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Little Lake Shoreline Protection & Marsh Creation Project (BA-37)

2010 Post-Construction Survey Monitoring Report

PREPARED FOR:

OFFICE OF
Coastal Protection and Restoration

PREPARED BY:

Morris P. Hebert, Inc.

August 2010

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SECTION 1
METHODOLOGY REPORT

Morris P. Hebert, Inc. (MPH) has been contracted by the Office of Coastal Protection & Restoration (OCPR) to perform the 2010 monitoring survey for the Little Lake Shoreline Protection & Marsh Creation Project (BA-37). This monitoring report discusses the methods used by MPH to provide OCPR with quality data and data that is consistent with the data obtained from previous surveys.

1.1 Project Location:

The Little Lake Shoreline Protection / Dedicated Dredging near Round Lake Project (BA-37) is located along the southwestern shoreline of Little Lake from Plum Point westward to Superior Canal in Lafourche Parish, Louisiana in the vicinity of Brusle and Round Lakes. The center of the project area is located at the approximate coordinates Latitude = 29° 29’ 45” N and Longitude = 90° 20’ 15” W. The site is accessible only by boat. The public launch on Clovelly Canal located in Cut Off, Louisiana is the nearest boat launch to the project site.

1.2 Project Description:

According to OCPR, the project includes approximately 25,000 linear feet of rock dike constructed along the Little Lake shoreline and approximately 1,000 acres of marsh creation/nourishment that was completed in March 2007. The project is sponsored by the United States Department of Commerce / National Ocean and Atmospheric Administration (NOAA) / National Marine Fisheries Services (NMFS) and the Louisiana Department of Natural Resources (LDNR) under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA).

1.3 MPH’s Scope of Services:

1.3.1 Perform Marsh Creation Area Grid Survey
1.3.2 Perform Average Marsh Elevation Survey
1.3.3 Perform Rock Dike Settlement Plate Elevation Survey
1.3.4 Provide Deliverables
1.3.5 Check LCZ Secondary Monuments and TBM using GulfNET GPS System (added to scope after-the-fact)

The description of the above Scope of Services provided by OCPR and performed by MPH is included in Appendix A.

1.4 Planning & Layout of the GPS Survey:

OCPR provided MPH with the Annual Monitoring Reports from the years 2007, 2008, and 2009. MPH used the locations of the survey points from the 2009 survey to plan for the surveying of the Settlement Plates, Grid Elevations and Average Grid Marsh Elevations in 2010.

OCPR conducted a meeting with MPH on July 15, 2010 regarding the Planning and Layout of the surveying for the project. OCPR provided MPH with a copy of the Final Draft document titled "Surveying Coastal Marsh Found in Louisiana" and instructed MPH to follow the procedures in this document while performing the survey.

During the meeting, OCPR discussed the control points to be used to perform the survey. The LCZ Secondary Monuments were installed in 2002 and have experienced significant subsidence over the years. OCPR made the decision to use the Railroad Spike, having an elevation of +3.69' to maintain consistency with the previous surveys since the R/R spike appears to be the most stable control point of the three.

1.5 GPS Survey Control using existing LCZ Secondary Monuments

LCZ Secondary Monuments "SM01" and "SM02" were provided by OCPR. Data sheets for the monuments are included in Appendix B. Survey data on the T.B.M. Railroad (R/R) Spike, which was used in the previous surveys, was provided by OCPR. Since the Railroad Spike having an elevation of +3.69' was used as the primary control for the previous surveys, it was used as the primary control for the 2010 survey to insure the consistency of the data between the 2010 survey and the previous surveys.

1.6 Quality Assurance Procedures

Prior to beginning the survey, MPH checked the LCZ Secondary Monuments "SM01" and "SM02" and the R/R Spike using *GULFNet* / Trimble R8 GPS System. *GULFNet* is a network of Continually Operating GPS Reference Stations (**CORS**) that delivers Real Time Network (RTN) error corrections via a cell phone and Bluetooth connection to the GPS data that is collected with a Trimble R8 Rover GPS Receiver. The purpose of checking the control points with *GULFNet* was to determine an accurate comparison of the 3 control points. The control points were shot 3 times using *GULFNet* / R8 GPS System and an average position and elevation was calculated. The elevations were adjusted by adding 0.76' to them to be consistent with R/R spike having an elevation of 3.69', which was used for the previous surveys. The average coordinates for the control points using *GULFNet* are as follows:

POINT	NORTHING (*GULFNet*)	EASTING (*GULFNet*)	ELEVATION (*GULFNet*)	ELEVATION (ADJUST +0.76')
SM01	363981.42	3638772.83	2.53'	3.29'
SM02	350270.13	3655746.01	2.42'	3.18'
R/R SPIKE	349553.65	3642771.67	2.93'	3.69'

OCPR decided to use the R/R spike having an elevation of 3.69' as the primary control point so that the survey data would be consistent with the previous surveys. MPH calculated an adjusted elevation for both SM01 and SM02 to be used when performing Quality Control (QC) checks for the GPS, since both monuments have subsided over the years. With the GPS R7 base station set up on the R/R spike (elevation 3.69'), daily QC shots were taken on SM01 and/or SM02, and the observed daily QC shots were compared to the adjusted coordinates and elevations of SM01 and SM02 in the above table to make sure the GPS was working properly.

1.7 Key Personnel & Survey Timeline

Project Manager:	Gerard M. Legendre, P.L.S.
Survey Party Chief:	Aaron Beal
Survey Instrument Man:	Charles Hartwell
Survey Rod Man:	Derrick Dupre
Draftsman:	Greg Plaisance

07/06/10	MPH received Notice to Proceed from OCPR
07/15/10	MPH attended Planning & Layout meeting with OCPR
07/20/10	MPH crew checked Secondary Monuments using GULFNET.
07/26/10	MPH crew performed elevation survey of settlement plates.
07/29/10	MPH crew began marsh grid elevation survey.
08/02/10	MPH crew completed marsh grid elevation survey.

1.8 Equipment, Data Collection & Data Processing

- Airboat was used to access the location and perform the survey
- Trimble Survey Controller (TSC2) used for GPS Data Collection
- Combination Trimble R7 GNSS (base) / R8 GNSS (rover) GPS Receivers
- Combination *GULFNet* (base) / R8 GNSS (rover) GPS Receivers
- Trimble Geomatics Office v1.63 used to process survey data from TCS2 data collectors.
- ACAD Civil3D 2010 used to prepare drawings.

SECTION 2
Drawing Files

The drawings for the 2010 Post-Construction Monitoring Survey – Little Lake Shoreline Protection & Marsh Creation Project (BA-37) are referenced to the Louisiana State Plane Coordinate System, South Zone, U.S. Survey Feet. The horizontal datum is North American Datum of 1983 (NAD83) and the vertical datum is North American Vertical Datum of 1988 (NAVD88). The drawings include the following:

Sheet 1	Title Sheet
Sheet 2	Plan View
Sheet 3	2010 Post-Construction Elevation Surveys
Sheet 3A	Comparison of Current Survey to Previous Surveys
Sheet 4	Average Grid Elevation Survey (6 Locations)
Sheet 5	Marsh Cross Sections 1A – 2
Sheet 6	Marsh Cross Sections 3A – 4
Sheet 7	Marsh Cross Sections 5A – 6
Sheet 8	Marsh Cross Sections 7A – 8
Sheet 9	Marsh Cross Sections 9A – 13A
Sheet 10	Marsh Cross Sections 13 – 15A
Sheet 11	Marsh Cross Sections 15 – 16
Sheet 12	Marsh Cross Sections 17A – 17
Sheet 13	Settlement Plate Elevation Survey

M.P.H. JOB NO.	DATE	SHEET NO.
10435-02	JUL 2010	1

Office of Coastal Protection and Restoration

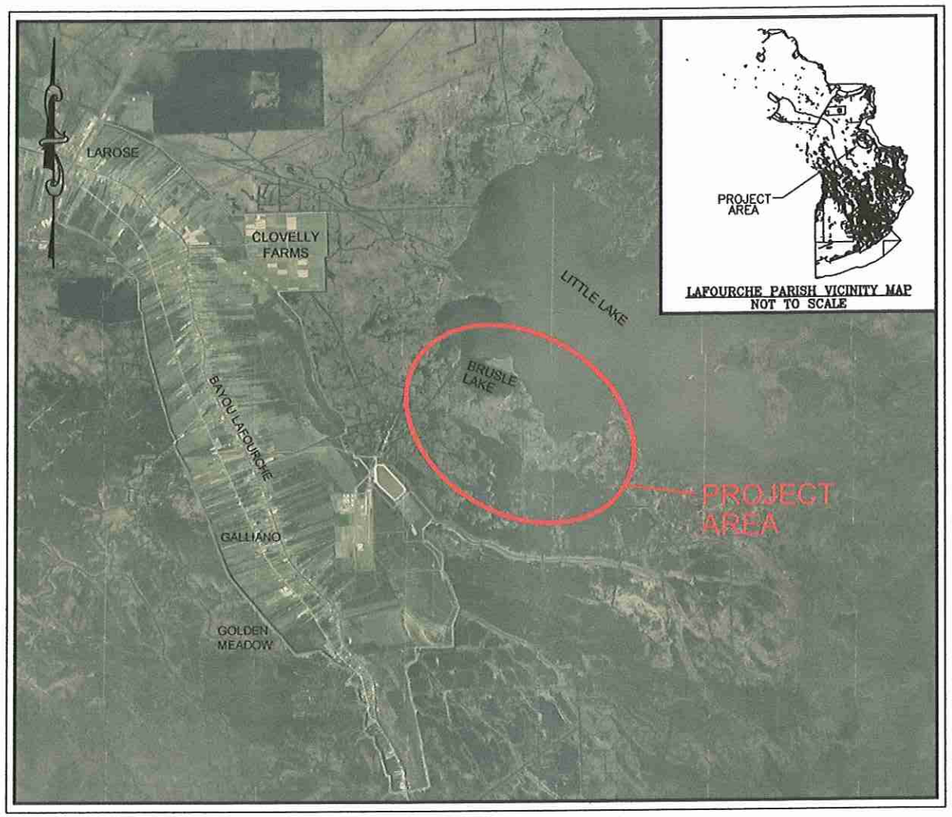
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
BA-37
LAFOURCHE PARISH

SUMMER 2010 POST CONSTRUCTION MONITORING REPORT

CPRA

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	MARSH TRANSECTION PLAN VIEW
3	AS-BUILT & POST CONSTRUCTION SURVEYS
3A	ELEVATION COMPARISON CHART
4	AVERAGE GRID LOCATION ELEVATIONS
5	MARSH CROSS SECTIONS 1A-2
6	MARSH CROSS SECTIONS 3A-4
7	MARSH CROSS SECTIONS 5A-6
8	MARSH CROSS SECTIONS 7A-8
9	MARSH CROSS SECTIONS 9A-13A
10	MARSH CROSS SECTIONS 13-15A
11	MARSH CROSS SECTIONS 15-16
12	MARSH CROSS SECTIONS 17A-17
13	SETTLEMENT PLATE ELEVATION SURVEY



PROJECT LOCATION MAP

STATE OF LOUISIANA
INSET MAP
NOT TO SCALE

STATE OF LOUISIANA
GERARD M. LEGENDRE
License No. 4966
PROFESSIONAL LAND SURVEYOR

APPROVED: _____
GERARD M. LEGENDRE, LA. LICENSE NO. 4966

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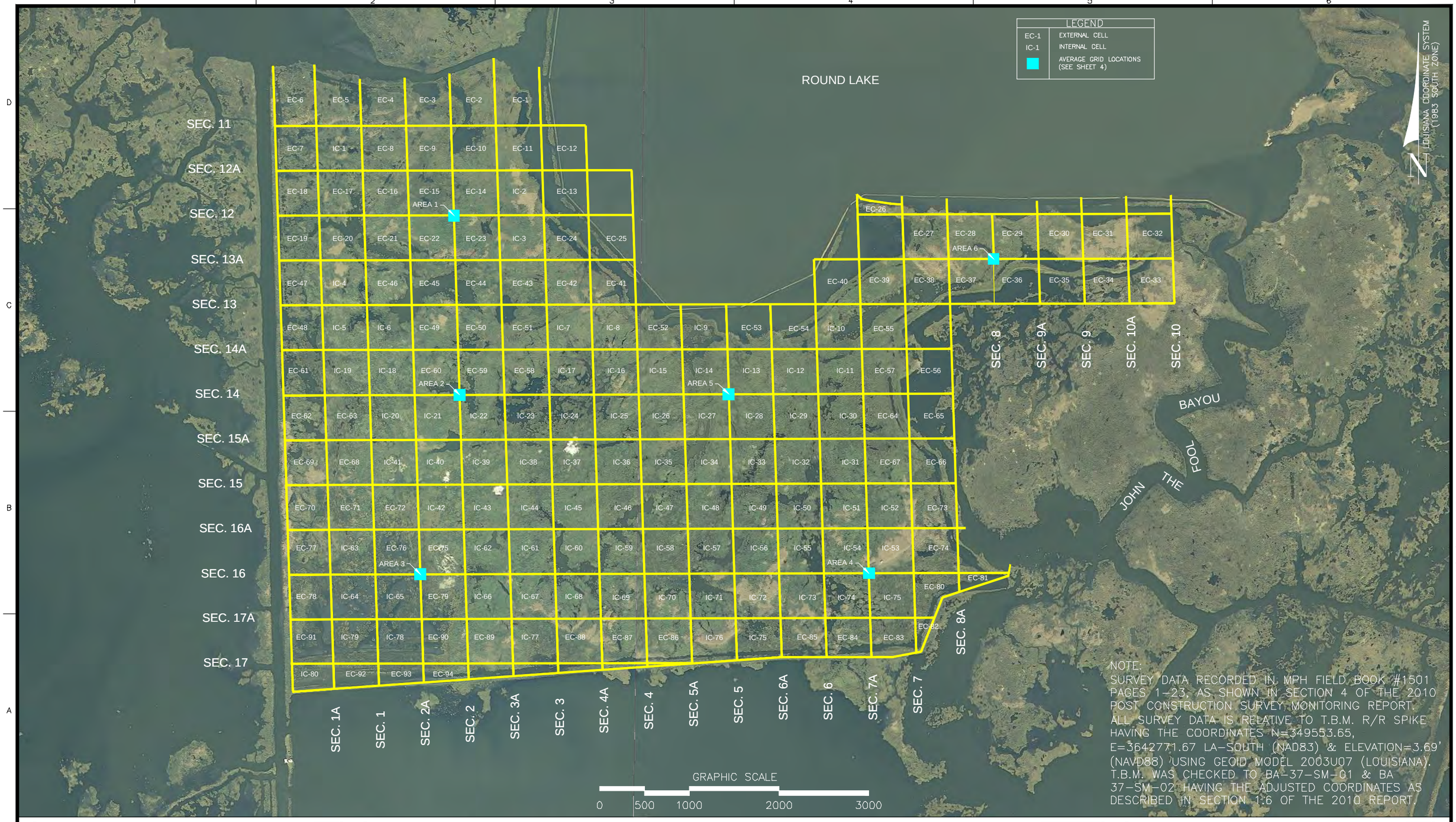

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA–SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA–37–SM–01 & BA 37–SM–02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUSIANA

MARSH TRANSECTION PLAN VIEW
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST–CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	2
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 02 MARSH TRANSECT PLAN VIEW.DWG			

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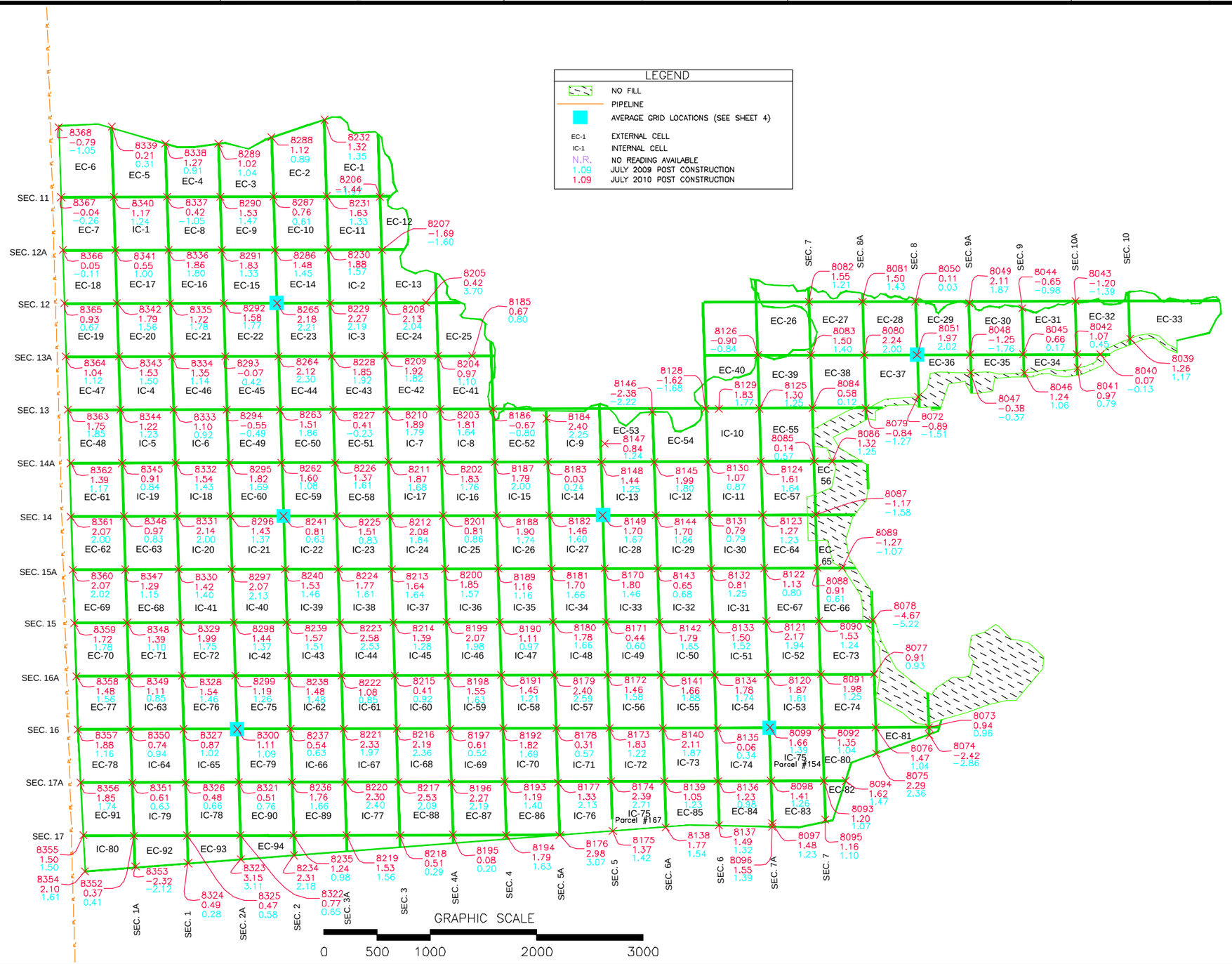

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA–SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA–37–SM–01 & BA 37–SM–02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUSIANA

AS–BUILT & POST CONSTRUCTION SURVEYS
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST–CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	3
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 03 POST CONSTRUCTION MONITORING.DWG			

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Point Table - Elevation Comparison

