PRELIMINARY COPY

John C. Mattingly, P.L.S.
Louisiana Registration Number 4710

APPENDIX 1

New Survey Benchmark Data Sheet

VICINITY MAP Not to Scale

Reproduced from Louisiana 2008 DOQQ

Station Name: "AT02-SM-01"

Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the south side of Natal Pass southwest of Atchafalaya River Outlet.

Monument Description: NGS Style Floating Sleeve Monument: Stainless steel sectional rods driven 60 feet to refusal Within a greased sleeve and sand filled 6" PVC pipe with protective cover and is set flush with the ground.

Stamping: AT02-SM-01

Installation Date: 2003 **Date of Survey:** March 14 & 15, 2016

Monument Established By: JCLS **For:** CPRA

Adjusted NAD83 Geodetic Position (2011)
Lat. 29°26'14.99545" N
Long. 091°16'48.18520"W

Adjusted NAD83 Datum LSZ (1702) Ft (2011)
N= 340,941.78
E= 3,297,793.87

Adjusted NAVD88 Height (2011)
Elevation = 1.61 feet (0.491 mtrs)

Ellipsoid Height = - 24.506 mtrs.
Geoid12A Height = -24.997 mtrs.

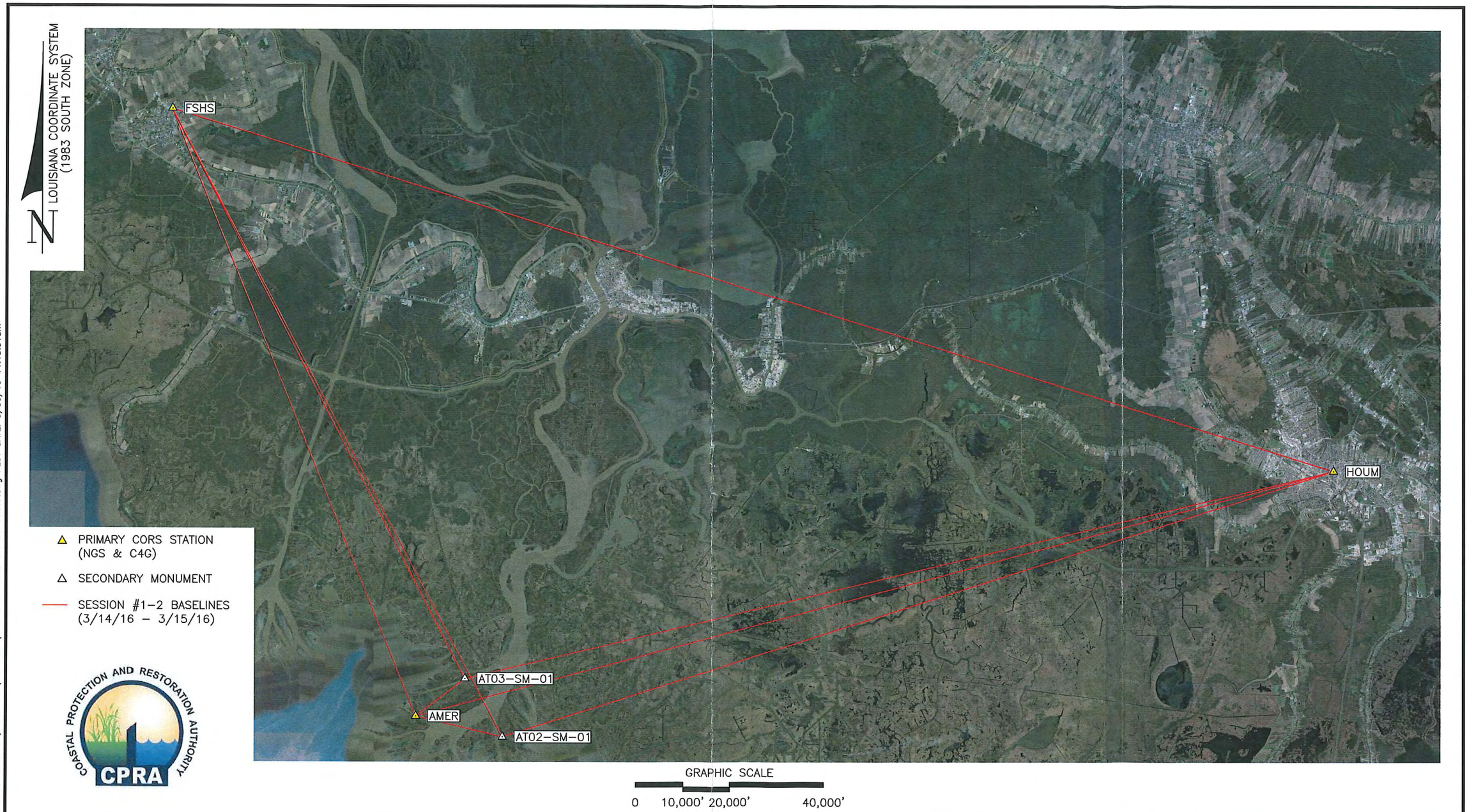
FOR REFERENCE ONLY
Adjusted NAVD88 Height (2006.81)
Elevation = 1.75 ft. (0.535 mtrs.)
Ellipsoid Height = -24.497 mtrs.
Geoid03 Height = -25.031 mtrs. (2004.65)

Adjusted NAVD88 Height (Geoid99)
Elevation = 2.11 feet (0.644 mtrs)

Adjusted Position determined by Morris P. Hebert, Inc. for the Coastal Protection & Restoration Authority of Louisiana

APPENDIX 2

GPS Network Map



P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\MONUMENT AT02-SM-01 11X17.dwg PLOT DATE: 3/30/16 11:15:31am

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
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HOUMA, LA. * BATON ROUGE, LA. * HOUSTON, TX. * SAN ANTONIO, TX.
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

GPS NETWORK

AT02 ATCHAFALAYA SEDIMENT/AT03 BIG ISLAND
TASK 6 (STATIC CONTROL PLAN) AT02-SM-01 MONUMENT UPDATE
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
ST. MARY PARISH, LOUISIANA

DRAWN BY:	NPB	SHEET:	1 OF 1
CHKD./APPD. BY:	JCM	SCALE:	1" = 20,000'
UPDATED BY:		DATE:	3/30/2016
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: MONUMENT AT02-SM-01 11X17.DWG			

APPENDIX 3

GPS Session Schedule

CPRA/Coastal Protection and Restoration Authority

"AT02-SM-01" Monument Static Survey
For
Atchafalaya Sediment Delivery (AT-02)

Big Island Mining (AT-03)

Morris P. Hebert, Inc.
client focused solutions

GPS SESSION SCHEDULE

Date	Monument	Operator/Crew	Session #	Start Time	End Time	Length
3/14/2016	AT02-SM-01	Aaron Beal	1	10:34	6:04	7:30
3/15/2016	AT02-SM-01	Aaron Beal	2	7:50	1:52	6:02

APPENDIX 4

GPS Field Log Sheets

MPH Static Session Log Sheet

Date: 3-14-16 Start Time: 10:34:11 End Time: 6:04:10

Operator: Aaron Beal Receiver / S/N 5141474231

Point ID: ATO2-SM-01 File Name: 42310740.TO2 Size: 634 KB

Antenna Height: 7.382 Fixed Hgt? Y Extension (0.25m) pole? Y

Verified tripod level and plumb over the point: Start: Y End: Y

Location and Description of point:

Deep Rod w/ Bullet Cap in Aluminum Flip Cap

(Show sketch on back of page)

Ties:	Object tied to:	Distance:
Deep Rod Mon in 4" PVC with Brass Disk		4.77

(Show any additional ties on back of page)

Photo File Names: Point: _____ Looking North: _____

South: _____ East: _____ West: _____

MPH Static Session Log Sheet

Date: 3/15/16 Start Time: 7:50:16 End Time: 1:52:38

Operator: Aaron Beck Receiver / S/N 5141474231

Point ID: AT02-SM-01 File Name: 42310750.T02 Size:

Antenna Height: 7.382 Fixed Hgt? Y Extension (0.25m) pole? Y

Verified tripod level and plumb over the point: Start: Y End: Y

Location and Description of point:

Deep Rod w/ Bullet Cap in Aluminum Flip Cap

(Show sketch on back of page)

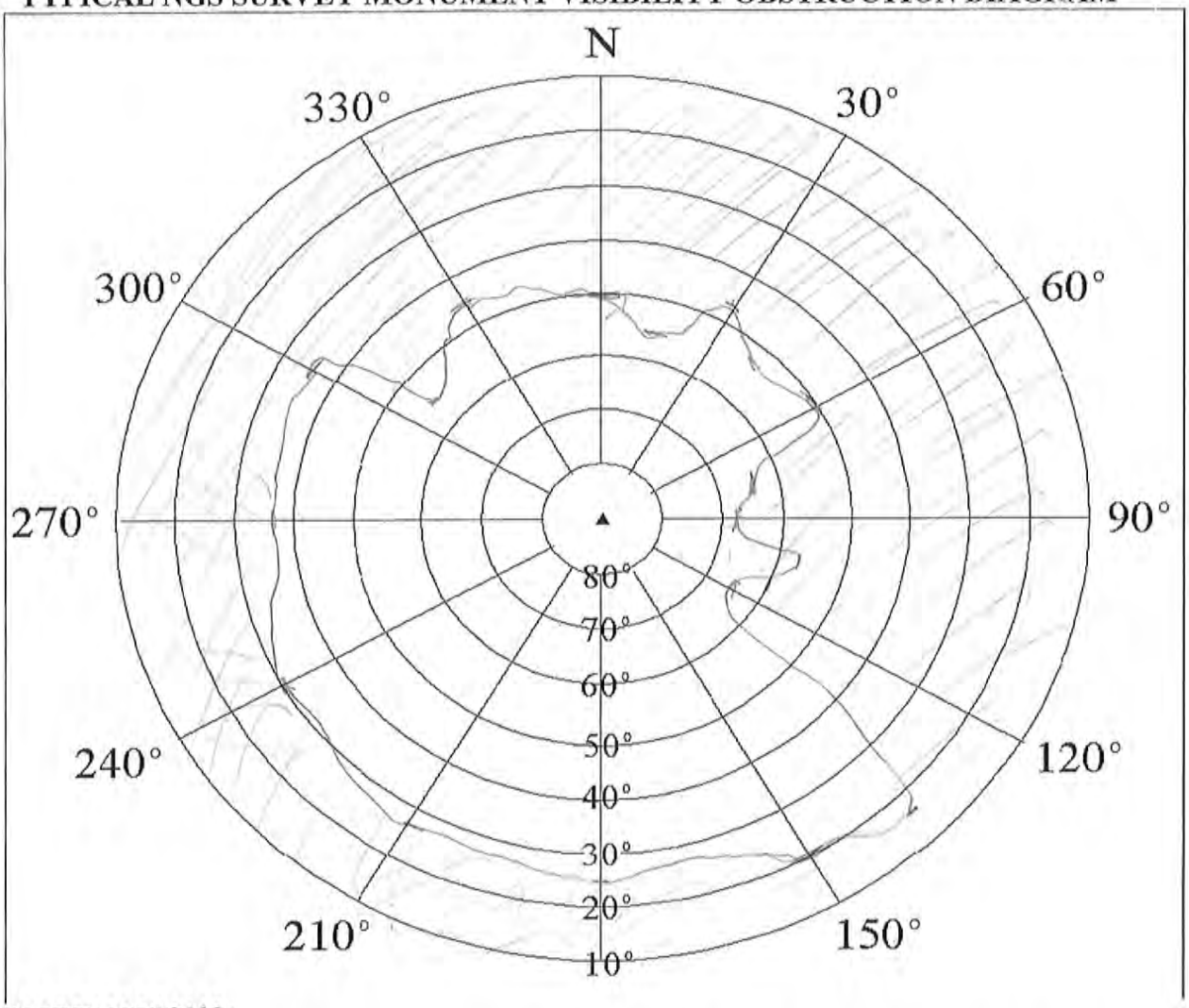
Ties:	Object tied to:	Distance:
	Deep Rod Mon. in 4" PVC w/ Brass Cap	4.77

(Show any additional ties on back of page)

Photo File Names: Point: Looking North:

South: East: West:

TYPICAL NGS SURVEY MONUMENT VISIBILITY OBSTRUCTION DIAGRAM



INSTRUCTIONS:

Identify obstructions by azimuth (magnetic) and elevation angle (above horizon) as seen from station mark. Indicate distance and direction to nearby structures and reflective surfaces (potential multipath sources).

Designation/Name: AT-02-SM-01

Location: Nelal Pass

Parish: St. Mary Reconnaissance By: Aaron Beal

Height above mark, meters: 2.25 Meters

Company: Morris P. Hebert

Phone: (985) 209 - 8526 Date: 3-30-16 Check if no obstructions above 10 degrees_____

MPH Static Session Log Sheet

Date: 3-14-11e Start Time: 11:36:10 End Time: 5:36:21

Operator: Aaron Beal Receiver / S/N 5350450414

Point ID: AT03-SM-01 File Name: 04140740.T02 Size: 513 KB

Antenna Height: 6.562 Fixed Hgt? Y Extension (0.25m) pole? N

Verified tripod level and plumb over the point: Start: Y End: Y

Location and Description of point:

Deep Rod w/ Bullet Cap IN Aluminum Flip Cap

(Show sketch on back of page)

Ties:	Object tied to:	Distance:
	Deep Rod Mon in 4" PVC w/ Brass Disk	4.03

(Show any additional ties on back of page)

Photo File Names: Point: _____ Looking North: _____

South: _____ East: _____ West: _____

MPH Static Session Log Sheet

Date: 3-15-16 Start Time: 8:19:53 End Time: 2:15:30

Operator: Aaron Beal Receiver / S/N 5350450414

Point ID: AT03-SM-01 File Name: 04146750.T02 Size: _____

Antenna Height: 6.562 Fixed Hgt? Y Extension (0.25m) pole? N

Verified tripod level and plumb over the point: Start: Y End: Y

Location and Description of point:

Deep Rod w/ Bullet Cap IN Aluminum Flip Cap

(Show sketch on back of page)

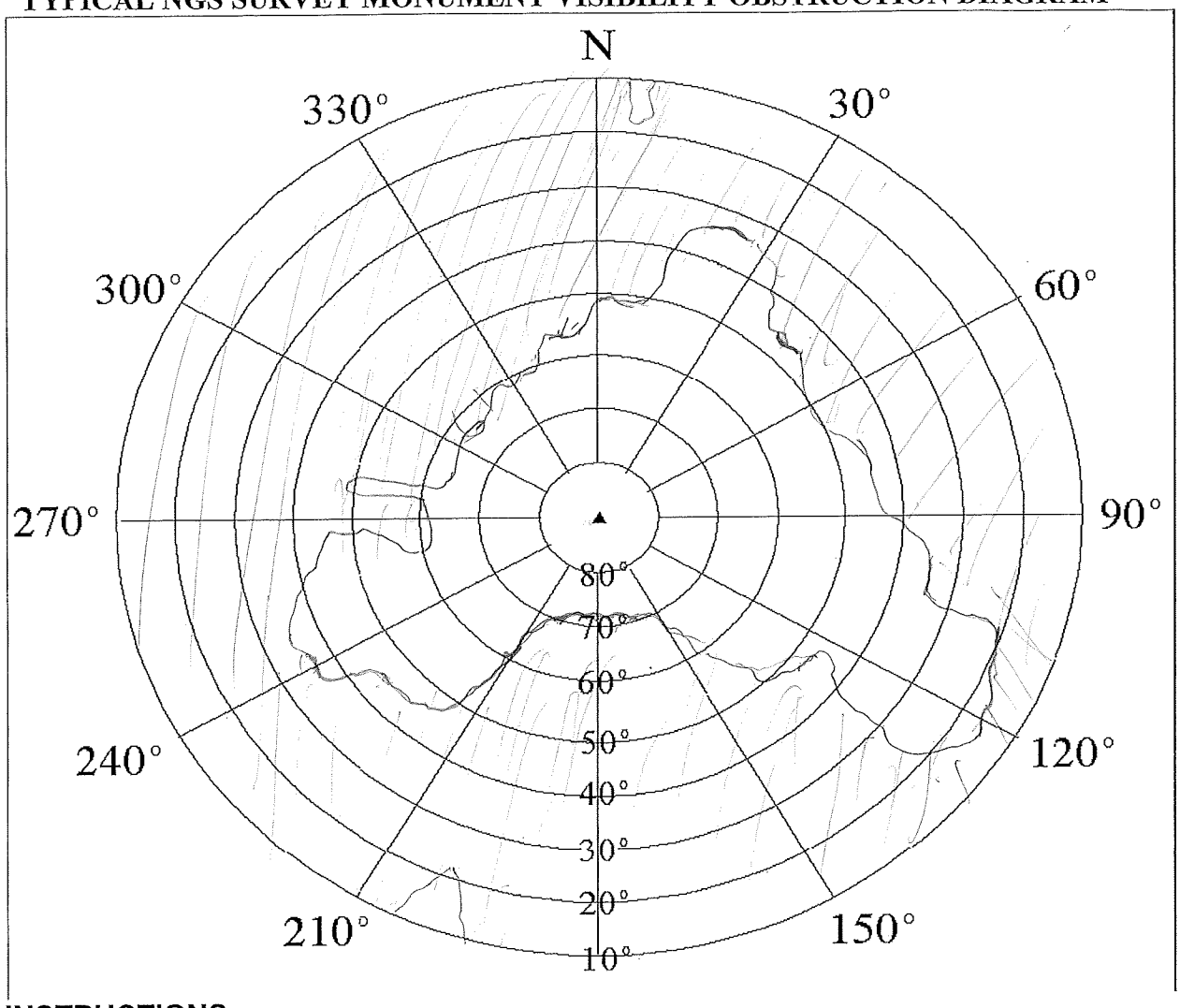
Ties:	Object tied to:	Distance:
	Deep Rod Mon in 4" PVC w/Brass Cap	4.03

(Show any additional ties on back of page)

Photo File Names: Point: _____ Looking North: _____

South: _____ East: _____ West: _____

TYPICAL NGS SURVEY MONUMENT VISIBILITY OBSTRUCTION DIAGRAM



INSTRUCTIONS:

Identify obstructions by azimuth (magnetic) and elevation angle (above horizon) as seen from station mark. Indicate distance and direction to nearby structures and reflective surfaces (potential multipath sources).

Designation/Name: AT-03-SM-01

Location: Breaux Pass

Parish: St. Mary Reconnaissance By: Aaron Beal

Height above mark, meters: 2.0 meters

Company: Morris P. Hebert INC.

Phone: (985) 209 - 8526 Date: 3-30-16 Check if no obstructions above 10 degrees _____

APPENDIX 5

Network Adjustment and OPUS Summary

CPRA/Coastal Protection and Restoration Authority

"AT02-SM-01" Monument Static Survey
For
Atchafalaya Sediment Delivery (AT-02)

Big Island Mining (AT-03)

Morris P. Hebert, Inc.
client focused solutions

Minimally Constrained Network Adjustment Summary

	TBC Adjusted Values			Published Control Values			Residuals		
Station	Northing (ft)	Easting (ft)	Ht. (ft)	Northing (ft)	Easting (ft)	Ht. (ft)	Δ Northing (ft)	Δ Easting (ft)	Δ Ht. (ft)
AT03-SM-01	353352.360	3289814.269	2.425	-	-	-	0.012	0.013	0.023
AMER	Fixed	Fixed	Fixed	345332.200	3279311.625	34.825	Fixed	Fixed	Fixed
FSHS	474730.234	3227265.780	37.391	474730.254	3227265.765	37.424	0.020	-0.015	0.033
HOUM	397729.366	3474618.953	45.275	397729.333	3474618.955	45.350	-0.033	0.002	0.075
AT02-SM-01	340941.785	3297793.881	1.606	-	-	-	-	-	-

Fully Constrained Network Adjustment Summary

	TBC Adjusted Values			Published Control Values			Precision (95% Confidence Level)		
Station	Northing (ft)	Easting (ft)	El. (ft)*	Northing (ft)	Easting (ft)	Ht. (ft)	Northing (ft)	Easting (ft)	El. (ft)*
AT03-SM-01	353352.356	3289814.254	2.430	-	-	-	0.013	0.013	0.027
AMER	Fixed	Fixed	Fixed	345332.200	3279311.625	34.825	Fixed	Fixed	Fixed
FSHS	Fixed	Fixed	Fixed	474730.254	3227265.765	37.424	Fixed	Fixed	Fixed
HOUM	Fixed	Fixed	Fixed	397729.333	3474618.955	45.350	Fixed	Fixed	Fixed
AT02-SM-01	340941.779	3297793.865	1.609	-	-	-	0.013	0.013	0.025

OPUS Elevation Survey

	Final OPUS Values					
Station	Elevation (m)	Elevation (ft)	RMS	Notes	TBC Adjusted Elevation (ft)	Δ Elev. (ft)*
AT02-SM-01	0.487	1.598	0.017		1.609	0.011
	0.501	1.644	0.020		1.609	-0.035
Average	**0.494**	**1.621**				-0.012
AT03-SM-01	0.659	2.162	0.022		2.430	0.268
	0.719	2.359	0.023		2.430	0.071
Average	**0.689**	**2.260**				0.170

*-Elevations expressed in NAVD88 computed using GEOID 12a

APPENDIX 6

Initial and Weighted Free Network Adjustment Report

Project File Data		Coordinate System	
Name:	C:\Users\ldrennan\Documents\Trimble Business Center\12063-07 Static.vce	Name:	US State Plane 1983
Size:	84 KB	Datum:	NAD 1983 (Conus)
Modified:	3/17/2016 8:00:29 PM (UTC:-5)	Zone:	Louisiana South 1702
Time zone:	Central Standard Time	Geoid:	GEOID12A (Conus)
Reference number:		Vertical datum:	
Description:			
Comment 1:			
Comment 2:			
Comment 3:			

Additional Coordinate System Details

Local Site Settings			
Project latitude:	?	Ground scale factor:	1
Project longitude:	?	False northing offset:	0.000 ft
Project height:	0.000 ft	False easting offset:	0.000 ft

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.007 ft

Centering Error: 0.010 ft

Covariance Display

Horizontal:

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960

Three-Dimensional

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960

Adjustment Statistics

Number of Iterations for Successful Adjustment:	2
Network Reference Factor:	0.95
Chi Square Test (95%):	Passed
Precision Confidence Level:	95%
Degrees of Freedom:	48

Post Processed Vector Statistics

Reference Factor:	0.95
Redundancy Number:	48.00
A Priori Scalar:	1.00

Control Coordinate Comparisons

Values shown are control coordinates minus adjusted coordinates.

Point ID	ΔNorthing (US survey foot)	ΔEasting (US survey foot)	ΔElevation (US survey foot)	ΔHeight (US survey foot)
FSHS	0.020	-0.015	?	0.034
HOUM	-0.034	0.002	?	0.075

Control Point Constraints

Point ID	Type	North σ (US survey foot)	East σ (US survey foot)	Height σ (US survey foot)	Elevation σ (US survey foot)
AMER	Global	Fixed	Fixed	Fixed	
Fixed = 0.000003(US survey foot)					

Adjusted Grid Coordinates

Point ID	Northing (US survey foot)	Northing Error (US survey foot)	Easting (US survey foot)	Easting Error (US survey foot)	Elevation (US survey foot)	Elevation Error (US survey foot)	Constrain
AMER	345332.200	?	3279311.625	?	34.825	?	LLh
AT02	340941.785	0.012	3297793.881	0.013	1.606	0.020	
AT03	353352.360	0.012	3289814.269	0.013	2.425	0.023	
FSHS	474730.234	0.012	3227265.780	0.012	37.391	0.017	
HOUM	397729.366	0.012	3474618.953	0.013	45.275	0.017	

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Constraint
AMER	N29°26'58.49797"	W91°20'17.21180"	-47.260	?	LLh
AT02	N29°26'14.99551"	W91°16'48.18501"	-80.402	0.020	
AT03	N29°28'17.88443"	W91°18'18.39571"	-79.791	0.023	
FSHS	N29°48'19.10304"	W91°30'08.05108"	-47.622	0.017	
HOUM	N29°35'32.10997"	W90°43'24.98849"	-37.257	0.017	

Adjusted ECEF Coordinates

Point ID	X (US survey foot)	X Error (US survey foot)	Y (US survey foot)	Y Error (US survey foot)	Z (US survey foot)	Z Error (US survey foot)	3D Error (US survey foot)	Constraint
AMER	-425865.641	?	-18231526.152	?	10227612.481	?	?	LLh
AT02	-407437.382	0.013	-18234079.117	0.019	10223769.339	0.015	0.027	
AT03	-415273.066	0.013	-18227797.053	0.021	10234578.840	0.016	0.029	

FSHS	-476410.890	0.012	-18166300.600	0.016	10340063.678	0.014	0.024	
HOUM	-229986.086	0.013	-18209490.552	0.016	10272765.217	0.014	0.024	

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
AT02	0.016	0.015	83°
AT03	0.016	0.016	87°
FSHS	0.015	0.015	91°
HOUM	0.016	0.015	84°

Adjusted GNSS Observations

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
HOUM --> AT02 (PV8)	**Az.**	252°29'54"	0.013 sec	-0.006 sec	-0.476
	ΔHt.	-43.145 ft	0.019 ft	0.063 ft	3.162
	Ellip Dist.	185727.151 ft	0.013 ft	-0.009 ft	-0.737
AT02 --> AT03 (PV1)	**Az.**	327°17'12"	0.175 sec	-0.094 sec	-0.532
	ΔHt.	0.611 ft	0.023 ft	0.059 ft	2.538
	Ellip Dist.	14754.974 ft	0.012 ft	-0.004 ft	-0.281
AT02 --> AT03 (PV2)	**Az.**	327°17'12"	0.175 sec	0.073 sec	0.410
	ΔHt.	0.611 ft	0.023 ft	0.072 ft	2.361
	Ellip Dist.	14754.974 ft	0.012 ft	0.005 ft	0.428
HOUM --> AT03 (PV9)	**Az.**	256°48'01"	0.013 sec	0.011 sec	0.817
	ΔHt.	-42.534 ft	0.021 ft	-0.053 ft	-2.131
	Ellip Dist.	190065.885 ft	0.013 ft	0.008 ft	0.616
HOUM --> AT03 (PV12)	**Az.**	256°48'01"	0.013 sec	0.005 sec	0.410
	ΔHt.	-42.534 ft	0.021 ft	-0.038 ft	-1.942

	Ellip Dist.	190065.885 ft	0.013 ft	0.017 ft	1.212
AMER --> AT02 (PV19)	**Az.**	103°21'38"	0.134 sec	0.158 sec	1.116
	ΔHt.	-33.142 ft	0.020 ft	-0.051 ft	-1.614
	Ellip Dist.	18997.084 ft	0.013 ft	0.006 ft	0.471
HOUM --> AT02 (PV11)	**Az.**	252°29'54"	0.013 sec	0.014 sec	1.036
	ΔHt.	-43.145 ft	0.019 ft	0.026 ft	1.567
	Ellip Dist.	185727.151 ft	0.013 ft	0.001 ft	0.103
FSHS --> AT03 (PV6)	**Az.**	152°39'11"	0.019 sec	-0.025 sec	-1.302
	ΔHt.	-32.169 ft	0.021 ft	0.015 ft	0.754
	Ellip Dist.	136553.570 ft	0.012 ft	-0.002 ft	-0.167
FSHS --> AT02 (PV3)	**Az.**	152°07'11"	0.017 sec	0.011 sec	0.658
	ΔHt.	-32.780 ft	0.019 ft	0.025 ft	1.149
	Ellip Dist.	151247.760 ft	0.012 ft	0.007 ft	0.570
HOUM --> AMER (PV13)	**Az.**	255°17'06"	0.012 sec	-0.006 sec	-0.446
	ΔHt.	-10.003 ft	0.017 ft	-0.015 ft	-1.126
	Ellip Dist.	202221.711 ft	0.013 ft	0.000 ft	0.024
AMER --> AT03 (PV20)	**Az.**	52°37'52"	0.195 sec	0.170 sec	0.805
	ΔHt.	-32.531 ft	0.023 ft	-0.024 ft	-0.637
	Ellip Dist.	13215.105 ft	0.013 ft	-0.015 ft	-1.087
FSHS --> AT02 (PV5)	**Az.**	152°07'11"	0.017 sec	0.010 sec	0.579
	ΔHt.	-32.780 ft	0.019 ft	-0.002 ft	-0.137
	Ellip Dist.	151247.760 ft	0.012 ft	-0.012 ft	-0.967
FSHS --> AT03 (PV4)	**Az.**	152°39'11"	0.019 sec	-0.014 sec	-0.738
	ΔHt.	-32.169 ft	0.021 ft	-0.026 ft	-0.959
	Ellip Dist.	136553.570 ft	0.012 ft	0.000 ft	-0.034
FSHS --> AMER (PV18)	**Az.**	158°00'19"	0.018 sec	0.003 sec	0.179
	ΔHt.	0.363 ft	0.017 ft	-0.010 ft	-0.585
	Ellip Dist.	139479.846 ft	0.012 ft	0.012 ft	0.937
AMER --> AT02 (PV15)	**Az.**	103°21'38"	0.134 sec	-0.110 sec	-0.814
	ΔHt.	-33.142 ft	0.020 ft	-0.021 ft	-0.926
	Ellip Dist.	18997.084 ft	0.013 ft	0.006 ft	0.496
AMER --> AT03 (PV16)	**Az.**	52°37'52"	0.195 sec	0.164 sec	0.809
	ΔHt.	-32.531 ft	0.023 ft	0.007 ft	0.283
	Ellip Dist.	13215.105 ft	0.013 ft	0.000 ft	-0.016

HOUM --> FSHS (PV7)	**Az.**	287°35'39"	0.010 sec	0.002 sec	0.178
	ΔHt.	-10.365 ft	0.016 ft	0.009 ft	0.604
	Ellip Dist.	259076.760 ft	0.012 ft	-0.010 ft	-0.782
HOUM --> AMER (PV17)	**Az.**	255°17'06"	0.012 sec	-0.008 sec	-0.657
	ΔHt.	-10.003 ft	0.017 ft	-0.002 ft	-0.089
	Ellip Dist.	202221.711 ft	0.013 ft	-0.008 ft	-0.639
FSHS --> AMER (PV14)	**Az.**	158°00'19"	0.018 sec	0.002 sec	0.087
	ΔHt.	0.363 ft	0.017 ft	0.001 ft	0.087
	Ellip Dist.	139479.846 ft	0.012 ft	0.007 ft	0.580
HOUM --> FSHS (PV10)	**Az.**	287°35'39"	0.010 sec	-0.005 sec	-0.549
	ΔHt.	-10.365 ft	0.016 ft	-0.004 ft	-0.321
	Ellip Dist.	259076.760 ft	0.012 ft	-0.001 ft	-0.107

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
AT02	AMER	**Az.**	283°23'21"	0.134 sec	1 : 1517779	1 : 1517957
		ΔHt.	33.142 ft	0.020 ft		
		ΔElev.	33.219 ft	0.020 ft		
		Ellip Dist.	18997.084 ft	0.013 ft		
AT02	FSHS	**Az.**	332°13'46"	0.017 sec	1 : 12409519	1 : 12409640
		ΔHt.	32.780 ft	0.019 ft		
		ΔElev.	35.784 ft	0.019 ft		
		Ellip Dist.	151247.760 ft	0.012 ft		
AT02	HOUM	**Az.**	72°13'28"	0.013 sec	1 : 14837760	1 : 14837423
		ΔHt.	43.145 ft	0.019 ft		
		ΔElev.	43.669 ft	0.019 ft		
		Ellip Dist.	185727.151 ft	0.013 ft		
AT03	AMER	**Az.**	232°38'51"	0.196 sec	1 : 1042885	1 : 1043031
		ΔHt.	32.531 ft	0.023 ft		
		ΔElev.	32.400 ft	0.023 ft		
		Ellip Dist.	13215.105 ft	0.013 ft		
AT03	AT02	**Az.**	147°16'28"	0.175 sec	1 : 1193832	1 : 1193839

		ΔHt.	-0.611 ft	0.023 ft		
		ΔElev.	-0.818 ft	0.023 ft		
		Ellip Dist.	14754.974 ft	0.012 ft		
AT03	FSHS	**Az.**	332°45'02"	0.019 sec	1 : 11099367	1 : 11099429
		ΔHt.	32.169 ft	0.021 ft		
		ΔElev.	34.966 ft	0.021 ft		
		Ellip Dist.	136553.570 ft	0.012 ft		
AT03	HOUM	**Az.**	76°30'49"	0.013 sec	1 : 14809709	1 : 14809424
		ΔHt.	42.534 ft	0.021 ft		
		ΔElev.	42.850 ft	0.021 ft		
		Ellip Dist.	190065.885 ft	0.013 ft		
FSHS	AMER	**Az.**	158°00'19"	0.018 sec	1 : 11410901	1 : 11410754
		ΔHt.	0.363 ft	0.017 ft		
		ΔElev.	-2.566 ft	0.017 ft		
		Ellip Dist.	139479.846 ft	0.012 ft		
FSHS	HOUM	**Az.**	107°12'30"	0.010 sec	1 : 20955534	1 : 20955128
		ΔHt.	10.365 ft	0.016 ft		
		ΔElev.	7.884 ft	0.016 ft		
		Ellip Dist.	259076.760 ft	0.012 ft		
HOUM	AMER	**Az.**	255°17'06"	0.012 sec	1 : 16106072	1 : 16105322
		ΔHt.	-10.003 ft	0.017 ft		
		ΔElev.	-10.450 ft	0.017 ft		
		Ellip Dist.	202221.711 ft	0.013 ft		

APPENDIX 7

Fully Constrained Network Adjustment Report

Project File Data		Coordinate System	
Name:	C:\Users\ldrennan\Documents\Trimble Business Center\12063-07 Static.vce	Name:	US State Plane 1983
Size:	84 KB	Datum:	NAD 1983 (Conus)
Modified:	3/17/2016 8:00:29 PM (UTC:-5)	Zone:	Louisiana South 1702
Time zone:	Central Standard Time	Geoid:	GEOID12A (Conus)
Reference number:		Vertical datum:	
Description:			
Comment 1:			
Comment 2:			
Comment 3:			

Additional Coordinate System Details

Local Site Settings			
Project latitude:	?	Ground scale factor:	1
Project longitude:	?	False northing offset:	0.000 ft
Project height:	0.000 ft	False easting offset:	0.000 ft

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.007 ft

Centering Error: 0.010 ft

Covariance Display

Horizontal:

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960

Three-Dimensional

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960

Adjustment Statistics

Number of Iterations for Successful Adjustment: 2
Network Reference Factor: 1.00
Chi Square Test (95%): Passed
Precision Confidence Level: 95%
Degrees of Freedom: 50

Post Processed Vector Statistics

Reference Factor: 1.00
Redundancy Number: 50.00
A Priori Scalar: 1.17

Control Point Constraints

Point ID	Type	North σ (US survey foot)	East σ (US survey foot)	Height σ (US survey foot)	Elevation σ (US survey foot)
AMER	Global	Fixed	Fixed	Fixed	
FSHS	Local	Fixed	Fixed	Fixed	
HOUM	Local	Fixed	Fixed	Fixed	
Fixed = 0.000003(US survey foot)					

Adjusted Grid Coordinates

Point ID	Northing (US survey foot)	Northing Error (US survey foot)	Easting (US survey foot)	Easting Error (US survey foot)	Elevation (US survey foot)	Elevation Error (US survey foot)	Constrain
AMER	345332.200	?	3279311.625	?	34.825	?	LLh
AT02	340941.779	0.013	3297793.865	0.013	1.609	0.025	
AT03		0.013		0.013	2.430	0.027	

	353352.356		3289814.254				
FSHS	474730.254	?	3227265.765	?	37.424	?	LLh
HOUM	397729.333	?	3474618.955	?	45.350	?	LLh

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Constraint
AMER	N29°26'58.49797"	W91°20'17.21180"	-47.260	?	LLh
AT02	N29°26'14.99545"	W91°16'48.18520"	-80.399	0.025	
AT03	N29°28'17.88439"	W91°18'18.39588"	-79.785	0.027	
FSHS	N29°48'19.10324"	W91°30'08.05125"	-47.588	?	LLh
HOUM	N29°35'32.10964"	W90°43'24.98847"	-37.182	?	LLh

Adjusted ECEF Coordinates

Point ID	X (US survey foot)	X Error (US survey foot)	Y (US survey foot)	Y Error (US survey foot)	Z (US survey foot)	Z Error (US survey foot)	3D Error (US survey foot)	Constraint
AMER	-425865.641	?	-18231526.152	?	10227612.481	?	?	LLh
AT02	-407437.399	0.013	-18234079.123	0.023	10223769.335	0.017	0.031	
AT03	-415273.081	0.013	-18227797.059	0.024	10234578.840	0.017	0.033	
FSHS	-476410.906	?	-18166300.619	?	10340063.712	?	?	LLh
HOUM	-229986.085	?	-18209490.634	?	10272765.225	?	?	LLh

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
AT02	0.016	0.016	86°
AT03	0.017	0.016	90°

Adjusted GNSS Observations

Transformation Parameters

Deflection in Latitude:	0.079 sec **(95%)**	0.017 sec
Deflection in Longitude:	-0.060 sec **(95%)**	0.035 sec
Azimuth Rotation:	-0.029 sec **(95%)**	0.011 sec
Scale Factor:	1.00000008 **(95%)**	0.00000005

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
HOUM --> AT02 (PV8)	**Az.**	252°29'54"	0.016 sec	0.000 sec	0.004
	ΔHt.	-43.145 ft	0.023 ft	0.063 ft	2.579
	Ellip Dist.	185727.144 ft	0.015 ft	-0.016 ft	-1.012
AT02 --> AT03 (PV1)	**Az.**	327°17'12"	0.216 sec	-0.093 sec	-0.431
	ΔHt.	0.611 ft	0.028 ft	0.059 ft	2.059
	Ellip Dist.	14754.974 ft	0.015 ft	-0.004 ft	-0.230
AT02 --> AT03 (PV2)	**Az.**	327°17'12"	0.216 sec	0.073 sec	0.336
	ΔHt.	0.611 ft	0.028 ft	0.071 ft	1.916
	Ellip Dist.	14754.974 ft	0.015 ft	0.005 ft	0.346
HOUM --> AMER (PV17)	**Az.**	255°17'06"	0.011 sec	-0.004 sec	-0.214
	ΔHt.	-10.002 ft	0.021 ft	-0.001 ft	-0.032
	Ellip Dist.	202221.686 ft	0.011 ft	-0.032 ft	-1.905
AMER --> AT03 (PV20)	**Az.**	52°37'52"	0.206 sec	0.044 sec	0.165
	ΔHt.	-32.532 ft	0.028 ft	-0.025 ft	-0.531
	Ellip Dist.	13215.089 ft	0.013 ft	-0.031 ft	-1.754
HOUM --> AT03 (PV9)	**Az.**	256°48'01"	0.016 sec	0.018 sec	1.072
	ΔHt.	-42.534 ft	0.026 ft	-0.053 ft	-1.730

	Ellip Dist.	190065.878 ft	0.015 ft	0.002 ft	0.132
HOUM --> AT03 (PV12)	**Az.**	256°48'01"	0.016 sec	0.012 sec	0.746
	ΔHt.	-42.534 ft	0.026 ft	-0.038 ft	-1.575
	Ellip Dist.	190065.878 ft	0.015 ft	0.011 ft	0.616
FSHS --> AT03 (PV6)	**Az.**	152°39'11"	0.021 sec	-0.037 sec	-1.570
	ΔHt.	-32.168 ft	0.026 ft	0.016 ft	0.621
	Ellip Dist.	136553.580 ft	0.014 ft	0.008 ft	0.487
FSHS --> AMER (PV14)	**Az.**	158°00'19"	0.011 sec	-0.038 sec	-1.533
	ΔHt.	0.363 ft	0.021 ft	0.002 ft	0.118
	Ellip Dist.	139479.858 ft	0.007 ft	0.020 ft	1.194
FSHS --> AMER (PV18)	**Az.**	158°00'19"	0.011 sec	-0.036 sec	-1.451
	ΔHt.	0.363 ft	0.021 ft	-0.009 ft	-0.438
	Ellip Dist.	139479.858 ft	0.007 ft	0.024 ft	1.453
HOUM --> AMER (PV13)	**Az.**	255°17'06"	0.011 sec	-0.001 sec	-0.049
	ΔHt.	-10.002 ft	0.021 ft	-0.014 ft	-0.863
	Ellip Dist.	202221.686 ft	0.011 ft	-0.024 ft	-1.435
AMER --> AT02 (PV19)	**Az.**	103°21'38"	0.140 sec	0.234 sec	1.303
	ΔHt.	-33.143 ft	0.025 ft	-0.052 ft	-1.324
	Ellip Dist.	18997.068 ft	0.013 ft	-0.010 ft	-0.598
HOUM --> AT02 (PV11)	**Az.**	252°29'54"	0.016 sec	0.021 sec	1.224
	ΔHt.	-43.145 ft	0.023 ft	0.026 ft	1.284
	Ellip Dist.	185727.144 ft	0.015 ft	-0.005 ft	-0.336
FSHS --> AT03 (PV4)	**Az.**	152°39'11"	0.021 sec	-0.027 sec	-1.114
	ΔHt.	-32.168 ft	0.026 ft	-0.025 ft	-0.774
	Ellip Dist.	136553.580 ft	0.014 ft	0.009 ft	0.592
FSHS --> AT02 (PV3)	**Az.**	152°07'11"	0.019 sec	0.000 sec	-0.003
	ΔHt.	-32.779 ft	0.023 ft	0.025 ft	0.946
	Ellip Dist.	151247.769 ft	0.014 ft	0.017 ft	1.087
AMER --> AT03 (PV16)	**Az.**	52°37'52"	0.206 sec	0.037 sec	0.146
	ΔHt.	-32.532 ft	0.028 ft	0.007 ft	0.212
	Ellip Dist.	13215.089 ft	0.013 ft	-0.016 ft	-0.969
HOUM --> FSHS (PV7)	**Az.**	287°35'39"	0.011 sec	0.009 sec	0.770
	ΔHt.	-10.366 ft	0.020 ft	0.009 ft	0.476
	Ellip Dist.	259076.770 ft	0.014 ft	0.001 ft	0.052

AMER --> AT02 (PV15)	**Az.**	103°21'38"	0.140 sec	-0.034 sec	-0.200
	ΔHt.	-33.143 ft	0.025 ft	-0.021 ft	-0.770
	Ellip Dist.	18997.068 ft	0.013 ft	-0.010 ft	-0.604
HOUM --> FSHS (PV10)	**Az.**	287°35'39"	0.011 sec	0.002 sec	0.197
	ΔHt.	-10.366 ft	0.020 ft	-0.004 ft	-0.278
	Ellip Dist.	259076.770 ft	0.014 ft	0.009 ft	0.593
FSHS --> AT02 (PV5)	**Az.**	152°07'11"	0.019 sec	-0.001 sec	-0.070
	ΔHt.	-32.779 ft	0.023 ft	-0.002 ft	-0.095
	Ellip Dist.	151247.769 ft	0.014 ft	-0.002 ft	-0.135

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
AT02	AMER	**Az.**	283°23'21"	0.140 sec	1 : 1456734	1 : 1456938
		ΔHt.	33.139 ft	0.025 ft		
		ΔElev.	33.215 ft	0.025 ft		
		Ellip Dist.	18997.070 ft	0.013 ft		
AT02	FSHS	**Az.**	332°13'46"	0.018 sec	1 : 11740542	1 : 11740677
		ΔHt.	32.810 ft	0.025 ft		
		ΔElev.	35.815 ft	0.025 ft		
		Ellip Dist.	151247.782 ft	0.013 ft		
AT02	HOUM	**Az.**	72°13'28"	0.014 sec	1 : 14232712	1 : 14232380
		ΔHt.	43.217 ft	0.025 ft		
		ΔElev.	43.741 ft	0.025 ft		
		Ellip Dist.	185727.160 ft	0.013 ft		
AT03	AMER	**Az.**	232°38'51"	0.204 sec	1 : 1004124	1 : 1004296
		ΔHt.	32.526 ft	0.027 ft		
		ΔElev.	32.395 ft	0.027 ft		
		Ellip Dist.	13215.091 ft	0.013 ft		
AT03	AT02	**Az.**	147°16'28"	0.216 sec	1 : 969530	1 : 969535
		ΔHt.	-0.613 ft	0.028 ft		
		ΔElev.	-0.821 ft	0.028 ft		
		Ellip Dist.	14754.975 ft	0.015 ft		

AT03	FSHS	**Az.**	332°45'02"	0.020 sec	1 : 10528366	1 : 10528455
		ΔHt.	32.197 ft	0.027 ft		
		ΔElev.	34.994 ft	0.027 ft		
		Ellip Dist.	136553.591 ft	0.013 ft		
AT03	HOUM	**Az.**	76°30'49"	0.014 sec	1 : 14290465	1 : 14290160
		ΔHt.	42.604 ft	0.027 ft		
		ΔElev.	42.920 ft	0.027 ft		
		Ellip Dist.	190065.894 ft	0.013 ft		
FSHS	AMER	**Az.**	158°00'19"	0.000 sec	1 : 0	1 : 0
		ΔHt.	0.329 ft	0.000 ft		
		ΔElev.	-2.600 ft	0.000 ft		
		Ellip Dist.	139479.870 ft	0.000 ft		
FSHS	HOUM	**Az.**	107°12'30"	0.000 sec	1 : 0	1 : 0
		ΔHt.	10.407 ft	0.000 ft		
		ΔElev.	7.926 ft	0.000 ft		
		Ellip Dist.	259076.792 ft	0.000 ft		
HOUM	AMER	**Az.**	255°17'06"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-10.078 ft	0.000 ft		
		ΔElev.	-10.525 ft	0.000 ft		
		Ellip Dist.	202221.704 ft	0.000 ft		

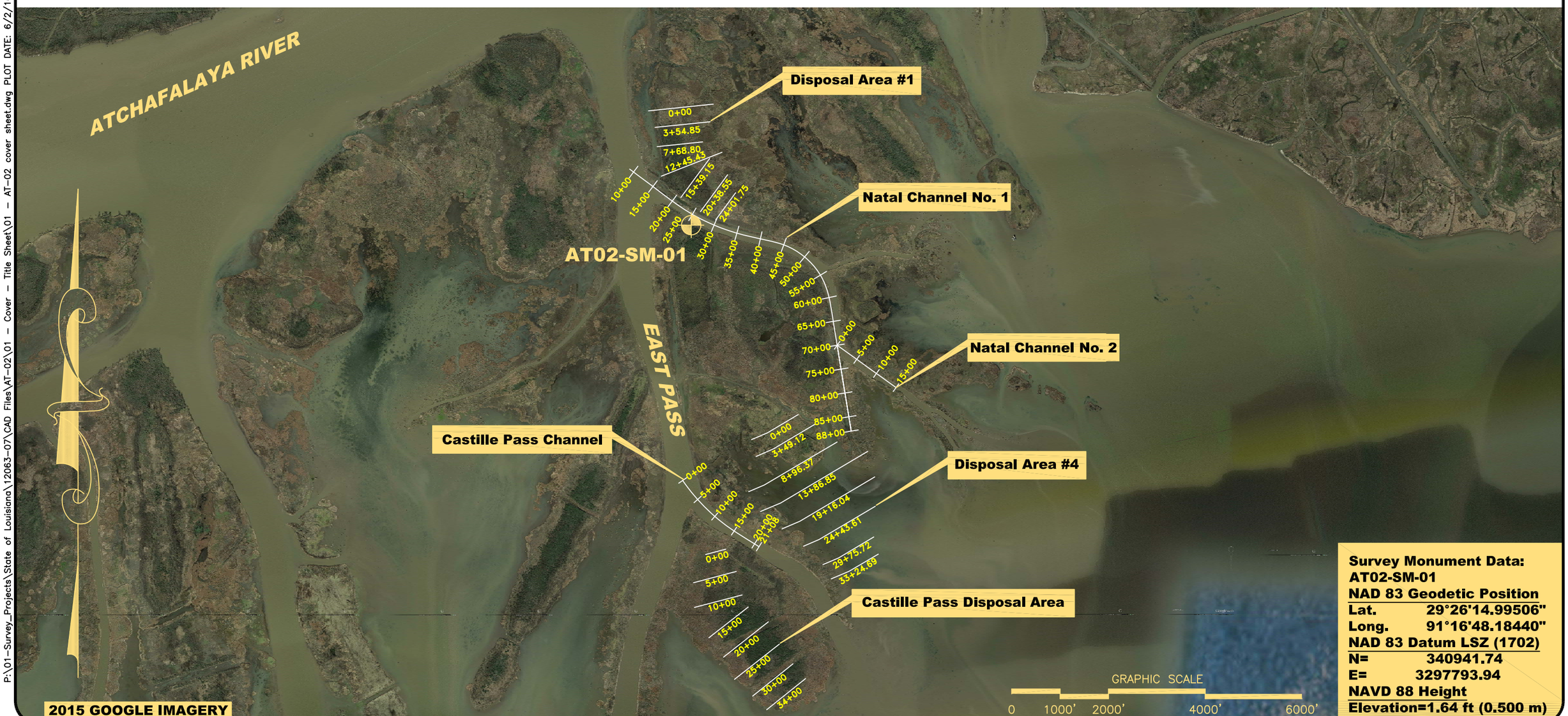
APPENDIX 8

Original Contract Drawings

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

TOPOGRAPHIC AND BATHYMETRIC SURVEY
ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

04/07/16



Survey Monument Data:
AT02-SM-01
NAD 83 Geodetic Position

Lat.	29°26'14.99506"
Long.	91°16'48.18440"

NAD 83 Datum LSZ (1702)

N=	340941.74
E=	3297793.94

NAVD 88 Height
Elevation=1.64 ft (0.500 m)

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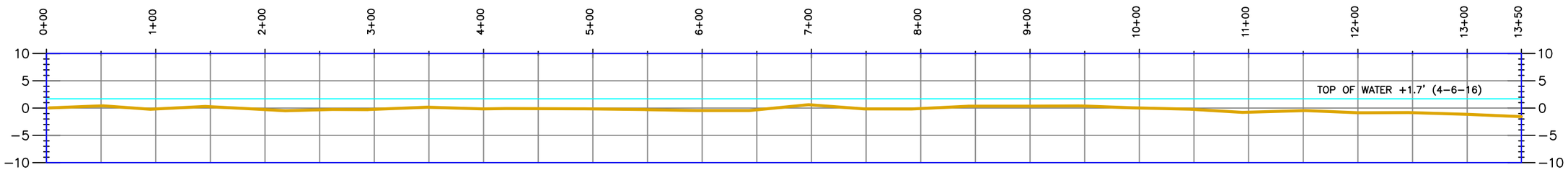
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW
FOR
DISPOSAL AREA #1

DRAWN BY:	NPB/TPC	SHEET:	1 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 DISPOSAL AREA #1.DWG			



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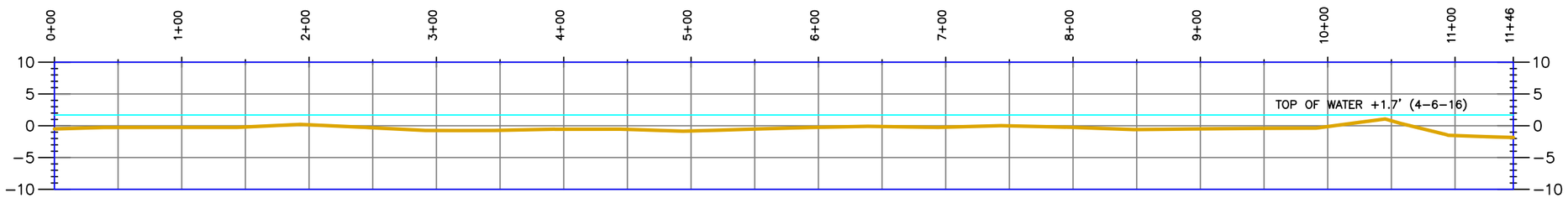

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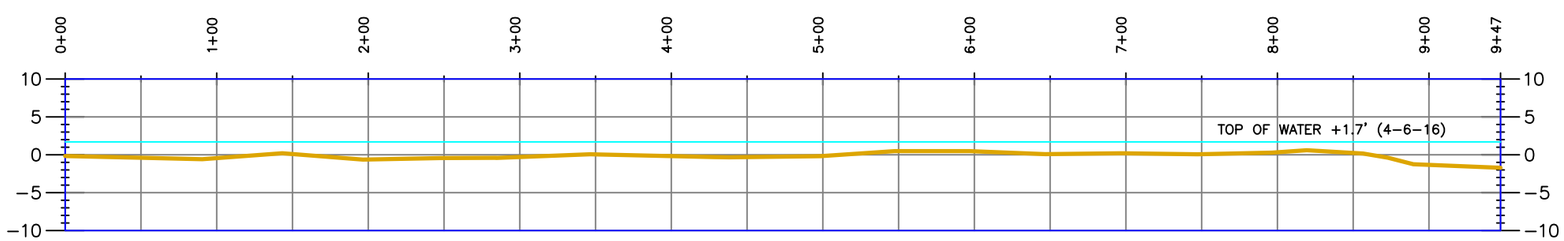

TRANSECT 7+68.80 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
DISPOSAL AREA #1

DRAWN BY:	NPB/TPC	SHEET:	2 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 DISPOSAL AREA #1.DWG			

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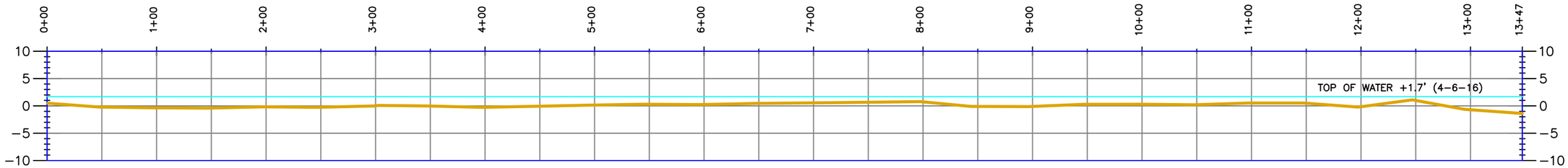

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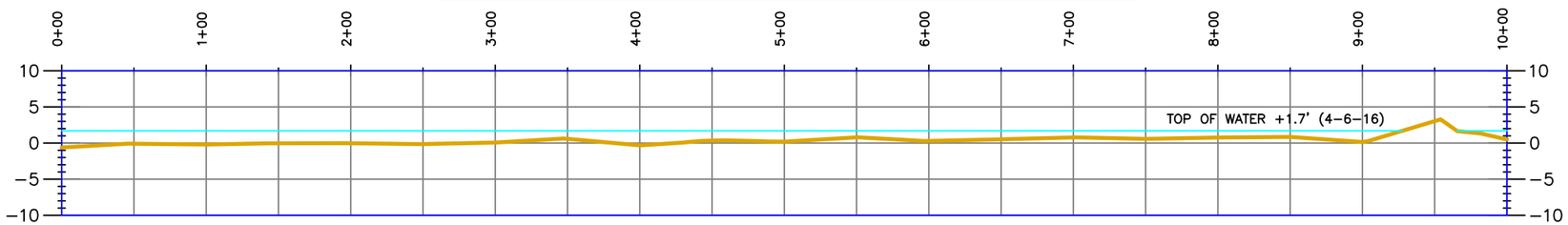

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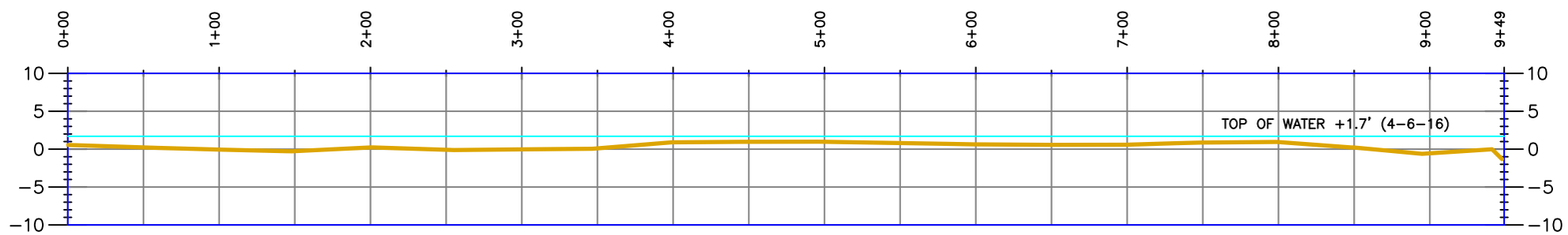

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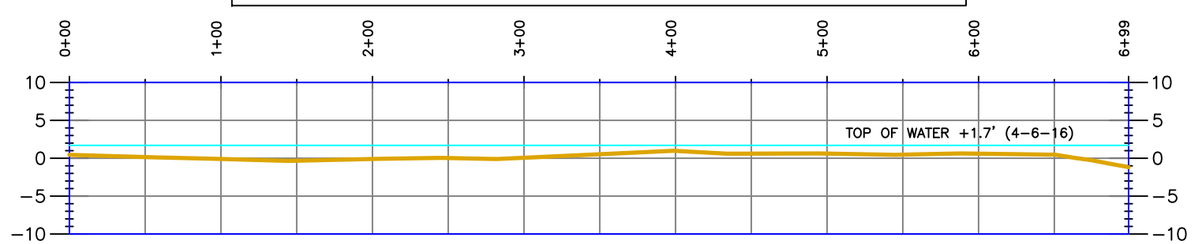

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HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
DISPOSAL AREA #1

DRAWN BY:	NPB/TPC	SHEET:	3 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 DISPOSAL AREA #1.DWG			

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW
FOR
DISPOSAL AREA #4

DRAWN BY:	NPB/TPC	SHEET:	1 OF 4
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
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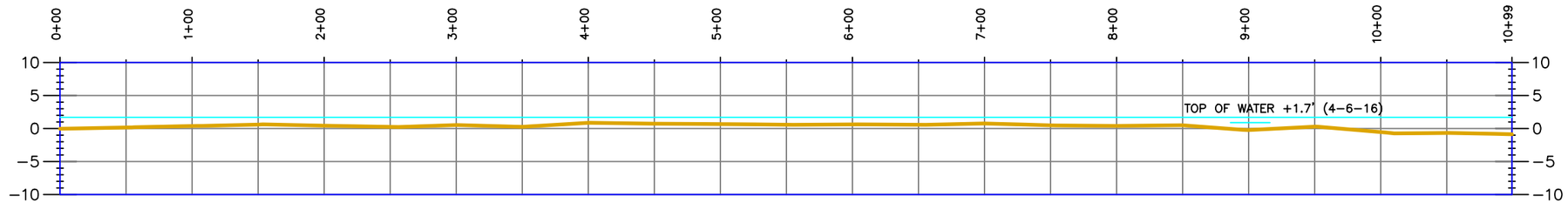

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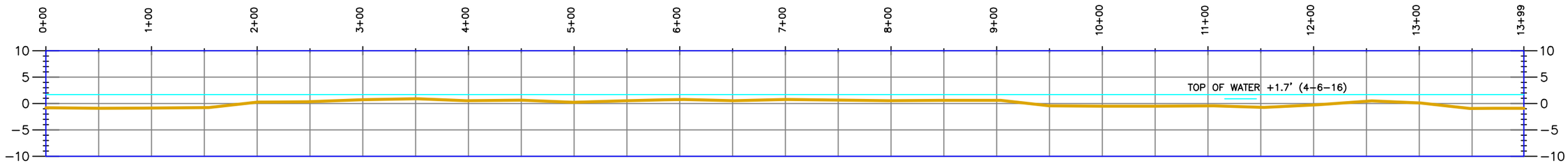

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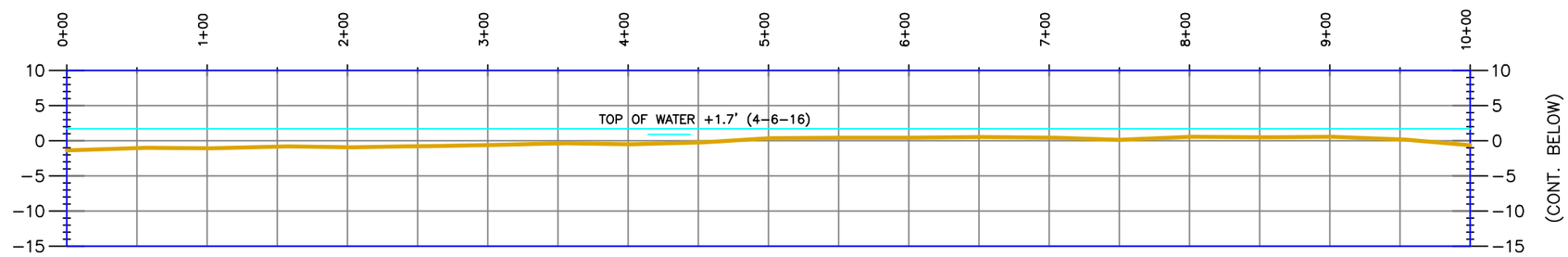

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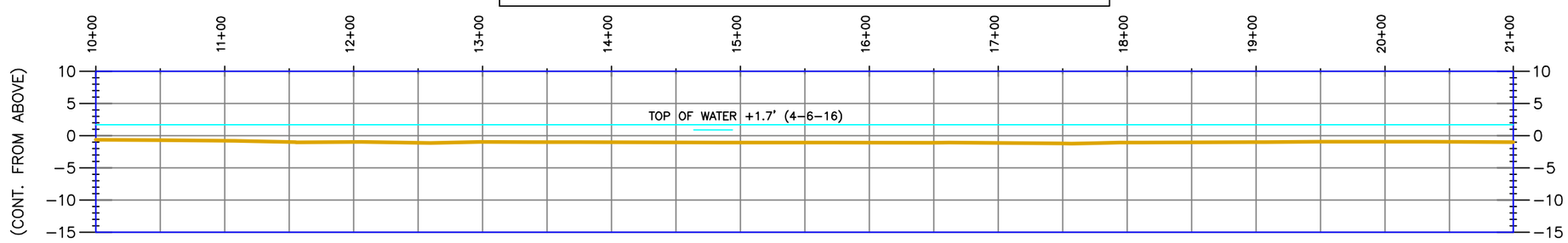

TRANSECT 8+96.37 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
DISPOSAL AREA #4

DRAWN BY:	NPB/TPC	SHEET:	2 OF 4
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
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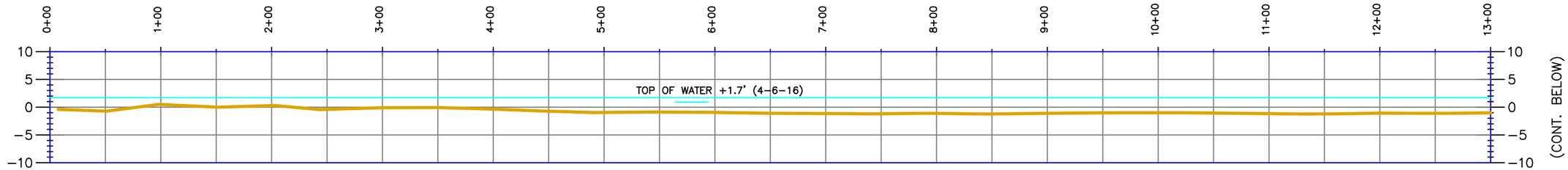

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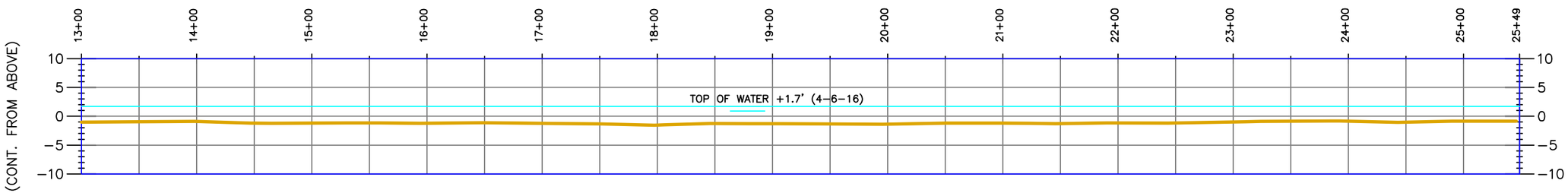

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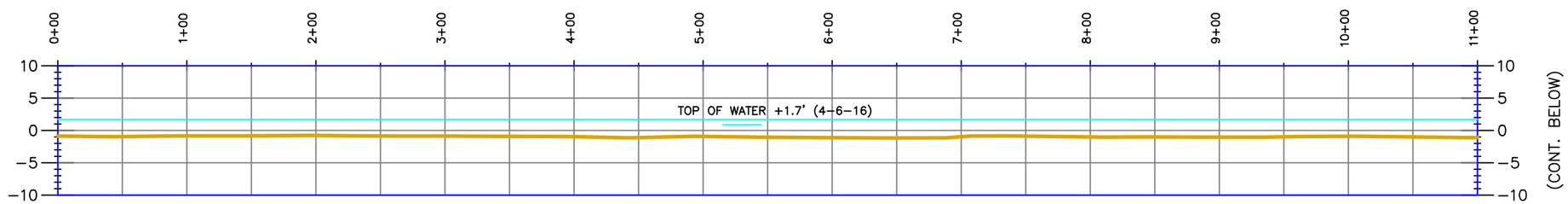

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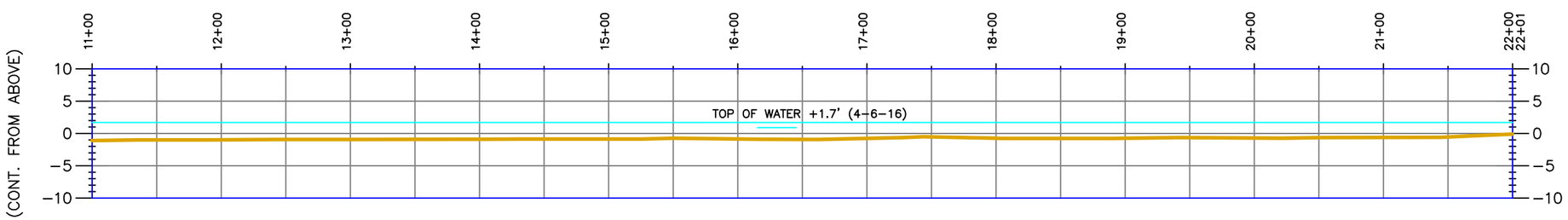

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HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
DISPOSAL AREA #4

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UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
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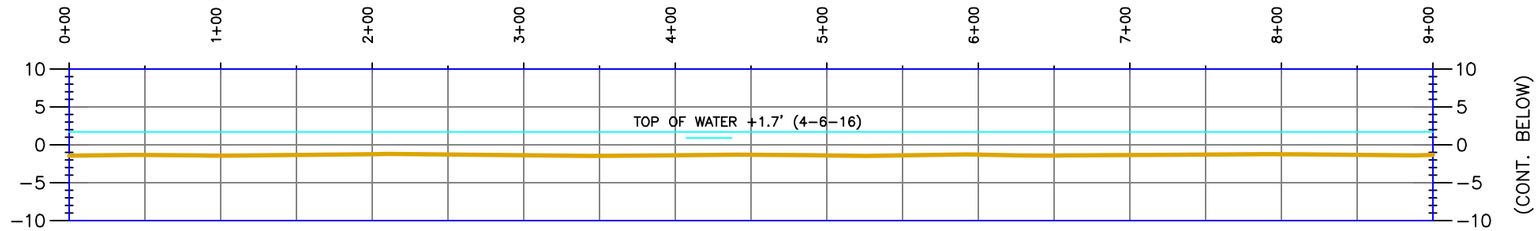

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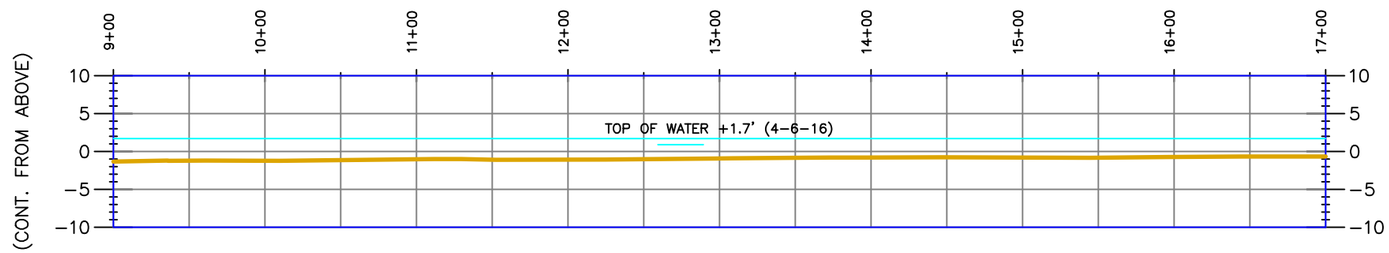

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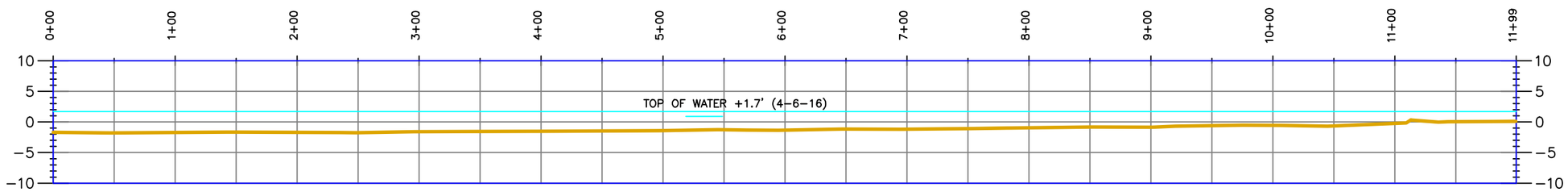

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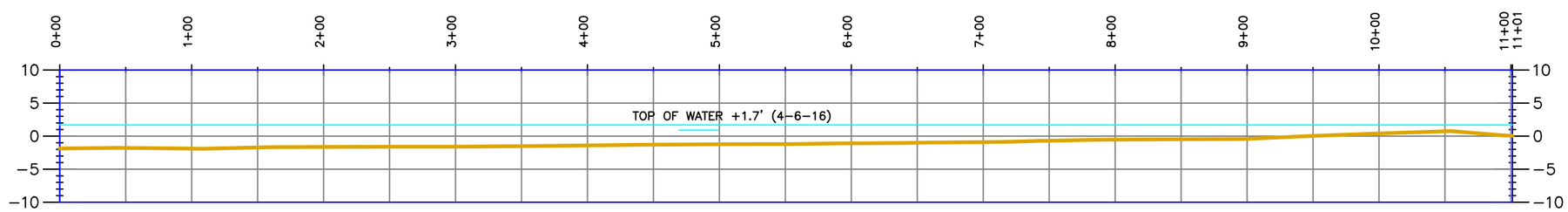

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HORIZONTAL GRAPHIC SCALE
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0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
DISPOSAL AREA #4

DRAWN BY:	NPB/TPC	SHEET:	4 OF 4
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 DISPOSAL AREA #4_PROFILE.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\05-08 - Disposal Area 4\AT-02 DISPOSAL AREA #4_PROFILE.dwg PLOT DATE: 6/6/16 11:16:10am

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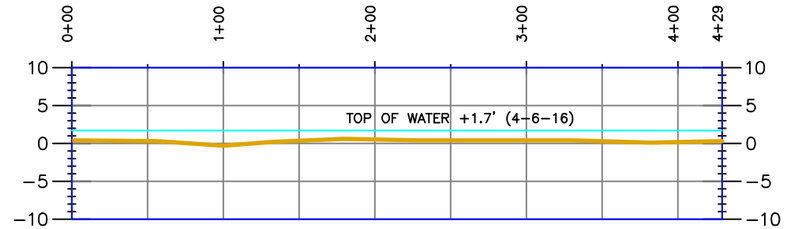
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

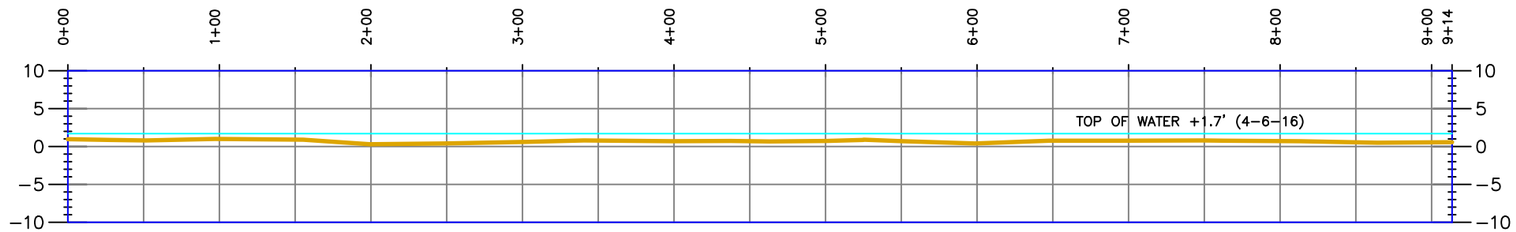
AT-02
PLAN VIEW
FOR
CASTILLE PASS DISPOSAL AREA

DRAWN BY:	NPB/TPC	SHEET:	1 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS DISPOSAL.DWG			

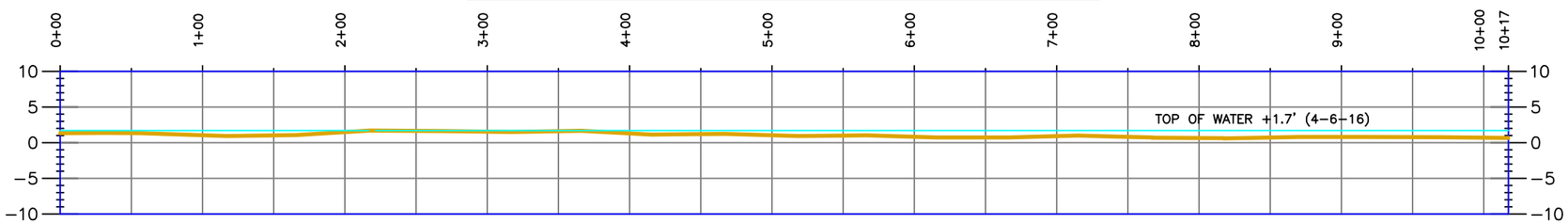
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\09-11 - Castille Pass Disposal Area\AT-02 CASTILLE PASS DISPOSAL.dwg PLOT DATE: 6/6/16 11:18:55am



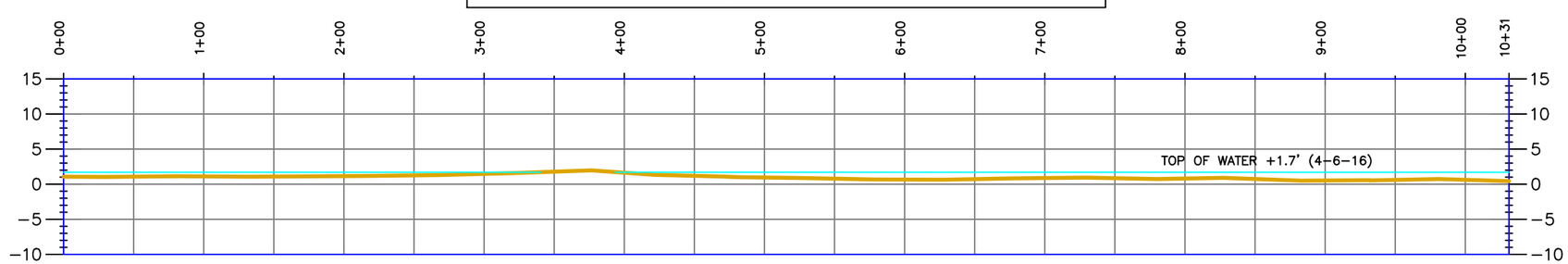
TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



TRANSECT 5+00 (LOOKING SOUTHEASTERLY)



