

REPORT OF SURVEY

**ACOE Survey 09-149**

**C&SF Water Control Structures South  
Topographic Survey  
Central and South Florida**

**Network EastMid**

Prepared for:

**U.S. Army Corps of Engineers**  
Jacksonville District

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THIS REPORT IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA  
LICENSED SURVEYOR AND MAPPER

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## 1. General Approach and Strategy

As directed in the Scope of Work and subsequently agreed to in pre-field work discussions with Mr. Robert Swilley, PSM, Project Manager of the Jacksonville Geomatics Section of the USACOE, the overall task of determining the elevations of some 326 structures was divided into five different spatially delimited sub-projects called West, EastN1, EastN2, EastMid and EastS respectively, as shown in Figure 1 below: This report is specific to the sub-project EastMid only.

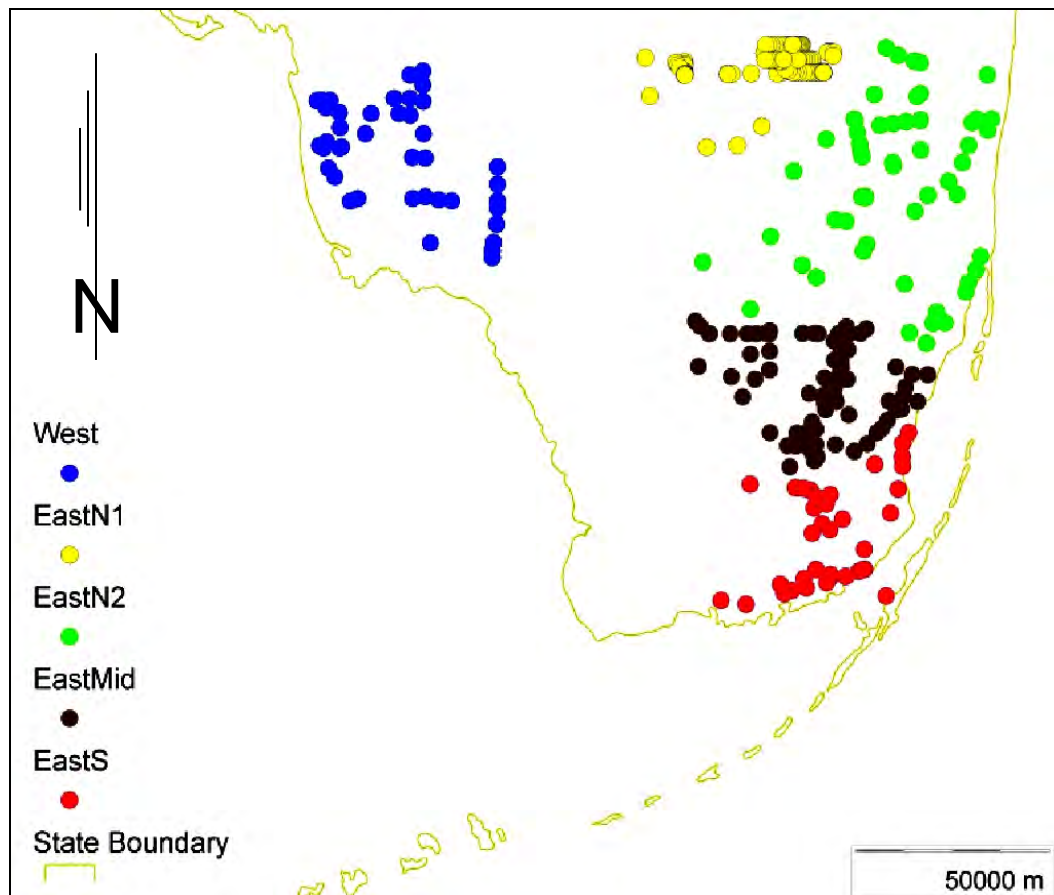


Figure 1: Segmentation of Project into Sub-Projects

The obvious efficiencies and specific mention of GPS technology in the scope have led to the choice of GPS as the primary 3D positioning technology for this survey. As the scope expressly excludes the application of any Real Time Kinematic GPS methods from being applied on this project, the method of static dual frequency GPS observations with post processed and least squares adjusted baseline network was opted for.

The structures to be surveyed by us were defined by means of general descriptions (such as “weir”, “spillway”, “culvert” or “staff gauge” coupled with very approximate coordinates. A detailed reconnaissance was thus necessary to find and positively identify the structures and to determine and demarcate a specific point on each structure as the primary survey point allocated to the specific structure. Each structure was inspected for the availability of existing monumentation such as disks or nails firmly embedded in a well defined and stable integral component of the structure. If such existing monumentation was found to be unsuitable for static GPS purposes - i.e if it was too close to obstructing obstacles or multi-

path rendering surfaces or if it could not be securely occupied with the use of a tripod for longer periods of time, then we demarcated a point in a more suitable position on the structure and adopted that as the primary survey point for the structure. In general, we demarcated such alternative points by an X-cut in the level concrete surface of a prominent part of the structure.

To achieve homogeneity of accuracy across the entire spatial domain of the network and to ensure harmony with nearest NGS-published geodetic control (i.e. control points for which data sheets can be downloaded from [http://www.ngs.noaa.gov/cgi-bin/ds\\_pid.prl](http://www.ngs.noaa.gov/cgi-bin/ds_pid.prl)), a preliminary selection of suitable control was filtered to include only geodetic control points that are classified as being suitable for satellite surveying and that have a vertical coordinate accuracy of better than or equal to 2<sup>nd</sup> order. A second selection round of geodetic control points for controlling the GPS baseline network was made by including only points in the nearest proximity of the individual structures in the network. A further refinement of the control point selection was based on a field inspection during which selected points were verified for suitability with regard to static GPS surveying requirements. For example, control points that were found to be near structures like high chain-link fences or traffic signs that could cause multi-paths of the GPS signals or points that could not be occupied for long periods of time without human support, such as disks mounted in head walls of bridges on major high ways, were replaced by the nearest suitable alternative control points in the original control point selection.

After the comprehensive reconnaissance was concluded, we designed a robust network of baselines which provided for sufficient redundancy to ascertain internal network integrity as well as sufficient subsequent control point constraints to transform the network onto NAD83/NAVD88 in the state plane coordinate system.

The network contains 21 NGS control points for which the geodetic coordinates as well as the published elevations were of sufficient quality to be held as fixed constraints in a network adjustment. The published elevation of AC0517 was added as an additional constraint. AC1187 was eliminated as control point because of bad horizontal as well as vertical discrepancies.

Altogether 103 baselines provided for a well-connected geometric network with ample loops to provide redundancy for the purpose of determining internal network integrity. The above statistics yield a ratio of 2.4 structure points per control point and 1.9 baselines per unknown point. Figure 2 displays the final, adjusted network design.

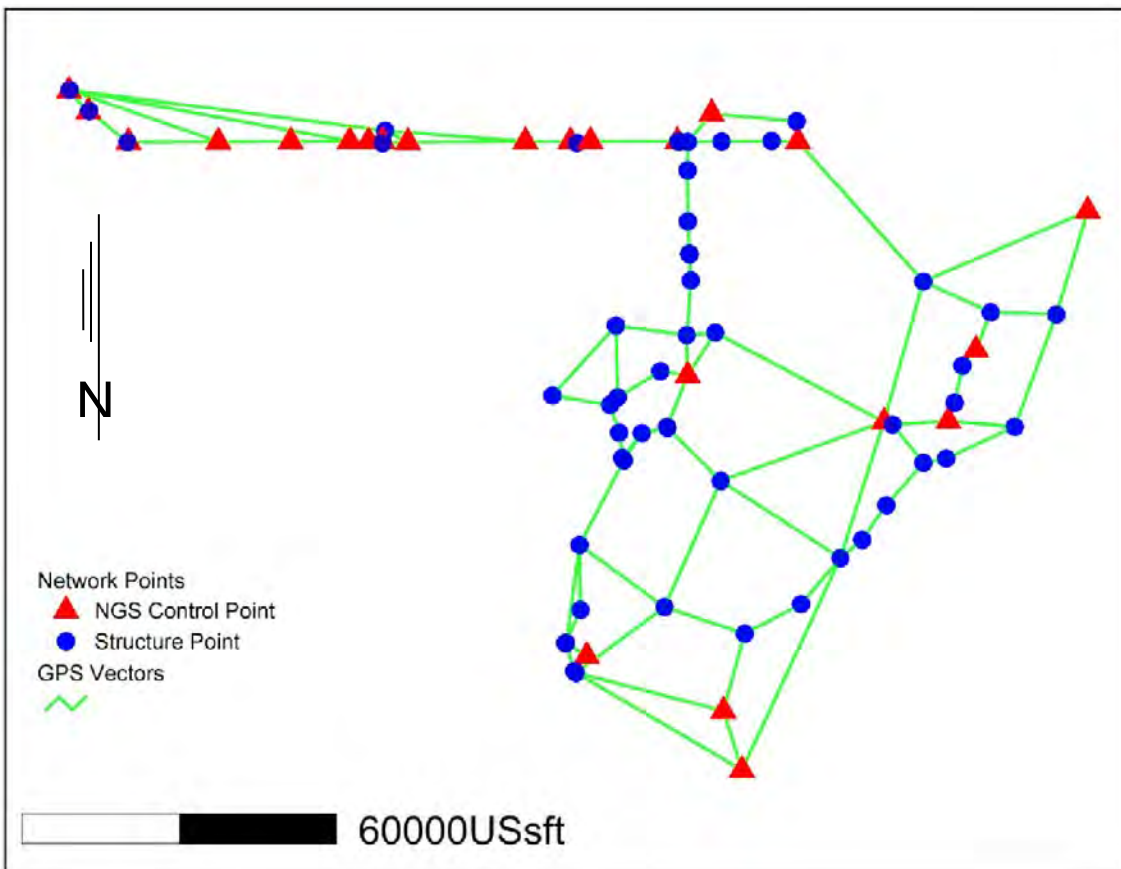


Figure 2: Final Layout of EastN2 Network

Access navigation is best achieved through the use of GPS navigators.

## 2. Observation Campaign

Six dual frequency receivers (five Trimble 4700 and One Trimble 4000ssi models) were used to perform static observations of sufficient duration to solve integer ambiguities for all the base lines contained in the network. All receivers were equipped with Trimble's microcentered L1/L2 antennas with ground planes and only 2.00m fixed height tripods or 2.00m "fixed height snap lock" rods were used to center the antennas. This regimen greatly reduced the risk of using incorrect antenna heights in the adjustment and obviated the need for multiple occupations at each point. In order to guard against gross horizontal centering errors, centering was checked both at the beginning as well as at the end of each observation session.

Sufficient observations for a fixed solution of the integer ambiguity were collected for each baseline. At each point in the network we observed at least once for at least 15 minutes at 5s epochs. This measure was introduced to enable isolation of network problems (in case of accidental centering errors, misidentification of points or other unexplained measuring problems) through the use of rapid OPUS provided by the NGS. The said 15 minute sessions could also be very useful for the purpose of an independent third party quality assessment of our work.

We generally performed the same routine of tasks for each occupation. In addition to carefully setting up the antenna and ensuring the correct recording settings on the receiver, we filled in relevant field sheets and took photographs to properly document the occupation. We generally took three photographs at each structure; a close-up view of the mark to display fine details such as stamping and center punch, a view of the instrument as it was centered over the mark and a general view of the major features of the overall structure showing the location of the instrument (and thus the primary survey mark) relative to the overall structure design. At control points we only took the first two of the three types of views described above. In this way we collected independent verifications of the field sheet entries.

For ease of cross referencing and in compliance with the scope, we used the following file naming conventions for digital photographs:

XXXXXX mm-dd-yy ?nnnn.jpg where

XXXXXX is a text string of variable length (with spaces tolerated) exactly replicating the name of the structure as supplied to us as part of our original brief,

mm-dd-yy is the date that the photograph was taken

? is an M for a close-up of the disk or centering mark  
I for a photograph of the instrument set-up  
S for a photograph showing the point in relation to the structure  
L for a photograph showing the part of a feature to which a level was run.

nnn is the integer allocated by the camera on the sd-card file name.

All GPS observations were collected by Richard Sawyer, Andrew Sawyer, and Walter Volkmann. GPS observations were collected on March 12<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup>, as well as on May 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 19<sup>th</sup> of 2010.