Point #	Elevation					
	Original	2006	2007	2008	2009	2010
8039	1.40	1.30	1.00	1.53	1.17	1.26
8040	-0.60	1.80	1.95	1.95	-0.13	0.07
8041	1.04	2.00	1.04	1.41	0.79	0.97
8042	0.25	1.70	0.89	1.11	0.45	1.07
8043	1.80	1.80	3.33	1.83	-1.39	-1.20
8044	1.80	1.80	1.28	1.78	-0.98	-0.65
8045	0.32	1.40	0.12	0.35	0.17	0.66
8046	0.62	2.20	1.52	1.75	1.06	1.24
8047	1.22	2.00	1.75	1.98	-0.37	-0.38
8048	-0.40	1.10	-0.82	-0.32	-1.76	-1.25
8049	2.20	2.20	1.14	2.09	1.87	2.11
8050	1.80	1.90	0.09	0.50	0.03	0.11
8051	-0.25	2.20	1.71	2.23	2.02	1.97
8072	1.48	2.40	2.03	2.08	-1.51	-0.89
8073	-0.93	0.80	0.20	0.98	0.96	0.94
8074	N.R.	N.R.	N.R.	0.51	-2.86	-2.42
8075	0.50	0.90	0.97	1.09	2.36	2.29
8076	1.24	1.80	1.32	1.03	1.04	1.47
8077	0.67	1.20	1.04	0.60	0.93	0.91
8078	1.23	1.30	1.33	1.35	-5.22	-4.67
8079	0.10	2.30	2.28	2.16	-1.27	-0.84
8080	0.23	2.50	2.53	2.39	2.00	2.24
8081	1.80	1.50	1.51	1.56	1.43	1.50
8082	1.69	1.30	1.27	1.43	1.21	1.55
8083	0.40	2.40	1.79	1.73	1.40	1.50
8084	0.30	2.20	0.78	0.88	0.12	0.58
8085	-0.03	1.20	-0.37	2.27	0.57	0.14
8086	-0.03	1.20	-0.25	1.58	1.25	1.32
8087	-1.80	1.80	1.27	1.43	-1.58	-1.17
8088	1.90	1.60	0.99	0.72	0.61	0.91
8089	0.49	1.30	1.49	1.60	-1.07	-1.27
8090	-0.60	2.50	1.34	1.45	1.24	1.53
8091	-1.00	1.80	1.65	1.79	1.25	1.98
8092	-0.70	1.50	1.25	1.24	1.04	1.35
8093	-1.40	2.10	1.12	0.98	1.07	1.20
8094	N.R.	1.40	0.37	0.71	1.47	1.62
8095	-0.30	1.60	-0.27	-0.27	1.10	1.16
8096	N.R.	N.R.	N.R.	N.R.	1.39	1.55
8097	1.24	1.80	0.14	0.14	1.23	1.48
8098	-1.02	2.50	1.17	0.81	1.26	1.41
8099	0.28	2.70	1.80	1.76	1.39	1.66
8120	0.04	2.60	1.88	1.95	1.61	1.87
8121	0.78	3.30	2.26	2.20	1.94	2.17
8122	-0.12	2.40	1.37	1.35	0.80	1.13
8123	0.50	2.60	1.55	1.55	1.23	1.27
8124	0.48	2.20	1.63	1.62	1.64	1.61
8125	1.70	2.60	1.91	1.83	1.25	1.30
8126	0.30	2.00	1.77	1.90	-0.84	-0.90
8128	2.20	2.00	1.45	1.33	-1.68	-1.62
8129	-0.40	2.20	1.92	2.04	1.77	1.83
8130	-4.20	2.50	1.04	1.00	0.87	1.07
8131	-3.60	2.60	1.09	1.08	0.79	0.79
8132	-1.70	2.70	1.32	1.23	1.25	0.81
8133	-3.00	3.00	1.90	2.42	1.52	1.50
8134	-1.10	2.90	2.41	2.36	1.74	1.78
8135	-0.80	2.20	0.99	0.22	0.34	0.06
8136	-0.67	2.40	1.43	1.46	0.98	1.23
8137	1.50	2.40	0.78	1.20	1.32	1.49
8138	-1.00	2.00	0.74	0.85	1.54	1.77
8139	-0.80	2.10	1.11	0.95	1.23	1.05
8140	0.00	2.90	2.45	2.36	1.87	2.11
8141	0.18	3.10	1.87	2.06	1.88	1.66
8142	-2.00	3.10	2.04	2.06	1.65	1.79
8143	1.40	2.70	0.94	1.03	0.68	0.65
8144	0.80	2.50	2.17	2.17	1.86	1.70
8145	1.38	2.20	2.02	1.92	1.80	1.99
8146	2.20	2.00	1.68	1.92	-2.22	-2.38
8147	1.69	2.30	1.73	1.84	1.24	0.84

Point Table - Elevation Comparison

Point #	Elevation					
	Original	2006	2007	2008	2009	2010
8148	0.57	2.40	1.27	1.69	1.25	1.44
8149	1.68	2.40	1.27	1.92	1.67	1.70
8170	1.07	2.50	1.66	2.14	1.46	1.80
8171	-0.10	2.90	0.72	0.95	0.60	0.44
8172	0.03	2.60	2.47	2.03	1.58	1.46
8173	-4.80	2.60	1.52	1.36	1.22	1.83
8174	1.70	2.90	2.52	2.52	2.71	2.39
8175	1.30	1.90	0.92	0.87	1.42	1.37
8176	0.00	2.00	1.43	1.31	3.07	2.98
8177	1.20	2.80	2.38	1.53	2.13	1.33
8178	-0.90	2.30	0.80	0.76	0.57	0.31
8179	0.20	3.10	2.73	2.56	2.59	2.40
8180	1.59	2.50	2.23	1.90	1.66	1.78
8181	1.76	2.10	1.70	1.89	1.66	1.70
8182	-1.71	2.40	1.56	1.74	1.60	1.46
8183	-2.25	2.00	0.79	0.44	0.24	0.03
8184	2.60	2.00	1.59	1.69	2.25	2.40
8185	1.12	1.00	1.40	1.72	0.80	0.67
8186	2.30	1.80	1.94	2.65	-0.80	-0.67
8187	1.51	2.20	2.13	2.15	2.00	1.79
8188	1.35	2.70	2.22	2.19	1.74	1.90
8189	-1.10	2.70	1.31	1.37	1.16	1.16
8190	-3.10	2.30	1.24	0.99	0.97	1.11
8191	-0.80	2.40	1.43	1.39	1.21	1.45
8192	-1.70	3.00	2.10	2.18	1.69	1.82
8193	-1.00	2.40	1.17	0.97	1.40	1.19
8194	1.47	2.60	1.05	2.03	1.63	1.79
8195	0.87	2.10	0.49	-0.91	0.20	0.08
8196	2.17	3.10	2.52	2.43	2.19	2.27
8197	0.33	3.34	2.20	2.13	0.52	0.61
8198	0.04	2.50	2.09	2.19	1.63	1.55
8199	-0.70	2.80	2.18	2.36	1.98	2.07
8200	-0.40	2.70	1.88	1.75	1.57	1.85
8201	0.50	2.30	1.22	1.26	0.86	0.81
8202	0.94	2.30	1.85	2.16	1.76	1.83
8203	1.80	2.20	2.13	2.27	1.64	1.81
8204	1.45	1.40	1.60	1.44	1.10	0.97
8205	-2.90	1.10	1.38	-3.35	3.70	0.42
8206	1.56	1.30	1.33	1.34	-1.97	-1.44
8207	1.64	2.20	2.02	2.06	-1.60	-1.69
8208	2.60	1.90	2.07	2.11	2.04	2.13
8209	1.13	2.10	1.97	1.85	1.82	1.92
8210	2.50	3.20	2.35	2.31	1.79	1.89
8211	1.28	2.30	1.97	1.87	1.68	1.87
8212	-0.50	2.60	1.93	2.12	1.84	2.08
8213	-1.40	3.00	1.89	1.85	1.64	1.64
8214	-1.50	3.00	1.76	1.62	1.28	1.39
8215	-1.00	2.70	1.02	0.81	0.92	0.41
8216	-0.54	3.30	2.94	2.57	2.36	2.19
8217	0.40	2.90	2.57	2.22	2.09	2.53
8218	-0.90	1.90	0.98	0.60	0.29	0.51
8219	0.54	2.30	1.69	1.65	1.56	1.53
8220	-2.00	3.00	2.66	2.49	2.40	2.30
8221	0.60	3.40	3.05	2.81	1.97	2.33
8222	-1.16	2.70	1.35	1.11	0.85	1.08
8223	0.52	3.80	3.02	2.63	2.53	2.58
8224	0.30	2.80	2.07	1.83	1.61	1.77
8225	0.11	2.40	1.47	1.56	0.83	1.51
8226	0.62	2.40	1.45	1.49	1.61	1.37
8227	3.40	2.70	1.16	0.86	-0.23	0.41
8228	0.20	3.10	2.63	2.45	1.92	1.85
8229	1.75	2.80	2.70	2.47	2.19	2.27
8230	1.85	2.20	1.62	1.69	1.57	1.88
8231	2.50	2.10	1.58	1.39	1.33	1.63
8232	1.46	1.20	1.35	1.00	1.35	1.32
8234	1.57	1.90	1.70	1.63	2.18	2.31
8235	-0.30	2.00	0.98	0.67	0.98	1.24
8236	1.20	2.50	1.90	1.91	1.66	1.76

Point Table - Elevation Comparison

Point #	Elevation					
	Original	2006	2007	2008	2009	2010
8237	-1.90	2.80	1.40	1.00	0.63	0.54
8238	-2.00	3.30	1.95	1.78	1.48	1.48
8239	-1.50	3.70	2.19	1.66	1.51	1.57
8240	-0.18	2.80	2.06	1.60	1.46	1.53
8241	1.21	2.60	1.24	1.02	0.63	0.81
8262	1.52	2.30	0.78	1.28	1.08	1.60
8263	3.50	3.00	1.96	1.84	1.86	1.51
8264	-1.22	2.80	2.90	2.65	2.30	2.12
8265	-0.04	2.70	2.35	2.44	2.21	2.18
8286	0.75	2.00	1.54	1.47	1.45	1.48
8287	-3.40	1.70	0.96	0.68	0.61	0.76
8288	1.28	1.20	0.90	1.17	0.89	1.12
8289	0.55	1.10	1.01	0.86	1.04	1.02
8290	1.41	1.80	1.61	1.46	1.47	1.53
8291	1.22	2.10	1.91	1.43	1.33	1.83
8292	-0.62	2.80	2.04	2.13	1.77	1.58
8293	-2.05	2.20	0.74	0.45	0.42	-0.07
8294	3.10	2.30	0.63	0.42	-0.49	-0.55
8295	-2.80	2.30	2.09	2.54	1.69	1.82
8296	0.00	2.50	1.49	1.42	1.37	1.43
8297	1.06	3.10	2.41	2.35	2.13	2.07
8298	-1.00	3.30	2.07	1.41	1.37	1.44
8299	-2.80	3.20	1.71	1.35	1.26	1.19
8300	-1.90	3.10	1.55	1.16	1.09	1.11
8321	-1.60	2.40	1.10	0.83	0.76	0.51
8322	-1.70	1.50	0.84	0.31	0.65	0.77
8323	-1.80	1.90	0.68	0.19	3.11	3.15
8324	-1.90	1.50	0.33	-0.08	0.28	0.49
8325	-1.70	1.80	0.88	0.29	0.58	0.47
8326	-1.80	2.50	0.63	0.67	0.66	0.48
8327	-2.30	2.60	1.20	0.98	1.02	0.87
8328	1.30	2.50	1.80	1.52	1.46	1.54
8329	1.63	3.00	2.32	2.16	1.75	1.99
8330	-1.20	2.40	1.66	1.49	1.40	1.42
8331	-1.00	2.80	2.50	2.26	2.00	2.14
8332	-0.16	2.70	1.89	1.68	1.43	1.54
8333	3.80	2.60	1.28	1.32	0.92	1.10
8334	-1.55	2.60	1.41	1.32	1.14	1.35
8335	1.44	2.40	2.03	2.05	1.78	1.72
8336	1.43	2.40	2.08	1.62	1.80	1.86
8337	-1.26	1.10	0.81	0.99	-1.05	0.42
8338	1.24	1.30	1.26	0.99	0.91	1.27
8339	0.62	1.30	1.42	0.34	0.31	0.21
8340	1.17	1.50	1.32	1.18	1.24	1.17
8341	-0.89	2.00	0.81	0.41	1.00	0.55
8342	-0.70	2.20	1.87	1.70	1.56	1.79
8343	-0.61	2.30	1.65	1.70	1.50	1.53
8344	2.60	2.20	1.08	1.11	1.23	1.22
8345	-1.00	2.10	1.21	1.38	0.84	0.91
8346	-0.40	2.10	1.43	1.18	0.83	0.97
8347	0.52	2.10	1.39	1.43	1.15	1.29
8348	-0.80	2.10	1.37	1.12	1.10	1.39
8349	-1.10	1.90	1.09	0.92	0.85	1.11
8350	-1.50	1.80	0.96	0.82	0.94	0.74
8351	-1.30	2.00	0.83	0.68	0.63	0.61
8352	0.00	1.90	0.88	0.30	0.41	0.37
8353	-1.60	1.90	0.58	-1.93	-2.12	-2.32
8354	1.95	1.80	0.63	1.02	1.61	2.10
8355	-0.40	2.00	1.55	1.39	1.50	1.50
8356	1.68	1.40	1.33	1.36	1.74	1.85
8357	2.43	1.40	1.11	1.24	1.16	1.88
8358	2.20	1.70	0.21	0.60	1.56	1.48
8359	1.93	1.80	1.47	1.55	1.78	1.72
8360	1.71	2.00	1.39	1.86	2.02	2.07
8361	1.37	1.90	1.31	1.28	2.00	2.07
8362	1.24	1.50	1.30	1.58	1.17	1.39
8363	1.70	1.70	1.47	1.49	1.85	1.75
8364	0.96	1.90	1.40	1.45	1.12	1.04

Point Table - Elevation Comparison

Point #	Elevation					
	Original	2006	2007	2008	2009	2010
8365	0.97	1.90	1.66	1.81	0.67	0.93
8366	0.26	1.50	1.24	1.04	-0.11	0.05
8367	1.69	1.60	1.42	1.05	-0.26	-0.04
8368	1.11	1.30	1.17	1.01	-1.05	-0.79

NOTE:
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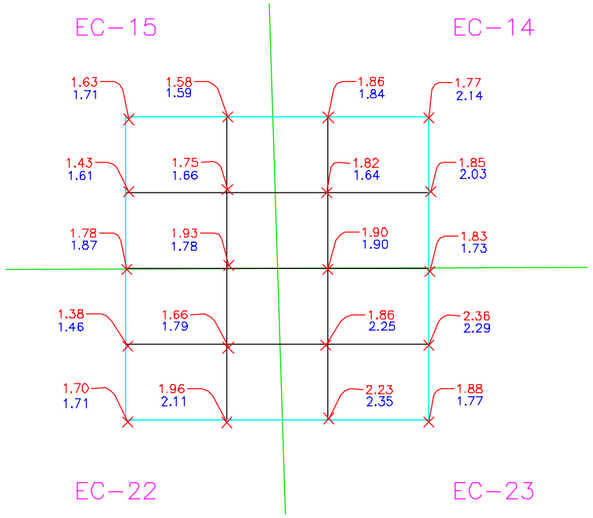
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUSIANA

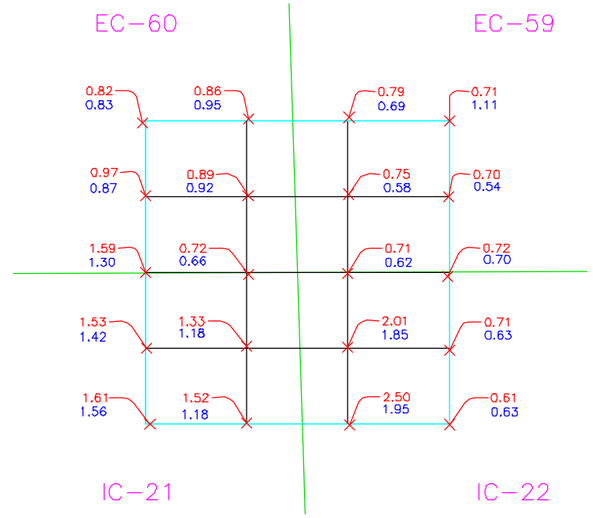
AS–BUILT & POST CONSTRUCTION SURVEYS
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST–CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	3A
CHKD./APPD. BY:	GML	SCALE:	NO SCALE
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 03 POST CONSTRUCTION MONITORING.DWG			

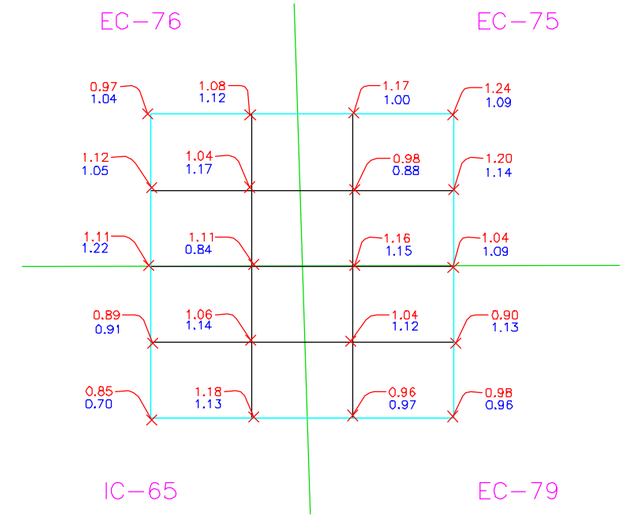
W:\dwg\10435-02 DNR\2010\03 Post Construction Monitoring.dwg PLOT DATE: 10/14/10 10:41:36am



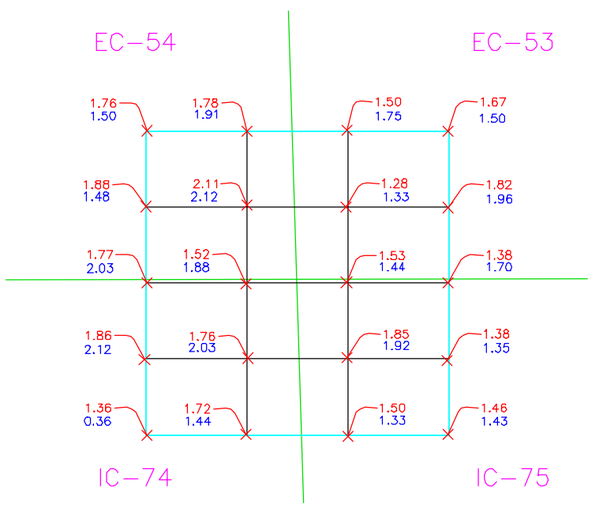
AREA 1
2010 AVG. ELEVATION = 1.81'
2009 AVG. ELEVATION = 1.86'



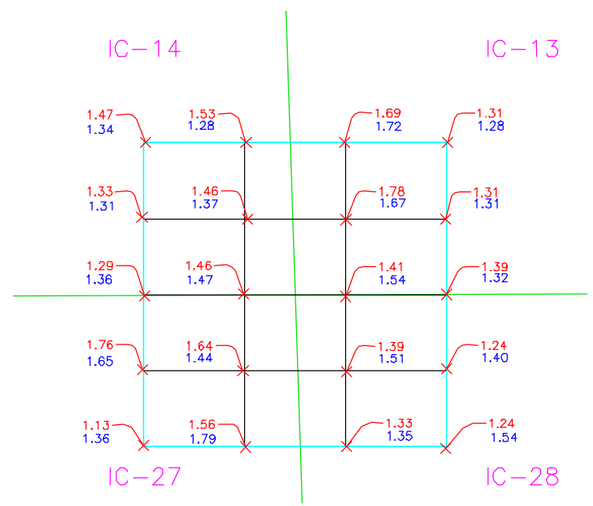
AREA 2
2010 AVG. ELEVATION = 1.10'
2009 AVG. ELEVATION = 1.01'



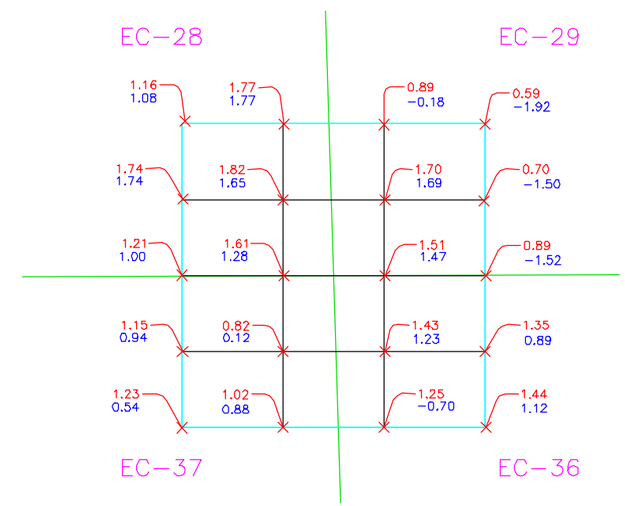
AREA 3
2010 AVG. ELEVATION = 1.05'
2009 AVG. ELEVATION = 1.04'



AREA 4
2010 AVG. ELEVATION = 1.64'
2009 AVG. ELEVATION = 1.63'



AREA 5
2010 AVG. ELEVATION = 1.43'
2009 AVG. ELEVATION = 1.45'



AREA 6
2010 AVG. ELEVATION = 1.26'
2009 AVG. ELEVATION = 0.58'

LEGEND

2010 ELEVATION	1.52
2009 ELEVATION	1.88

NOTE:
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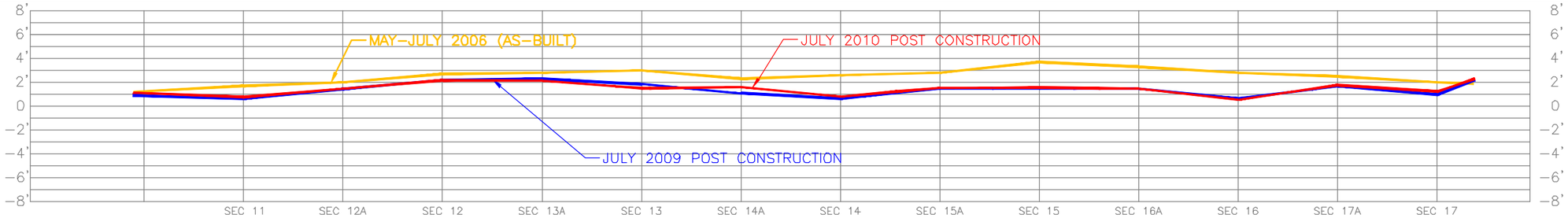
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