TRANSECT 10+00 (LOOKING SOUTHEASTERLY)



TRANSECT 15+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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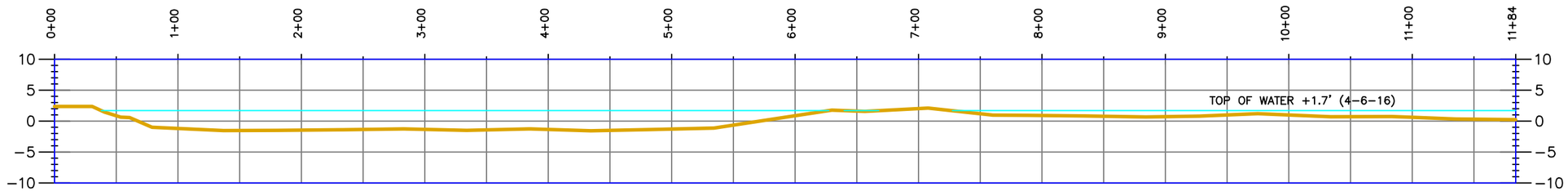
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

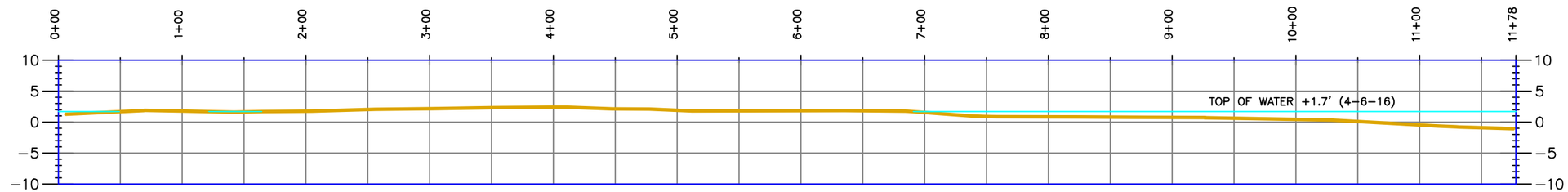
AT-02
TRANSECTS
FOR
CASTILLE PASS DISPOSAL AREA

DRAWN BY:	NPB/TPC	SHEET:	2 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS DISPOSAL.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\09-11 - Castille Pass Disposal Area\AT-02 CASTILLE PASS DISPOSAL.dwg PLOT DATE: 6/6/16 11:20:03am



TRANSECT 20+00 (LOOKING SOUTHEASTERLY)



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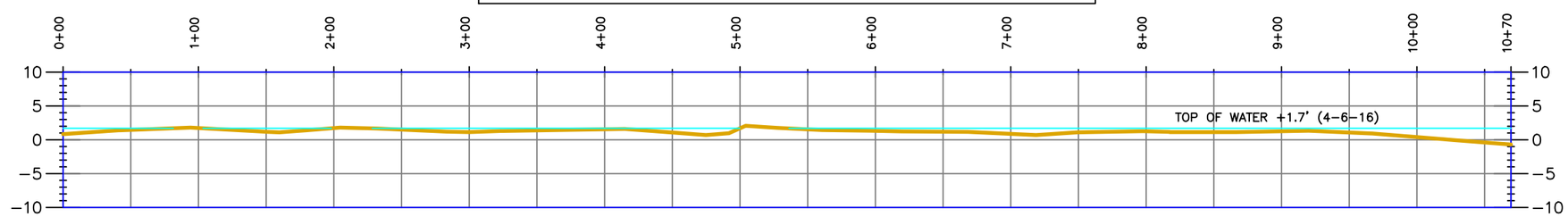

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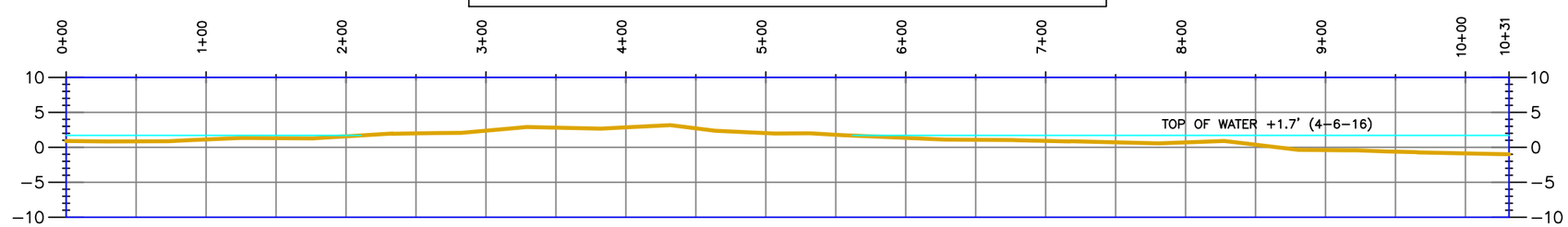

TRANSECT 34+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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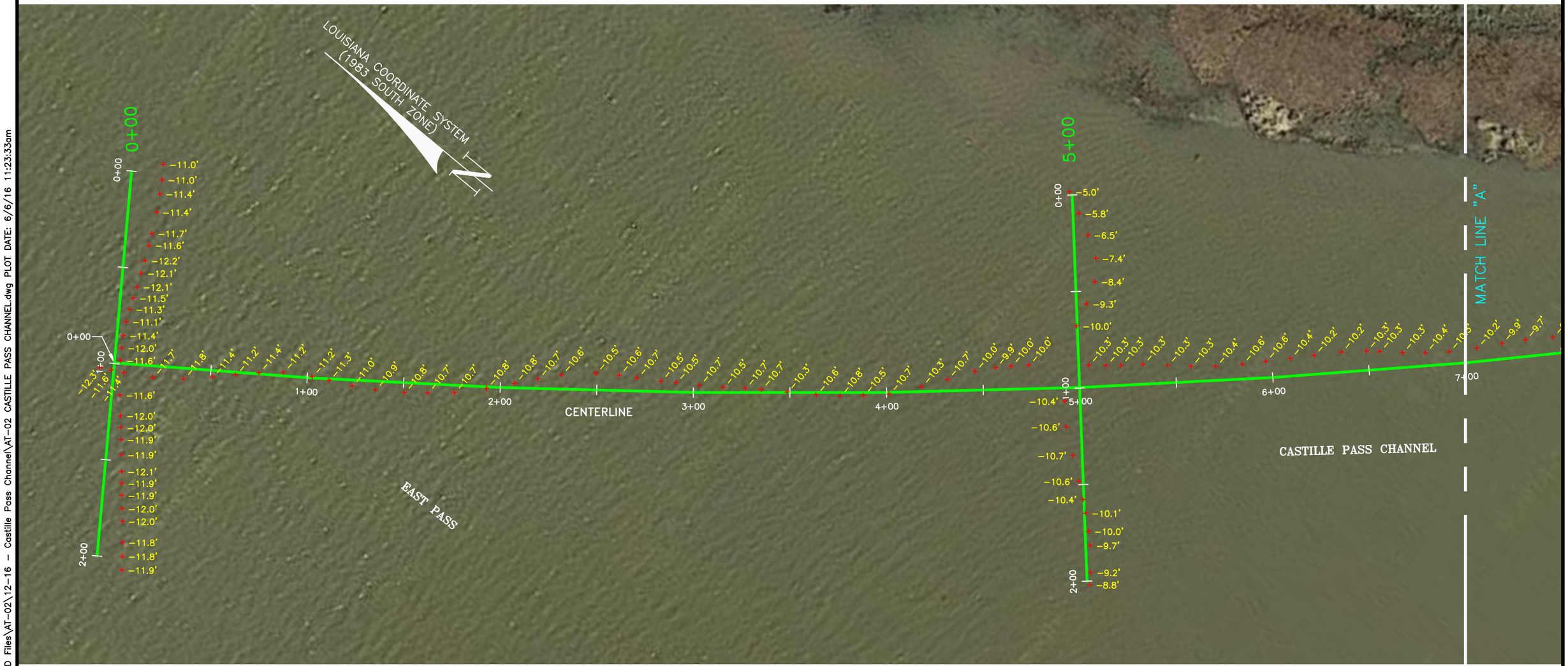
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
CASTILLE PASS DISPOSAL AREA

DRAWN BY:	NPB/TPC	SHEET:	3 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS DISPOSAL.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\09-11 - Castille Pass Disposal Area\AT-02 CASTILLE PASS DISPOSAL.dwg PLOT DATE: 6/6/16 11:21:19am



GRAPHIC SCALE

0 25' 50' 100' 150'

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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 1
FOR
CASTILLE PASS CHANNEL

DRAWN BY:	NPB/TPC	SHEET:	1 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS CHANNEL.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\12-16 - Castille Pass Channel\AT-02 CASTILLE PASS CHANNEL.dwg PLOT DATE: 6/6/16 11:23:33am

GRAPHIC SCALE

0 25' 50' 100' 150'

Morris P. Hebert, Inc.
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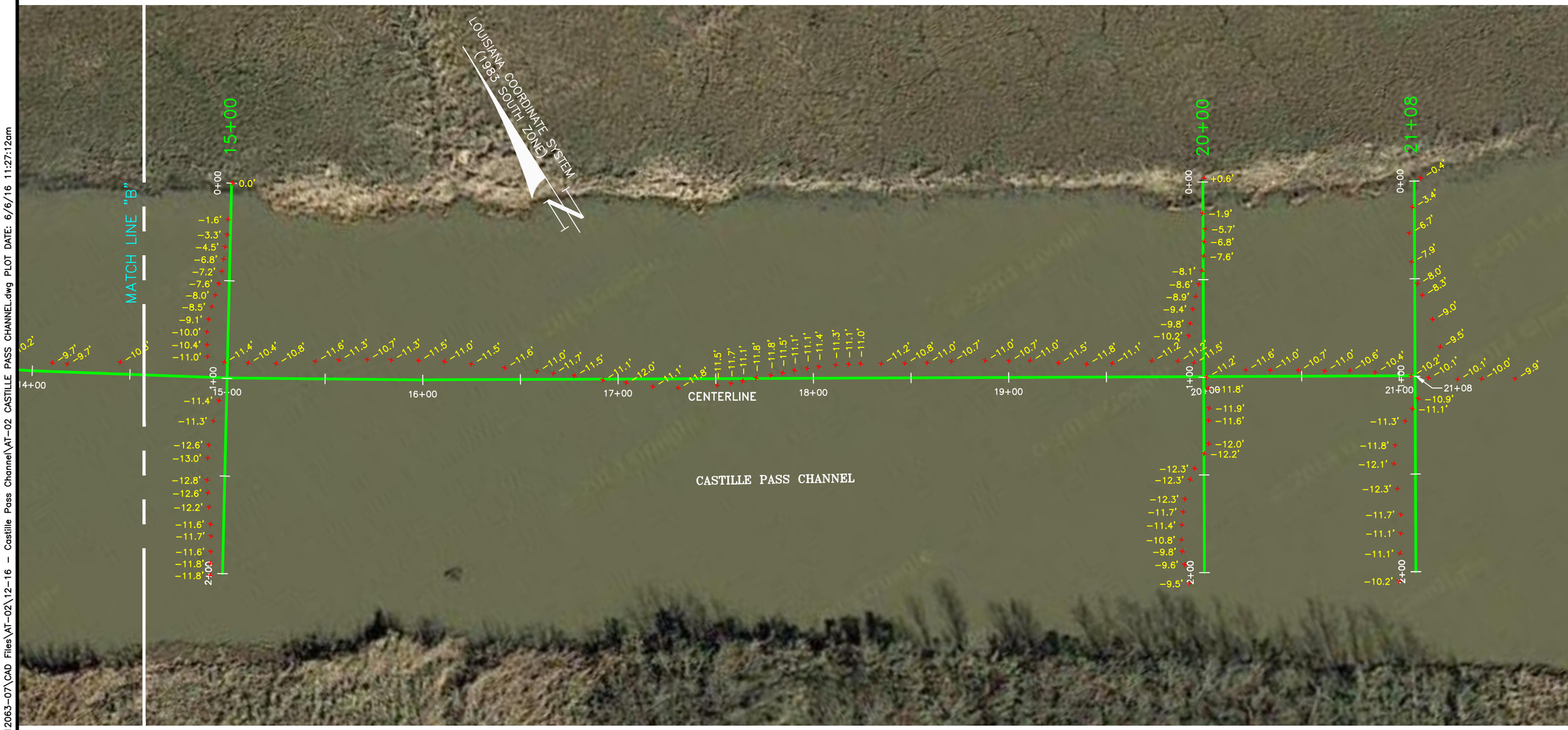
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 2
FOR
CASTILLE PASS CHANNEL

DRAWN BY:	NPB/TPC	SHEET:	2 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS CHANNEL.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\12-16 - Castille Pass Channel\AT-02 CASTILLE PASS CHANNEL.dwg PLOT DATE: 6/6/16 11:26:02am



GRAPHIC SCALE

0 25' 50' 100' 150'

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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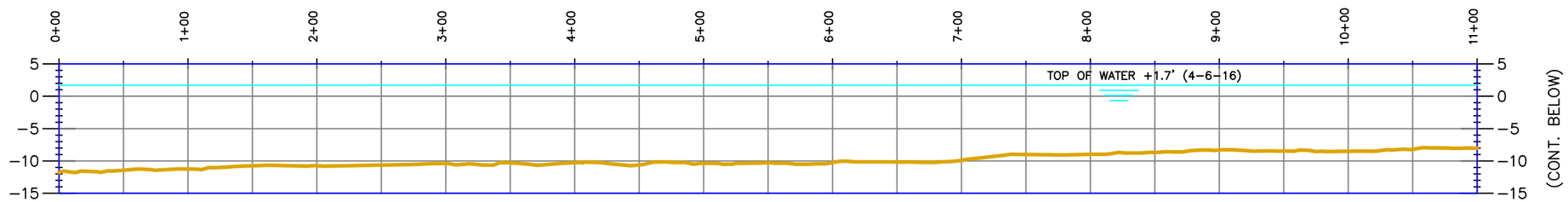
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

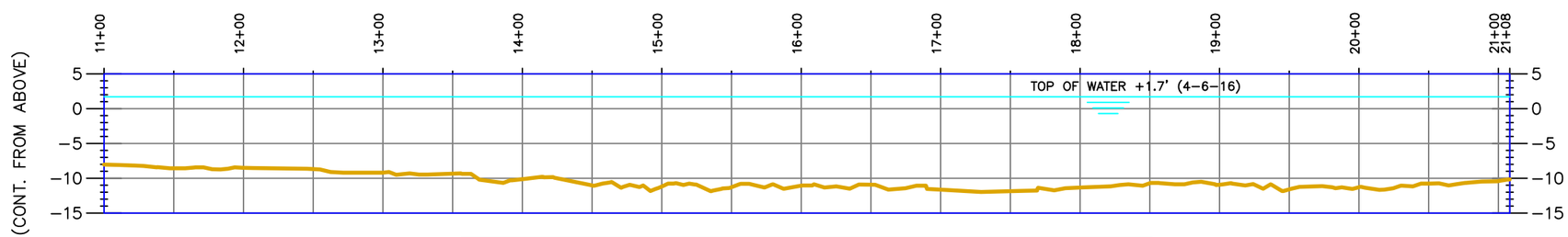
AT-02
PLAN VIEW 3
FOR
CASTILLE PASS CHANNEL

DRAWN BY:	NPB/TPC	SHEET:	3 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS CHANNEL.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\12-16 - Castille Pass Channel\AT-02 CASTILLE PASS CHANNEL.dwg PLOT DATE: 6/6/16 11:27:12am



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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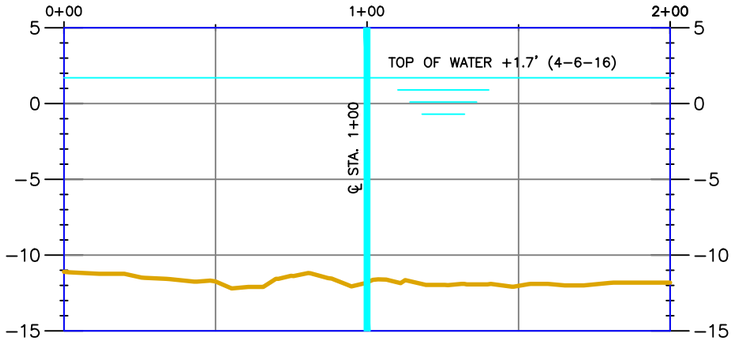
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

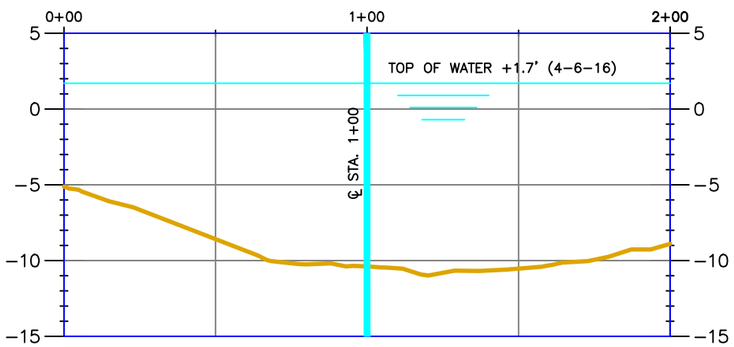
AT-02
PROFILE
FOR
CASTILLE PASS CHANNEL CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	4 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS CHANNEL.DWG			

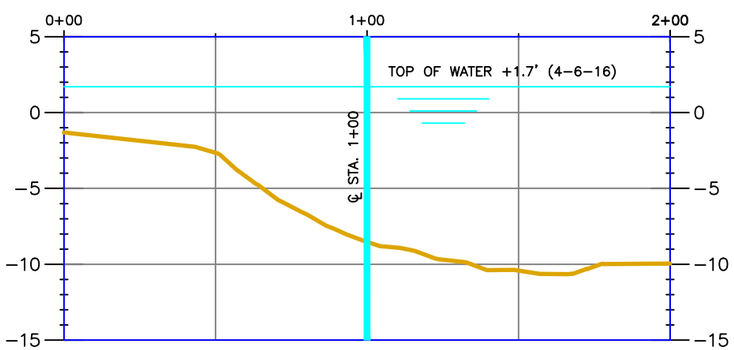
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\12-16 - Castille Pass Channel\AT-02 CASTILLE PASS CHANNEL.dwg PLOT DATE: 6/6/16 11:28:32am



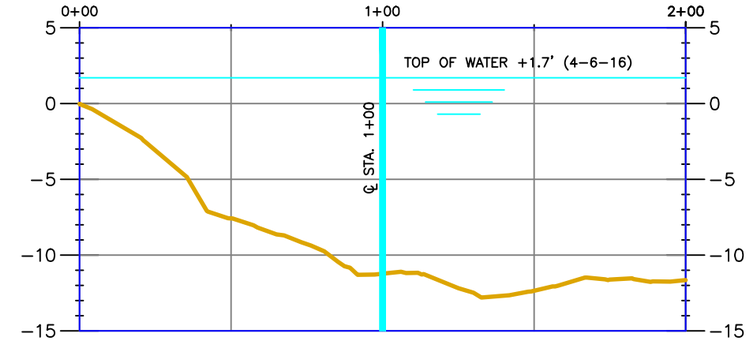
TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



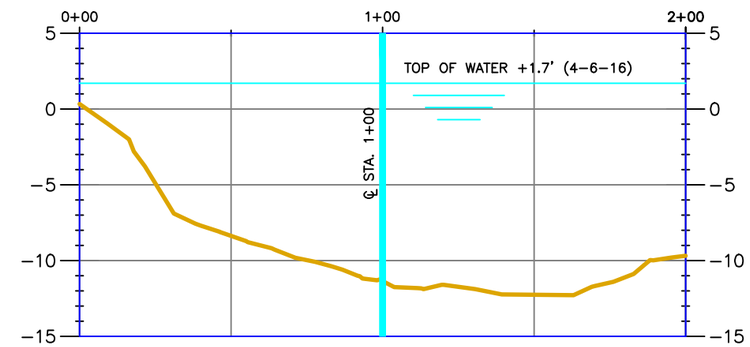
TRANSECT 5+00 (LOOKING SOUTHEASTERLY)



TRANSECT 10+00 (LOOKING SOUTHEASTERLY)



TRANSECT 15+00 (LOOKING SOUTHEASTERLY)



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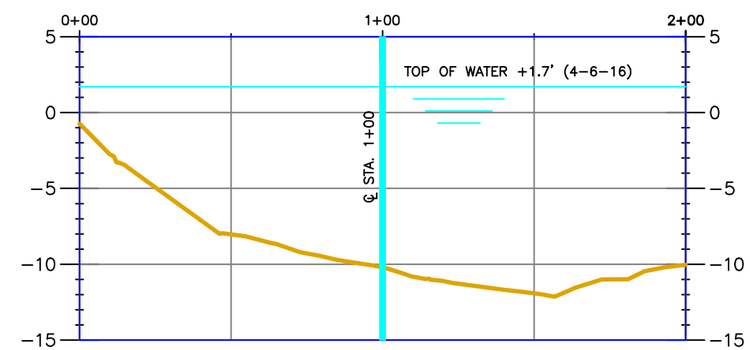

TRANSECT 21+08 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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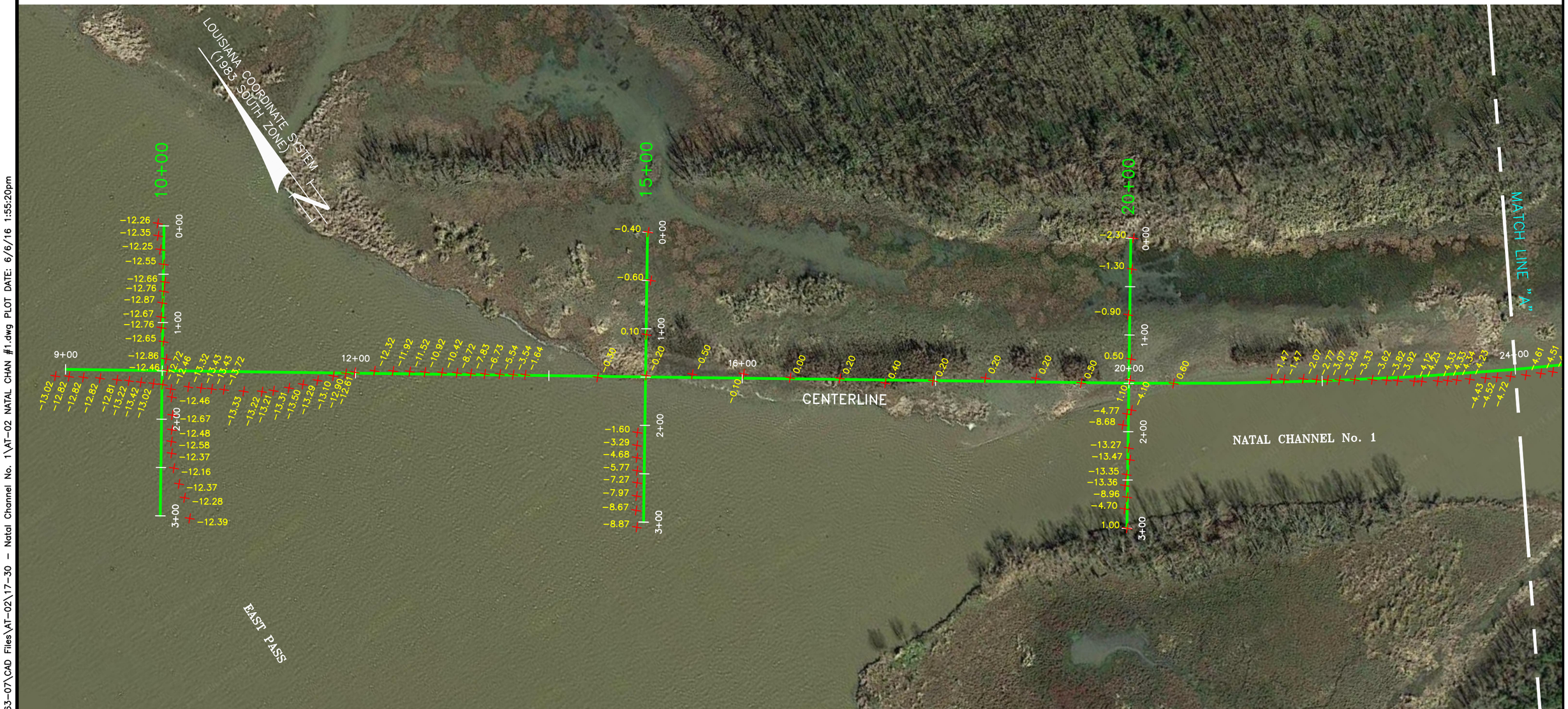
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
CASTILLE PASS CHANNEL

DRAWN BY:	NPB/TPC	SHEET:	5 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 CASTILLE PASS CHANNEL.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\12-16 - Castille Pass Channel\AT-02 CASTILLE PASS CHANNEL.dwg PLOT DATE: 6/6/16 11:29:41am



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.
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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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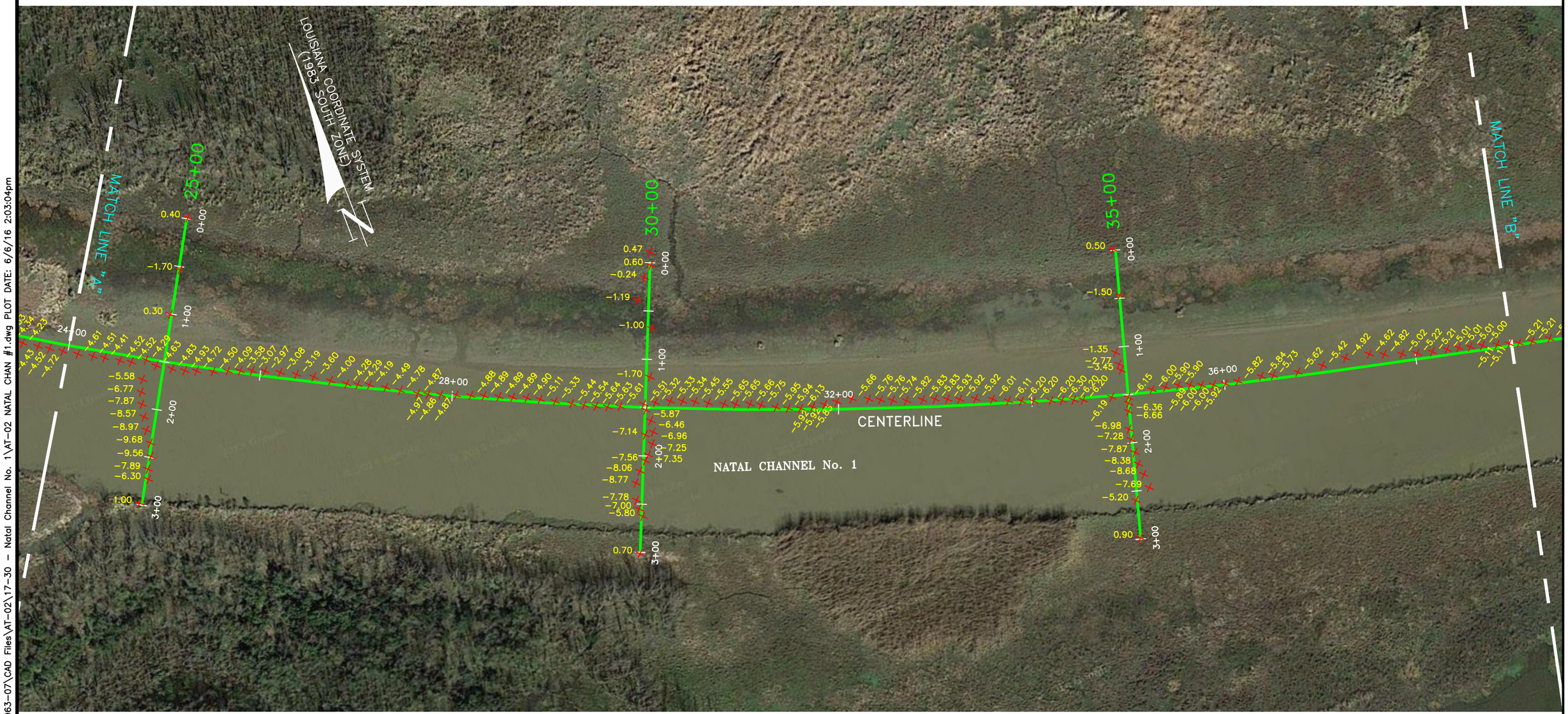
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 1
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	1 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 1:55:20pm



GRAPHIC SCALE

0 50' 100' 200' 300'

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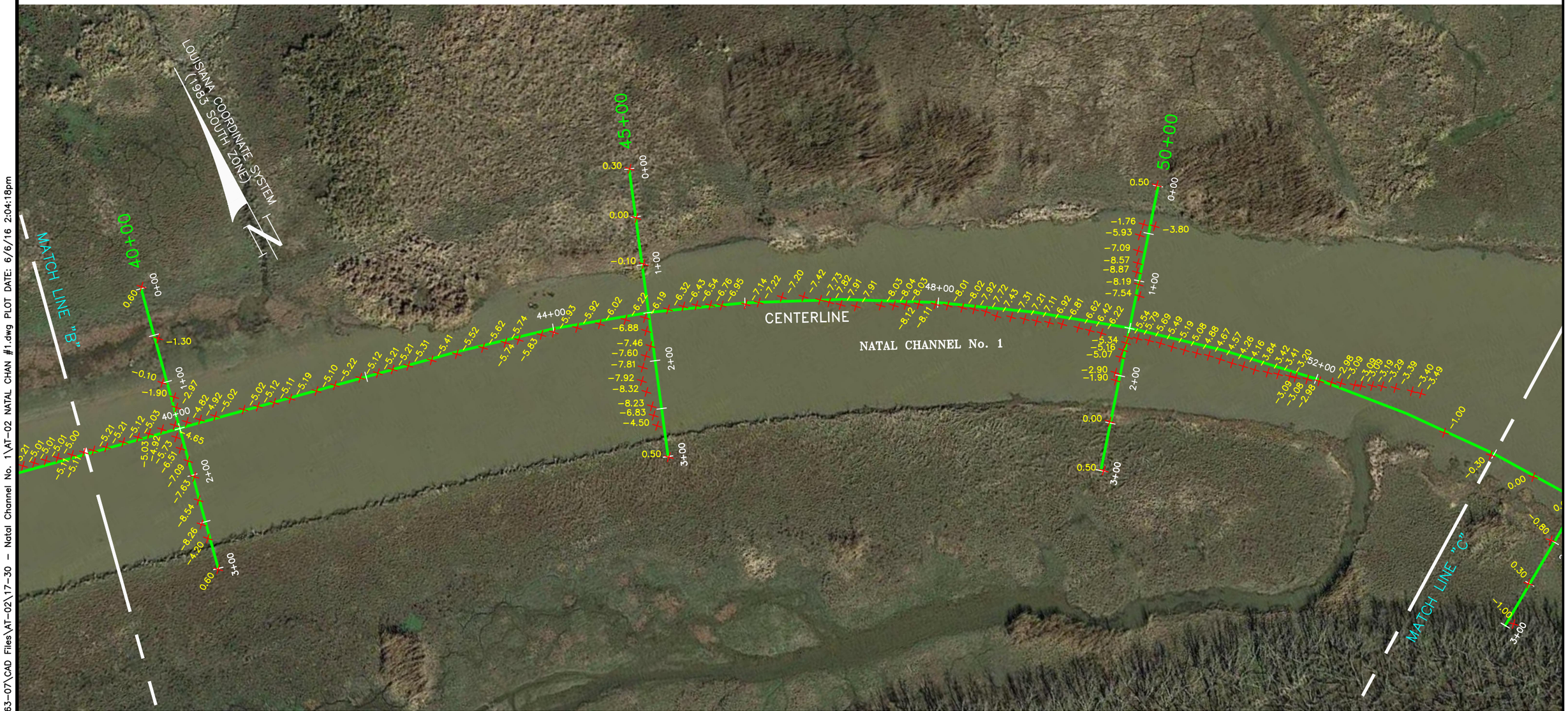
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 2
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	2 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:03:04pm



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.
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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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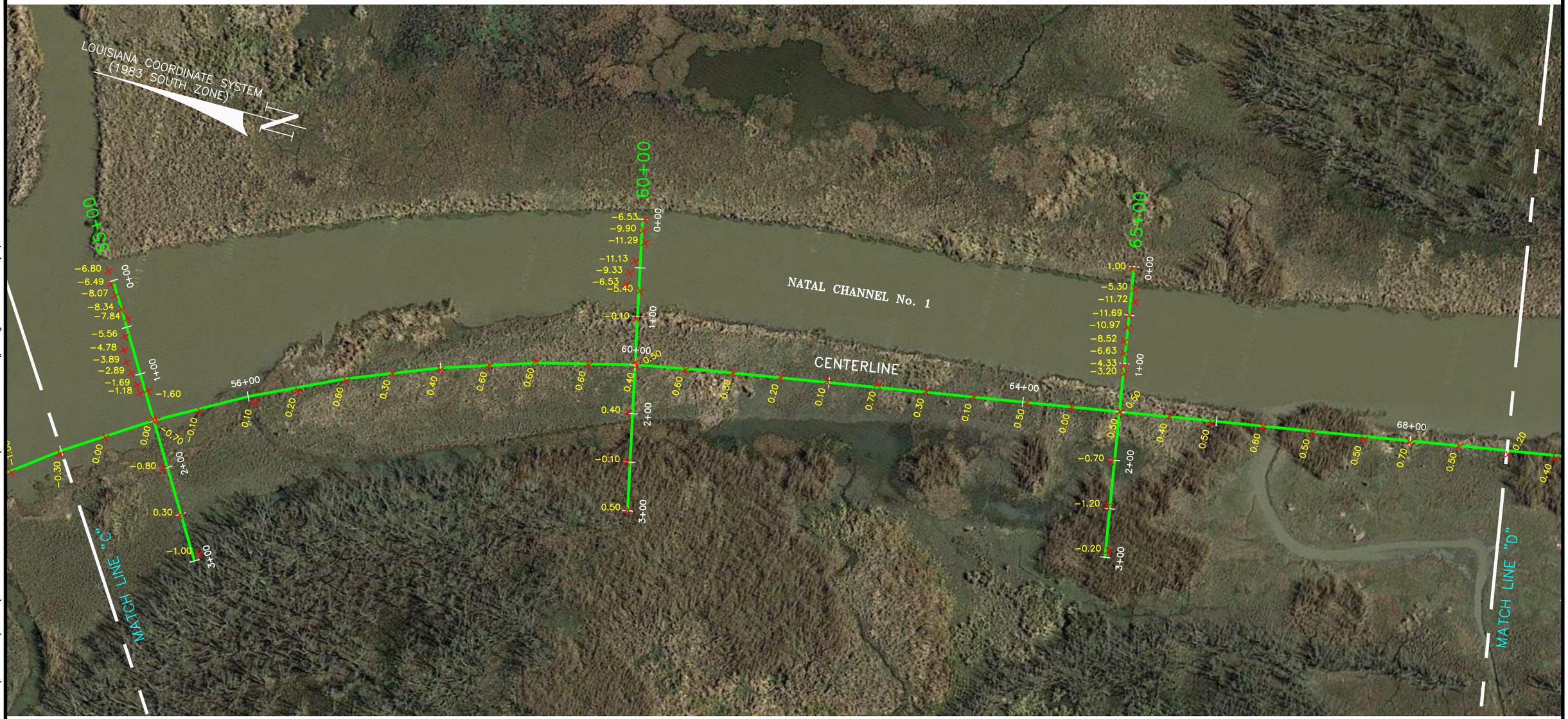
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 3
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	3 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:04:18pm



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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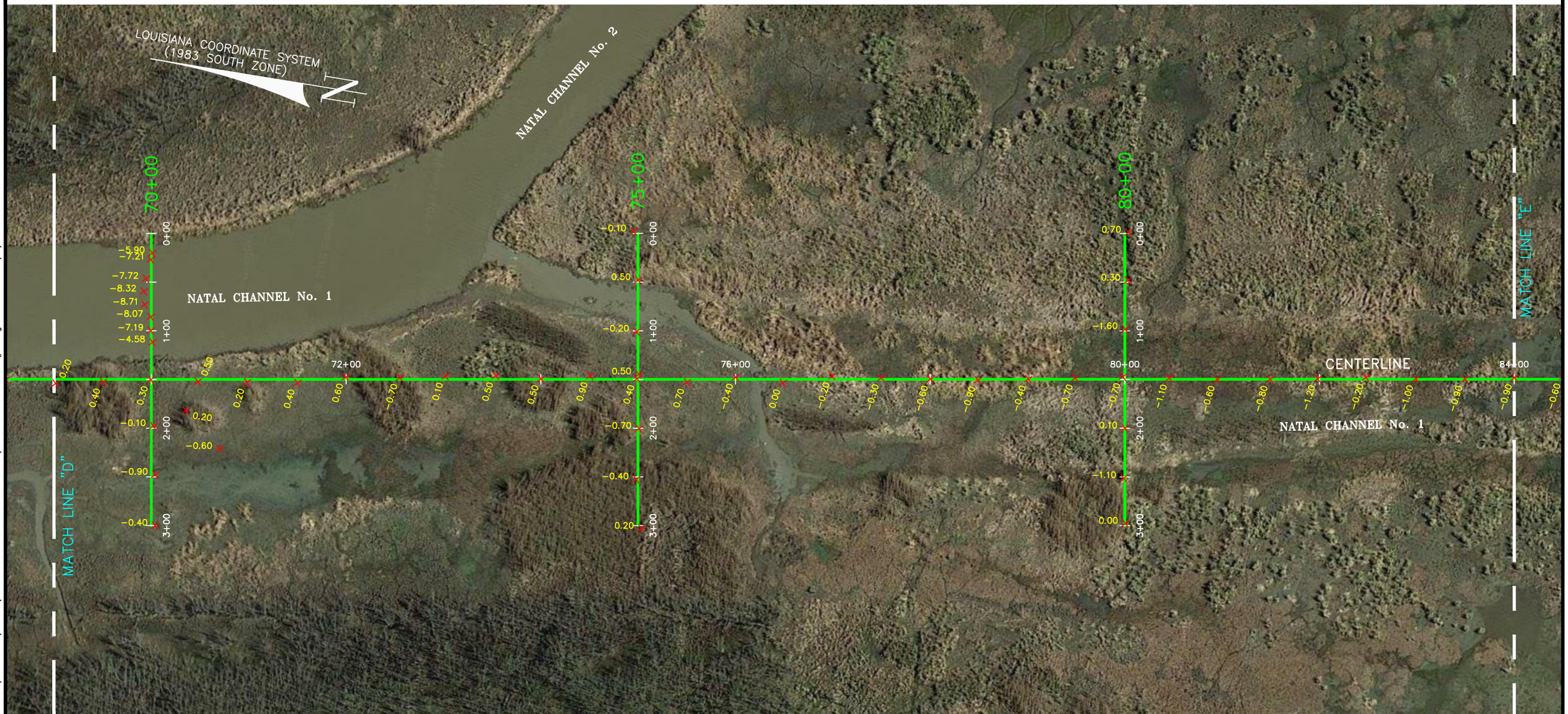
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 4
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	4 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/7/16 11:17:26am



GRAPHIC SCALE

0 50' 100' 200' 300'

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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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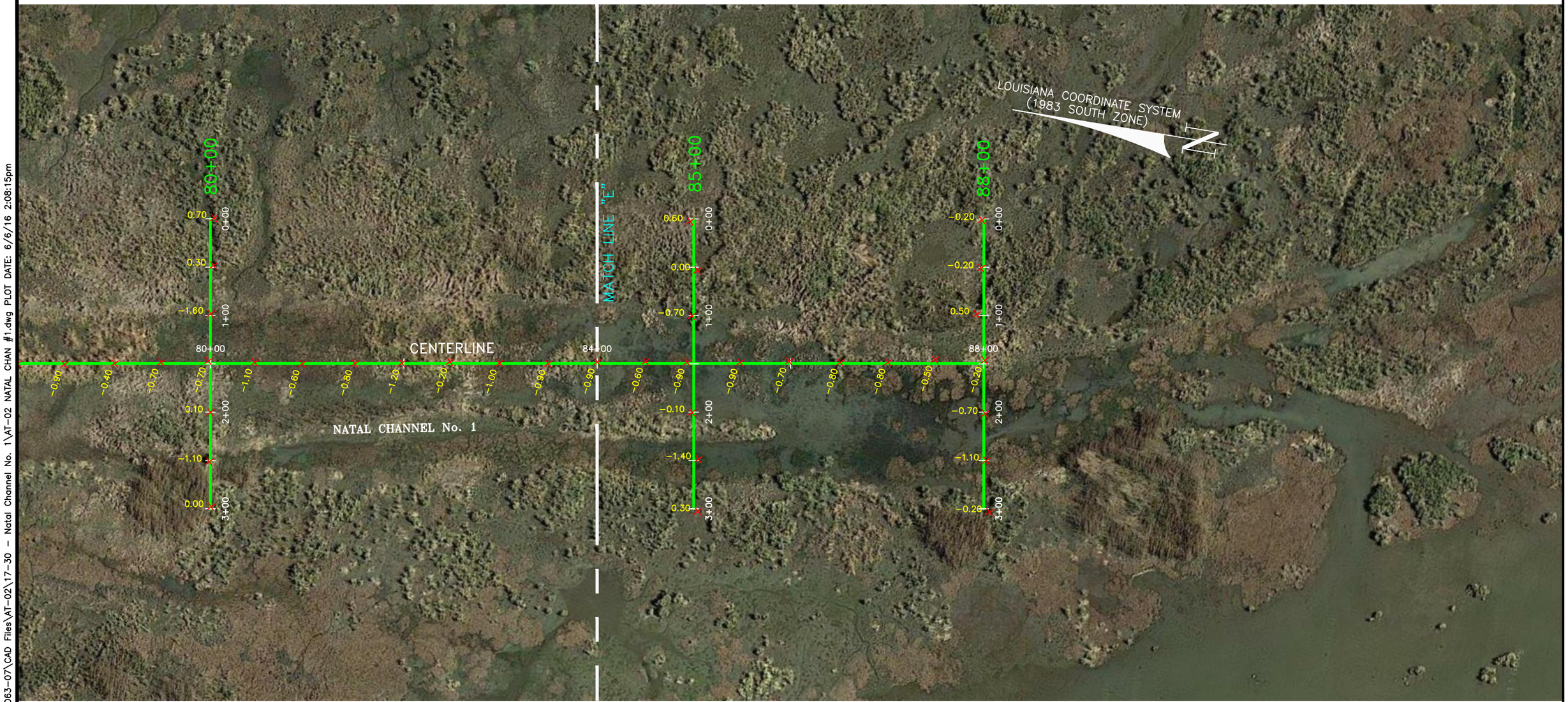
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 5
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	5 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/7/16 11:19:48am



GRAPHIC SCALE

0 50' 100' 200' 300'

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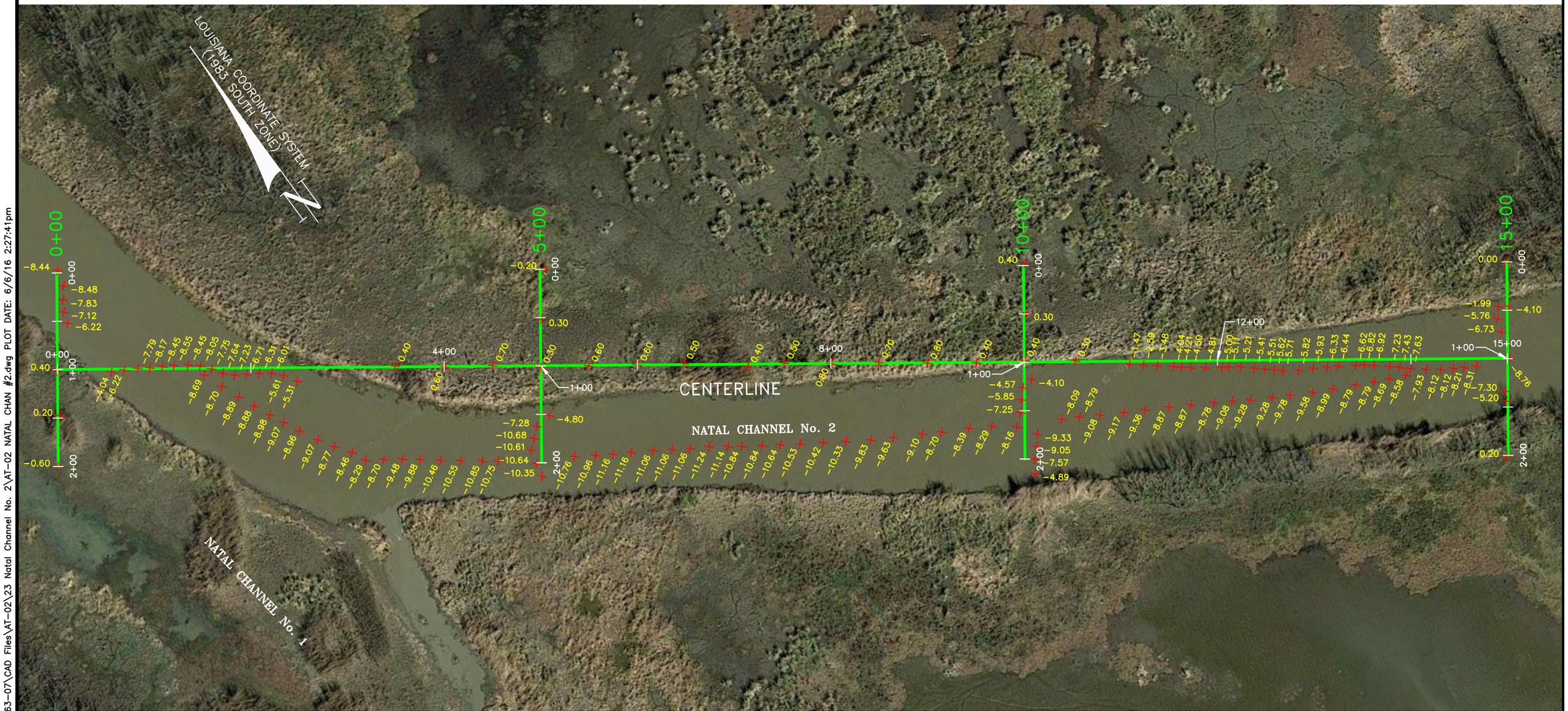
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 6
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	6 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:08:15pm



GRAPHIC SCALE

0 50' 100' 200' 300'

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\23 Natal Channel No. 2\AT-02 NATAL CHAN #2.dwg PLOT DATE: 6/6/16 2:27:41pm

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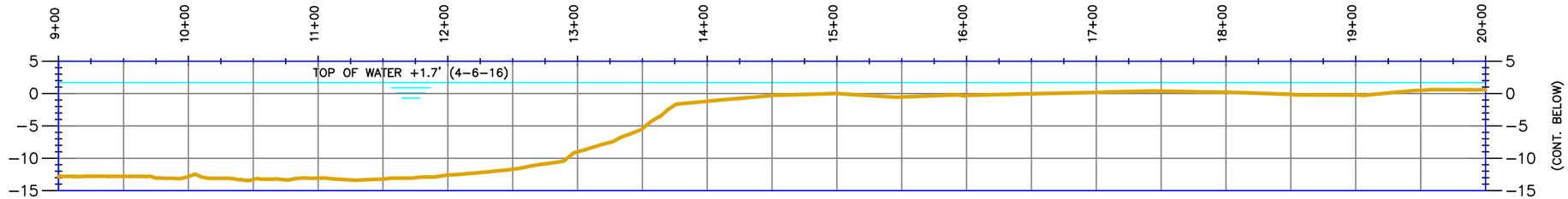
10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 1
FOR
NATAL CHANNEL No. 2

DRAWN BY:	NPB/TPC	SHEET:	7 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2.DWG			



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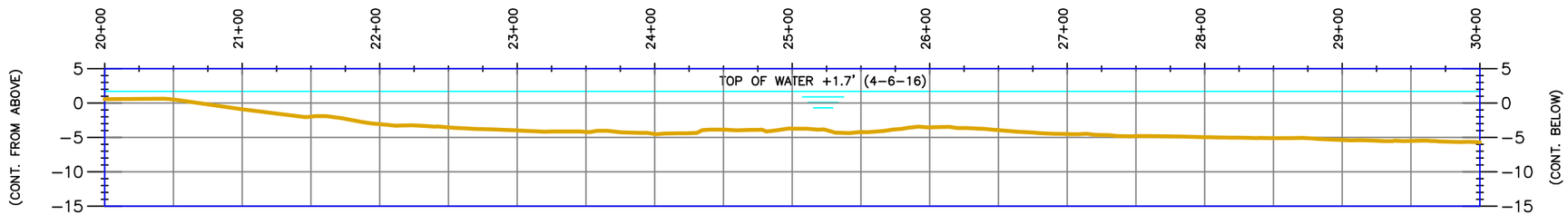
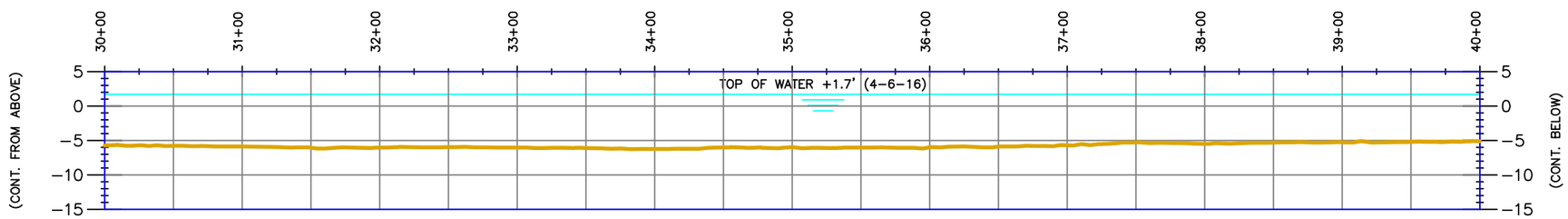
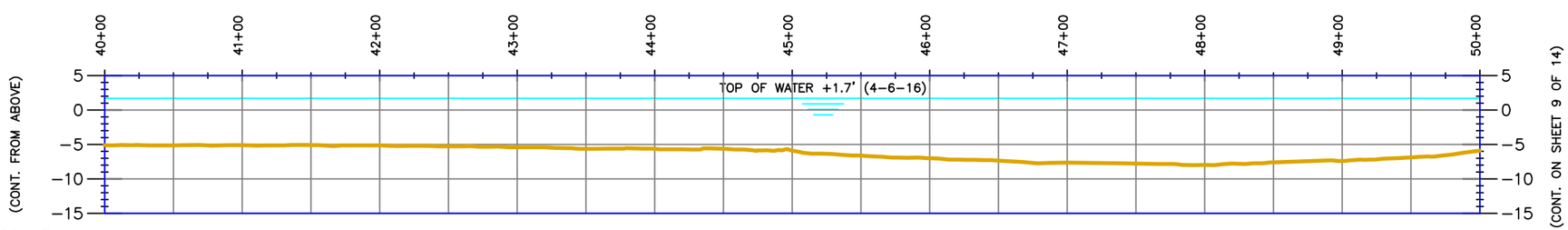


PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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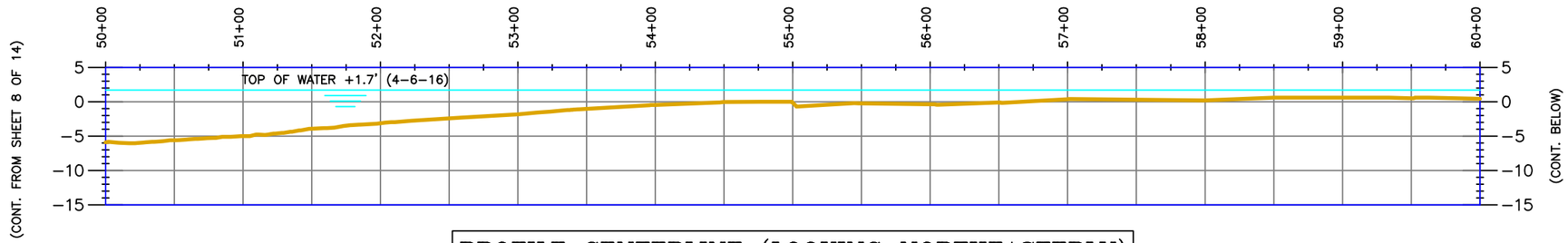
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

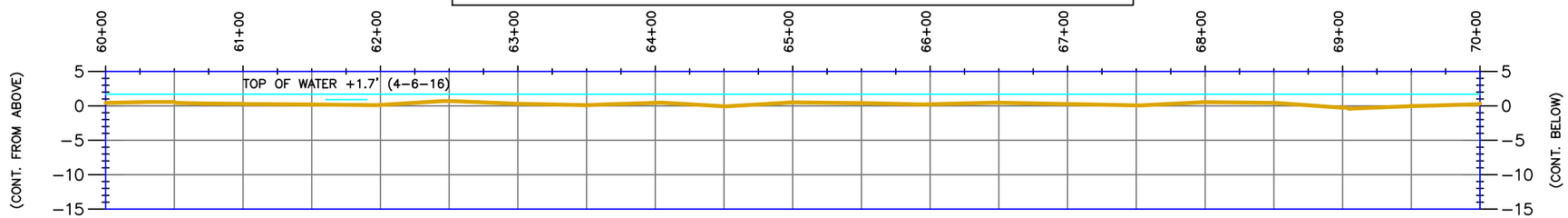
AT-02
PROFILES
FOR
NATAL CHANNEL No. 1 CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	8 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:29:59pm



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



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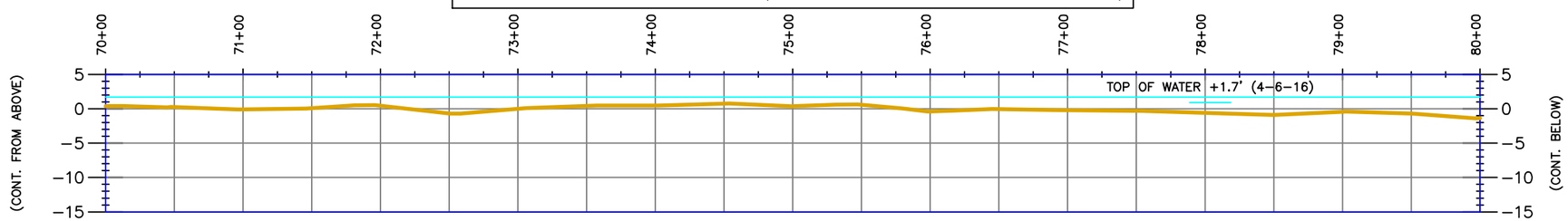
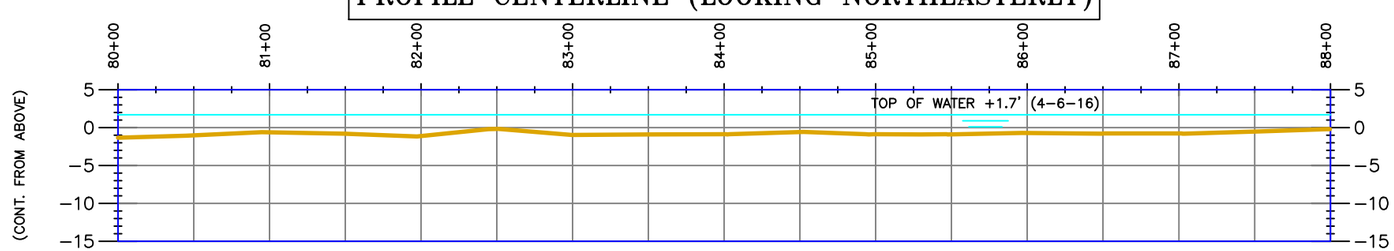


PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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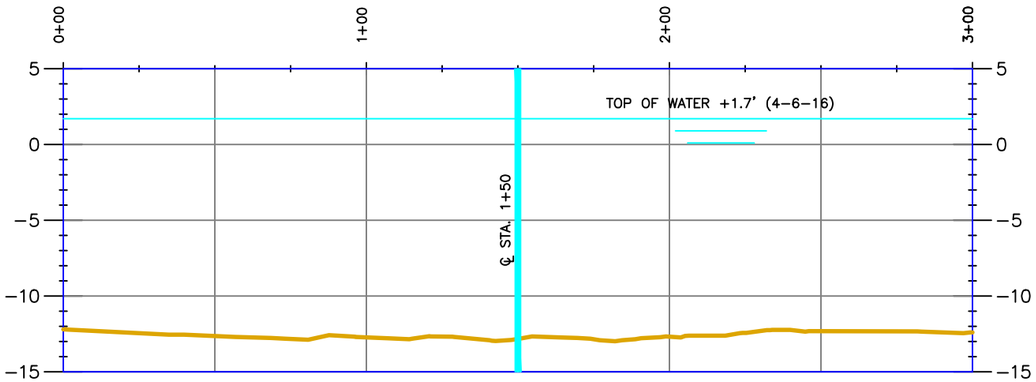
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

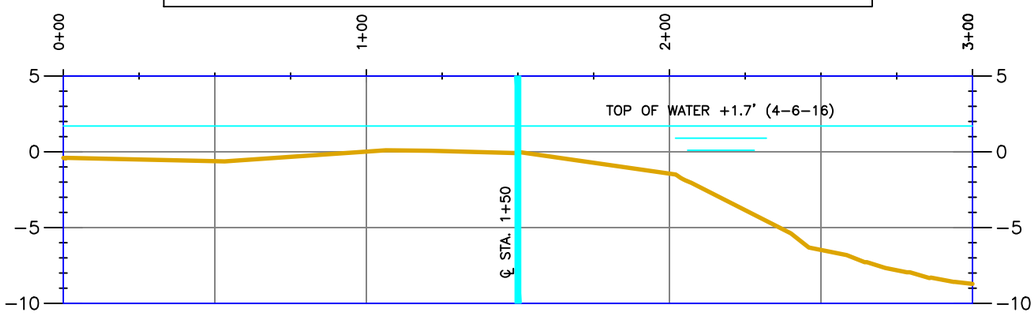
AT-02
PROFILES
FOR
NATAL CHANNEL No. 1 CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	9 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:30:57pm



TRANSECT 10+00 (LOOKING SOUTHEASTERLY)



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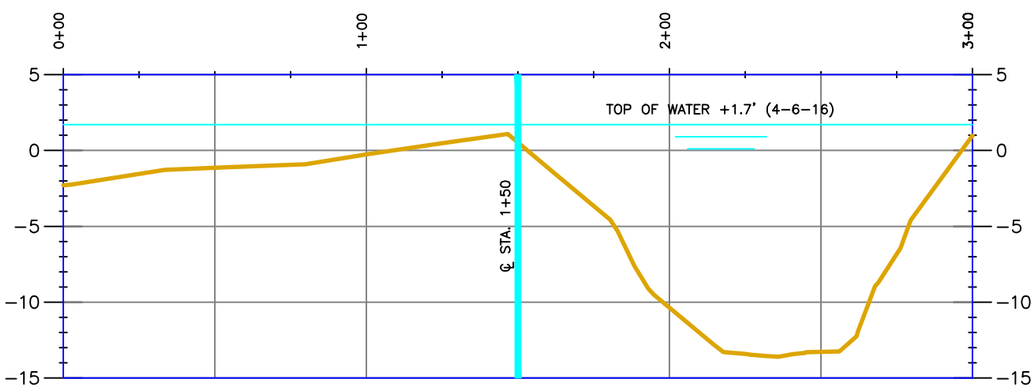

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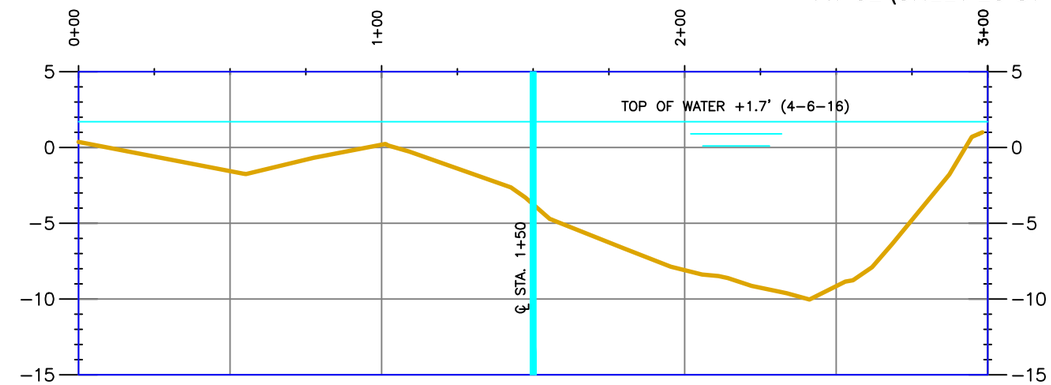

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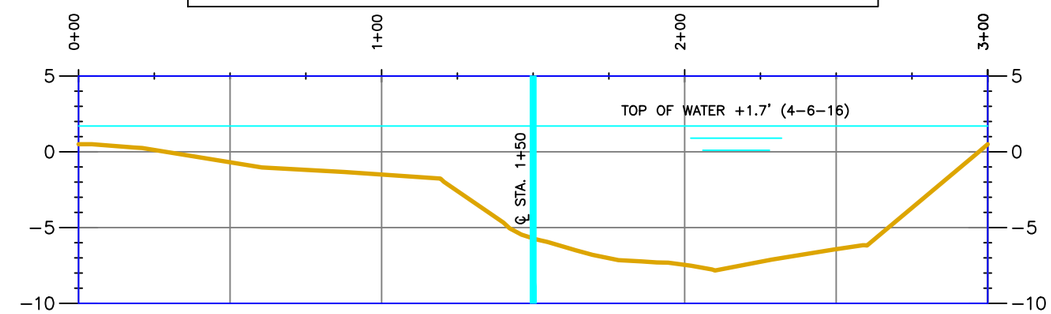

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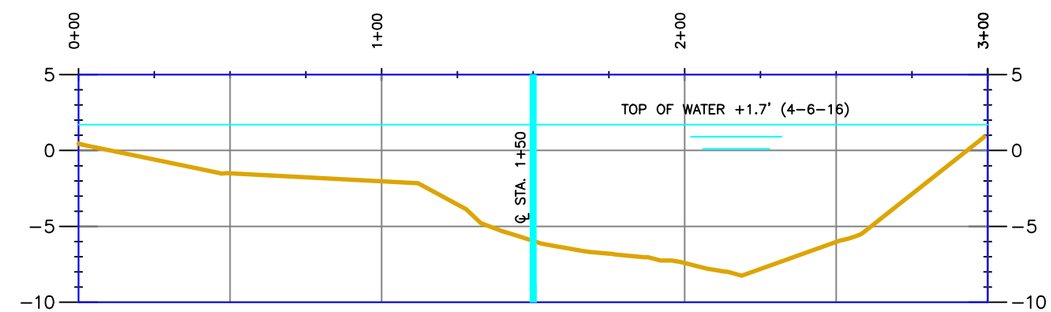

TRANSECT 35+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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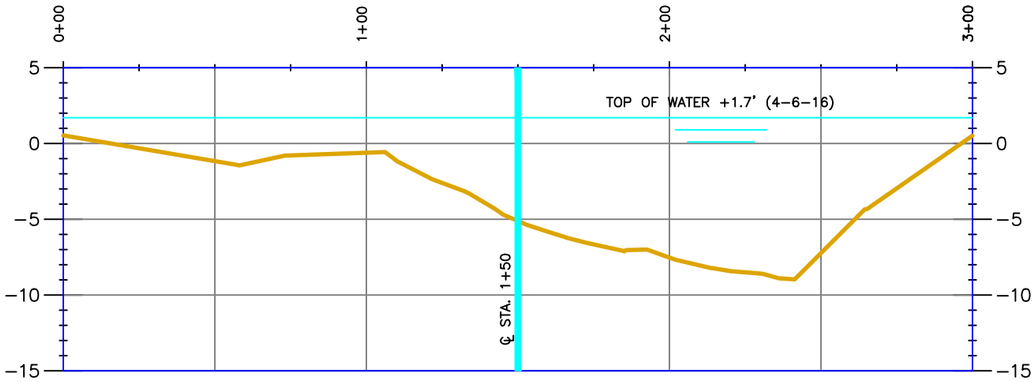
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	10 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:31:48pm



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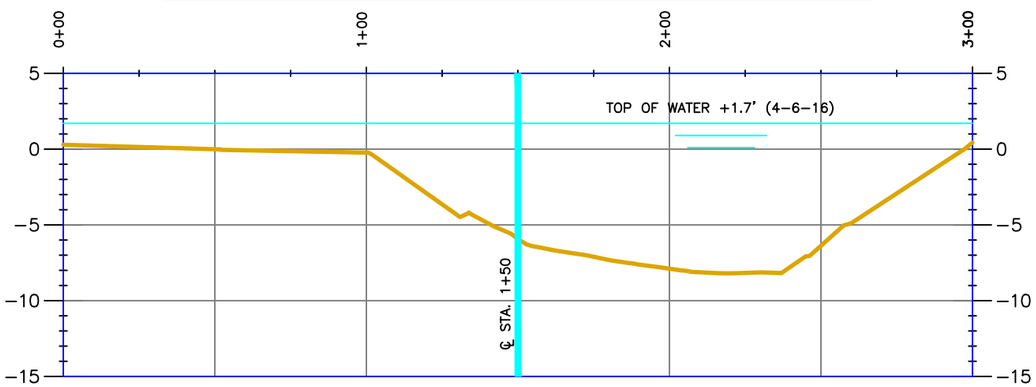

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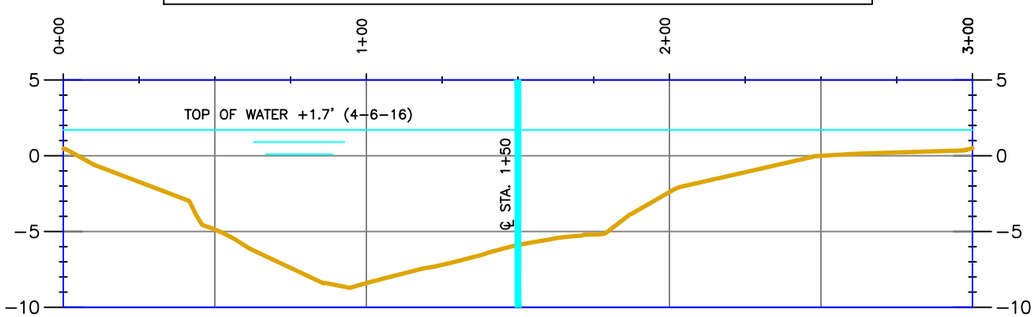

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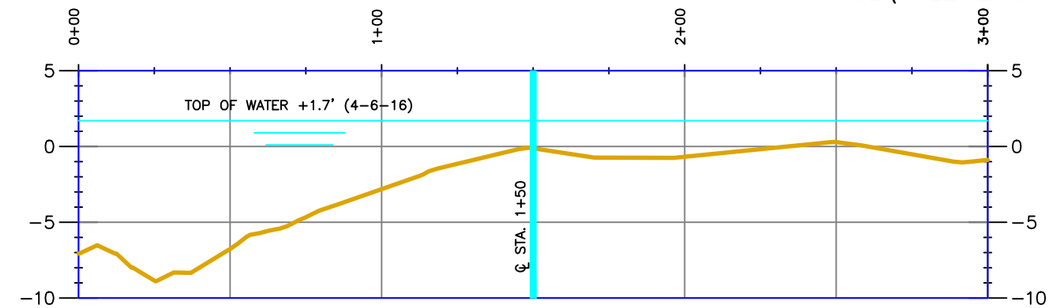

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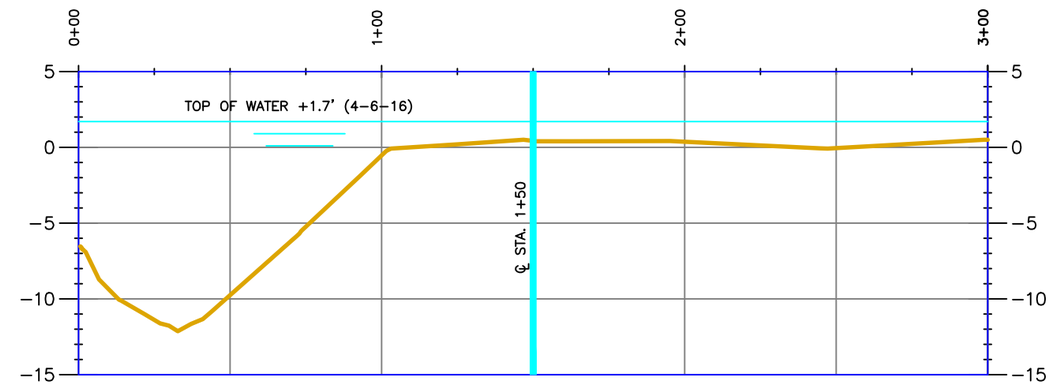

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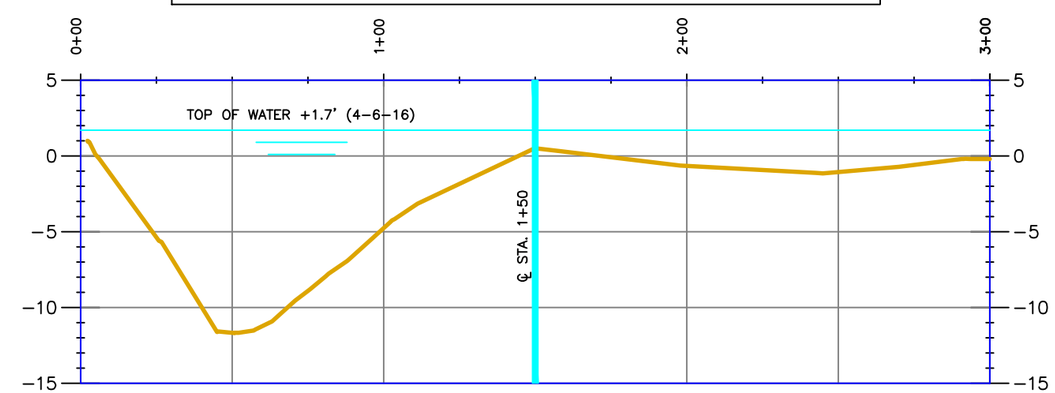

TRANSECT 65+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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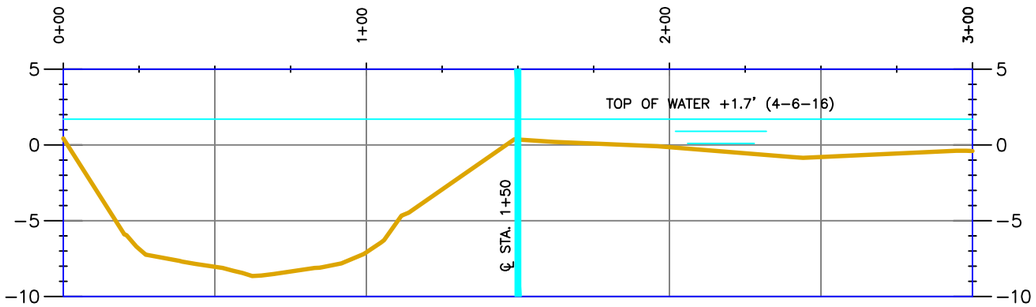
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	11 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 2:33:02pm



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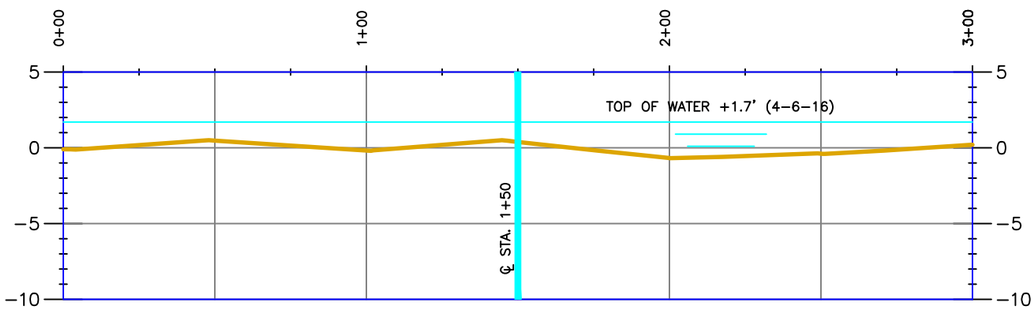

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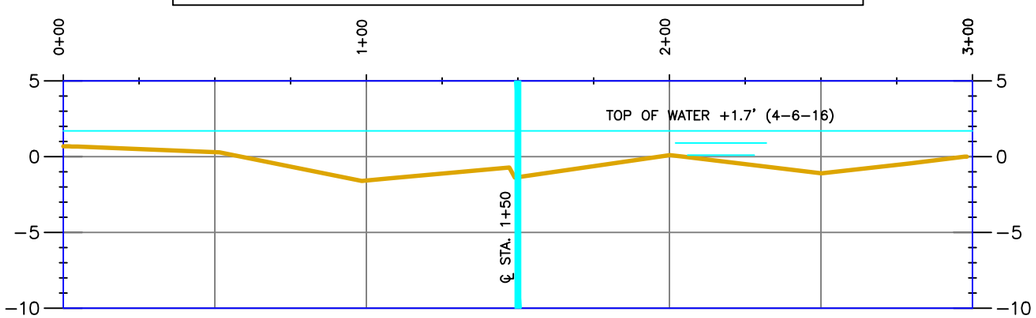

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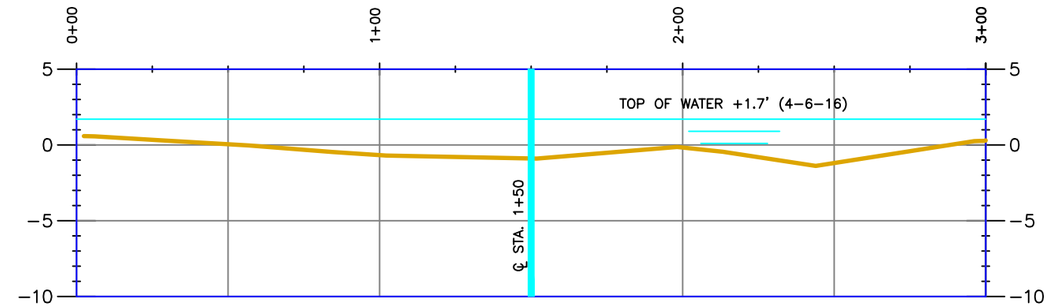

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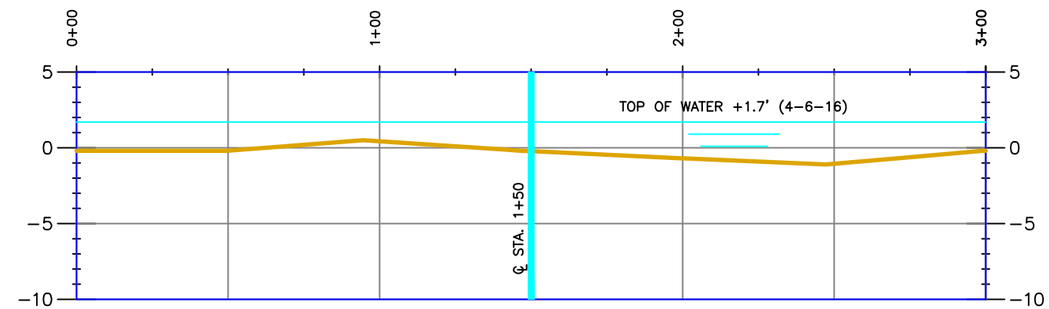