Leveling work at structures G70, G789, G3272, G3557, G3559, G3575, G3622, G3628, L31, Las Palmas G1, S24, S332B, S332D, S336, S343A and S343B was performed on April 7<sup>th</sup> and May 19<sup>th</sup> and 20<sup>th</sup> of 2010.

For these particular structures we provided an independent point in the direct vicinity of the structure from which we subsequently spirit-leveled the elevation of a defined, integral feature of that structure. The relevant structure sheets show the individual features to which we leveled in more detail. Occupation records OR0410 to OR0425 contain the original leveling observations and the elevation computations were done on the *Level/Cals* worksheet in MasterNEhe.xls workbook.

### **3. Base Line Computations and Network Adjustment**

The horizontal network datum was set to be NAD83 and the Florida East state plane coordinate system with US survey feet as unit of linear measure was specified. To compute NAVD88 elevations from GPS determined ellipsoidal heights, Geoid09, as published by the NGS, was specified as default geoid in this adjustment. Horizontal centering errors were set to 0.005'. Antenna height accuracies were specified to be 0.002'.

The *Wave* module in Trimble’s Geomatics Office (TGO) suite was used to post-process baselines. Only baseline results with fixed integer ambiguity solutions were accepted for adjustment. In order to not contaminate the accuracy estimates with dependent observations, only non-trivial baselines were used in the network (i.e. we followed the “n-1”-rule). Loop closures were computed as the work progressed.

Once all the baselines had been processed and validated by loop closure analyses, a free network adjustment was performed using Trimble’s *Network* module. No significant outliers were detected in this initial adjustment. The resulting geodetic coordinates of the control points were compared to published values. The published horizontal as well as vertical coordinates of AC1187 did not agree well with the rest of the network. Hence the coordinates for this point were treated as unknowns and the point DL2579 was added to replace it as a constraint in the south of the network.

After validation of the control point coordinates they were held as fixed constraints and Geoid09 (published by the NGS) was added as a set of observations to determine orthometric heights on the NAVD88 datum. A fully constrained adjustment showed no outliers and hence no observations were discarded. A chi-square test was passed within four iterations of the constrained adjustment. The resulting coordinates and accuracy estimates are shown in Table 1 below.

#### NGS Control Points

Point	SPCS Florida East (usft)			NAVD88	Est. Accuracies @ 95% Conf. Level			
	N	E	EIht	Elev	dN	dE	dEIht	dElev
AC0477	<b>519296.788</b>	<b>842749.006</b>	<b>-74.826</b>	<b>6.480</b>	0.000	0.000	0.000	0.000
AC0509	<b>519332.583</b>	<b>760808.477</b>	<b>-65.357</b>	<b>14.377</b>	0.000	0.000	0.000	0.000
AC0511	<b>519334.545</b>	<b>757169.749</b>	<b>-68.422</b>	<b>11.368</b>	0.000	0.000	0.000	0.000
AC0517	519289.449	745956.608	-65.143	<b>14.436</b>	0.066	0.069	0.085	0.000
AC0523	<b>519240.945</b>	<b>732114.381</b>	<b>-64.770</b>	<b>14.573</b>	0.000	0.000	0.000	0.000
AC0528	<b>519170.824</b>	<b>714955.971</b>	<b>-64.659</b>	<b>14.449</b>	0.000	0.000	0.000	0.000
AC1187	410646.670	828544.753	-75.574	6.008	0.062	0.059	0.069	0.108
AC3931	<b>474644.443</b>	<b>821718.925</b>	<b>-67.685</b>	<b>13.350</b>	0.000	0.000	0.000	0.000
AC4650	<b>506016.248</b>	<b>898079.872</b>	<b>-76.037</b>	<b>6.916</b>	0.000	0.000	0.000	0.000
AC4661	<b>421118.154</b>	<b>802458.315</b>	<b>-75.512</b>	<b>5.239</b>	0.000	0.000	0.000	0.000
AC4724	<b>465959.264</b>	<b>871453.008</b>	<b>-73.461</b>	<b>9.232</b>	0.000	0.000	0.000	0.000
AC4726	<b>479520.747</b>	<b>876761.167</b>	<b>-73.894</b>	<b>8.760</b>	0.000	0.000	0.000	0.000
AC4738	<b>519320.172</b>	<b>819724.920</b>	<b>-74.406</b>	<b>6.407</b>	0.000	0.000	0.000	0.000
AC4755	<b>519343.379</b>	<b>763458.911</b>	<b>-66.817</b>	<b>12.940</b>	0.000	0.000	0.000	0.000
AJ7732	<b>519180.975</b>	<b>768272.090</b>	<b>-70.886</b>	<b>9.049</b>	0.000	0.000	0.000	0.000
AJ7736	<b>519290.071</b>	<b>790733.895</b>	<b>-63.651</b>	<b>16.657</b>	0.000	0.000	0.000	0.000
AJ7737	<b>519271.287</b>	<b>799299.724</b>	<b>-72.467</b>	<b>8.009</b>	0.000	0.000	0.000	0.000
AJ7738	<b>519314.263</b>	<b>803127.722</b>	<b>-63.898</b>	<b>16.621</b>	0.000	0.000	0.000	0.000
AJ7751	<b>528933.047</b>	<b>703595.604</b>	<b>-70.567</b>	<b>8.720</b>	0.000	0.000	0.000	0.000
AJ7752	<b>524937.828</b>	<b>707324.373</b>	<b>-67.329</b>	<b>11.903</b>	0.000	0.000	0.000	0.000
AJ7756	<b>524589.834</b>	<b>826301.393</b>	<b>-71.069</b>	<b>9.856</b>	0.000	0.000	0.000	0.000

DF7989	<b>465790.412</b>	<b>859175.156</b>	<b>-45.866</b>	<b>36.419</b>	0.000	0.000	0.000	0.000
DL2759	<b>399383.380</b>	<b>832068.300</b>	<b>-54.393</b>	<b>27.166</b>	0.000	0.000	0.000	0.000
<b>Primary Structure Points</b>								
	SPCS Florida East (usft)			NAVD88	Est. Accuracies @ 95% Conf. Level			
Point	N	E	EIHt	Elev	dN	dE	dEIHt	dElev
<a href="#">Angles Well</a>	468979.908	806940.299	-74.816	5.817	0.079	0.082	0.052	0.102
<a href="#">G114</a>	465258.912	860781.702	-76.946	5.390	0.059	0.059	0.052	0.102
<a href="#">G119</a>	519268.051	828195.536	-73.709	7.270	0.062	0.059	0.075	0.115
<a href="#">G211</a>	482328.973	821573.782	-74.606	6.339	0.052	0.052	0.033	0.092
<a href="#">G3272</a>	484171.224	808029.411	-75.237	5.342	0.072	0.072	0.046	0.098
<a href="#">G3273</a>	470820.693	795913.791	-73.925	6.386	0.092	0.095	0.089	0.121
<a href="#">G3557</a>	492747.038	822329.180	-71.815	9.084	0.082	0.082	0.046	0.095
<a href="#">G3559</a>	513808.794	821722.457	-73.696	7.140	0.085	0.082	0.052	0.098
<a href="#">G3575</a>	497756.623	822035.687	-73.046	7.820	0.102	0.098	0.049	0.098
<a href="#">G3622A</a>	423572.556	798524.652	-77.308	3.321	0.052	0.052	0.036	0.092
<a href="#">G3622B</a>	423598.228	798376.693	-77.366	3.259	0.082	0.079	0.043	0.095
<a href="#">G3628</a>	458446.300	809526.875	-74.757	6.032	0.072	0.072	0.049	0.098
<a href="#">G420</a>	523151.936	842483.441	-73.012	8.278	0.056	0.056	0.062	0.105
<a href="#">G69</a>	519024.315	800528.438	-71.902	8.551	0.059	0.056	0.033	0.092
<a href="#">G70</a>	521357.328	763942.708	-65.587	14.303	0.043	0.043	0.039	0.092
<a href="#">G789 (AC4661)</a>	<b>421118.154</b>	<b>802458.315</b>	<b>-75.512</b>	<b>5.239</b>	0.000	0.000	0.000	0.000
<a href="#">L31</a>	497751.014	822120.651	-74.190	6.678	0.095	0.095	0.049	0.098
<a href="#">Las Palmas C1</a>	475446.606	816554.518	-75.212	5.650	0.062	0.066	0.039	0.095
<a href="#">Las Palmas DC1</a>	458899.317	809240.550	-75.150	5.627	0.092	0.095	0.089	0.125
<a href="#">Las Palmas G1</a>	470496.102	808372.405	-75.544	5.121	0.072	0.072	0.046	0.095
<a href="#">Las Palmas G2</a>	463730.582	808650.798	-75.207	5.513	0.085	0.085	0.062	0.105
<a href="#">S118</a>	469413.865	872696.967	-74.314	8.357	0.072	0.072	0.102	0.131
<a href="#">S119</a>	476479.087	874164.552	-74.201	8.402	0.069	0.075	0.095	0.128
<a href="#">S120</a>	486679.773	879569.610	-69.178	13.440	0.052	0.056	0.052	0.102
<a href="#">S121</a>	492548.572	866685.936	-67.384	14.739	0.046	0.046	0.052	0.098
<a href="#">S122</a>	458787.832	871058.458	-77.838	4.953	0.075	0.072	0.056	0.102
<a href="#">S123</a>	464819.206	884143.424	-74.662	8.490	0.062	0.059	0.059	0.105
<a href="#">S12A (AC0528)</a>	<b>519170.824</b>	<b>714955.971</b>	<b>-64.659</b>	<b>14.449</b>	0.000	0.000	0.000	0.000
<a href="#">S12B (AC0523)</a>	<b>519240.945</b>	<b>732114.381</b>	<b>-64.770</b>	<b>14.573</b>	0.000	0.000	0.000	0.000
<a href="#">S12C (AC0517)</a>	<b>519289.449</b>	<b>745956.608</b>	<b>-65.143</b>	<b>14.436</b>	0.066	0.069	0.085	0.000
<a href="#">S12D (AC0509)</a>	<b>519332.583</b>	<b>760808.477</b>	<b>-65.357</b>	<b>14.377</b>	0.000	0.000	0.000	0.000
<a href="#">S12E</a>	519111.474	763519.085	-67.423	12.436	0.062	0.059	0.036	0.092
<a href="#">S14</a>	519181.222	714740.830	-63.601	15.557	0.066	0.066	0.049	0.098
<a href="#">S148</a>	449899.595	859619.561	-75.053	7.470	0.089	0.085	0.069	0.108
<a href="#">S149</a>	457988.154	866710.100	-75.324	7.328	0.062	0.062	0.039	0.095
<a href="#">S165</a>	439848.727	850863.590	-74.811	7.522	0.049	0.049	0.052	0.098
<a href="#">S166</a>	431012.936	843336.588	-73.651	8.476	0.075	0.072	0.062	0.105
<a href="#">S167</a>	425399.288	832608.094	-73.388	8.393	0.066	0.062	0.056	0.102



