



Survey Report

BA-0076 NRDA Chenier Ronquille

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Revision II

Submitted to:

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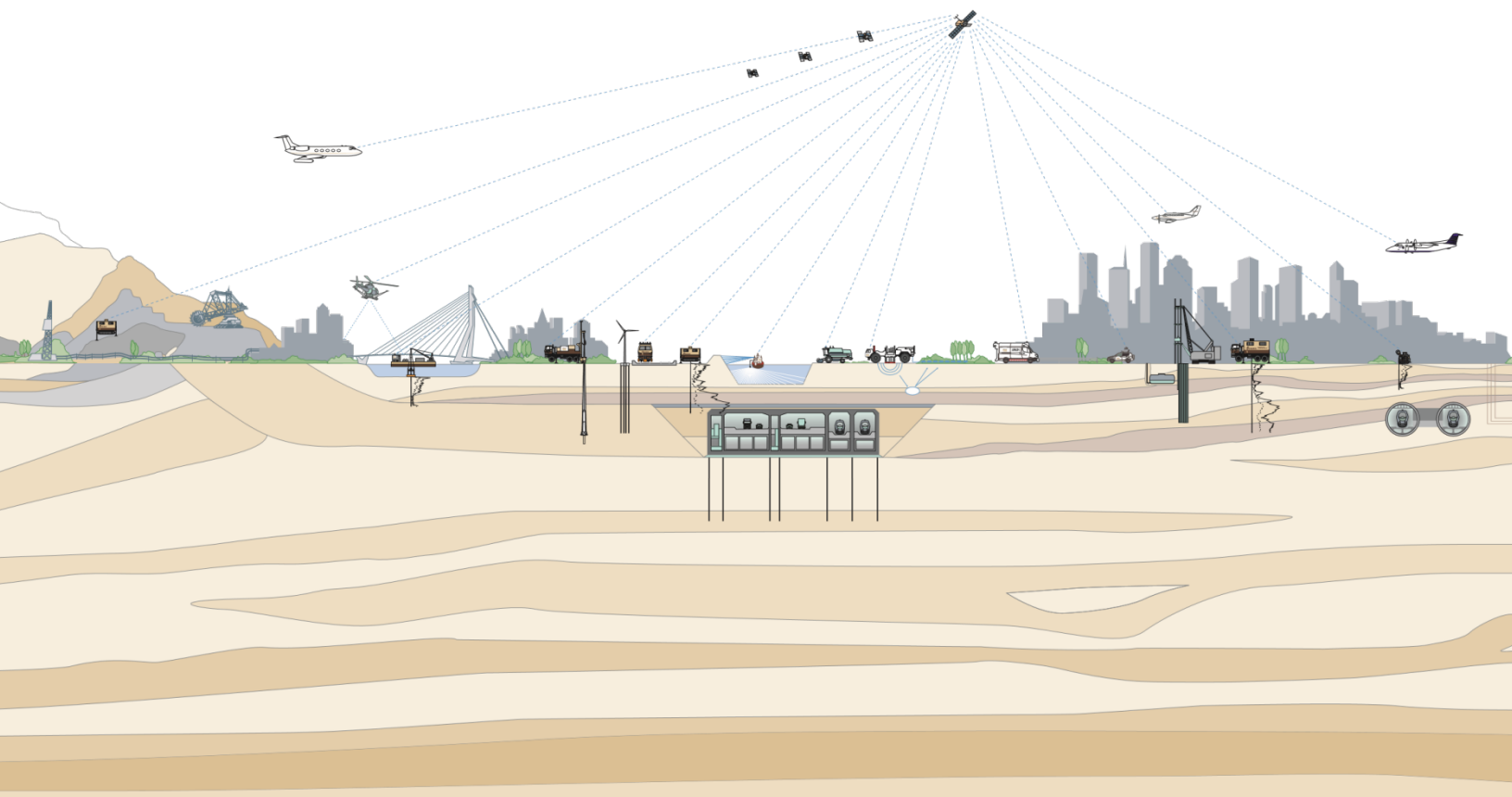




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1 COMPANY INFORMATION

Fugro is an internationally-acclaimed consulting firm that specializes in the provision of technical data and information required to design, construct, and maintain large structures and infrastructure in a safe, reliable, and efficient manner. We have been at the forefront of providing geospatial knowledge for over 50 years. Our complete geospatial approach assists our clients through the entire life span of a project: We begin with feasibility and continue through to post-construction and maintenance. Our comprehensive, integrated survey services have been used by a diverse set of industries including oil and gas, rail, electric utility, and government agencies. Access to Fugro's global resources allows us to deliver optimal solutions for projects of every scale.

Fugro is a global company with approximately 11,500 employees in about 60 countries, including an active office in Lafayette, Louisiana. Fugro Geospatial, Inc. is a wholly-owned subsidiary of Fugro NV, a Dutch corporation whose shares are publicly traded on the Amsterdam Mid-Cap Exchange. Throughout the world the multiple Fugro offices work as One Fugro to provide the most experience and best possible solutions for our clients. Fugro holds a strong market position due to in-house developed technologies, high value services, and a strong international and regional presence. Our highly-qualified specialists work with modern technologies and systems at locations all over the world.

Fugro provides registered, licensed Professional Land Surveyors throughout the Gulf Coast region. We provide a regulatory services group able to obtain necessary federal, state, and local permits. Fugro also offers hydrographic survey services for underwater projects such as oyster assessments, bathymetric hazard surveys, and coastal restoration projects. Furthermore, we provide high-precision FLI-MAP aerial LiDAR technology for linear projects such as rail, pipeline, and transmission line route surveys. As needed, 3D laser scanning services are also available.



2 PROJECT OVERVIEW

2.1 Project Purpose

This is the first complete data collection effort for NRDA Chenier Ronquille (BA-0076). Survey data was acquired during construction; however, they did not conduct a true as-built survey once construction was complete. This survey will serve as the potential base line for any future change analysis that may be needed to determine sediment budgets or volumetric changes within the project and immediate surrounding areas.

In support of this project, Fugro Geospatial, Inc. (Fugro) provided aerial lidar topographic, conventional Real-Time Kinematic (RTK) topographic, and single beam echosounder bathymetric surveys of the island and the associated near-shore areas. The following report details the methodology and results of the aforementioned survey.

The survey of this island was part of a larger surveying campaign covering the following restoration projects: Chenier Ronquille (BA-0076), Shell Island West (BA-0111), Shell Island East (BA-0110), Pelican Island (BA-0038-1), and Scofield Island (BA-0040). Field work commenced on April 6, 2017, and the data collection was completed on August 2, 2017. Each island was surveyed dependent on weather and accessibility, with crews moving from island to island in an effort to increase the efficiency of the overall project. As such, data and/or documentation unrelated to this specific island project may be included in this report.

2.2 Project Location

Chenier Ronquille is located along the Plaquemines/Barataria Barrier Shoreline and 8 miles east of Grand Isle.

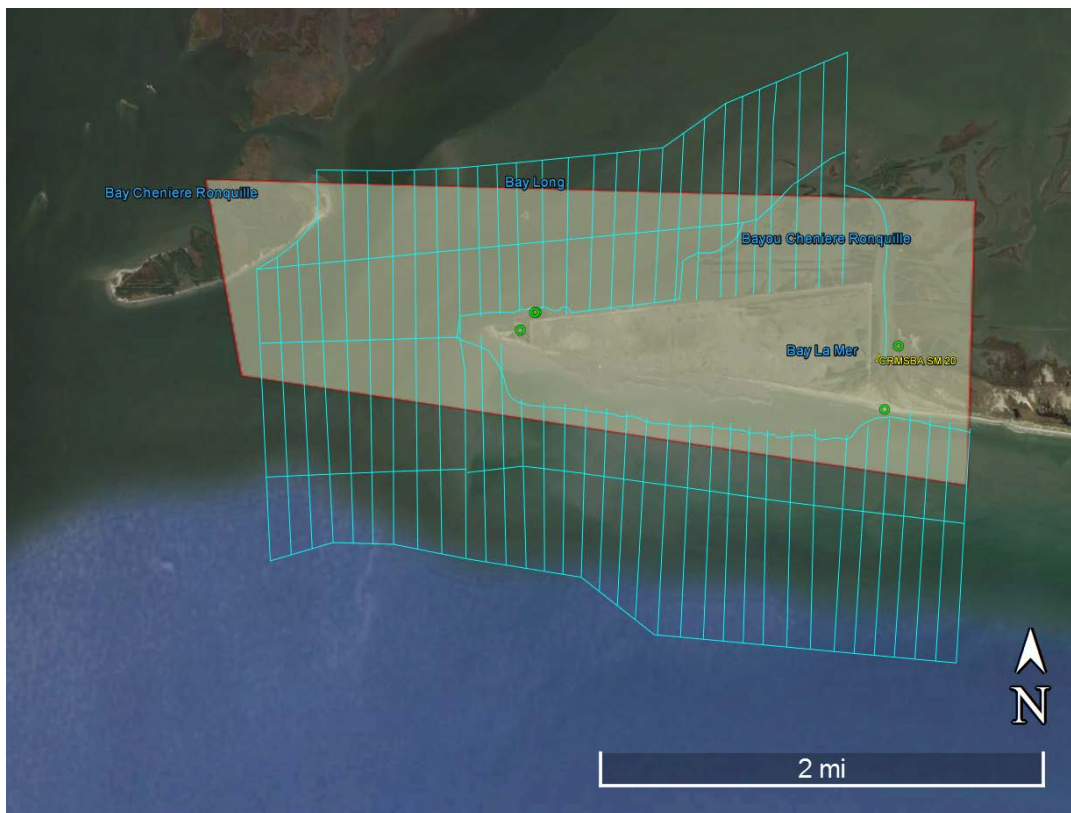


Figure 1: Project Location. Bathymetric transects are depicted in blue. Planned lidar coverage is depicted as a beige polygon. Control points are depicted as green circles. The project monument is shown in yellow.

3 SURVEY METHODOLOGY

3.1 Static Session and GPS Network Adjustment

Multiple static GPS sessions were observed over the project monuments specified in the scope of work in an effort to establish a control network for this surveying campaign. To accomplish this, a GPS RTK base receiver was assembled over the monument. A two-meter fixed height tripod was used to eliminate human error potentially introduced by errant measurement of the GPS antenna height. Upon equipment installation, the base unit was initialized with its coordinates and elevation and a static GPS session began. During each session, a raw data file was created on the RTK base receiver. The monument name, Julian date, session number and antenna height was keyed into each receiver. A GPS log sheet was recorded in the field to document information about the survey and other pertinent monument details. Monument stamping, actual survey start and stop times, and GPS antenna height measurements were documented in the GPS log sheet. The log sheet also served as a quality control check during post-processing to confirm that the monument names and antenna heights were entered correctly.

As part of this static adjustment, the coordinates of 12 control points were also updated. Three control points within the scope of work were not found. To accomplish this task, a minimum of two 20-minute static GPS observations were collected over the control point. These data were then post-processed. The results of these observations were then averaged and provided in the final adjusted control table presented in Appendix C.

During post-processing, GPS log sheets were checked and compared to the data files on the receivers. The raw GPS data was downloaded into the project file created in Trimble Business Center (TBC) software. The IGS Precise Ephemeris data was also downloaded from the NOAA/NGS Internet website for the days that GPS data was collected. All CORS stations located nearest to or within the project area were also downloaded from the Center for Geoinformatics (C4G) website and processed with the static GPS data.

A processing report was generated in the TBC program and reviewed to determine satellite cycle slips to avoid baseline float solutions in the processed data. Each daily session was re-processed independently using Precise Ephemeris and eliminating satellites determined to be unusable or excessively noisy. Upon completing the processing phase, the data was loaded into the adjustment program and adjusted. All necessary adjustments were performed using the TBC Network Adjustment software.

The initial adjustment for the GPS network was minimally constrained to the published adjusted NAD83 (2011) Epoch 2010.00 and the published ellipsoid height at the antenna reference point (ARP) for CORS Station "BVHS". A re-adjustment was performed and all outliers removed from the adjustment. A scale factor was determined from the Statistics Summary and applied to the network and re-adjusted until the Chi-Square Test passed with a 95% confidence level.

The final fully constrained adjustment was performed by holding to the published values for the antenna reference points (ARP) on CORS Stations "SBCH", "BVHS", "GRIS", and "DEV1" (see Fig. 2). Orthometric heights (elevations) were calculated using the Geoid12B model. Adjusted orthometric heights on the benchmarks were compared with their published NAVD88 values as a quality control check. Additionally, all GPS files were submitted to the NGS Online Positioning User Service (OPUS) Program for an independent solution and comparisons made with the final adjustment results. The published horizontal datum for OPUS is based on the Continuously Operating Reference Stations (CORS) which is NAD83 (2011) 2010.00 epoch. The vertical datum is North American Vertical Datum of 1988 (NAVD88) using Geoid12B.

The final post-processed coordinates of the survey monuments were exported from TBC and organized into a table that may be viewed in Appendix C. These points were also exported using the Geoid 09 model for the purposes of comparing legacy datasets. The updated datasheet for each project monument is also available in Appendix C.

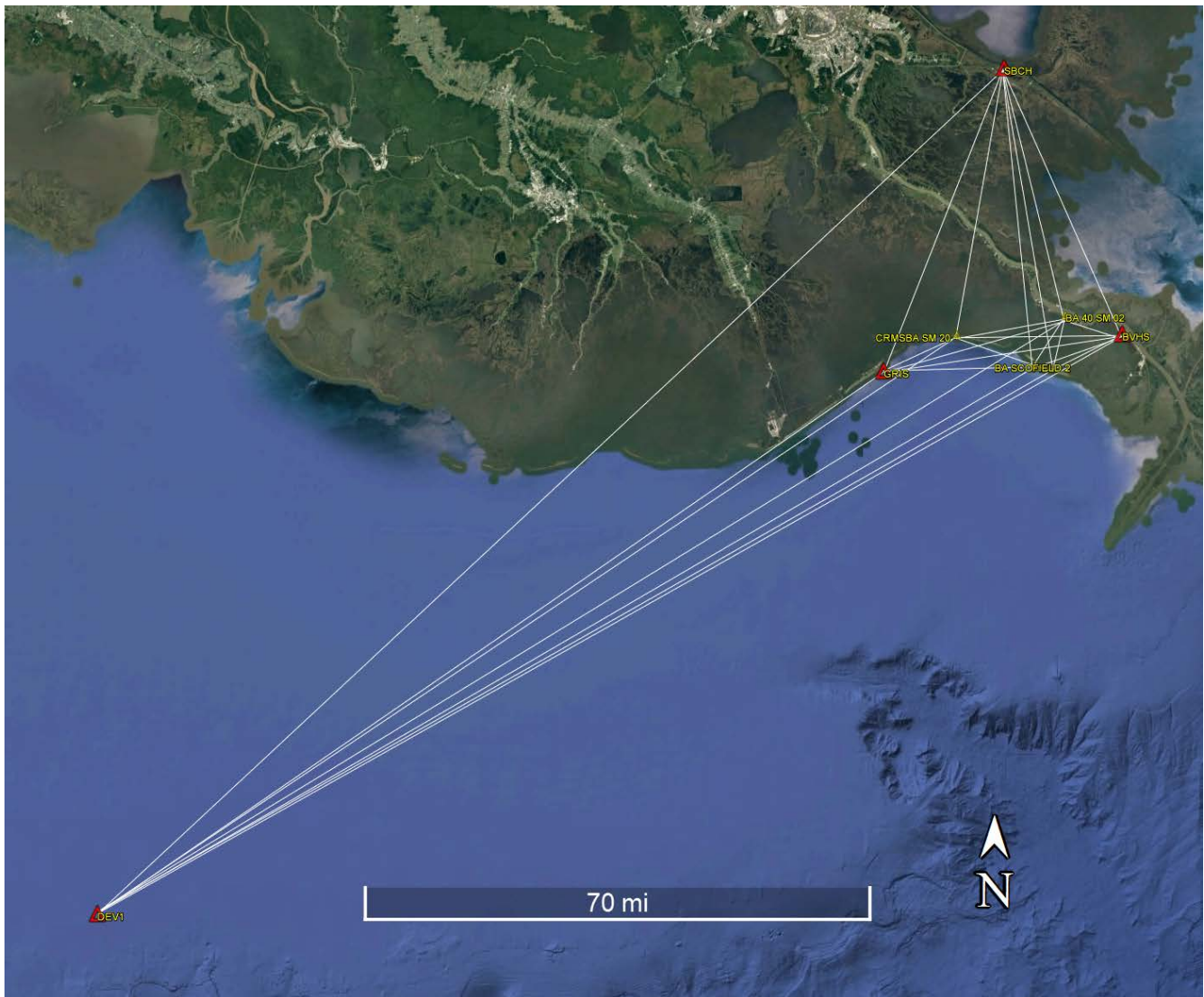


Figure 2: Illustration of the GPS network used for the final static adjustment.

3.2 Survey Collection Dates

Table 1: Survey Dates

Survey Type	Dates Collected
Real-Time Kinematic GPS Topographic	4/17/2017 - 8/1/2017
Bathymetric	4/20/2017 - 6/7/2017
Aerial Lidar	4/20/2017

3.3 Real-Time Kinematic (RTK) Topographic and Settlement Plate Survey

The topographic survey for this project was part of a larger campaign covering five barrier islands within the Barataria Basin. The survey campaign was conducted between April 17 and August 1, 2017. A total of 1627 topographic survey data points were collected in support of this specific island project. These points were identified using a feature code as a descriptor. Table 2, presented in this section, explains these feature codes. Each day, the survey crew assembled an RTK GPS base station at the project surveying monument. A two-meter fixed height tripod was used to mitigate human error potentially introduced by incorrectly measuring the GPS antenna height. The RTK GPS base station unit was then initialized and a static GPS session commenced. The static GPS sessions that were recorded each day of surveying were used to compute the final adjustments to the project control monument.



Figure 3: Photograph of a settlement plate on Shell West Barrier Island.

After completing the installation of the RTK GPS base station, the RTK GPS rover unit was assembled and initialized. The crew then navigated to the nearest monument or control point to complete a five-second check-in observation. This quality control procedure served to verify that the system was operational and delivering corrected positions.

Following the check-in observation, the crew navigated on foot along pre-plotted surveying transects and recorded topographic points spaced 20 feet apart or less, and at any abrupt changes in elevation greater than or equal to 6 inches. On the shore face, the crew surveyed to the deepest submerged portion of the surveying transect that they could safely negotiate on foot. The land crew also surveyed any portions of the bathymetric transects determined to be unnavigable by the bathymetric surveying crew. Supplemental topographic points were collected to support ground-truthing quality control procedures for processing the lidar data.

The crew also recorded topographic points at each specified settlement plate located within the project area. These points consisted of one observation from atop the each settlement plate pole, and four natural ground shots surrounding each settlement plate pole. A table listing the results of this survey is available in Appendix E. Detailed field notes from the topographic and settlement plate surveys are available in Appendix G.

Topographic data collected during the survey were uploaded to the Fugro database and Trimble Business Center for post-processing. The data were exported in a CSV digital file containing Point, Northing, Easting, Elevation, Description (PNEZD) information. These data were assembled into tables viewable in Appendices D and E.

Table 2: Feature code descriptions.

Feature Code	Description
AT	Aerial Target
BOLT	Bolt on Settlement Plate Pole
CHK	Check-in Observation
NG	Natural Ground
SP	Top of Settlement Plate Pole
WB	Water Bottom
WES	Water's Edge/Surface
WS	Water Surface

3.4 Aerial Lidar Topographic Survey

The aerial lidar topographic survey was collected on April 20, 2017, and collected data across all five barrier island projects simultaneously in order to increase data collection efficiency. All lidar data was collected using Fugro's proprietary FLI-MAP aerial lidar acquisition system. Data was collected over approximately 95 survey line miles, and required three helicopter flights. The altitude of the helicopter averaged approximately 650 feet throughout the duration of data collection, resulting in a point density of approximately 3/ft² for all lidar returns. A detailed explanation of system specifications and lidar survey control is viewable in Appendix H.

The positioning for all lidar data was accomplished using local CORS stations and local project monuments with coordinates determined by the static GPS network adjustment (see Fig. 2). All positioning data was post-processed in POSPac, producing an Inertial-Aided Post-Processed Kinematic solution. Multiple baselines from different monuments within the GPS network were used to calculate each GPS position. Baselines were selected based on proximity to the monument. As the airframe traveled through the survey area, the baselines would then be adjusted to the nearest monuments within the GPS network.

All lidar surveying data were then imported into Fugro's proprietary FLIP7 lidar editing software suite. The data were initially scrubbed using proprietary filtering algorithms engineered to remove vegetation by seeking the lowest-elevation returns and statistically predicting the ground in uncertain areas based on expected spatial variation. The data then underwent a secondary editing and quality-control assessment whereby a survey analyst manually scrutinized the data to identify abrupt elevation variations indicative of vegetation that remained undetected through the automated algorithmic processing. These vegetated areas were then manually filtered based on an interpretation of the bare-earth surface. Data were also scrutinized for large areas of relatively uniform elevation indicative of water returns. Areas identified as potentially flooded surfaces were also identified using the orthomosaic imagery captured during the same flight. These inundated areas were subsequently removed from the dataset. It is important to note that much of the data was collected during a low-tide event, and therefore areas of uniform elevation are interpreted to potentially be indicative of exposed, intertidal mud flats partially obscured by vegetation. In these areas, data were compared to the conventional RTK topographic data as a quality control measure. In areas where the elevation differences were marginal and potentially caused by the different surveying techniques (i.e. a range pole penetrating soft mud), the lidar data were not removed from the final dataset. The final bare-earth point cloud was then dissected and tiled according to the CIMS grid and provided as a deliverable.

Aerial targets were also used during the lidar survey to verify the accuracy and repeatability of the system. A total of 12 aerial targets were installed across the island chain prior to the lidar flight. One target was placed on each end of each island in a clear and flat area. The terrestrial RTK topographic surveying crews then positioned the panel using four topographic points, one in the center of each square of the panel. These points were then imported into the lidar point cloud, and the lidar point falling within the four terrestrial RTK points was compared to the closest terrestrial RTK point. The results of this analysis are viewable in the table located in Appendix G.

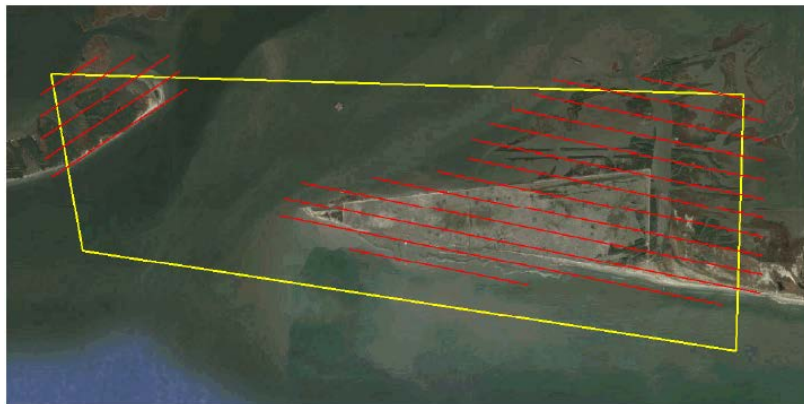


Figure 4: Flight lines collected on April 20, 2017 between 0815 and 0925.



3.5 Bathymetric Survey

The bathymetric survey for this project was part of a larger campaign covering five barrier islands within the Barataria Basin. Bathymetric data were collected between April 20 and June 7, 2017. Each day, the survey crew ensured an RTK GPS base station was assembled at one of the available project monuments constituting the control network. A two-meter fixed height tripod was used to mitigate human error potentially introduced by incorrectly measuring the GPS antenna height. The RTK GPS base station unit was then initialized and a static GPS session commenced. The static GPS sessions that were recorded each day of bathymetric surveying were used in concert with the static GPS network adjustment results during post-processing of the bathymetric navigation data. Check-in observations were also conducted to ensure that the static base station was operating as expected and broadcasting corrections to the RTK GPS rover antenna.

Tide level observations were recorded with the RTK rover unit prior to and immediately following each bathymetric surveying session. Additional tide elevations were recorded throughout the day as needed. The tide level measurements were then used to independently verify the elevation measurements of the inertial navigation system and ensure data integrity.

Upon arrival at the surveying site each day, the crew initialized all bathymetric surveying equipment for calibration. The inertial navigation system was initialized at least 15 minutes prior to recording any bathymetric data to facilitate Kalman filtering routines and system orientation. The echosounder was initialized and the echogram was examined to verify that the water bottom was accurately digitized. A sound velocity probe was deployed over the side at the anticipated deepest portion of the project area. Acoustic velocity measurements were captured along the entire vertical profile of the water column. The average of these velocity measurements was then inputted into the echosounder topside. A bar check was then conducted to verify that these velocity measurements were producing accurate distance computations. At the end of each surveying day, an additional sound velocity probe was collected at the verified deepest portion of the survey area.

Inertial navigation data were post-processed using Trimble's proprietary POSPac navigation software. Raw data from the navigation system and the static base station were imported into the software. The vessel trajectory was processed as a tightly-coupled solution relative to the updated or verified project monument coordinates. All navigation data were scrutinized to ensure no anomalous GPS data or motion artifacts were included in the final navigation solution. At the conclusion of post-processing, a Smoothed Best Estimate of Trajectory (SBET) was exported and applied to the bathymetric sounding data.

All sounding data were post-processed using HyPack's Single Beam Max editor. Raw data were imported into the program, and sound velocity corrections were applied using the results of the sound velocity casts. The full sound velocity profile was applied as a correction to account for any density variations in the water column that would affect the depth measurement computed by the echo sounder. Sounding data were initially filtered based on the motion of the vessel. Any data recorded at excessive vessel attitudes were filtered and removed from the dataset to ensure that elevations represented were obtained vertically. The signal echogram was scrutinized to confirm that the bottom tracking algorithms employed were digitizing the true water bottom. Any soundings produced by water column noise were then identified using the echogram, and manually removed from the dataset. A final, confident representation of the water bottom was exported in Easting, Northing, Elevation (XYZ) format. These data were also converted to CIMS format to be provided as a digital deliverable.



3.6 Equipment/Survey System(s)

3.6.1 HyPack Navigation and Acquisition Software

HyPack, Inc. develops Windows-based software for the hydrographic and dredging industry and is one of the most successful worldwide providers of hydrographic and navigation software. HYPACK is one of the most widely used hydrographic surveying packages in the world, with over 4,000 users. It provides the surveyor with all of the tools needed to design their survey, collect data, process it, reduce it, and generate final products.

3.6.2 Applanix POS MV Positioning System

Vessel positioning data is acquired using an Applanix POS MV Inertial-Aided Real-Time Kinematic (IARTK) GPS positioning system. This setup blends GNSS data, angular rate and acceleration data from the Inertial Measurement Unit (IMU), and heading from the GPS Azimuth Measurement System (GAMS) to produce a robust and accurate full six degrees-of-freedom position and orientation solution. Inertial-aided systems offer a higher level of positioning precision than standard RTK systems. This is accomplished by calculating the vessel position based on recorded vessel motion between GPS epochs, which increases the number of navigation fixes associated with acoustic ranges delivered by the bathymetric surveying instrument. This navigation solution is a proven valuable asset to inland hydrography, where GPS signal outages may briefly occur when surveying near structures such as dams and bridges or passing under a tree canopy. The inertial-aided system is able to “dead-reckon” through brief GPS signal outages, thus enabling a more complete survey without sacrificing the precision of the navigation solution.

Fugro takes advantage of the Inertially-Aided Post-Processed Kinematic (IAPPK) capability offered through the use of the Applanix POSpac software suite. This post-processing technique enables the computation of a Smoothed Best Estimate of Trajectory (SBET), which is the final positioning solution applied to our MBES and SBES data. The SBET produces a 200 Hz fix interval, and elevates the positioning performance to centimeter-level accuracy.

3.6.3 Odom CV 100 Single Beam Echo Sounder (SBES)

The CV100 is a frequency agile SBES capable of operating in high (100 kHz-750 kHz) or low (3.5 kHz-50 kHz) frequency bands. This enables the user to optimize the accuracy of the SBES according to a wide range of surveying depths. When operating at 200 kHz, the CV100 realizes an accuracy of 1 cm. The sensor can also operate at a ping rate of 20 Hz, enabling the collection of a dense data set.

3.6.4 Trimble R8 RTK Surveying System

The Trimble R8 GNSS receiver delivers reliable, precise positioning in the most challenging surveying environments through the exploitation of the proprietary R-Track™ technology. This feature compensates for intermittent signal loss and enables extended precision operation throughout brief RTK correction signal interruption. The R8 receiver boasts a horizontal accuracy of 1 cm and a vertical accuracy of 2 cm when operating in kinematic mode.

3.6.5 Trimble Business Center (TBC) Software

Trimble TBC is a comprehensive software solution that streamlines the workflows for surveying and GIS deliverables. The software enables the user to create projects with a wide range of coordinate systems, post-process static GNSS data, adjust traverses, and complete networks. The capabilities of the software also extend from the planning phase through deliverable generation, enabling a seamless work flow that optimizes project efficiency.

3.6.6 FLI-MAP System Specifications

Please see Appendix H for a detailed summary of technical specifications.

4 QUALITY ASSURANCE

Fugro has a totally integrated Quality Assurance System that is documented, implemented, and under the control of a Quality Manager. Certification and compliance of this system to the ISO standards listed below verifies our commitment to meet customer needs by providing the proper policies, procedures, and resources. The Quality Assurance System is used to provide job control and promote optimal client communication during all stages of a project – from the initial proposal to final invoicing. Implementation of our Quality Assurance System assures compliance with all applicable regulatory and ecological requirements. For data management, the Fugro Quality System provides checks to validate and confirm that all survey data and processed data are interpreted and stored as required. The effectiveness of these business and operational processes are monitored, measured and analyzed as part of our compulsory quarterly Management Review of the Quality Assurance System which includes surveillance audits and certification renewal audits.

Fugro has qualified for and applied the following standards to our business and operational activities:



Quality Management System:

ISO 9001:2008

Certificate NO. UQA 4000406/AB

Approved by: Lloyd's Register Quality Assurance

Provision of Advanced Surveying, Mapping, Regulatory and Ecological Services for Land Applications and Airborne LIDAR data Collection and Interpretation



Environmental Management System:

ISO 14001:2004

Certificate NO. UQA 4000406/CB

Approved by: Lloyd's Register Quality Assurance

Provision of Advanced Surveying, Mapping, Regulatory and Ecological Services for Land Applications and Airborne LIDAR data Collection and Interpretation



Occupational Health & Safety Management System:

OHSAS 18001:2007

Certificate NO. UQA 4000406/BB

Approved by: Lloyd's Register Quality Assurance

Provision of Advanced Surveying, Mapping, Regulatory and Ecological Services for Land Applications and Airborne LIDAR data Collection and Interpretation

Fugro ensures that all surveys and documentation associated with this project is accurate and complied with accepted Industry Standards.

5 SAFETY

Fugro has developed and implemented an Occupational Health & Safety (OH&S) and Environmental Management System (EMS) to satisfy the needs of our customers, employees, shareholders, and community. We continually strive to improve our employee and company performance in the areas of health, safety, and protection of the environment. Fugro assures that ALL required safety equipment and gear including personal protective equipment (PPE) were utilized on this project.

Fugro also strives to prevent wasteful and inefficient operations, avoid damage to property and equipment, show respect for the environment, and, foremost, to protect the safety and well-being of all employees. Fugro employees received all safety training as specified in the contract.

The schedule of safety meetings and drills executed for this project included but were not limited to:

- Pre-job safety meetings;
- Pre-job vessel health, safety, and environmental orientation including man overboard, fire, and abandon ship drills;
- Daily tailgate safety meetings prior to each day's operations;
- When a new procedure or piece of equipment is introduced, including a written Job Safety Analysis; and
- Document a Near Miss accident or Injury.

Fugro ensures compliance with all applicable rules, regulations, orders, standards and interpretations promulgated under the Occupational Safety and Health Act (1997) and all other applicable laws, ordinances, rules, regulations and orders of anybody having jurisdiction over safety and health of persons or property or the protection of same to protect them from injury, illness, damage or loss. The Fugro Survey Project Manager or his designee conducted and documented a daily safety meeting at the beginning of each work day. A copy of the daily safety meeting minutes will be furnished upon request.

Fugro ensures that Personal Protective Equipment (PPE) will be utilized and maintained in accordance with the written PPE program. Training in the proper use, maintenance and inspection of PPE is provided to all Fugro employees prior to beginning work. Fugro will supply all required PPE required at the work site. Unless otherwise specified, the minimum PPE includes:

- Hard hats
- Safety glasses with side shields or side impact protection as necessary
- Safety toe shoes/boots (steel/composite toe or approved toe caps)
- Protective clothing with high visibility vest
- Task appropriate gloves





6 CONTACT INFORMATION

By use of these specific contact points, Fugro ensures quality control and prompt action with respect to all project-related issues.

Paul Laverty: For all corporate, legal, and contractual issues

Ryan Chapman, PLS: For all operational QA/QC issues from mobilization through final product delivery and for final project responsibility

Fugro Geospatial, Inc.			
Address	226 Dulles Drive Lafayette, LA 70506		
General Manager Survey Operations	Ryan Chapman, PLS	337.354.4538	rchapman@fugro.com
Service Line Coastal Services	Paul Laverty	337.268.3133	p.laverty@fugro.com
Data Manager	Mark Spivey	337.268.3158	mspivey@fugro.com

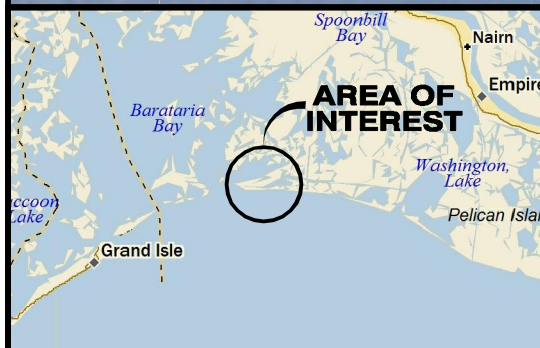
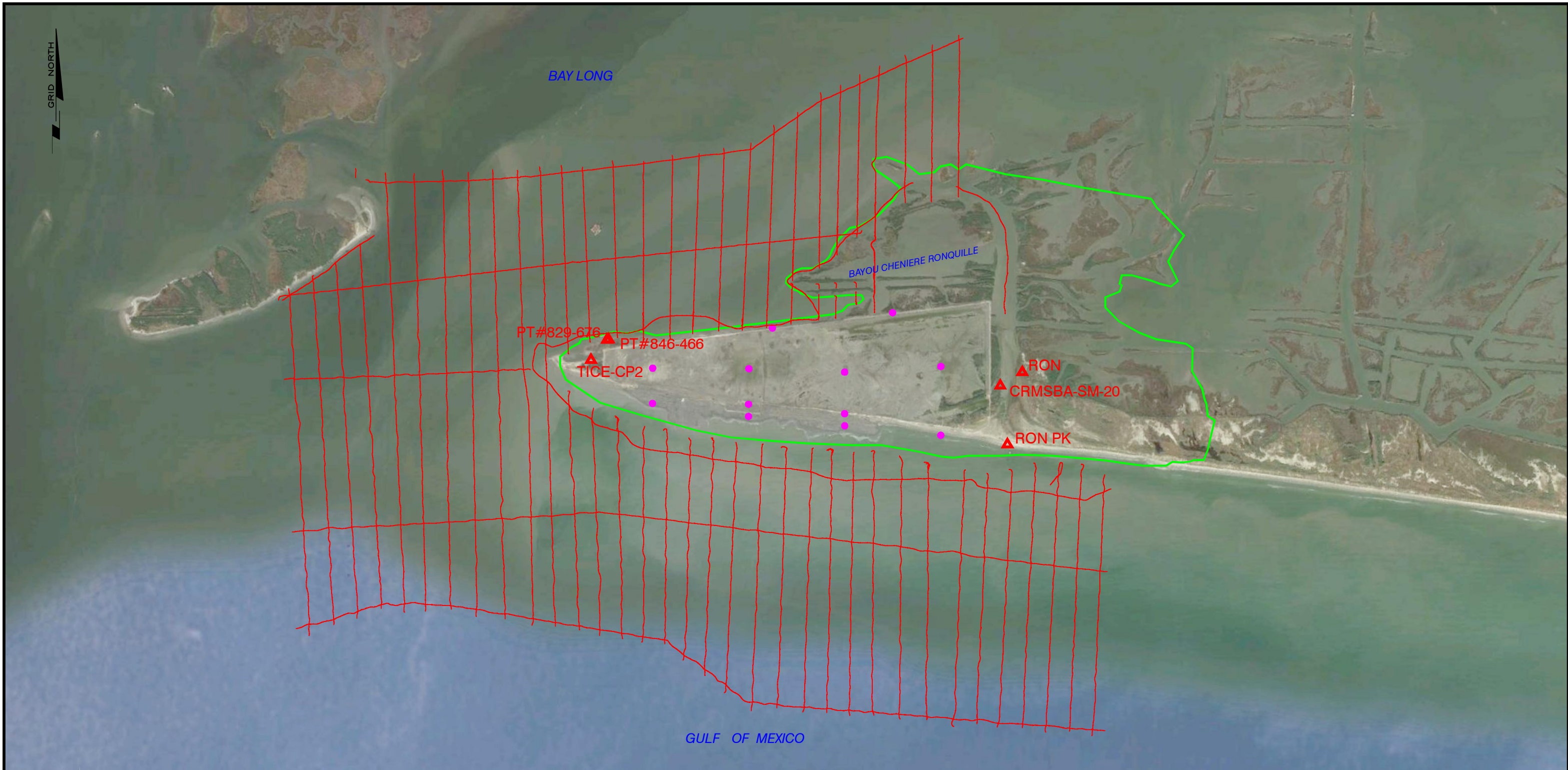
RYAN H. CHAPMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION NO. 5096

APPENDICES



APPENDIX A: DRAWINGS

GRID NORTH



VICINITY MAP
NOT TO SCALE

- NOTES:**
1. HORIZONTAL DATUM FOR THIS CHART IS NAD83 (2011) STATE PLANE LOUISIANA SOUTH ZONE, US SURVEY FEET.
 2. BENCHMARKS USED FOR THIS SURVEY IS REFERENCED TO GEOID 12B ELEVATION AND N.A.V.D.88.

RYAN H. CHAPMAN
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION NO. 5096

LEGEND:

- TRANSECT LINE
- LIDAR LIMITS
- SETTLEMENT PLATE
- ▲ CONTROL MONUMENT



COASTAL PROTECTION & RESTORATION AUTHORITY

**TOPOGRAPHIC & BATHYMETRIC SURVEY
CHENIERE RONQUILLE ISLAND**

BAY LONG AREA
PLAQUEMINES PARISH, LOUISIANA
GULF OF MEXICO

FUGRO GEOSPATIAL INC.



GEODEIC DATUM: NAD83
PROJECTION: LOUISIANA SOUTH
GRID UNITS: US SURVEY FEET

SCALE
IN FEET 0 2,000'

Proj. Mgr.: PL
Revised:
Printed: 3/13/18

Job No.: 17-0061 Date: 1/19/18

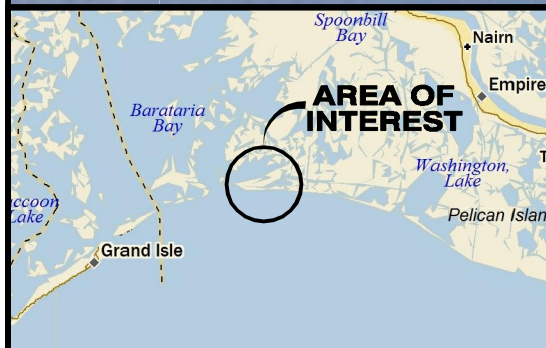
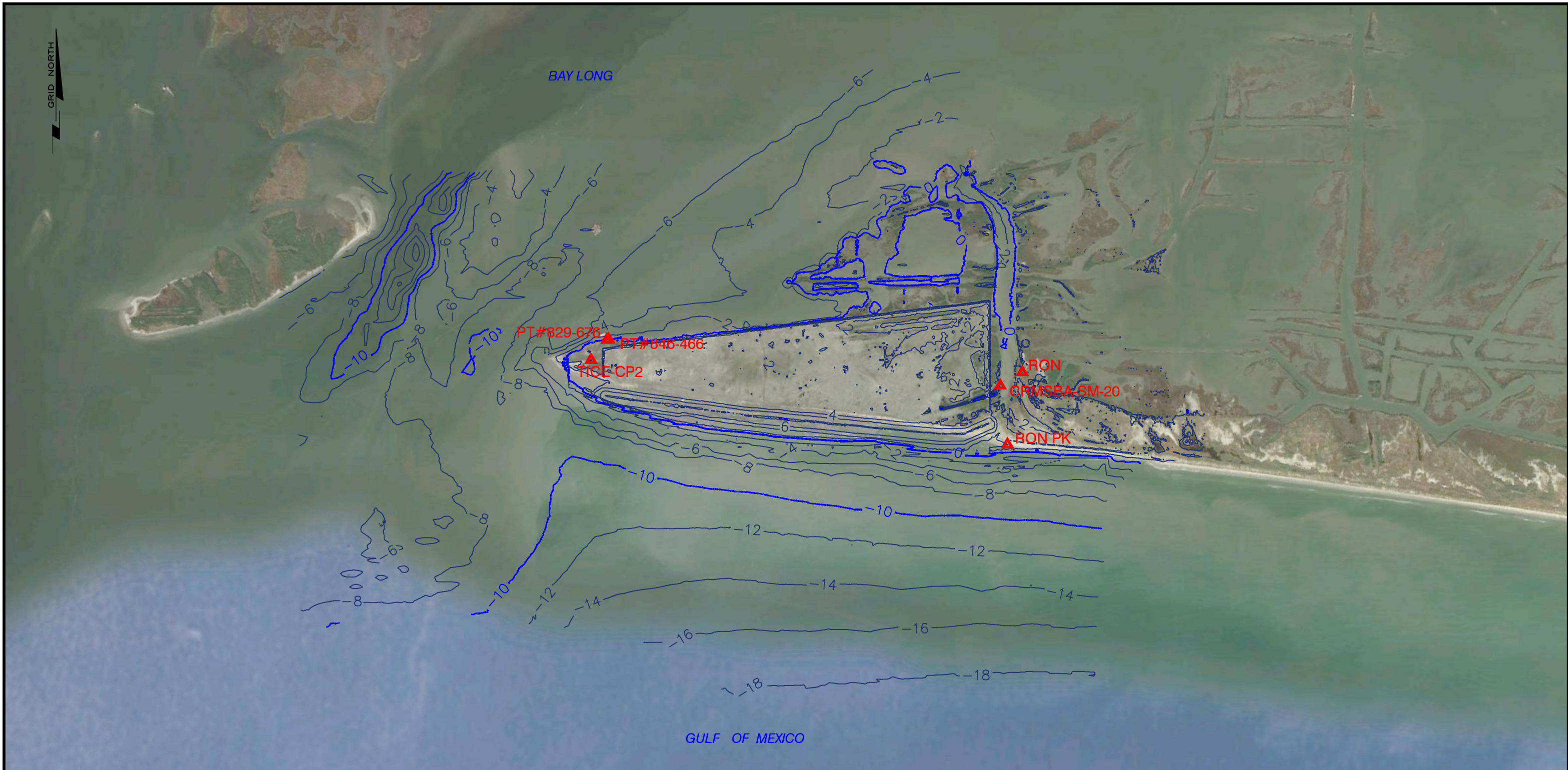
Drwn: AXG

Chart: Of:

Dwgfile: L:\2017\170061\CAD\E170061_Cheniere_Ronquille

1 2



GRID NORTH



VICINITY MAP
NOT TO SCALE

- NOTES:**
1. HORIZONTAL DATUM FOR THIS CHART IS NAD83 (2011) STATE PLANE LOUISIANA SOUTH ZONE, US SURVEY FEET.
 2. BENCHMARKS USED FOR THIS SURVEY IS REFERENCED TO GEOID 12B ELEVATION AND N.A.V.D.88.

LEGEND:

-  CONTOUR LINE (NAVD88)
-  CONTROL MONUMENT



COASTAL PROTECTION & RESTORATION AUTHORITY

**TOPOGRAPHIC & BATHYMETRIC SURVEY
CHENIERE RONQUILLE ISLAND**

BAY LONG AREA
PLAQUEMINES PARISH, LOUISIANA
GULF OF MEXICO

FUGRO GEOSPATIAL INC.



GEODEIC DATUM: NAD83
PROJECTION: LOUISIANA SOUTH
GRID UNITS: US SURVEY FEET

SCALE
IN FEET 

Proj. Mgr.: PL
Revised:
Printed: 3/13/18

Job No.: 17-0061 Date: 1/19/18

Drwn: AXG

Chart: Of:

Dwgfile: L:\2017\170061\CAD\E170061_Cheniere_Ronquille

2 2



APPENDIX B: STATIC GPS REPORT AND SUPPORTING DOCUMENTS

Project File Data	Coordinate System
Name: D:\TBC_5Island\COMBINED NAD 83 LA S GEOID12B.vce	Name: United States/State Plane 1983
Size: 1 MB	Datum: NAD 1983 (Conus) Louisiana
Modified: 5/8/2017 1:09:13 PM (UTC:-5)	Zone: South 1702 Geoid12B (Conus)
Time zone: Central Standard Time	Geoid:
Reference number:	Vertical datum:
Description:	

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.005 ft

Centering Error: 0.005 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: 227

Post Processed Vector Statistics

Reference Factor: 1.00
Redundancy Number: 227.00
A Priori Scalar: 2.17

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)
BVHS	Global	Fixed	Fixed	Fixed	
DEVI	Global	Fixed	Fixed	Fixed	
GRIS	Global	Fixed	Fixed	Fixed	
SBCH	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)	Constraint
BA SCOFIELD 2	278985.614	0.008	3832299.846	0.009	3.933	0.020	
BA40 SM 01	315642.541	0.008	3854052.368	0.009	-2.623	0.018	
BA40 SM 03	276699.226	0.008	3845115.083	0.009	2.638	0.020	
BVHS	309482.268	?	3894798.478	?	31.546	?	LLh
CRMSBA SM 20	300238.984	0.008	3774247.951	0.008	2.344	0.018	
DEV1	-117001.388	?	3152130.358	?	112.994	?	LLh
GRIS	281033.474	?	3719590.183	?	27.375	?	LLh
SBCH	501341.887	?	3806984.526	?	35.858	?	LLh

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Constraint
BA SCOFIELD 2	N29°15'20.49315"	W89°36'14.24815"	-73.885	0.020	
BA40 SM 01	N29°21'20.02463"	W89°32'02.21585"	-81.162	0.018	
BA40 SM 03	N29°14'55.92470"	W89°33'49.99250"	-75.104	0.020	
BVHS	N29°20'12.48973"	W89°24'23.01021"	-46.745	?	LLh
CRMSBA SM 20	N29°18'59.09078"	W89°47'06.29582"	-76.291	0.018	
DEV1	N28°10'39.74267"	W91°43'57.51033"	34.600	?	LLh

GRIS	N29°15'55.88300"	W89°57'26.26226"	-51.286	?	LLh
SBCH	N29°52'05.20582"	W89°40'23.63833"	-48.731	?	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
BA SCOFIELD 2	126292.796	0.009	-18270601.721	0.018	10166142.867	0.012	0.023	
BA40 SM 01	148472.664	0.009	-18252651.720	0.016	10197808.987	0.011	0.021	
BA40 SM 03	139079.918	0.009	-18271720.539	0.018	10163977.022	0.012	0.024	
BVHS	189142.939	?	-18255649.119	?	10191879.301	?	?	LLh
CRMSBA SM 20	68494.412	0.008	-18260106.147	0.016	10185400.715	0.011	0.021	
DEV1	-558134.796	?	-18451026.881	?	9822435.345	?	?	LLh
GRIS	13616.876	?	-18269305.528	?	10169272.617	?	?	LLh
SBCH	103575.603	?	-18160885.909	?	10359876.751	?	?	LLh

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
BA SCOFIELD 2	0.011	0.010	64°
BA40 SM 01	0.011	0.010	77°
BA40 SM 03	0.011	0.010	65°
CRMSBA SM 20	0.011	0.010	64°

Adjusted GNSS Observations

Transformation Parameters

Deflection in Latitude:	-0.123 sec (95%)	0.012 sec
Deflection in Longitude:	-0.072 sec (95%)	0.014 sec
Azimuth Rotation:	-0.009 sec (95%)	0.002 sec
Scale Factor:	1.00000011 (95%)	0.00000001

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
BVHS --> GRIS (PV228)	Az.	261°44'17"	0.002 sec	0.009 sec	0.519
	ΔHt.	-4.497 ft	0.008 ft	0.083 ft	3.673
	Ellip Dist.	177502.922 ft	0.002 ft	0.010 ft	0.590
DEV1 --> GRIS (PV227)	Az.	54°46'23"	0.002 sec	0.004 sec	0.813
	ΔHt.	-85.848 ft	0.012 ft	0.072 ft	3.139
	Ellip Dist.	693010.071 ft	0.007 ft	-0.013 ft	-0.783
GRIS --> BA40 SM 01 (PV220)	Az.	76°15'23"	0.011 sec	0.020 sec	0.880
	ΔHt.	-29.902 ft	0.016 ft	-0.088 ft	-3.008

	Ellip Dist.	138845.038 ft	0.008 ft	0.011 ft	0.693
DEV1 --> GRIS (PV221)	Az.	54°46'23"	0.002 sec	0.001 sec	0.140
	ΔHt.	-85.848 ft	0.012 ft	0.061 ft	2.782
	Ellip Dist.	693010.071 ft	0.007 ft	-0.013 ft	-0.800
GRIS --> SBCH (PV233)	Az.	22°19'37"	0.002 sec	-0.015 sec	-1.062
	ΔHt.	2.656 ft	0.011 ft	-0.060 ft	-2.698
	Ellip Dist.	237019.374 ft	0.002 ft	0.009 ft	0.570
GRIS --> BA40 SM 03 (PV223)	Az.	92°40'04"	0.013 sec	0.007 sec	0.255
	ΔHt.	-23.864 ft	0.018 ft	-0.088 ft	-2.533
	Ellip Dist.	125598.523 ft	0.008 ft	-0.021 ft	-1.221
BVHS --> GRIS (PV222)	Az.	261°44'17"	0.002 sec	0.006 sec	0.314
	ΔHt.	-4.497 ft	0.008 ft	0.072 ft	2.366
	Ellip Dist.	177502.922 ft	0.002 ft	0.022 ft	1.243
GRIS --> CRMSBA SM 20 (PV226)	Az.	71°19'43"	0.027 sec	-0.082 sec	-1.430
	ΔHt.	-25.012 ft	0.017 ft	-0.088 ft	-2.275
	Ellip Dist.	57933.664 ft	0.008 ft	-0.007 ft	-0.372
DEV1 --> CRMSBA SM 20 (PV209)	Az.	55°58'22"	0.003 sec	-0.009 sec	-2.155
	ΔHt.	-110.860 ft	0.019 ft	0.004 ft	0.119
	Ellip Dist.	748945.726 ft	0.010 ft	-0.006 ft	-0.343
SBCH --> BA40 SM 01 (PV239)	Az.	166°36'27"	0.010 sec	-0.034 sec	-1.921
	ΔHt.	-32.559 ft	0.018 ft	-0.012 ft	-0.378
	Ellip Dist.	191580.657 ft	0.008 ft	0.035 ft	2.134

SBCH --> CRMSBA SM 20 (PV238)	Az.	190°04'32"	0.009 sec	-0.035 sec	-2.102
	ΔHt.	-27.669 ft	0.019 ft	0.018 ft	0.537
	Ellip Dist.	203759.177 ft	0.008 ft	0.017 ft	0.991
DEV1 --> SBCH (PV234)	Az.	46°27'45"	0.002 sec	-0.005 sec	-1.468
	ΔHt.	-83.192 ft	0.016 ft	-0.043 ft	-2.012
	Ellip Dist.	900561.837 ft	0.009 ft	-0.011 ft	-0.713
GRIS --> BA SCOFIELD 2 (PV224)	Az.	91°43'51"	0.015 sec	0.003 sec	0.089
	ΔHt.	-22.639 ft	0.018 ft	-0.069 ft	-1.998
	Ellip Dist.	112727.289 ft	0.008 ft	-0.003 ft	-0.206
BVHS --> CRMSBA SM 20 (PV195)	Az.	266°34'37"	0.014 sec	0.053 sec	1.978
	ΔHt.	-29.509 ft	0.020 ft	0.044 ft	1.258
	Ellip Dist.	120905.031 ft	0.009 ft	0.014 ft	0.830
GRIS --> CRMSBA SM 20 (PV231)	Az.	71°19'43"	0.027 sec	0.016 sec	0.274
	ΔHt.	-25.012 ft	0.017 ft	-0.064 ft	-1.723
	Ellip Dist.	57933.664 ft	0.008 ft	0.006 ft	0.328
GRIS --> BA SCOFIELD 2 (PV217)	Az.	91°43'51"	0.015 sec	-0.023 sec	-0.767
	ΔHt.	-22.639 ft	0.018 ft	-0.061 ft	-1.702
	Ellip Dist.	112727.289 ft	0.008 ft	0.010 ft	0.575
SBCH --> BA40 SM 01 (PV245)	Az.	166°36'27"	0.010 sec	0.017 sec	0.959
	ΔHt.	-32.559 ft	0.018 ft	0.048 ft	1.701
	Ellip Dist.	191580.657 ft	0.008 ft	0.000 ft	0.008
CRMSBA SM 20 --> BA SCOFIELD 2 (PV178)	Az.	110°53'00"	0.034 sec	0.045 sec	0.839
	ΔHt.	2.373 ft	0.022 ft	0.011 ft	0.302

	Ellip Dist.	61819.935 ft	0.010 ft	0.028 ft	1.697
GRIS --> CRMSBA SM 20 (PV219)	Az.	71°19'43"	0.027 sec	0.096 sec	1.665
	ΔHt.	-25.012 ft	0.017 ft	-0.060 ft	-1.592
	Ellip Dist.	57933.664 ft	0.008 ft	0.020 ft	1.141
DEV1 --> BVHS (PV210)	Az.	59°57'31"	0.002 sec	0.006 sec	1.647
	ΔHt.	-81.352 ft	0.018 ft	-0.016 ft	-0.748
	Ellip Dist.	856263.960 ft	0.008 ft	-0.004 ft	-0.248
BVHS --> SBCH (PV249)	Az.	336°22'08"	0.002 sec	-0.001 sec	-0.070
	ΔHt.	-1.841 ft	0.018 ft	0.020 ft	0.953
	Ellip Dist.	211010.784 ft	0.002 ft	0.026 ft	1.639
GRIS --> SBCH (PV240)	Az.	22°19'37"	0.002 sec	-0.001 sec	-0.097
	ΔHt.	2.656 ft	0.011 ft	-0.035 ft	-1.597
	Ellip Dist.	237019.374 ft	0.002 ft	0.013 ft	0.816
GRIS --> BA SCOFIELD 2 (PV229)	Az.	91°43'51"	0.015 sec	0.016 sec	0.547
	ΔHt.	-22.639 ft	0.018 ft	-0.055 ft	-1.591
	Ellip Dist.	112727.289 ft	0.008 ft	0.001 ft	0.034
CRMSBA SM 20 --> BA SCOFIELD 2 (PV174)	Az.	110°53'00"	0.034 sec	-0.089 sec	-1.555
	ΔHt.	2.373 ft	0.022 ft	-0.014 ft	-0.363
	Ellip Dist.	61819.935 ft	0.010 ft	-0.012 ft	-0.746
BVHS --> SBCH (PV242)	Az.	336°22'08"	0.002 sec	-0.004 sec	-0.240
	ΔHt.	-1.841 ft	0.018 ft	0.012 ft	0.398
	Ellip Dist.	211010.784 ft	0.002 ft	0.026 ft	1.548
GRIS --> BA40 SM 01 (PV232)	Az.	76°15'23"	0.011 sec	-0.042 sec	-1.530

	ΔHt.	-29.902 ft	0.016 ft	-0.010 ft	-0.312
	Ellip Dist.	138845.038 ft	0.008 ft	-0.050 ft	-1.071
CRMSBA SM 20 --> BA40 SM 03 (PV181)	Az.	109°09'00"	0.028 sec	0.067 sec	1.518
	ΔHt.	1.148 ft	0.022 ft	-0.003 ft	-0.073
	Ellip Dist.	74674.141 ft	0.010 ft	0.012 ft	0.735
CRMSBA SM 20 --> BA40 SM 03 (PV171)	Az.	109°09'00"	0.028 sec	-0.072 sec	-1.507
	ΔHt.	1.148 ft	0.022 ft	-0.002 ft	-0.051
	Ellip Dist.	74674.141 ft	0.010 ft	-0.012 ft	-0.724
DEV1 --> BVHS (PV205)	Az.	59°57'31"	0.002 sec	0.002 sec	0.594
	ΔHt.	-81.352 ft	0.018 ft	-0.045 ft	-1.494
	Ellip Dist.	856263.960 ft	0.008 ft	0.005 ft	0.296
GRIS --> BA40 SM 03 (PV230)	Az.	92°40'04"	0.013 sec	-0.006 sec	-0.223
	ΔHt.	-23.864 ft	0.018 ft	-0.050 ft	-1.488
	Ellip Dist.	125598.523 ft	0.008 ft	0.001 ft	0.077
BVHS --> BA40 SM 01 (PV194)	Az.	279°33'36"	0.040 sec	0.030 sec	0.368
	ΔHt.	-34.399 ft	0.019 ft	0.055 ft	1.462
	Ellip Dist.	41209.540 ft	0.009 ft	0.012 ft	0.629
SBCH --> BA40 SM 03 (PV237)	Az.	171°11'49"	0.008 sec	-0.022 sec	-1.456
	ΔHt.	-26.520 ft	0.020 ft	-0.004 ft	-0.109
	Ellip Dist.	227864.848 ft	0.008 ft	-0.014 ft	-0.791
BVHS --> BA40 SM 03 (PV192)	Az.	237°32'39"	0.028 sec	0.036 sec	0.650
	ΔHt.	-28.361 ft	0.021 ft	0.045 ft	1.140
	Ellip Dist.	59524.409 ft	0.009 ft	0.025 ft	1.420

BVHS --> BA40 SM 01 (PV199)	Az.	279°33'36"	0.040 sec	-0.010 sec	-0.120
	ΔHt.	-34.399 ft	0.019 ft	0.037 ft	1.064
	Ellip Dist.	41209.540 ft	0.009 ft	0.024 ft	1.384
GRIS --> BA40 SM 03 (PV218)	Az.	92°40'04"	0.013 sec	-0.016 sec	-0.577
	ΔHt.	-23.864 ft	0.018 ft	-0.050 ft	-1.375
	Ellip Dist.	125598.523 ft	0.008 ft	0.009 ft	0.557
BVHS --> BA SCOFIELD 2 (PV193)	Az.	244°57'07"	0.024 sec	0.021 sec	0.435
	ΔHt.	-27.136 ft	0.021 ft	0.052 ft	1.374
	Ellip Dist.	69542.184 ft	0.009 ft	0.006 ft	0.329
BVHS --> GRIS (PV216)	Az.	261°44'17"	0.002 sec	0.014 sec	0.464
	ΔHt.	-4.497 ft	0.008 ft	0.091 ft	1.367
	Ellip Dist.	177502.922 ft	0.002 ft	0.011 ft	0.347
BA40 SM 01 --> BA SCOFIELD 2 (PV175)	Az.	211°35'05"	0.048 sec	0.109 sec	1.364
	ΔHt.	7.264 ft	0.021 ft	0.009 ft	0.222
	Ellip Dist.	42625.179 ft	0.010 ft	-0.007 ft	-0.385
SBCH --> BA SCOFIELD 2 (PV250)	Az.	174°20'06"	0.008 sec	-0.004 sec	-0.282
	ΔHt.	-25.295 ft	0.020 ft	0.014 ft	0.402
	Ellip Dist.	223801.726 ft	0.008 ft	0.023 ft	1.357
DEV1 --> BA SCOFIELD 2 (PV211)	Az.	59°36'59"	0.002 sec	0.006 sec	1.352
	ΔHt.	-108.487 ft	0.020 ft	-0.011 ft	-0.304
	Ellip Dist.	786894.705 ft	0.010 ft	-0.011 ft	-0.578
SBCH --> BA SCOFIELD 2 (PV236)	Az.	174°20'06"	0.008 sec	-0.020 sec	-1.332
	ΔHt.	-25.295 ft	0.020 ft	-0.011 ft	-0.309

	Ellip Dist.	223801.726 ft	0.008 ft	-0.015 ft	-0.857
BVHS --> SBCH (PV235)	Az.	336°22'08"	0.002 sec	-0.015 sec	-0.625
	ΔHt.	-1.841 ft	0.018 ft	-0.018 ft	-0.279
	Ellip Dist.	211010.784 ft	0.002 ft	0.042 ft	1.318
SBCH --> BA40 SM 03 (PV243)	Az.	171°11'49"	0.008 sec	0.019 sec	1.296
	ΔHt.	-26.520 ft	0.020 ft	0.014 ft	0.438
	Ellip Dist.	227864.848 ft	0.008 ft	0.000 ft	-0.024
BVHS --> BA40 SM 03 (PV197)	Az.	237°32'39"	0.028 sec	-0.010 sec	-0.168
	ΔHt.	-28.361 ft	0.021 ft	0.048 ft	1.295
	Ellip Dist.	59524.409 ft	0.009 ft	-0.005 ft	-0.284
BA40 SM 01 --> BA40 SM 03 (PV180)	Az.	193°49'29"	0.053 sec	0.027 sec	0.308
	ΔHt.	6.038 ft	0.021 ft	-0.007 ft	-0.185
	Ellip Dist.	39955.694 ft	0.010 ft	0.021 ft	1.293
GRIS --> BA40 SM 01 (PV225)	Az.	76°15'23"	0.011 sec	-0.014 sec	-0.612
	ΔHt.	-29.902 ft	0.016 ft	-0.037 ft	-1.281
	Ellip Dist.	138845.038 ft	0.008 ft	-0.012 ft	-0.736
BVHS --> CRMSBA SM 20 (PV198)	Az.	266°34'37"	0.014 sec	0.001 sec	0.024
	ΔHt.	-29.509 ft	0.020 ft	0.043 ft	1.279
	Ellip Dist.	120905.031 ft	0.009 ft	-0.014 ft	-0.816
SBCH --> CRMSBA SM 20 (PV246)	Az.	190°04'32"	0.009 sec	0.021 sec	1.267
	ΔHt.	-27.669 ft	0.019 ft	0.023 ft	0.733
	Ellip Dist.	203759.177 ft	0.008 ft	-0.010 ft	-0.579
DEV1 --> BA SCOFIELD 2 (PV201)	Az.	59°36'59"	0.002 sec	-0.005 sec	-1.247

	ΔHt.	-108.487 ft	0.020 ft	0.023 ft	0.647
	Ellip Dist.	786894.705 ft	0.010 ft	0.003 ft	0.174
GRIS --> SBCH (PV247)	Az.	22°19'37"	0.002 sec	0.011 sec	0.789
	ΔHt.	2.656 ft	0.011 ft	-0.029 ft	-1.168
	Ellip Dist.	237019.374 ft	0.002 ft	0.021 ft	1.227
DEV1 --> BA40 SM 01 (PV208)	Az.	58°10'33"	0.002 sec	-0.002 sec	-0.562
	ΔHt.	-115.751 ft	0.018 ft	0.035 ft	1.218
	Ellip Dist.	824403.745 ft	0.010 ft	0.006 ft	0.338
DEV1 --> CRMSBA SM 20 (PV213)	Az.	55°58'22"	0.003 sec	0.005 sec	1.164
	ΔHt.	-110.860 ft	0.019 ft	-0.004 ft	-0.090
	Ellip Dist.	748945.726 ft	0.010 ft	-0.010 ft	-0.515
DEV1 --> BA40 SM 03 (PV202)	Az.	60°13'21"	0.002 sec	-0.004 sec	-0.977
	ΔHt.	-109.712 ft	0.020 ft	0.038 ft	1.058
	Ellip Dist.	796861.164 ft	0.010 ft	0.012 ft	0.653
BVHS --> BA SCOFIELD 2 (PV196)	Az.	244°57'07"	0.024 sec	-0.026 sec	-0.536
	ΔHt.	-27.136 ft	0.021 ft	0.038 ft	1.057
	Ellip Dist.	69542.184 ft	0.009 ft	-0.002 ft	-0.096
BA40 SM 01 --> CRMSBA SM 20 (PV176)	Az.	259°58'26"	0.024 sec	0.040 sec	1.023
	ΔHt.	4.890 ft	0.021 ft	-0.018 ft	-0.512
	Ellip Dist.	81277.985 ft	0.010 ft	0.008 ft	0.489
SBCH --> BA SCOFIELD 2 (PV244)	Az.	174°20'06"	0.008 sec	0.004 sec	0.240
	ΔHt.	-25.295 ft	0.020 ft	0.031 ft	0.973
	Ellip Dist.	223801.726 ft	0.008 ft	0.005 ft	0.299

DEV1 --> CRMSBA SM 20 (PV203)	Az.	55°58'22"	0.003 sec	0.004 sec	0.946
	ΔHt.	-110.860 ft	0.019 ft	0.030 ft	0.899
	Ellip Dist.	748945.726 ft	0.010 ft	-0.006 ft	-0.323
BA40 SM 03 --> BA SCOFIELD 2 (PV179)	Az.	281°00'01"	0.160 sec	0.249 sec	0.944
	ΔHt.	1.225 ft	0.023 ft	-0.004 ft	-0.094
	Ellip Dist.	13017.461 ft	0.010 ft	0.013 ft	0.705
DEV1 --> GRIS (PV215)	Az.	54°46'23"	0.002 sec	-0.001 sec	-0.163
	ΔHt.	-85.848 ft	0.012 ft	0.020 ft	0.928
	Ellip Dist.	693010.071 ft	0.007 ft	-0.013 ft	-0.839
DEV1 --> BA40 SM 01 (PV204)	Az.	58°10'33"	0.002 sec	0.002 sec	0.413
	ΔHt.	-115.751 ft	0.018 ft	-0.025 ft	-0.890
	Ellip Dist.	824403.745 ft	0.010 ft	-0.009 ft	-0.531
DEV1 --> BA SCOFIELD 2 (PV207)	Az.	59°36'59"	0.002 sec	0.000 sec	-0.043
	ΔHt.	-108.487 ft	0.020 ft	0.029 ft	0.884
	Ellip Dist.	786894.705 ft	0.010 ft	0.004 ft	0.236
BA40 SM 03 --> BA SCOFIELD 2 (PV173)	Az.	281°00'01"	0.160 sec	0.077 sec	0.263
	ΔHt.	1.225 ft	0.023 ft	0.013 ft	0.256
	Ellip Dist.	13017.461 ft	0.010 ft	0.016 ft	0.884
DEV1 --> BA40 SM 03 (PV212)	Az.	60°13'21"	0.002 sec	0.003 sec	0.783
	ΔHt.	-109.712 ft	0.020 ft	0.014 ft	0.368
	Ellip Dist.	796861.164 ft	0.010 ft	0.012 ft	0.646
BA40 SM 01 --> CRMSBA SM 20 (PV170)	Az.	259°58'26"	0.024 sec	-0.014 sec	-0.342
	ΔHt.	4.890 ft	0.021 ft	0.027 ft	0.750

	Ellip Dist.	81277.985 ft	0.010 ft	0.011 ft	0.643
SBCH --> CRMSBA SM 20 (PV252)	Az.	190°04'32"	0.009 sec	-0.009 sec	-0.523
	ΔHt.	-27.669 ft	0.019 ft	0.013 ft	0.392
	Ellip Dist.	203759.177 ft	0.008 ft	0.013 ft	0.738
BA40 SM 01 --> BA40 SM 03 (PV172)	Az.	193°49'29"	0.053 sec	0.056 sec	0.641
	ΔHt.	6.038 ft	0.021 ft	0.011 ft	0.272
	Ellip Dist.	39955.694 ft	0.010 ft	-0.012 ft	-0.706
BA40 SM 01 --> BA SCOFIELD 2 (PV187)	Az.	211°35'05"	0.048 sec	-0.053 sec	-0.638
	ΔHt.	7.264 ft	0.021 ft	0.001 ft	0.016
	Ellip Dist.	42625.179 ft	0.010 ft	0.012 ft	0.671
DEV1 --> BA40 SM 03 (PV206)	Az.	60°13'21"	0.002 sec	-0.002 sec	-0.464
	ΔHt.	-109.712 ft	0.020 ft	0.020 ft	0.600
	Ellip Dist.	796861.164 ft	0.010 ft	-0.004 ft	-0.249
DEV1 --> BA40 SM 01 (PV214)	Az.	58°10'33"	0.002 sec	0.001 sec	0.269
	ΔHt.	-115.751 ft	0.018 ft	0.015 ft	0.547
	Ellip Dist.	824403.745 ft	0.010 ft	-0.010 ft	-0.576
BA40 SM 01 --> CRMSBA SM 20 (PV182)	Az.	259°58'26"	0.024 sec	-0.021 sec	-0.520
	ΔHt.	4.890 ft	0.021 ft	-0.009 ft	-0.247
	Ellip Dist.	81277.985 ft	0.010 ft	-0.007 ft	-0.399
BVHS --> BA40 SM 01 (PV191)	Az.	279°33'36"	0.040 sec	-0.053 sec	-0.385
	ΔHt.	-34.399 ft	0.019 ft	0.036 ft	0.503
	Ellip Dist.	41209.540 ft	0.009 ft	0.016 ft	0.511
BA40 SM 03 --> BA SCOFIELD 2 (PV185)	Az.	281°00'01"	0.160 sec	-0.061 sec	-0.209