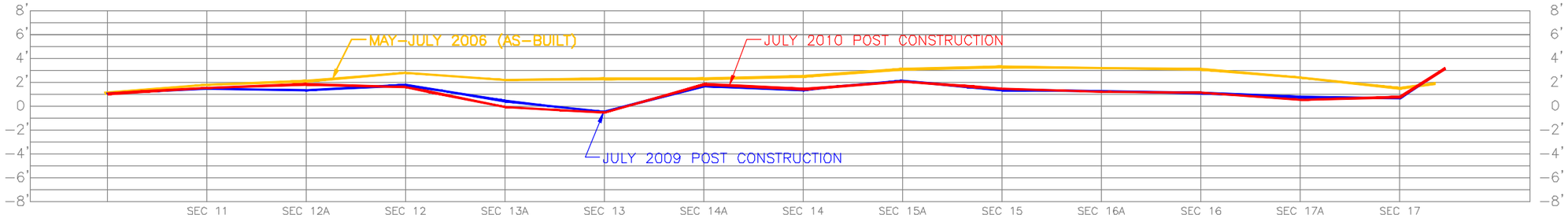
AVERAGE GRID LOCATION ELEVATIONS
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	4
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07-16-10
DATA BASE:	10435-02	JOB NO.	10435-02
MPH CAD FILE: 04 AVERAGE GRID LOCATION ELEVATIONS.DWG			

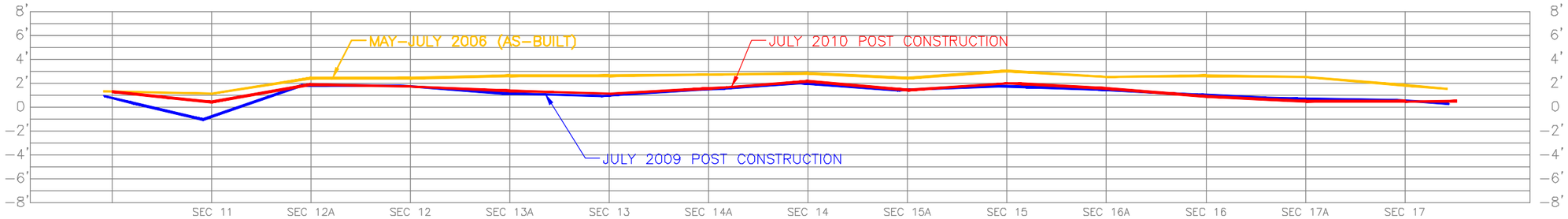
W:\dwg\10435-02 DNR\2010\04 Average Grid Location Elevations.dwg PLOT DATE: 10/14/10 10:41:50am



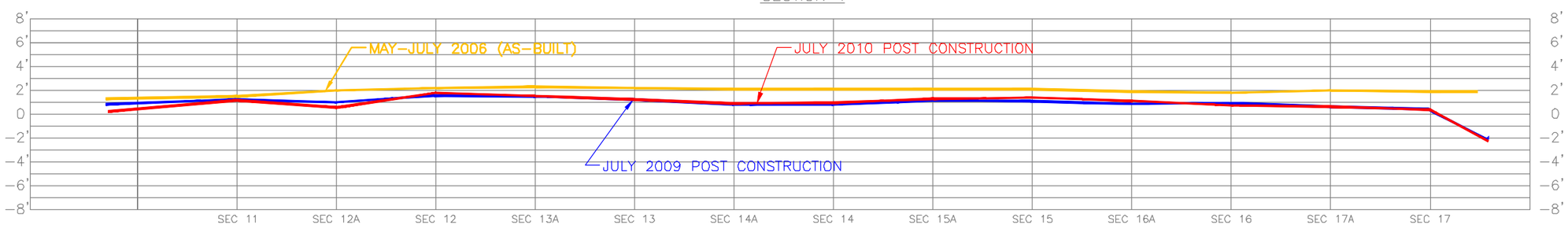
SECTION 2



SECTION 2A



SECTION 1



SECTION 1A

LEGEND

- MAY-JULY 2006 (AS-BUILT)
- JULY 2009 POST CONSTRUCTION
- JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1-23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA-SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA-37-SM-01 & BA 37-SM-02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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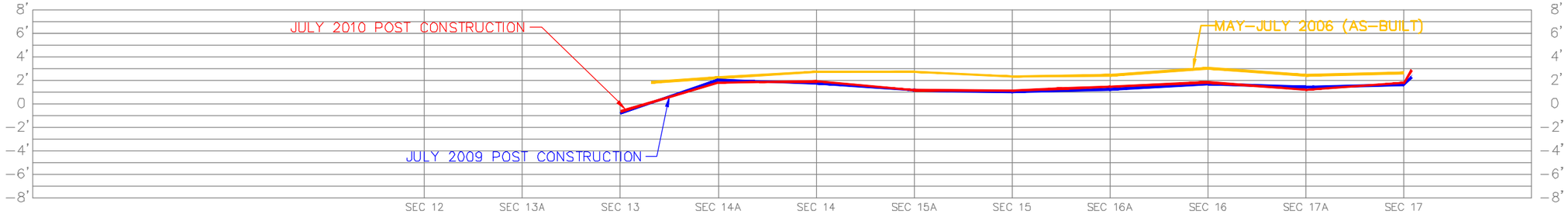
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

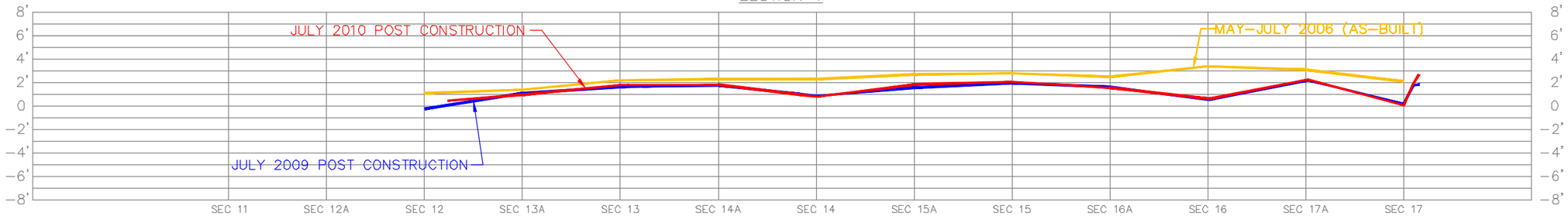
MARSH CROSS SECTIONS 1A-2
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	5
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07-16-10
DATA BASE:	10435-02	JOB NO.	10435-02
MPH CAD FILE: 05 MARSH CROSS SECTION 1A-2.DWG			

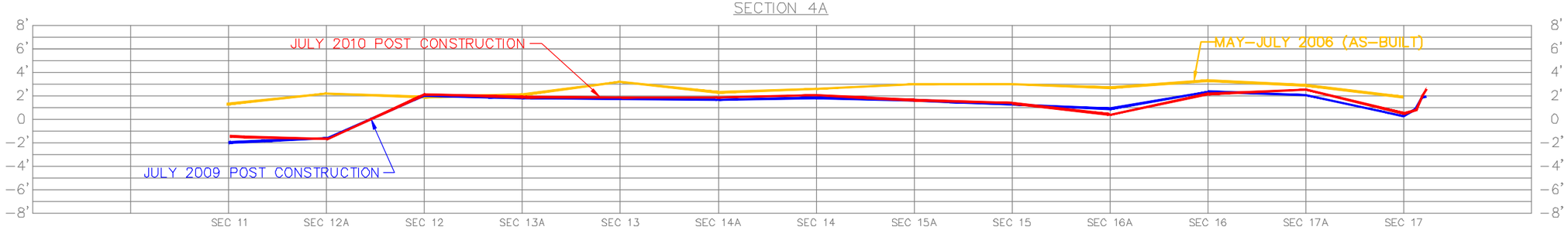
W:\dwg\10435-02 DNR\2010\05 MARSH CROSS SECTION 1A-2.dwg PLOT DATE: 10/14/10 10:42:00am



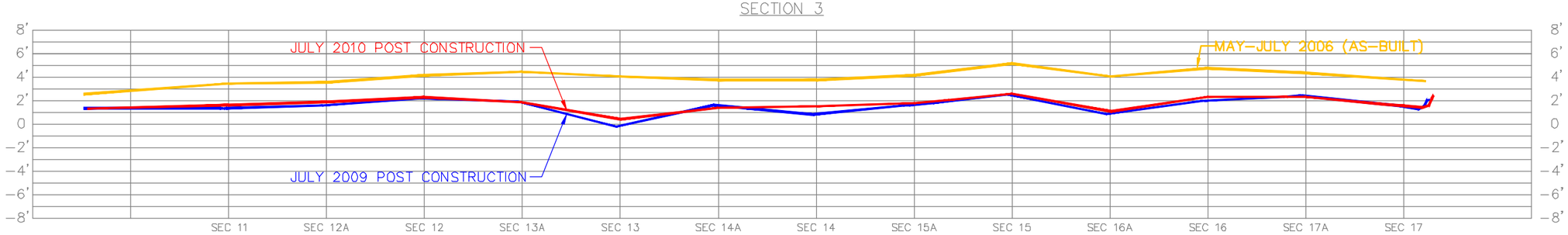
SECTION 4



SECTION 4A



SECTION 3



SECTION 3A

LEGEND
MAY–JULY 2006 (AS–BUILT)
JULY 2009 POST CONSTRUCTION
JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA–SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA–37–SM–01 & BA 37–SM–02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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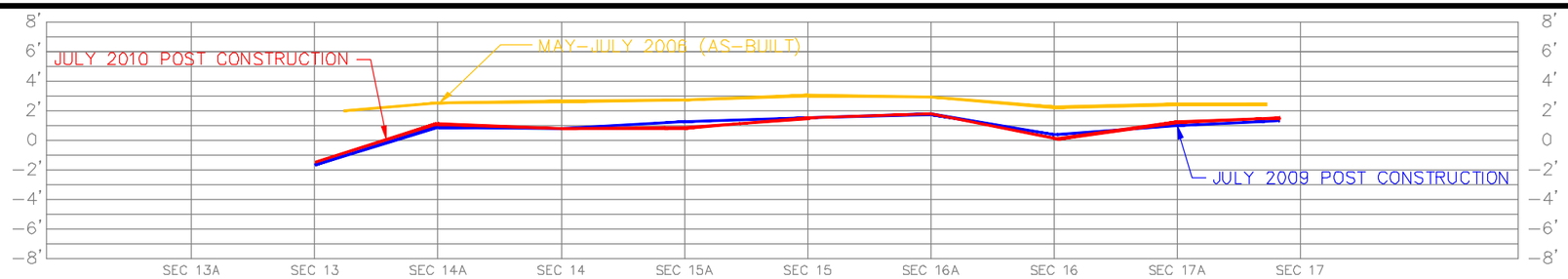
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUSIANA

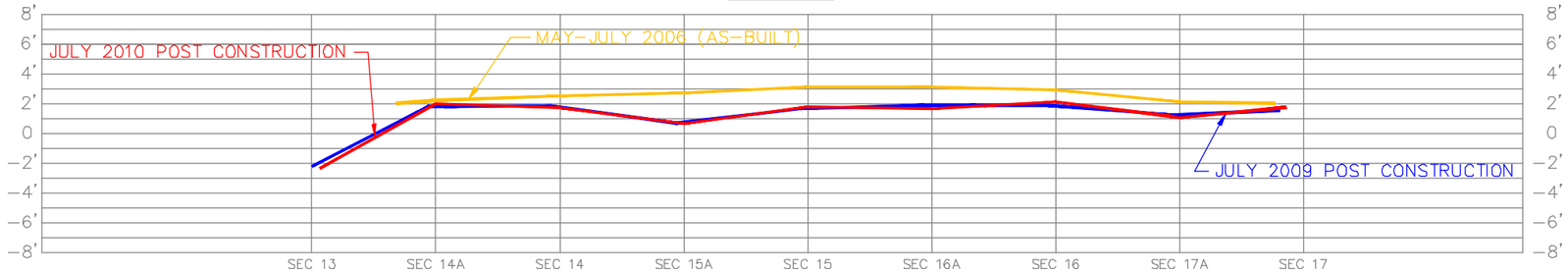
MARSH CROSS SECTIONS 3A–4
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST–CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	6
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 06 MARSH CROSS SECTION 3A–4.DWG			

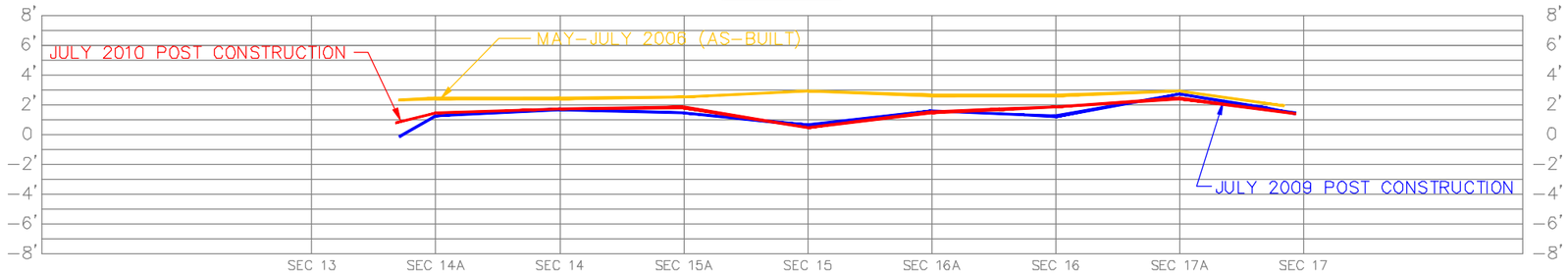
W:\dwg\10435-02 DNR\2010\06 MARSH CROSS SECTION 3A-4.dwg PLOT DATE: 10/14/10 10:42:10am



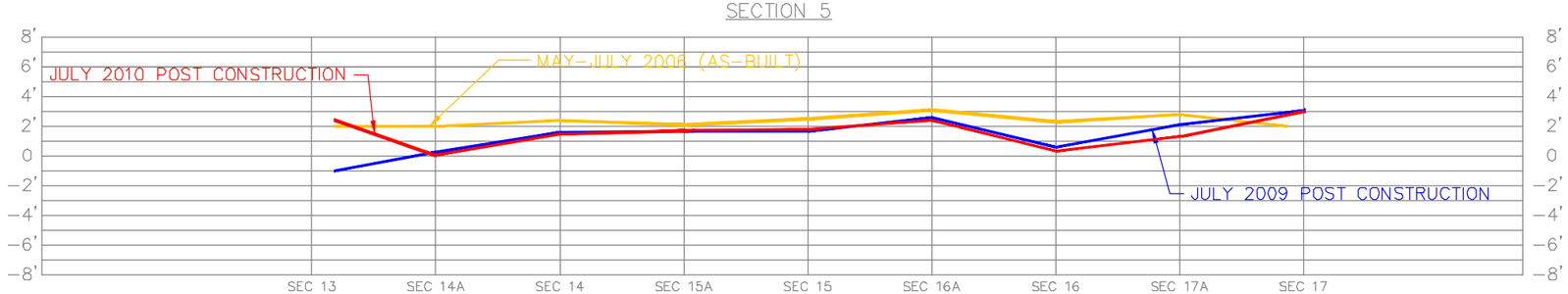
SECTION 6



SECTION 6A



SECTION 5



SECTION 5A

LEGEND

- MAY-JULY 2006 (AS-BUILT)
- JULY 2009 POST CONSTRUCTION
- JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1-23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA-SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA-37-SM-01 & BA 37-SM-02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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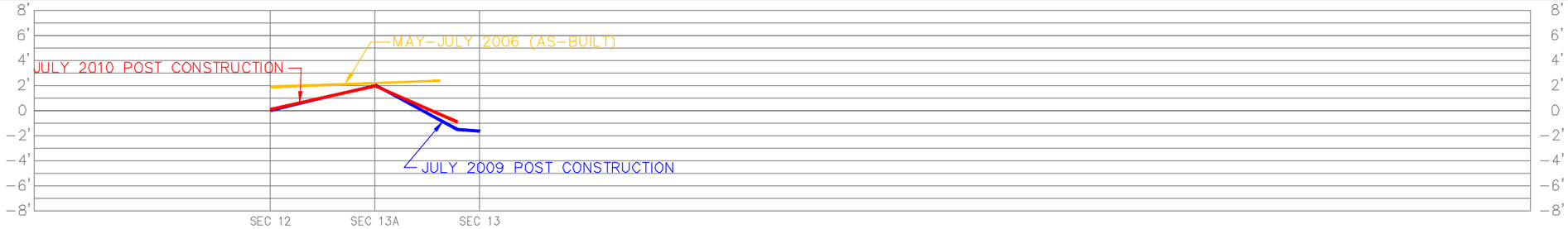
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

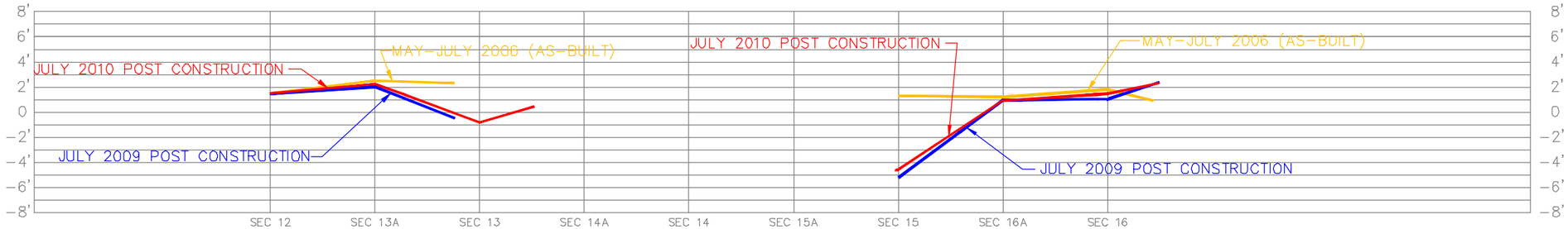
MARSH CROSS SECTIONS 5A-6
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	7
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07-16-10
DATA BASE:	10435-02	JOB NO.	10435-02
MPH CAD FILE: 07 MARSH CROSS SECTION 5A-6.DWG			

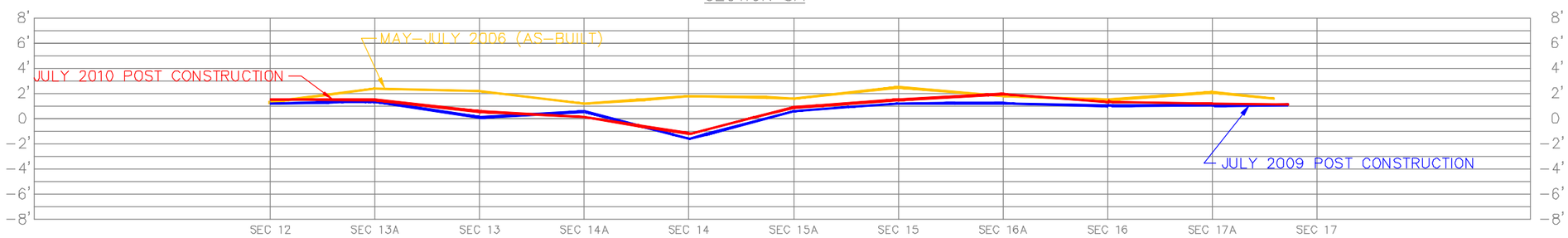
W:\dwg\10435-02 DNR\2010\07 MARSH CROSS SECTION 5A-6.dwg PLOT DATE: 10/14/10 10:42:22am



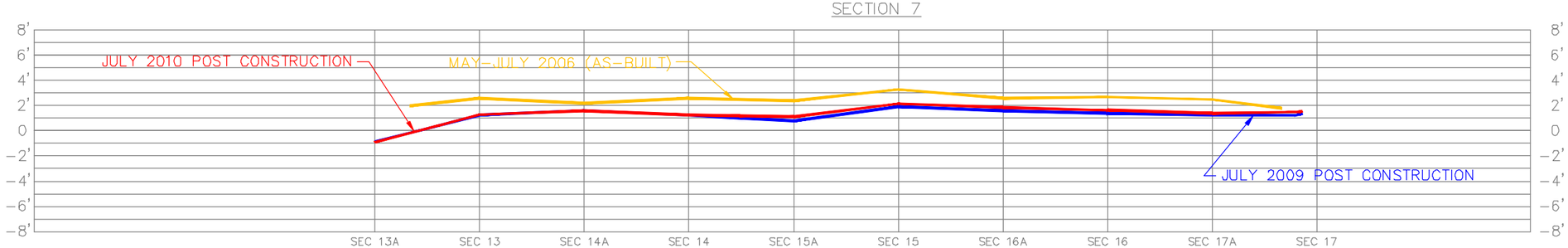
SECTION 8



SECTION 8A



SECTION 7



SECTION 7A

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA–SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA–37–SM–01 & BA 37–SM–02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

LEGEND

- MAY–JULY 2006 (AS–BUILT)
- JULY 2009 POST CONSTRUCTION
- JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE
0 300 600 1200 1800
0 5 10 20 30
VERTICAL GRAPHIC SCALE

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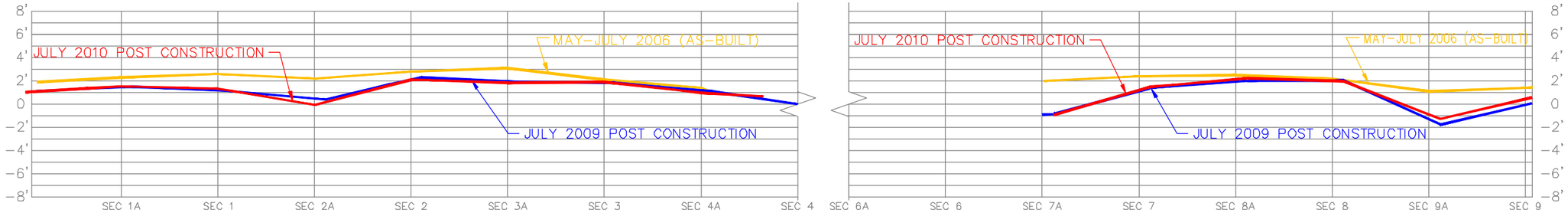
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