<a href="#">S173</a>	464811.792	817763.431	-68.773	12.209	0.069	0.066	0.046	0.098
<a href="#">S174</a>	418224.579	800059.432	-71.145	9.530	0.052	0.052	0.033	0.092
<a href="#">S176</a>	417899.768	800380.969	-71.309	9.375	0.059	0.059	0.075	0.115
<a href="#">S194</a>	454529.143	828051.650	-74.985	6.420	0.052	0.052	0.066	0.105
<a href="#">S195</a>	443307.466	854997.862	-75.947	6.494	0.085	0.079	0.069	0.108
<a href="#">S196</a>	430453.299	817296.788	-74.960	6.287	0.056	0.056	0.052	0.102
<a href="#">S22</a>	486255.271	892082.585	-76.061	6.983	0.062	0.059	0.059	0.102
<a href="#">S24A</a>	504024.510	821772.553	-75.347	5.493	0.098	0.095	0.052	0.098
<a href="#">S331</a>	464646.853	817901.667	-70.233	10.754	0.072	0.066	0.049	0.098
<a href="#">S332B</a>	442310.247	801082.868	-70.524	10.118	0.062	0.062	0.049	0.098
<a href="#">S332C</a>	429947.639	801228.639	-71.111	9.600	0.085	0.085	0.066	0.108
<a href="#">S333 (AC4755)</a>	<b>519343.379</b>	<b>763458.911</b>	<b>-66.817</b>	<b>12.940</b>	0.000	0.000	0.000	0.000
<a href="#">S334</a>	519271.929	819957.988	-68.708	12.104	0.066	0.066	0.036	0.092
<a href="#">S335 (AJ7756)</a>	<b>524589.834</b>	<b>826301.393</b>	<b>-71.069</b>	<b>9.856</b>	0.000	0.000	0.000	0.000
<a href="#">S336</a>	519221.573	821769.654	-71.533	9.315	0.056	0.056	0.049	0.098
<a href="#">S338</a>	482786.341	826984.091	-71.306	9.784	0.049	0.049	0.030	0.092
<a href="#">S343A</a>	529089.552	703748.023	-62.322	16.909	0.052	0.052	0.046	0.098
<a href="#">S343B</a>	525082.320	707484.591	-62.513	16.677	0.062	0.062	0.052	0.098
<a href="#">S346</a>	518979.506	763466.187	-68.658	11.198	0.056	0.056	0.039	0.092
<a href="#">S347</a>	505112.912	763978.282	-72.336	7.377	0.098	0.098	0.312	0.322
<a href="#">S355A (AJ7736)</a>	<b>519290.071</b>	<b>790733.895</b>	<b>-63.651</b>	<b>16.657</b>	0.000	0.000	0.000	0.000
<a href="#">S355B (AJ7738)</a>	<b>519314.263</b>	<b>803127.722</b>	<b>-63.898</b>	<b>16.621</b>	0.000	0.000	0.000	0.000
<a href="#">S356</a>	519285.951	820075.162	-61.633	19.181	0.075	0.072	0.043	0.095
<a href="#">S357</a>	463610.711	812938.370	-72.707	8.143	0.079	0.079	0.052	0.098
<a href="#">S380</a>	519347.913	837685.963	-73.093	8.089	0.066	0.066	0.085	0.121

**Table 1: List of Coordinates and 95% Confidence Level Accuracy Estimates**

The estimated absolute accuracies, when compared to the accuracies obtained from a network held free from NGS published coordinates, indicate that the NGS published values add tension to the network. However, since harmony with nearest NGS-published control is desired, we have not eliminated more control than that mentioned above. There is ample redundancy in the constraints to eliminate the possibility of gross errors.

#### **4. Description of Deliverables**

The reader will note that Table 2 above contains hyperlinks. These were introduced to enhance the transparency of our survey records and to facilitate easy access to all the information components of the deliverables. In order for the hyperlinks to function, all the deliverables described below were stored in a specific directory structure which should be replicated by the reader on his/her computer. A description of the deliverables in their respective folders is given below as follows:

a. Structure Sheets

For each structure we have provided an MS Word file. These files are stored in the folder

C:\09-149 EastMid\StructureSheets\DOC

b. Occupation Records

A pdf version of each of the record sheets that we filled out in the field is located in the folder C:\09-149 EastMid\OccRecords

c. Digital Photographs

All the photographs that we took of structures and control points are in jpg format. They are in the folder

C:\09-149 EastMid\OccPhotos

d. Shape file

A shape file containing all the structures surveyed by us is located in C:\09-149 EastMid\Shapefile

Please note that the shape file is referenced to the Florida East (usft) State Plane Coordinate System.

e. Report and Tables (Saved in Folder **Main**)

This report (09-149EastMidREPORT.doc), a record of the control points that were occupied (Control Point Occupations.doc) as well as a multi-sheet structured MS Excel file linking points with operational details such as GPS observation files, field sheet records and photographs (MasterNEheEastMid.xls) are located in C:\09-149 EastMid>Main.

f. Trimble Geomatics Office Project

A replica of our TGO project, from which all the GPS related results of this project were derived is saved in C:\09-149 EastMid\STATIC EASTMID

# CONTROL POINT RECORDS

**Point ID** AC0477 **DESIGNATION** A 237  
**DESCRIPTION** Bench Mark Disk in Rock Outcrop



**GEODETTIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519296.788	842749.006	-74.826	6.480	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
22630736	OR0319.pdf	AC0477 03-14-10 M1308	AC0477 03-14-10 I1309

## CONTROL POINT RECORDS

**Point ID** AC0509 **DESIGNATION** M 237  
**DESCRIPTION** Bench Mark Disk in Concrete Retaining Wall

GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**  
 UNITS USED      **US Survey Foot**



SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519332.583	760808.477	-65.357	14.377	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
22631260-2	OR0388.pdf	AC0509 05-06-10 M0005	AC0509 05-06-10 I0006

# CONTROL POINT RECORDS

Point ID **AC051 1** DESIGNATION N 237  
 DESCRIPTION Bench Mark Disk in Concrete Monument



GEODETIC DATUM      NAD83 (2007)      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM    NAVD 88      GEOID USED            **Geoid 09**  
 UNITS USED            US Survey Foot

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519334.545	757169.749	-68.422	11.368	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
28270961-2	OR0389.pdf	AC0511 05-06-10 M0008	AC0511 05-06-10 I0009

# CONTROL POINT RECORDS

**Point ID** AC051 7 **DESIGNATION** Q 237  
**DESCRIPTION** Bench Mark Disk in Concrete Retaining Wall

**GEODETIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot



**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519289.449	745956.608	-65.143	14.436	0.066	0.069	0.085	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
49251260-2	OR0390.pdf	AC0517 05-06-20 M0010	AC0517 05-06-20 I0011

# CONTROL POINT RECORDS

**Point ID** AC0523 **DESIGNATION** T237  
**DESCRIPTION** Bench Mark Disk in Concrete Retaining Wall



GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**  
 UNITS USED      **US Survey Foot**

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519240.945	732114.381	-64.770	14.573	0.000	0.000	0.000	0.000

GPS Obs. Files		Occupation Records		Occupation Photos	
				Monument Photo	Setup Photo
0575 1260-2	OR0391.pdf	AC0523 05-06-10 M0013	AC0523 05-06-10 I0014		

---

# CONTROL POINT RECORDS

Point ID AC0528 DESIGNATION V 237  
 DESCRIPTION Bench Mark Disk in Concrete Retaining Wall

GEODETIC DATUM NAD83 (2007) COORDINATE SYSTEM FLORIDA EAST  
 ELEVATION DATUM NAVD 88 GEOID USED Geoid 09  
 UNITS USED US Survey Foot



SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519170.824	714955.971	-64.659	14.449	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
22631260	OR0392.pdf	AC0528 05-06-10 M0016	AC0528 05-06-10 I0017





## CONTROL POINT RECORDS

**Point ID** AC3931 **DESIGNATION** KROME  
**DESCRIPTION** Triang. Stn. Disk in Concrete Monument



**GEODETIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
474644.443	821718.925	-67.685	13.350	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
5750772	OR0340.pdf	AC3931 03-18-10 M1372	AC3931 03-18-10 I1373

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# CONTROL POINT RECORDS

Point ID AC4650 DESIGNATION FLGPS GABLES  
 DESCRIPTION Stainless Steel Rod



GEODETIC DATUM      NAD83 (2007)      COORDINATE SYSTEM FLORIDA EAST  
 ELEVATION DATUM      NAVD 88      GEOID USED      Geoid 09  
 UNITS USED      US Survey Foot

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
506016.248	898079.872	-76.037	6.916	0.000	0.000	0.000	0.000

**GPS Obs. Files**

**Occupation Records**

**Occupation Photos**

**Monument Photo**

**Setup Photo**

22630772

OR0343.pdf

AC4650 03-18-10 M1343

AC4650 03-18-10 I1344





## CONTROL POINT RECORDS

Point ID AC4724 DESIGNATION J 399  
 DESCRIPTION Vertical Control Disk in Concrete Catch Basin

GEODETIC DATUM      NAD83 (2007)      COORDINATE SYSTEM FLORIDA EAST  
 ELEVATION DATUM    NAVD 88      GEOID USED            Geoid 09  
 UNITS USED            US Survey Foot



SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
465959.264	871453.008	-73.461	9.232	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
5750741	OR0333.pdf	AC4724 03-15-10 M1322	AC4724 03-15-10 I1323

# CONTROL POINT RECORDS

**Point ID** AC4726 **DESIGNATION** K 399  
**DESCRIPTION** Vertical Control Disk in Concrete Catch Basin



GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**  
 UNITS USED      **US Survey Foot**

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
479520.747	876761.167	-73.894	8.760	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
4925 1260-3	OR0398.pdf	AC4726 05-07-10 M0007	AC4726 05-07-10 I0008

# CONTROL POINT RECORDS

**Point ID** AC4738 **DESIGNATION** J 407  
**DESCRIPTION** Stainless Steel Rod



**GEODETIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519320.172	819724.920	-74.406	6.407	0.000	0.000	0.000	0.000

**GPS Obs. Files**

**Occupation Records**

**Occupation Photos**

**Monument Photo**

**Setup Photo**

22630734

OR0318.pdf

AC4738 03-14-10 M1288

AC4738 03-14-10 I1295



## CONTROL POINT RECORDS

**Point ID** AC4755 **DESIGNATION** A410X  
**DESCRIPTION** Vertical Control Disk in Retaining Wall



**GEODETIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519343.379	763458.911	-66.817	12.940	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
5751260	OR0386.pdf	AC4755 05-06-10 M0001	AC4755 05-06-10I0002

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# CONTROL POINT RECORDS

**Point ID** AJ7732 **DESIGNATION** 8788 F4  
**DESCRIPTION** Survey Disk in Concrete Monument



**GEODETIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519180.975	768272.090	-70.886	9.049	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
28270961	OR0387.pdf	AJ7732 05-06-10 M0004	AJ7732 05-06-10 I0005

## CONTROL POINT RECORDS

**Point ID** AJ7736 **DESIGNATION** D 546  
**DESCRIPTION** Survey Disk in Concrete Bridge Abutment

GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**  
 UNITS USED      **US Survey Foot**



SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519290.071	790733.895	-63.651	16.657	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
49250717	OR0324.pdf	AJ7736 03-12-10 M302	AJ7736 03-12-10 I303

## CONTROL POINT RECORDS

**Point ID** AJ7737 **DESIGNATION** 8700 F33 RESET  
**DESCRIPTION** Survey Disk in Concrete Monument



GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**  
 UNITS USED      **US Survey Foot**

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519271.287	799299.724	-72.467	8.009	0.000	0.000	0.000	0.000

**GPS Obs. Files**

**Occupation Records**

**Occupation Photos**

**Monument Photo**

**Setup Photo**

49250730

OR0310.pdf

AJ7737 03-14-10 M1277

AJ7737 03-14-10 I1278

# CONTROL POINT RECORDS

**Point ID** **AJ7738** **DESIGNATION** E 546  
**DESCRIPTION** Survey Disk in Concrete Bridge Abutment



GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM    **NAVD 88**      GEOID USED            **Geoid 09**  
 UNITS USED            **US Survey Foot**

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519314.263	803127.722	-63.898	16.621	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
49250732	OR0311.pdf	AJ7738 03-14-10 M1285	AJ7738 03-14-10 I1286

# CONTROL POINT RECORDS

**Point ID** AJ7751      **DESIGNATION** Y 527  
**DESCRIPTION** Metal Rod



**GEODETIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**  
**UNITS USED**      **US Survey Foot**

**SOURCE:** [NGS Datasheet](#)

<b>COORDINATES</b>				<b>Estimated Errors at 95% Confidence Level</b>			
<b>N</b>	<b>E</b>	<b>El. Ht</b>	<b>Elev.</b>	<b>N</b>	<b>E</b>	<b>El. Ht</b>	<b>Elev</b>
528933.047	703595.604	-70.567	8.720	0.000	0.000	0.000	0.000

<b>GPS Obs. Files</b>	<b>Occupation Records</b>	<b>Occupation Photos</b>	
		<b>Monument Photo</b>	<b>Setup Photo</b>
22630710	OR0326.pdf	AJ7751 03-12-10 M286	AJ7751 03-12-10 I287

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## CONTROL POINT RECORDS

**Point ID** **AJ7752** **DESIGNATION** Z 527  
**DESCRIPTION** Survey Disk in Concrete Bridge Guard Rail



**GEODETTIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
524937.828	707324.373	-67.329	11.903	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
5750710	OR0305.pdf	AJ7752 03-12-10 M1256	AJ7752 03-12-10 I1257