	ΔHt.	1.225 ft	0.023 ft	0.002 ft	0.030
	Ellip Dist.	13017.461 ft	0.010 ft	0.010 ft	0.508
DEV1 --> BVHS (PV200)	Az.	59°57'31"	0.002 sec	0.003 sec	0.503
	ΔHt.	-81.352 ft	0.018 ft	-0.026 ft	-0.398
	Ellip Dist.	856263.960 ft	0.008 ft	-0.006 ft	-0.209
DEV1 --> SBCH (PV241)	Az.	46°27'45"	0.002 sec	-0.002 sec	-0.485
	ΔHt.	-83.192 ft	0.016 ft	0.007 ft	0.327
	Ellip Dist.	900561.837 ft	0.009 ft	0.003 ft	0.181
SBCH --> BA40 SM 01 (PV253)	Az.	166°36'27"	0.010 sec	0.007 sec	0.371
	ΔHt.	-32.559 ft	0.018 ft	0.013 ft	0.475
	Ellip Dist.	191580.657 ft	0.008 ft	0.002 ft	0.110
SBCH --> BA40 SM 03 (PV251)	Az.	171°11'49"	0.008 sec	-0.007 sec	-0.456
	ΔHt.	-26.520 ft	0.020 ft	0.015 ft	0.458
	Ellip Dist.	227864.848 ft	0.008 ft	0.000 ft	-0.002
BA40 SM 01 --> BA40 SM 03 (PV184)	Az.	193°49'29"	0.053 sec	-0.042 sec	-0.446
	ΔHt.	6.038 ft	0.021 ft	0.005 ft	0.140
	Ellip Dist.	39955.694 ft	0.010 ft	0.007 ft	0.413
CRMSBA SM 20 --> BA SCOFIELD 2 (PV186)	Az.	110°53'00"	0.034 sec	0.023 sec	0.416
	ΔHt.	2.373 ft	0.022 ft	0.004 ft	0.103
	Ellip Dist.	61819.935 ft	0.010 ft	0.000 ft	0.021
BA40 SM 01 --> BA SCOFIELD 2 (PV177)	Az.	211°35'05"	0.048 sec	-0.029 sec	-0.369
	ΔHt.	7.264 ft	0.021 ft	0.004 ft	0.095
	Ellip Dist.	42625.179 ft	0.010 ft	0.006 ft	0.374

CRMSBA SM 20 --> BA40 SM 03 (PV183)	Az.	109°09'00"	0.028 sec	-0.013 sec	-0.289
	ΔHt.	1.148 ft	0.022 ft	0.001 ft	0.035
	Ellip Dist.	74674.141 ft	0.010 ft	-0.002 ft	-0.122
DEV1 --> SBCH (PV248)	Az.	46°27'45"	0.002 sec	0.000 sec	0.086
	ΔHt.	-83.192 ft	0.016 ft	-0.002 ft	-0.080
	Ellip Dist.	900561.837 ft	0.009 ft	0.000 ft	0.031

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
BA SCOFIELD 2	BVHS	Az.	64°51'19"	0.024 sec	1 : 8011775	1 : 8011753
		ΔHt.	27.139 ft	0.020 ft		
		ΔElev.	27.613 ft	0.020 ft		
		Ellip Dist.	69542.192 ft	0.009 ft		
BA SCOFIELD 2	DEV1	Az.	240°38'22"	0.002 sec	1 : 90699051	1 : 90684644
		ΔHt.	108.485 ft	0.020 ft		
		ΔElev.	109.061 ft	0.020 ft		
		Ellip Dist.	786894.794 ft	0.009 ft		
BA SCOFIELD 2	GRIS	Az.	271°54'13"	0.015 sec	1 : 13190170	1 : 13202822
		ΔHt.	22.598 ft	0.020 ft		
		ΔElev.	23.441 ft	0.020 ft		
		Ellip Dist.	112727.302 ft	0.009 ft		
BA SCOFIELD 2	SBCH	Az.	354°22'09"	0.008 sec	1 : 27724626	1 : 27701518

		ΔHt.	25.154 ft	0.020 ft		
		ΔElev.	31.925 ft	0.020 ft		
		Ellip Dist.	223801.751 ft	0.008 ft		
BA40 SM 01	BA SCOFIELD 2	Az.	211°35'05"	0.048 sec	1 : 4169138	1 : 4163446
		ΔHt.	7.278 ft	0.021 ft		
		ΔElev.	6.556 ft	0.021 ft		
		Ellip Dist.	42625.184 ft	0.010 ft		
BA40 SM 01	BA40 SM 03	Az.	193°49'29"	0.053 sec	1 : 4014170	1 : 4008563
		ΔHt.	6.059 ft	0.022 ft		
		ΔElev.	5.261 ft	0.022 ft		
		Ellip Dist.	39955.698 ft	0.010 ft		
BA40 SM 01	BVHS	Az.	99°29'51"	0.040 sec	1 : 4845632	1 : 4849921
		ΔHt.	34.417 ft	0.018 ft		
		ΔElev.	34.169 ft	0.018 ft		
		Ellip Dist.	41209.544 ft	0.009 ft		
BA40 SM 01	CRMSBA SM 20	Az.	259°58'26"	0.024 sec	1 : 7782342	1 : 7785732
		ΔHt.	4.872 ft	0.021 ft		
		ΔElev.	4.967 ft	0.021 ft		
		Ellip Dist.	81277.994 ft	0.010 ft		
BA40 SM 01	DEV1	Az.	239°14'02"	0.002 sec	1 : 96706174	1 : 96633837
		ΔHt.	115.763 ft	0.018 ft		
		ΔElev.	115.617 ft	0.018 ft		
		Ellip Dist.	824403.838 ft	0.009 ft		
BA40 SM 01	GRIS	Az.	256°27'49"	0.012 sec	1 : 16152612	1 : 16151763
		ΔHt.	29.876 ft	0.018 ft		

		ΔElev.	29.997 ft	0.018 ft		
		Ellip Dist.	138845.054 ft	0.009 ft		
BA40 SM 01	SBCH	Az.	346°40'35"	0.009 sec	1 : 24304929	1 : 24306234
		ΔHt.	32.432 ft	0.018 ft		
		ΔElev.	38.481 ft	0.018 ft		
		Ellip Dist.	191580.678 ft	0.008 ft		
BA40 SM 03	BA SCOFIELD 2	Az.	281°00'01"	0.161 sec	1 : 1243173	1 : 1244910
		ΔHt.	1.219 ft	0.023 ft		
		ΔElev.	1.295 ft	0.023 ft		
		Ellip Dist.	13017.462 ft	0.010 ft		
BA40 SM 03	BVHS	Az.	57°28'02"	0.028 sec	1 : 6834254	1 : 6832006
		ΔHt.	28.359 ft	0.020 ft		
		ΔElev.	28.908 ft	0.020 ft		
		Ellip Dist.	59524.416 ft	0.009 ft		
BA40 SM 03	DEV1	Az.	241°15'53"	0.002 sec	1 : 91389644	1 : 91375324
		ΔHt.	109.704 ft	0.020 ft		
		ΔElev.	110.356 ft	0.020 ft		
		Ellip Dist.	796861.254 ft	0.009 ft		
BA40 SM 03	GRIS	Az.	272°51'36"	0.013 sec	1 : 14626508	1 : 14640878
		ΔHt.	23.818 ft	0.020 ft		
		ΔElev.	24.737 ft	0.020 ft		
		Ellip Dist.	125598.537 ft	0.009 ft		
BA40 SM 03	SBCH	Az.	351°15'03"	0.008 sec	1 : 28152552	1 : 28132653
		ΔHt.	26.373 ft	0.020 ft		
		ΔElev.	33.220 ft	0.020 ft		

		Ellip Dist.	227864.873 ft	0.008 ft		
BVHS	DEV1	Az.	241°04'41"	0.000 sec	1 : 0	1 : 0
		ΔHt.	81.346 ft	0.000 ft		
		ΔElev.	81.448 ft	0.000 ft		
		Ellip Dist.	856264.056 ft	0.000 ft		
BVHS	GRIS	Az.	261°44'17"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-4.541 ft	0.000 ft		
		ΔElev.	-4.171 ft	0.000 ft		
		Ellip Dist.	177502.943 ft	0.000 ft		
BVHS	SBCH	Az.	336°22'08"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-1.985 ft	0.000 ft		
		ΔElev.	4.312 ft	0.000 ft		
		Ellip Dist.	211010.809 ft	0.000 ft		
CRMSBA SM 20	BA SCOFIELD 2	Az.	110°53'00"	0.034 sec	1 : 6097006	1 : 6104551
		ΔHt.	2.406 ft	0.022 ft		
		ΔElev.	1.589 ft	0.022 ft		
		Ellip Dist.	61819.941 ft	0.010 ft		
CRMSBA SM 20	BA40 SM 03	Az.	109°09'01"	0.028 sec	1 : 7338005	1 : 7346945
		ΔHt.	1.187 ft	0.023 ft		
		ΔElev.	0.294 ft	0.023 ft		
		Ellip Dist.	74674.149 ft	0.010 ft		
CRMSBA SM 20	BVHS	Az.	86°23'29"	0.013 sec	1 : 14362049	1 : 14372612
		ΔHt.	29.546 ft	0.018 ft		
		ΔElev.	29.202 ft	0.018 ft		
		Ellip Dist.	120905.044 ft	0.008 ft		

CRMSBA SM 20	DEV1	Az.	236°54'34"	0.002 sec	1 : 88173106	1 : 88149286
		ΔHt.	110.891 ft	0.018 ft		
		ΔElev.	110.650 ft	0.018 ft		
		Ellip Dist.	748945.811 ft	0.008 ft		
CRMSBA SM 20	GRIS	Az.	251°24'46"	0.028 sec	1 : 6816634	1 : 6818432
		ΔHt.	25.005 ft	0.018 ft		
		ΔElev.	25.031 ft	0.018 ft		
		Ellip Dist.	57933.670 ft	0.008 ft		
CRMSBA SM 20	SBCH	Az.	10°01'13"	0.008 sec	1 : 25313510	1 : 25285339
		ΔHt.	27.560 ft	0.018 ft		
		ΔElev.	33.514 ft	0.018 ft		
		Ellip Dist.	203759.200 ft	0.008 ft		
DEV1	GRIS	Az.	54°46'23"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-85.886 ft	0.000 ft		
		ΔElev.	-85.620 ft	0.000 ft		
		Ellip Dist.	693010.149 ft	0.000 ft		
DEV1	SBCH	Az.	46°27'45"	0.000 sec	1 : 0	1 : 0
		ΔHt.	-83.331 ft	0.000 ft		
		ΔElev.	-77.136 ft	0.000 ft		
		Ellip Dist.	900561.942 ft	0.000 ft		
GRIS	SBCH	Az.	22°19'37"	0.000 sec	1 : 0	1 : 0
		ΔHt.	2.556 ft	0.000 ft		
		ΔElev.	8.483 ft	0.000 ft		
		Ellip Dist.	237019.401 ft	0.000 ft		

Project: D:\TBC_5Island\COMBINED NAD

Date: 1/24/2018 11:48:04 AM

83 LA S GEOID12B.vce

Trimble Business Center

Barataria Basin Five Barrier Islands Lidar Topo Bathy CPRA (2017) - OPUS COMPARISONS

Horizontal Datum: NAD83 (2011) LSZ (1702) - Vertical Datum: NAVD88 (Geoid12B)

Comparison at Monument "BA SCOFIELD 02" - OPUS Average vs. Static GPS Adjustment

Monument	DEG	MIN	SEC	DEG	MIN	SEC	Northing Mtr	Easting Mtr	Northing Ft	Easting Ft	Ellipsoid Hgt Mtr	Elev Mtr	Elev Ft
89971071.17o	29	15	20.49311	89	36	14.24815	85,034.984	1,168,087.329	278,985.61	3,832,299.84	-22.563	1.156	3.793
29361080.17o	29	15	20.49339	89	36	14.24807	85,034.993	1,168,087.331	278,985.64	3,832,299.85	-22.566	1.153	3.783
89971090.17o	29	15	20.49334	89	36	14.24811	85,034.991	1,168,087.330	278,985.63	3,832,299.84	-22.557	1.162	3.812
OPUS AVG	29	15	20.49328	89	36	14.24811	85,034.989	1,168,087.330	278,985.63	3,832,299.84	-22.562	1.157	3.796
BA SCOFIELD 02	29	15	20.49315	89	36	14.24815	85,034.985	1,168,087.330	278,985.61	3,832,299.85	-22.520	1.19878	3.930
Difference =	0	0	0.00013	0.000	0.000	-0.00004	0.004	0.000	0.013	-0.001	-0.042	-0.042	-0.134

Comparison at Monument "BA40 SM 01" - OPUS Average vs. Static GPS Adjustment

Monument	DEG	MIN	SEC	DEG	MIN	SEC	Northing Mtr	Easting Mtr	Northing Ft	Easting Ft	Ellipsoid Hgt Mtr	Elev Mtr	Elev Ft
29271070.17o	29	21	20.02494	89	32	02.21641	96,208.048	1,174,717.496	315,642.570	3,854,052.314	-24.786	-0.847	-2.779
89871080.17o	29	21	20.02487	89	32	02.21577	96,208.046	1,174,717.513	315,642.564	3,854,052.370	-24.794	-0.855	-2.805
29271090.17o	29	21	20.02466	89	32	02.21581	96,208.040	1,174,717.512	315,642.544	3,854,052.367	-24.780	-0.841	-2.759
OPUS AVG	29	21	20.02482	89	32	02.21600	96,208.045	1,174,717.507	315,642.560	3,854,052.350	-24.787	-0.848	-2.781
BA40 SM 01	29	21	20.02463	89	32	02.21585	96,208.039	1,174,717.512	315,642.541	3,854,052.368	-24.744	-0.799	-2.623
Difference =	0	0	0.00019	0.000	0.000	00.00015	0.006	-0.005	0.019	-0.018	-0.043	-0.049	-0.158

Comparison at Monument "BA40 SM 03" - OPUS Average vs. Static GPS Adjustment

Monument	DEG	MIN	SEC	DEG	MIN	SEC	Northing Mtr	Easting Mtr	Northing Ft	Easting Ft	Ellipsoid Hgt Mtr	Elev Mtr	Elev Ft
29361070.17o	29	14	55.92468	89	33	49.99244	84,338.092	1,171,993.423	276,699.223	3,845,115.085	-22.934	0.762	2.500
89971080.17o	29	14	55.92483	89	33	49.99237	84,338.097	1,171,993.425	276,699.240	3,845,115.091	-22.928	0.768	2.520
29361090.17o	29	14	55.92482	89	33	49.99252	84,338.096	1,171,993.421	276,699.234	3,845,115.043	-22.927	0.769	2.523
OPUS AVG	29	14	55.92478	89	33	49.99244	84,338.095	1,171,993.423	276,699.232	3,845,115.073	-22.930	0.766	2.514
BA40 SM 03	29	14	55.92470	89	33	49.99250	84,338.093	1,171,993.422	276,699.226	3,845,115.083	-22.891	0.804	2.638
Difference =	0	0	00.00008	0.000	0.000	-00.00006	0.002	0.001	0.006	-0.010	-0.039	-0.038	-0.124

Comparison at Monument "CRMSBA SM 20" - OPUS Average vs. Static GPS Adjustment

Monument	DEG	MIN	SEC	DEG	MIN	SEC	Northing Mtr	Easting Mtr	Northing Ft	Easting Ft	Ellipsoid Hgt Mtr	Elev Mtr	Elev Ft
89871070.17o	29	18	59.09113	89	47	06.29584	91,513.036	1,150,393.076	300,239.019	3,774,247.946	-23.297	0.671	2.201
29271080.17o	29	18	59.09065	89	47	06.29566	91,513.021	1,150,393.081	300,238.969	3,774,247.963	-23.279	0.689	2.260
89871090.17o	29	18	59.09107	89	47	06.29577	91,513.034	1,150,393.078	300,239.012	3,774,247.953	-23.296	0.672	2.205
OPUS AVG	29	18	59.09095	89	47	06.29576	91,513.030	1,150,393.078	300,239.000	3,774,247.954	-23.291	0.677	2.222
CRMSBA SM 20	29	18	59.09078	89	47	06.29582	91,513.025	1,150,393.077	300,238.984	3,774,247.951	-23.253	0.714	2.344
Difference =	0	0	00.00017	0.000	0.000	-00.00006	0.005	0.001	0.016	0.003	-0.037	-0.037	-0.122

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:04 AM
To: Castille, Lance
Subject: OPUS solution : 89971090.17o OP1494259379265
Attachments: 8997109n.17o.xml

FILE: 89971090.17o OP1494259379265

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 8997109n.17o TIME: 16:04:19 UTC

SOFTWARE: page5 1209.04 master55.pl 160321 START: 2017/04/19 13:30:00
EPHEMERIS: igs19453.eph [precise] STOP: 2017/04/19 19:00:00
NAV FILE: brdc1090.17n OBS USED: 14691 / 15485 : 95%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 74 / 80 : 93%
ARP HEIGHT: 2.000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2977)

X:	38494.122(m)	0.005(m)	38493.317(m)	0.005(m)
Y:	-5568890.507(m)	0.009(m)	-5568888.998(m)	0.009(m)
Z:	3098646.530(m)	0.013(m)	3098646.344(m)	0.013(m)

LAT:	29 15 20.49334	0.009(m)	29 15 20.51210	0.009(m)
E LON:	270 23 45.75189	0.005(m)	270 23 45.72246	0.005(m)
W LON:	89 36 14.24811	0.005(m)	89 36 14.27754	0.005(m)
EL HGT:	-22.557(m)	0.014(m)	-23.969(m)	0.014(m)
ORTHO HGT:	1.162(m)	0.027(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3239126.075	85034.991
Easting (X) [meters]	246955.554	1168087.330
Convergence [degrees]	-1.27325237	0.86470971
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039373	1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	21196.4
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	90504.2

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:01 AM
To: Castille, Lance
Subject: OPUS solution : 89971080.17o OP1494259076541
Attachments: 8997108n.17o.xml

FILE: 89971080.17o OP1494259076541

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 8997108n.17o TIME: 16:00:21 UTC

SOFTWARE: page5 1209.04 master55.pl 160321 START: 2017/04/18 13:40:00
EPHEMERIS: igs19452.eph [precise] STOP: 2017/04/18 20:21:00
NAV FILE: brdc1080.17n OBS USED: 17757 / 18702 : 95%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 78 / 84 : 93%
ARP HEIGHT: 2.000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2951)

X:	42391.647(m)	0.012(m)	42390.842(m)	0.012(m)
Y:	-5569231.525(m)	0.018(m)	-5569230.016(m)	0.018(m)
Z:	3097986.378(m)	0.015(m)	3097986.192(m)	0.015(m)

LAT:	29 14 55.92483	0.012(m)	29 14 55.94360	0.012(m)
E LON:	270 26 10.00763	0.012(m)	270 26 9.97824	0.012(m)
W LON:	89 33 49.99237	0.012(m)	89 33 50.02176	0.012(m)
EL HGT:	-22.928(m)	0.019(m)	-24.341(m)	0.019(m)
ORTHO HGT:	0.768(m)	0.034(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3238283.631	84338.097
Easting (X) [meters]	250834.356	1171993.425
Convergence [degrees]	-1.25337204	0.88474574
Point Scale	1.00036615	1.00001122
Combined Factor	1.00036975	1.00001482

US NATIONAL GRID DESIGNATOR: 16RBT5083438283(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	18143.0
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	69452.8
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	92225.2

NEAREST NGS PUBLISHED CONTROL POINT

AT1158	SCOFIELD BAYOU LIGHT NEW	N291450.261	W0893348.547	178.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 10:55 AM
To: Castille, Lance
Subject: OPUS solution : 89971071.17o OP1494258840833
Attachments: 8997107r.17o.xml

FILE: 89971071.17o OP1494258840833

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 8997107r.17o TIME: 15:55:06 UTC

SOFTWARE: page5 1209.04 master58.pl 160321 START: 2017/04/17 17:29:00
EPHEMERIS: igs19451.eph [precise] STOP: 2017/04/17 22:08:00
NAV FILE: brdc1070.17n OBS USED: 12079 / 12679 : 95%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 73 / 76 : 96%
ARP HEIGHT: 2.000 OVERALL RMS: 0.015(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2927)

X:	38494.121(m)	0.006(m)	38493.316(m)	0.006(m)
Y:	-5568890.505(m)	0.006(m)	-5568888.996(m)	0.006(m)
Z:	3098646.521(m)	0.010(m)	3098646.335(m)	0.010(m)

LAT:	29 15 20.49311	0.009(m)	29 15 20.51188	0.009(m)
E LON:	270 23 45.75185	0.006(m)	270 23 45.72242	0.006(m)
W LON:	89 36 14.24815	0.006(m)	89 36 14.27758	0.006(m)
EL HGT:	-22.563(m)	0.008(m)	-23.976(m)	0.008(m)
ORTHO HGT:	1.156(m)	0.018(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3239126.069	85034.984
Easting (X) [meters]	246955.553	1168087.329
Convergence [degrees]	-1.27325238	0.86470970
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039374	1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	90504.3
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Thursday, May 11, 2017 10:06 AM
To: Castille, Lance
Subject: OPUS solution : 89871300.17o OP1494514972815
Attachments: 8987130m.17o.xml

FILE: 89871300.17o OP1494514972815

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 11, 2017
RINEX FILE: 8987130m.17o TIME: 15:06:07 UTC

SOFTWARE: page5 1209.04 master95.pl 160321 START: 2017/05/10 12:37:00
EPHEMERIS: igu19483.eph [ultra-rapid] STOP: 2017/05/10 20:40:00
NAV FILE: brdc1300.17n OBS USED: 21400 / 22574 : 95%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 103 / 120 : 86%
ARP HEIGHT: 2.000 OVERALL RMS: 0.017(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.3553)

X:	38494.124(m)	0.006(m)	38493.318(m)	0.006(m)
Y:	-5568890.481(m)	0.006(m)	-5568888.972(m)	0.006(m)
Z:	3098646.517(m)	0.005(m)	3098646.331(m)	0.005(m)

LAT:	29 15 20.49338	0.005(m)	29 15 20.51215	0.005(m)
E LON:	270 23 45.75197	0.006(m)	270 23 45.72250	0.006(m)
W LON:	89 36 14.24803	0.006(m)	89 36 14.27750	0.006(m)
EL HGT:	-22.586(m)	0.006(m)	-23.998(m)	0.006(m)
ORTHO HGT:	1.133(m)	0.015(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3239126.077	85034.992
Easting (X) [meters]	246955.556	1168087.332
Convergence [degrees]	-1.27325236	0.86470972
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039374	1.00001322

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	90160.4
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	90504.3

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:04 AM
To: Castille, Lance
Subject: OPUS solution : 89871090.17o OP1494259347716
Attachments: 8987109n.17o.xml

FILE: 89871090.17o OP1494259347716

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 8987109n.17o TIME: 16:04:08 UTC

SOFTWARE: page5 1209.04 master95.pl 160321 START: 2017/04/19 13:13:00
EPHEMERIS: igs19453.eph [precise] STOP: 2017/04/19 18:55:00
NAV FILE: brdc1090.17n OBS USED: 15256 / 15963 : 96%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 61 / 64 : 95%
ARP HEIGHT: 2.000 OVERALL RMS: 0.017(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2977)

X:	20877.140(m)	0.005(m)	20876.335(m)	0.005(m)
Y:	-5565691.444(m)	0.008(m)	-5565689.937(m)	0.008(m)
Z:	3104516.334(m)	0.012(m)	3104516.148(m)	0.012(m)

LAT:	29 18 59.09107	0.009(m)	29 18 59.10981	0.009(m)
E LON:	270 12 53.70423	0.005(m)	270 12 53.67461	0.005(m)
W LON:	89 47 6.29577	0.005(m)	89 47 6.32539	0.005(m)
EL HGT:	-23.296(m)	0.012(m)	-24.703(m)	0.012(m)
ORTHO HGT:	0.672(m)	0.023(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3246262.962	91513.034
Easting (X) [meters]	229507.601	1150393.078
Convergence [degrees]	-1.36449571	0.77414523
Point Scale	1.00050293	0.99999657
Combined Factor	1.00050659	1.00000023

US NATIONAL GRID DESIGNATOR: 16RBT2950746262(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	76004.8
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	62105.5
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	17658.2

NEAREST NGS PUBLISHED CONTROL POINT

AT1199	MER 1966 RM 3	N291859.556	W0894706.233	14.4
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:00 AM
To: Castille, Lance
Subject: OPUS solution : 89871080.17o OP1494259044593
Attachments: 8987108l.17o.xml

FILE: 89871080.17o OP1494259044593

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 8987108l.17o TIME: 15:59:14 UTC

SOFTWARE: page5 1209.04 master56.pl 160321 START: 2017/04/18 11:50:00
EPHEMERIS: igs19452.eph [precise] STOP: 2017/04/18 21:58:00
NAV FILE: brdc1080.17n OBS USED: 26733 / 28784 : 93%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 129 / 148 : 87%
ARP HEIGHT: 2.000 OVERALL RMS: 0.017(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2951)

X:	45254.560(m)	0.011(m)	45253.754(m)	0.011(m)
Y:	-5563419.319(m)	0.015(m)	-5563417.811(m)	0.015(m)
Z:	3108298.375(m)	0.008(m)	3108298.190(m)	0.008(m)

LAT:	29 21 20.02487	0.014(m)	29 21 20.04375	0.014(m)
E LON:	270 27 57.78423	0.011(m)	270 27 57.75480	0.011(m)
W LON:	89 32 2.21577	0.011(m)	89 32 2.24520	0.011(m)
EL HGT:	-24.794(m)	0.012(m)	-26.205(m)	0.012(m)
ORTHO HGT:	-0.855(m)	0.024(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3250047.758	96208.046
Easting (X) [meters]	254000.984	1174717.513
Convergence [degrees]	-1.24283748	0.89971509
Point Scale	1.00034678	0.99998870
Combined Factor	1.00035068	0.99999259

US NATIONAL GRID DESIGNATOR: 16RBT5400050047(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	58393.5
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	82576.6
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	85796.4

NEAREST NGS PUBLISHED CONTROL POINT

AT0258	Q 195	N292120.	W0893157.	140.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 10:53 AM
To: Castille, Lance
Subject: OPUS solution : 89871070.17o OP1494258643025
Attachments: 8987107q.17o.xml

FILE: 89871070.17o OP1494258643025

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 8987107q.17o TIME: 15:52:11 UTC

SOFTWARE: page5 1209.04 master55.pl 160321 START: 2017/04/17 16:59:00
EPHEMERIS: igs19451.eph [precise] STOP: 2017/04/17 22:06:00
NAV FILE: brdc1070.17n OBS USED: 13677 / 14209 : 96%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 54 / 64 : 84%
ARP HEIGHT: 2.000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2926)

X:	20877.138(m)	0.006(m)	20876.333(m)	0.006(m)
Y:	-5565691.442(m)	0.010(m)	-5565689.935(m)	0.010(m)
Z:	3104516.335(m)	0.012(m)	3104516.149(m)	0.012(m)

LAT:	29 18 59.09113	0.006(m)	29 18 59.10987	0.006(m)
E LON:	270 12 53.70416	0.006(m)	270 12 53.67454	0.006(m)
W LON:	89 47 6.29584	0.006(m)	89 47 6.32546	0.006(m)
EL HGT:	-23.297(m)	0.015(m)	-24.704(m)	0.015(m)
ORTHO HGT:	0.671(m)	0.028(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3246262.964	91513.036
Easting (X) [meters]	229507.600	1150393.076
Convergence [degrees]	-1.36449572	0.77414522
Point Scale	1.00050293	0.99999657
Combined Factor	1.00050659	1.00000023

US NATIONAL GRID DESIGNATOR: 16RBT2950746262(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	17658.2
DJ9603	LWES LAKEWOOD ELMENTRY CORS ARP	N295401.295	W0902057.833	84719.3
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	62105.5

NEAREST NGS PUBLISHED CONTROL POINT

AT1199	MER 1966 RM 3	N291859.556	W0894706.233	14.4
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Thursday, July 13, 2017 9:31 AM
To: Castille, Lance
Subject: OPUS solution : 52151930.17o OP1499956100855
Attachments: 5215193n.17o.xml

FILE: 52151930.17o OP1499956100855

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: July 13, 2017
RINEX FILE: 5215193n.17o TIME: 14:30:57 UTC

SOFTWARE: page5 1603.24 master55.pl 160321 START: 2017/07/12 13:30:00
EPHEMERIS: igu19573.eph [ultra-rapid] STOP: 2017/07/12 20:11:00
NAV FILE: brdc1930.17n OBS USED: 17798 / 18452 : 96%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 60 / 70 : 86%
ARP HEIGHT: 2.000 OVERALL RMS: 0.023(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.5280)

X: 38494.095(m) 0.015(m) 38493.287(m) 0.015(m)
Y: -5568890.532(m) 0.027(m) -5568889.023(m) 0.027(m)
Z: 3098646.546(m) 0.016(m) 3098646.360(m) 0.016(m)

LAT: 29 15 20.49340 0.005(m) 29 15 20.51215 0.005(m)
E LON: 270 23 45.75088 0.015(m) 270 23 45.72136 0.015(m)
W LON: 89 36 14.24912 0.015(m) 89 36 14.27864 0.015(m)
EL HGT: -22.528(m) 0.031(m) -23.940(m) 0.031(m)
ORTHO HGT: 1.191(m) 0.054(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 16) SPC (1702 LA S)
Northing (Y) [meters] 3239126.078 85034.992
Easting (X) [meters] 246955.527 1168087.303
Convergence [degrees] -1.27325251 0.86470957
Point Scale 1.00039019 1.00000967
Combined Factor 1.00039373 1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	90160.4
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Wednesday, July 12, 2017 9:02 AM
To: Castille, Lance
Subject: OPUS solution : 52151920.17o OP1499868079024
Attachments: 5215192n.17o.xml

FILE: 52151920.17o OP1499868079024

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: July 12, 2017
RINEX FILE: 5215192n.17o TIME: 14:02:12 UTC

SOFTWARE: page5 1603.24 master90.pl 160321 START: 2017/07/11 13:22:00
EPHEMERIS: igu19572.eph [ultra-rapid] STOP: 2017/07/11 20:01:00
NAV FILE: brdc1920.17n OBS USED: 18152 / 18709 : 97%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 62 / 75 : 83%
ARP HEIGHT: 2.000 OVERALL RMS: 0.025(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.5252)

X: 38494.122(m) 0.009(m) 38493.314(m) 0.009(m)
Y: -5568890.500(m) 0.012(m) -5568888.991(m) 0.012(m)
Z: 3098646.505(m) 0.007(m) 3098646.319(m) 0.007(m)

LAT: 29 15 20.49275 0.002(m) 29 15 20.51150 0.002(m)
E LON: 270 23 45.75188 0.008(m) 270 23 45.72236 0.008(m)
W LON: 89 36 14.24812 0.008(m) 89 36 14.27764 0.008(m)
EL HGT: -22.575(m) 0.014(m) -23.988(m) 0.014(m)
ORTHO HGT: 1.144(m) 0.027(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3239126.057	85034.973
Easting (X) [meters]	246955.553	1168087.330
Convergence [degrees]	-1.27325237	0.86470971
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039374	1.00001322

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	21196.4

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Tuesday, July 11, 2017 9:45 AM
To: Castille, Lance
Subject: OPUS solution : 52151910.17o OP1499784249277
Attachments: 5215191r.17o.xml

FILE: 52151910.17o OP1499784249277

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: July 11, 2017
RINEX FILE: 5215191r.17o TIME: 14:45:01 UTC

SOFTWARE: page5 1603.24 master90.pl 160321 START: 2017/07/10 17:51:00
EPHEMERIS: igu19571.eph [ultra-rapid] STOP: 2017/07/10 20:30:00
NAV FILE: brdc1910.17n OBS USED: 6482 / 6709 : 97%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 31 / 37 : 84%
ARP HEIGHT: 2.000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.5227)

X:	38494.119(m)	0.012(m)	38493.311(m)	0.012(m)
Y:	-5568890.507(m)	0.056(m)	-5568888.998(m)	0.056(m)
Z:	3098646.523(m)	0.022(m)	3098646.337(m)	0.022(m)

LAT:	29 15 20.49314	0.009(m)	29 15 20.51190	0.009(m)
E LON:	270 23 45.75178	0.012(m)	270 23 45.72226	0.012(m)
W LON:	89 36 14.24822	0.012(m)	89 36 14.27774	0.012(m)
EL HGT:	-22.561(m)	0.059(m)	-23.973(m)	0.059(m)
ORTHO HGT:	1.158(m)	0.101(m)	[NAVD88 (Computed using GEOID12B)]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 16)	SPC (1702 LA S)
Northing (Y) [meters]	3239126.070	85034.985
Easting (X) [meters]	246955.551	1168087.327
Convergence [degrees]	-1.27325239	0.86470969
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039373	1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	21196.4

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Thursday, June 29, 2017 8:43 AM
To: Castille, Lance
Subject: OPUS solution : 52151790.17o OP1498743733532
Attachments: 5215179p.17o.xml

FILE: 52151790.17o OP1498743733532

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: June 29, 2017
RINEX FILE: 5215179p.17o TIME: 13:43:11 UTC

SOFTWARE: page5 1603.24 master92.pl 160321 START: 2017/06/28 15:09:00
EPHEMERIS: igu19553.eph [ultra-rapid] STOP: 2017/06/28 18:24:00
NAV FILE: brdc1790.17n OBS USED: 8690 / 8797 : 99%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 41 / 41 : 100%
ARP HEIGHT: 2.000 OVERALL RMS: 0.013(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.4896)

X:	38494.117(m)	0.006(m)	38493.309(m)	0.006(m)
Y:	-5568890.524(m)	0.011(m)	-5568889.015(m)	0.011(m)
Z:	3098646.537(m)	0.013(m)	3098646.351(m)	0.013(m)

LAT:	29 15 20.49325	0.009(m)	29 15 20.51204	0.009(m)
E LON:	270 23 45.75170	0.006(m)	270 23 45.72215	0.006(m)
W LON:	89 36 14.24830	0.006(m)	89 36 14.27785	0.006(m)
EL HGT:	-22.539(m)	0.015(m)	-23.951(m)	0.015(m)
ORTHO HGT:	1.180(m)	0.028(m)	[NAVD88 (Computed using GEOID12B)]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 16)	SPC (1702 LA S)
Northing (Y) [meters]	3239126.073	85034.988
Easting (X) [meters]	246955.549	1168087.325
Convergence [degrees]	-1.27325240	0.86470968
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039373	1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	21196.4
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	90160.4
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Wednesday, June 28, 2017 10:48 AM
To: Castille, Lance
Subject: OPUS solution : 52151780.17o OP1498664771825
Attachments: 5215178r.17o.xml

FILE: 52151780.17o OP1498664771825

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: June 28, 2017
RINEX FILE: 5215178r.17o TIME: 15:47:37 UTC

SOFTWARE: page5 1603.24 master90.pl 160321 START: 2017/06/27 17:03:00
EPHEMERIS: igu19552.eph [ultra-rapid] STOP: 2017/06/27 20:07:00
NAV FILE: brdc1780.17n OBS USED: 7579 / 7779 : 97%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 34 / 35 : 97%
ARP HEIGHT: 2.000 OVERALL RMS: 0.013(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.4870)

X: 38494.129(m) 0.016(m) 38493.321(m) 0.016(m)
Y: -5568890.532(m) 0.017(m) -5568889.023(m) 0.017(m)
Z: 3098646.540(m) 0.012(m) 3098646.354(m) 0.012(m)

LAT: 29 15 20.49322 0.002(m) 29 15 20.51201 0.002(m)
E LON: 270 23 45.75214 0.016(m) 270 23 45.72262 0.016(m)
W LON: 89 36 14.24786 0.016(m) 89 36 14.27738 0.016(m)
EL HGT: -22.530(m) 0.021(m) -23.943(m) 0.021(m)
ORTHO HGT: 1.189(m) 0.037(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters] 3239126.072 85034.987
Easting (X) [meters] 246955.561 1168087.337
Convergence [degrees] -1.27325234 0.86470974
Point Scale 1.00039019 1.00000967
Combined Factor 1.00039373 1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	90160.4
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	34359.2
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	21196.4

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:04 AM
To: Castille, Lance
Subject: OPUS solution : 29361090.17o OP1494259379265
Attachments: 2936109n.17o.xml

FILE: 29361090.17o OP1494259379265

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 2936109n.17o TIME: 16:04:17 UTC

SOFTWARE: page5 1209.04 master57.pl 160321 START: 2017/04/19 13:13:00
EPHEMERIS: igs19453.eph [precise] STOP: 2017/04/19 18:50:00
NAV FILE: brdc1090.17n OBS USED: 15102 / 15735 : 96%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 70 / 75 : 93%
ARP HEIGHT: 2.000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2977)

X:	42391.643(m)	0.002(m)	42390.838(m)	0.002(m)
Y:	-5569231.526(m)	0.003(m)	-5569230.017(m)	0.003(m)
Z:	3097986.378(m)	0.013(m)	3097986.192(m)	0.013(m)

LAT:	29 14 55.92482	0.010(m)	29 14 55.94359	0.010(m)
E LON:	270 26 10.00748	0.002(m)	270 26 9.97809	0.002(m)
W LON:	89 33 49.99252	0.002(m)	89 33 50.02191	0.002(m)
EL HGT:	-22.927(m)	0.008(m)	-24.340(m)	0.008(m)
ORTHO HGT:	0.769(m)	0.018(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3238283.631	84338.096
Easting (X) [meters]	250834.352	1171993.421
Convergence [degrees]	-1.25337205	0.88474572
Point Scale	1.00036615	1.00001122
Combined Factor	1.00036975	1.00001482

US NATIONAL GRID DESIGNATOR: 16RBT5083438283(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	69452.8
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	93318.4
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	18143.0

NEAREST NGS PUBLISHED CONTROL POINT

AT1158	SCOFIELD BAYOU LIGHT NEW	N291450.261	W0893348.547	178.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:00 AM
To: Castille, Lance
Subject: OPUS solution : 29361080.17o OP1494259076541
Attachments: 2936108n.17o.xml

FILE: 29361080.17o OP1494259076541

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 2936108n.17o TIME: 16:00:15 UTC

SOFTWARE: page5 1209.04 master97.pl 160321 START: 2017/04/18 13:54:00
EPHEMERIS: igs19452.eph [precise] STOP: 2017/04/18 20:35:00
NAV FILE: brdc1080.17n OBS USED: 18126 / 18831 : 96%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 98 / 108 : 91%
ARP HEIGHT: 2.000 OVERALL RMS: 0.018(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2951)

X:	38494.123(m)	0.003(m)	38493.318(m)	0.003(m)
Y:	-5568890.498(m)	0.018(m)	-5568888.989(m)	0.018(m)
Z:	3098646.527(m)	0.009(m)	3098646.341(m)	0.009(m)

LAT:	29 15 20.49339	0.017(m)	29 15 20.51216	0.017(m)
E LON:	270 23 45.75193	0.003(m)	270 23 45.72250	0.003(m)
W LON:	89 36 14.24807	0.003(m)	89 36 14.27750	0.003(m)
EL HGT:	-22.566(m)	0.011(m)	-23.979(m)	0.011(m)
ORTHO HGT:	1.153(m)	0.022(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3239126.077	85034.993
Easting (X) [meters]	246955.555	1168087.331
Convergence [degrees]	-1.27325237	0.86470971
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039374	1.00001321

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	21196.4
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	90504.2

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 10:55 AM
To: Castille, Lance
Subject: OPUS solution : 29361070.17o OP1494258840833
Attachments: 2936107r.17o.xml

FILE: 29361070.17o OP1494258840833

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 2936107r.17o TIME: 15:55:02 UTC

SOFTWARE: page5 1209.04 master96.pl 160321 START: 2017/04/17 17:57:00
EPHEMERIS: igs19451.eph [precise] STOP: 2017/04/17 22:17:00
NAV FILE: brdc1070.17n OBS USED: 11080 / 11736 : 94%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 67 / 80 : 84%
ARP HEIGHT: 2.000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2927)

X:	42391.645(m)	0.008(m)	42390.840(m)	0.008(m)
Y:	-5569231.522(m)	0.016(m)	-5569230.013(m)	0.016(m)
Z:	3097986.371(m)	0.012(m)	3097986.185(m)	0.012(m)

LAT:	29 14 55.92468	0.004(m)	29 14 55.94345	0.004(m)
E LON:	270 26 10.00756	0.008(m)	270 26 9.97817	0.008(m)
W LON:	89 33 49.99244	0.008(m)	89 33 50.02183	0.008(m)
EL HGT:	-22.934(m)	0.020(m)	-24.347(m)	0.020(m)
ORTHO HGT:	0.762(m)	0.035(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3238283.627	84338.092
Easting (X) [meters]	250834.354	1171993.423
Convergence [degrees]	-1.25337204	0.88474573
Point Scale	1.00036615	1.00001122
Combined Factor	1.00036975	1.00001482

US NATIONAL GRID DESIGNATOR: 16RBT5083438283(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	93318.4
DH7121	GRIS GRAND ISLE CORS ARP	N291555.883	W0895726.262	38282.3
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	69452.8

NEAREST NGS PUBLISHED CONTROL POINT

AT1158	SCOFIELD BAYOU LIGHT NEW	N291450.261	W0893348.547	178.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:04 AM
To: Castille, Lance
Subject: OPUS solution : 29271090.17o OP1494259347716
Attachments: 2927109l.17o.xml

FILE: 29271090.17o OP1494259347716

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 2927109l.17o TIME: 16:04:18 UTC

SOFTWARE: page5 1209.04 master58.pl 160321 START: 2017/04/19 11:48:00
EPHEMERIS: igs19453.eph [precise] STOP: 2017/04/19 21:22:00
NAV FILE: brdc1090.17n OBS USED: 25904 / 27267 : 95%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 129 / 136 : 95%
ARP HEIGHT: 2.000 OVERALL RMS: 0.014(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2978)

X:	45254.559(m)	0.010(m)	45253.753(m)	0.010(m)
Y:	-5563419.334(m)	0.012(m)	-5563417.826(m)	0.012(m)
Z:	3108298.376(m)	0.005(m)	3108298.191(m)	0.005(m)

LAT:	29 21 20.02466	0.011(m)	29 21 20.04354	0.011(m)
E LON:	270 27 57.78419	0.009(m)	270 27 57.75476	0.009(m)
W LON:	89 32 2.21581	0.009(m)	89 32 2.24524	0.009(m)
EL HGT:	-24.780(m)	0.008(m)	-26.191(m)	0.008(m)
ORTHO HGT:	-0.841(m)	0.017(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3250047.751	96208.040
Easting (X) [meters]	254000.983	1174717.512
Convergence [degrees]	-1.24283748	0.89971508
Point Scale	1.00034678	0.99998870
Combined Factor	1.00035067	0.99999259

US NATIONAL GRID DESIGNATOR: 16RBT5400050047(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	82576.6
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	58393.5
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	12560.7

NEAREST NGS PUBLISHED CONTROL POINT

AT0258	Q 195	N292120.	W0893157.	140.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 11:00 AM
To: Castille, Lance
Subject: OPUS solution : 29271080.17o OP1494259044593
Attachments: 2927108n.17o.xml

FILE: 29271080.17o OP1494259044593

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 2927108n.17o TIME: 15:59:04 UTC

SOFTWARE: page5 1209.04 master98.pl 160321 START: 2017/04/18 13:23:00
EPHEMERIS: igs19452.eph [precise] STOP: 2017/04/18 20:20:00
NAV FILE: brdc1080.17n OBS USED: 18907 / 19604 : 96%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 70 / 75 : 93%
ARP HEIGHT: 2.000 OVERALL RMS: 0.015(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2951)

X:	20877.143(m)	0.014(m)	20876.338(m)	0.014(m)
Y:	-5565691.465(m)	0.010(m)	-5565689.958(m)	0.010(m)
Z:	3104516.331(m)	0.011(m)	3104516.145(m)	0.011(m)

LAT:	29 18 59.09065	0.011(m)	29 18 59.10939	0.011(m)
E LON:	270 12 53.70434	0.014(m)	270 12 53.67472	0.014(m)
W LON:	89 47 6.29566	0.014(m)	89 47 6.32528	0.014(m)
EL HGT:	-23.279(m)	0.010(m)	-24.686(m)	0.010(m)
ORTHO HGT:	0.689(m)	0.020(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3246262.949	91513.021
Easting (X) [meters]	229507.604	1150393.081
Convergence [degrees]	-1.36449569	0.77414525
Point Scale	1.00050293	0.99999657
Combined Factor	1.00050659	1.00000023

US NATIONAL GRID DESIGNATOR: 16RBT2950746262(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE8091	BVHS BOOTHVILLE CORS ARP	N292012.489	W0892423.010	36851.8
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	62105.5
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	79292.1

NEAREST NGS PUBLISHED CONTROL POINT

AT1199	MER 1966 RM 3	N291859.556	W0894706.233	14.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Monday, May 08, 2017 10:53 AM
To: Castille, Lance
Subject: OPUS solution : 29271070.17o OP1494258643025
Attachments: 2927107p.17o.xml

FILE: 29271070.17o OP1494258643025

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: May 08, 2017
RINEX FILE: 2927107p.17o TIME: 15:52:13 UTC

SOFTWARE: page5 1209.04 master57.pl 160321 START: 2017/04/17 15:10:00
EPHEMERIS: igs19451.eph [precise] STOP: 2017/04/17 23:42:00
NAV FILE: brdc1070.17n OBS USED: 22450 / 23996 : 94%
ANT NAME: TRMR8_GNSS3 NONE # FIXED AMB: 105 / 121 : 87%
ARP HEIGHT: 2.000 OVERALL RMS: 0.018(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.2926)

X:	45254.543(m)	0.009(m)	45253.737(m)	0.009(m)
Y:	-5563419.325(m)	0.011(m)	-5563417.817(m)	0.011(m)
Z:	3108298.381(m)	0.014(m)	3108298.196(m)	0.014(m)

LAT:	29 21 20.02494	0.007(m)	29 21 20.04382	0.007(m)
E LON:	270 27 57.78359	0.009(m)	270 27 57.75417	0.009(m)
W LON:	89 32 2.21641	0.009(m)	89 32 2.24583	0.009(m)
EL HGT:	-24.786(m)	0.016(m)	-26.197(m)	0.016(m)
ORTHO HGT:	-0.847(m)	0.030(m)	[NAVD88 (Computed using GEOID12B)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3250047.760	96208.048
Easting (X) [meters]	254000.967	1174717.496
Convergence [degrees]	-1.24283756	0.89971500
Point Scale	1.00034678	0.99998870
Combined Factor	1.00035067	0.99999259

US NATIONAL GRID DESIGNATOR: 16RBT5400050047(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DP7419	INRI LOYOLA UNIVERSITY CORS ARP	N295613.211	W0900707.837	85796.4
DO8512	MARY MARY_289 LSU C4G CORS ARP	N300122.709	W0895446.801	82576.6
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	58393.5

NEAREST NGS PUBLISHED CONTROL POINT

AT0258	Q 195	N292120.	W0893157.	140.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Hebert, Terence

From: opus <opus@ngs.noaa.gov>
Sent: Friday, July 14, 2017 8:44 AM
To: Castille, Lance
Subject: OPUS-RS solution : 52151940.17o OP1500039606767
Attachments: 52151940.17o.xml

FILE: 52151940.17o OP1500039606767

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

6011 Warning - OPUS-RS was able to find a set of reference stations
6011 with data suitable for use with your dataset. However, your
6011 position does not fall within the polygon enclosing these reference
6011 stations. This means that the geographic interpolation algorithms
6011 performed within OPUS-RS must instead perform extrapolation.
6011 Extrapolation, especially if your position is far from the
6011 reference stations, is prone to error. Use this solution with
6011 caution.

aldi
lmcn
sbch
al90
dev1
lwes
alfo
dstr
almj

Your station is 9.1 KM outside the polygon enclosing the reference stations

NGS OPUS-RS SOLUTION REPORT

=====

All computed coordinate accuracies are listed as 1-sigma RMS values.
For additional information: <https://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: lcastille@fugro.com DATE: July 14, 2017
RINEX FILE: 52151940.17o TIME: 13:44:03 UTC

SOFTWARE: rsgps 1.38 RS97.prl 1.99.3 START: 2017/07/13 14:14:11
EPOCHS: igu19574.eph [ultra-rapid] STOP: 2017/07/13 15:59:09
NAV FILE: brdc1940.17n OBS USED: 7007 / 8540 : 82%
ANT NAME: TRMR8_GNSS3 NONE QUALITY IND. 16.95/ 2.53
ARP HEIGHT: 2.000 NORMALIZED RMS: 0.444

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2017.53049)

X: 38494.119(m) 0.007(m) 38493.311(m) 0.007(m)
Y: -5568890.577(m) 0.042(m) -5568889.068(m) 0.042(m)
Z: 3098646.560(m) 0.023(m) 3098646.374(m) 0.023(m)

LAT: 29 15 20.49307 0.009(m) 29 15 20.51183 0.009(m)
E LON: 270 23 45.75178 0.007(m) 270 23 45.72222 0.007(m)
W LON: 89 36 14.24822 0.007(m) 89 36 14.27778 0.007(m)
EL HGT: -22.481(m) 0.047(m) -23.894(m) 0.047(m)
ORTHO HGT: 1.238(m) 0.048(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 16) SPC (1702 LA S)

Northing (Y) [meters]	3239126.067	85034.983
Easting (X) [meters]	246955.551	1168087.327
Convergence [degrees]	-1.27325239	0.86470969
Point Scale	1.00039019	1.00000967
Combined Factor	1.00039372	1.00001320

US NATIONAL GRID DESIGNATOR: 16RBT4695539126(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DL3486	ALDI DAUPHIN ISLAND CORS ARP	N301456.987	W0880440.688	184145.4
DF5771	LMCN LUMCON CORS ARP	N291517.904	W0903940.652	102769.6
DP7421	SBCH SHELL BEACH CORS ARP	N295205.205	W0894023.638	68214.4
DI3826	AL90 ALDOT 9 DIV OFF CORS ARP	N304126.969	W0880154.137	219832.7
DP5952	DEV1 EUGENE ISLAND 337 CORS ARP	N281039.742	W0914357.510	239831.6
DL7331	ALFO FOLEY CORS ARP	N302501.021	W0874030.260	226522.0
DO2054	ALMJ MCDAVIDJONESSCH2 CORS ARP	N310144.313	W0881347.068	236989.8

NEAREST NGS PUBLISHED CONTROL POINT

AT1126	FONTANELLE	N291522.237	W0893617.523	103.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/17/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location		Proj. Mgr.	P. LAVERTY		

SESSION INFO

File Name	<small>4 Characters</small> 2927	Julian Date	<small>3 Characters</small> 107	Session No.	<small>1 Character</small> 0
Long Name	BA40 SM 01				
Mon. Description					
Rec. Base Type	R8 MOD 3	Rec Serial #	5208482927		
Base Ant Type	R8 MOD 3	Base Ant Ser #			
Rover Ant Type	R8 MOD 3	Rover Ant Ser #			

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number

Actual Start Time	10:10	Actual Stop Time	18:41	Session Time (Min 2:01 Hr)	8:31
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** **ZONE** **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **315642.54** **Coordinate Origin-Where did you get your positions?**

Easting/Long. **3854052.39** **OFFICE**

Elevation **-2.644**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/17/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 8987	Julian Date	<small>3 Characters</small> 107	Session No.	<small>1 Character</small> 0
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Long Name **CRMSBA SM 20**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"CRMSBASM20**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5037448987
Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	5031442254

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 39**

Actual Start Time	12:01	Actual Stop Time	17:06	Session Time (Min 2:01 Hr)	5:05
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE
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Northing/Lat **300238.97** **Coordinate Origin-Where did you get your positions?**

Easting/Long. **3774247.96** **OFFICE**

Elevation **2.352**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/18/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PALQUEMINES PARISH		Proj. Mgr.	P. LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 8987	Julian Date	<small>3 Characters</small> 108	Session No.	<small>1 Character</small> 0
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Long Name **BA40 SM 01**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"BA40SM02**

Rec. Base Type	R8 MOD 3	Rec Serial #	5037448987
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Base Ant Type	R8 MOD 3	Base Ant Ser #	
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Rover Ant Type	R8 MOD 3	Rover Ant Ser #	
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Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 39**

Actual Start Time	6:50	Actual Stop Time	16:58	Session Time (Min 2:01 Hr)	10:08
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD 83	ZONE	LA SOUTH ZONE
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Northing/Lat	315642.54	Coordinate Origin-Where did you get your positions?
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Easting/Long.	3854052.39	OFFICE
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Elevation	-2.644
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Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/18/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 2927	Julian Date	<small>3 Characters</small> 108	Session No.	<small>1 Character</small> 0
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Long Name **CRMSBA SM 20**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"CRMSBASM20**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5208482927
Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	

Antenna Height Measurement is TRUE VERTICAL to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **52.00**

Actual Start Time	8:22	Actual Stop Time	15:20	Session Time (Min 2:01 Hr)	6:58
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE**

Northing/Lat **300238.97** Coordinate Origin-Where did you get your positions?

Easting/Long. **3774247.96** OFFICE

Elevation **2.352**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/19/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 2927	Julian Date	<small>3 Characters</small> 109	Session No.	<small>1 Character</small> 0
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Long Name **BA40 SM 01**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"BA40 SM 02**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5208482927
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Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
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Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	5031442254
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Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **52.00**

Actual Start Time	6:49	Actual Stop Time	16:21	Session Time (Min 2:01 Hr)	9:32
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE/GEOID 12B
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Northing/Lat **315642.54** **Coordinate Origin-Where did you get your positions?**

Easting/Long. **3854052.39** **OFFICE**

Elevation **-2.644**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/19/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 8987	Julian Date	<small>3 Characters</small> 109	Session No.	<small>1 Character</small> 0
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Long Name **CRMSBA SM 20**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"CRMSBASM20**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5037448987
Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	5031442254

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 39**

Actual Start Time	8:13	Actual Stop Time	13:55	Session Time (Min 2:01 Hr)	5:42
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **300238.97** Coordinate Origin-Where did you get your positions?

Easting/Long. **3774247.96** OFFICE

Elevation **2.352**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/20/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 2927	Julian Date	<small>3 Characters</small> 110	Session No.	<small>1 Character</small> 0
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Long Name **BA40 SM 01**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"BA40 SM 02**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5208482927
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Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
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Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	
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Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **52.00**

Actual Start Time	6:31	Actual Stop Time	16:53	Session Time (Min 2:01 Hr)	10:22
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE/GEOID 12B
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Northing/Lat **315642.54** **Coordinate Origin-Where did you get your positions?**

Easting/Long. **3854052.39** **OFFICE**

Elevation **-2.644**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/20/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 8987	Julian Date	<small>3 Characters</small> 110	Session No.	<small>1 Character</small> 0
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Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD 2**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5037448987
Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod	2M	Mtrs or Ft
Tripod Number	RP 39	

Actual Start Time	7:46	Actual Stop Time	16:05	Session Time (Min 2:01 Hr)	8:19
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE/GEOID 12B
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Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/21/2017	Observer	BEN/GREG
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 8987	Julian Date	<small>3 Characters</small> 111	Session No.	<small>1 Character</small> 0
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Long Name **CRMSBA SM 20**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"CRMSBA SM 20**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5037448987
Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	5031442254

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod	2M	Mtrs or Ft
Tripod Number	RP 39	

Actual Start Time	7:58	Actual Stop Time	12:01	Session Time (Min 2:01 Hr)	4:03
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE/GEOID 12B
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Northing/Lat **300238.97** Coordinate Origin-Where did you get your positions?

Easting/Long. **3854052.39** OFFICE

Elevation **-2.644**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/24/2017	Observer	BEN/GARY/JASON
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	<small>4 Characters</small> 8987	Julian Date	<small>3 Characters</small> 114	Session No.	<small>1 Character</small> 0
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Long Name **BA40 SM 01**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"BA40 SM 02**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5037448987
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Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
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Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	
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Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 39**

Actual Start Time	9:38	Actual Stop Time	16:50	Session Time (Min 2:01 Hr)	7:12
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE/GEOID 12B
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Northing/Lat **315642.54** **Coordinate Origin-Where did you get your positions?**

Easting/Long. **3854052.39** **OFFICE**

Elevation **-2.644**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	4/25/2017	Observer	BEN/GARY/JASON
Client	CPRA	Job Description	BARATARIA BARRIER ISLAND		
Location	PLAQUEMINES PARISH		Proj. Mgr.	PAUL LAVERTY	

SESSION INFO

File Name	2927 <small>4 Characters</small>	Julian Date	115 <small>3 Characters</small>	Session No.	0 <small>1 Character</small>
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Long Name **BA40 SM 01**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"BA40 SM 02**

Rec. Base Type	R-8 GNSS MODEL 3	Rec Serial #	5208482927
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Base Ant Type	R-8 GNSS MODEL 3	Base Ant Ser #	
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Rover Ant Type	R-8 GNSS MODEL 3	Rover Ant Ser #	
----------------	-------------------------	-----------------	--

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **52.00**

Actual Start Time	6:46	Actual Stop Time	15:40	Session Time (Min 2:01 Hr)	8:54
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BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM	NAD83	ZONE	LA SOUTH ZONE/GEOID 12B
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Northing/Lat **315642.54** **Coordinate Origin-Where did you get your positions?**

Easting/Long. **3854052.39** **OFFICE**

Elevation **-2.644**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/6/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **126** Session No. ^{1 Character} **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**
 Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #
 Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **8:22** Actual Stop Time **15:10** Session Time (Min 2:01 Hr) **6:48**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/7/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **127** Session No. ^{1 Character} **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**

Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #

Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:43** Actual Stop Time **15:05** Session Time (Min 2:01 Hr) **7:22**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/8/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **128** Session No. ^{1 Character} **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**
 Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #
 Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:46** Actual Stop Time **16:37** Session Time (Min 2:01 Hr) **8:51**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/9/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **129** Session No. ^{1 Character} **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED"BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**

Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #

Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:38** Actual Stop Time **15:35** Session Time (Min 2:01 Hr) **7:57**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/10/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **130** Session No. ^{1 Character} **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**

Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #

Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:36** Actual Stop Time **15:41** Session Time (Min 2:01 Hr) **8:05**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/11/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **8987** Julian Date 3 Characters **131** Session No. 1 Character **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**

Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #

Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:40** Actual Stop Time **12:01** Session Time (Min 2:01 Hr) **4:21**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/16/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **8987** Julian Date 3 Characters **136** Session No. 1 Character **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**

Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #

Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:43** Actual Stop Time **15:20** Session Time (Min 2:01 Hr) **7:37**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/17/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **8987** Julian Date 3 Characters **137** Session No. 1 Character **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**

Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #

Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is TRUE VERTICAL to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:46** Actual Stop Time **15:16** Session Time (Min 2:01 Hr) **7:30**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

Elevation **3.937** **OFFICE**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/18/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **138** Session No. ^{1 Character} **1**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**
 Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #
 Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 54**

Actual Start Time **7:55** Actual Stop Time **15:25** Session Time (Min 2:01 Hr) **7:30**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **5/19/2017** Observer **BEN/GARY/STEWART**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name ^{4 Characters} **8987** Julian Date ^{3 Characters} **139** Session No. ^{1 Character} **0**

Long Name **BA SCOFIELD 2**

Mon. Description **STAINLESS STEEL ROD DRIVEN TO REFUSAL WITHIN 6" PVC PIPE STAMPED "BA SCOFIELD 2**

Rec. Base Type **R-8 GNSS MODEL 3** Rec Serial # **5037448987**
 Base Ant Type **R-8 GNSS MODEL 3** Base Ant Ser #
 Rover Ant Type **R-8 GNSS MODEL 3** Rover Ant Ser # **5031442254**

Antenna Height Measurement is TRUE VERTICAL to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft
 Tripod Number **RP 54**

Actual Start Time **7:35** Actual Stop Time **12:28** Session Time (Min 2:01 Hr) **4:53**

BASE STATION INFORMATION

WGS84, NAD83 or NAD27

Example : LA South Zone or TX South Central Zone

DATUM **NAD83** ZONE **LA SOUTH ZONE/GEOID 12B**

Northing/Lat **278985.58** Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84** OFFICE

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	6/27/2017	Operator	J. DEVILLIER
Client	CPRA	Job Description	TRANSECTS		
Location	5 BARRIER ISLANDS		Proj. Mgr.	J. KIBODEAUX	

SESSION INFO

File Name	<small>4 Characters</small> 5215	Julian Date	<small>3 Characters</small> 178	Session No.	<small>1 Character</small> 1 0
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Long Name **BA SCOFIELD 2**

Mon. Description **DEEP ROD MONUMENT**

Rec. Base Type	R8 GNSS	Rec Serial #	5045455215
Base Ant Type	R8 GNSS	Base Ant Ser #	5045455215
Rover Ant Type	R8 GNSS	Rover Ant Ser #	4953411777

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 34**

Actual Start Time	12:02	Actual Stop Time	15:07	Session Time (Min 2:01 Hr)	3:05
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BASE STATION INFORMATION

NAD 83 or NAD 27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** ZONE **LA SOUTH**

Northing/Lat **278985.58**

Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

CSV

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	6/28/2017	Operator	J. DEVILLIER
Client	CPRA	Job Description	TRANSECTS		
Location	5 BARRIER ISLANDS		Proj. Mgr.	J. KIBODEAUX	

SESSION INFO

File Name	<small>4 Characters</small> 5215	Julian Date	<small>3 Characters</small> 179	Session No.	<small>1 Character</small> 1 0
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Long Name **BA SCOFIELD 2**

Mon. Description **DEEP ROD MONUMENT**

Rec. Base Type **R8 GNSS** Rec Serial # **5045455215**

Base Ant Type **R8 GNSS** Base Ant Ser # **5045455215**

Rover Ant Type **R8 GNSS** Rover Ant Ser # **4953411777**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 34**

Actual Start Time	10:08	Actual Stop Time	13:24	Session Time (Min 2:01 Hr)	3:16
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BASE STATION INFORMATION

NAD 83 or NAD 27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** ZONE **LA SOUTH**

Northing/Lat **278985.58**

Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

CSV

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	7/10/2017	Operator	J. DEVILLIER
Client	CPRA	Job Description	TRANSECTS		
Location	5 BARRIER ISLANDS		Proj. Mgr.	J. KIBODEAUX	

SESSION INFO

File Name	<small>4 Characters</small> 5215	Julian Date	<small>3 Characters</small> 191	Session No.	<small>1 Character</small> 1
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Long Name **BA SCOFIELD 2**

Mon. Description **DEEP ROD MONUMENT**

Rec. Base Type **R8 GNSS** Rec Serial # **5045455215**

Base Ant Type **R8 GNSS** Base Ant Ser # **5045455215**

Rover Ant Type **R8 GNSS** Rover Ant Ser # **4953411777**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 34**

Actual Start Time	12:49	Actual Stop Time	15:30	Session Time (Min 2:01 Hr)	2:41
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BASE STATION INFORMATION

NAD 83 or NAD 27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** ZONE **LA SOUTH**

Northing/Lat **278985.58**

Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

CSV

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	7/11/2017	Operator	J. DEVILLIER
Client	CPRA	Job Description	TRANSECTS		
Location	5 BARRIER ISLANDS		Proj. Mgr.	J. KIBODEAUX	

SESSION INFO

File Name	<small>4 Characters</small> 5215	Julian Date	<small>3 Characters</small> 192	Session No.	<small>1 Character</small> 1
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Long Name **BA SCOFIELD 2**

Mon. Description **DEEP ROD MONUMENT**

Rec. Base Type	R8 GNSS	Rec Serial #	5045455215
Base Ant Type	R8 GNSS	Base Ant Ser #	5045455215
Rover Ant Type	R8 GNSS	Rover Ant Ser #	4953411777

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 34**

Actual Start Time	8:21	Actual Stop Time	15:02	Session Time (Min 2:01 Hr)	6:39
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BASE STATION INFORMATION

NAD 83 or NAD 27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** ZONE **LA SOUTH**

Northing/Lat **278985.58**

Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

CSV

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No.	20170061	Date	7/12/2017	Operator	J. DEVILLIER
Client	CPRA	Job Description	TRANSECTS		
Location	5 BARRIER ISLANDS		Proj. Mgr.	J. KIBODEAUX	

SESSION INFO

File Name	<small>4 Characters</small> 5215	Julian Date	<small>3 Characters</small> 193	Session No.	<small>1 Character</small> 1
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Long Name **BA SCOFIELD 2**

Mon. Description **DEEP ROD MONUMENT**

Rec. Base Type	R8 GNSS	Rec Serial #	5045455215
Base Ant Type	R8 GNSS	Base Ant Ser #	5045455215
Rover Ant Type	R8 GNSS	Rover Ant Ser #	4953411777

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 34**

Actual Start Time	8:29	Actual Stop Time	15:11	Session Time (Min 2:01 Hr)	6:42
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BASE STATION INFORMATION

NAD 83 or NAD 27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** ZONE **LA SOUTH**

Northing/Lat **278985.58**

Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

CSV

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **7/13/2017** Operator **J. DEVILLIER**
 Client **CPRA** Job Description **TRANSECTS/ SETTLEMENT PLATE**
 Location **5 BARRIER ISLANDS** Proj. Mgr. **J. KIBODEAUX**

SESSION INFO

File Name 4 Characters **5215** Julian Date 3 Characters **194** Session No. 1 Character **1**

Long Name **BA SCOFIELD 2**

Mon. Description **DEEP ROD MONUMENT**

Rec. Base Type **R8 GNSS** Rec Serial # **5045455215**

Base Ant Type **R8 GNSS** Base Ant Ser # **5045455215**

Rover Ant Type **R8 GNSS** Rover Ant Ser # **4953411777**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **RP 34**

Actual Start Time **9:13** Actual Stop Time **10:58** Session Time (Min 2:01 Hr) **1:45**

BASE STATION INFORMATION

NAD 83 or NAD 27

Example : LA South Zone or TX South Central Zone

DATUM **NAD 83** ZONE **LA SOUTH**

Northing/Lat **278985.58**

Coordinate Origin-Where did you get your positions?