TRANSECT 88+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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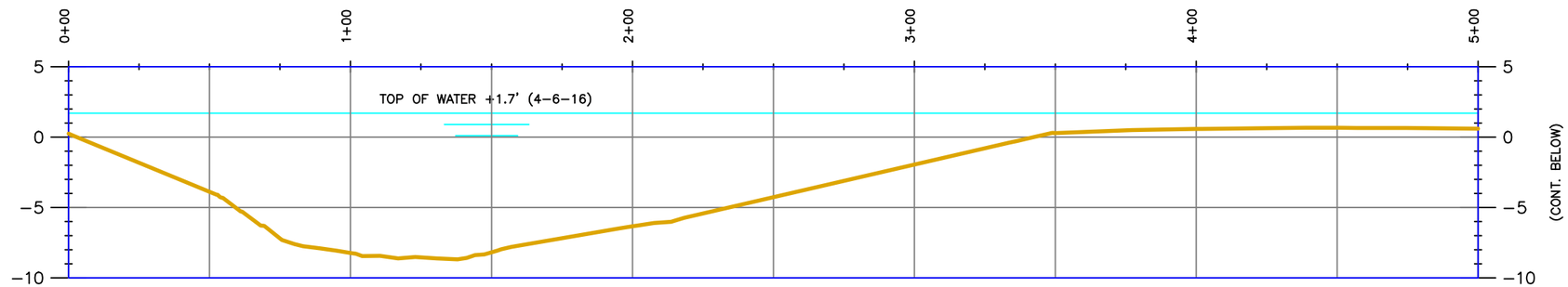
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

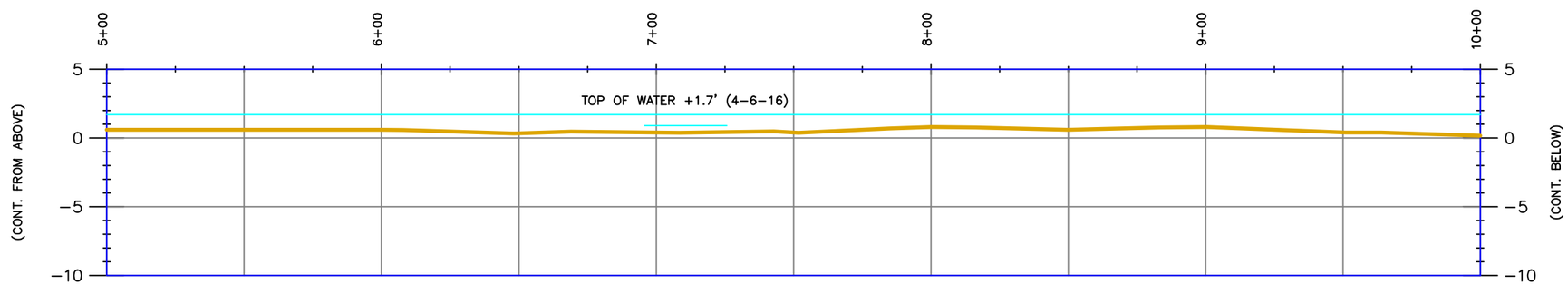
AT-02
TRANSECTS
FOR
NATAL CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	12 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\17-30 - Natal Channel No. 1\AT-02 NATAL CHAN #1.dwg PLOT DATE: 6/6/16 3:33:39pm



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



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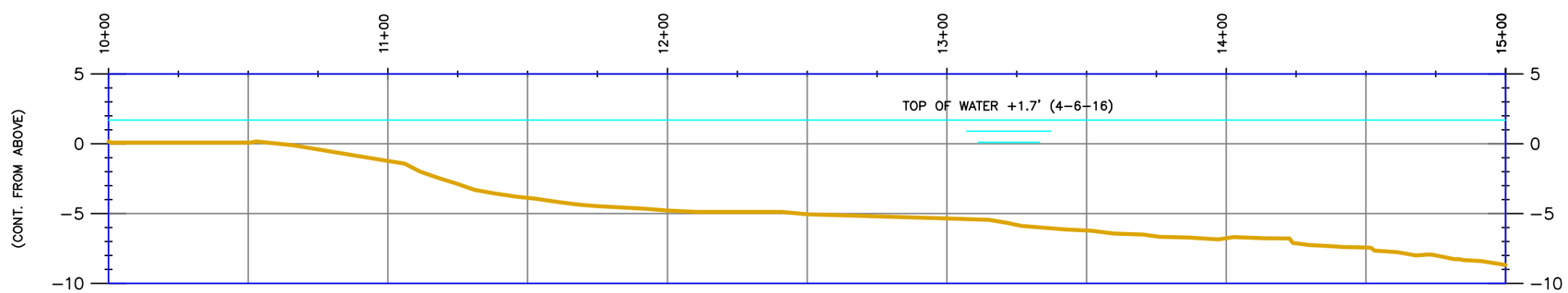

PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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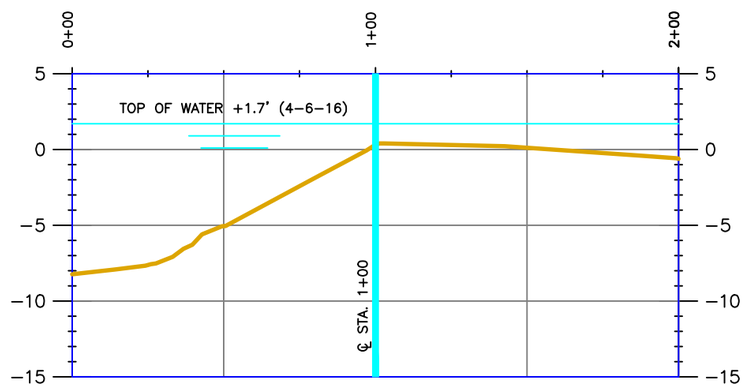
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

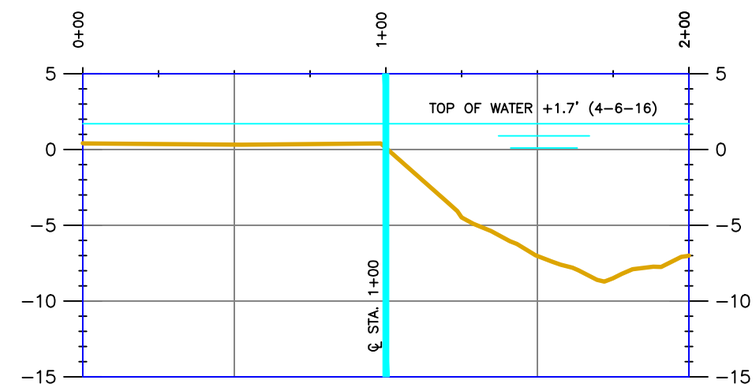
AT-02
PROFILES
FOR
NATAL CHANNEL No. 2 CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	13 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2.DWG			

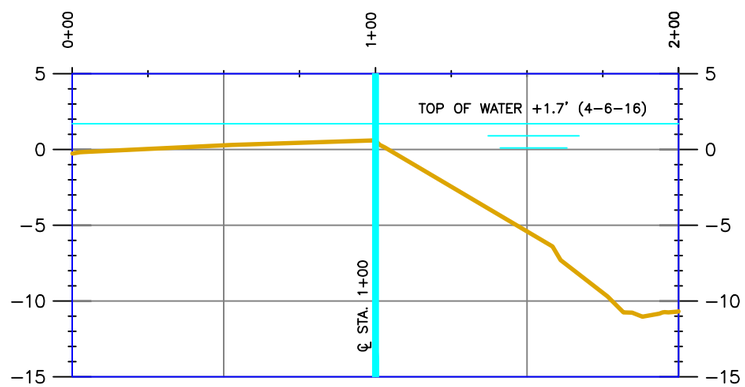
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\23 Natal Channel No. 2\AT-02 NATAL CHAN #2.dwg PLOT DATE: 6/6/16 3:35:00pm



TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



TRANSECT 10+00 (LOOKING SOUTHEASTERLY)



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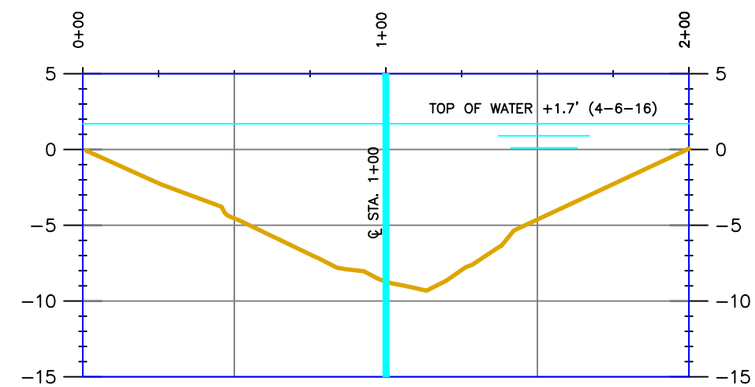

TRANSECT 15+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NATAL CHANNEL No. 2

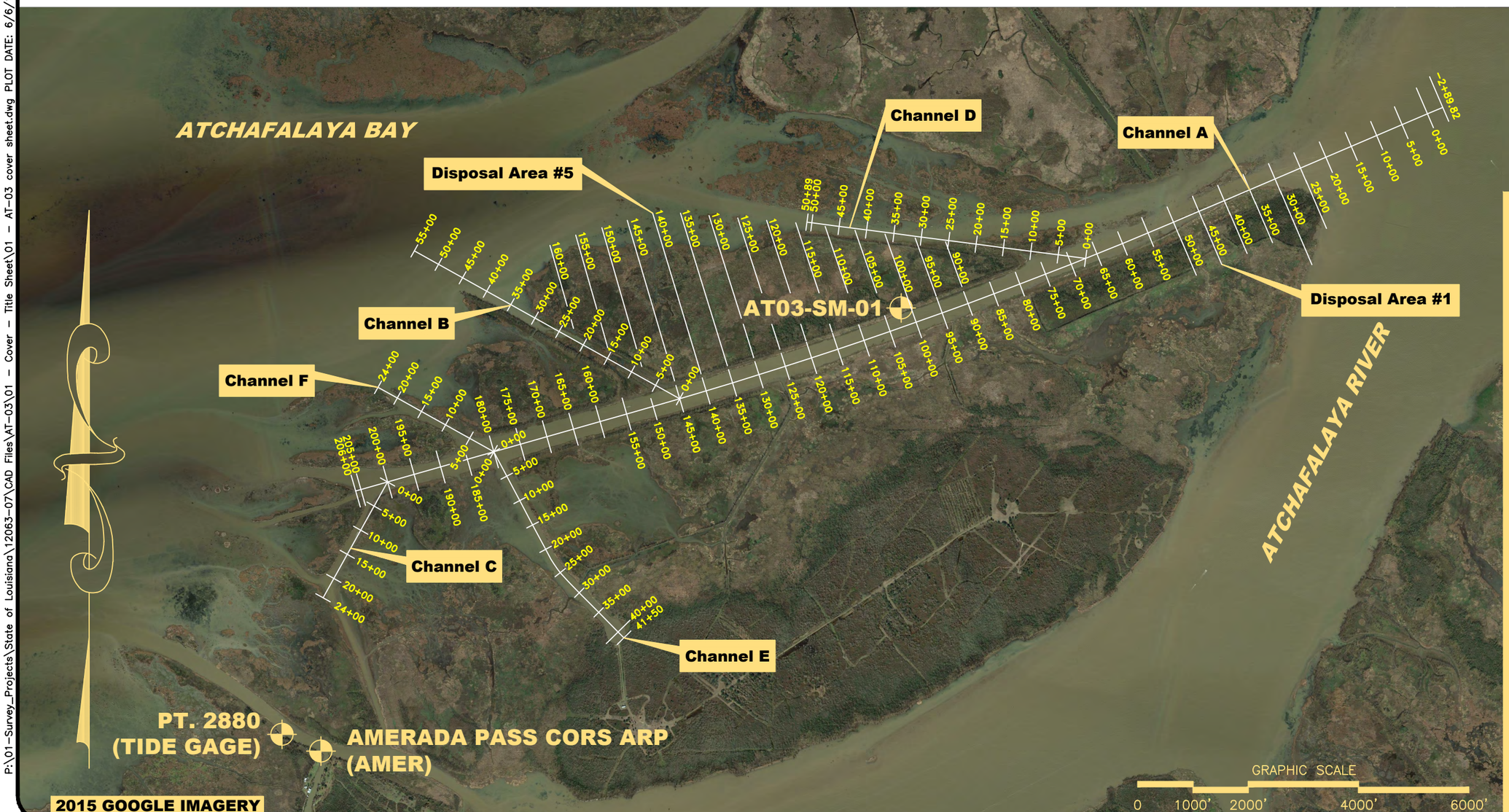
DRAWN BY:	NPB/TPC	SHEET:	14 OF 14
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\23 Natal Channel No. 2\AT-02 NATAL CHAN #2.dwg PLOT DATE: 6/6/16 3:36:53pm

STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

TOPOGRAPHIC AND BATHYMETRIC SURVEY
BIG ISLAND MINING (AT-03)

04/07/16



Survey Monument Data:
AT03-SM-01
NAD 83 Geodetic Position
Lat. 29°28'17.88447"
Long. 91°18'18.39588"
NAD 83 Datum LSZ (1702)
N= 353352.36
E= 3289814.25
NAVD 88 Height
Elevation=2.60 ft (0.792 m)

AMERADA PASS CORS ARP (AMER)
NAD 83 Geodetic Position
Lat. 29°26'58.49797"
Long. 91°20'17.21175"
NAD 83 Datum LSZ (1702)
N= 345332.20
E= 3279311.63
NAVD 88 Height
Elevation=34.825 ft (10.615 m)

PT. 2880 (TIDE GAGE)
NAD 83 Geodetic Position
Lat. 29°27'01.49464"
Long. 91°20'25.18848"
NAD 83 Datum LSZ (1702)
N= 345634.94
E= 3278606.42
NOTE: EXISTING CONTROL POINTS USED TO SET THIS TIDE GAGE @ NAVD 88

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\01 - Cover - Title Sheet\01 - AT-03 cover sheet.dwg PLOT DATE: 6/6/16 3:45:42pm

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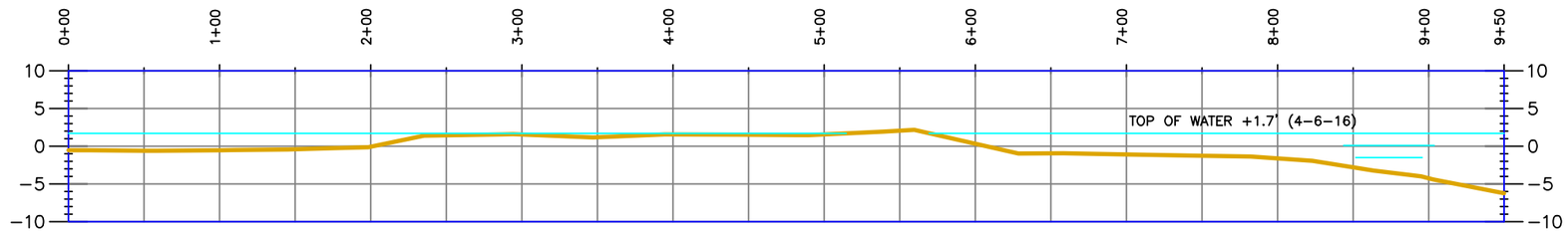
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

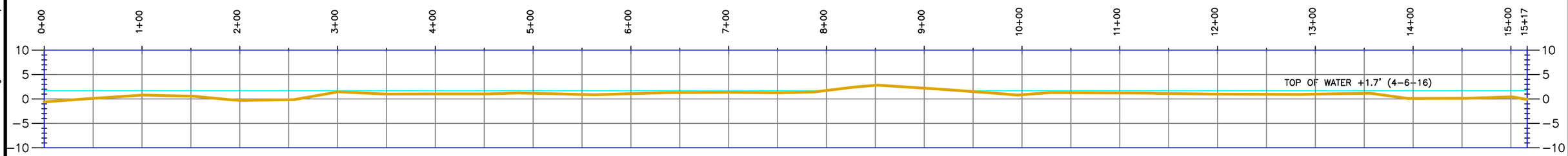
AT-03
PLAN VIEW
FOR
DISPOSAL AREA #1

DRAWN BY:	NPB/TPC	SHEET:	1 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 32-34 – AT-03 DSPL AREA 1.DWG			

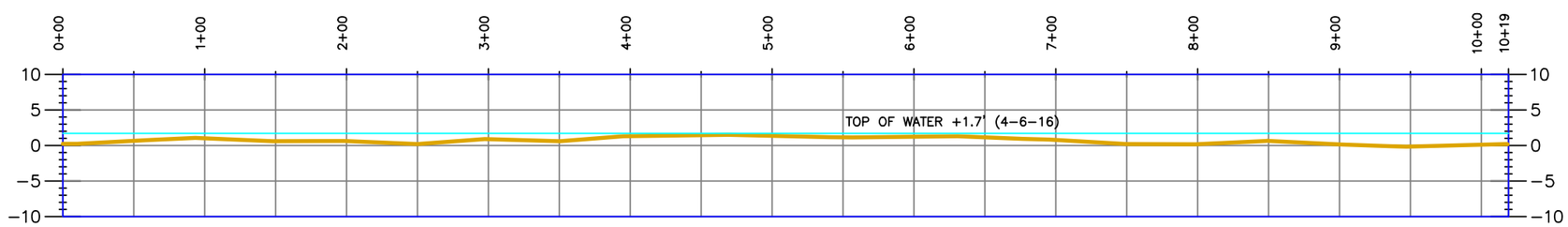
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\32-34 – Disposal Area 1\32-34 – AT-03 DSPL AREA 1.dwg PLOT DATE: 6/7/16 2:47:30pm



TRANSECT 25+00 (LOOKING SOUTHWESTERLY)



TRANSECT 30+00 (LOOKING SOUTHWESTERLY)



TRANSECT 35+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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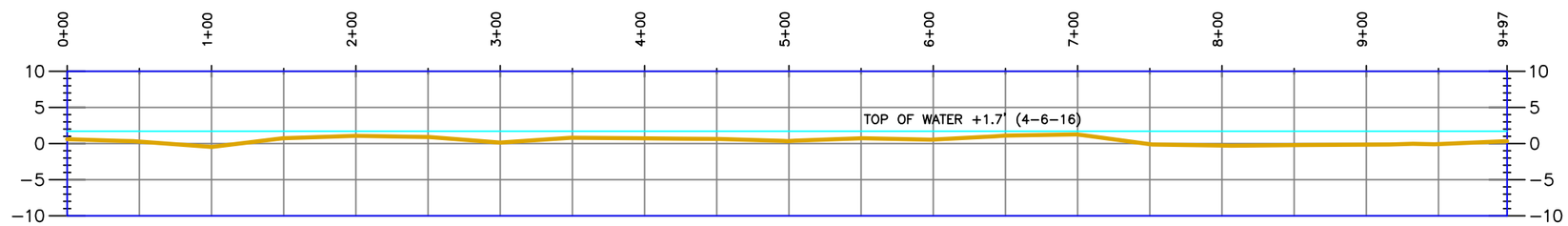
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

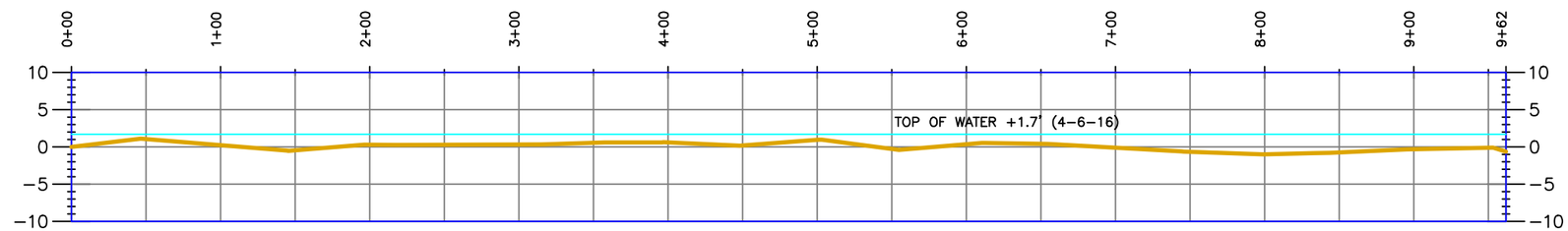
AT-03
TRANSECTS
FOR
DISPOSAL AREA #1

DRAWN BY:	NPB	SHEET:	2 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 32-34 – AT-03 DSPL AREA 1.DWG			

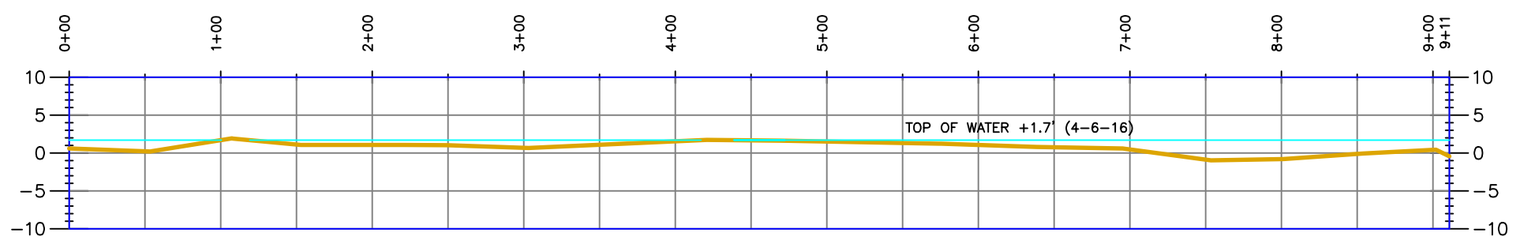
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\32-34 - Disposal Area 1\32-34 - AT-03 DSPL AREA 1.dwg PLOT DATE: 5/17/16 10:53:07am



TRANSECT 40+00 (LOOKING SOUTHWESTERLY)



TRANSECT 45+00 (LOOKING SOUTHWESTERLY)



TRANSECT 50+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
DISPOSAL AREA #1

DRAWN BY:	NPB/TPC	SHEET:	3 OF 3
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 32-34 – AT-03 DSPL AREA 1.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\32-34 - Disposal Area 1\32-34 - AT-03 DSPL AREA 1.dwg PLOT DATE: 5/17/16 10:57:33am

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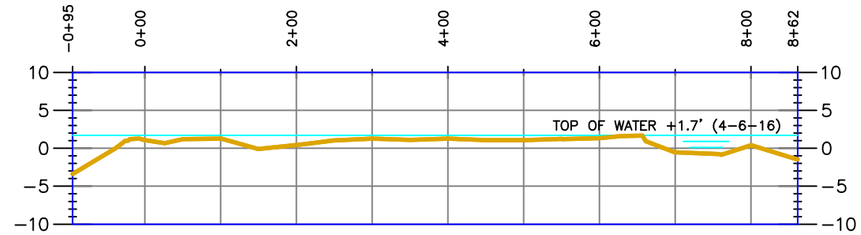
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

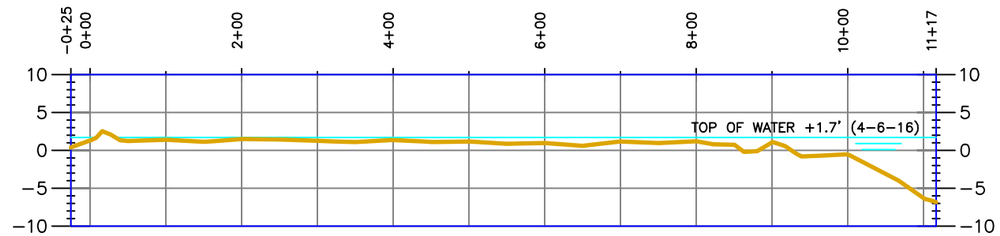
AT-03
PLAN VIEW
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	1 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 – AT-03 DSPL AREA 5.DWG			

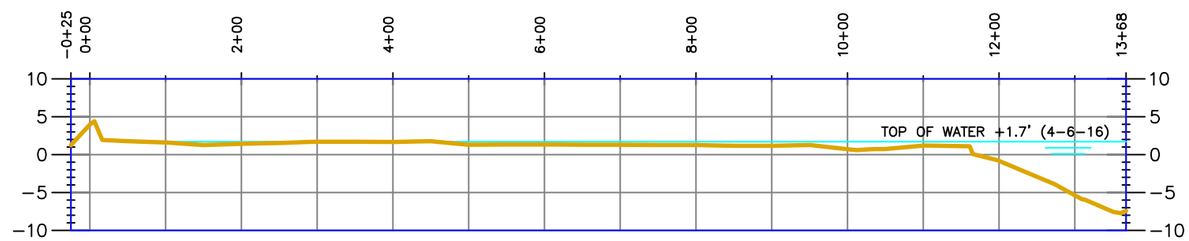
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 – Disposal Area 5\35-41 – AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:17:14pm



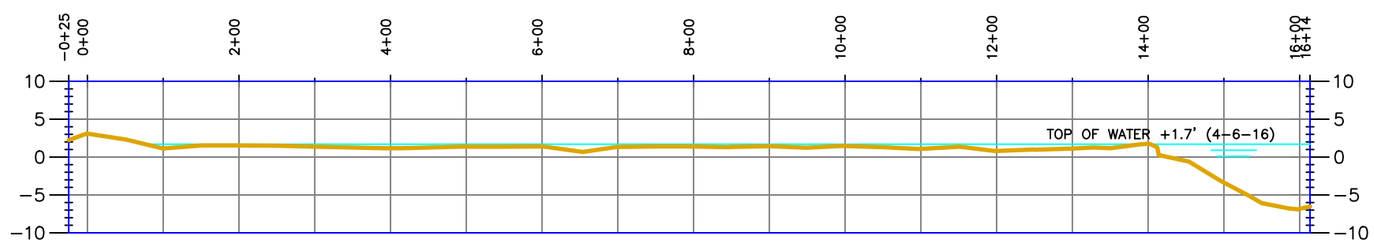
TRANSECT 90+00 (LOOKING SOUTHWESTERLY)



TRANSECT 95+00 (LOOKING SOUTHWESTERLY)



TRANSECT 100+00 (LOOKING SOUTHWESTERLY)



TRANSECT 105+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 100' 200' 400' 600'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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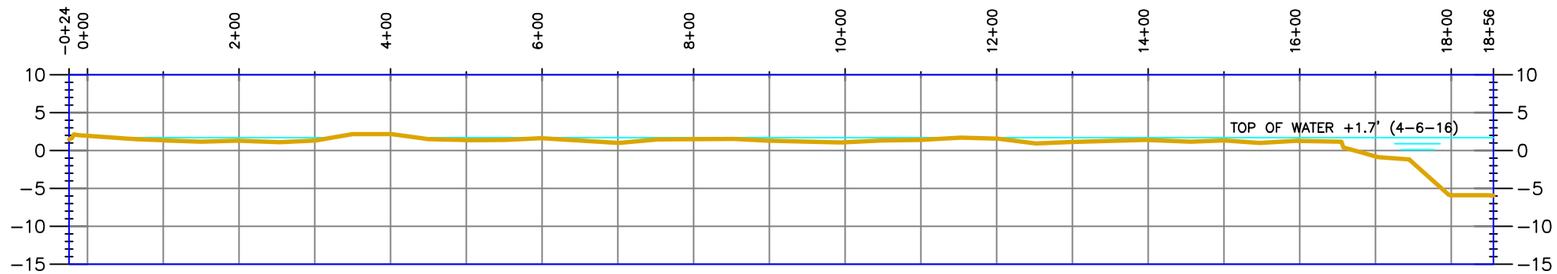
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

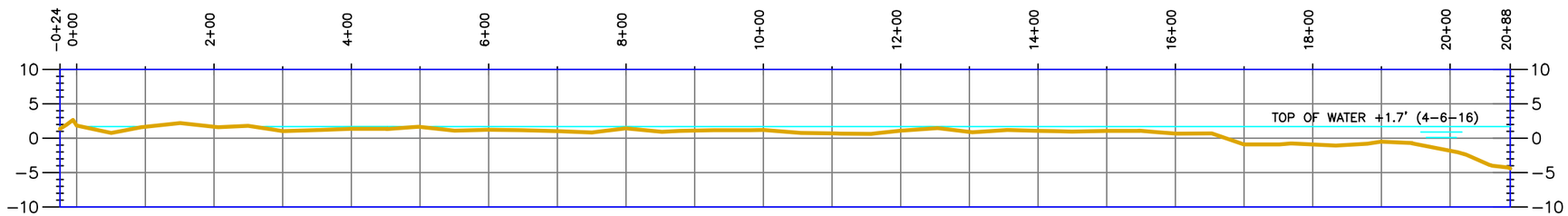
AT-03
TRANSECTS
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	2 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 - AT-03 DSPL AREA 5.DWG			

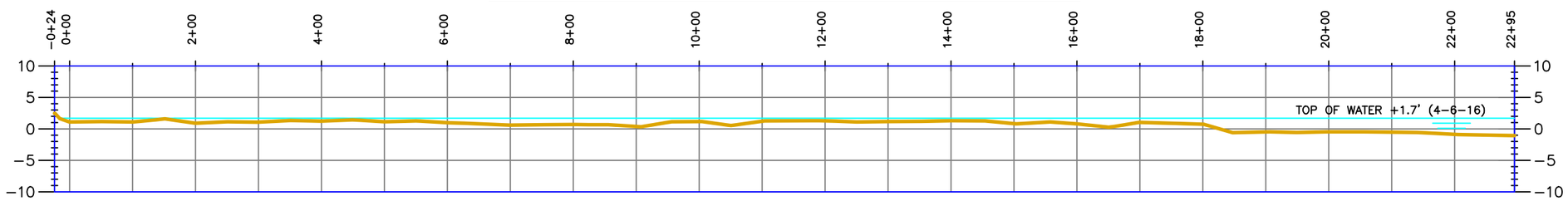
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 - Disposal Area 5\35-41 - AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:19:19pm



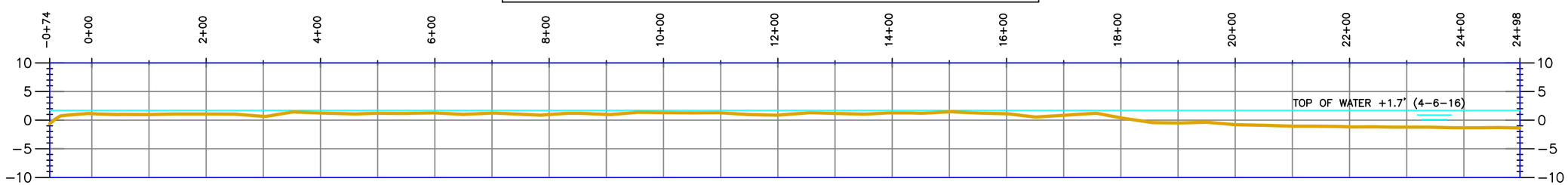
TRANSECT 110+00 (LOOKING SOUTHWESTERLY)



TRANSECT 115+00 (LOOKING SOUTHWESTERLY)



TRANSECT 120+00 (LOOKING SOUTHWESTERLY)



TRANSECT 125+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 100' 200' 400' 600'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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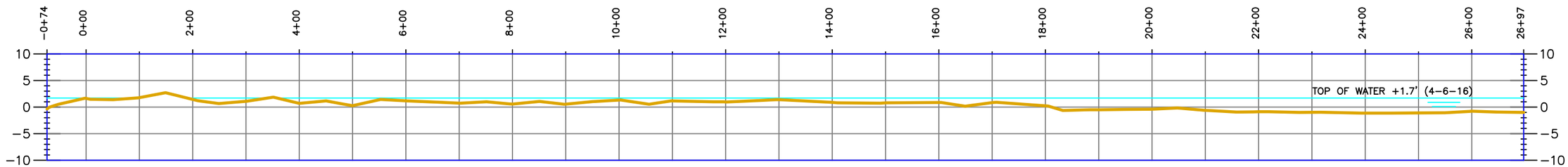
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

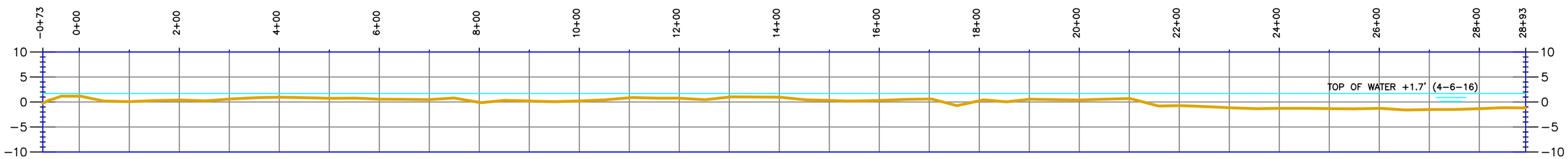
AT-03
TRANSECTS
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	3 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 - AT-03 DSPL AREA 5.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 - Disposal Area 5\35-41 - AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:20:40pm



TRANSECT 130+00 (LOOKING SOUTHWESTERLY)



TRANSECT 135+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 100' 200' 400' 600'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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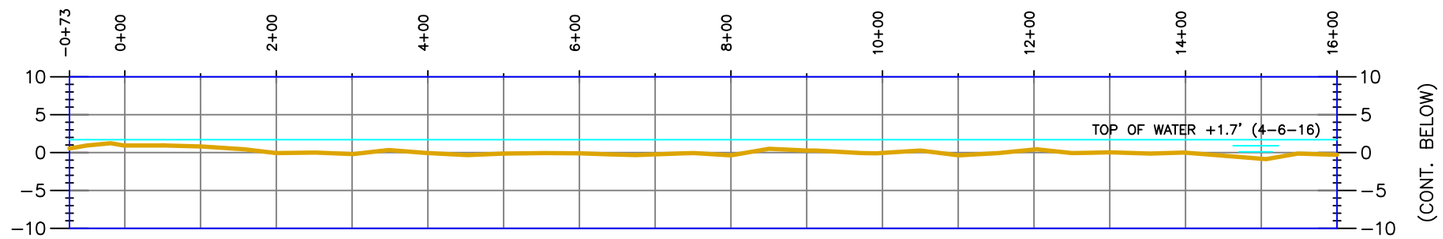
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

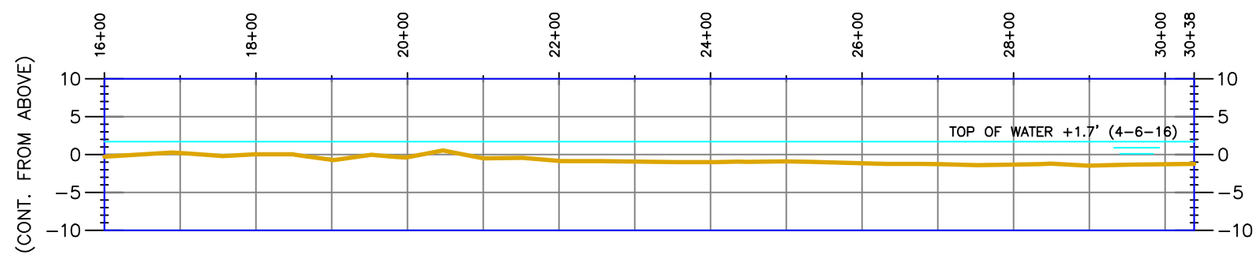
AT-03
TRANSECTS
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	4 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 - AT-03 DSPL AREA 5.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 - Disposal Area 5\35-41 - AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:22:13pm



TRANSECT 140+00 (LOOKING SOUTHWESTERLY)



TRANSECT 140+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 100' 200' 400' 600'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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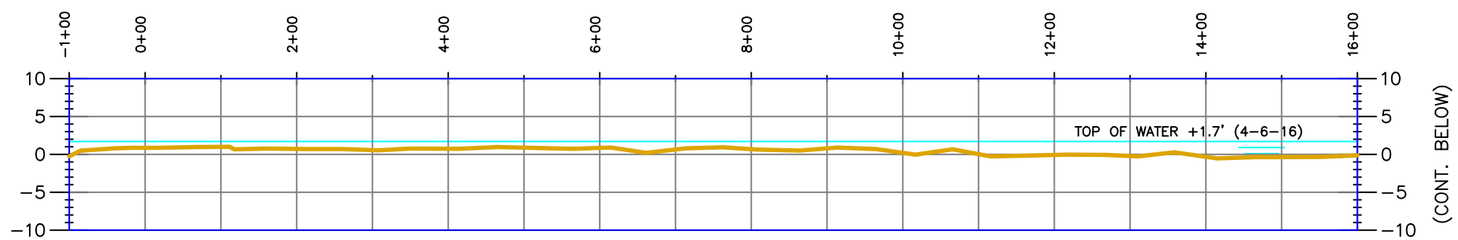
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

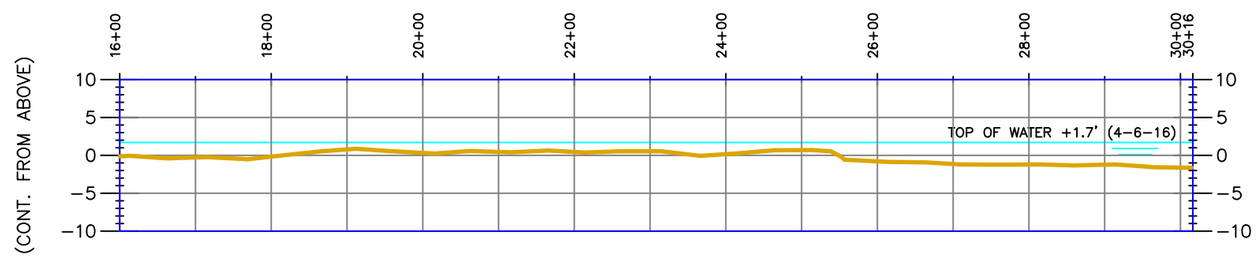
AT-03
TRANSECTS
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	5 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 - AT-03 DSPL AREA 5.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 - Disposal Area 5\35-41 - AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:23:10pm



TRANSECT 145+00 (LOOKING SOUTHWESTERLY)



TRANSECT 145+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 100' 200' 400' 600'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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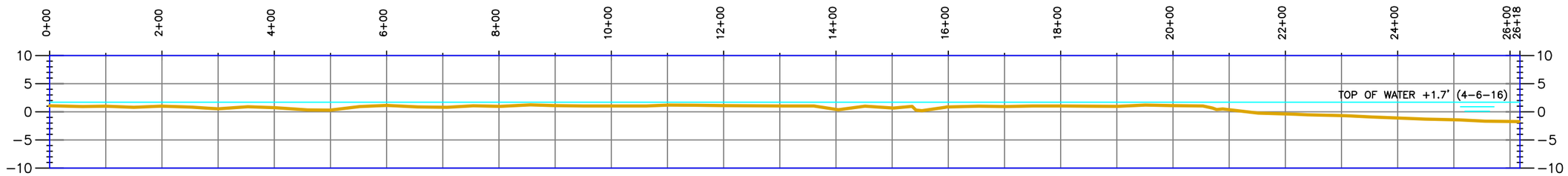
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

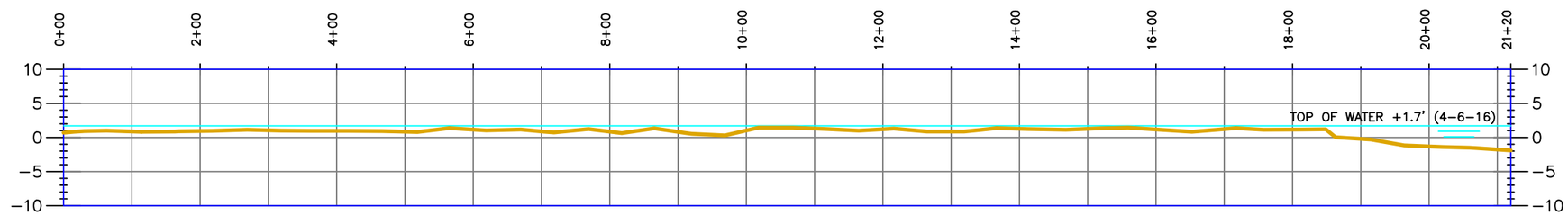
AT-03
TRANSECTS
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	6 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 – AT-03 DSPL AREA 5.DWG			

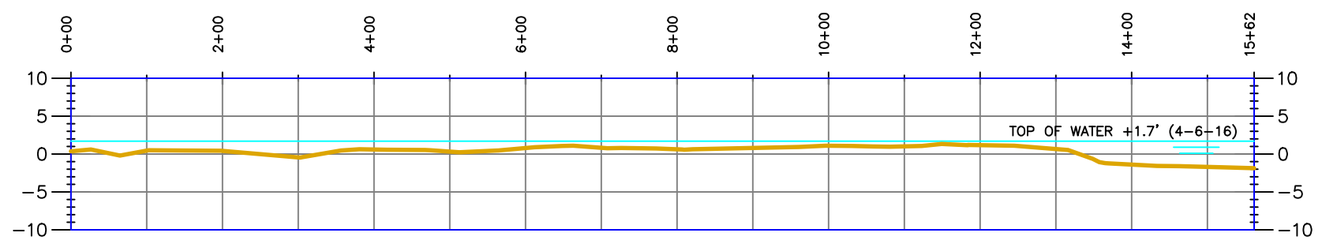
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 - Disposal Area 5\35-41 - AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:24:01pm



TRANSECT 150+00 (LOOKING SOUTHWESTERLY)



TRANSECT 155+00 (LOOKING SOUTHWESTERLY)



TRANSECT 160+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 100' 200' 400' 600'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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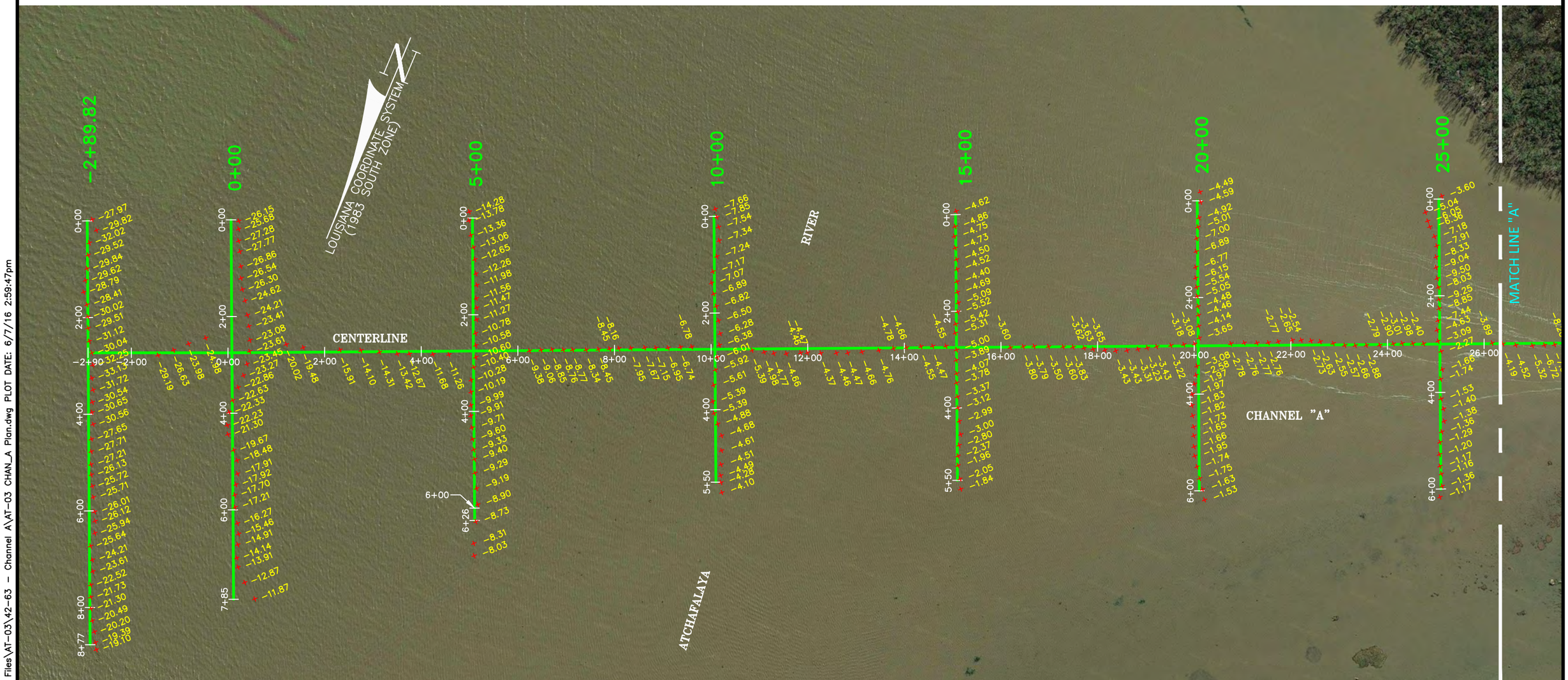
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
DISPOSAL AREA #5

DRAWN BY:	NPB/TPC	SHEET:	7 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: 35-41 – AT-03 DSPL AREA 5.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\35-41 – Disposal Area 5\35-41 – AT-03 DSPL AREA 5.dwg PLOT DATE: 5/18/16 1:24:48pm



GRAPHIC SCALE

0 100' 200' 400'

Morris P. Hebert, Inc.
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 1
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	1 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 6/7/16 2:59:47pm

GRAPHIC SCALE

0 100' 200' 400'

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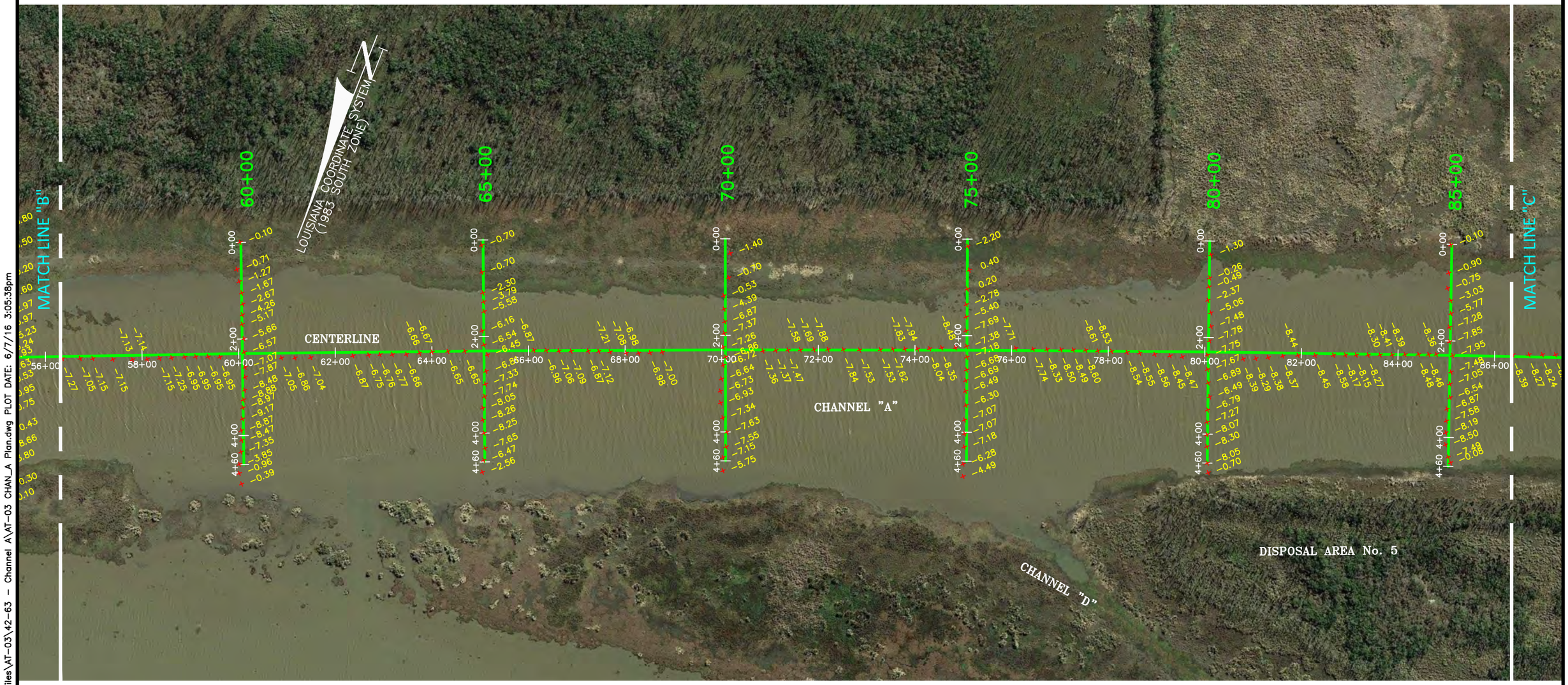
10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 2
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	2 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 6/7/16 3:02:55pm



GRAPHIC SCALE

0 100' 200' 400'

mph Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
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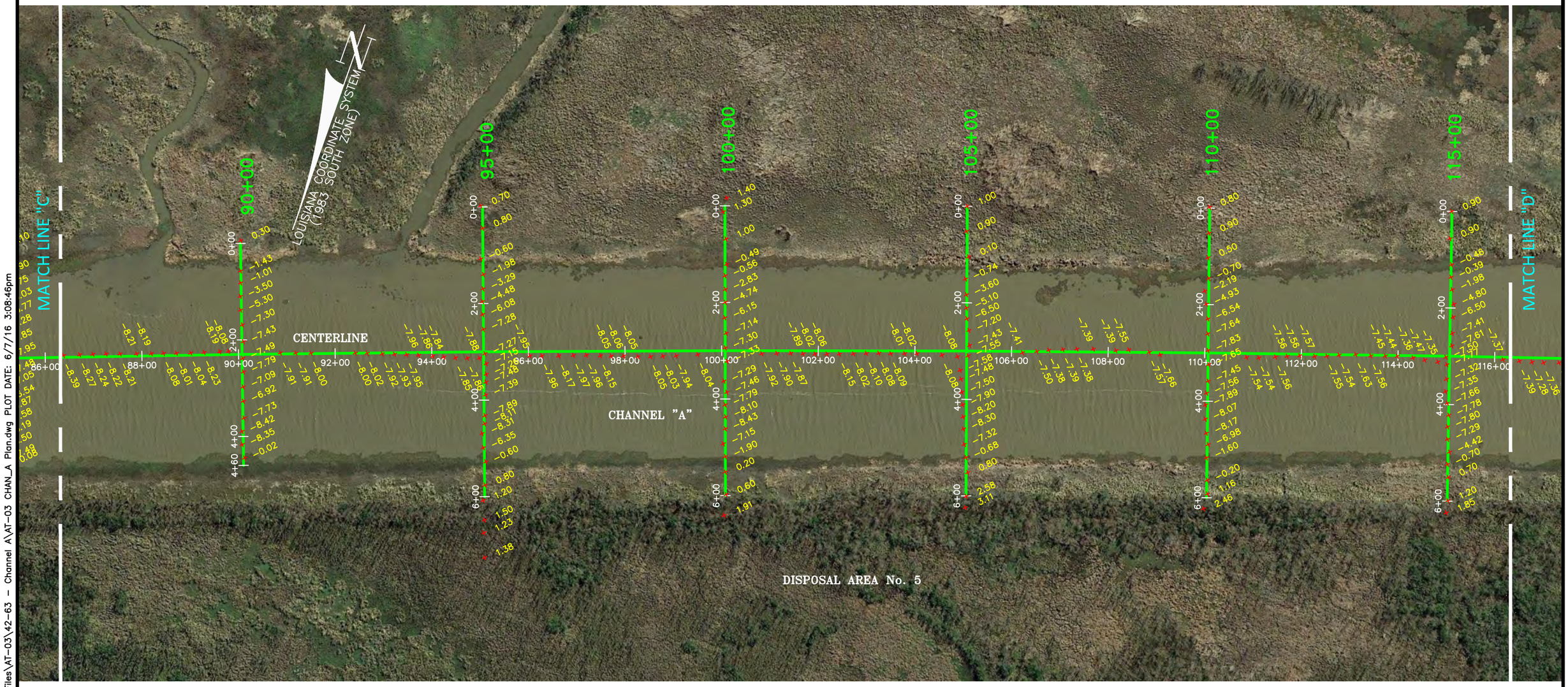
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 3
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	3 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 6/7/16 3:05:38pm



GRAPHIC SCALE

0 100' 200' 400'

Morris P. Hebert, Inc.
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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 4
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	4 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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GRAPHIC SCALE

0 100' 200' 400'

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 5
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	5 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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GRAPHIC SCALE

0 100' 200' 400'

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 6
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	6 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 6/7/16 3:26:55pm

GRAPHIC SCALE

0 100' 200' 400'

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 7
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	7 OF 22
CHKD./APPD. BY:	JCM	SCALE:	1" = 200'
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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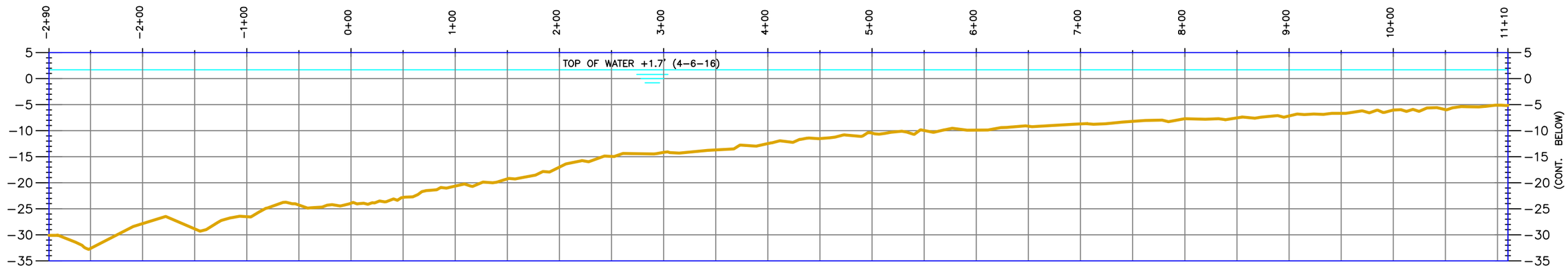

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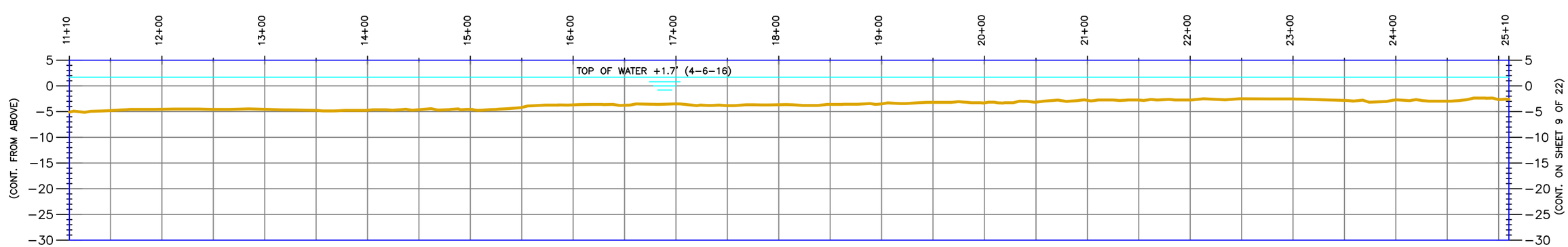

PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	8 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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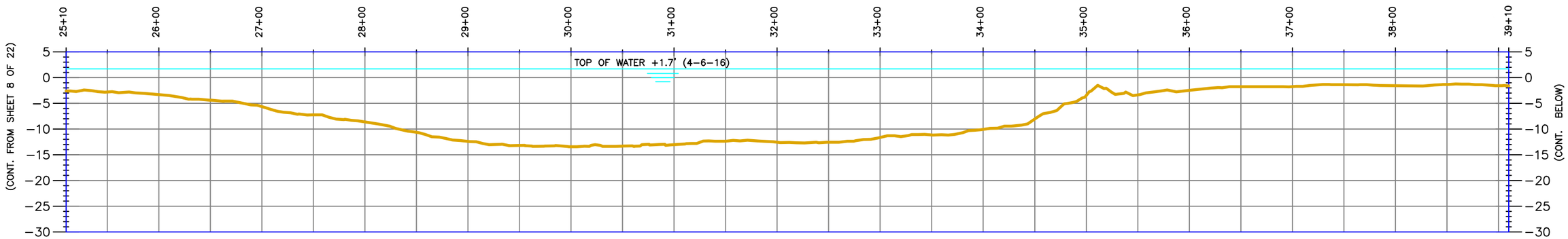
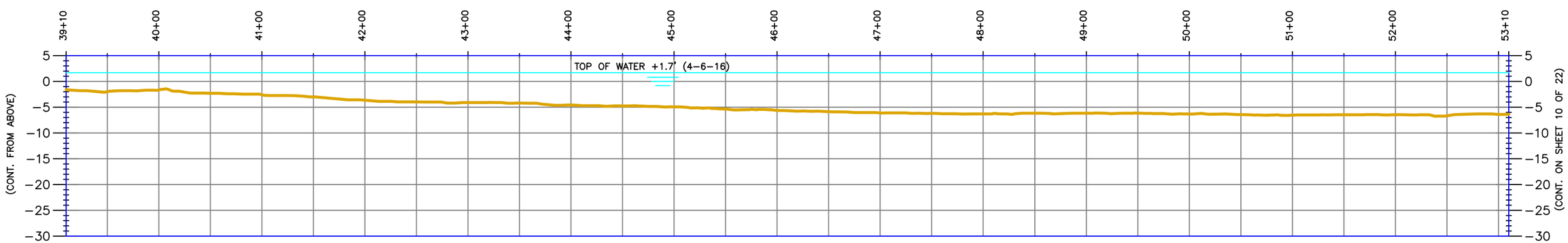


PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	9 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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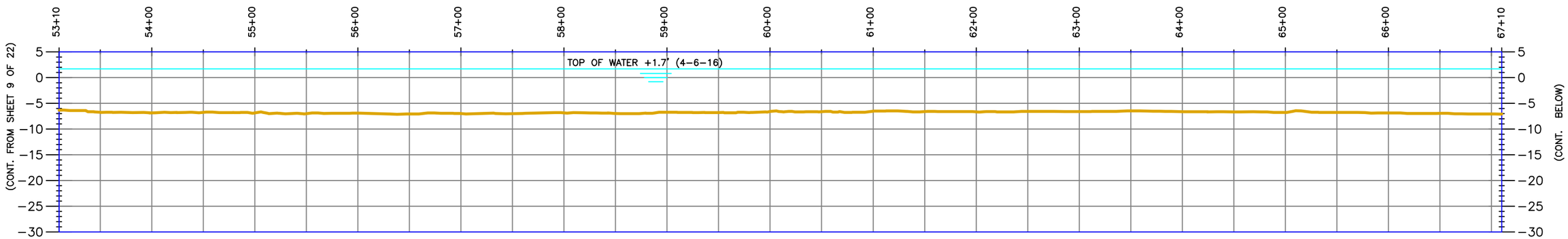
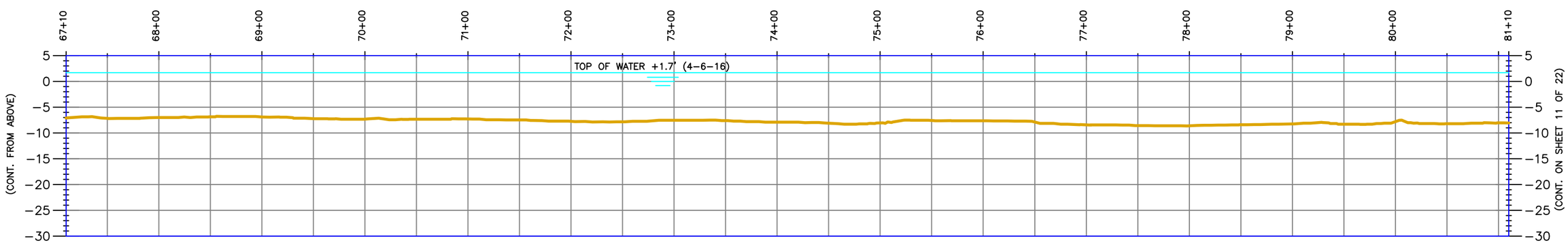


PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	10 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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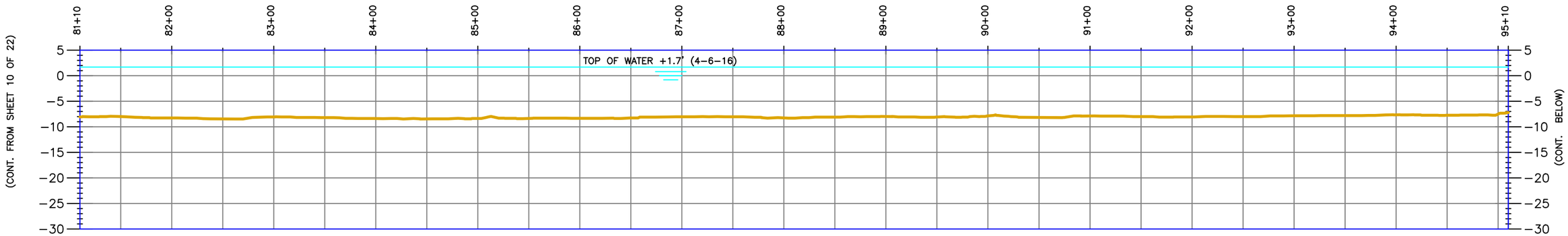
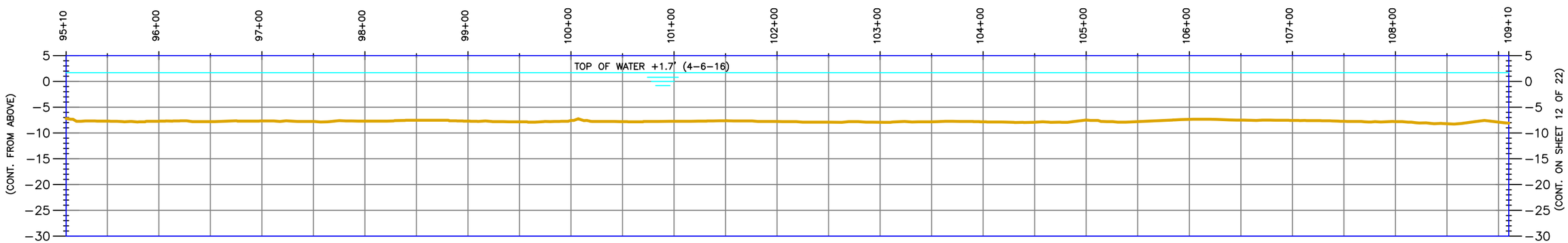


PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	11 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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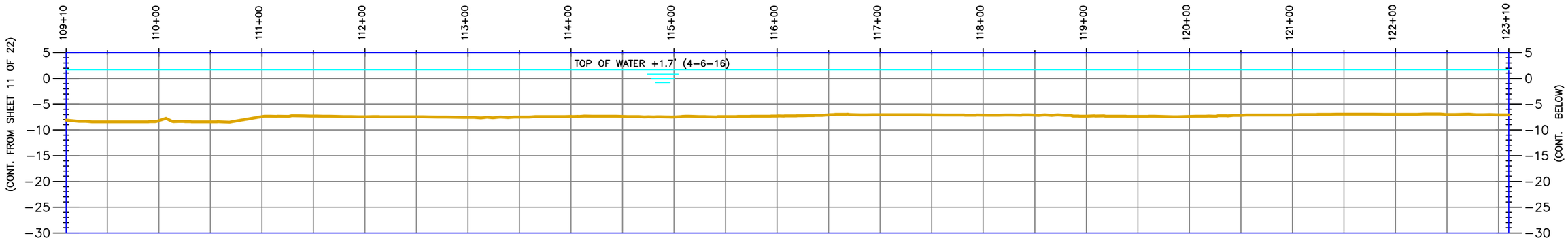
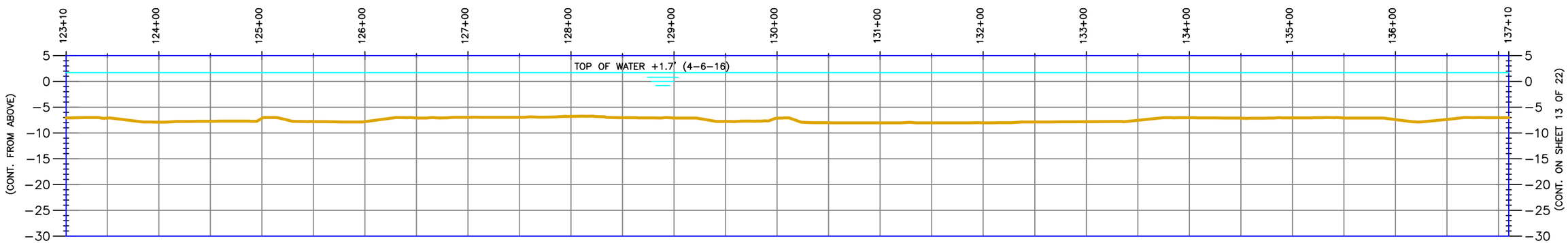


PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	12 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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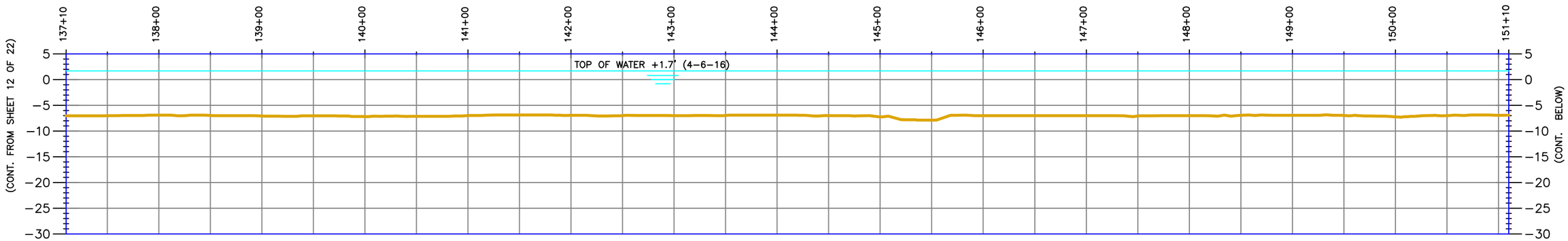
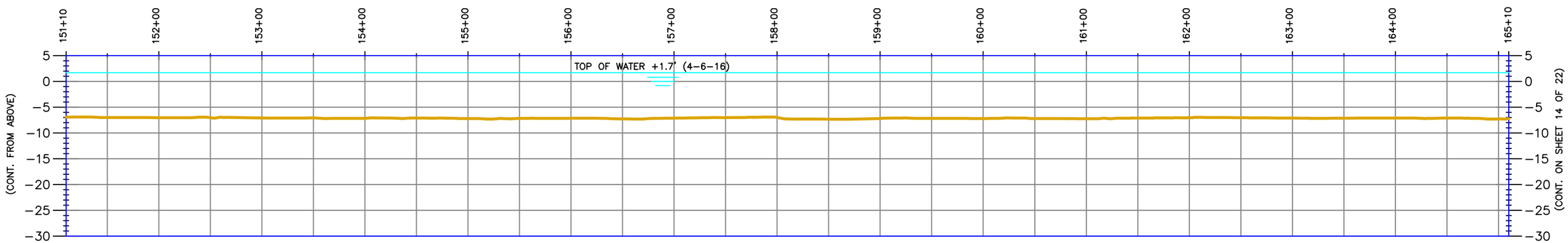


PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	13 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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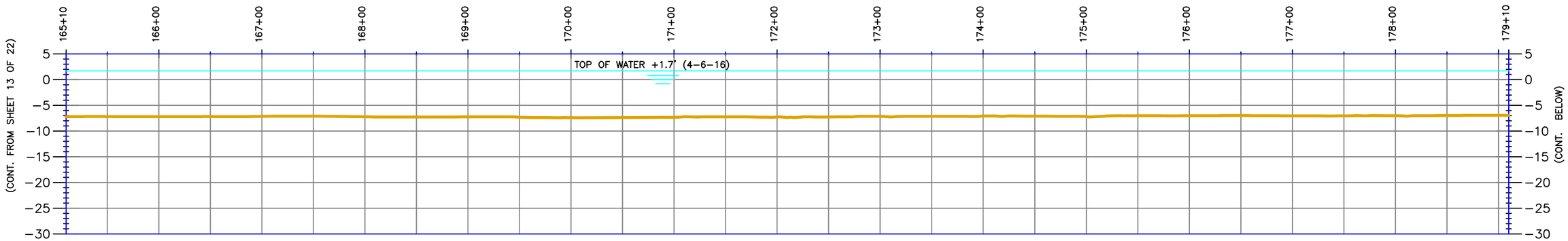
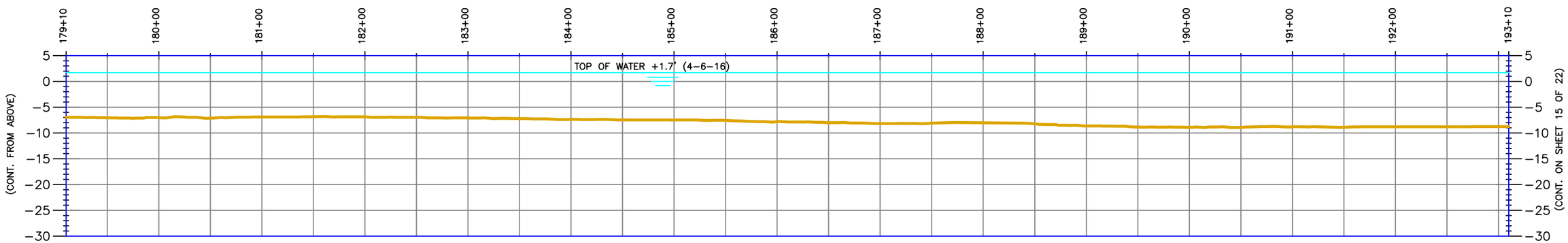


PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	14 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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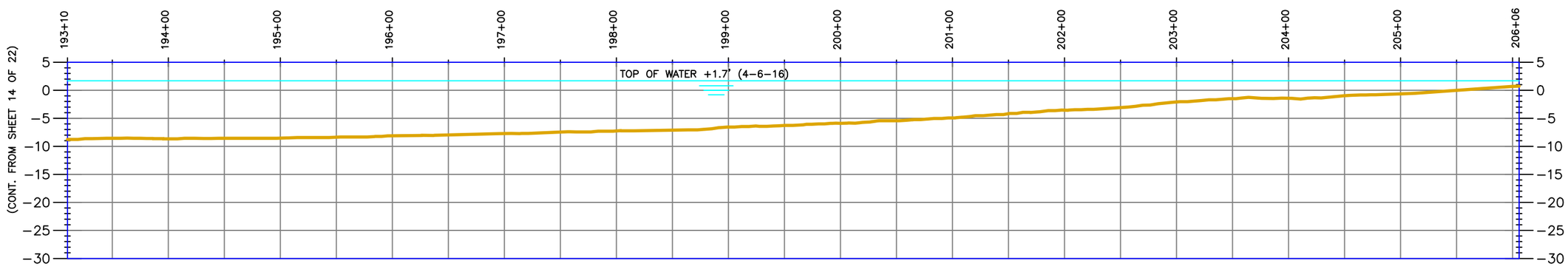

PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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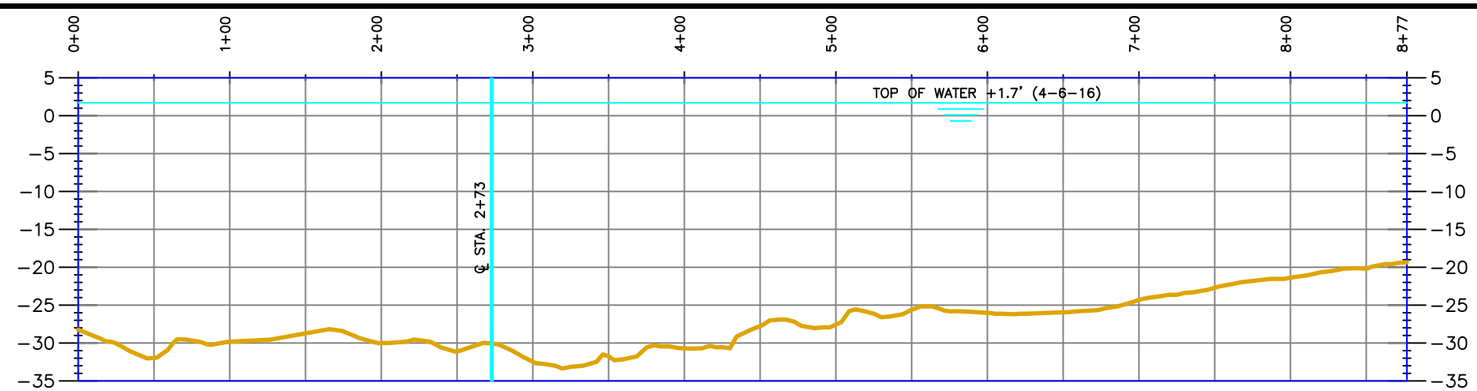
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

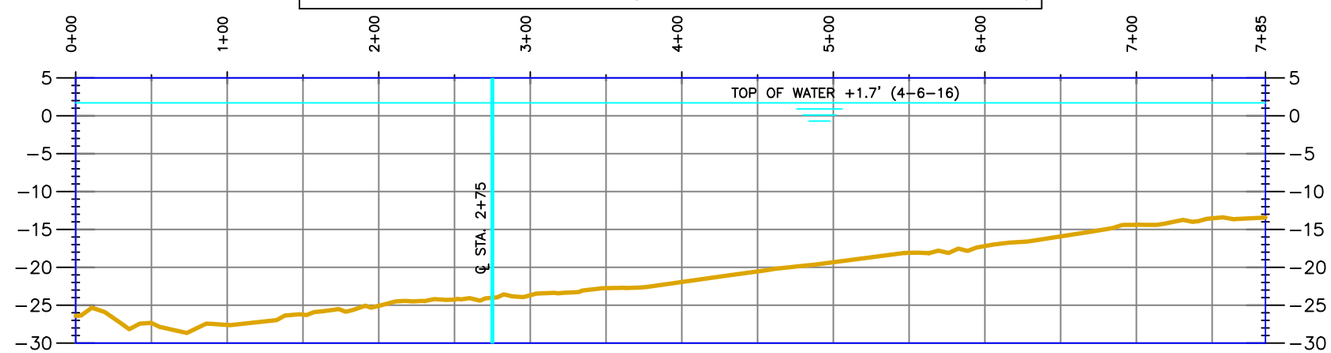
AT-03
PROFILE
FOR
CHANNEL "A" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	15 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-03 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 5/24/16 11:43:51am



TRANSECT −2+89.82 (LOOKING SOUTHWESTERLY)



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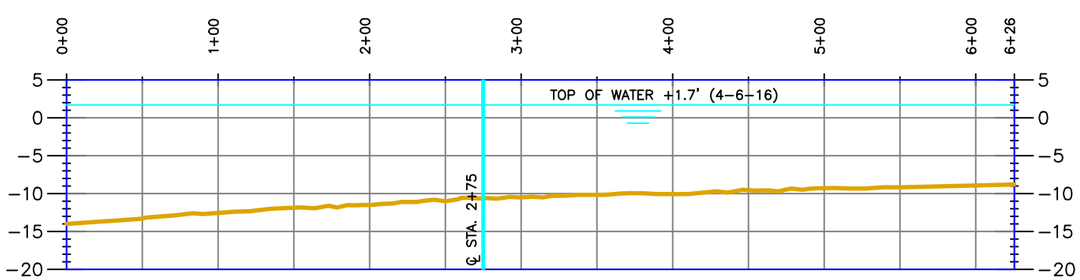

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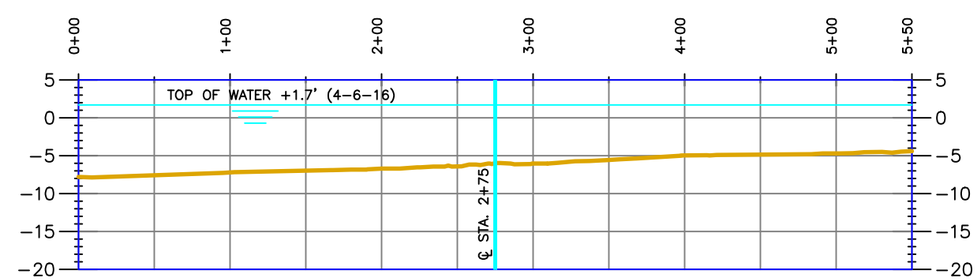