# CONTROL POINT RECORDS

**Point ID** AJ7756 **DESIGNATION** S335  
**DESCRIPTION** Survey Disk in Concrete Bridge Abutment



GEODETIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM    **NAVD 88**      GEOID USED            **Geoid 09**  
 UNITS USED            **US Survey Foot**

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
524589.834	826301.393	-71.069	9.856	0.000	0.000	0.000	0.000

GPS Obs. Files	Occupation Records	Occupation Photos	
		Monument Photo	Setup Photo
28270711-2	OR0321.pdf	AJ7756 03-14-10 M1299	AJ7756 03-14-10 I1300



# CONTROL POINT RECORDS

**Point ID** **DF7989** **DESIGNATION** RICHMOND CORS L1 PHASE  
**DESCRIPTION** L1 Phase Center of GPS Antenna  
 GEODETIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**  
 UNITS USED **US Survey Foot**

SOURCE: [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
465790.412	859175.156	-45.866	36.419	0.000	0.000	0.000	0.000

**GPS Obs. Files**

**Occupation Records**

**Occupation Photos**

**Monument Photo**

**Setup Photo**

# CONTROL POINT RECORDS

**Point ID** DL2759 **DESIGNATION** CARD SOUND 6 CORS L1 PHA  
**DESCRIPTION** L1 Phase Center of GPS Antenna

**GEODETIC DATUM** NAD83 (2007) **COORDINATE SYSTEM** FLORIDA EAST  
**ELEVATION DATUM** NAVD 88 **GEOID USED** Geoid 09  
**UNITS USED** US Survey Foot

**SOURCE:** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
399383.380	832068.300	-54.393	27.166	0.000	0.000	0.000	0.000

**GPS Obs. Files**

**Occupation Records**

**Occupation Photos**

**Monument Photo**

**Setup Photo**

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# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME

Angles Well

**DESCRIPTION** X-Cut in Concrete

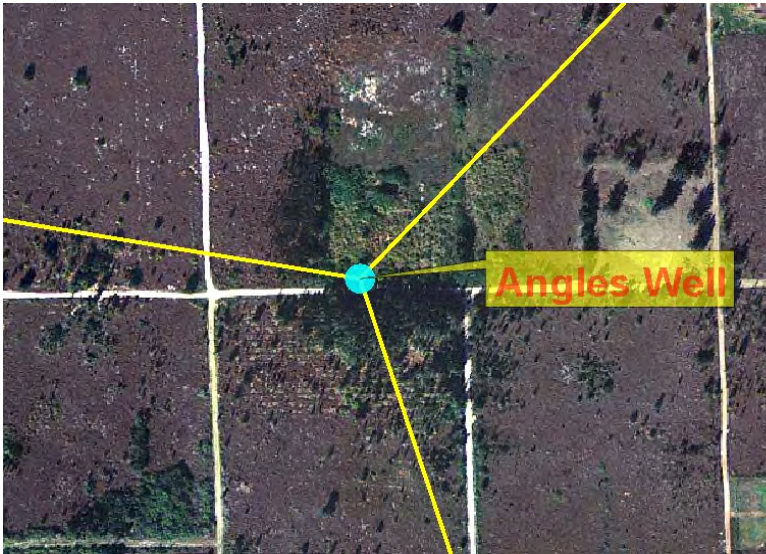
GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**

SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
468979.908	806940.299	-74.816	5.817	0.079	0.082	0.052	0.102



GPS Obs. Files

Occupation Records

Occupation Photos

# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G114**

**DESCRIPTION**      X-Cut in Steel Beam

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

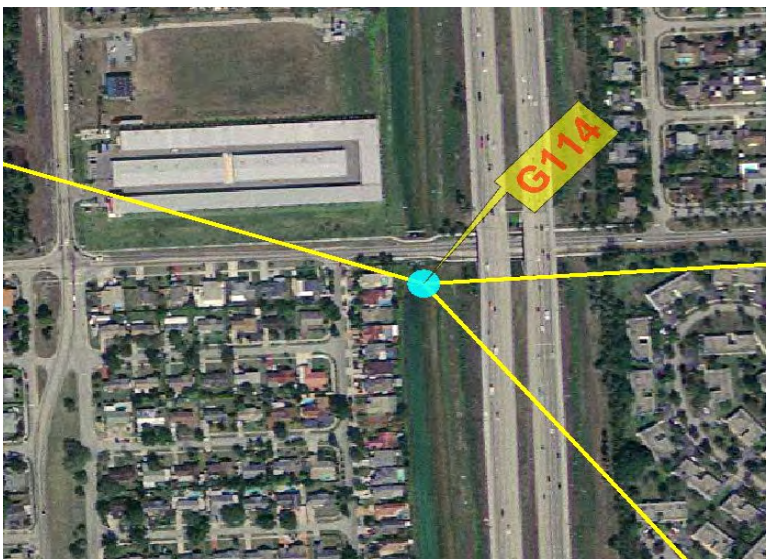
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
465258.912	860781.702	-76.946	5.390	0.059	0.059	0.052	0.102



**GPS Obs. Files**

22630785

**Occupation Records**

OR0370.pdf

**Occupation Photos**

G114 03-19-10 M312

G114 03-19-10 I313

G114 03-19-10 S314



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **G119**

**DESCRIPTION** 2" Aluminum Disk in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
519268.051	828195.536	-73.709	7.270	0.062	0.059	0.075	0.115



**GPS Obs. Files**

**Occupation Records**

22630738

OR0320.pdf

**Occupation Photos**

G119 03-14-10 M1310

G119 03-14-10 I1311

G119 03-14-10 S1312



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G211**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
482328.973	821573.782	-74.606	6.339	0.052	0.052	0.033	0.092



**GPS Obs. Files**

**Occupation Records**

49250773

OR0351.pdf

49251260-4

OR0394.pdf

49251390

OR0408.pdf

**Occupation Photos**

G211 03-18-10 M1363

G211 03-18-10 I1364

G211 03-18-10 S1365

G211 05-07-10 M0005

G211 05-07-10 I0006

G211 05-07-10 S0007



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G3272**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
484171.224	808029.411	-75.237	5.342	0.072	0.072	0.046	0.098



**GPS Obs. Files**

**Occupation Records**

2263077A

OR0347.pdf

**Occupation Photos**

G3272 03-18-10 M1377

G3272 03-18-10 I1378

G3272 03-18-10 S1379



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G3273**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
470820.693	795913.791	-73.925	6.386	0.092	0.095	0.089	0.121



**GPS Obs. Files**

28270711-4

**Occupation Records**

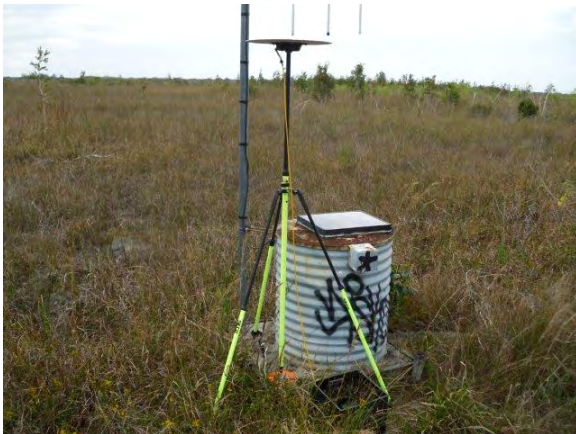
OR0337.pdf

**Occupation Photos**

G3273 03-18-10 M1383

G3273 03-18-10 I1384

G3273 03-18-10 S1385





# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **G3557**

## DESCRIPTION

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**  
 UNITS USED **US Survey Foot**



SOURCE : [Least Sqaures Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
492747.038	822329.180	-71.815	9.084	0.082	0.082	0.046	0.095



### GPS Obs. Files

22631390

### Occupation Records

OR0409.pdf

### Occupation Photos

G3557 05-19-10 M

G3557 05-19-10 I



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G3559**

**DESCRIPTION**      1/2" Rebar in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
513808.794	821722.457	-73.696	7.140	0.085	0.082	0.052	0.098



**GPS Obs. Files**

**Occupation Records**

49250771

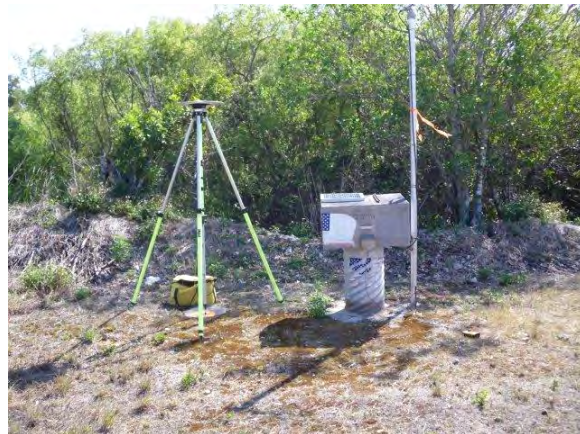
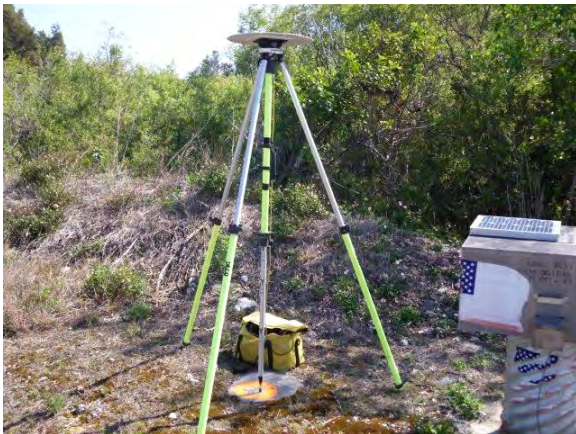
OR0349.pdf

**Occupation Photos**

G3559 03-18-10 M1348

G3559 03-18-10 I1349

G3559 03-18-10 S1350



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G3575**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
497756.623	822035.687	-73.046	7.820	0.102	0.098	0.049	0.098



**GPS Obs. Files**

**Occupation Records**

49250772

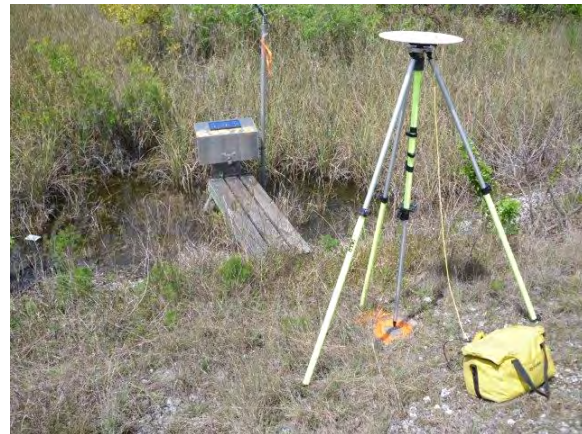
OR0350.pdf

**Occupation Photos**

G3575 03-18-10 M1354

G3575 03-18-10 I1355

G3575 03-18-10 S1356



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **G3622A**

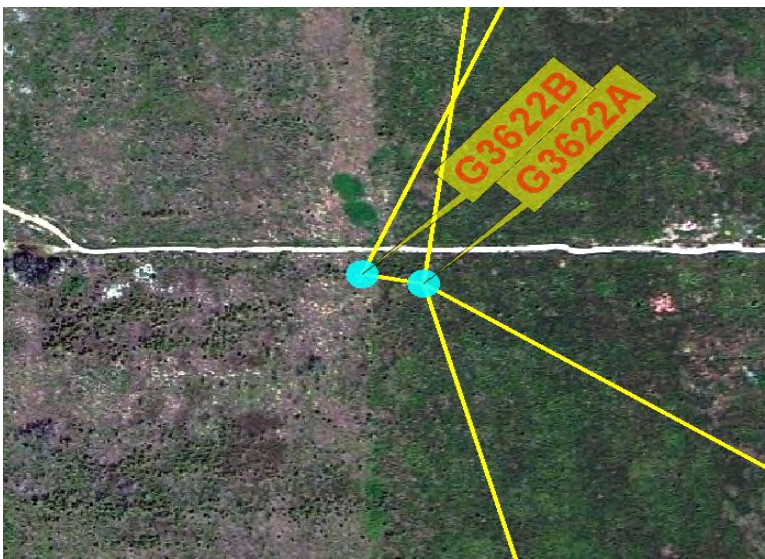
**DESCRIPTION** 1/2" Rebar  
**GEODETIC DATUM** NAD83 (2007)  
**ELEVATION DATUM** NAVD 88  
**UNITS USED** US Survey Foot

