



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

Site Name: Basing		Date of Field Work: 28-jul-16	
Party Chief: Strickland	Field Book: Misc 6Y	Page(s) 66-68	
Site Benchmark: Basing	Benchmark Elevation (NAVD88) 45.037	Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) +1.220	
Reference Elevation(s) (NAVD88): 48.719	Existing Tag Elevation (Datum): None Written at site: 50.02 11/20/03 SOP	Calibration Port Elevation(s) (NAVD88): N/A	
Ground Elevation (NAVD88): 45.4		Pad Elevation (NAVD88): N/A	
Latitude: 27° 24' 11.8"		Longitude: 81° 00' 42.5"	

Notes:
NAVD88 – North American Vertical Datum of 1988
NGVD29- National Geodetic Vertical Datum of 1929
Corpscon 6.0.1 – A MS-Windows-based program to convert coordinates and elevations between datum's

PICTURES

Overall Site



Looking Northwesterly



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16



Benchmark
BASING
B•M 2016

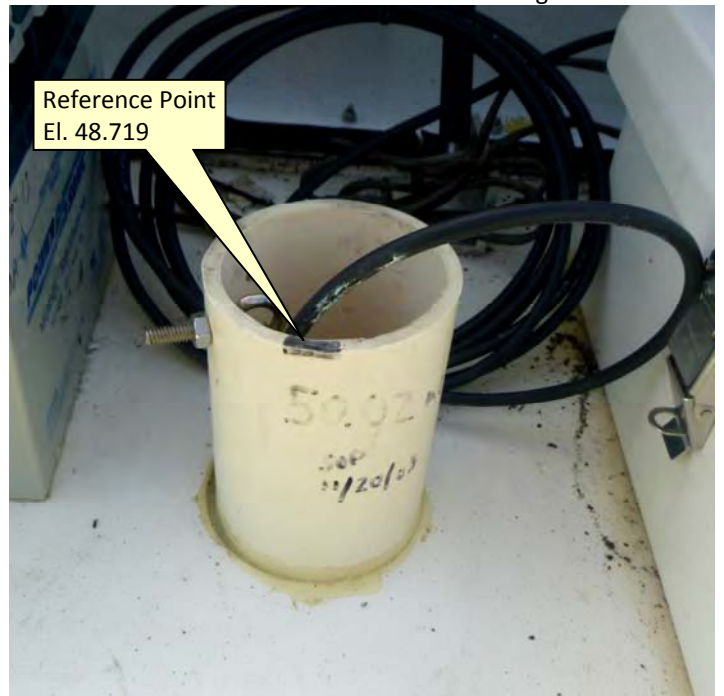


Looking Southerly

Brass Tag Close Up



Reference Mark without Brass Tag



SEC 27

TWP

35

RGE

33

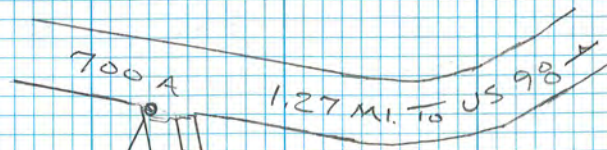
WIPB ROVER OPUS/STATIC SET BM "BASING 2016 BM"

HZ = 1.5 M = 4.92

START = 11:25 AM

END = 13:35

STICKLAND
CLANTON



TEMP
MAG
NAIL

LOCKED
METAL
GATE

290'

MTL
WITNESS
SIGN
NAIL'D
TO FENCE POST

3.1'

3.1'

3.1'

3.1'

BASING BM 2016

SET 1 1/4" ID GALV PIPE W/ SWAMP
ALUM CAP IN CONC. STAMPED 'BASING
BM 2016' 0.4' BELOW GRND
2.7' SE of FENCE POST W/ MTL WITNESS
SIGN 3.5' NW of SE FENCE CORNER
POST 3.1' ENE of 3" WELL CASING

N = 1115766.407

E = 652336.352

EL = 45.037 NAVD 88

COW
PENS

SEC	TWP	RGE	33
ESTABLISH NAVD 88 ELEV @ WELL & BMA BASING			
FILE NAME BASING			
LINE#1			
STA / PT#		EL	BMA EL
BMA 1			43.25 NAVD 88
TBM 5		47.231	47.229 (ADJ)
BMA 13		44.517	44.51 NAVD 88
	* DIFF = 0.007 *		
LINE#2			
TBM 5		47.231	47.229 (ADJ)
BMA 14		45.040	45.037 (ADJ)
TBM 5/15		47.233	47.229 ADJ