TRANSECT 10+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	16 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

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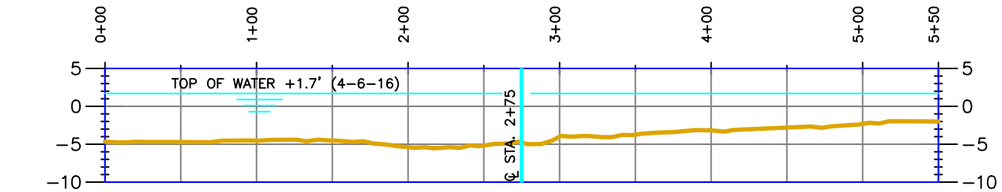
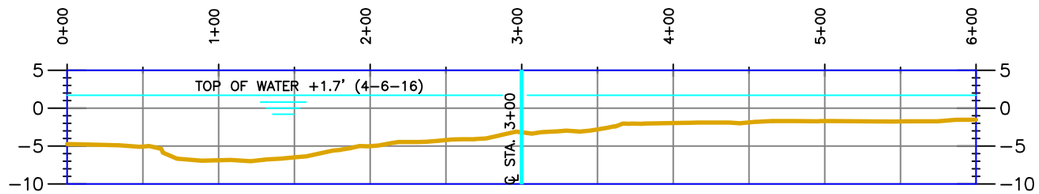


TRANSECT 15+00 (LOOKING SOUTHWESTERLY)



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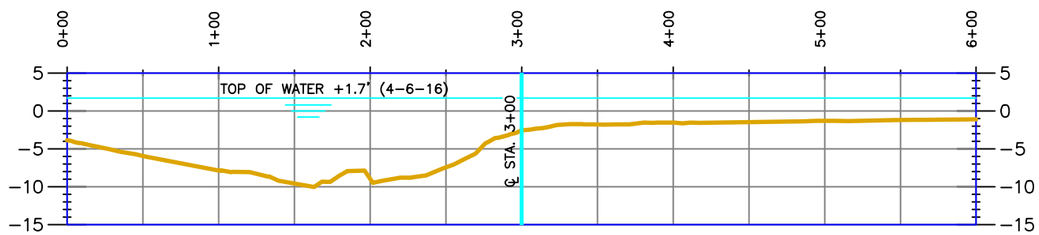

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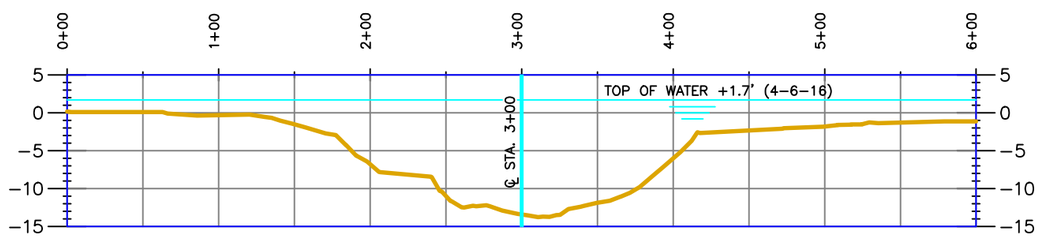

TRANSECT 30+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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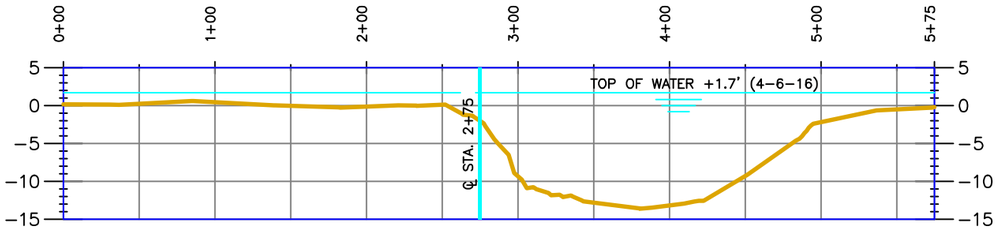
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	17 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 5/24/16 1:53:19pm



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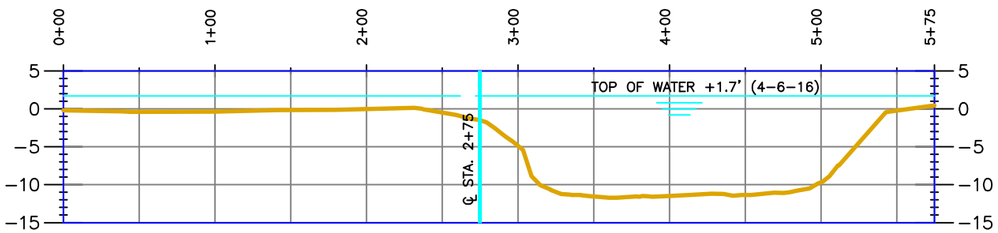

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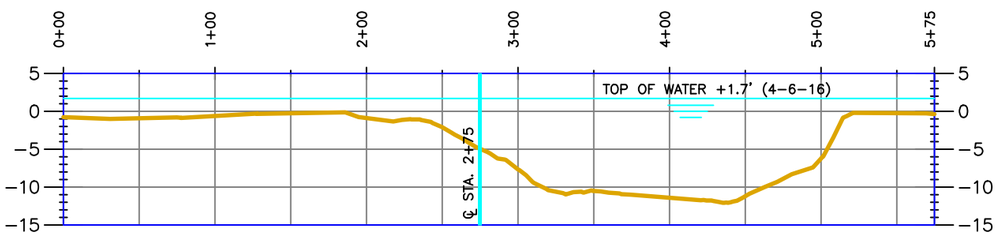

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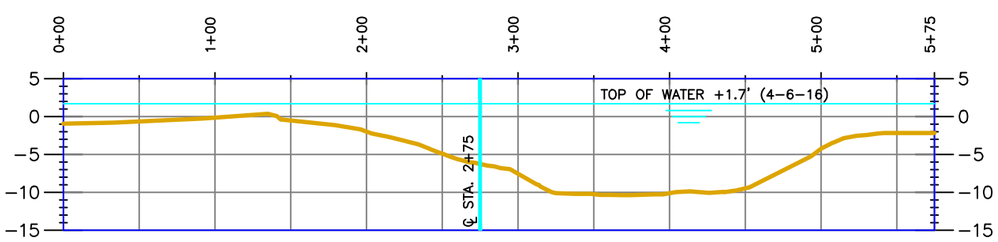

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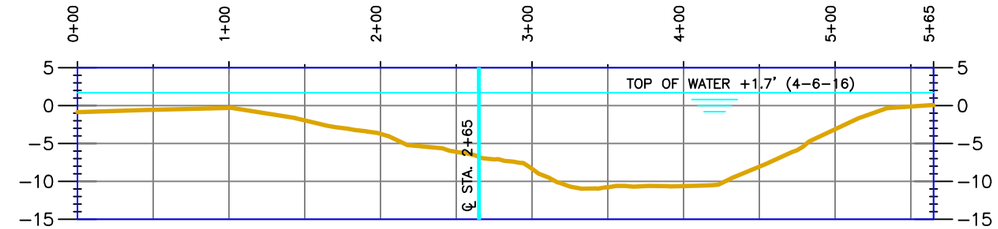

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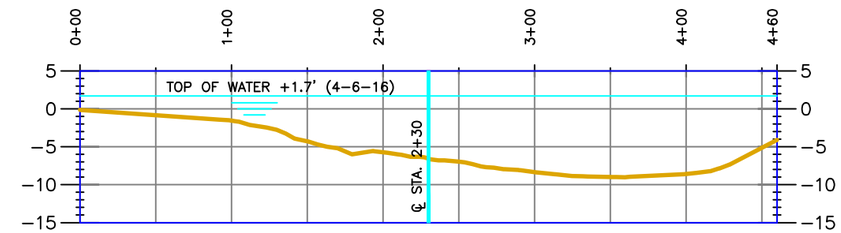

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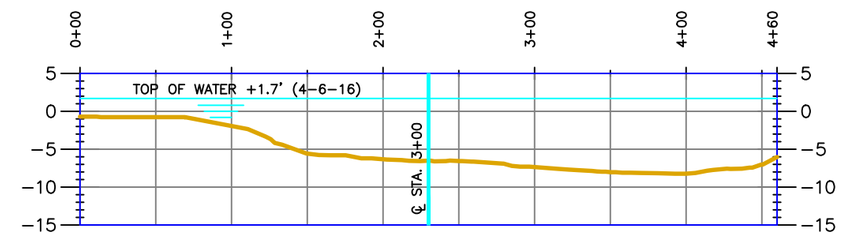

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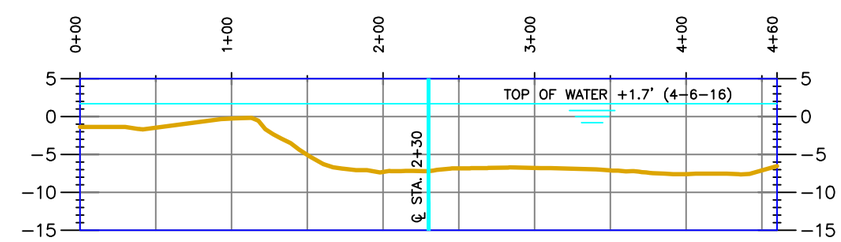

TRANSECT 70+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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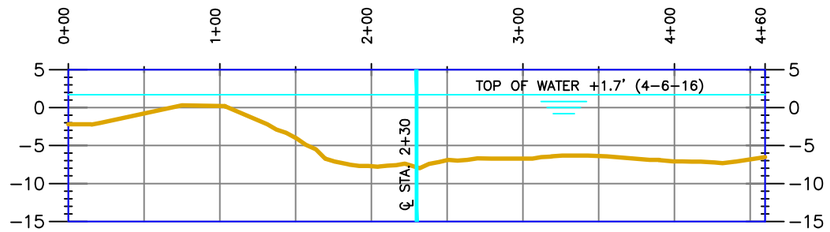
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

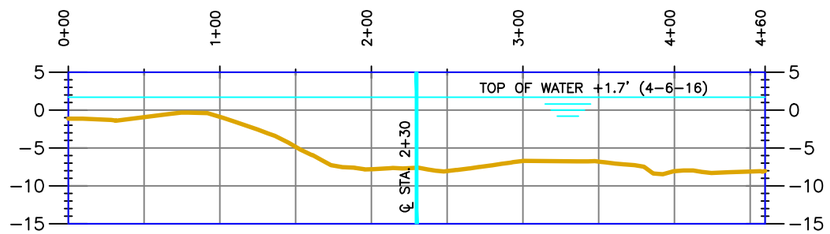
AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	18 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 5/24/16 1:30:36pm



TRANSECT 75+00 (LOOKING SOUTHWESTERLY)



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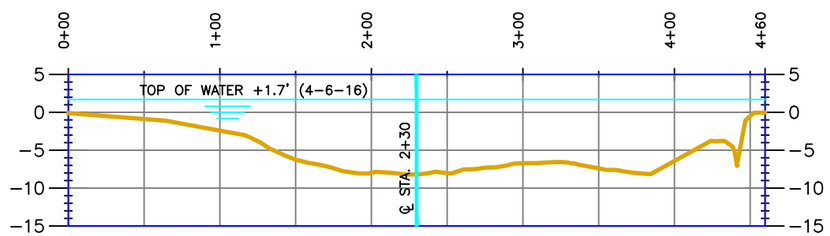

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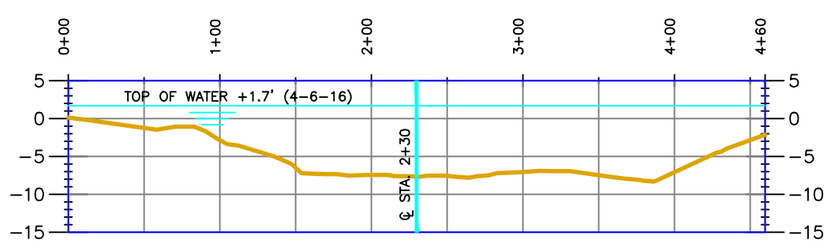

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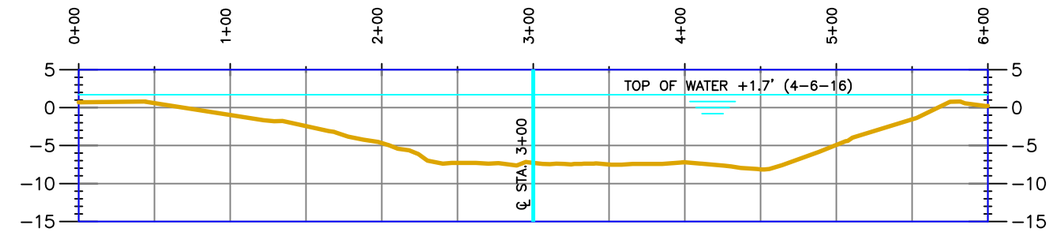

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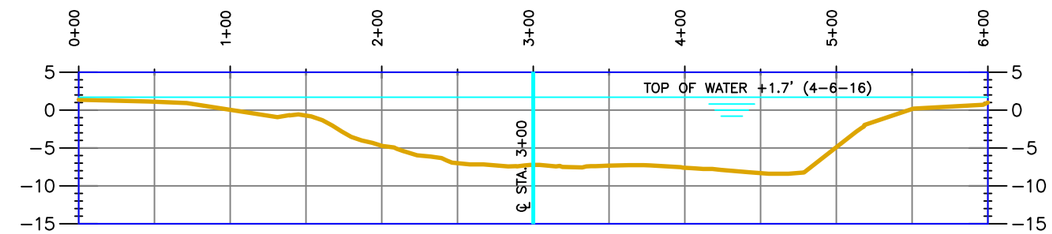

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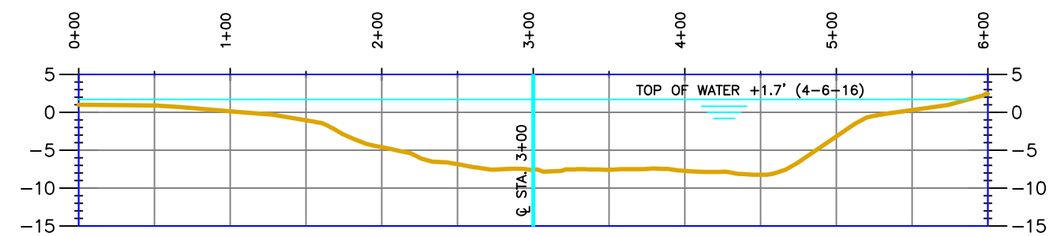

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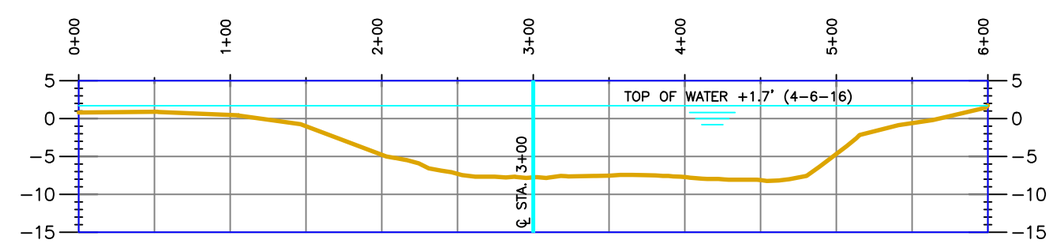

TRANSECT 110+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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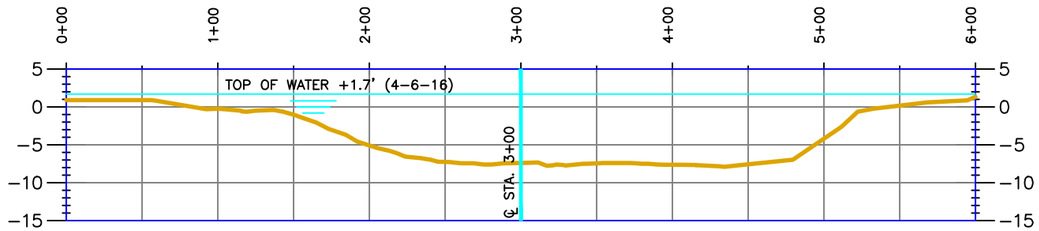
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	19 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 5/24/16 2:06:46pm



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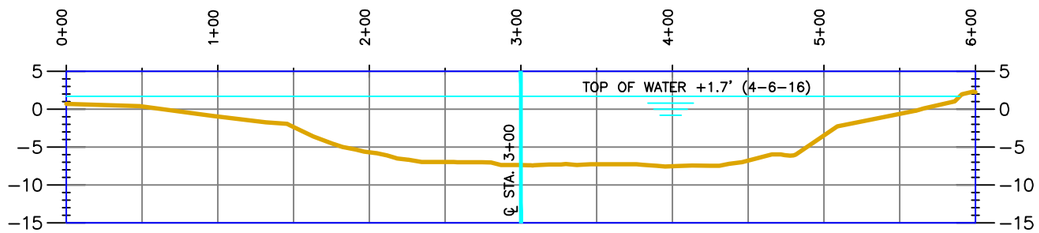

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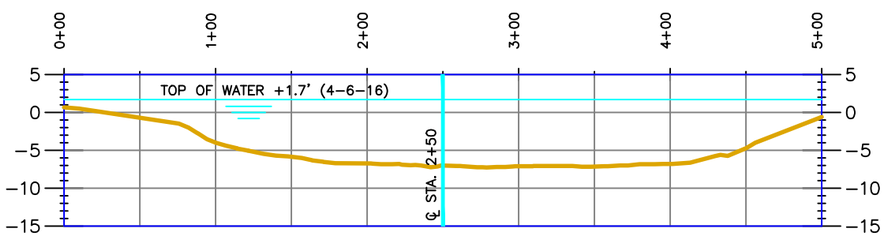

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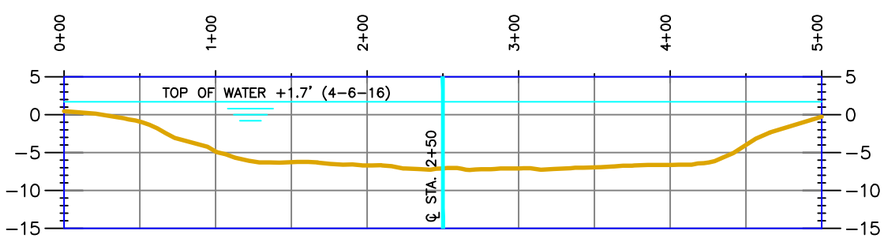

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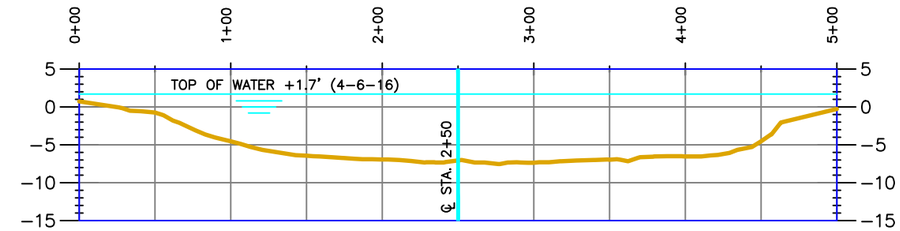

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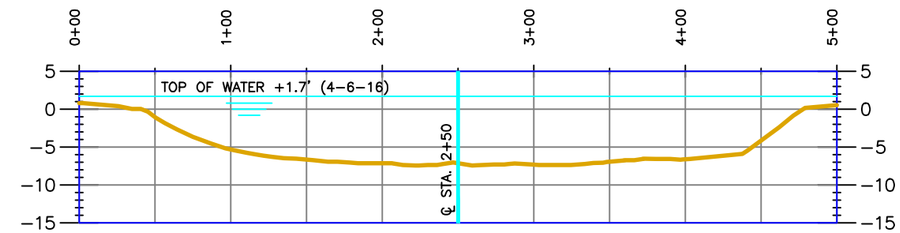

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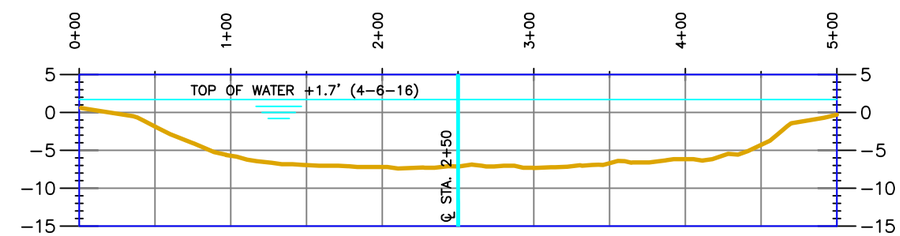

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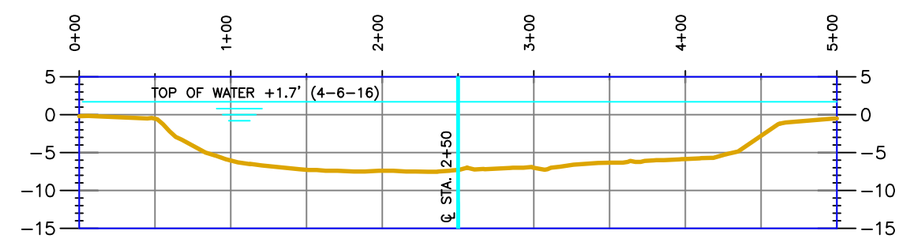

TRANSECT 150+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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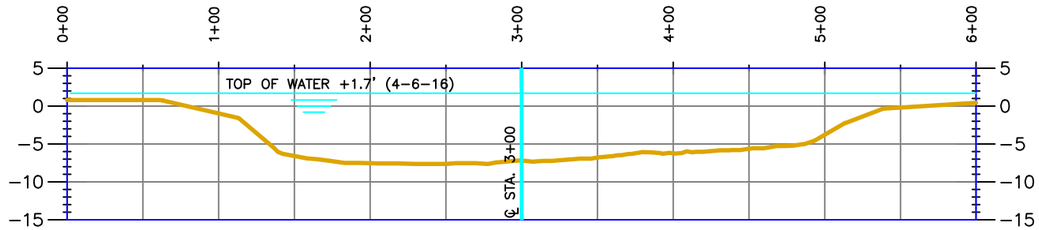
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	20 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 6/7/16 10:27:37am



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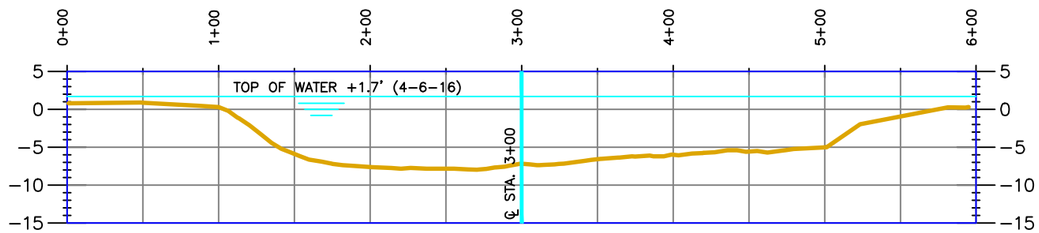

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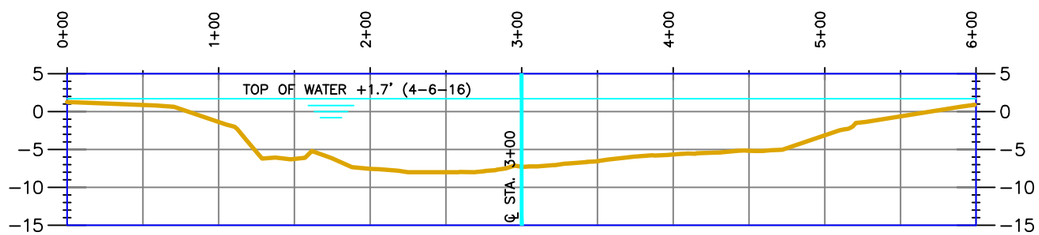

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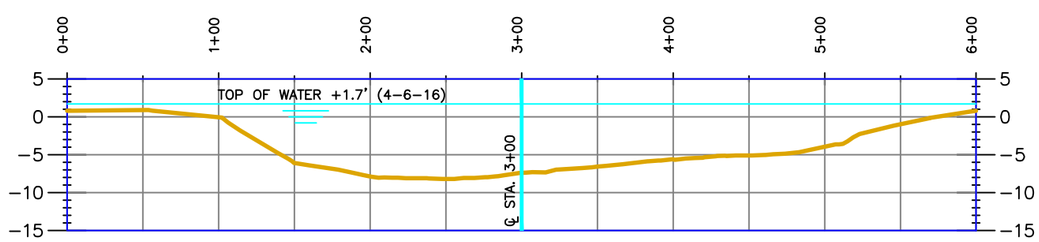

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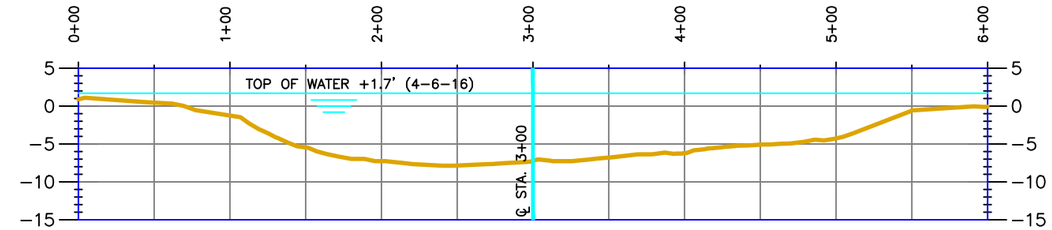

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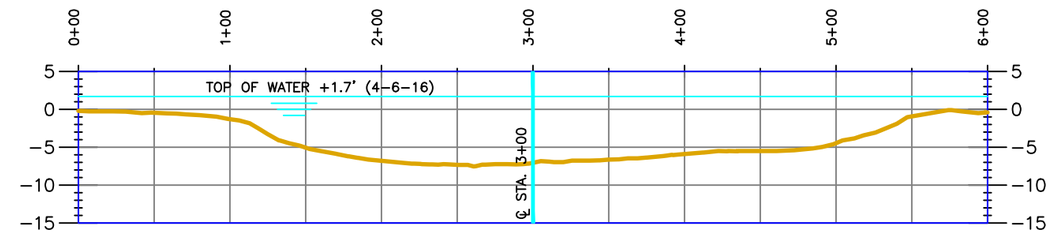

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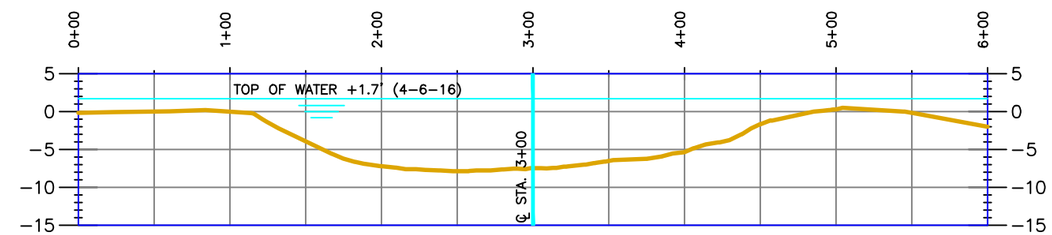

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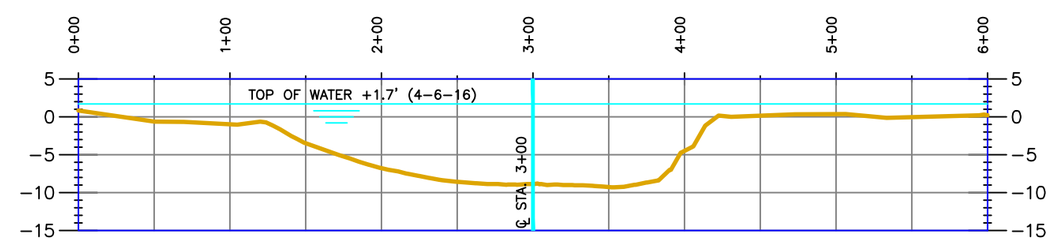

TRANSECT 190+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

mph
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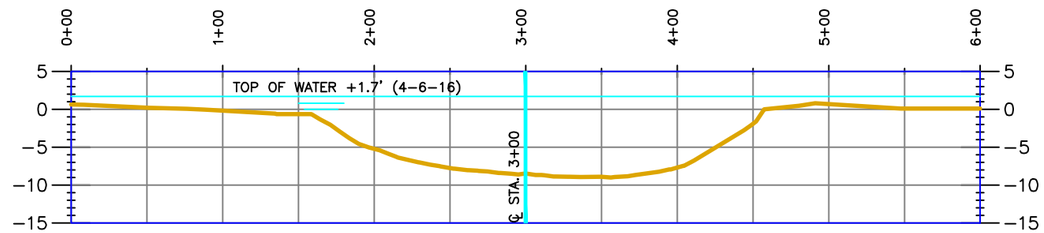
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	21 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 5/24/16 2:17:57pm



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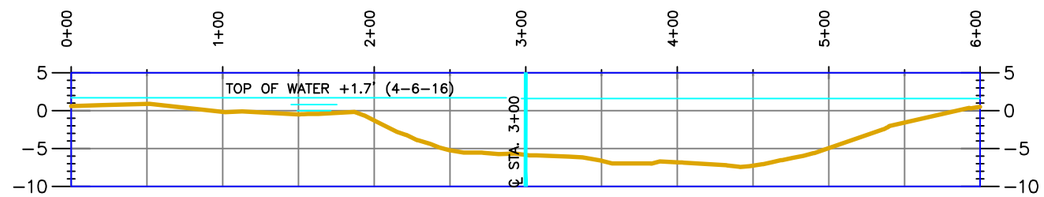

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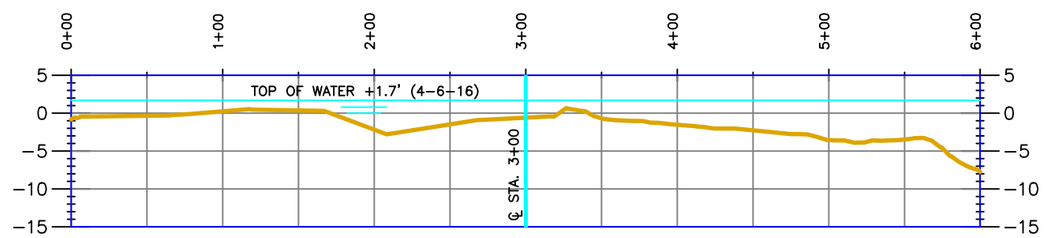

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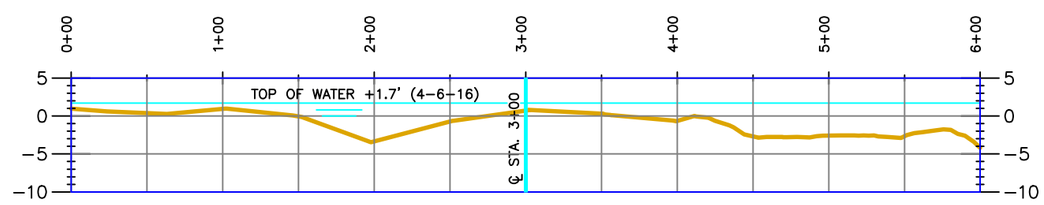

TRANSECT 206+06 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "A"

DRAWN BY:	NPB/TPC	SHEET:	22 OF 22
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:	12063-07	JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_A PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\42-63 - Channel A\AT-03 CHAN_A Plan.dwg PLOT DATE: 6/7/16 11:01:12am

GRAPHIC SCALE

0 50' 100' 200'

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\64-72 - Channel B\AT-03 CHAN_B PLAN.dwg PLOT DATE: 6/7/16 8:04:31am

mph
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 1
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	1 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

GRAPHIC SCALE

0 50' 100' 200'

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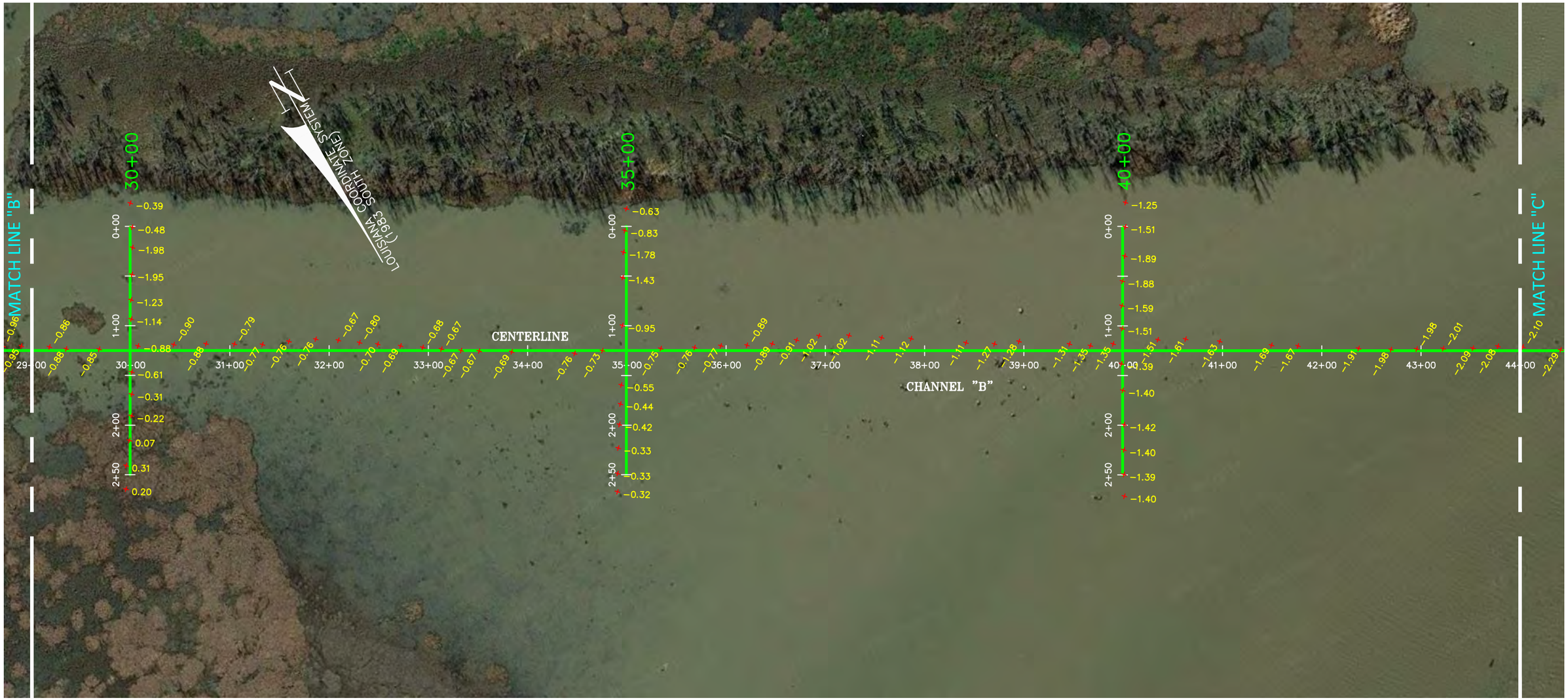
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 2
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	2 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\64-72 - Channel B\AT-03 CHAN_B PLAN.dwg PLOT DATE: 6/7/16 8:05:22am



GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 3
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	3 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

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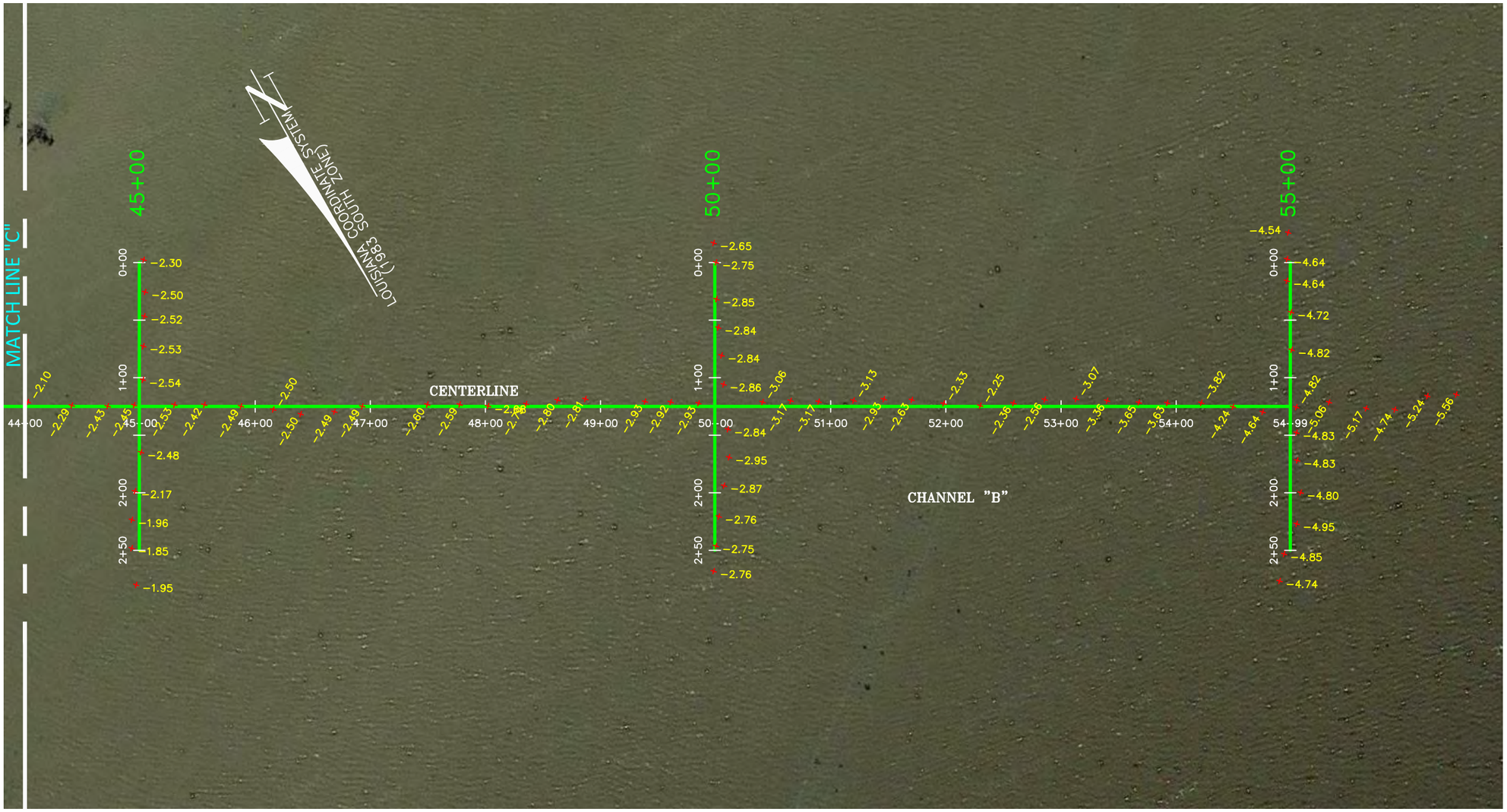

GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 4
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	4 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

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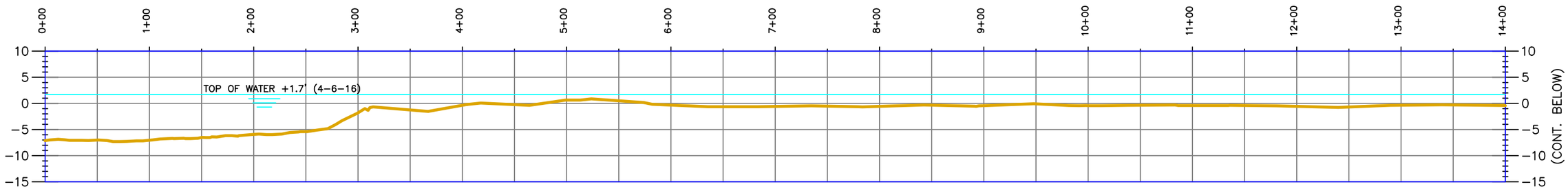
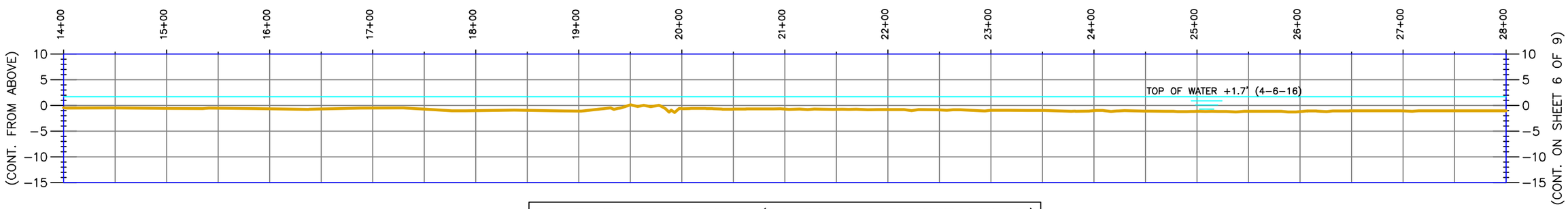


PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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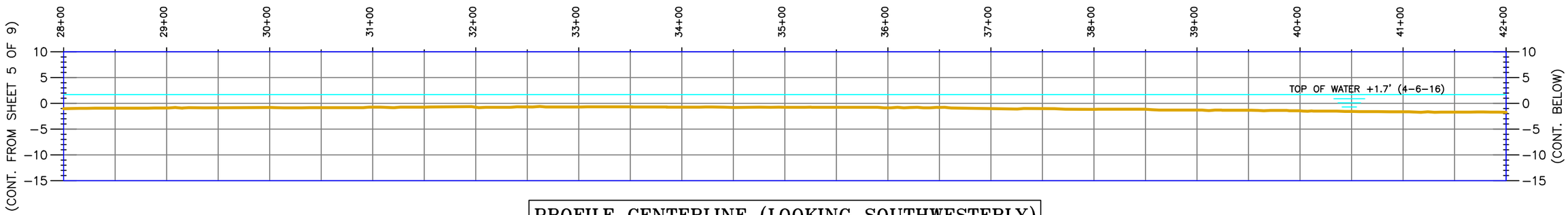
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

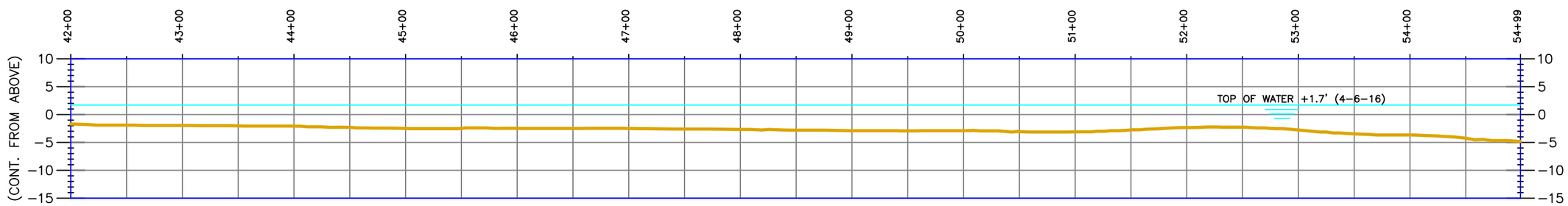
AT-03
PROFILES
FOR
CHANNEL "B" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	5 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\64-72 - Channel B\AT-03 CHAN_B PLAN.dwg PLOT DATE: 6/7/16 11:30:29am



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PROFILES
FOR
CHANNEL "B" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	6 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

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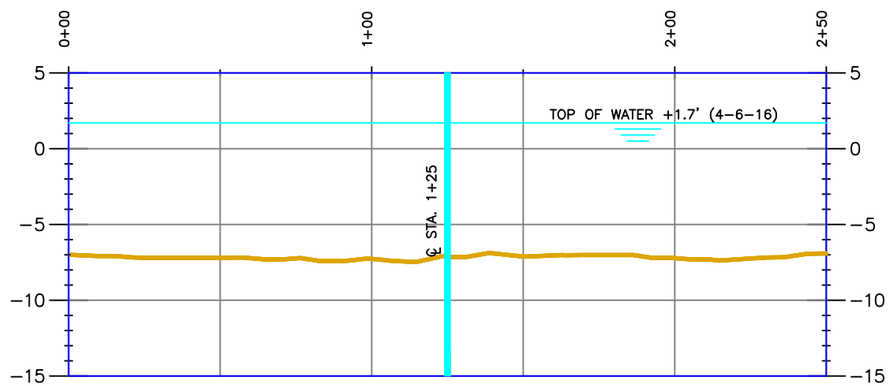
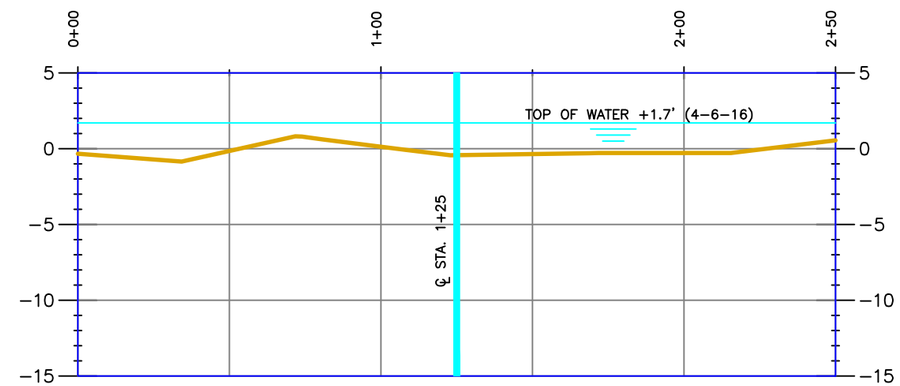
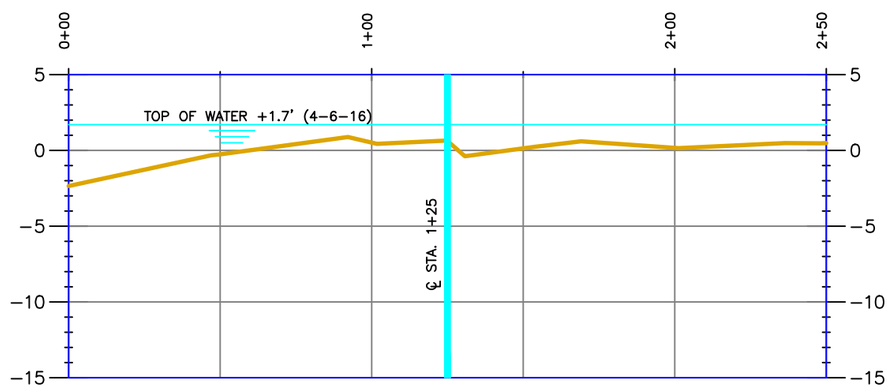


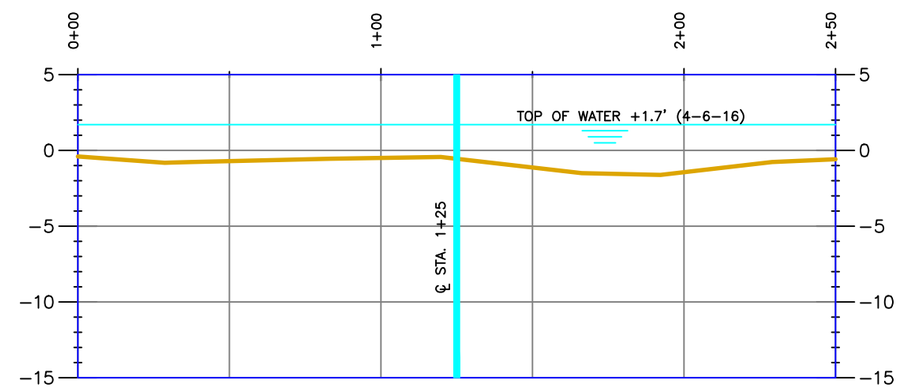
TRANSECT 0+00 (LOOKING NORTHWESTERLY)



TRANSECT 10+00 (LOOKING NORTHWESTERLY)



TRANSECT 5+00 (LOOKING NORTHWESTERLY)



TRANSECT 15+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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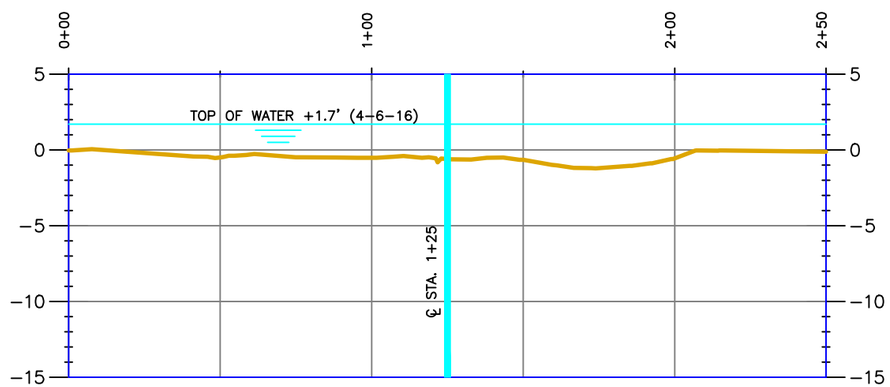
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

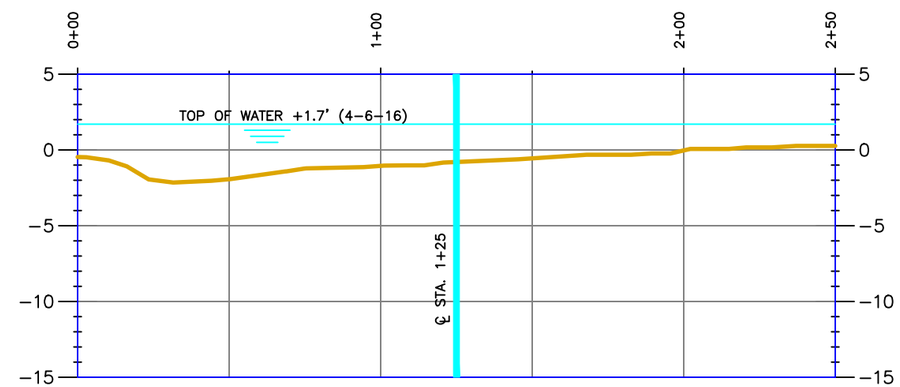
AT-03
TRANSECTS
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	7 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\64-72 - Channel B\AT-03 CHAN_B PLAN.dwg PLOT DATE: 5/24/16 4:01:22pm



TRANSECT 20+00 (LOOKING NORTHWESTERLY)



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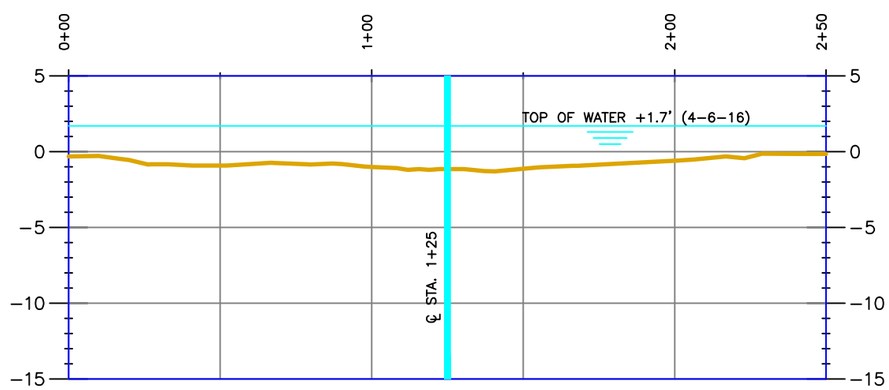

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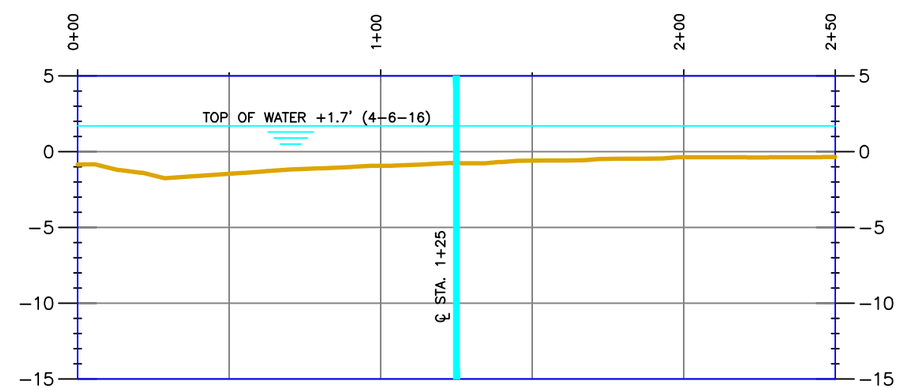

TRANSECT 35+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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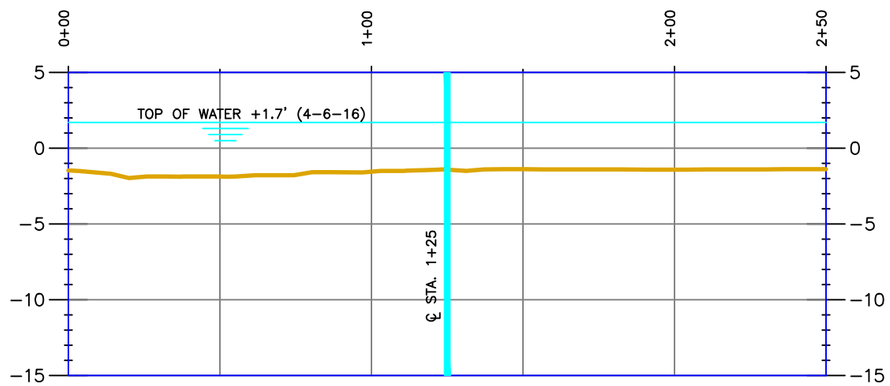
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	8 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\64-72 - Channel B\AT-03 CHAN_B PLAN.dwg PLOT DATE: 5/24/16 4:14:20pm



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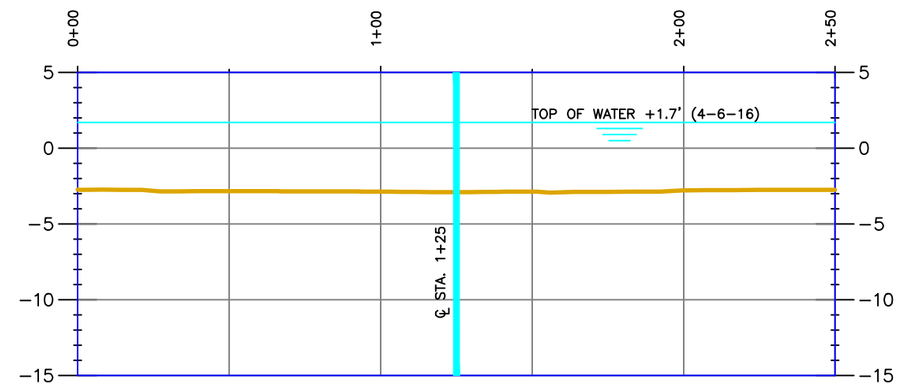

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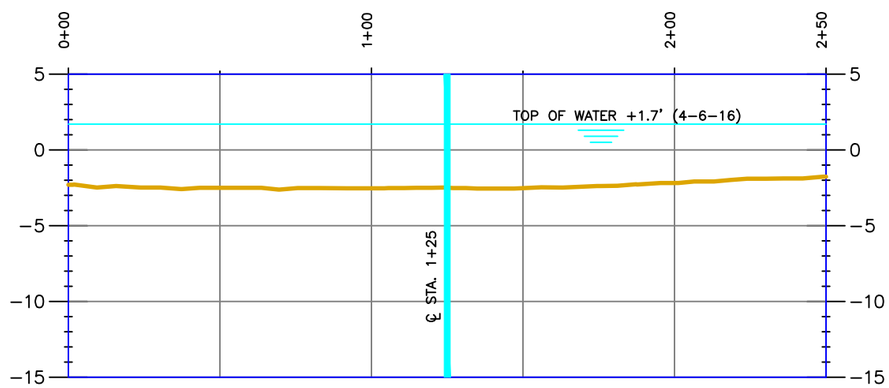

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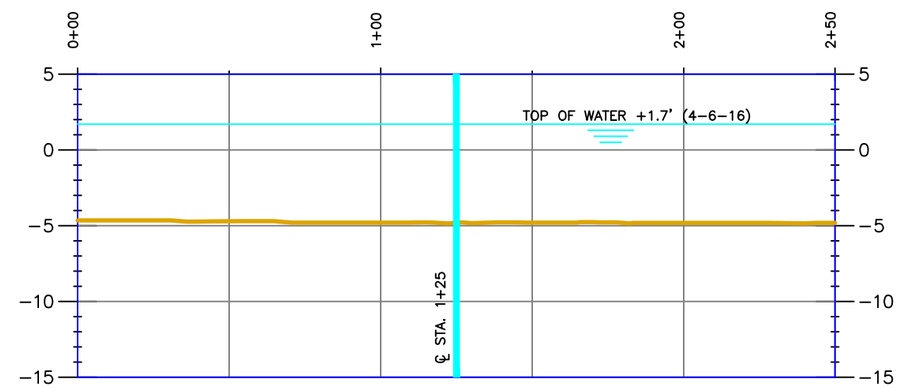

TRANSECT 55+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "B"

DRAWN BY:	NPB/TPC	SHEET:	9 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_B PLAN.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\64-72 - Channel B\AT-03 CHAN_B PLAN.dwg PLOT DATE: 5/24/16 4:45:04pm

GRAPHIC SCALE

0 50' 100' 200'

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 1
FOR
CHANNEL "C"

DRAWN BY:	NPB/TPC	SHEET:	1 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_C.DWG			

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GRAPHIC SCALE

0 50' 100' 200'

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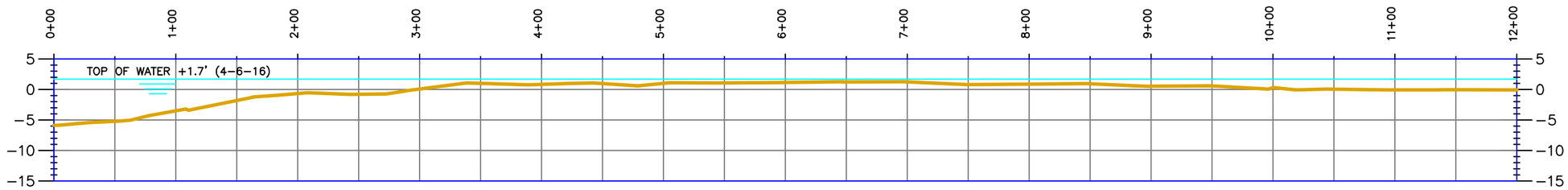
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

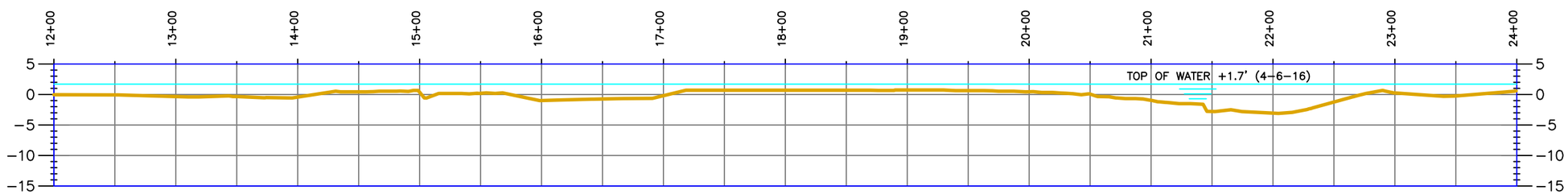
AT-03
PLAN VIEW 2
FOR
CHANNEL "C"

DRAWN BY:	NPB/TPC	SHEET:	2 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_C.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\73-77 - Channel C\AT-03 CHAN_C.dwg PLOT DATE: 6/7/16 8:16:33am



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)



PROFILE CENTERLINE (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE

0 50' 100' 200' 300'

0 10' 20' 40' 60'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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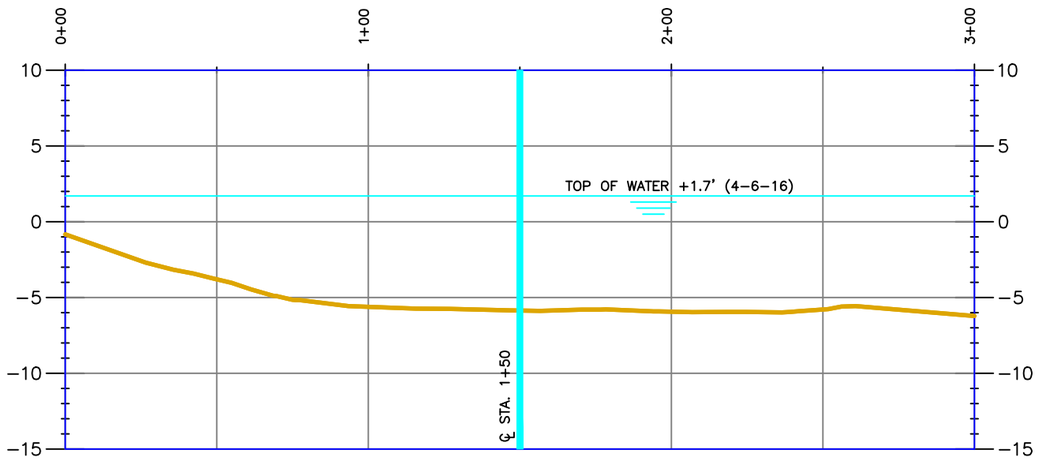
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

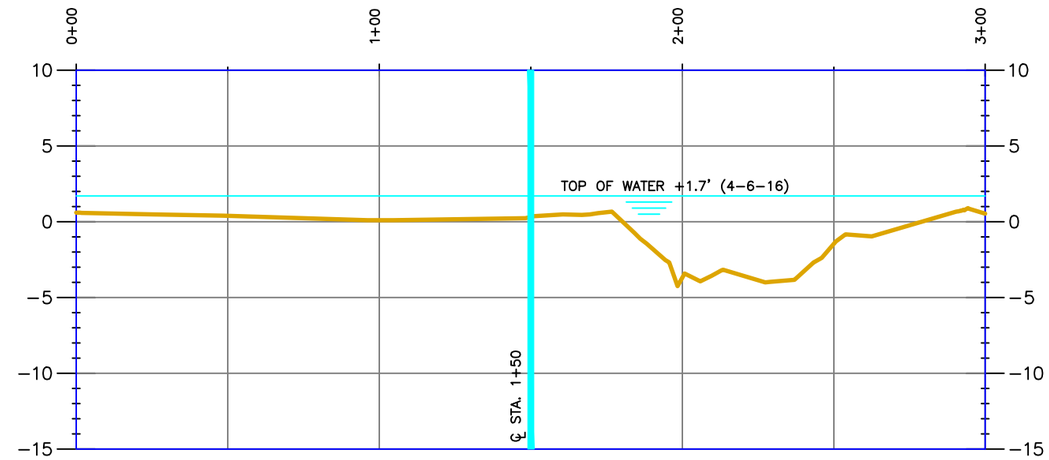
AT-03
PROFILES
FOR
CHANNEL "C" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	3 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_C.DWG			

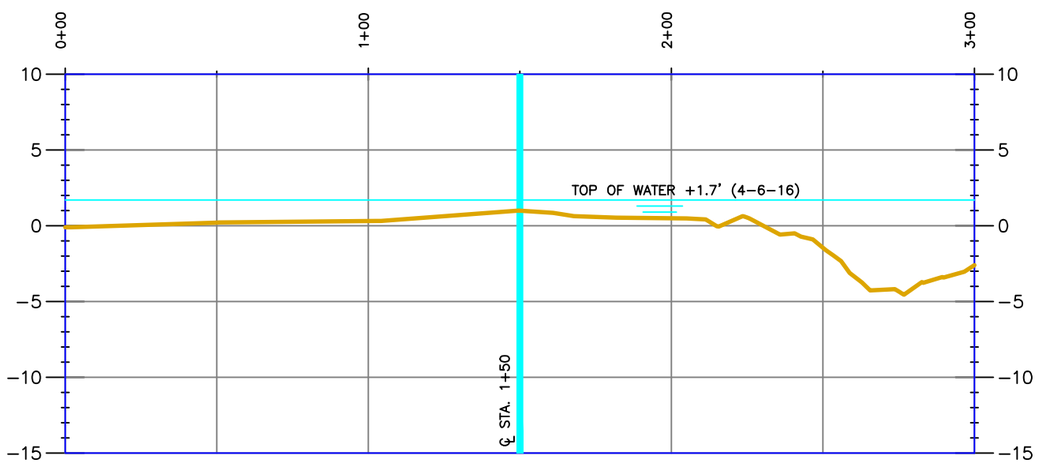
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\73-77 - Channel C\AT-03 CHAN_C.dwg PLOT DATE: 5/25/16 11:18:24am



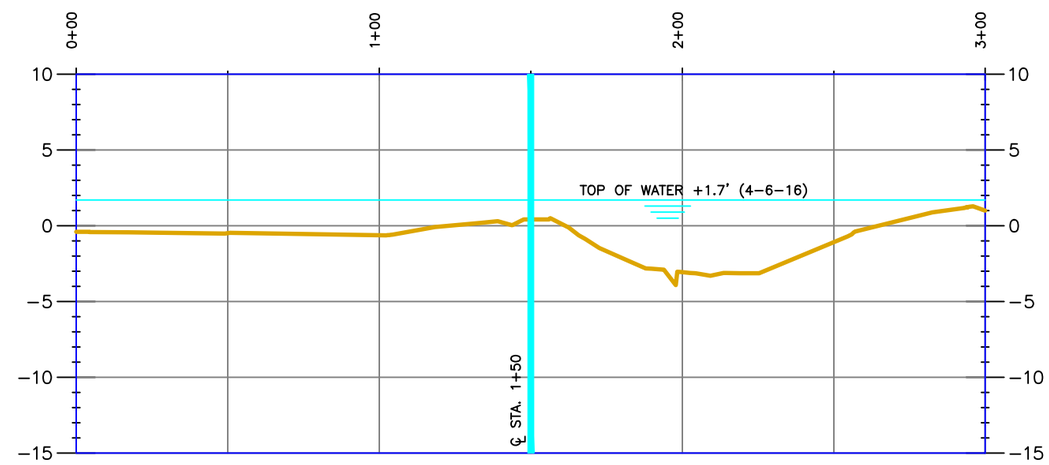
TRANSECT 0+00 (LOOKING SOUTHWESTERLY)



TRANSECT 10+00 (LOOKING SOUTHWESTERLY)



TRANSECT 5+00 (LOOKING SOUTHWESTERLY)



TRANSECT 15+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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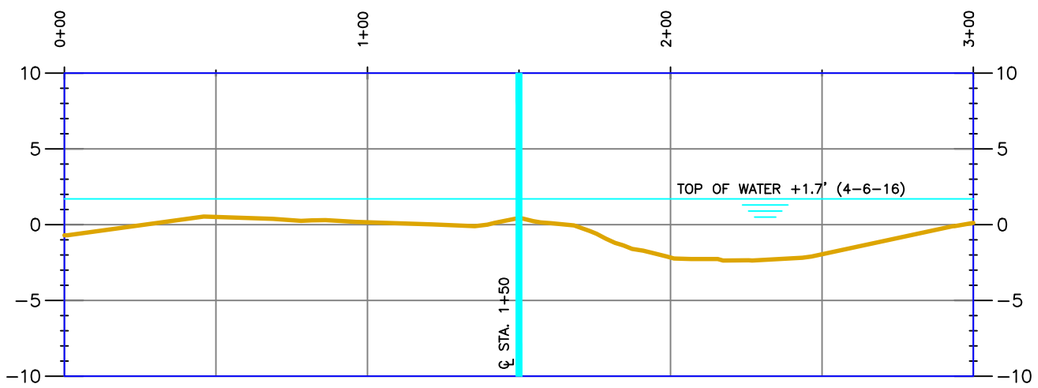
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

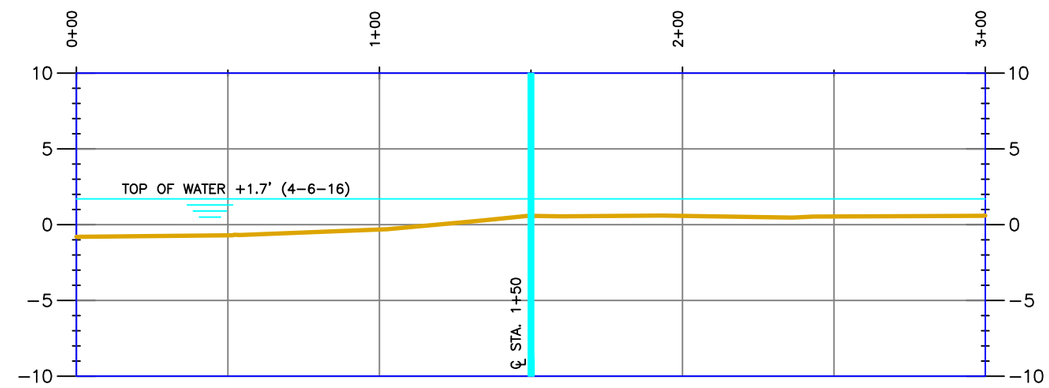
AT-03
TRANSECTS
FOR
CHANNEL "C"

DRAWN BY:	NPB/TPC	SHEET:	4 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_C.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\73-77 - Channel C\AT-03 CHAN_C.dwg PLOT DATE: 6/7/16 3:55:37pm



TRANSECT 20+00 (LOOKING SOUTHWESTERLY)



TRANSECT 24+00 (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "C"

DRAWN BY:	NPB/TPC	SHEET:	5 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_C.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\73-77 - Channel C\AT-03 CHAN_C.dwg PLOT DATE: 5/25/16 1:25:46pm

GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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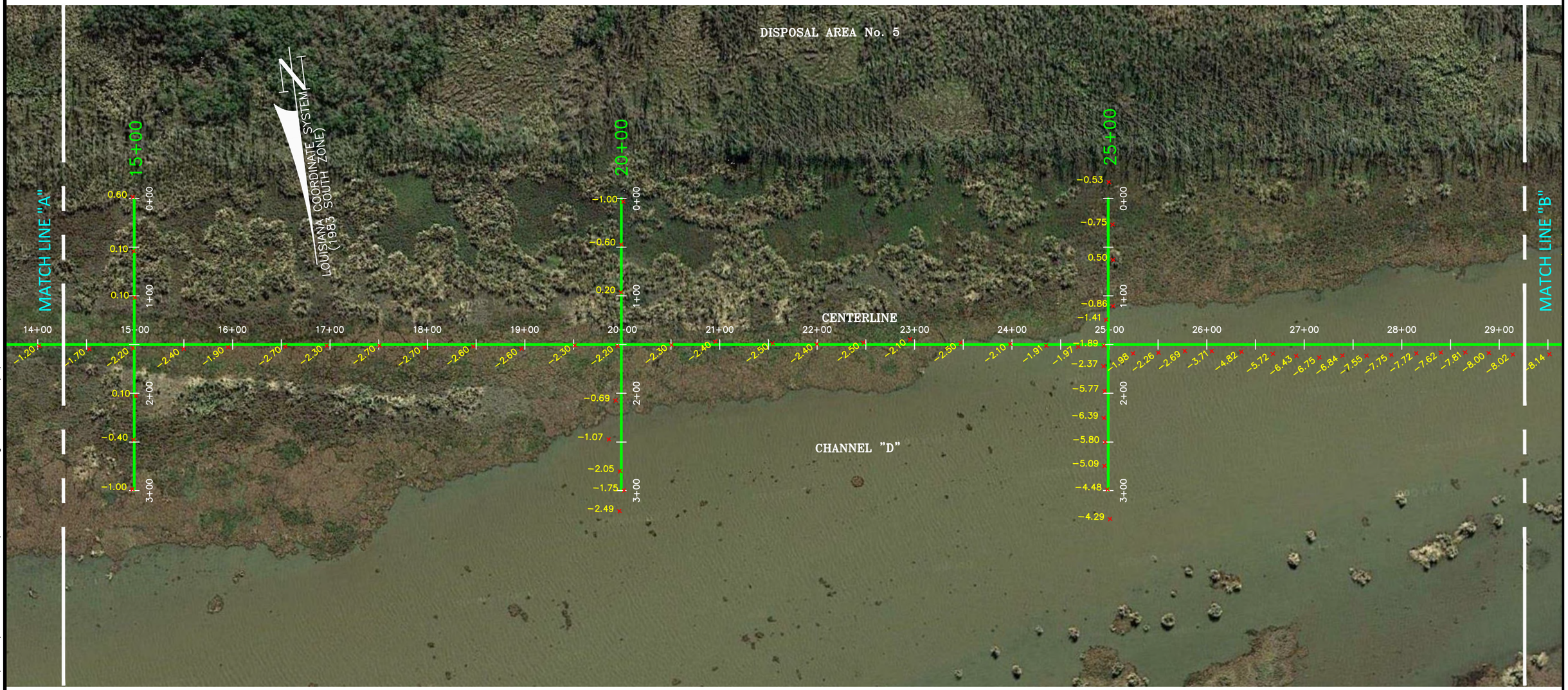
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 1
FOR
CHANNEL "D"

DRAWN BY:	NPB/TPC	SHEET:	1 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 6/7/16 8:19:04am



GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 2
FOR
CHANNEL "D"

DRAWN BY:	NPB/TPC	SHEET:	2 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 6/7/16 8:19:59am

GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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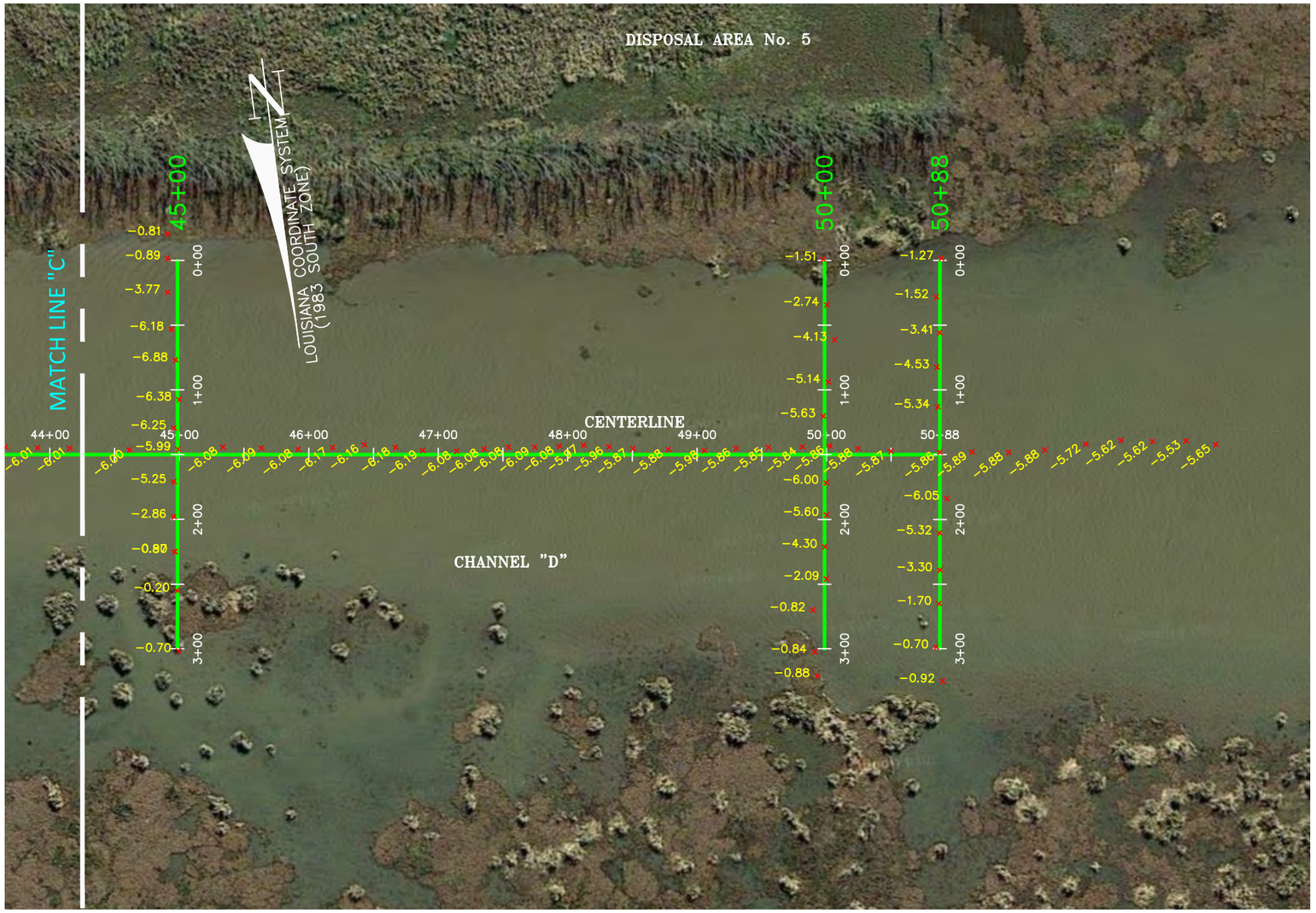
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 3
FOR
CHANNEL "D"