**COORDINATE SYSTEM** FLORIDA EAST  
**GEOID USED** Geoid 09



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
423572.556	798524.652	-77.308	3.321	0.052	0.052	0.036	0.092



**GPS Obs. Files**

5750780

**Occupation Records**

OR0365.pdf

**Occupation Photos**

- G3622A 03-19-10 M332
- G3622A 03-19-10 I333
- G3622A 03-19-10 S334



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G3622B**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

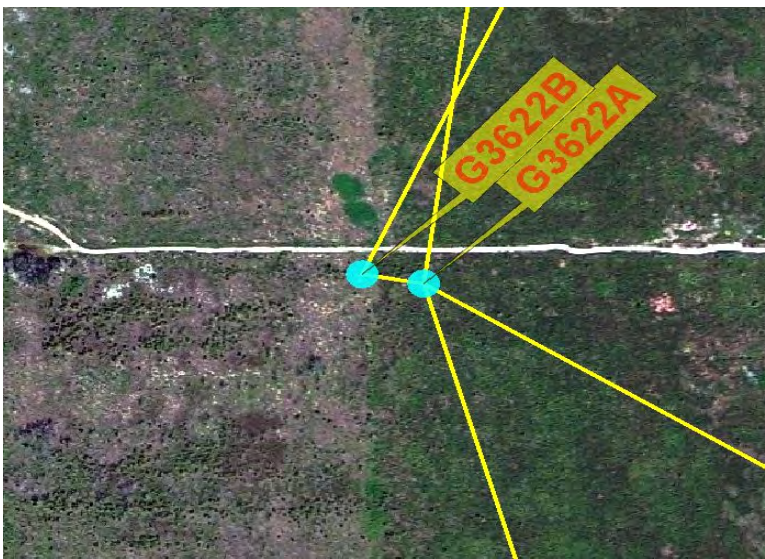
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
423598.228	798376.693	-77.366	3.259	0.082	0.079	0.043	0.095



**GPS Obs. Files**

2263078B

**Occupation Records**

OR0366.pdf

**Occupation Photos**

G3622b 03-19-10 M335

G3622B 03-19-10 I336

G3622b 03-19-10 S337



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**            **G3628**

**DESCRIPTION**            2" Aluminum Disk in Concrete

**GEODETTIC DATUM**        **NAD83 (2007)**                    **COORDINATE SYSTEM**        **FLORIDA EAST**

**ELEVATION DATUM**        **NAVD 88**                            **GEOID USED**                    **Geoid 09**

**UNITS USED**                **US Survey Foot**



**SOURCE :**    [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
458446.300	809526.875	-74.757	6.032	0.072	0.072	0.049	0.098



**GPS Obs. Files**

**Occupation Records**

49250790

OR0381.pdf

49251260-6

OR0401.pdf

**Occupation Photos**

G3628 03-20-10 M1421

G3628 03-20-10 I1422

G3628 03-20-10 S1423

G3628 05-08-10 M0007

G3628 05-08-10 I0008

G3628 05-08-10 S0009



# STRUCTURE POINT SURVEY RECORD

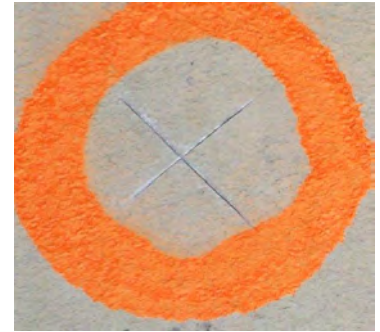
**STRUCTURE NAME**      **G420**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
523151.936	842483.441	-73.012	8.278	0.056	0.056	0.062	0.105



**GPS Obs. Files**

**Occupation Records**

49250736

OR0313.pdf

**Occupation Photos**

G420 03-14-10 M1305

G420 03-14-10 I1306

G420 03-14-10 S1307



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **G69**

DESCRIPTION X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

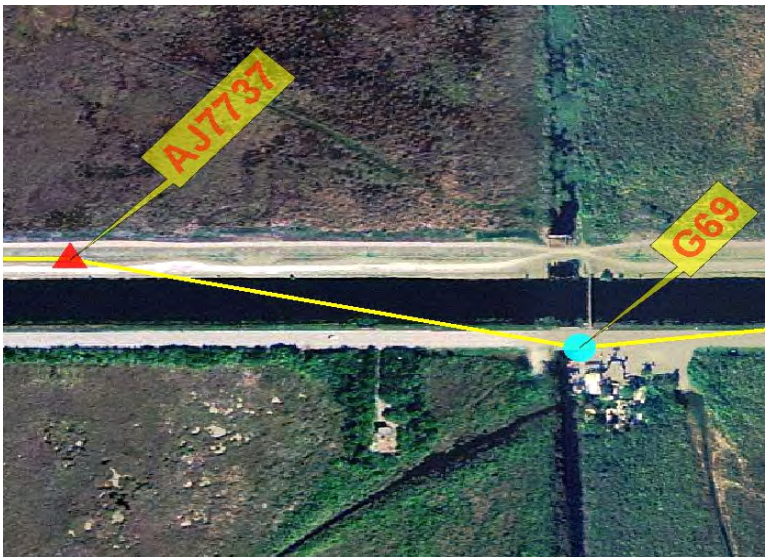
ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
519024.315	800528.438	-71.902	8.551	0.059	0.056	0.033	0.092



**GPS Obs. Files**

22630732

**Occupation Records**

OR0317.pdf

**Occupation Photos**

G69 03-14-10 M1282

G69 03-14-10 I1283

G69 03-14-10 S1284





# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **G70**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
521357.328	763942.708	-65.587	14.303	0.043	0.043	0.039	0.092



**GPS Obs. Files**

**Occupation Records**

- 22630713
- 49250715
- 49251260

- OR0304.pdf
- OR0330.pdf
- OR0385.pdf

**Occupation Photos**

- G70 03-12-10 M296
- G70 03-12-10 I297
- G70 03-12-10 S298
- G70 05-06-10 M0020
- G70 05-06-10 I0021
- G70 05-06-10 S0022



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME** AC4661

**DESCRIPTION** Stainless Steel Rod

**GEODETTIC DATUM** NAD83 (2007)      **COORDINATE SYSTEM** FLORIDA EAST

**ELEVATION DATUM** NAVD 88      **GEOID USED** Geoid 09

**UNITS USED** US Survey Foot



**SOURCE :** [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
421118.154	802458.315	-75.512	5.239	0.000	0.000	0.000	0.000



**GPS Obs. Files**

2263078A

**Occupation Records**

OR0367.pdf

**Occupation Photos**

AC4661 03-19-10 M327

AC4661 03-19-10 I328



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **L31**

**DESCRIPTION** 2" Aluminum Disk in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
497751.014	822120.651	-74.190	6.678	0.095	0.095	0.049	0.098



### GPS Obs. Files

### Occupation Records

22630776

OR0345.pdf

5751260-3

OR0395.pdf

5751390

OR0407.pdf

### Occupation Photos

L31 03-18-10 M1357

L31 03-18-10 I1358

L31 03-18-10 S1359

L31 05-07-108 M0008

L31 05-07-108 I0009

L31 05-07-108 S0010



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **Las Palmas C1**

**DESCRIPTION**      4" Brass Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Sqaures Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
475446.606	816554.518	-75.212	5.650	0.062	0.066	0.039	0.095



**GPS Obs. Files**

28270711-5

**Occupation Records**

OR0336.pdf

**Occupation Photos**

LASPALMASC1 03-18-10 M136

LASPALMASC1 03-18-10 I1370

LASPALMASC1 03-18-10 S1371



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **Las Palmas DC1**

DESCRIPTION X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
458899.317	809240.550	-75.150	5.627	0.092	0.095	0.089	0.125



**GPS Obs. Files**

**Occupation Records**

5751260-5

OR0400.pdf

**Occupation Photos**

Las Palmas DC1 05-08-10 M000

Las Palmas DC1 05-08-10 I0005

Las Palmas DC1 05-08-10 S000



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **Las Palmas G1**

DESCRIPTION **Stainless Steel Rod**

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

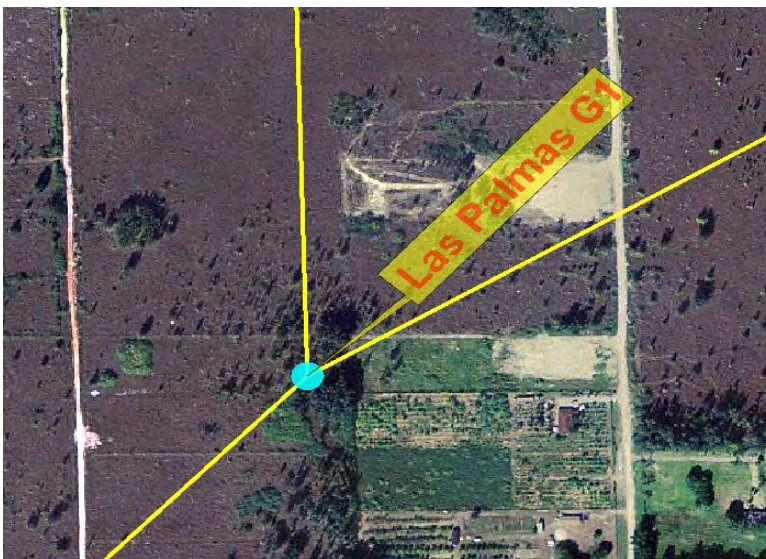
ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
470496.102	808372.405	-75.544	5.121	0.072	0.072	0.046	0.095



### GPS Obs. Files

5750774

### Occupation Records

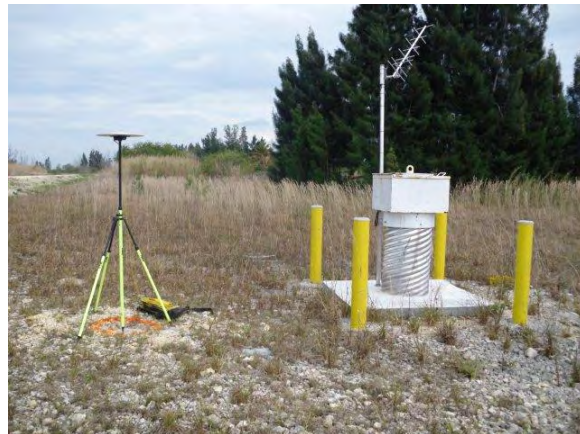
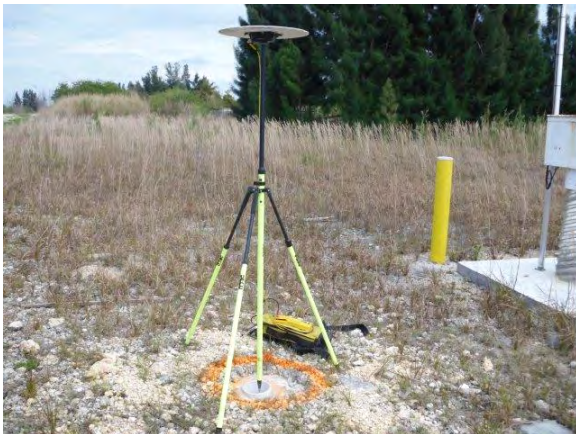
OR0341.pdf

### Occupation Photos

LASPALMASG1 03-18-10 M137

LASPALMASG1 03-18-10 I1375

LASPALMASG1 03-18-10 S1376



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **Las Palmas G2**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
463730.582	808650.798	-75.207	5.513	0.085	0.085	0.062	0.105



**GPS Obs. Files**

**Occupation Records**

28270711-3

OR0338.pdf

58410790

OR0384.pdf

**Occupation Photos**

LASPALMASG2 03-18-10 M138

LASPALMASG2 03-18-10 I1387

LASPALMASG2 03-18-10 S1388

LASPALMASG2 03-20-10 M143

LASPALMASG2 03-20-12 I1431

LASPALMASG2 03-20-10 S1432



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S118**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