DINI LEVEL & BAR CODE ROD	MIT STEICKLAND
SN = 771295	CLANTON
J 499 2000 FL DEP BRASS DISK GOOD COND	
MAG NAIL SET IN W. SIDE of TADA of ASPHALT DRIVEWAY APRON ENTRANCE (SINGLE LANE DIRT RD) TO WELL SITE BASING	
K 499 2000 FL DEP BRASS DISK GOOD COND	
MAG NAIL AS ABOVE	
BMA BASING 2016 SET 1/4" ID X 18" LONG GALV PIPE IN 2" MINIMUM ALUM CAP IN CONC STAMPED "BASING BMA 2016" 2.7' SE of WITNESS SIGN & CORNER POST 3.5' NW of SE CORNER POST 3.1' ENE of 3" WELL CASING & 0.4' BELOW GROUND	
MAG NAIL AS ABOVE	

SEC	ZT	TWP	35	RGE	33
		BASING	WELL SITE		
STA/PT#			EL		BM EL
BM 14			45.040		45.037 (ADJ)
REF 16			48.722		48.719 (ADJ)
GRND 17			45.44		
BM 14			45.040		45.037 (ADJ)

III STRICKLAND
 X CLANTON

COMMENTS	
BM BASING 2016	SFWMS ALUM CAP SEE PG-66167
REF <input checked="" type="checkbox"/> MARK ATOP	3" PVC BASING WELL
GROUNDS @ WELL	
BM BASING 2016	AS ABOVE



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

DESIGNATION: BASING		PROJECT: BASING Well	
ESTABLISHED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT		SURVEYOR: Strickland	
RECOVERED BY:		DATE: 28-jul-16	
GEOGRAPHIC POSITION			
SECTION 27	TOWNSHIP 35 SOUTH	RANGE 33 EAST	
COUNTY: Okeechobee	NAME OF QUADRANGLE: Basinger GEOGRAPHIC INDEX OF QUAD: 2809		
HORIZONTAL DATUM: 1927 (1983) Other _____ (circle one) ZONE (E) or W			
VERTICAL DATUM: MSL 1929 (1988) Other _____ (circle one)			
VERTICAL ACCURACY: 1 2 (3)			
STATE PLANE COORDINATE	X: 652336.38	Y: 1115766.41	NAVD 88 EL. 45.037 NGVD 29 EL. 46.269
CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): +1.220			
LATITUDE: 27°24'11.765"		LONGITUDE: 81°00'42.50"	
RECOVERY DATA			
Stamping: BASING B•M 2016			
To Reach: From the Intersection of US 98 North State Road 700 and Country Road 700A (176 th Avenue Durrance Road) North West of the City of Okeechobee, Florida. Go North along County Highway 700A (176 th Avenue, Durrance Road) a distance of 1.27 miles to a road on the left; turn left and heads Southwest along the dirt road for 150 feet to a locked metal gate; continue Southwesterly 290 feet more or less to the barbed wire fence enclosed Basing Well site and station location.			
The station is 2.7 feet Southeasterly of a witness sign on the Northeast fence corner post, 3.5 feet Northwesterly of the Southeast fence corner post and 3.1 feet East Northeast of the 3-inch casing with the recorder box on top for the Basing Well . The station is a poured in place concrete monument with a 1-1/4-inch galvanized (inside diameter) iron pipe, 0.4 of a foot below ground and a South Florida Water Management District aluminum cap stamped "Basing B•M 2016."			
NOTABLE LAND MARKS:			
NGS SOURCE BENCHMARK: J499 (PID AJ6097) and K499 (AJ6098)			
FIELD BOOK: MISC 6Y PAGES 66 thru 68			
PICTURES			
Overall Site			
Looking Northwesterly			