Easting/Long. **3832299.84**

CSV

Elevation **3.937**

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/17/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **2936** Julian Date 3 Characters **107** Session No. 1 Character **0**

Long Name **BA40 SM 03**

Mon. Description **9/16" Stainless steal rod driven to refusal set in floating sleeve and 6" PVC pipe filled with sand**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5208482936**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5208482936**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **36.00**

Actual Start Time **12:56**

Stop Time **17:17**

Session Time (Min 2:01 Hr) **4H 21MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **276699.17**

Easting/Long. **3845115.09**

Elevation **2.68**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/17/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **8997** Julian Date 3 Characters **107** Session No. 1 Character **1**

Long Name **BA SCOFIELD 2**

Mon. Description **9/16" Stainless steal rod driven 68 feet to refusal, set in floating sleeve and 6" PVC pipe with sand**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5037448997**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5037448997**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **26.00**

Actual Start Time **12:23**

Stop Time **17:08**

Session Time (Min 2:01 Hr) **4H 45MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **278985.58**

Easting/Long. **3832299.84**

Elevation **3.937**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/18/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **8997** Julian Date 3 Characters **108** Session No. 1 Character **0**

Long Name **BA40 SM 03**

Mon. Description **9/16" Stainless steal rod driven to refusal set in floating sleeve and 6" PVC pipe filled with sand**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5037448997**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5037448997**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **26.00**

Actual Start Time **8:39**

Stop Time **15:21**

Session Time (Min 2:01 Hr) **6H 42MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **276699.17**

Easting/Long. **3845115.09**

Elevation **2.68**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/18/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **2936** Julian Date 3 Characters **108** Session No. 1 Character **0**

Long Name **BA SCOFIELD 2**

Mon. Description **9/16" Stainless steal rod driven 68 feet to refusal, set in floating sleeve and 6" PVC pipe with sand**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5208482936**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5208482936**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **36.00**

Actual Start Time **8:53**

Stop Time **15:35**

Session Time (Min 2:01 Hr) **6H 42MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **278985.58**

Easting/Long. **3832299.84**

Elevation **3.937**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/19/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **2936** Julian Date 3 Characters **109** Session No. 1 Character **0**

Long Name **BA40 SM 03**

Mon. Description **9/16" Stainless steal rod driven to refusal set in floating sleeve and 6" PVC pipe filled with sand**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5208482936**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5208482936**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **26.00**

Actual Start Time **8:12**

Stop Time **13:50**

Session Time (Min 2:01 Hr) **5H 38MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **276699.17**

Easting/Long. **3845115.09**

Elevation **2.68**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/19/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **8997** Julian Date 3 Characters **109** Session No. 1 Character **0**

Long Name **BA SCOFIELD 2**

Mon. Description **9/16" Stainless steal rod driven 68 feet to refusal, set in floating sleeve and 6" PVC pipe with sand**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5037448997**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5037448997**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **36.00**

Actual Start Time **8:29**

Stop Time **13:59**

Session Time (Min 2:01 Hr) **5H 30MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **278985.58**

Easting/Long. **3832299.84**

Elevation **3.937**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/24/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **2936** Julian Date 3 Characters **114** Session No. 1 Character **0**

Long Name **CRMSBA SM 20**

Mon. Description **9/16" Stainless steal rod driven to refusal, within 6" PVC sleeve set in concrete with metal cover, stamped**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5208482936**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5208482936**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **36.00**

Actual Start Time **12:03**

Stop Time **15:01**

Session Time (Min 2:01 Hr) **2H 58MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **300238.97**

Easting/Long. **3774247.96**

Elevation **2.352**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/25/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **2936** Julian Date 3 Characters **115** Session No. 1 Character **0**

Long Name **CRMSBA SM 20**

Mon. Description **9/16" Stainless steal rod driven to refusal, within 6" PVC sleeve set in concrete with metal cover, stamped**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5208482936**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5208482936**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **36.00**

Actual Start Time **9:01**

Stop Time **14:04**

Session Time (Min 2:01 Hr) **5H 03MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **300238.97**

Easting/Long. **3774247.96**

Elevation **2.352**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION

USE THIS FORM IF USING FIXED HEIGHT TRIPODS TO DOCUMENT STATIC SURVEYS ON BASE POINTS FOR ALL RTK SURVEYS

GPS LOG SHEET

Job No. **20170061** Date **4/27/2017** **TREVOR EVANS**
 Client **CPRA** Job Description **BARATARIA BARRIER ISLAND**
 Location **PLAQUEMINES PARISH, LA** Proj. Mgr. **PAUL LAVERTY**

SESSION INFO

File Name 4 Characters **2936** Julian Date 3 Characters **117** Session No. 1 Character **0**

Long Name **CRMSBA SM 20**

Mon. Description **9/16" Stainless steal rod driven to refusal, within 6" PVC sleeve set in concrete with metal cover, stamped**

Rec. Base Type **TRIMBLE R8- MOD 3** Rec Serial # **5208482936**

Base Ant Type **TRIMBLE R8- MOD 3** Base Ant Ser # **5208482936**

Rover Ant Type **TRIMBLE R8- MOD 3** Rover Ant Ser # **5105460397**

Antenna Height Measurement is **TRUE VERTICAL** to the Bottom of Antenna Mount if Using Fixed Hgt Tripod

Fixed Hgt 2 Meter Tripod **2M** Mtrs or Ft

Tripod Number **36.00**

Actual Start Time **8:15**

Stop Time **12:31**

Session Time (Min 2:01 Hr) **4H 16MIN**

BASE STATION INFORMATION

NAD 83 or NAD 27
 DATUM **NAD 83**

Example: LA South Zone or TX South Central Zone
 ZONE **LA SOUTH ZONE, GEOID 12B**

Northing/Lat **300238.97**

Easting/Long. **3774247.96**

Elevation **2.352**

Coordinate Origin-Where did you get your positions?

CSV FROM PROJECT MANAGER

Note any power problems, obstructions, weather issues, etc.

ALL WHITE BOXES MUST BE FILLED IN WITH INFORMATION. A MINIMUM OBSERVATION OF 2 HOURS IS REQUIRED TO DETERMINE THE 3-D POSITION OF AN UNKNOWN POINT USING NGS-OPUS

USE BACK OF THIS SHEET TO MAKE STATION SKETCH, REFERENCE TIES & DESCRIPTION



APPENDIX C: CONTROL POINT TABLE AND MONUMENT DATA SHEETS

Survey Monument Data Table

Barataria Basin Barrier Island 2017 Survey

	LAT			LONG			Northing	Easting	Northing	Easting	Ellipsoid Height	G12B Elevation	G09 Elevation	G12B Elevation	G09 Elevation
	DEG	MIN	SEC	DEG	MIN	SEC	Meter	Meter	Feet	Feet	Meter	Meter	Meter	Feet	Feet
CRMSBA -SM-20	29	18	59.09078	89	47	6.29582	91513.0254	1150393.077	300238.984	3774247.951	-23.253	0.714	0.736	2.344	2.416
BA40-SM-01	29	21	20.02463	89	32	2.21585	96208.039	1174717.512	315642.541	3854052.368	-24.744	-0.799	-0.651	-2.623	-2.137
SCOFIELD2	29	15	20.49315	89	36	14.24815	85034.9853	1168087.33	278985.614	3832299.846	-22.520	1.198	1.305	3.933	4.282
BA40-SM-03	29	14	55.92470	89	33	49.99250	84338.0928	1171993.422	276699.226	3845115.083	-22.891	0.804	0.928	2.638	3.047
PT#829-676	29	19	9.63651	89	48	38.67975	91,804.338	1,147,899.260	301,194.569	3,766,055.954	-23.712	0.289	0.299	0.948	0.981
PT#846-466	29	19	9.69764	89	48	38.50332	91,806.120	1,147,904.662	301,201.214	3,766,091.407	-23.730	0.271	0.172	0.888	0.921
RON	29	19	1.79747	89	47	1.10224	91,598.065	1,150,529.776	300,518.586	3,774,703.991	-23.347	0.622	0.281	2.039	2.114
RON PK	29	18	46.99826	89	47	4.81147	91,141.101	1,150,435.857	299,019.359	3,774,395.855	-22.789	1.170	1.191	3.837	3.908
TICE-CP2	29	19	5.51851	89	48	42.48875	91,675.961	1,147,792.772	300,774.152	3,765,724.314	-23.129	0.870	0.872	2.852	2.883
SW TBM01	29	16	6.39781	89	36	27.32992	86,442.694	1,167,710.544	283,604.638	3,831,071.341	-22.222	1.523	1.630	4.998	5.352
SW TBM02	29	16	8.05423	89	36	27.52151	86,493.635	1,167,704.606	283,771.681	3,831,051.854	-22.409	1.338	1.440	4.391	4.745
SW TBM00	29	21	19.30416	89	32	0.98354	96,187.689	1,174,748.745	315,571.485	3,854,162.549	-23.868	0.070	0.218	0.229	0.716
TIDAL 11	29	15	53.27901	89	57	27.08177	85,578.740	1,133,712.196	280,769.582	3,719,520.760	-23.080	0.895	0.861	2.935	2.826
CP 604	29	15	54.01062	89	57	16.26295	85,604.774	1,134,003.983	280,854.997	3,720,478.064	-23.234	0.739	0.705	2.423	2.314
CP 602	29	15	52.11026	89	57	17.01820	85,546.023	1,133,984.299	280,662.243	3,720,413.483	-23.345	0.626	0.593	2.055	1.946



VICINITY MAP

Reproduced from Google Earth

Station Name: "BA 40 SM 01"

Monument Location: In Plaquemines Parish, from the bridge crossing the Doullut Canal on LA Hwy 23 in Empire, proceed south on LA Hwy 23 ~4.5 miles to the station on the left. The station is located in the northeast quadrant of the intersection of LA Hwy 23 and Cazezu Drive. The mark is 160.5 feet north of a large flag pole; 73.3 feet east of a carsonite witness post and 96.7 feet north of the northern edge of Cazezu Drive.

Monument Description: The station is a stainless steel spherical datum point attached to a 9/16" stainless steel rod driven to refusal set within a floating sleeve and 6" PVC pipe filled with sand set in concrete with an access cover.

Stamping: BA 40 SM 02 (Stamping Differs from Station ID)

Survey Date: April 17-19, 2017

Monument Established By: SJB Group

Installation Date: June 2007

NAD83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29° 21' 20.02463"N

Long. 89° 32' 02.21585"W

NAD83 (2011) Epoch 2010.00 Geodetic Position LSZ (1702) Ft

N= 315642.541

E= 3854052.368

Adjusted NAVD88 Height

Elevation = -2.623 feet (-0.799 m)

Geoid12B Height = -23.940 m

Ellipsoid Height = -24.739 m





VICINITY MAP

Scale: N.T.S.

Reproduced from LDNR "SONRIS" Interactive Map

Station Name: "BA40-SM-03"

Monument Location: The Station is located by boat approximately 9 miles due south of Empire, Louisiana, on the east bank of Scofield Pass near Pelican Island in Section 35, T21S-R28E, Plaquemines Parish, Louisiana. It is located adjacent to an orange carsonite witness post.

Monument Description: The station is a stainless steel spherical datum point attached to a 9/16" stainless steel rod driven to refusal set within a floating sleeve and 6" PVC pipe filled with sand set in concrete with an access cover.

Stamping: BA40-SM-03

Survey Date: April 17-19, 2017

Monument Established By: Office of Coastal Protection and Restoration

NAD83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29° 14' 55.92470"N

Long. 89° 33' 49.99250"W

NAD83 (2011) Epoch 2010.00 Geodetic Position LSZ (1702) Ft

N= 276699.226

E= 3845115.083

Adjusted NAVD88 Height

Elevation = 2.638 feet (0.804 m)

Geoid12B Height = -23.696 m

Ellipsoid Height = -22.892 m





VICINITY MAP

Reproduced from Google Earth

Station Name: "CRMSBA SM 20"

Monument Location: By boat from Joshua's Marina in Buras, LA, go southwest ~1.4 miles into Bay Pomme D'Or. Cross the bay and continue south ~1.2 miles into Cyprien Bay. Go southeast ~1.7 miles into the bay to the mouth of Scofield Bay to the west. Follow Scofield bay into Scofield Bayou for ~3.5 miles to the shore of the Gulf of Mexico. Go west along the shoreline for ~11.5 miles to a canal. Go north along this canal for ~3700 feet to the monument set on the west side of this canal.

Monument Description: Monument is a 9/16" stainless steel rod driven to refusal set within a floating sleeve and 6" PVC pipe filled with sand set in concrete with an access cover.

Stamping: CRMSBA SM 20

Survey Date: April 17-19, 2017

Monument Established By: CHUSTZ

NAD83 (2011) Epoch 2010.00 Geodetic

Position Lat. 29° 18' 59.09078"N
Long. 89° 47' 06.29582"W

NAD83 (2011) Epoch 2010.00 Geodetic Position LSZ (1702)

Ft N= 300238.984
E= 3774247.951

Adjusted NAVD88 Height

Elevation = 2.344 feet (0.714 m)

Geoid12B Height = -23.968 m

Ellipsoid Height = -23.254 m





VICINITY MAP

Scale: N.T.S.

Reproduced from LDNR "SONRIS" Interactive Map

Station Name: "SCOFIELD 2"

Monument Location: The Station is located by boat approximately 9 miles due south of Empire, Louisiana, on the south spoil bank of a pipeline canal on Pelican Island in Section 35, T21S-R28E, Plaquemines Parish, Louisiana. It is located approximately 17 feet south of the waters edge of the Canal and is 15 feet south from an orange carsonite witness post.

Monument Description: The station is a stainless steel spherical datum point attached to a 9/16" stainless steel rod driven 68 feet to refusal set within a floating sleeve and 6" PVC pipe filled with sand set in concrete with an access cover.

Stamping: SCOFIELD 2

Survey Date: April 17-19, 2017

Monument Established By:
John Chance Land Surveys, Inc. (Fugro, Inc.)

NAD83 (2011) Epoch 2010.00 Geodetic Position

Lat. 29° 15' 20.49315"N
Long. 89° 36' 14.24815"W

NAD83 (2011) Epoch 2010.00 Geodetic Position LSZ (1702) Ft

N= 278985.614
E= 3832299.846

Adjusted NAVD88 Height

Elevation = 3.933 feet (1.199 m)

Geoid12B Height = -23.719 m
Ellipsoid Height = -22.520 m





APPENDIX D: RTK SURVEY POINTS TABLE – GEOID 12B

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1000	300518.582	3774703.989	2.034	CHECK
1001	300518.59	3774703.992	2.044	CHECK
1002	300568.929	3774536.04	1.03	AERIAL TARGET
1003	299019.357	3774395.856	3.837	CHECK
1004	299019.361	3774395.853	3.836	CHECK
1005	300276.426	3774033.832	5.462	AERIAL TARGET
1006	300276.418	3774032.847	5.516	AERIAL TARGET
1007	300275.405	3774032.838	5.508	AERIAL TARGET
1008	300275.413	3774033.837	5.463	AERIAL TARGET
1009	301194.567	3766055.956	0.951	CHECK
1010	301194.571	3766055.952	0.945	CHECK
1011	301201.214	3766091.406	0.888	CHECK
1012	301201.214	3766091.407	0.887	CHECK
1013	300774.149	3765724.312	2.853	CHECK
1014	300774.154	3765724.316	2.851	CHECK
1015	300690.005	3765486.664	2.599	AERIAL TARGET
1016	300689.728	3765485.698	2.592	AERIAL TARGET
1017	300688.755	3765485.976	2.584	AERIAL TARGET
1018	300689.01	3765486.955	2.591	AERIAL TARGET
1019	300754.676	3765534.546	0.881	AERIAL TARGET
1028	304824.428	3774292.943	0.386	AERIAL TARGET
1029	301516.854	3774070.511	0.783	AERIAL TARGET
1030	301756.841	3772007.359	9.478	SETTLEMENT PLATE
1031	301755.925	3772008.588	3.868	NATURAL GROUND
1032	301753.383	3772009.11	4.16	NATURAL GROUND
1033	301753.104	3772005.94	4.2	NATURAL GROUND
1034	301755.509	3772005.661	3.66	NATURAL GROUND
1035	301447.243	3774558.458	0.814	AERIAL TARGET
1095	303864.177	3774497.842	0.589	AERIAL TARGET
1096	299867.293	3767007.812	13.337	SETTLEMENT PLATE
1097	299867.663	3767008.413	7.807	NATURAL GROUND
1098	299865.75	3767007.949	7.934	NATURAL GROUND
1099	299866.219	3767006.079	7.987	NATURAL GROUND
1100	299868.142	3767006.559	7.84	NATURAL GROUND
1101	299596.067	3769008.039	15.054	SETTLEMENT PLATE
1102	299596.978	3769009.072	8.184	NATURAL GROUND
1103	299594.945	3769008.898	8.214	NATURAL GROUND
1104	299595.055	3769006.961	8.247	NATURAL GROUND
1105	299597.045	3769007.179	8.207	NATURAL GROUND
1106	299848.7	3769007.676	10.163	SETTLEMENT PLATE
1107	299849.425	3769009.06	3.309	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1108	299847.704	3769008.151	3.298	NATURAL GROUND
1109	299848.653	3769006.492	3.318	NATURAL GROUND
1110	299850.333	3769007.442	3.341	NATURAL GROUND
1111	299401.059	3771008.303	16.537	SETTLEMENT PLATE
1112	299400.406	3771007.282	8.367	NATURAL GROUND
1113	299402.324	3771007.651	8.342	NATURAL GROUND
1114	299402.017	3771009.528	8.321	NATURAL GROUND
1115	299400.05	3771009.178	8.393	NATURAL GROUND
1116	299654.711	3771008.034	11.502	SETTLEMENT PLATE
1117	299656.322	3771007.83	3.279	NATURAL GROUND
1118	299655.064	3771009.316	3.246	NATURAL GROUND
1119	299653.579	3771007.996	3.117	NATURAL GROUND
1120	299654.77	3771006.527	3.25	NATURAL GROUND
1121	300519.63	3771008.054	11.351	SETTLEMENT PLATE
1122	300518.528	3771007.605	3.795	NATURAL GROUND
1123	300520.168	3771006.525	3.86	NATURAL GROUND
1124	300521.235	3771008.125	3.754	NATURAL GROUND
1125	300519.611	3771009.225	3.749	NATURAL GROUND
1126	300600.329	3767009.128	8.53	SETTLEMENT PLATE
1127	300599.469	3767009.137	3.26	NATURAL GROUND
1128	300600.06	3767007.294	3.369	NATURAL GROUND
1129	300601.995	3767007.956	3.339	NATURAL GROUND
1130	300601.321	3767009.801	3.189	NATURAL GROUND
1131	301437.228	3769502.45	9.944	SETTLEMENT PLATE
1132	301436.984	3769501.99	0.867	NATURAL GROUND
1133	301439.084	3769501.205	0.51	NATURAL GROUND
1134	301439.638	3769504.115	0.691	NATURAL GROUND
1135	301437.58	3769503.631	0.904	NATURAL GROUND
1136	299203.636	3773009.572	13.255	SETTLEMENT PLATE
1137	299202.953	3773008.315	7.826	NATURAL GROUND
1138	299204.804	3773008.164	7.961	NATURAL GROUND
1139	299204.996	3773010.163	7.859	NATURAL GROUND
1140	299203.058	3773010.282	7.791	NATURAL GROUND
1141	300636.359	3773013.06	9.138	SETTLEMENT PLATE
1142	300637.095	3773013.997	2.119	NATURAL GROUND
1143	300637.425	3773012.168	2.129	NATURAL GROUND
1144	300635.547	3773011.852	2.147	NATURAL GROUND
1145	300635.245	3773013.724	2.128	NATURAL GROUND
1146	302655.288	3774613.258	0.741	AERIAL TARGET
1147	300769.532	3765528.037	0.67	AERIAL TARGET
1148	300470.382	3765261.126	1.513	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1149	300445.724	3765261.937	1.684	NATURAL GROUND
1150	300421.536	3765262.891	0.658	NATURAL GROUND
1151	300404.384	3765263.591	0.465	NATURAL GROUND
1152	300379.736	3765264.627	0.596	NATURAL GROUND
1153	300362.399	3765265.491	1.028	NATURAL GROUND
1154	300354.584	3765265.785	0.437	WATER EDGE SURFACE
1155	300347.742	3765266.052	0.299	WATER BOTTOM
1156	300326.012	3765266.76	-0.373	WATER BOTTOM
1157	300296.344	3765268.294	-1.323	WATER BOTTOM
1158	300269.306	3765269.363	-1.905	WATER BOTTOM
1159	300252.162	3765270.224	-1.193	WATER BOTTOM
1160	300215.717	3765271.518	-1.196	WATER BOTTOM
1161	300188.375	3765272.86	-2.111	WATER BOTTOM
1162	300169.932	3765273.384	-2.883	WATER BOTTOM
1163	300150.793	3765275.169	-3.472	WATER BOTTOM
1164	300233.726	3765732.464	1.24	NATURAL GROUND
1165	300213.899	3765731.841	1.384	NATURAL GROUND
1166	300192.134	3765732.851	1.539	NATURAL GROUND
1167	300168.436	3765734.023	1.795	NATURAL GROUND
1168	300141.815	3765736.05	1.879	NATURAL GROUND
1169	300116.74	3765735.442	2.129	NATURAL GROUND
1170	300091.94	3765735.894	2.335	NATURAL GROUND
1171	300081.899	3765737.041	2.144	NATURAL GROUND
1172	300078.48	3765736.911	2.318	NATURAL GROUND
1173	300070.703	3765737.06	1.685	NATURAL GROUND
1174	300053.347	3765738.127	1.083	NATURAL GROUND
1175	300046.069	3765737.83	1.095	NATURAL GROUND
1176	300039.355	3765737.874	0.422	WATER EDGE SURFACE
1177	300018.801	3765738.542	-0.277	WATER BOTTOM
1178	300000.044	3765739.516	-1.204	WATER BOTTOM
1179	299983.294	3765739.867	-2.145	WATER BOTTOM
1180	299971.046	3765740.267	-2.059	WATER BOTTOM
1181	299955.689	3765741.191	-1.117	WATER BOTTOM
1182	299945.124	3765740.745	-0.772	WATER BOTTOM
1183	299920.994	3765741.608	-1.579	WATER BOTTOM
1184	299900.493	3765742.596	-2.428	WATER BOTTOM
1185	299878.899	3765742.035	-3.643	WATER BOTTOM
1186	299665.236	3766295.379	-3.963	WATER BOTTOM
1187	299681.792	3766295.353	-2.862	WATER BOTTOM
1188	299701.244	3766294.757	-1.823	WATER BOTTOM
1189	299719.665	3766294.296	-1.099	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1190	299734.072	3766293.935	-0.555	WATER BOTTOM
1191	299745.269	3766294.064	-0.732	WATER BOTTOM
1192	299747.75	3766293.076	-1.324	WATER BOTTOM
1193	299749.343	3766293.638	-1.681	WATER BOTTOM
1194	299754.927	3766294.256	-2.043	WATER BOTTOM
1195	299765.801	3766293.485	-2.066	WATER BOTTOM
1196	299777.894	3766293.261	-1.658	WATER BOTTOM
1197	299788.826	3766293.15	-0.934	WATER BOTTOM
1198	299801.625	3766292.232	-0.28	WATER BOTTOM
1199	299816.139	3766293.805	0.242	WATER EDGE SURFACE
1200	299824.316	3766292.915	1.12	NATURAL GROUND
1201	299836.882	3766292.364	1.205	NATURAL GROUND
1202	299843.804	3766292.315	1.656	NATURAL GROUND
1203	299847.338	3766292.439	2.095	NATURAL GROUND
1204	299849.303	3766292.273	2.671	NATURAL GROUND
1205	299849.807	3766292.221	6.45	NATURAL GROUND
1206	299878.19	3766292.052	7.327	NATURAL GROUND
1207	299904.558	3766291.727	7.568	NATURAL GROUND
1208	299926.476	3766291.443	7.689	NATURAL GROUND
1209	299952.696	3766291.033	7.737	NATURAL GROUND
1210	299885.949	3766816.765	7.417	NATURAL GROUND
1211	299864.742	3766816.828	7.35	NATURAL GROUND
1212	299845.028	3766816.854	7.287	NATURAL GROUND
1213	299817.489	3766816.849	7.223	NATURAL GROUND
1214	299790.558	3766816.844	6.632	NATURAL GROUND
1215	299763.981	3766816.749	5.915	NATURAL GROUND
1216	299741.15	3766816.899	5.206	NATURAL GROUND
1217	299716.514	3766816.844	4.611	NATURAL GROUND
1218	299702.493	3766816.913	4.042	NATURAL GROUND
1219	299699.406	3766816.765	3.815	NATURAL GROUND
1220	299698.94	3766816.69	2.68	NATURAL GROUND
1221	299695.913	3766816.933	2.415	NATURAL GROUND
1222	299683.639	3766816.965	1.383	NATURAL GROUND
1223	299664.574	3766816.768	0.918	NATURAL GROUND
1224	299659.001	3766816.866	0.396	WATER EDGE SURFACE
1225	299642.33	3766816.892	-0.504	WATER BOTTOM
1226	299619.394	3766816.804	-1.447	WATER BOTTOM
1227	299596.694	3766816.756	-1.569	WATER BOTTOM
1228	299588.636	3766816.918	-0.968	WATER BOTTOM
1229	299583.294	3766816.8	-0.426	WATER BOTTOM
1230	299568.066	3766817.245	-0.754	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1231	299548.802	3766816.814	-1.458	WATER BOTTOM
1232	299528.136	3766816.755	-2.429	WATER BOTTOM
1233	299518.054	3766816.824	-3.033	WATER BOTTOM
1234	299502.354	3766815.233	-3.789	WATER BOTTOM
1235	299488.67	3766815.397	-4.272	WATER BOTTOM
1236	299356.568	3767325.76	-4.109	WATER BOTTOM
1237	299373.13	3767328.408	-3.26	WATER BOTTOM
1238	299382.295	3767331.1	-2.627	WATER BOTTOM
1239	299394.554	3767327.026	-2.055	WATER BOTTOM
1240	299416.419	3767327.473	-1.23	WATER BOTTOM
1241	299439.882	3767328.391	-0.454	WATER BOTTOM
1242	299453.002	3767328.456	-0.381	WATER BOTTOM
1243	299458.299	3767328.576	-1.131	WATER BOTTOM
1244	299476.358	3767329.016	-1.237	WATER BOTTOM
1245	299496.107	3767329.437	-0.546	WATER BOTTOM
1246	299505.947	3767328.923	-0.014	WATER BOTTOM
1247	299513.992	3767330.008	0.301	WATER EDGE SURFACE
1248	299519.552	3767330.993	0.951	NATURAL GROUND
1249	299533.592	3767330.319	1.468	NATURAL GROUND
1250	299546.782	3767330.636	2.447	NATURAL GROUND
1251	299566.999	3767331.195	2.553	NATURAL GROUND
1252	299602.85	3767332.512	3.406	NATURAL GROUND
1253	299628.561	3767332.976	4.25	NATURAL GROUND
1254	299651.372	3767333.177	4.903	NATURAL GROUND
1255	299583.468	3767806.561	3.126	NATURAL GROUND
1256	299559.315	3767805.937	2.588	NATURAL GROUND
1257	299524.949	3767805.234	2.594	NATURAL GROUND
1258	299479.128	3767804.092	2.15	NATURAL GROUND
1259	299451.55	3767803.474	2.484	NATURAL GROUND
1260	299443.664	3767803.253	1.614	NATURAL GROUND
1261	299433.491	3767803.134	1.251	NATURAL GROUND
1262	299423.998	3767803.011	0.26	WATER EDGE SURFACE
1263	299416.991	3767802.997	0.046	WATER BOTTOM
1264	299400.867	3767802.564	-0.726	WATER BOTTOM
1265	299378.902	3767802.058	-1.28	WATER BOTTOM
1266	299356.454	3767801.565	-0.664	WATER BOTTOM
1267	299337.366	3767800.965	-0.739	WATER BOTTOM
1268	299317.606	3767800.503	-1.524	WATER BOTTOM
1269	299296.943	3767800.306	-2.482	WATER BOTTOM
1270	299279.291	3767799.708	-3.361	WATER BOTTOM
1271	299266.361	3767798.811	-4.319	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1272	299472.892	3768305.86	2.994	NATURAL GROUND
1273	299454.311	3768306.438	2.627	NATURAL GROUND
1274	299430.977	3768305.406	2.39	NATURAL GROUND
1275	299412.8	3768304.423	2.396	NATURAL GROUND
1276	299391.886	3768303.121	2.38	NATURAL GROUND
1277	299364.457	3768302.329	1.982	NATURAL GROUND
1278	299343.168	3768301.39	1.237	NATURAL GROUND
1279	299331.206	3768301.202	0.331	WATER EDGE SURFACE
1280	299315.277	3768300.035	-0.457	WATER BOTTOM
1281	299294.815	3768299.945	-1.055	WATER BOTTOM
1282	299276.829	3768298.668	-1.038	WATER BOTTOM
1283	299272.46	3768298.565	-0.429	WATER BOTTOM
1284	299250.965	3768297.942	-1.022	WATER BOTTOM
1285	299232.604	3768296.056	-1.864	WATER BOTTOM
1286	299217.933	3768296.612	-2.864	WATER BOTTOM
1287	299204.811	3768296.279	-3.794	WATER BOTTOM
1288	299190.021	3768294.508	-3.969	WATER BOTTOM
1289	299424.498	3768776.921	4.008	NATURAL GROUND
1290	299401.54	3768775.859	3.28	NATURAL GROUND
1291	299376.38	3768774.787	3.047	NATURAL GROUND
1292	299354.176	3768773.44	2.691	NATURAL GROUND
1293	299324.972	3768771.949	2.474	NATURAL GROUND
1294	299304.723	3768770.773	1.363	NATURAL GROUND
1295	299291.007	3768770.332	1.146	NATURAL GROUND
1296	299283.1	3768769.914	0.362	WATER EDGE SURFACE
1297	299264.344	3768768.725	-0.75	WATER BOTTOM
1298	299244.936	3768767.922	-1.407	WATER BOTTOM
1299	299229.123	3768766.866	-1.244	WATER BOTTOM
1300	299215.175	3768766.254	-0.953	WATER BOTTOM
1301	299200.297	3768765.228	-0.851	WATER BOTTOM
1302	299182.75	3768764.665	-1.52	WATER BOTTOM
1303	299165.792	3768763.478	-2.554	WATER BOTTOM
1304	299153.538	3768763.133	-3.433	WATER BOTTOM
1305	299140.103	3768761.838	-4.02	WATER BOTTOM
1306	299126.694	3768762.357	-3.477	WATER BOTTOM
1307	299116.934	3768761.883	-2.443	WATER BOTTOM
1308	299105.282	3768760.99	-1.965	WATER BOTTOM
1309	299085.965	3768759.86	-2.356	WATER BOTTOM
1310	299065.038	3768757.841	-3.026	WATER BOTTOM
1311	299043.728	3768757.869	-3.73	WATER BOTTOM
1312	299030.64	3768757.377	-4.171	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1313	299021.134	3768757.335	-4.507	WATER BOTTOM
1314	300679.085	3774360.428	0.896	AERIAL TARGET
1315	299380.532	3769307.514	4.469	NATURAL GROUND
1316	299357.459	3769306.691	3.812	NATURAL GROUND
1317	299327	3769305.682	3.208	NATURAL GROUND
1318	299295.933	3769304.294	3.033	NATURAL GROUND
1319	299287.691	3769304.262	2.528	NATURAL GROUND
1320	299256.833	3769303.111	2.275	NATURAL GROUND
1321	299245.745	3769302.673	1.584	NATURAL GROUND
1322	299232.796	3769302.165	0.892	WATER EDGE SURFACE
1323	299224.429	3769301.894	0.527	WATER BOTTOM
1324	299211.161	3769301.395	-0.113	WATER BOTTOM
1325	299196.012	3769300.988	-0.996	WATER BOTTOM
1326	299180.606	3769300.594	-1.367	WATER BOTTOM
1327	299163.488	3769299.803	-1.338	WATER BOTTOM
1328	299150.377	3769299.29	-0.702	WATER BOTTOM
1329	299133.182	3769298.665	-1.012	WATER BOTTOM
1330	299114.572	3769298.188	-2.01	WATER BOTTOM
1331	299100.481	3769297.251	-2.905	WATER BOTTOM
1332	299088.863	3769297.439	-3.599	WATER BOTTOM
1333	299075.49	3769298.423	-3.777	WATER BOTTOM
1334	299018.41	3769806.164	-4.126	WATER BOTTOM
1335	299036.012	3769806.565	-3.007	WATER BOTTOM
1336	299048.154	3769808.637	-2.258	WATER BOTTOM
1337	299057.656	3769809.05	-1.681	WATER BOTTOM
1338	299072.696	3769809.315	-1.131	WATER BOTTOM
1339	299085.52	3769809.058	-0.668	WATER BOTTOM
1340	299100.115	3769810.525	-0.692	WATER BOTTOM
1341	299105.641	3769810.749	-1.254	WATER BOTTOM
1342	299117.43	3769810.789	-1.442	WATER BOTTOM
1343	299132.828	3769810.577	-1.083	WATER BOTTOM
1344	299141.579	3769811.315	-0.733	WATER BOTTOM
1345	299153.312	3769811.859	0.157	WATER BOTTOM
1346	299170.45	3769812.664	1.025	WATER EDGE SURFACE
1347	299184.436	3769812.786	1.529	NATURAL GROUND
1348	299194.37	3769813.25	2.586	NATURAL GROUND
1349	299211.007	3769813.619	2.879	NATURAL GROUND
1350	299233.048	3769814.669	3.203	NATURAL GROUND
1351	299257.784	3769815.266	3.05	NATURAL GROUND
1352	299282.365	3769816.17	3.178	NATURAL GROUND
1353	299306.522	3769816.907	3.948	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1354	299326.825	3769817.318	4.552	NATURAL GROUND
1355	299367.847	3770354.198	6.756	NATURAL GROUND
1356	299345.111	3770353.427	6.225	NATURAL GROUND
1357	299322.82	3770351.49	5.583	NATURAL GROUND
1358	299302.514	3770350.302	5.113	NATURAL GROUND
1359	299284.009	3770350.274	4.584	NATURAL GROUND
1360	299262.944	3770348.965	3.989	NATURAL GROUND
1361	299243.091	3770347.958	3.505	NATURAL GROUND
1362	299221.889	3770346.391	3.377	NATURAL GROUND
1363	299202.643	3770346.321	2.938	NATURAL GROUND
1364	299181.953	3770344.518	2.49	NATURAL GROUND
1365	299164.239	3770343.804	2.319	NATURAL GROUND
1366	299151.82	3770343.338	1.321	NATURAL GROUND
1367	299141.652	3770341.91	1.371	NATURAL GROUND
1368	299135.939	3770342.022	0.787	WATER EDGE SURFACE
1369	299118.759	3770342.105	0.196	WATER BOTTOM
1370	299099.772	3770340.996	-0.944	WATER BOTTOM
1371	299082.4	3770340.361	-1.405	WATER BOTTOM
1372	299073.931	3770339.097	-0.71	WATER BOTTOM
1373	299062.159	3770338.358	-0.444	WATER BOTTOM
1374	299045.804	3770338.441	-0.872	WATER BOTTOM
1375	299031.006	3770336.619	-1.478	WATER BOTTOM
1376	299020.445	3770337.415	-2.059	WATER BOTTOM
1377	299005.879	3770336.227	-3.035	WATER BOTTOM
1378	298995.88	3770335.89	-3.968	WATER BOTTOM
1379	298990.177	3770335.151	-4.438	WATER BOTTOM
1380	298954.865	3770757.326	-4.651	WATER BOTTOM
1381	298977.032	3770758.419	-3.13	WATER BOTTOM
1382	298993.253	3770758.232	-2.153	WATER BOTTOM
1383	299009.106	3770759.332	-1.335	WATER BOTTOM
1384	299024.766	3770758.929	-0.716	WATER BOTTOM
1385	299039.854	3770759.997	-0.911	WATER BOTTOM
1386	299053.869	3770759.22	-0.959	WATER BOTTOM
1387	299072.513	3770760.033	-0.523	WATER BOTTOM
1388	299092.146	3770760.379	0.077	WATER BOTTOM
1389	299111.629	3770760.128	0.415	WATER BOTTOM
1390	299117.201	3770761.712	0.758	WATER EDGE SURFACE
1391	299123.728	3770761.875	1.429	NATURAL GROUND
1392	299132.648	3770761.55	1.919	NATURAL GROUND
1393	299153.065	3770762.286	2.542	NATURAL GROUND
1394	299172.831	3770762.18	3.239	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1395	299192.771	3770762.895	3.562	NATURAL GROUND
1396	299213.041	3770763.529	3.846	NATURAL GROUND
1397	299234.515	3770764.482	4.069	NATURAL GROUND
1398	299255.564	3770764.828	4.523	NATURAL GROUND
1399	299276.543	3770764.586	5.056	NATURAL GROUND
1400	299292.84	3770765.283	5.703	NATURAL GROUND
1401	299314.862	3770765.143	6.519	NATURAL GROUND
1402	300685.188	3765259.221	2.811	NATURAL GROUND
1403	300717.533	3765258.553	2.999	NATURAL GROUND
1404	300720.085	3765258.378	1.741	NATURAL GROUND
1405	300723.323	3765258.542	1.374	NATURAL GROUND
1406	300725.6	3765258.329	1.485	NATURAL GROUND
1407	300730.016	3765258.32	1.318	NATURAL GROUND
1408	300732.967	3765258.36	1	NATURAL GROUND
1409	300744.705	3765258.201	0.799	NATURAL GROUND
1410	300763.378	3765257.624	0.599	NATURAL GROUND
1411	300780.689	3765257.225	0.755	NATURAL GROUND
1412	300796.125	3765257.032	1.275	NATURAL GROUND
1413	300826.622	3765256.515	1.719	NATURAL GROUND
1414	300840.385	3765256.281	1.965	NATURAL GROUND
1415	300841.867	3765256.168	1.694	NATURAL GROUND
1416	300853.386	3765255.961	1.844	NATURAL GROUND
1417	300864.742	3765255.815	0.718	WATER EDGE SURFACE
1418	300866.642	3765255.736	0.419	WATER BOTTOM
1419	300880.014	3765255.36	-0.208	WATER BOTTOM
1420	300896.327	3765255.144	-0.413	WATER BOTTOM
1421	300914.917	3765254.645	-1.029	WATER BOTTOM
1422	300938.579	3765254.378	-1.501	WATER BOTTOM
1423	300945.691	3765709.133	2.361	NATURAL GROUND
1424	300961.164	3765708.814	1.907	NATURAL GROUND
1425	300961.663	3765708.738	1.567	NATURAL GROUND
1426	300984.81	3765707.788	1.179	NATURAL GROUND
1427	300987.75	3765707.711	0.947	NATURAL GROUND
1428	300990.853	3765707.721	1.07	NATURAL GROUND
1429	301004.189	3765707.463	1.263	NATURAL GROUND
1430	301039.196	3765706.32	0.883	NATURAL GROUND
1431	301072.054	3765705.885	1.163	NATURAL GROUND
1432	301088.492	3765704.726	1.503	NATURAL GROUND
1433	301096.442	3765704.271	0.715	NATURAL GROUND
1434	301104.905	3765704.031	0.759	NATURAL GROUND
1435	301107.852	3765703.876	0.658	WATER EDGE SURFACE

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1436	301113.13	3765703.773	0.43	WATER BOTTOM
1437	301133.792	3765703.046	0.24	WATER BOTTOM
1438	301139.337	3765702.899	-0.415	WATER BOTTOM
1439	301146.618	3765702.575	-1.026	WATER BOTTOM
1440	301162.667	3765702.044	-1.264	WATER BOTTOM
1441	301173.174	3765701.778	-2.193	WATER BOTTOM
1442	301159.313	3766273.829	0.825	NATURAL GROUND
1443	301165.371	3766274.527	0.673	NATURAL GROUND
1444	301166.87	3766274.145	0.603	WATER EDGE SURFACE
1445	301168.382	3766273.982	0.169	WATER BOTTOM
1446	301177.244	3766274.315	-0.086	WATER BOTTOM
1447	301178.376	3766274.514	0.62	WATER EDGE SURFACE
1448	301183.248	3766273.966	0.623	NATURAL GROUND
1449	301195.074	3766274.441	0.451	NATURAL GROUND
1450	301208.224	3766273.578	1.149	NATURAL GROUND
1451	301214.778	3766273.402	1.523	NATURAL GROUND
1452	301223.529	3766273.357	1.165	NATURAL GROUND
1453	301226.035	3766272.833	0.887	NATURAL GROUND
1454	301226.053	3766273.208	0.627	WATER EDGE SURFACE
1455	301226.376	3766273.122	0.237	WATER BOTTOM
1456	301233.428	3766273.085	-0.484	WATER BOTTOM
1457	301237.465	3766272.843	-0.855	WATER BOTTOM
1458	301246.868	3766272.658	-1.189	WATER BOTTOM
1459	301252.356	3766272.647	-1.643	WATER BOTTOM
1460	301031.156	3766816.544	2.816	NATURAL GROUND
1461	301057.225	3766816.781	2.775	NATURAL GROUND
1462	301079.029	3766816.468	2.911	NATURAL GROUND
1463	301083.681	3766816.454	3.349	NATURAL GROUND
1464	301086.71	3766816.889	4.01	NATURAL GROUND
1465	301090.487	3766816.885	4.768	NATURAL GROUND
1466	301092.612	3766816.546	5.234	NATURAL GROUND
1467	301105.42	3766816.301	5.202	NATURAL GROUND
1468	301110.532	3766816.376	4.909	NATURAL GROUND
1469	301115.057	3766816.254	4.146	NATURAL GROUND
1470	301120.225	3766816.754	3.055	NATURAL GROUND
1471	301123.495	3766816.747	2.473	NATURAL GROUND
1472	301124.072	3766816.598	1.908	NATURAL GROUND
1473	301130.238	3766816.806	1.328	NATURAL GROUND
1474	301132.814	3766817.067	1.417	NATURAL GROUND
1475	301133.112	3766816.996	1.044	NATURAL GROUND
1476	301135.788	3766816.922	0.587	WATER EDGE SURFACE