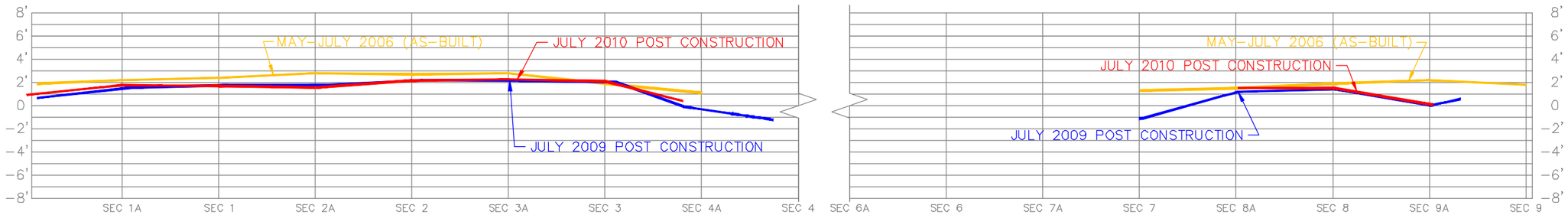
MARSH CROSS SECTIONS 7A–8
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST–CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	8
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 08 MARSH CROSS SECTION 7A–8.DWG			

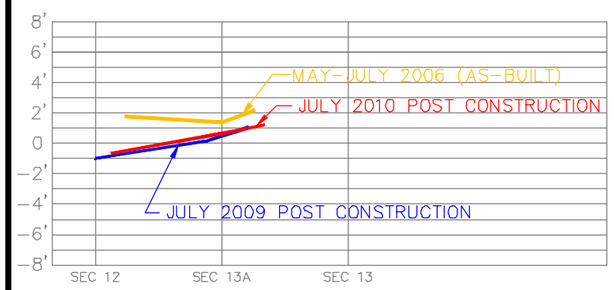
W:\dwg\10435-02 DNR\2010\08 MARSH CROSS SECTION 7A-8.dwg PLOT DATE: 10/14/10 10:42:30am



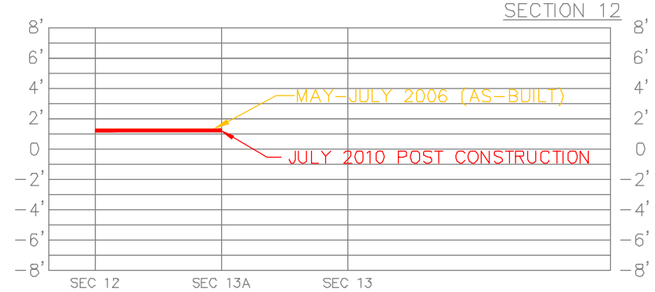
SECTION 13A



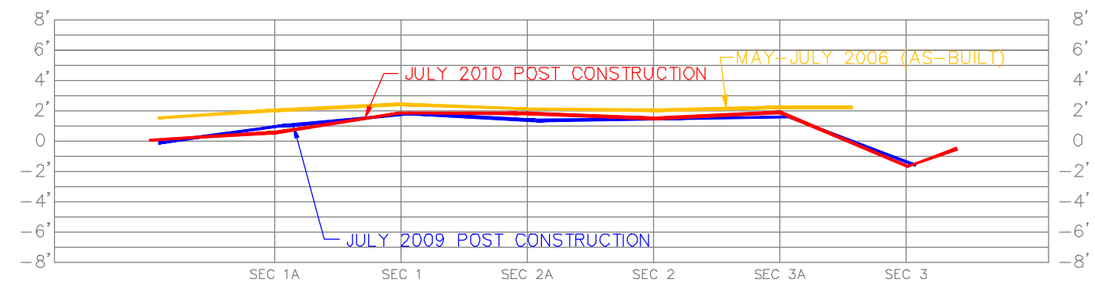
SECTION 12



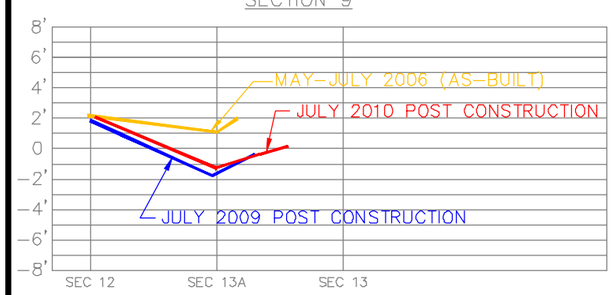
SECTION 9



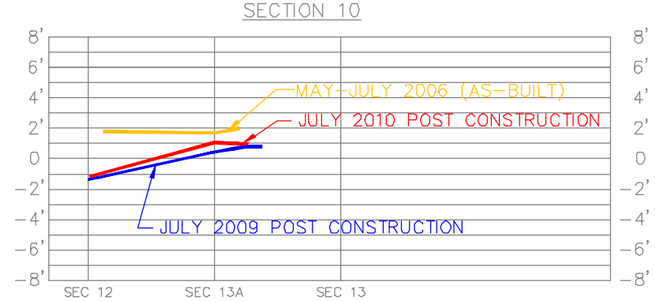
SECTION 10



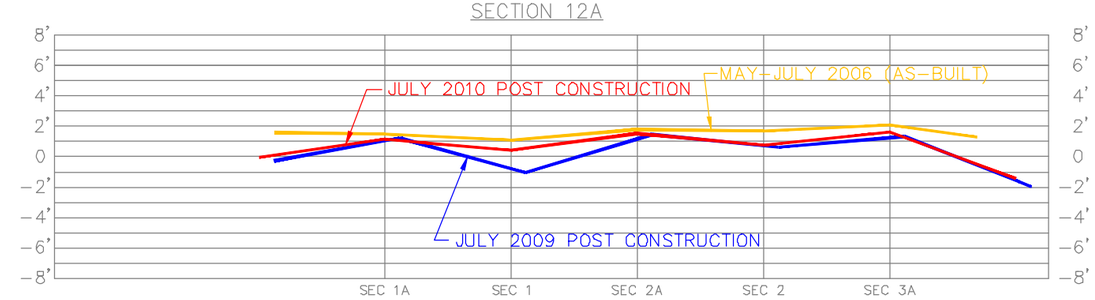
SECTION 12A



SECTION 9A



SECTION 10A



SECTION 11

LEGEND

- MAY-JULY 2006 (AS-BUILT)
- JULY 2009 POST CONSTRUCTION
- JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA-SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA-37-SM-01 & BA 37-SM-02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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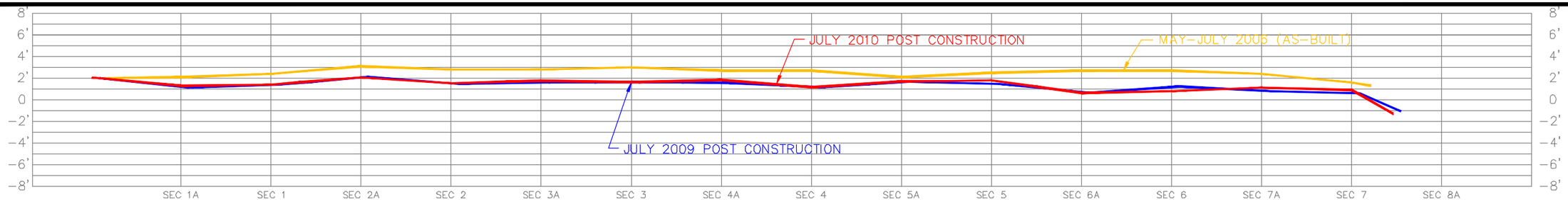
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

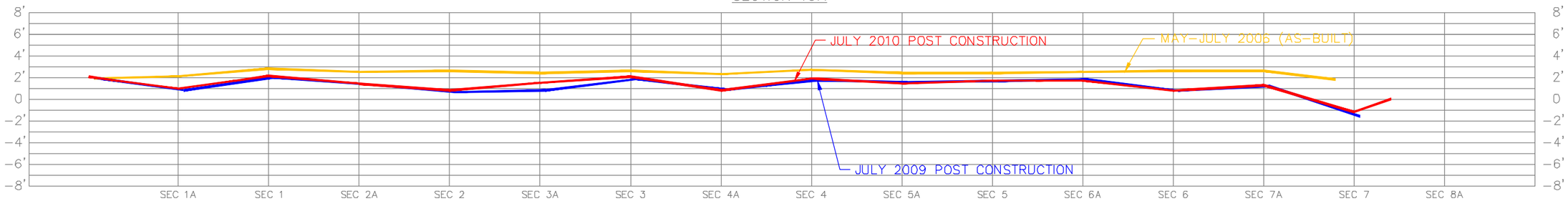
MARSH CROSS SECTIONS 9A–13
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	9
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 09 MARSH CROSS SECTION 9A–13A.DWG			

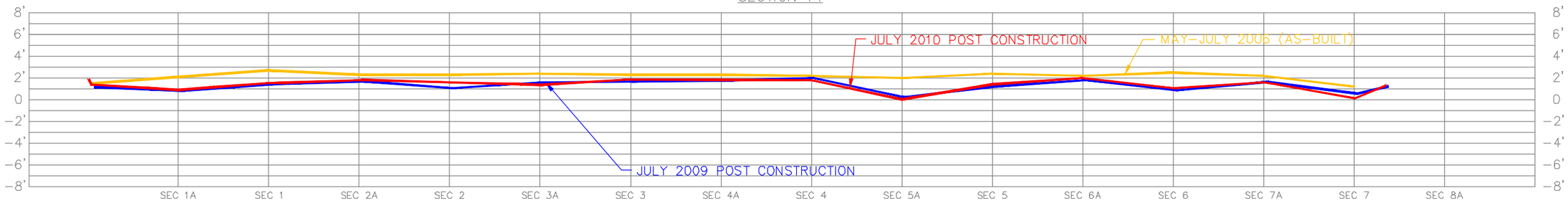
W:\dwg\10435-02 DNR\2010\09 MARSH CROSS SECTION 9A-13A.dwg PLOT DATE: 10/14/10 10:42:40am



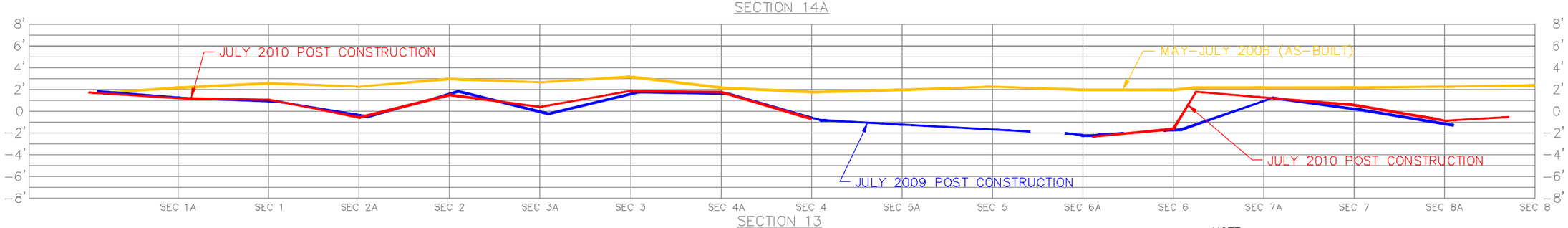
SECTION 15A



SECTION 14



SECTION 14A



SECTION 13

LEGEND

- MAY-JULY 2006 (AS-BUILT)
- JULY 2009 POST CONSTRUCTION
- JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA-SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA-37-SM-01 & BA 37-SM-02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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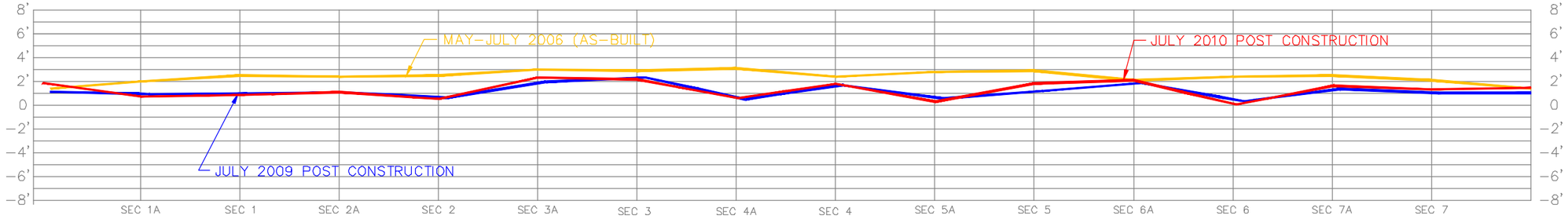
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

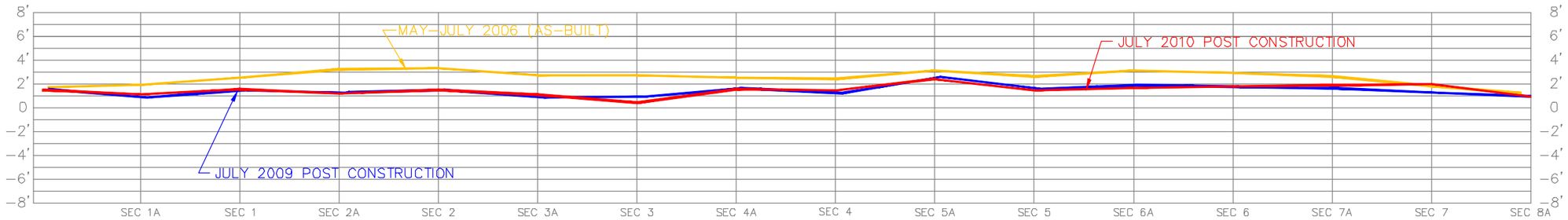
MARSH CROSS SECTIONS 13–15A
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	10
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 10 MARSH CROSS SECTION 13–15A.DWG			

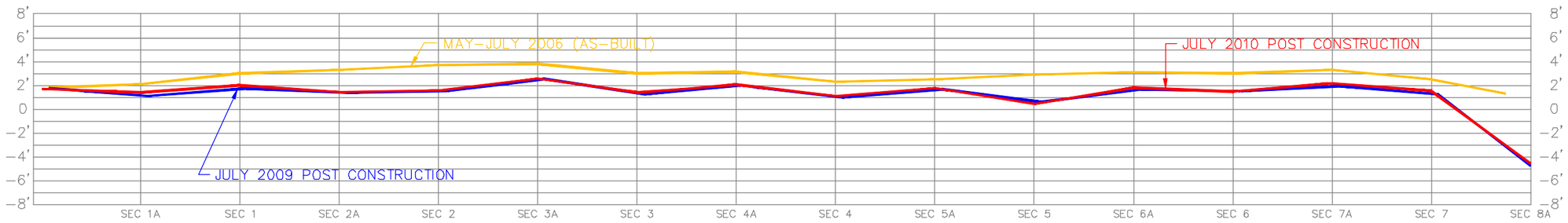
W:\dwg\10435-02 DNR\2010\10 MARSH CROSS SECTION 13-15A.dwg PLOT DATE: 10/14/10 10:42:50am



SECTION 16



SECTION 16A



SECTION 15

LEGEND
MAY-JULY 2006 (AS-BUILT)
JULY 2009 POST CONSTRUCTION
JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1-23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA-SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA-37-SM-01 & BA 37-SM-02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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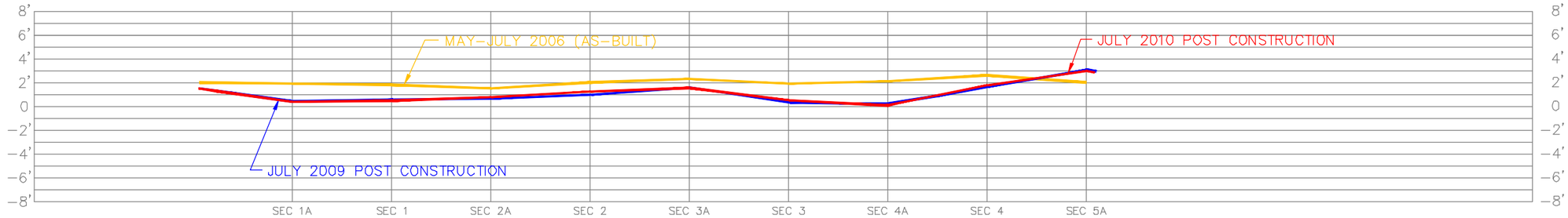
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

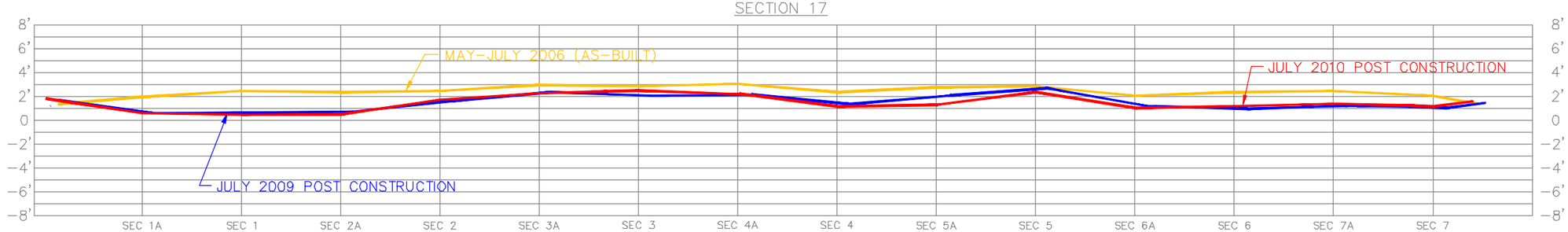
MARSH CROSS SECTIONS 15-16
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	11
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07-16-10
DATA BASE:	10435-02	JOB NO.	10435-02
MPH CAD FILE: 11 MARSH CROSS SECTION 15-16.DWG			

W:\dwg\10435-02 DNR\2010\11 MARSH CROSS SECTION 15-16.dwg PLOT DATE: 10/14/10 10:43:00am



SECTION 17



SECTION 17A

LEGEND
MAY-JULY 2006 (AS-BUILT)
JULY 2009 POST CONSTRUCTION
JULY 2010 POST CONSTRUCTION

HORIZONTAL GRAPHIC SCALE

0 300 600 1200 1800

0 5 10 20 30

VERTICAL GRAPHIC SCALE

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1-23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA-SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA-37-SM-01 & BA 37-SM-02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

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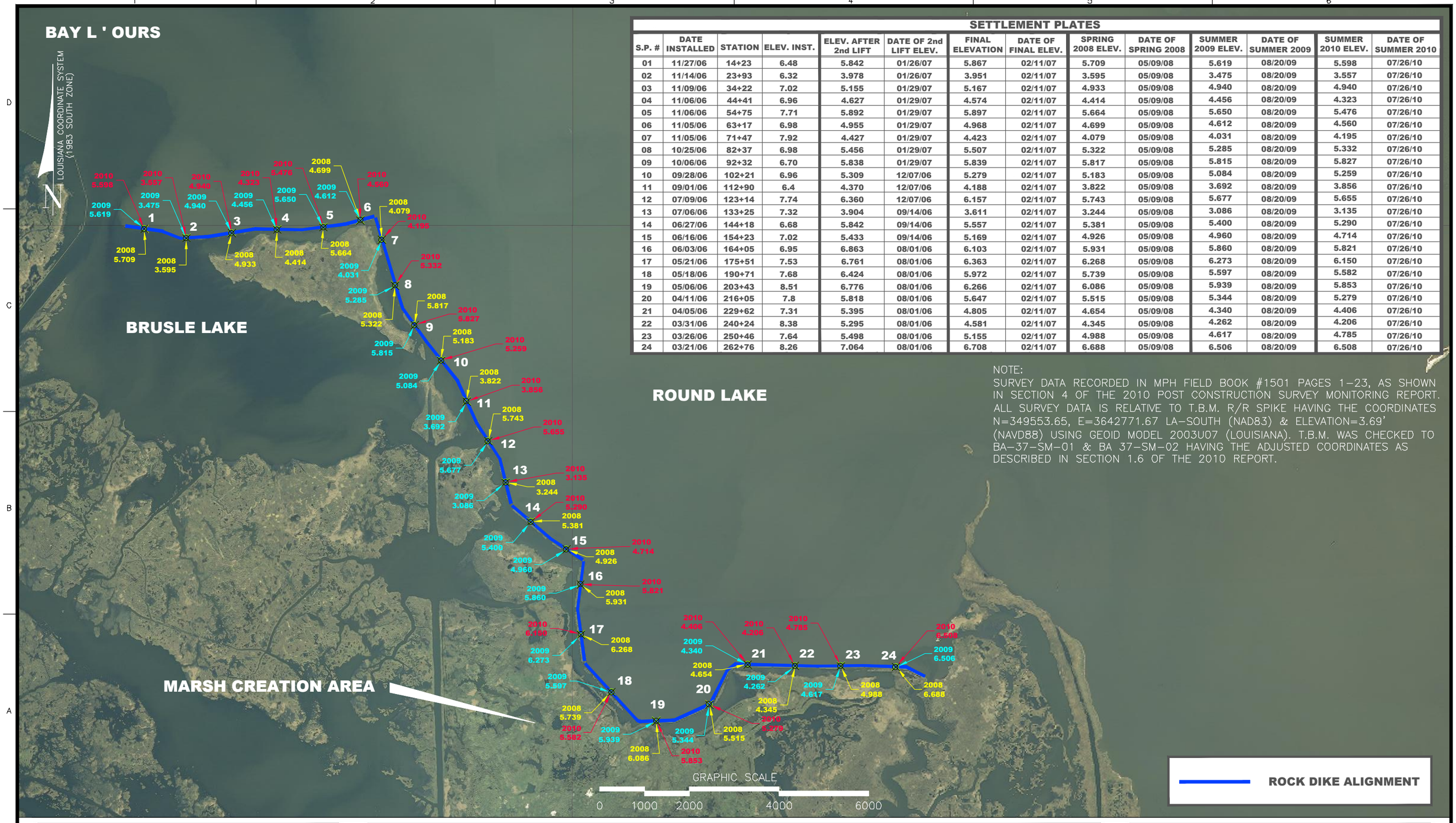
OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUISIANA

MARSH CROSS SECTIONS 17A-17
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST-CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	12
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07-16-10
DATA BASE:	10435-02	JOB NO.	10435-02
MPH CAD FILE: 12 MARSH CROSS SECTION 17A-17.DWG			

W:\dwg\10435-02 DNR\2010\12 MARSH CROSS SECTION 17A-17.dwg PLOT DATE: 10/14/10 10:43:10am



SETTLEMENT PLATES

S.P. #	DATE INSTALLED	STATION	ELEV. INST.	ELEV. AFTER 2nd LIFT	DATE OF 2nd LIFT ELEV.	FINAL ELEVATION	DATE OF FINAL ELEV.	SPRING 2008 ELEV.	DATE OF SPRING 2008	SUMMER 2009 ELEV.	DATE OF SUMMER 2009	SUMMER 2010 ELEV.	DATE OF SUMMER 2010
01	11/27/06	14+23	6.48	5.842	01/26/07	5.867	02/11/07	5.709	05/09/08	5.619	08/20/09	5.598	07/26/10
02	11/14/06	23+93	6.32	3.978	01/26/07	3.951	02/11/07	3.595	05/09/08	3.475	08/20/09	3.557	07/26/10
03	11/09/06	34+22	7.02	5.155	01/29/07	5.167	02/11/07	4.933	05/09/08	4.940	08/20/09	4.940	07/26/10
04	11/06/06	44+41	6.96	4.627	01/29/07	4.574	02/11/07	4.414	05/09/08	4.456	08/20/09	4.323	07/26/10
05	11/06/06	54+75	7.71	5.892	01/29/07	5.897	02/11/07	5.664	05/09/08	5.650	08/20/09	5.476	07/26/10
06	11/05/06	63+17	6.98	4.955	01/29/07	4.968	02/11/07	4.699	05/09/08	4.612	08/20/09	4.560	07/26/10
07	11/05/06	71+47	7.92	4.427	01/29/07	4.423	02/11/07	4.079	05/09/08	4.031	08/20/09	4.195	07/26/10
08	10/25/06	82+37	6.98	5.456	01/29/07	5.507	02/11/07	5.322	05/09/08	5.285	08/20/09	5.332	07/26/10
09	10/06/06	92+32	6.70	5.838	01/29/07	5.839	02/11/07	5.817	05/09/08	5.815	08/20/09	5.827	07/26/10
10	09/28/06	102+21	6.96	5.309	12/07/06	5.279	02/11/07	5.183	05/09/08	5.084	08/20/09	5.259	07/26/10
11	09/01/06	112+90	6.4	4.370	12/07/06	4.188	02/11/07	3.822	05/09/08	3.692	08/20/09	3.856	07/26/10
12	07/09/06	123+14	7.74	6.360	12/07/06	6.157	02/11/07	5.743	05/09/08	5.677	08/20/09	5.655	07/26/10
13	07/06/06	133+25	7.32	3.904	09/14/06	3.611	02/11/07	3.244	05/09/08	3.086	08/20/09	3.135	07/26/10
14	06/27/06	144+18	6.68	5.842	09/14/06	5.557	02/11/07	5.381	05/09/08	5.400	08/20/09	5.290	07/26/10
15	06/16/06	154+23	7.02	5.433	09/14/06	5.169	02/11/07	4.926	05/09/08	4.960	08/20/09	4.714	07/26/10
16	06/03/06	164+05	6.95	6.863	08/01/06	6.103	02/11/07	5.931	05/09/08	5.860	08/20/09	5.821	07/26/10
17	05/21/06	175+51	7.53	6.761	08/01/06	6.363	02/11/07	6.268	05/09/08	6.273	08/20/09	6.150	07/26/10
18	05/18/06	190+71	7.68	6.424	08/01/06	5.972	02/11/07	5.739	05/09/08	5.597	08/20/09	5.582	07/26/10
19	05/06/06	203+43	8.51	6.776	08/01/06	6.266	02/11/07	6.086	05/09/08	5.939	08/20/09	5.853	07/26/10
20	04/11/06	216+05	7.8	5.818	08/01/06	5.647	02/11/07	5.515	05/09/08	5.344	08/20/09	5.279	07/26/10
21	04/05/06	229+62	7.31	5.395	08/01/06	4.805	02/11/07	4.654	05/09/08	4.340	08/20/09	4.406	07/26/10
22	03/31/06	240+24	8.38	5.295	08/01/06	4.581	02/11/07	4.345	05/09/08	4.262	08/20/09	4.206	07/26/10
23	03/26/06	250+46	7.64	5.498	08/01/06	5.155	02/11/07	4.988	05/09/08	4.617	08/20/09	4.785	07/26/10
24	03/21/06	262+76	8.26	7.064	08/01/06	6.708	02/11/07	6.688	05/09/08	6.506	08/20/09	6.508	07/26/10

NOTE:
SURVEY DATA RECORDED IN MPH FIELD BOOK #1501 PAGES 1–23, AS SHOWN IN SECTION 4 OF THE 2010 POST CONSTRUCTION SURVEY MONITORING REPORT. ALL SURVEY DATA IS RELATIVE TO T.B.M. R/R SPIKE HAVING THE COORDINATES N=349553.65, E=3642771.67 LA–SOUTH (NAD83) & ELEVATION=3.69' (NAVD88) USING GEOID MODEL 2003U07 (LOUISIANA). T.B.M. WAS CHECKED TO BA–37–SM–01 & BA 37–SM–02 HAVING THE ADJUSTED COORDINATES AS DESCRIBED IN SECTION 1.6 OF THE 2010 REPORT.

Morris P. Hebert, Inc.
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OFFICE OF COASTAL PROTECTION & RESTORATION AUTHORITY OF LOUSIANA

SETTLEMENT PLATE ELEVATION SURVEY
LITTLE LAKE SHORELINE PROTECTION & MARSH CREATION
SUMMER 2010 POST–CONSTRUCTION MONITORING REPORT
LOCATED IN LAFOURCHE PARISH, LOUISIANA

DRAWN BY:	GJP	SHEET:	13
CHKD./APPD. BY:	GML	SCALE:	AS SHOWN
UPDATED BY:		DATE:	07–16–10
DATA BASE:	10435–02	JOB NO.	10435–02
MPH CAD FILE: 13 SETTLEMENT PLATE ELEV SURVEY.DWG			

W:\dwg\10435-02 DNR\2010\13 Settlement Plate Elev Survey.dwg PLOT DATE: 10/20/10 9:32:22am

SECTION 3
2010 Survey Point Data

The point data was compiled into an ASCII formatted point list and includes the following surveys:

3.1 Average Marsh Area Grid Survey Elevations (points 8052-8071, 8100-8119, 8150-8169, 8242-8261, 8266-8285, 8301-8320)

3.2 Marsh Grid Survey Elevations (points 8039-8051, 8072-8099, 8120-8149, 8170-8241, 8262-8265, 8286-8300, 8321-8368)

3.3 Settlement Plate Elevations (points 8012-8035)

3.4 Control Points (points 8000-8008)

The 2010 survey point data list includes the point number, x-coordinate, y-coordinate, elevation and description. The point data is referenced to the Louisiana State Plane Coordinate System, South Zone, U.S. Survey Feet, using Geoid03LA. The horizontal datum is North American Datum of 1983 (NAD83) and the vertical datum is North American Vertical Datum of 1988 (NAVD88). The survey point data includes the following list of points ranging from 8000 - 8368:

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8000	3638772.80	363981.27	2.54	sm01 (GULFNet)
8001	3638772.79	363981.44	2.55	sm01 (GULFNet)
8002	3638772.91	363981.53	2.51	sm01 (GULFNet)
8003	3642771.64	349553.61	3.00	R/R spike (GULFNet)
8004	3642771.69	349553.69	2.90	R/R spike (GULFNet)
8005	3642771.66	349553.64	2.90	R/R spike (GULFNet)
8006	3655746.02	350270.14	2.44	sm02 (GULFNet)
8007	3655746.00	350270.14	2.44	sm02 (GULFNet)
8008	3655746.00	350270.10	2.37	sm02 (GULFNet)
8010	3655746.00	350270.02	3.04	qc SM02 on 2010-07-26
8011	3638772.82	363981.39	3.07	qc SM01 on 2010-07-26
8012	3652776.43	355588.09	6.51	plate 01
8013	3651548.19	355610.41	4.79	plate 02
8014	3650529.70	355615.82	4.21	plate 03
8015	3649474.29	355639.48	4.41	plate 04
8016	3648618.66	354751.60	5.28	plate 21
8017	3647436.22	354383.12	5.85	plate 24
8018	3646434.63	355029.05	5.58	plate 23
8019	3645754.04	356311.19	6.15	plate 22
8020	3645746.31	357429.14	5.82	plate 18
8021	3645429.40	358211.25	4.71	plate 17
8022	3644635.82	358822.33	5.29	plate 20
8023	3644077.70	359701.39	3.14	plate 19
8024	3643684.88	360625.48	5.66	plate 08
8025	3643206.05	361506.51	3.86	plate 10
8026	3642638.38	362418.89	5.26	plate 09
8027	3642045.89	363206.79	5.83	plate 07
8028	3641610.29	364094.66	5.33	plate 06
8029	3641311.67	365116.04	4.20	plate 05
8030	3640837.93	365545.10	4.56	plate 11
8031	3640011.73	365389.73	5.48	plate 12
8032	3638980.29	365336.30	4.32	plate 13
8033	3637966.39	365262.51	4.94	plate 14
8034	3636952.57	365148.88	3.56	plate 15
8035	3636018.08	365351.61	5.60	plate 16
8036	3638772.92	363981.26	2.99	qc SM01 on 2010-07-26
8037	3638772.91	363981.30	3.00	qc SM01 on 2010-07-29
8038	3655746.13	350270.04	3.15	qc SM02 on 2010-07-29
8039	3652640.47	355068.72	1.26	grid point
8040	3652359.09	354923.83	0.07	grid point
8041	3652146.69	354793.76	0.97	grid point
8042	3652139.12	354923.15	1.07	grid point
8043	3652125.39	355424.59	-1.20	grid point
8044	3651627.38	355358.41	-0.65	grid point
8045	3651636.55	354921.77	0.66	grid point
8046	3651646.38	354751.83	1.24	grid point
8047	3651143.49	354750.93	-0.38	grid point

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8048	3651137.73	354920.48	-1.25	grid point
8049	3651125.86	355401.75	2.11	grid point
8050	3650623.38	355420.10	0.11	grid point
8051	3650639.25	354918.98	1.97	grid point
8052	3650591.93	354970.68	1.16	avg grid area 6
8053	3650624.41	354969.77	1.77	avg grid area 6
8054	3650657.49	354969.52	0.89	avg grid area 6
8055	3650690.77	354969.53	0.59	avg grid area 6
8056	3650690.53	354944.48	0.70	avg grid area 6
8057	3650657.90	354944.77	1.70	avg grid area 6
8058	3650624.16	354944.60	1.82	avg grid area 6
8059	3650591.19	354945.05	1.74	avg grid area 6
8060	3650590.98	354919.93	1.21	avg grid area 6
8061	3650624.41	354919.70	1.61	avg grid area 6
8062	3650657.77	354919.72	1.51	avg grid area 6
8063	3650691.11	354919.89	0.89	avg grid area 6
8064	3650690.80	354894.89	1.35	avg grid area 6
8065	3650657.75	354894.76	1.43	avg grid area 6
8066	3650624.21	354894.95	0.82	avg grid area 6
8067	3650591.06	354894.90	1.15	avg grid area 6
8068	3650590.84	354869.72	1.23	avg grid area 6
8069	3650624.18	354870.00	1.02	avg grid area 6
8070	3650657.60	354869.88	1.25	avg grid area 6
8071	3650691.11	354869.80	1.44	avg grid area 6
8072	3650649.14	354525.86	-0.89	grid point
8073	3650750.42	351420.04	0.94	grid point
8074	3650754.84	351347.49	-2.42	grid point
8075	3650257.62	351174.78	2.29	grid point
8076	3650250.09	351419.78	1.47	grid point
8077	3650235.69	351922.16	0.91	grid point
8078	3650222.08	352426.63	-4.67	grid point
8079	3650155.68	354418.85	-0.84	grid point
8080	3650141.07	354917.50	2.24	grid point
8081	3650125.13	355419.23	1.50	grid point
8082	3649622.94	355418.50	1.55	grid point
8083	3649640.04	354917.87	1.50	grid point
8084	3649656.20	354416.39	0.58	grid point
8085	3649673.22	353918.15	0.14	grid point
8086	3649844.96	353917.96	1.32	grid point
8087	3649686.20	353416.44	-1.17	grid point
8088	3649703.89	352917.21	0.91	grid point
8089	3649933.27	352916.88	-1.27	grid point
8090	3649716.34	352417.67	1.53	grid point
8091	3649734.75	351919.21	1.98	grid point
8092	3649740.70	351418.26	1.35	grid point
8093	3649764.83	350917.64	1.20	grid point
8094	3649968.04	350917.31	1.62	grid point

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8095	3649776.65	350555.33	1.16	grid point
8096	3649278.24	350487.53	1.55	grid point
8097	3649279.35	350522.03	1.48	grid point
8098	3649266.75	350917.24	1.41	grid point
8099	3649255.73	351420.67	1.66	grid point
8100	3649200.21	351465.54	1.76	avg grid area 4
8101	3649233.35	351465.23	1.78	avg grid area 4
8102	3649266.32	351465.70	1.50	avg grid area 4
8103	3649299.70	351465.31	1.67	avg grid area 4
8104	3649299.66	351440.25	1.82	avg grid area 4
8105	3649265.99	351440.43	1.28	avg grid area 4
8106	3649233.39	351440.98	2.11	avg grid area 4
8107	3649199.88	351440.59	1.88	avg grid area 4
8108	3649200.39	351415.42	1.77	avg grid area 4
8109	3649232.85	351415.05	1.52	avg grid area 4
8110	3649266.17	351415.66	1.53	avg grid area 4
8111	3649299.70	351415.52	1.38	avg grid area 4
8112	3649299.29	351389.82	1.38	avg grid area 4
8113	3649266.39	351390.94	1.85	avg grid area 4
8114	3649233.73	351390.69	1.76	avg grid area 4
8115	3649199.50	351390.24	1.86	avg grid area 4
8116	3649200.27	351365.32	1.36	avg grid area 4
8117	3649232.88	351365.47	1.72	avg grid area 4
8118	3649266.52	351364.94	1.50	avg grid area 4
8119	3649299.72	351365.56	1.46	avg grid area 4
8120	3649236.17	351916.34	1.87	grid point
8121	3649223.48	352417.28	2.17	grid point
8122	3649204.10	352915.62	1.13	grid point
8123	3649186.20	353415.34	1.27	grid point
8124	3649170.66	353916.31	1.61	grid point
8125	3649154.86	354414.34	1.30	grid point
8126	3649142.09	354919.14	-0.90	grid point
8127	3655746.14	350270.06	3.12	qc SM02 on 2010-07-30
8128	3648651.44	354412.72	-1.62	grid point
8129	3648777.97	354413.56	1.83	grid point
8130	3648668.81	353913.99	1.07	grid point
8131	3648684.70	353415.52	0.79	grid point
8132	3648703.18	352914.27	0.81	grid point
8133	3648718.09	352404.96	1.50	grid point
8134	3648734.18	351914.54	1.78	grid point
8135	3648765.12	351413.69	0.06	grid point
8136	3648766.42	350913.68	1.23	grid point
8137	3648777.94	350502.74	1.49	grid point
8138	3648278.48	350478.72	1.77	grid point
8139	3648264.97	350913.89	1.05	grid point
8140	3648250.44	351415.90	2.11	grid point
8141	3648232.98	351914.05	1.66	grid point

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8142	3648217.63	352414.20	1.79	grid point
8143	3648201.75	352913.74	0.65	grid point
8144	3648184.23	353414.48	1.70	grid point
8145	3648171.17	353913.45	1.99	grid point
8146	3648151.74	354385.05	-2.38	grid point
8147	3647705.55	354087.34	0.84	grid point
8148	3647673.29	353910.60	1.44	grid point
8149	3647685.97	353412.62	1.70	grid point
8150	3647637.24	353463.23	1.47	avg grid area 5
8151	3647670.43	353463.14	1.53	avg grid area 5
8152	3647702.95	353463.21	1.69	avg grid area 5
8153	3647736.71	353463.20	1.31	avg grid area 5
8154	3647736.29	353437.94	1.31	avg grid area 5
8155	3647703.42	353437.71	1.78	avg grid area 5
8156	3647670.98	353437.82	1.46	avg grid area 5
8157	3647636.15	353438.42	1.33	avg grid area 5
8158	3647636.91	353412.51	1.29	avg grid area 5
8159	3647669.74	353413.31	1.46	avg grid area 5
8160	3647703.34	353412.40	1.41	avg grid area 5
8161	3647736.59	353413.09	1.39	avg grid area 5
8162	3647736.44	353388.54	1.24	avg grid area 5
8163	3647703.67	353387.70	1.39	avg grid area 5
8164	3647669.44	353387.92	1.64	avg grid area 5
8165	3647636.29	353388.23	1.76	avg grid area 5
8166	3647636.65	353363.32	1.13	avg grid area 5
8167	3647670.34	353362.87	1.56	avg grid area 5
8168	3647703.54	353363.12	1.33	avg grid area 5
8169	3647736.23	353362.32	1.24	avg grid area 5
8170	3647701.15	352913.48	1.80	grid point
8171	3647717.70	352413.63	0.44	grid point
8172	3647731.50	351911.72	1.46	grid point
8173	3647750.99	351413.26	1.83	grid point
8174	3647765.32	350912.54	2.39	grid point
8175	3647780.17	350445.64	1.37	grid point
8176	3647280.50	350409.24	2.98	grid point
8177	3647265.46	350903.06	1.33	grid point
8178	3647250.96	351412.68	0.31	grid point
8179	3647232.80	351910.70	2.40	grid point
8180	3647219.55	352412.76	1.78	grid point
8181	3647201.94	352911.41	1.70	grid point
8182	3647185.77	353412.92	1.46	grid point
8183	3647167.48	353911.37	0.03	grid point
8184	3647157.96	354321.05	2.40	grid point
8185	3646458.61	354909.83	0.67	grid point
8186	3646653.84	354408.54	-0.67	grid point
8187	3646668.50	353909.98	1.79	grid point
8188	3646689.11	353410.56	1.90	grid point

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8189	3646701.76	352909.96	1.16	grid point
8190	3646717.34	352412.49	1.11	grid point
8191	3646733.23	351911.36	1.45	grid point
8192	3646750.81	351412.73	1.82	grid point
8193	3646763.92	350910.20	1.19	grid point
8194	3646778.91	350409.44	1.79	grid point
8195	3646279.51	350410.88	0.08	grid point
8196	3646264.58	350899.60	2.27	grid point
8197	3646252.98	351407.69	0.61	grid point
8198	3646233.40	351909.04	1.55	grid point
8199	3646216.37	352410.52	2.07	grid point
8200	3646201.88	352909.41	1.85	grid point
8201	3646186.56	353408.66	0.81	grid point
8202	3646167.72	353908.84	1.83	grid point
8203	3646155.00	354408.07	1.81	grid point
8204	3646139.29	354909.25	0.97	grid point
8205	3646025.21	355408.37	0.42	grid point
8206	3645591.33	356403.76	-1.44	grid point
8207	3645611.86	355905.25	-1.69	grid point
8208	3645622.99	355407.44	2.13	grid point
8209	3645638.96	354908.55	1.92	grid point
8210	3645652.25	354403.17	1.89	grid point
8211	3645669.82	353915.48	1.87	grid point
8212	3645685.33	353407.42	2.08	grid point
8213	3645701.96	352907.21	1.64	grid point
8214	3645717.68	352407.45	1.39	grid point
8215	3645732.74	351907.67	0.41	grid point
8216	3645751.04	351409.72	2.19	grid point
8217	3645764.78	350907.87	2.53	grid point
8218	3645781.00	350408.66	0.51	grid point
8219	3645279.64	350406.06	1.53	grid point
8220	3645263.21	350908.57	2.30	grid point
8221	3645250.47	351408.76	2.33	grid point
8222	3645234.14	351905.46	1.08	grid point
8223	3645217.53	352408.21	2.58	grid point
8224	3645200.89	352906.34	1.77	grid point
8225	3645185.14	353406.46	1.51	grid point
8226	3645169.13	353907.32	1.37	grid point
8227	3645151.16	354405.99	0.41	grid point
8228	3645137.38	354907.31	1.85	grid point
8229	3645122.41	355406.00	2.27	grid point
8230	3645106.91	355906.78	1.88	grid point
8231	3645091.46	356406.87	1.63	grid point
8232	3645068.86	357126.00	1.32	grid point
8233	3655746.07	350270.10	3.14	qc SM02 on 2010-08-02
8234	3644785.63	350218.34	2.31	grid point
8235	3644778.98	350405.69	1.24	grid point