DRAWN BY:	NPB/TPC	SHEET:	3 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 6/7/16 8:20:47am



GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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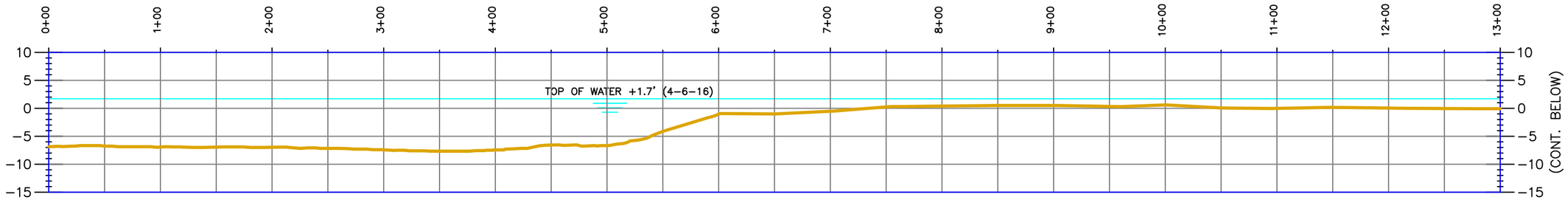
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

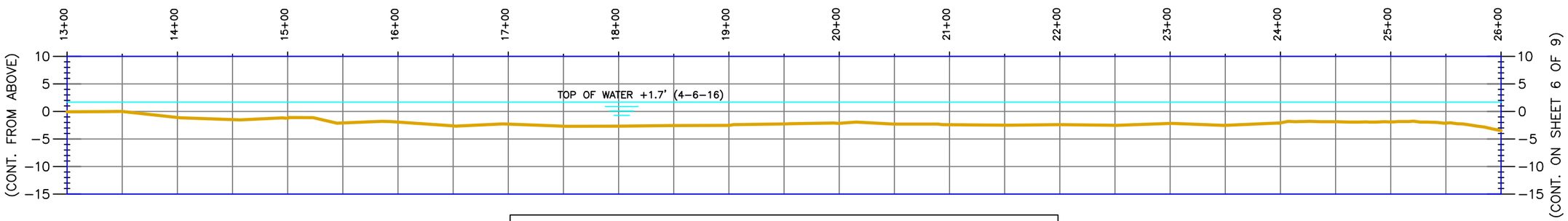
AT-03
PLAN VIEW 4
FOR
CHANNEL "D"

DRAWN BY: NPB/TPC	SHEET: 4 OF 9
CHKD./APPD. BY: JCM	SCALE: SHOWN
UPDATED BY:	DATE: 04/07/16
DATA BASE:	JOB NO. 12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG	

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 6/7/16 8:23:14am



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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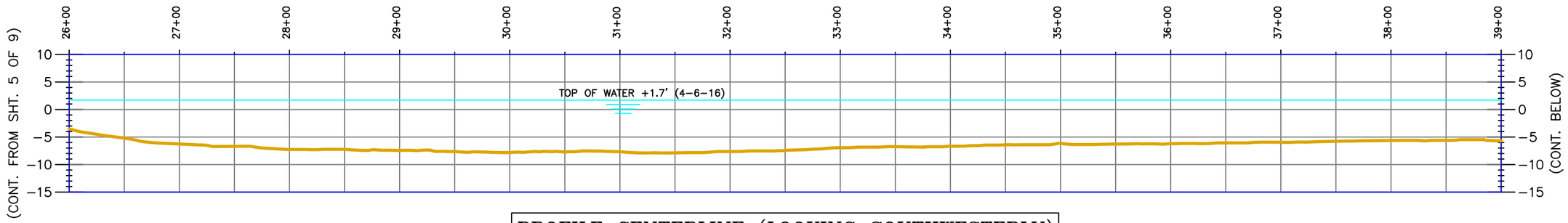
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

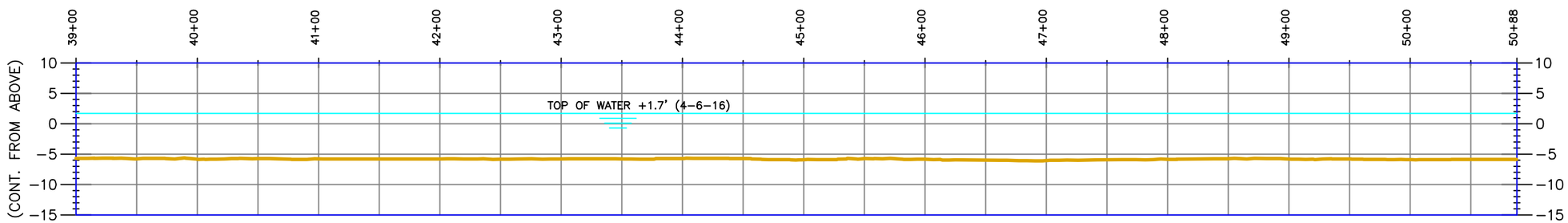
AT-03
PROFILES
FOR
CHANNEL "D" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	5 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 5/25/16 2:38:15pm



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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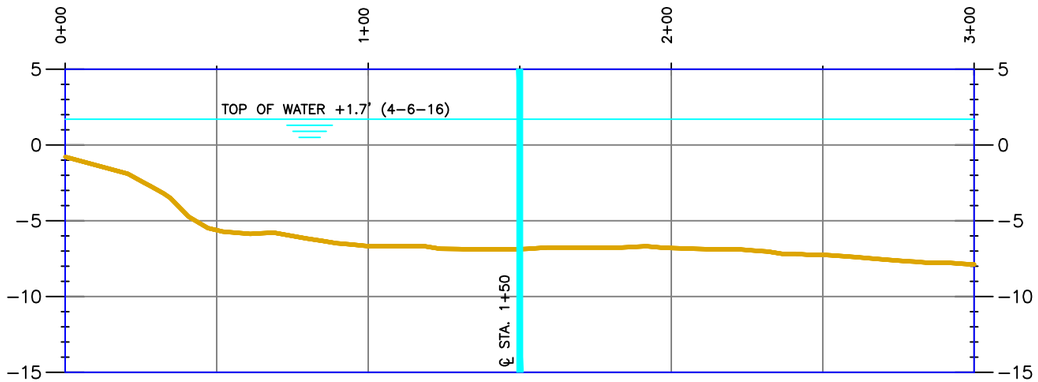
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

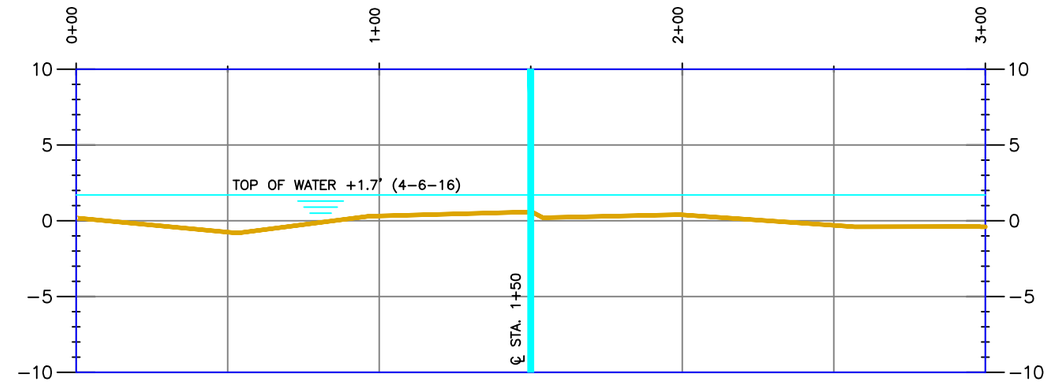
AT-03
PROFILES
FOR
CHANNEL "D" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	6 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

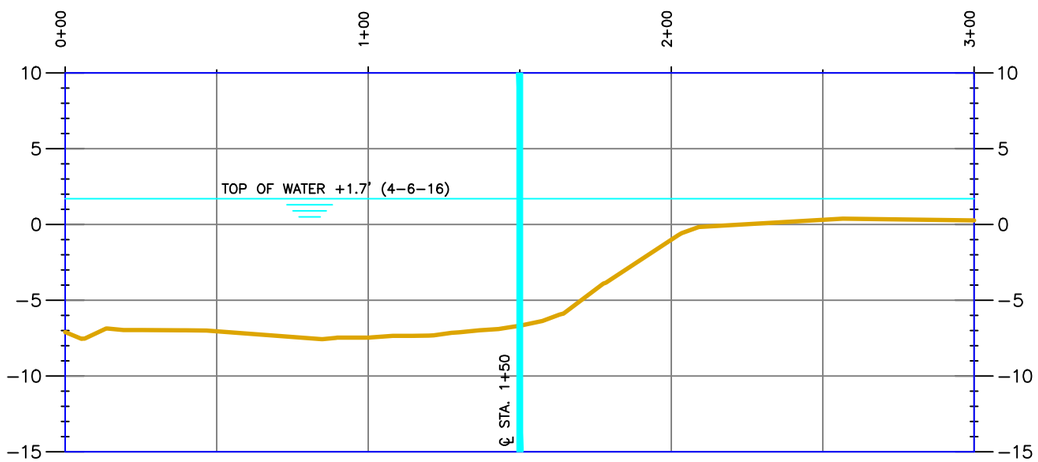
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 5/25/16 2:39:15pm



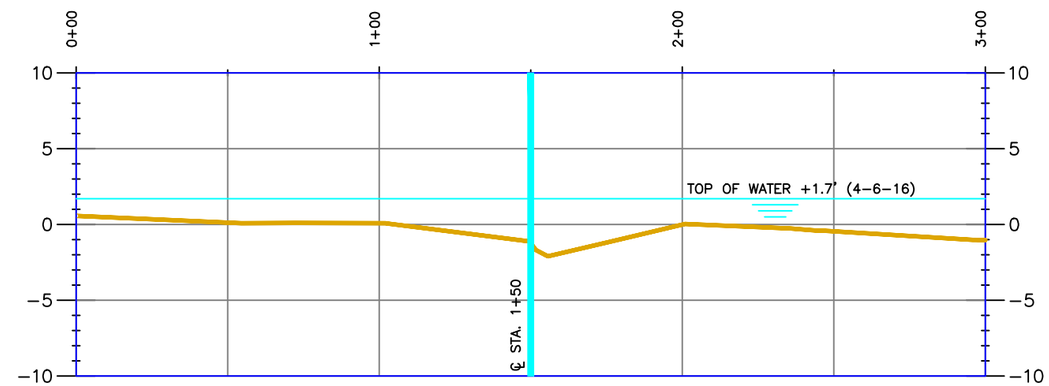
TRANSECT 0+00 (LOOKING NORTHWESTERLY)



TRANSECT 10+00 (LOOKING NORTHWESTERLY)



TRANSECT 5+00 (LOOKING NORTHWESTERLY)



TRANSECT 15+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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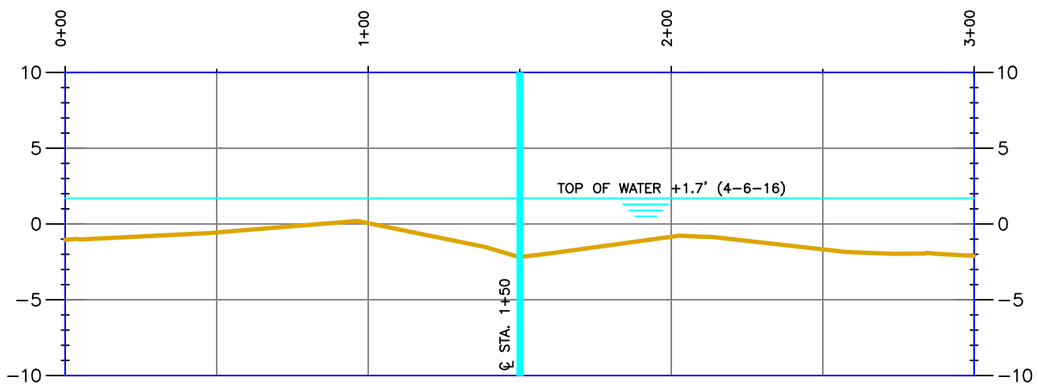
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

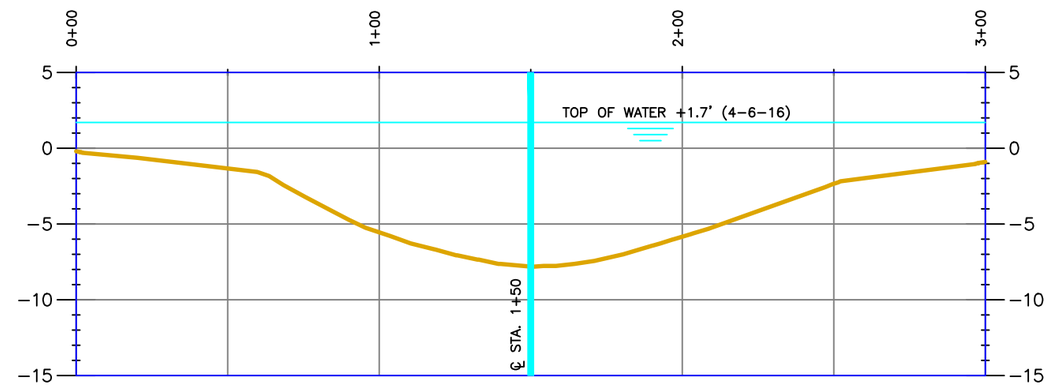
AT-03
TRANSECTS
FOR
CHANNEL "D"

DRAWN BY:	NPB/TPC	SHEET:	7 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\78-86 - Channel D\AT-03 CHAN_D.dwg PLOT DATE: 5/25/16 2:40:14pm



TRANSECT 20+00 (LOOKING NORTHWESTERLY)



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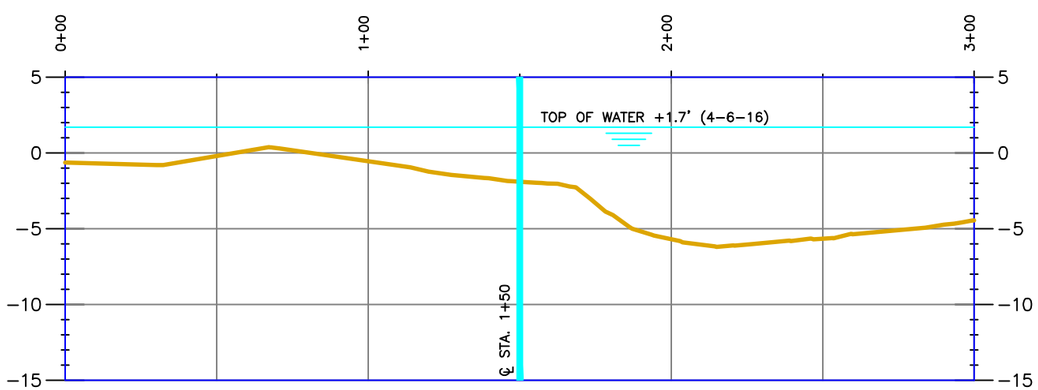
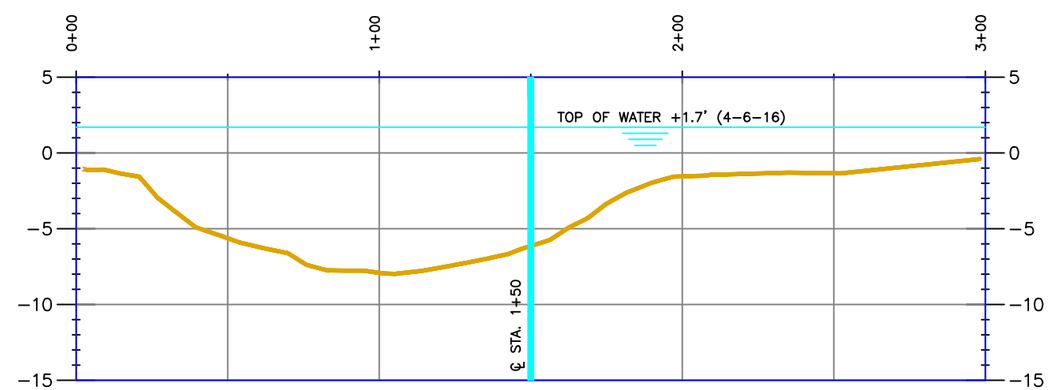


TRANSECT 25+00 (LOOKING NORTHWESTERLY)



TRANSECT 35+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "D"

DRAWN BY:	NPB/TPC	SHEET:	8 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

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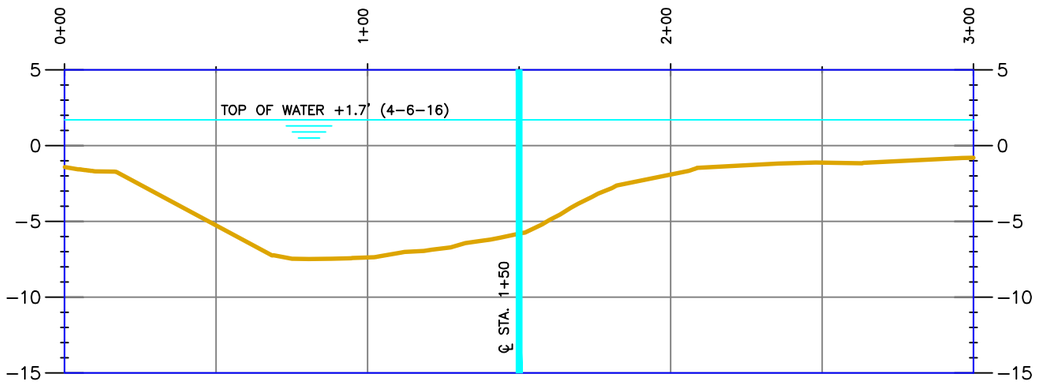
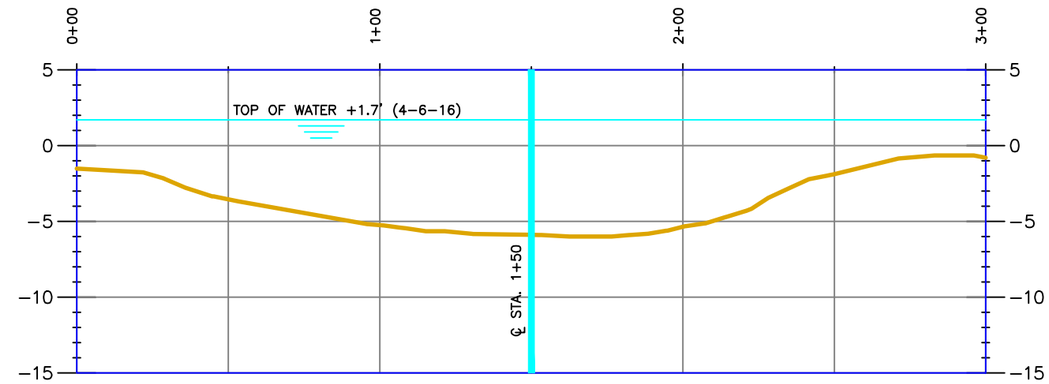
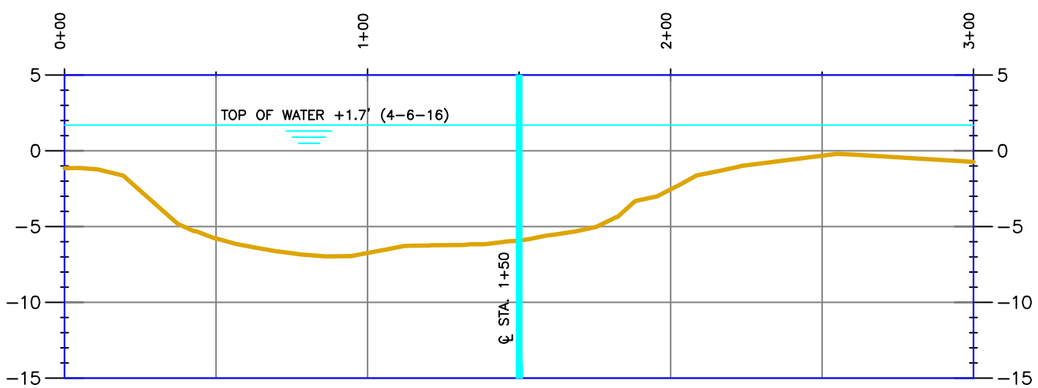


TRANSECT 40+00 (LOOKING NORTHWESTERLY)



TRANSECT 50+00 (LOOKING NORTHWESTERLY)



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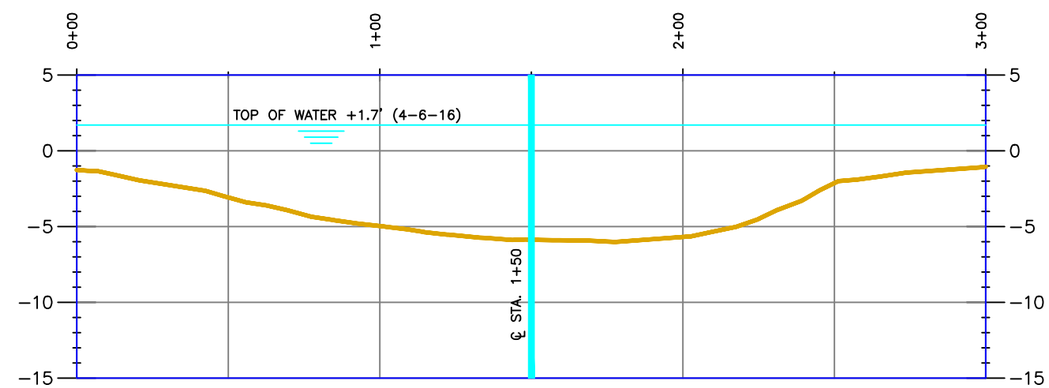

TRANSECT 50+88 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "D"

DRAWN BY:	NPB/TPC	SHEET:	9 OF 9
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_D.DWG			

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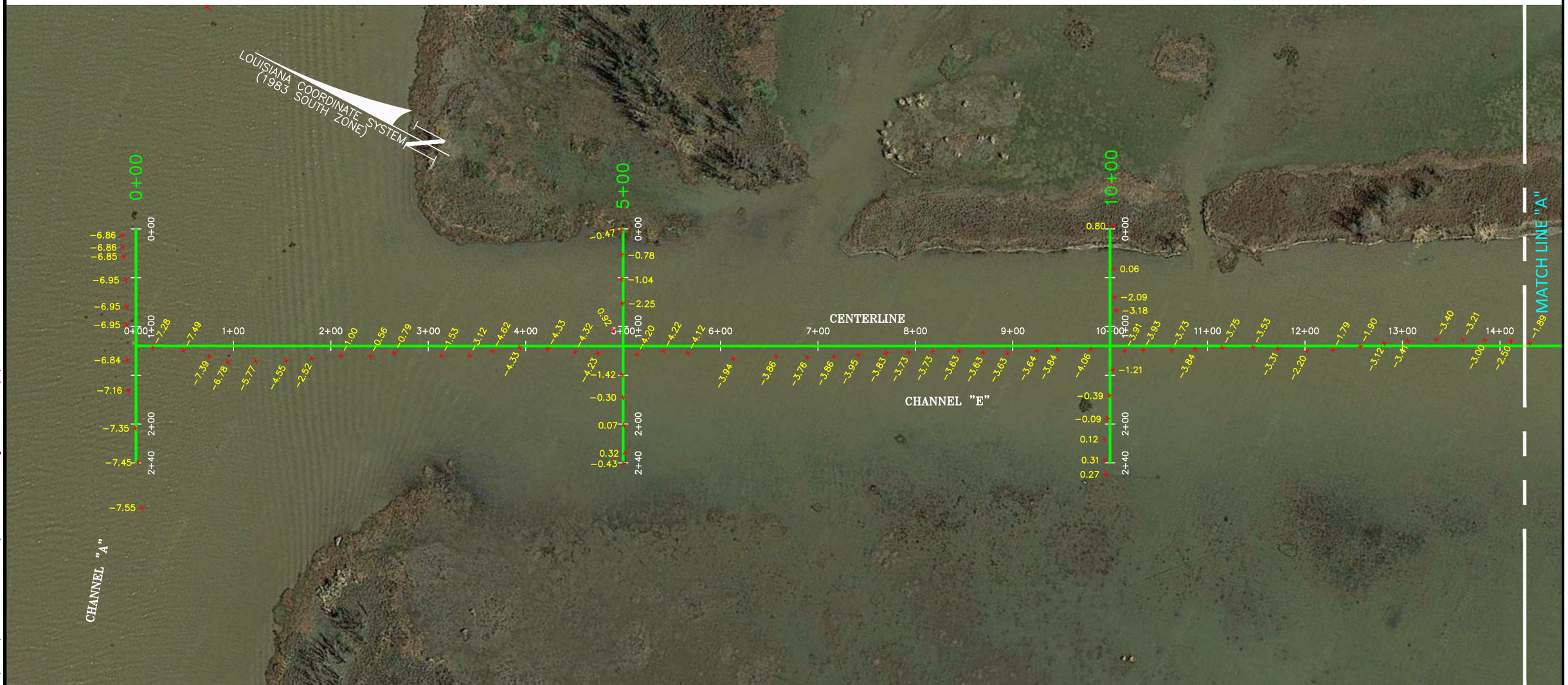

GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.

SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS

P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 1
FOR
CHANNEL "E"

DRAWN BY:	NPB/TPC	SHEET:	1 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_E.DWG			

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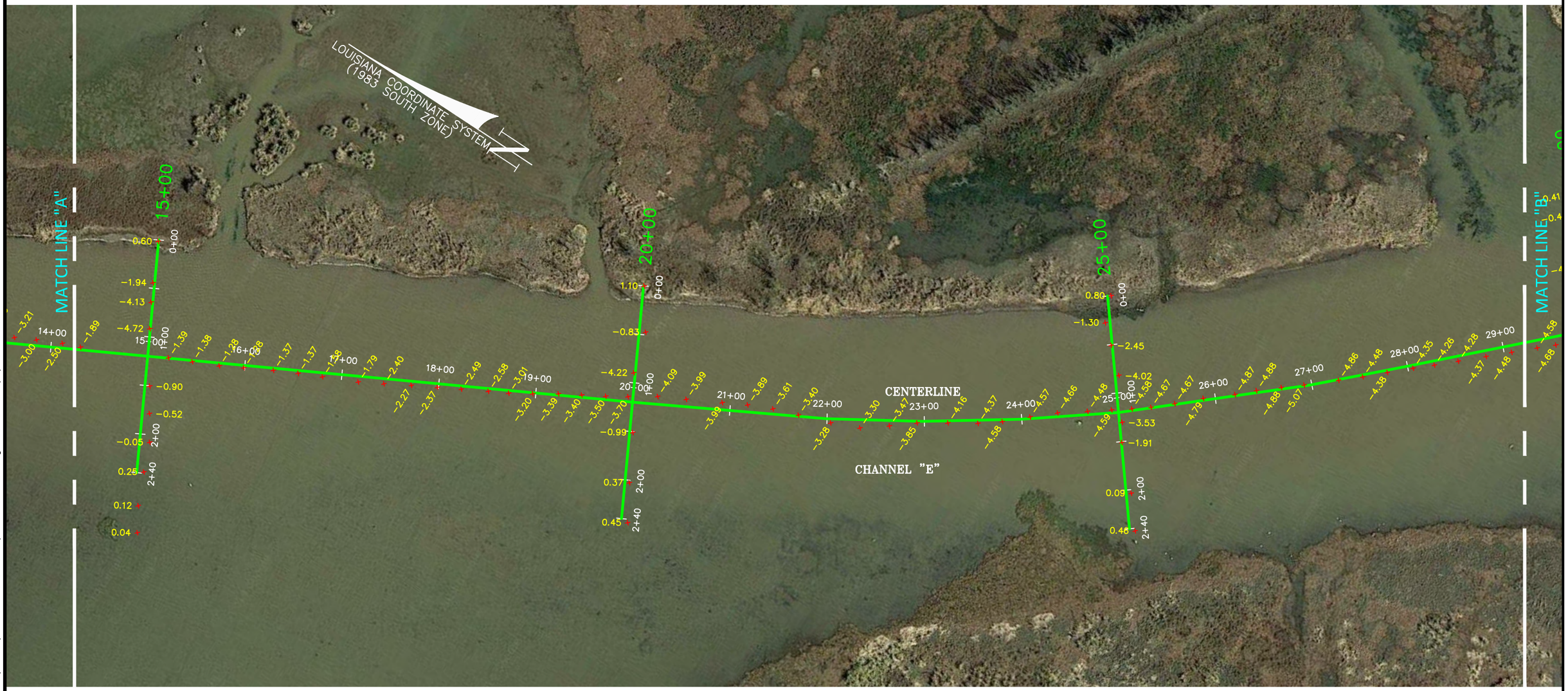

GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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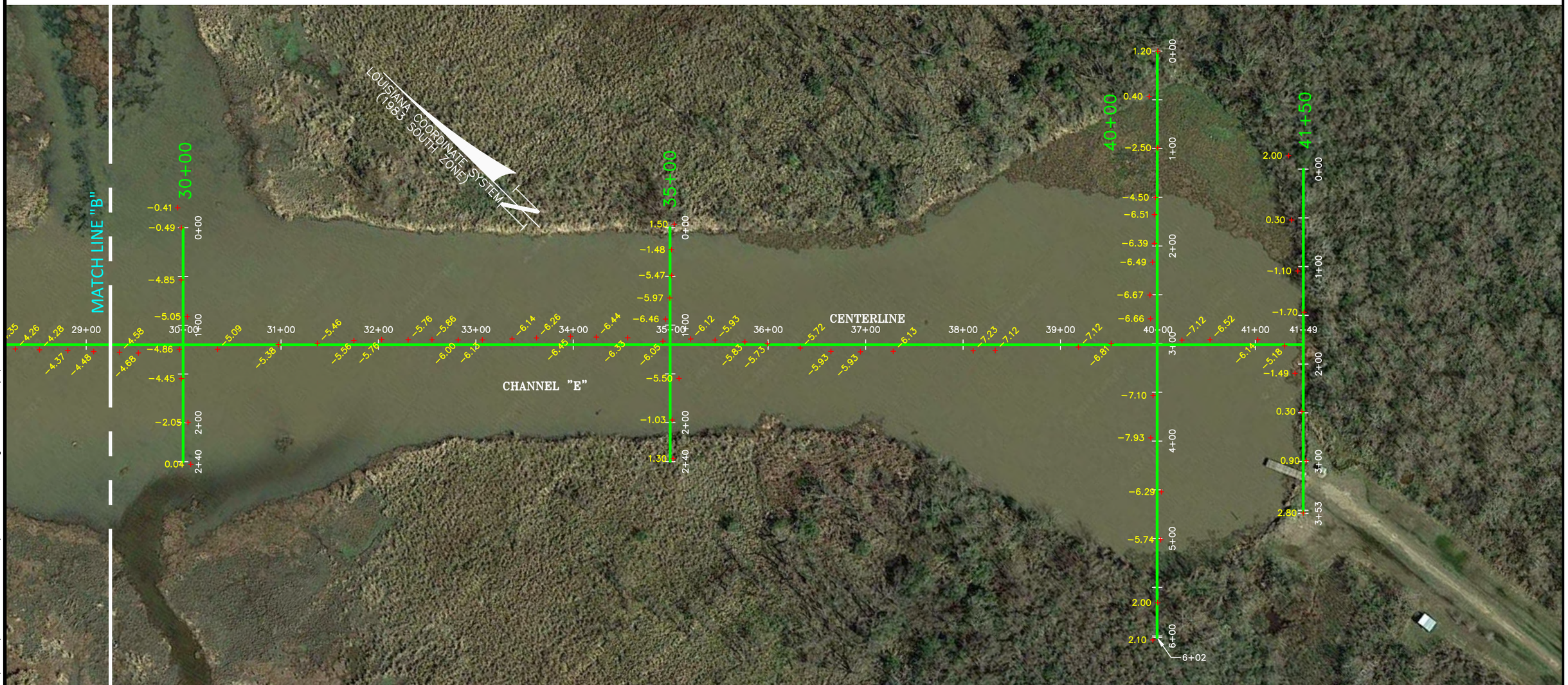
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 2
FOR
CHANNEL "E"

DRAWN BY:	NPB/TPC	SHEET:	2 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_E.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\87-93 - Channel E\AT-03 CHAN_E.dwg PLOT DATE: 6/7/16 8:38:05am



GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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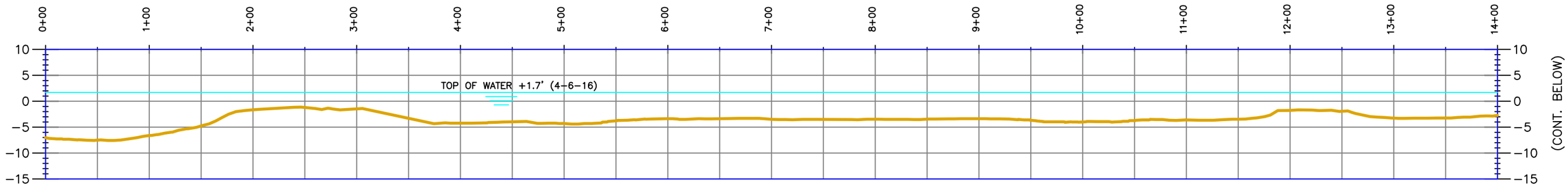
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

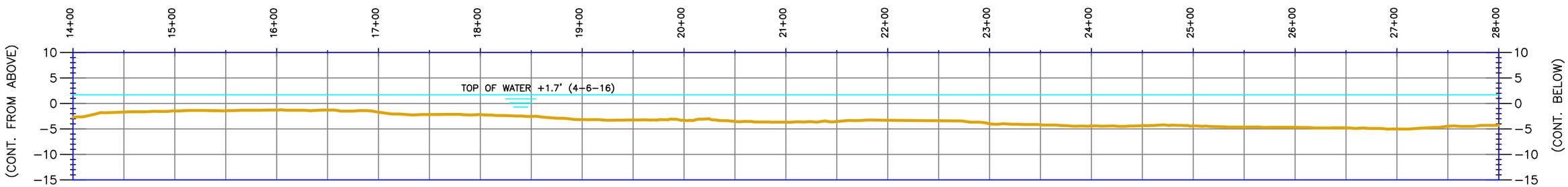
AT-03
PLAN VIEW 3
FOR
CHANNEL "E"

DRAWN BY:	NPB/TPC	SHEET:	3 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_E.DWG			

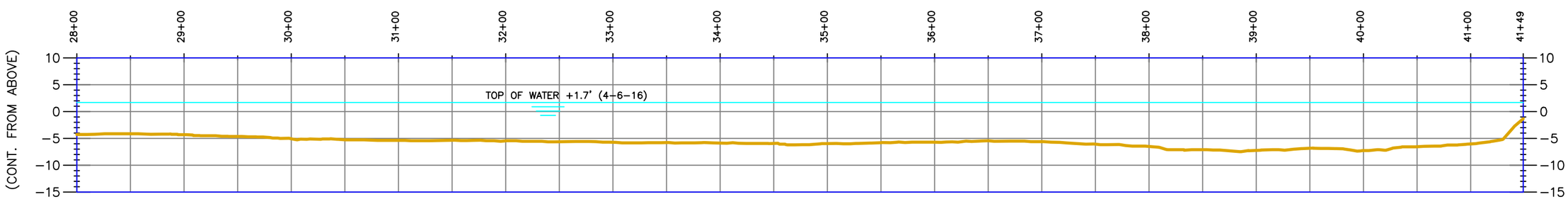
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\87-93 - Channel E\AT-03 CHAN_E.dwg PLOT DATE: 6/7/16 8:32:59am



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

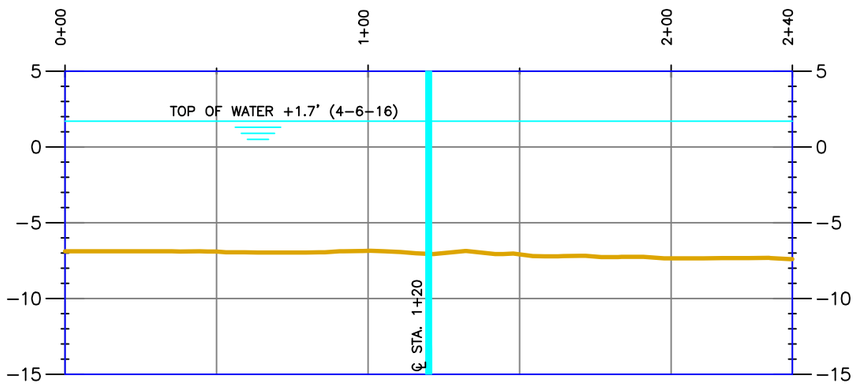
Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

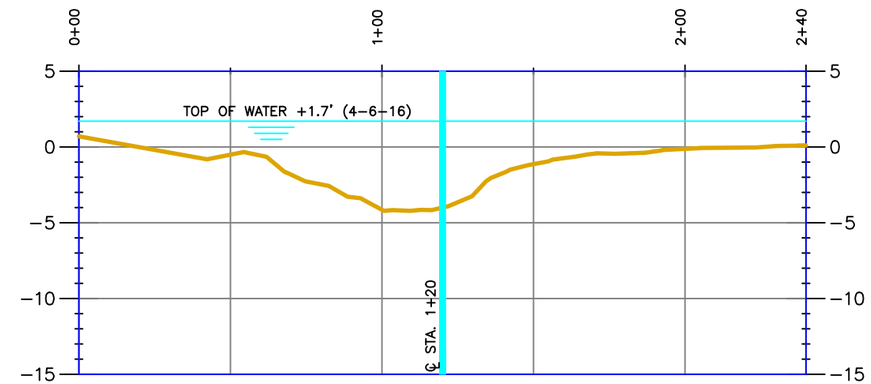
AT-03
PROFILES
FOR
CHANNEL "E" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	4 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_E.DWG			

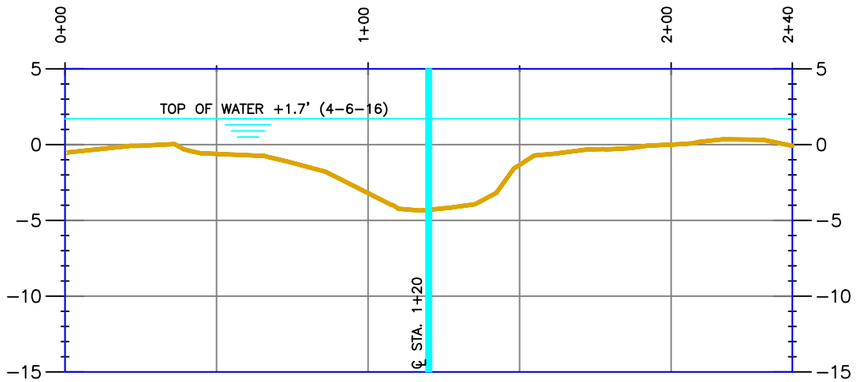
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\87-93 - Channel E\AT-03 CHAN_E.dwg PLOT DATE: 5/25/16 3:30:04pm



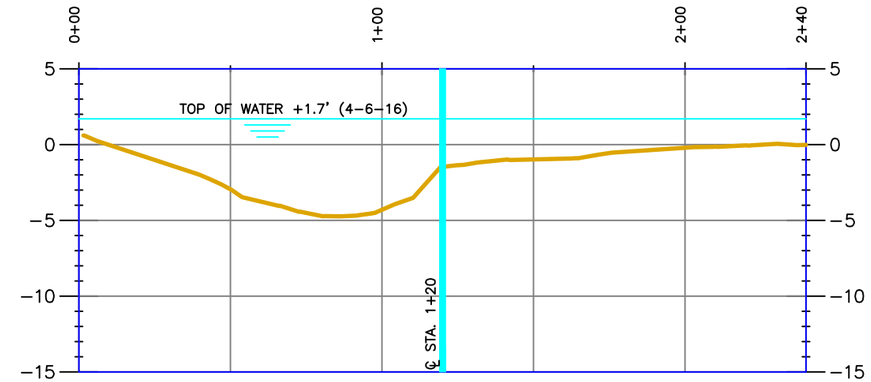
TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



TRANSECT 10+00 (LOOKING SOUTHEASTERLY)



TRANSECT 5+00 (LOOKING SOUTHEASTERLY)



TRANSECT 15+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
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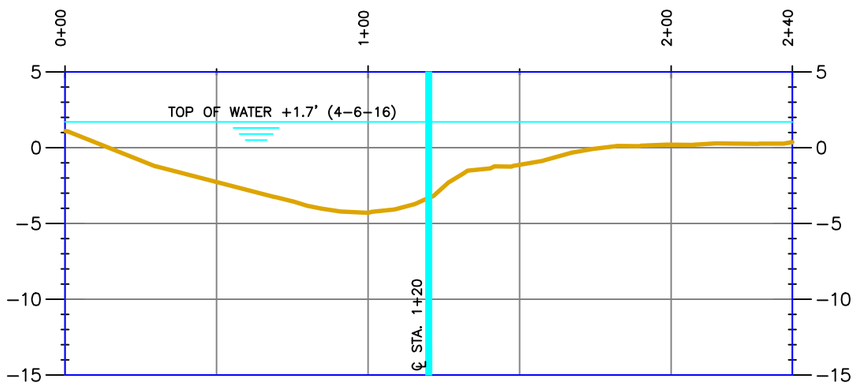
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

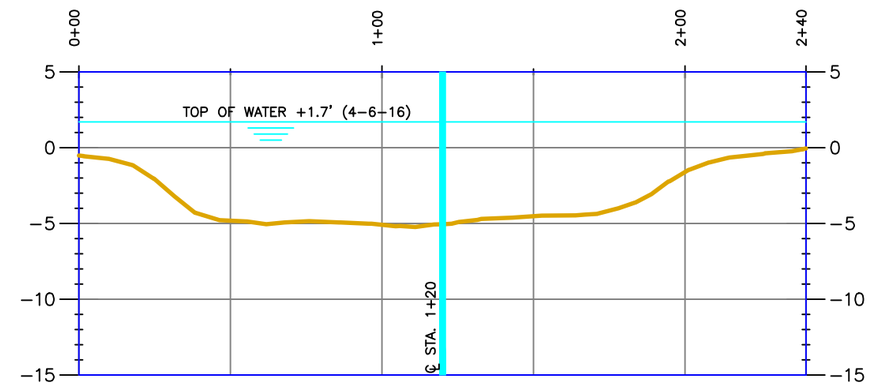
AT-03
TRANSECTS
FOR
CHANNEL "E"

DRAWN BY:	NPB/TPC	SHEET:	5 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_E.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\87-93 - Channel E\AT-03 CHAN_E.dwg PLOT DATE: 5/25/16 3:32:42pm



TRANSECT 20+00 (LOOKING SOUTHEASTERLY)



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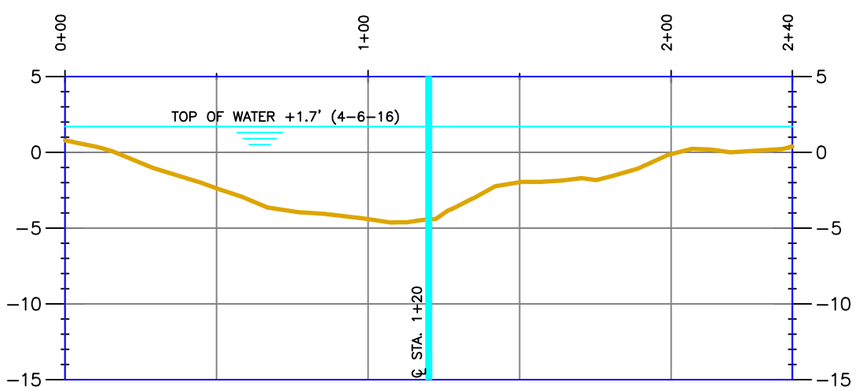
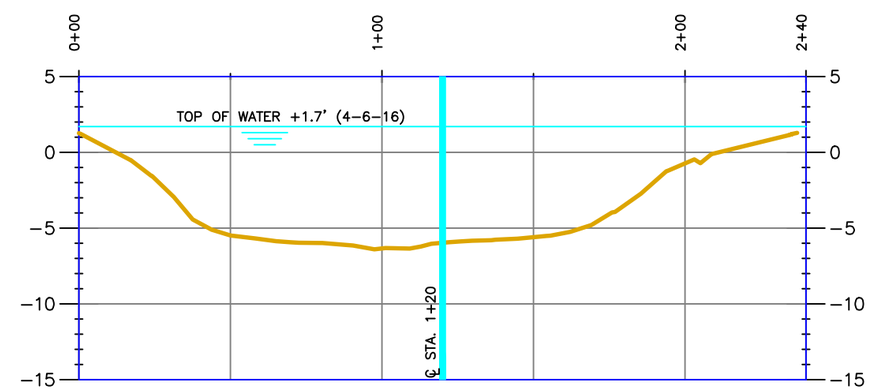


TRANSECT 25+00 (LOOKING SOUTHEASTERLY)



TRANSECT 35+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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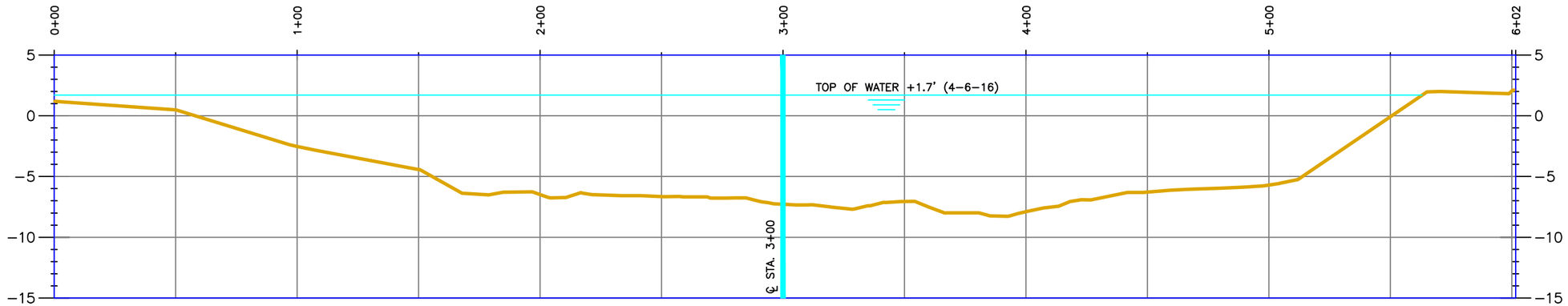
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

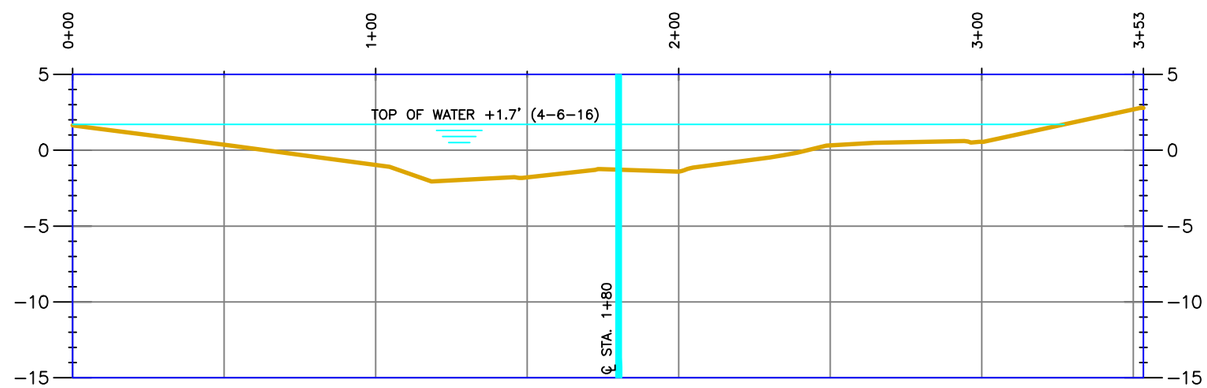
AT-03
TRANSECTS
FOR
CHANNEL "E"

DRAWN BY:	NPB/TPC	SHEET:	6 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	
MPH CAD FILE: AT-03 CHAN_E.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\87-93 - Channel E\AT-03 CHAN_E.dwg PLOT DATE: 5/25/16 3:35:42pm



TRANSECT 40+00 (LOOKING SOUTHEASTERLY)



TRANSECT 41+50 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE

0 25' 50' 100' 150'

0 5' 10' 20' 30'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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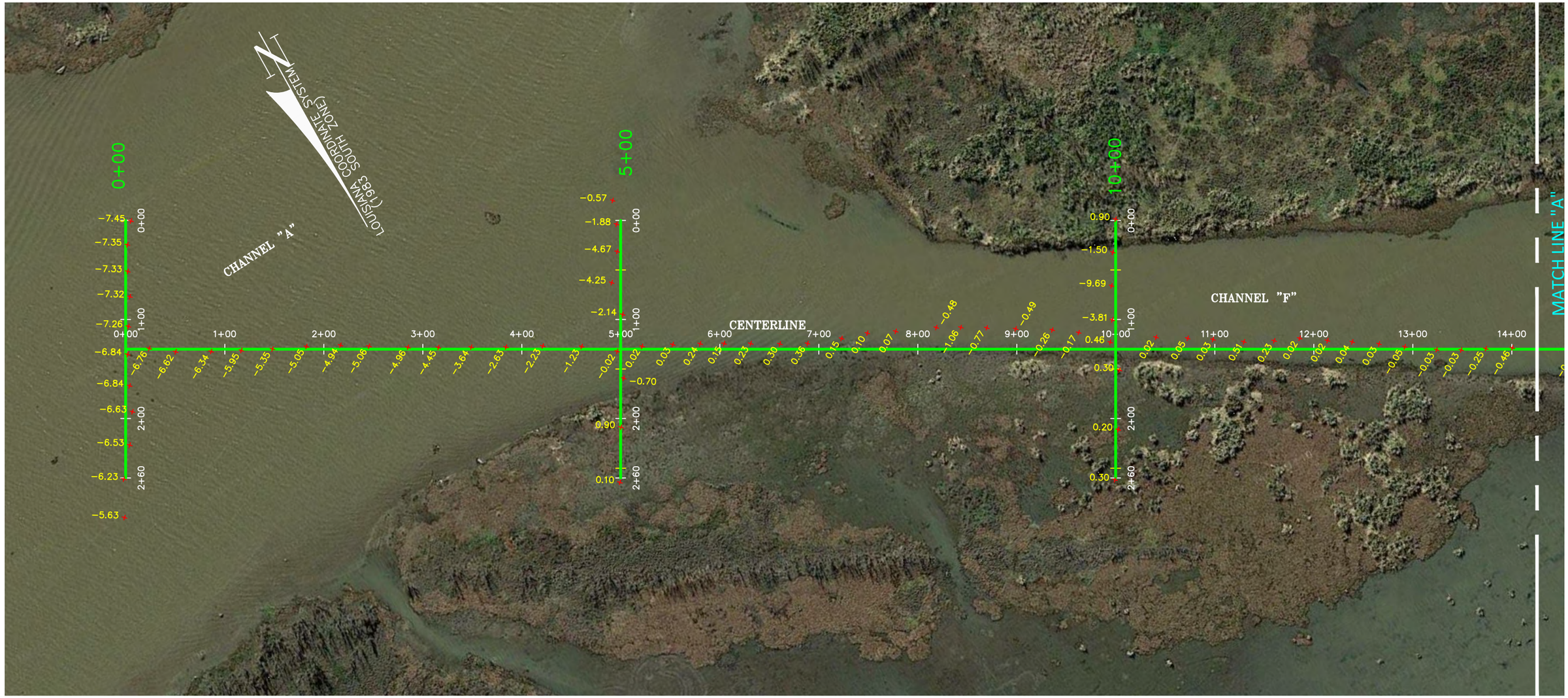
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "E"

DRAWN BY:	NPB/TPC	SHEET:	7 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_E.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\87-93 - Channel E\AT-03 CHAN_E.dwg PLOT DATE: 5/25/16 3:41:40pm



GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
PLAN VIEW 1
FOR
CHANNEL "F"

DRAWN BY:	NPB/TPC	SHEET:	1 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_F.DWG			

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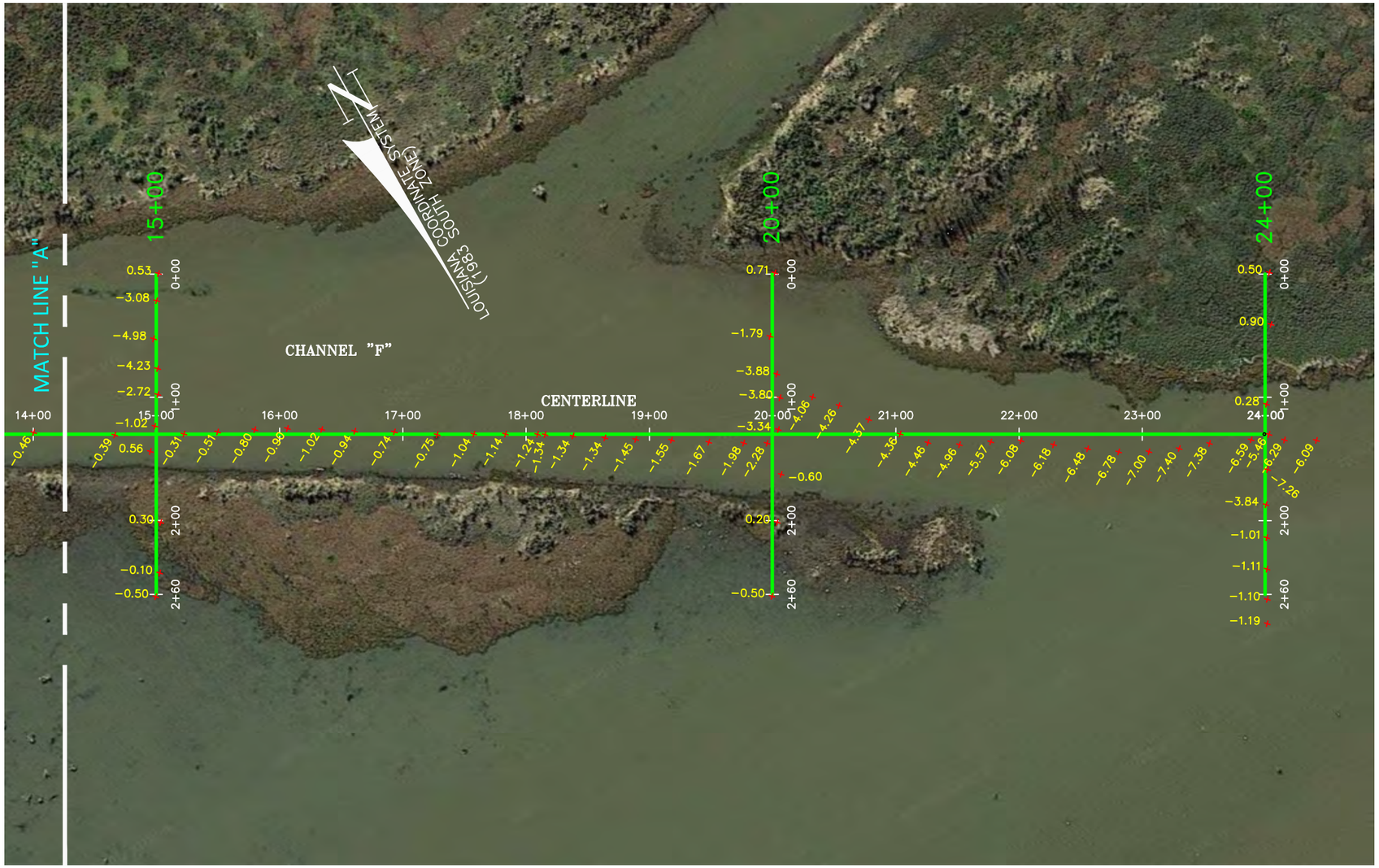

GRAPHIC SCALE

0 50' 100' 200'

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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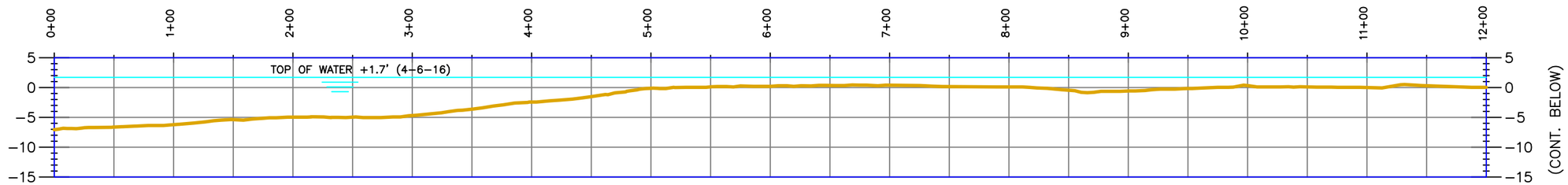
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

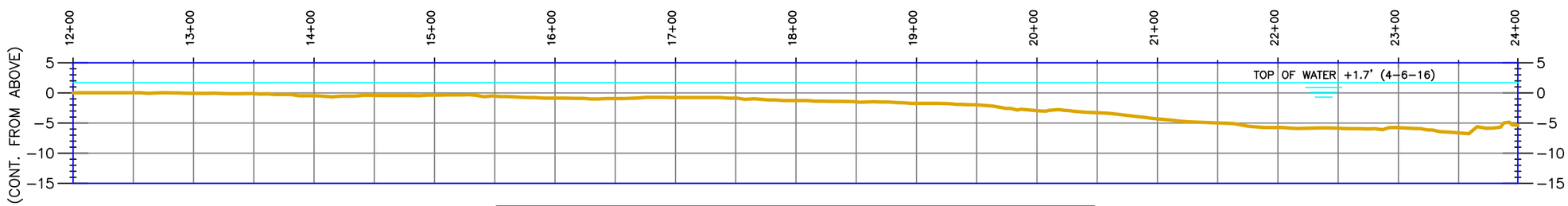
AT-03
PLAN VIEW 2
FOR
CHANNEL "F"

DRAWN BY:	NPB/TPC	SHEET:	2 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_F.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\94-98 - Channel F\AT-03 CHAN_F.dwg PLOT DATE: 6/7/16 8:58:25am



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)



PROFILE CENTERLINE (LOOKING SOUTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 50' 100' 200' 300'
0 10' 20' 40' 60'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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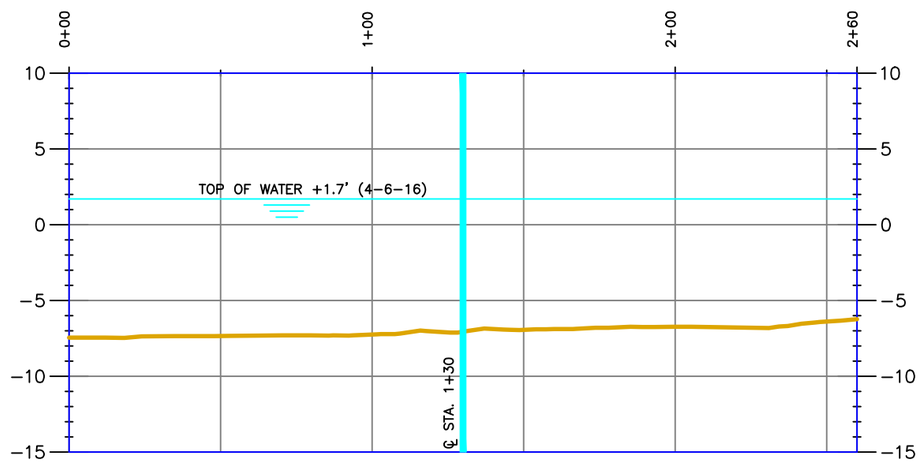
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

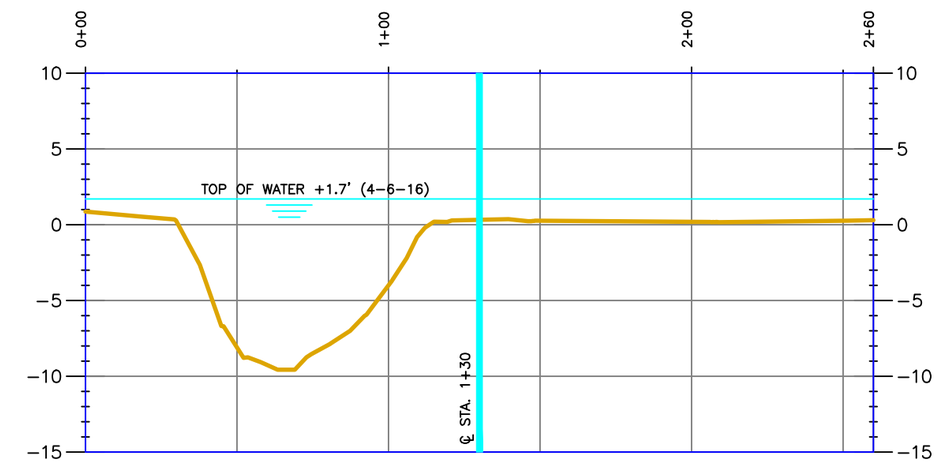
AT-03
PROFILES
FOR
CHANNEL "F" CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	3 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_F.DWG			

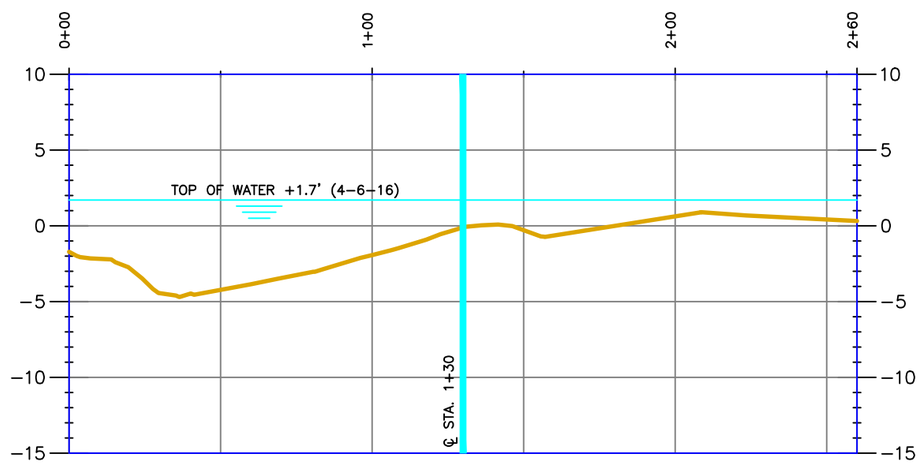
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\94-98 - Channel F\AT-03 CHAN_F.dwg PLOT DATE: 6/7/16 4:41:35pm



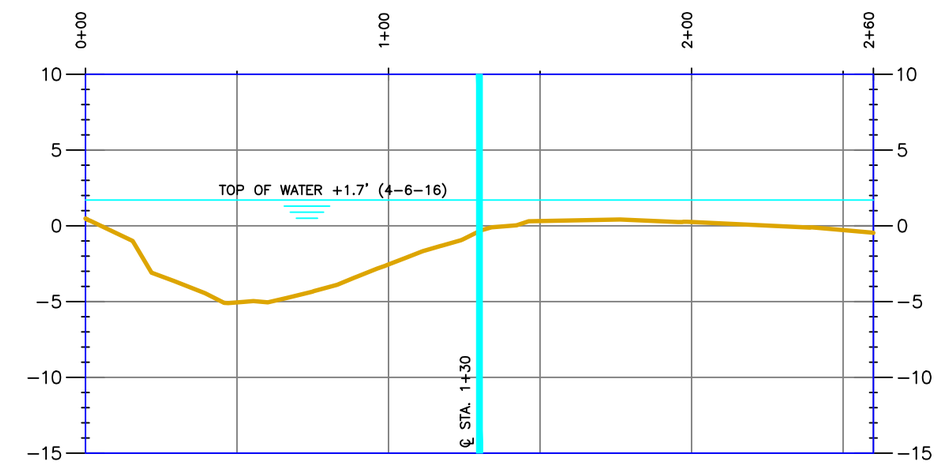
TRANSECT 0+00 (LOOKING NORTHWESTERLY)



TRANSECT 10+00 (LOOKING NORTHWESTERLY)



TRANSECT 5+00 (LOOKING NORTHWESTERLY)



TRANSECT 15+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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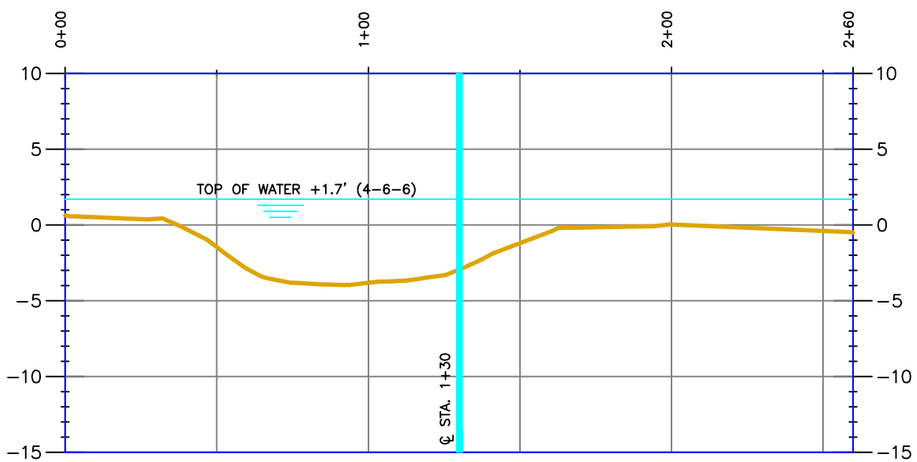
10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

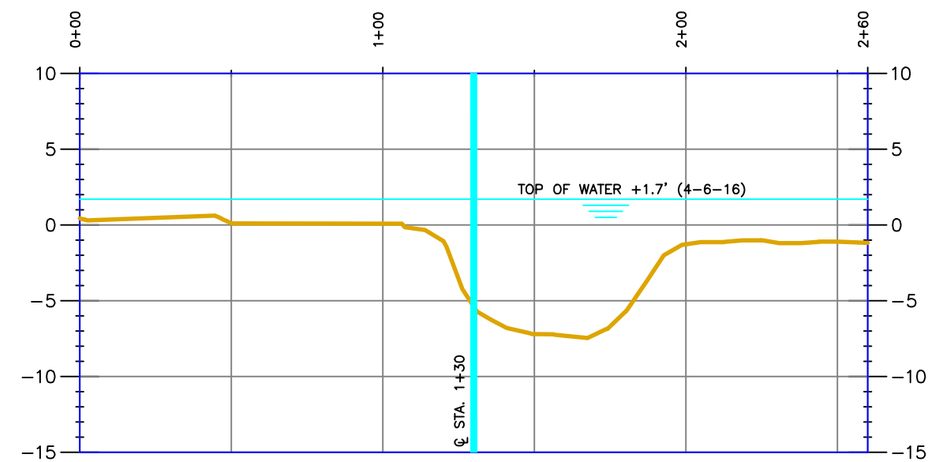
AT-03
TRANSECTS
FOR
CHANNEL "F"

DRAWN BY:	NPB/TPC	SHEET:	4 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_F.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\94-98 - Channel F\AT-03 CHAN_F.dwg PLOT DATE: 6/7/16 9:00:09am



TRANSECT 20+00 (LOOKING NORTHWESTERLY)



TRANSECT 24+00 (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL "F"

DRAWN BY:	NPB/TPC	SHEET:	5 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHAN_F.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\94-98 - Channel F\AT-03 CHAN_F.dwg PLOT DATE: 6/7/16 9:06:30am

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

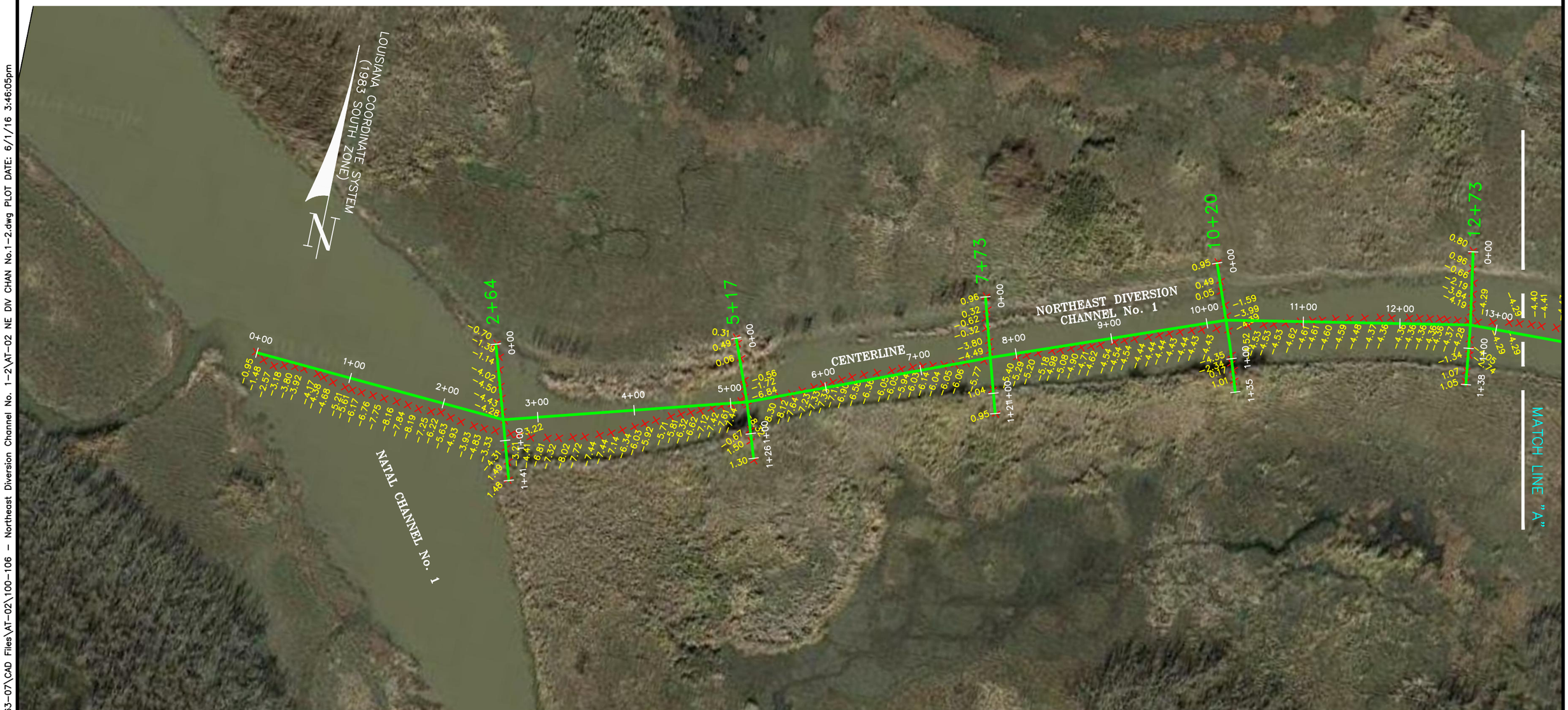
TOPOGRAPHIC AND BATHYMETRIC SURVEY
ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

05/24/16

Survey Monument Data:
AT02-SM-01

NAD 83 Geodetic Position	
Lat.	**29°26'14.99506"**
Long.	**91°16'48.18440"**
NAD 83 Datum LSZ (1702)	
N=	340941.74
E=	3297793.94
NAVD 88 Height	
Elevation=1.64 ft (0.500 m)	

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\99 - Cover - Title Sheet\99 - AT-02 cover sheet.dwg PLOT DATE: 6/7/16 11:10:54am



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.
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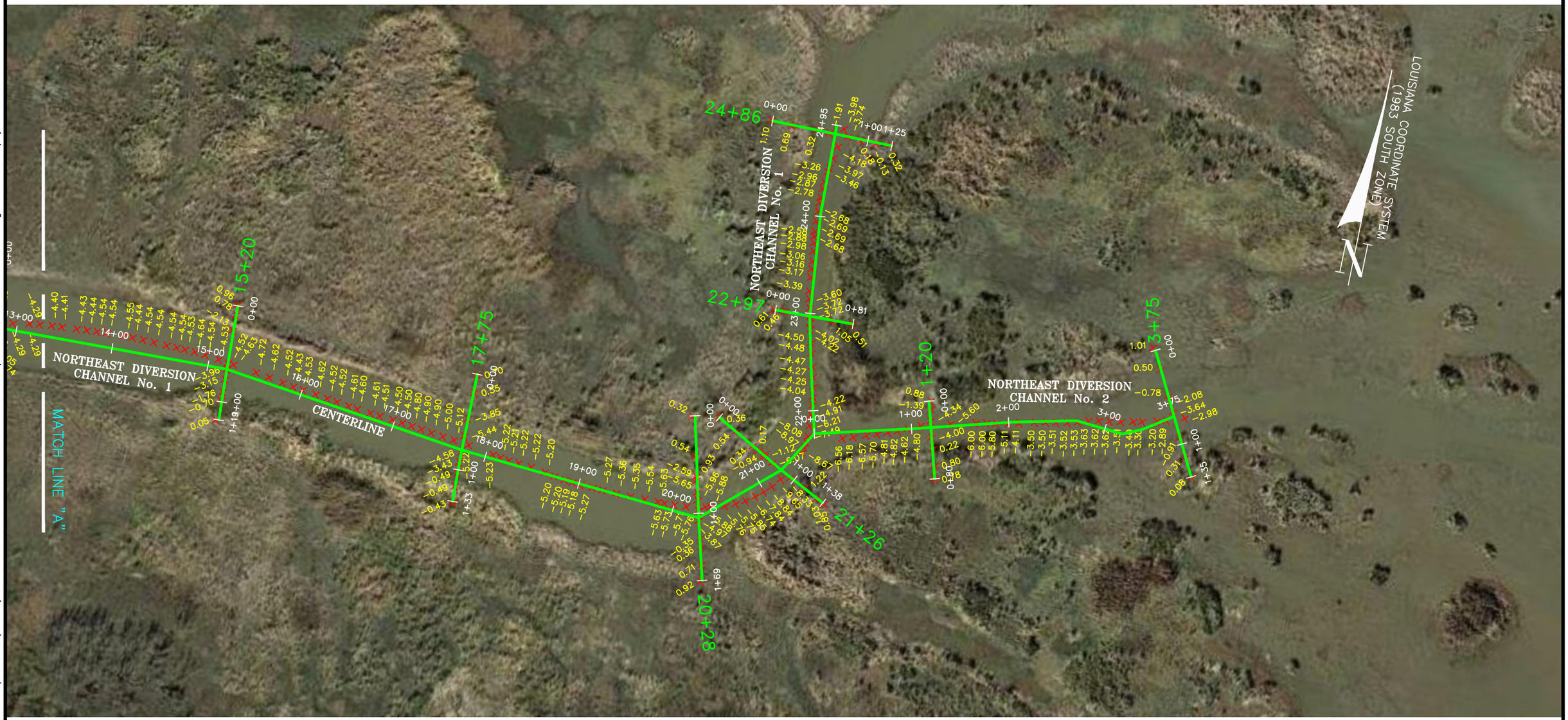
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 1
FOR
NORTHEAST CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	1 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/1/16 3:46:05pm