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1477	301138.422	3766816.875	0.305	WATER BOTTOM
1478	301145.567	3766816.822	-0.141	WATER BOTTOM
1479	301157.682	3766817.235	-0.421	WATER BOTTOM
1480	301174.528	3766817.446	-0.556	WATER BOTTOM
1481	301193.515	3766816.6	-0.697	WATER BOTTOM
1482	301217.193	3766816.693	-0.753	WATER BOTTOM
1483	301238.321	3766816.447	-1.001	WATER BOTTOM
1484	300415.305	3774234.724	1.421	AERIAL TARGET
1485	301373.046	3769887.178	2.865	NATURAL GROUND
1486	301396.742	3769887.954	2.655	NATURAL GROUND
1487	301408.555	3769888.43	2.261	NATURAL GROUND
1488	301448.307	3769889.448	2.122	NATURAL GROUND
1489	301464.106	3769889.994	2.549	NATURAL GROUND
1490	301471.897	3769890.447	2.929	NATURAL GROUND
1491	301477.081	3769890.102	4.602	NATURAL GROUND
1492	301486.709	3769890.682	4.778	NATURAL GROUND
1493	301493.828	3769890.924	2.856	NATURAL GROUND
1494	301495.541	3769890.812	1.582	WATER EDGE SURFACE
1495	301496.108	3769891.299	-0.017	WATER BOTTOM
1496	301503.081	3769889.63	-0.561	WATER BOTTOM
1497	301525.562	3769893.845	-1.473	WATER BOTTOM
1498	301537.062	3769893.915	-1.777	WATER BOTTOM
1499	301551.449	3769893.458	-2.173	WATER BOTTOM
1500	302196.072	3769910.991	-2.652	WATER BOTTOM
1501	302217.053	3769911.408	-2.635	WATER BOTTOM
1502	302238.189	3769911.218	-2.594	WATER BOTTOM
1503	302260.018	3769913.463	-2.453	WATER BOTTOM
1504	302281.158	3769913.332	-2.535	WATER BOTTOM
1505	302303.922	3769913.013	-2.216	WATER BOTTOM
1506	302326.297	3769912.52	-1.729	WATER BOTTOM
1507	302345.805	3769914.666	-1.536	WATER BOTTOM
1508	302361.267	3769914.818	-1.193	WATER BOTTOM
1509	302372.291	3769917.481	-0.346	WATER BOTTOM
1510	302377.116	3769918.24	1.368	WATER EDGE SURFACE
1511	302380.919	3769918.502	1.816	NATURAL GROUND
1512	302387.538	3769918.094	1.474	WATER EDGE SURFACE
1513	302389.135	3769918.319	0.82	WATER BOTTOM
1514	302396.594	3769919.141	0.697	WATER BOTTOM
1515	302409.876	3769918.548	-0.508	WATER BOTTOM
1516	302418.477	3769918.248	-1.16	WATER BOTTOM
1517	302428.905	3769919.035	-1.365	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1518	302439.836	3769918.983	-2.11	WATER BOTTOM
1519	302451.524	3769921.501	-1.907	WATER BOTTOM
1520	302462.222	3769923.253	-1.845	WATER BOTTOM
1521	302473.431	3769924.055	-2.06	WATER BOTTOM
1522	302490.268	3769928.918	-1.903	WATER BOTTOM
1523	302533.409	3769924.545	-2.578	WATER BOTTOM
1524	301482.536	3770465.189	2.258	NATURAL GROUND
1525	301506.074	3770465.517	2.157	NATURAL GROUND
1526	301528.273	3770465.636	2.501	NATURAL GROUND
1527	301539.273	3770465.72	2.823	NATURAL GROUND
1528	301545.044	3770465.98	3.549	NATURAL GROUND
1529	301550.447	3770465.873	5.568	NATURAL GROUND
1530	301560.492	3770466.218	5.473	NATURAL GROUND
1531	301573.362	3770466.549	3.009	NATURAL GROUND
1532	301581.562	3770465.804	1.492	WATER EDGE SURFACE
1533	301582.93	3770465.568	0.522	WATER BOTTOM
1534	301587.611	3770464.043	-0.281	WATER BOTTOM
1535	301608.224	3770464.203	-1.268	WATER BOTTOM
1536	301615.468	3770454.379	-1.416	WATER BOTTOM
1537	301630.513	3770460.494	-1.87	WATER BOTTOM
1538	301646.179	3770461.629	-2.74	WATER BOTTOM
1539	301666.391	3770461.066	-3.004	WATER BOTTOM
1540	302049.331	3770464.014	-1.996	WATER BOTTOM
1541	302075.344	3770464.416	-1.82	WATER BOTTOM
1542	302096.505	3770464.04	-1.526	WATER BOTTOM
1543	302119.165	3770464.754	-1.367	WATER BOTTOM
1544	302142.636	3770464.678	-1.132	WATER BOTTOM
1545	302160.658	3770464.173	-0.855	WATER BOTTOM
1546	302175.125	3770465.279	0.31	WATER BOTTOM
1547	302185.928	3770465.809	0.82	WATER BOTTOM
1548	302208.86	3770466.069	1.026	WATER BOTTOM
1549	302228.047	3770465.347	0.436	WATER BOTTOM
1550	302241.557	3770466.678	-0.746	WATER BOTTOM
1551	302254.172	3770471.05	-0.987	WATER BOTTOM
1552	302278.67	3770473.342	-1.607	WATER BOTTOM
1553	302299.247	3770473.362	-2.634	WATER BOTTOM
1554	302327.226	3770475.823	-0.145	WATER BOTTOM
1555	302340.135	3770474.768	-1.955	WATER BOTTOM
1556	302356.857	3770474.496	-1.489	WATER BOTTOM
1557	302369.149	3770474.828	0.247	WATER BOTTOM
1558	302386.229	3770474.631	1.043	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1559	302408.281	3770475.116	0.974	WATER BOTTOM
1560	302429.003	3770474.649	0.89	WATER BOTTOM
1561	302442.219	3770474.434	0.769	WATER BOTTOM
1562	302456.595	3770473.951	-0.186	WATER BOTTOM
1563	302472.477	3770474.091	-0.417	WATER BOTTOM
1564	302491.7	3770474.9	-0.919	WATER BOTTOM
1565	302506.875	3770475.29	-1.558	WATER BOTTOM
1566	302523.64	3770475.986	-1.548	WATER BOTTOM
1567	302543.643	3770475.949	-1.191	WATER BOTTOM
1568	302563.305	3770475.404	-0.851	WATER BOTTOM
1569	302581.131	3770476.433	0.662	WATER BOTTOM
1570	302602.16	3770478.168	0.916	WATER BOTTOM
1571	302620.33	3770477.445	0.991	WATER BOTTOM
1572	302649.097	3770475.525	0.921	WATER BOTTOM
1573	302668.934	3770474.786	-0.843	WATER BOTTOM
1574	302682.038	3770475.827	-1.362	WATER BOTTOM
1575	302695.484	3770476.966	-1.361	WATER BOTTOM
1576	302710.612	3770475.875	-1.304	WATER BOTTOM
1577	302725.681	3770473.834	-1.84	WATER BOTTOM
1578	302737.915	3770473.256	-2.095	WATER BOTTOM
1579	302753.17	3770469.737	-2.353	WATER BOTTOM
1580	302769.403	3770464.324	-2.419	WATER BOTTOM
1581	302785.553	3770459.364	-2.908	WATER BOTTOM
1582	301557.721	3770816.214	2.292	NATURAL GROUND
1583	301571.901	3770816.688	2.341	NATURAL GROUND
1584	301581.294	3770816.578	2.656	NATURAL GROUND
1585	301586.641	3770816.704	4.216	NATURAL GROUND
1586	301591.231	3770816.952	5.059	NATURAL GROUND
1587	301600.692	3770816.908	4.757	NATURAL GROUND
1588	301610.115	3770817.148	3.03	NATURAL GROUND
1589	301617.713	3770817.449	1.795	NATURAL GROUND
1590	301619.948	3770817.27	1.521	WATER EDGE SURFACE
1591	301621.156	3770817.394	1.291	WATER BOTTOM
1592	301624.325	3770817.459	0.701	WATER BOTTOM
1594	301659.75	3770816.54	-1.926	WATER BOTTOM
1595	301679.805	3770823.837	-1.879	WATER BOTTOM
1596	301698.434	3770824.745	-2.543	WATER BOTTOM
1597	301738.99	3770821.212	-2.135	WATER BOTTOM
1598	301759.34	3770819.77	-2.152	WATER BOTTOM
1599	302052.797	3770825.832	-1.661	WATER BOTTOM
1600	302077.604	3770827.407	-1.621	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1601	302100.325	3770828.199	-1.44	WATER BOTTOM
1602	302127.854	3770827.512	-1.303	WATER BOTTOM
1603	302151.132	3770828.963	-1.213	WATER BOTTOM
1604	302169.776	3770829.458	-0.771	WATER BOTTOM
1605	302181.259	3770829.982	-0.372	WATER BOTTOM
1606	302195.191	3770830.274	0.751	WATER BOTTOM
1607	302219.488	3770830.09	0.979	WATER BOTTOM
1608	302248.293	3770831.343	0.411	WATER BOTTOM
1609	302260.036	3770832.046	-0.642	WATER BOTTOM
1610	302279.53	3770831.746	-1.322	WATER BOTTOM
1611	302298.528	3770833.223	-1.971	WATER BOTTOM
1612	302321.113	3770833.328	-2.389	WATER BOTTOM
1613	302341.213	3770834.101	-2.356	WATER BOTTOM
1614	302362.3	3770835.326	-1.938	WATER BOTTOM
1615	302379.902	3770835.265	-1.567	WATER BOTTOM
1616	302392.619	3770835.118	-0.15	WATER BOTTOM
1617	302421.465	3770835.196	0.943	WATER BOTTOM
1618	302453.696	3770838.528	0.385	WATER BOTTOM
1619	302466.516	3770839.554	-0.662	WATER BOTTOM
1620	302481.28	3770837.714	-0.953	WATER BOTTOM
1621	302507.435	3770838.035	-1.095	WATER BOTTOM
1622	302533.827	3770837.284	-1.12	WATER BOTTOM
1623	302560.912	3770837.52	-1.146	WATER BOTTOM
1624	302582.33	3770839.156	-1.048	WATER BOTTOM
1625	302600.247	3770838.75	-1.228	WATER BOTTOM
1626	302618.839	3770839.478	-1.507	WATER BOTTOM
1627	302638.269	3770839.6	-1.751	WATER BOTTOM
1628	302660.43	3770841.311	-1.348	WATER BOTTOM
1629	302684.974	3770841.245	-0.84	WATER BOTTOM
1630	302701.579	3770841.555	0.56	WATER BOTTOM
1631	302724.267	3770840.406	0.736	WATER BOTTOM
1632	302737.464	3770840.391	0.01	WATER BOTTOM
1633	302745.47	3770840.993	-0.512	WATER BOTTOM
1634	302757.094	3770842.533	-0.431	WATER BOTTOM
1635	302765.873	3770843.278	0.418	WATER BOTTOM
1636	302780.853	3770843.718	0.617	WATER BOTTOM
1637	302795.96	3770843.778	0.333	WATER BOTTOM
1638	302809.222	3770843.143	-0.519	WATER BOTTOM
1639	302827.087	3770842.581	-0.783	WATER BOTTOM
1640	302840.703	3770843.983	0.486	WATER BOTTOM
1641	302853.632	3770844.272	-0.688	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1642	302872.076	3770843.322	0.822	WATER BOTTOM
1643	302894.373	3770843.72	-0.793	WATER BOTTOM
1644	302918.36	3770844.847	0.813	WATER BOTTOM
1645	302938.783	3770845.495	0.583	WATER BOTTOM
1646	302950.198	3770844.398	-1.486	WATER BOTTOM
1647	302966.698	3770844.586	-1.877	WATER BOTTOM
1648	302980.268	3770844.518	-1.92	WATER BOTTOM
1649	302994	3770845.312	-2.098	WATER BOTTOM
1650	303010.534	3770846.419	-2.262	WATER BOTTOM
1651	303026.569	3770849.549	-2.372	WATER BOTTOM
1652	303042.424	3770848.949	-2.222	WATER BOTTOM
1653	303060.656	3770846.55	-2.298	WATER BOTTOM
1654	303079.168	3770844.403	-2.179	WATER BOTTOM
1655	303094.811	3770842.822	-2.541	WATER BOTTOM
1656	303123.127	3770834.385	-2.536	WATER BOTTOM
1657	301611.845	3771232.611	2.115	NATURAL GROUND
1658	301620.553	3771233.053	2.451	NATURAL GROUND
1659	301627.491	3771233.141	2.887	NATURAL GROUND
1660	301641.046	3771233.474	3.673	NATURAL GROUND
1661	301644.679	3771233.555	5.463	NATURAL GROUND
1662	301661.422	3771233.706	5.796	NATURAL GROUND
1663	301663.112	3771233.794	4.005	NATURAL GROUND
1664	301669.232	3771234.03	2.906	NATURAL GROUND
1665	301677.64	3771234.087	2.837	NATURAL GROUND
1666	301684.82	3771234.165	1.789	NATURAL GROUND
1667	301691.952	3771227.851	1.35	WATER EDGE SURFACE
1668	301698.464	3771231.417	0.804	WATER BOTTOM
1669	301702.725	3771238.69	0.82	WATER BOTTOM
1670	301721.824	3771234.398	0.666	WATER BOTTOM
1671	301747.331	3771234.496	0.578	WATER BOTTOM
1672	301773.429	3771235.857	0.48	WATER BOTTOM
1673	301799.709	3771236.499	0.293	WATER BOTTOM
1674	301819.16	3771236.564	0.281	WATER BOTTOM
1675	301837.462	3771236.38	0.49	WATER BOTTOM
1676	301854.859	3771237.927	0.726	WATER BOTTOM
1677	301862.784	3771237.789	0.57	WATER BOTTOM
1678	301876.046	3771238.285	-0.48	WATER BOTTOM
1679	301896.7	3771238.654	-1.275	WATER BOTTOM
1680	301918.665	3771239.932	-1.424	WATER BOTTOM
1681	301938.434	3771238.82	-1.313	WATER BOTTOM
1682	301958.906	3771238.288	-1.429	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1683	301979.536	3771236.278	-1.317	WATER BOTTOM
1684	302000.932	3771235.816	-1.424	WATER BOTTOM
1685	302025.978	3771235.641	-1.383	WATER BOTTOM
1686	302051.876	3771235.363	-1.516	WATER BOTTOM
1687	302091.903	3771236.393	-0.791	WATER BOTTOM
1688	302101.67	3771236.014	-1.637	WATER BOTTOM
1689	302137.042	3771237.099	-0.877	WATER BOTTOM
1690	302156.746	3771238.551	-1.549	WATER BOTTOM
1691	302183.375	3771241.514	-0.979	WATER BOTTOM
1692	302204.575	3771245.067	-1.214	WATER BOTTOM
1693	302222.226	3771247.469	-0.479	WATER BOTTOM
1694	302233.678	3771248.474	0.87	WATER BOTTOM
1695	302267.213	3771247.447	0.18	WATER BOTTOM
1696	302278.506	3771247.739	-0.963	WATER BOTTOM
1697	302292.925	3771247.505	-1.242	WATER BOTTOM
1698	302312.458	3771248.487	-1.637	WATER BOTTOM
1699	302329.712	3771248.759	-1.94	WATER BOTTOM
1700	302347.673	3771249.676	-2.32	WATER BOTTOM
1701	302373.964	3771252.55	0.589	WATER BOTTOM
1702	302409.96	3771253.962	0.327	WATER BOTTOM
1703	302411.026	3771253.699	0.44	WATER BOTTOM
1704	302410.518	3771253.886	0.389	WATER BOTTOM
1705	302429.973	3771252.722	1.191	WATER BOTTOM
1706	302457.643	3771255.868	0.207	WATER BOTTOM
1707	302461.632	3771251.905	-0.526	WATER BOTTOM
1708	302472.55	3771249.656	-0.898	WATER BOTTOM
1709	302491.45	3771245.396	-1.271	WATER BOTTOM
1710	302508.809	3771242.115	-1.455	WATER BOTTOM
1711	302531.405	3771241.904	-1.407	WATER BOTTOM
1712	302552.36	3771243.212	-1.844	WATER BOTTOM
1713	302573.523	3771242.024	-2.313	WATER BOTTOM
1714	302594.851	3771243.129	-1.951	WATER BOTTOM
1715	302620.003	3771242.716	-2.088	WATER BOTTOM
1716	302642.589	3771243.876	-1.969	WATER BOTTOM
1717	302666.505	3771244.873	-1.824	WATER BOTTOM
1718	302685.472	3771245.94	-1.978	WATER BOTTOM
1719	302704.923	3771246.776	-1.811	WATER BOTTOM
1720	302727.589	3771248.248	-1.642	WATER BOTTOM
1721	302748.268	3771249.269	-1.693	WATER BOTTOM
1722	302769.366	3771249.037	-1.687	WATER BOTTOM
1723	302790.843	3771251.484	-1.762	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1724	302810.394	3771252.678	-1.562	WATER BOTTOM
1725	302830.391	3771252.97	-1.208	WATER BOTTOM
1726	302849.323	3771253.941	-1.421	WATER BOTTOM
1727	302870.26	3771253.734	-0.677	WATER BOTTOM
1728	302883.459	3771254.354	0.414	WATER BOTTOM
1729	302903.718	3771255.262	0.694	WATER BOTTOM
1730	302929.654	3771255.707	0.577	WATER BOTTOM
1731	302961.953	3771257.185	-0.36	WATER BOTTOM
1732	302988.549	3771258.222	-0.45	WATER BOTTOM
1733	303014.613	3771259.289	0.611	WATER BOTTOM
1734	303040.689	3771260.624	-0.501	WATER BOTTOM
1735	303061.465	3771262.778	-0.453	WATER BOTTOM
1736	303085.76	3771263.955	-0.509	WATER BOTTOM
1737	303113.726	3771265.538	-0.743	WATER BOTTOM
1738	303139.015	3771266.163	-0.384	WATER BOTTOM
1739	303165.325	3771265.469	-0.669	WATER BOTTOM
1740	303193.493	3771265.092	0.051	WATER BOTTOM
1741	303214.272	3771264.046	-0.926	WATER BOTTOM
1742	303239.248	3771265.744	-0.621	WATER BOTTOM
1743	303263.205	3771266.423	-0.386	WATER BOTTOM
1744	303282.064	3771267.143	0.373	WATER BOTTOM
1745	303301.231	3771267.839	0.768	WATER BOTTOM
1746	303322.346	3771269.567	0.609	WATER BOTTOM
1747	303332.31	3771267.45	-1.612	WATER BOTTOM
1748	303347.6	3771267.582	-2.1	WATER BOTTOM
1749	303364.599	3771268.818	-2.353	WATER BOTTOM
1750	303384.185	3771269.924	-2.29	WATER BOTTOM
1751	303396.228	3771270.418	-2.337	WATER BOTTOM
1752	303412.47	3771269.578	-2.622	WATER BOTTOM
1753	303425.071	3771266.404	-2.48	WATER BOTTOM
1754	303439.682	3771264.219	-2.801	WATER BOTTOM
1755	303459.836	3771263.301	-2.484	WATER BOTTOM
1756	300699.985	3768842.573	2.165	NATURAL GROUND
1757	300675.996	3768840.589	2.217	NATURAL GROUND
1758	300649.769	3768839.065	2.288	NATURAL GROUND
1759	300621.662	3768838.218	2.32	NATURAL GROUND
1760	300591.729	3768836.114	1.992	NATURAL GROUND
1761	300564.876	3768834.708	2.101	NATURAL GROUND
1762	300537.143	3768834.423	2.038	NATURAL GROUND
1763	300510.517	3768831.311	2.221	NATURAL GROUND
1764	300481.112	3768830.235	2.109	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
1765	300454.824	3768828.762	2.214	NATURAL GROUND
1766	300427.703	3768827.739	2.135	NATURAL GROUND
1767	300400.435	3768826.015	2.208	NATURAL GROUND
1768	300371.543	3768824.093	2.25	NATURAL GROUND
1769	300363.411	3769074.019	2.373	NATURAL GROUND
1770	300389.388	3769074.888	2.143	NATURAL GROUND
1771	300414.465	3769077.006	2.189	NATURAL GROUND
1772	300438.041	3769078.043	2.297	NATURAL GROUND
1773	300455.833	3769079.901	2.255	NATURAL GROUND
1774	300591.774	3769015.045	9.268	SETTLEMENT PLATE
1775	300590.915	3769017.115	2.23	NATURAL GROUND
1776	300592.914	3769016.872	2.183	NATURAL GROUND
1777	300592.758	3769014.962	2.065	NATURAL GROUND
1778	300590.811	3769015.185	2.03	NATURAL GROUND
1779	300870.474	3769359.558	2.322	NATURAL GROUND
1780	300847.809	3769358.661	2.263	NATURAL GROUND
1781	300826.38	3769358.491	2.06	NATURAL GROUND
1782	300806.23	3769358.329	1.888	NATURAL GROUND
1783	300785.152	3769357.755	1.939	NATURAL GROUND
1784	300761.324	3769356.649	1.918	NATURAL GROUND
1785	300736.8	3769355.98	1.663	NATURAL GROUND
1786	300715.134	3769354.238	1.753	NATURAL GROUND
1787	300695.109	3769353.986	1.861	NATURAL GROUND
1788	300676.517	3769353.537	0.81	NATURAL GROUND
1789	300663.095	3769354.183	1.517	NATURAL GROUND
1790	300648.444	3769354.018	1.693	NATURAL GROUND
1791	300633.801	3769352.565	2.049	NATURAL GROUND
100000	299957.128	3774355.813	1.476	NATURAL GROUND
100001	299972.961	3774356.325	1.442	NATURAL GROUND
100002	300000.428	3774355.605	1.362	NATURAL GROUND
100003	300026.833	3774355.884	1.318	NATURAL GROUND
100004	300054.367	3774355.817	1.331	NATURAL GROUND
100005	300080.714	3774355.47	1.285	NATURAL GROUND
100006	300107.937	3774355.942	1.246	NATURAL GROUND
100007	300136.461	3774355.851	1.124	NATURAL GROUND
100008	300161.109	3774355.826	1.044	NATURAL GROUND
100009	300184.065	3774355.855	1.02	NATURAL GROUND
100010	300205.26	3774356.021	1.012	NATURAL GROUND
100011	300225.339	3774355.693	1.016	NATURAL GROUND
100012	300244.442	3774355.662	1.052	NATURAL GROUND
100013	300259.113	3774355.559	0.962	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
100014	300275.776	3774356.166	0.97	NATURAL GROUND
100015	300295.016	3774356.058	0.961	NATURAL GROUND
100016	300311.666	3774355.688	1.016	NATURAL GROUND
100017	300333.11	3774355.67	1.024	NATURAL GROUND
100018	300350.249	3774355.098	0.844	NATURAL GROUND
100019	300349.416	3774357.169	0.884	NATURAL GROUND
100020	300366.214	3774356.427	0.785	NATURAL GROUND
100021	300387.503	3774356.218	0.986	NATURAL GROUND
100022	300412.933	3774356.421	1.059	NATURAL GROUND
100023	300437.648	3774357.068	0.799	NATURAL GROUND
100024	300457.111	3774356.325	0.956	NATURAL GROUND
100025	300482.73	3774356.298	0.744	NATURAL GROUND
100026	300501.248	3774355.089	0.556	NATURAL GROUND
100027	300527.739	3774351.442	0.683	NATURAL GROUND
100028	300565.158	3774351.102	0.619	NATURAL GROUND
100029	300603.276	3774352.665	0.387	NATURAL GROUND
100030	300651.344	3774350.829	0.522	NATURAL GROUND
100031	300692.106	3774350.978	0.377	NATURAL GROUND
100032	300731.543	3774355.339	0.266	NATURAL GROUND
100033	300759.365	3774356.547	0.543	NATURAL GROUND
100034	300789.27	3774355.204	0.454	NATURAL GROUND
100035	300827.111	3774354.096	0.595	NATURAL GROUND
100036	300865.075	3774354.114	0.275	NATURAL GROUND
100037	300904.805	3774353.834	0.293	NATURAL GROUND
100038	300943.103	3774353.37	0.178	NATURAL GROUND
100039	300973.348	3774353.187	0.138	NATURAL GROUND
100040	301013.718	3774352.764	-0.033	NATURAL GROUND
100041	301058.893	3774353.104	-1.466	NATURAL GROUND
100042	301100.818	3774350.878	-0.067	NATURAL GROUND
100043	301145.612	3774354.369	-0.3	NATURAL GROUND
100044	301190.501	3774355.489	-0.271	NATURAL GROUND
100045	301237.855	3774355.524	-0.096	NATURAL GROUND
100046	301282.516	3774356.107	-0.31	NATURAL GROUND
100047	301323.277	3774357.338	-0.451	NATURAL GROUND
100048	301361.299	3774356.954	-0.436	NATURAL GROUND
100049	301402.791	3774355.966	-0.569	NATURAL GROUND
100050	301445.935	3774356.032	-0.665	NATURAL GROUND
100051	301488.163	3774356.187	-0.685	NATURAL GROUND
100052	301525.014	3774355.989	-0.651	NATURAL GROUND
100053	301567.974	3774356.428	-0.847	NATURAL GROUND
100054	301617.722	3774355.213	-0.781	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft Vertical Datum: NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
100055	301663.524	3774354.349	-0.94	NATURAL GROUND
100056	301703.468	3774354.526	-0.936	NATURAL GROUND
100057	301739.453	3774355.597	-1.038	NATURAL GROUND
100058	301779.566	3774357.38	-1.066	NATURAL GROUND
100059	301820.934	3774358.853	-1.016	NATURAL GROUND
100060	301855.545	3774361.512	-1.347	NATURAL GROUND
100061	301895.046	3774363.224	-1.09	NATURAL GROUND
100062	301934.46	3774366.946	-1.086	NATURAL GROUND
100063	300987.375	3765210.799	1.135	AERIAL TARGET
100064	295608.621	3773687.466	0.286	AERIAL TARGET
100065	296384.736	3775368.214	0.479	AERIAL TARGET
100066	296387.508	3775365.723	0.563	AERIAL TARGET
10045	300799.499	3774484.52	0.601	AERIAL TARGET
10046	298899.669	3776438.907	4.127	NATURAL GROUND
10047	298883.637	3776438.392	3.968	NATURAL GROUND
10048	298866.411	3776437.656	3.656	NATURAL GROUND
10049	298850.327	3776436.833	2.878	NATURAL GROUND
10050	298833.745	3776436.235	2.607	NATURAL GROUND
10051	298817.01	3776435.475	2.277	NATURAL GROUND
10052	298800.322	3776434.779	1.336	NATURAL GROUND
10053	298785.518	3776434.214	0.857	NATURAL GROUND
10054	298777.507	3776434.198	0.356	WATER EDGE SURFACE
10055	298770.963	3776433.932	0.149	WATER BOTTOM
10056	298759.211	3776432.494	-0.08	WATER BOTTOM
10057	298745.108	3776432.732	-0.656	WATER BOTTOM
10058	298732.085	3776432.081	-1.378	WATER BOTTOM
10059	298731.336	3776432.219	-1.447	WATER BOTTOM
10060	298721.551	3776430.936	-2.106	WATER BOTTOM
10061	298710.424	3776431.199	-2.821	WATER BOTTOM
10062	298698.578	3776430.452	-3.419	WATER BOTTOM
10063	298686.094	3776430.489	-3.872	WATER BOTTOM
10064	298946.797	3775968.828	4.621	NATURAL GROUND
10065	298934.993	3775968.387	3.719	NATURAL GROUND
10066	298921.353	3775967.686	3.944	NATURAL GROUND
10067	298904.679	3775966.828	3.189	NATURAL GROUND
10068	298890.515	3775966.387	2.471	NATURAL GROUND
10069	298873.888	3775965.633	2.388	NATURAL GROUND
10070	298857.329	3775964.823	2.307	NATURAL GROUND
10071	298837.066	3775963.968	1.299	NATURAL GROUND
10072	298829.699	3775963.335	0.494	WATER EDGE SURFACE
10073	298819.55	3775962.793	0.091	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10074	298809.177	3775962.812	0.494	WATER BOTTOM
10075	298791.161	3775961.799	0.191	WATER BOTTOM
10076	298776.025	3775961.191	-0.177	WATER BOTTOM
10077	298760.521	3775960.452	-0.573	WATER BOTTOM
10078	298743.751	3775959.492	-1.354	WATER BOTTOM
10079	298729.215	3775958.772	-2.025	WATER BOTTOM
10080	298716.438	3775958.494	-3.02	WATER BOTTOM
10081	298707.703	3775957.565	-3.665	WATER BOTTOM
10082	298982.193	3775491.969	4.382	NATURAL GROUND
10083	298974.435	3775491.686	3.751	NATURAL GROUND
10084	298951.218	3775490.404	3.745	NATURAL GROUND
10085	298935.822	3775489.647	3.23	NATURAL GROUND
10086	298912.926	3775488.586	2.212	NATURAL GROUND
10087	298894.208	3775487.453	2.244	NATURAL GROUND
10088	298877.551	3775486.643	2.328	NATURAL GROUND
10089	298864.072	3775486.311	1.224	NATURAL GROUND
10090	298856.313	3775485.732	0.394	WATER EDGE SURFACE
10091	298844.215	3775485.075	0.043	WATER BOTTOM
10092	298823.258	3775484.132	0.097	WATER BOTTOM
10093	298803.92	3775483.452	0.018	WATER BOTTOM
10094	298784.827	3775481.839	0.118	WATER BOTTOM
10095	298754.253	3775480.646	-0.566	WATER BOTTOM
10096	298732.956	3775479.481	-1.438	WATER BOTTOM
10097	298721.716	3775478.662	-1.888	WATER BOTTOM
10098	298710.755	3775478.53	-2.56	WATER BOTTOM
10099	298697.369	3775478.309	-3.447	WATER BOTTOM
10100	298685.826	3775477.581	-3.824	WATER BOTTOM
10101	298679.531	3775477.191	-4.105	WATER BOTTOM
10102	299014.963	3775017.139	3.986	NATURAL GROUND
10103	299006.475	3775016.797	3.841	NATURAL GROUND
10104	298993.725	3775016.462	3.302	NATURAL GROUND
10105	298975.362	3775015.184	3.395	NATURAL GROUND
10106	298957.791	3775014.817	3.059	NATURAL GROUND
10107	298938.909	3775013.364	2.735	NATURAL GROUND
10108	298933.13	3775013.081	2.439	NATURAL GROUND
10109	298922.662	3775012.692	1.615	NATURAL GROUND
10110	298907.972	3775012.063	0.491	NATURAL GROUND
10111	298906.398	3775011.905	0.324	WATER EDGE SURFACE
10112	298905.018	3775011.971	0.146	WATER BOTTOM
10113	298899.912	3775011.461	-0.495	WATER BOTTOM
10114	298890.686	3775011.131	-0.651	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10115	298890.669	3775011.143	-0.663	WATER BOTTOM
10116	298886.096	3775010.91	0.031	WATER BOTTOM
10117	298882.6	3775010.647	0.151	WATER BOTTOM
10118	298870.962	3775010.034	0.194	WATER BOTTOM
10119	298856.617	3775009.385	0.13	WATER BOTTOM
10120	298841.572	3775008.147	-0.134	WATER BOTTOM
10121	298825.56	3775007.18	-0.439	WATER BOTTOM
10122	298825.663	3775007.111	-0.431	WATER BOTTOM
10123	298812.192	3775006.727	-0.56	WATER BOTTOM
10124	298797.225	3775005.33	-0.551	WATER BOTTOM
10125	298781.834	3775005.566	-0.581	WATER BOTTOM
10126	298766.436	3775004.427	-0.749	WATER BOTTOM
10127	298750.805	3775003.676	-1.193	WATER BOTTOM
10128	298734.794	3775002.536	-1.707	WATER BOTTOM
10129	298719.952	3775001.547	-2.038	WATER BOTTOM
10130	298704.56	3775000.507	-2.268	WATER BOTTOM
10131	298692.12	3775000.459	-2.545	WATER BOTTOM
10132	298678.67	3774999.875	-2.812	WATER BOTTOM
10133	298665.551	3774999.586	-2.42	WATER BOTTOM
10134	298651.357	3774998.282	-2.006	WATER BOTTOM
10135	298636.634	3774998.347	-2.198	WATER BOTTOM
10136	298623.075	3774996.848	-2.624	WATER BOTTOM
10137	298608.627	3774995.914	-3.068	WATER BOTTOM
10138	298595.211	3774995.87	-3.444	WATER BOTTOM
10139	298581.269	3774994.464	-3.89	WATER BOTTOM
10140	298571.565	3774994.551	-4.197	WATER BOTTOM
10141	299038.107	3774524.709	2.651	NATURAL GROUND
10142	299018.658	3774523.599	2.422	NATURAL GROUND
10143	299001.613	3774522.746	2.328	NATURAL GROUND
10144	298982.847	3774522.014	2.403	NATURAL GROUND
10145	298965.895	3774521.179	2.519	NATURAL GROUND
10146	298948.695	3774520.255	2.356	NATURAL GROUND
10147	298929.158	3774519.183	2.333	NATURAL GROUND
10148	298908.283	3774518.126	2.162	NATURAL GROUND
10149	298896.771	3774517.639	1.331	NATURAL GROUND
10150	298886.082	3774516.854	0.994	NATURAL GROUND
10151	298879.635	3774516.726	0.424	WATER EDGE SURFACE
10152	298864.588	3774515.901	0.112	WATER BOTTOM
10153	298848.208	3774514.86	-0.221	WATER BOTTOM
10154	298832.425	3774514.195	-0.608	WATER BOTTOM
10155	298819.289	3774513.492	-0.98	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10156	298805.129	3774512.794	-0.966	WATER BOTTOM
10157	298790.896	3774511.971	-1.172	WATER BOTTOM
10158	298777.265	3774511.565	-1.573	WATER BOTTOM
10159	298766.327	3774510.816	-1.88	WATER BOTTOM
10160	298756.21	3774510.219	-2.307	WATER BOTTOM
10161	298739.098	3774509.291	-2.841	WATER BOTTOM
10162	298725.307	3774508.743	-2.875	WATER BOTTOM
10163	298713.424	3774508.025	-3.165	WATER BOTTOM
10164	298704.637	3774507.471	-3.634	WATER BOTTOM
10165	298696.694	3774507.486	-3.719	WATER BOTTOM
10166	298685.875	3774506.208	-2.888	WATER BOTTOM
10167	298673.83	3774506.079	-1.712	WATER BOTTOM
10168	298659.563	3774505.196	-1.455	WATER BOTTOM
10169	298647.817	3774504.602	-1.616	WATER BOTTOM
10170	298634.377	3774504.075	-1.663	WATER BOTTOM
10171	298622.025	3774503.482	-1.78	WATER BOTTOM
10172	298609.729	3774502.773	-2.118	WATER BOTTOM
10173	298597.691	3774501.949	-2.48	WATER BOTTOM
10174	298585.834	3774501.6	-2.788	WATER BOTTOM
10175	298575.36	3774500.971	-3.037	WATER BOTTOM
10176	298563.789	3774500.454	-3.364	WATER BOTTOM
10177	298553.172	3774499.954	-3.919	WATER BOTTOM
10178	298548.048	3774500.502	-4.712	WATER BOTTOM
10179	298999.762	3774032.042	1.619	NATURAL GROUND
10180	298972.428	3774030.991	1.923	NATURAL GROUND
10181	298947.297	3774029.938	2.053	NATURAL GROUND
10182	298927.078	3774028.913	2.167	NATURAL GROUND
10183	298907.501	3774027.996	1.902	NATURAL GROUND
10184	298885.592	3774027.012	2.165	NATURAL GROUND
10185	298865.066	3774025.79	2.244	NATURAL GROUND
10186	298850.752	3774025.307	1.069	NATURAL GROUND
10187	298843.725	3774025.063	0.312	WATER EDGE SURFACE
10188	298827.524	3774024.436	-0.211	WATER BOTTOM
10189	298815.602	3774023.747	0.288	WATER BOTTOM
10190	298798.909	3774023.165	0.437	WATER BOTTOM
10191	298781.232	3774021.834	0.246	WATER BOTTOM
10192	298749.586	3774020.26	-0.21	WATER BOTTOM
10193	298722.561	3774019.064	-0.383	WATER BOTTOM
10194	298696.226	3774017.816	-0.481	WATER BOTTOM
10195	298665.31	3774016.942	-1.381	WATER BOTTOM
10196	298647.768	3774015.525	-0.856	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10197	298616.579	3774014.152	-1.59	WATER BOTTOM
10198	298603.275	3774013.538	-2.168	WATER BOTTOM
10199	298590.89	3774012.923	-2.759	WATER BOTTOM
10200	298581.524	3774012.289	-1.945	WATER BOTTOM
10201	298563.625	3774011.888	-1.721	WATER BOTTOM
10202	298545.377	3774010.651	-2.183	WATER BOTTOM
10203	298532.562	3774010.655	-2.626	WATER BOTTOM
10204	298519.333	3774009.722	-3.157	WATER BOTTOM
10205	298507.708	3774009.118	-3.66	WATER BOTTOM
10206	298497.521	3774008.896	-3.466	WATER BOTTOM
10207	298487.395	3774008.57	-2.614	WATER BOTTOM
10208	298470.221	3774008.217	-2.453	WATER BOTTOM
10209	298454.51	3774005.393	-2.695	WATER BOTTOM
10210	298439.662	3774006.129	-3.126	WATER BOTTOM
10211	298423.503	3774005.224	-3.519	WATER BOTTOM
10212	299032.205	3773469.788	4.737	NATURAL GROUND
10213	299015.201	3773470.115	4.213	NATURAL GROUND
10214	298997.014	3773471.485	3.644	NATURAL GROUND
10215	298977.571	3773472.245	3.056	NATURAL GROUND
10216	298958.648	3773472.964	2.783	NATURAL GROUND
10217	298938.795	3773474.092	2.44	NATURAL GROUND
10218	298919.871	3773473.932	2.316	NATURAL GROUND
10219	298900.354	3773475.277	2.114	NATURAL GROUND
10220	298881.6	3773475.909	2.256	NATURAL GROUND
10221	298870.16	3773476.176	2.263	NATURAL GROUND
10222	298858.987	3773476.734	1.235	NATURAL GROUND
10223	298846.714	3773477.198	0.486	NATURAL GROUND
10224	298844.301	3773477.335	0.264	WATER EDGE SURFACE
10225	298842.268	3773477.335	0.19	WATER BOTTOM
10226	298828.21	3773477.645	0.17	WATER BOTTOM
10227	298812.428	3773478.655	0.176	WATER BOTTOM
10228	298795.67	3773479.085	0.139	WATER BOTTOM
10229	298777.942	3773479.907	-0.048	WATER BOTTOM
10230	298761.629	3773480.769	-0.217	WATER BOTTOM
10231	298746.343	3773481.159	-0.405	WATER BOTTOM
10232	298730.621	3773481.076	-0.857	WATER BOTTOM
10233	298713.507	3773481.992	-1.319	WATER BOTTOM
10234	298697.32	3773482.801	-1.528	WATER BOTTOM
10235	298679.578	3773483.469	-1.631	WATER BOTTOM
10236	298661.114	3773484.263	-1.831	WATER BOTTOM
10237	298643.986	3773485.247	-2.052	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10238	298625.982	3773485.937	-2.053	WATER BOTTOM
10239	298609.438	3773485.928	-2.074	WATER BOTTOM
10240	298590.846	3773486.626	-2.286	WATER BOTTOM
10241	298573.643	3773486.992	-2.605	WATER BOTTOM
10242	298555.556	3773488.315	-2.852	WATER BOTTOM
10243	298539.361	3773488.305	-3.104	WATER BOTTOM
10244	298525.259	3773489.071	-3.248	WATER BOTTOM
10245	298511.712	3773489.733	-3.393	WATER BOTTOM
10246	298496.785	3773490.563	-3.512	WATER BOTTOM
10247	298480.651	3773491.137	-3.709	WATER BOTTOM
10248	298465.907	3773491.676	-3.852	WATER BOTTOM
10249	298450.988	3773492.479	-3.98	WATER BOTTOM
10250	298437.068	3773492.918	-4.14	WATER BOTTOM
10251	301112.254	3774376.256	0.426	AERIAL TARGET
10252	300633.089	3774405.698	0.821	AERIAL TARGET
10253	299028.636	3772768.371	4.046	NATURAL GROUND
10254	299011.973	3772767.712	3.526	NATURAL GROUND
10255	298993.971	3772767.314	3.281	NATURAL GROUND
10256	298977.731	3772767.207	3.072	NATURAL GROUND
10257	298960.575	3772767.006	2.462	NATURAL GROUND
10258	298943.617	3772767.245	2.39	NATURAL GROUND
10259	298926.258	3772767.048	2.21	NATURAL GROUND
10260	298910.161	3772766.74	1.613	NATURAL GROUND
10261	298902.408	3772766.855	1.239	NATURAL GROUND
10262	298893.45	3772765.973	1.342	NATURAL GROUND
10263	298889.233	3772765.824	0.718	WATER EDGE SURFACE
10264	298882.893	3772766.211	0.46	WATER BOTTOM
10265	298870.974	3772766.415	0.188	WATER BOTTOM
10266	298857.52	3772766.001	-0.175	WATER BOTTOM
10267	298843.878	3772765.286	-0.739	WATER BOTTOM
10268	298831.301	3772765.384	-1.097	WATER BOTTOM
10269	298817.423	3772765.482	-1.474	WATER BOTTOM
10270	298802.146	3772765.421	-1.658	WATER BOTTOM
10271	298789.485	3772764.979	-1.153	WATER BOTTOM
10272	298775.312	3772764.758	-0.673	WATER BOTTOM
10273	298759.34	3772764.896	-1.248	WATER BOTTOM
10274	298745.661	3772764.109	-1.848	WATER BOTTOM
10275	298732.445	3772764.617	-2.358	WATER BOTTOM
10276	298721.279	3772764.746	-2.774	WATER BOTTOM
10277	298709.76	3772764.48	-3.374	WATER BOTTOM
10278	298698.23	3772764.185	-3.476	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10279	298690.314	3772764.657	-2.977	WATER BOTTOM
10280	298676.896	3772763.657	-1.99	WATER BOTTOM
10281	298661.174	3772762.326	-1.971	WATER BOTTOM
10282	298646.049	3772764.325	-2.378	WATER BOTTOM
10283	298630.044	3772763.805	-2.805	WATER BOTTOM
10284	298616.184	3772764.173	-3.181	WATER BOTTOM
10285	298601.123	3772763.863	-3.559	WATER BOTTOM
10286	299192.304	3772207.546	6.829	NATURAL GROUND
10287	299174.186	3772207.556	6.458	NATURAL GROUND
10288	299157.195	3772207.15	5.99	NATURAL GROUND
10289	299139.397	3772207.055	5.616	NATURAL GROUND
10290	299122.526	3772206.763	5.175	NATURAL GROUND
10291	299104.179	3772206.491	4.624	NATURAL GROUND
10292	299084.913	3772206.145	3.997	NATURAL GROUND
10293	299067.276	3772205.869	3.53	NATURAL GROUND
10294	299051.549	3772205.725	3.33	NATURAL GROUND
10295	299035.758	3772205.397	2.1	NATURAL GROUND
10296	299026.319	3772205.468	1.515	NATURAL GROUND
10297	299021.069	3772205.096	0.918	WATER EDGE SURFACE
10298	299006.557	3772204.958	0.324	WATER BOTTOM
10299	298990.041	3772204.775	-0.701	WATER BOTTOM
10300	298976.149	3772204.32	-1.301	WATER BOTTOM
10301	298962.63	3772204.447	-1.856	WATER BOTTOM
10302	298950.817	3772204.322	-2.022	WATER BOTTOM
10303	298935.547	3772204.279	-1.19	WATER BOTTOM
10304	298920.562	3772203.636	-0.297	WATER BOTTOM
10305	298902.426	3772203.492	-0.795	WATER BOTTOM
10306	298887.979	3772203.299	-1.146	WATER BOTTOM
10307	298874.126	3772202.906	-1.587	WATER BOTTOM
10308	298859.392	3772203.108	-2.08	WATER BOTTOM
10309	298846.166	3772202.785	-2.619	WATER BOTTOM
10310	298833.484	3772202.397	-3.032	WATER BOTTOM
10311	298821.846	3772202.452	-3.211	WATER BOTTOM
10312	298811.697	3772202.181	-3.145	WATER BOTTOM
10313	298797.903	3772202.067	-2.24	WATER BOTTOM
10314	298782.1	3772202.062	-1.845	WATER BOTTOM
10315	298768.724	3772201.752	-2.06	WATER BOTTOM
10316	298755.927	3772201.593	-2.353	WATER BOTTOM
10317	298742.417	3772201.042	-2.77	WATER BOTTOM
10318	298729.456	3772201.03	-3.026	WATER BOTTOM
10319	299258.854	3771622.889	7.096	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10320	299237.006	3771622.757	6.613	NATURAL GROUND
10321	299216.86	3771622.76	6.132	NATURAL GROUND
10322	299196.37	3771622.819	5.606	NATURAL GROUND
10323	299167.496	3771622.784	4.935	NATURAL GROUND
10324	299140.221	3771622.651	3.919	NATURAL GROUND
10325	299139.075	3771622.456	2.872	NATURAL GROUND
10326	299128.344	3771622.538	1.915	NATURAL GROUND
10327	299115.864	3771622.831	1.433	NATURAL GROUND
10328	299111.054	3771621.635	0.968	WATER EDGE SURFACE
10329	299095.043	3771622.444	0.139	WATER BOTTOM
10330	299079.544	3771622.969	-0.163	WATER BOTTOM
10331	299058.41	3771622.417	-0.536	WATER BOTTOM
10332	299031.629	3771622.636	-0.917	WATER BOTTOM
10333	299007.219	3771621.826	-1.995	WATER BOTTOM
10334	298993.654	3771622.473	-2.867	WATER BOTTOM
10335	298979.36	3771625.554	-4.217	WATER BOTTOM
10336	298967.405	3771629.971	-4.955	WATER BOTTOM
10337	298957.499	3771622.337	-4.471	WATER BOTTOM
10338	298944.416	3771614.699	-3.154	WATER BOTTOM
10339	298928.365	3771619.758	-1.952	WATER BOTTOM
10340	298911.632	3771620.877	-2.06	WATER BOTTOM
10341	298896.917	3771621.743	-2.635	WATER BOTTOM
10342	298880.731	3771620.26	-3.236	WATER BOTTOM
10343	298857.905	3771618.345	-4.147	WATER BOTTOM
10344	298849.702	3771617.13	-4.433	WATER BOTTOM
10345	299254.307	3771201.236	6.202	NATURAL GROUND
10346	299237.766	3771199.286	5.808	NATURAL GROUND
10347	299221.015	3771199.147	5.33	NATURAL GROUND
10348	299205.08	3771199.079	4.963	NATURAL GROUND
10349	299188.406	3771199.301	4.452	NATURAL GROUND
10350	299171.69	3771199.887	3.93	NATURAL GROUND
10351	299153.779	3771199.614	3.296	NATURAL GROUND
10352	299137.807	3771198.833	3.024	NATURAL GROUND
10353	299122.038	3771198.295	2.069	NATURAL GROUND
10354	299111.838	3771198.554	1.384	NATURAL GROUND
10355	299107.37	3771199.229	0.909	WATER EDGE SURFACE
10356	299103.121	3771199.304	0.605	WATER BOTTOM
10357	299093.424	3771198.02	0.08	WATER BOTTOM
10358	299079.283	3771198.445	-0.204	WATER BOTTOM
10359	299065.269	3771197.432	-0.044	WATER BOTTOM
10360	299049.675	3771197.343	-0.22	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10361	299034.304	3771197.354	-0.391	WATER BOTTOM
10362	299017.752	3771196.714	-0.743	WATER BOTTOM
10363	299003.744	3771196.616	-1.207	WATER BOTTOM
10364	298988.237	3771196.105	-1.868	WATER BOTTOM
10365	298972.942	3771196.234	-2.774	WATER BOTTOM
10366	298961.97	3771196.796	-4.648	WATER BOTTOM
10367	301508.156	3769966.236	0.752	AERIAL TARGET
10368	301301.858	3769374.732	2.802	NATURAL GROUND
10369	301318.683	3769375.46	2.748	NATURAL GROUND
10370	301337.637	3769376.032	2.552	NATURAL GROUND
10371	301357.054	3769376.585	2.588	NATURAL GROUND
10372	301378.101	3769377.758	2.498	NATURAL GROUND
10373	301398.648	3769378.908	2.536	NATURAL GROUND
10374	301401.459	3769379.389	2.699	NATURAL GROUND
10375	301402.46	3769378.386	3.13	NATURAL GROUND
10376	301405.424	3769378.187	4.039	NATURAL GROUND
10377	301407.338	3769378.266	4.948	NATURAL GROUND
10378	301408.766	3769378.457	5.101	NATURAL GROUND
10379	301412.418	3769378.962	5.353	NATURAL GROUND
10380	301416.078	3769378.668	5.335	NATURAL GROUND
10381	301417.034	3769378.395	2.672	NATURAL GROUND
10382	301417.238	3769378.704	0.755	WATER EDGE SURFACE
10383	301421.554	3769379.312	0.354	WATER BOTTOM
10384	301539.723	3769378.779	-3.362	WATER BOTTOM
10385	301526.552	3769382.038	-3.22	WATER BOTTOM
10386	301513.728	3769382.217	-5.123	WATER BOTTOM
10387	301498.568	3769382.265	-4.288	WATER BOTTOM
10388	301478.891	3769381.789	-1.64	WATER BOTTOM
10389	301465.386	3769379.91	-1.192	WATER BOTTOM
10390	301452.838	3769378.859	-0.937	WATER BOTTOM
10391	301440.467	3769377.214	-0.632	WATER BOTTOM
10392	301429.181	3769379.295	-0.236	WATER BOTTOM
10393	301271.574	3768870.844	2.614	NATURAL GROUND
10394	301287.914	3768871.568	2.143	NATURAL GROUND
10395	301305.381	3768872.521	2.55	NATURAL GROUND
10396	301323.839	3768873.447	2.735	NATURAL GROUND
10397	301334.51	3768873.887	2.673	NATURAL GROUND
10398	301344.147	3768874.459	3.213	NATURAL GROUND
10399	301347.412	3768874.652	5.039	NATURAL GROUND
10400	301358.481	3768875.255	5.079	NATURAL GROUND
10401	301361.29	3768875.375	1.102	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10402	301365.693	3768875.586	0.806	WATER EDGE SURFACE
10403	301368.45	3768876.153	0.269	WATER BOTTOM
10404	301479.081	3768873.299	-2.33	WATER BOTTOM
10405	301466.916	3768873.773	-2.323	WATER BOTTOM
10406	301454.288	3768874.431	-2.773	WATER BOTTOM
10407	301439.671	3768874.835	-3.981	WATER BOTTOM
10408	301424.899	3768875.463	-1.36	WATER BOTTOM
10409	301412.894	3768876.454	-0.94	WATER BOTTOM
10410	301399.855	3768876.284	-0.756	WATER BOTTOM
10411	301388.122	3768876.841	-0.657	WATER BOTTOM
10412	301375.404	3768875.5	-0.331	WATER BOTTOM
10413	301203.571	3768379.435	2.918	NATURAL GROUND
10414	301221.625	3768379.236	3.218	NATURAL GROUND
10415	301241.061	3768379.942	3.265	NATURAL GROUND
10416	301259.877	3768380.801	3.121	NATURAL GROUND
10417	301272	3768381.35	3.849	NATURAL GROUND
10418	301275.924	3768381.265	4.677	NATURAL GROUND
10419	301279.354	3768381.654	5.071	NATURAL GROUND
10420	301288.731	3768381.525	5.129	NATURAL GROUND
10421	301298.619	3768382.109	4.844	NATURAL GROUND
10422	301301.43	3768382.241	4.325	NATURAL GROUND
10423	301303.15	3768381.787	2.367	NATURAL GROUND
10424	301305.971	3768381.727	1.656	NATURAL GROUND
10425	301310.588	3768382.147	1.19	NATURAL GROUND
10426	301313.592	3768381.867	0.736	WATER EDGE SURFACE
10427	301313.491	3768382.197	0.71	WATER BOTTOM
10428	301316.618	3768382.168	0.418	WATER BOTTOM
10429	301324.703	3768383.068	-0.022	WATER BOTTOM
10430	301335.313	3768383.505	-0.274	WATER BOTTOM
10431	301347.454	3768383.394	-0.428	WATER BOTTOM
10432	301361.23	3768383.944	-0.6	WATER BOTTOM
10433	301374.229	3768384.28	-0.727	WATER BOTTOM
10434	301392.238	3768385.214	-0.804	WATER BOTTOM
10435	301403.955	3768386.484	-0.94	WATER BOTTOM
10436	301133.05	3767841.485	3.798	NATURAL GROUND
10437	301153.262	3767840.849	3.619	NATURAL GROUND
10438	301172.03	3767841.543	3.639	NATURAL GROUND
10439	301192.969	3767841.779	3.741	NATURAL GROUND
10440	301208.789	3767841.842	3.845	NATURAL GROUND
10441	301217.475	3767842.556	4.494	NATURAL GROUND
10442	301221.332	3767842.493	5.824	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10443	301228.065	3767842.579	5.842	NATURAL GROUND
10444	301234.698	3767843.064	5.325	NATURAL GROUND
10445	301238.208	3767842.908	4.19	NATURAL GROUND
10446	301240.661	3767842.719	2.792	NATURAL GROUND
10447	301243.27	3767842.987	1.286	NATURAL GROUND
10448	301247.27	3767843.137	0.662	WATER EDGE SURFACE
10449	301253.198	3767843.209	0.146	WATER BOTTOM
10450	301263.674	3767843.46	-0.295	WATER BOTTOM
10451	301278.133	3767843.761	-0.369	WATER BOTTOM
10452	301289.997	3767844.116	-0.475	WATER BOTTOM
10453	301302.99	3767844.167	-0.614	WATER BOTTOM
10454	301321.144	3767844.54	-0.698	WATER BOTTOM
10455	301335.595	3767844.695	-0.885	WATER BOTTOM
10456	301350.764	3767845.597	-1.115	WATER BOTTOM
10457	301367.206	3767845.823	-1.127	WATER BOTTOM
10458	301383.969	3767846.042	-1.141	WATER BOTTOM
10459	301065.087	3767368.029	3.39	NATURAL GROUND
10460	301081.536	3767368.52	2.986	NATURAL GROUND
10461	301098.407	3767368.901	2.841	NATURAL GROUND
10462	301115.979	3767369.36	2.704	NATURAL GROUND
10463	301133.071	3767369.659	3.238	NATURAL GROUND
10464	301144.944	3767369.949	3.492	NATURAL GROUND
10465	301156.195	3767370.234	3.949	NATURAL GROUND
10466	301159.586	3767370.421	5.765	NATURAL GROUND
10467	301167.611	3767370.426	5.75	NATURAL GROUND
10468	301170.842	3767370.366	4.241	NATURAL GROUND
10469	301173.177	3767370.535	1.262	NATURAL GROUND
10470	301177.227	3767370.529	0.768	WATER EDGE SURFACE
10471	301178.738	3767370.515	0.362	WATER BOTTOM
10472	301185.67	3767370.751	-0.136	WATER BOTTOM
10473	301196.352	3767370.94	-0.505	WATER BOTTOM
10474	301207.596	3767370.979	-0.499	WATER BOTTOM
10475	301220.343	3767371.168	-0.705	WATER BOTTOM
10476	301236.731	3767371.425	-0.774	WATER BOTTOM
10477	301252.575	3767371.562	-0.892	WATER BOTTOM
10478	300258.678	3774248.096	1.429	AERIAL TARGET
10479	304055.459	3773374.507	0.724	NATURAL GROUND
10480	304064.691	3773374.43	0.615	NATURAL GROUND
10481	304071.799	3773374.591	0.555	NATURAL GROUND
10482	304085.606	3773374.785	0.454	NATURAL GROUND
10483	304092.811	3773374.911	0.049	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10484	304092.794	3773375.049	1.464	AERIAL TARGET
10485	304344.662	3773363.351	-1.937	WATER BOTTOM
10486	304327.417	3773369.559	-1.91	WATER BOTTOM
10487	304311.077	3773374.5	-1.653	WATER BOTTOM
10488	304293.196	3773374.789	-1.582	WATER BOTTOM
10489	304272.749	3773371.088	-1.34	WATER BOTTOM
10490	304252.076	3773370.267	-1.334	WATER BOTTOM
10491	304232.784	3773374.032	-1.419	WATER BOTTOM
10492	304210.76	3773378.998	-1.226	WATER BOTTOM
10493	304192.566	3773378.675	-1.35	WATER BOTTOM
10494	304173.295	3773378.385	-1.324	WATER BOTTOM
10495	304156.435	3773377.796	-0.717	WATER BOTTOM
10496	304149.665	3773374.412	0.089	WATER BOTTOM
10497	304141.984	3773373.521	-0.207	WATER BOTTOM
10498	304129.437	3773372.748	-1.038	WATER BOTTOM
10499	304111.307	3773375.446	-1.132	WATER BOTTOM
10500	304103.303	3773374.144	-0.767	WATER BOTTOM
10501	303917.684	3773373.363	0.414	NATURAL GROUND
10502	303910.836	3773373.292	0.392	NATURAL GROUND
10503	303892.417	3773373.119	0.396	NATURAL GROUND
10504	303892.682	3773372.942	1.409	AERIAL TARGET
10505	301823.036	3773356.47	2.477	NATURAL GROUND
10506	301836.14	3773356.636	2.337	NATURAL GROUND
10507	301852.111	3773356.706	2.253	NATURAL GROUND
10508	301867.862	3773356.877	2.413	NATURAL GROUND
10509	301885.526	3773357.009	2.862	NATURAL GROUND
10510	301893.003	3773357.237	3.607	NATURAL GROUND
10511	301896.458	3773357.214	5.28	NATURAL GROUND
10512	301908.238	3773357.275	5.336	NATURAL GROUND
10513	301914.938	3773357.308	3.479	NATURAL GROUND
10514	301920.705	3773357.29	2.123	NATURAL GROUND
10515	301929.23	3773357.272	1.887	NATURAL GROUND
10516	301938.375	3773357.474	1.228	NATURAL GROUND
10517	301968.04	3773356.887	1.161	NATURAL GROUND
10518	301993.68	3773355.643	0.64	NATURAL GROUND
10519	302033.487	3773359.824	0.548	NATURAL GROUND
10520	302099.821	3773359.113	0.411	NATURAL GROUND
10521	302144.752	3773356.941	0.692	NATURAL GROUND
10522	302158.425	3773356.867	0.453	NATURAL GROUND
10523	302158.415	3773356.775	1.419	AERIAL TARGET
10524	302168.231	3773356.412	-0.263	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10525	302181.611	3773356.907	-0.525	WATER BOTTOM
10526	302197.591	3773358.997	-0.501	WATER BOTTOM
10527	302216.916	3773360.073	-0.234	WATER BOTTOM
10528	302238.7	3773358.552	-0.288	WATER BOTTOM
10529	302264.559	3773358.778	-0.552	WATER BOTTOM
10530	302277.977	3773359.326	-0.334	WATER BOTTOM
10531	302280.489	3773360.056	1.425	AERIAL TARGET
10532	302283.2	3773360.164	0.555	NATURAL GROUND
10533	302299.956	3773360.651	0.818	NATURAL GROUND
10534	302324.379	3773359.82	1.026	NATURAL GROUND
10535	302344.568	3773360.689	0.464	NATURAL GROUND
10536	302345.319	3773360.677	1.412	AERIAL TARGET
10537	302348.304	3773360.457	0.214	WATER BOTTOM
10538	302359.56	3773360.017	-0.586	WATER BOTTOM
10539	302377.908	3773361.267	-0.534	WATER BOTTOM
10540	302398.284	3773362.666	-0.679	WATER BOTTOM
10541	302420.343	3773360.997	-0.744	WATER BOTTOM
10542	302441.98	3773360.037	-0.718	WATER BOTTOM
10543	302462.946	3773359.858	-0.829	WATER BOTTOM
10544	302484.606	3773360.091	-0.405	WATER BOTTOM
10545	302490.718	3773359.234	1.487	AERIAL TARGET
10546	302492.038	3773359.478	0.476	NATURAL GROUND
10547	302508.124	3773351.189	1.162	NATURAL GROUND
10548	302520.833	3773352.374	0.87	NATURAL GROUND
10549	302526.128	3773353.393	0.526	NATURAL GROUND
10550	302527.194	3773353.946	1.512	AERIAL TARGET
10551	302528.533	3773353.205	-0.096	WATER BOTTOM
10552	302546.124	3773364.551	-0.914	WATER BOTTOM
10553	302560.822	3773363.833	-1.047	WATER BOTTOM
10554	302574.983	3773362.152	-1.181	WATER BOTTOM
10555	302594.843	3773362.818	-1.145	WATER BOTTOM
10556	302616.607	3773362.92	-1.211	WATER BOTTOM
10557	302636.766	3773363.345	-1.069	WATER BOTTOM
10558	302660.008	3773362.963	-1.188	WATER BOTTOM
10559	302681.19	3773364.027	-1.215	WATER BOTTOM
10560	302700.786	3773364.498	-1.145	WATER BOTTOM
10561	302723.941	3773364.586	-1.246	WATER BOTTOM
10562	302755.418	3773364.589	-1.384	WATER BOTTOM
10563	302782.438	3773365.183	-1.542	WATER BOTTOM
10564	302810.257	3773363.977	-1.565	WATER BOTTOM
10565	302837.245	3773364.854	-1.805	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10566	302867.227	3773368.636	-1.742	WATER BOTTOM
10567	302895.301	3773367.251	-1.909	WATER BOTTOM
10568	302922.324	3773365.945	-1.494	WATER BOTTOM
10569	302950.037	3773368.033	-1.624	WATER BOTTOM
10570	302980.445	3773367.156	-1.149	WATER BOTTOM
10571	303007.429	3773366.757	-0.889	WATER BOTTOM
10572	303027.477	3773370.205	-0.887	WATER BOTTOM
10573	303050.645	3773373.885	-0.746	WATER BOTTOM
10574	303075.014	3773375.747	-0.879	WATER BOTTOM
10575	303106.101	3773376.487	-0.654	WATER BOTTOM
10576	303135.514	3773375.048	-0.73	WATER BOTTOM
10577	303159.05	3773375.575	-0.644	WATER BOTTOM
10578	303191.698	3773376.628	-0.499	WATER BOTTOM
10579	303216.502	3773370.668	-0.406	WATER BOTTOM
10580	303241.073	3773367.97	-0.53	WATER BOTTOM
10581	303270.501	3773366.581	-0.339	WATER BOTTOM
10582	303298.739	3773366.647	-0.336	WATER BOTTOM
10583	303330.77	3773366.167	-0.426	WATER BOTTOM
10584	303364.219	3773365.33	-0.277	WATER BOTTOM
10585	303393.924	3773363.405	-0.811	WATER BOTTOM
10586	303430.788	3773363.963	-0.962	WATER BOTTOM
10587	303468.979	3773365.858	-1.091	WATER BOTTOM
10588	303507.926	3773370.202	-1.237	WATER BOTTOM
10589	303544.021	3773364.274	-1.085	WATER BOTTOM
10590	303581.097	3773359.249	-1.362	WATER BOTTOM
10591	303608.043	3773368.9	-0.605	WATER BOTTOM
10592	303624.009	3773378.68	-0.171	WATER BOTTOM
10593	303628.251	3773379.64	1.401	AERIAL TARGET
10594	303630.235	3773380.588	0.385	NATURAL GROUND
10595	303651.572	3773381.825	0.624	NATURAL GROUND
10596	303674.077	3773380.521	0.731	NATURAL GROUND
10597	303701.218	3773379.895	0.441	NATURAL GROUND
10598	303711.451	3773379.48	0.616	NATURAL GROUND
10599	303713.146	3773378.72	1.454	AERIAL TARGET
10600	303714.849	3773378.842	-0.495	WATER BOTTOM
10601	303728.201	3773383.332	-0.949	WATER BOTTOM
10602	303738.664	3773383.598	-0.475	WATER BOTTOM
10603	303747.931	3773381.614	-0.426	WATER BOTTOM
10604	303768.652	3773381.021	-1.602	WATER BOTTOM
10605	303792.858	3773381.045	-2.879	WATER BOTTOM
10606	303808.586	3773380.614	-2.952	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10607	303826.41	3773379.705	-1.202	WATER BOTTOM
10608	303846.435	3773378.401	-0.209	WATER BOTTOM
10609	303862.492	3773376.823	-0.37	WATER BOTTOM
10610	303877.978	3773375.201	-0.493	WATER BOTTOM
10611	303887.12	3773374.336	-0.379	WATER BOTTOM
10612	303991.428	3772815.011	1.911	NATURAL GROUND
10613	303980.564	3772817.156	1.408	NATURAL GROUND
10614	303956.205	3772816.476	0.655	NATURAL GROUND
10615	303947.966	3772819.065	0.211	NATURAL GROUND
10616	303943.406	3772820.007	0.37	NATURAL GROUND
10617	303941.937	3772820.171	1.458	AERIAL TARGET
10618	301751.691	3772797.489	2.416	NATURAL GROUND
10619	301769.351	3772797.613	2.411	NATURAL GROUND
10620	301784.719	3772797.657	2.432	NATURAL GROUND
10621	301800.799	3772798.012	2.602	NATURAL GROUND
10622	301808.628	3772798.124	3.436	NATURAL GROUND
10623	301812.612	3772798.089	4.276	NATURAL GROUND
10624	301822.271	3772798.185	4.55	NATURAL GROUND
10625	301826.237	3772798.252	5.156	NATURAL GROUND
10626	301840.787	3772798.597	5.123	NATURAL GROUND
10627	301845.873	3772798.607	4.134	NATURAL GROUND
10628	301849.708	3772798.464	3.469	NATURAL GROUND
10629	301861.632	3772798.377	2.704	NATURAL GROUND
10630	301870.328	3772798.547	3.059	NATURAL GROUND
10631	301873.278	3772798.513	1.936	NATURAL GROUND
10632	301881.521	3772798.777	1.43	AERIAL TARGET
10633	301882.691	3772798.623	1.088	NATURAL GROUND
10634	301899.419	3772789.26	1.125	NATURAL GROUND
10635	301915.009	3772788.925	1.04	NATURAL GROUND
10636	301939.854	3772793.417	-0.109	NATURAL GROUND
10637	301963.918	3772801.919	0.488	NATURAL GROUND
10638	301993.566	3772801.128	0.43	NATURAL GROUND
10639	302020.23	3772801.283	0.88	NATURAL GROUND
10640	302059.566	3772806.596	0.913	NATURAL GROUND
10641	302081.677	3772809.236	0.876	NATURAL GROUND
10642	302092.085	3772811.611	0.582	NATURAL GROUND
10643	302092.996	3772811.726	1.381	AERIAL TARGET
10644	302095.118	3772812.505	0.357	WATER BOTTOM
10645	302115.025	3772809.131	0.282	WATER BOTTOM
10646	302140.633	3772804.697	0.447	WATER BOTTOM
10647	302166.201	3772804.14	0.268	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10648	302196.093	3772801.677	0.189	WATER BOTTOM
10649	302222.921	3772802.286	0.198	WATER BOTTOM
10650	302245.901	3772803.242	0.143	WATER BOTTOM
10651	302260.468	3772802.898	0.461	WATER BOTTOM
10652	302261.789	3772802.173	1.258	AERIAL TARGET
10653	302265.544	3772801.923	0.834	NATURAL GROUND
10654	302278.28	3772802.191	0.947	NATURAL GROUND
10655	302299.065	3772802.498	1.232	NATURAL GROUND
10656	302319.367	3772800.957	0.343	NATURAL GROUND
10657	302320.706	3772801.15	1.342	AERIAL TARGET
10658	302325.819	3772801.189	0.207	WATER BOTTOM
10659	302332.674	3772801.327	-1.04	WATER BOTTOM
10660	302351.414	3772801.739	-0.555	WATER BOTTOM
10661	302368.365	3772801.931	-0.534	WATER BOTTOM
10662	302385.465	3772800.707	-0.432	WATER BOTTOM
10663	302401.212	3772799.692	-0.58	WATER BOTTOM
10664	302421.242	3772802.106	-0.799	WATER BOTTOM
10665	302437.933	3772804.34	-0.755	WATER BOTTOM
10666	302456.638	3772809.389	-0.276	WATER BOTTOM
10667	302461.845	3772810.981	1.305	AERIAL TARGET
10668	302466.73	3772811.827	0.69	NATURAL GROUND
10669	302485.349	3772814.849	1.135	NATURAL GROUND
10670	302494.056	3772814.186	0.702	NATURAL GROUND
10671	302499.341	3772813.868	1.373	AERIAL TARGET
10672	302501.034	3772813.645	-0.71	WATER BOTTOM
10673	302524.476	3772807.543	-1.168	WATER BOTTOM
10674	302545.131	3772803.868	-1.255	WATER BOTTOM
10675	302568.374	3772802.465	-1.251	WATER BOTTOM
10676	302595.005	3772801.554	-1.362	WATER BOTTOM
10677	302619.153	3772800.947	-1.175	WATER BOTTOM
10678	302644.644	3772800.694	-1.27	WATER BOTTOM
10679	302671.424	3772801.628	-1.252	WATER BOTTOM
10680	302697.732	3772803.635	-1.219	WATER BOTTOM
10681	302727.073	3772804.964	-1.419	WATER BOTTOM
10682	302757.877	3772805.366	-1.439	WATER BOTTOM
10683	302784.376	3772804.706	-1.274	WATER BOTTOM
10684	302814.692	3772803.819	-1.28	WATER BOTTOM
10685	302844.889	3772802.96	-1.418	WATER BOTTOM
10686	302876.327	3772805.645	-1.342	WATER BOTTOM
10687	302904.39	3772805.42	-1.319	WATER BOTTOM
10688	302937.27	3772802.229	-1.335	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10689	302967.565	3772801.364	-1.422	WATER BOTTOM
10690	302997.257	3772805.38	-1.583	WATER BOTTOM
10691	303029.991	3772807.178	-1.522	WATER BOTTOM
10692	303056.259	3772804.376	-1.541	WATER BOTTOM
10693	303084.721	3772809.391	-1.49	WATER BOTTOM
10694	303115.674	3772811.429	-1.647	WATER BOTTOM
10695	303148.409	3772812.232	-1.637	WATER BOTTOM
10696	303182.503	3772809.447	-1.723	WATER BOTTOM
10697	303222.009	3772810.028	-1.76	WATER BOTTOM
10698	303256.357	3772810.161	-1.759	WATER BOTTOM
10699	303282.532	3772807.939	-1.662	WATER BOTTOM
10700	303301.424	3772808.507	-1.677	WATER BOTTOM
10701	303323.768	3772810.564	-1.62	WATER BOTTOM
10702	303352.708	3772812.293	-1.535	WATER BOTTOM
10703	303384.697	3772811.775	-1.36	WATER BOTTOM
10704	303419.852	3772810.826	-1.445	WATER BOTTOM
10705	303451.873	3772808.953	-1.347	WATER BOTTOM
10706	303486.066	3772807.752	-1.485	WATER BOTTOM
10707	303525.008	3772808.829	-1.346	WATER BOTTOM
10708	303560.127	3772812.031	-1.223	WATER BOTTOM
10709	303595.248	3772814.67	-1.272	WATER BOTTOM
10710	303626.706	3772815.706	-1.281	WATER BOTTOM
10711	303659.07	3772814.81	-1.353	WATER BOTTOM
10712	303689.523	3772813.318	-1.363	WATER BOTTOM
10713	303721.339	3772814.432	-1.249	WATER BOTTOM
10714	303754.159	3772815.016	-1.346	WATER BOTTOM
10715	303784.514	3772815.481	-1.341	WATER BOTTOM
10716	303817.066	3772817.682	-1.373	WATER BOTTOM
10717	303850.208	3772821.449	-1.336	WATER BOTTOM
10718	303881.777	3772819.855	-1.334	WATER BOTTOM
10719	303908.08	3772820.036	-1.274	WATER BOTTOM
10720	303927.477	3772819.677	-0.58	WATER BOTTOM
10721	303939.619	3772819.888	-0.358	WATER BOTTOM
10722	304187.769	3772815.374	-1.036	WATER BOTTOM
10723	304166.98	3772819.079	-1.056	WATER BOTTOM
10724	304147.6	3772818.473	-1.15	WATER BOTTOM
10725	304126.81	3772822.006	-1.188	WATER BOTTOM
10726	304104.578	3772823.313	-1.261	WATER BOTTOM
10727	304083.971	3772817.411	-1.019	WATER BOTTOM
10728	304063.264	3772815.172	-0.66	WATER BOTTOM
10729	304050.008	3772820.605	0.173	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10730	304041.164	3772817.077	0.605	WATER BOTTOM
10731	304034.051	3772821.375	1.303	AERIAL TARGET
10732	304032.836	3772820.949	0.85	NATURAL GROUND
10733	304004.741	3772819.165	2.659	NATURAL GROUND
10734	304014.314	3772816.153	1.973	NATURAL GROUND
10735	303795.393	3772264.281	0.838	NATURAL GROUND
10736	303785.861	3772264.263	0.755	NATURAL GROUND
10737	303773.159	3772263.089	0.443	NATURAL GROUND
10738	303768.802	3772262.29	0.447	NATURAL GROUND
10739	301696.176	3772244.832	2.335	NATURAL GROUND
10740	301713.656	3772244.986	2.331	NATURAL GROUND
10741	301730.286	3772245.165	2.38	NATURAL GROUND
10742	301746.904	3772245.32	3.093	NATURAL GROUND
10743	301753.871	3772245.506	3.597	NATURAL GROUND
10744	301758.219	3772245.467	4.638	NATURAL GROUND
10745	301761.802	3772245.449	5.711	NATURAL GROUND
10746	301767.991	3772245.388	5.8	NATURAL GROUND
10747	301774.355	3772245.715	5.972	NATURAL GROUND
10748	301777.242	3772245.699	4.781	NATURAL GROUND
10749	301781.165	3772245.679	3.519	NATURAL GROUND
10750	301788.976	3772245.855	3.308	NATURAL GROUND
10751	301797.61	3772245.983	2.511	NATURAL GROUND
10752	301806.765	3772245.817	0.957	NATURAL GROUND
10753	301812.578	3772245.952	0.865	NATURAL GROUND
10754	301812.421	3772245.863	1.324	AERIAL TARGET
10755	301824.977	3772245.979	0.527	NATURAL GROUND
10756	301835.561	3772246.353	0.74	NATURAL GROUND
10757	301844.231	3772248.78	0.549	NATURAL GROUND
10758	301867.868	3772252.947	0.222	NATURAL GROUND
10759	301888.329	3772247.787	0.272	NATURAL GROUND
10760	301907.828	3772247.31	0.088	NATURAL GROUND
10761	301936.482	3772245.65	0.649	NATURAL GROUND
10762	301954.417	3772245.401	-0.019	NATURAL GROUND
10763	301973.415	3772245.071	0.689	NATURAL GROUND
10764	301990.028	3772243.425	-0.011	NATURAL GROUND
10765	302017.345	3772240.649	0.653	NATURAL GROUND
10766	302042.358	3772241.751	0.304	NATURAL GROUND
10767	302065.053	3772243.4	0.318	NATURAL GROUND
10768	302092.385	3772244.923	0.461	NATURAL GROUND
10769	302110.439	3772244.72	0.677	NATURAL GROUND
10770	302112.121	3772245.175	1.236	AERIAL TARGET

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10771	302113.739	3772244.986	0.147	WATER BOTTOM
10772	302131.807	3772244.955	0.091	WATER BOTTOM
10773	302155.908	3772244.58	-0.261	WATER BOTTOM
10774	302181.414	3772243.098	0.179	WATER BOTTOM
10775	302199.279	3772243.611	-0.098	WATER BOTTOM
10776	302216.102	3772245.333	-0.302	WATER BOTTOM
10777	302232.795	3772245.834	0.048	WATER BOTTOM
10778	302239.214	3772246.738	1.261	AERIAL TARGET
10779	302241.086	3772246.049	0.758	NATURAL GROUND
10780	302266.331	3772245.861	0.929	NATURAL GROUND
10781	302285.199	3772247.485	0.969	NATURAL GROUND
10782	302298.869	3772249.179	0.858	NATURAL GROUND
10783	302303.01	3772248.052	0.831	NATURAL GROUND
10784	302306.496	3772247.231	1.325	AERIAL TARGET
10785	302309.321	3772247.288	-0.113	WATER BOTTOM
10786	302323.495	3772249.738	-0.982	WATER BOTTOM
10787	302344.26	3772249.289	-1.233	WATER BOTTOM
10788	302364.796	3772251.031	-0.967	WATER BOTTOM
10789	302385.66	3772253.26	-1.002	WATER BOTTOM
10790	302406.945	3772254.984	-1.247	WATER BOTTOM
10791	302425.892	3772254.578	-1.258	WATER BOTTOM
10792	302442.592	3772253.83	-0.089	WATER BOTTOM
10793	302446.578	3772254.452	1.245	AERIAL TARGET
10794	302449.087	3772254.409	0.753	NATURAL GROUND
10795	302466.188	3772255.254	1.279	NATURAL GROUND
10796	302484.707	3772254.253	1.008	NATURAL GROUND
10797	302492.885	3772254.205	0.54	NATURAL GROUND
10798	302494.732	3772253.551	1.297	AERIAL TARGET
10799	302497.707	3772253.478	-0.44	WATER BOTTOM
10800	302509.639	3772253.61	-0.856	WATER BOTTOM
10801	302527.094	3772251.608	-1.25	WATER BOTTOM
10802	302546.687	3772251.542	-1.403	WATER BOTTOM
10803	302567.412	3772251.029	-1.19	WATER BOTTOM
10804	302595.423	3772248.716	-1.334	WATER BOTTOM
10805	302625.876	3772247.916	-1.246	WATER BOTTOM
10806	302656.788	3772249.425	-1.441	WATER BOTTOM
10807	302687.23	3772251.71	-1.754	WATER BOTTOM
10808	302714.687	3772251.453	-1.912	WATER BOTTOM
10809	302746.847	3772250.582	-2.092	WATER BOTTOM
10810	302783.138	3772253.761	-1.962	WATER BOTTOM
10811	302822.125	3772258.817	-1.781	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10812	302853.52	3772258.436	-1.207	WATER BOTTOM
10813	302879.859	3772259.353	-0.992	WATER BOTTOM
10814	302898.467	3772258.144	-1.505	WATER BOTTOM
10815	302921.081	3772255.721	-1.532	WATER BOTTOM
10816	302949.5	3772256.59	-1.588	WATER BOTTOM
10817	302978.194	3772256.315	-1.586	WATER BOTTOM
10818	303008.752	3772260.655	-1.403	WATER BOTTOM
10819	303036.249	3772264.712	-1.575	WATER BOTTOM
10820	303065.923	3772268.966	-1.252	WATER BOTTOM
10821	303092.923	3772268.379	-0.95	WATER BOTTOM
10822	303120.363	3772268.985	-0.859	WATER BOTTOM
10823	303153.916	3772268.914	-0.904	WATER BOTTOM
10824	303182.529	3772267.648	-1.711	WATER BOTTOM
10825	303215.937	3772266.519	-1.629	WATER BOTTOM
10826	303251.159	3772266.189	-1.769	WATER BOTTOM
10827	303286.797	3772265.404	-1.701	WATER BOTTOM
10828	303323.625	3772263.514	-1.782	WATER BOTTOM
10829	303359.864	3772264.958	-1.714	WATER BOTTOM
10830	303397.192	3772267.364	-1.651	WATER BOTTOM
10831	303432.918	3772266.7	-1.538	WATER BOTTOM
10832	303472.108	3772267.526	-1.367	WATER BOTTOM
10833	303512.539	3772267.789	-1.326	WATER BOTTOM
10834	303548.936	3772265.774	-1.726	WATER BOTTOM
10835	303580.487	3772265.915	-1.92	WATER BOTTOM
10836	303606.45	3772265.728	-1.359	WATER BOTTOM
10837	303626.67	3772264.688	-1.371	WATER BOTTOM
10838	303654.483	3772264.551	-1.438	WATER BOTTOM
10839	303685.623	3772264.412	-0.925	WATER BOTTOM
10840	303715.184	3772263.911	-1.037	WATER BOTTOM
10841	303735.108	3772264.214	-0.915	WATER BOTTOM
10842	303750.957	3772263.259	-0.578	WATER BOTTOM
10843	303762.745	3772263.875	-0.208	WATER BOTTOM
10844	303763.266	3772263.189	1.279	AERIAL TARGET
10845	304171.39	3772276.457	-2.317	WATER BOTTOM
10846	304155.791	3772272.471	-2.453	WATER BOTTOM
10847	304135.357	3772272.086	-2.386	WATER BOTTOM
10848	304115.302	3772270.924	-2.287	WATER BOTTOM
10849	304095.525	3772270.706	-2.027	WATER BOTTOM
10850	304075.636	3772269.833	-1.545	WATER BOTTOM
10851	304057.995	3772268.853	-1.14	WATER BOTTOM
10852	304042.065	3772268.519	-0.62	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum:** NAVD88 (GEOID 12B) Ft

Point	Northing	Easting	Elevation	Description
10853	304034.579	3772267.476	0.165	WATER BOTTOM
10854	304033.344	3772267.729	1.345	AERIAL TARGET
10855	304030.398	3772267.21	0.694	NATURAL GROUND
10856	304026.524	3772266.693	0.864	NATURAL GROUND
10857	304017.763	3772266.447	1.696	NATURAL GROUND
10858	304023.121	3772265.298	1.209	NATURAL GROUND
10859	301635.718	3771627.99	2.305	NATURAL GROUND
10860	301651.434	3771628.234	2.357	NATURAL GROUND
10861	301667.454	3771628.099	2.464	NATURAL GROUND
10862	301677.542	3771628.299	3.115	NATURAL GROUND
10863	301684.12	3771628.174	3.313	NATURAL GROUND
10864	301686.646	3771628.014	4.809	NATURAL GROUND
10865	301689.856	3771628.159	5.785	NATURAL GROUND
10866	301696.233	3771628.375	5.671	NATURAL GROUND
10867	301701.916	3771628.393	5.136	NATURAL GROUND
10868	301705.106	3771628.259	4.283	NATURAL GROUND
10869	301715.525	3771628.264	2.902	NATURAL GROUND
10870	301725.018	3771628.198	1.901	NATURAL GROUND
10871	301731.614	3771628.338	1.303	WATER EDGE SURFACE
10872	301734.342	3771628.261	0.814	WATER BOTTOM
10873	301851.042	3771633.405	-1.311	WATER BOTTOM
10874	301830.278	3771633.555	-1.403	WATER BOTTOM
10875	301810.594	3771628.763	-1.473	WATER BOTTOM
10876	301789.629	3771627.531	-2.306	WATER BOTTOM
10877	301770.332	3771629.926	-1.455	WATER BOTTOM
10878	301752.183	3771631.403	-0.415	WATER BOTTOM
10879	301739.687	3771628.58	0.172	WATER BOTTOM
10880	300374.788	3774224.802	1.17	AERIAL TARGET