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8236	3644762.59	350906.35	1.76	grid point
8237	3644749.08	351406.40	0.54	grid point
8238	3644733.04	351905.16	1.48	grid point
8239	3644715.62	352406.87	1.57	grid point
8240	3644702.03	352907.90	1.53	grid point
8241	3644684.01	353404.99	0.81	grid point
8242	3644634.28	353455.39	0.82	avg grid area 2
8243	3644669.33	353456.50	0.86	avg grid area 2
8244	3644702.43	353457.10	0.79	avg grid area 2
8245	3644735.51	353455.99	0.71	avg grid area 2
8246	3644735.34	353431.07	0.70	avg grid area 2
8247	3644702.39	353431.80	0.75	avg grid area 2
8248	3644669.17	353431.39	0.89	avg grid area 2
8249	3644635.38	353431.39	0.97	avg grid area 2
8250	3644635.41	353405.97	1.59	avg grid area 2
8251	3644669.40	353405.25	0.72	avg grid area 2
8252	3644702.00	353405.75	0.71	avg grid area 2
8253	3644734.78	353404.65	0.72	avg grid area 2
8254	3644735.56	353380.42	0.71	avg grid area 2
8255	3644701.85	353381.26	2.01	avg grid area 2
8256	3644668.67	353381.60	1.33	avg grid area 2
8257	3644635.58	353381.06	1.53	avg grid area 2
8258	3644636.85	353356.06	1.61	avg grid area 2
8259	3644668.62	353356.33	1.52	avg grid area 2
8260	3644702.65	353355.70	2.50	avg grid area 2
8261	3644735.65	353355.91	0.61	avg grid area 2
8262	3644667.61	353905.14	1.60	grid point
8263	3644654.43	354400.91	1.51	grid point
8264	3644637.99	354905.80	2.12	grid point
8265	3644622.64	355405.46	2.18	grid point
8266	3644573.75	355454.97	1.63	avg grid area 1
8267	3644606.29	355455.78	1.58	avg grid area 1
8268	3644639.49	355455.62	1.86	avg grid area 1
8269	3644672.58	355455.57	1.77	avg grid area 1
8270	3644673.35	355431.08	1.85	avg grid area 1
8271	3644638.91	355430.90	1.82	avg grid area 1
8272	3644606.21	355431.77	1.75	avg grid area 1
8273	3644573.56	355431.20	1.43	avg grid area 1
8274	3644573.16	355405.66	1.78	avg grid area 1
8275	3644606.69	355406.86	1.93	avg grid area 1
8276	3644639.41	355405.50	1.90	avg grid area 1
8277	3644672.89	355404.96	1.83	avg grid area 1
8278	3644672.76	355380.60	2.36	avg grid area 1
8279	3644638.55	355380.66	1.86	avg grid area 1
8280	3644606.55	355379.77	1.66	avg grid area 1
8281	3644573.48	355380.37	1.38	avg grid area 1
8282	3644573.23	355355.34	1.70	avg grid area 1

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8283	3644606.02	355355.13	1.96	avg grid area 1
8284	3644639.76	355356.41	2.23	avg grid area 1
8285	3644672.76	355355.37	1.88	avg grid area 1
8286	3644605.81	355903.64	1.48	grid point
8287	3644590.70	356406.07	0.76	grid point
8288	3644573.96	356960.70	1.12	grid point
8289	3644075.38	356901.38	1.02	grid point
8290	3644092.01	356404.71	1.53	grid point
8291	3644107.68	355904.42	1.83	grid point
8292	3644122.73	355403.62	1.58	grid point
8293	3644137.98	354903.31	-0.07	grid point
8294	3644154.12	354405.74	-0.55	grid point
8295	3644179.21	353902.55	1.82	grid point
8296	3644185.21	353403.48	1.43	grid point
8297	3644199.22	352906.13	2.07	grid point
8298	3644217.04	352406.02	1.44	grid point
8299	3644231.92	351905.16	1.19	grid point
8300	3644250.01	351404.14	1.11	grid point
8301	3644196.75	351455.02	0.97	avg grid area 3
8302	3644230.58	351454.66	1.08	avg grid area 3
8303	3644264.60	351455.55	1.17	avg grid area 3
8304	3644297.37	351454.67	1.24	avg grid area 3
8305	3644297.57	351430.21	1.20	avg grid area 3
8306	3644265.11	351430.17	0.98	avg grid area 3
8307	3644230.37	351430.96	1.04	avg grid area 3
8308	3644198.12	351430.73	1.12	avg grid area 3
8309	3644197.07	351405.27	1.11	avg grid area 3
8310	3644231.65	351405.58	1.11	avg grid area 3
8311	3644265.18	351405.22	1.16	avg grid area 3
8312	3644297.53	351404.55	1.04	avg grid area 3
8313	3644298.30	351379.41	0.90	avg grid area 3
8314	3644263.63	351380.13	1.04	avg grid area 3
8315	3644230.74	351380.52	1.06	avg grid area 3
8316	3644198.46	351379.67	0.89	avg grid area 3
8317	3644198.00	351354.20	0.85	avg grid area 3
8318	3644231.67	351355.37	1.18	avg grid area 3
8319	3644264.50	351355.75	0.96	avg grid area 3
8320	3644297.49	351355.38	0.98	avg grid area 3
8321	3644264.25	350904.71	0.51	grid point
8322	3644280.21	350405.89	0.77	grid point
8323	3644286.79	350179.51	3.15	grid point
8324	3643788.67	350145.08	0.49	grid point
8325	3643781.50	350403.95	0.47	grid point
8326	3643763.34	350902.90	0.48	grid point
8327	3643746.95	351404.17	0.87	grid point
8328	3643733.24	351904.13	1.54	grid point
8329	3643716.02	352404.27	1.99	grid point

2010 SURVEY POINT DATA

POINT	EASTING (X)	NORTHING (Y)	ELEVATION	DESCRIPTION
8330	3643700.44	352903.04	1.42	grid point
8331	3643683.11	353403.05	2.14	grid point
8332	3643669.73	353903.98	1.54	grid point
8333	3643654.82	354402.41	1.10	grid point
8334	3643637.17	354903.78	1.35	grid point
8335	3643621.63	355404.75	1.72	grid point
8336	3643606.47	355905.59	1.86	grid point
8337	3643590.41	356405.53	0.42	grid point
8338	3643576.22	356902.56	1.27	grid point
8339	3643071.48	357060.23	0.21	grid point
8340	3643091.15	356401.18	1.17	grid point
8341	3643106.58	355902.50	0.55	grid point
8342	3643121.66	355401.44	1.79	grid point
8343	3643137.70	354901.81	1.53	grid point
8344	3643153.79	354402.62	1.22	grid point
8345	3643169.38	353902.20	0.91	grid point
8346	3643183.91	353403.53	0.97	grid point
8347	3643201.24	352902.23	1.29	grid point
8348	3643215.31	352402.91	1.39	grid point
8349	3643232.46	351901.34	1.11	grid point
8350	3643247.20	351402.04	0.74	grid point
8351	3643264.63	350902.26	0.61	grid point
8352	3643277.78	350403.67	0.37	grid point
8353	3643295.87	350115.10	-2.32	grid point
8354	3642821.05	350068.59	2.10	grid point
8355	3642808.60	350406.30	1.50	grid point
8356	3642778.44	350901.67	1.85	grid point
8357	3642753.73	351401.48	1.88	grid point
8358	3642737.26	351900.65	1.48	grid point
8359	3642720.85	352400.24	1.72	grid point
8360	3642704.88	352900.20	2.07	grid point
8361	3642687.81	353400.97	2.07	grid point
8362	3642687.53	353902.07	1.39	grid point
8363	3642659.26	354403.30	1.75	grid point
8364	3642641.91	354902.30	1.04	grid point
8365	3642627.63	355404.68	0.93	grid point
8366	3642611.78	355903.64	0.05	grid point
8367	3642596.40	356400.09	-0.04	grid point
8368	3642574.66	357054.72	-0.79	grid point

SECTION 4
2010 Survey Field Notes

The survey was documented and recorded in MPH Field Book 1501, Pages 1-23. Copies of the field notes are attached as follows:

Job# 10,435-02

LADNR
Little Lake Marsh Creation
Recover BM's for Grid
Survey in Little Lake Area
using
Gulf Net 2 meter Antenna

GEOID 03 LA

Pt. # Description

8000 - BA - 37 - SM01
N=363981.27 E=3638772.80 Elev.=2.54
8001 - BA - 37 - SM01
N=363981.44 E=3638772.79 Elev.=2.55
8002 - BA - 37 - SM01
N=363981.53 E=3638772.91 Elev.=2.53

AVG. N=363981.42 E=3638772.83 Elev.=2.53

2002 DATA SHEET N=363981.44 E=3638772.80 Elev. 2.98

1501 -

720-1011

A. Beal
C. Hortwell

Found BA-37-SM01

No longer in Marsh
Aprox. 13' From Bank
Mon. is 1.0' Above
WATer

Job# 10,435-02

LA DNR Control

GULF NET

Pt. # Description

8003 - Rail Road Spike

N= 349553.61 E=3642771.64 Elev.= 3.00

8004 - Rail Road Spike

N= 349553.69 E=3642771.69 Elev. 2.90

8005 - Rail Road Spike

N= 349553.64 E=3642771.66 Elev. 2.90

Average R/R SPIKE

N= 349553.65 E=3642771.67 Elev = 2.93'

Adjusted to +3.69' (Add 0.76')

1501

7-20-10 2

A. Beal
C. Hartwell

Found Rail Road Spike
On top of Tree Stump

Job# 10,435-02

LA DNR Cont'd.

GULFNET

Pt. # Description

8006 - BA-37-SM02

N= 350270.14 E= 3655746.02 Elev. = 2.44

8007 - BA-37-SM02

N= 350270.14 E= 3655746.

8008 - BA-37-SM02

N= 350270.10 E= 3655746.00 Elev.= 2.37

AVG SM02

N= 350270.13 E= 3655746.01 Elev= 2.42

2002 DATA SHEET SM02

N= 350270.15 E= 3655746.23 Elev.= 3.38

1501

7-20-10 3

A. Beal
C. Hartwell

Found BA-37-SM02

IN Good Shape

Job# 10,435-02

LADNR Cont'd

Base π @ Pt. # 8009

8009 Keyed-In Rail Road Spike

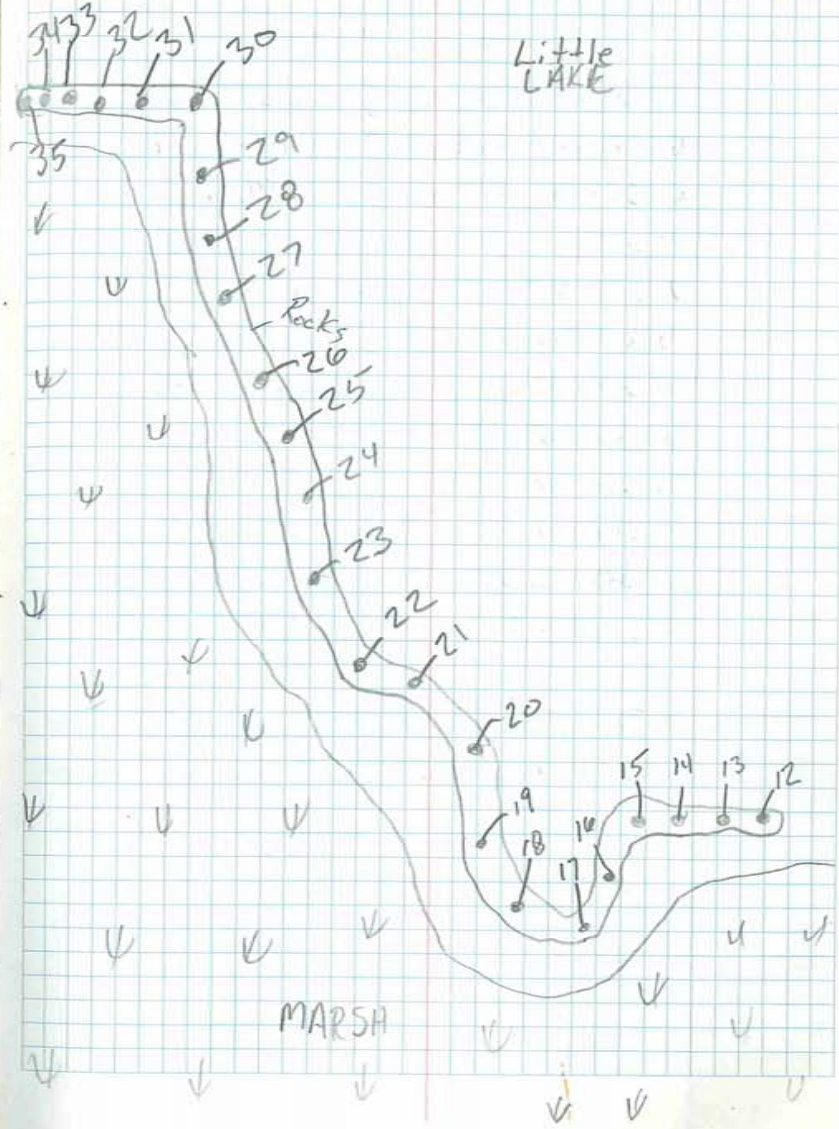
Ant. Ht. 4.921'

Pt#	Description	Pt#	Description
8010	Qc Check on 1001	8031	Plate 12
11	Qc Check on 1000	32	Plate 13
12	Plate 1	33	Plate 14
13	Plate 2	34	Plate 15
14	Plate 3	35	Plate 16
15	Plate 4	8036	Qc check on 1000
16	Plate 21	↳	N= 363981.26
17	plate 24		E=363 8772.92
18	Plate 23		Elev.= 2.99
19	Plate 22		QC on 5M01
20	Plate 18		
21	Plate 17		
22	Plate 20		
23	Plate 19		
24	Plate 8		
25	Plate 10		
26	Plate 9		
27	Plate 7		
28	Plate 6		
29	Plate 5		
8030	Plate 11		

1501

7-26-10 4

A. Bent
D. Boudreaux



Job# 10,435-02

LADNR Cont'd

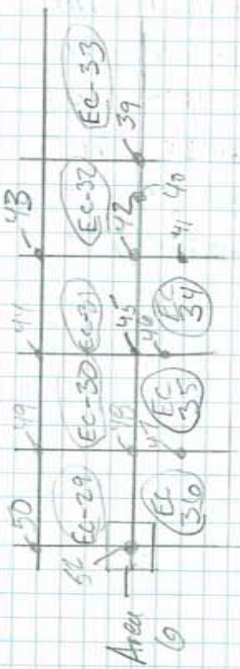
Base @ 8009 Ant. Ht 4.921'

Pt.#	Description
8039	N= 355068.716 E= 3652640.472
40	N= 354923.827 E= 3652359.093
41	N= 354793.763 E= 3652146.694
42	N= 354923.148 E= 3652139.115
43	N= 355424.594 E= 3652125.385
44	N= 355358.409 E= 3651627.377
45	N= 354921.771 E= 3651636.548
46	N= 354751.826 E= 3651646.381
47	N= 354750.927 E= 3651143.488
48	N= 354920.478 E= 3651137.734
49	N= 355401.750 E= 3651125.857
50	N= 355420.098 E= 3650623.377
80 51	N= 354918.977 E= 3650639.246
8037	N= 363981.30 E= 3638772.91 Elev= 3.00 QC SM01
8038	N= 350270.04 E= 3655746.13 Elev. = 3.15 QC SM02

1501

7-29-10 5

A. Beal
D. Boudreaux



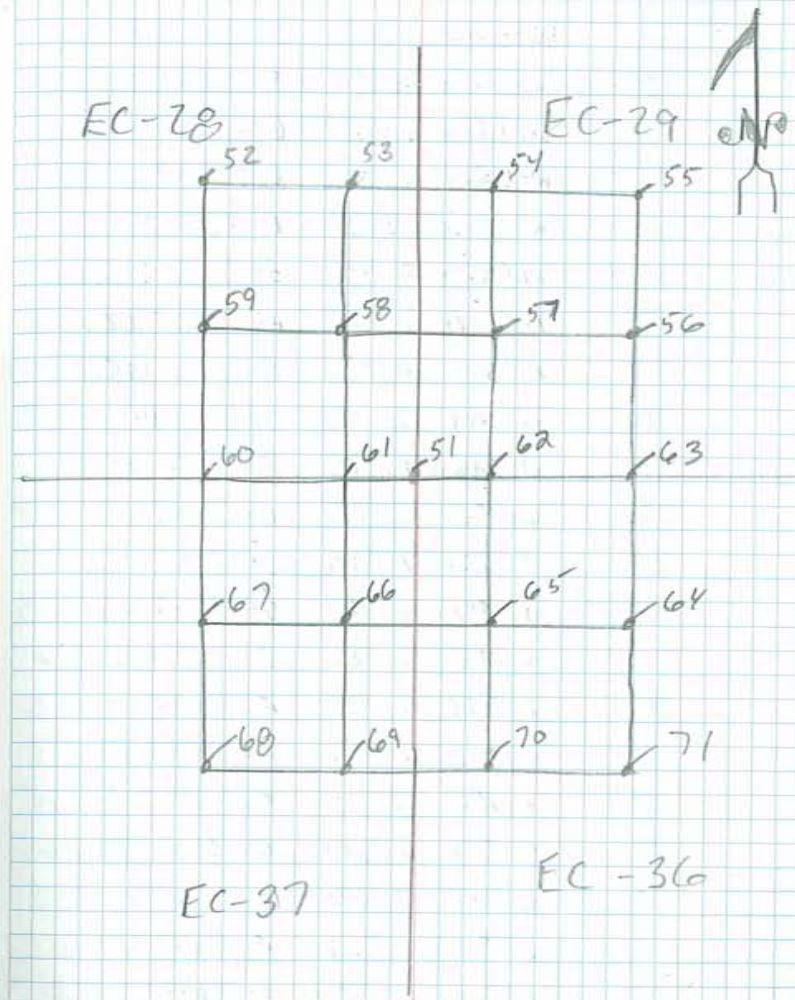
Job # 10,435-02 LADNR Cont'd

Pt. #	Description	
8052	N= 354970.683	E= 3650591.926
53	N= 354969.774	E= 3650624.414
54	N= 354969.515	E= 3650657.494
55	N= 354969.530	E= 3650690.770
56	N= 354944.478	E= 3650690.528
57	N= 354944.769	E= 3650657.895
58	N= 354944.599	E= 3650624.160
59	N= 354945.046	E= 3650591.188
60	N= 354919.928	E= 3650590.977
61	N= 354919.701	E= 3650624.408
62	N= 354919.721	E= 3650657.765
63	N= 354919.891	E= 3650691.109
64	N= 354894.894	E= 3650690.797
65	N= 354,894.760	E= 3650657.748
66	N= 354894.952	E= 3650624.213
67	N= 354894.896	E= 3650591.062
68	N= 354869.720	E= 3650590.840
69	N= 354869.996	E= 3650624.178
70	N= 354869.884	E= 3650657.596
8071	N= 354869.796	E= 3650691.106

1501

7-29-10 6

A. Beard
D. Boudreaux



JOB# 10,43502 LADNR Cont'd

Pt #	Description	
8072	N=354525.863	E=3650649.138
73	N=351420.039	E=3650750.423
74	N=351347.492	E=3650754.837
75	N=351174.778	E=3650257.619
76	N=351419.783	E=3650250.091
77	N=351922.159	E=3650235.689
78	N=352426.625	E=3650222.076
79	N=354418.851	E=3650155.680
80	N=354917.502	E=3650141.070
81	N=355419.228	E=3650125.129
82	N=355418.503	E=3649622.944
83	N=354917.869	E=3649640.037
84	N=354416.390	E=3649656.203
85	N=353918.148	E=3649673.216
86	N=353917.959	E=3649844.962
87	N=353416.442	E=3649686.195
88	N=352917.211	E=3649703.885
89	N=352916.877	E=3649933.265
90	N=352417.671	E=3649716.342
91	N=351919.209	E=3649734.753
92	N=351418.261	E=3649740.698
93	N=350917.642	E=3649764.830
94	N=350917.309	E=3649968.044
8095	N=350555.328	E=3649776.652

1501

7-29-80

A. Beal
D. Boudreaux

Job# 10,435-02 LADNR Cont'd

Pt. #	Description	
8096	N=350487.525	E=3649278.237
8097	N=350522.026	E=3649279.346
8098	N=350917.235	E=3649266.748
8099	N=351420.672	E=3649255.731