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.
SURVEYING • ENGINEERING • ENVIRONMENTAL SERVICES • FIELD SERVICES • GIS
P.O. BOX 3106 * 283 CORPORATE DRIVE * HOUMA, LOUISIANA 70361 * (985) 879-2731
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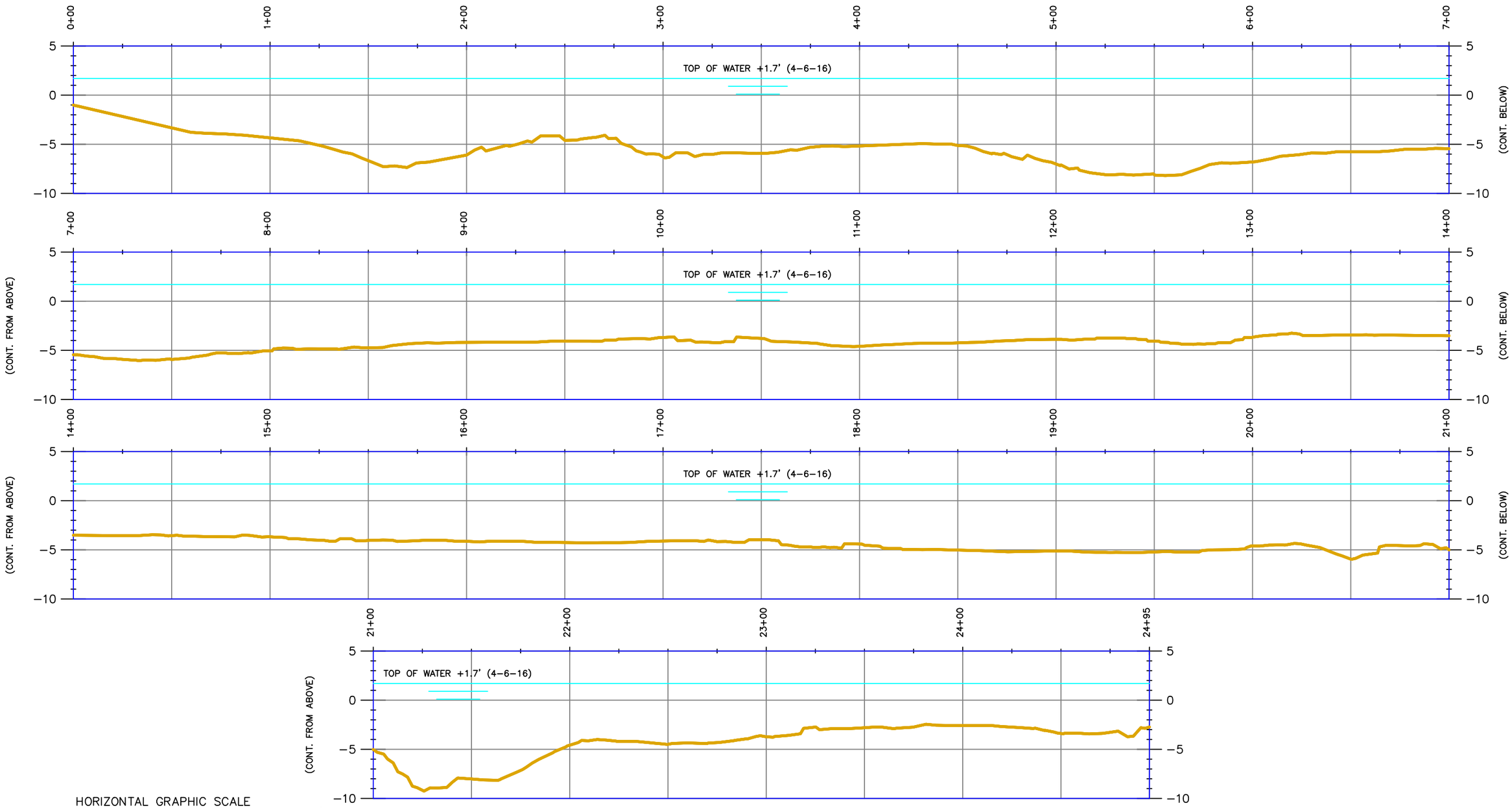
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 2
FOR
NORTHEAST DIVERSION CHANNEL No. 1-2

DRAWN BY:	NPB/TPC	SHEET:	2 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/2/16 8:08:27am



HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

PROFILE CENTERLINE (LOOKING NORTHERLY & WESTERLY)

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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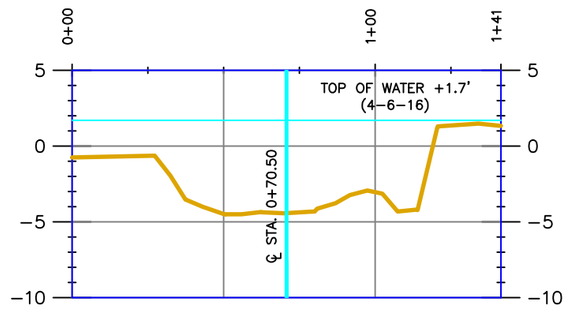
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

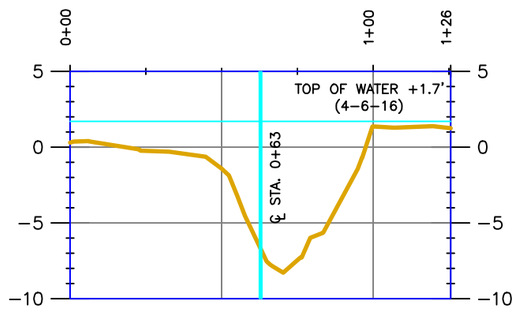
AT-02
PROFILES
FOR
NORTHEAST DIVERSION CHANNEL No. 1 CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	3 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

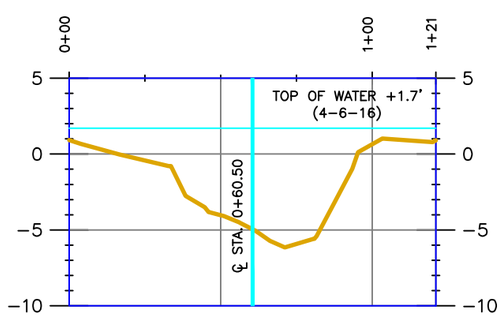
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/7/16 11:14:11am



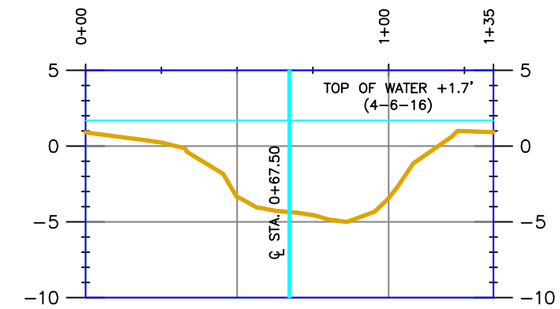
TRANSECT 2+64 (LOOKING NORTHEASTERLY)



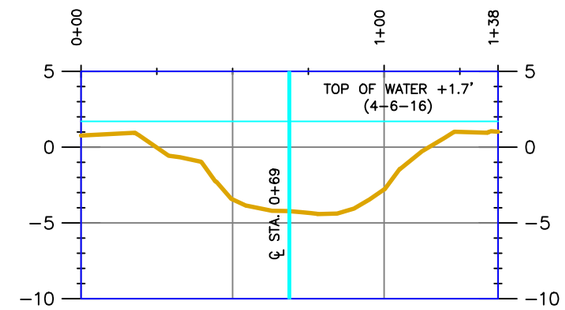
TRANSECT 5+17 (LOOKING NORTHEASTERLY)



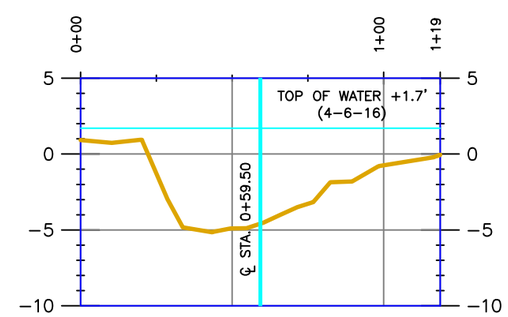
TRANSECT 7+73 (LOOKING NORTHEASTERLY)



TRANSECT 10+20 (LOOKING NORTHEASTERLY)



TRANSECT 12+73 (LOOKING NORTHEASTERLY)



TRANSECT 15+20 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE

0 25' 50' 100' 150'

0 5' 10' 20' 30'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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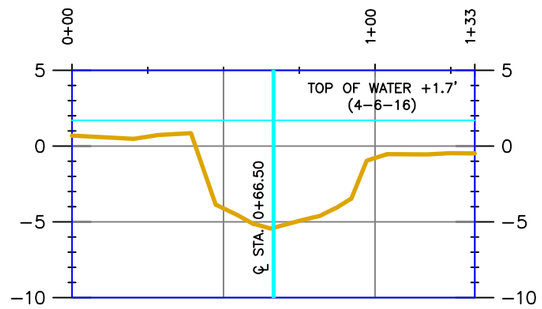
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

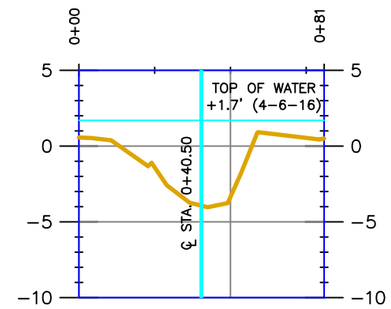
AT-02
TRANSECTS
FOR
NORTHEAST DIVERSION CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	4 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

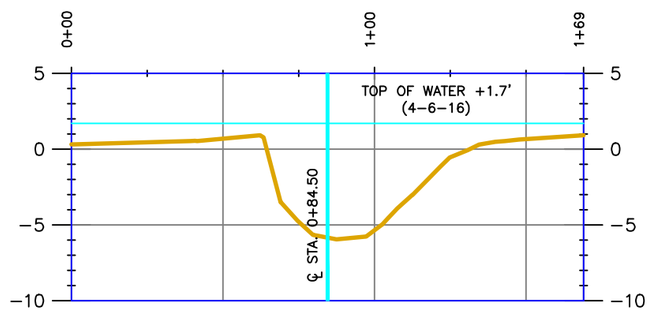
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/7/16 9:17:29am



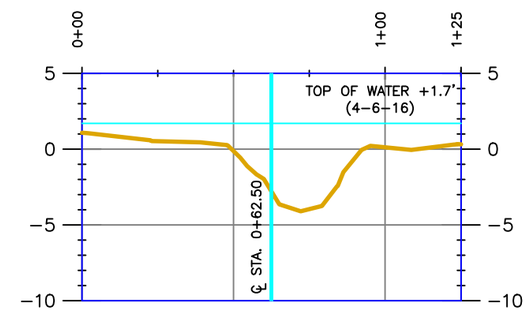
TRANSECT 17+75 (LOOKING SOUTHEASTERLY)



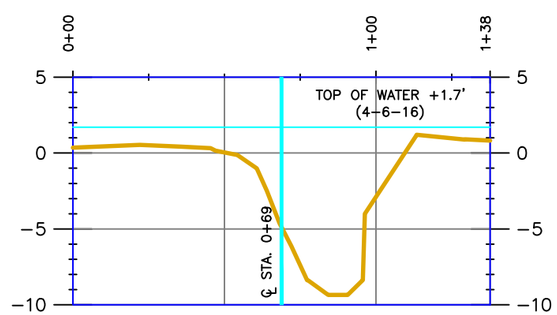
TRANSECT 22+97 (LOOKING NORTHERLY)



TRANSECT 20+28 (LOOKING NORTHEASTERLY)



TRANSECT 24+86 (LOOKING NORTHERLY)



TRANSECT 21+26 (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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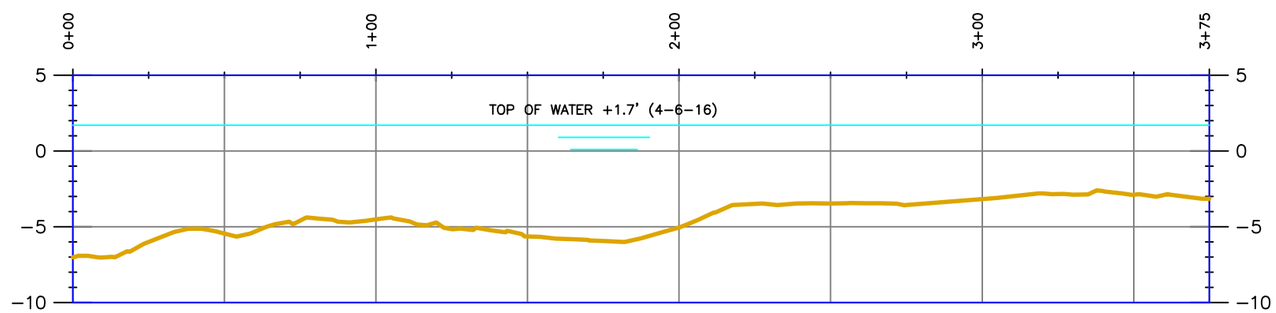
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NORTHEAST DIVERSION CHANNEL No. 1

DRAWN BY:	NPB/TPC	SHEET:	5 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/7/16 9:21:19am



PROFILE CENTERLINE (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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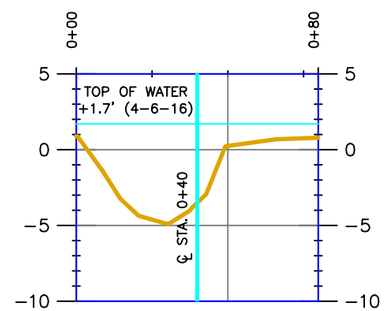
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

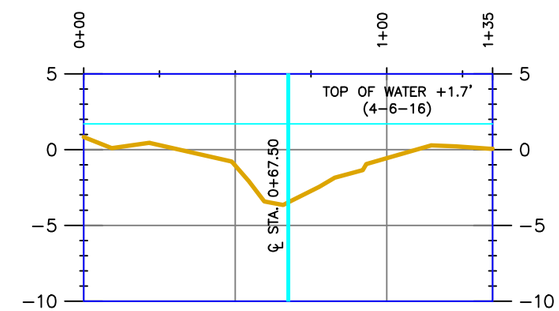
AT-02
PROFILE
FOR
NORTHEAST DIVERSION CHANNEL No. 2 CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	6 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/7/16 9:23:12am



TRANSECT 1+20 (LOOKING NORTHEASTERLY)



TRANSECT 3+75 (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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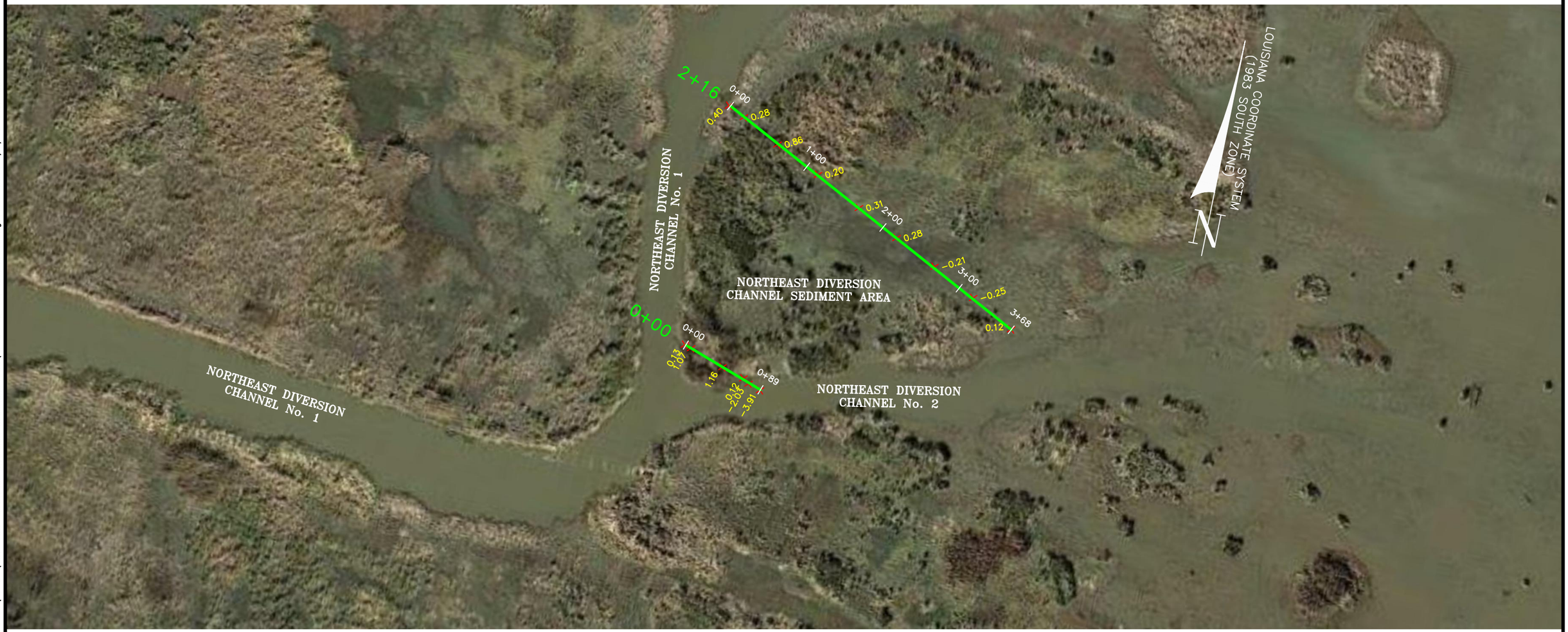
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NORTHEAST DIVERSION CHANNEL No. 2

DRAWN BY:	NPB/TPC	SHEET:	7 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV CHAN NO.1-2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\100-106 - Northeast Diversion Channel No. 1-2\AT-02 NE DIV CHAN No.1-2.dwg PLOT DATE: 6/2/16 11:01:31am



GRAPHIC SCALE

0 50' 100' 200' 300'

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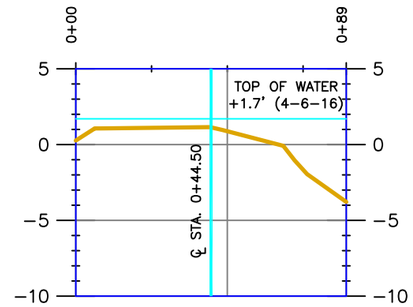
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

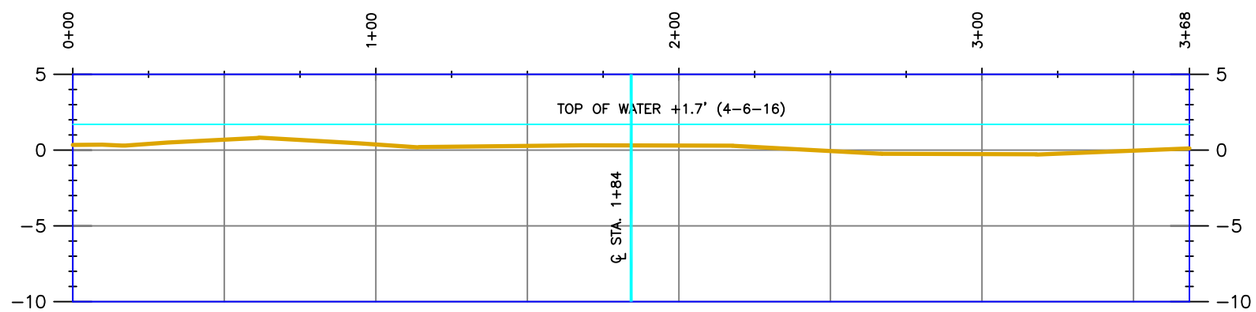
AT-02
PLAN VIEW 1
FOR
NORTHEAST DIVERSION CHANNEL SEDIMENT AREA

DRAWN BY:	NPB/TPC	SHEET:	1 OF 2
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV SED AREA.DWG			

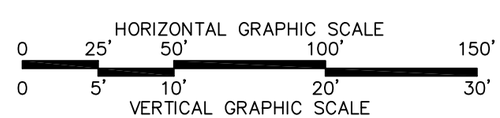
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\107-108 Northeast Diversion Sediment Area\AT-02 NE DIV SED AREA.dwg PLOT DATE: 6/7/16 11:12:39am



TRANSECT 0+00 (LOOKING NORTHEASTERLY)



TRANSECT 2+16 (LOOKING NORTHEASTERLY)



NOTE: VERTICAL DATUM IN NAVD 88

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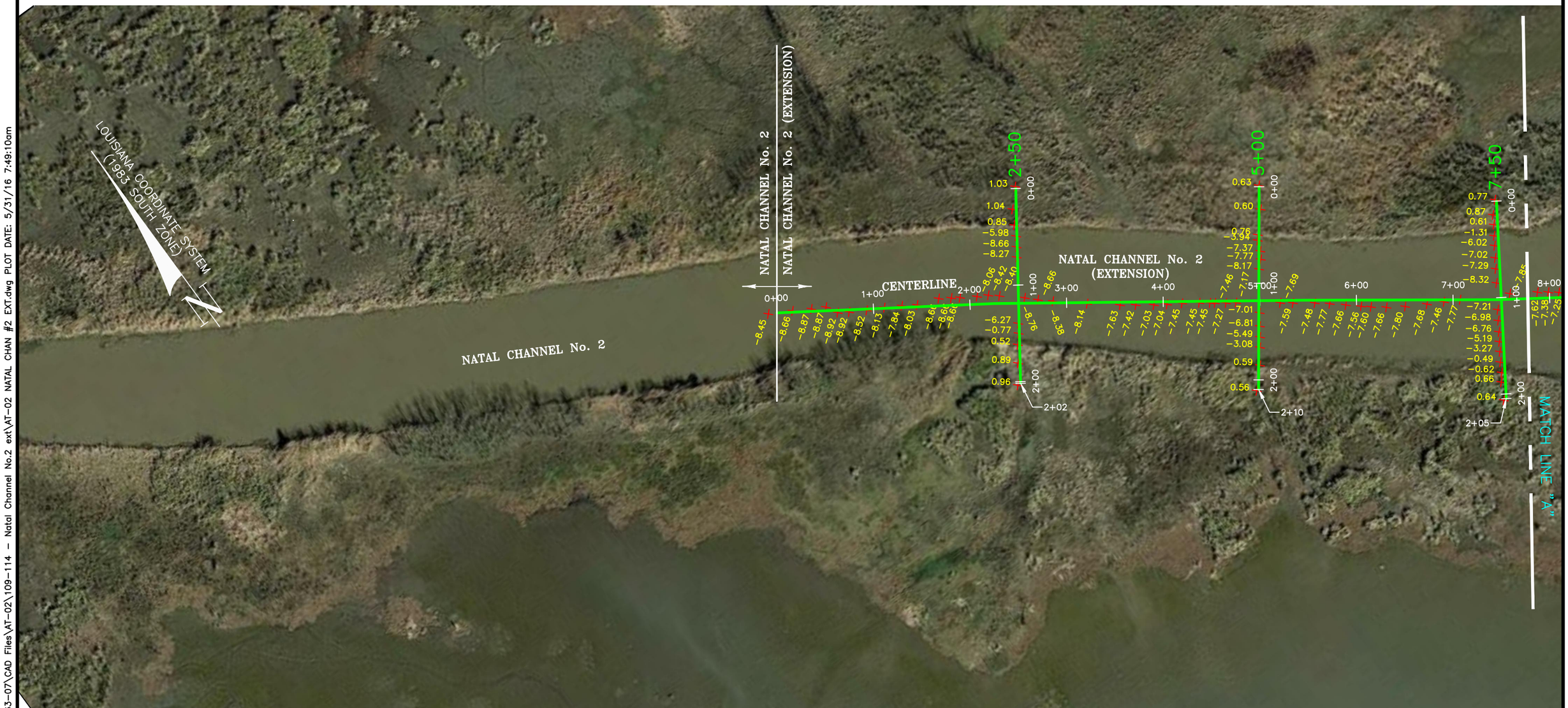
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NORTHEAST DIVERSION CHANNEL SEDIMENT AREA

DRAWN BY:	NPB/TPC	SHEET:	2 OF 2
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NE DIV SED AREA.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\107-108 Northeast Diversion Sediment Area\AT-02 NE DIV SED AREA.dwg PLOT DATE: 6/2/16 1:18:23pm



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 1
FOR
NATAL CHANNEL No. 2 (EXTENSION)

DRAWN BY:	NPB/TPC	SHEET:	1 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 5/31/16 7:49:10am

GRAPHIC SCALE

0 50' 100' 200' 300'

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 6/3/16 11:58:03am

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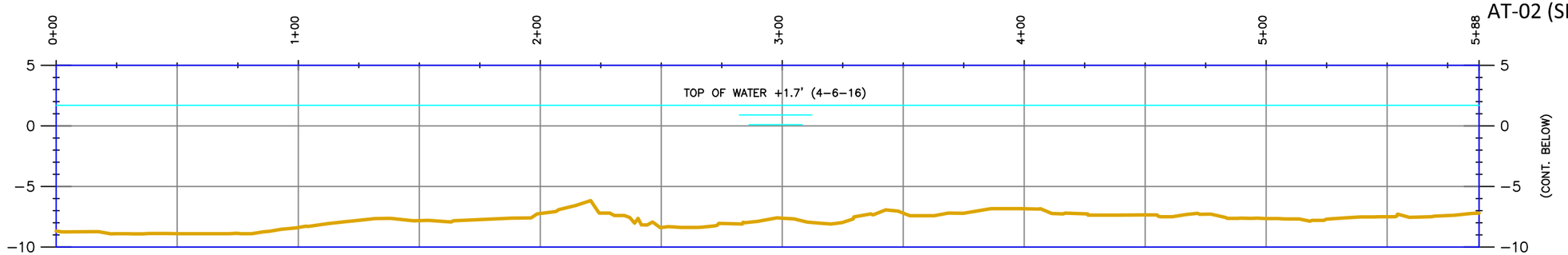
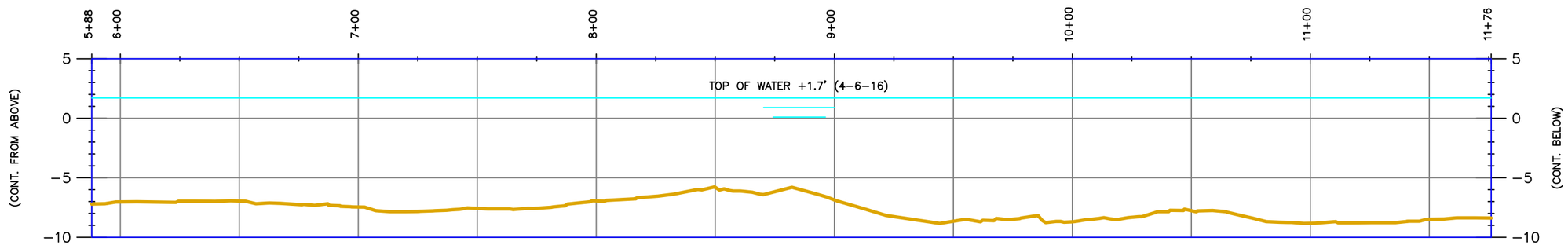
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
PLAN VIEW 2
FOR
NATAL CHANNEL No. 2 (EXTENSION) AND NATAL CHANNEL No. 2A

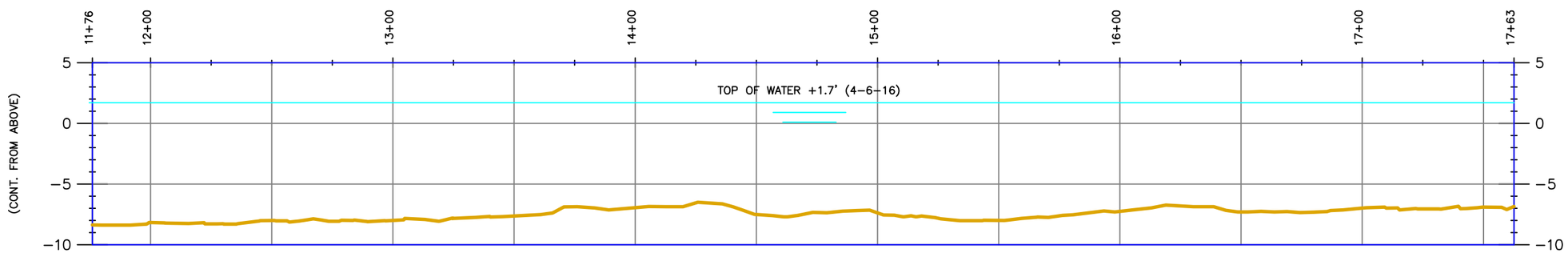
DRAWN BY:	NPB/TPC	SHEET:	2 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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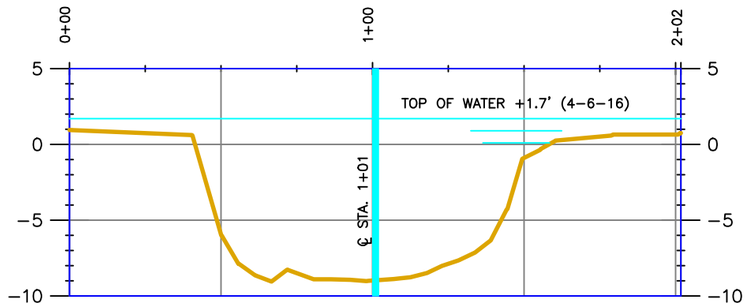
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

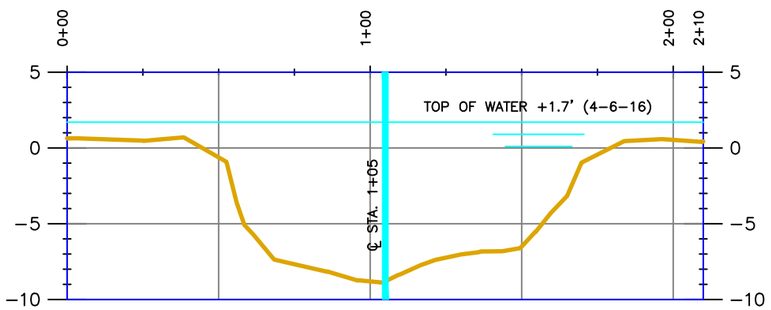
AT-02
PROFILES
FOR
NATAL CHANNEL No. 2 (EXTENSION) CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	3 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			

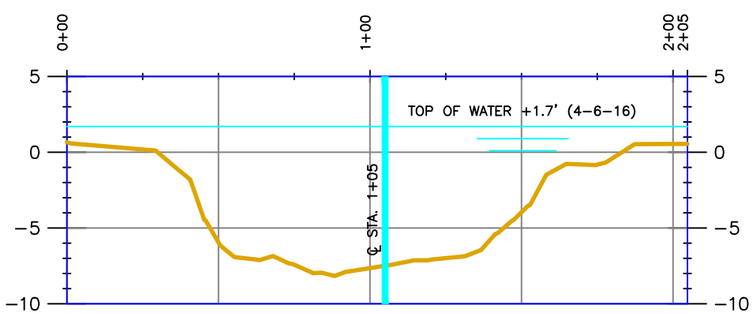
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 5/31/16 8:18:39am



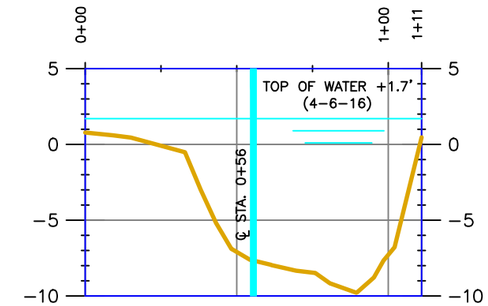
TRANSECT 2+50 (LOOKING SOUTHEASTERLY)



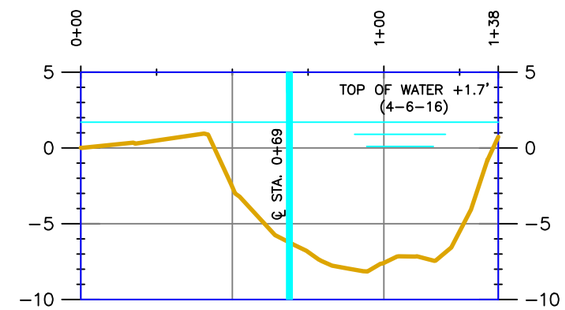
TRANSECT 5+00 (LOOKING SOUTHEASTERLY)



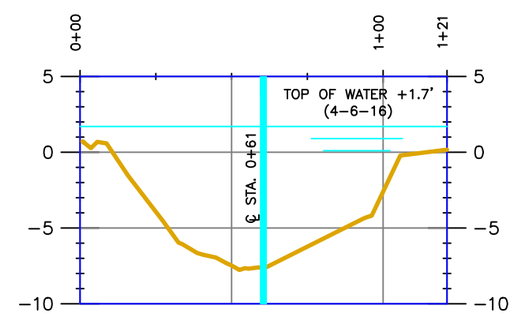
TRANSECT 7+50 (LOOKING SOUTHEASTERLY)



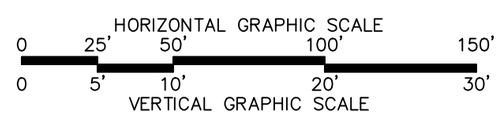
TRANSECT 10+13 (LOOKING SOUTHEASTERLY)



TRANSECT 12+70 (LOOKING SOUTHEASTERLY)



TRANSECT 15+10 (LOOKING SOUTHEASTERLY)



NOTE: VERTICAL DATUM IN NAVD 88

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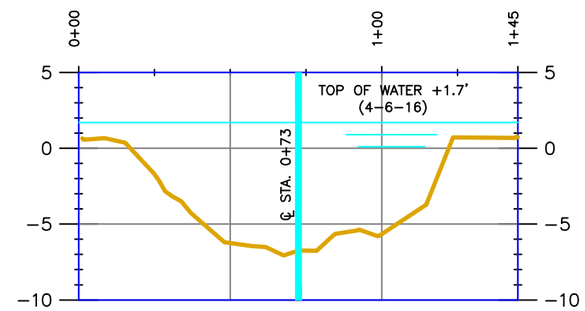
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NATAL CHANNEL No. 2 (EXTENSION)

DRAWN BY:	NPB/TPC	SHEET:	4 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 6/7/16 9:54:11am



TRANSECT 17+63 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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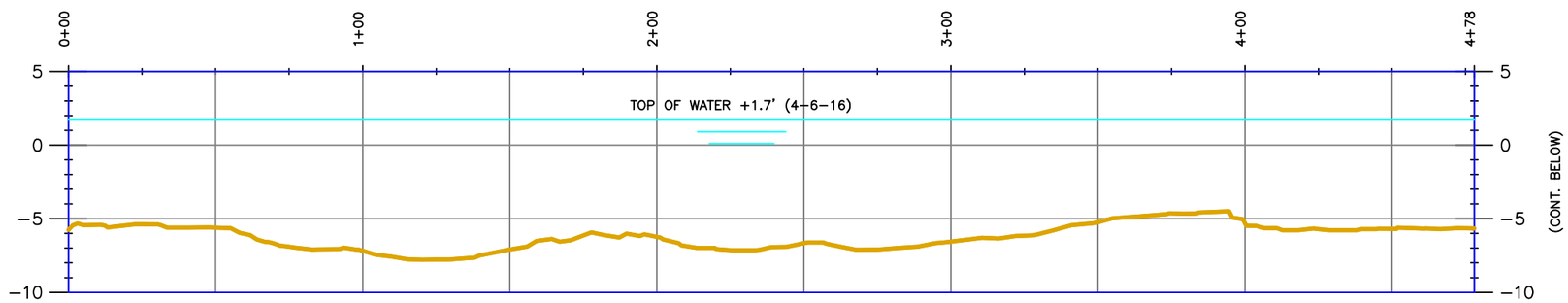
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

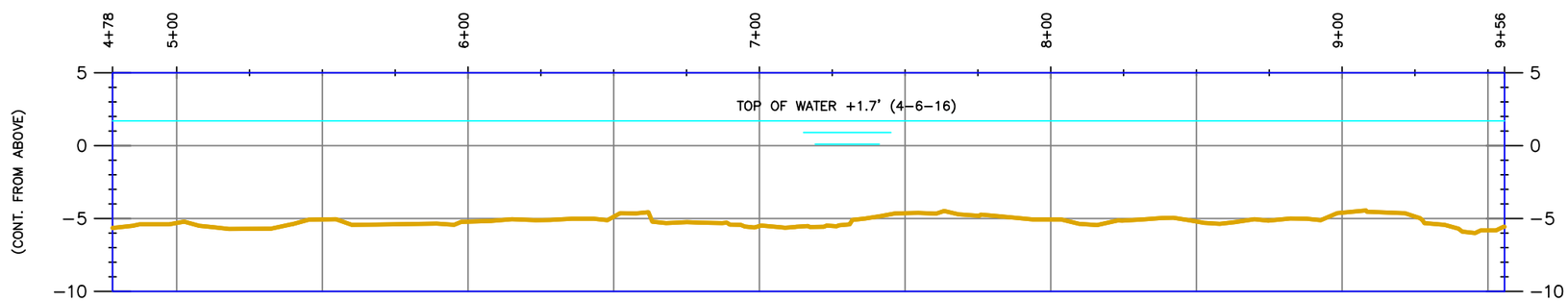
AT-02
TRANSECT
FOR
NATAL CHANNEL No. 2 (EXTENSION)

DRAWN BY:	NPB/TPC	SHEET:	5 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 5/31/16 9:53:13am



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

Morris P. Hebert, Inc.
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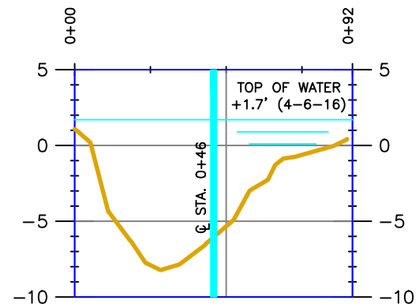
10101 SOUTHWEST FREEWAY * SUITE 400 * HOUSTON, TEXAS 77074 * (713) 219-1470

STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

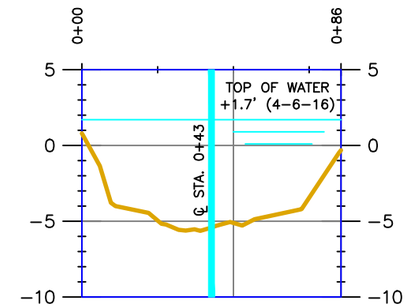
AT-02
PROFILES
FOR
NATAL CHANNEL No. 2A CENTERLINE

DRAWN BY:	NPB/TPC	SHEET:	6 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			

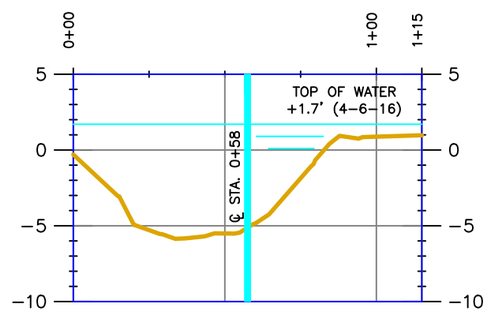
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 5/31/16 10:25:34am



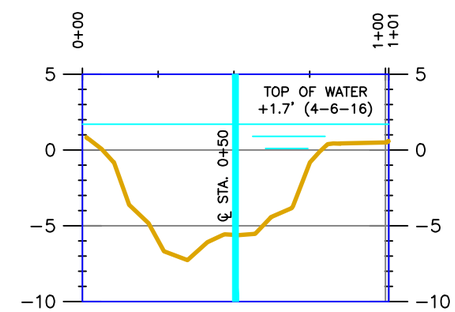
TRANSECT 1+77 (LOOKING SOUTHEASTERLY)



TRANSECT 7+00 (LOOKING SOUTHEASTERLY)



TRANSECT 4+26 (LOOKING SOUTHEASTERLY)



TRANSECT 9+56 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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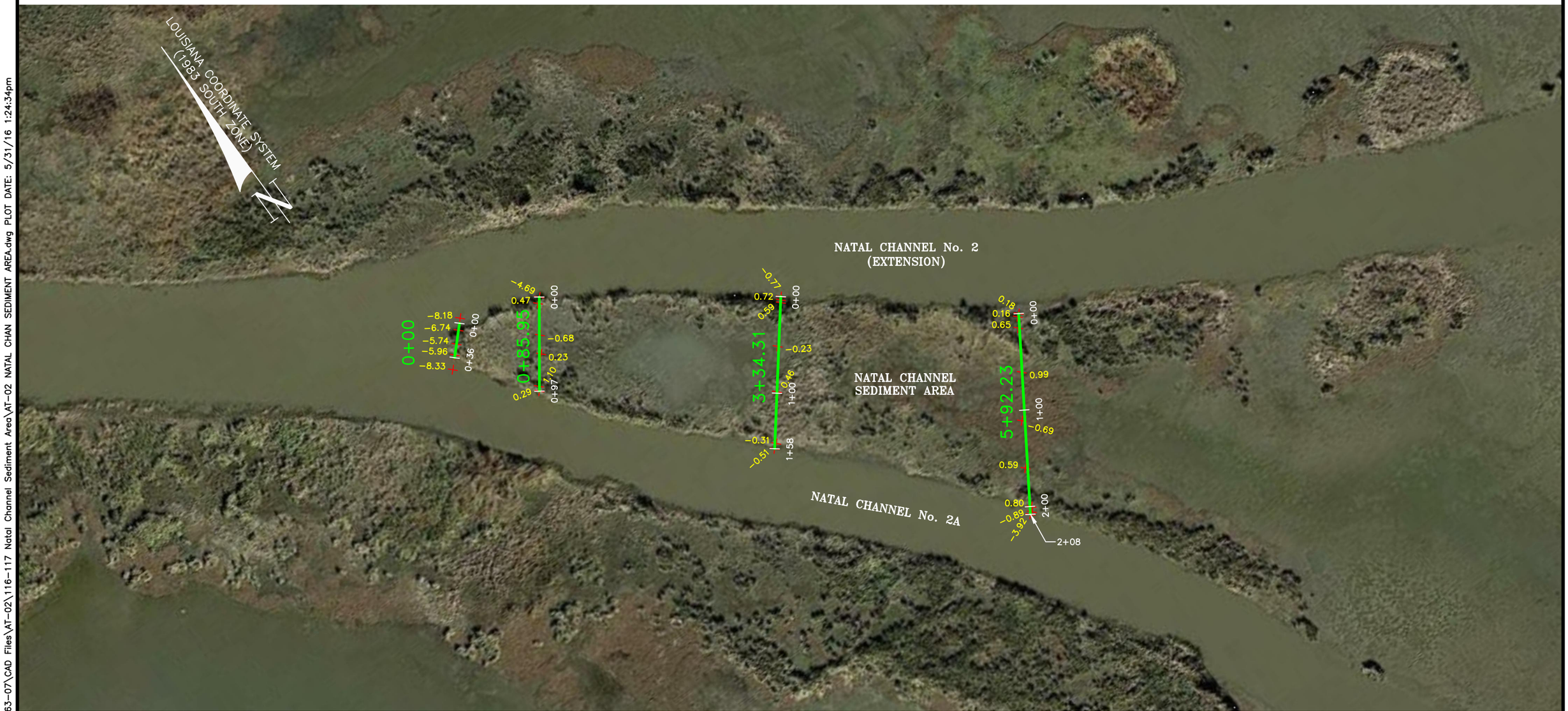
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NATAL CHANNEL No. 2A

DRAWN BY:	NPB/TPC	SHEET:	7 OF 7
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN #2 EXT.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\109-114 - Natal Channel No.2 ext\AT-02 NATAL CHAN #2 EXT.dwg PLOT DATE: 6/7/16 9:55:37am



GRAPHIC SCALE

0 50' 100' 200' 300'

Morris P. Hebert, Inc.
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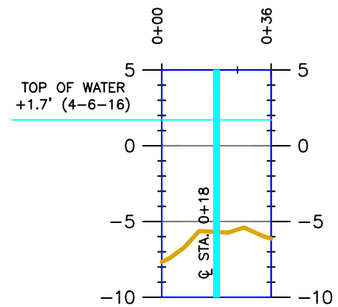
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

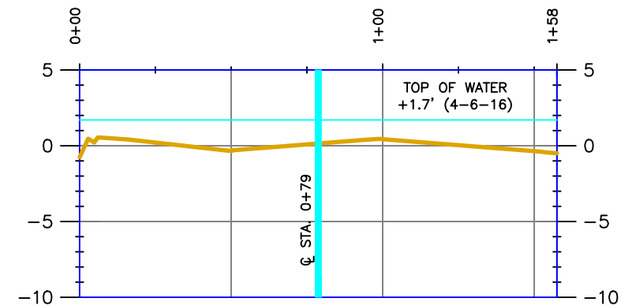
AT-02
PLAN VIEW 1
FOR
NATAL CHANNEL SEDIMENT AREA

DRAWN BY:	NPB/TPC	SHEET:	1 OF 2
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN SEDIMENT AREA.DWG			

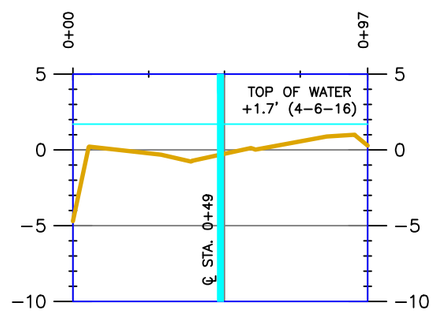
P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\116-117 Natal Channel Sediment Area\AT-02 NATAL CHAN SEDIMENT AREA.dwg PLOT DATE: 5/31/16 1:24:34pm



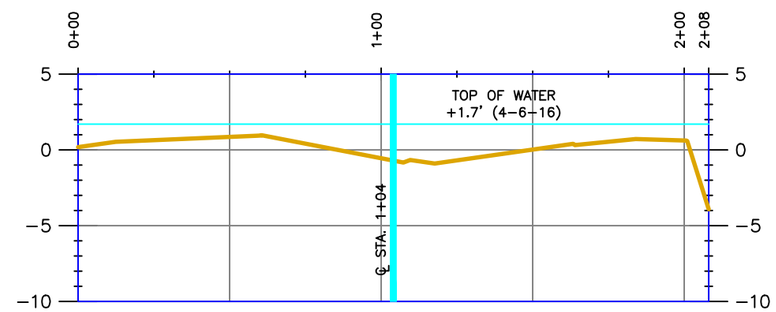
TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



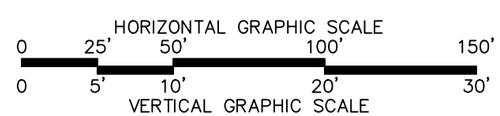
TRANSECT 3+34.31 (LOOKING SOUTHEASTERLY)



TRANSECT 0+85.95 (LOOKING SOUTHEASTERLY)



TRANSECT 5+92.23 (LOOKING SOUTHEASTERLY)



NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-02
TRANSECTS
FOR
NATAL CHANNEL SEDIMENT AREA

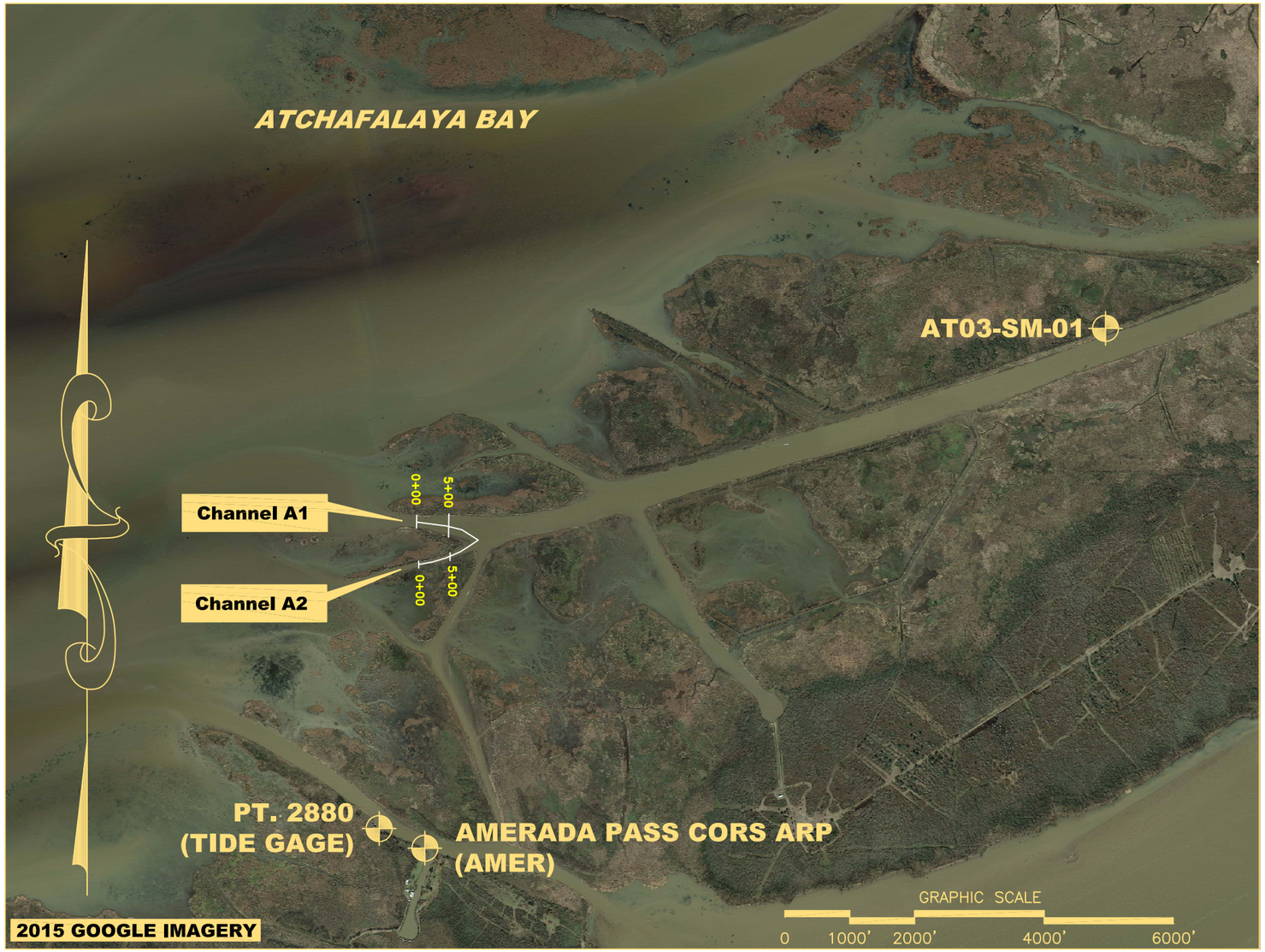
DRAWN BY:	NPB/TPC	SHEET:	2 OF 2
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-02 NATAL CHAN SEDIMENT AREA.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-02\116-117 Natal Channel Sediment Area\AT-02 NATAL CHAN SEDIMENT AREA.dwg PLOT DATE: 5/31/16 1:42:50pm

STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

TOPOGRAPHIC AND BATHYMETRIC SURVEY
BIG ISLAND MINING (AT-03)

05/24/16



Survey Monument Data:
AT03-SM-01
NAD 83 Geodetic Position
Lat. 29°28'17.88447"
Long. 91°18'18.39588"
NAD 83 Datum LSZ (1702)
N= 353352.36
E= 3289814.25
NAVD 88 Height
Elevation=2.60 ft (0.792 m)

AMERADA PASS CORS ARP (AMER)
NAD 83 Geodetic Position
Lat. 29°26'58.49797"
Long. 91°20'17.21175"
NAD 83 Datum LSZ (1702)
N= 345332.20
E= 3279311.63
NAVD 88 Height
Elevation=34.825 ft (10.615 m)

PT. 2880 (TIDE GAGE)
NAD 83 Geodetic Position
Lat. 29°27'01.49464"
Long. 91°20'25.18848"
NAD 83 Datum LSZ (1702)
N= 345634.94
E= 3278606.42
NOTE: EXISTING CONTROL POINTS USED TO SET THIS TIDE GAGE @ NAVD 88

GRAPHIC SCALE

0 100' 200' 400' 600'

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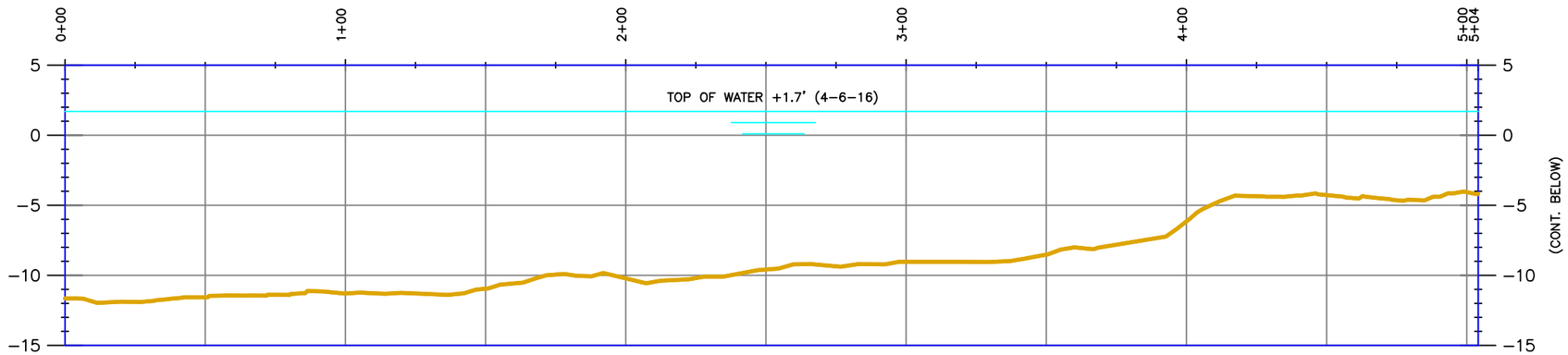
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

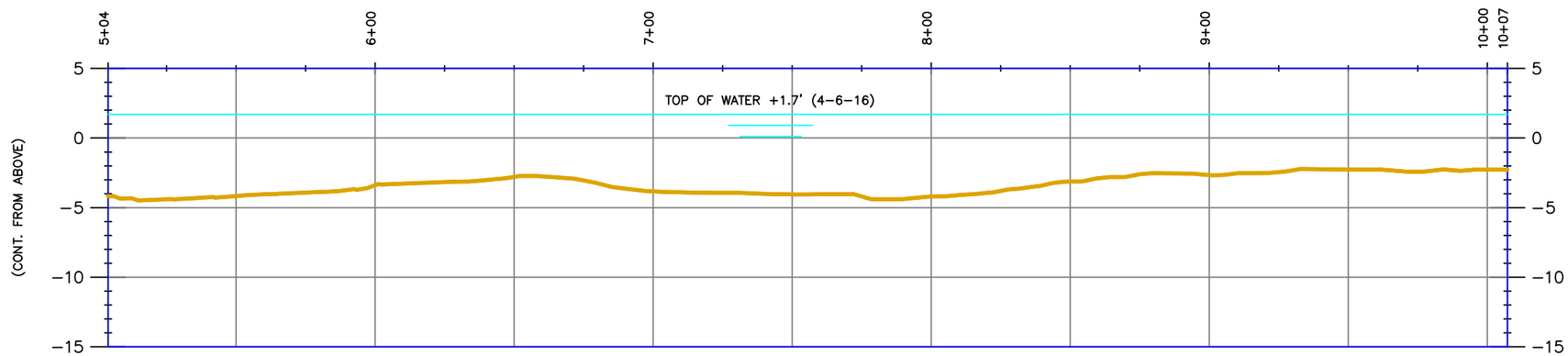
AT-03
PLAN VIEW
FOR
CHANNEL A1 & A2

DRAWN BY:	NPB/TPC	SHEET:	1 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHANNEL A1-A2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\119-123 - Channel A1-A2\AT-03 CHANNEL A1-A2.dwg PLOT DATE: 6/7/16 10:16:43am



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)



PROFILE CENTERLINE (LOOKING NORTHEASTERLY)

HORIZONTAL GRAPHIC SCALE

0 25' 50' 100' 150'

0 5' 10' 20' 30'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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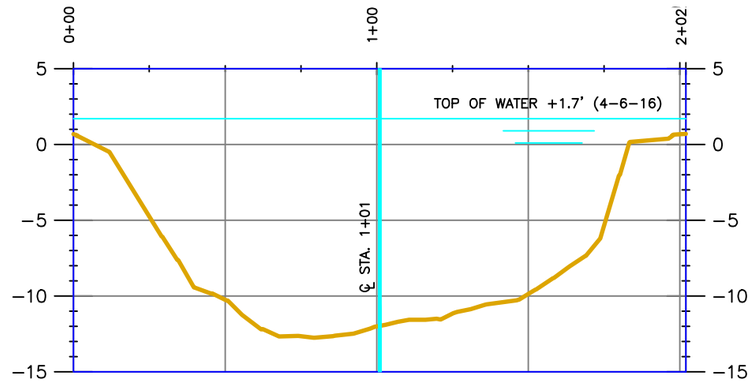
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

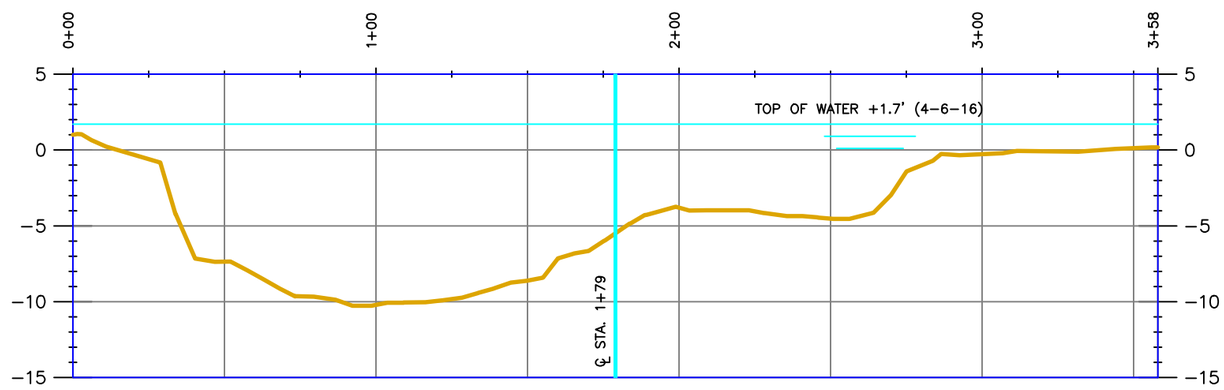
AT-03
PROFILE
FOR
CHANNEL A1

DRAWN BY:	NPB/TPC	SHEET:	2 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHANNEL A1-A2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\119-123 - Channel A1-A2\AT-03 CHANNEL A1-A2.dwg PLOT DATE: 6/7/16 10:38:49am



TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



TRANSECT 5+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE

0 25' 50' 100' 150'

0 5' 10' 20' 30'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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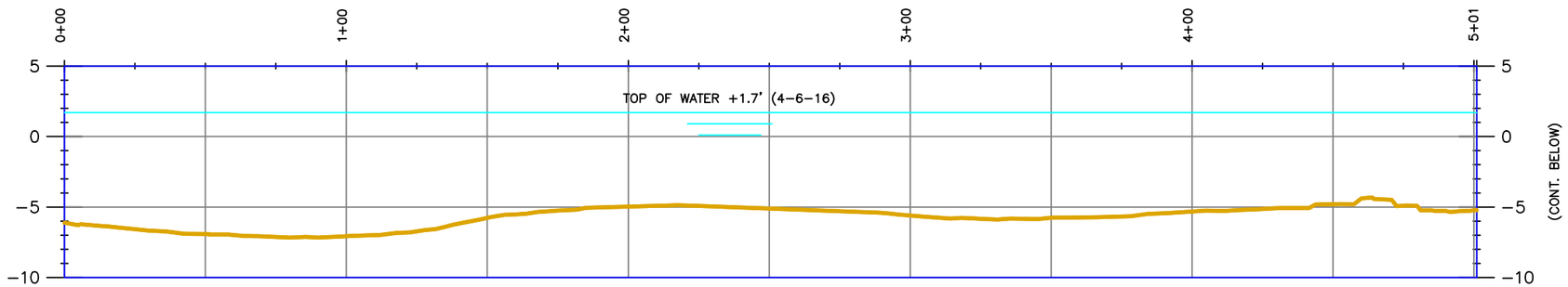
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

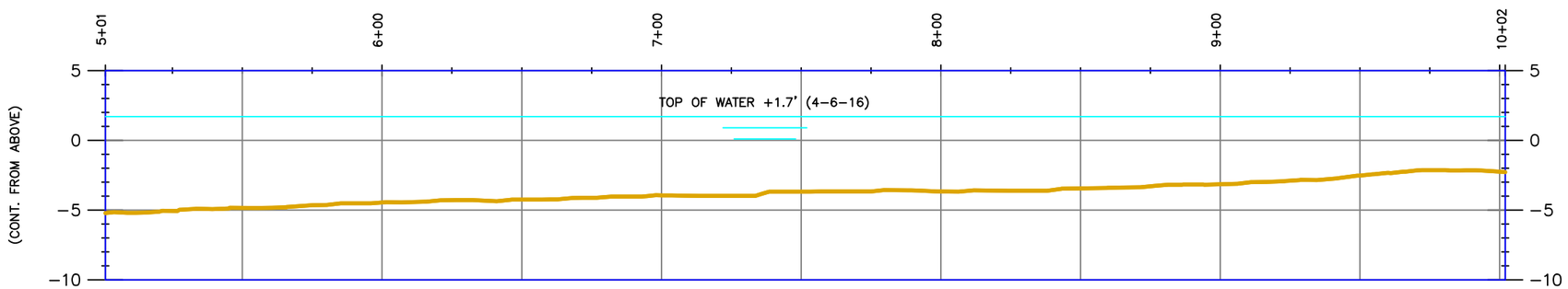
AT-03
TRANSECTS
FOR
CHANNEL A1

DRAWN BY:	NPB/TPC	SHEET:	3 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHANNEL A1-A2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\119-123 - Channel A1-A2\AT-03 CHANNEL A1-A2.dwg PLOT DATE: 6/7/16 10:39:38am



PROFILE CENTERLINE (LOOKING NORTHWESTERLY)



PROFILE CENTERLINE (LOOKING NORTHWESTERLY)

HORIZONTAL GRAPHIC SCALE

0 25' 50' 100' 150'

0 5' 10' 20' 30'

VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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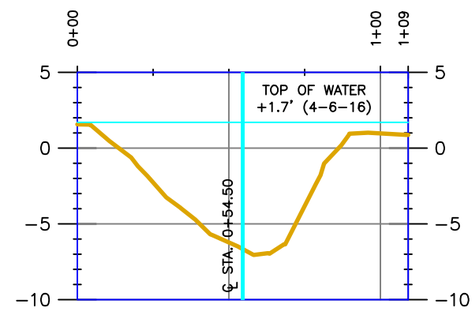
STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

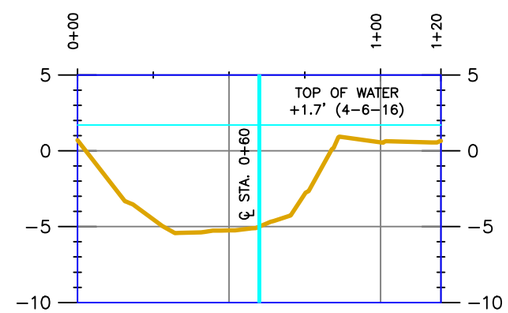
AT-03
PROFILE
FOR
CHANNEL A2

DRAWN BY:	NPB/TPC	SHEET:	4 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHANNEL A1-A2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\119-123 - Channel A1-A2\AT-03 CHANNEL A1-A2.dwg PLOT DATE: 6/7/16 10:41:19am



TRANSECT 0+00 (LOOKING SOUTHEASTERLY)



TRANSECT 5+00 (LOOKING SOUTHEASTERLY)

HORIZONTAL GRAPHIC SCALE
0 25' 50' 100' 150'
0 5' 10' 20' 30'
VERTICAL GRAPHIC SCALE

NOTE: VERTICAL DATUM IN NAVD 88

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STATE OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

AT-03
TRANSECTS
FOR
CHANNEL A2

DRAWN BY:	NPB/TPC	SHEET:	5 OF 5
CHKD./APPD. BY:	JCM	SCALE:	SHOWN
UPDATED BY:		DATE:	04/07/16
DATA BASE:		JOB NO.	12063-07
MPH CAD FILE: AT-03 CHANNEL A1-A2.DWG			

P:\01-Survey_Projects\State of Louisiana\12063-07\CAD Files\AT-03\119-123 - Channel A1-A2\AT-03 CHANNEL A1-A2.dwg PLOT DATE: 6/7/16 10:46:12am

APPENDIX 11

Field Note Records

JCB #: 12,063-07 CPRA

AT02 Atchafalaya Sediment

AT03 - Big Island

Base @ AT02-SM1-01

7.382 Ant. Ht.

Run Static on AT02-SM1-01

Start Static 10:34 A.M

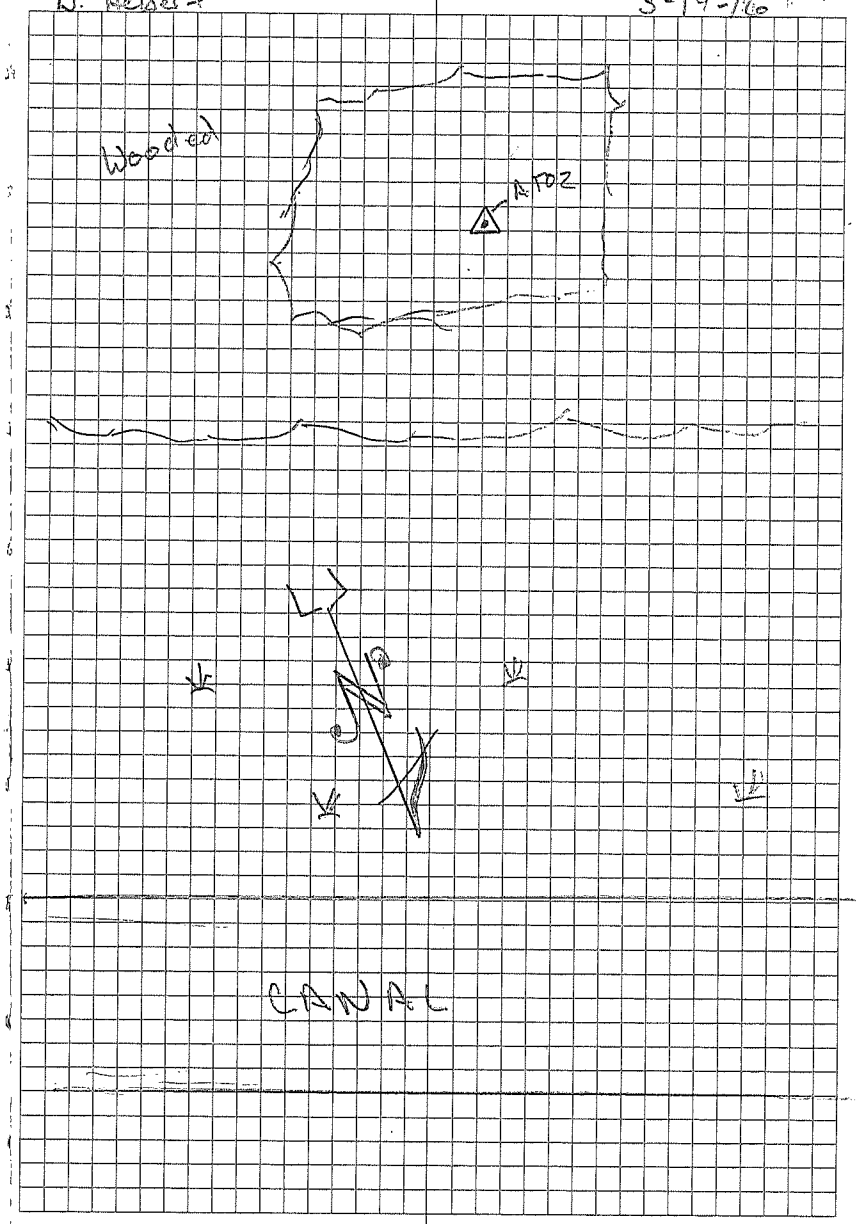
End Static 6:04 P.M.

A. Beal
B. Vogel
D. Hebert

2112

3-14-16

1



JCB #: 12,063-07 CPRA

AT02 ATCHAFALAYA Sediment / AT03 Big Island

Base @ AT03-SM-01

Ant. Ht 6.562

Start Static 11:36 A.M.

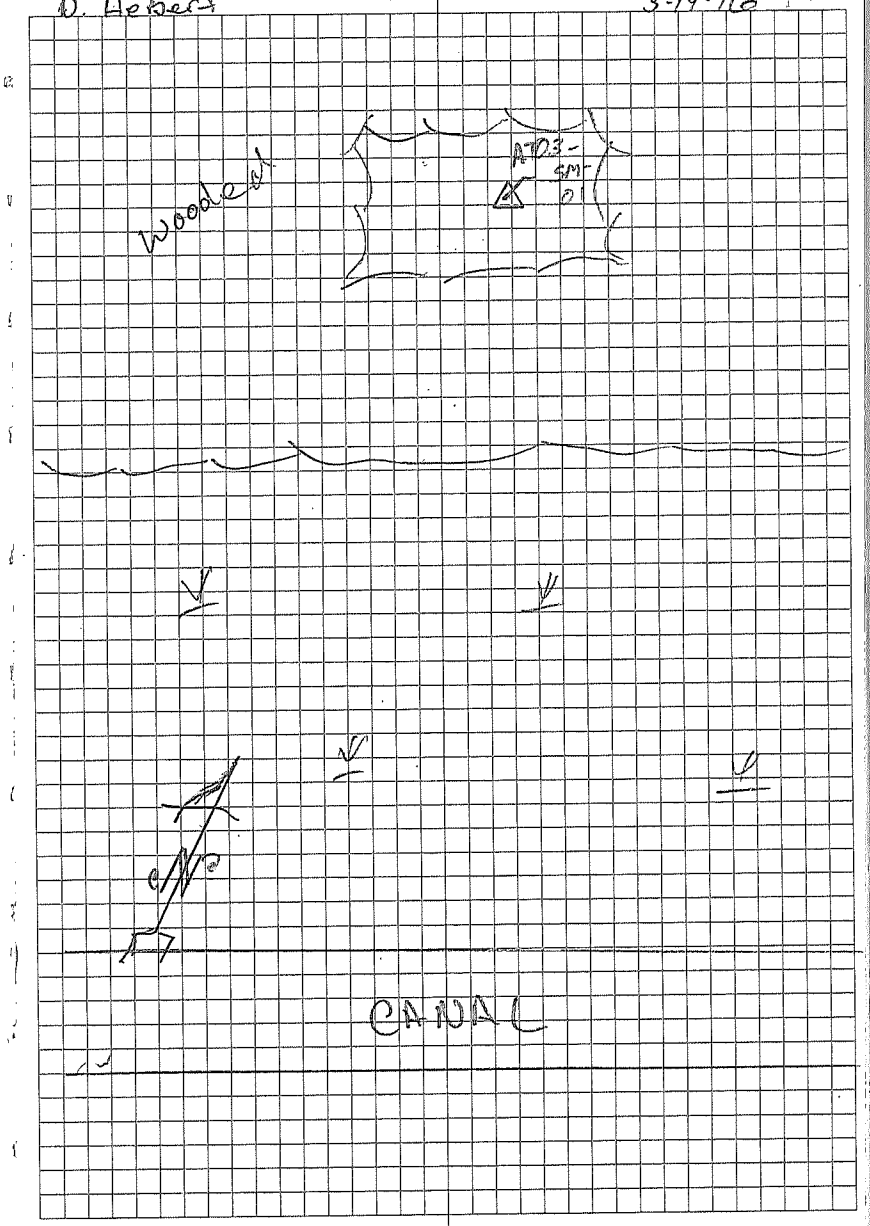
End Static 5:36 P.M.

A. Bent
B. Vogel
D. Hebert

2112

3-14-16

2



A. Beal
B. Vogel

2112

3-15-96

3

JOB#: 12,063-07 CPRA

AT02 Atchafalaya Sediment

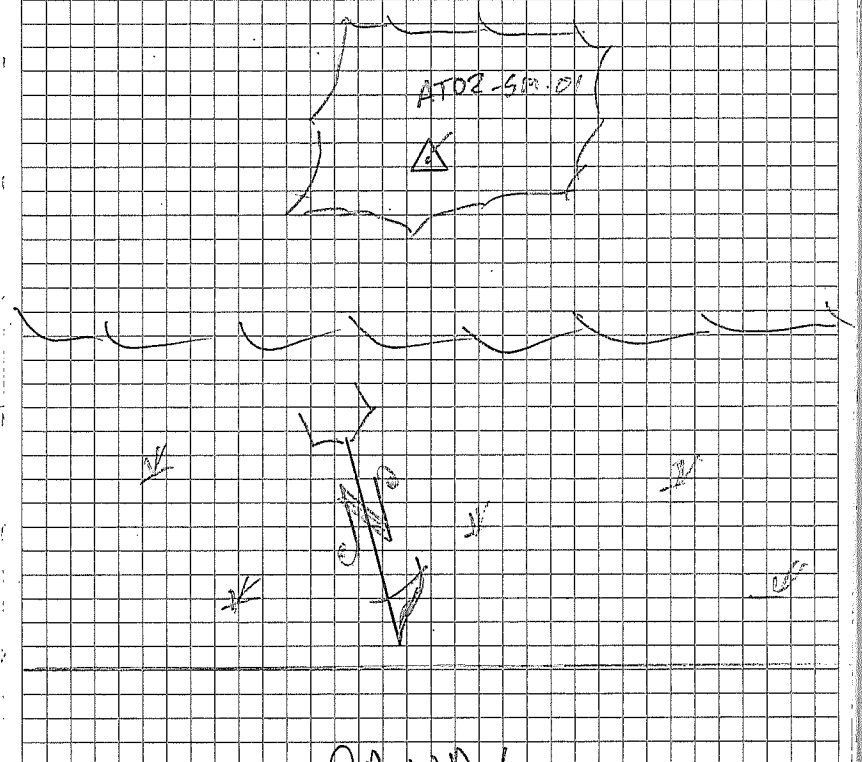
AT03 Big Island

Base @ AT02-SM-01

Ant. Ht 7.382

Start Static 7.50 A.M.

End Static 1:52 P.M.