APPENDIX E: RTK SURVEY POINTS TABLE – GEOID 09

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10386	301513.728	3769382.217	-5.073	WATER BOTTOM
10336	298967.405	3771629.971	-4.899	WATER BOTTOM
10178	298548.048	3774500.502	-4.642	WATER BOTTOM
1380	298954.865	3770757.326	-4.599	WATER BOTTOM
10366	298961.97	3771196.796	-4.594	WATER BOTTOM
1313	299021.134	3768757.335	-4.466	WATER BOTTOM
10337	298957.499	3771622.337	-4.415	WATER BOTTOM
1379	298990.177	3770335.151	-4.389	WATER BOTTOM
10344	298849.702	3771617.13	-4.378	WATER BOTTOM
1271	299266.361	3767798.811	-4.281	WATER BOTTOM
1235	299488.67	3766815.397	-4.238	WATER BOTTOM
10387	301498.568	3769382.265	-4.238	WATER BOTTOM
10335	298979.36	3771625.554	-4.161	WATER BOTTOM
1312	299030.64	3768757.377	-4.13	WATER BOTTOM
10140	298571.565	3774994.551	-4.124	WATER BOTTOM
10343	298857.905	3771618.345	-4.092	WATER BOTTOM
1334	299018.41	3769806.164	-4.079	WATER BOTTOM
10250	298437.068	3773492.918	-4.075	WATER BOTTOM
1236	299356.568	3767325.76	-4.074	WATER BOTTOM
10101	298679.531	3775477.191	-4.03	WATER BOTTOM
1305	299140.103	3768761.838	-3.978	WATER BOTTOM
10407	301439.671	3768874.835	-3.934	WATER BOTTOM
1186	299665.236	3766295.379	-3.932	WATER BOTTOM
1288	299190.021	3768294.508	-3.93	WATER BOTTOM
1378	298995.88	3770335.89	-3.918	WATER BOTTOM
10249	298450.988	3773492.479	-3.915	WATER BOTTOM
10177	298553.172	3774499.954	-3.849	WATER BOTTOM
10139	298581.269	3774994.464	-3.817	WATER BOTTOM
10063	298686.094	3776430.489	-3.792	WATER BOTTOM
10248	298465.907	3773491.676	-3.787	WATER BOTTOM
1234	299502.354	3766815.233	-3.755	WATER BOTTOM
1287	299204.811	3768296.279	-3.754	WATER BOTTOM
10100	298685.826	3775477.581	-3.748	WATER BOTTOM
1333	299075.49	3769298.423	-3.732	WATER BOTTOM
1311	299043.728	3768757.869	-3.689	WATER BOTTOM
10165	298696.694	3774507.486	-3.649	WATER BOTTOM
10247	298480.651	3773491.137	-3.644	WATER BOTTOM
1185	299878.899	3765742.035	-3.614	WATER BOTTOM
10205	298507.708	3774009.118	-3.592	WATER BOTTOM
10081	298707.703	3775957.565	-3.587	WATER BOTTOM
10164	298704.637	3774507.471	-3.564	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1332	299088.863	3769297.439	-3.554	WATER BOTTOM
10285	298601.123	3772763.863	-3.497	WATER BOTTOM
10211	298423.503	3774005.224	-3.452	WATER BOTTOM
10246	298496.785	3773490.563	-3.447	WATER BOTTOM
1163	300150.793	3765275.169	-3.444	WATER BOTTOM
1306	299126.694	3768762.357	-3.435	WATER BOTTOM
10278	298698.23	3772764.185	-3.414	WATER BOTTOM
10206	298497.521	3774008.896	-3.399	WATER BOTTOM
1304	299153.538	3768763.133	-3.391	WATER BOTTOM
10099	298697.369	3775478.309	-3.372	WATER BOTTOM
10138	298595.211	3774995.87	-3.371	WATER BOTTOM
10062	298698.578	3776430.452	-3.34	WATER BOTTOM
10245	298511.712	3773489.733	-3.327	WATER BOTTOM
1270	299279.291	3767799.708	-3.323	WATER BOTTOM
10277	298709.76	3772764.48	-3.312	WATER BOTTOM
10384	301539.723	3769378.779	-3.312	WATER BOTTOM
10176	298563.789	3774500.454	-3.294	WATER BOTTOM
1237	299373.13	3767328.408	-3.225	WATER BOTTOM
10244	298525.259	3773489.071	-3.183	WATER BOTTOM
10342	298880.731	3771620.26	-3.181	WATER BOTTOM
10385	301526.552	3769382.038	-3.17	WATER BOTTOM
10311	298821.846	3772202.452	-3.152	WATER BOTTOM
10284	298616.184	3772764.173	-3.119	WATER BOTTOM
10338	298944.416	3771614.699	-3.098	WATER BOTTOM
10163	298713.424	3774508.025	-3.094	WATER BOTTOM
10204	298519.333	3774009.722	-3.089	WATER BOTTOM
10312	298811.697	3772202.181	-3.086	WATER BOTTOM
1381	298977.032	3770758.419	-3.078	WATER BOTTOM
10210	298439.662	3774006.129	-3.059	WATER BOTTOM
10243	298539.361	3773488.305	-3.038	WATER BOTTOM
1233	299518.054	3766816.824	-3	WATER BOTTOM
10137	298608.627	3774995.914	-2.995	WATER BOTTOM
1377	299005.879	3770336.227	-2.986	WATER BOTTOM
1310	299065.038	3768757.841	-2.984	WATER BOTTOM
10310	298833.484	3772202.397	-2.973	WATER BOTTOM
10318	298729.456	3772201.03	-2.967	WATER BOTTOM
10175	298575.36	3774500.971	-2.966	WATER BOTTOM
1335	299036.012	3769806.565	-2.96	WATER BOTTOM
1539	301666.391	3770461.066	-2.949	WATER BOTTOM
10080	298716.438	3775958.494	-2.943	WATER BOTTOM
10279	298690.314	3772764.657	-2.915	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10606	303808.586	3773380.614	-2.878	WATER BOTTOM
1331	299100.481	3769297.251	-2.86	WATER BOTTOM
1162	300169.932	3765273.384	-2.856	WATER BOTTOM
1581	302785.553	3770459.364	-2.851	WATER BOTTOM
1187	299681.792	3766295.353	-2.83	WATER BOTTOM
1286	299217.933	3768296.612	-2.824	WATER BOTTOM
10166	298685.875	3774506.208	-2.818	WATER BOTTOM
10334	298993.654	3771622.473	-2.811	WATER BOTTOM
10605	303792.858	3773381.045	-2.805	WATER BOTTOM
10162	298725.307	3774508.743	-2.804	WATER BOTTOM
10242	298555.556	3773488.315	-2.786	WATER BOTTOM
10161	298739.098	3774509.291	-2.771	WATER BOTTOM
10283	298630.044	3772763.805	-2.743	WATER BOTTOM
10061	298710.424	3776431.199	-2.742	WATER BOTTOM
10132	298678.67	3774999.875	-2.739	WATER BOTTOM
1754	303439.682	3771264.219	-2.738	WATER BOTTOM
10406	301454.288	3768874.431	-2.726	WATER BOTTOM
10365	298972.942	3771196.234	-2.72	WATER BOTTOM
10174	298585.834	3774501.6	-2.718	WATER BOTTOM
10276	298721.279	3772764.746	-2.712	WATER BOTTOM
10317	298742.417	3772201.042	-2.711	WATER BOTTOM
10199	298590.89	3774012.923	-2.691	WATER BOTTOM
1538	301646.179	3770461.629	-2.684	WATER BOTTOM
10209	298454.51	3774005.393	-2.627	WATER BOTTOM
1500	302196.072	3769910.991	-2.599	WATER BOTTOM
1238	299382.295	3767331.1	-2.592	WATER BOTTOM
1501	302217.053	3769911.408	-2.581	WATER BOTTOM
10341	298896.917	3771621.743	-2.579	WATER BOTTOM
1553	302299.247	3770473.362	-2.578	WATER BOTTOM
1752	303412.47	3771269.578	-2.56	WATER BOTTOM
10309	298846.166	3772202.785	-2.56	WATER BOTTOM
10203	298532.562	3774010.655	-2.558	WATER BOTTOM
10136	298623.075	3774996.848	-2.551	WATER BOTTOM
10207	298487.395	3774008.57	-2.547	WATER BOTTOM
1502	302238.189	3769911.218	-2.541	WATER BOTTOM
10241	298573.643	3773486.992	-2.54	WATER BOTTOM
1523	302533.409	3769924.545	-2.524	WATER BOTTOM
1303	299165.792	3768763.478	-2.512	WATER BOTTOM
1596	301698.434	3770824.745	-2.486	WATER BOTTOM
10098	298710.755	3775478.53	-2.484	WATER BOTTOM
1504	302281.158	3769913.332	-2.482	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1655	303094.811	3770842.822	-2.481	WATER BOTTOM
1656	303123.127	3770834.385	-2.477	WATER BOTTOM
10131	298692.12	3775000.459	-2.472	WATER BOTTOM
1269	299296.943	3767800.306	-2.444	WATER BOTTOM
1755	303459.836	3771263.301	-2.421	WATER BOTTOM
1753	303425.071	3771266.404	-2.418	WATER BOTTOM
10173	298597.691	3774501.949	-2.41	WATER BOTTOM
1307	299116.934	3768761.883	-2.401	WATER BOTTOM
1503	302260.018	3769913.463	-2.4	WATER BOTTOM
1184	299900.493	3765742.596	-2.399	WATER BOTTOM
1232	299528.136	3766816.755	-2.395	WATER BOTTOM
10208	298470.221	3774008.217	-2.385	WATER BOTTOM
10846	304155.791	3772272.471	-2.384	WATER BOTTOM
1580	302769.403	3770464.324	-2.362	WATER BOTTOM
10133	298665.551	3774999.586	-2.347	WATER BOTTOM
1612	302321.113	3770833.328	-2.331	WATER BOTTOM
10282	298646.049	3772764.325	-2.317	WATER BOTTOM
10847	304135.357	3772272.086	-2.317	WATER BOTTOM
1309	299085.965	3768759.86	-2.314	WATER BOTTOM
1651	303026.569	3770849.549	-2.313	WATER BOTTOM
1613	302341.213	3770834.101	-2.298	WATER BOTTOM
1579	302753.17	3770469.737	-2.296	WATER BOTTOM
10275	298732.445	3772764.617	-2.296	WATER BOTTOM
10316	298755.927	3772201.593	-2.294	WATER BOTTOM
1749	303364.599	3771268.818	-2.29	WATER BOTTOM
10404	301479.081	3768873.299	-2.283	WATER BOTTOM
10405	301466.916	3768873.773	-2.277	WATER BOTTOM
1751	303396.228	3771270.418	-2.274	WATER BOTTOM
1700	302347.673	3771249.676	-2.26	WATER BOTTOM
1713	302573.523	3771242.024	-2.253	WATER BOTTOM
10845	304171.39	3772276.457	-2.249	WATER BOTTOM
10876	301789.629	3771627.531	-2.245	WATER BOTTOM
1653	303060.656	3770846.55	-2.239	WATER BOTTOM
10160	298756.21	3774510.219	-2.236	WATER BOTTOM
1750	303384.185	3771269.924	-2.227	WATER BOTTOM
10240	298590.846	3773486.626	-2.221	WATER BOTTOM
10848	304115.302	3772270.924	-2.218	WATER BOTTOM
1336	299048.154	3769808.637	-2.211	WATER BOTTOM
1650	303010.534	3770846.419	-2.203	WATER BOTTOM
10130	298704.56	3775000.507	-2.195	WATER BOTTOM
10313	298797.903	3772202.067	-2.181	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1441	301173.174	3765701.778	-2.163	WATER BOTTOM
1505	302303.922	3769913.013	-2.163	WATER BOTTOM
1652	303042.424	3770848.949	-2.163	WATER BOTTOM
10135	298636.634	3774998.347	-2.125	WATER BOTTOM
1499	301551.449	3769893.458	-2.121	WATER BOTTOM
1654	303079.168	3770844.403	-2.12	WATER BOTTOM
1179	299983.294	3765739.867	-2.116	WATER BOTTOM
10202	298545.377	3774010.651	-2.116	WATER BOTTOM
1382	298993.253	3770758.232	-2.101	WATER BOTTOM
10198	298603.275	3774013.538	-2.1	WATER BOTTOM
1598	301759.34	3770819.77	-2.094	WATER BOTTOM
1161	300188.375	3765272.86	-2.084	WATER BOTTOM
1597	301738.99	3770821.212	-2.078	WATER BOTTOM
1518	302439.836	3769918.983	-2.056	WATER BOTTOM
10172	298609.729	3774502.773	-2.048	WATER BOTTOM
1649	302994	3770845.312	-2.039	WATER BOTTOM
1578	302737.915	3770473.256	-2.038	WATER BOTTOM
1748	303347.6	3771267.582	-2.038	WATER BOTTOM
1195	299765.801	3766293.485	-2.034	WATER BOTTOM
1180	299971.046	3765740.267	-2.03	WATER BOTTOM
1715	302620.003	3771242.716	-2.027	WATER BOTTOM
10060	298721.551	3776430.936	-2.026	WATER BOTTOM
10809	302746.847	3772250.582	-2.025	WATER BOTTOM
10308	298859.392	3772203.108	-2.021	WATER BOTTOM
1239	299394.554	3767327.026	-2.019	WATER BOTTOM
1194	299754.927	3766294.256	-2.012	WATER BOTTOM
1376	299020.445	3770337.415	-2.01	WATER BOTTOM
10239	298609.438	3773485.928	-2.009	WATER BOTTOM
1521	302473.431	3769924.055	-2.007	WATER BOTTOM
10340	298911.632	3771620.877	-2.004	WATER BOTTOM
10315	298768.724	3772201.752	-2	WATER BOTTOM
10238	298625.982	3773485.937	-1.987	WATER BOTTOM
10237	298643.986	3773485.247	-1.986	WATER BOTTOM
1330	299114.572	3769298.188	-1.966	WATER BOTTOM
10129	298719.952	3775001.547	-1.965	WATER BOTTOM
10302	298950.817	3772204.322	-1.963	WATER BOTTOM
10849	304095.525	3772270.706	-1.958	WATER BOTTOM
10079	298729.215	3775958.772	-1.948	WATER BOTTOM
1540	302049.331	3770464.014	-1.94	WATER BOTTOM
10333	299007.219	3771621.826	-1.939	WATER BOTTOM
10134	298651.357	3774998.282	-1.933	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10280	298676.896	3772763.657	-1.928	WATER BOTTOM
1308	299105.282	3768760.99	-1.923	WATER BOTTOM
1718	302685.472	3771245.94	-1.917	WATER BOTTOM
1611	302298.528	3770833.223	-1.912	WATER BOTTOM
10281	298661.174	3772762.326	-1.909	WATER BOTTOM
1716	302642.589	3771243.876	-1.908	WATER BOTTOM
1555	302340.135	3770474.768	-1.899	WATER BOTTOM
10339	298928.365	3771619.758	-1.897	WATER BOTTOM
10810	302783.138	3772253.761	-1.895	WATER BOTTOM
1714	302594.851	3771243.129	-1.89	WATER BOTTOM
1699	302329.712	3771248.759	-1.88	WATER BOTTOM
1614	302362.3	3770835.326	-1.879	WATER BOTTOM
1158	300269.306	3765269.363	-1.878	WATER BOTTOM
10200	298581.524	3774012.289	-1.877	WATER BOTTOM
1594	301659.75	3770816.54	-1.869	WATER BOTTOM
10485	304344.662	3773363.351	-1.863	WATER BOTTOM
1648	302980.268	3770844.518	-1.861	WATER BOTTOM
1519	302451.524	3769921.501	-1.854	WATER BOTTOM
10835	303580.487	3772265.915	-1.852	WATER BOTTOM
1522	302490.268	3769928.918	-1.85	WATER BOTTOM
10808	302714.687	3772251.453	-1.846	WATER BOTTOM
10567	302895.301	3773367.251	-1.836	WATER BOTTOM
10486	304327.417	3773369.559	-1.835	WATER BOTTOM
1285	299232.604	3768296.056	-1.824	WATER BOTTOM
1595	301679.805	3770823.837	-1.822	WATER BOTTOM
1647	302966.698	3770844.586	-1.817	WATER BOTTOM
1537	301630.513	3770460.494	-1.815	WATER BOTTOM
10364	298988.237	3771196.105	-1.814	WATER BOTTOM
10097	298721.716	3775478.662	-1.813	WATER BOTTOM
10159	298766.327	3774510.816	-1.809	WATER BOTTOM
10301	298962.63	3772204.447	-1.796	WATER BOTTOM
1188	299701.244	3766294.757	-1.792	WATER BOTTOM
1520	302462.222	3769923.253	-1.791	WATER BOTTOM
10274	298745.661	3772764.109	-1.786	WATER BOTTOM
10314	298782.1	3772202.062	-1.786	WATER BOTTOM
1577	302725.681	3770473.834	-1.783	WATER BOTTOM
1712	302552.36	3771243.212	-1.783	WATER BOTTOM
10236	298661.114	3773484.263	-1.765	WATER BOTTOM
1541	302075.344	3770464.416	-1.764	WATER BOTTOM
1717	302666.505	3771244.873	-1.763	WATER BOTTOM
1719	302704.923	3771246.776	-1.75	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10565	302837.245	3773364.854	-1.732	WATER BOTTOM
1498	301537.062	3769893.915	-1.725	WATER BOTTOM
10811	302822.125	3772258.817	-1.715	WATER BOTTOM
10828	303323.625	3772263.514	-1.714	WATER BOTTOM
10171	298622.025	3774503.482	-1.709	WATER BOTTOM
10826	303251.159	3772266.189	-1.702	WATER BOTTOM
1723	302790.843	3771251.484	-1.701	WATER BOTTOM
1627	302638.269	3770839.6	-1.692	WATER BOTTOM
10697	303222.009	3772810.028	-1.69	WATER BOTTOM
10698	303256.357	3772810.161	-1.688	WATER BOTTOM
10807	302687.23	3772251.71	-1.688	WATER BOTTOM
1506	302326.297	3769912.52	-1.675	WATER BOTTOM
10566	302867.227	3773368.636	-1.669	WATER BOTTOM
10834	303548.936	3772265.774	-1.658	WATER BOTTOM
10201	298563.625	3774011.888	-1.653	WATER BOTTOM
10696	303182.503	3772809.447	-1.653	WATER BOTTOM
1193	299749.343	3766293.638	-1.649	WATER BOTTOM
10829	303359.864	3772264.958	-1.646	WATER BOTTOM
10824	303182.529	3772267.648	-1.643	WATER BOTTOM
10167	298673.83	3774506.079	-1.641	WATER BOTTOM
1337	299057.656	3769809.05	-1.634	WATER BOTTOM
10128	298734.794	3775002.536	-1.634	WATER BOTTOM
10827	303286.797	3772265.404	-1.634	WATER BOTTOM
1721	302748.268	3771249.269	-1.632	WATER BOTTOM
1196	299777.894	3766293.261	-1.626	WATER BOTTOM
1722	302769.366	3771249.037	-1.626	WATER BOTTOM
1459	301252.356	3766272.647	-1.61	WATER BOTTOM
10700	303301.424	3772808.507	-1.607	WATER BOTTOM
1599	302052.797	3770825.832	-1.603	WATER BOTTOM
10270	298802.146	3772765.421	-1.596	WATER BOTTOM
10170	298634.377	3774504.075	-1.593	WATER BOTTOM
10699	303282.532	3772807.939	-1.591	WATER BOTTOM
10388	301478.891	3769381.789	-1.59	WATER BOTTOM
10830	303397.192	3772267.364	-1.584	WATER BOTTOM
1720	302727.589	3771248.248	-1.581	WATER BOTTOM
10487	304311.077	3773374.5	-1.578	WATER BOTTOM
1688	302101.67	3771236.014	-1.577	WATER BOTTOM
1698	302312.458	3771248.487	-1.577	WATER BOTTOM
10694	303115.674	3772811.429	-1.577	WATER BOTTOM
10695	303148.409	3772812.232	-1.567	WATER BOTTOM
10235	298679.578	3773483.469	-1.565	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1600	302077.604	3770827.407	-1.563	WATER BOTTOM
10825	303215.937	3772266.519	-1.562	WATER BOTTOM
1552	302278.67	3770473.342	-1.551	WATER BOTTOM
10569	302950.037	3773368.033	-1.551	WATER BOTTOM
1183	299920.994	3765741.608	-1.55	WATER BOTTOM
1747	303332.31	3771267.45	-1.55	WATER BOTTOM
10701	303323.768	3772810.564	-1.549	WATER BOTTOM
10169	298647.817	3774504.602	-1.545	WATER BOTTOM
1227	299596.694	3766816.756	-1.535	WATER BOTTOM
10604	303768.652	3773381.021	-1.529	WATER BOTTOM
10307	298874.126	3772202.906	-1.528	WATER BOTTOM
10197	298616.579	3774014.152	-1.522	WATER BOTTOM
10816	302949.5	3772256.59	-1.521	WATER BOTTOM
10817	302978.194	3772256.315	-1.519	WATER BOTTOM
10690	302997.257	3772805.38	-1.513	WATER BOTTOM
1615	302379.902	3770835.265	-1.508	WATER BOTTOM
10488	304293.196	3773374.789	-1.508	WATER BOTTOM
10819	303036.249	3772264.712	-1.508	WATER BOTTOM
1565	302506.875	3770475.29	-1.502	WATER BOTTOM
10158	298777.265	3774511.565	-1.502	WATER BOTTOM
1724	302810.394	3771252.678	-1.501	WATER BOTTOM
10564	302810.257	3773363.977	-1.493	WATER BOTTOM
1566	302523.64	3770475.986	-1.492	WATER BOTTOM
1690	302156.746	3771238.551	-1.489	WATER BOTTOM
1268	299317.606	3767800.503	-1.487	WATER BOTTOM
1507	302345.805	3769914.666	-1.483	WATER BOTTOM
1302	299182.75	3768764.665	-1.478	WATER BOTTOM
10850	304075.636	3772269.833	-1.476	WATER BOTTOM
1422	300938.579	3765254.378	-1.473	WATER BOTTOM
10692	303056.259	3772804.376	-1.471	WATER BOTTOM
1542	302096.505	3770464.04	-1.47	WATER BOTTOM
10563	302782.438	3773365.183	-1.47	WATER BOTTOM
10831	303432.918	3772266.7	-1.47	WATER BOTTOM
10815	302921.081	3772255.721	-1.465	WATER BOTTOM
10702	303352.708	3772812.293	-1.464	WATER BOTTOM
10234	298697.32	3773482.801	-1.462	WATER BOTTOM
1686	302051.876	3771235.363	-1.456	WATER BOTTOM
10691	303029.991	3772807.178	-1.452	WATER BOTTOM
1626	302618.839	3770839.478	-1.448	WATER BOTTOM
10814	302898.467	3772258.144	-1.438	WATER BOTTOM
1556	302356.857	3770474.496	-1.433	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1375	299031.006	3770336.619	-1.428	WATER BOTTOM
1646	302950.198	3770844.398	-1.427	WATER BOTTOM
1231	299548.802	3766816.814	-1.425	WATER BOTTOM
1497	301525.562	3769893.845	-1.421	WATER BOTTOM
10568	302922.324	3773365.945	-1.421	WATER BOTTOM
10693	303084.721	3772809.391	-1.42	WATER BOTTOM
10706	303486.066	3772807.752	-1.414	WATER BOTTOM
1226	299619.394	3766816.804	-1.413	WATER BOTTOM
10269	298817.423	3772765.482	-1.411	WATER BOTTOM
10875	301810.594	3771628.763	-1.411	WATER BOTTOM
1342	299117.43	3769810.789	-1.395	WATER BOTTOM
1710	302508.809	3771242.115	-1.395	WATER BOTTOM
10877	301770.332	3771629.926	-1.393	WATER BOTTOM
100041	301058.893	3774353.104	-1.392	NATURAL GROUND
10168	298659.563	3774505.196	-1.385	WATER BOTTOM
1601	302100.325	3770828.199	-1.382	WATER BOTTOM
10806	302656.788	3772249.425	-1.375	WATER BOTTOM
10704	303419.852	3772810.826	-1.374	WATER BOTTOM
1682	301958.906	3771238.288	-1.37	WATER BOTTOM
10682	302757.877	3772805.366	-1.37	WATER BOTTOM
10838	303654.483	3772264.551	-1.37	WATER BOTTOM
10059	298731.336	3776432.219	-1.367	WATER BOTTOM
1298	299244.936	3768767.922	-1.365	WATER BOTTOM
1680	301918.665	3771239.932	-1.365	WATER BOTTOM
1684	302000.932	3771235.816	-1.365	WATER BOTTOM
10096	298732.956	3775479.481	-1.363	WATER BOTTOM
1536	301615.468	3770454.379	-1.361	WATER BOTTOM
1726	302849.323	3771253.941	-1.36	WATER BOTTOM
1371	299082.4	3770340.361	-1.355	WATER BOTTOM
10689	302967.565	3772801.364	-1.352	WATER BOTTOM
10681	302727.073	3772804.964	-1.35	WATER BOTTOM
10685	302844.889	3772802.96	-1.349	WATER BOTTOM
1711	302531.405	3771241.904	-1.346	WATER BOTTOM
10491	304232.784	3773374.032	-1.344	WATER BOTTOM
10874	301830.278	3771633.555	-1.341	WATER BOTTOM
10802	302546.687	3772251.542	-1.337	WATER BOTTOM
10818	303008.752	3772260.655	-1.336	WATER BOTTOM
1685	302025.978	3771235.641	-1.323	WATER BOTTOM
1326	299180.606	3769300.594	-1.322	WATER BOTTOM
10408	301424.899	3768875.463	-1.314	WATER BOTTOM
10195	298665.31	3774016.942	-1.313	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1517	302428.905	3769919.035	-1.311	WATER BOTTOM
1543	302119.165	3770464.754	-1.311	WATER BOTTOM
10562	302755.418	3773364.589	-1.311	WATER BOTTOM
1574	302682.038	3770475.827	-1.305	WATER BOTTOM
1575	302695.484	3770476.966	-1.304	WATER BOTTOM
10837	303626.67	3772264.688	-1.303	WATER BOTTOM
10716	303817.066	3772817.682	-1.302	WATER BOTTOM
10832	303472.108	3772267.526	-1.299	WATER BOTTOM
10058	298732.085	3776432.081	-1.298	WATER BOTTOM
1157	300296.344	3765268.294	-1.296	WATER BOTTOM
1192	299747.75	3766293.076	-1.293	WATER BOTTOM
1327	299163.488	3769299.803	-1.293	WATER BOTTOM
10676	302595.005	3772801.554	-1.293	WATER BOTTOM
10712	303689.523	3772813.318	-1.292	WATER BOTTOM
10836	303606.45	3772265.728	-1.291	WATER BOTTOM
10703	303384.697	3772811.775	-1.29	WATER BOTTOM
1628	302660.43	3770841.311	-1.289	WATER BOTTOM
10590	303581.097	3773359.249	-1.289	WATER BOTTOM
1383	299009.106	3770759.332	-1.284	WATER BOTTOM
10711	303659.07	3772814.81	-1.282	WATER BOTTOM
10078	298743.751	3775959.492	-1.276	WATER BOTTOM
10705	303451.873	3772808.953	-1.276	WATER BOTTOM
10493	304192.566	3773378.675	-1.275	WATER BOTTOM
10707	303525.008	3772808.829	-1.275	WATER BOTTOM
10714	303754.159	3772815.016	-1.275	WATER BOTTOM
10686	302876.327	3772805.645	-1.273	WATER BOTTOM
100060	301855.545	3774361.512	-1.271	NATURAL GROUND
10715	303784.514	3772815.481	-1.27	WATER BOTTOM
10804	302595.423	3772248.716	-1.267	WATER BOTTOM
10489	304272.749	3773371.088	-1.266	WATER BOTTOM
10688	302937.27	3772802.229	-1.265	WATER BOTTOM
10717	303850.208	3772821.449	-1.265	WATER BOTTOM
1610	302279.53	3770831.746	-1.264	WATER BOTTOM
10718	303881.777	3772819.855	-1.262	WATER BOTTOM
10490	304252.076	3773370.267	-1.259	WATER BOTTOM
10833	303512.539	3772267.789	-1.258	WATER BOTTOM
1683	301979.536	3771236.278	-1.257	WATER BOTTOM
1681	301938.434	3771238.82	-1.254	WATER BOTTOM
10233	298713.507	3773481.992	-1.254	WATER BOTTOM
10494	304173.295	3773378.385	-1.25	WATER BOTTOM
10873	301851.042	3771633.405	-1.25	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10687	302904.39	3772805.42	-1.249	WATER BOTTOM
1576	302710.612	3770475.875	-1.247	WATER BOTTOM
1602	302127.854	3770827.512	-1.245	WATER BOTTOM
1265	299378.902	3767802.058	-1.243	WATER BOTTOM
10300	298976.149	3772204.32	-1.242	WATER BOTTOM
1440	301162.667	3765702.044	-1.233	WATER BOTTOM
1679	301896.7	3771238.654	-1.216	WATER BOTTOM
1535	301608.224	3770464.203	-1.213	WATER BOTTOM
1709	302491.45	3771245.396	-1.21	WATER BOTTOM
10684	302814.692	3772803.819	-1.21	WATER BOTTOM
10710	303626.706	3772815.706	-1.21	WATER BOTTOM
1341	299105.641	3769810.749	-1.207	WATER BOTTOM
10683	302784.376	3772804.706	-1.205	WATER BOTTOM
10719	303908.08	3772820.036	-1.203	WATER BOTTOM
1299	299229.123	3768766.866	-1.202	WATER BOTTOM
1244	299476.358	3767329.016	-1.201	WATER BOTTOM
10678	302644.644	3772800.694	-1.201	WATER BOTTOM
10709	303595.248	3772814.67	-1.201	WATER BOTTOM
1240	299416.419	3767327.473	-1.195	WATER BOTTOM
10791	302425.892	3772254.578	-1.192	WATER BOTTOM
10726	304104.578	3772823.313	-1.189	WATER BOTTOM
10273	298759.34	3772764.896	-1.186	WATER BOTTOM
10674	302545.131	3772803.868	-1.186	WATER BOTTOM
10820	303065.923	3772268.966	-1.185	WATER BOTTOM
10801	302527.094	3772251.608	-1.184	WATER BOTTOM
1697	302292.925	3771247.505	-1.182	WATER BOTTOM
10675	302568.374	3772802.465	-1.182	WATER BOTTOM
10679	302671.424	3772801.628	-1.182	WATER BOTTOM
10790	302406.945	3772254.984	-1.181	WATER BOTTOM
10805	302625.876	3772247.916	-1.179	WATER BOTTOM
10713	303721.339	3772814.432	-1.178	WATER BOTTOM
1178	300000.044	3765739.516	-1.175	WATER BOTTOM
10561	302723.941	3773364.586	-1.174	WATER BOTTOM
1625	302600.247	3770838.75	-1.17	WATER BOTTOM
1160	300215.717	3765271.518	-1.169	WATER BOTTOM
10787	302344.26	3772249.289	-1.167	WATER BOTTOM
1159	300252.162	3765270.224	-1.166	WATER BOTTOM
10588	303507.926	3773370.202	-1.163	WATER BOTTOM
1458	301246.868	3766272.658	-1.156	WATER BOTTOM
1603	302151.132	3770828.963	-1.155	WATER BOTTOM
1692	302204.575	3771245.067	-1.154	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10363	299003.744	3771196.616	-1.153	WATER BOTTOM
10492	304210.76	3773378.998	-1.152	WATER BOTTOM
10708	303560.127	3772812.031	-1.152	WATER BOTTOM
10680	302697.732	3772803.635	-1.15	WATER BOTTOM
1725	302830.391	3771252.97	-1.147	WATER BOTTOM
10389	301465.386	3769379.91	-1.143	WATER BOTTOM
10559	302681.19	3773364.027	-1.142	WATER BOTTOM
10812	302853.52	3772258.436	-1.14	WATER BOTTOM
1508	302361.267	3769914.818	-1.139	WATER BOTTOM
10556	302616.607	3773362.92	-1.139	WATER BOTTOM
1567	302543.643	3770475.949	-1.135	WATER BOTTOM
10303	298935.547	3772204.279	-1.13	WATER BOTTOM
10607	303826.41	3773379.705	-1.128	WATER BOTTOM
10803	302567.412	3772251.029	-1.124	WATER BOTTOM
10127	298750.805	3775003.676	-1.12	WATER BOTTOM
10725	304126.81	3772822.006	-1.116	WATER BOTTOM
10558	302660.008	3773362.963	-1.115	WATER BOTTOM
10554	302574.983	3773362.152	-1.109	WATER BOTTOM
1516	302418.477	3769918.248	-1.107	WATER BOTTOM
10677	302619.153	3772800.947	-1.106	WATER BOTTOM
10157	298790.896	3774511.971	-1.101	WATER BOTTOM
10458	301383.969	3767846.042	-1.1	WATER BOTTOM
10673	302524.476	3772807.543	-1.099	WATER BOTTOM
1243	299458.299	3767328.576	-1.095	WATER BOTTOM
10271	298789.485	3772764.979	-1.091	WATER BOTTOM
1181	299955.689	3765741.191	-1.088	WATER BOTTOM
1623	302560.912	3770837.52	-1.088	WATER BOTTOM
10306	298887.979	3772203.299	-1.086	WATER BOTTOM
10457	301367.206	3767845.823	-1.085	WATER BOTTOM
1338	299072.696	3769809.315	-1.084	WATER BOTTOM
10724	304147.6	3772818.473	-1.079	WATER BOTTOM
1544	302142.636	3770464.678	-1.076	WATER BOTTOM
10570	302980.445	3773367.156	-1.076	WATER BOTTOM
10456	301350.764	3767845.597	-1.073	WATER BOTTOM
10555	302594.843	3773362.818	-1.073	WATER BOTTOM
10560	302700.786	3773364.498	-1.073	WATER BOTTOM
10851	304057.995	3772268.853	-1.072	WATER BOTTOM
1189	299719.665	3766294.296	-1.068	WATER BOTTOM
1622	302533.827	3770837.284	-1.062	WATER BOTTOM
10499	304111.307	3773375.446	-1.057	WATER BOTTOM
1621	302507.435	3770838.035	-1.037	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1343	299132.828	3769810.577	-1.035	WATER BOTTOM
10268	298831.301	3772765.384	-1.034	WATER BOTTOM
10587	303468.979	3773365.858	-1.018	WATER BOTTOM
1281	299294.815	3768299.945	-1.015	WATER BOTTOM
100061	301895.046	3774363.224	-1.014	NATURAL GROUND
10589	303544.021	3773364.274	-1.012	WATER BOTTOM
100062	301934.46	3774366.946	-1.011	NATURAL GROUND
1421	300914.917	3765254.645	-1.001	WATER BOTTOM
1282	299276.829	3768298.668	-0.998	WATER BOTTOM
10557	302636.766	3773363.345	-0.996	WATER BOTTOM
1439	301146.618	3765702.575	-0.995	WATER BOTTOM
100058	301779.566	3774357.38	-0.991	NATURAL GROUND
1624	302582.33	3770839.156	-0.989	WATER BOTTOM
10723	304166.98	3772819.079	-0.984	WATER BOTTOM
1284	299250.965	3768297.942	-0.982	WATER BOTTOM
10553	302560.822	3773363.833	-0.975	WATER BOTTOM
10659	302332.674	3772801.327	-0.971	WATER BOTTOM
10840	303715.184	3772263.911	-0.969	WATER BOTTOM
1329	299133.182	3769298.665	-0.968	WATER BOTTOM
10722	304187.769	3772815.374	-0.965	WATER BOTTOM
1483	301238.321	3766816.447	-0.964	WATER BOTTOM
100057	301739.453	3774355.597	-0.963	NATURAL GROUND
10498	304129.437	3773372.748	-0.963	WATER BOTTOM
1325	299196.012	3769300.988	-0.951	WATER BOTTOM
10727	304083.971	3772817.411	-0.948	WATER BOTTOM
100059	301820.934	3774358.853	-0.94	NATURAL GROUND
10789	302385.66	3772253.26	-0.936	WATER BOTTOM
1228	299588.636	3766816.918	-0.934	WATER BOTTOM
1551	302254.172	3770471.05	-0.931	WATER BOTTOM
10813	302879.859	3772259.353	-0.926	WATER BOTTOM
1691	302183.375	3771241.514	-0.919	WATER BOTTOM
10786	302323.495	3772249.738	-0.916	WATER BOTTOM
1300	299215.175	3768766.254	-0.91	WATER BOTTOM
10155	298819.289	3774513.492	-0.909	WATER BOTTOM
1386	299053.869	3770759.22	-0.907	WATER BOTTOM
1696	302278.506	3771247.739	-0.903	WATER BOTTOM
1197	299788.826	3766293.15	-0.902	WATER BOTTOM
10788	302364.796	3772251.031	-0.901	WATER BOTTOM
10435	301403.955	3768386.484	-0.896	WATER BOTTOM
1620	302481.28	3770837.714	-0.895	WATER BOTTOM
10156	298805.129	3774512.794	-0.895	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1370	299099.772	3770340.996	-0.894	WATER BOTTOM
10409	301412.894	3768876.454	-0.893	WATER BOTTOM
10586	303430.788	3773363.963	-0.889	WATER BOTTOM
10390	301452.838	3769378.859	-0.887	WATER BOTTOM
10821	303092.923	3772268.379	-0.883	WATER BOTTOM
10601	303728.201	3773383.332	-0.875	WATER BOTTOM
100055	301663.524	3774354.349	-0.865	NATURAL GROUND
1741	303214.272	3771264.046	-0.864	WATER BOTTOM
1564	302491.7	3770474.9	-0.862	WATER BOTTOM
10332	299031.629	3771622.636	-0.861	WATER BOTTOM
100056	301703.468	3774354.526	-0.86	NATURAL GROUND
1385	299039.854	3770759.997	-0.859	WATER BOTTOM
10839	303685.623	3772264.412	-0.857	WATER BOTTOM
10477	301252.575	3767371.562	-0.853	WATER BOTTOM
10841	303735.108	3772264.214	-0.846	WATER BOTTOM
10455	301335.595	3767844.695	-0.843	WATER BOTTOM
10552	302546.124	3773364.551	-0.842	WATER BOTTOM
1708	302472.55	3771249.656	-0.837	WATER BOTTOM
10823	303153.916	3772268.914	-0.836	WATER BOTTOM
1374	299045.804	3770338.441	-0.823	WATER BOTTOM
1457	301237.465	3766272.843	-0.821	WATER BOTTOM
1689	302137.042	3771237.099	-0.817	WATER BOTTOM
10571	303007.429	3773366.757	-0.817	WATER BOTTOM
10572	303027.477	3773370.205	-0.814	WATER BOTTOM
1301	299200.297	3768765.228	-0.809	WATER BOTTOM
10574	303075.014	3773375.747	-0.806	WATER BOTTOM
1545	302160.658	3770464.173	-0.798	WATER BOTTOM
1568	302563.305	3770475.404	-0.794	WATER BOTTOM
10822	303120.363	3772268.985	-0.792	WATER BOTTOM
10232	298730.621	3773481.076	-0.791	WATER BOTTOM
10800	302509.639	3772253.61	-0.789	WATER BOTTOM
10196	298647.768	3774015.525	-0.788	WATER BOTTOM
1573	302668.934	3770474.786	-0.786	WATER BOTTOM
1629	302684.974	3770841.245	-0.781	WATER BOTTOM
100053	301567.974	3774356.428	-0.771	NATURAL GROUND
10434	301392.238	3768385.214	-0.76	WATER BOTTOM
10543	302462.946	3773359.858	-0.757	WATER BOTTOM
1182	299945.124	3765740.745	-0.742	WATER BOTTOM
10585	303393.924	3773363.405	-0.738	WATER BOTTOM
10305	298902.426	3772203.492	-0.735	WATER BOTTOM
10476	301236.731	3767371.425	-0.735	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1643	302894.373	3770843.72	-0.733	WATER BOTTOM
1687	302091.903	3771236.393	-0.731	WATER BOTTOM
10664	302421.242	3772802.106	-0.73	WATER BOTTOM
1639	302827.087	3770842.581	-0.724	WATER BOTTOM
1230	299568.066	3766817.245	-0.72	WATER BOTTOM
1482	301217.193	3766816.693	-0.717	WATER BOTTOM
1604	302169.776	3770829.458	-0.713	WATER BOTTOM
10410	301399.855	3768876.284	-0.709	WATER BOTTOM
1297	299264.344	3768768.725	-0.708	WATER BOTTOM
100054	301617.722	3774355.213	-0.706	NATURAL GROUND
1191	299745.269	3766294.064	-0.701	WATER BOTTOM
1267	299337.366	3767800.965	-0.701	WATER BOTTOM
10500	304103.303	3773374.144	-0.693	WATER BOTTOM
1550	302241.557	3770466.678	-0.69	WATER BOTTOM
10362	299017.752	3771196.714	-0.689	WATER BOTTOM
1264	299400.867	3767802.564	-0.688	WATER BOTTOM
1344	299141.579	3769811.315	-0.686	WATER BOTTOM
10665	302437.933	3772804.34	-0.686	WATER BOTTOM
10433	301374.229	3768384.28	-0.683	WATER BOTTOM
1737	303113.726	3771265.538	-0.681	WATER BOTTOM
10267	298843.878	3772765.286	-0.677	WATER BOTTOM
10126	298766.436	3775004.427	-0.676	WATER BOTTOM
10541	302420.343	3773360.997	-0.673	WATER BOTTOM
10573	303050.645	3773373.885	-0.673	WATER BOTTOM
10475	301220.343	3767371.168	-0.666	WATER BOTTOM
1384	299024.766	3770758.929	-0.664	WATER BOTTOM
1372	299073.931	3770339.097	-0.661	WATER BOTTOM
1481	301193.515	3766816.6	-0.661	WATER BOTTOM
1328	299150.377	3769299.29	-0.657	WATER BOTTOM
10576	303135.514	3773375.048	-0.657	WATER BOTTOM
10454	301321.144	3767844.54	-0.656	WATER BOTTOM
10542	302441.98	3773360.037	-0.646	WATER BOTTOM
1340	299100.115	3769810.525	-0.645	WATER BOTTOM
10495	304156.435	3773377.796	-0.643	WATER BOTTOM
10299	298990.041	3772204.775	-0.642	WATER BOTTOM
10672	302501.034	3772813.645	-0.64	WATER BOTTOM
1641	302853.632	3770844.272	-0.629	WATER BOTTOM
1266	299356.454	3767801.565	-0.626	WATER BOTTOM
1339	299085.52	3769809.058	-0.621	WATER BOTTOM
1727	302870.26	3771253.734	-0.616	WATER BOTTOM
10411	301388.122	3768876.841	-0.611	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
100051	301488.163	3774356.187	-0.61	NATURAL GROUND
10272	298775.312	3772764.758	-0.61	WATER BOTTOM
1739	303165.325	3771265.469	-0.608	WATER BOTTOM
10540	302398.284	3773362.666	-0.607	WATER BOTTOM
1619	302466.516	3770839.554	-0.604	WATER BOTTOM
100050	301445.935	3774356.032	-0.59	NATURAL GROUND
10115	298890.669	3775011.143	-0.589	WATER BOTTOM
10728	304063.264	3772815.172	-0.589	WATER BOTTOM
1609	302260.036	3770832.046	-0.584	WATER BOTTOM
10391	301440.467	3769377.214	-0.582	WATER BOTTOM
10575	303106.101	3773376.487	-0.581	WATER BOTTOM
10114	298890.686	3775011.131	-0.578	WATER BOTTOM
10057	298745.108	3776432.732	-0.577	WATER BOTTOM
100052	301525.014	3774355.989	-0.576	NATURAL GROUND
10453	301302.99	3767844.167	-0.573	WATER BOTTOM
10577	303159.05	3773375.575	-0.571	WATER BOTTOM
1742	303239.248	3771265.744	-0.559	WATER BOTTOM
10432	301361.23	3768383.944	-0.556	WATER BOTTOM
10852	304042.065	3772268.519	-0.551	WATER BOTTOM
10154	298832.425	3774514.195	-0.537	WATER BOTTOM
10591	303608.043	3773368.9	-0.532	WATER BOTTOM
1190	299734.072	3766293.935	-0.523	WATER BOTTOM
1480	301174.528	3766817.446	-0.52	WATER BOTTOM
10538	302359.56	3773360.017	-0.515	WATER BOTTOM
10663	302401.212	3772799.692	-0.511	WATER BOTTOM
1245	299496.107	3767329.437	-0.51	WATER BOTTOM
10842	303750.957	3772263.259	-0.51	WATER BOTTOM
1496	301503.081	3769889.63	-0.509	WATER BOTTOM
10125	298781.834	3775005.566	-0.508	WATER BOTTOM
10720	303927.477	3772819.677	-0.508	WATER BOTTOM
10077	298760.521	3775960.452	-0.495	WATER BOTTOM
100049	301402.791	3774355.966	-0.494	NATURAL GROUND
10095	298754.253	3775480.646	-0.491	WATER BOTTOM
10123	298812.192	3775006.727	-0.487	WATER BOTTOM
10660	302351.414	3772801.739	-0.486	WATER BOTTOM
10529	302264.559	3773358.778	-0.481	WATER BOTTOM
10331	299058.41	3771622.417	-0.48	WATER BOTTOM
10124	298797.225	3775005.33	-0.478	WATER BOTTOM
1387	299072.513	3770760.033	-0.471	WATER BOTTOM
1225	299642.33	3766816.892	-0.47	WATER BOTTOM
10473	301196.352	3767370.94	-0.466	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1707	302461.632	3771251.905	-0.465	WATER BOTTOM
10661	302368.365	3772801.931	-0.465	WATER BOTTOM
10539	302377.908	3773361.267	-0.462	WATER BOTTOM
1638	302809.222	3770843.143	-0.46	WATER BOTTOM
10474	301207.596	3767370.979	-0.46	WATER BOTTOM
10580	303241.073	3773367.97	-0.457	WATER BOTTOM
1515	302409.876	3769918.548	-0.454	WATER BOTTOM
1633	302745.47	3770840.993	-0.453	WATER BOTTOM
10525	302181.611	3773356.907	-0.453	WATER BOTTOM
1456	301233.428	3766273.085	-0.45	WATER BOTTOM
1736	303085.76	3771263.955	-0.448	WATER BOTTOM
1734	303040.689	3771260.624	-0.439	WATER BOTTOM
10452	301289.997	3767844.116	-0.433	WATER BOTTOM
10526	302197.591	3773358.997	-0.429	WATER BOTTOM
10578	303191.698	3773376.628	-0.426	WATER BOTTOM
1678	301876.046	3771238.285	-0.421	WATER BOTTOM
10113	298899.912	3775011.461	-0.421	WATER BOTTOM
10600	303714.849	3773378.842	-0.421	WATER BOTTOM
1241	299439.882	3767328.391	-0.419	WATER BOTTOM
1693	302222.226	3771247.469	-0.419	WATER BOTTOM
10610	303877.978	3773375.201	-0.419	WATER BOTTOM
1280	299315.277	3768300.035	-0.417	WATER BOTTOM
10194	298696.226	3774017.816	-0.413	WATER BOTTOM
10602	303738.664	3773383.598	-0.401	WATER BOTTOM
1373	299062.159	3770338.358	-0.395	WATER BOTTOM
1229	299583.294	3766816.8	-0.392	WATER BOTTOM
1735	303061.465	3771262.778	-0.391	WATER BOTTOM
1283	299272.46	3768298.565	-0.389	WATER BOTTOM
1732	302988.549	3771258.222	-0.389	WATER BOTTOM
1420	300896.327	3765255.144	-0.385	WATER BOTTOM
1479	301157.682	3766817.235	-0.385	WATER BOTTOM
1438	301139.337	3765702.899	-0.384	WATER BOTTOM
10431	301347.454	3768383.394	-0.384	WATER BOTTOM
100047	301323.277	3774357.338	-0.376	NATURAL GROUND
10799	302497.707	3772253.478	-0.374	WATER BOTTOM
1634	302757.094	3770842.533	-0.372	WATER BOTTOM
10121	298825.56	3775007.18	-0.366	WATER BOTTOM
10662	302385.465	3772800.707	-0.364	WATER BOTTOM
100048	301361.299	3774356.954	-0.361	NATURAL GROUND
1563	302472.477	3770474.091	-0.36	WATER BOTTOM
10122	298825.663	3775007.111	-0.358	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10878	301752.183	3771631.403	-0.354	WATER BOTTOM
10583	303330.77	3773366.167	-0.353	WATER BOTTOM
10603	303747.931	3773381.614	-0.352	WATER BOTTOM
1156	300326.012	3765266.76	-0.345	WATER BOTTOM
1242	299453.002	3767328.456	-0.345	WATER BOTTOM
10231	298746.343	3773481.159	-0.339	WATER BOTTOM
10361	299034.304	3771197.354	-0.337	WATER BOTTOM
10544	302484.606	3773360.091	-0.333	WATER BOTTOM
10579	303216.502	3773370.668	-0.333	WATER BOTTOM
10451	301278.133	3767843.761	-0.328	WATER BOTTOM
1743	303263.205	3771266.423	-0.325	WATER BOTTOM
1738	303139.015	3771266.163	-0.323	WATER BOTTOM
10193	298722.561	3774019.064	-0.315	WATER BOTTOM
1605	302181.259	3770829.982	-0.314	WATER BOTTOM
10611	303887.12	3773374.336	-0.305	WATER BOTTOM
1731	302961.953	3771257.185	-0.299	WATER BOTTOM
10609	303862.492	3773376.823	-0.296	WATER BOTTOM
1509	302372.291	3769917.481	-0.293	WATER BOTTOM
10721	303939.619	3772819.888	-0.287	WATER BOTTOM
10412	301375.404	3768875.5	-0.284	WATER BOTTOM
10581	303270.501	3773366.581	-0.266	WATER BOTTOM
10530	302277.977	3773359.326	-0.263	WATER BOTTOM
10582	303298.739	3773366.647	-0.262	WATER BOTTOM
10450	301263.674	3767843.46	-0.253	WATER BOTTOM
1177	300018.801	3765738.542	-0.248	WATER BOTTOM
1198	299801.625	3766292.232	-0.248	WATER BOTTOM
10304	298920.562	3772203.636	-0.238	WATER BOTTOM
100046	301282.516	3774356.107	-0.236	NATURAL GROUND
10776	302216.102	3772245.333	-0.236	WATER BOTTOM
10430	301335.313	3768383.505	-0.23	WATER BOTTOM
1534	301587.611	3770464.043	-0.226	WATER BOTTOM
100043	301145.612	3774354.369	-0.225	NATURAL GROUND
10528	302238.7	3773358.552	-0.217	WATER BOTTOM
10666	302456.638	3772809.389	-0.207	WATER BOTTOM
10584	303364.219	3773365.33	-0.204	WATER BOTTOM
100044	301190.501	3774355.489	-0.197	NATURAL GROUND
10773	302155.908	3772244.58	-0.195	WATER BOTTOM
10524	302168.231	3773356.412	-0.191	WATER BOTTOM
10392	301429.181	3769379.295	-0.187	WATER BOTTOM
1419	300880.014	3765255.36	-0.18	WATER BOTTOM
10360	299049.675	3771197.343	-0.166	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10527	302216.916	3773360.073	-0.163	WATER BOTTOM
10230	298761.629	3773480.769	-0.151	WATER BOTTOM
10153	298848.208	3774514.86	-0.15	WATER BOTTOM
10358	299079.283	3771198.445	-0.15	WATER BOTTOM
10188	298827.524	3774024.436	-0.142	WATER BOTTOM
10192	298749.586	3774020.26	-0.142	WATER BOTTOM
10843	303762.745	3772263.875	-0.14	WATER BOTTOM
10608	303846.435	3773378.401	-0.135	WATER BOTTOM
10497	304141.984	3773373.521	-0.133	WATER BOTTOM
1562	302456.595	3770473.951	-0.13	WATER BOTTOM
10266	298857.52	3772766.001	-0.113	WATER BOTTOM
10330	299079.544	3771622.969	-0.107	WATER BOTTOM
1478	301145.567	3766816.822	-0.105	WATER BOTTOM
10076	298776.025	3775961.191	-0.099	WATER BOTTOM
10472	301185.67	3767370.751	-0.097	WATER BOTTOM
10592	303624.009	3773378.68	-0.097	WATER BOTTOM
1616	302392.619	3770835.118	-0.092	WATER BOTTOM
1554	302327.226	3770475.823	-0.089	WATER BOTTOM
1324	299211.161	3769301.395	-0.068	WATER BOTTOM
10120	298841.572	3775008.147	-0.061	WATER BOTTOM
1446	301177.244	3766274.315	-0.052	WATER BOTTOM
10785	302309.321	3772247.288	-0.048	WATER BOTTOM
10636	301939.854	3772793.417	-0.041	NATURAL GROUND
10775	302199.279	3772243.611	-0.032	WATER BOTTOM
10551	302528.533	3773353.205	-0.025	WATER BOTTOM
10792	302442.592	3772253.83	-0.023	WATER BOTTOM
100045	301237.855	3774355.524	-0.021	NATURAL GROUND
100042	301100.818	3774350.878	0.007	NATURAL GROUND
10359	299065.269	3771197.432	0.01	WATER BOTTOM
10229	298777.942	3773479.907	0.018	WATER BOTTOM
1246	299505.947	3767328.923	0.022	WATER BOTTOM
10429	301324.703	3768383.068	0.022	WATER BOTTOM
1495	301496.108	3769891.299	0.035	WATER BOTTOM
100040	301013.718	3774352.764	0.041	NATURAL GROUND
10762	301954.417	3772245.401	0.047	NATURAL GROUND
10764	301990.028	3772243.425	0.055	NATURAL GROUND
1632	302737.464	3770840.391	0.069	WATER BOTTOM
1263	299416.991	3767802.997	0.084	WATER BOTTOM
10093	298803.92	3775483.452	0.093	WATER BOTTOM
10116	298886.096	3775010.91	0.104	WATER BOTTOM
1740	303193.493	3771265.092	0.112	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10777	302232.795	3772245.834	0.114	WATER BOTTOM
10091	298844.215	3775485.075	0.118	WATER BOTTOM
10483	304092.811	3773374.911	0.124	NATURAL GROUND
1388	299092.146	3770760.379	0.129	WATER BOTTOM
10357	299093.424	3771198.02	0.134	WATER BOTTOM
10760	301907.828	3772247.31	0.153	NATURAL GROUND
10772	302131.807	3772244.955	0.157	WATER BOTTOM
10496	304149.665	3773374.412	0.164	WATER BOTTOM
10073	298819.55	3775962.793	0.169	WATER BOTTOM
10092	298823.258	3775484.132	0.173	WATER BOTTOM
10152	298864.588	3774515.901	0.183	WATER BOTTOM
10449	301253.198	3767843.209	0.188	WATER BOTTOM
10094	298784.827	3775481.839	0.194	WATER BOTTOM
10329	299095.043	3771622.444	0.195	WATER BOTTOM
1445	301168.382	3766273.982	0.203	WATER BOTTOM
10119	298856.617	3775009.385	0.203	WATER BOTTOM
1345	299153.312	3769811.859	0.204	WATER BOTTOM
10228	298795.67	3773479.085	0.205	WATER BOTTOM
10650	302245.901	3772803.242	0.211	WATER BOTTOM
100039	300973.348	3774353.187	0.212	NATURAL GROUND
10771	302113.739	3772244.986	0.213	WATER BOTTOM
10112	298905.018	3775011.971	0.22	WATER BOTTOM
10117	298882.6	3775010.647	0.224	WATER BOTTOM
10055	298770.963	3776433.932	0.229	WATER BOTTOM
10853	304034.579	3772267.476	0.234	WATER BOTTOM
10879	301739.687	3771628.58	0.234	WATER BOTTOM
10226	298828.21	3773477.645	0.236	WATER BOTTOM
1695	302267.213	3771247.447	0.24	WATER BOTTOM
10227	298812.428	3773478.655	0.242	WATER BOTTOM
10729	304050.008	3772820.605	0.245	WATER BOTTOM
10774	302181.414	3772243.098	0.245	WATER BOTTOM
1369	299118.759	3770342.105	0.246	WATER BOTTOM
10265	298870.974	3772766.415	0.25	WATER BOTTOM
100038	300943.103	3774353.37	0.252	NATURAL GROUND
10225	298842.268	3773477.335	0.256	WATER BOTTOM
10648	302196.093	3772801.677	0.257	WATER BOTTOM
1706	302457.643	3771255.868	0.267	WATER BOTTOM
10649	302222.921	3772802.286	0.267	WATER BOTTOM
10075	298791.161	3775961.799	0.268	WATER BOTTOM
10118	298870.962	3775010.034	0.268	WATER BOTTOM
1437	301133.792	3765703.046	0.27	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft | **Vertical Datum:** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1455	301226.376	3766273.122	0.271	WATER BOTTOM
1199	299816.139	3766293.805	0.273	WATER EDGE SURFACE
10658	302325.819	3772801.189	0.276	WATER BOTTOM
10615	303947.966	3772819.065	0.282	NATURAL GROUND
10537	302348.304	3773360.457	0.286	WATER BOTTOM
10758	301867.868	3772252.947	0.287	NATURAL GROUND
1262	299423.998	3767803.011	0.297	WATER EDGE SURFACE
1557	302369.149	3770474.828	0.303	WATER BOTTOM
10191	298781.232	3774021.834	0.314	WATER BOTTOM
10403	301368.45	3768876.153	0.316	WATER BOTTOM
1155	300347.742	3765266.052	0.326	WATER BOTTOM
10224	298844.301	3773477.335	0.329	WATER EDGE SURFACE
10647	302166.201	3772804.14	0.336	WATER BOTTOM
10759	301888.329	3772247.787	0.337	NATURAL GROUND
1247	299513.992	3767330.008	0.337	WATER EDGE SURFACE
100032	300731.543	3774355.339	0.34	NATURAL GROUND
1674	301819.16	3771236.564	0.34	WATER BOTTOM
1477	301138.422	3766816.875	0.341	WATER BOTTOM
100064	295608.621	3773687.466	0.347	WATER SURFACE
100036	300865.075	3774354.114	0.349	NATURAL GROUND
10645	302115.025	3772809.131	0.35	WATER BOTTOM
1673	301799.709	3771236.499	0.352	WATER BOTTOM
10189	298815.602	3774023.747	0.357	WATER BOTTOM
100037	300904.805	3774353.834	0.367	NATURAL GROUND
1546	302175.125	3770465.279	0.367	WATER BOTTOM
10766	302042.358	3772241.751	0.37	NATURAL GROUND
1279	299331.206	3768301.202	0.371	WATER EDGE SURFACE
10187	298843.725	3774025.063	0.381	WATER EDGE SURFACE
10767	302065.053	3772243.4	0.384	NATURAL GROUND
10298	299006.557	3772204.958	0.384	WATER BOTTOM
1702	302409.96	3771253.962	0.387	WATER BOTTOM
1637	302795.96	3770843.778	0.392	WATER BOTTOM
10111	298906.398	3775011.905	0.398	WATER EDGE SURFACE
10471	301178.738	3767370.515	0.401	WATER BOTTOM
10383	301421.554	3769379.312	0.404	WATER BOTTOM
1296	299283.1	3768769.914	0.404	WATER EDGE SURFACE
10656	302319.367	3772800.957	0.411	NATURAL GROUND
10644	302095.118	3772812.505	0.425	WATER BOTTOM
1224	299659.001	3766816.866	0.43	WATER EDGE SURFACE
1744	303282.064	3771267.143	0.435	WATER BOTTOM
10054	298777.507	3776434.198	0.436	WATER EDGE SURFACE

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10616	303943.406	3772820.007	0.441	NATURAL GROUND
1618	302453.696	3770838.528	0.443	WATER BOTTOM
1418	300866.642	3765255.736	0.447	WATER BOTTOM
1704	302410.518	3771253.886	0.45	WATER BOTTOM
100031	300692.106	3774350.978	0.451	NATURAL GROUND
1176	300039.355	3765737.874	0.451	WATER EDGE SURFACE
10594	303630.235	3773380.588	0.459	NATURAL GROUND
100029	300603.276	3774352.665	0.46	NATURAL GROUND
1436	301113.13	3765703.773	0.461	WATER BOTTOM
10428	301316.618	3768382.168	0.462	WATER BOTTOM
1154	300354.584	3765265.785	0.464	WATER EDGE SURFACE
10502	303910.836	3773373.292	0.466	NATURAL GROUND
1389	299111.629	3770760.128	0.466	WATER BOTTOM
1028	304824.428	3774292.943	0.466	WATER SURFACE
1608	302248.293	3770831.343	0.469	WATER BOTTOM
10503	303892.417	3773373.119	0.47	NATURAL GROUND
10090	298856.313	3775485.732	0.47	WATER EDGE SURFACE
1728	302883.459	3771254.354	0.476	WATER BOTTOM
1635	302765.873	3770843.278	0.477	WATER BOTTOM
10520	302099.821	3773359.113	0.483	NATURAL GROUND
1449	301195.074	3766274.441	0.485	NATURAL GROUND
10501	303917.684	3773373.363	0.488	NATURAL GROUND
1151	300404.384	3765263.591	0.493	NATURAL GROUND
1549	302228.047	3770465.347	0.493	WATER BOTTOM
10151	298879.635	3774516.726	0.495	WATER EDGE SURFACE
10638	301993.566	3772801.128	0.498	NATURAL GROUND
10251	301112.254	3774376.256	0.5	WATER SURFACE
1703	302411.026	3771253.699	0.501	WATER BOTTOM
10190	298798.909	3774023.165	0.505	WATER BOTTOM
10737	303773.159	3772263.089	0.512	NATURAL GROUND
10597	303701.218	3773379.895	0.515	NATURAL GROUND
10738	303768.802	3772262.29	0.515	NATURAL GROUND
10646	302140.633	3772804.697	0.515	WATER BOTTOM
10264	298882.893	3772766.211	0.522	WATER BOTTOM
10522	302158.425	3773356.867	0.524	NATURAL GROUND
10768	302092.385	3772244.923	0.527	NATURAL GROUND
100034	300789.27	3774355.204	0.528	NATURAL GROUND
10482	304085.606	3773374.785	0.529	NATURAL GROUND
10651	302260.468	3772802.898	0.53	WATER BOTTOM
10535	302344.568	3773360.689	0.535	NATURAL GROUND
1672	301773.429	3771235.857	0.539	WATER BOTTOM

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1640	302840.703	3770843.983	0.545	WATER BOTTOM
10546	302492.038	3773359.478	0.547	NATURAL GROUND
100065	296384.736	3775368.214	0.549	WATER SURFACE
1675	301837.462	3771236.38	0.55	WATER BOTTOM
10223	298846.714	3773477.198	0.551	NATURAL GROUND
10637	301963.918	3772801.919	0.556	NATURAL GROUND
1133	301439.084	3769501.205	0.56	NATURAL GROUND
10110	298907.972	3775012.063	0.565	NATURAL GROUND
10074	298809.177	3775962.812	0.571	WATER BOTTOM
1323	299224.429	3769301.894	0.572	WATER BOTTOM
10072	298829.699	3775963.335	0.572	WATER EDGE SURFACE
1533	301582.93	3770465.568	0.577	WATER BOTTOM
10755	301824.977	3772245.979	0.593	NATURAL GROUND
100030	300651.344	3774350.829	0.596	NATURAL GROUND
10549	302526.128	3773353.393	0.597	NATURAL GROUND
10797	302492.885	3772254.205	0.606	NATURAL GROUND
10757	301844.231	3772248.78	0.615	NATURAL GROUND
100033	300759.365	3774356.547	0.616	NATURAL GROUND
1630	302701.579	3770841.555	0.618	WATER BOTTOM
10519	302033.487	3773359.824	0.619	NATURAL GROUND
1476	301135.788	3766816.922	0.623	WATER EDGE SURFACE
1152	300379.736	3765264.627	0.624	NATURAL GROUND
1410	300763.378	3765257.624	0.627	NATURAL GROUND
10532	302283.2	3773360.164	0.627	NATURAL GROUND
100026	300501.248	3774355.089	0.629	NATURAL GROUND
1677	301862.784	3771237.789	0.629	WATER BOTTOM
10481	304071.799	3773374.591	0.63	NATURAL GROUND
100066	296387.508	3775365.723	0.634	WATER SURFACE
1444	301166.87	3766274.145	0.637	WATER EDGE SURFACE
1671	301747.331	3771234.496	0.638	WATER BOTTOM
1730	302929.654	3771255.707	0.638	WATER BOTTOM
1645	302938.783	3770845.495	0.642	WATER BOTTOM
1701	302373.964	3771252.55	0.649	WATER BOTTOM
10642	302092.085	3772811.611	0.651	NATURAL GROUND
1447	301178.376	3766274.514	0.653	WATER EDGE SURFACE
1448	301183.248	3766273.966	0.657	NATURAL GROUND
10356	299103.121	3771199.304	0.659	WATER BOTTOM
1454	301226.053	3766273.208	0.66	WATER EDGE SURFACE
1095	303864.177	3774497.842	0.668	WATER SURFACE
100035	300827.111	3774354.096	0.669	NATURAL GROUND
1746	303322.346	3771269.567	0.671	WATER BOTTOM

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum:** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1733	303014.613	3771259.289	0.672	WATER BOTTOM
10045	300799.499	3774484.52	0.675	WATER SURFACE
1636	302780.853	3770843.718	0.676	WATER BOTTOM
10730	304041.164	3772817.077	0.676	WATER BOTTOM
1150	300421.536	3765262.891	0.685	NATURAL GROUND
1435	301107.852	3765703.876	0.688	WATER EDGE SURFACE
10480	304064.691	3773374.43	0.69	NATURAL GROUND
10598	303711.451	3773379.48	0.69	NATURAL GROUND
100028	300565.158	3774351.102	0.692	NATURAL GROUND
10595	303651.572	3773381.825	0.698	NATURAL GROUND
1147	300769.532	3765528.037	0.699	WATER SURFACE
10448	301247.27	3767843.137	0.704	WATER EDGE SURFACE
1443	301165.371	3766274.527	0.706	NATURAL GROUND
10518	301993.68	3773355.643	0.711	NATURAL GROUND
10761	301936.482	3772245.65	0.714	NATURAL GROUND
10765	302017.345	3772240.649	0.718	NATURAL GROUND
1569	302581.131	3770476.433	0.718	WATER BOTTOM
1670	301721.824	3771234.398	0.725	WATER BOTTOM
10614	303956.205	3772816.476	0.726	NATURAL GROUND
1134	301439.638	3769504.115	0.741	NATURAL GROUND
10769	302110.439	3772244.72	0.742	NATURAL GROUND
1433	301096.442	3765704.271	0.746	NATURAL GROUND
1417	300864.742	3765255.815	0.746	WATER EDGE SURFACE
1514	302396.594	3769919.141	0.751	WATER BOTTOM
10763	301973.415	3772245.071	0.754	NATURAL GROUND
10427	301313.491	3768382.197	0.754	WATER BOTTOM
1729	302903.718	3771255.262	0.755	WATER BOTTOM
100027	300527.739	3774351.442	0.756	NATURAL GROUND
1592	301624.325	3770817.459	0.758	WATER BOTTOM
10668	302466.73	3772811.827	0.759	NATURAL GROUND
10521	302144.752	3773356.941	0.763	NATURAL GROUND
10855	304030.398	3772267.21	0.763	NATURAL GROUND
10670	302494.056	3772814.186	0.772	NATURAL GROUND
10426	301313.592	3768381.867	0.78	WATER EDGE SURFACE
10263	298889.233	3772765.824	0.781	WATER EDGE SURFACE
1411	300780.689	3765257.225	0.783	NATURAL GROUND
1676	301854.859	3771237.927	0.786	WATER BOTTOM
1434	301104.905	3765704.031	0.79	NATURAL GROUND
1631	302724.267	3770840.406	0.795	WATER BOTTOM
10479	304055.459	3773374.507	0.798	NATURAL GROUND
10596	303674.077	3773380.521	0.804	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10382	301417.238	3769378.704	0.804	WATER EDGE SURFACE
10367	301508.156	3769966.236	0.804	WATER SURFACE
10756	301835.561	3772246.353	0.805	NATURAL GROUND
10470	301177.227	3767370.529	0.807	WATER EDGE SURFACE
1606	302195.191	3770830.274	0.809	WATER BOTTOM
1390	299117.201	3770761.712	0.81	WATER EDGE SURFACE
100025	300482.73	3774356.298	0.817	NATURAL GROUND
10794	302449.087	3772254.409	0.819	NATURAL GROUND
1146	302655.288	3774613.258	0.819	WATER SURFACE
10736	303785.861	3772264.263	0.823	NATURAL GROUND
10779	302241.086	3772246.049	0.824	NATURAL GROUND
1561	302442.219	3770474.434	0.826	WATER BOTTOM
1409	300744.705	3765258.201	0.827	NATURAL GROUND
1745	303301.231	3771267.839	0.83	WATER BOTTOM
1368	299135.939	3770342.022	0.837	WATER EDGE SURFACE
10402	301365.693	3768875.586	0.853	WATER EDGE SURFACE
1029	301516.854	3774070.511	0.856	WATER SURFACE
1442	301159.313	3766273.829	0.858	NATURAL GROUND
1788	300676.517	3769353.537	0.858	NATURAL GROUND
100020	300366.214	3774356.427	0.858	NATURAL GROUND
1668	301698.464	3771231.417	0.863	WATER BOTTOM
100023	300437.648	3774357.068	0.872	NATURAL GROUND
1644	302918.36	3770844.847	0.872	WATER BOTTOM
1513	302389.135	3769918.319	0.874	WATER BOTTOM
10872	301734.342	3771628.261	0.875	WATER BOTTOM
1547	302185.928	3770465.809	0.876	WATER BOTTOM
1669	301702.725	3771238.69	0.879	WATER BOTTOM
1642	302872.076	3770843.322	0.881	WATER BOTTOM
10533	302299.956	3773360.651	0.89	NATURAL GROUND
1035	301447.243	3774558.458	0.89	WATER SURFACE
10252	300633.089	3774405.698	0.895	WATER SURFACE
10783	302303.01	3772248.052	0.897	NATURAL GROUND
10653	302265.544	3772801.923	0.903	NATURAL GROUND
10735	303795.393	3772264.281	0.907	NATURAL GROUND
1019	300754.676	3765534.546	0.911	WATER SURFACE
1430	301039.196	3765706.32	0.914	NATURAL GROUND
1132	301436.984	3769501.99	0.917	NATURAL GROUND
100018	300350.249	3774355.098	0.917	NATURAL GROUND
1012	301201.214	3766091.407	0.92	CHECK
1011	301201.214	3766091.406	0.921	CHECK
1453	301226.035	3766272.833	0.921	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum:** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10732	304032.836	3772820.949	0.921	NATURAL GROUND
10782	302298.869	3772249.179	0.924	NATURAL GROUND
10753	301812.578	3772245.952	0.93	NATURAL GROUND
1694	302233.678	3771248.474	0.931	WATER BOTTOM
10856	304026.524	3772266.693	0.933	NATURAL GROUND
10053	298785.518	3776434.214	0.937	NATURAL GROUND
1322	299232.796	3769302.165	0.937	WATER EDGE SURFACE
10548	302520.833	3773352.374	0.942	NATURAL GROUND
10641	302081.677	3772809.236	0.944	NATURAL GROUND
1560	302429.003	3770474.649	0.947	WATER BOTTOM
10639	302020.23	3772801.283	0.948	NATURAL GROUND
1223	299664.574	3766816.768	0.952	NATURAL GROUND
1135	301437.58	3769503.631	0.954	NATURAL GROUND
100019	300349.416	3774357.169	0.957	NATURAL GROUND
10355	299107.37	3771199.229	0.963	WATER EDGE SURFACE
1314	300679.085	3774360.428	0.969	WATER SURFACE
1570	302602.16	3770478.168	0.973	WATER BOTTOM
1427	300987.75	3765707.711	0.977	NATURAL GROUND
1572	302649.097	3770475.525	0.977	WATER BOTTOM
1010	301194.571	3766055.952	0.978	CHECK
10297	299021.069	3772205.096	0.978	WATER EDGE SURFACE
10640	302059.566	3772806.596	0.981	NATURAL GROUND
1009	301194.567	3766055.956	0.984	CHECK
1248	299519.552	3767330.993	0.986	NATURAL GROUND
10780	302266.331	3772245.861	0.995	NATURAL GROUND
1617	302421.465	3770835.196	1.002	WATER BOTTOM
10654	302278.28	3772802.191	1.016	NATURAL GROUND
10752	301806.765	3772245.817	1.022	NATURAL GROUND
10328	299111.054	3771621.635	1.024	WATER EDGE SURFACE
1408	300732.967	3765258.36	1.028	NATURAL GROUND
100024	300457.111	3774356.325	1.029	NATURAL GROUND
1559	302408.281	3770475.116	1.031	WATER BOTTOM
100015	300295.016	3774356.058	1.034	NATURAL GROUND
10781	302285.199	3772247.485	1.035	NATURAL GROUND
100013	300259.113	3774355.559	1.035	NATURAL GROUND
1607	302219.488	3770830.09	1.037	WATER BOTTOM
100014	300275.776	3774356.166	1.043	NATURAL GROUND
1571	302620.33	3770477.445	1.048	WATER BOTTOM
1153	300362.399	3765265.491	1.055	NATURAL GROUND
100021	300387.503	3774356.218	1.059	NATURAL GROUND
10150	298886.082	3774516.854	1.065	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft | **Vertical Datum:** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1346	299170.45	3769812.664	1.073	WATER EDGE SURFACE
10796	302484.707	3772254.253	1.075	NATURAL GROUND
1475	301133.112	3766816.996	1.08	NATURAL GROUND
1548	302208.86	3770466.069	1.082	WATER BOTTOM
100010	300205.26	3774356.021	1.085	NATURAL GROUND
100011	300225.339	3774355.693	1.089	NATURAL GROUND
100016	300311.666	3774355.688	1.089	NATURAL GROUND
100009	300184.065	3774355.855	1.092	NATURAL GROUND
100017	300333.11	3774355.67	1.097	NATURAL GROUND
10534	302324.379	3773359.82	1.098	NATURAL GROUND
1558	302386.229	3770474.631	1.099	WATER BOTTOM
1428	300990.853	3765707.721	1.1	NATURAL GROUND
1002	300568.929	3774536.04	1.104	WATER SURFACE
10635	301915.009	3772788.925	1.108	NATURAL GROUND
1174	300053.347	3765738.127	1.112	NATURAL GROUND
100008	300161.109	3774355.826	1.117	NATURAL GROUND
1175	300046.069	3765737.83	1.124	NATURAL GROUND
100012	300244.442	3774355.662	1.125	NATURAL GROUND
100022	300412.933	3774356.421	1.132	NATURAL GROUND
10186	298850.752	3774025.307	1.138	NATURAL GROUND
10401	301361.29	3768875.375	1.149	NATURAL GROUND
1200	299824.316	3766292.915	1.152	NATURAL GROUND
10633	301882.691	3772798.623	1.156	NATURAL GROUND
100063	300987.375	3765210.799	1.163	WATER SURFACE
1450	301208.224	3766273.578	1.183	NATURAL GROUND
1295	299291.007	3768770.332	1.188	NATURAL GROUND
10634	301899.419	3772789.26	1.193	NATURAL GROUND
1431	301072.054	3765705.885	1.194	NATURAL GROUND
100007	300136.461	3774355.851	1.197	NATURAL GROUND
1452	301223.529	3766273.357	1.199	NATURAL GROUND
10669	302485.349	3772814.849	1.205	NATURAL GROUND
1426	300984.81	3765707.788	1.21	NATURAL GROUND
10517	301968.04	3773356.887	1.232	NATURAL GROUND
10425	301310.588	3768382.147	1.234	NATURAL GROUND
10547	302508.124	3773351.189	1.234	NATURAL GROUND
1201	299836.882	3766292.364	1.237	NATURAL GROUND
10880	300374.788	3774224.802	1.243	WATER SURFACE
1705	302429.973	3771252.722	1.252	WATER BOTTOM
1164	300233.726	3765732.464	1.269	NATURAL GROUND
1278	299343.168	3768301.39	1.277	NATURAL GROUND
10858	304023.121	3772265.298	1.278	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum:

NAD 83 LA-S Ft

Vertical Datum

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1261	299433.491	3767803.134	1.289	NATURAL GROUND
1429	301004.189	3765707.463	1.294	NATURAL GROUND
10089	298864.072	3775486.311	1.299	NATURAL GROUND
10516	301938.375	3773357.474	1.299	NATURAL GROUND
10222	298858.987	3773476.734	1.301	NATURAL GROUND
10469	301173.177	3767370.535	1.301	NATURAL GROUND
10655	302299.065	3772802.498	1.301	NATURAL GROUND
10261	298902.408	3772766.855	1.302	NATURAL GROUND
10770	302112.121	3772245.175	1.302	WATER SURFACE
1412	300796.125	3765257.032	1.303	NATURAL GROUND
10793	302446.578	3772254.452	1.311	WATER SURFACE
100006	300107.937	3774355.942	1.319	NATURAL GROUND
10447	301243.27	3767842.987	1.327	NATURAL GROUND
10652	302261.789	3772802.173	1.327	WATER SURFACE
10778	302239.214	3772246.738	1.327	WATER SURFACE
10795	302466.188	3772255.254	1.345	NATURAL GROUND
1407	300730.016	3765258.32	1.346	NATURAL GROUND
10844	303763.266	3772263.189	1.347	WATER SURFACE
1591	301621.156	3770817.394	1.348	WATER BOTTOM
100005	300080.714	3774355.47	1.358	NATURAL GROUND
1473	301130.238	3766816.806	1.364	NATURAL GROUND
10798	302494.732	3772253.551	1.364	WATER SURFACE
10871	301731.614	3771628.338	1.365	WATER EDGE SURFACE
1366	299151.82	3770343.338	1.371	NATURAL GROUND
10667	302461.845	3772810.981	1.374	WATER SURFACE
10731	304034.051	3772821.375	1.374	WATER SURFACE
10071	298837.066	3775963.968	1.377	NATURAL GROUND
10754	301812.421	3772245.863	1.389	WATER SURFACE
100003	300026.833	3774355.884	1.391	NATURAL GROUND
10784	302306.496	3772247.231	1.391	WATER SURFACE
1405	300723.323	3765258.542	1.402	NATURAL GROUND
10149	298896.771	3774517.639	1.402	NATURAL GROUND
100004	300054.367	3774355.817	1.404	NATURAL GROUND
1294	299304.723	3768770.773	1.405	NATURAL GROUND
10262	298893.45	3772765.973	1.405	NATURAL GROUND
1667	301691.952	3771227.851	1.409	WATER EDGE SURFACE
10657	302320.706	3772801.15	1.411	WATER SURFACE
1165	300213.899	3765731.841	1.413	NATURAL GROUND
10854	304033.344	3772267.729	1.414	WATER SURFACE
10052	298800.322	3776434.779	1.415	NATURAL GROUND
1222	299683.639	3766816.965	1.417	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1367	299141.652	3770341.91	1.421	NATURAL GROUND
1510	302377.116	3769918.24	1.422	WATER EDGE SURFACE
100002	300000.428	3774355.605	1.434	NATURAL GROUND
10354	299111.838	3771198.554	1.438	NATURAL GROUND
10671	302499.341	3772813.868	1.443	WATER SURFACE
10643	302092.996	3772811.726	1.449	WATER SURFACE
1474	301132.814	3766817.067	1.453	NATURAL GROUND
10593	303628.251	3773379.64	1.475	WATER SURFACE
10613	303980.564	3772817.156	1.479	NATURAL GROUND
1391	299123.728	3770761.875	1.481	NATURAL GROUND
10504	303892.682	3773372.942	1.483	WATER SURFACE
10536	302345.319	3773360.677	1.484	WATER SURFACE
10327	299115.864	3771622.831	1.489	NATURAL GROUND
10523	302158.415	3773356.775	1.49	WATER SURFACE
1484	300415.305	3774234.724	1.494	WATER SURFACE
10531	302280.489	3773360.056	1.496	WATER SURFACE
10632	301881.521	3772798.777	1.498	WATER SURFACE
10478	300258.678	3774248.096	1.501	WATER SURFACE
1249	299533.592	3767330.319	1.504	NATURAL GROUND
1406	300725.6	3765258.329	1.513	NATURAL GROUND
100001	299972.961	3774356.325	1.514	NATURAL GROUND
1512	302387.538	3769918.094	1.527	WATER EDGE SURFACE
10599	303713.146	3773378.72	1.528	WATER SURFACE
10617	303941.937	3772820.171	1.53	WATER SURFACE
1432	301088.492	3765704.726	1.534	NATURAL GROUND
10484	304092.794	3773375.049	1.538	WATER SURFACE
1148	300470.382	3765261.126	1.54	NATURAL GROUND
1532	301581.562	3770465.804	1.547	WATER EDGE SURFACE
100000	299957.128	3774355.813	1.548	NATURAL GROUND
1451	301214.778	3766273.402	1.557	NATURAL GROUND
10545	302490.718	3773359.234	1.559	WATER SURFACE
1789	300663.095	3769354.183	1.565	NATURAL GROUND
1166	300192.134	3765732.851	1.568	NATURAL GROUND
10296	299026.319	3772205.468	1.575	NATURAL GROUND
1347	299184.436	3769812.786	1.576	NATURAL GROUND
1590	301619.948	3770817.27	1.578	WATER EDGE SURFACE
10550	302527.194	3773353.946	1.584	WATER SURFACE
1425	300961.663	3765708.738	1.598	NATURAL GROUND
1321	299245.745	3769302.673	1.629	NATURAL GROUND
1494	301495.541	3769890.812	1.634	WATER EDGE SURFACE
1260	299443.664	3767803.253	1.652	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft | **Vertical Datum:** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10260	298910.161	3772766.74	1.676	NATURAL GROUND
1202	299843.804	3766292.315	1.688	NATURAL GROUND
10109	298922.662	3775012.692	1.688	NATURAL GROUND
10179	298999.762	3774032.042	1.688	NATURAL GROUND
10424	301305.971	3768381.727	1.701	NATURAL GROUND
1149	300445.724	3765261.937	1.711	NATURAL GROUND
1785	300736.8	3769355.98	1.711	NATURAL GROUND
1173	300070.703	3765737.06	1.714	NATURAL GROUND
1415	300841.867	3765256.168	1.722	NATURAL GROUND
1790	300648.444	3769354.018	1.741	NATURAL GROUND
1413	300826.622	3765256.515	1.748	NATURAL GROUND
104	300591.83	3769015.44	1.75	SETTLEMENT PLATE
10857	304017.763	3772266.447	1.765	NATURAL GROUND
1404	300720.085	3765258.378	1.769	NATURAL GROUND
1786	300715.134	3769354.238	1.8	NATURAL GROUND
1167	300168.436	3765734.023	1.824	NATURAL GROUND
1666	301684.82	3771234.165	1.848	NATURAL GROUND
1589	301617.713	3770817.449	1.852	NATURAL GROUND
1511	302380.919	3769918.502	1.87	NATURAL GROUND
1416	300853.386	3765255.961	1.872	NATURAL GROUND
1168	300141.815	3765736.05	1.909	NATURAL GROUND
1787	300695.109	3769353.986	1.909	NATURAL GROUND
1782	300806.23	3769358.329	1.936	NATURAL GROUND
1424	300961.164	3765708.814	1.937	NATURAL GROUND
1472	301124.072	3766816.598	1.944	NATURAL GROUND
10515	301929.23	3773357.272	1.958	NATURAL GROUND
10870	301725.018	3771628.198	1.962	NATURAL GROUND
1784	300761.324	3769356.649	1.966	NATURAL GROUND
10183	298907.501	3774027.996	1.97	NATURAL GROUND
1392	299132.648	3770761.55	1.971	NATURAL GROUND
10326	299128.344	3771622.538	1.971	NATURAL GROUND
10612	303991.428	3772815.011	1.982	NATURAL GROUND
1783	300785.152	3769357.755	1.987	NATURAL GROUND
10180	298972.428	3774030.991	1.992	NATURAL GROUND
1414	300840.385	3765256.281	1.993	NATURAL GROUND
10631	301873.278	3772798.513	2.004	NATURAL GROUND
1277	299364.457	3768302.329	2.022	NATURAL GROUND
1760	300591.729	3768836.114	2.037	NATURAL GROUND
10734	304014.314	3772816.153	2.044	NATURAL GROUND
1778	300590.811	3769015.185	2.076	NATURAL GROUND
101	299866.96	3767006.56	2.08	SETTLEMENT PLATE