A. Beal
D. Boudreaux

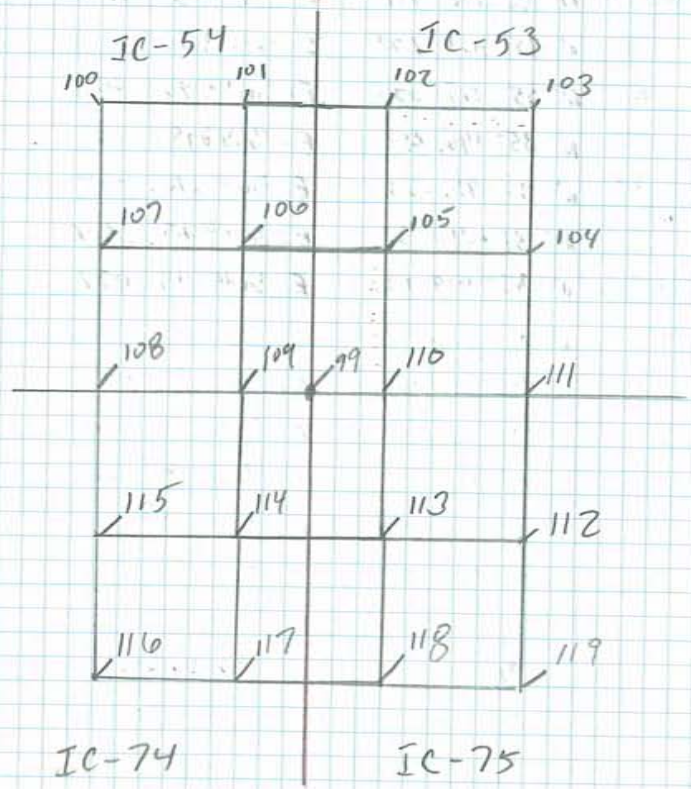
Job# 10,435-02 LADNR Cont'd

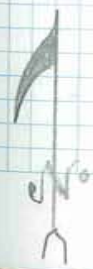
Pt#	Description	
8100	N= 351465.535	E= 3649200.212
101	N= 351465.234	E= 3649233.347
102	N= 351465.700	E= 3649266.321
103	N= 351465.306	E= 3649299.700
104	N= 351440.252	E= 3649299.656
105	N= 351440.430	E= 3649265.987
106	N= 351440.979	E= 3649233.390
107	N= 351440.591	E= 3649199.877
108	N= 351415.422	E= 3649200.386
109	N= 351415.049	E= 3649232.854
110	N= 351415.663	E= 3649266.167
111	N= 351415.523	E= 3649299.697
112	N= 351389.824	E= 3649299.286
113	N= 351390.942	E= 3649266.387
114	N= 351390.694	E= 3649233.732
115	N= 351390.239	E= 3649199.497
116	N= 351365.321	E= 3649200.272
117	N= 351365.473	E= 3649232.880
118	N= 351364.941	E= 3649266.523
8119	N= 351365.558	E= 3649299.720

1501

7-29-10 9

A. Beul
D. Boudreaux





Job# 10,435-02 LADNR Cont'd

Pt#	Description	
8120	N=351916.341	E=3649236.170
Z1	N=352417.279	E=3649223.482
Z2	N=352915.619	E=3649204.103
Z3	N=353415.344	E=3649186.199
Z4	N=353916.311	E=3649170.658
Z5	N=354414.341	E=3649154.864
8126	N=354919.140	E=3649142.092

1501

7-29-10 10

A. Beal
D. Bandreaux

Job# 10,435-02 LADNR

Base @ Pt# 8009

6.184' Ant. Ht.

Pt. #	Description		
8127	N=350 270.057	E=3655746.137	El.= 3.12 QC SM02
28	N=354 412.221	E=3648651.444	
29	N=354 413.563	E=3648777.965	
30	N=353 913.994	E=3648668.814	
31	N=353 415.519	E=3648684.697	
32	N=352 914.271	E=3648703.177	
33	N=352 404.955	E=3648718.089	
34	N=351 914.535	E=3648734.182	
35	N=351 413.692	E=3648765.124	
36	N=350 913.676	E=3648766.421	
37	N=350 502.735	E=3648777.936	
38	N=350 478.719	E=3648278.477	
39	N=350 913.891	E=3648264.968	
40	N=351 415.897	E=3648250.439	
41	N=351 914.053	E=3648232.976	
42	N=352 414.200	E=3648217.634	
43	N=352 913.735	E=3648201.752	
44	N=353 414.475	E=3648184.232	
45	N=353 913.445	E=3648171.173	
46	N=354 385.050	E=3648151.740	
47	N=354 087.346	E=3647705.550	
48	N=353 910.597	E=3647673.288	
8149	N=353 412.623	E=3647685.973	

1501

7-30-10 111

A. Beal
D. Dupre

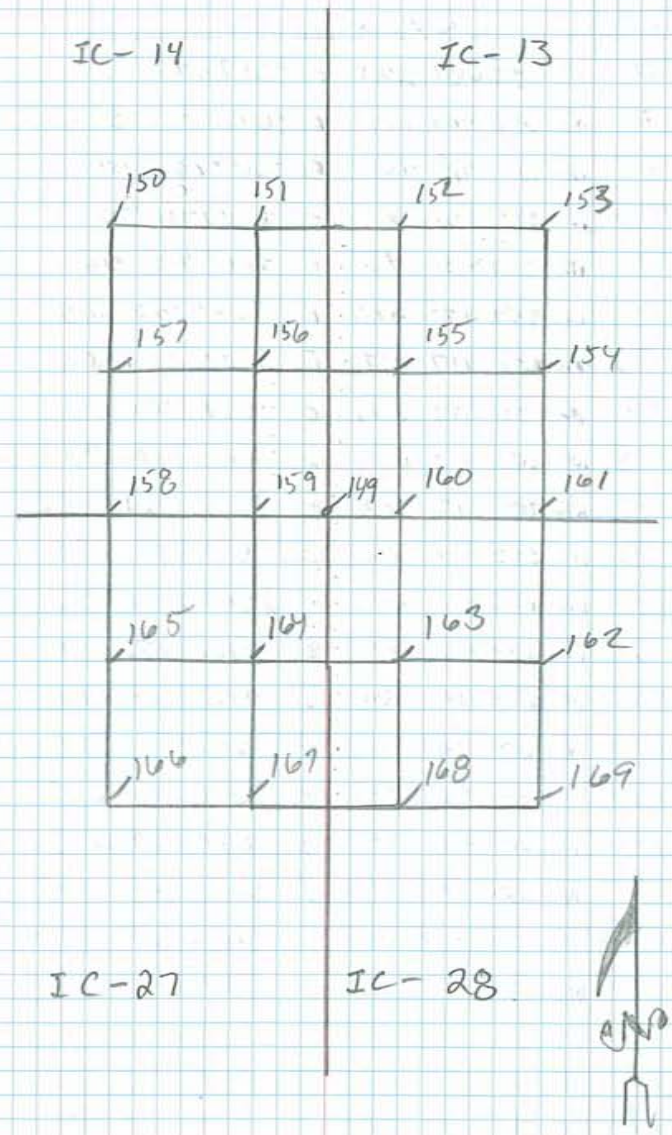
Job# 10,435-02 LADNR Cont'd

Pt#	Description	
8150	N= 353 463.231	E= 3647637.238
51	N= 353 463.140	E= 3647670.434
52	N= 353 463.205	E= 3647702.949
53	N= 353 463.196	E= 3647736.713
54	N= 353 437.935	E= 3647736.290
55	N= 353 437.713	E= 3647703.416
56	N= 353 437.817	E= 3647670.983
57	N= 353 438.416	E= 3647636.151
58	N= 353 412.513	E= 3647636.907
59	N= 353 413.309	E= 3647669.738
60	N= 353 412.403	E= 3647703.340
61	N= 353 413.090	E= 3647736.589
62	N= 353 388.535	E= 3647736.436
63	N= 353 387.920	E= 3647703.674
64	N= 353 387.920	E= 3647669.438
65	N= 353 388.226	E= 3647636.290
66	N= 353 363.321	E= 3647636.649
67	N= 353 362.866	E= 3647670.335
68	N= 353 363.121	E= 3647703.538
8169	N= 353 362.316	E= 3647736.228

1501

7-30-2012

A. Beal
D. Dupre



Job# 10,435-02 LADNR Cont'd

Pt. #	Description	
8170	N= 352913.480	E= 3647701.147
171	N= 352413.625	E= 3647717.703
172	N= 351911.716	E= 3647731.504
173	N= 351413.261	E= 3647750.988
174	N= 350912.543	E= 3647765.315
175	N= 350445.643	E= 3647780.165
176	N= 350409.236	E= 3647280.500
177	N= 350903.061	E= 3647265.457
178	N= 351412.682	E= 3647250.955
179	N= 351910.702	E= 3647232.802
180	N= 352412.760	E= 3647219.553
181	N= 352911.411	E= 3647201.936
182	N= 353412.917	E= 3647185.765
183	N= 353911.366	E= 3647167.480
184	N= 354321.053	E= 3647157.963
185	N= 354909.831	E= 3646458.605
186	N= 354408.544	E= 3646653.843
187	N= 353909.976	E= 3646668.502
188	N= 353410.560	E= 3646689.114
189	N= 352909.959	E= 3646701.764
190	N= 352412.486	E= 3646717.340
191	N= 351911.355	E= 3646733.230
192	N= 351412.725	E= 3646750.805
8193	N= 350910.204	E= 3646763.924

1501

7-30-10 13

A. Benl
D. Pupre

Job# 10,435-02 LADNR Cont'd

Pt#	Description	
8194	N= 350 409.444	E= 3646 778.908
95	N= 350 410.883	E= 3646 279.507
96	N= 350 899.595	E= 3646 264.578
97	N= 351 407.685	E= 3646 252.979
98	N= 351 909.039	E= 3646 233.401
99	N= 352 410.523	E= 3646 216.373
8200	N= 352 909.412	E= 3646 201.882
01	N= 353 408.660	E= 3646 186.556
02	N= 353 908.835	E= 3646 167.716
03	N= 354 408.065	E= 3646 155.000
04	N= 354 909.250	E= 3646 139.294
05	N= 355 408.367	E= 3646 025.207
06	N= 356 403.758	E= 3645 591.329
07	N= 355 905.251	E= 3645 611.862
08	N= 355 407.439	E= 3645 622.993
09	N= 354 908.551	E= 3645 638.959
10	N= 354 403.174	E= 3645 652.248
11	N= 353 915.483	E= 3645 669.815
12	N= 353 407.416	E= 3645 685.334
13	N= 352 907.206	E= 3645 701.963
14	N= 352 407.446	E= 3645 717.682
15	N= 351 907.674	E= 3645 732.743
16	N= 351 409.722	E= 3645 751.039
8217	N= 350 907.866	E= 3645 764.775

1501

7-30-10 14

A. Beal
D. Dupre

Job# 10,435-02 LADNR Cont'd

1501

7-30-10 15

A. Beal
D. Dupre

Pt #	Description	
8218	N= 350408.656	E= 3645781.004
19	N= 350406.056	E= 3645279.636
20	N= 350908.571	E= 3645263.208
21	N= 351408.764	E= 3645250.474
22	N= 351905.461	E= 3645234.139
23	N= 352408.207	E= 3645217.527
24	N= 352906.343	E= 3645200.885
25	N= 353406.463	E= 3645185.142
26	N= 353907.324	E= 3645169.129
27	N= 354405.987	E= 3645151.163
28	N= 354907.307	E= 3645137.384
29	N= 355406.003	E= 3645122.405
30	N= 355906.782	E= 3645106.908
31	N= 356406.870	E= 3645091.461
8232	N= 357125.995	E= 3645068.857

Job# 10,435-02 LADNR Cont'd

Base @ 8009

Ant. Ht. 6.184'

Pt#	Description
8233	N= 350270.096 E= 3655746.073 El=3.14 SM 02
34	N= 350218.342 E= 3644785.630
35	N= 350405.685 E= 3644778.977
36	N= 350906.353 E= 3644762.593
37	N= 351406.395 E= 3644749.080
38	N= 351905.162 E= 3644733.036
39	N= 352406.866 E= 3644715.623
40	N= 352907.902 E= 3644702.033
8241	N= 353404.988 E= 3644684.009

1501

8-2-10 16

A. Bond
JB. Ellender
D. Dupre

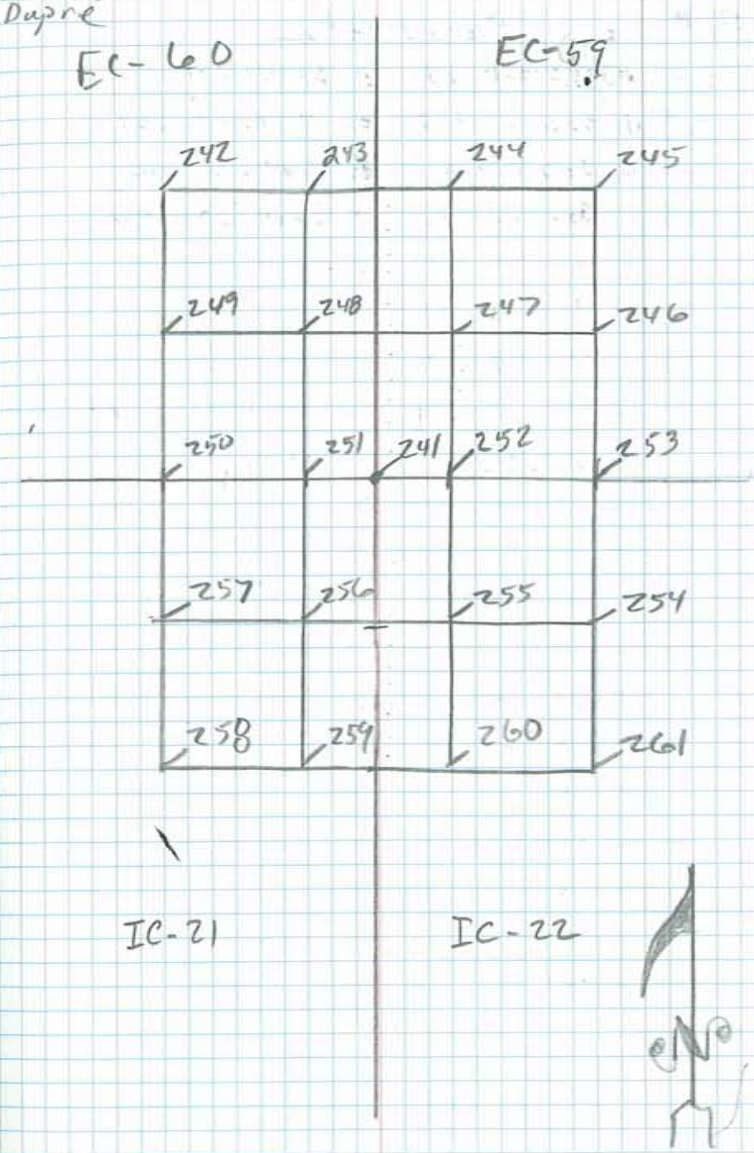
Job# 10,435-62 LADNR Cont'd

Pt.#	Description	
8242	N= 353 455.385	E= 3644634.277
43	N= 353 456.503	E= 3644669.329
44	N= 353 457.104	E= 3644702.425
45	N= 353 455.989	E= 3644735.506
46	N= 353 431.069	E= 3644735.344
47	N= 353 431.799	E= 3644702.385
48	N= 353 431.385	E= 3644669.174
49	N= 353 431.385	E= 3644635.378
50	N= 353 405.965	E= 3644635.413
51	N= 353 405.245	E= 3644669.402
52	N= 353 405.751	E= 3644702.001
53	N= 353 404.651	E= 3644734.779
54	N= 353 380.418	E= 3644735.559
55	N= 353 381.256	E= 3644701.849
56	N= 353 381.600	E= 3644668.665
57	N= 353 381.061	E= 3644635.584
58	N= 353 356.055	E= 3644636.846
59	N= 353 356.326	E= 3644668.619
60	N= 353 355.704	E= 3644702.647
8261	N= 353 355.909	E= 3644735.650

1501

8-2-10 17

A. Beal
B. Ellender
D. Dupre



Job# 10,435-02 LADNIR Cont'd

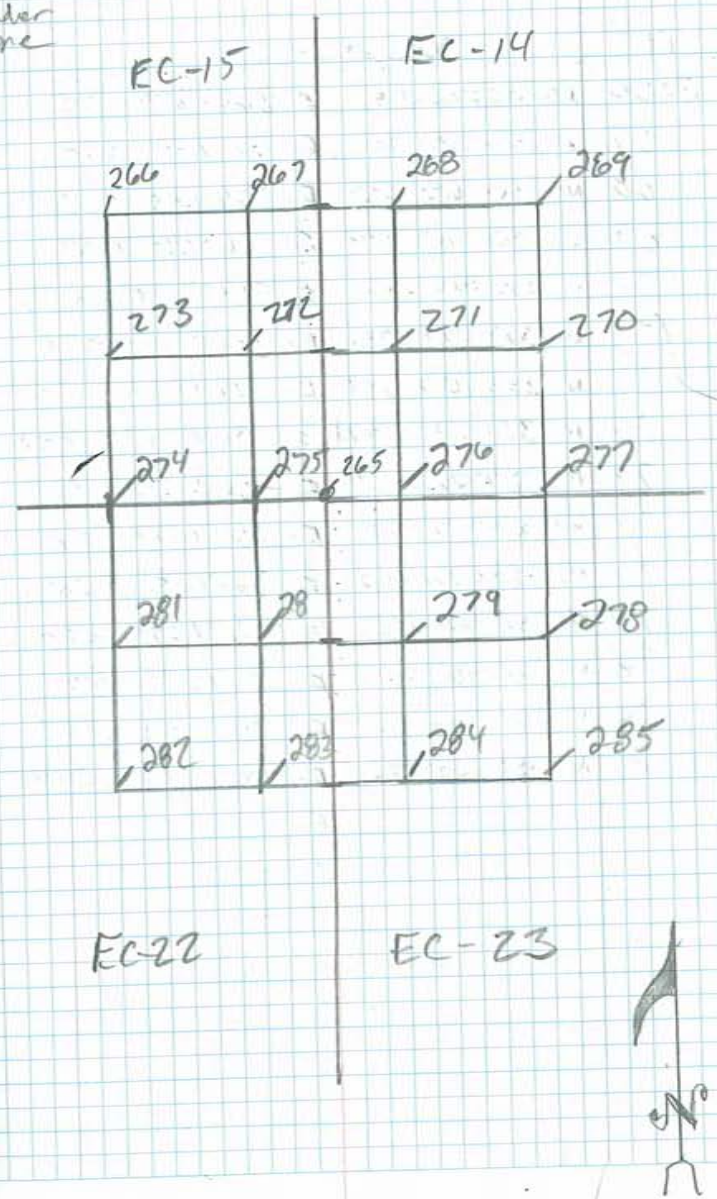
Pt. #	Description	
8262	N=353 905.141	E=3644667.613
63	N=354400.912	E=3644654.430
64	N=354905.802	E=3644637.992
65	N=355405.463	E=3644622.642

A. Ben
B. Ellender
D. Dupre

JOB# 10,435-02 LADNR Cont'd

Pt. #	Description	
8266	N= 355454.972	E= 3644573.754
67	N= 355455.781	E= 3644606.293
68	N= 355455.620	E= 3644639.492
69	N= 355455.572	E= 3644672.578
70	N= 355431.080	E= 3644673.352
71	N= 355430.900	E= 3644638.911
72	N= 355431.769	E= 3644606.213
73	N= 355431.196	E= 3644573.558
74	N= 355405.655	E= 3644573.160
75	N= 355406.858	E= 3644606.690
76	N= 355405.495	E= 3644639.409
77	N= 355404.958	E= 3644672.893
78	N= 355380.601	E= 3644672.758
79	N= 355380.663	E= 3644638.553
80	N= 355379.769	E= 3644606.548
81	N= 355380.372	E= 3644573.480
82	N= 355355.343	E= 3644573.227
83	N= 355355.126	E= 3644606.017
84	N= 355356.411	N= 3644639.756
8285	N= 355355.372	N= 3644672.757

A. Beal
B. Ellender
D. Dupre



Job #10,435-02 LADWR Cont'd.