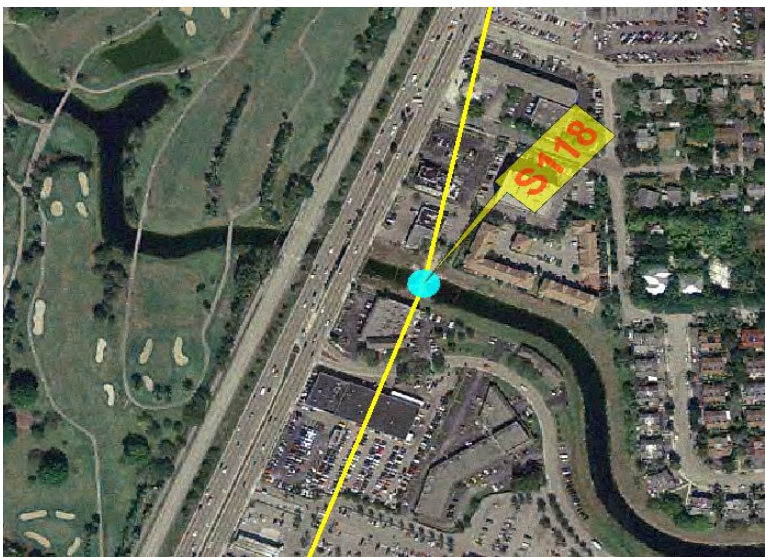
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
469413.865	872696.967	-74.314	8.357	0.072	0.072	0.102	0.131



**GPS Obs. Files**

**Occupation Records**

28270711-7

OR0332.pdf

28270961-4

OR0396.pdf

**Occupation Photos**

S118 03-15-10 M1319

S118 03-15-10 I1320

S118 03-15-10 S1321

S118 05-07-10 M0001

S118 05-07-10 I0002

S118 05-07-10 S0003





# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S119**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
476479.087	874164.552	-74.201	8.402	0.069	0.075	0.095	0.128



**GPS Obs. Files**

05751260-4

**Occupation Records**

OR0397.pdf

**Occupation Photos**

S119 05-07-10 M0004

S119 05-07-10 I0005

S119 05-07-10 S0006



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S120**

**DESCRIPTION** 2" Aluminum Disk in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

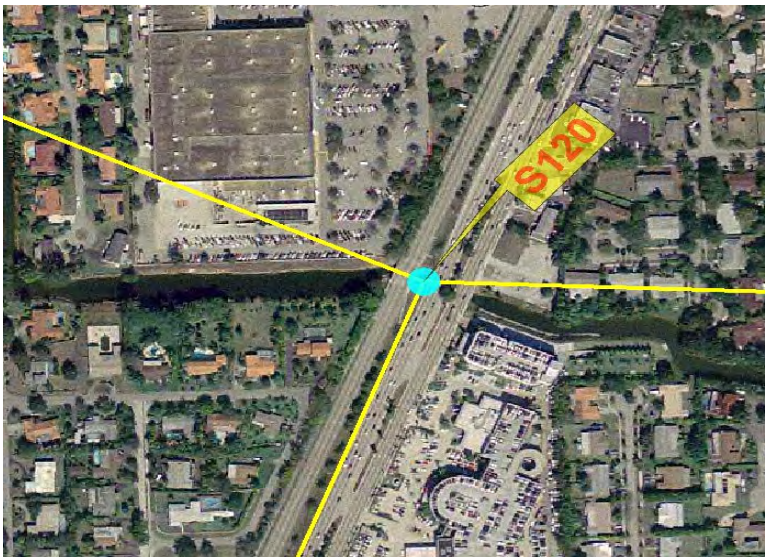
ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
486679.773	879569.610	-69.178	13.440	0.052	0.056	0.052	0.102



**GPS Obs. Files**

**Occupation Records**

22630771

OR0342.pdf

22630783

OR0371.pdf

**Occupation Photos**

S120 03-18-10 M1340

S120 03-18-10 I1341

S120 03-18-10 S1342

S120 03-19-10 M309

S120 03-19-10 I310

S120 03-19-10 S311



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S121**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

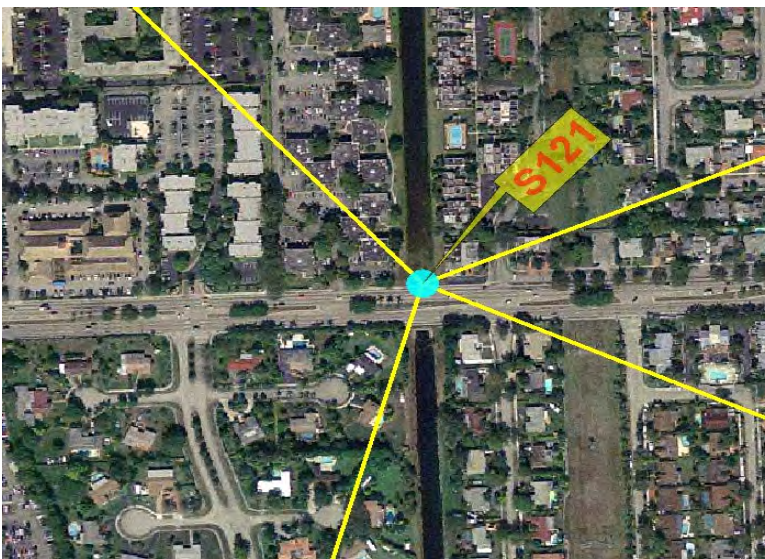
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
492548.572	866685.936	-67.384	14.739	0.046	0.046	0.052	0.098



**GPS Obs. Files**

**Occupation Records**

5750781

OR0356.pdf

**Occupation Photos**

S121 03-19-10 M1389

S121 03-19-10 I1390

S121 03-19-10 S1391



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S122**

**DESCRIPTION**      4" Brass Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

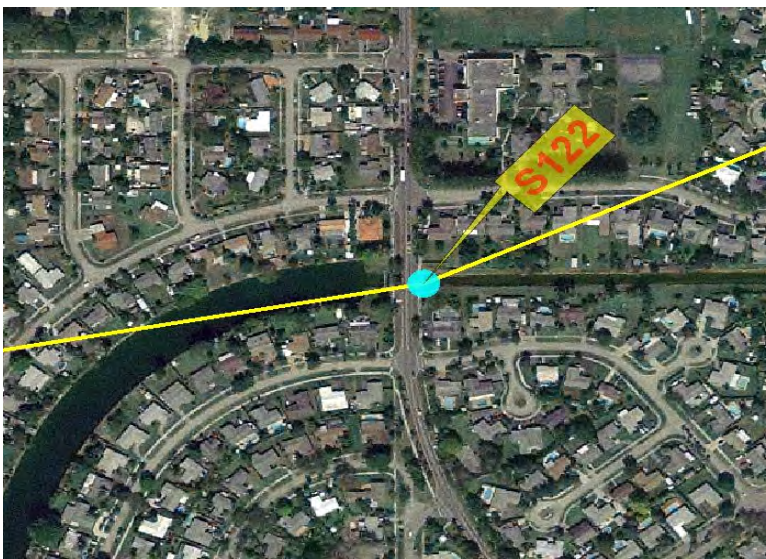
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
458787.832	871058.458	-77.838	4.953	0.075	0.072	0.056	0.102



**GPS Obs. Files**

**Occupation Records**

5751260-7

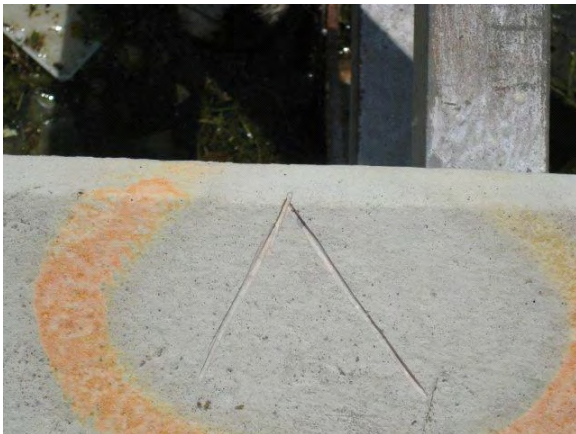
OR0405.pdf

**Occupation Photos**

S122 05-09-10 I0005

S122 05-09-10 M0004

S122 05-09-10 S0006



# STRUCTURE POINT SURVEY RECORD

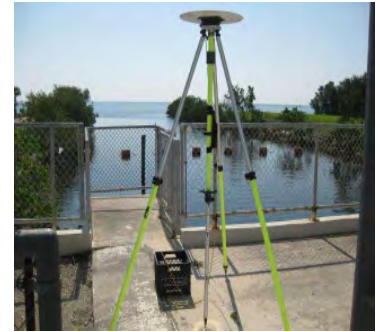
**STRUCTURE NAME**      **S123**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
464819.206	884143.424	-74.662	8.490	0.062	0.059	0.059	0.105



## GPS Obs. Files

## Occupation Records

22630741

OR0334.pdf

28271290

OR0404.pdf

## Occupation Photos

S123 03-15-10 M1316

S123 03-15-10 I1317

S123 03-15-10 S1318

S123 05-09-10 I0002

S123 05-09-10 M0001

S123 05-09-10 S0003



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S12A**

**DESCRIPTION** Bench Mark Disk in Concrete Retaining Wall

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519170.824	714955.971	-64.659	14.449	0.000	0.000	0.000	0.000



**GPS Obs. Files**

**Occupation Records**

58410710

OR0302.pdf

22631260

OR0392.pdf

**Occupation Photos**

S12A 03-12-10 M126

S12A 03-12-10 I1262

S12A 03-12-10 S1263

S12A 05-06-10 M0016

S12A 05-06-10 I0017

S12A 05-06-10 S0018



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S12B**

**DESCRIPTION**      Bench Mark Disk in Concrete Retaining Wall

GEODETTIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM      **FLORIDA EAST**  
 ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**  
 UNITS USED      **US Survey Foot**



SOURCE :      [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
519240.945	732114.381	-64.770	14.573	0.000	0.000	0.000	0.000



**GPS Obs. Files**

**Occupation Records**

49250713

OR0329.pdf

05751260-2

OR0391.pdf

**Occupation Photos**

S12B 03-12-10 M288

S12B 03-12-10 I289

S12B 03-12-10 S290

S12B 05-06-10 M0013

S12B 05-06-10 I0014

S12B 05-06-10 S0015



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S12C**

**DESCRIPTION** Bench Mark Disk in Concrete Retaining Wall

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**  
 UNITS USED **US Survey Foot**



SOURCE : [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519289.449	745956.608	-65.143	14.436	0.066	0.069	0.085	0.000



**GPS Obs. Files**

**Occupation Records**

5750714

OR0307.pdf

49251260-2

OR0390.pdf

**Occupation Photos**

S12C 03-12-10 M1264

S12C 03-12-10 I1265

S12C 03-12-10 S1266

S12C 05-06-20 M0010

S12C 05-06-20 I0011

S12C 05-06-20 S0012





# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S12D**

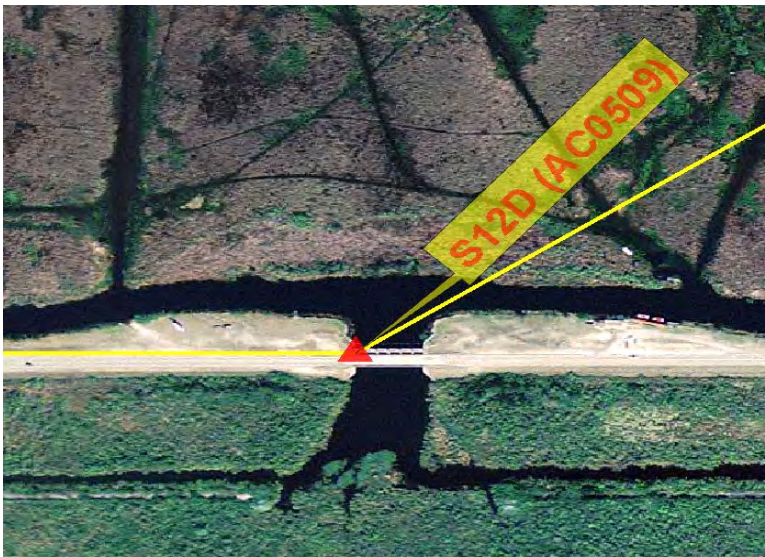
**DESCRIPTION** Bench Mark Disk in Concrete Retaining Wall

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**  
 UNITS USED **US Survey Foot**



SOURCE : [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519332.583	760808.477	-65.357	14.377	0.000	0.000	0.000	0.000