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1762	300537.143	3768834.423	2.083	NATURAL GROUND
1791	300633.801	3769352.565	2.097	NATURAL GROUND
1781	300826.38	3769358.491	2.108	NATURAL GROUND
1000	300518.582	3774703.989	2.109	CHECK
1777	300592.758	3769014.962	2.111	NATURAL GROUND
1001	300518.59	3774703.992	2.119	CHECK
10181	298947.297	3774029.938	2.122	NATURAL GROUND
10353	299122.038	3771198.295	2.123	NATURAL GROUND
1203	299847.338	3766292.439	2.126	NATURAL GROUND
110	300636.04	3773012.79	2.13	SETTLEMENT PLATE
1761	300564.876	3768834.708	2.146	NATURAL GROUND
1764	300481.112	3768830.235	2.154	NATURAL GROUND
1169	300116.74	3765735.442	2.158	NATURAL GROUND
10295	299035.758	3772205.397	2.159	NATURAL GROUND
1171	300081.899	3765737.041	2.174	NATURAL GROUND
1488	301448.307	3769889.448	2.174	NATURAL GROUND
1657	301611.845	3771232.611	2.174	NATURAL GROUND
1766	300427.703	3768827.739	2.18	NATURAL GROUND
10219	298900.354	3773475.277	2.18	NATURAL GROUND
1142	300637.095	3773013.997	2.186	NATURAL GROUND
1258	299479.128	3767804.092	2.188	NATURAL GROUND
1770	300389.388	3769074.888	2.189	NATURAL GROUND
10394	301287.914	3768871.568	2.189	NATURAL GROUND
10514	301920.705	3773357.29	2.194	NATURAL GROUND
1145	300635.245	3773013.724	2.195	NATURAL GROUND
1143	300637.425	3773012.168	2.196	NATURAL GROUND
1756	300699.985	3768842.573	2.211	NATURAL GROUND
1525	301506.074	3770465.517	2.212	NATURAL GROUND
1144	300635.547	3773011.852	2.214	NATURAL GROUND
1776	300592.914	3769016.872	2.229	NATURAL GROUND
10148	298908.283	3774518.126	2.233	NATURAL GROUND
10184	298885.592	3774027.012	2.233	NATURAL GROUND
1771	300414.465	3769077.006	2.235	NATURAL GROUND
10182	298927.078	3774028.913	2.236	NATURAL GROUND
1767	300400.435	3768826.015	2.253	NATURAL GROUND
1765	300454.824	3768828.762	2.259	NATURAL GROUND
1757	300675.996	3768840.589	2.262	NATURAL GROUND
1763	300510.517	3768831.311	2.266	NATURAL GROUND
10259	298926.258	3772767.048	2.272	NATURAL GROUND
1775	300590.915	3769017.115	2.276	NATURAL GROUND
10086	298912.926	3775488.586	2.288	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1768	300371.543	3768824.093	2.295	NATURAL GROUND
1773	300455.833	3769079.901	2.301	NATURAL GROUND
1780	300847.809	3769358.661	2.311	NATURAL GROUND
1524	301482.536	3770465.189	2.312	NATURAL GROUND
1487	301408.555	3769888.43	2.313	NATURAL GROUND
10185	298865.066	3774025.79	2.313	NATURAL GROUND
10087	298894.208	3775487.453	2.319	NATURAL GROUND
1320	299256.833	3769303.111	2.32	NATURAL GROUND
10220	298881.6	3773475.909	2.322	NATURAL GROUND
10507	301852.111	3773356.706	2.323	NATURAL GROUND
10221	298870.16	3773476.176	2.329	NATURAL GROUND
1758	300649.769	3768839.065	2.333	NATURAL GROUND
1772	300438.041	3769078.043	2.343	NATURAL GROUND
1172	300078.48	3765736.911	2.347	NATURAL GROUND
1582	301557.721	3770816.214	2.349	NATURAL GROUND
10051	298817.01	3776435.475	2.357	NATURAL GROUND
1170	300091.94	3765735.894	2.364	NATURAL GROUND
1759	300621.662	3768838.218	2.366	NATURAL GROUND
10859	301635.718	3771627.99	2.366	NATURAL GROUND
1365	299164.239	3770343.804	2.369	NATURAL GROUND
1779	300870.474	3769359.558	2.37	NATURAL GROUND
10218	298919.871	3773473.932	2.382	NATURAL GROUND
10070	298857.329	3775964.823	2.385	NATURAL GROUND
1423	300945.691	3765709.133	2.392	NATURAL GROUND
10740	301713.656	3772244.986	2.396	NATURAL GROUND
1583	301571.901	3770816.688	2.397	NATURAL GROUND
10143	299001.613	3774522.746	2.399	NATURAL GROUND
10739	301696.176	3772244.832	2.4	NATURAL GROUND
10088	298877.551	3775486.643	2.403	NATURAL GROUND
10147	298929.158	3774519.183	2.404	NATURAL GROUND
10506	301836.14	3773356.636	2.408	NATURAL GROUND
10423	301303.15	3768381.787	2.411	NATURAL GROUND
10860	301651.434	3771628.234	2.418	NATURAL GROUND
1769	300363.411	3769074.019	2.419	NATURAL GROUND
1276	299391.886	3768303.121	2.42	NATURAL GROUND
10146	298948.695	3774520.255	2.428	NATURAL GROUND
1274	299430.977	3768305.406	2.43	NATURAL GROUND
1275	299412.8	3768304.423	2.436	NATURAL GROUND
10741	301730.286	3772245.165	2.445	NATURAL GROUND
1221	299695.913	3766816.933	2.449	NATURAL GROUND
10258	298943.617	3772767.245	2.453	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10069	298873.888	3775965.633	2.466	NATURAL GROUND
10144	298982.847	3774522.014	2.475	NATURAL GROUND
10619	301769.351	3772797.613	2.478	NATURAL GROUND
1250	299546.782	3767330.636	2.483	NATURAL GROUND
10508	301867.862	3773356.877	2.484	NATURAL GROUND
10618	301751.691	3772797.489	2.484	NATURAL GROUND
10142	299018.658	3774523.599	2.493	NATURAL GROUND
10620	301784.719	3772797.657	2.5	NATURAL GROUND
10217	298938.795	3773474.092	2.506	NATURAL GROUND
1471	301123.495	3766816.747	2.509	NATURAL GROUND
1658	301620.553	3771233.053	2.51	NATURAL GROUND
10108	298933.13	3775013.081	2.513	NATURAL GROUND
1293	299324.972	3768771.949	2.516	NATURAL GROUND
1259	299451.55	3767803.474	2.522	NATURAL GROUND
10257	298960.575	3772767.006	2.524	NATURAL GROUND
10861	301667.454	3771628.099	2.525	NATURAL GROUND
1364	299181.953	3770344.518	2.54	NATURAL GROUND
10372	301378.101	3769377.758	2.547	NATURAL GROUND
10505	301823.036	3773356.47	2.548	NATURAL GROUND
10068	298890.515	3775966.387	2.549	NATURAL GROUND
1526	301528.273	3770465.636	2.556	NATURAL GROUND
1319	299287.691	3769304.262	2.573	NATURAL GROUND
10751	301797.61	3772245.983	2.577	NATURAL GROUND
10373	301398.648	3769378.908	2.586	NATURAL GROUND
1251	299566.999	3767331.195	2.589	NATURAL GROUND
10145	298965.895	3774521.179	2.59	NATURAL GROUND
1393	299153.065	3770762.286	2.594	NATURAL GROUND
10395	301305.381	3768872.521	2.596	NATURAL GROUND
1489	301464.106	3769889.994	2.601	NATURAL GROUND
10370	301337.637	3769376.032	2.601	NATURAL GROUND
1017	300688.755	3765485.976	2.613	AERIAL TARGET
1018	300689.01	3765486.955	2.62	AERIAL TARGET
1016	300689.728	3765485.698	2.621	AERIAL TARGET
1256	299559.315	3767805.937	2.627	NATURAL GROUND
1015	300690.005	3765486.664	2.628	AERIAL TARGET
1257	299524.949	3767805.234	2.632	NATURAL GROUND
1348	299194.37	3769813.25	2.633	NATURAL GROUND
10371	301357.054	3769376.585	2.637	NATURAL GROUND
10393	301271.574	3768870.844	2.66	NATURAL GROUND
1273	299454.311	3768306.438	2.668	NATURAL GROUND
10621	301800.799	3772798.012	2.67	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10050	298833.745	3776436.235	2.687	NATURAL GROUND
1204	299849.303	3766292.273	2.703	NATURAL GROUND
1486	301396.742	3769887.954	2.707	NATURAL GROUND
1584	301581.294	3770816.578	2.713	NATURAL GROUND
1220	299698.94	3766816.69	2.714	NATURAL GROUND
10397	301334.51	3768873.887	2.72	NATURAL GROUND
10381	301417.034	3769378.395	2.721	NATURAL GROUND
10141	299038.107	3774524.709	2.723	NATURAL GROUND
10733	304004.741	3772819.165	2.731	NATURAL GROUND
1292	299354.176	3768773.44	2.734	NATURAL GROUND
10462	301115.979	3767369.36	2.743	NATURAL GROUND
10374	301401.459	3769379.389	2.748	NATURAL GROUND
10629	301861.632	3772798.377	2.772	NATURAL GROUND
10396	301323.839	3768873.447	2.782	NATURAL GROUND
10369	301318.683	3769375.46	2.797	NATURAL GROUND
10107	298938.909	3775013.364	2.809	NATURAL GROUND
1461	301057.225	3766816.781	2.811	NATURAL GROUND
10446	301240.661	3767842.719	2.833	NATURAL GROUND
1402	300685.188	3765259.221	2.839	NATURAL GROUND
10216	298958.648	3773472.964	2.849	NATURAL GROUND
10368	301301.858	3769374.732	2.851	NATURAL GROUND
1460	301031.156	3766816.544	2.852	NATURAL GROUND
1527	301539.273	3770465.72	2.878	NATURAL GROUND
10461	301098.407	3767368.901	2.879	NATURAL GROUND
1014	300774.154	3765724.316	2.881	CHECK
1013	300774.149	3765724.312	2.884	CHECK
1665	301677.64	3771234.087	2.896	NATURAL GROUND
1493	301493.828	3769890.924	2.908	NATURAL GROUND
1485	301373.046	3769887.178	2.917	NATURAL GROUND
1349	299211.007	3769813.619	2.926	NATURAL GROUND
10325	299139.075	3771622.456	2.928	NATURAL GROUND
10509	301885.526	3773357.009	2.932	NATURAL GROUND
1659	301627.491	3771233.141	2.946	NATURAL GROUND
1462	301079.029	3766816.468	2.947	NATURAL GROUND
10049	298850.327	3776436.833	2.958	NATURAL GROUND
10413	301203.571	3768379.435	2.962	NATURAL GROUND
10869	301715.525	3771628.264	2.963	NATURAL GROUND
1664	301669.232	3771234.03	2.965	NATURAL GROUND
1490	301471.897	3769890.447	2.981	NATURAL GROUND
1363	299202.643	3770346.321	2.988	NATURAL GROUND
10460	301081.536	3767368.52	3.025	NATURAL GROUND

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RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1403	300717.533	3765258.553	3.027	NATURAL GROUND
1272	299472.892	3768305.86	3.035	NATURAL GROUND
1531	301573.362	3770466.549	3.064	NATURAL GROUND
1318	299295.933	3769304.294	3.078	NATURAL GROUND
10352	299137.807	3771198.833	3.078	NATURAL GROUND
1588	301610.115	3770817.148	3.087	NATURAL GROUND
1291	299376.38	3768774.787	3.09	NATURAL GROUND
1470	301120.225	3766816.754	3.091	NATURAL GROUND
1351	299257.784	3769815.266	3.097	NATURAL GROUND
10215	298977.571	3773472.245	3.122	NATURAL GROUND
10630	301870.328	3772798.547	3.127	NATURAL GROUND
10106	298957.791	3775014.817	3.132	NATURAL GROUND
10256	298977.731	3772767.207	3.134	NATURAL GROUND
102	300600.32	3767009.07	3.15	SETTLEMENT PLATE
10742	301746.904	3772245.32	3.158	NATURAL GROUND
1255	299583.468	3767806.561	3.165	NATURAL GROUND
10416	301259.877	3768380.801	3.165	NATURAL GROUND
1119	299653.579	3771007.996	3.171	NATURAL GROUND
10862	301677.542	3771628.299	3.176	NATURAL GROUND
10375	301402.46	3769378.386	3.179	NATURAL GROUND
111	299848.26	3769008.15	3.2	SETTLEMENT PLATE
112	299655.03	3771007.66	3.21	SETTLEMENT PLATE
1130	300601.321	3767009.801	3.225	NATURAL GROUND
1352	299282.365	3769816.17	3.226	NATURAL GROUND
1350	299233.048	3769814.669	3.251	NATURAL GROUND
1317	299327	3769305.682	3.253	NATURAL GROUND
10398	301344.147	3768874.459	3.259	NATURAL GROUND
10414	301221.625	3768379.236	3.262	NATURAL GROUND
10067	298904.679	3775966.828	3.267	NATURAL GROUND
10463	301133.071	3767369.659	3.277	NATURAL GROUND
1394	299172.831	3770762.18	3.291	NATURAL GROUND
1127	300599.469	3767009.137	3.296	NATURAL GROUND
1118	299655.064	3771009.316	3.3	NATURAL GROUND
1120	299654.77	3771006.527	3.305	NATURAL GROUND
10085	298935.822	3775489.647	3.306	NATURAL GROUND
10415	301241.061	3768379.942	3.309	NATURAL GROUND
1290	299401.54	3768775.859	3.323	NATURAL GROUND
1117	299656.322	3771007.83	3.333	NATURAL GROUND
1108	299847.704	3769008.151	3.343	NATURAL GROUND
10255	298993.971	3772767.314	3.343	NATURAL GROUND
10351	299153.779	3771199.614	3.35	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1107	299849.425	3769009.06	3.354	NATURAL GROUND
1109	299848.653	3769006.492	3.363	NATURAL GROUND
10750	301788.976	3772245.855	3.373	NATURAL GROUND
10863	301684.12	3771628.174	3.374	NATURAL GROUND
1129	300601.995	3767007.956	3.375	NATURAL GROUND
10104	298993.725	3775016.462	3.376	NATURAL GROUND
1110	299850.333	3769007.442	3.385	NATURAL GROUND
1463	301083.681	3766816.454	3.386	NATURAL GROUND
10294	299051.549	3772205.725	3.39	NATURAL GROUND
1128	300600.06	3767007.294	3.405	NATURAL GROUND
1362	299221.889	3770346.391	3.427	NATURAL GROUND
10459	301065.087	3767368.029	3.429	NATURAL GROUND
1252	299602.85	3767332.512	3.442	NATURAL GROUND
10105	298975.362	3775015.184	3.469	NATURAL GROUND
10622	301808.628	3772798.124	3.504	NATURAL GROUND
10464	301144.944	3767369.949	3.531	NATURAL GROUND
10628	301849.708	3772798.464	3.537	NATURAL GROUND
10513	301914.938	3773357.308	3.55	NATURAL GROUND
1361	299243.091	3770347.958	3.555	NATURAL GROUND
10749	301781.165	3772245.679	3.584	NATURAL GROUND
10254	299011.973	3772767.712	3.589	NATURAL GROUND
10293	299067.276	3772205.869	3.589	NATURAL GROUND
1528	301545.044	3770465.98	3.604	NATURAL GROUND
1395	299192.771	3770762.895	3.613	NATURAL GROUND
10437	301153.262	3767840.849	3.66	NATURAL GROUND
10743	301753.871	3772245.506	3.662	NATURAL GROUND
10510	301893.003	3773357.237	3.678	NATURAL GROUND
10438	301172.03	3767841.543	3.68	NATURAL GROUND
10214	298997.014	3773471.485	3.711	NATURAL GROUND
1034	301755.509	3772005.661	3.723	NATURAL GROUND
1660	301641.046	3771233.474	3.732	NATURAL GROUND
10048	298866.411	3776437.656	3.736	NATURAL GROUND
107	300519.59	3771007.68	3.74	SETTLEMENT PLATE
10439	301192.969	3767841.779	3.783	NATURAL GROUND
10065	298934.993	3775968.387	3.797	NATURAL GROUND
1125	300519.611	3771009.225	3.805	NATURAL GROUND
1124	300521.235	3771008.125	3.81	NATURAL GROUND
10084	298951.218	3775490.404	3.821	NATURAL GROUND
10083	298974.435	3775491.686	3.827	NATURAL GROUND
10436	301133.05	3767841.485	3.84	NATURAL GROUND
1219	299699.406	3766816.765	3.849	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1122	300518.528	3771007.605	3.851	NATURAL GROUND
1316	299357.459	3769306.691	3.857	NATURAL GROUND
10440	301208.789	3767841.842	3.886	NATURAL GROUND
10417	301272	3768381.35	3.893	NATURAL GROUND
1396	299213.041	3770763.529	3.898	NATURAL GROUND
1004	299019.361	3774395.853	3.907	CHECK
1003	299019.357	3774395.856	3.908	CHECK
10103	299006.475	3775016.797	3.914	NATURAL GROUND
1123	300520.168	3771006.525	3.916	NATURAL GROUND
1031	301755.925	3772008.588	3.931	NATURAL GROUND
10324	299140.221	3771622.651	3.975	NATURAL GROUND
10350	299171.69	3771199.887	3.984	NATURAL GROUND
10465	301156.195	3767370.234	3.988	NATURAL GROUND
1353	299306.522	3769816.907	3.996	NATURAL GROUND
10066	298921.353	3775967.686	4.022	NATURAL GROUND
1360	299262.944	3770348.965	4.039	NATURAL GROUND
1464	301086.71	3766816.889	4.046	NATURAL GROUND
10047	298883.637	3776438.392	4.048	NATURAL GROUND
1289	299424.498	3768776.921	4.051	NATURAL GROUND
10292	299084.913	3772206.145	4.057	NATURAL GROUND
10102	299014.963	3775017.139	4.06	NATURAL GROUND
1663	301663.112	3771233.794	4.064	NATURAL GROUND
1218	299702.493	3766816.913	4.076	NATURAL GROUND
10376	301405.424	3769378.187	4.089	NATURAL GROUND
10253	299028.636	3772768.371	4.109	NATURAL GROUND
1397	299234.515	3770764.482	4.121	NATURAL GROUND
1469	301115.057	3766816.254	4.182	NATURAL GROUND
10627	301845.873	3772798.607	4.202	NATURAL GROUND
10046	298899.669	3776438.907	4.207	NATURAL GROUND
108	301754.64	3772007.66	4.22	SETTLEMENT PLATE
1032	301753.383	3772009.11	4.223	NATURAL GROUND
10445	301238.208	3767842.908	4.232	NATURAL GROUND
1033	301753.104	3772005.94	4.263	NATURAL GROUND
1585	301586.641	3770816.704	4.273	NATURAL GROUND
10213	299015.201	3773470.115	4.279	NATURAL GROUND
10468	301170.842	3767370.366	4.28	NATURAL GROUND
1253	299628.561	3767332.976	4.286	NATURAL GROUND
10623	301812.612	3772798.089	4.344	NATURAL GROUND
10868	301705.106	3771628.259	4.344	NATURAL GROUND
10422	301301.43	3768382.241	4.369	NATURAL GROUND
10082	298982.193	3775491.969	4.458	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft | **Vertical Datum:** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10349	299188.406	3771199.301	4.506	NATURAL GROUND
1315	299380.532	3769307.514	4.514	NATURAL GROUND
10441	301217.475	3767842.556	4.535	NATURAL GROUND
1398	299255.564	3770764.828	4.575	NATURAL GROUND
1354	299326.825	3769817.318	4.6	NATURAL GROUND
10624	301822.271	3772798.185	4.618	NATURAL GROUND
1359	299284.009	3770350.274	4.634	NATURAL GROUND
1217	299716.514	3766816.844	4.645	NATURAL GROUND
1491	301477.081	3769890.102	4.654	NATURAL GROUND
10291	299104.179	3772206.491	4.684	NATURAL GROUND
10064	298946.797	3775968.828	4.699	NATURAL GROUND
10744	301758.219	3772245.467	4.703	NATURAL GROUND
10418	301275.924	3768381.265	4.721	NATURAL GROUND
105	301437.12	3769503.06	4.76	SETTLEMENT PLATE
1465	301090.487	3766816.885	4.804	NATURAL GROUND
10212	299032.205	3773469.788	4.804	NATURAL GROUND
1587	301600.692	3770816.908	4.814	NATURAL GROUND
1492	301486.709	3769890.682	4.83	NATURAL GROUND
10748	301777.242	3772245.699	4.846	NATURAL GROUND
10864	301686.646	3771628.014	4.87	NATURAL GROUND
10421	301298.619	3768382.109	4.888	NATURAL GROUND
1254	299651.372	3767333.177	4.939	NATURAL GROUND
1468	301110.532	3766816.376	4.945	NATURAL GROUND
10323	299167.496	3771622.784	4.992	NATURAL GROUND
10377	301407.338	3769378.266	4.997	NATURAL GROUND
10348	299205.08	3771199.079	5.017	NATURAL GROUND
10399	301347.412	3768874.652	5.085	NATURAL GROUND
1399	299276.543	3770764.586	5.108	NATURAL GROUND
10419	301279.354	3768381.654	5.115	NATURAL GROUND
1586	301591.231	3770816.952	5.116	NATURAL GROUND
10400	301358.481	3768875.255	5.126	NATURAL GROUND
10378	301408.766	3769378.457	5.15	NATURAL GROUND
1358	299302.514	3770350.302	5.163	NATURAL GROUND
10420	301288.731	3768381.525	5.173	NATURAL GROUND
10626	301840.787	3772798.597	5.191	NATURAL GROUND
10867	301701.916	3771628.393	5.197	NATURAL GROUND
10625	301826.237	3772798.252	5.224	NATURAL GROUND
10290	299122.526	3772206.763	5.235	NATURAL GROUND
1467	301105.42	3766816.301	5.238	NATURAL GROUND
1216	299741.15	3766816.899	5.24	NATURAL GROUND
1466	301092.612	3766816.546	5.27	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft**Vertical Datum**

NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
10511	301896.458	3773357.214	5.351	NATURAL GROUND
10444	301234.698	3767843.064	5.367	NATURAL GROUND
10347	299221.015	3771199.147	5.384	NATURAL GROUND
10380	301416.078	3769378.668	5.384	NATURAL GROUND
10379	301412.418	3769378.962	5.402	NATURAL GROUND
10512	301908.238	3773357.275	5.407	NATURAL GROUND
1661	301644.679	3771233.555	5.522	NATURAL GROUND
1530	301560.492	3770466.218	5.528	NATURAL GROUND
1005	300276.426	3774033.832	5.533	AERIAL TARGET
1008	300275.413	3774033.837	5.534	AERIAL TARGET
1007	300275.405	3774032.838	5.58	AERIAL TARGET
1006	300276.418	3774032.847	5.588	AERIAL TARGET
1529	301550.447	3770465.873	5.622	NATURAL GROUND
1357	299322.82	3770351.49	5.633	NATURAL GROUND
10322	299196.37	3771622.819	5.662	NATURAL GROUND
10289	299139.397	3772207.055	5.676	NATURAL GROUND
10866	301696.233	3771628.375	5.732	NATURAL GROUND
1400	299292.84	3770765.283	5.756	NATURAL GROUND
10745	301761.802	3772245.449	5.776	NATURAL GROUND
10467	301167.611	3767370.426	5.789	NATURAL GROUND
10466	301159.586	3767370.421	5.804	NATURAL GROUND
10865	301689.856	3771628.159	5.846	NATURAL GROUND
1662	301661.422	3771233.706	5.855	NATURAL GROUND
10346	299237.766	3771199.286	5.862	NATURAL GROUND
10442	301221.332	3767842.493	5.865	NATURAL GROUND
10746	301767.991	3772245.388	5.865	NATURAL GROUND
10443	301228.065	3767842.579	5.883	NATURAL GROUND
1215	299763.981	3766816.749	5.949	NATURAL GROUND
10747	301774.355	3772245.715	6.037	NATURAL GROUND
10288	299157.195	3772207.15	6.051	NATURAL GROUND
10321	299216.86	3771622.76	6.188	NATURAL GROUND
10345	299254.307	3771201.236	6.257	NATURAL GROUND
1356	299345.111	3770353.427	6.275	NATURAL GROUND
1205	299849.807	3766292.221	6.482	NATURAL GROUND
10287	299174.186	3772207.556	6.518	NATURAL GROUND
1401	299314.862	3770765.143	6.571	NATURAL GROUND
1214	299790.558	3766816.844	6.666	NATURAL GROUND
10320	299237.006	3771622.757	6.67	NATURAL GROUND
1355	299367.847	3770354.198	6.807	NATURAL GROUND
10286	299192.304	3772207.546	6.889	NATURAL GROUND
10319	299258.854	3771622.889	7.153	NATURAL GROUND

BA-0076 Chenier Ronquille 2017 Survey

RTK Survey Points Table

Horizontal Datum: NAD 83 LA-S Ft **Vertical Datum** NAVD88 (GEOID 09) Ft

Point	Northing	Easting	Elevation	Description
1213	299817.489	3766816.849	7.258	NATURAL GROUND
1212	299845.028	3766816.854	7.321	NATURAL GROUND
1206	299878.19	3766292.052	7.359	NATURAL GROUND
1211	299864.742	3766816.828	7.384	NATURAL GROUND
1210	299885.949	3766816.765	7.452	NATURAL GROUND
1207	299904.558	3766291.727	7.6	NATURAL GROUND
1208	299926.476	3766291.443	7.721	NATURAL GROUND
1209	299952.696	3766291.033	7.769	NATURAL GROUND
1097	299867.663	3767008.413	7.842	NATURAL GROUND
1140	299203.058	3773010.282	7.855	NATURAL GROUND
1100	299868.142	3767006.559	7.875	NATURAL GROUND
1137	299202.953	3773008.315	7.891	NATURAL GROUND
1139	299204.996	3773010.163	7.923	NATURAL GROUND
1098	299865.75	3767007.949	7.969	NATURAL GROUND
1099	299866.219	3767006.079	8.022	NATURAL GROUND
1138	299204.804	3773008.164	8.025	NATURAL GROUND
1102	299596.978	3769009.072	8.228	NATURAL GROUND
1105	299597.045	3769007.179	8.251	NATURAL GROUND
1103	299594.945	3769008.898	8.258	NATURAL GROUND
103	299595.69	3769007.88	8.28	SETTLEMENT PLATE
1104	299595.055	3769006.961	8.291	NATURAL GROUND
1114	299402.017	3771009.528	8.375	NATURAL GROUND
1113	299402.324	3771007.651	8.395	NATURAL GROUND
109	299203.09	3773009.98	8.4	SETTLEMENT PLATE
1112	299400.406	3771007.282	8.421	NATURAL GROUND
1115	299400.05	3771009.178	8.446	NATURAL GROUND
1126	300600.329	3767009.128	8.567	SETTLEMENT PLATE
106	299401.75	3771008.37	8.58	SETTLEMENT PLATE
1141	300636.359	3773013.06	9.205	SETTLEMENT PLATE
1774	300591.774	3769015.045	9.314	SETTLEMENT PLATE
1030	301756.841	3772007.359	9.541	SETTLEMENT PLATE
1131	301437.228	3769502.45	9.994	SETTLEMENT PLATE
1106	299848.7	3769007.676	10.208	SETTLEMENT PLATE
1121	300519.63	3771008.054	11.407	SETTLEMENT PLATE
1116	299654.711	3771008.034	11.556	SETTLEMENT PLATE
1136	299203.636	3773009.572	13.319	SETTLEMENT PLATE
1096	299867.293	3767007.812	13.372	SETTLEMENT PLATE
1101	299596.067	3769008.039	15.098	SETTLEMENT PLATE
1111	299401.059	3771008.303	16.591	SETTLEMENT PLATE



APPENDIX F: SETTLEMENT PLATE TABLE

Project Name: Chenier Ronquille - BA-0076
Horizontal Datum: NAD83 (2011) LA-S 1702 Feet
Vertical Datum: NAVD88 G12B Feet



BA-0076 Settlement Plate #01				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1096	BA-0076_TOP_SP1	299867.293	3767007.812	13.337
1097	BA-0076_NG_SP1	299867.663	3767008.413	7.807
1098	BA-0076_NG_SP1	299865.75	3767007.949	7.934
1099	BA-0076_NG_SP1	299866.219	3767006.079	7.987
1100	BA-0076_NG_SP1	299868.142	3767006.559	7.84
Average NG Elevation =				7.89

BA-0076 Settlement Plate #02				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1126	BA-0076_TOP_SP2	300600.329	3767009.128	8.53
1127	BA-0076_NG_SP2	300599.469	3767009.137	3.26
1128	BA-0076_NG_SP2	300600.06	3767007.294	3.369
1129	BA-0076_NG_SP2	300601.995	3767007.956	3.339
1130	BA-0076_NG_SP2	300601.321	3767009.801	3.189
Average NG Elevation =				3.29

BA-0076 Settlement Plate #03				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1101	BA-0076_TOP_SP3	299596.067	3769008.039	15.054
1102	BA-0076_NG_SP3	299596.978	3769009.072	8.184
1103	BA-0076_NG_SP3	299594.945	3769008.898	8.214
1104	BA-0076_NG_SP3	299595.055	3769006.961	8.247
1105	BA-0076_NG_SP3	299597.045	3769007.179	8.207
Average NG Elevation =				8.21

BA-0076 Settlement Plate #04				
Date of Survey: 5/2/2017				
Point number	Description	Northing	Easting	Elevation
1774	BA-0076_TOP_SP4	300591.774	3769015.045	9.268
1775	BA-0076_NG_SP4	300590.915	3769017.115	2.23
1776	BA-0076_NG_SP4	300592.914	3769016.872	2.183
1777	BA-0076_NG_SP4	300592.758	3769014.962	2.065
1778	BA-0076_NG_SP4	300590.811	3769015.185	2.03
Average NG Elevation =				2.13

Project Name: Chenier Ronquille - BA-0076
Horizontal Datum: NAD83 (2011) LA-S 1702 Feet
Vertical Datum: NAVD88 G12B Feet



BA-0076 Settlement Plate #05				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1131	BA-0076_TOP_SP5	301437.228	3769502.45	9.944
1132	BA-0076_NG_SP5	301436.984	3769501.99	0.867
1133	BA-0076_NG_SP5	301439.084	3769501.205	0.51
1134	BA-0076_NG_SP5	301439.638	3769504.115	0.691
1135	BA-0076_NG_SP5	301437.58	3769503.631	0.904
Average NG Elevation =				0.74

BA-0076 Settlement Plate #06				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1111	BA-0076_TOP_SP6	299401.059	3771008.303	16.537
1112	BA-0076_NG_SP6	299400.406	3771007.282	8.367
1113	BA-0076_NG_SP6	299402.324	3771007.651	8.342
1114	BA-0076_NG_SP6	299402.017	3771009.528	8.321
1115	BA-0076_NG_SP6	299400.05	3771009.178	8.393
Average NG Elevation =				8.36

BA-0076 Settlement Plate #07				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1121	BA-0076_TOP_SP7	300519.63	3771008.054	11.351
1122	BA-0076_NG_SP7	300518.528	3771007.605	3.795
1123	BA-0076_NG_SP7	300520.168	3771006.525	3.86
1124	BA-0076_NG_SP7	300521.235	3771008.125	3.754
1125	BA-0076_NG_SP7	300519.611	3771009.225	3.749
Average NG Elevation =				3.79

BA-0076 Settlement Plate #08				
Date of Survey: 4/19/2017				
Point number	Description	Northing	Easting	Elevation
1030	BA-0076_TOP_SP8	301756.841	3772007.359	9.478
1031	BA-0076_NG_SP8	301755.925	3772008.588	3.868
1032	BA-0076_NG_SP8	301753.383	3772009.11	4.16
1033	BA-0076_NG_SP8	301753.104	3772005.94	4.2
1034	BA-0076_NG_SP8	301755.509	3772005.661	3.66
Average NG Elevation =				3.97

Project Name: Chenier Ronquille - BA-0076
Horizontal Datum: NAD83 (2011) LA-S 1702 Feet
Vertical Datum: NAVD88 G12B Feet



BA-0076 Settlement Plate #09				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1136	BA-0076_TOP_SP9	299203.636	3773009.572	13.255
1137	BA-0076_NG_SP9	299202.953	3773008.315	7.826
1138	BA-0076_NG_SP9	299204.804	3773008.164	7.961
1139	BA-0076_NG_SP9	299204.996	3773010.163	7.859
1140	BA-0076_NG_SP9	299203.058	3773010.282	7.791
Average NG Elevation =				7.86

BA-0076 Settlement Plate #10				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1141	BA-0076_TOP_SP10	300636.359	3773013.06	9.138
1142	BA-0076_NG_SP10	300637.095	3773013.997	2.119
1143	BA-0076_NG_SP10	300637.425	3773012.168	2.129
1144	BA-0076_NG_SP10	300635.547	3773011.852	2.147
1145	BA-0076_NG_SP10	300635.245	3773013.724	2.128
Average NG Elevation =				2.13

BA-0076 Settlement Plate #11				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1106	BA-0076_TOP_SP11	299848.7	3769007.676	10.163
1107	BA-0076_NG_SP11	299849.425	3769009.06	3.309
1108	BA-0076_NG_SP11	299847.704	3769008.151	3.298
1109	BA-0076_NG_SP11	299848.653	3769006.492	3.318
1110	BA-0076_NG_SP11	299850.333	3769007.442	3.341
Average NG Elevation =				3.32

BA-0076 Settlement Plate #12				
Date of Survey: 4/21/2017				
Point number	Description	Northing	Easting	Elevation
1116	BA-0076_TOP_SP12	299654.711	3771008.034	11.502
1117	BA-0076_NG_SP12	299656.322	3771007.83	3.279
1118	BA-0076_NG_SP12	299655.064	3771009.316	3.246
1119	BA-0076_NG_SP12	299653.579	3771007.996	3.117
1120	BA-0076_NG_SP12	299654.77	3771006.527	3.25
Average NG Elevation =				3.22



APPENDIX G: AERIAL TARGET COMPARISON TABLE

Aerial Target Comparison

Horizontal Datum: NAD83 (2011) LSZ (1702) - Vertical Datum: NAVD88 (Geoid12B)
Comparison of Aerial Target Survey: Terrestrial RTK vs. Aerial LiDAR

Scofield Island - East Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	271909.710	3856783.630	3.120
Nearest LiDAR Point	271909.840	3856783.610	3.110
DIFFERENCE	0.130	0.020	0.010
Scofield Island - West Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	276755.810	3845142.540	1.530
Nearest LiDAR Point	276755.740	3845142.550	1.500
DIFFERENCE	0.070	0.010	0.030
Pelican Island - East Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	277276.700	3842739.610	1.380
Nearest LiDAR Point	277276.450	3842739.620	1.300
DIFFERENCE	0.250	0.010	0.080
Pelican Island - West Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	279035.520	3832340.830	2.110
Nearest LiDAR Point	279035.220	3832340.740	2.050
DIFFERENCE	0.300	0.090	0.060
Shell East Island - East Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	283684.060	3831099.880	3.770
Nearest LiDAR Point	283683.860	3831100.050	3.660
DIFFERENCE	0.200	0.170	0.110
Shell East Island - West Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	285883.770	3827282.350	1.300
Nearest LiDAR Point	285883.990	3827281.980	1.210
DIFFERENCE	0.220	0.370	0.090
Shell West Island, East of Inlet - East Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	289163.200	3824080.830	1.370
Nearest LiDAR Point	289163.100	3824080.610	1.230
DIFFERENCE	0.100	0.220	0.140
Shell West Island, East of Inlet - West Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	292750.740	3821763.920	5.900
Nearest LiDAR Point	292750.940	3821763.840	5.740
DIFFERENCE	0.200	0.080	0.160
Shell West Island, West of Inlet - East Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	293751.570	3812941.150	2.610
Nearest LiDAR Point	293751.200	3812942.450	2.530
DIFFERENCE	0.370	1.300	0.080
Shell West Island, West of Inlet - West Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	293095.240	3807764.690	5.320
Nearest LiDAR Point	293095.320	3807764.770	5.210
DIFFERENCE	0.080	0.080	0.110
Chenier Ronquille - East Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	300276.420	3774032.850	5.520
Nearest LiDAR Point	300276.160	3774032.900	5.350
DIFFERENCE	0.260	0.050	0.170
Chenier Ronquille - West Target			
Point Source	Northing	Easting	Elevation
Terrestrial RTK	300690.010	3765486.660	2.600
Nearest LiDAR Point	300689.850	3765486.590	2.480
DIFFERENCE	0.160	0.070	0.120



APPENDIX H: FIELD NOTES

1 107

0500 Meet Crews at office

0510 Load Equipment & Boats

0525 Depart Backshop

0830 Fuel Truck/Boat; Ice & water

0940 Arrive at Job Site

1010 Ben's first Base @ BAYO SM 01

1223 Start Base @ BA SCOFIELD 2

1256 Start Base @ BAYO SM 03

1708 End Base @ BA SCOFIELD 2

1717 End Base @ BAYO SM 03

✓ R8 Mod 3 Base

↓ S/N 5037418997

CP# 2 BA SCOFIELD 2

N. 278985.580

E. 3832299.840

Elev. 3.937

✓ R8 Mod 3 Base

↓ S/N 5208482936

CP# 3 BAYO SM 03

N. 276699.170

E. 3845115.090

Elev. 2.680

1

T. Evans

J. Devillier

4-17-17

107

Cloudy 80°

CCPRA

5 Baratavia Barrier

Island Restoration Project

Plaquemines Parish, LA

Survey Control Network

2017-0061

NAO 83

LA South Zone, Geoid 12B

TLE107_20170061 29361070.702/89971071.702



2

107

* Set Aerial Targets on Scofield and Pelican Island

* Search for check points # 207 and 208. Both points where no longer at there location due to erosion.
 - Took Pictures of there location
 img. 240, img. 241 → Pt # 207
 img. 242, img. 243 → Pt # 208

Time: 4:11 P.M.

Elev. 0.730

10018 WS

AT (Aerial Target)

10017

AT (Aerial Target)

10013

AT (Aerial Target)

10010

AT (Aerial Target)

10009

WS

10005

AT (Aerial Target)

10,000

WS

2M

Time: 2:52 P.M.

Elev. 0.952

Code

TR

Comment

JCLS BOOK NO. 1439



JCLS BOOK NO. 1439



107

2

Target

WS

Scofield

BA Ho smob

WS Target

Target

Pelican

BA SCOFIELD 2

Target

WS



JCLS BOOK NO. 1439



0500 Meet with Crew @ office
 0530 E/R to job site
 1010 Start Static (BA40SM02) 01
 1100 Launch Airboat
 1201 Start Static (CRMSBA SM 20)
 1220 Topo Reference Points and set
 Ariel Targets
 1706 End Static (CRMSBA SM 20)
 1610 Arrive @ Launch E/R to pickup Base
 1841 End Static (BA40 SM 02)
 1915 Arrive @ trailer change equipment
 and prepare data

29271070.T02	89871070.T02
Δ BA40SM02	CRMSBA SM 20
N 315642.540	300238.970
E 3854052.390	3774247.960
Z -2.644	2.352



B. Castillo
 G. Spiller
 (107) 4-17-17
 Mon

CPRA

20170061

5 Barrataria Basin Barrier Island
 Restoration Project
 Plaquemines Parish

LA South Zone / MAD 1983
 Geoid 12 B

Temp: 78°/67°
 Pressure: 30.03 in

BEC-107.2017-20170061



Point Code

1000-01 CHK on 209 (ROW)

1002 WS

1003-04 CHK on 210 (ROW PK)

1005-08 Aerial Target

1009-10 CHK on 205

1011-12 CHK on 206

1013-14 CHK on 212 (Disturbed)

1015-18 Aerial Marker

1019 WS

H.I.
6562'



0600 Meet with Crew
 0650 Start Static (BA40SM02) 01
 0735 Launch Airboat E/R to Monument
 0822 Start Static (CRMSBA SM 20)
 0840 Set Aerial Targets
 1520 End Static (CRMSBA SM 20)
 1625 Arrive @ Launch E/R to Base
 1658 End Static (BA40SM02)
 1735 Arrive @ trailer / prepare data
 and charge equipment

89871080.T02 29271080.T02
 A BA40 SM ~~02~~ 01 CRMSBA SM 20
 N 315642,540 \ 300238,970
 E 3854052,390 3774247,960
 Z -2.644 2.352



B Castle
 G Spiller
 (108) 4.18.17
 Tues

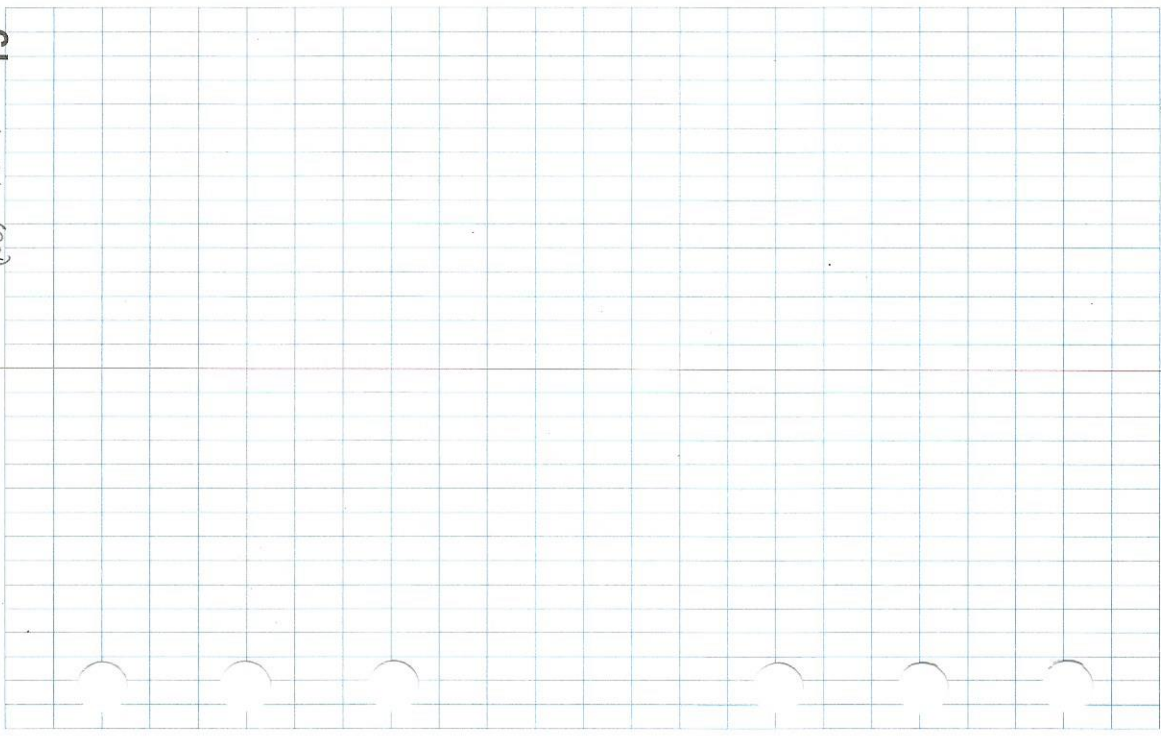
CPRA
 20170061
 5 Barataria Basin Island
 Restoration Project
 Plaquemines Parish

LA South Zone / NAD 1983
 Geoid 12B

Temp: 83°/65°
 Pressure 30.04/in

BEC-108-2017_20170061





JCLS BOOK NO. 1494

Point Code

1020-23 Aerial Target

1024-27 Aerial Target

H.I.

6.562

6.562



JCLS BOOK NO. 1494

3 108

0600 Load Equipment

0630 Arrive at Boat Launch

0700 Launch Boats/Gas, Water, Ice

0839 Start Base @ BA 405M03

0853 Start Base @ BASCOFIELD 2

1521 End Base @ BA 40 SM 03

1535 End Base @ BA SCOFIELD 2

1800 Arrive at Hotel/Notes, Data, charge Batteries

↑ R8 Mod 3 Base

↓ S/N 5208482936

↓ CP #2 BA SCOFIELD 2 CP#3 BA 40 SM03

N. 278985.580

N. 276699.170

E. 3832299.840

E. 384515.090

Elev. 3.937

Elev. 2.680

T. EVANS

J. Devillier

4-18-17

108

Clear 80°

CPRA

5 Barataria Barrier

Island Restoration Project

Plaquemines Parish, LA

Survey Control Network

Set Aerial Targets

2017-006d

NAD 83

LA South Zone, Grid 12B

TLE_108_2017-2017_006d



3

PT #	Code	HR	Comments
10019	WS	2M	Time: 9:00 a.m. Elev. 0.772
10020- 10023	AT (Aerial Target)		
10024	CHK on SW TBM 01		3/4" Rebar
10025	CHK on SW TBM 01		"
10026	CHK on SW TBM 02		3/4" steel Threaded Rod inside a 1" pipe
10027	CHK on SW TBM 02		"
10028	WS		Time: 12:16 p.m. Elev. 1.034
10029- 10032	AT (Aerial Target)		
10033- 10036	AT (Aerial Target)		
10037- 10040	AT (Aerial Target)		
10041	WS		Time: 3:33 p.m. Elev. 0.957

* Set Aerial Targets on Shell East Island.

* Took (2) 20 min observation shots on check points: ↓
SW TBM 01
SW TBM 02

* Searched for check point # 211 (Kelsey TBM). Could not locate point. Searched with metal detector and dug 3 feet or more in area of mag hit. Point fell within sand construction area.

- Picture #'s: img. 263
img. 264
img. 265

5 109

0600 Load Equipment

0630 Arrive at Boat Launch

0705 Launch Boat/Gas, water, Ice

0812 Start Base @ BA 40 SMO3

0829 Start Base @ BA SCOFIELD 2

1350 End Base @ BA 40 SMO3

1359 End Base @ BA SCOFIELD 2

1800 Arrive at Hotel/Data, Notes, Charge Batteries

F8 Mod 3 Base

S/N 503748997

CP #2 BA SCOFIELD 2

N. 278985.580

E. 3832299.840

Elev. 3937

F8 Mod 3 Base

S/N 5208482936

CP #3 BA 40 SMO3

N. 276699.170

E. 3845115.090

Elev. 2.680

5

T. Evans

J. DeVillier

4-19-17
109
Cloudy 81°

CPA

5 Baracteria Barrier

Island Restoration Project
Plaquemines Parish, LASurvey Control Network
2017-2061

MAD 83

LA South Zone, Grid 12B

TLE-109-2017-2070061.de

6

109

PT#	Code	HA	Comment
10042	WS	2M	Time: 8:33 am Elev. 0.578
10043	WS	2M	Time: 12:10 pm Elev. 0.021
10044	WS	2M	Time: 1:35 PM Elev. 0.718

109

6

* Ran 2 Static Sessions
for Survey Control Network

* Checked water Surface Elevations
throughout day for Sonar Crew.

0600 Meet with Crew

0649 Start Static (BA40 SM ~~02~~ 01)

0720 Launch Airboat E/R to Base

0813 Start Static (CRMSBA SM 20)

0840 Tie-in Settlement Plates

1355 End Static (CRMSBA SM 20)

1445 Arrive @ dock E/R to Base

1530 Arrive @ Base tie in CURPT

1621 End Static (BA40 SM 02)

1715 Arrive @ trailer / charge equipment and prepare for data

29271090.T02 89871090.T02

A BA40SM ~~02~~ 01 CRMSBA SM 20

N 315642.540 300238970

E 3854052.390 3774247.960

Z -2.644 2.352



B. Castillo

G. Spiller

(109) 4-19-17

Wed

CPRA

5 Barataria Basin Island
Restoration Project
20170061
Plaquemines Parish

LA South Zone / NAD 1983
Beaid 12B

Temp: 80°/69°
Pressure: 30.09 in

REC_109_2017_20170061



21

Point Code

102829

WS

1030

1031-34

1035

1036-37

Settlement Plate

MS

WS

CHK on 2/15

H.I

6.562'

0.000

6.562'

6.562'

6.562'

(109) 4-19-17

21



JCLS BOOK NO. 1494



JCLS BOOK NO. 1494

Point	Code	H.I.
1038	WS	6.562'
1039	SP	0.000'
1040	Bolt	6.562'
1041-44	WB	6.562'
1045	SP	0.000'
1046	Bolt	6.562'
1047-50	NG	6.562'
1051	SP	0.000'
1052	Bolt	2.570'
1053-56	WB	6.562'
1057	SP	0.000'
1058	Bolt	2.570'
1059-62	NG	6.562'
1063	SP	0.000'
1064	Bolt	2.570'
1065-68	WB	6.562'
1069	SP	6.562'
1070	Bolt	6.562'
1071-74	NG	6.562'
1075	SP	0.000'
1076	Bolt	2.570'
1077-80	NG	6.562'
1081	SP	0.000'



Point	Code	H.I.
1082	Bolt	2.570'
1083-86	NG	6.562'
1087	SP	0.000'
1088	Bolt	6.562'
1089-92	NG	6.562'
1093-94	WS	6.562'



0600 Meet with Crew
 0705 Launch Boat EIR to Base
 0758 Start Static (CRMSBA SM 20)
 0805 Ties in Settlement Plates
 1201 End Static (CRMSBA SM 20)
 1250 Arrive @ dock / unload Equipment
 1415 EIR to office
 1805 Arrive @ office / prepare data and charge equipment

8987110 T02
 A CRMSBA SM 20
 N 500238.970
 E 3854052.390
 Z -2.644



B. Castille
 T. Evans
 G. Spiller

(11) 4-21-17
 Fri

CPR A

20170061

Barataria Barrier Island
 Restoration Project
 Plaquemines Parish

LA South Zone / NAD 1983
 Geoid 12B

Temp: 78°/69°
 Pressure: 30.02 in

BEC_111_2017_20170061



Point	Code	H.I
1095	WS	6.562
1096	SP	2.570
1097-100	NG	6.562
1101	SP	0.000
1102-05	NG	6.562
1106	SP	0.000
1107-10	NG	6.562
1111	SP	0.000
1112-15	NG	6.562
1116	SP	0.000
1117-20	NG	6.562
1121	SP	0.000
1122-25	NG	6.562
1126	SP	2.570
1127-30	NG	6.562
1131	SP	0.000
1132-35	NG	6.562
1136	SP	2.570
1137-40	NG	6.562
1141	SP	0.000
1142-45	NG	6.562
1146	WS	6.562



7

114

- 0500 Arrive at office/Meet crews
- 0515 Depart office
- 0815 Gas/Water/Ice
- 0900 Arrive at Boats
- 0950 Launch Boats/Load Equipment
- 1203 Start Base @ CRMSBA SM 20
- 1501 End Base @ CRMSBA SM 20
- 1520 In route to Boat Launch
- 1610 Arrive at dock
- 1730 Arrive at Trailer/Data, Notes, ^{Charge}Batteries

R8 Mod 3 Base

S/N 5008482936

- CP #1 CRMSBA SM20

N. 300238.970

E. 3774247.960.

Elev. 2.352

7

T. Evans
J. DeVillier
T. Henry

4-24-17

114

Clear 75°

CPRA

Barrataria Barrier
Island Restoration Project
Plaquemines Parish, LA
Topo Survey
2017-0061

NAD 83

LA South Zone, Geoid 12B

TLE 114-2017-20170061

R#	Code	HR	Comment
10045	WS (Water Surface)	2M	Time: 12:12 P.M. Elev: 0.609
10046- 10053	NG (Natural Ground)		
10054	WES (Water Edge Surface)		
10055- 10063	WB (Water Bottom)		
10064- 10071	NG		
10072	WES		
10073- 10081	WB		
10082- 10089	NG		
10090	WES		
10091- 10101	WB		
10102- 10101	NG		
10111	WES		
10112- 10140	WB		
10141- 10150	NG		
10151	WES		
10152- 10178	WB		
10179- 10186	NG		
10187	WES		
10188- 10211	WB		
10212- 10223	NG		
10224	WES		
10225- 10250	WB		
10251	WS		Time: 2:53 P.M. Elev: 0.434



*Topo Survey Lines
on Chenier Ronquille
Island



0500 Meet with Crew/Gather job material
 0520 E/R to jobsite
 0938 Start Static (BA40 SM02) 01
 1030 Launch Boat E/R to Base
 1205 Running on Trevors Base (RM5BA S120)
 Topo Survey lines
 1505 End Base E/R to dock
 1610 Arrive @ dock E/R to base
 1650 End Static (BA40 S102)
 1735 Arrive @ trailer / prepare dot q
 and charge equipment

A 89971140.T02
 BA40 SM02
 N 315642.540
 E 3854052.390
 Z -2.644



B. Castille
 J. Granger
 G. Spiller
 (114) 424-17
 Mon

CPRA

20170061

Barataria Barrier Island
 Restoration Project
 Plaquemines Parish

LA South Zone / NAB 1983
 Geoid 12B

Temp: 75°/62°
 Pressure: 29.84 in

BEC-114-2017-20170061



Point Code

1147

WS

1148-53

NG

1154

WES

1155-63

WB

1164-75

NG

1176

WES

1177-98

WB

1199

WES

1200-23

NG

1224

WES

1225-46

WB

1247

WES

1248-61

NG

1262

WES

1263-71

WB

1277-78

NG

1279

WES

1280-88

WB

1289-95

NG

1296

WES

1297-313

WB

H.I.

6.562



0600 Meet with crew
 0646 Start Static (BA40SM02) 01
 0720 Launch Boat E/R to Island
 0900 Running on trevors Base
 (CRMS BA SM 20) topo transects
 1420 E/R to dock
 1505 Arrive @ dock E/R to Base
 1540 End Static (BA40SM02)
 1645 Arrive @ trailer / prepare data
 Charge & maintainance equipment

29271150.T02
 A BA40SM02
 N 315642540
 E 3854052390
 Z -2.644



B. Castille
 J. Granger
 G. Spiller
 (115) 4-25-17
 Tues

C.P.R.A

20170061

Barataria Barrier Island
 Restoration Project
 Plaquemines Parish

LA South Zone / NAD 1983
 Geoid 12B

Temp: 78° / 69°
 Pressure: 29.80 in

BEC 115-2017-2070061





Point	Code
1314	WS
1315.21	MG
1322	WES
1323.45	WB
1346	WES
1347.67	MG
1368	WES
1369.89	WB
1390	WES
1391.416	MG
1417	WES
1418.22	WB
1423.34	MG
1435	WES
1436.41	WB
1442.43	MG
1444	WES
1445.46	WB
1447	WES
1448.53	MG
1454	WES
1455.59	WB
1460.75	MG

H.I.
6.562



1476 WES

1477-83 WB

/

9

0600 Meet crews/Load Equipment
 0646 Ben's Base started
 0720 Depart Boat Launch
 0901 Start Base @ CRMSBA SM20
 stock running lines
 1404 End Base @ CRMSBA SM20
 1505 Arrive at dock / to Base
 1540 End Static on Ben's Base
 1645 Arrive at trailer/Outfit, Notes, Charge Batteries

R8 Mod 3 Base

SN 5208482936

-CP#1 CRMSBA SM20

N. 300238.970

E. 3774247.960

Elev. 2.352

9

T. Evans
 J. DeVillier
 T. Henry

4-25-17

115

clear 75°

CPRIA

5 Barataria Barrier
 Island Restoration Project
 Plaquemines Parish, LA
 Topo Survey
 2017-0061

NAD 83

LA South Zone, Grid 12B

TLE115_20170061

10

115

Alt#	Code	HR	Comment
10252	WS	2M	Time: 9:04 a.m. Elev. 0.830
10253-	NG		
10262			
10263	WES		
10264-	WB		
10285			
10286-	NG		
10296			
10297	WES		
10298-	WB		
10318			
10319-	NG		
10328	WES		
10329-	WB		
10344			
10345-	NG		
10354			
10355	WES		
10356-	WB		
10367	WS		
10368-	NG		
10381			
10382	WES		
10383-	WB		
10392			
10393-	NG		
10401			
10402	WES		
10403-	WB		
10412			
10413-	NG		
10425			
10426	WES		
10427-	WB		
10435			

Time: 12:29 p.m.
Elev. 0.760

115

10

*Topo Survey Lines
on Chenier Ronquille
Island

11

115

Pt#	Code	HR	Comment
10436- 10447	NG	2M	
10448	WES	↓	
10449- 10458	WB		
10459- 10469	NG		
10470	WES		
10471- 10477	WB		

Time: 1:18pm.
Elev. 0.777

* Topo Survey Lines
on Chenier Rouge
Island

115

11

13

117

0600 Meet with crews/Load Equipment

0630 Gas/water/ Ice

0705 Depart Launch

0815 Start Base @ CRMSBA SM 20

1231 End Base @ CRMSBA SM 20

1235 In Route to Launch

1400 Unload Boat/Equipment

1430 Depart Trailers /In Route to office

1845 Arrive at office/unload

R8 Mod 3 Base

9N 5208482936

-CP #1 CRMSBA SM 20

N. 300238.970

E. 3774247.900

Elev. 2352

JCLS BOOK NO. 1439



13

T. Evans

J. DeVillier

B. Malveaux

4-27-17

117

Cloudy 83°

CPAA

5 Barataria Baymer

Island Restoration Project

Plaquemines Parish, LA

Topo Survey

2017-0061

NAD 83

LA South Zone, Geoid 12B

TLE-117-2017-20170061

JCLS BOOK NO. 1439



Pt #	Code	HR	Comments
10478	WS	2M	Elev. 1.437 Time: 8:16am
10479-	NG		
10484	WS		
10485	WB		
10486-	NG		
10500	WS		
10501-	NG		
10503	WS		
10504	NG		
10505-	WS		
10502	WB		
10523	WS		
10524-	WB		
10530	WS		
10531	NG		
10532-	WS		
10535	WB		
10536	WS		
10537-	WB		
10544	WS		
10545	NG		
10546	WS		
10549	WB		
10550	WS		
10551-	WB		
10592	WS		
10593	NG		
10594-	WS		
10598	WB		
10599	WS		
10600-	WB		
10611	NG		
10612-	WS		
10616	WB		
10617	NG		
	WS		

*Topo Survey Lines
on Chenier
Rouquille
Island

Pl#	Code	M/R	Comments
10618-	Ng	2M	
10631	WS		
10632	NG		
10633-	WS		
10642	WB		
10643	WS		
10644-	WS		
10651	Ng		
10652	WS		
10653-	WB		
10656	WS		
10657	WB		
10658-	WS		
10666	Ng		
10667	WS		
10668-	WB		
10670	WS		
10671	WB		
10672-	WS		
10721	WB		
10722-	WB		
10730	WS		
10731	WB		
10732-	WS		
10734	Ng		
10735-	Ng		
10738	Ng		
10739-	Ng		
10753	Ng		
10754	WS		
10755-	Ng		
10769	WS		
10770	WB		
10771-	WS		
10777	WB		
10778	WS		



Pl#	Code	M/R	Comments
10618-	Ng	2M	
10631	WS		
10632	NG		
10633-	WS		
10642	WB		
10643	WS		
10644-	WS		
10651	Ng		
10652	WS		
10653-	WB		
10656	WS		
10657	WB		
10658-	WS		
10666	Ng		
10667	WS		
10668-	WB		
10670	WS		
10671	WB		
10672-	WS		
10721	WB		
10722-	WB		
10730	WS		
10731	WB		
10732-	WS		
10734	Ng		
10735-	Ng		
10738	Ng		
10739-	Ng		
10753	Ng		
10754	WS		
10755-	Ng		
10769	WS		
10770	WB		
10771-	WS		
10777	WB		
10778	WS		



PL#	Code	HR	Comments
10779-	NG	2M	
10783	WS		
10784	WB		
10785-	WS		
10792	NG		
10793	WS		
10794-	WB		
10797	WS		
10798	WB		
10843	WS		
10844	WB		
10845-	WS		
10853	NG		
10854	NG		
10855-	WS		
10858	WB		
10859-	WS		
10870	WB		
10871	WS		
10872-	WB		
10879	WS		
10880			Ekv. 1/178 Time: 12:22pm

Point	Code	A.I.
1792	WS	6.562'
1793-1800	MG	6.562
1801	WES	6.562
1802-07	WB	6.562
1808-22	WB	10.562'
1823-24	NAV	- Discard Points -
1825-46	WB	7.422
1847	WES	
1848-72	MG	
1873	WES	
1874-904	WB	
1905	WES	
1906-24	MG	
1925	WES	
1926-52	WB	
1953	WES	
1954-67	MG	
1968	WES	
1969-97	WB	
1998	WES	
1999-018	MG	
2019	WES	
2020-73	WB	

JCLS BOOK NO. 1494



JCLS BOOK NO. 1494



B. Costillie
 S. Boigle
 G. Spiller

(27) 5-7-17
 Sun

CPR A
 20170061
 Barataria Barrier Islands
 Restoration Project
 Plaquemines Parish

LA South Zone / NAD 1983
 Geoid / RBUS

Temp: 78°/62°
 Pressure 30.00in

BEC.12.7.2017.20170061



0600 Meet with crew

0650 Launch boat IER to base

0743 Start + Static (BA SCOFIELD 2)

0800 Topo Traced Lines PTZ118 WS 0.189

1505 End Static (BA SCOFIELD 2)
 E/R to dock

1610 Arrive @ back unload boat

1720 Arrive @ trailer change equipment
 and prepare data

89871270.T02

A BA SCOFIELD 2

N 278985.580

E 3832209.840

Z 3937





Point	Code
2118	WS
2119-28	NG
2129	WES
2130-62	WB
2163	WES
2164-86	NG
2187	WES
2188-219	WB
2220	WES
2221-37	NG
2238	WES
2239-72	WB
2273	WES
2274-93	NG
2294	WES
2295-326	WB
2327	WES
2328-48	NG
2349	WES
2350-77	WB
2378-81	NG
2382	WES
2383-94	WB

H.I.
7422



0600 Meet with crew/load equipment
 0645 Launch Boat / EIR to Base
 0746 Start Static (BASCOFIELD2)
 0800 Topo Transmits / WS PT 2447 0461
 1150 WS PT 2574 0425 North of Pelican Island
 1541 WS PT 2669 - 0.130
 1637 End Static (BASCOFIELD2)
 1735 Arrive @ dock / unload boat
 1820 Arrive @ trailer / charge equipment
 and prepare data

A BASCOFIELD2
 N 278985.580
 E 3832294.840
 Z 3937



B. Casville
 S. Daigle
 G. Spiller

(28) 5-8-17
 Mon

CPRA
 20170061
 Barbados Barrier Islands
 Restoration Project
 Plaquemines Parish

LA South Zone / NAB 1983
 Good / RB

Temp: 77° 163°
 Pressure: 30.06 in

BEC. 128.2017.20170061



Point	Code
2447	WB
2448-58	WB
2459	WES
2460-63	NG
2464-75	WB
2476	WES
2477-81	NG
2482-93	WB
2494	WES
2495-99	NG
2500-12	WB
2513	WES
2514-19	NG
2520-36	WB
2537	WES
2538-46	NG
2547-62	WB
2563	WES
2564-73	NG
2574	WS
2575-80	WB
2581	WES
2582-91	NG

H.I.
6562



Point	Code
258593	WB
2594	WES
259598	NG
2599-611	WB
2612	WES
2613-19	MG
2620-36	WB
2637	WES
2638-47	MG
2648-62	WB
2663	WES
2664-68	NG
2669	WS

H.I.
6.562



0600 Meet with crew / Load Equipment
 0645 Launch Boat E/R to Base
 0738 Start Static (BA SCOFIELD 2)
 0746 WS PT 2670 01656
 0755 Topo transects
 1535 End Static (BA SCOFIELD 2)
 1630 Arrive @ dock / unload boat
 1735 Arrive @ trailer prepare data and charge equipment

A BA SCOFIELD 2
 N 278985.580
 E 3832299.846
 Z 3.937



BCastille
 S. Daigle
 G. Spiller

(129) 59-17
 Tues

CPRA

2017 0061

Barataria Barrier Islands
 Restoration Project
 Plaquemines Parish

LA South Zone / MAR 1983

Geoid 12 B

Temp: 78.0 / 64.0

Pressure: 30.09 in

BEG-129_2017_20170061



Point	Code	HI
2670	WS	6562
2671-89	WB	
2690	WES	
2691-94	NG	
2695-708	WB	
2709	WES	
2710-12	NG	
2713-25	WB	
2726	WES	
2727-31	NG	
2732	WES	
2733-44	WB	
2800	WES	
2801-03	NG	
2804-29	WB	* 2817/2818 Camp Between slots
2830	WES	
2831-32	NG	
2833-3007	NG	



JCLS BOOK NO. 1494



JCLS BOOK NO. 1494

0600 Meet with Crew/Load Equipment
 0635 Launch Boat
 0736 Start Static (BA SCOFIBL2)
 WS PT 3008 0.613'
 0800 Topo Transsect Lines
 1133 WS PT 3349 0.623'
 1513 WS PT 3415 0.097'
 1541 End Static (BA SCOFIBL2)
 1635 Arrive@ dock unload boat
 1725 Arrive@ trailer /charge equipment
 and prepare data
 29871300.T02
 BA SCOFIBL2
 278985.580
 3832299.840
 3.937



B. Castille
 S. Daigle
 G. Spiller
 CPRA
 20170061
 Barataria Barrier Islands
 Restoration Project
 Plaquemines Parish
 LA South Zone / NMS 1983
 Geoid 12 B
 Temp: 79.9/68
 Pressure: 30.08 in
 REC_130_2017_20170061

(130) 5.10.17
WES



Point	Code
3008	WS
3009	NG
3010	WES
3011-28	WB
3029	WES
3030-63	NG
3064	WES
3065-79	WB
3080	WES
3081-82	NG
3083-84	WB
3085-88	NG
3089	WES
3090-95	NG
3096	WES
3097-117	WB
3118-130	NG
3131	WES
3132-52	WB
3153-66	NG
3167	WES
3168-86	WB
3187-97	NG



H.I.
6.562'



0600 Meet with Crew / Load Equipment
 0645 Launch Boat EIR to Base
 0740 Start Static (BA SCOF/ELB2)
 WS PT 3416 0878
 0805 Topo Traversed Lines
 0925-1135 Airboat stuck on sand flat
 1201 End Static (BA SCOF/ELB2)
 1300 Arrive @ back unload boat
 1415 EIR to Lafayette Office
 1820 Arrive @ office / prepare data

89871310.T02
 A BA SCOF/ELB 2
 N 278985.580
 E 3832299.840
 Z 3.937



B. Castille
 S. Bayle
 G. Spiller

(131) 5-11-17
 Thurs

CPRA

20170061

Barataria Barrier Islands
 Restoration Projects
 Plaquemines Parish

LA South Zone / NAB 1983
 Geoid 12B

Temp: 80° / 70°
 Pressure: 30.08 in

REC_131-2017-20170061



Point	Code
3416	WS
3417-94	NS

H.I
6562
6562



(131) 5-11-17



0600 Meet with Crew/Lead Equipment
 0645 Launch Boat ER to Island
 0743 Start Static (BA SCOTFIELD 2)
 0747 WS PT 3495 0651
 0800 Topo transects Lines
 1520 End Static (BA SCOTFIELD 2)
 1640 Arrive @ deck unload boat
 1725 Arrive @ trailer/charge equipment
 and prepare data

89871360.T02
 A BA SCOTFIELD 2
 N 278985.580
 E 3832299.840
 Z 3.937



B. Castillo
 S. Baige
 G. Spiller

(136) 5.16.17
 Tues

CPRA

20170061

Banisteria Barrier Islands
 Restoration Project
 Ploqueminis Parish

LA South Zone/MAD 983
 Grid 12B

Temp: 82.072°
 Pressure: 30.02 in

BEL-136-2017-20170061



Point	Code
3495	WS
3496-774	NG
3775	SP
3776-79	NG

H.I.
6.562'
6.562'
0.000'
6.562'



0600 Meet with Crew/Load Equipment
 0646 Launch Boat
 0746 Start Static (BA SCOFIELD 2)
 0805 Tissue Settlement Plates on Scofield
 1045 Topo Transect Lines
 1335 Pick-up Aerial Targets on Pelican and SCOFIELD Islands
 1516 End Static (BA SCOFIELD 2)
 1625 Arrive @ dock / unload boat
 1730 Arrive @ trailer / charge equipment and prepare data