Pt#	Description	
8286	N= 355903.643	E= 3644605.805
87	N= 356406.069	E= 3644590.698
88	N= 356960.698	E= 3644573.961
89	N= 356901.378	E= 3644075.383
90	N= 356404.705	E= 3644092.007
91	N= 355904.415	E= 3644107.681
92	N= 355403.624	E= 3644122.727
93	N= 354903.309	E= 3644137.977
94	N= 354405.739	E= 3644154.122
95	N= 353902.548	E= 3644179.214
96	N= 353403.478	E= 3644185.205
97	N= 352906.129	E= 3644199.216
98	N= 352406.024	E= 3644217.043
99	N= 351905.157	E= 3644231.922
8300	N= 351404.142	E= 3644250.014

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A. Beal
B. Ellender
D. Dupre

Job# 10,435-02 LADNR Cont'd

Pt. #	Description	
8301	N: 351455.023	E: 3644196.749
02	N: 351454.655	E: 3644230.577
03	N: 351455.546	E: 3644264.596
04	N: 351454.667	E: 3644297.368
05	N: 351430.207	E: 3644297.573
06	N: 351430.956	E: 3644265.111
07	N: 351430.956	E: 3644230.370
08	N: 351430.726	E: 3644198.120
09	N: 351405.274	E: 3644197.069
10	N: 351405.578	E: 3644231.653
11	N: 351405.222	E: 3644265.181
12	N: 351404.553	E: 3644297.531
13	N: 351379.410	E: 3644298.298
14	N: 351380.132	E: 3644263.627
15	N: 351380.516	E: 3644230.736
16	N: 351379.665	E: 3644198.456
17	N: 351354.202	E: 3644197.995
18	N: 351355.369	E: 3644231.667
19	N: 351355.754	E: 3644264.500
8320	N: 351355.381	E: 3644297.486

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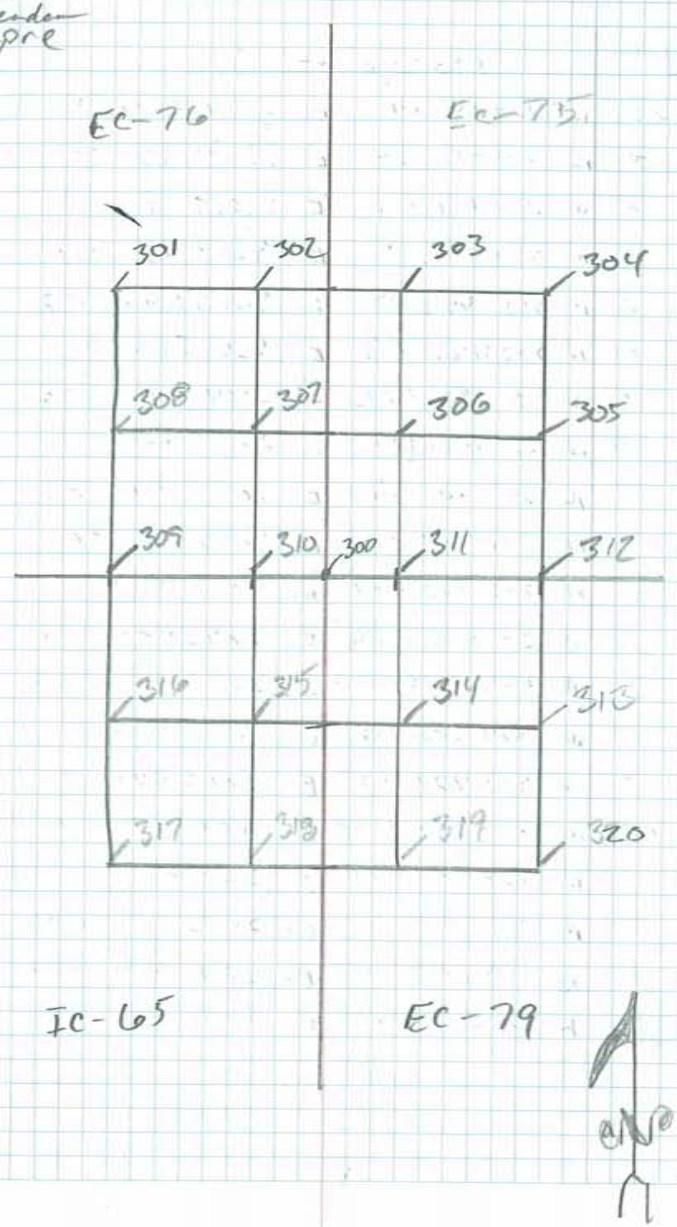
8-2-10 21

A. Bell
B. Ellender
D. Dupre



Job# 10,435-02 LADOT Cont'd

Pt.#	Description	
8321	N= 350 904.711	E= 3644 246.253
22	N= 350 405.886	E= 3644 280.214
23	N= 350 179 511	E= 3644 286.790
24	N= 350 145.077	E= 3643 788.671
25	N= 350 403.951	E= 3643781.503
26	N= 350 902.898	E= 3643 763.338
27	N= 351 404.172	E= 3643746.952
28	N= 351 904.134	E= 3643 733.236
29	N= 352 404.274	E= 3643 716.023
30	N= 352 903.643	E= 3643700.444
31	N= 353 403.045	E= 3643683.112
32	N= 353 903.980	E= 3643669.731
33	N= 354 402.413	E= 3643654.824
34	N= 354 903.781	E= 3643637.173
35	N= 355 404 754	E= 3643 621.633
36	N= 355 905.593	E= 3643 606.473
37	N= 356 405.530	E= 3643590.408
38	N= 356 902.555	E= 3643576.221
39	N= 356 060.230	E= 3643071.481
40	N= 356 401.178	E= 3643 091.145
41	N= 355 902.499	E= 3643106.584
42	N= 355 401.443	E= 3643121.659
43	N= 354 901.810	E= 3643 137.696
44	N= 354 402.616	E= 3643 153.792
8345	N= 353 902.204	E= 3643169.377

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8-2-10 22

N. Beal
B. Ellender
D. Dupre

Job# 10,435-02 LADNR Cont'd

Pt #	Description	
8346	N= 353403.532	E= 3643183.905
47	N= 352902.229	E= 3643201.241
48	N= 352402.913	E= 3643125.309
49	N= 351901.344	E= 3643232.460
50	N= 351402.042	E= 3643247.195
51	N= 350902.259	E= 3643264.632
52	N= 350402.669	E= 3643277.781
53	N= 350115.104	E= 3643295.871
54	N= 350068.592	E= 3642821.045
55	N= 350406.296	E= 3642808.602
56	N= 350901.671	E= 3642778.437
57	N= 351401.481	E= 3642753.726
58	N= 351900.654	E= 3642737.263
59	N= 352400.243	E= 3642720.853
60	N= 352900.203	E= 3642704.882
61	N= 353400.967	E= 3642687.807
62	N= 353902.074	E= 3642687.527
63	N= 354403.300	E= 3642659.255
64	N= 354902.303	E= 3642641.910
65	N= 355404.678	E= 3642627.626
66	N= 355903.644	E= 3642611.783
67	N= 356400.087	E= 3642596.396
8368	N= 357054.720	E= 3642574.661

A. Beal
B. Ellender
D. Dupre

APPENDIX A
Scope of Services

SCOPE OF SERVICES
MARSH CREATION AREA GRID SURVEY
LITTLE LAKE SHORELINE PROTECTION/
DEDICATED DREDGING NEAR ROUND LAKE
PROJECT BA-37
LAFOURCHE PARISH, LOUISIANA

5/12/2010

1.0 LOCATION

The Little Lake Shoreline Protection / Dedicated Dredging near Round Lake Project (BA-37) is located along the southwestern shoreline of Little Lake from Plum Point westward to Superior Canal in Lafourche Parish, Louisiana in the vicinity of Brusle and Round Lakes. The center of the project area is located at the approximate coordinates latitude 29° 29’ 45” N and longitude 90° 20’ 15” W.

2.0 DESCRIPTION

The project consists of approximately 25,000 linear feet of foreshore rock dike constructed along the Little Lake shoreline and approximately 1,000 acres of marsh creation/nourishment. The construction was completed in March 2007. The project is sponsored by the United States Department of Commerce / National Ocean and Atmospheric Administration (NOAA) / National Marine Fisheries Services (NMFS) and the Louisiana Department of Natural Resources (LDNR) under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA).

3.0 SCOPE OF SERVICES

The engineering firm, hereafter referred to as “Contracting Party”, shall perform the surveying services necessary to complete the tasks for Little Lake Shoreline Protection / Dedicated Dredging near Round Lake Project (BA-37) as outlined in the following subsections.

3.1 Marsh Creation Area Grid Survey

Perform RTK surveys of the Marsh Creation Area grid. The elevation shots shall be taken in the same locations as those taken by the contractor for the existing, 14-day, and 28-day as-built survey points. This survey shall be referenced to the LDNR Louisiana Coastal Zone (LCZ) GPS Network. The LCZ Secondary Monuments to be used as the GPS reference station shall be the same two used by the contractor during his surveys, BA37-SM-01 and BA37-SM-02.

3.1.1 Average Marsh Elevation

In addition to the grid elevation shots described above, at each of the locations shown on the attached figure, 20 additional evenly-distributed marsh elevation shots shall be collected within each 100 ft by 100 ft area centered on the selected grid points in order to obtain average marsh elevations for those selected areas.

3.2 Rock Dike Settlement Plate Survey

Perform RTK survey of the tops of the 24 settlement plate pipes installed in the foreshore rock dike segments. This survey shall be referenced to the LDNR Louisiana Coastal Zone (LCZ) GPS Network. The LCZ Secondary Monuments to be used as the GPS reference station shall be the same two used by the contractor during his surveys, BA37-SM-01 and BA37-SM-02.

3.3 Deliverables

A Survey Report shall be provided to OCPR and shall contain the following information:

a. The methodology section shall contain but not be limited to the following information: project description, planning and layout of the survey, information on Secondary Monument used as reference station, dates for each job task and key personnel involved, the GPS RTK survey including quality assurance (elevation check) procedures, equipment used for data collection, and downloading/processing procedures. This section shall be in Microsoft Word format.

b. Electronic survey data shall be submitted in ASCII format and shall contain the point number, x-coordinate, y-coordinate, elevation, and description (grid location, e.g. 4A-14A or settlement plate and rock segment). Two separate files shall be generated. One will contain the marsh survey data, and the other will contain the settlement plate elevations. Survey data shall be reported in Louisiana State Plane Coordinates, South Zone in feet with elevations in feet. All survey data shall be referenced to the North American Datum of 1983 (NAD 83) and the North American Vertical Datum of 1988 (NAVD 88). The data files shall be written to the compact disc (CD) with hard copies bound in the survey report.

c. A plan view drawing shall be created for the project area with the Marsh Creation Area grid and elevations clearly labeled and plotted using the coordinates. The drawing shall be referenced to the Louisiana State Plane Coordinates, South Zone, and the North American Datum of 1983 (NAD 83) in feet. The information to be shown on the drawings will include but not be limited to the following: project name; Contracting Party name; digital aerial referenced to LA State Plane Coordinates, South Zone,

NAD83 in feet; grid section lines; grid point elevations in feet; labeling/description of secondary monuments and control points used (including xyz data); field book numbers; horizontal and vertical datum; survey dates; drawing date; drawing scale; and north arrow. The drawing files shall be in AutoCAD format (*.dwg) and written to the compact disc (CD). The hard copies shall be half-size, folded to 8 ½" x 11", and bound in the survey report.

d. A table shall be generated for the settlement plate survey elevations containing the settlement plate / rock segment number, station, as-built elevation, date of as-built elevation, current elevation, and date of current survey. The table shall be in Excel format and written to the compact disc (CD). A hard copy of the table shall be bound in the survey report.

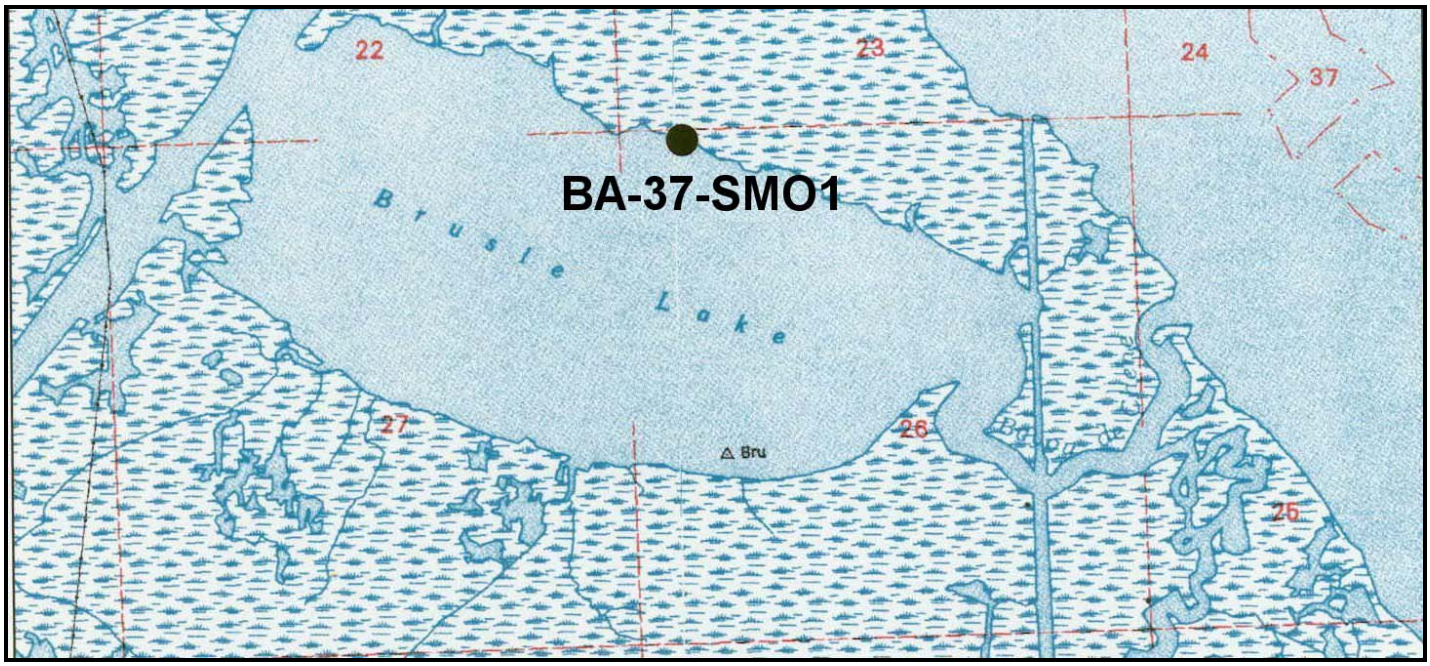
e. Provide a table for each average marsh elevation area that includes the individual points and the averaged elevation. The tables shall be in Excel format and written to the compact disc (CD). A hard copy of the tables shall be bound in the survey report.

f. All deliverables shall be certified by a professional land surveyor licensed in the State of Louisiana.

The Contracting Party shall prepare and deliver a complete **preliminary draft** copy of the Survey Report (including the inserted CD) described above to OCPR for review and comment no later than 21 days after completion of survey. The Contracting Party shall address all comments to the preliminary draft to the satisfaction of OCPR and submit one (1) **final** set of unbound originals and two (2) complete bound copies of the Survey Report (including the CD) described above to OCPR no later than 14 days after receiving comments from OCPR. The Survey Report shall be delivered to the following OCPR representative:

Daniel Dearmond, P.E.	TEL: (985) 449-5103
OCPR	FAX: (985) 447-0997
1440 Tiger Drive, Suite B	daniel.dearmond@la.gov
Thibodaux, La 70301	

APPENDIX B
LCZ Secondary Monument Data Sheets



VICINITY MAP Scale: 1" = 2000' Reproduced from USC&GS "Golden Meadow Farms" Quadrangle

Station Name: "SM01"

Location: The monument stamped BA-37-SM01 is located near the north shore of Brusle Lake in Lafourche Parish, Louisiana. The monument is approximately 11.8 miles southwest of the intersection of Bayou Lafourche and the Gulf Intracoastal Waterway in Larose, Louisiana.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 88 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA-37-SMO1

Installation Date: 08-15-02 **Date of Survey:** August 16 and 17, 2002

Monument Established By: T. Baker Smith & Son, Inc.

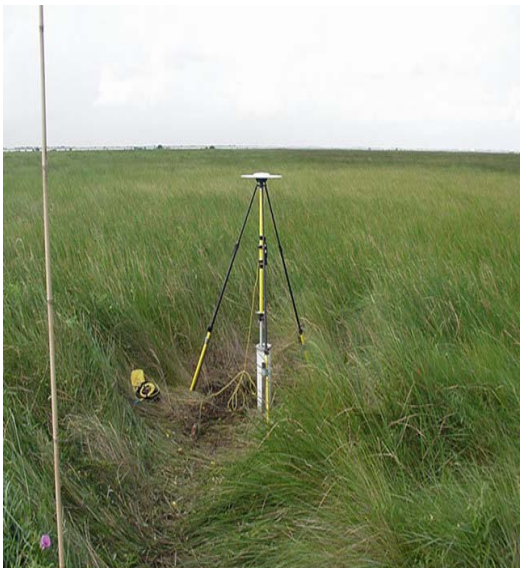
For: *Louisiana Department of Natural Resources, CRD*

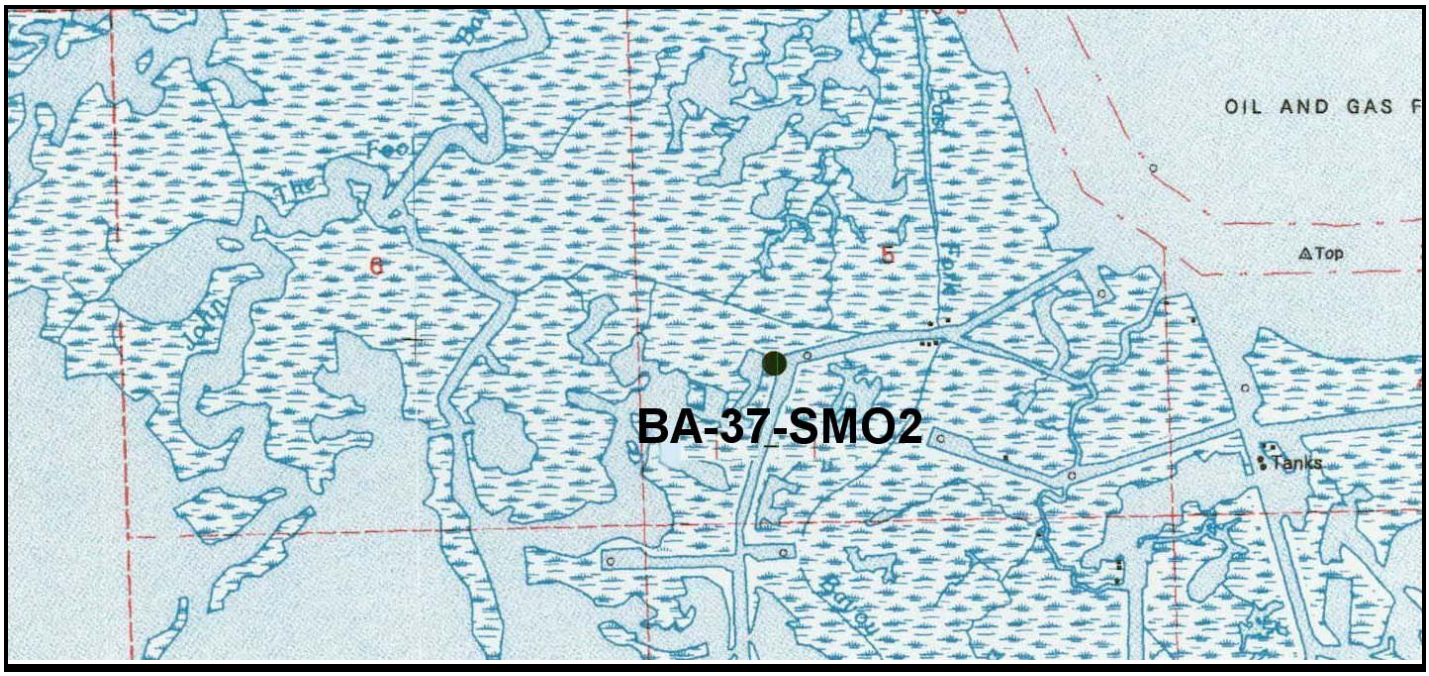
Adjusted NAD 83 Geodetic Position
Lat. 29°29' 45.72302" N
Long. 90°12' 29.46131" W

Adjusted NAD 83 Datum LSZ (1702) Feet
N= 363,981.440
E= 3,638,772.849

Adjusted NAVD88 Height
Elevation = 2.981 feet (.909 mtrs)

Geoid99 Height = -24.899 mtrs.
Ellipsoid Height = -23.990 mtrs.





VICINITY MAP Scale: 1" = 2000' Reproduced from USC&GS "Golden Meadow Farms" Quadrangle

Station Name: "SM02"

Location: The monument stamped BA-37-SM02 is located just less than 2 miles south Plum Point which is located within Little Lake in Lafourche Parish, Louisiana. The monument is approximately 13.9 miles southwest of the intersection of Bayou Lafourche and the Gulf Intracoastal Waterway in Larose, Louisiana
.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 104 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA-37-SM02

Installation Date: August 15, 2002 **Date of Survey:** August 16 and 17, 2002

Monument Established By: T. Baker Smith & Son, Inc

For: *Louisiana Department of Natural Resources, CRD*

Adjusted NAD 83 Geodetic Position
Lat. 29°27' 28.30362" N
Long. 90°09' 18.99432" W

Adjusted NAD 83 Datum LSZ (1702) Feet
N= 350,270.145
E= 3,655,746.234

Adjusted NAVD88 Height
Elevation = 3.384 feet (1.031 mtrs)

Geoid99 Height = -24.760 mtrs.
Ellipsoid Height = -23.729 mtrs.

Adjusted Position Established for Louisiana Department of Natural Resources, Coastal Restoration Division

APPENDIX C
Survey Report on Data CD

APPENDIX D
Surveyor's Certification

Morris P. Hebert, Inc.
client focused solutions

CERTIFICATION:

I, hereby, certify that the data, drawings and report referenced herein were prepared from a field survey conducted on the ground by me or under my direct supervision and control; and that the survey was performed as per OCPR specifications; and that the report, data and drawings accurately depict the results of said survey.

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

STATE OF LOUISIANA
GERARD M. LEGENDRE
License No. 4966
PROFESSIONAL
LAND SURVEYOR

Gerard M. Legendre, P.L.S.
Louisiana Registration Number 4966

This document valid when either an original certification stamp or an embossing seal is impressed over an original signature.