A. Beal
B. Vogel

2112

4

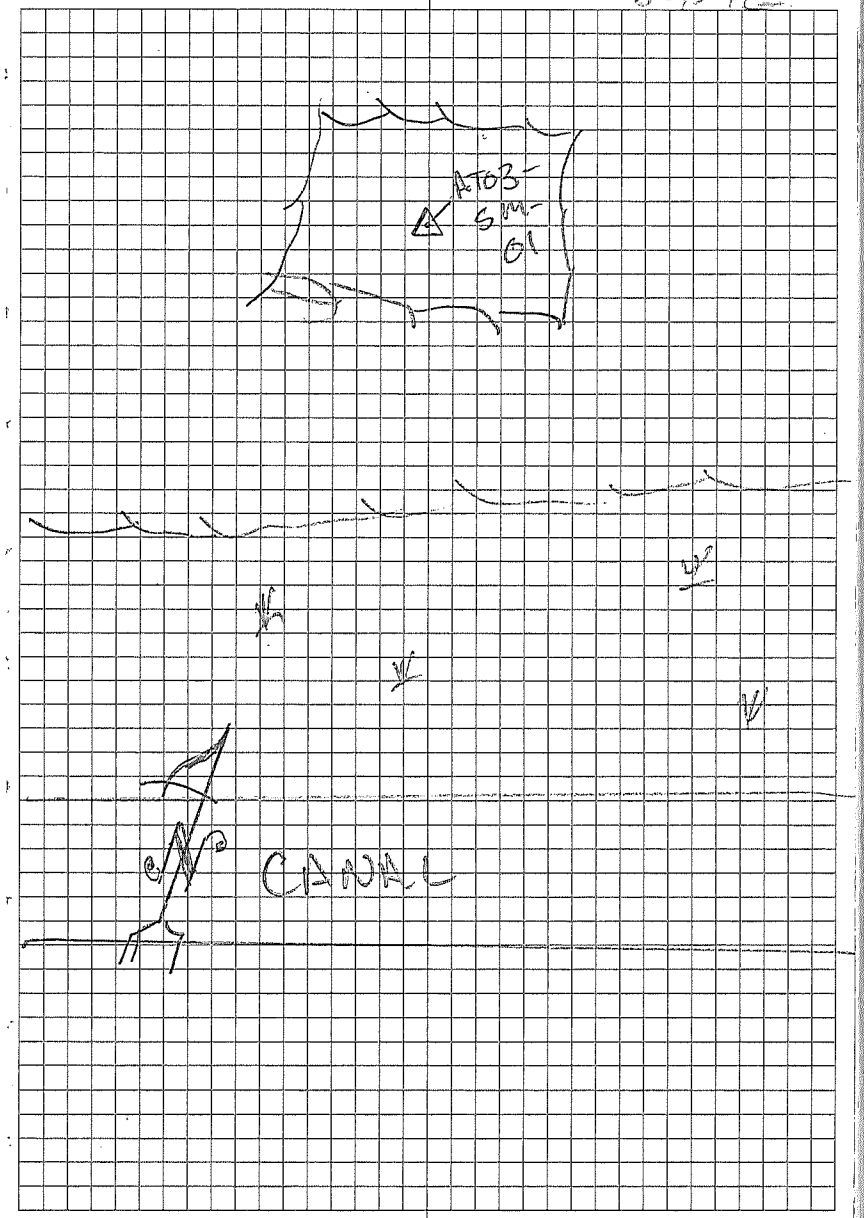
3-15-16

JOB #: 12,063-07 CPRA

AT02 Atchafalaya Sediment
AT03 Big Island

Base @ AT03-SM-01
Ant Ht. 6.562

Start Static 8:20 A.M.
End Static 2:15 P.M.



JOB #: 12063-01 CPRA

AT02 Atchafalaya Sediment

AT03 Big Island

Base @ Pt# AT03

7.382 Ant. Ht.

30,000 QC IS Pt# AT02 H= .133 V= .235

A. Beed
B. Vogel
[illegible]

2112

3-16-16

5

Due To Fog

We Departed Dock

@ 10:27 A.M.

And Arrived @ Job Site

@ 11:32 A.M.

Find Access to Line

(Westerly)

A. Beal
B. Vogel

2112

3-19-16

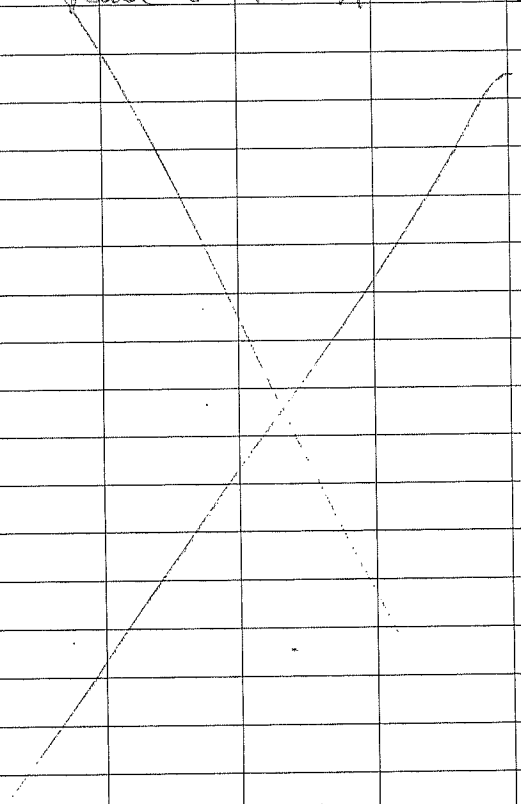
6

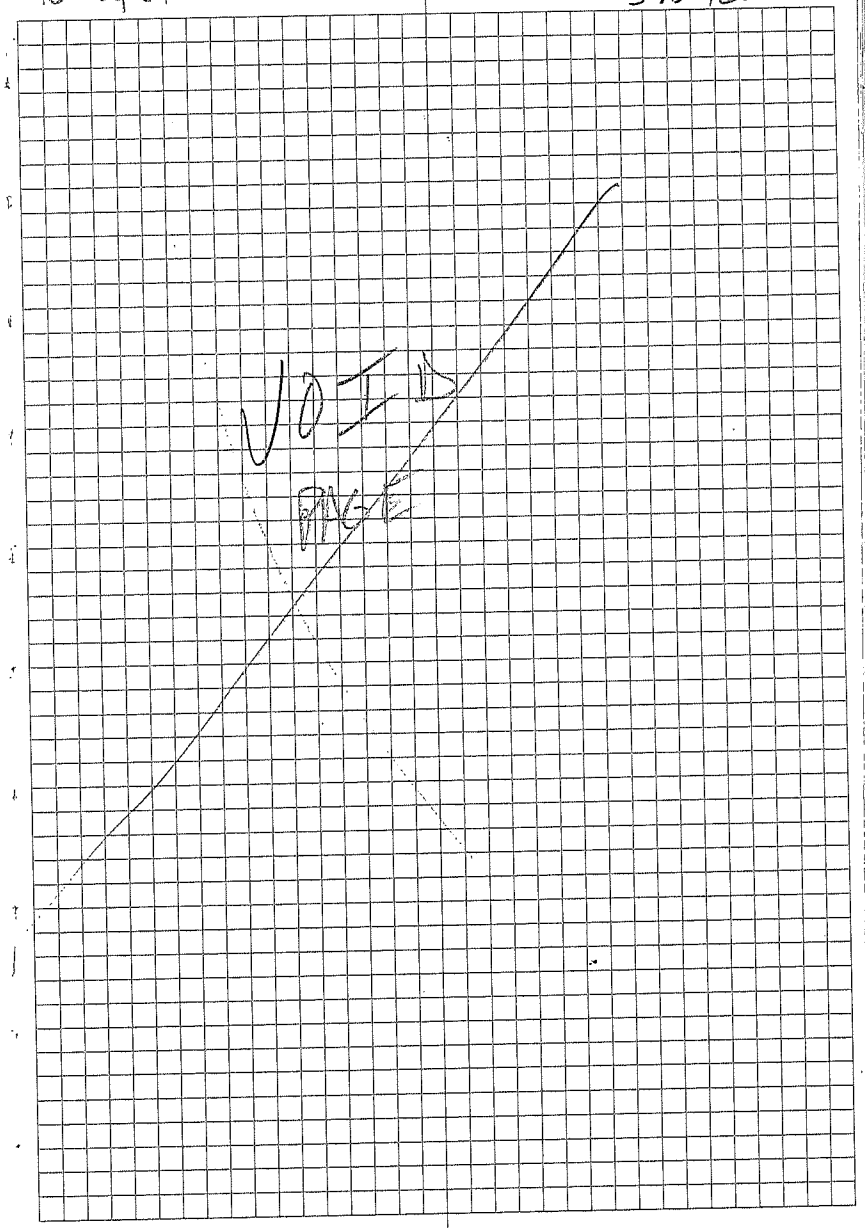
JOB #: CPRA

12,063-07 AT02 Atchafalaya Sediment

AT03 Big Island

Base @ AT03 - 1382 Hrs.





JOB#: 12,063-07 CPRA

AT02 Atchafalaya Sediment

AT03 Big Island

Base @ Pt# AT03

7.382 Amt. H.I.

30,100 QCIN Pt# AT02 H= .092 V= .264

30,101 – 30,107 Natural Bottom (MAP 72-84)

30,108 Top Bank

30,109 – 30,146 Natural Ground

30,147 Top Bank

30,148 Natural Bottom

30,149 – 3,189 Natural Ground

30,190 Top Bank (MAP 80-95)

30,191 – 30,202 Natural Bottom

30,272 – 30274 Natural Ground

30,275 Top Bank

30,276 Natural Bottom

30,203 – 30,213 Natural Bottom

30,214 Top Bank (MAP 89-101)

30,215 – 30,269 Natural Ground

30,270 Top Bank

30,271 Bottom

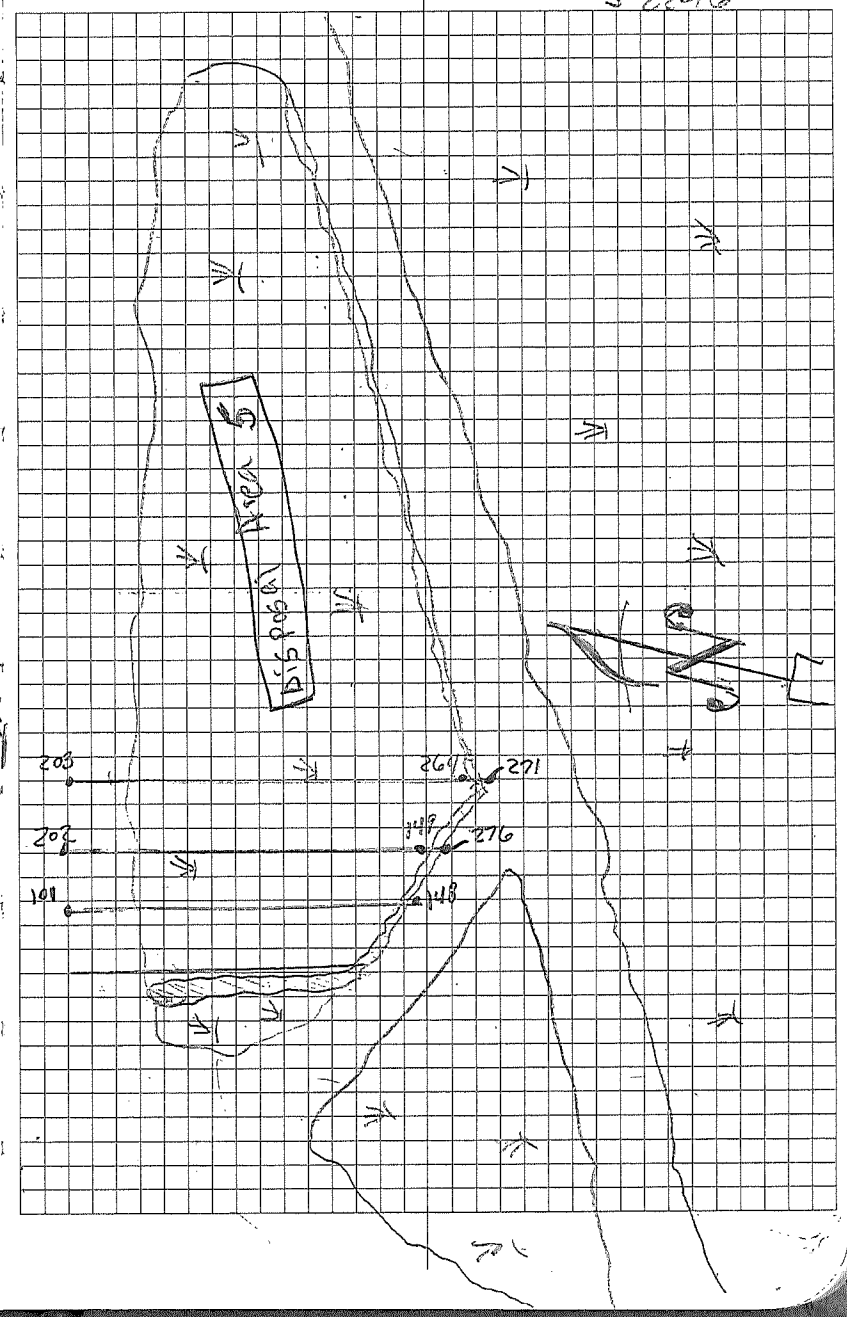
A. Beal
B. Vogel

Windy & Pattly Cove

2112

3-22-16

7



A. Beal
B. Vogel

2112 64°. Overcast 8

3-28-16

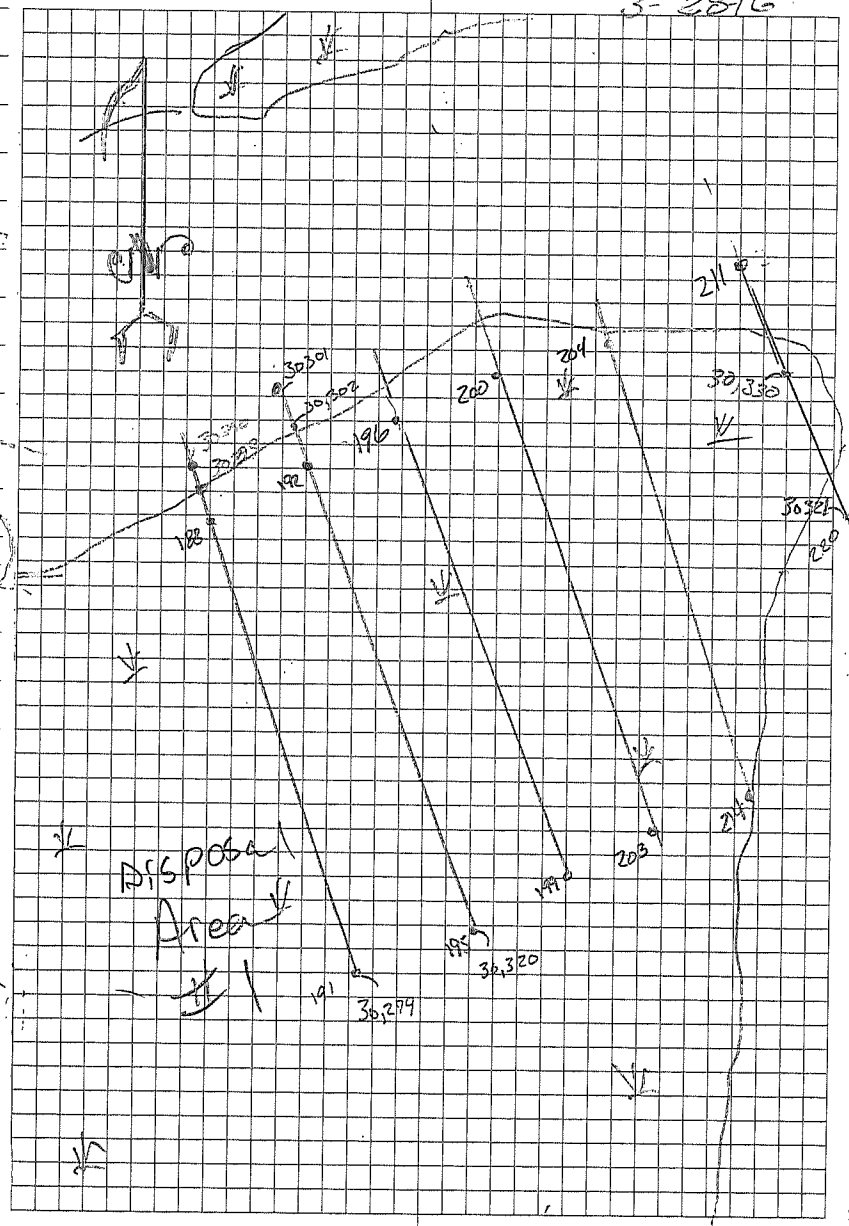
JOB #: 12,063-07 CPRA

ATO2 ATCHalalaya Sectional

ATO3 Big Island

Barge Qty ATO3 7.382 Amb. HT.

30,218	Qc In	Pt# 40,280	H = .184	V = .007
30,279 -	30,298	Natural Ground	MAP	
30,299		Top Bank Canal	(188-191)	
30,300		Natural Bottom		
30,301		Natural Bottom		
30,302		Top Bank	(MAP	
30,303 -	30,320	Natural Ground	192-195)	
30,321 -	30,330	Natural Ground		



JOB#: CPRA

12,063-07 AT02 Atchafalaya Sediment

AT03 Big Island

Base @ PH# AT03 7,388 Ac/ft

30,331 Go Check PH# 40280 H: .030 V: .025

30,332 - 30,333 Natural Ground MAP

30,334 Top Bank (211-228)

30,335 - 30,341 Natural Bottom

30,342 - 30,371 Natural Ground Map

30,372 Top Bank (214-204)

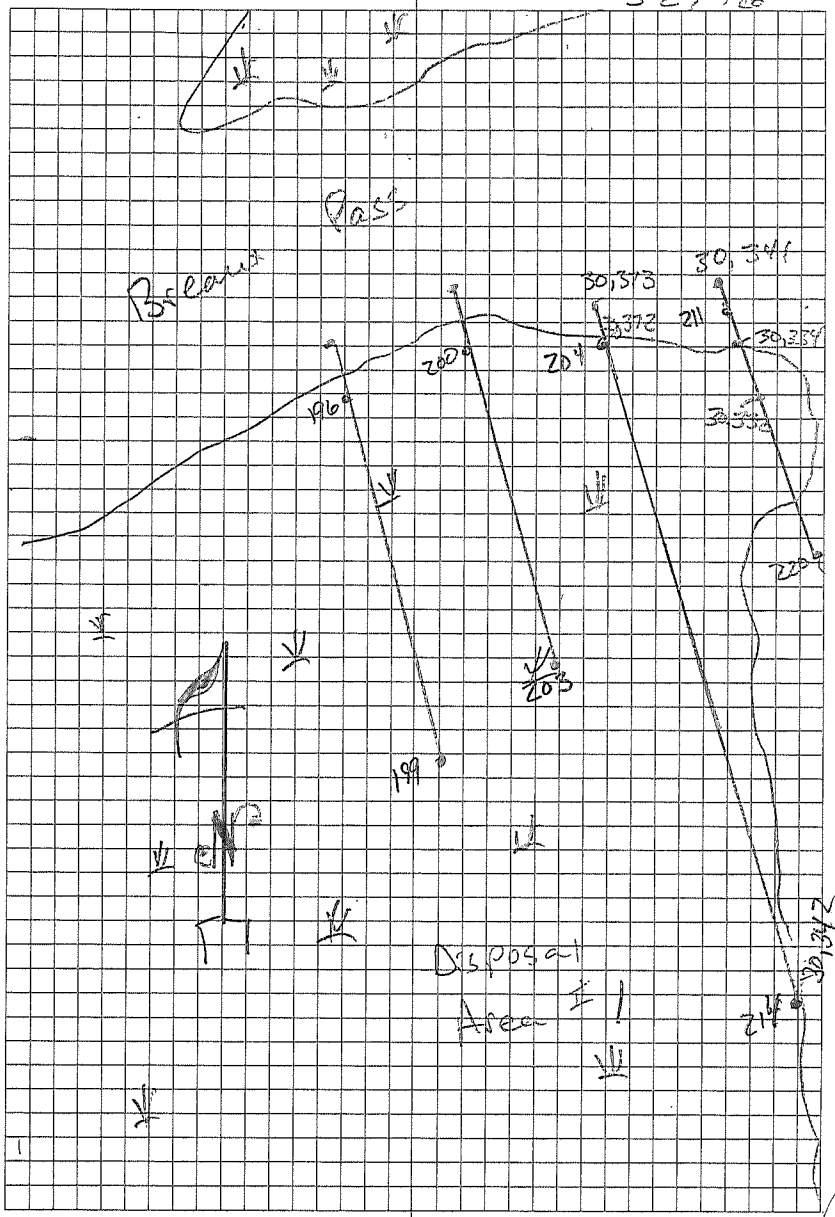
30,373 Natural Bottom

A. Bear
D. Hebert

70° Overcast

2112

3-29-16



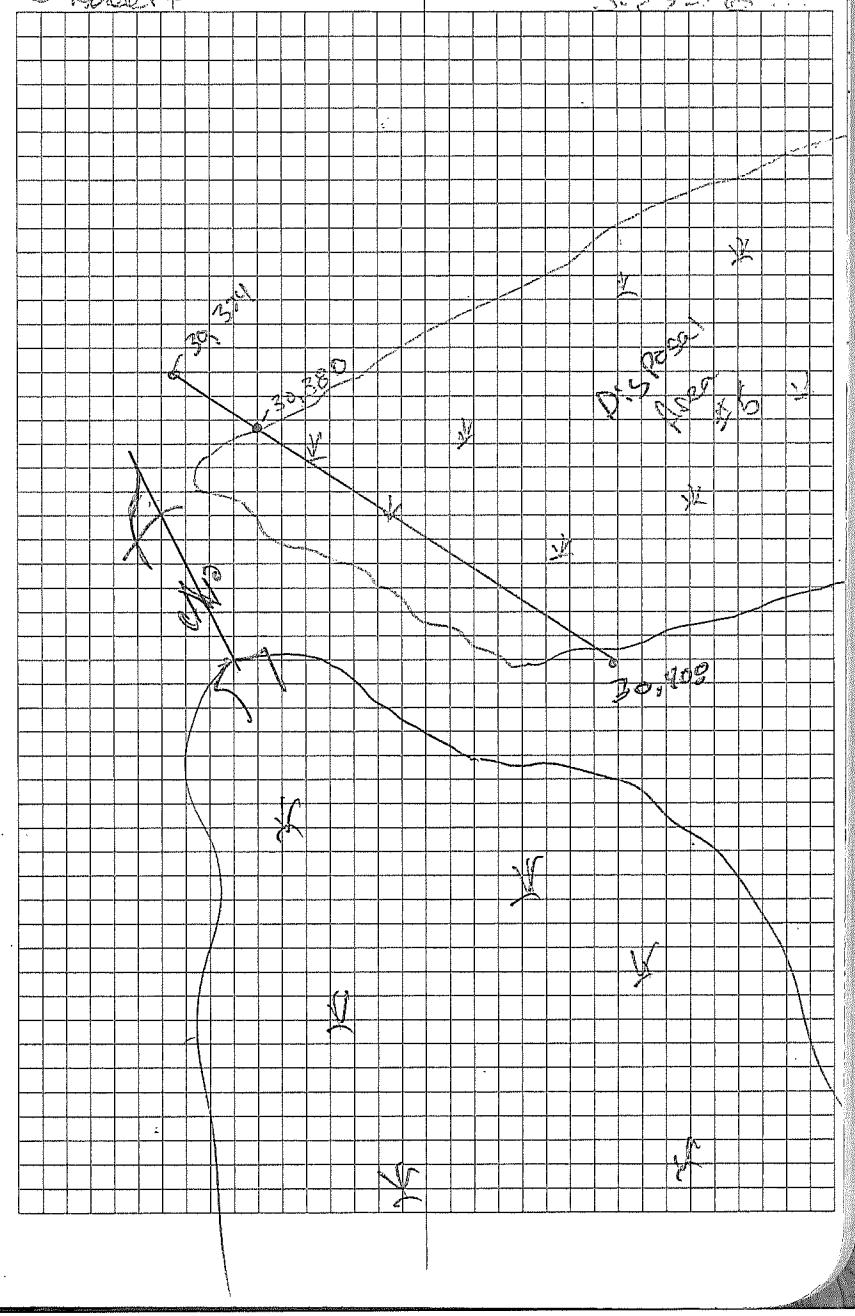
JOB #:		CPRA		
12,063	-07	AT02	Atchafalaya Sediment	
		AT03	Big Island	
		Based on AT03	7,382 Auto H.	
30,374 -	30,379	Natural Bottom		
30,380		Top Bank		
30,381 -	30,406	Natural Ground	MAP	
30,407		Top Bank	71-63	
30,408		Natural Bottom		

A. Beal
D. Hebert

2112

3-29-16

10



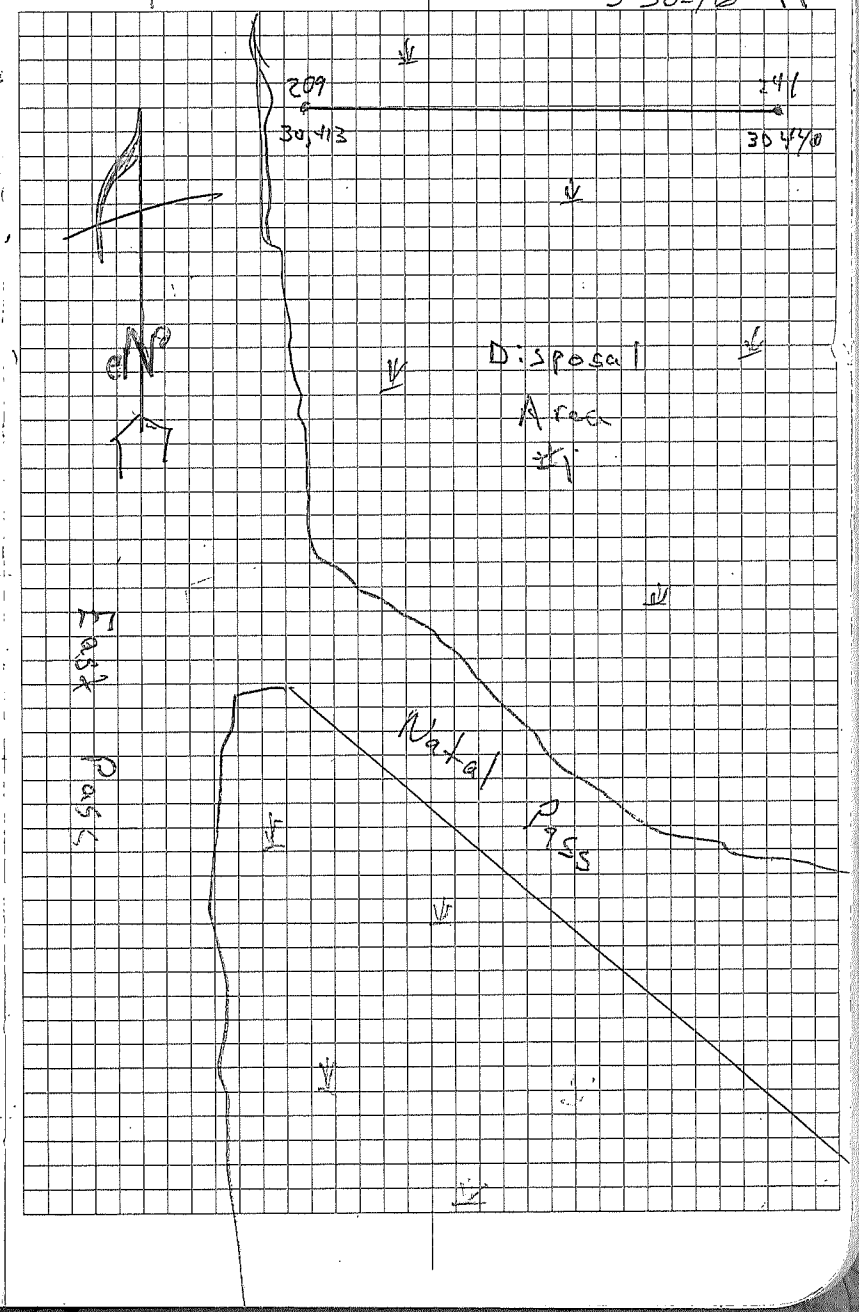
JOB#:	CPRH			
12,063.07	AT02 Atchafalaya Sediment			
	AT03 Big Island			
	Base @ ~~AT~~ AT02			
30,409	Fast Static on Mouton			
30,410	CHK Shot on Mouton			
30,411	Fast Static on AT-03			
30,412	Fast Static on Juneau			
30,413 - 30,440	Natural Ground (Map 209-241)			

A. Beal
B. Vogel

83° Overcast

2112

3-30-16



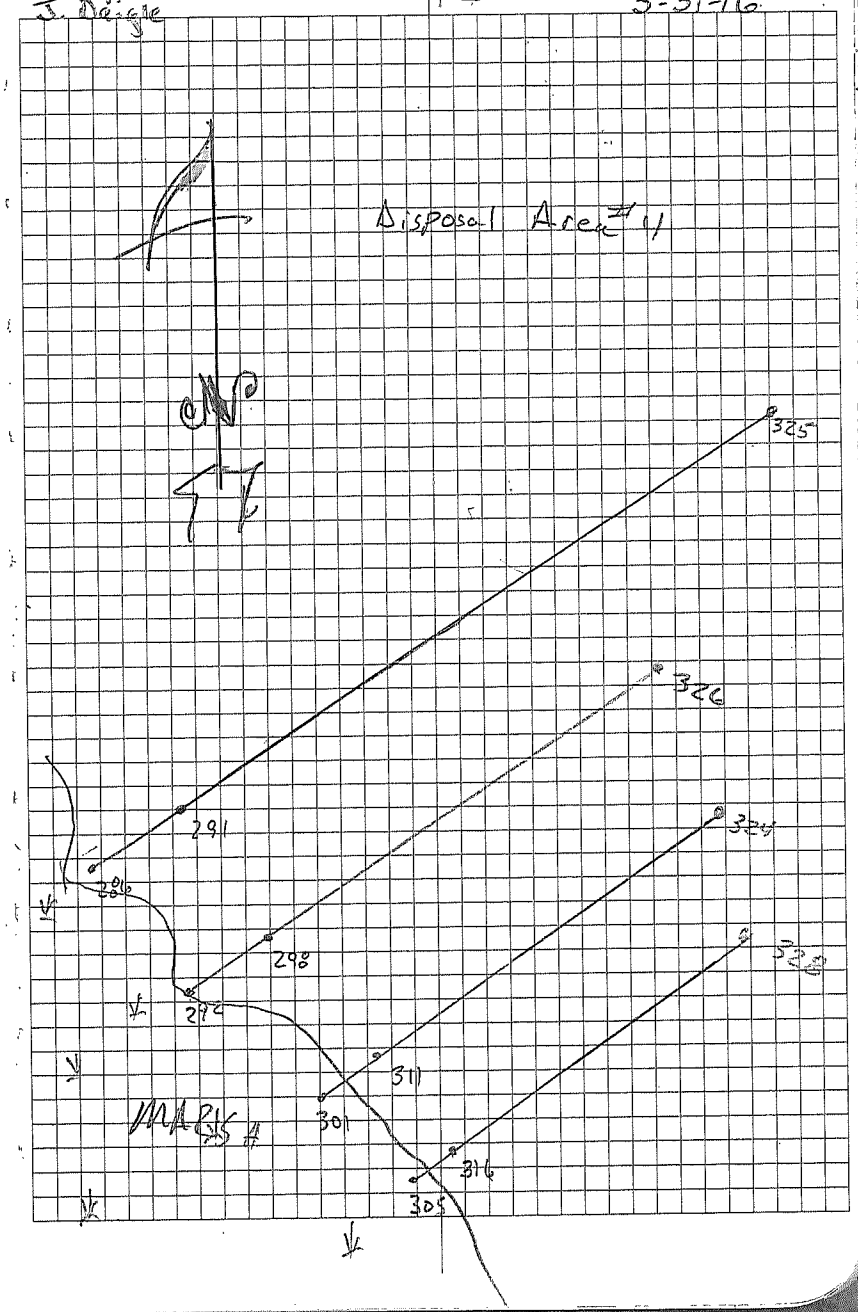
JOB#:	CPRA	
12,063-07	AT02 Mechanical Sediment	
	AT03 Big Island	
	Base @ Pt# AT02	7,382 MH.
30,442	BC Tw Pt# 30,409	H=.065 U=.084
30,443 - 30,461	Natural Bottom	(MAP 305-328)
30,462	Top Bank	
30,463 - 30,465	Natural Ground	
30,466 - 30,467	Natural Ground	MAP (301-324)
30,468	Top Bank	
30,469 - 30,492	Natural Bottom	
30,493 - 30,527	Natural Bottom	(292-326)
30,528 - 30,572	Natural Bottom	(286-325)

A. Beal
B. Voger
J. Daigle

75° Overcast

2112

3-31-16 12



JOB #: CPRA

12,063-07 AT02 Atchafalaya Sediment

AT03 Big Island

Base @ AT02 7,382 Ant

30,573 - 30,582 Natural Ground MAP (239-252)

30,583 - 30,602 Natural Ground MAP (231-260)

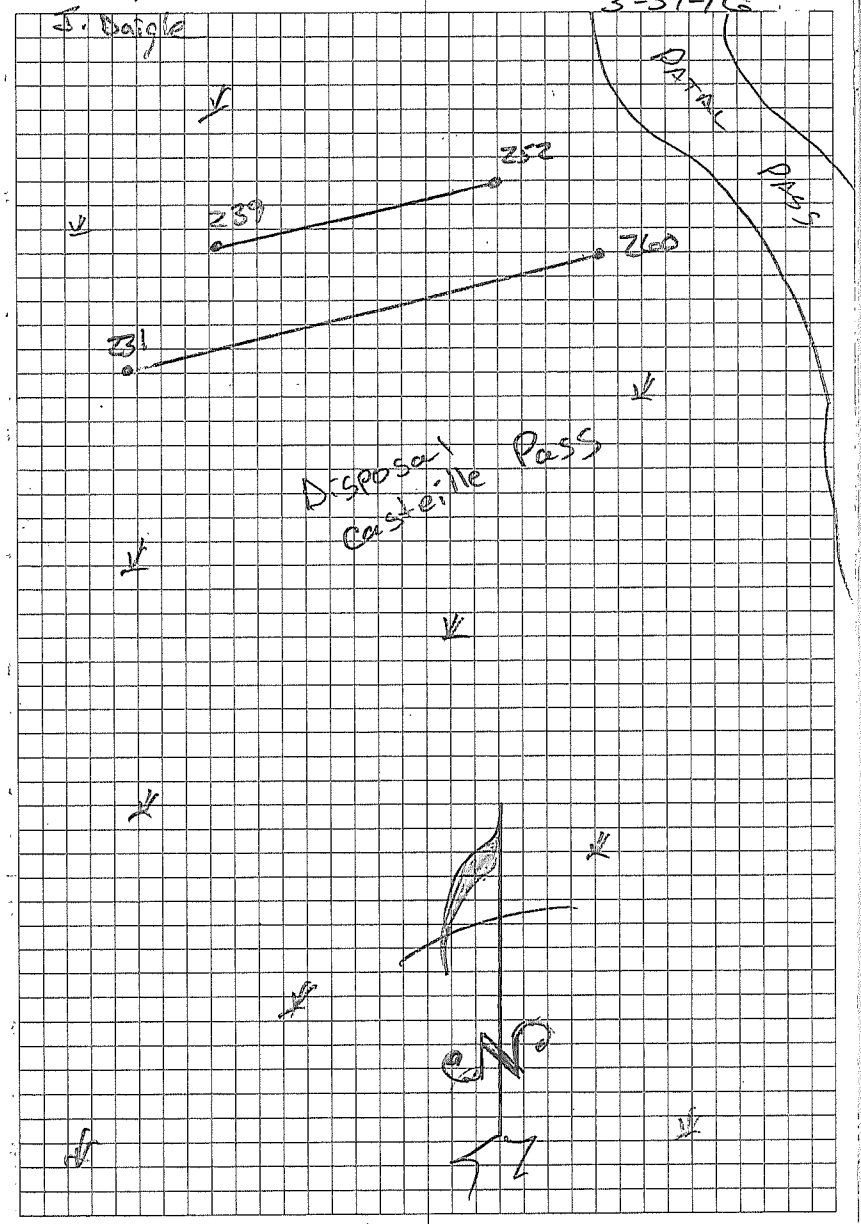
A. Beal
B. Vogel
J. Bargle

77° overcast

2112

3-31-16

13



A. Beal
B. Vogel

2112

72° Clear & Windy
11-24-16 14

JOB #: CPRA

12,063-07 AT02 Atchafalaya Sediment
AT03 Big Island
Base @ AT02 7.382 Avd. Ht.
#30,409

30,604 Qc IN Pt# Mouton H= .02 V= .007

30,605 - 30,701 Natural Grounds
Big Island Hydro Gaps

30,409
30,702 Qc out on Mouton H= .053 V= .055

JOB#: CPRA

12,063.07 AT02 Atchafalaya Sediment

AT03 Big Island

Base @ AT02 Ant. Ht. 7.382'

30,703 Qc in Pt# 30,409 H: .033 V: .062

30,704 - 30,714 Natural Ground (MAP 288-269)

30,715 - 30,729 Natural Ground (MAP 258-285)

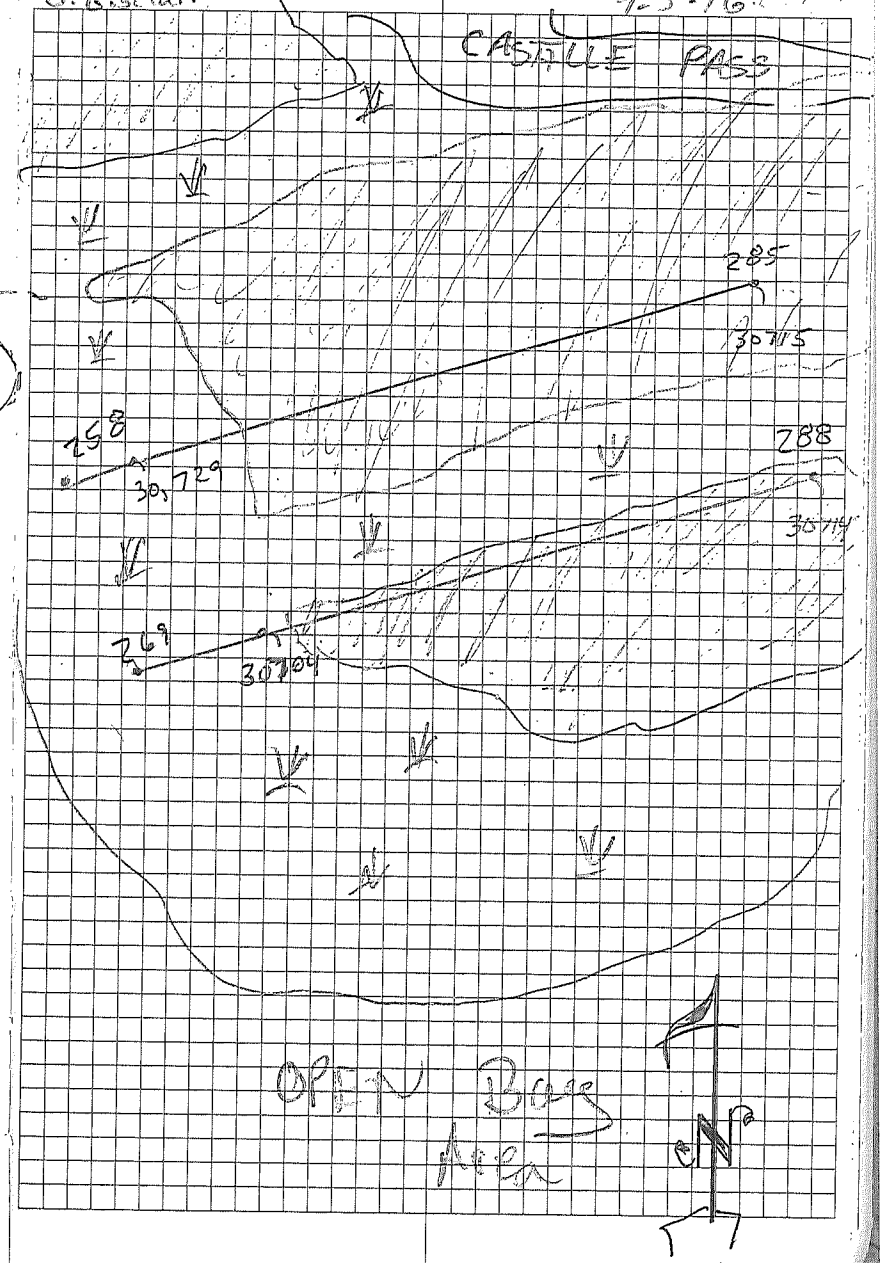
30,730 Qc out Pt# 409 H: .04 V: .004

A. Beal
B. Vogel
S. Bisclair

89 Clear
21 12'

4-5-16

15



JOB#: CPRA

12,063-07 AT02 Atchafalaya Sediment

AT03 Big Island

Base @ Pt #1 AT03

731

30,~~705~~ Qc In

732

30,~~706~~ - 30,799 Natural Ground

Big Island

Hydro Gaps

30,800 Qc out

A. Beal
B. Vogel
S. Gisclair

BP Clear

2112

4-5-16

16

JOB #: CPRA

12,063-07 AT02 Atchafalaya Sediment
AT03 Big Island
Base @ Pt AT03
7.382 And H

30,412

30,801 Qe in A H: .016 U: .237

30,802 - 30,905 Natural Ground

30,906 Top of Water @ 2:02 P.M.
1.712

30,907 Qe out Pt# 30,412 H: .018 U: .316

A. Bacal
D. Hebert
J. Daigle

SW Wind 2112 83° Cloudy

4-6-16 #7

A. Beal
D. Hebert

82° Cloudy

2112

4-7-16

18

JOB #: CPRA

12,063-07 AT02 Atchafalaya Sediment
AT03 Big Island
Base @ AT02 7.382 Ant Ht

30,908 Qc in Pt# 30,409 H= .048 V= .05

30,909 Top of Water @ 9:52 A.M. = .376

30,910 - 31,046 Natural Ground Shots

31,047 Top of Water @ 1:46 P.M. = .662

31,048 Qc out Pt# 30,409 H= .06 V= .066

A. Beal
D. Hebert

2112 83° overcast 4-8-16 19

JOB#:	CPRA		
R,063-07	ATO2 ATChafalaya Sediment		
	ATO3 Big Island		
	Base @ ATO2 7.382 Ant. Ht.		
31,049	Be in Pt# 30,409	H = .068	V = .008
31,050	Top of water @ 10:06		= .579
31,051 - 31,131	Natural Ground Shots		
31,132	Top of Water @ 1:10		= .668
31,133	Be Dup Pt# 30,409	H = .025	V = .04[illegible]

A. Beal
B. Vogel
D. Helbert

83° Windy / Clouds

2112

20

JOB#:		CPRA		
12,063-07		ATO2 Atchafalaya Sediment		
		ATO3 Big Island		
		Base @ ATO3 7.382 Ant. Ht		
31,134	Qc in	P# 30,412	H: .110	V= .519
31,135-	31,190	Natural	Ground	Shots
31,191	Top of Water @		1:14 P.M.	2.529
31,192	Qc out	P# 30,412	H= .094	V=.428

A. Beal
B. Vogel
D. Hobart

2112

4-18-16

21

JOB#: CPRA

12,063-07 AT02 Atchafalaya Sediment
AT03 Big Island
Base @ AT03 7.382 Auto Hts

31,193 Qc in Pit 30,4/2 H= .141 V= .320

31,194 - 31212 Natural Ground Shots

31,213 Top of Water @ 11:02 A.M. = 1.673

31,214 - 31,251 Natural Ground Shots

31252 Sound 32.0
31253 Sound 28.0
31254 Sound 35.0
31255 Sound 34.0

31256 Top of Water @ 1:09 PM = 2.296

31,257 Qc out Pit 30,4/2 H= .065 V= .290

JOB #: CPRA.

12063-07 AT-02 ATchafalaya Sediment /
AT-03 Big Island
Base PT. AT-03 HT. 2.25 m.
40,000 QC PT. AT-02 HT. 2.00 m.
H. Dist 0.141 V. Dist 0.253
Tie in N.G Shots in Marsh

10:27 AM Late Departure because of fog
11:32 AM Started Base

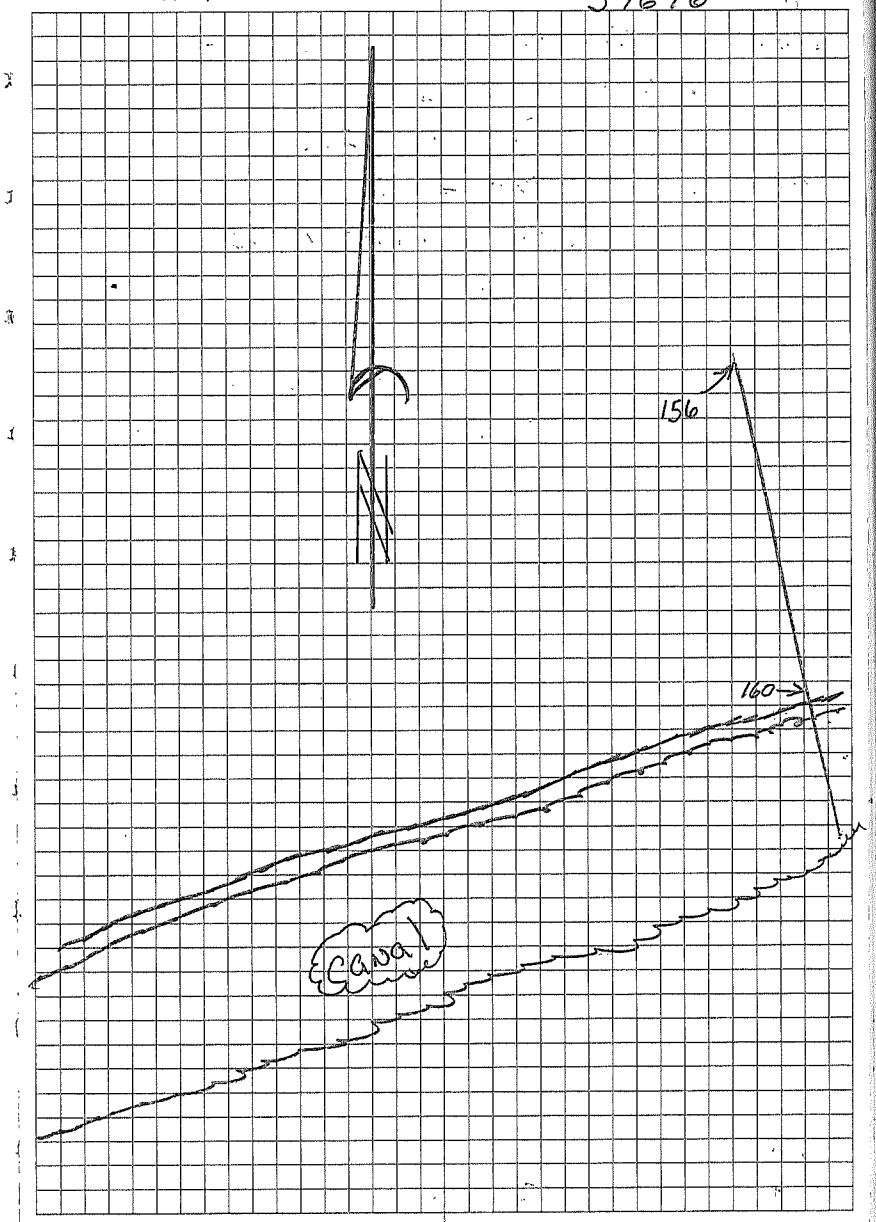
18 CHK H. Dist 0.140 V. Dist -0.382
01-17 NG NG Shots From Shoreline to Shoreline

R. Burdi
C. Hartwell
J. Fitch

Cloudy & warm

2113

3-16-16



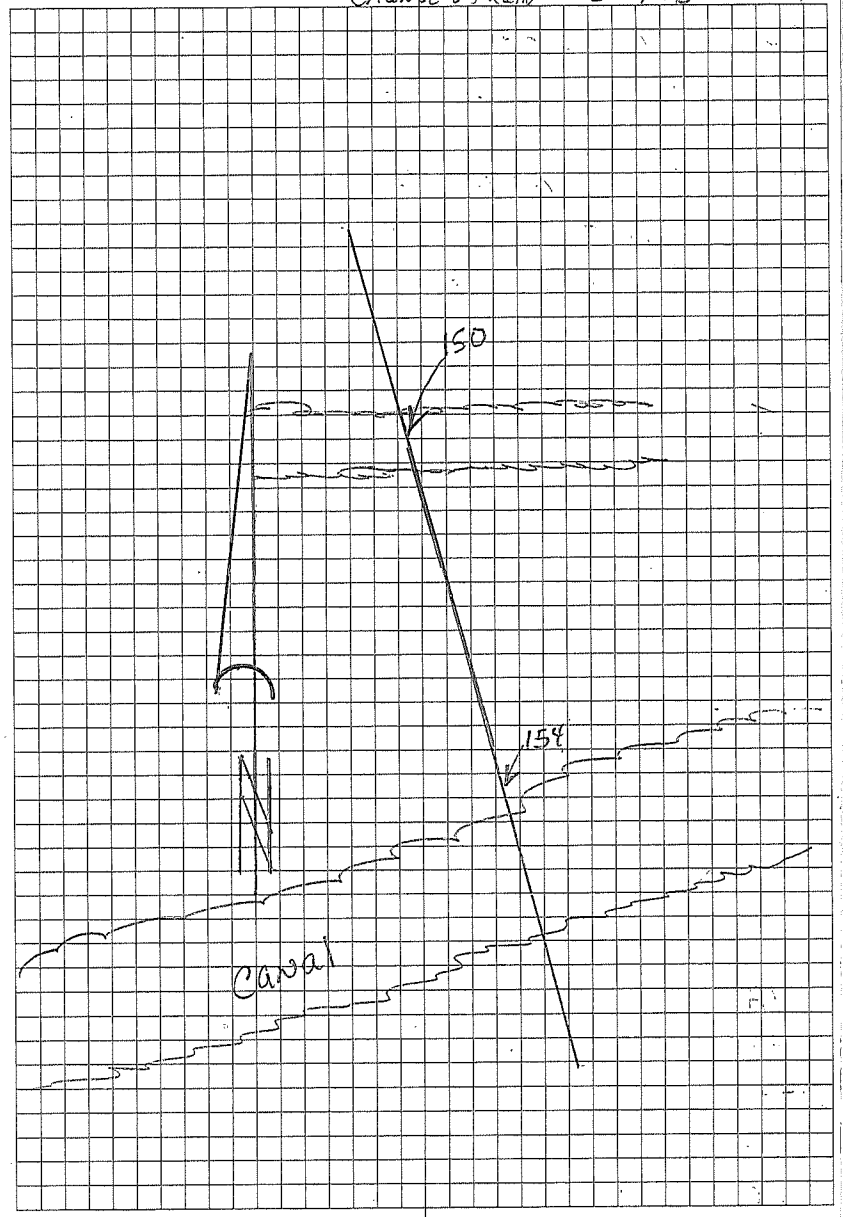
R. Burdi
C. Hartwell
J. Fitch

Cloudy & warm
2113
Chance of Rain

3-17-16

2

JOB #:		CPRA
12063-07	AT-02 Atchafalaya Sediment/	
	AT-03 Big Island	
	Base PT. AT-03 H.T. 2.25 m.	
40,019	QC PT. AT.02 HT. 2.00 m.	
	H. Dist 0.064	V. Dist -0.196
	Tie in NG shots in marsh	
		Berwick, LA.
PT.		Remarks:
50	CHK	H. Dist 0.164 V. Dist -0.352
49	"	NB
48	"	Toe Bank
47	WBY	Top Bank
22-46	NG	
21	"	Top Bank
20	WBY	Toe Bank



R. Burdith
C. Hartwell
J. Fitch

2113

Cloudy & Cool

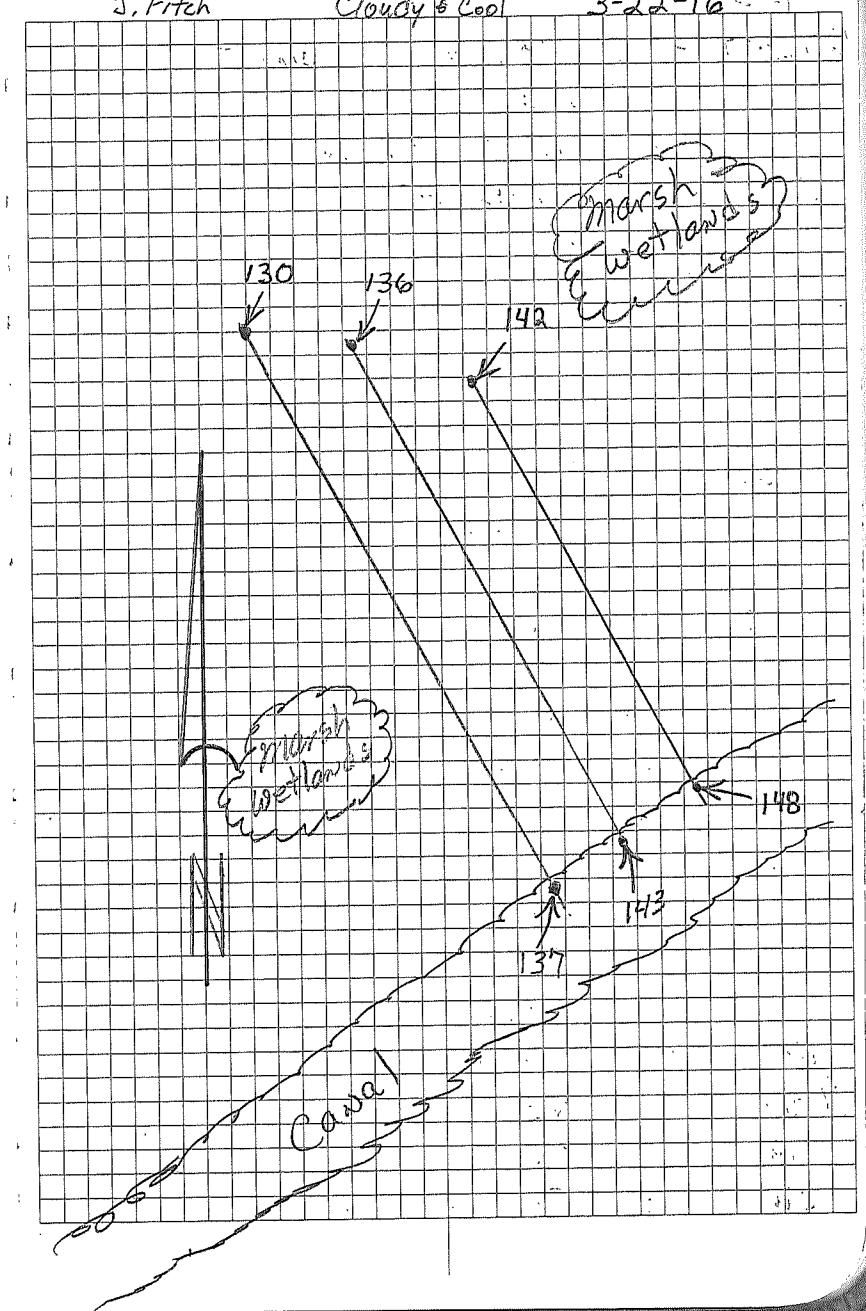
3-22-16

3

Job #:	CARA.
12063-07	AT-02 Atchafalaya Sediment/
	AT-03 Big Island
	Base. PT. AT-03 HT. 2.25 m.
40051	QC PT. AT.02 HT. 2.00 m.
	H. Dist 0.053 V. Dist -0.243
	Topo Survey Shoot NG Shots Every 50 FT. on
	Section Lines.

Berwick, LA,

PT.		Remarks
135-167	NG	Wetland
134	"	Top Bank "
133	"	Toe Canal
130-132	"	NB
129	"	Toe "
128	WBY	Top Bank Canal
98-127	NG	Wetland
97	"	Top Bank Canal
93-96	"	NB
92	"	Toe "
91	WBY	Top Bank Canal
65-90	NG	Wetland
64	"	Top Bank Canal
54-63	"	NB
53	"	Toe "
52	WBY	Top Bank Canal



Same crew

Cloudy & Cool

2113

3-22-16

4

JOB #:	CPRA			
12063-07	AT-02 Atchafalaya Sediment / At-02			
	Big Island			
	Topo Survey Shoot NG, NB Shots every			
	50 FT on Section Line			
			Berwick, LA.	
PT.		Remarks		
	H. Dist	0.079	V. Dist 0.262	
173	CHK	AT-02	HT. 2.25 M.	
170-172	"	NB		
169	"	Toe	"	
40,168	WBY	Top Bank Canal		

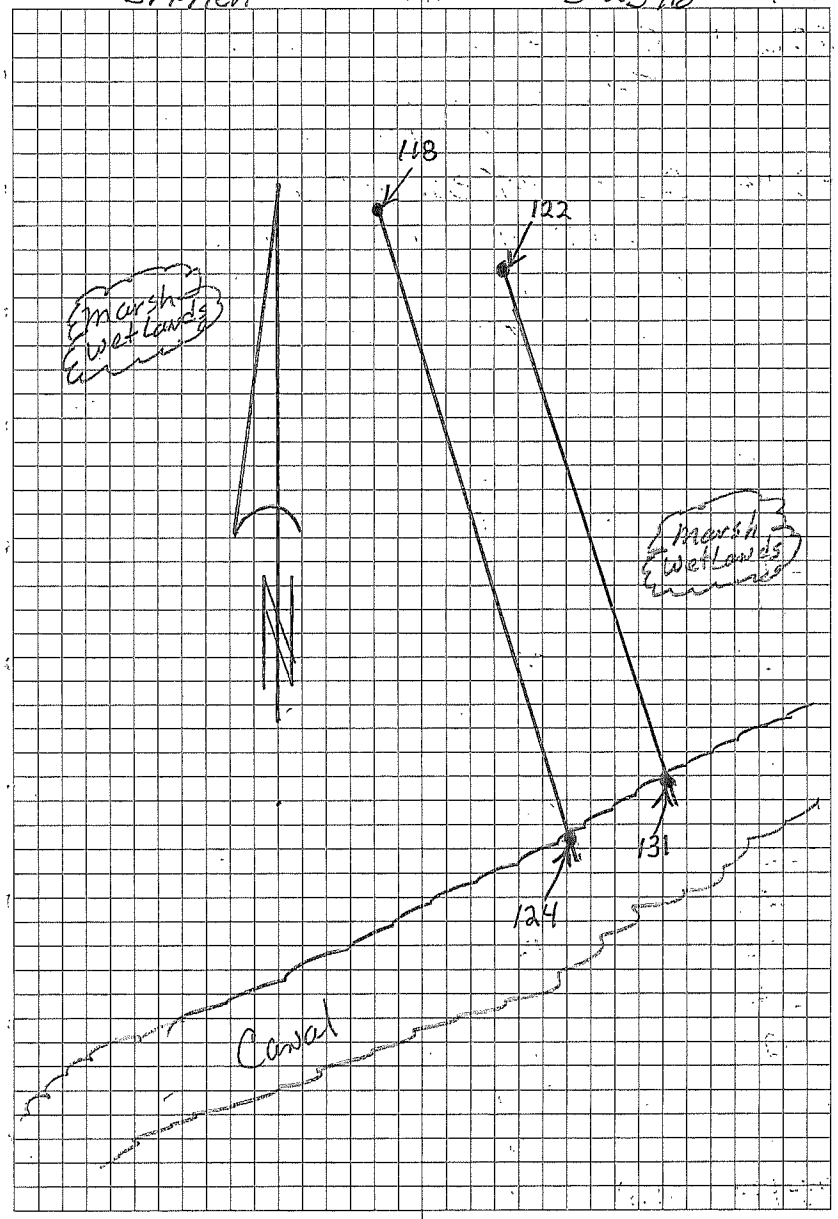
Drawing on Page #3

R. Burditt
C. Hartwell
J. Fitch

Cloudy & warm
2113
3-23-16

5

JOB #:	SPRA.		
12063.07	AT-02 Atchafalaya Sediment/		
	AT.-03 Big Island		
	Base PT. AT-03 HT. 2.25M.		
40,174	QC PT. AT. 02 HT. 2.00M		
	H. Dist 0.107	V. Dist -0.326	
	Topo Sunny Shoot NG, NB Shots		
	every 50' Tow Cross Section Lines		
			Berwick, LA.
PT.		Remarks	
	H. Dist 0.058	V. Dist -0.234	
279	CHK.	PT. AT-02 HT. 2.00M.	
269-278	"	NB	
268	"	Toe	Canal
267	WBY	Top Bank	Canal
229-266	NG	Wetlands	
228	"	Top Bank	"
227	"	Toe	Canal
220-226	"	NB	
219	"	Toe	Canal
218	WBY	TOP Bank	Canal
182-217	NG	Wetlands	
181	"	Top Bank	"
180	"	Toe	Canal
175-179	WBY	NB	



R. Burdit
C. Hartwell
J. Fitch

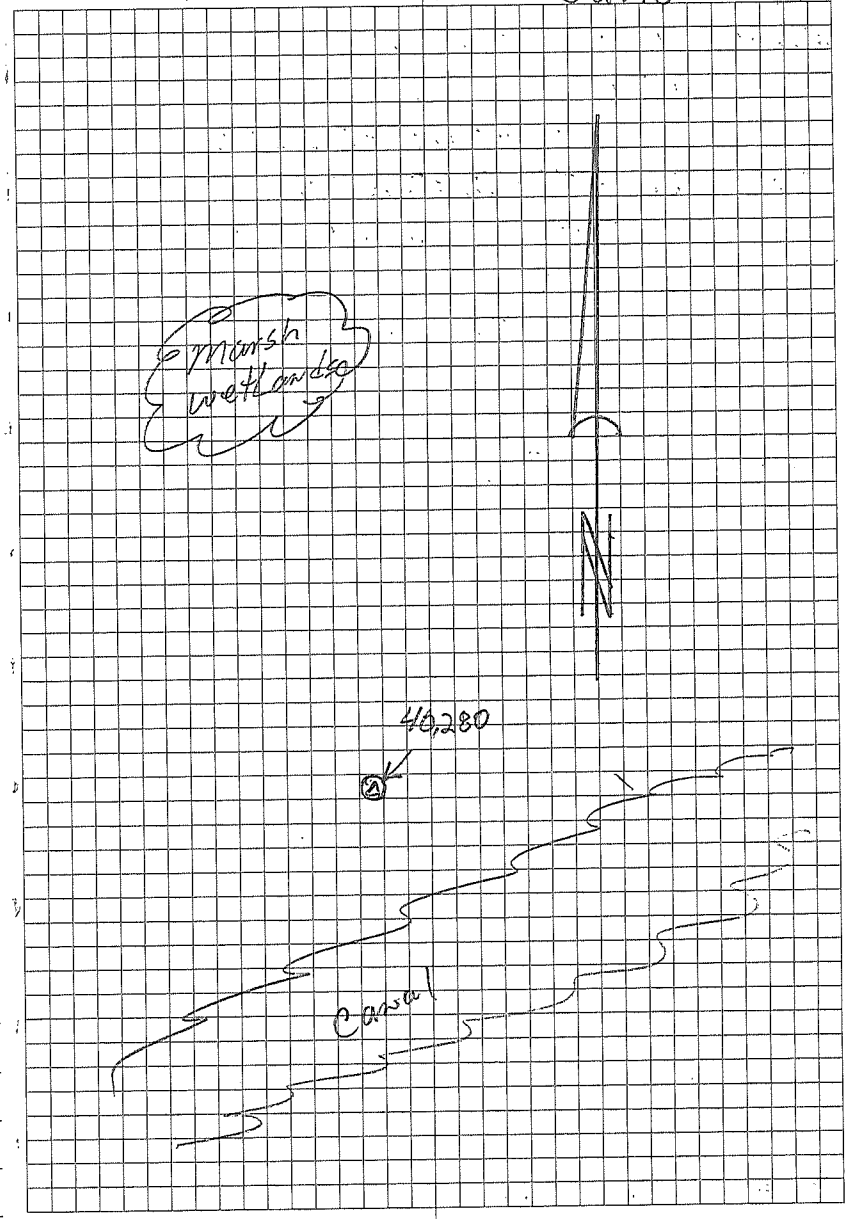
Cloudy, warm w/rain

2113

3-24-16

6

JOB #.	CPRA
12063-07	AT.-02 Atchafalaya Sediment/
	AT.-03 Big Island
	Base PT. AT-03 HT. 2.25m.
40,281	QC PT. #40,280 HT. 2.00m.
	H. Dist 0.045 V. Dist 0.013
	Topo Sump Tied in & Established
	Brass Cap (Juneau)
	Berwick, LA.
PT.	Remarks
40,280	CP Brass Cap (JUNEAU)



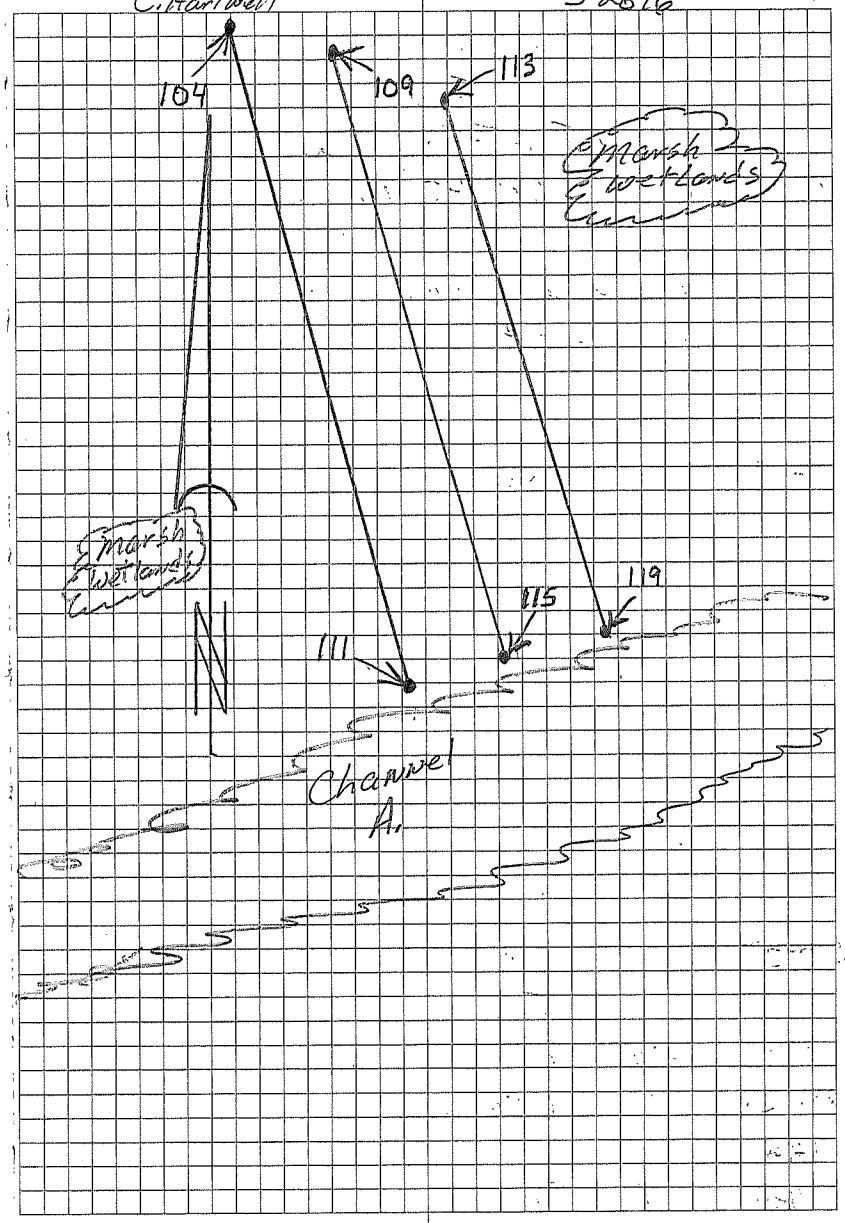
R. Burditt
D. Hebert
C. Hartwell

Cloudy & warm

2113

3-28-16

JOB #:	SPRA.		
12063-07	AT-02 Atchafalaya Sediment/		
	AT-03 Big Island		
	Base PT. AT-03 HT. 2.25 m.		
40,282	QC PT. 40,280 HT. 2.00 m.		
	H. Dist 0.070	V. Dist 0.071	
	Topo Survey NG, NB every 50 FT Cross Section Lines		
	H. Dist 0.049	V. Dist -0.071	
460	CHK	PT. 40280 HT. 2.00 m.	
446-459	"	NB	
445	WBY	Toe	Canal
398-444	NG	wetlands	
397	"	Top Bank	"
396	"	Toe	Canal
385-395	"	NB	
384	"	Toe	"
383	WBY	Top Bank	Canal
340-382	NG	wetlands	
339	"	Top Bank	"
338	"	Toe	Canal
329-337	"	NB	
328	"	Toe	"
327	WBY	Top Bank	Canal
285-326	NG	Wetland	
284	"	Top Bank	"
283	WBY	Toe	Canal



R. Burditt
C. Hartwell

Cloudy & warm

2113

3-29-16

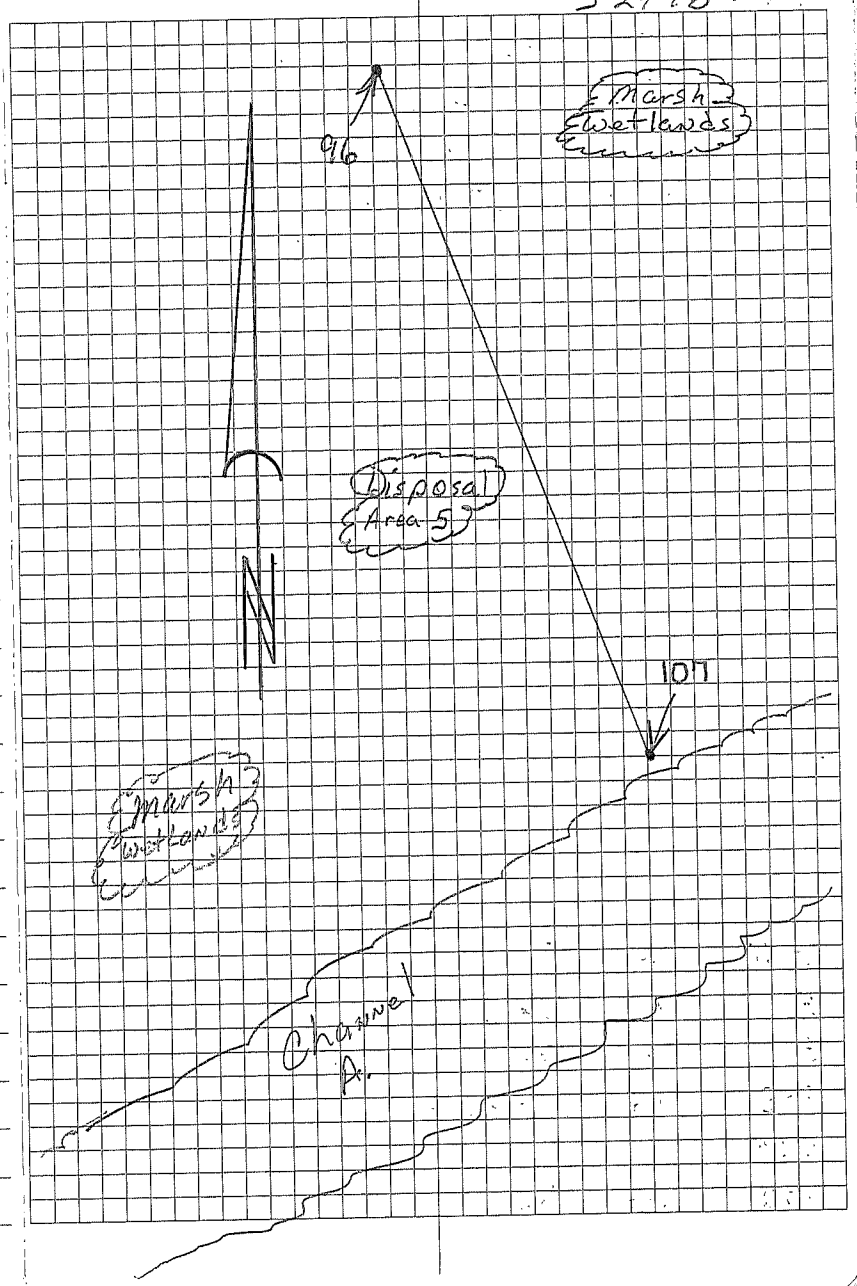
8

JOB #: SPRA

12063-07 AT-02 Atchafala Sediment/
AT-03 Big Island
Base PT. AT-03 HT. 2.25m.
40,461 QC PT. 40,280 HT. 2.00m.
H. Dist-0.043 V. Dist-0.024
Topo Survey Tie to NG, NB every 50 FT.
on Cross Section Lines

Berwick LA.

PT.		Remarks
515-527	"	NB
514	"	Toe "
513	WBY	Top Bank Canal
464-512	NG	Wetlands
463	"	Top Bank "
462	WBY	Toe Canal



Same crew

Cloudy & warm

2113

3-29-16

9

JOB #: CPRA

12063-07 AT-02 ATchafalaya Sediment/

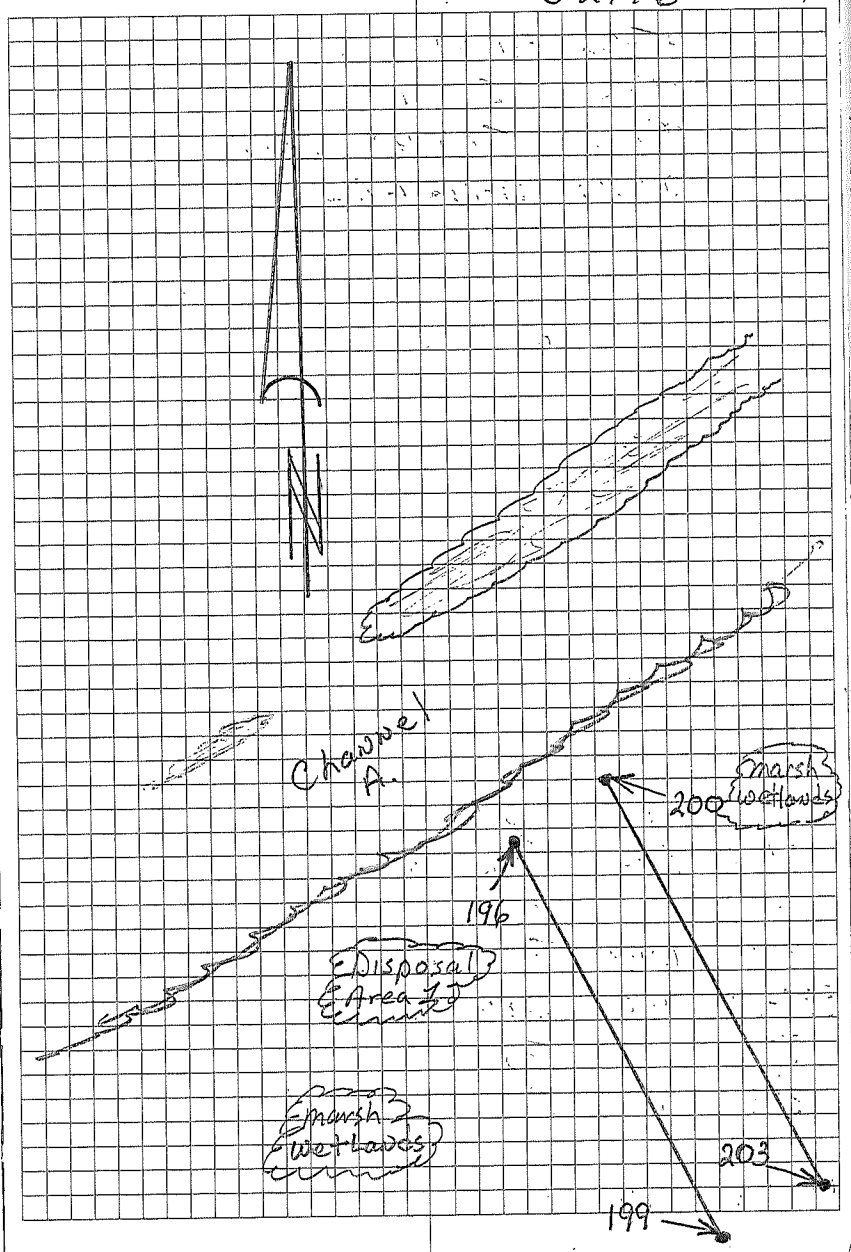
AT-03 Big Island

Topo Survey Tie in NG, NB every 50 FT.