89871370.T02
 BA SCOFIELD 2
 278985.580
 3832299.840
 3,937



B. Castillo
 S. Baig
 G. Spiller

(137) 5-17-17
 Wed

CPRA

20170061

Barataria Barrier Islands
 Restoration Project
 Plaquemines Parish

LA South Zone LMA 1983
 Geoid 12B

Temp: 83.0740
 Pressure: 29.95in

BEC 137-2017-20170061



Point	Code	H.I.
3780	SP	0.000'
3781-84	NG	6.562'
3785	SP	0.000'
3786-89	NG	6.562'
3790	SP	0.000'
3791-94	NG	6.562'
3795	SP	0.000'
3796-99	NG	6.562'
3800-3921	NG	6.562'



0600 Meet with Crew/Load Equipment.
 0645 Launch Boat
 0755 Start Static (BASCOFIELD 2)
 0830 Topo Transsect Lines
 1305 Tie-in Settlement Plates
 Settlement Plates 1514/152 Not found
 Settlement Plates P#s 4156, 4168, 4180
 were not on the Settlement Plate List
 1525 End Static (BASCOFIELD 2)
 1635 Arrive @ Launch/unload boat
 1730 Arrive @ trailer/charge equipment
 and prepare data

89871381.T02
 BA SCOFIELDS 2
 278985.580
 383 2299.840
 3937



B. Costello
 S. Balge
 G. Spiller

(138) 5:18:17
 Thurs

CPRA

20170061

Barataria Barrier Islands
 Restoration Project
 Plaquemines Parish

LA South Zone INAD 1983
 Geoid 12B

Temp: 83°/75°
 Pressure: 29.99 in

BSC-138-2017-2070061



Point	Code
3922-31	NG
3932	WES
3933-53	WB
3954-65	NG
3966	WES
3967-89	WB
3990-1001	NG
4002	WES
4003-26	WB
4027-34	NG
4035	WES
4036-55	WB
4056-63	NG
4064	WES
4065	WB
4066-74	NG
4075	WES
4076-88	WB
4089-99	NG
4100	WES
4101-18	WB
4119-22	NG
4123	WES

H.I.
6.562



(138) 5.18.17

Point	Code	H.I.
412439	WB	6.562'
4140-49	NG	6.562'
4150	WES	6.562'
4151-55	WB	6.562'
4156	SP	0.000'
4157	BOLT	3.140'
4158-61	NG	6.562'
4162	SP	0.000'
4163	BOLT	6.562'
4164-67	NG	6.562'
4168	SP	0.000'
4169	BOLT	6.562'
4170-73	NG	6.562'
4174	SP	0.000'
4175	BOLT	6.562'
4176-79	NG	6.562'
4180	SP	0.000'
4181	BOLT	2.570'
4182-85	NG	6.562'



0600 Meet with Crew/Load Equipment
 0645 Launch Boat
 0725 Start Static (BA SCOPFIELD 2)
 0800 Topo Traversed Lines
 1228 End Static (BA SCOPFIELD 2)
 1330 Arrive @ Launch/Unload Boat
 1420 EIR to Lafayette office
 1845 Arrive @ office/unload equipment
 and prepare data

A 29871390.702
 N BA SCOPFIELD 2
 E 278985.580
 Z 3832299.840
 3.937



B. Castille
 S. Baigle
 G. Spiller
 (139) 5-9-17
 Fri

CPR
 20170061
 Barataria Barrier Islands
 Restoration Project
 Plaquemine Parish

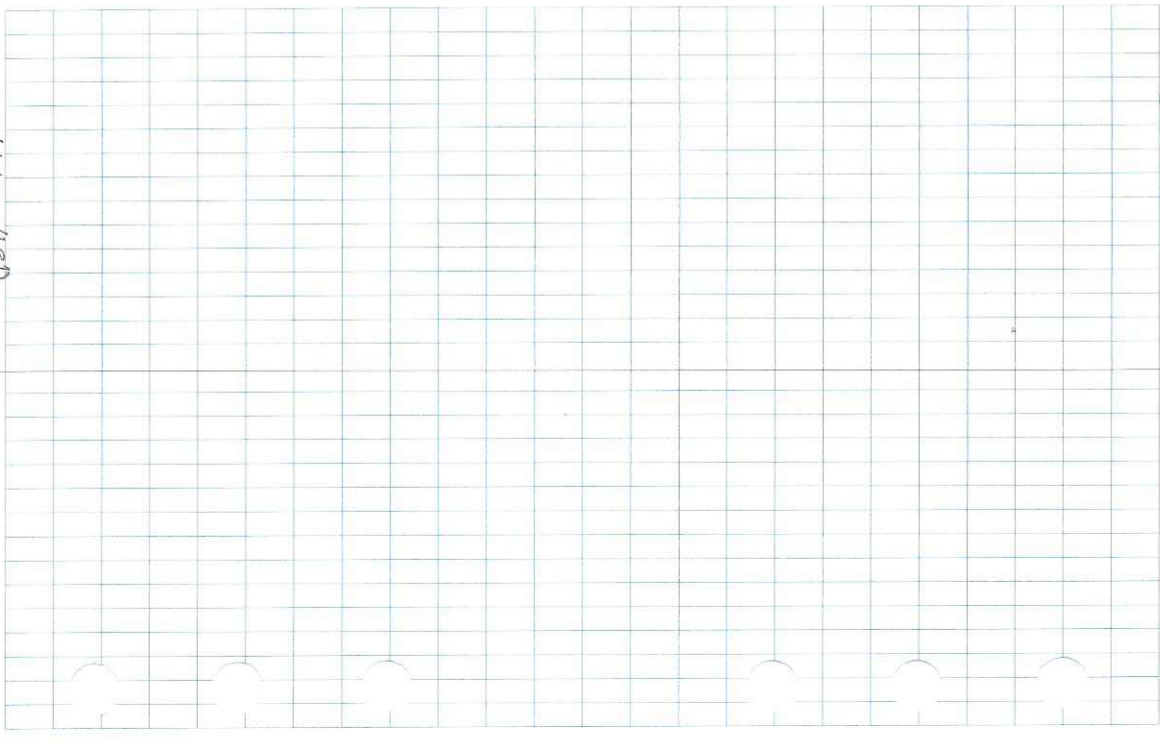
LA South Zone INAB 1983
 Geoid 12 B

Temp: 85.0/76.0
 Pressure: 29.96 in

BEC_139_2017_20170061



(139) 5-19-17



JCLS BOOK NO. 1494

Point	Code	H.I.
4316	WES	6.562
4317-40	WB	
4341-52	NG	
4353	WES	
4354-72	WB	
4373-82	NG	
4383	WES	
4384-4400	WB	
4401-09	NG	
4410	WES	
4411-26	WB	
4427-31	NG	
4432	WES	
4433-46	WB	
4447-51	NG	
4452	WES	
4453-68	WB	



JCLS BOOK NO. 1494

6/27/17

I. DEVILLIERZ

G. SHULER

CPRA

5 ISLAND SURVEY

PLAQUEMINES PARISH

2017 0061

NAD 83 LA SANTA

JSD 179 - 2017 - 2017 0061



239 MILES

8

0530 @ OFFICE

0600 DEPART

1045 @ DOK

1100 DEPART

1802 BASE @ BA SCOTFIELD 2

1815 START SURVEY

1507 END

1530 DEPART

1600 @ DOK

1630 DEPART

1730 ARRIVE @ HOTEL



60304 WS HR=2m
 60303 WB ↑
 60305 WB
 60304 WES
 60303 NG ↑
 60306 NG
 60305 WB ↑
 60303 WB
 60302 WES
 60301 NG ↑
 60305 NG
 60304 WB ↑
 60303 WB
 60302 WES HR=2m



* 14 TRANSECTS ON GULFSIDE



12

L-95 278 MILES

0530 LANDING TRUCK

0600 DEPART

0640 @ DOCK

0700 STANDBY ON WEATHER

0730 DEPART DOCK

1000 BASE @ BA SCOFFIELD

1030 START SURVEY

1230 STORMS APPROACHING, PREPARING

TO SHUT DOWN BASE AFTER TIDE HAS

COMPLETED

1324 END BASE

1400 @ DOCK

1430 @ HOTEL

1530 IN ROUTE TO OFFICE

2030 @ OFFICE



12

6/28/77

CLOUDY 78°

J. DEVILLER

C. STILLER

CPRA

S BARRIER ISLAND SURVEY

PLAQUEMINES PARISH

20170061

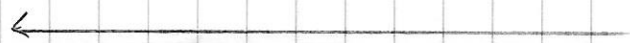
NAD 83 LA SOUTH

ISD-179-2017-20170061



60435 WS
 60434 WB
 ↑
 60418 WB
 60417 WES
 60416 NG
 ↑
 60419 NG
 60411 WB
 ↑
 60394 WB
 60393 (DELETED)
 60392 WES
 60391 NG
 ↑
 60390 NG

HZ = JM



HZ = JM



X 6 TRANSECTS ON GULFSIDE



12

L-95 278 MILES

0530 LANDING TRUCK

0600 DEPART

0640 @ DOCK

0700 STANDBY ON WEATHER

0730 DEPART DOCK

1008 BASE @ BA SCOFFIELD

1030 START SURVEY

1230 STORMS APPROACHING, PREPARING

TO SHUT DOWN BASE AFTER TIDE HAS

COMPLETED

1324 END BASE

1400 @ DOCK

1430 @ HOTEL

1530 IN ROUTE TO OFFICE

2030 @ OFFICE



12

6/28/77

CLOUDY 78°

J. DEVILLER

C. STILLER

CPRA

S BARRIER ISLAND SURVEY

PLACEMINES PARISH

20170061

NAD 83 LA SOUTH

ISD-179-2017-20170061



60435 WS
 60434 WB
 ↑
 60418 WB
 60417 WES
 60416 NG
 ↑
 60412 NG
 60411 WB
 ↑
 60394 WB
~~60389 (over)~~
 60392 WES
 60381 NG
 ↑
 60378 NG

H2 = 8m



H2 = 8m



X 6 TRANSECTS ON GULFSIDE



15

L-95 242 MILES

0630 @ OFFICE

0630 DEPART

1045 ARRIVE @ MARINA

1130 BTI BOMB MOTOR NOT RUNNING,

PAT BACK ON TRAILER

1200 HEAD TO JOBSITE ON HIGHWAY

1249 BASE @ BA SCOTFIELD 2

1300 START SURVEY

1530 END

1400 @ DOCK

1630 DEPART

1730 ARRIVE @ HOTEL



15

7/10/17

J. DEVILIER

T. EVANS

CPRA

S BARRER ISLAND SURVEY

PLAQUEMINES PARISH

20170061

NAD 83 LA SOUTH

333-191-2017-20170061



16

60514	WB	HR=2M	60573	WES	HR=2M
60513	WES	↑	60572	WB	
60512	NG		↑		
↑			60567	WB	
60501	NG		60566	WES	
60500	WB		60565	NG	
↑			↑		
60453	WB		60551	NG	
60452	WES		60550	WB	
60451	NG		↑		
60450	NG		60534	WB	
60449	WES		60533	WES	
60448	WB		60532	NG	
↑			↑		
60442	WB		60521	NG	
60441	WES		60520	WES	
60440	NG		60519	WB	
↑			↑		
60436	NG	HR=2M	60515	WB	HR=2M

BASE @ BA SCOFFIELD 2

N. 27995.580

E. 393229.840

ELEV. 3.937

JCLS BOOK NO. 1145



16

* 6 TRANSECTS (SHELL WEST)

JCLS BOOK NO. 1145



HR=2M



60641 WES

60640 NG

↑

60639 NG

60638 WB

↑

60615 WB

60614 WES

60613 NG

↑

60607 NG

60606 WB

↑

60595 WB

60594 WES

60593 NG

↑

60598 NG

60597 WB

↑

60577 WB

60510 WES

60575 NG

60574 NG

60659 WB

↑

WB

HR=2M

JCLS BOOK NO. 1145



X 6 TRANSECTS (SHELL WEST)

JCLS BOOK NO. 1145



18

L-25 72 MILES

0536 LOADING TRUCK

0630 DEPART

0700 @ MARINA

0730 IN ROUTE TO SITE

0801 BASE @ BA SCOFFIELD ?

0845 START SURVEY

1502 END

1530 DEPART

1600 @ DOCK

1630 DEPART

1730 ARRIVE @ HOTEL

JCLS BOOK NO. 1145



18

7/11/17

I. DEVILLIEZ

T. EVANS

CPRA

S BARRIER ISLAND SURVEY

RACEMINES PARISH

20170061

NAD 83 LA SOUTH

ISS-192-2017-20170061

JCLS BOOK NO. 1145



60709 WB	HR=2m	60747 NC	HR=2m
60708 WES	↑	60772 NC	↑
60707 NG	↑	60771 WB	↑
60700 NG	↑	60759 WB	↑
60699 WB	↑	60758 WES	↑
60688 WB	↑	60757 NC	↑
60687 WES	↑	60746 NC	↑
60686 NG	↑	60745 WB	↑
60679 NG	↑	60738 WB	↑
60678 WB	↑	60731 WES	↑
60665 WB	↑	60730 NC	↑
60664 WES	↑	60721 NC	↑
60663 NC	↑	60720 WB	↑
60664 NC	NR=2m	60710 WB	NR=2m

Base @ BA Seafield

N. 279785.590
 E. 3832299.940
 ELEV. 3.937



SEE PAGE 28



60921	WES	HR=2m	60990	WB	HR=2m
60930	WB	↑	60989	WES	↑
			60988	NG	
60927	WB		↑		
60926	WES		60887	NG	
60925	NG		60881	WB	
			↑		
60921	NG		60869	WB	
60920	WB		60867	WES	
			60866	NG	
60916	WB		↑		
60905	WES		60862	NG	
60904	NG		60861	WB	
60903	WES		↑		
60902	WB		60850	WB	
60901	WB		60849	WES	
60900	WES		60848	NG	
60899	NG		↑		
			60843	NG	
60894	NG		60842	WB	
60893	WB		↑		
			60834	WB	
60899	WB		60833	WES	
60898	WES	HR=2m	60832	NG	HR=2m

JCLS BOOK NO. 1145



SEE PAGE 22

JCLS BOOK NO. 1145



21

60926 NG

↑

HR = 2M

60923 NG

↑

60922 BOLT

HR = 2M

60924 SETTLEMENT PLATE

HR = 0.0

60920 NG

HR = 2M

↑

60917 NG

↑

60916 BOLT

HR = 2M

60915 SETTLEMENT PLATE

HR = 0.0

60914 NG

HR = 2M

↑

60911 NG

HR = 2M

60910 BOLT

HR = 2M

60909 SETTLEMENT PLATE

HR = 0.0

60905 NG

HR = 2M

↑

60905 NG

HR = 2M

60904 BOLT

HR = 2M

60903 SETTLEMENT PLATE

HR = 0.0

60907 WB

HR = 2M

↑

60991 WB

HR = 2M

SEE PAGE 22

21



60932	NG	HR = 2m
↑		
60929	NG	↑
60989	BOLT	HR = 2m
60927	SETTLEMENT PLATE	HR = 0.10



* 11 TRANSECTS GULFSIDE (SHELL WEST)

* 5 SETTLEMENT PLATES (SHELL WEST)

23

L-85 72 MILES

0530 LANDING TRUCK

0630 DEPART HOTEL

0730 ARRIVE @ MATINA

0750 DEPART DOCK

0809 BASE @ BA SCOFFIELD &

0845 START SURVEY

1511 END

1530 DEPART SUBSITE

1600 @ DOCK

1630 DEPART

1730 ARRIVE @ HOTEL

JCLS BOOK NO. 1145



23

7/12/17

SUNNY 81°

J. DEVILLIEZ

T. EVANS

CPRA

5 BARRIER ISLAND SURVEY

PLACEMINES PARISH

20170061

NAD 83

LA SOUTH

532-193-2017-20170061

JCLS BOOK NO. 1145



24

60984	WB	H2=8m	61035	NG	H2=8m
60989	WES	↑	61034	NG	↑
60988	NG		61033	WB	
↑			↑		
60973	NG		61025	WB	
60972	WB		61024	WES	
↑			61023	NG	
60967	WB		↑		
60966	WES		61013	NG	
60965	NG		61012	WB	
↑			↑		
60958	NG		61005	WB	
60957	WB		61004	WES	
↑			61003	NG	
60943	WB		↑		
60942	WES		60993	NG	
60941	NG		60992	WB	
↑			↑		
60933	NG	H2=8m	60985	WB	H2=8m

Base @ BA SCOPED 2

N- 27995.590

E- 393229.940

ELEV- 3.137

JCLS BOOK NO. 1145



24

SEE PAGE 27

JCLS BOOK NO. 1145



6104	NG	HR = 2m	6105	WB	HR = 2m
↑		↑	6104	WB	
6103	NG		6103	WES	
6102	WB		6102	NG	
↑			↑		
6104	WB		6104	NG	
6103	WES		6103	WB	
6102	NG		↑		
↑			6100	WB	
6101	NG		6101	WES	
6100	WB		6100	NG	
↑			↑		
6103	WB		6103	NG	
6102	WES		6102	WB	
6101	NG		↑		
↑			6103	WB	
6102	NG		6102	WES	
6101	WB		6101	NG	
↑			↑		
6104	WB		6104	NG	
6103	WES		6103	WB	
6102	NG		↑		
↑			6106	WB	
6106	NG	HR = 2m	6105	WES	HR = 2m

SEE PAGE 27

HR=2m

NG

61240

↑

NG

61233

WB

61232

↑

WB

61216

WES

61215

NG

61214

↑

NG

61212

WES

61211

WB

61210

↑

WB

61204

WES

61203

NG

61202

↑

NG

61189

WES

61197

WB

61196

↑

WB

61169

WB

61168

↑

WB

61166

HR=2m

61241

WES

HR=2m

JCLS BOOK NO. 1145



SEE PAGE 21

JCLS BOOK NO. 1145



61346	TARGET PICKED UP	HR=2m
61347	NG	HR=2m
	↑	
61344	NG	↑
61345	BOLT	HR=2m
61348	SETTLEMENT PLATE	HR=0.0
61341	NG	HR=2m
	↑	
61339	NG	↑
61337	BOLT	HR=2m
61336	SETTLEMENT PLATE	HR=0.0



* 4 TRANSECTS (SHELL EAST)
 * 12 TRANSECTS (SHELL WEST)
 * 3 TARGETS PICKED UP
 * 2 SETTLEMENT PLATES



28

L-85 250 MILES

0530

LOADING TRUCK

0630

DEPART

0730

@ MARINA, STANDBY ON RAIN SHOWER

0830

IN ROUTE TO JOBSITE

0913

BASE @ BA SCOFFIELD

0930

START SURVEY, LIMITED SETTLEMENT

PLANTS NOT SURVEYED

1058

END

1130

DEPART JOBSITE

1800

ARRIVE @ DOCK

1830

DEPART

1700

ARRIVE @ OFFICE



28

7/13/17

SUNNY 81°

I. DEVILLIER

T. EVANS

CPR

S BARRIER ISLAND SURVEY

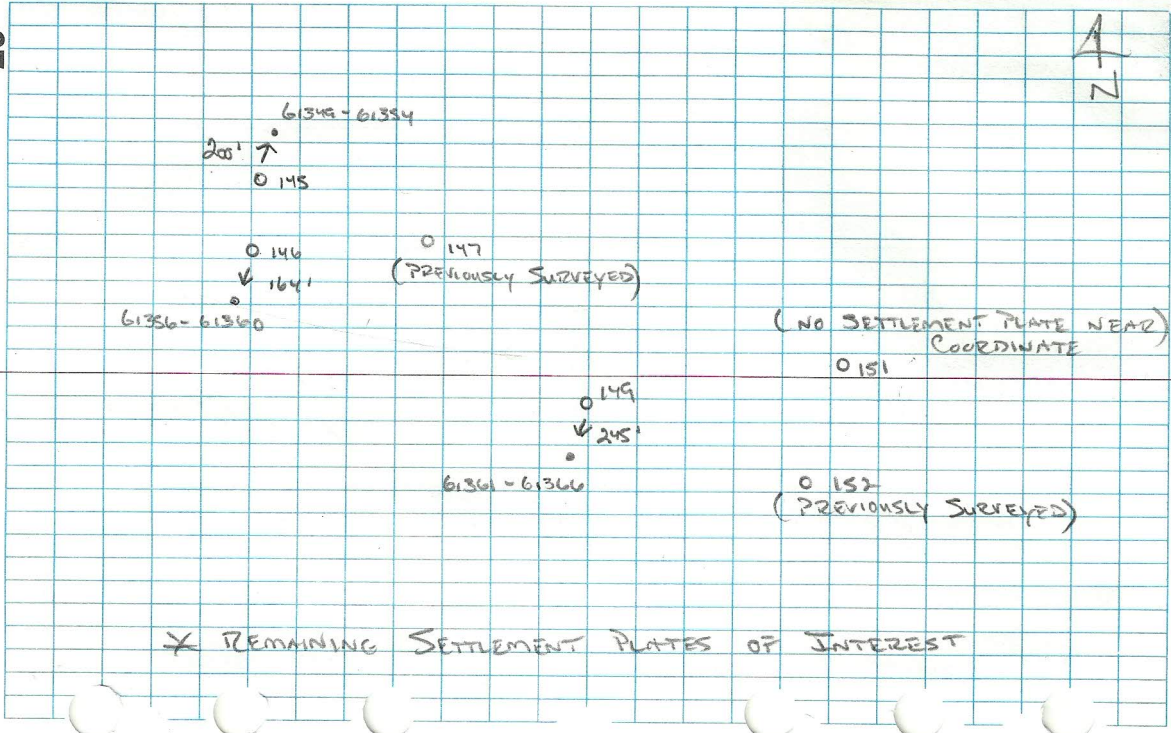
PLAQUEMINES PARISH

20170061

NAD 83 LA SOUTH

133-194-2017-20170061

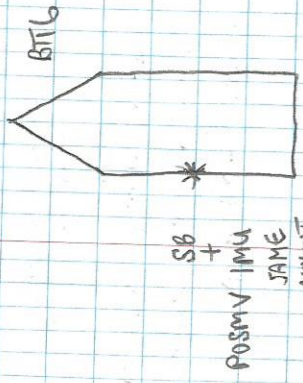




61306	NG	HR = 2m
↑		↑
61363	NG	HR = 2m
61362	BOLT	HR = 2m
61361	SETTLEMENT RATE	HR = 0.0
61360	NG	HR = 2m
↑		
61357	NG	
61356	SETTLEMENT PLATE	HR = 0.0
61355	TARGET PICKUP	HR = 2m
61354	NG	HR = 2m
↑		↑
61351	NG	
61350	BOLT	HR = 2m
61349	SETTLEMENT PLATE	HR = 0.0
BASE @ BA SCOFFLID 2		
N.	178955.580	
E.	3832249.840	
ELEV.	3.937	

TIM SONNIGER
STURGEY DAVILE

CIPRA
S-15 LAND BARENTINCA BASIN
BATRY SURVEY
HYRACK, POSMV, ODOM SB
NIND 83, LA SOUTH
NEED DIB, FEET



SEE ATTACHED FOR OFFSETS



0500 LEAVING OFFICE
1000 ARRIVED AT BOAT LAUNCH
1030 SOUND VELOCITY AT BOAT DOCK 4970
1042 BAR CHECK

BT16 DRAFT 1.0	
INDEX DIB	BAR CHECK ODOM SB
SV 4970	5 5.0
SV 4974	10 10.0

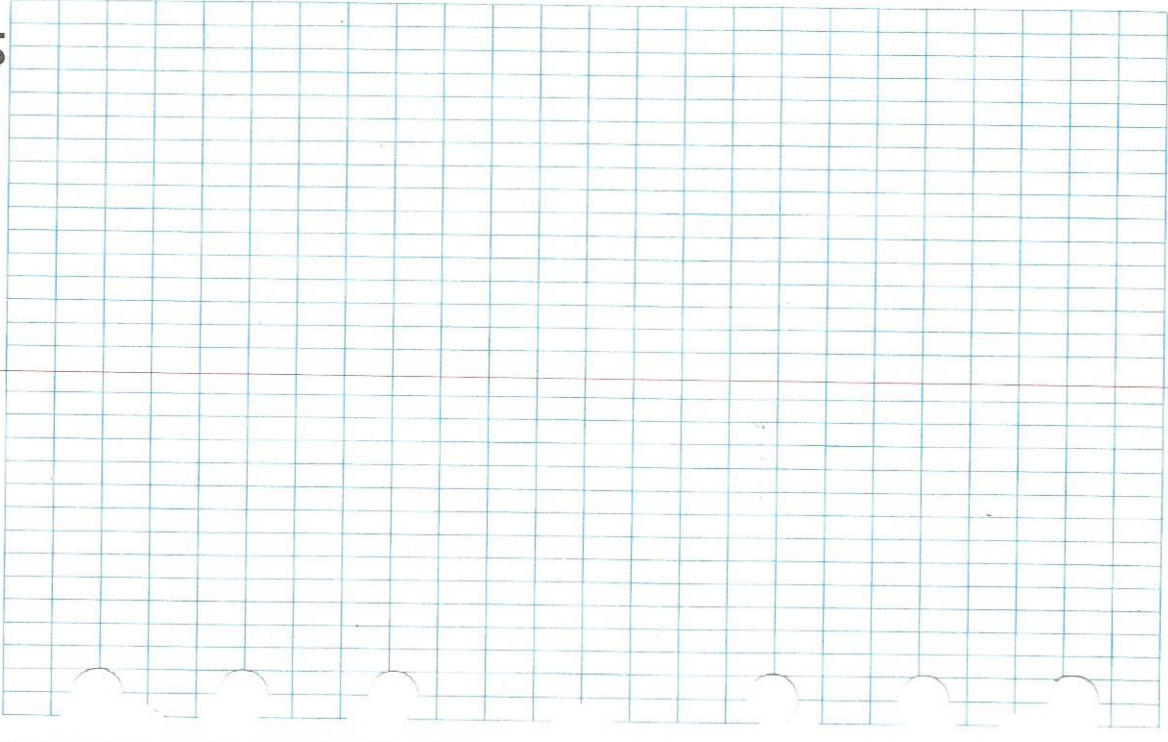
1050 CHANGE ECHOTRAC DRAFT TO 0.0
ADD 1.0 DRAFT TO ECHOTRAC IN HYRACK.
1055 MOVE UP SB + POSMV.
1125 EIR TO SURVEY AREA, CHEVIE RONDVILLE
1236 SV CAST #2 4966, BEHIND ISLAND
1238 POSMV GAMMA'S CALIBRATION
1249 START POSMV LOGGING
1300 weather Partly cloudy, Seas 1 to 2,
SE wind 10 to 15, TIDE FALLING

1306 SOL 28 Bad Data SB TRANSDUCER NOT IN MOUNT.
1319 SOL 28A Bad Data
1336 SOL 35 Bad Data
1413 SOL 35A
1439 SOL 28 B





61	TAS-107-170061	Monday 4/17/17
1456	SOL 27	
1518	SOL 26	
1530	SOL 25	
1534	SOL 25A	
1542	SOL 25B	
1600	SU CAST #3, BEHIND ISLAND	4968
1612	STOP POSING LAPPING	
1900	BACK AT BOAT LAUNCH	
	<u>WATER SURFACE SHOTS</u>	
1301	ELEVATION; +1.019	NEAR CONTROL PT. 3
1306	ELEVATION; +1.038	NEAR CONTROL PT. 2
1650	ELEVATION; +0.889	NEAR CONTROL PT. 3



62

TAS 108-170061 TUESDAY 4/18/17

0600 LEAVING TFF TRAILER

0715 ARRIVED AT BOAT LAUNCH

0818 SV CAST #1 IN JUNEY AREA 4955

0820 BAR CHECK

INDEX 0.1	BAR CHECK POLE	DRAFT 1.0'	ODDM SB
SV 4955	5	5	5
SV 4956	10	10	10

0824 CHANGE ECHOTRAC DRAFT TO 0.0

ADD 1.0 DRAFT TO ECHOTRAC IN HYRACK.

0825 MOVE UP SB + POSMV IMU MOUNT.

0842 POSMV GAMMA'S CALIBRATION

0845 START POSMV LOGGING

0901 WEATHER: SUNNY, S.E. WINDS 10-15, SEAS 1-2'

TIPS

0901 SOL 24 CHERIER RONQUILLE

0913 SOL 23 ISLAND

0915 SOL 23A

0924 SOL 22

0936 SOL 21

0938 SOL 21A

0948 SOL 20

0959 SOL 19

1001 SOL 19A

TAS 108-170061

TUESDAY 4/18/17

62

TIM SONNIG
STANUT DAILBLE

CPRA

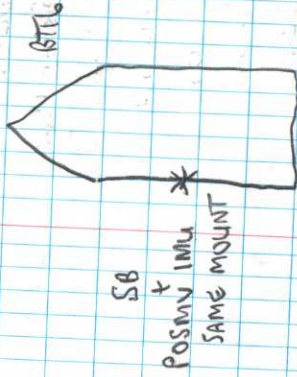
5 ISLAND BARATARIA BASIN

BATHY SUANEY

HYRACK POSMV ODDM SB

NAD 83 LA SOUTH

6501D 012B FEET



SEE ATTACHED FOL OFFSETS

63

TAS 108-170061

Tuesday

4/18/17

1011 SOL 18

1022 SOL 17

1024 SOL 17A

1034 SOL 16

1048 SOL 15

1051 SOL 15A

1100 SOL 14

1111 SOL 13

1113 SOL 13A

1121 SOL 12

1133 SOL 11

1141 Seas on Gulf side 2 to 3 ft

1149 SOL 10

1208 SOL 11A

1225 SOL 09

1250 SOL 08

1310 SOL 07

1336 SV East #2 4962

1340 SOL 06

1403 SOL 36

1500 STOP POSMAN LOGGING

1700 BACKAT BOAT LAUNCH

TAS 108-170061 TUESDAY 4/18/17

WATER SURFACE SHOTS

0900 ELEVATION: +0.772 SCOFFIELD ISL.

1245 ELEVATION: +1.634 PELICAN ISL.

1533 ELEVATION: +0.957 PELICAN ISL.

64

TAS109_170061 WEDNESDAY 4/19/17

0600

LEAVING T-17 TRAILER

0710

ARRIVED AT BOAT LAUNCH

0758

SV CAST #1 IN SURVEY AREA 4959

0800

BAR CHECK

BT16 DRAFT 1.0'

INDEX 0.1	BAR CHECK POLE	ODOM SB
SV 4959	5	5
SV 4959	10	10

0805

CHANGE ECHOTRAC DRAFT TO 0.0

0806

ADD 1.0 DRAFT TO ECHOTRAC IN NYRACK

0807

MOVE UP SB + POSMV IMU MOUNT.

0807

POSTIV GAMMA'S CALIBRATION

0808

START POSMV LOGGING

WEATHER: SUNNY, SE WINDS 10-15, SEAS 1-2'

TIDE: RISING

0836

SOL 38 CHERIEF RONVILLE

0903

SOL 37 ISLAND

0915

SOL 39

0921 Gulf Side Seas 2 to 3 FT.

0937

SOL 05

0955

SOL 04

1001

SOL 04A

1021

SOL 03

1032 Seas ESE Building up to 2 to 4 ft.

64

TAS109_170061 WEDNESDAY 4/19/17

TIM DOWNING

STUART DALBE

CARA

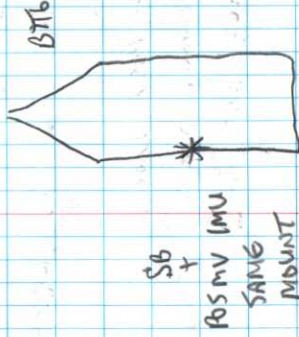
5 ISLAND BARRAJUA BASIN

BATHY SURVEY

HYRACK POSMV ODOM SB

NAD 83 CA SOUTH

6010 0128, FEET



SEE ATTACHED FOL SHEETS

65

TAS109-120061

Wednesday

4/19/17

1036 SOL 02

1054 SV CART #2 4962, GULFSIDE

1057 SOL 01

1127 SOL 1A

1141 SOL 13

1152 SOL 14

1154 SOL 14A

1206 SOL 15

1217 SOL 16

1230 SOL 17

1243 SOL 18

1257 SV CART #3 4972, GULFSIDE

1303 SOL 19

1330 Stop POS MV Logging

1340 SHUTDOWN DUE TO WEATHER. SEAS (35') TOO ROUGH

1500 BACK AT BOAT LAUNCH

WATER SURFACE SHOTS

0825 ELEVATION: +0.394 SCOFFIELD

0833 ELEVATION: +0.518 E. SHELL PELICAN ISLAND

1203 ELEVATION: +0.791 SCOFFIELD

1210 ELEVATION: +0.821 E. SHELL PELICAN ISLAND

1335 ELEVATION: +0.718 SCOFFIELD

1344 ELEVATION: +0.822 PELICAN ISLAND



TAS 110-170061 THURSDAY 4/20/17

0600

LEAVING TTT TRAILER

0700

ARRIVE AT BOAT LAUNCH

0743

SV EAST #7 IN SURVEY AREA 4958

0744

BAR CHECK

BT16 DRAFT 1.0'

INDEX 0.1	BAR CHECK POLE	ODOM SB
SU 4958	5	5
SU 4958	10	10

0745

CHANGE ECHOTRAC DRAFT TO 0.0

ADD 1.0 DRAFT TO ECHOTRAC IN HYPACK

0747

MOVE UP SB + POSMV IMU MOUNT.

0749

POSMV GAINS CALIBRATION

0759

START POSMV LOGGING

0800

WEATHER: SUNNY, SE WINDS 10-15, SEAS 1-2'

TIDE: RISING

0809

SOL 4A CHERYL RONQUILLE

0833

SOL 4AA ISLAND

0850

SOL 22

0852

SOL 23

0855

SOL 24

0903

SOL 21

0908

SOL 22A

0909

SOL 22B

0912

SOL 23A

TAS 110-170061 THURSDAY 4/20/17

TIN JOHNSON

STUART DAISIE

CPRA

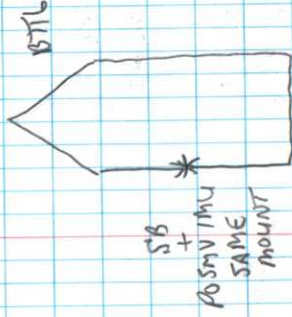
5. ISLAND BAKANTAKA BASIN

BATTERY JUKUCH

HYPACK POSMV ODOM SB

NAD 83 LA SOUTH

6 EOD 012B, F667



SEE ATTACHED FOR OFFSETS

67

TAS 110-170061 Thursday 4/20/17

0916 SOL 24A

0917 SOL 24B

0924 SOL 42B

1010 SOL 40

1045 SOL 41

1128 weather: Gulf side seas 2 to 4 ft.

Sunny ESE winds 10/15

1132 SV Cast #2 4978 Gulf side

1136 SOL 34

1151 SOL 33

1205 SOL 32

1220 SOL 31

1234 SOL 30

1247 SOL 29

1301 SOL 28

1317 SOL 27

1318 SOL 27A

1332 SOL 26

1347 SOL 25

1401 SOL 24

1417 SOL 23

1419 SOL 23A

1433 SOL 22

1450 SOL 21

67

TAS III - 17061 FERRY 4/21/17

- 0600 LEAVING TET TOWER
- 0630 ARRIVE AT BOAT LAUNCH
- 0720 ARRIVE AT SURVEY AREA
- 0725 SV CAST #1 4974 GULFIDE
- 0730 BAR CHECK

BTB DRAGE LO

INDEX 0.1	1/2 hr check	POLE	ODOM SB
SV 4974	5		5
SV 4974	10		10

- 0735 CHANGE DRAFT IN ECHOTRAC TO 0.0
- 0736 ADD 1.0 DRAFT TO ECHOTRAC IN HYPACK
- 0735 POBE UP SB+IMV MOUNT.
- 0740 POSMV GAINS CALIBRATION
- 0745 START POSMV LOGGING
- WEATHER: SUNNY WIND ESE S-10
- SEAS 1-2 TIDE: RISING

- 0825 SOL 89
- 0913 SOL 88 SHELL WEST ISLAND
- 1013 SOL 86
- 1049 SOL 85 USE STATIC BASE ON CHEMICAL ROSSVILLE ISLAND

1130 START WORK TO TRAVEL BACK TO LAZYVOTE



TAS III - 17061

FERRY 4/21/17

TIM SANNISU
STRAUT ANGLE

CPRA

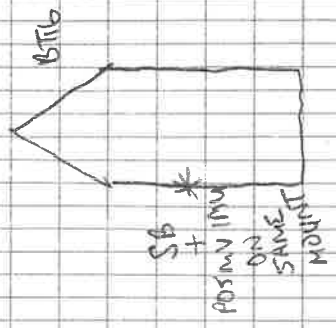
BARATARIA BASIN S-15 LAND

BATHY SURVEY

HYPACK POSMV ODOM SB

NND 83 LA SOUTH

62017 019B, FEET



SEE ATTACHED FOR OFFSETS



70

TR-111-17066 Friday 4/24/17

1132 5:00 POSITIVE LOGGING

1300 BACK AT BOAT LAUNCH

1810 BACK AT OFFICE

Water Surface Shots

0825 Elevation: 10,597 Chester Ravine

1118 Elevation: 10,749 Chester Ravine

70



68

TAS 110-170061 Thursday 4/20/17

1504 SOL 20

1535 STOP POSMV LOGGING

1735 BACK AT BOAT CAUSEWAY

WATER SURFACE SHEETS

0755 ELEVATION: +0.407 EMILIES BERTI

1308 ELEVATION: +0.919 PELICAN

1548 ELEVATION: +1.017 PELICAN

68

TAS114_170061 MONDAY 4/24/17

0500 LEAVING OFFICE

0900 ARRIVED AT T+T TRAILER TO 66T BOAT.

0942 ARRIVED AT BOAT LAUNCH

1025 ARRIVE AT SUANEY AREA

1053 SV EAST #1 5007 GULFSIDE

1055 BANK CHECK

BTLS DRAFT 1.0'		BAL CHECK		ODDMA SB	
INDEX OIL	MILE	5	10	5	10
SV 5000	5				
SV 5007	10				

CHANGE DRAFT IN ECHOSTAR TO 0.0

ADD 1.0 DRAFT TO ECHOSTAR IN HYPACK

1025 MAKE UP SB + IMU MOUNT.

1033 POSMV GAMMAS CALCULATION

1039 START POSMV LOGGING

WEATHER: SUNNY WINDS EAST 15-20
SEAS: 3 to 5' TIDE!

1104 SOL 94A

1105 SOL 94B

1116 SOL 93

1126 SOL 92

1136 SOL 91

1153 SOL 94C

1217 SOL 94D

TIM SONNICK

STEWING DANCE

CPRA

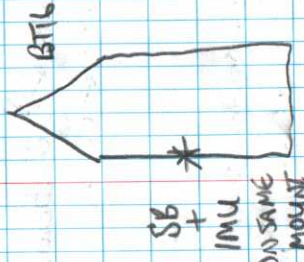
BARATARIA BASIN 5-15 LAND

BOATY SURVEY

HYPACK POSMV ODDMA SB

NAD 83 LA SANTA

66ND 012B, FEET



SEE ATTACHED OFFSETS PAGE

72

TAG 114-170061

Monday

4/24/17

1242 SOL 99

1249 SOL 100

1257 SOL 101

1304 SOL 102

1312 SOL 103

1320 SOL 104

1328 SOL 105

1341 SOL 106

1355 SOL 110

SV CAST #2 4986
EMPIRE BULSTRO AT SERVICES

1451 STOP POSTMUN LANDING

1550 STANBY AT LOCKS, DRAW BRIDGE CLOSED

1700 BACK AT BOAT LAUNCH

WATER SURFACE SHOTS

1712 ELEVATION: +0.609 RONQUILLE ISLAND

73

TAS 115-170061 TUESDAY 4/25/17

0600 LEAVING TRAILER

0630 ARRIVED AT KEAT LAUNCH

0720 ARRIVED AT SUNNY AREA

0753 SV CART #1 500'S BUSSEING

0755 BAK CHECK

BT16 DRAFT 1.0'		
INDEX 01	BACK CHECK POLE	ODOM SB
SV 500'S	5	5
SV 500'S	10	10

0756 CHANGE ELECTRIC DRAFT TO 0.0

ADD 1.0 DRAFT TO ELECTRIC IN TRACK

0772 MORE UP SB+IMM MOUNT

0729 POS MV GAMMS CALCULATION

0735 START POSMV LOGGING

WEATHER: SUNNY W/ST WIND S-W

JEAS: 1-2 TIDE!

0759 SOL 81

0817 SOL 80

0820 SOL 80A

0839 SOL 79 Completed Pos Had to
Be RESTARTED

0905 Start Posmv Logging

0920 SOL 78

0941 SOL 79A

JCLS BOOK NO. 1127



73

TAS 115-170061 TUESDAY 4/25/17

TIM SOMMER
STEWART DANCE

CPRA

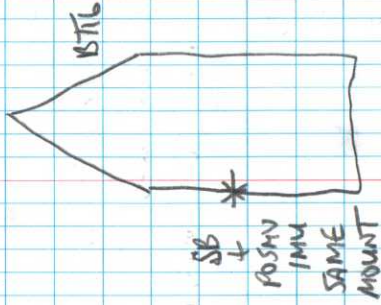
BARRACIA BASIN 5-BLIND

BATHY JUNEY

INPACE POSMV ODOM SB

NAD 83 LA SOUTH

6E0D 0128, FEET



DIFFERS ON ATTACHED SHEETS

JCLS BOOK NO. 1127



74

TAS115-170061

Tuesday

4/25/17

1000 SOL 77

1019 SOL 76

1021 SOL 76A

1040 SOL 75

1059 SOL 74

1101 SOL 74A

1122 SOL 73

1140 SOL 72

1142 SOL 72A

1205 SOL 71

1224 SOL 70

1226 SOL 70A

1236 Weather: Sunny west wind 10 to 15

Seas 2-3'

1250 SV CASE #2 4987 BULGIVE

1252 SOL 69

1311 SOL 68

1313 SOL 68A

1334 SOL 67

1415 STOP POS MV LOBBING

1530 BACK AT BOAT CATCH

2000 BARRAT OFFICE IN LA FAYETTE

WATER SURFACE STATS

0904 +0.830 RONQUILLE

1318 +0.777 RONQUILLE



TAS128-170061 MONDAY 5/8/10

0600 LEAVING TRAILER
0700 WAKOAO AT

0735 ARRIVED AT SURVEY AREA

0741 SV CASE #1 4929 BUESIDE

BNC CHECK

RTTB DEACT 1.0'

INDEX 0.1	BNC CHECK POS	ODOM SB
SV 4929	5	5
SV 4929	10	10

0744 CHANGE ELECTRIC DRAG TO 0.0'

0745 ADD 1.0' DRAG TO ELECTRIC IN TRACK

0747 MOVE UP SB + IMU MOUNT.

0757 POSMV GAINS CALIBRATION

0801 START POSMV Lobbying

WENTHILL. SUNNY WIND SWD SE.

SENS. 1.2' TIDE, FLOWING

0833 SOL 43 50' Short to beach - Sand

0848 SOL 44 50' Short to beach - bar

0851 SOL 44A

0905 SOL 45 50' Short to beach

0919 SOL 46 "

0923 SOL 46A

0934 SOL 47 "

0953 SOL 47

JCLS BOOK NO. 1127

TAS128-170061 MONDAY 5/8/10

TIM SOMMER
TASDOL EVANS.

CORA

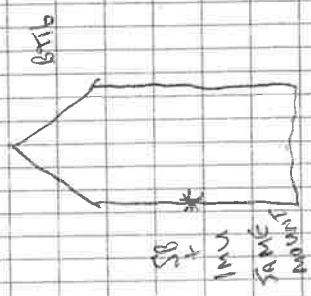
BAKARUA BASIN S-18 AND SURVEY

BATHY

HYDRO POSMV ODOM SB

NAD 83 LA SOUTH

BEAD 0.26, F1ST



OFFSETS ON ATTACHED SHEETS

JCLS BOOK NO. 1127

TAS 128-170061 MONDAY 5/8/17

0959 SOL 48 1/4 30' short to beach

1001 SOL 48A " " "

1013 SOL 49 " " "

1026 SOL 50 " " "

1028 SOL 50A " " "

1039 SOL 51 " " "

1052 SOL 52 " " "

1054 SOL 52A (Hypack Logged 52 on file name 53) ^{line}

1107 S.V. CRST #2 5001 BULLSIDE

1114 SOL 53A 1/4 30' short to beach

1127 SOL 54 " " "

1129 SOL 54A " " "

1140 SOL 55 1/4 50' short to beach

1154 SOL 56 " " "

1156 SOL 56A " " "

1210 SOL 57 " " "

1226 SOL 58 1/4 100' short to beach

1229 SOL 58A " " "

1244 SOL 59 1/4 50' short to beach

1314 SOL 60 " " "

1339 SOL 61 " " "

1414 SOL 62 " " "

1437 SOL 63 " " "

1507 SOL 64 " " "



TAS 128-170061 MONDAY 5/8/17

1411 SOL 64A 1/4 100' short to beach

1435 SOL 65 1/4 50' short to beach

1500 SOL 66

1501 SOL 66A

1502 SOL 66B

1635 STOP POSH LOOKING

1730 BACK AT BOAT LAUNCH

1830 LEAVING TET TRAILER

2000 BACK AT OFFICE IN LAKEVIEW

Water Surface Shots

0800 +0.4161 Ba Scafield

1206 +0.425 North of Pelican Island

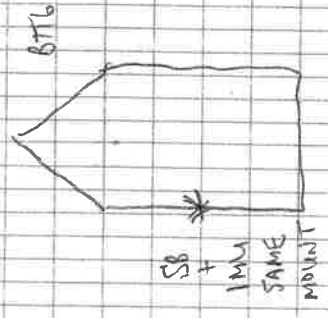
1539 -0.130 Near Scafield



TAS 130 - 170061 WEDNESDAY 5/10/17

TIM SOMNICH
JASON GRANGEL

CPRR
KARANTINA BASIN S-ISLAND
BATEY SURVEY
HYRACK POSMV ODOM SB
NAD 83 (A SOUTH)
6200 0126 FEET



OFFSETS ON ATTACHED SHEETS

TAS 130 - 170061 WEDNESDAY 5/10/17

LEAVING TOWLER
ARRIVED AT BOAT LAUNCH
ARRIVED AT SURVEY AREA
SU CAST #1 4929 GULFVIEW

BAR CHECK		
BTT6	DRIFT 1.0'	
INDEX 0.1	BAR CHECK	ODOM SB
SU 4929	10	5
SU 4929	10	10

CHANGE ELECTRONIC DRIFT TO 0.0
ADD 1.0 DRIFT TO ELECTRONIC IN HYRACK
MOVE UP SB + IMU MOUNT
POSMV GANIS CALIBRATION
START POSMV LOGGING

WOBATACK: P. CLUMP WIND: E 5-10
SURVEY: 2' SEAS: 1-2 TIDE: FALLING
start shell level - East

- 0813 SOL 89
- 0842 SOL 90
- 0900 SOL 95
- 0930 SOL 98
- 0943 SOL 98 start of R.ican
- 0952 SOL 99
- 0953 SOL 99-A
- 1001 SOL 101



2

TAS120-170061 WOODSONY 51017

1009 SOL 102

1010 SOL 102 A

1018 SOL 103

1024 SOL 104

1028 SOL 104 A

1036 SOL 105

1044 SOL 106

1046 SOL 106 A

1053 SOL 107

1102 SOL 112 start scaffold

1105 SOL 112 A

1113 SOL 113

1121 SOL 114

1122 SOL 114 A

1129 SOL 115

1137 SOL 116

1139 SOL 116 A

1145 SOL 117

1154 SOL 118

1155 SOL 118 A

1201 SOL 119

1210 SOL 120

1212 SOL 120 A

1219 SOL 121

JCLS BOOK NO. 1138



JCLS BOOK NO. 1138



2

3

TAS 130 170061 WEDNESDAY 5/10/17

1289 SOL 122 start scotland check line

1290 SOL 109 start Pelican check line

1321 SOL 097

1330 SOL 110 Pelican Harbour

1414 SOL 107

1423 SOL 110 A

1431 SOL 122 Scofield Harbour

1340 STOP POSTAL LOGGING

1700 BACK AT BOAT LAUNCH

1800 LEAVE T+T TRAILER

2200 BACK AT OFFICE

WATER SURFACE SHOTS

0745 +0.613' PELICAN ISLAND

1133 +0.623' SCOFIELD ISLAND

1313 +0.097' SCOFIELD ISLAND



0650 LEAVING OFFICE

0700 PICK UP BTIB AT MILK'S MARINE

1242 START ATK. BASE

POINT NAME: BA-40 SMOI

TIPS: 0668.000

N= 315492.604

E= 3854052.133

ELEVATION: -1.956'

1336 SU CASE I 5006, BACKSIDE SHELL EAST

1340 BAR CHECK DRAFT 1.0

INDEX Q.1	BAR CHECK POLE	ODDIN SB
SU 5006	5	5
SU 5006	10	10

CHUCK ECONOMIC DRAFT IS 0.0'

CRANKS GEOMETRIC DRAFT IN HURDLES IS 1.0'

1400 START POSMV LOGGING

WEATHER: P. CLOUDY WIND 6-10-15

SEAS: 1-2

1417 SOL 94

1426 SOL 93

1438 SOL 92

1452 SOL 91

COMPLETE SHELL EAST/BEGINS SHELL WEST

1505 SOL 81



TIM SOMMER

JASON GORNSKI

CPRA

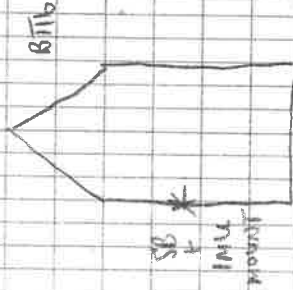
BANATRIA BASIN S-ISSAND

BATTERY SURVEY

HACK POSMV ODDIN SB

NAD 83 LA SOUTH

GEODOLITE, FEET



OFFSETS ON ATTACHED SHEETS



1583	TAS 177-16061	6/25/17	MONDAY
1533	SOL 79		
1534	SOL 79 A		
1544	SOL 78		
1545	SOL 78 A		
1553	SOL 77		
1555	SOL 77 A		
1604	SOL 76		
1615	SOL 75		
1617	SOL 75 A		
1625	SOL 74		
1643	SOL 73		
1705	SOL 72		
1736	SOL 71		
1832	SOL 70		

SV CASE 2 4996, BRACKSIDE JETTY EAST
 SIDE POSITIVE LOBBING
 BACK AT CONF LOUNCH
 508 RELEASE, FUE: 56491771
 We were not able to setup on island, causing
 us not to be able to take water surface
 shots. NO SIGNAL FOR SURFNET.
 ARRIVED AT AIRTEL



27

TAS179-170061 6/21/10 TUESDAY

0600 LEAVING MOTEL

0703 START RTX BASE

POINT NAME: BA-40 S.M.O.I

TYPE: DEEP ROD

N = 315692.604

E = 3854052.383

ELEVATION: - 1.856'

0710 ARRIVE AT BOAT LAUNCH

0715 MOVE UP BOAT

0755 SV EAST 1 4973 BACKSIDE SHELL BEAND

0756 BAR CHECKS

INDEX O.I.	BAR CHECK POLE	ODDOM SB
SV 4973	5	5
SV 4973	10	10

0759 CHANGE GEOMETRIC DRAFT TO 0.0'

CHANGE GEOMETRIC DRAFT IN INSPACE TO 1.0'

0802 START POSMV LOBBING

WEATHER: CLOUDY WIND: E 5-10

SEAS: 1-2' TIDE: FALLING

0819 SOL 74'

0829 SOL 73

0831 SOL 73.A

0839 SOL 72

0849 SOL 71

JCLS BOOK NO. 1138



27

TAS179-170061 6/21/10 TUESDAY

TIM SONNEN

JASON GRANTER

CPMA

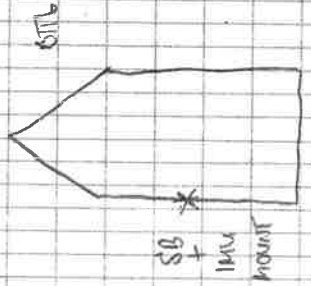
BAKATONA BASIN 5-ISLAND

BATTY SWING

HYPERK POSMV ODOM SB

NAD 83 LA SOUTH

BEED OAB, FEET



OFFSETS ON ATTACHED SHEETS

WATER SURFACE SHOTS

1208 + 1334'

1330 + 1185'

1505 + 0.938'

JCLS BOOK NO. 1138

74.65 59-



0851 SOL 71A
 0859 SOL 70
 0907 SOL 69
 0910 SOL 69 A
 0917 SOL 68
 0924 SOL 67
 0925 SOL 67 A
 0927 SOL 67 B
 0934 SOL 66
 0937 SOL 66 A
 0958 SOL 65
 1010 SOL 59
 1012 SOL 58
 1020 SOL 58 A
 1027 SOL 57
 1037 SOL 56
 1039 SOL 56 A
 1048 SV CASY 2 4993 BACKSIDE OF SHELL ISLAND
 1051 SOL 55
 1100 SOL 54
 1108 SOL 54 A
 1117 SOL 53
 1120 SOL 52
 1122 SOL 52 A

1131 SOL 51
 1141 SOL 50
 1143 SOL 50 A
 1154 SOL 47
 1209 SOL 48
 1214 SOL 49
 1215 SOL 49 A
 1221 SOL 84
 1222 SOL 84 A
 1243 SOL 84
 1317 SOL 90
 1347 SOL 95
 1410 SV CASY 3 4996 BACKSIDE SHELL EAST
 1423 SOL 83
 1430 SOL 83 A
 1441 SOL 83 B
 1511 SOL 82
 1610 STEP PASTON LOGGERS
 1700 BACK AT ABOUT LUNCH
 1703 STEP BACK BASE, FILE. 5649 1780
 1817 BACK AT MOTEL
 NOTE: GAVE JASON BARBER EXTRA HOUR
 FOR PROCESSING DATA + CREATING DXF
 FOR LAND CHECK AT MOTEL.

0600 LEARNING MOTEL
 0700 ARRIVED AT BART CAUCH
 0705 MOVE UP BART, WORKER DELAY, STANDED AT LEAVATCH
 1613 SU EAST 1 4936 BACKSIDE SEHWISLAND ISLAND
 1015 BAR CHECK

INDEX 0.1	BARCHECK POLE	ODOM SB
SU 4936	5	5
SU 4936	10	10

1017 CHANGE ECROTICAL DRAFT TO 0.0'
 CHANGE ECROTICAL DRAFT IN HWACK TO 1.0'
 1013 STRET POSMV LOBBING

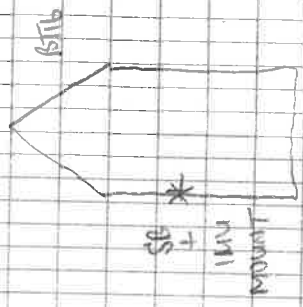
WEATHER: CLOUDY WIND, E 10-15
 SEAS: 1-2' TIDE:

- 1041 SOL 111
- 1049 SOL 111 A
- 1101 SOL 112
- 1110 SOL 113
- 1129 SOL 114
- 1138 SOL 115
- 1145 SOL 116
- 1153 SOL 117
- 1200 SOL 118
- 1207 SOL 119
- 1214 SOL 120



TIM JONNICK
 JASON GRANGELU

CPRA
 BARBARIA BASIN S-ISLAND
 BATHY SURVEY
 HWACK POSMV ODDM SB
 NAD 83 LA SOUTH
 620102 B, FEET



OFFSETS ON ATTACHED SHEETS

WATER SURFACE SHOTS
 1014 +1.221'



30

TR 179-17061 6/24/17 WEDNESDAY

1228 SOL 121

1232 SOL 123

1312 SU CASE 2 4959 BACKSIDE OF SCHROEDER ISLAND

1324 STOP POINT LANSING

1430 BACK AT BOAT LAUNCH

30

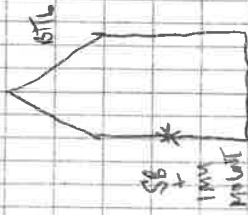
JCLS BOOK NO. 1138

JCLS BOOK NO. 1138



TAS 187-170061 7/6/77 THURSDAY

TIM JENNING
 JASON BRASSIL
 MIKE DELAMON
 CPA
 BRANTIAIR BASIN 5-ISLAND
 BATHY SWISSY
 NAD 73 (A SOUTH FEET)
 62010 01215



OFFSETS ON ATTACHED SHEETS

Water Surface Shots
 0932 +1.143'
 1137 +0.295'
 1221 +0.571'



JCLS BOOK NO. 1138

TAS 187-170061 7/6/77 THURSDAY

LEAVING MOTEL
 ARRIVE AT BOAT LAUNCH
 MORE UP BOAT
 STAGE PTK BASE
 PT. NAME
 N= 300238.920
 E= 3074247.960
 ELEVATION: +2.352'
 SV EAST I 3007, GULFSIDE
 BAR CHECK

INDX 011	8M CHECK POLE	ADJOM SB
SV 4999	5	5
SV 3007	10	10

CHARLES SCHEDULE TO O.O. DEART
 CHARLES CHARACT. DEART IN HYRCEL TO 1.0'
 STACT FROM LOBBINS
 WETTER, P. CLOUDY WIND: S 5-10
 SEAS: 1-2' TIDE: FALLING

SOL 11
 SOL 12
 SOL 12A
 SOL 13
 SOL 14
 SOL 14A



JCLS BOOK NO. 1138

34

TAS 187-170061

7/16/17 THURSDAY

1000 SOL 15

1007 SOL 16

1008 SOL 16 A

1013 SOL 17

1020 SOL 17

1021 SOL 18 A

1028 SOL 19

1034 SOL 20

1036 SOL 20 A

1041 SOL 21

1047 SOL 22

1050 SOL 22 A

1055 SOL 23

1100 SOL 24

1102 SOL 24 A

1108 SOL 25

1112 SOL 26

1113 SOL 26 A

1118 SOL 27

1125 SOL 28

1127 SOL 28 A

1138 SOL 29

1144 SOL 30

1146 SOL 31

JCLS BOOK NO. 1138



34

TAS 187-170061

7/16/17

THURSDAY

1137 SOL 31 A

1152 SOL 32

1157 SOL 33

1159 SOL 33 A

1205 SOL 34

1215 SV CRT 2, 3007, BLUE SIDE

1226 STOP POSING LOGS

1249 STOP RTK RANGE FILE: 56491871

1400 BRK AT BRNT LUNCH

1950 BRK AT OFFICE IN UNPAID

JCLS BOOK NO. 1138





APPENDIX I: LIDAR SYSTEM SPECIFICATIONS

1 FLI-MAP SYSTEM AND METHODOLOGY

The FLI-MAP or Fast Laser Imaging-Mapping and Profiling system integrates an accurate GPS positioning system, with video and digital still imaging, and scanning reflectorless laser rangefinders to provide fast and accurate aerial surveys. The system, aboard a specially equipped helicopter, is flown over the corridors of interest collecting precise GPS, platform altitude, laser ranges, and imagery data at a data collection rate of 150,000 – 250,000 ranges per second.



1.1 LiDAR Survey Control

Once Fugro has mobilized to the project areas, local GPS survey monuments will be recovered to control the surveys and reference the FLI-MAP data to the desired horizontal coordinate system and vertical datum. The number of recovered monuments will vary depending upon the measured relative accuracy of the existing monuments recovered. The control will be utilized to establish accurate networks along the routes and used for kinematic post processing of the FLI-MAP data.

Unique to FLI-MAP, the GPS data from the base stations and the primary and secondary navigation receiver on the helicopter are reduced to produce 3D vectors from all of the base stations to the helicopter. The processed GPS data from the two on-board GPS receivers are blended with the inertial data to produce accurate XYZ and attitude information of the helicopter. This position and attitude information is time-matched with laser data to produce accurate XYZs of the laser returns. The laser data can then be viewed within Fugro's FLIP7 and FLIPSharp software to allow for data processing, filtering, and merging of the laser data with imagery.

1.1.1 Quality Control

QC procedures call for accuracy checks to be done at base station locations during each flight. This procedure involves over flight of the base station to capture LiDAR data. Due to the high point density of the LiDAR data, the base station GPS antenna can be identified in the LiDAR data. The LiDAR derived position of the antenna can then be compared with the position obtained at the base station using ground GPS equipment.

1.2 System Specifications

Laser Pulse Rate	150,000, 200,000 or 250,000 pulses per second (selectable)
Multiple Return Capability	Yes - Maximum of 4 returns per pulse Typically 150,000 transmitted will generate approx. 180,000 returns (including multiple returns)
Laser Intensity Capture	Yes – For all laser returns
Laser Eye Safety	FDA Certified Class 1 laser Eye safe at the aperture
Laser Point Density (single pass)	Approx. 28 points per square meter @ 300m altitude and 25m/s speed
Laser Ranging Accuracy	1 cm
Laser Swath Angle	60 degrees – Swath width approximates to flying height
Laser Look Angles	Nadir (50% of pulses) Forward looking (7 degrees) (25% of pulses) Rear looking (7 degrees) (25% of pulses)
Laser Beam Divergence	Approx. 0.45 mR
Laser Spot Size	Approx. 8.0 cm @ 150m altitude
Maximum Operating Height	900 meters
Total System Accuracy (absolute)	15 cm horizontal @ 2 sigma (95% confidence) 10 cm vertical @ 2 sigma (95% confidence)
Total System Accuracy (relative)	5 cm horizontal @ 2 sigma (95% confidence) 5 cm vertical @ 2 sigma (95% confidence)
Digital Video Imagery	MPEG 4 format (Avi) – 720 x 576 pixel or 1920 x 1081 pixel (HD) Forward and down looking perspectives Forward view at 30 degrees to the horizon
Digital Still Imagery	11.0, 16.0 or 29.0 Megapixel Forward and down looking perspectives Forward view at 30 degrees to the horizon Approx. 1 frame per 2 seconds for each camera
Line scan Imagery	Yes – Integrated line scan camera fitted to laser scanner Used to generate RGB values for each laser return
GPS Positioning Rate	10 Hz

1.2.1 Accuracy of Raw LiDAR Data

The stated absolute accuracy of discrete laser points (representing ground and feature data points) with FLI-MAP using OTF kinematic positioning is 15 cm horizontally and 10 cm vertically. The relative accuracy of data points collected with subsequent scans and to the kinematic control network is 5 cm horizontally and 5 cm vertically. The relative accuracy of points common to a single scan is 5 cm. The stated accuracies are to the 95% confidence level.

1.2.2 Aerial Imagery

The FLI-MAP 400 system is fitted with both digital video and digital still cameras. Both video and still imagery are captured in 2 perspectives:

- Forward looking (at a 30 degree angle to the horizon)
- Down looking (vertical)

In addition, FLI-MAP 400 is fitted with a digital line scan camera. The line scan data is used to provide color data (RGB values) to the laser data. Imagery from the mapping camera (down looking still camera) will be orthorectified using the LiDAR data, then tiled and color matched to provide high-resolution ortho mosaic imagery.

1.2.3 Laser Eye Safety

The laser fitted to the FLI-MAP 400 system is FDA-certified Class 1. It is eye-safe, including binocular eye-safe, at the aperture. There is no minimum altitude specified for FLI-MAP operations to remain eye-safe. This allows for safe data collection at low altitudes, enabling very high point densities to be achieved, while maintaining high levels of accuracy and small laser spot size.



APPENDIX J: SCOPE OF WORK PROVIDED BY CPRA

SCOPE OF SERVICES for

“Topographic Survey via LiDAR and Bathymetric Survey of Five Barataria Basin Barrier Island Restoration Projects”

January 27, 2017

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 an important tool for evaluation of geomorphic alterations in barrier island systems because these ephemeral environments are shaped by erosional and longshore transport processes. This Scope of Services will provide for aerial-based LiDAR surveys and topographic and bathymetric surveys of five barrier island restoration projects within Plaquemines Parish, Louisiana: Shell Island East Barrier Restoration (BA-110), Pelican Island Restoration (BA-38-1), Riverine Sand Mining/Scofield Island Restoration (BA-40), Shell Island West Barrier Restoration (BA-0111), and NRDA Chenier Ronquille (BA-0076). The environmental consulting company hereafter referred to as the “Contracting Party”, will perform the specified services according to this Scope of Services.

2.0 LOCATION & ACCESS

The five restoration projects to be surveyed were constructed as part of an overall effort to restore the Barataria barrier island chain (Figure 1). Historically, these areas have suffered significant land loss due to shoreline erosion, subsidence, interior wetland loss, and the installation of oil and gas infrastructure. All five projects involved the placement of dredged material as marsh, beach, and dune fill in an effort to nourish and re-build approximately 10.4 miles of gulf shoreline [1.3 miles (BA-110), 2.4 miles (BA-38-1), 2.4 miles (BA-40), 2.7 miles (BA-0111), and 1.6 miles (BA-0076)]. These five projects are located between Quatre Bayou Pass to the west and Sandy Point to the East.

The Contracting Party shall be required to contact landowners and secure access permission prior to performing surveys on any privately owned lands. Rights of entry to privately owned property must be respected by all CPRA contractors. Failure to adhere to the above-stated CPRA policy will be considered grounds for termination of the contract. Landowner contact information is provided in Appendix A.

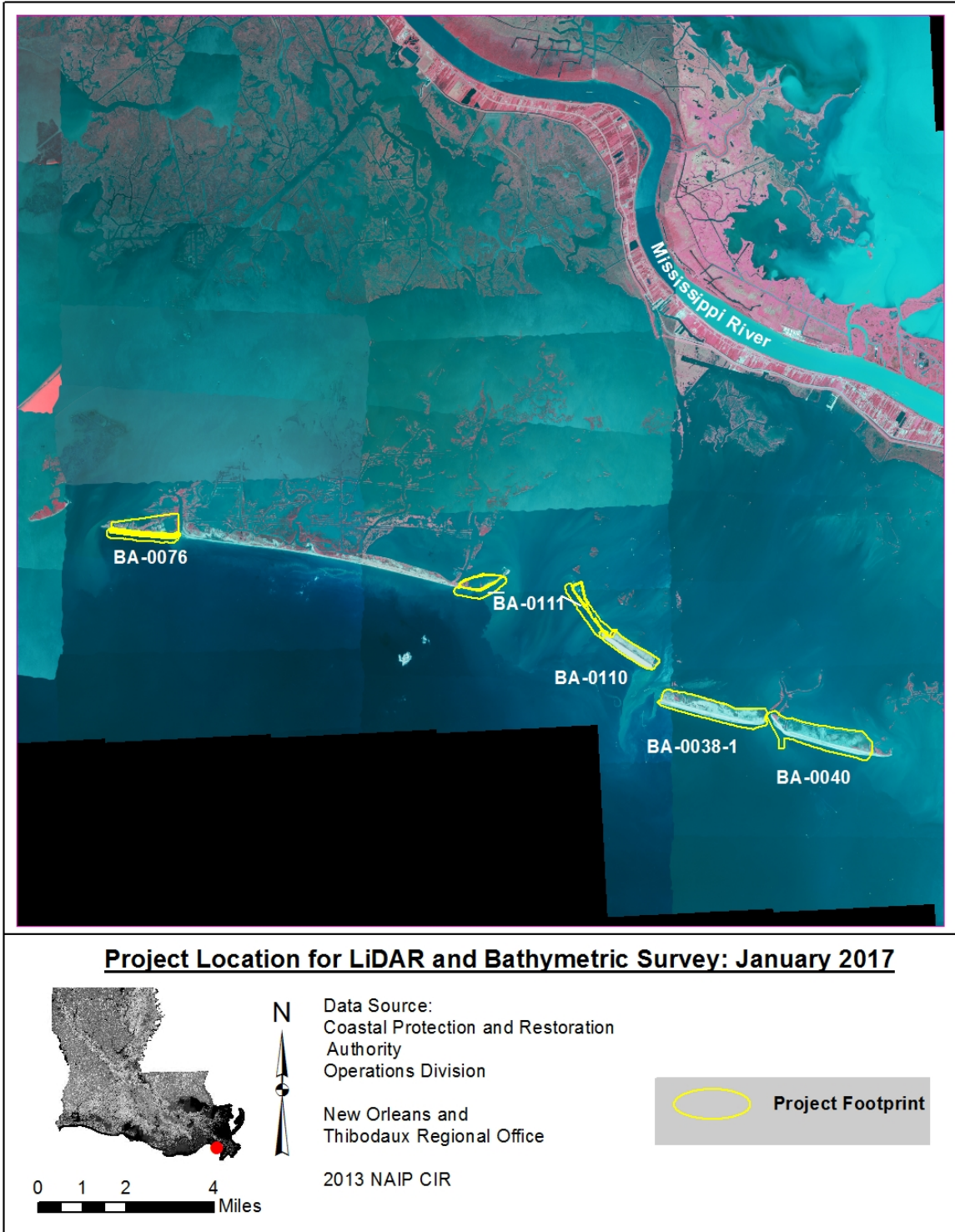


Figure 1. Project location for LiDAR and bathymetric survey acquisition.