**GPS Obs. Files**

**Occupation Records**

5750716

OR0308.pdf

22631260-2

OR0388.pdf

**Occupation Photos**

S12D 03-12-10 M1267

S12D 03-12-10 I1268

S12D 03-12-10 S1269

S12D 05-06-10 M0005

S12D 05-06-10 I0006

S12D 05-06-10 S0007



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S12E**

**DESCRIPTION** 2" Disk in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519111.474	763519.085	-67.423	12.436	0.062	0.059	0.036	0.092



**GPS Obs. Files**

**Occupation Records**

5750718

OR0309.pdf

**Occupation Photos**

S12E 03-12-10 M1270

S12E 03-12-10 I1271

S12E 03-12-10 S1272



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S14**

**DESCRIPTION** X-Cut in Concrete

GEODETIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
519181.222	714740.830	-63.601	15.557	0.066	0.066	0.049	0.098



**GPS Obs. Files**

5750712

**Occupation Records**

OR0306.pdf

**Occupation Photos**

S14 03-12-10 M1258

S14 03-12-10 I1259

S14 03-12-10 S1260



# STRUCTURE POINT SURVEY RECORD

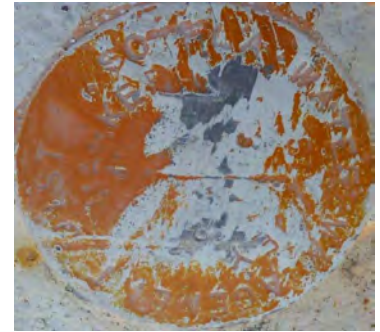
**STRUCTURE NAME**      **S148**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
449899.595	859619.561	-75.053	7.470	0.089	0.085	0.069	0.108



**GPS Obs. Files**

5750787

**Occupation Records**

OR0359.pdf

**Occupation Photos**

S148 03-19-10 M1399

S148 03-19-10 I1400

S148 03-19-10 S1401



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S149**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

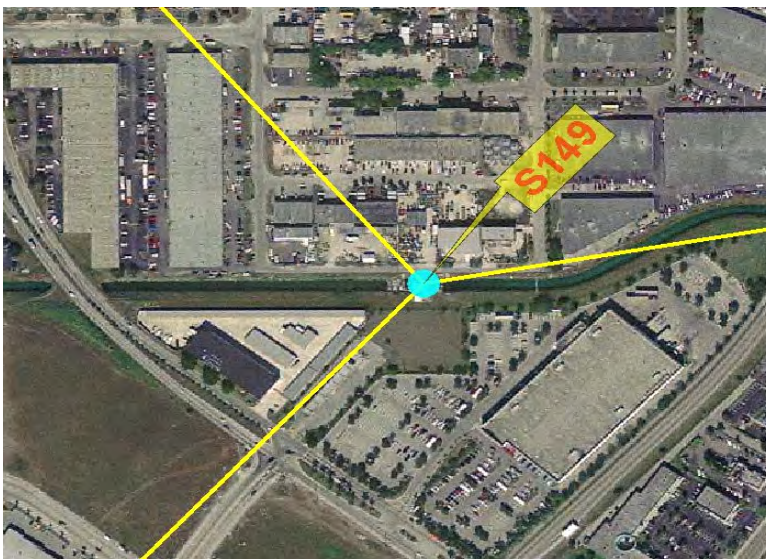
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
457988.154	866710.100	-75.324	7.328	0.062	0.062	0.039	0.095



**GPS Obs. Files**

**Occupation Records**

28270711-5

OR0355.pdf

49251260-7

OR0406.pdf

**Occupation Photos**

S149 03-19-10 M1396

S149 03-19-10 I1397

S149 03-19-10 S1398

S149 05-09-10 I0008

S149 05-09-10 M0007

S149 05-09-10 S0009



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S165**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

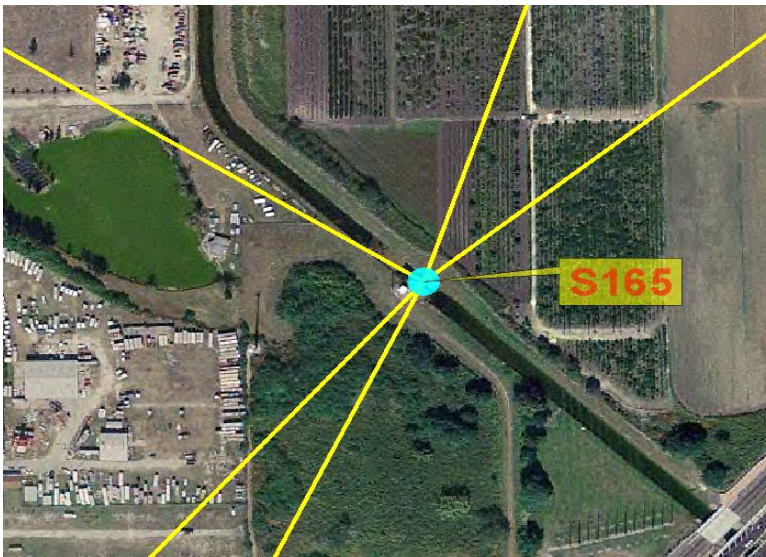
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
439848.727	850863.590	-74.811	7.522	0.049	0.049	0.052	0.098



**GPS Obs. Files**

**Occupation Records**

22630786

OR0369.pdf

**Occupation Photos**

S165 03-19-10 M315

S165 03-19-10 I316

S165 03-19-10 S317



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S166**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
431012.936	843336.588	-73.651	8.476	0.075	0.072	0.062	0.105



**GPS Obs. Files**

05750789

**Occupation Records**

OR0360.pdf

**Occupation Photos**

S166 03-19-10 M1408

S166 03-19-10 I1409

S166 03-19-10 S1410



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S167**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
425399.288	832608.094	-73.388	8.393	0.066	0.062	0.056	0.102



**GPS Obs. Files**

**Occupation Records**

58410780

OR0363.pdf

**Occupation Photos**

S167 03-19-10 M1405

S167 03-19-10 I1406

S167 03-19-10 S1407





# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S173**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

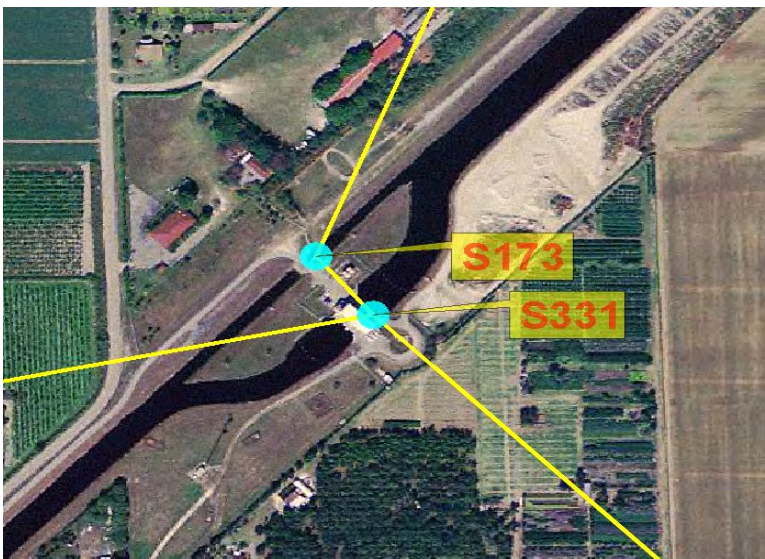
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
464811.792	817763.431	-68.773	12.209	0.069	0.066	0.046	0.098



**GPS Obs. Files**

28270711

**Occupation Records**

OR0376.pdf

**Occupation Photos**

S173 03-20-10 M1433

S173 03-20-10 I1434

S173 03-20-10 S1435



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S174**

**DESCRIPTION** 4" Brass Disk in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

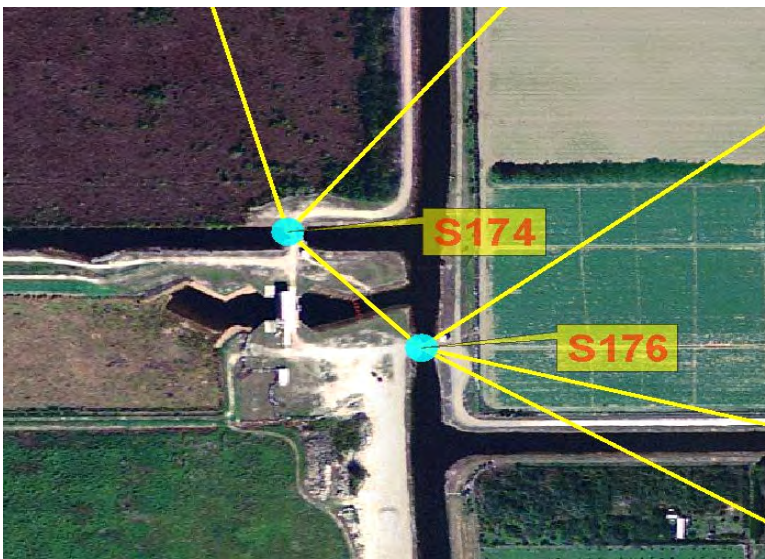
ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
418224.579	800059.432	-71.145	9.530	0.052	0.052	0.033	0.092



**GPS Obs. Files**

49250782

**Occupation Records**

OR0373.pdf

**Occupation Photos**

S174 03-19-10 M329

S174 03-19-10 I330

S174 03-19-10 S331



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S176**

**DESCRIPTION** X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
417899.768	800380.969	-71.309	9.375	0.059	0.059	0.075	0.115



**GPS Obs. Files**

0575078B

**Occupation Records**

OR0361.pdf

**Occupation Photos**

S176 03-19-10 M0699

S176 03-19-10 I0700

S176 03-19-10 S0701



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S194**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
454529.143	828051.650	-74.985	6.420	0.052	0.052	0.066	0.105



**GPS Obs. Files**

49250781  
5750792

**Occupation Records**

OR0374.pdf  
OR0378.pdf

**Occupation Photos**

S194 03-19-10 M322  
S194 03-19-10 I323  
S194 03-19-10 S324  
S194 03-20-10 M1439  
S194 03-20-10 I1440  
S194 03-20-10 S1441



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S195**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
443307.466	854997.862	-75.947	6.494	0.085	0.079	0.069	0.108



**GPS Obs. Files**

49250780

**Occupation Records**

OR0375.pdf

**Occupation Photos**

S195 03-19-10 M319

S195 03-19-10 I320

S195 03-19-10 S321



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S196**

**DESCRIPTION**      2" Aluminum Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

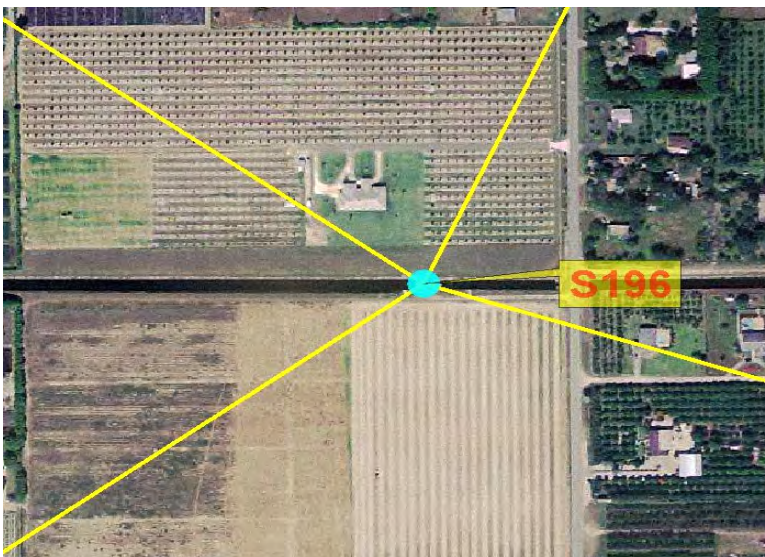
**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
430453.299	817296.788	-74.960	6.287	0.056	0.056	0.052	0.102



**GPS Obs. Files**

28270711-4

**Occupation Records**

OR0354.pdf

**Occupation Photos**

S196 03-19-10 M1402

S196 03-19-10 I1403

S196 03-19-10 S1404



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S22**

**DESCRIPTION**      4" Brass Disk in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
486255.271	892082.585	-76.061	6.983	0.062	0.059	0.059	0.102



**GPS Obs. Files**

**Occupation Records**

49250742

OR0331.pdf

49250770

OR0348.pdf

**Occupation Photos**

S22 03-15-10 M1313

S22 03-15-10 I1314

S22 03-15-10 S1315

S22 03-18-10 M1337

S22 03-18-10 I1338

S22 03-18-10 S1339



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S24A**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
504024.510	821772.553	-75.347	5.493	0.098	0.095	0.052	0.098



**GPS Obs. Files**

**Occupation Records**

5750770

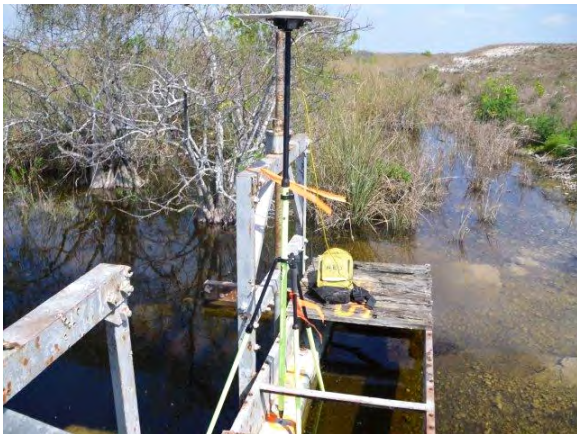
OR0339.pdf

**Occupation Photos**

S24A 03-18-10 M1351

S24A 03-18-10 I1352

S24A 03-18-10 S1353





# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S331**

**DESCRIPTION** X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
464646.853	817901.667	-70.233	10.754	0.072	0.066	0.049	0.098



**GPS Obs. Files**

**Occupation Records**

49250791

OR0382.pdf

**Occupation Photos**

S331 03-20-10 M1436

S331 03-20-10 I1437

S331 03-20-10 S1438



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S332B**

**DESCRIPTION** 1/2" Rebar  
**GEODETTIC DATUM** NAD83 (2007)  
**ELEVATION DATUM** NAVD 88  
**UNITS USED** US Survey Foot

**COORDINATE SYSTEM** FLORIDA EAST  
**GEOID USED** Geoid 09



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
442310.247	801082.868	-70.524	10.118	0.062	0.062	0.049	0.098



### GPS Obs. Files

58410781  
 28270711-2  
 49251260-5

### Occupation Records

OR0362.pdf  
 OR0377.pdf  
 OR0402.pdf

### Occupation Photos

S332B 03-19-10 M1412  
 S332B 03-19-10 I1413  
 S332B 03-19-10 S1414  
 S332B 03-20-10 M1418  
 S332B 03-20-10 I1419  
 S332B 03-20-10 S1420



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S332C**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Sqaures Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
429947.639	801228.639	-71.111	9.600	0.085	0.085	0.066	0.108



**GPS Obs. Files**

**Occupation Records**

28270711

OR0353.pdf

05751260-6

OR0403.pdf

**Occupation Photos**

S332C 03-19-10 M1415

S332C 03-19-10 I1416

S332C 03-19-10 S1417

S332C 05-08-10 M0002

S332C 05-08-10 I0003

S332C 05-08-10 S0004



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S333**

**DESCRIPTION** Vertical Control Disk in Retaining Wall

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**  
 ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**  
 UNITS USED **US Survey Foot**



SOURCE : [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519343.379	763458.911	-66.817	12.940	0.000	0.000	0.000	0.000



**GPS Obs. Files**

22630711  
5751260

**Occupation Records**

OR0327.pdf  
OR0386.pdf

**Occupation Photos**

S333 03-12-10 M293  
S333 03-12-10 I294  
S333 03-12-10 S295  
S333 05-06-10 M0001  
S333 05-06-10 I0002  
S333 05-06-10 S0003



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S334**

**DESCRIPTION** X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519271.929	819957.988	-68.708	12.104	0.066	0.066	0.036	0.092



**GPS Obs. Files**

5750730

**Occupation Records**

OR0314.pdf

**Occupation Photos**

S334 03-14-10 M1289

S334 03-14-10 I1290

S334 03-14-10 S1291



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S335**

**DESCRIPTION**      Survey Disk in Concrete Bridge Abutment

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
524589.834	826301.393	-71.069	9.856	0.000	0.000	0.000	0.000



**GPS Obs. Files**

**Occupation Records**

28270711-2

OR0321.pdf

**Occupation Photos**

S335 03-14-10 M1299

S335 03-14-10 I1300

S335 03-14-10 S1301



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S336**

**DESCRIPTION** X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
519221.573	821769.654	-71.533	9.315	0.056	0.056	0.049	0.098



### GPS Obs. Files

58410730

22630774

### Occupation Records

OR0322.pdf

OR0344.pdf

### Occupation Photos

S336 03-14-10 M1296

S336 03-14-10 I1297

S336 03-14-10 S1298

S336 03-18-10 M1345

S336 03-18-10 I1346

S336 03-18-10 S1347



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S338**

**DESCRIPTION** X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
482786.341	826984.091	-71.306	9.784	0.049	0.049	0.030	0.092



**GPS Obs. Files**

22630778

**Occupation Records**

OR0346.pdf

**Occupation Photos**

S338 03-18-10 M1366

S338 03-18-10 I1367

S338 03-18-10 S1368





# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S343A**

**DESCRIPTION** Brass Rod  
**GEODETTIC DATUM** NAD83 (2007)  
**ELEVATION DATUM** NAVD 88  
**UNITS USED** US Survey Foot

**COORDINATE SYSTEM** FLORIDA EAST  
**GEOID USED** Geoid 09



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
529089.552	703748.023	-62.322	16.909	0.052	0.052	0.046	0.098



**GPS Obs. Files**

28270710

**Occupation Records**

OR0303.pdf

**Occupation Photos**

- S343A 03-12-10 M1253
- S343A 03-12-10 I1254
- S343A 03-12-10 S1255



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S343B**

**DESCRIPTION**      Brass Rod  
**GEODETTIC DATUM**      **NAD83 (2007)**  
**ELEVATION DATUM**      **NAVD 88**  
**UNITS USED**      **US Survey Foot**

**COORDINATE SYSTEM**      **FLORIDA EAST**  
**GEOID USED**      **Geoid 09**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
525082.320	707484.591	-62.513	16.677	0.062	0.062	0.052	0.098



**GPS Obs. Files**

49250711

**Occupation Records**

OR0328.pdf

**Occupation Photos**

- S343B 03-12-10 M283
- S343B 03-12-10 I284
- S343B 03-12-10 S285



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S346**

**DESCRIPTION**      Punch Mark on Angle Iron

GEODETTIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM      **FLORIDA EAST**

ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**

UNITS USED      **US Survey Foot**



SOURCE :      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
518979.506	763466.187	-68.658	11.198	0.056	0.056	0.039	0.092



**GPS Obs. Files**

58410711

**Occupation Records**

OR0301.pdf

**Occupation Photos**

S346 03-12-10 M1273

S346 03-12-10 I1274

S346 03-12-10 S1275



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S347**

**DESCRIPTION** 2" Aluminum Disk in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
505112.912	763978.282	-72.336	7.377	0.098	0.098	0.312	0.322



**GPS Obs. Files**

42951550

**Occupation Records**

OR0427.pdf

**Occupation Photos**

S347 06-07-10 M1654

S347 06-07-10 I1655

S347 06-07-10 S1656



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S355A**

**DESCRIPTION**      Survey Disk in Concrete Bridge Abutment

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	EI. Ht	Elev.	N	E	EI. Ht	Elev
519290.071	790733.895	-63.651	16.657	0.000	0.000	0.000	0.000



**GPS Obs. Files**

**Occupation Records**

49250717

OR0324.pdf

**Occupation Photos**

S355A 03-12-10 M302

S355A 03-12-10 I303

S355A 03-12-10 S304



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S355B**

**DESCRIPTION**      Survey Disk in Concrete Bridge Abutment

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [NGS Datasheet](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519314.263	803127.722	-63.898	16.621	0.000	0.000	0.000	0.000



**GPS Obs. Files**

49250732

**Occupation Records**

OR0311.pdf

**Occupation Photos**

- S355B 03-14-10 M1285
- S355B 03-14-10 I1286
- S355B 03-14-10 S1287



# STRUCTURE POINT SURVEY RECORD

STRUCTURE NAME **S356**

**DESCRIPTION** X-Cut in Concrete

GEODETTIC DATUM **NAD83 (2007)** COORDINATE SYSTEM **FLORIDA EAST**

ELEVATION DATUM **NAVD 88** GEOID USED **Geoid 09**

UNITS USED **US Survey Foot**



SOURCE : [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519285.951	820075.162	-61.633	19.181	0.075	0.072	0.043	0.095



**GPS Obs. Files**

49250734

**Occupation Records**

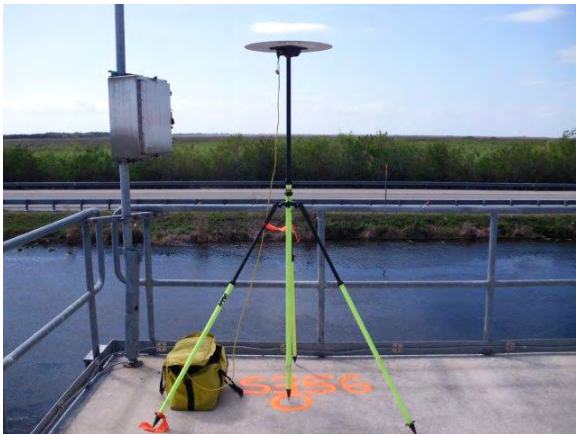
OR0312.pdf

**Occupation Photos**

S356 03-14-10 M1292

S356 03-14-10 I1293

S356 03-14-10 S1294



# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S357**

**DESCRIPTION**      X-Cut in Concrete

**GEODETTIC DATUM**      **NAD83 (2007)**      **COORDINATE SYSTEM**      **FLORIDA EAST**

**ELEVATION DATUM**      **NAVD 88**      **GEOID USED**      **Geoid 09**

**UNITS USED**      **US Survey Foot**



**SOURCE :**      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
463610.711	812938.370	-72.707	8.143	0.079	0.079	0.052	0.098



**GPS Obs. Files**

**Occupation Records**

22630790

OR0383.pdf

28270961-5

OR0399.pdf

**Occupation Photos**

S357 03-20-10 M1427

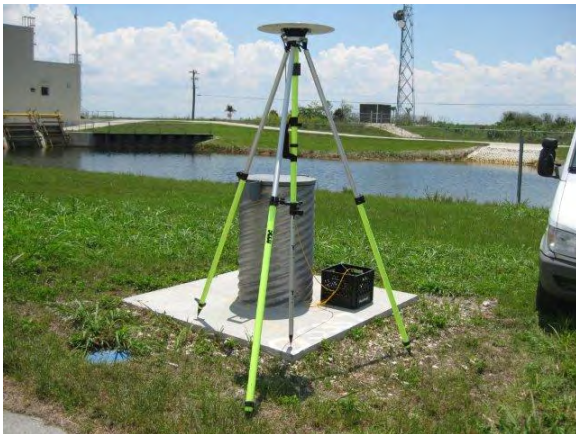
S357 03-20-10 I1428

S357 03-20-10 S1429

S357 05-08-10 M0001

S357 05-08-10 I0002

S357 05-08-10 S0003





# STRUCTURE POINT SURVEY RECORD

**STRUCTURE NAME**      **S380**

**DESCRIPTION**      Punch Mark in Cross Member

GEODETTIC DATUM      **NAD83 (2007)**      COORDINATE SYSTEM      **FLORIDA EAST**

ELEVATION DATUM      **NAVD 88**      GEOID USED      **Geoid 09**

UNITS USED      **US Survey Foot**



SOURCE :      [Least Squares Network Adjustment Report](#)

COORDINATES				Estimated Errors at 95% Confidence Level			
N	E	El. Ht	Elev.	N	E	El. Ht	Elev
519347.913	837685.963	-73.093	8.089	0.066	0.066	0.085	0.121



**GPS Obs. Files**

5750732

**Occupation Records**

OR0315.pdf

**Occupation Photos**

S380 03-14-10 M1302

S380 03-14-10 I1303

S380 03-14-10 S1304