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

SKETCH

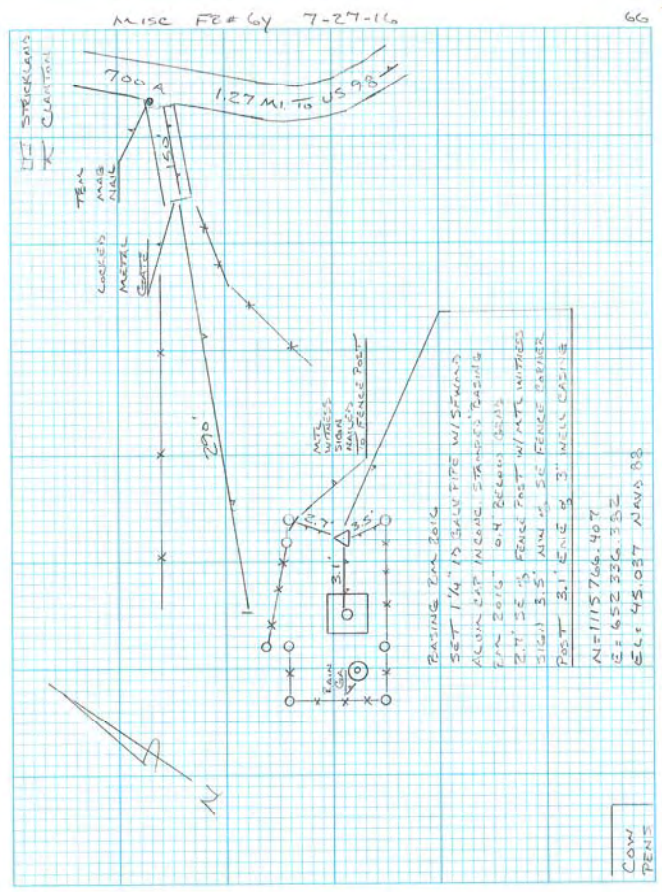
66 MISC FE#6Y 7-27-16

SEC 27 TWP 35 RGE 33

WIPPE RIVER OPUS/STAKE SET 2M BASING 2M 8M

HI = 1.5 M = 4.92

START = 11:25 AM END = 13:35



Field Notes Misc 6Y page66



NGS J499 (PID AJ6097)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16



NGS K499 (PID AJ6098)

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.9
1      National Geodetic Survey,  Retrieval Date = JULY 28, 2016
AJ6097 *****
AJ6097 DESIGNATION - J 499
AJ6097 PID - AJ6097
AJ6097 STATE/COUNTY- FL/OKEECHOBEE
AJ6097 COUNTRY - US
AJ6097 USGS QUAD - BASINGER (1972)
AJ6097
AJ6097 *CURRENT SURVEY CONTROL
AJ6097
AJ6097* NAD 83(1986) POSITION- 27 23 57. (N) 081 00 31. (W) SCALED
AJ6097* NAVD 88 ORTHO HEIGHT - 13.182 (meters) 43.25 (feet) ADJUSTED
AJ6097
AJ6097 GEOID HEIGHT - -26.271 (meters) GEOID12B
AJ6097 DYNAMIC HEIGHT - 13.162 (meters) 43.18 (feet) COMP
AJ6097 MODELED GRAVITY - 979,131.2 (mgal) NAVD 88
AJ6097
AJ6097 VERT ORDER - SECOND CLASS I
AJ6097
AJ6097.The horizontal coordinates were scaled from a topographic map and have
AJ6097.an estimated accuracy of +/- 6 seconds.
AJ6097.
AJ6097.The orthometric height was determined by differential leveling and
AJ6097.adjusted by the NATIONAL GEODETIC SURVEY
AJ6097.in January 2002.
AJ6097
AJ6097.Significant digits in the geoid height do not necessarily reflect accuracy.
AJ6097.GEOID12B height accuracy estimate available here.
AJ6097
AJ6097.The dynamic height is computed by dividing the NAVD 88
AJ6097.geopotential number by the normal gravity value computed on the
AJ6097.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ6097.degrees latitude (g = 980.6199 gals.).
AJ6097
AJ6097.The modeled gravity was interpolated from observed gravity values.
AJ6097
AJ6097; North East Units Estimated Accuracy
AJ6097;SPC FL E - 339,630. 199,150. MT (+/- 180 meters Scaled)
AJ6097
AJ6097 SUPERSEDED SURVEY CONTROL
AJ6097
AJ6097.No superseded survey control is available for this station.
AJ6097
AJ6097_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML991306(NAD 83)
AJ6097
AJ6097_MARKER: DD = SURVEY DISK
AJ6097_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AJ6097_STAMPING: J 499 2000
AJ6097_MARK LOGO: FLDEP
AJ6097_MAGNETIC: N = NO MAGNETIC MATERIAL

```

AJ6097_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AJ6097+STABILITY: SURFACE MOTION
 AJ6097_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AJ6097+SATELLITE: SATELLITE OBSERVATIONS - 2000

AJ6097

AJ6097	HISTORY	- Date	Condition	Report By
AJ6097	HISTORY	- 2000	MONUMENTED	FLDEP

AJ6097

AJ6097 STATION DESCRIPTION

AJ6097

AJ6097'DESCRIBED BY FL DEPT OF ENV PRO 2000 (JLM)
 AJ6097'THE MARK IS ABOUT 34.0 MI (54.7 KM) SOUTHEAST OF SEBRING, 15.8 MI
 AJ6097'(25.4 KM) NORTHWEST OF OKEECHOBEE ON COUNTY ROAD 700-A, IN SECTION 27,
 AJ6097'TOWNSHIP 35 SOUTH, RANGE 33 EAST. TO REACH THE MARK FROM THE
 AJ6097'INTERSECTION OF U.S. HIGHWAY 441 (PARROTT STREET) AND U.S. HIGHWAY
 AJ6097'98 (STATE HIGHWAY 70, PARK STREET) IN OKEECHOBEE, GO WEST ON U.S.
 AJ6097'HIGHWAY 98, (STATE HIGHWAY 70, PARK STREET) FOR 1.15 MI (1.85 KM) TO
 AJ6097'THE JUNCTION OF U.S. HIGHWAY 98 NORTH ON THE RIGHT, TURN RIGHT ON
 AJ6097'U.S. HIGHWAY 98 AND GO NORTHWESTERLY FOR 0.65 MI (1.05 KM) TO THE
 AJ6097'RAILROAD TRACK, CONTINUE NORTHWESTERLY ON U.S. HIGHWAY 98 FOR 11.9 MI
 AJ6097'(19.2 KM) TO THE JUNCTION OF COUNTY ROAD 68 EAST ON THE RIGHT,
 AJ6097'CONTINUE NORTHWESTERLY ON U.S. HIGHWAY 98 FOR 1.85 MI (2.98 KM) TO
 AJ6097'THE JUNCTION OF COUNTY ROAD 700-A ON THE RIGHT, TURN RIGHT ON COUNTY
 AJ6097'ROAD 700-A AND GO NORTH FOR 0.9 MI (1.4 KM) TO THE MARK ON THE RIGHT,
 AJ6097'SET IN THE TOP OF A ROUND CONCRETE MONUMENT RECESSED 0.2 FT (6.1 CM)
 AJ6097'BELOW THE LEVEL OF THE GROUND AND BELOW THE LEVEL OF U.S. HIGHWAY 98.
 AJ6097'LOCATED 126.3 FT (38.5 M) SOUTH OF THE APPROXIMATE CENTERLINE OF A
 AJ6097'ROAD LEADING EAST (AT 16988) , 31.8 FT (9.7 M) EAST OF THE CENTERLINE
 AJ6097'OF 700-A, 1.2 FT (0.4 M) WEST OF A HOG WIRE FENCE AND 1.0 FT (0.3 M)
 AJ6097'WEST OF A CARSONITE WITNESS POST.

*** retrieval complete.

Elapsed Time = 00:00:02

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.9
1      National Geodetic Survey,  Retrieval Date = JULY 29, 2016
AJ6098 *****
AJ6098 DESIGNATION - K 499
AJ6098 PID - AJ6098
AJ6098 STATE/COUNTY- FL/OKEECHOBEE
AJ6098 COUNTRY - US
AJ6098 USGS QUAD - BASINGER (1972)
AJ6098
AJ6098 *CURRENT SURVEY CONTROL
AJ6098
AJ6098 * NAD 83(1986) POSITION- 27 24 50. (N) 081 00 32. (W) SCALED
AJ6098 * NAVD 88 ORTHO HEIGHT - 13.568 (meters) 44.51 (feet) ADJUSTED
AJ6098
AJ6098 -----
AJ6098 GEOID HEIGHT - -26.268 (meters) GEOID12B
AJ6098 DYNAMIC HEIGHT - 13.547 (meters) 44.45 (feet) COMP
AJ6098 MODELED GRAVITY - 979,134.6 (mgal) NAVD 88
AJ6098
AJ6098 VERT ORDER - SECOND CLASS I
AJ6098
AJ6098.The horizontal coordinates were scaled from a topographic map and have
AJ6098.an estimated accuracy of +/- 6 seconds.
AJ6098.
AJ6098.The orthometric height was determined by differential leveling and
AJ6098.adjusted by the NATIONAL GEODETIC SURVEY
AJ6098.in January 2002.
AJ6098
AJ6098.Significant digits in the geoid height do not necessarily reflect accuracy.
AJ6098.GEOID12B height accuracy estimate available here.
AJ6098
AJ6098.The dynamic height is computed by dividing the NAVD 88
AJ6098.geopotential number by the normal gravity value computed on the
AJ6098.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ6098.degrees latitude (g = 980.6199 gals.).
AJ6098
AJ6098.The modeled gravity was interpolated from observed gravity values.
AJ6098
AJ6098; North East Units Estimated Accuracy
AJ6098;SPC FL E - 341,260. 199,120. MT (+/- 180 meters Scaled)
AJ6098
AJ6098 SUPERSEDED SURVEY CONTROL
AJ6098
AJ6098.No superseded survey control is available for this station.
AJ6098
AJ6098_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML991322 (NAD 83)
AJ6098
AJ6098_MARKER: DD = SURVEY DISK
AJ6098_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AJ6098_STAMPING: K 499 2000
AJ6098_MARK LOGO: FLDEP
AJ6098_MAGNETIC: N = NO MAGNETIC MATERIAL

```

AJ6098_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AJ6098+STABILITY: SURFACE MOTION
AJ6098_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ6098+SATELLITE: SATELLITE OBSERVATIONS - 2000

AJ6098

AJ6098	HISTORY	- Date	Condition	Report By
AJ6098	HISTORY	- 2000	MONUMENTED	FLDEP

AJ6098

AJ6098 STATION DESCRIPTION

AJ6098

AJ6098'DESCRIBED BY FL DEPT OF ENV PRO 2000 (JLM)
AJ6098'THE MARK IS ABOUT 34.5 MI (55.5 KM) SOUTHEAST OF SEBRING, 16.0 MI
AJ6098'(25.7 KM) NORTHWEST OF OKEECHOBEE ON COUNTY ROAD 700-A, IN SECTION 22,
AJ6098'TOWNSHIP 35 SOUTH, RANGE 33 EAST. TO REACH THE MARK FROM THE
AJ6098'INTERSECTION OF U.S. HIGHWAY 441 (PARROTT STREET) AND U.S. HIGHWAY
AJ6098'98 (STATE HIGHWAY 70, PARK STREET) IN OKEECHOBEE, GO WEST ON U.S.
AJ6098'HIGHWAY 98, (STATE HIGHWAY 70, PARK STREET) FOR 1.15 MI (1.85 KM) TO
AJ6098'THE JUNCTION OF U.S. HIGHWAY 98 NORTH ON THE RIGHT, TURN RIGHT ON
AJ6098'U.S. HIGHWAY 98 AND GO NORTHWESTERLY FOR 0.65 MI (1.05 KM) TO THE
AJ6098'RAILROAD TRACK, CONTINUE NORTHWESTERLY ON U.S. HIGHWAY 98 FOR 11.9 MI
AJ6098'(19.2 KM) TO THE JUNCTION OF COUNTY ROAD 68 EAST ON THE RIGHT,
AJ6098'CONTINUE NORTHWESTERLY ON U.S. HIGHWAY 98 FOR 1.85 MI (2.98 KM) TO
AJ6098'THE JUNCTION OF COUNTY ROAD 700-A ON THE RIGHT, TURN RIGHT ON COUNTY
AJ6098'ROAD 700-A AND GO NORTH FOR 1.95 MI (3.14 KM) TO THE MARK ON THE LEFT,
AJ6098'SET IN THE TOP OF A ROUND CONCRETE MONUMENT FLUSH WITH THE GROUND AND
AJ6098'LEVEL WITH COUNTY ROAD 700-A. LOCATED 31.4 FT (9.6 M) NORTHWEST OF THE
AJ6098'CENTERLINE OF 700-A, 29.5 FT (9.0 M) NORTHEAST OF THE APPROXIMATE
AJ6098'CENTERLINE OF NORTHWEST 184TH DRIVE (THOMAS ROAD) , 12.8 FT (3.9 M)
AJ6098'NORTHEAST OF THE SOUTHEAST CORNER OF A CHAINLINK FENCE, 1.4 FT (0.4 M)
AJ6098'SOUTHEAST OF THE CHAINLINK FENCE AND 1.0 FT (0.3 M) SOUTHEAST OF A
AJ6098'CARSONITE WITNESS POST.

*** retrieval complete.

Elapsed Time = 00:00:02

Project Information		Coordinate System	
Name:		Name:	Default
Size:		Datum:	WGS 1984
Modified:	2/15/2012 8:48:57 AM (UTC:-7)	Zone:	Default
Time zone:	Mountain Standard Time	Geoid:	
Reference number:		Vertical datum:	
Description:			

Level Report

Imported file: [BASING.DAT](#)
Instrument: DiNi
Standard error per kilometer of double leveling: 0.00230 ft
Standard error per turn/station setup: 0.00000 ft
Creation option: Delta elevations
Description usage: Feature codes

Run - 1 Raw Observations

Raw Misclosure: 0.00700 ft
 Σ BS Distances: 2755.810 ft
 Σ FS Distances: 2736.580 ft
Run Length: 5492.390 ft
Reduction: Adjusted Values

Create	Point ID	BS	IS	FS	Δ Elevation	Raw Elevation	Correction	Adj. Elevation	Type	Distance	Description
<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/> 7.40500 ft			0.00000 ft	43.250 ft	0.00000 ft	43.250 ft ▲	Benchmark	242.550 ft	J499 3
<input type="checkbox"/>	2			<input checked="" type="checkbox"/> 4.37400 ft	3.03100 ft	46.281 ft	-0.00063 ft	46.280 ft	Computed	241.900 ft	3
	2	<input checked="" type="checkbox"/> 5.63500 ft								245.960 ft	3
<input type="checkbox"/>	3			<input checked="" type="checkbox"/> 5.50200 ft	0.13300 ft	46.414 ft	-0.00126 ft	46.413 ft	Computed	239.830 ft	3
	3	<input checked="" type="checkbox"/> 4.33500 ft								248.650 ft	3
<input type="checkbox"/>	4			<input checked="" type="checkbox"/> 3.46800 ft	0.86700 ft	47.281 ft	-0.00194 ft	47.279 ft	Computed	257.640 ft	3
	4	<input checked="" type="checkbox"/> 5.56500 ft								168.630 ft	3
<input checked="" type="checkbox"/>	5			<input checked="" type="checkbox"/> 5.61500 ft	-0.05000 ft	47.231 ft	-0.00224 ft	47.229 ft	Computed	165.710 ft	MAGNL 3
	5	<input checked="" type="checkbox"/> 5.33600 ft								248.160 ft	MAGNL 3
<input type="checkbox"/>	6			<input checked="" type="checkbox"/> 5.81100 ft	-0.47500 ft	46.756 ft	-0.00291 ft	46.753 ft	Computed	251.310 ft	3
	6	<input checked="" type="checkbox"/> 4.90400 ft								251.570 ft	3

<input type="checkbox"/>	7		<input checked="" type="checkbox"/> 4.88100 ft	0.02300 ft	46.779 ft	-0.00359 ft	46.775 ft	Computed	252.430 ft	3
	7	<input checked="" type="checkbox"/> 4.78500 ft							250.330 ft	3
<input type="checkbox"/>	8		<input checked="" type="checkbox"/> 4.80700 ft	-0.02200 ft	46.757 ft	-0.00426 ft	46.753 ft	Computed	249.020 ft	3
	8	<input checked="" type="checkbox"/> 4.63200 ft							250.980 ft	3
<input type="checkbox"/>	9		<input checked="" type="checkbox"/> 5.11800 ft	-0.48600 ft	46.271 ft	-0.00493 ft	46.266 ft	Computed	252.590 ft	3
	9	<input checked="" type="checkbox"/> 4.68500 ft							250.200 ft	3
<input type="checkbox"/>	10		<input checked="" type="checkbox"/> 4.96600 ft	-0.28100 ft	45.990 ft	-0.00559 ft	45.984 ft	Computed	246.690 ft	3
	10	<input checked="" type="checkbox"/> 4.55200 ft							249.900 ft	3
<input type="checkbox"/>	11		<input checked="" type="checkbox"/> 4.44300 ft	0.10900 ft	46.099 ft	-0.00625 ft	46.093 ft	Computed	247.110 ft	3
	11	<input checked="" type="checkbox"/> 5.41900 ft							254.100 ft	3
<input type="checkbox"/>	12		<input checked="" type="checkbox"/> 5.15600 ft	0.26300 ft	46.362 ft	-0.00691 ft	46.355 ft	Computed	239.240 ft	3
	12	<input checked="" type="checkbox"/> 5.03700 ft							94.780 ft	3
<input checked="" type="checkbox"/>	13		<input checked="" type="checkbox"/> 6.88200 ft	-1.84500 ft	44.517 ft	-0.00700 ft	44.510 ft	Benchmark	93.110 ft	K499 3

Run - 1 (N4) Reduced Observations

Observation	Status	Raw Δ Elevation	Correction	Final Δ Elevation	Setups	Length	Σ BS Readings	Σ FS Readings	Std. Error
1-5 (E8)	Enabled	3.98100 ft	-0.00224 ft	3.97876 ft	4	1810.870 ft	22.94000 ft	18.95900 ft	0.02389 ft
5-13 (E9)	Enabled	-2.71400 ft	-0.00476 ft	-2.71876 ft	8	3681.520 ft	39.35000 ft	42.06400 ft	0.03480 ft

Run - 1 (N4) Reduced Coordinates

Point ID	Status	Elevation
1	Enabled	43.25000 ft
13	Enabled	44.51000 ft

Run - 2 Raw Observations

Raw Misclosure: 0.00200 ft
 Σ BS Distances: 448.690 ft
 Σ FS Distances: 432.380 ft
 Run Length: 881.070 ft
 Reduction: Adjusted Values

Create	Point ID	BS	IS	FS	Δ Elevation	Raw Elevation	Correction	Adj. Elevation	Type	Distance	Description
<input checked="" type="checkbox"/>	5				0.00000 ft	47.231 ft	-0.00224 ft	47.229 ft	Computed		MAGNL 3

		✓ 3.54700 ft								226.640 ft	
✓	14		✓ 5.73800 ft	-2.19100 ft	45.040 ft	-0.00325 ft	45.037 ft	Computed		214.600 ft	BASIN 3
	14	✓ 5.66800 ft								222.050 ft	BASIN 3
	5		✓ 3.47500 ft							217.780 ft	MAGNL 3

Run - 2 (N5) Reduced Observations

Observation	Status	Raw Δ Elevation	Correction	Final Δ Elevation	Setups	Length	Σ BS Readings	Σ FS Readings	Std. Error
5-14 (E10)	Enabled	-2.19100 ft	-0.00100 ft	-2.19200 ft	1	441.240 ft	3.54700 ft	5.73800 ft	0.01151 ft
14-5 (E11)	Enabled	2.19300 ft	-0.00100 ft	2.19200 ft	1	439.830 ft	5.66800 ft	3.47500 ft	0.01147 ft

Run - 10001 Raw Observations

Raw Misclosure: ?

Σ BS Distances: 33.330 ft

Σ FS Distances: 33.660 ft

Run Length: 66.990 ft

Reduction: Adjusted Values

Create	Point ID	BS	IS	FS	Δ Elevation	Raw Elevation	Correction	Adj. Elevation	Type	Distance	Description
✓	14	✓ 5.59700 ft			0.00000 ft	?	?	45.037 ft	Computed	33.330 ft	BASIN 3
✓	16			✓ 1.91500 ft	3.68200 ft	48.722 ft	-0.00325 ft	48.719 ft	Computed	33.660 ft	REF 3
✓	17		✓ 5.19700 ft		0.40000 ft	45.440 ft	-0.00325 ft	45.437 ft	Computed	32.220 ft	GRND 3
	14	✓ 5.59700 ft			0.00000 ft	?	?	45.037 ft	Computed	33.330 ft	BASIN 3

Run - 10001 (N6) Reduced Observations

Observation	Status	Raw Δ Elevation	Correction	Final Δ Elevation	Setups	Length	Σ BS Readings	Σ FS Readings	Std. Error
14-16 (E12)	Enabled	3.68200 ft	0.00000 ft	3.68200 ft	1	66.990 ft	5.59700 ft	1.91500 ft	0.00175 ft
14-17 (E13)	Enabled	0.40000 ft	0.00000 ft	0.40000 ft	1	65.550 ft	5.59700 ft	5.19700 ft	0.00171 ft
14-14 (E14)	Enabled	0.00000 ft	0.00000 ft	0.00000 ft	1	66.660 ft	5.59700 ft	5.59700 ft	0.00174 ft

Date: 7/28/2016 1:23:12 PM

Project:

Trimble Business Center

Office

Project

28 July 2016

INPUT

State Plane, flhpgn - Florida HPGN
0901 - Florida East, U.S. Feet
Vertical - NAVD88, U.S. Feet

OUTPUT

Geographic, flhpgn - Florida HPGN
Vertical - NGVD29 (Custom), U.S. Feet

Basing

1/1

Northing/Y: 1115766.41

Easting/X: 652336.38

Elevation/Z: 0

Convergence: -0 00 19.56051

Scale Factor: 0.999941193

Combined Factor: 0.999945315

Latitude: 27 24 11.76499

Longitude: 81 00 42.49971

Elevation/Z: 1.220

Remark:

Corpscon v6.0.1, U.S. Army Corps of Engineers

From: [opus](#)
To: [Clanton, Terry](#)
Subject: OPUS solution : BASING.tps OP1469646288425
Date: Wednesday, July 27, 2016 3:06:38 PM

FILE: BASING.tps OP1469646288425

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
=====

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

USER: tclanton@sfwmd.gov DATE: July 27, 2016
RINEX FILE: basi209p.16o TIME: 19:05:56 UTC

SOFTWARE: page5 1209.04 master93.pl 160321 START: 2016/07/27 15:26:00
EPHEMERIS: igu19073.eph [ultra-rapid] STOP: 2016/07/27 17:35:00
NAV FILE: brdc2090.16n OBS USED: 5608 / 6149 : 91%
ANT NAME: TPSHIPER_GGD NONE # FIXED AMB: 38 / 53 : 72%
ARP HEIGHT: 1.5 OVERALL RMS: 0.025(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2016.5702)

X: 885274.703(m) 0.056(m) 885273.914(m) 0.056(m)
Y: -5596867.940(m) 0.035(m) -5596866.364(m) 0.035(m)
Z: 2917952.563(m) 0.047(m) 2917952.394(m) 0.047(m)

LAT: 27 24 11.76497 0.028(m) 27 24 11.78522 0.028(m)
E LON: 278 59 17.50030 0.060(m) 278 59 17.48090 0.060(m)
W LON: 81 0 42.49970 0.060(m) 81 0 42.51910 0.060(m)
EL HGT: -12.479(m) 0.050(m) -14.049(m) 0.050(m)
ORTHO HGT: 13.787(m) 0.085(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 17) SPC (0901 FL E)
Northing (Y) [meters] 3031102.227 340086.281
Easting (X) [meters] 498832.925 198832.527
Convergence [degrees] -0.00543347 -0.00543347
Point Scale 0.99960002 0.99994119
Combined Factor 0.99960198 0.99994315

US NATIONAL GRID DESIGNATOR: 17RML9883231102(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DF9225	ZMA1 MIAMI WAAS 1 CORS ARP	N254928.585	W0801909.066	188013.3
DP6859	FLF1 FL FOUNDATION 1 CORS ARP	N253655.240	W0802309.912	207671.0

DL2756 FLC5 CARD SOUND 5 CORS ARP N252553.839 W0802801.043 225094.9

NEAREST NGS PUBLISHED CONTROL POINT

AJ6097 J 499 N272357. W0810031. 553.5

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.