3.0 SCOPE OF WORK

3.1 Minimum Standards

All topographic and bathymetric Real Time Kinematic (RTK) surveys shall be conducted per the document “A Contractor’s Guide to the Standards of Practice” (version January 2016) as required by the CPRA. A digital copy of this document will be provided to the contractor or can be obtained from the agency’s Coastal Information Management System (CIMS) Document Library at: <http://cims.coastal.la.gov/RecordDetail.aspx?Root=0&sid=18503>.

3.2 Control and Static Monument Adjustment

Static monuments used as a control are tied into the CPRA - Louisiana Coastal Zone (LCZ) GPS Network. The Contracting Party shall conduct all surveying activities using the benchmarks located in the vicinity of the five projects associated with this scope of service, as follows:

PROJECT	CONTROL MONUMENT
Chenier Ronquille (BA-0076)	CRMSBA-SM-20
Shell Island – West (BA-0111)	BA40-SM-01
Shell Island – East (BA-0110)	SCOFIELD 2
Pelican Island (BA-0038-1)	SCOFIELD 2
Scotfield Island (BA-0040)	BA40-SM-03

These benchmarks should be used for horizontal and vertical control. These monuments were identified by the Louisiana State Plane Coordinate System South Zone (LSZ), the North American Horizontal Datum of 1983 (NAD 83), and the North American Vertical Datum of 1988 (NAVD88). The most recent CPRA data sheets are provided in Appendix B.

The contractor shall develop a static survey control plan per “A Contractor’s Guide to the Standards of Practice” for the benchmarks being used for control. These benchmarks shall be occupied to establish a Geoid12B elevation which will be the official deliverable elevation for the survey points; however, all projects will require the data be processed and delivered using Geoid 09 and 12B. Monuments may have an established Geoid12B elevation. The contracting party will determine the validity of the elevation for the monument being used.

Additionally, control points from previous surveys associated with these 5 sites should be updated using RTK at a minimum (not less than two 20 minute sessions), to insure data from previous surveys can be adjusted for project comparisons. The following is a list of control points to be updated based on the Static adjustment.

<u>Name</u>	<u>Easting</u>	<u>Northing</u>
829-602 (PK Nail) at Coast Guard Station	3,720,413.47	280,662.29
876 1724 Tidal 11	3,719,520.77	280,769.59
829-603 (Pk Nail) at Coast Guard Station	3,720,445.98	280,758.38
829-604 (Pk Nail) at Coast Guard Station	3,720,478.06	280,854.99
TBM 10' Rebar – PT#829-676	3,766,055.91	301,194.62
TBM 10' Rebar – PT#846-466	3,766,091.28	301,200.84
TBM 10' Rebar – PT#850-217	3,832,448.89	279,892.01
TBM 10' Rebar – PT#850-216	3,832,260.75	279,813.95
RON	3,774,704	300,518.6
RON PK	3,774,395.763	299,019.289
KELSEY TBM	3,825,347	286,303.4
TICE-CP2	3,765,723.728	300,774.351
SW TBM01	3,831,071.381	283,604.547
SW TBM02	3,831,051.872	283,771.543
SW TBM00	3,854,162.537	315,571.366

3.3 LiDAR

In lieu of traditional RTK surveying along cross-island transects at equidistant spacing, LiDAR will be utilized to acquire topographic elevation survey points for the entire area within each of the five (5) projects specified in this scope of work.

The LiDAR System Specifications for data acquisition should be equal to or exceed the following:

Laser Pulse Rate	150,000; 200,000; or 250,000 pulses per second (selectable)
Multiple Return Capability	Yes – Maximum of 4 returns per pulse Typically 150,000 transmitted will generated approx. 180,000 returns (including multiple returns)
Laser Intensity Capture	Yes – For all laser returns
Laser Eye Safety	FD Certified Class 1 laser Eye safe at the aperture

Laser Point Density (single pass)	Approx. 54 points per square meter @ 200m altitude and 20m/s speed
Laser Ranging Accuracy	1 cm
Laser Swath Angle	60 degrees – Swath width approximates to flying height
Laser Look Angles	Nadir (50% of pulses) Forward looking (7 degrees) (25% of pulses) Rear looking (7 degrees) (25% of pulses)
Laser Beam Divergence	Approx. 0.45 mR
Laser Spot Size	Approx. 8.0 cm @ 150m altitude
Maximum Operating Height	900 meters
Total System Accuracy (absolute)	15 cm horizontal @ 2 sigma (95% confidence) 10 cm vertical @ 2 sigma (95% confidence)
Total System Accuracy (relative)	5 cm horizontal @ 2 sigma (95% confidence) 5 cm vertical @ 2 sigma (95% confidence)
Digital Video Imagery	MPEG 4 format (Avi) – 720 x 576 pixel or 1920 x 1081 pixel (HD) Forward and down looking perspectives Forward view at 30 degrees to the horizon
Digital Still Imagery	11.0, 16.0 or 29.0 Megapixel Forward and down looking perspectives Forward view at 30 degrees to the horizon Approx. 1 frame per 2 seconds for each camera
Line scan Imagery	Yes – Integrated line scan camera fitted to laser scanner Used to generate RGB values for each laser return
GPS Positioning Rate	10 Hz

LiDAR points should have or exceed a horizontal and vertical relative accuracy of 5 cm after processing to the kinematic control network with a 95% confidence level.

The selected altitude should result in a 30% overlap of LiDAR points.

The LiDAR data acquisition shall take place during the lowest possible anticipated water levels as soon as possible after the notice to proceed is issued.

Quality control checks should be performed during every flight. This quality control check shall include flights over the base station to capture LiDAR data if the point density is high enough to identify the GPS antenna in the LiDAR data. Several ground targets shall be deployed at each island and surveyed for data comparison.

3.4 RTK Topographic Survey

3.4.1 Area between LiDAR and Bathymetry

It is inevitable that there will be a data gap between the LiDAR topographic data and the bathymetric data due to fluctuating water levels and the inability of water vessels to get close enough to shore. Hence, RTK data may need to be collected to acquire the elevation in this area. Survey points shall be acquired using RTK or a method proposed by the contractor and accepted by CPRA to capture the elevation along the bathymetric survey transects that were not acquired by LiDAR.

The Contracting Party shall reference horizontal survey coordinates to the North American Horizontal Datum of 1983 (NAD 83) using the Lambert Conformal Conic Projection and the Louisiana State Plane South Zone (LSZ) coordinate system. Vertical elevation surveys shall be referenced to the North American Vertical Datum of 1988 (NAVD 88) and will utilize the Geoid 12B model to determine orthometric heights. The data shall be reported in feet to two decimal places. Survey points along the transect shall be a maximum of twenty-five (25) feet apart unless there is an abrupt change in elevation along the transect. An abrupt change in elevation is defined as elevation changes greater than or equal to 6 inches.

Survey points should be acquired from where the bathymetric data begins/ends to at least up the beach front to the toe of the dune to ensure overlap with the LiDAR data. Overlapping points between the topographic RTK and LiDAR should be examined as a quality control measure.

3.4.2 Ground-truthing within Densely Vegetated Areas

In areas of dense vegetation, traditional RTK survey points shall be acquired to assist in post-processing ground detection and cleaning of LiDAR data. The extent of RTK ground-truthing in densely vegetated areas cannot be predetermined as it is dependent on conditions at the time of the survey. These areas will need to be discussed during the Pre-Field Work Meeting, Section 3.7.2.

3.4.3 Interior Ponds

Due to the inability of the LiDAR to penetrate flooded areas, topographical RTK surveys shall be implemented to acquire elevation in areas where there are interior ponds. LiDAR data obtained as part of this scope of work shall be reviewed for missing areas. Upon review of the data, discussions with CPRA shall occur to determine the best method for obtaining elevation where these gaps occurred. Figure 2 shows the approximate locations where this occurred in the previous data collection effort. Due to the changing environment the extent of these areas may differ for this scope of work.

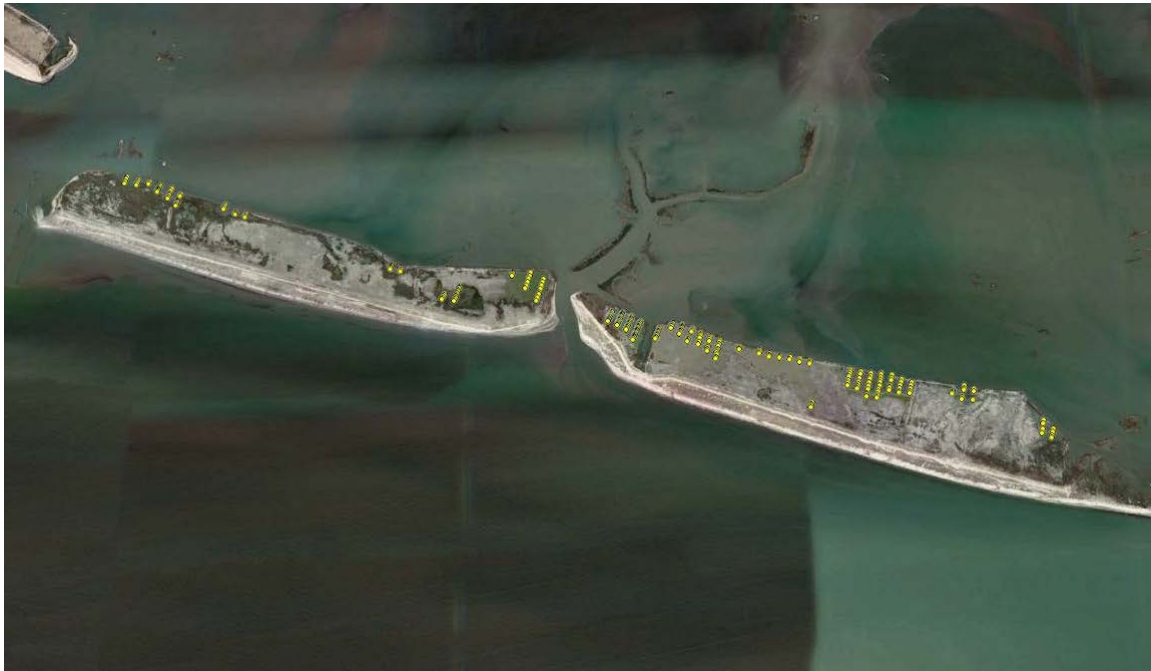


Figure 2. Location of ponding areas (in yellow) on Pelican Island and Scofield Island which require RTK surveying.

3.4.4 Settlement Plates

The Contracting Party will survey a total of 50 settlement plates using RTK methods. The number and location coordinates of settlement plates for each project are provided in Appendix C and will be provided in shape file format by the CPRA. The Contracting Party shall survey the ground at a minimum of 4 locations (cardinal directions preferred), bolt elevation, and top of pipe of the settlement plates.

3.5 RTK Bathymetric Survey

The Contracting Party shall reference horizontal survey coordinates to the North American Horizontal Datum of 1983 (NAD 83) using the Lambert Conformal Conic Projection and the Louisiana State Plane South Zone (LSZ) Coordinate System. Vertical elevation surveys shall be referenced to the North American Vertical Datum of 1988 (NAVD 88) and will utilize the Geoid 12B model to determine orthometric heights. The data shall be reported in feet to two decimal places.

The Contracting Party will collect bathymetric data using these minimum data collection standards that may change in the normal course of operation as equipment and software are updated and to accommodate variations in study areas. For this, survey vessels with similar equipment acquiring single-beam bathymetric data will be utilized. All data collected will be consistent and controlled to a high standard. Approved data will be stored in HYPACK® or similar format in preparation for bathymetric data processing prior to surface generation.

Navigation: Geographic Positioning System (GPS) base stations will be assembled at a permanent benchmark or temporarily installed benchmarks (e.g. TMRK). GPS receivers will record 12-channel full-carrier-phase positioning signals. This GPS instrument combination will be duplicated on the survey vessels. HYPACK® a marine surveying, positioning, and navigation software package, will be used to manage the planned-transect information and provide real-time navigation, steering, correction, data quality, and instrumentation-status information to the boat operator.

Soundings and Motion: Aboard the survey vessel(s), depth soundings will be recorded using a high-resolution echosounder system with 200-kilohertz (kHz) transducers. Boat motion will be recorded using a real time dynamic motion sensor. Data from the GPS receiver, motion sensor, and fathometer will be recorded in real-time and merged into a single raw data file (.raw) in HYPACK®, with each device string referenced by a device identification code and time stamped to UTC.

Sound Velocity: Sound velocity measurements will be collected using a Sound Velocity Profiler (SVP). The instrument will be cast overboard periodically

throughout the survey to observe changes in water column speed of sound (SOS).

3.6 Project Specific Details

3.6.1 NRDA Chenier Ronquille (BA-0076) Project

This is the first complete data collection effort for this project. Survey data was acquired during construction; however, they did not conduct a true as-built survey once construction was complete. This survey will serve as the potential base line for any future change analysis that may be needed to determine sediment budgets or volumetric changes within the project and immediate surrounding areas.

The design for the data collection effort for this project was centered around the bathymetric data collection for the Barrier Island Comprehensive Monitoring (BICM) program. Two (2) transects are spaced equidistant between each BICM bathymetric transect. BICM transects are spaced approximately 1,500 feet apart; therefore, the inclusion of the two additional transect places a transect approximately every 500 feet apart running in a north / south orientation. There are also 5 east/west oriented transects as well as a transect that runs in close proximity to the island (Appendix D.1). Shapefiles will be provided to the contracting party illustrating all transects requiring surveying.

The LiDAR acquisition polygon (Appendix D.1) covers the actual project area and some additional surrounding areas where sand movement is anticipated over the life of the project.

There are ten (10) settlement plates associated with this project that require surveying. Appendix C.1 contains the approximate coordinates for each settlement plate in UTM, NAD83, Zone 15 Meters.

3.6.2 Shell Island West Barrier Restoration (BA-0111) Project

This is the first complete data collection effort for this project. Survey data was acquired during construction; however, they did not conduct a true as-built survey once construction was complete. This survey will serve as the potential base line for any future change analysis that may be needed to determine sediment budgets or volumetric changes within the project and immediate surrounding areas.

The design for the data collection effort for this project was centered around the bathymetric data collection for the Barrier Island Comprehensive Monitoring (BICM) program. Two (2) transects are spaced equidistant between each BICM bathymetric transect. BICM transects are spaced approximately 1,500 feet apart; therefore, the inclusion of the two additional transect places a transect approximately

every 500 feet apart running in a north / south orientation. There are also 5 east/west oriented transects as well as a transect that runs in close proximity to the island (Appendix D.2). Shapefiles will be provided to the contracting party illustrating all transects requiring surveying.

The LiDAR acquisition polygon (Appendix D.2) covers the actual project area and some additional surrounding areas where sand movement is anticipated over the life of the project.

There are eighteen (18) settlement plates associated with this project that require surveying. Appendix C.2 contains the approximate coordinates for each in UTM, NAD83, Zone 15 Meters.

3.6.3 Shell Island East Barrier Restoration (BA-0110) Project

Construction of the Shell Island East (BA-0110) project was completed in August 2013, and this survey will be the third post-construction survey event. A LiDAR survey of the entire island and an RTK bathymetric survey are required as shown in Appendix D.3. In addition, there are eight (8) settlement plates associated with this project that require surveying. Appendix C.3 contains the approximate coordinates for each settlement plate in State Plane, NAD83, LA South in ft.

The bathymetric data collection effort for this project follows survey lines consistent with the Barrier Island Comprehensive Monitoring (BICM) program. Four BICM transects are spaced approximately 1,500 feet apart running in a north / south orientation. North / south transects will extend approximately 1,500 ft from the north side of the island, and approximately 2,000 ft from the south side of the island. There is also a transect that runs in close proximity around the circumference of the island (Appendix D.3). Shapefiles will be provided to the contracting party illustrating all transects requiring surveying. Bathymetry data collected for the Shell West project that falls within the Shell East LiDAR extent boundary (Appendix D.3) will be merged with bathymetry collected for the Shell East project for all deliverables pertaining to Shell East. The LiDAR acquisition polygon (Appendix D.3) covers the actual project area and some additional surrounding areas where sand movement is anticipated over the life of the project.

All orthometric heights shall be reported in NAVD88 Geoid09 and Geoid12B. In addition, the ellipsoid height shall be included for all survey points.

3.6.4 Pelican Island Restoration (BA-0038-1) Project

Construction of the Pelican Island (BA-0038-1) project was completed in 2012, and this survey will be the third post-construction survey event.

This task includes an aerial-based LiDAR survey of the Pelican Island Restoration project (BA-38-1), a bathymetric RTK survey, and an RTK survey of 9 settlement plates. Appendix C.4 contains the approximate coordinates for each settlement plate in State Plane, NAD83, LA South in ft.

The bathymetric data collection effort for this project follows survey lines consistent with the Barrier Island Comprehensive Monitoring (BICM) program. Nine BICM transects are spaced approximately 1,500 feet apart running in a north / south orientation. North / south transects will extend approximately 1,000 ft from the north side of the island, and approximately 2,000 ft from the south side of the island. There is also one east/west oriented transect on the gulf side of the island, as well as one transect that runs in close proximity around the circumference of the island (Appendix D.4). Shapefiles will be provided to the contracting party illustrating all transects requiring surveying. The LiDAR acquisition polygon (Appendix D.4) covers the actual project area and some additional surrounding areas where sand movement is anticipated over the life of the project.

All orthometric heights shall be reported in NAVD88 Geoid09 and Geoid12B.

3.6.5 Riverine Sediment Mining/Scofield Island Restoration (BA-0040) Project

Construction of the Riverine Sand Mining/Scofield Island Restoration (BA-0040) project was completed in 2013, and this survey will be the third post-construction survey event. This task includes an aerial-based LiDAR survey of the Riverine Sand Mining/Scofield Island Restoration (BA-0040) project, a bathymetric RTK survey, and an RTK survey of 5 settlement plates. Appendix C.5 contains the approximate coordinates for each settlement plate in State Plane, NAD83, LA South in ft.

The bathymetric data collection effort for this project follows survey lines consistent with the Barrier Island Comprehensive Monitoring (BICM) program. Nine BICM transects are spaced approximately 1,500 feet apart running in a north / south orientation. North / south transects will extend approximately 1000 ft from the north side of the island, and approximately 2000 ft from the south side of the island. There is also one east/west oriented transect on the gulf side of the island as well as one transect that runs in close proximity around the circumference of the island (Appendix D.5). Shapefiles will be provided to the contracting party illustrating all transects requiring surveying. The LiDAR acquisition polygon (Appendix D.5) covers the actual project area and some additional surrounding areas where sand movement is anticipated over the life of the project.

All orthometric heights shall be reported in NAVD88 Geoid09 and Geoid12B.

3.7 Project Meetings and Updates

3.7.1 Pre-Field Work Meeting

A meeting between the Contracting Party and the CPRA shall be conducted after the notice to proceed is issued, but prior to any field work being conducted to answer any questions that may arise with respect to data acquisition.

3.7.2 Weekly Updates

Weekly updates in the form of e-mails shall be provided from the Contracting Party to the CPRA. This weekly update shall provide what tasks were worked on and/or completed as well as what is projected for the upcoming week. Any delays or issues shall be reported. If issues arise, then CPRA shall be notified immediately for resolution.

3.7.3 Data Delivery

Upon delivery of the data, a meeting shall be conducted. This meeting should include, but not be limited to, how data was collected, issues that may have arisen, processing, processing issues, and potential products that could be developed from the data collected.

3.7.4 Timeline

LiDAR data shall be collected within 30 days from issuance of the notice to proceed, unless previously discussed and agreed upon with CPRA. Bathymetric data should be collected in the following project order: NRDA Chenier Ronquille (BA-0076), Shell Island West Barrier Restoration (BA-0111), Shell Island East Barrier Restoration (BA-110), Pelican Island Restoration (BA-38-1), and Riverine Sand Mining/Scofield Island Restoration (BA-40). Data collection shall begin at the same time as LiDAR and shall be completed as soon as possible.

4.0 DELIVERABLES

There will be two sets of deliverables required for this scope of service. One set of deliverables shall/will follow the agency's LASARD format for upload to the agency's database for public access. This data will be delivered in Geoid12B. The second set of deliverables will follow the CPRA's "A Contractor's Guide to the Standards of Practice" (version January 2016) for the GPS Survey Report, Methodology Report, Monument

Datasheets, Drawing Files, and Field Notebook Records. Since data has been collected previously using Geoid09 for all projects within this scope of work, the Geoid09 data will be used to perform data analysis.

4.1 Survey Data Delivery

The data deliverables will consist of point files (LAS format in the case of LiDAR), trackline shapefiles, and metadata files for each datum (LA State Plane South and UTM Zone 15N) and geoid (12B and 09). All data deliverables will be delivered by the Contracting Party in the CPRA's LASARD format. A SOP for this data format will be provided along with four (4) appendices – Attribute Specifications, FGDB Templates (metadata), Data Delivery Grid, and File Naming Convention. The LASARD Standard Operating Procedure manual can be found on CPRA's Coastal Information Management System (CIMS) website's document library -

<http://cims.coastal.la.gov/RecordDetail.aspx?Root=0&sid=12362>.

The attribute specifications for the point files and track lines are located in the Table 1 and Table 4 tabs of the following spreadsheet: AttributeSpecifications20160608.xlsx. For each elevation data set two (2) sets of point files will be delivered in .csv format – a State Plane South 1702 in feet and a Universal Transverse Mercator Zone 15N (UTM) in meters. Table 2 and 3 of appendix C illustrates these formats. The data collected for this scope of work is associated with multiple LASARD grids and some projects may be in multiple grids. Point data shall be parsed into the corresponding LASARD grid and these data files will utilize the LASARD file naming convention in Appendix 4. The Data Delivery Grid is in an ESRI shape file format and is located in Appendix 3. Once completed the point file and track line data will be enclosed in a ZIP file by Data Delivery Grid as per the SOP. An example of these LASARD file formats will also be provided to the Contracting Party.

4.1.1 LiDAR

LiDAR data will be delivered in a raw and processed format as LAS files. Raw data will constitute download from the LiDAR system and minimal processing to get it to the LAS file format. Processed format will entail converting the data from the LiDAR system and complete processing to tie in the data to the appropriate horizontal and vertical requirements. Two versions of the fully processed LAS files will be delivered: 1) the entire classified LiDAR dataset, and 2) the classified bare ground points only.

4.1.2 RTK and LiDAR Point Data Deliverable Format

For each project four (4) Excel files with the RTK point survey data shall be delivered with the point data where one file contains the X, Y data in UTM, NAD 83, Zone 15 Meters and the Z data in Geoid09; one file contains the X, Y data in UTM, NAD 83, Zone 15 Meters and the Z data

in Geoid12B; one file will contain the X,Y data in State Plane, NAD83, LA South 1702, Feet and the Z data in Geoid09; and one file will contain the X,Y data in State Plane, NAD83, LA South 1702, Feet and the Z data in Geoid12B. For the RTK survey point data in the Excel file the format shall be delivered using the columns represented in Appendix E, tables E.1 and E.2. An Excel file will also be provided to the contracting party.

For each project, the full LiDAR dataset and the filtered ground point dataset shall be delivered in LAS file format in four different ways following the RTK data.

4.2 Project Specific Survey Reports

Upon completion of the survey, a GPS Survey Report shall be provided to CPRA for each of the 5 projects in Microsoft Word and Portable Document Format (PDF) format and written to a compact disc (CD) inserted within the 8 ½” x 11” bound hard copy of the report. Reports shall be a stand-alone product for each project and contain only information for the project associated with the report.

4.2.1 Static Survey Control Plan

Per the CPRA “January 2016 A Contractor’s Guide to the Standards of Practice” a Static Control Plan must be submitted and approved by CPRA prior to any monument establishment or update.

4.2.2 Methodology Report

The Methodology Report shall be in Microsoft Word and PDF format and written to a compact disc (CD). The hard copies shall be signed and stamped by the Registered/Professional Land Surveyor in the State of Louisiana who was directly involved with the project. The hard copies shall be bound in the GPS Survey Report.

The report shall contain but not be limited to the following information:
(Include dates for each job task and key personnel involved)

- *Project Description*
- *Static Survey Control Plan, if performed*
- *Planning and layout of the GPS Survey*
- *Chronological Summary of Work*
- *Information on Secondary Monuments used as reference station*
- *The GPS RTK Survey including quality control (elevation check) procedures*
- *Equipment used for data collection*
- *Downloading and Processing procedures*
- *Updated monument datasheets*

4.2.3 Field Notebook Records

The information to be included in the field notebook will be as follows:

- *Project name*
- *Date of survey*
- *Crew members*
- *RTK Base Monument name*
- *Sketch of Location*
- *RTK point numbers, descriptions, and elevations observed*

4.2.4 Drawing Files

The following two 11"x17" drawings shall be completed as a requirement of this scope, a plan view drawing and an elevation contour drawing.

1. Plan view drawing shall include a project area aerial image, the LiDAR extent, the bathymetric/topographic transects surveyed, the benchmark(s) used to conduct the survey, and the location of the settlement plates, if applicable.
2. Contour drawing will topographically illustrate the bare earth elevation contour results from the survey. The elevation contour drawing shall include a project area aerial image, the contour lines, the benchmark(s) used to conduct the survey, and the location of the settlement plates. The contour drawing will be delivered in the LASARD format.

All variables will be clearly labeled and accurately plotted. The drawing files shall be in a digital format such as ESRI ArcGIS shape files and written to the compact disk (CD) along with hard copies each bound in the final GPS Survey Report and folded to fit within the 8 ½" x 11" methodology report.

Additional information to be included on the Plan View and Elevation Contour Drawings will be as follows:

- *Project Name*
- *Contractor Name*
- *Digital aerial or USGS Quadrangle with monuments plotted correctly*
- *Monument Names*
- *Horizontal and Vertical Datum*
- *Map Date*
- *Map Scale*
- *North Arrow*

4.2.5 Updated Monument Data Sheets

If a monument's Geoid12B elevation required establishment or updating, the survey monument data sheets shall be generated and provided per "A Contractor's Guide to the Standards of Practice" (version January 2016).

4.3 Receipt of Deliverables

The Contracting Party shall prepare one (1) full draft copy of the deliverables (including the inserted CD) described above to CPRA within 30 days after completion of field data collection. This draft copy will be sent to the following CPRA representative for review:

Todd Folse
CPRA
1440 Tiger Drive, Suite B
Thibodaux, LA 70301
TEL: (985) 449-4082
Email: todd.folse@la.gov

Drafts will be reviewed by CPRA and comments or questions provided.

Upon acceptance of the draft deliverables, two (2) final deliverables will be created and delivered to CPRA two weeks after the acceptance of the draft product.

5.0 CERTIFICATION

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

Appendix A

LANDOWNER CONTACT INFORMATION

Shell Island East Barrier Restoration (BA-110) Project

- | | |
|--|--|
| 1) PEREZ ET AL.
Leander Perez III
(504) 656-2323 | 2) Plaquemines Parish Government
Attention: Vincent Frelich
8056 Hwy. 23, Ste. 200
Belle Chasse, LA 70037 |
|--|--|

Riverine Sand Mining/Scofield Island Restoration (BA-40) Project

- | | |
|---|---|
| 1) ROBINSON INTERESTS COMPANY LLC (FORMERLY J S ABERCROMBIE) ET AL
5055 RIVERWAY DRIVE
SUITE 200
HOUSTON, TX 77056
713-627-9440 | 2) Matthew B. Devitt, Jr.
802 Hancock
Slidell, LA 70458 |
|---|---|

Pelican Island Restoration (BA-38) Project

- | | |
|--|---|
| 1) Plaquemines Parish Government
Attention: Vincent Frelich
8056 Hwy. 23, Ste. 200
Belle Chasse, LA 70037 | 2) Matthew B. Devitt, Jr.
802 Hancock
Slidell, LA 70458 |
|--|---|

NRDA Chenier Ronquille (BA-0076) Project

- | |
|---|
| 1) Ordis J. (Buddy) Smith, III
ConocoPhillips
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Houma, Louisiana 70360
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Cell <u>(985) 852-2365</u>
Fax <u>(985) 872-1509</u>
<u>ordis.j.smith@conocophillips.com</u> |
|---|

Shell Island West Barrier Restoration (BA-0111) Project

Tract 1:

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Conoco Phillips
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Office: 985-853-3018

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Estate of Chalin O. Perez Attention:
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Debbie Zibilich Yakash
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303-641-8875 cell

Gloria J. Zibilich
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Woodland, PA 16881
814-857-5244 home
814-558-6322 cell

Leo H. Zibilich
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Home
2828 Westfork Dr.
Baton Rouge, LA 70816

Frederick Andrew Kron
3833 Riverwood Dr.
Provo, Utah 84604
801-372-2110 cell
801-607-2600 home

Ellen Kron
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New Orleans, LA 70125
850-261-3577

Judy Kron
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648
New Orleans, LA 70125
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Susan Kron
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504-256-0969 cell

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Metairie, LA 70778
504-432-0678

Margaret M. Muldrey Kane
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504-237-4954 cell

Kathleen Ellen Muldrey Hannigan
3706 Upperline St.
New Orleans, LA 70125
504-821-0375 home
504-782-1436 cell

Patricia Ann Muldrey Poinoi
16161 Tiger Bend Rd. Apt 17
Baton Rouge, LA 70817
225-756-6635 home
985-237-5977

Kenneth Deamore
2417 W. Pearl Dr.
Marrero, LA 70072
504-340-9889
504-566-5271

Tract 3:

United States of America - Bureau of Land Management
Attention: Victoria Craft
411 Briarwood Dr. Suite 404
Jackson, MS 39206
601-977-5435
VCraft@BLM.GOV

Tract 4:

St. Paul's Episcopal Church
Attention: Robert Courtney
6249 Canal Blvd.
New Orleans, LA 70124

Tract 5:

Cecile Airey Dinkens Ellis
4 Greenbriar Dr.
Covington, LA 70433
985-893-5455

Joyce Ludwig Ellis Spruiell
215 Iona St.
Metairie, LA 70005
504-833-4048

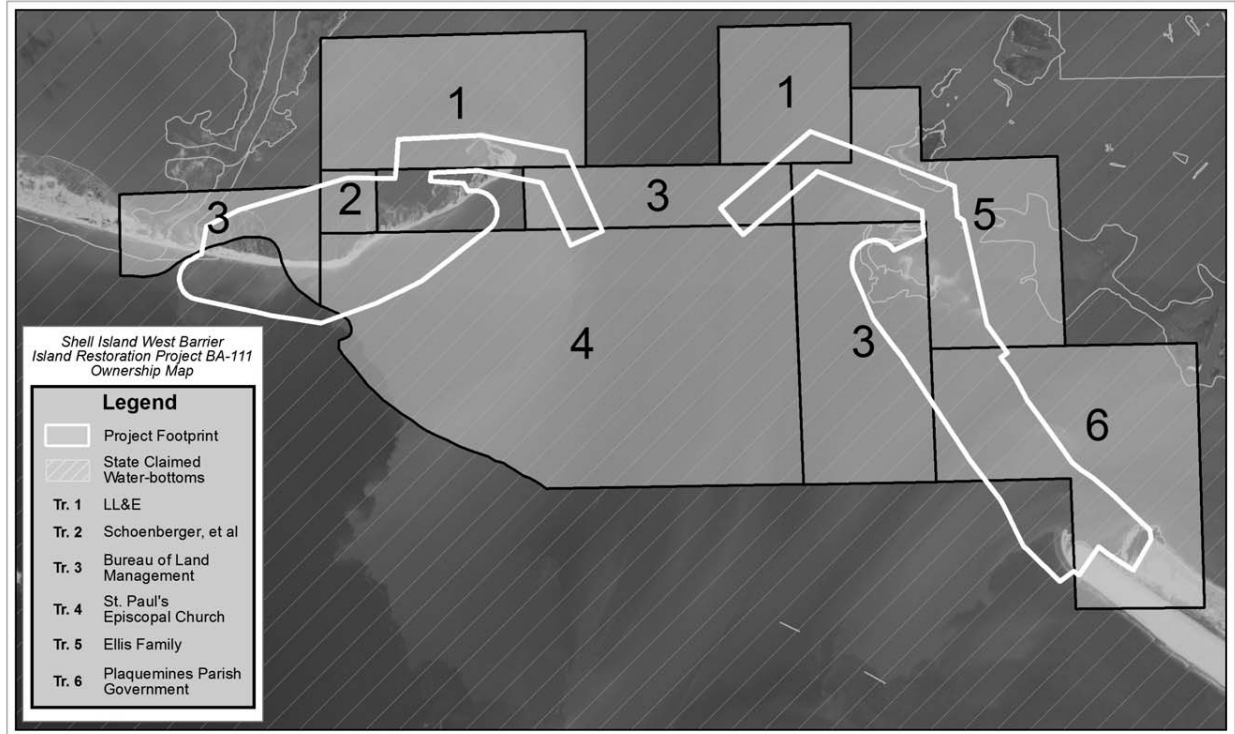
John Matson Ellis, Jr.
36 Dennis Rd.
Longmeadow, MA 01106
413-567-8643

Sidney Elder Ellis Reavy
36 Dennis Rd.
Longmeadow, MA 01106
413-567-8643

Catherine Moore Ellis
36 Dennis Rd.
Longmeadow, MA 01106
413-567-8643

Tract 6:

Plaquemines Parish Government
Attention: Vincent Frelich
8056 Hwy. 23, Ste. 200
Belle Chasse, LA 70037



Appendix B

Static Monument Data Sheets



VICINITY MAP

1 inch = 3,000 feet

Reproduced from NAIP Louisiana 2013 1m Aerial Imagery

Station Name: "CRMSBA SM 20"

Location: By boat from the Joshua's Marina in Buras, LA, go southwest +/- 1.4 miles into Bay Pomme D'Or. Cross the bay and continue south +/- 1.2 miles into Cyprien Bay. Go southeast +/- 1.7 miles into the bay to the mouth of Scofield Bay to the west. Follow Scofield bay into Scofield Bayou for +/- 3.5 miles to the shore of the Gulf of Mexico. Go west along the shoreline for +/- 11.5 miles to a canal. Go north along this canal for +/- 3,700 feet to the monument set on the west side of the canal.

Monument Description: Monument is a 9/16 steel rod driven to ?? feet to refusal within a 6" PVC sleeve set in concrete with protective metal accesscover stamped 'CRMSBA SM 20'

Stamping: CRMSBA SM 20

Installation Date: 2005 **Date of Survey:** 30-Mar-14

Monument Established By: CHUSTZ

NAD83 (2011) Epoch 2010.00 Geodetic Position

Lat: 29°18'59.09061"N
 Long: 89°47'06.29573"W

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

N= 300,238.97
 E= 3,774,247.96

Adjusted NAVD88 Height

Elevation = 2.35 feet (0.717 mtrs)

Ellipsoid Height (2011) = -23.251 mtrs.
 Geoid12A Height = -23.968 mtrs.

FOR REFERENCE ONLY
LCZ Adjusted NAVD88 Height

Elevation (Geoid09)= N/A
 Ellipsoid Height = N/A
 Elevation (Geoid03)= N/A
 Ellipsoid Height = N/A
 Elevation (Geoid99)= 3.46 feet (1.055 mtrs)
 Ellipsoid Height = N/A

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

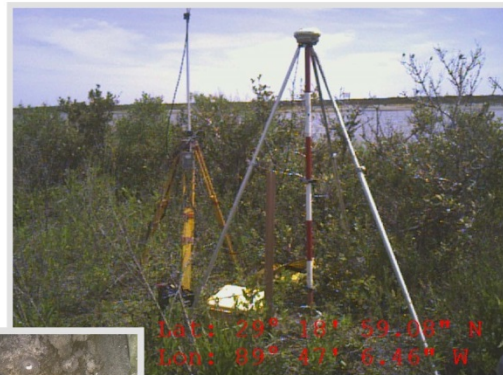


Figure B.1. Data sheet for static monument CRMSBA-SM-20.



VICINITY MAP Scale: 1" = 2000'
Station Name: "BA-40 SM01"

Reproduced from USC&GS "BURAS" Quadrangle

Location: In Plaquemines parish, From the bridge crossing Doullut canal on La. Hwy 23 in Empire proceed south on La. Hwy 23 approximately 4.5 miles to the station on the left. The station is located in the north east quadrant of the intersection of La. Hwy 23 and Cazezu Drive. The mark is 160.5 feet north of a large flag pole, 73.3 feet east of a carsonite witness post and 96.7 feet north of the north edge of Cazezu drive.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 92 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA-40 SM01

Installation Date: JUNE 07 **Date of Survey:**

Monument Established By: SJB GROUP

For: Louisiana Department of Natural Resources, CED

Adjusted NAD 83 Geodetic Position

Lat. 29°21' 20.02525" N
 Long. 89°32' 02.21589" W

Adjusted NAD 83 Datum LSZ (1702) Feet

N= 315642.604
 E= 3854052.363

Adjusted NAVD88 Height

Elevation = -1.856 feet (-0.566 mtrs)

Geoid03 Height = -24.134 mtrs.
 Ellipsoid Height = -24.699 mtrs.



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

Figure B.2. Data sheet for static monument BA40-SM-01.



VICINITY MAP Not to Scale

Reproduced from Louisiana 2005 DOQQ

Station Name: "BA-SCOFIELD 2"

Location: The Station is located by boat approximately 9 miles due south of Empire, Louisiana, on the south spoil bank of a pipeline canal on Pelican Island in Section 35, T21S-R28E, Plaquemines Parish, Louisiana. It is located approximately 17 feet south of the waters edge of the Canal and is 15 feet south from an orange carsonite witness post.

Monument Description: The station is a stainless steel spherical datum point attached to a 9/16" stainless steel rod driven 68 feet to refusal set within a floating sleeve and 6" PVC pipe filled with sand set in concrete with an access cover.

Stamping: SCOFIELD 2

Installation Date: 2007 **Date of Survey:** August 2007

Monument Established By: JCLS

For: JCLS

Adjusted NAD83 Geodetic Position (NSRS2007)

Lat. 29°15'20.49271" N
 Long. 089°38'14.24887" W

Adjusted NAD83 Datum LSZ (1702) Ft (NSRS2007)

N= 278,985.57
 E= 3,832,299.78

Adjusted NAVD88 Height (2006.81)

Elevation = 4.53 feet (1.382 mtrs)

*Ellipsoid Height = -22.523 mtrs.
 Geoid03 Height = -23.905 mtrs. (2004.65)*



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

Figure B.3. Data sheet for static monument SCOFIELD2.



VICINITY MAP

Scale: N.T.S.

Reproduced from LDNR "SONRIS" Interactive Map

Station Name: "BA40-SM-03"

Monument Location: The Station is located by boat approximately 9 miles due south of Empire, Louisiana, on the east bank of Scofield Pass near Pelican Island in Section 35, T21S-R28E, Plaquemines Parish, Louisiana. It is located adjacent to an orange carsonite witness post.

Monument Description: The station is a stainless steel spherical datum point attached to a 9/16" stainless steel rod driven to refusal set within a floating sleeve and 6" PVC pipe filled with sand set in concrete with an access cover.

Stamping: BA40-SM-03

Survey Date: August 2007

Monument Established By: Louisiana Department of Natural Resources, CED.

Adjusted NAD83 Geodetic Position (NSRS2007)

Lat. 29° 14' 55.92300"N

Long. 89° 33' 49.99350"W

Adjusted NAD83 Datum LSZ (1702) Ft (NSRS2007)

N= 276,699.05

E= 3,845,115.00

Adjusted NAVD88 Height (2006.81)

Elevation = 3.42 feet (1.044 mtrs)

Ellipsoid Height = -22.850 mtrs.

Geoid03 Height = -23.894 mtrs. (2004.65)

Note:

Position determined from RTK Survey based from monument "SCOFIELD 2".



Adjusted Position determined by John Chance Land Surveys, Inc. for NOAA and the Louisiana Department of Natural Resources, CED

Figure B.4. Data sheet for static monument BA40-SM-03.

Appendix C

Settlement Plate Coordinates

Table C.1 Settlement plate coordinates for the Chenier Ronquille (BA-0076) Project. Coordinates are represented in UTM, NAD83 Zone 15, Meters.

Settlement Plate	Easting (X)	Northing (Y)
1	810,053.5727	3,247,190.0445
2	810,050.4093	3,247,413.6566
3	810,664.7324	3,247,115.9401
4	810,660.4179	3,247,418.9362
5	810,657.1395	3,247,657.3938
6	811,275.5489	3,247,065.3751
7	811,270.8148	3,247,406.6764
8	811,570.6215	3,247,782.4768
9	811,886.4379	3,247,014.7746
10	811,880.3258	3,247,450.5372

Table C.2 Settlement plate coordinates for the Shell Island – West (BA-0111) Project. Coordinates are represented in UTM, NAD83 Zone 15, Meters.

Settlement Plate	Easting (X)	Northing (Y)
1	826,775.852	3,245,074.260
2	826,916.802	3,244,969.996
3	827,055.973	3,245,031.583
4	822,778.644	3,244,987.751
5	822,827.007	3,245,281.413
6	822,848.998	3,245,412.825
7	827,019.745	3,244,681.832
8	823,078.586	3,244,933.300
9	823,138.381	3,245,290.442
10	827,056.657	3,244,376.998
11	827,215.696	3,244,502.378
12	823,452.412	3,244,997.344
13	823,479.644	3,245,556.133
14	823,566.694	3,245,405.283
15	823,726.173	3,245,133.028
16	827,501.495	3,243,759.250
17	827,551.068	3,243,797.552
18	824,000.834	3,245,343.271

Table C.3 Settlement plate coordinates for the Shell Island – East (BA-0110) Project. Coordinates are represented in NAD 83, State Planes, LA South, Feet.

Settlement Plate	Easting (X)	Northing (Y)
SP-01	3827204.68	285983.31
SP-02	3826938.81	285240.22
SP-03	3828035.98	285416.93
SP-04	3828168.01	285665.49
SP-05	3828268.83	284238.01
SP-06	3829881.58	284628.17
SP-07	3829753.38	283323.45
SP-08A	3828723.03	285110.85

Table C.4 Settlement plate coordinates for the Pelican Island (BA-38-1) Project. Coordinates are represented in NAD 83, State Planes, LA South, Feet.

Settlement Plate	Easting (X)	Northing (Y)
1	3833415.1	278243.9
2	3833630.1	279053.4
3	3835552.3	279201.1
4	3837053.2	277797.9
5	3839034.4	278176.0
6	3839773.8	277435.5
7	3840433.3	276399.3
8	3841423.3	276578.1
9	3842583.3	277400.2

Table C.5 Settlement plate coordinates for the Scofield Island (BA-0040) Project. Coordinates are represented in NAD 83, State Planes, LA South, Feet.

Settlement Plate	Easting	Northing
1	3845222.000	275787.000
2	3847617.990	275256.490
3	3851272.320	274167.916
4	3854182.615	273317.105
5	3856312.484	272849.990

Appendix D

Project Specific Survey Maps

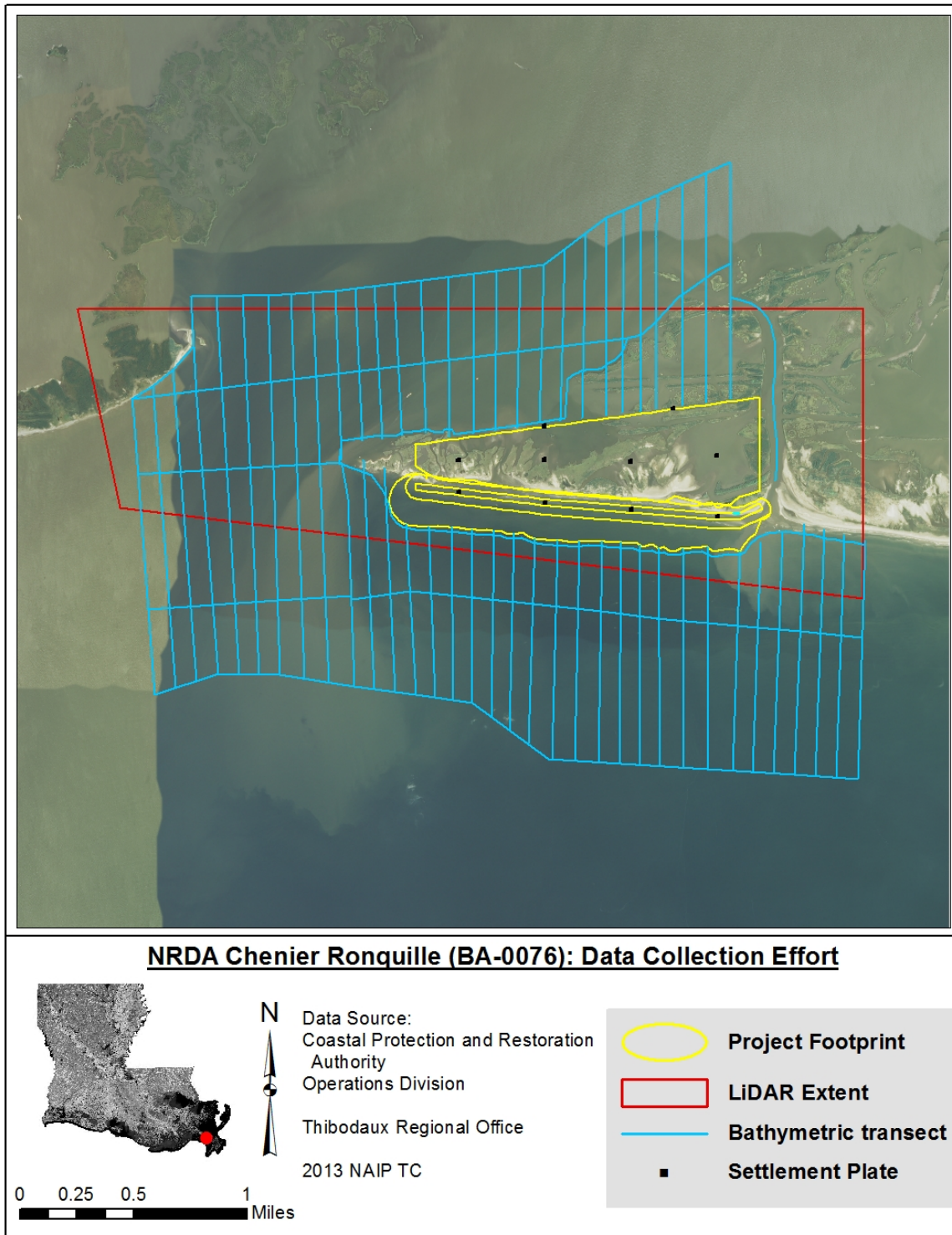
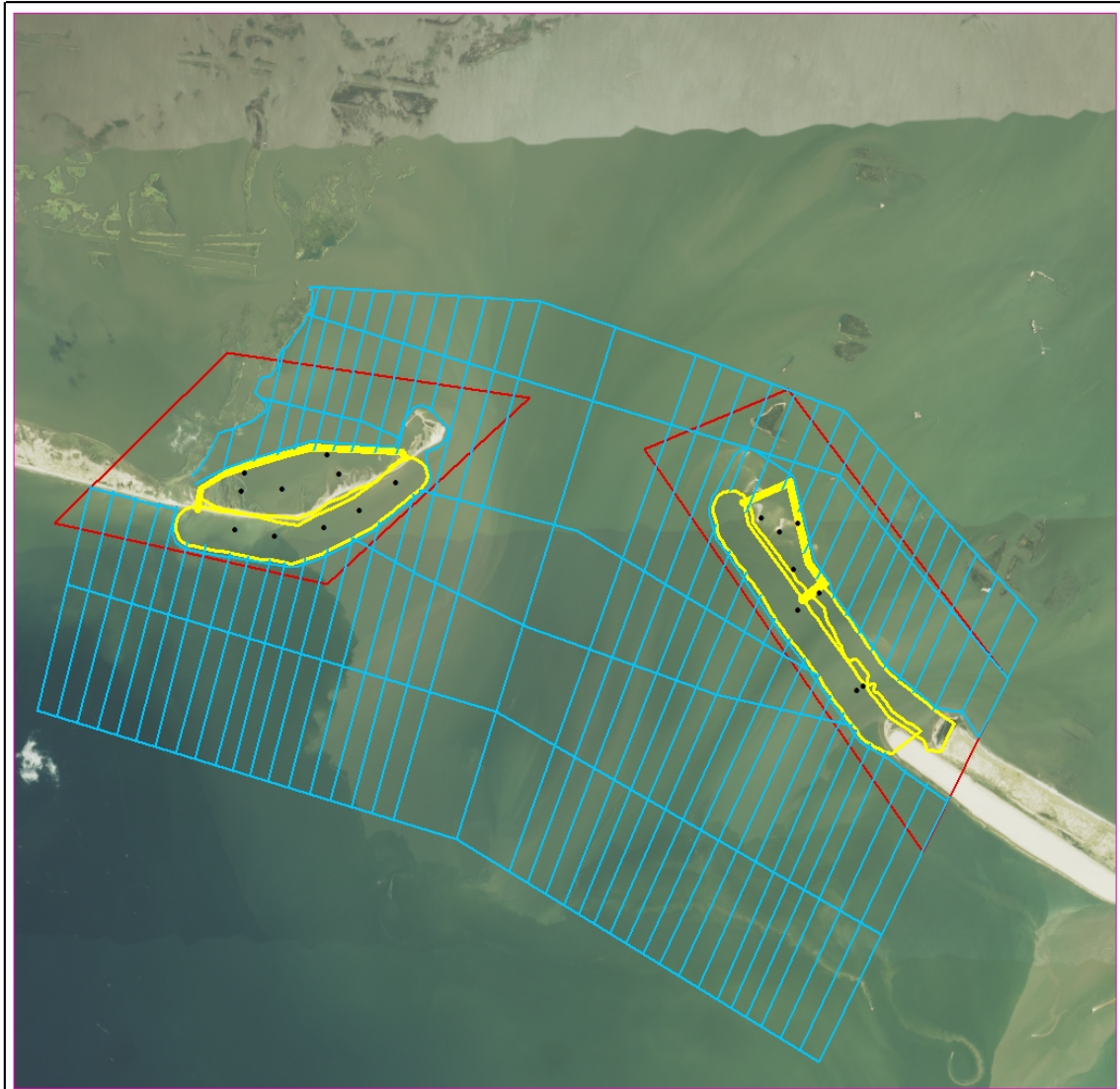


Figure D.1. NRDA Chenier Ronquille (BA-0076) Project data collection extent effort.



Shell Island West Barrier Island (BA-0111): Data Collection Effort

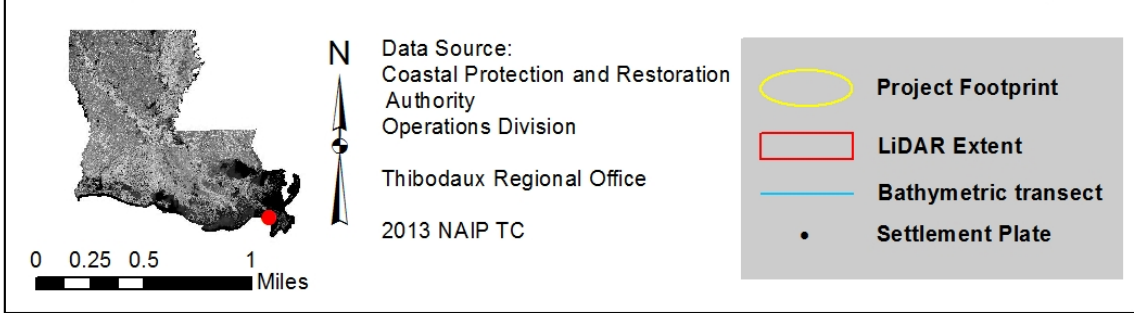


Figure D.2. Shell Island West Barrier Island (BA-0111) Project data collection extent effort.

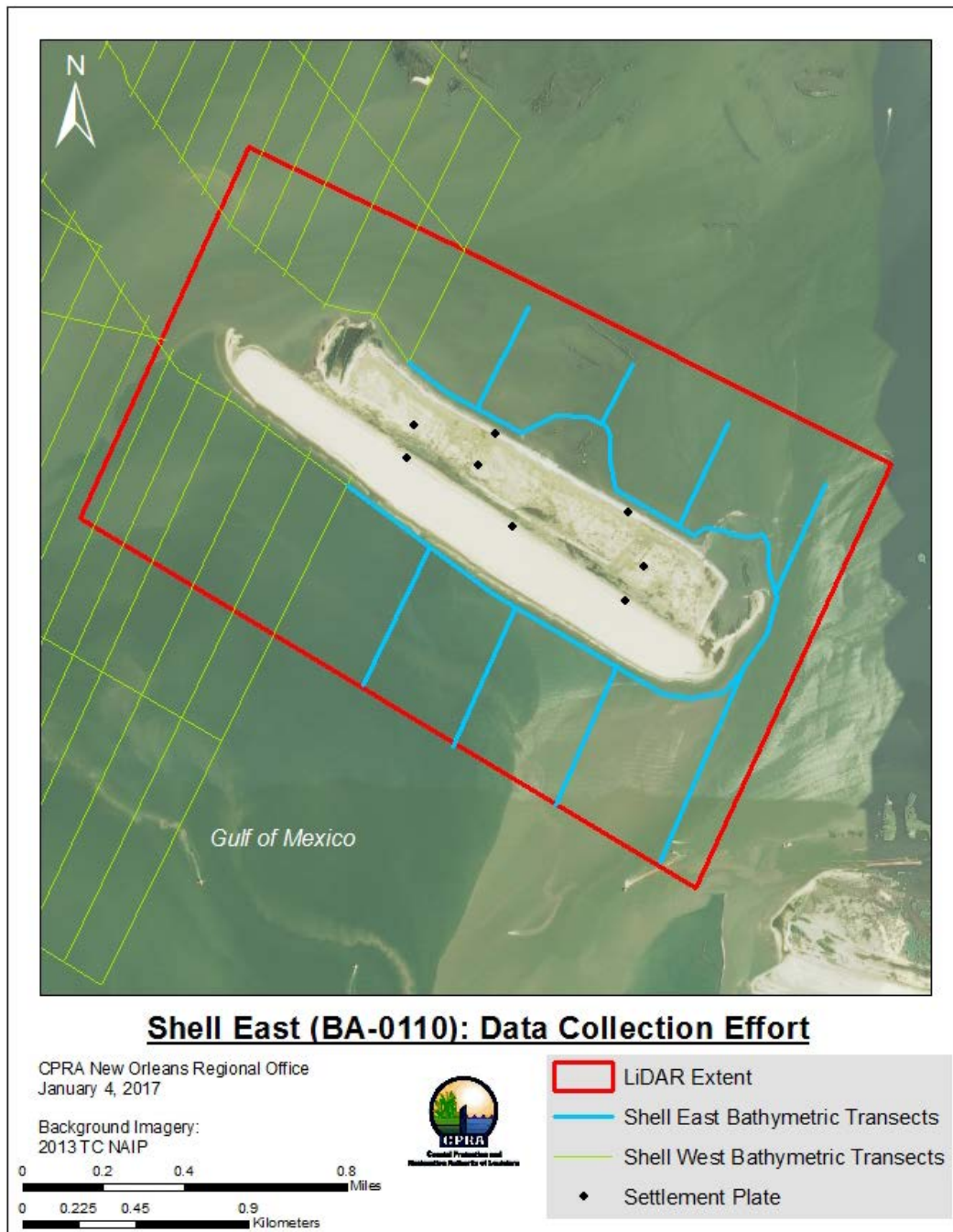


Figure D.3. Shell Island East Barrier Island Restoration (BA-0110) Project data collection layout.

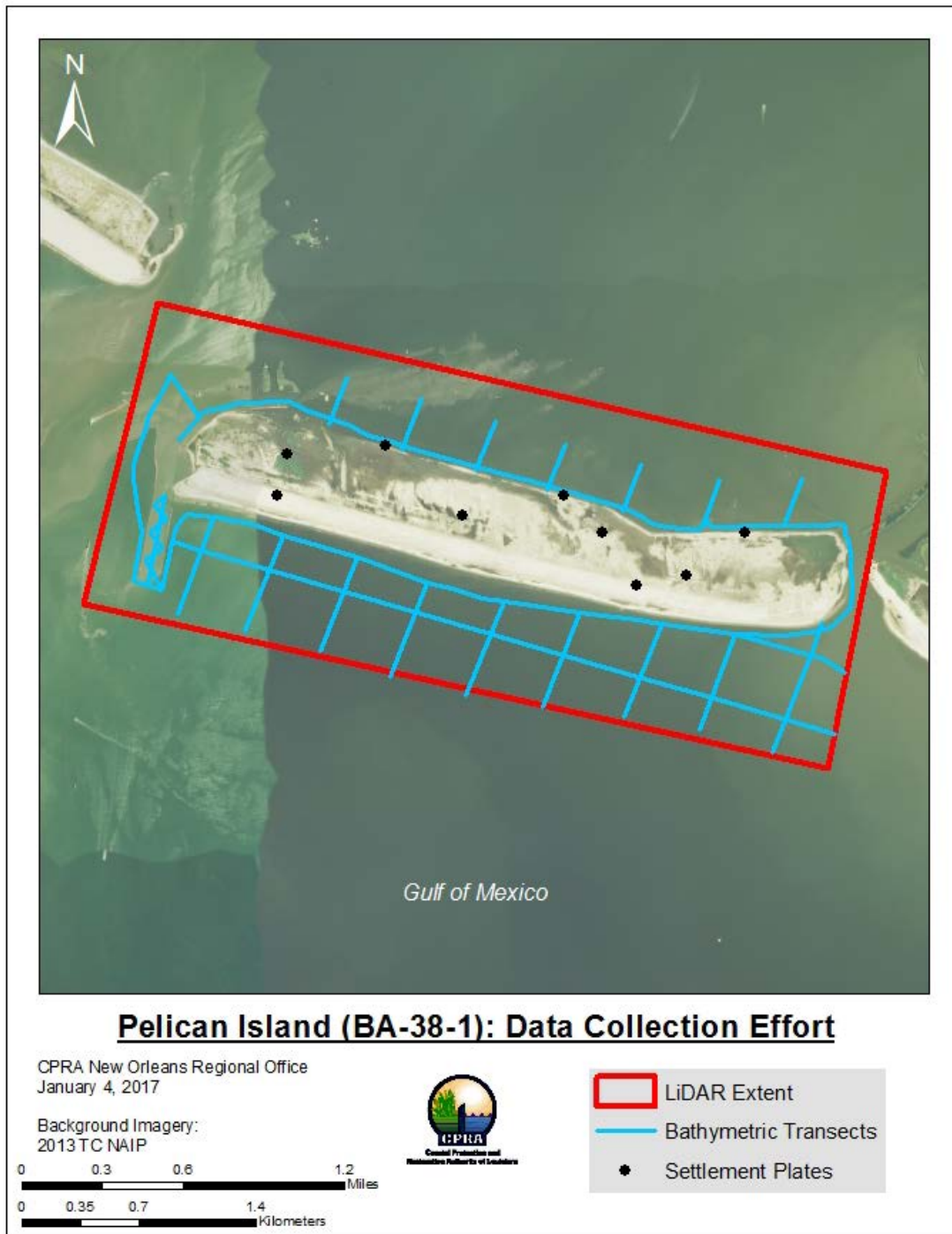


Figure D.4. Pelican Island Barrier Island Restoration (BA-0038-1) data collection layout.

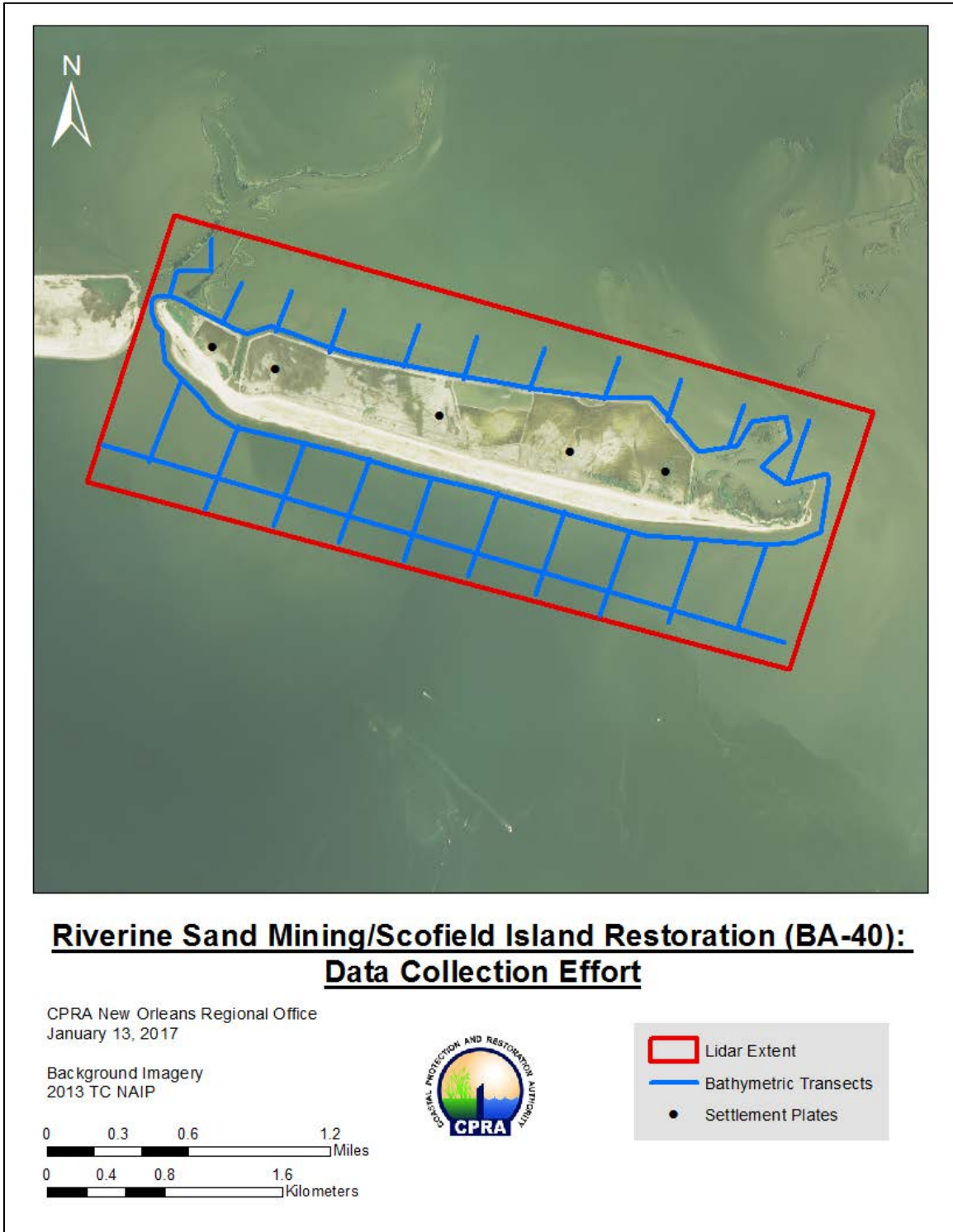


Figure D.5. Scofield Island Barrier Island Restoration (BA-0040) data collection layout.

Appendix E

DATA DELIVERY FILE FORMAT

Table E.1. Example spreadsheet showing required survey data formats for State Plane Coordinates.

Date	Point_num	X_LSP1702_ft	Y_LSP1702_ft	Z_NAVD88_GEOID12A_ft	Description	Station	Benchmark_ID
4/5/2016	1	3564559.770	181331.470	-37.55	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	2	3564559.980	181332.520	-37.55	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	3	3564560.070	181333.020	-37.54	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	4	3564560.210	181333.900	-37.54	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	5	3564560.390	181334.950	-37.54	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	6	3564560.650	181336.280	-37.43	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	7	3564560.760	181336.830	-37.43	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	8	3564560.970	181337.770	-37.43	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	9	3564561.170	181338.630	-37.42	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	10	3564561.300	181339.170	-37.42	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	11	3564561.530	181340.110	-37.42	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	12	3564561.740	181340.960	-37.42	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	13	3564561.880	181341.530	-37.43	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	14	3564562.120	181342.480	-37.53	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	15	3564562.330	181343.360	-37.43	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	16	3564562.480	181343.930	-37.43	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	17	3564562.730	181344.890	-37.54	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	18	3564562.990	181345.780	-37.54	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	19	3564563.160	181346.340	-37.64	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	20	3564563.300	181346.830	-37.64	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	21	3564563.450	181347.320	-37.64	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	22	3564563.590	181347.810	-37.74	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	23	3564563.880	181348.790	-37.64	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	24	3564564.020	181349.280	-37.64	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	25	3564564.160	181349.780	-37.54	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	26	3564564.390	181350.670	-37.74	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	27	3564564.540	181351.260	-37.74	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	28	3564564.660	181351.750	-37.63	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	29	3564564.760	181352.240	-37.63	BOTTOM	T-1	BICM2-MPH-04
4/5/2016	30	3564564.960	181353.150	-37.53	BOTTOM	T-1	BICM2-MPH-04

Where

Date (MM/DD/YYYY) is the date the point was collected,

Point num is the Survey Point Number,

X LSP1702 ft is the easting coordinate in State Plane, NAD83 – LA South 1702 in Feet,

Y LSP1702 ft is the northing coordinate in State Plane, NAD83 – LA South 1702 in Feet,

Z NAVD88 GEOID12B ft is the orthometric height at a specific coordinate referenced to the NAVD88 and the Geoid12B Model – in Feet,

Description describes the location where the point was taken,

Station is the Transect Number (T-1B to T-32), and

Benchmark ID is the name of the benchmark referenced during the survey.

Table E.2. Example spreadsheet showing required survey data formats for Universal Transverse Mercator Coordinates.

Date	Point_num	Easting_utm15N_m	Northing_utm15N_m	Elevation_NAVD88_GEOID12A_m	Description	Station	Benchmark_ID	Ellp_hgt_m
4/5/2016	1	748823.611	3210185.447	-11.45	BOTTOM	T-1	BICM2-MPH-04	-35.086
4/5/2016	2	748823.670	3210185.768	-11.45	BOTTOM	T-1	BICM2-MPH-04	-35.086
4/5/2016	3	748823.695	3210185.921	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.083
4/5/2016	4	748823.734	3210186.190	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.083
4/5/2016	5	748823.785	3210186.511	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.083
4/5/2016	6	748823.858	3210186.917	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.049
4/5/2016	7	748823.890	3210187.086	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.049
4/5/2016	8	748823.950	3210187.373	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.049
4/5/2016	9	748824.007	3210187.636	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.046
4/5/2016	10	748824.044	3210187.801	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.046
4/5/2016	11	748824.110	3210188.089	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.046
4/5/2016	12	748824.171	3210188.349	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.046
4/5/2016	13	748824.211	3210188.523	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.049
4/5/2016	14	748824.280	3210188.814	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.08
4/5/2016	15	748824.341	3210189.083	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.049
4/5/2016	16	748824.384	3210189.257	-11.41	BOTTOM	T-1	BICM2-MPH-04	-35.049
4/5/2016	17	748824.456	3210189.551	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.083
4/5/2016	18	748824.532	3210189.824	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.083
4/5/2016	19	748824.581	3210189.995	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.113
4/5/2016	20	748824.622	3210190.145	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.113
4/5/2016	21	748824.665	3210190.295	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.113
4/5/2016	22	748824.706	3210190.445	-11.50	BOTTOM	T-1	BICM2-MPH-04	-35.144
4/5/2016	23	748824.790	3210190.745	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.113
4/5/2016	24	748824.831	3210190.895	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.113
4/5/2016	25	748824.871	3210191.048	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.083
4/5/2016	26	748824.938	3210191.320	-11.50	BOTTOM	T-1	BICM2-MPH-04	-35.144
4/5/2016	27	748824.981	3210191.501	-11.50	BOTTOM	T-1	BICM2-MPH-04	-35.144
4/5/2016	28	748825.015	3210191.651	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.11
4/5/2016	29	748825.044	3210191.800	-11.47	BOTTOM	T-1	BICM2-MPH-04	-35.11
4/5/2016	30	748825.101	3210192.079	-11.44	BOTTOM	T-1	BICM2-MPH-04	-35.08

Where

Date (MM/DD/YYYY) is the date the point was collected,

Point num is the Survey Point Number,

Easting utm15N m is the easting coordinate in Universal Transverse Mercator Zone 15, NAD83 – in Meters,

Northing utm15N m is the northing coordinate in Universal Transverse Mercator Zone 15, NAD83 – in Meters,

Elevation NAVD88 GEOID12B m is the orthometric height at a specific coordinate referenced to the NAVD88 and the Geoid12B Model – in Meters,

Description describes the location where the point was taken,

Station is the Transect Number (T-1B to T-32),

Benchmark ID is the name of the benchmark referenced during the survey, and

Ellp hgt m is the height of the ellipsoid at a specific coordinate – in Meters.