ON Cross Section Line

Berwick LA.

PT.	Remarks
	H. Dist 0.084 V. Dist 0.118
572	CHK PT. 40, 280 HT. 2.00 m.
571	" Toe "
570	WBY Top Bank Canal
550-569	NG Wetlands
549	" Toe "
548	WBY Top Bank Canal
529-547	" "
40528	NG Wetlands



JOB #: CPRA.

12063-07 AT-02 Atchafalaya Sediment/

AT-03 Big Island

Base PT. AT-02 HT. 2.25 M.

40,574 QC PT. 40,573 HT. 2.00 m

H. Dist 0.018 V. Dist 0.014

Topo Survey Tie in NG, NB every 50 FT. on

Cross Section Lines

Berwick, LA.

PT.		Remarks	
683-684	WBY	NB	
666-682	NG	wetlands	
665	"	Top Bank	"
664	"	Toe	Canal
663	"	NB	
662	"	Toe	"
661	WBY	Top Bank	Canal
612-660	NG	wetlands	
611	"	Toe	"
610	WBY	Top Bank	Canal
577-609	NG	Wetlands	
576	"	Top Bank	"
575	WBY	Toe	Canal
40,573	CP	Brass Cap	

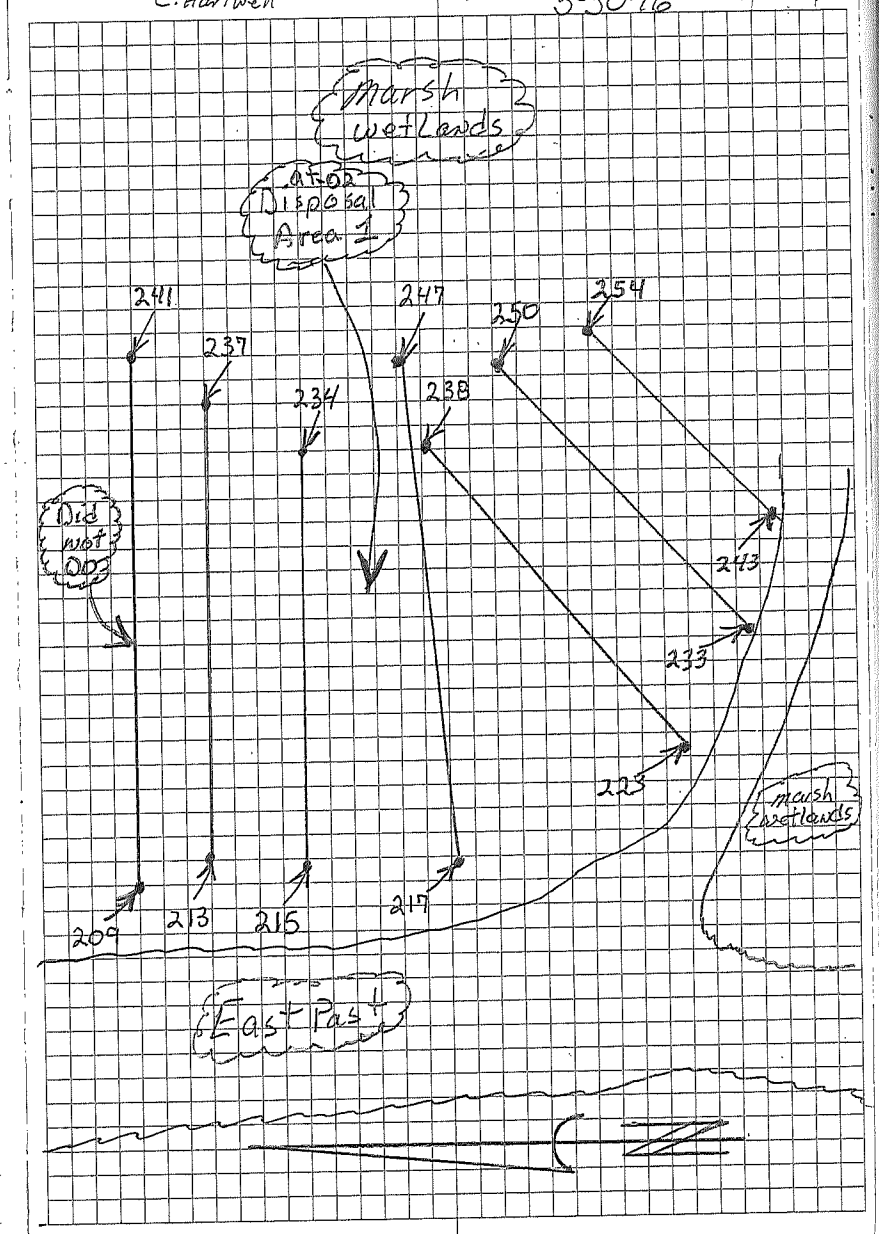
R. Burditt
D. Hebert
C. Hartwell

Cloudy & warm

2113

3-30-16

10



JOB #: CPRA

12063-07 AT-02 Atchafalaya Sediment /

AT-03 Big Island

Topo Survey Train NG, NB every 50 FT.

on Cross Section Lines

Berwick LA.

PT.		Remarks	
	H. Dist 0.039	V. Dist 0.003	
709	CHK	PT # 40,573 HT. 2.00 M.	
687-708	NG	Wetlands	
686	"	Top Bank	"
40,685	WBY	Toe	Canal

Same Crew Cloudy & warm

 3-30-16

Drawing on Page # 10

R. Burdi
D. Hebert
C. Hartwell

Cloudy & warm

2113

3-31-16

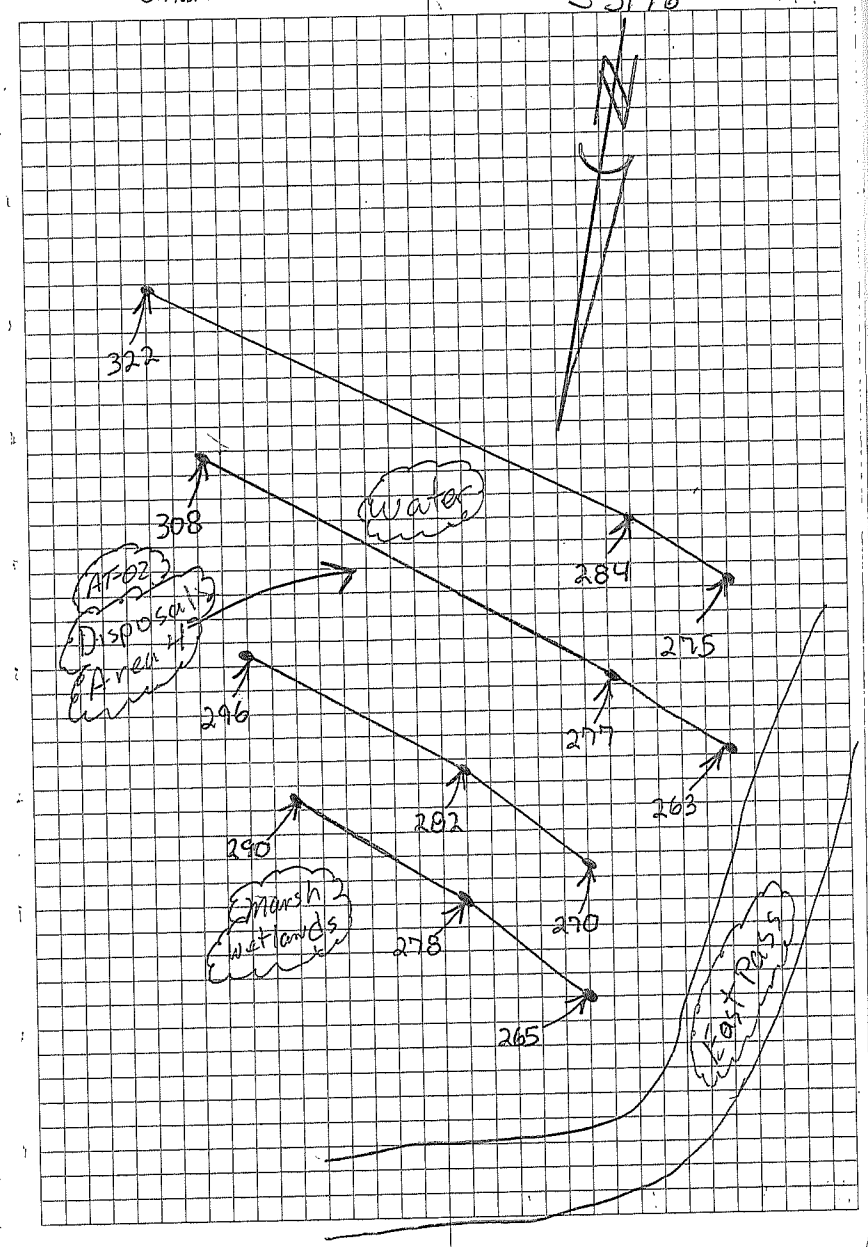
12

JOB #: CPRA

120,630-07 AT-02 Atchafalaya Sediment /
AT-03 Big Island
Base PT. AT-02 HT. 2.25m.
40,710 QC PT. 40,573 HT. 2.00m.
H. Dist 0.050 V. Dist -0.023 FT.
Topo Survey Tie in NG, NB every 50
on cross Section Lines

Berwick LA.

PT.	Remarks
711-857	NG Wetlands



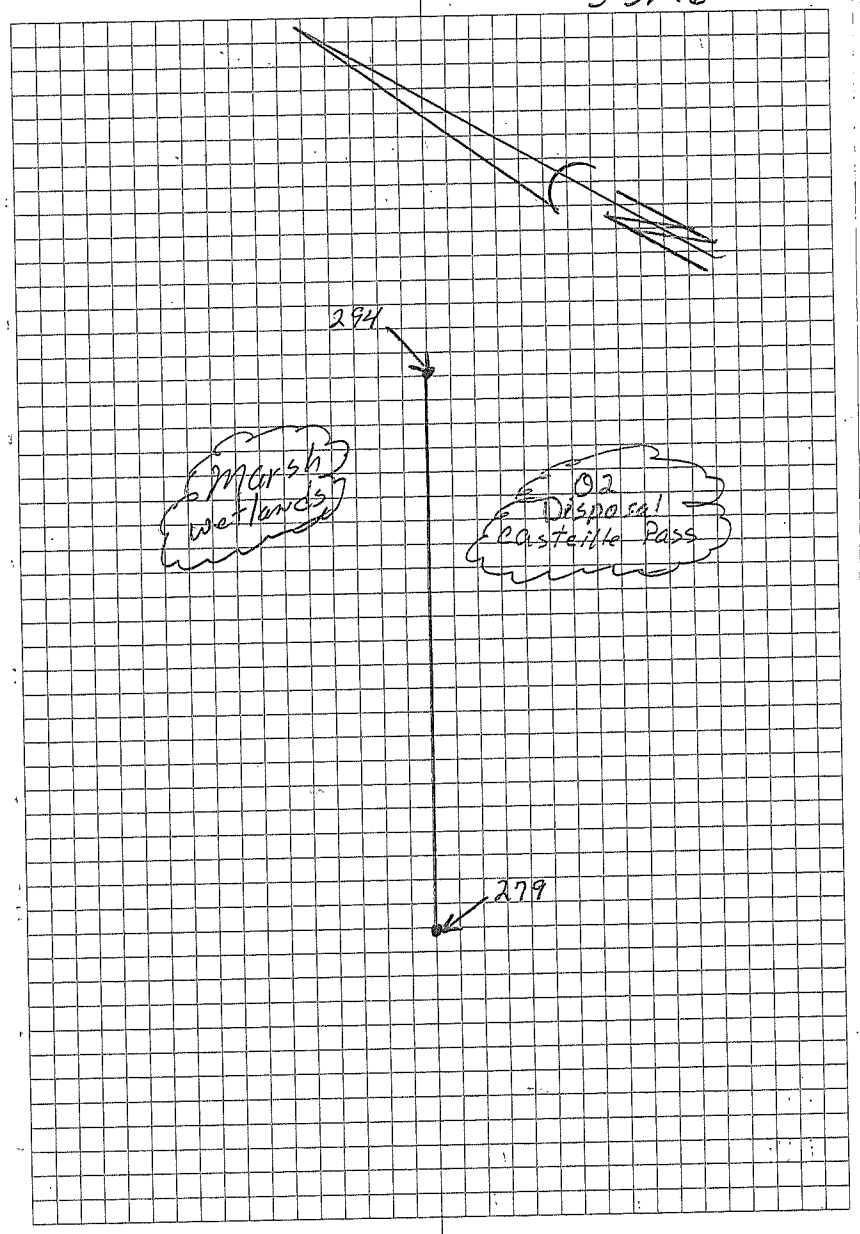
Same Crew Cloudy & warm 2113 3-31-16 13

JOB #: CPRA.
12063-07 AT-02 Atchafalaya Sediment/
AT-03 Big Island
Topo Survey Tie in NG, NB every 50 FT.
on Cross Section Lines

Berwick La.

PT.	Remarks

	H. Dist	V. Dist
881	CHR	PT. 40573 HT. 2.00 m
859-880	"	"
40,858	NG	wetlands



R. Burdi A
C. Hartwell
J. Fitch

Sunny & Hot

2113

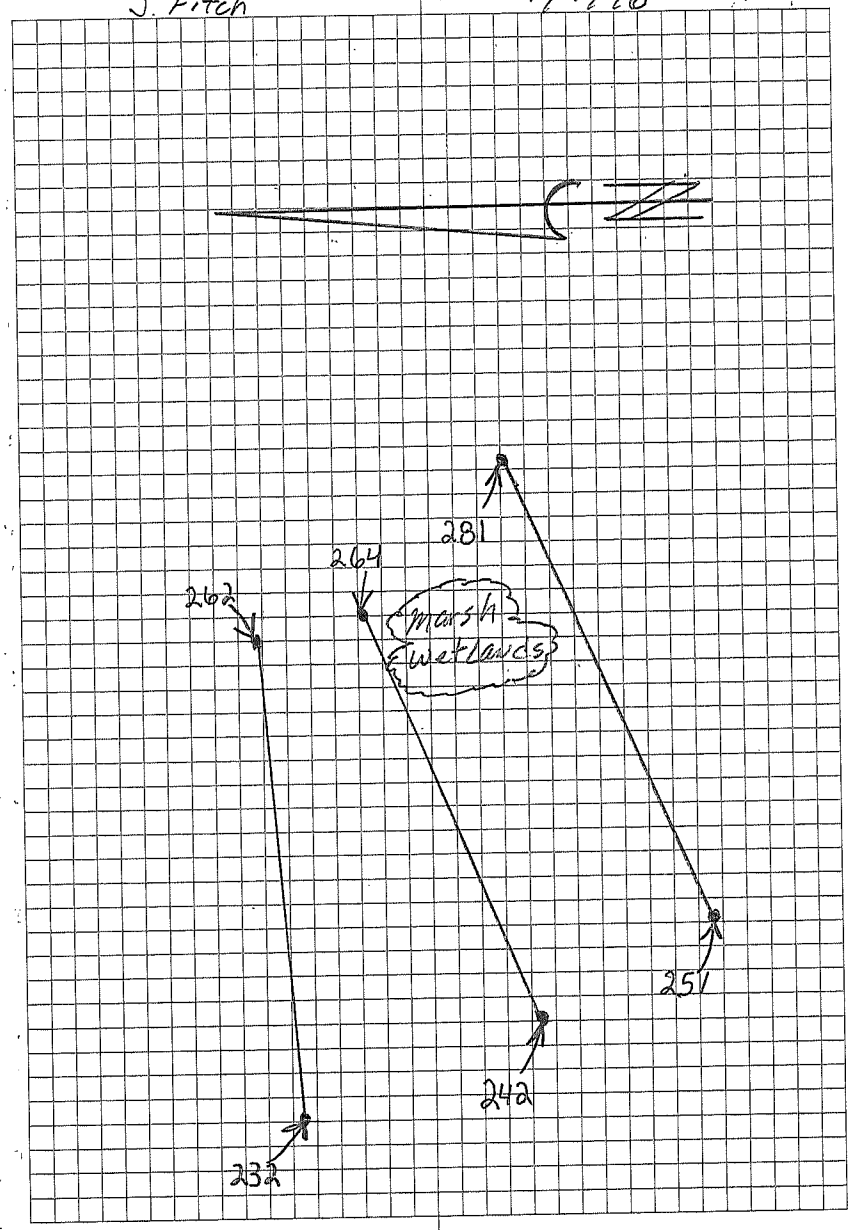
4-4-16

JOB #: CPRA

12063-07 AT-02 Atchafalaya Sediment/
AT-03 Big Island
Base PT. AT-02 HT. 2.25 M.
40,882 QC PT 40,573 HT. 2.00 m.
H. Dist 0.026 V. Dist -0.028
Topo Survey Tie in NG, NB every 50 FT.
on Cross Section Lines

Berwick, LA

PT.		Remarks	
	H. Dist 0.059	V. Dist 0.003	
979	CHK	PT. 40,573	HT. 2.00 m.
957-978	NG	wetland	
956	"	Top Bank	"
955	WBY	Toe	Canal
942-954	NG	Wetland	
941	"	Top Bank	"
940	"	Toe	Canal
931-939	"	NB	
930	"	Toe	"
929	WBY	Top Bank	Canal
883-928	NG	Wetland	



JOB#. 12063-07 CPRA

AT-02 ATCHAFALAYA SEDIMENT /
AT-03 BIG ISLAND TASK 6

SET BASE ON AT-03
Fixed height 2.25 m BASE
(Field crew setup pg. 8)

SOUND VELOCITY = 4,841 fps @ 4' MAX DEPTH
BAR CHECK @ 5 'ok'
TRANSDUCER DRAFT = 0.8'
ANTENNA HEIGHT = -4.9'

PT#	DESCRIPTION	REMARKS
	TOW (TOP OF WATER)	1.62' @ 09:30

S. BABIN
P. MOKHTARNEJAD

2113

3-29-16

15

cloudy & warm
choppy, rider

M/V Silverado survey vessel

AT-03 BIG ISLAND

BATHY CROSS-SECTIONS OF AREA(S):
CHANNEL A, B, C, E, F

SURVEY LINE(S) RUN #: 25, 26, 27, 28, 29, 30, 31, 71, 83, 32, 33, 34, 35, 36, 37, 38, 52, 53, 54, 82, 83, 75, 76, 77, 78, 79, 80, 81, 58, 57, 56, 55, 54, 55, 39, 40, 41, 42, 45, 44, 43, 51, 49, 50, 48, 47, 51, 46, 70, 69, 68, 67, 66, 65, 64, 63, 62, 61, 60, 70

JOB#: 12063-07 CPRA

AT-02 ATCHAFALAYA SEDIMENT /
AT-03 BIG ISLAND TASK 6

SET BASE ON AT-02
Fixed Height 2.25m BASE
(Field Crew setup pg. 10)

SOUND VELOCITY = 4,845 fps @ 7' MAX DE
BAR CHECK @ 5' 'ok'
TRANSDUCER DRAFT = 0.9' (adjusted +0.1)
ANTENNA HEIGHT = -4.9'

PT #	DESCRIPTION	REMARKS
	TOW (TOP OF WATER)	1.64' @

3-30-16

same

Mazy B Wacm
choppy in river

AT-03 BIG ISLAND

BATHY CROSS SECTIONS OF AREA(S):
CHANNEL A (EAST), D

PTH SURVEY LINE(S) RUN #: 24, 23, 22, 21, 20, 19, 18, 17, 16, 85, 86, 16, 84, 96, 84, 96, 84, 15, 14, 13, 12, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 70, 59, 70

09:30

JOB #: 12063-07 CPRA

AT-02 ATCHAFALAYA SEDIMENT/
AT-03 BIG ISLAND TASK 6

SET BASE ON AT-02
Fixed Height 2.25m BASE
(Field crew setup pg. 14)

SOUND VELOCITY = 4,850 fps @ 6'
BAR CHECK @ 5' (ok)
TRANSDUCER DRAFT = 1.5'
ANTENNA HEIGHT = -5.53'

PT #	DESCRIPTION	REMARKS
	TOW (TOP OF WATER)	0.565'

J. MORRIS
D. HEBERT

2113

17

4-4-16

Sunny & hot
1.5 ft chop

Same

AT-02 ATCHAFALAYA SEDIMENT

BATHY CROSS-SECTIONS OF AREA(S):
NATAL CHANNEL & CASTILLE PASS

SURVEY LINE(S) RUN #: 1, 2, 3, 4, 5, 6,
MAX DEPTH 7, 8, 9, 10, 11, 12, 13, 18, 19, 20, 21, 23, 22,
24, 25, 26, 27, 28, 29, 30

@ 12:00

JOB#: 12063-07 CPRA

AT-02 ATCHAFALAYA SEDIMENT

AT-03 BIG ISLAND TASK 6

SET BASE ON AT-02 ELEV: 1.61'

FIXED HT 2.0 M TRIPOD

ROD HT = 2.0 M

PT #	DESCRIPTION	REMARKS
1001	T.O.W	TOP OF WATER +0.89' @ 9:45 AM
1002	TOW	TOP OF WATER + 1.85' @ 1:30 PM

SOUND VELOCITY = 4901 fps

DRAFT = 1.2'

RTK BOAT ANT HT = 8.85'

USED SCULLY

BAR CHECK @ 5'

P. MOKHTARNEJAD
S. BABIW
B. VOGEL

2113 5-17-16 18

CLOUDY 80°F
SCAT. THUNDERSTORMS
LIGHT CHOP

SURVEYED EXTENDED LINES FOR CHANNEL A ON WEST END WITH LINES 1-4 CROSS SECTIONS ON BRANCH FORK OF CHANNEL IN AT-03 AREA

SURVEY EXTENDED LINES IN ~~NATAL CHANNEL~~ NE DIVERSION CHANNEL EAST FORK WITH LINE # 21-35 FOR CROSS SECTION AND NATAL CHANNEL SOUTH FORK LINE #'S 8-18 FOR CROSS SECTIONS IN AT-02 AREA

G. Naquin
R. Burdett
A. Leboeuf

Sunny & Hot

2113

5-19-16

19

JOB #: CPRA

12063-07 AT-03 Atchafalaya Sediment /
AT-02 Big Island

Base PT. AT-03-SM-01

41,001 QC PT. 40,280 HT. 2.00 m.

H. Dist 0.156 V. Dist -0129

Cross Sections

Berwick LA

PT. Remarks

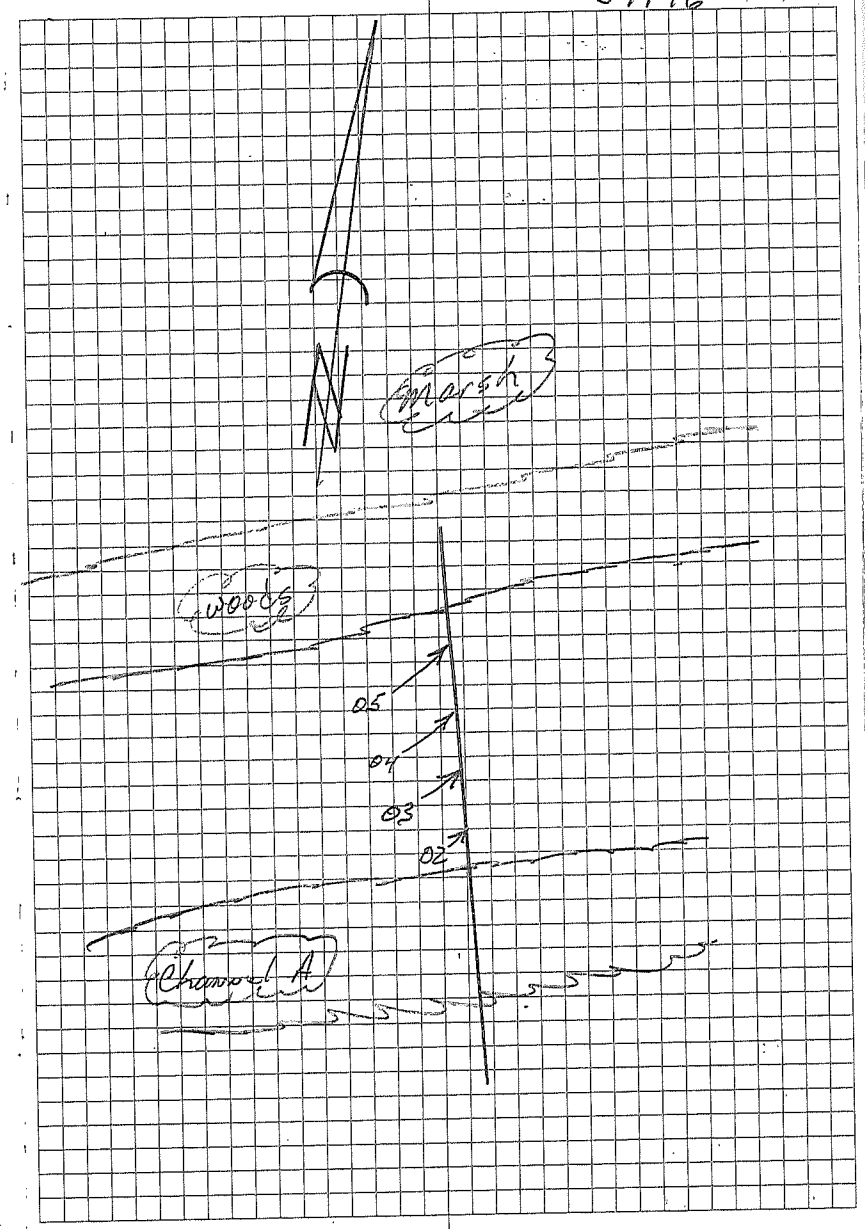
05 "

04 "

03 "

41,002 NB

600122 to 600123 73'

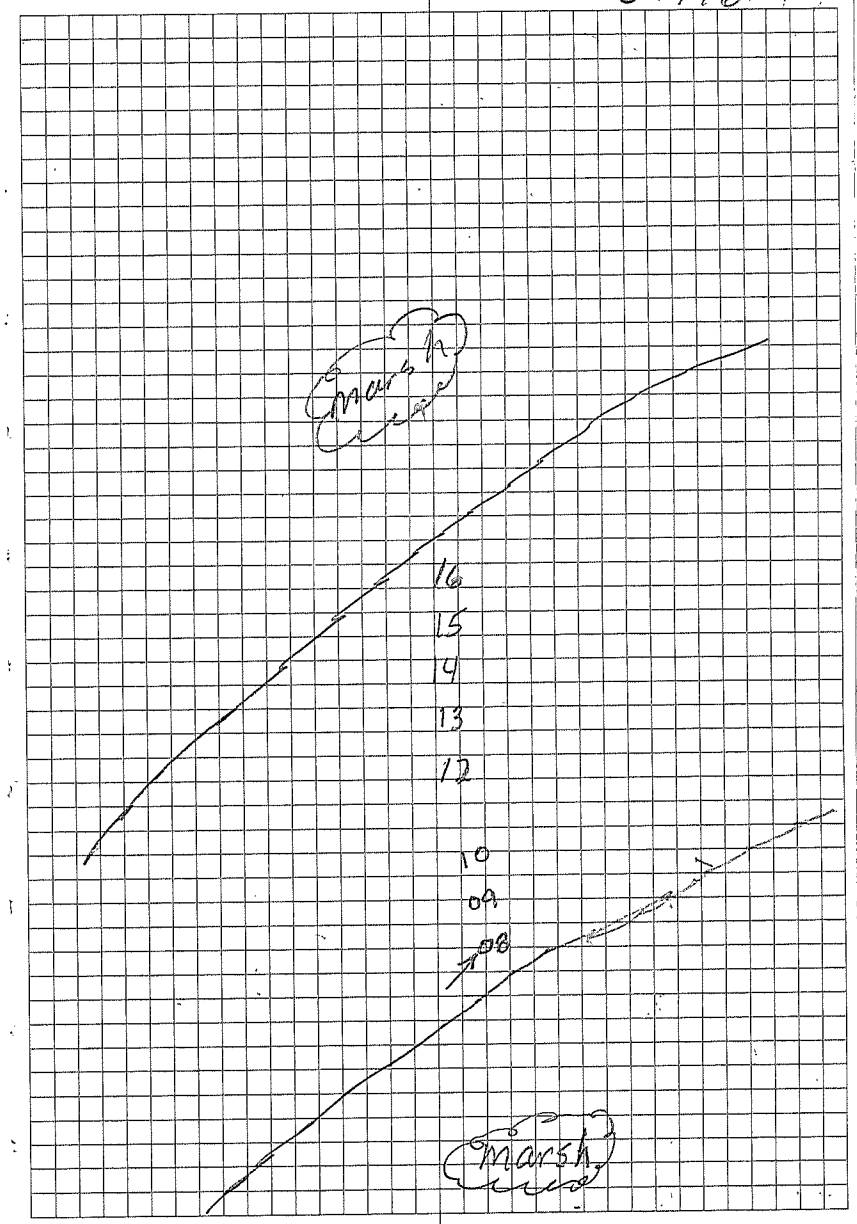


same crew

Survey Sheet 2113

5-19-16 20

JOB #:		CPRA		
12063-07		AT-03 Atchafalaya Sediment/		
		AT-02 Big Island		
		Re AT03-SM-01		
		Cross Section		
			Berwick LA.	
PT.		Remarks		
12-16	NB			
			125 FT	6°
11	TOW			6° W.
08-10	NB			
07	TOW		850'	
41006	NB			
		600121 to 600120		240 FT.



JOB #: CPRA.

12063-07 AT-03 Atchafalaya Sediment/

AT-02 Big Island

Re AT03-SM-01

Cross Sections

Berwick LA.

PT.		Remarks	
	2+55	"	8.0
	2+25	"	7.5
	1+70	Soundings	5.5
20	"		
19	"		
18	"		
41,017	NB	600119 to 600118	

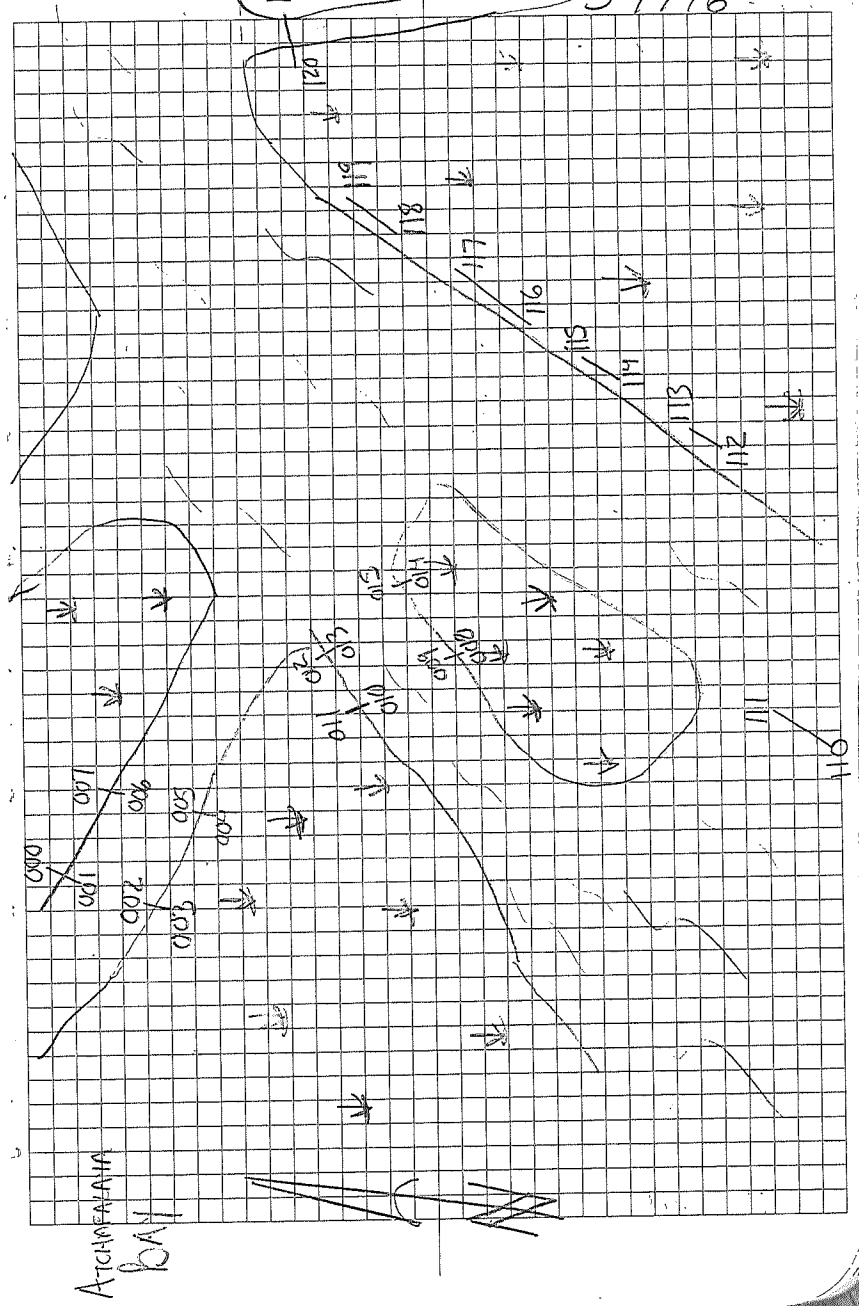
Same crew

Sunny + Hot

2113

5-19-16

21



Same crew

Survey Hat 2113

5-19-16

22

JOB #: SPRA.

12063.07 AT-03 Atchafalaya Sediment/

AT-02 Big Island

Re AT03-SM-01

Cross Sections

Berwick, LA

PT.	Remarks
036	NB
To	
41,021	NB

600116 - 600117 = 742'

Same crew

Survey & Hydro 2113

5-19-16

JOB#: SPRA

12063-07 AT-03 Atchafalaya Sediment/

AT.02 Big Island

ie AT03-SM-01

Cross Sections

Berwick LA.

PT.	Remarks
040	NB
to	
41,037	NB
	600115 to 600114 87 FT.

same crew

Sunny & Hot

2113

5-19-16

JOB # - SPRA.

12063-07 AT-03 Atchafalaya Sediment/

AT-02 Big Island

Λ @ AT03-SM-01

Cross Sections

Berwick LA.

PT. Remarks

044 NB

to

41,041 NB

600112 to 600113 97 FT.

Same crew

Sunny & Hot

2113

5-19-16

JOB#: SPRA.

12063-07 AT-03 Atchafalaya Sediment/

AT-02 Big Island

Ac AT03-SM-01

Cross Sections

Berwick, LA.

PT.	Remarks
059	"
058	NB
057	Top Bank of Bayou
056	Bottom Edge of Bayou
055	NB 600010 to 600011 16'
054	NB
053	Bottom Edge of Bayou
052	Top Bank of Bayou
051	"
050	NB 600008 to 600009 28'
049	NB
To	
41,045	NB
	600110- 600111 · 120'

same crew

Survey Hot 2113

5-19-16

26

JOB#: SPRA.

12063-07 AT-03 Atchafalaya Sediment/

AT-02 Big Island

Cross Sections Ac AT03-SM-01

Berwick LA.

PT.	Remarks		
077	NB		
076	Bottom Edge of Bayou		
075	Top Bank of Bayou		
074	NB		
073	NB	600006 to 600007	27'
072	NB		
To			
069	NB	600004 to 600005	64'
068	Top Bank of Bayou		
067	Bottom Edge of Bayou		
066	NB	600012 to 600013	16'
065	NB		
064	NB		
063	Bottom Edge of Bayou		
062	Top Bank of Bayou		
061	"		
41,060	NB	600014 to 600015	46'

same crew

Sunny & Hot

2113

5-19-16

27

JOB#: SPRA.

12063-07 AT-03 ATchafalaya Sediment

AT.-02 Big Island

@ ATOB-SM-01

Cross Section

Berwick LA.

PT.	Remarks	
	H.Dist 0.051 V.Dist -0.007	
085	CHK QCPT. 40,280 HT. 2.00m.	
084	NB	
083	Bottom Edge of Bayou	
082	Top Bank of Bayou	
081	"	
080	NB 600002 to 600003	20'
079	" @ Grass Line	
41,078	NB 600000 to 600001	7'

JOB #: 12,063.07

CPRA

ATOZ ATCHAFALAYA SEDIMENT

TC ATOZ-SM-01

LINE 600,105 - 600,104

41,087 NB

088 TOP EN BANK

089 NB

090 NB

LINE 600,102 - 600,103

41,091 - 41,094

600,100 - 600,101

41,095 - 41,097

600,090 - 600,91

41,098 - 41,102

600,099 - 600,98

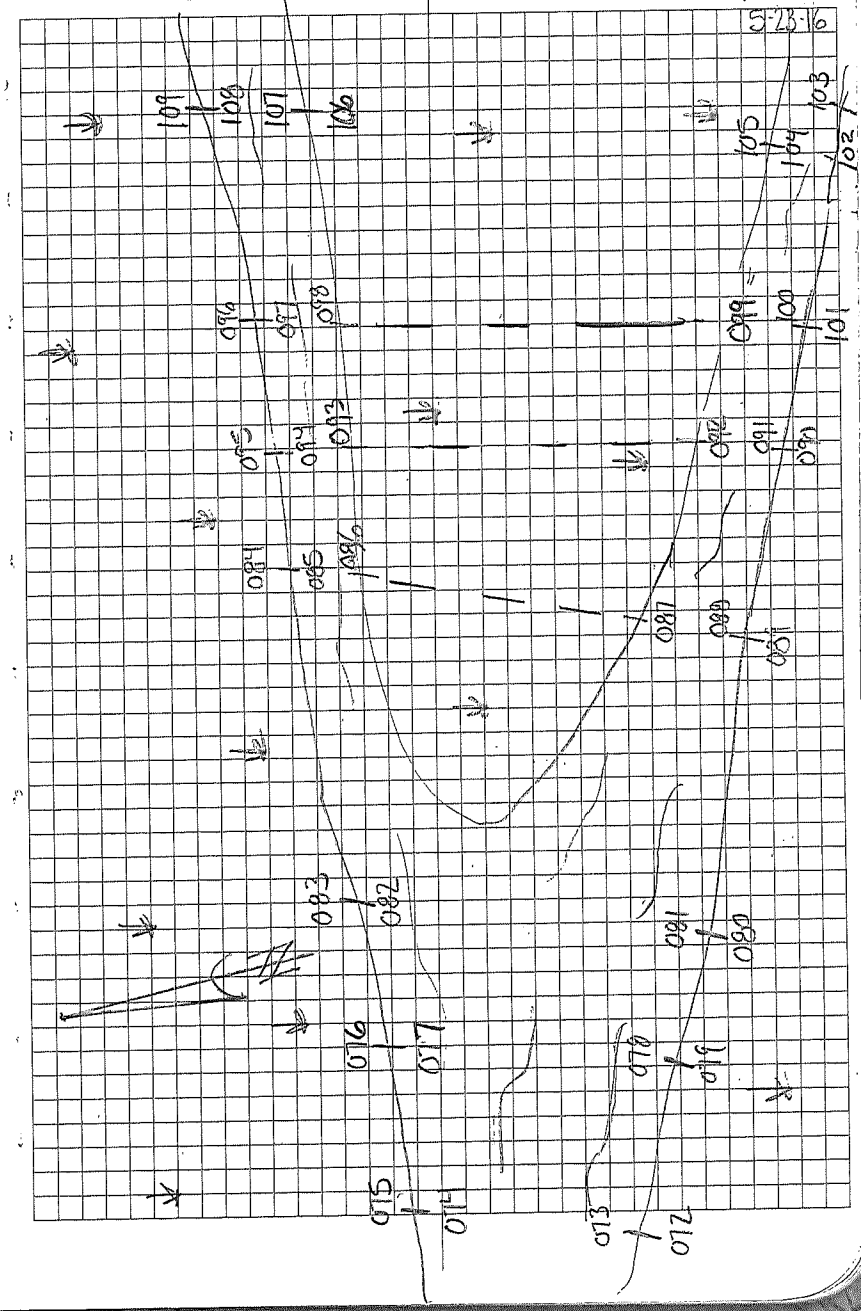
41,103 - 41,113

600,092 - 600,093

41,114 - 41,121

75° SUNNY

5-23-16



S/C 5-23-16

JOB #: 12,063-07

CPRA
ATO2 ATCHAFALAYA SEDIMENT
Λ e ATO2-SM-01

LINE - 600,088 - 600,089
41,122 - 41,124

LINE 600,081 - 600,081
41,125 - 41,128

LINE - 600,078 - 600,079
41,129 - 41,131

600,072 - 600,073
41,132 -

600,074 - 600,075
41,1 - 41,139

600,077 - 600,078
41,140 - 41,143

600,082 - 600,083
41,144 - 41,147

JOB #:
12,063-07

A: 02 ATCHAFALAYA SEDIMENT
Λ @ AT02-SM-01

LINE: 600,084 - 600,85
41,148 - 41,151

600,086 - 600,087
41,152 - 41,158

600,088 - 600,094
41,159 - 41,162

600,109 - 600,108
41,163 - 41,165

600,107 - 600,106
41,166 - 41,169

S/C

JOB#: 12,063-07

CFGN

ATOZ ATCHAFALAYA SEDIMENT

T @ ATOZ-SM-01

LINE 600,119 - 600,118
41,170 - 41,172

LINE 600,020 - 600,021
41,173 - 41,176

LINE 600,026 - 600,027
41,177 - 41,180

LINE 600,028 - 600,029
41,181 - 41,184

LINE 600,031 - 600,030
41,185 - 41,188

LINE - 600,024 - 600,25
41,189 - 41,192

LINE - 600,023 - 600,022
41,193 - 41,19

82° SUNNY

2113

31

SK

5-23-6

LINE - 600,016 - 600,017
41,1 41,200
~~41,201~~ QC

JOB#: CPRA

12,063.01 ATOZ ATCHAFALAYA SEDIMENT

TC ATOZ-SM.01

41,202 QC

Line 600096-60097

41,203 - 41,205

Line 600032-600033

41,206 - 41,208

Line 600034-600035

41,209 - 41,211

Line 600036-600037

41,212 - 41,215

Line 600039-600038

41,216 - 41,219

Line 600040 600041

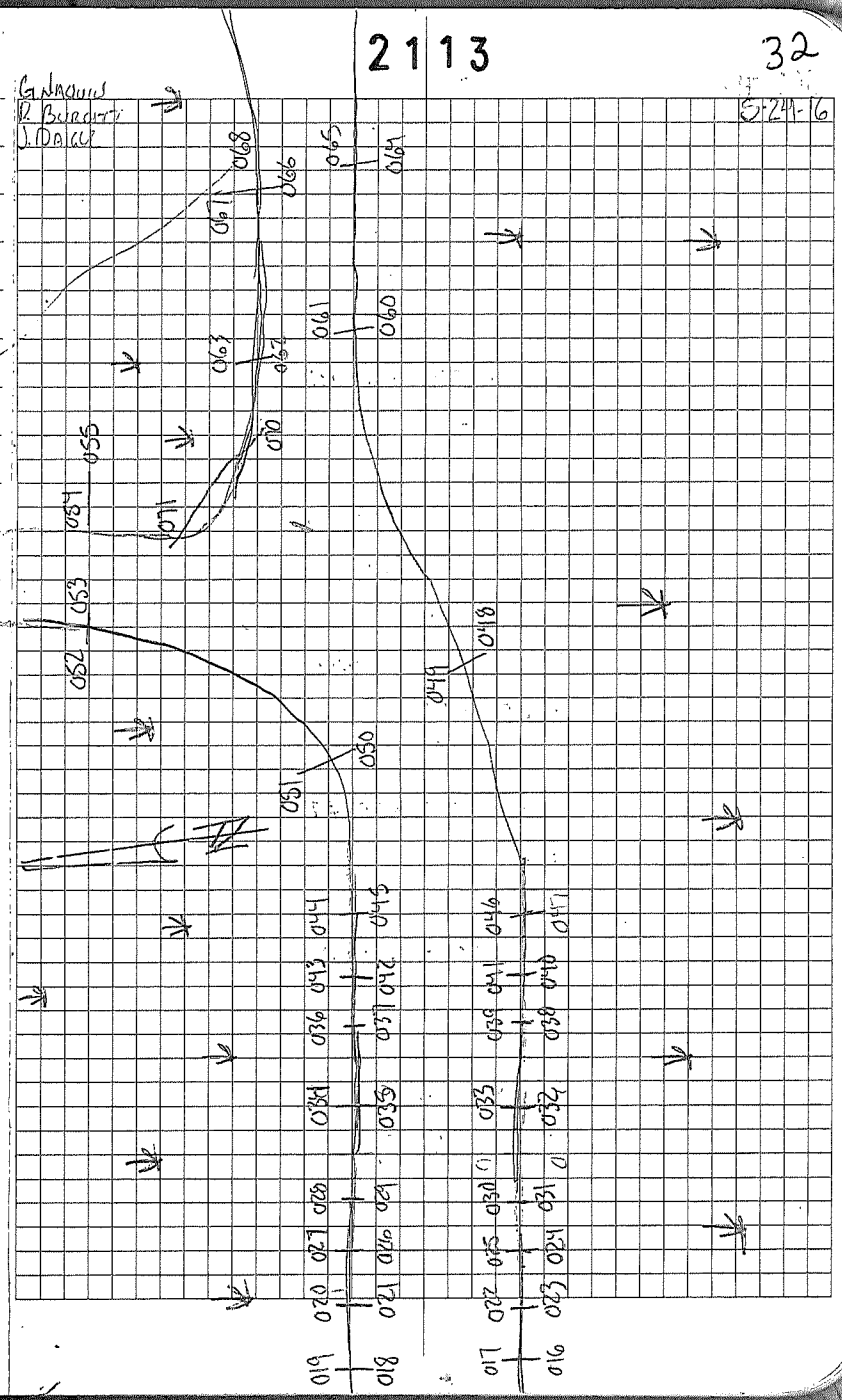
41,220 - 41,223

Line 600042-600043

41,224 - 41,227

G. Nagouis
R. Burcaw
J. Dalcu

5-24-16



JOB#: 12063-07

CPRA

ATOZ ATCHAFALAYA SEDIMENT

TC ATOZ-SM-01

Line 600044-600045

41,228 - 41,232

Line 600046-600047

41,233 41,237

Line 600048-600049

41,238 - 41,241

Line 600050-600051

41,242 - 41,246

Line 600052-600053

41,247 - 41,249

Line 600054-600055

41,250 - 41,252

S/C

2113

33

5-24-16

JOB#: 12,063-01

CPRA

ATOZ ATCHAFALAYA SEDIMENT

T@A-TOZ-SM-01

Line 600056 - 600057
41,253 - 41,256

Line 600058 - 600059
41,257 - 41,260

Line 600060 - 600061
41,261 - 41,264

Line 600062 - 600063
41,265 - 41,266

Line 600064 - 600065
41,267 41,269

Line 600066 - 600067
41,270 - 41,272

SK

5-24-16

JOB#: CPRA

12,063-07 ATOZ ATCHAFALAYA SEDIMENT

TC ATOZ-SM-01

Line 600068-600069

41,273 - 41,281

Line 600070-600071

41,282 - 41,287

~~46,288~~ QC

SK

5246

APPENDIX 12

Key Personnel

Key Personnel

OFFICE PERSONNEL

Nicky Boudreaux – CAD I

Tim Crosby – CAD II

Lee Drennan – CAD III – GPS Coordinator

John Mattingly – Senior Professional Land Surveyor

Jessie Newton III – CAD III – GIS Technician

Leah O'shea – Project Secretary

CONVENTIONAL FIELD PERSONNEL

Aaron Beal – Survey Crew Chief

Ronald Burditt – Survey Crew Chief

Gerald Naquin – Survey Crew Chief

HYDRO PERSONNEL

Stuart Babin – Hydro Survey Manager/Hydro Survey Technician

Patrick Mokhtarnejad – Hydro Survey Technician

Jonathan Morris – Hydro Survey Manager

APPENDIX 13

Existing Benchmark Data Sheets

VICINITY MAP Not to Scale

Reproduced from Louisiana 2005 DOQQ

Station Name: "AT02-SM-01"

Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on

Monument Description: NGS Style Floating Sleeve Monument: Stainless steel sectional rods driven 60 feet to refusal within a greased sleeve and sand filled 6" PVC pipe with protective cover and is set flush with the ground.

Stamping: AT02-SM-01

Installation Date: 2003 **Date of Survey:** June 24-25, 2015

Monument Established By: JCLS **For:** CPRA

Adjusted NAD83 Geodetic Position (2011)
Lat. 29°26'14.99506" N
Long. 091°16'48.18440" W

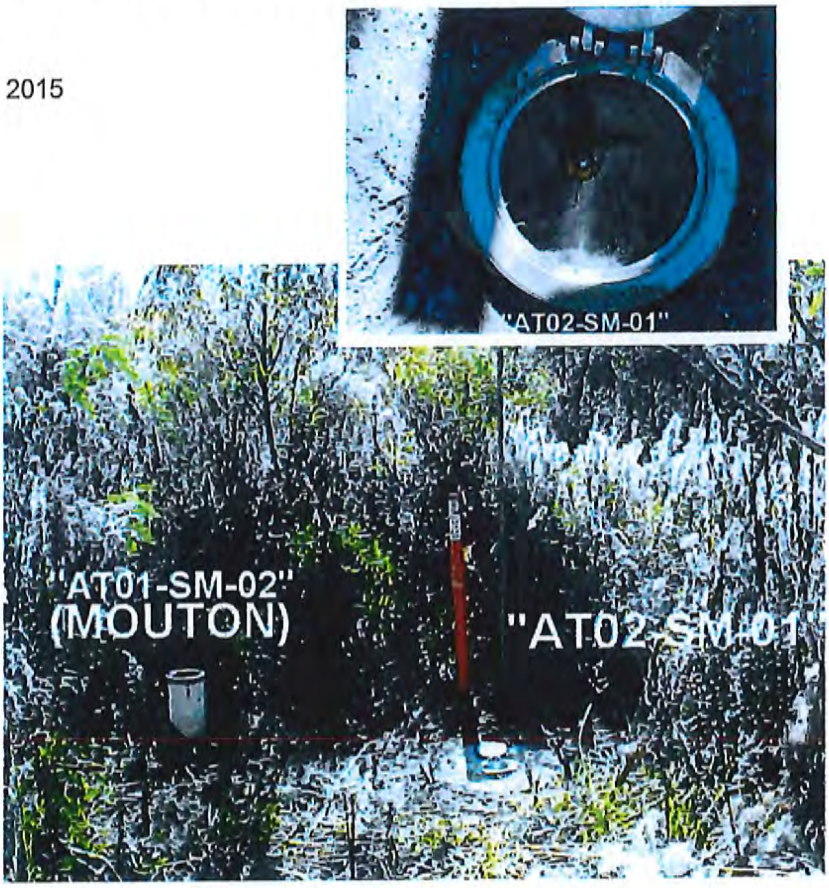
Adjusted NAD83 Datum LSZ (1702) Ft (2011)
N= 340,941.74
E= 3,297,793.94

Adjusted NAVD88 Height (2011)
Elevation = 1.64 feet (0.500 mtrs)

Ellipsoid Height = -24.497 mtrs.
Geoid12A Height = -24.997 mtrs.

FOR REFERENCE ONLY
Adjusted NAVD88 Height (2006.81)
Elevation = 2.15 feet (0.654 mtrs)
Ellipsoid Height = -24.377 mtrs.
Geoid03 Height = -25.031 mtrs. (2004.65)

Adjusted NAVD88 Height (Geoid99)
Elevation = 2.82 feet (0.860 mtrs)



Adjusted Position determined by John Chance Land Surveys, Inc. for the Coastal Protection & Restoration Authority of Louisiana

VICINITY MAP: Scale: 1"=2000'

2013 NAIP imagery provided by USDA Farm Service Agency

Station Name: AT02-SM-01

Monument Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the south side of Natal Pass southeast of Atchafalaya River Outlet.

Monument Description: NGS Style Floating Sleeve Monument: Stainless steel sectional rods driven 60 feet to refusal within a greased sleeve and sand filled 6" PVC pipe with protective cover and is set flush with the ground.

Monument Established By: John Chance Land Surveys, Inc.

For: LA Department of Natural Resources, CRD

Stamping: "AT02-SM-01"

Date of Survey: June 2014

Adjusted NAD 83 Geodetic Position
Lat. 29° 26' 14.9951" N
Long. 91° 16' 48.1844" W

Adjusted NAD 83 Datum LSZ (1702) Ft
N= 340,941.74
E= 3,297,793.94

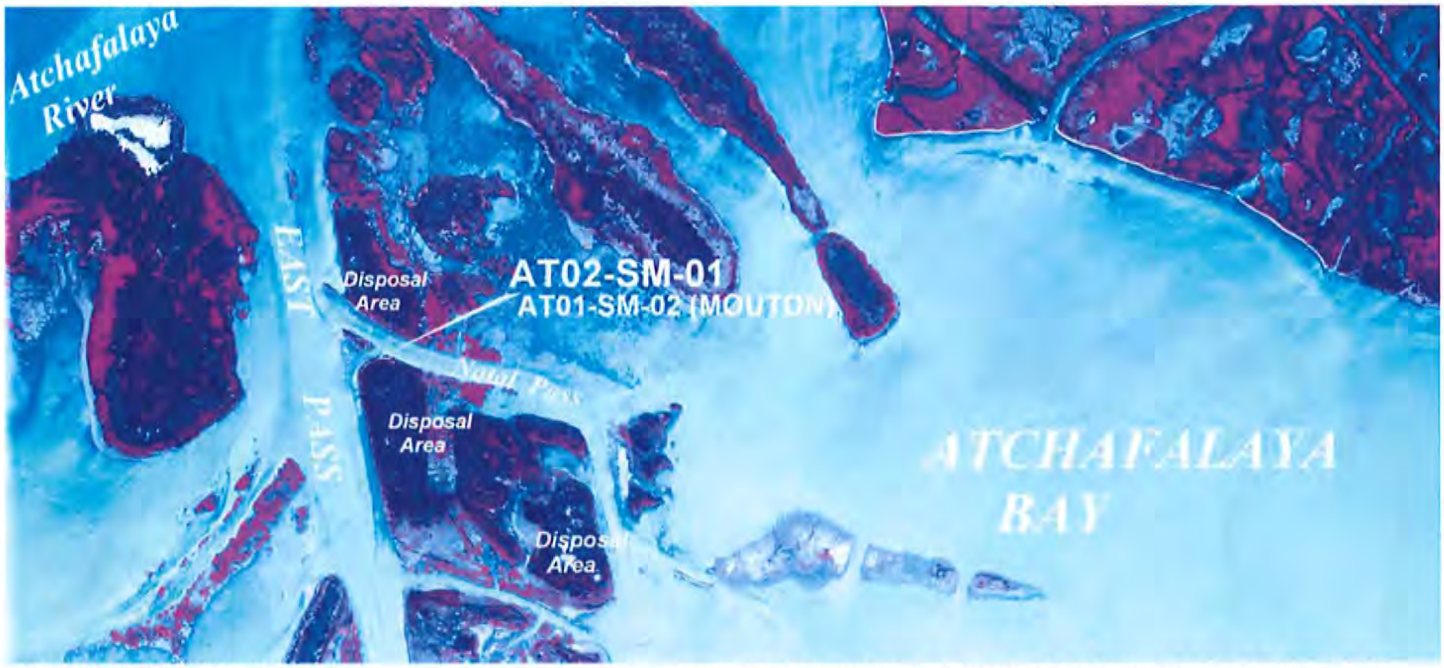
Adjusted UTM, NAD 83 Datum (Zone 15) Meters
N= 3,257,689.159
E= 666,825.649

Adjusted NAVD88 (2011) Height
Elevation Geoid12A = 1.82 feet (0.555 mtrs)
Elevation Geoid99= 2.30 feet (0.700 mtrs)

Geoid12A Height = -24.806 mtrs.
Ellipsoid Height = -24.251 mtrs.

Geoid99 Height = -25.141 mtrs.
Ellipsoid Height = -24.441 mtrs.

Adjusted position determined by T. Baker Smith, LLC for Coastal Protection and Restoration Authority



VICINITY MAP

Reproduced from U.S. Geological Survey, NWRC Aerial dated March 2001

Station Name: AT02-SM-01

Monument Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the south side of Natal Pass southeast of Atchafalaya River Outlet.

Monument Description: NGS Style Floating Sleeve Monument: Stainless steel sectional rods driven 60 feet to refusal within a greased sleeve and sand filled 6" PVC pipe with protective cover and is set flush with the ground.

Monument Established By: John Chance Land Surveys, Inc.

For: LA Department of Natural Resources, CRD

Stamping: "AT02-SM-01"

Date: December 2003

Adjusted NAD 83 Geodetic Position
Lat. 29° 26' 14.995420"N
Long. 91° 16' 48.184588"W

Adjusted NAD 83 Datum LSZ (1702) Ft
N= 340,941.78
E= 3,297,793.92

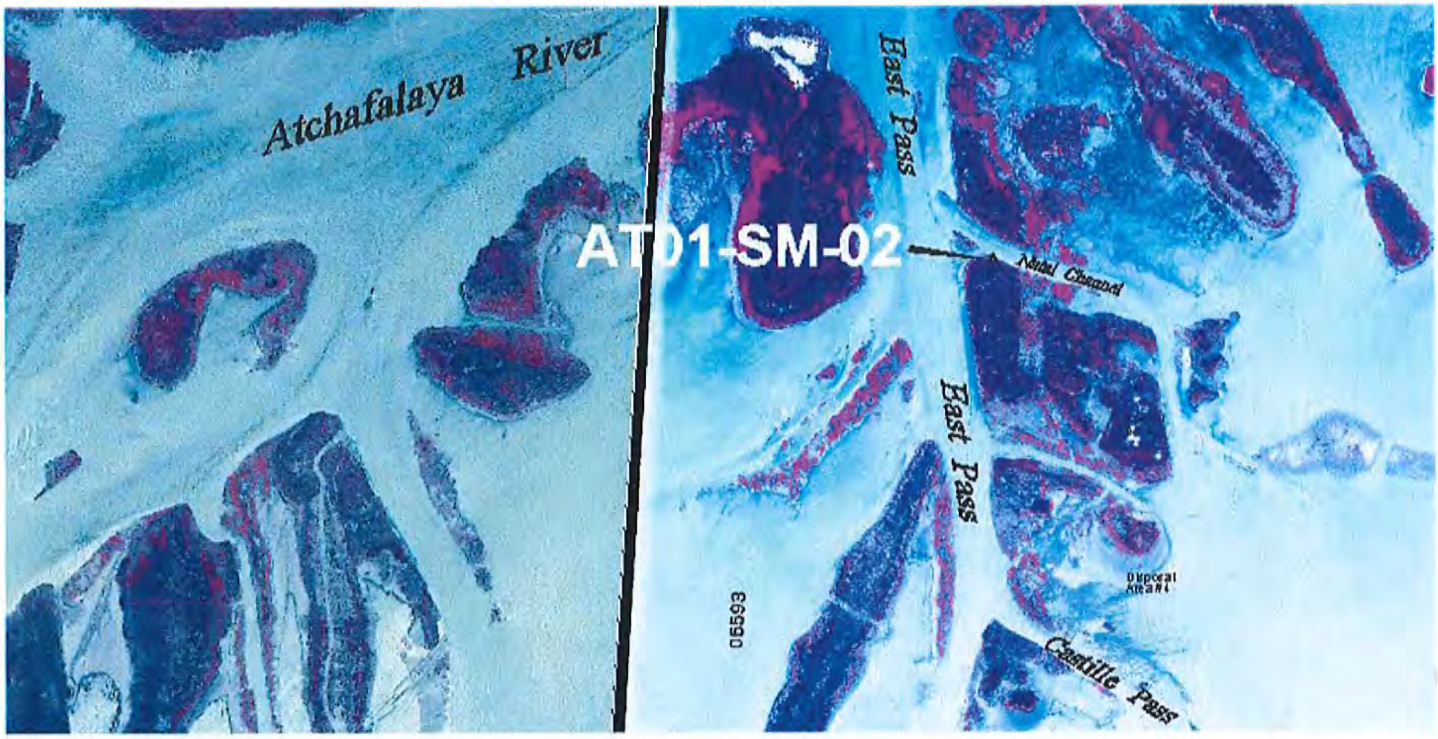
Adjusted NAVD88 Height
Elevation = 2.82 feet (0.860 mtrs)

Delta Hgt. Difference from Mon. "AT02-SM-01"
-1.105 feet (-0.337 mtrs)

Geoid99 Height = -25.141 mtrs.
Ellipsoid Height = -24.281 mtrs.

Adjusted CORS Height = 2.73 feet (0.831 mtrs)
Avg. of OPUS Solutions = 2.73 feet (0.831 mtrs)

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD



VICINITY MAP

Reproduced from U.S. Geological Survey, NWRC Aerial dated March 2001

Station Name: AT01-SM-02 (MOUTON)

Monument Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the south side of Natal Channel southeast of Atchafalaya River Outlet.

Monument Description: Stainless steel rod driven to 20 feet within a 6"PVC sleeve with protective cover and is projecting approximately 1 foot above the ground and is stamped "MOUTON".

Monument Established By: LA Department of Natural Resources, CRD

Stamping: "MOUTON"

Date: October 2000 **Re-Surveyed**: December 2003

Adjusted NAD 83 Geodetic Position
Lat. 29° 26' 14.973769"N
Long. 91° 16' 48.137076"W

Adjusted NAD 83 Datum LSZ (1702) Ft
N= 340,939.59
E= 3,297,798.12

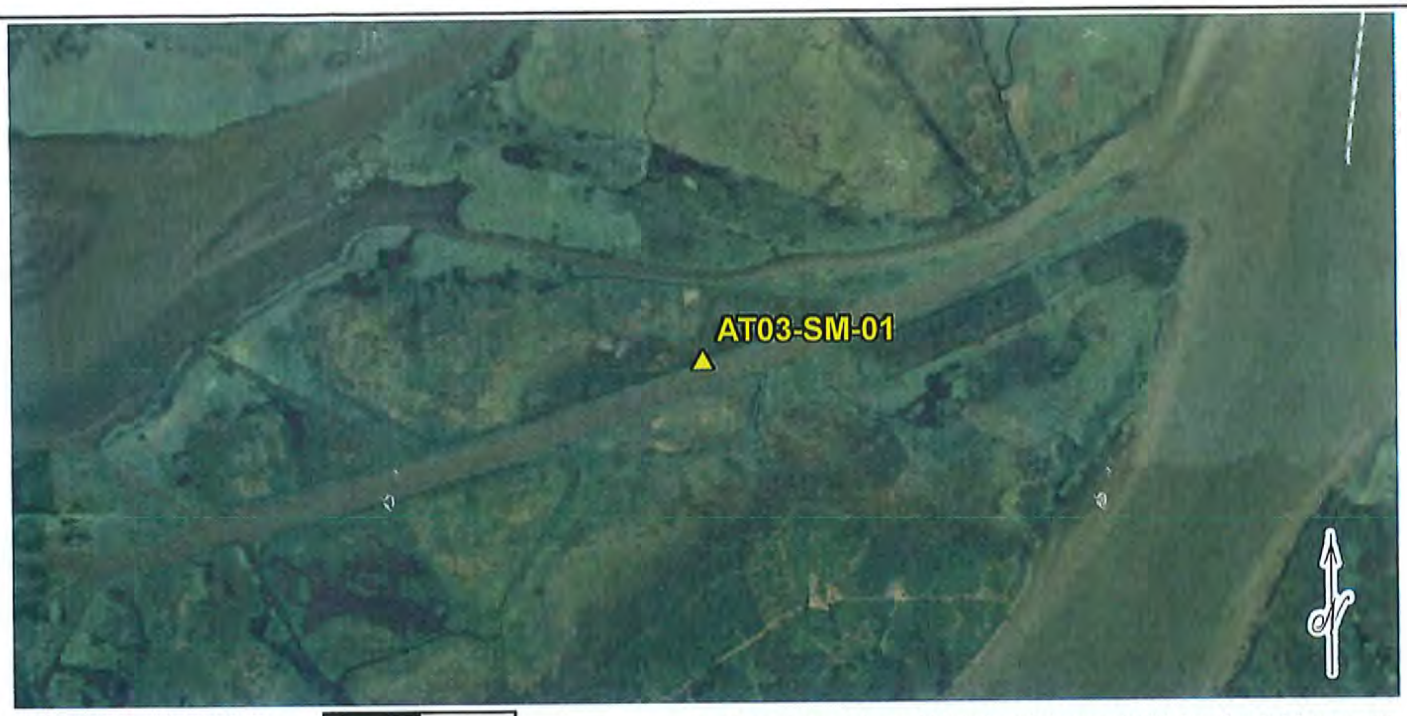
Adjusted NAVD88 Height determined from Differential Levels from Mon. "AT02-SM-01"
Elevation = 3.93 feet (1.197 mtrs)

Delta Hgt. Difference from Mon. "AT02-SM-01"
+1.105 feet (0.337 mtrs)

Geoid99 Height = -25.141 mtrs.
Ellipsoid Height = -23.944 mtrs.

Adjusted CORS Height = 3.83 feet (1.167 mtrs)

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD



VICINITY MAP 1 inch = 3,000 feet

Reproduced from NAIP Louisiana 2013 1m Aerial Imagery

Station Name: AT03 SM 01

Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the north-descending bank of the Big Island Channel and is west of the Atchafalaya River Outlet.

Monument Description: NGS Style Floating Sleeve Monument: Stainless steel sectional rods driven 64 feet to refusal within a greased sleeve and sand filled 6" PVC pipe with protective cover and is set flush with the ground.

Stamping: AT03-SM-01

Installation Date: 2003 **Date of Survey:** 2014

Monument Established By: N/A

NAD83 (2011) Epoch 2010.00 Geodetic Position

Lat: 29°28'17.88447"N
Long: 91°18'18.39588"W

NAD83 (2011) Epoch 2010.00 Datum LSZ (1702) Ft

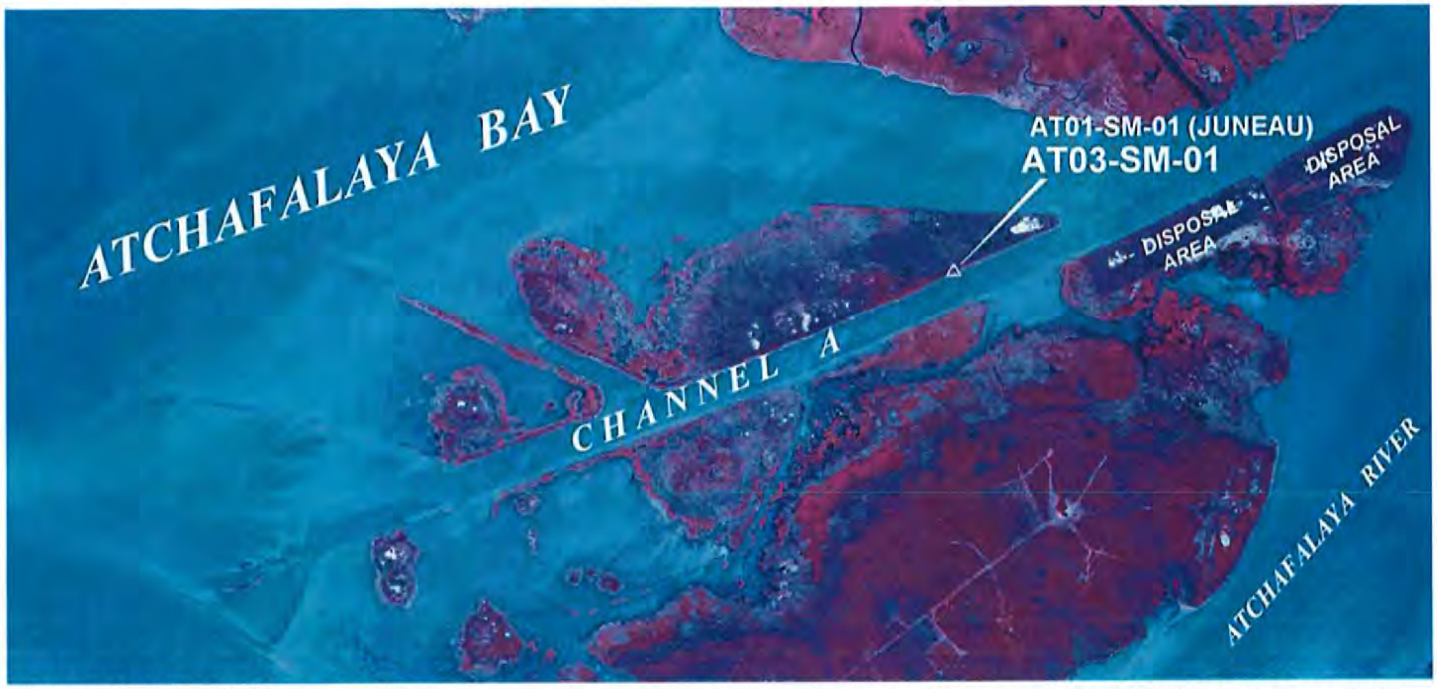
N= 353352.36
E= 3289814.25

Adjusted NAVD88 Height

Elevation = 2.60 feet (0.792 mtrs)
Ellipsoid Height (2011.00) = -24.272mtrs.
Geoid12A Height = -25.064 mtrs.

FOR REFERENCE ONLY
LCZ Adjusted NAVD88 Height
Elevation (Geoid09)= N/A
Ellipsoid Height = N/A
Elevation (Geoid03)= 2.52 feet (0.767mtrs.)
Ellipsoid Height = -24.330 mtrs.
Elevation (Geoid99)= 3.23 feet (0.983mtrs.)
Ellipsoid Height = -24.227 mtrs.

Adjusted Position Established by John Chance Land Surveys, Inc. for the Coastal Protection & Restoration Authority of Louisiana



VICINITY MAP Reproduced from U.S. Geological Survey, NWRC Aerial dated March 2001

Station Name: AT03-SM-01

Monument Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the north-descending bank of the Big Island Channel and is west of the Atchafalaya River Outlet.

Monument Description: NGS Style Floating Sleeve Monument: Stainless steel sectional rods driven 64 feet to refusal within a greased sleeve and sand filled 6" PVC pipe with protective cover and is set flush with the ground.

Monument Established By: John Chance Land Surveys, Inc.

For: LA Department of Natural Resources, CRD

Stamping: "AT03-SM-01"

Date: December 2003

Adjusted NAD 83 Geodetic Position
Lat. 29° 28' 17.884127"N
Long. 91° 18' 18.396182"W

Adjusted NAD 83 Datum LSZ (1702) Ft
N= 353,352.33
E= 3,289,814.23

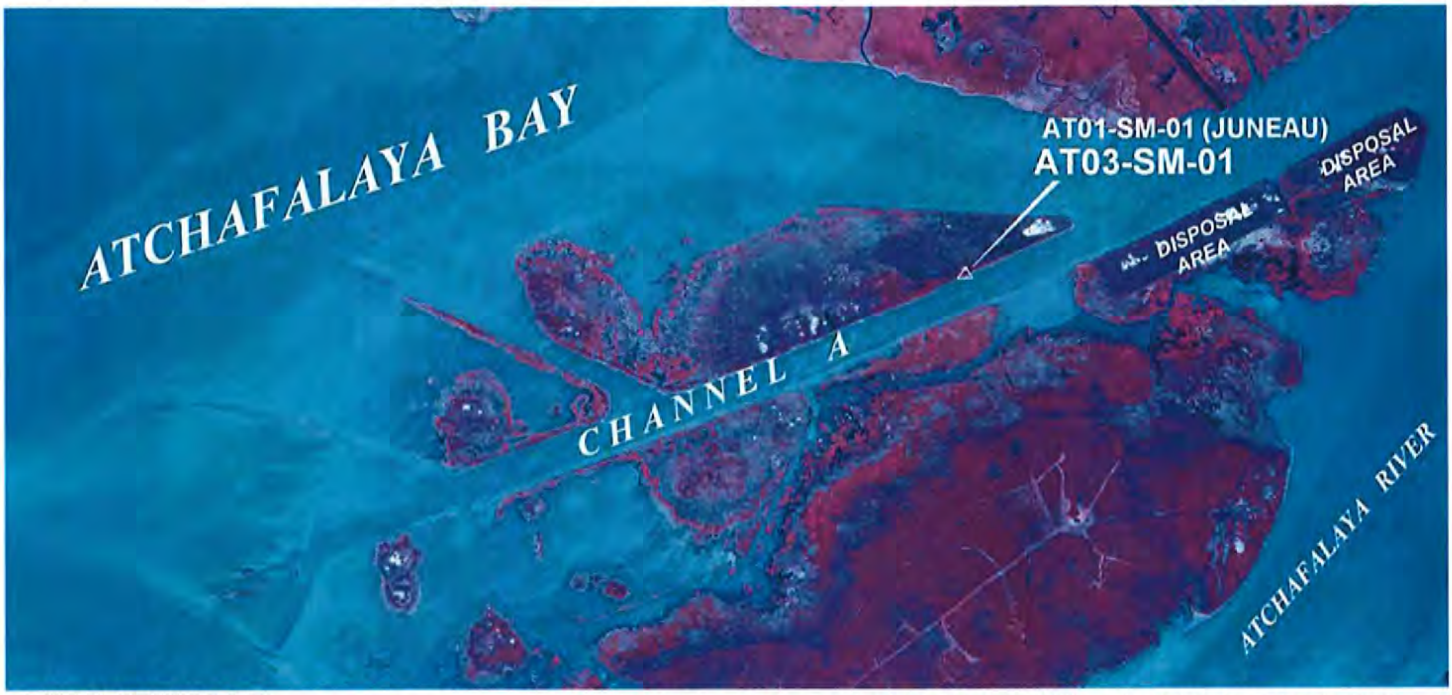
Adjusted NAVD88 Height
Elevation = 3.23 feet (0.983 mtrs)

Delta Hgt. Difference from Mon. "AT01-SM-01"
-2.17 feet (-0.661 mtrs)

Geoid99 Height = -25.210 mtrs.
Ellipsoid Height = -24.227 mtrs.

Adjusted CORS Height = 3.12 feet (0.950 mtrs)
Avg. of OPUS Solutions = 3.12 feet (0.950 mtrs)

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD



VICINITY MAP Reproduced from U.S. Geological Survey, NWRC Aerial dated March 2001

Station Name: AT01-SM-01 (JUNEAU)

Monument Location: This station is located in the Atchafalaya Delta Wildlife Management Area in Atchafalaya Bay, Louisiana, on the north-descending bank of the Big Island Channel and is west of the Atchafalaya River Outlet.

Monument Description: Stainless steel rod driven to 32 feet within a PVC sleeve which is projecting approximately 1 foot above the ground. Access Cover is stamped "JUNEAU" and has been removed.

Monument Established By: LA Department of Natural Resources, CRD

Stamping: "JUNEAU"

Date: October 2000

Re-Surveyed: December 2003

Adjusted NAD 83 Geodetic Position
Lat. 29° 28' 17.864608"N
Long. 91° 18' 18.435321"W

Adjusted NAD 83 Datum LSZ (1702) Ft
N= 353,350.36
E= 3,289,810.77

Adjusted NAVD88 Height determined from Differential Levels from Mon. "AT03-SM-01"
Elevation = 5.40 feet (1.646 mtrs)

Delta Hgt. Difference from Mon. "AT03-SM-01"
+2.17 feet (0.661 mtrs)

Geoid99 Height = -25.210 mtrs.
Ellipsoid Height = -23.564 mtrs.

Adjusted CORS Height = 5.29 feet (1.612 mtrs)

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD