

SURVEYOR'S REPORT

Specific Purpose Survey of Site M1071 Martin County, Florida

South Florida Water Management District Vertical Upgrade Program

Purchase Order# 4500019733
(EA Project #60073.06)

Prepared for:
South Florida Water Management District

March 12, 2008
Revised June 23, 2008

Prepared by:



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Project Description

This project was performed by Erdman Anthony of Florida, Inc. for South Florida Water Management District during the month of February 2008, as part of Purchase Order# 4500019733. The specific project tasks described in this report can be summarized by the following objectives:

- Obtain elevations on the M1071 monitoring well and the monitoring well at the South recorder as directed by William Giammarco of SFWMD. Elevation information to be referenced to the North American Vertical Datum (NAVD) of 1988 using differential leveling measurements.
- Horizontal locations of the monitoring wells referenced to the North American Datum (NAD) of 1983 (2007) using RTK GPS measurements.
- A distance to water measurement for each well was not obtained as clarified with William Giammarco of SFWMD.
- Meet or exceed Third Order Closure Standards for differential leveling.
- Set a brass tag on the wells with the following data stamped on it:
 - Elevation of the reference mark (NGVD29)
 - Date of site work
 - Initials
- Prepare a Survey Report containing the following items:
 - Summary of field observations
 - Paper and scanned copies of field notes
 - Paper and scanned copies of all computations
 - Site photographs
 - Benchmark information

Project Location Map



Leveling Methods

Erdman Anthony obtained existing control information from the NGS control database as well as control information supplied by SFWMD. The leveling for the project was performed in a manner to meet or exceed third order misclosure accuracy as published by the Federal Geodetic Control Subcommittee. The vertical control was required to meet 3rd Order accuracy.¹ The allowed section misclosure formula for this class of leveling is:

$$\text{Allowed misclosure} = 12\text{mm} \times \sqrt{L}$$

(where L = length of run in kilometers)

Each level run was checked for allowable misclosure in the field, and any unresolved failing runs were re-observed. In computing the allowable misclosure between two benchmarks the distance used is the *leveled* distance and not the *straight line* distance as measured between existing monuments. The reduced level observations were then adjusted and the results are shown in Appendix B.

All leveling for this project was performed with a Topcon DL102-C digital level and a Topcon two-section, fiberglass bar-code level rod and portable turning plates (turtles). Leveling data was processed using Topcon Survey Link Version 7.3.0.

Horizontal Control Methods

Horizontal information for this project was obtained using GPS RTK methods tied to the Lengemann real-time network.

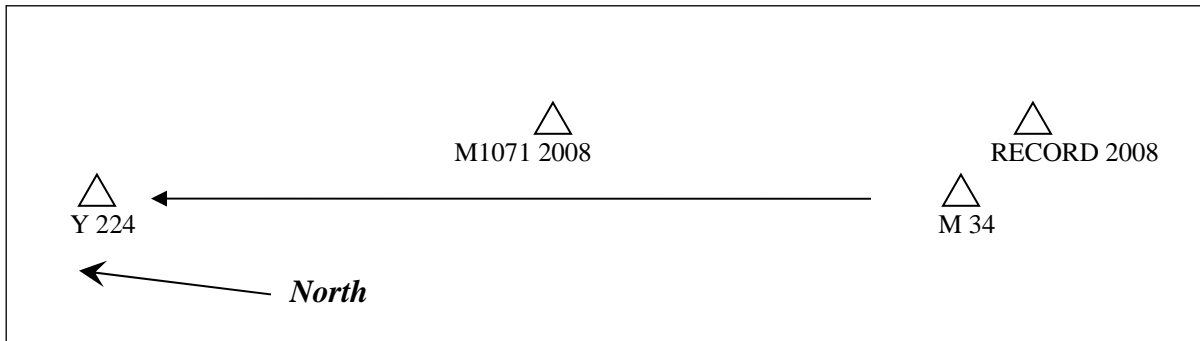
Horizontal datum: NAD 83 (2007)
Zone: Florida State Plane (East Zone)
Units: US Survey Feet

All horizontal locations were performed with a Topcon HiPer Plus Dual Frequency GPS Receiver and a Topcon FC100 Data Collector running Topsurv Version 6.11.03 data collection software.

¹ See section 3.5 of FGCC publication Standards & Specifications for Geodetic Control Networks, dated September 1984, and revised August 1993.

Project Results

Vertical information for this site is based on information supplied by NGS for benchmarks Y 224 (First Order, Class I) and M 34 (First Order, Class I). It was determined by William Giammarco of SFWMD that two new SFWMD benchmarks needed to be set at this site. The level run commenced at Y 224 and continued through the new benchmarks (M1071 2008 and RECORD 2008) and closed on M 34 for a total distance of 2.3543 km (7,724 feet) as shown below. Under these conditions, the allowable misclosure is 18.41 mm (0.060 feet). The closure results of the level run reflect a misclosure of 1.22 mm (0.004 feet). This survey then exceeds the Third Order closure standards.

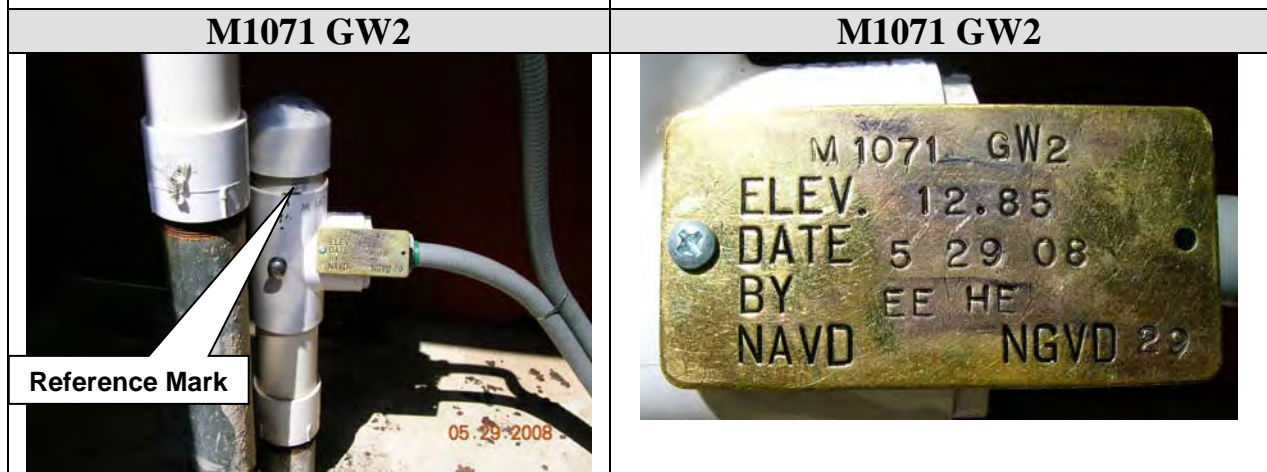
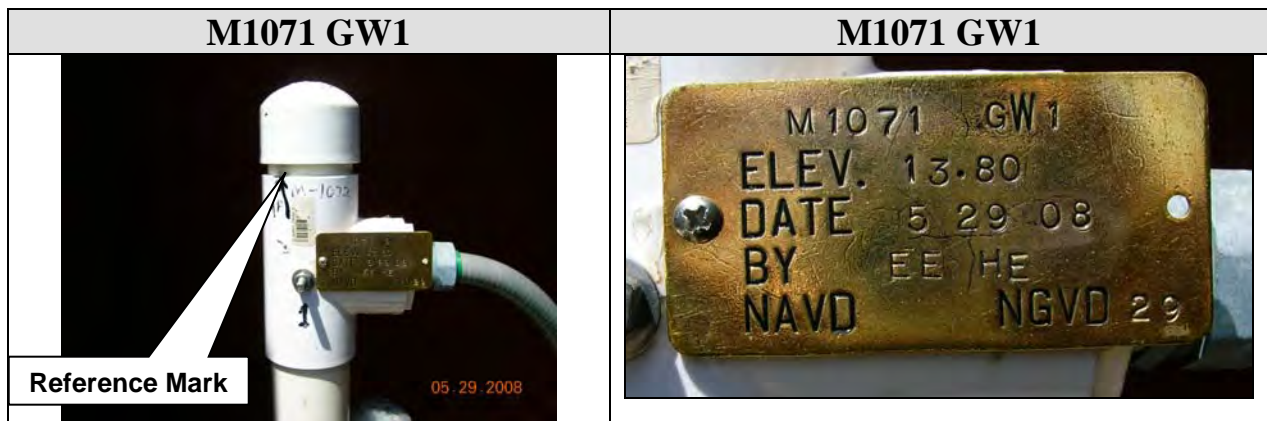
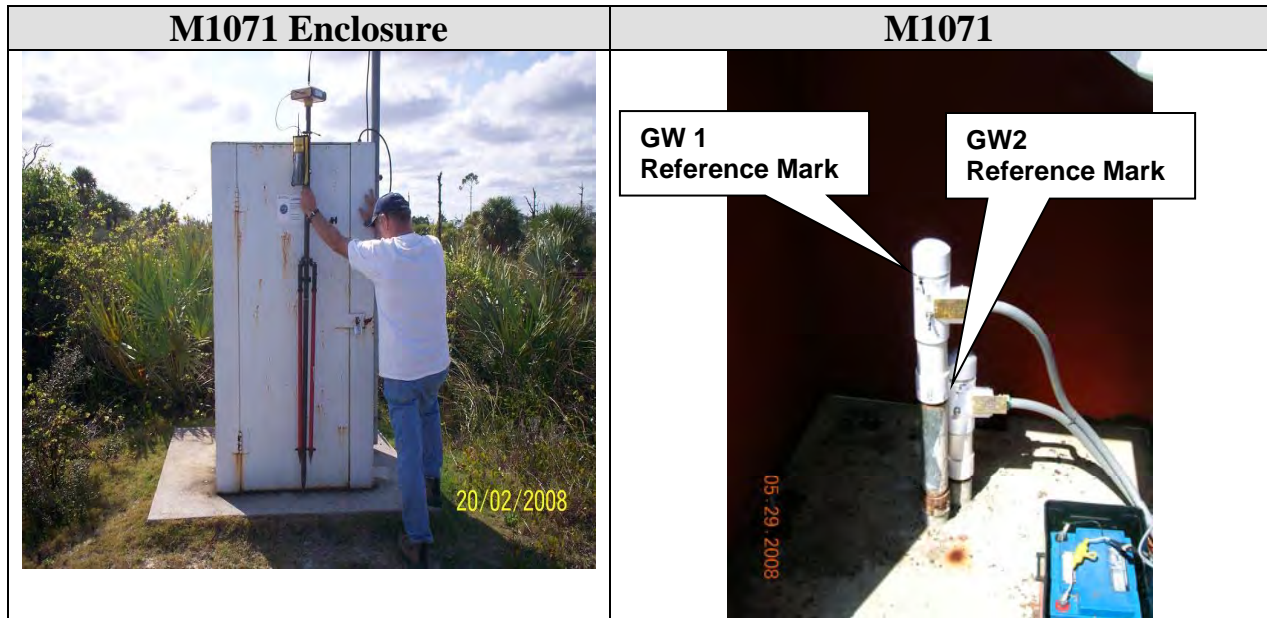


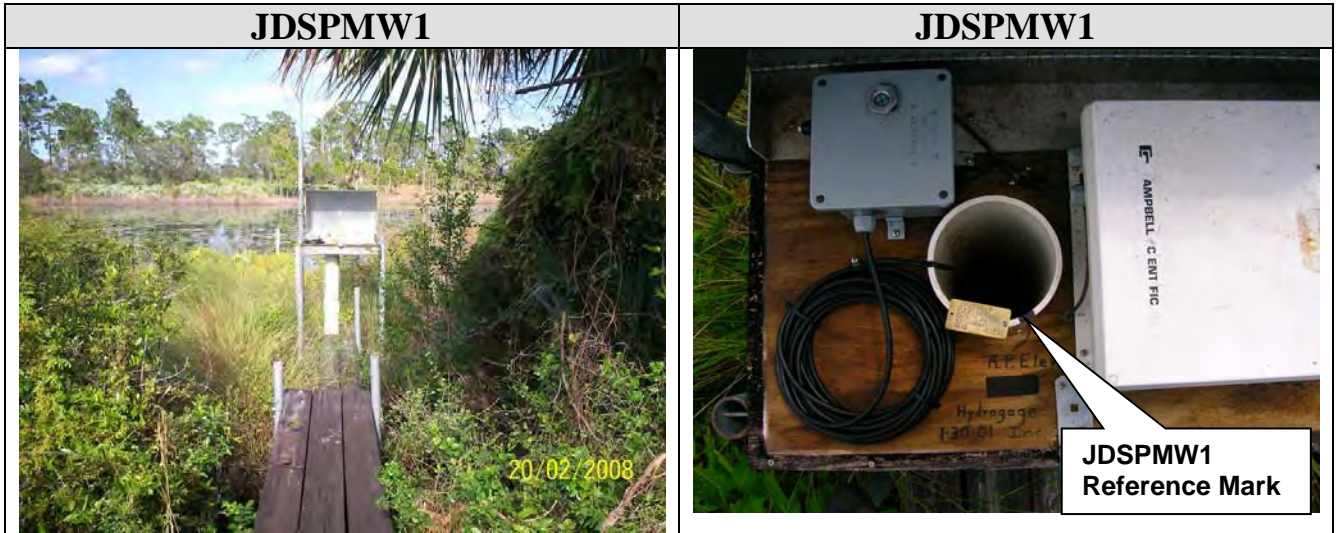
NAME	NORTH	EAST	ELEV 88	ELEV 29	DESCRIPTION
Y 224	973221	945396	6.35 (ft.)	7.84 (ft.)	Existing benchmark
M 34	968604	947147	11.05 (ft.)	12.54 (ft.)	Existing benchmark
M1071 2008	970495	946485	9.30 (ft.)	10.79 (ft.)	SFWMD brass disc set in concrete
RECORD 2008	967637	947749	6.25 (ft.)	7.74 (ft.)	SFWMD brass disc set in concrete
M1071 GW 1 Reference Mark	970485	946457	12.313 (ft.)	13.80 (ft.)	Top of upper PVC pipe (see photo page 8)
M1071 GW2 Reference Mark	970485	946457	11.358 (ft.)	12.85 (ft.)	Top of lower PVC pipe (see photo page 8)
JDSPMW1 Reference Mark	967644	947774	9.909 (ft.)	11.40 (ft.)	Top of PVC pipe (see photo page 8)
Top of Water	N/A	N/A	3.70 (ft.)	5.19 (ft.)	Top of water elevation on 2/20/08

NGVD29 data shown above is based on NGS superseded values for control point M 34 only, on the basis of its First Order status and proximity to the site location.

M1071 Well GW1	M1071 Well GW2
<p>Reference Mark: Affixed brass tag to PVC pipe using a single screw due to the small diameter of the pipe. See photos on next page. Reference Mark Elevation: 13.80' (NGVD29) Initials: EA Date: 5/29/08 Mark Location: Set tag on East side of PVC pipe.</p> <p>An existing brass tag was found affixed to the upper PVC pipe with the following data stamped on it: Elev. = 13.725 Date = 6/13/03 By = EE KS</p>	<p>Reference Mark: Affixed brass tag to PVC pipe using a single screw due to the small diameter of the pipe. See photos on next page. Reference Mark Elevation: 12.85' (NGVD29) Initials: EA Date: 5/29/08 Mark Location: Set tag on East side of PVC pipe.</p> <p>An existing brass tag was found affixed to the upper PVC pipe with the following data stamped on it: Elev. = Illegible Date = Illegible By = EE KS</p>
JDSPMW1	
<p>Reference Mark: Affixed brass tag to PVC pipe using a single screw due to the small diameter of the pipe. See photos on next page. Reference Mark Elevation: 11.40' (NGVD29) Initials: EA Date: 5/29/08 Mark Location: Set tag on West side of PVC pipe.</p> <p>No other written information was found at this well.</p>	

Site Pictures





To reach M1071 2008:

Benchmark is located on the west boundary of Jonathan Dickinson State Park east of US 1 in Martin County, Florida.

Benchmark is a SFWMD Brass Disk stamped “M1071 2008” and is set 0.41 of a mile south of a SFWMD Benchmark “Y224”. Benchmark is located 2’+/- east from the east edge of pavement of an abandoned asphalt road (old US 1) directly opposite the M1071 utility structure. Benchmark is located 90’+/- east of the Florida East Coast Railway railroad tracks.

Benchmark is approximately 4.7 miles north along the Florida East Coast Railway from the freight station in Jupiter.

RECORD 2008



RECORD 2008



To reach RECORD 2008:

Benchmark is located on the west boundary of Jonathan Dickinson State Park east of US 1 in Martin County, Florida.

Benchmark is a SFWMD Brass Disk stamped “RECORD 2008” and is set 0.20 of a mile south of SFWMD Benchmark “M34”. Benchmark is located 2’+/- from the east edge of pavement of an abandoned road 15’+/- north of a SFWMD recorder box and dock on the west edge of a pond.

Benchmark is approximately 4.1 miles north along the Florida East Coast Railway from the freight station in Jupiter.

Legend

- NAVD88 = North American Vertical Datum of 1988
- NGVD29 = National Geodetic Vertical Datum of 1929
- NAD = North American Datum (Horizontal Datum)
- NGS = National Geodetic Survey
- SFWMD = South Florida Water Management District
- PVC = Polyvinyl Chloride
- PSM = Professional Surveyor and Mapper



Project Summary

Project name: RTK6007306D.ttp
Surveyor: TONY WEATHERMAN
Comment: M1071
Linear unit: USFeet
Projection: SPC83-Florida (East)
Geoid: g2003u07

				Points
Name	Grid Northing (USft)	Grid Easting (USft)	Elevation (USft)	
100	970495.408	946484.472	9.254	
101	970484.569	946456.517	10.085	
102	968603.704	947147.021	11.022	
103	967637.021	947749.406	6.266	
104	967643.657	947774.931	6.303	
105	967641.576	947776.945	3.742	
Y224	973221.282	945395.996	6.35	

Code	Note
STMD/BM M1071	SET
RECORDER/M1071	
STMD/M34	
STMD/BM RECORD	
SOUTH RECORDER	
WE	CHECK
STMD	

CERTIFICATION

I hereby certify that the information herewith is true and correct to the best of my knowledge and belief as surveyed and depicted under my supervision. This survey meets the intent of the minimum technical standards for surveying in the state of Florida as set forth by the Florida Board of Professional Surveyors and Mappers pursuant to section 472.027, Florida Statutes and adopted in chapter 61G17-6, Florida Administrative Code. This report is prepared for the sole and specific use of the South Florida Water Management District and is not assignable.

Not valid without the raised seal and signature of a Florida licensed Surveyor and Mapper.

The date of the last field work was February 27, 2008.

ERDMAN ANTHONY OF FLORIDA, INC.

Bryan A. Merritt, PSM
Professional Surveyor and Mapper
No. 6558, State of Florida

Date: _____

APPENDIX A

LEVEL RUNS

SITE M1071

Closure Report for file N: \60073.06_VDUP2\survey\LEVEL\M1071\L60073F.l ev

Job No. : L60073F
 Benchmark No. : Y224
 Starting BM El ev. : 6. 3500
 Ending BM El ev. : 11. 0500
 Unadjusted Ending El ev. : 11. 0540
 Closure Error : 0. 0040
 Length of Level Run : 7, 724. 000
 Allowable Error : 0. 060
 Units : Feet

Closure is within allowable tolerances

Adjustment proportional to total distance

Pt. #	Unadj. El ev.	Adj. El ev.	Description
Y224	6. 3500		Y224 - STMD
1	5. 5590	5. 5590	TP1
2	3. 9650	3. 9647	TP2
3	4. 0160	4. 0155	TP3
4	5. 6640	5. 6633	TP4
5	6. 4650	6. 4641	TP5
6	9. 9870	9. 9859	TP6
7	10. 1810	10. 1797	TP7
8	9. 3030	9. 3015	BM SET M1071 - STMD
9	6. 0140	6. 0123	TP8
10	10. 7845	10. 7826	TP9
11	6. 1510	6. 1489	TP10
12	13. 4540	13. 4517	TP11
13	9. 1730	9. 1705	TP12
14	11. 0550	11. 0524	M34 - STMD
15	10. 5755	10. 5728	TP13
16	15. 7775	15. 7746	TP14
17	9. 7415	9. 7384	TP15
18	7. 2105	7. 2072	TP16
19	6. 2545	6. 2512	BM SET RECORD - STMD
20	7. 4265	7. 4231	TP17
21	11. 9795	11. 9759	TP18
22	10. 9135	10. 9097	TP19
23	10. 8090	10. 8051	TP20
24	11. 0540	11. 0500	M34 - STMD

APPENDIX B

FIELD BOOK NOTES

DL 102C
Network GPS

VDUP 2
G0073.06
LEVEL RUN 160073 F
Locations: RTK6007306 D
SITE ID: M1071

FOUND BM Y224 ELEV 6.35 (1988)
FOUND BM M34 11.05 (1988)

Set BM "M1071 2008" @ Recorder M1071
Set BM "RECORD 2008" @ Recorder So. of M34

PEG TEST

3.218 5.393
4.581 6.724

DIFF = 0.002

LEVEL RUN

BM	Y224	6.35
CP 1	M1071	9.303
CP 2	M34	11.055
CP 3	Record	6.254
BM	M34	11.054

NOTE: ALAN G. WAS ON SITE (SEWMD-PM).
NO WATER ELEVATION AT M1071 - NO WATER

T. Weatherman SFWMD PG 12
B. Shea

2-20-08
75°
CLEAR
5-10

4.73	M1071 Recorder	ELEV.	9.303	M1071
1.35	14.033	1.72	12.313	Hi PVC
2.54	13.663	2.305	11.358	Lo PVC
	13.898	4.595	9.303 ✓	M1071

LOCATIONS

Set Vertical @ Y224 6.35 (1988)
100 BM "M1071"
101 Recorder Box "M1071"
102 BM "M34"
103 BM "RECORD"
104 Recorder Box So. of M34

9.909 - 6.20 = 3.70 water elevation
at recorder Box
So. of M34

PHOTOS: 1-3 SET BM "RECORD"
4-6 SET BM "M1071"
7 SHOT @ RECORDER BOX M1071
8 2 PVC POINTS ELEVATED & TAGGED BY EA.
9-10 RECORDER BOX SOUTH OF BM M34
Recorder South of BM M34

5.34	11.594	6.254	BM Record
1.455	11.364	9.909	Recorder PVC
	5.11	6.254	BM

APPENDIX C

BENCHMARK INFORMATION

The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.56

1 National Geodetic Survey, Retrieval Date = NOVEMBER 21, 2007

AD3008 *****

AD3008 DESIGNATION - M 34

AD3008 PID - AD3008

AD3008 STATE/COUNTY- FL/MARTIN

AD3008 USGS QUAD - JUPITER (1983)

AD3008

AD3008 *CURRENT SURVEY CONTROL

AD3008

AD3008* NAD 83(1986)- 26 59 43. (N) 080 06 22. (W) SCALED

AD3008* NAVD 88 - 3.367 (meters) 11.05 (feet) ADJUSTED

AD3008

AD3008 GEOID HEIGHT- -27.50 (meters) GEOID03

AD3008 DYNAMIC HT - 3.362 (meters) 11.03 (feet) COMP

AD3008 MODELED GRAV- 979,093.5 (mgal) NAVD 88

AD3008

AD3008 VERT ORDER - FIRST CLASS I

AD3008

AD3008.The horizontal coordinates were scaled from a topographic map and have
AD3008.an estimated accuracy of +/- 6 seconds.

AD3008

AD3008.The orthometric height was determined by differential leveling

AD3008.and adjusted in June 1991.

AD3008.WARNING-Repeat measurements at this control monument indicate possible
AD3008.vertical movement.

AD3008

AD3008.The geoid height was determined by GEOID03.

AD3008

AD3008.The dynamic height is computed by dividing the NAVD 88

AD3008.geopotential number by the normal gravity value computed on the

AD3008.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AD3008.degrees latitude (g = 980.6199 gals.).

AD3008

AD3008.The modeled gravity was interpolated from observed gravity values.

AD3008

AD3008;	North	East	Units	Estimated Accuracy
AD3008;SPC FL E -	295,200.	288,720.	MT	(+/- 180 meters Scaled)

AD3008

AD3008 SUPERSEDED SURVEY CONTROL

AD3008

AD3008 NGVD 29 (??/??/92) 3.823 (m) 12.54 (f) ADJ UNCH 1 1

AD3008

AD3008.Superseded values are not recommended for survey control.

AD3008.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AD3008.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD3008

AD3008_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK886862(NAD 83)

AD3008_MARKER: DB = BENCH MARK DISK

AD3008_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AD3008_SP_SET: SET IN TOP OF CONCRETE MONUMENT

AD3008_STAMPING: M 34 1933 12.516

AD3008_MARK LOGO: CGS

AD3008_MAGNETIC: N = NO MAGNETIC MATERIAL
 AD3008_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AD3008+STABILITY: SURFACE MOTION

AD3008

AD3008	HISTORY	- Date	Condition	Report By
AD3008	HISTORY	- 1933	MONUMENTED	CGS
AD3008	HISTORY	- 1965	GOOD	NGS
AD3008	HISTORY	- 1972	GOOD	NGS
AD3008	HISTORY	- 1980	GOOD	FLDNR
AD3008	HISTORY	- 20010426	GOOD	GCI

AD3008

AD3008 STATION DESCRIPTION

AD3008

AD3008'DESCRIBED BY NATIONAL GEODETIC SURVEY 1965

AD3008'4.3 MI N FROM JUPITER.

AD3008'ABOUT 4.3 MILES NORTH ALONG THE FLORIDA EAST COAST RAILWAY FROM
 AD3008'THE FREIGHT STATION AT JUPITER, IN SECTION 13, R 42 E, T 40 S,
 AD3008'0.35 MILE SOUTH OF A ROAD CROSSING, 64 FEET NORTHEAST OF AND
 AD3008'ACROSS THE TRACK FROM MILEPOST 279, 37.9 FEET NORTHEAST OF THE
 AD3008'NORTHEAST RAIL, 75 FEET SOUTHWEST OF THE CENTER LINE OF A BLACK
 AD3008'TOP ROAD, 50 YARDS SOUTHWEST OF A SMALL POND, 1.3 FEET SOUTHWEST
 AD3008'OF A METAL WITNESS POST, 1 FOOT BELOW THE LEVEL OF THE TRACK
 AD3008'AND SET IN THE TOP OF A CONCRETE POST PROJECTING 2 INCHES
 AD3008'ABOVE THE LEVEL OF THE GROUND. NOTE-- THE MARK IS 65.5 FEET
 AD3008'NORTHEAST OF AND ACROSS THE TRACK FROM MILEPOST 279, INSTEAD
 AD3008'OF 64 FEET. ALSO, THERE IS A DIM TRAIL 13 FEET SOUTH OF THE
 AD3008'MARK BUT IT DOES NOT CROSS THE RAILROAD.

AD3008

AD3008 STATION RECOVERY (1972)

AD3008

AD3008'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1972

AD3008'RECOVERED IN GOOD CONDITION.

AD3008

AD3008 STATION RECOVERY (1980)

AD3008

AD3008'RECOVERY NOTE BY FL DEPT OF NAT RES 1980

AD3008'RECOVERED IN GOOD CONDITION.

AD3008

AD3008 STATION RECOVERY (2001)

AD3008

AD3008'RECOVERY NOTE BY G.C.Y., INCORPORATED 2001

AD3008'RECOVERED AS DESCRIBED.

*** retrieval complete.

Elapsed Time = 00:00:00

The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.56

1 National Geodetic Survey, Retrieval Date = NOVEMBER 21, 2007

AF3027 *****

AF3027 DESIGNATION - Y 224

AF3027 PID - AF3027

AF3027 STATE/COUNTY- FL/MARTIN

AF3027 USGS QUAD - HOBE SOUND (1983)

AF3027

AF3027 *CURRENT SURVEY CONTROL

AF3027

AF3027* NAD 83(1986)- 27 00 23. (N) 080 06 39. (W) SCALED

AF3027* NAVD 88 - 1.935 (meters) 6.35 (feet) ADJUSTED

AF3027

AF3027 GEOID HEIGHT- -27.52 (meters) GEOID03

AF3027 DYNAMIC HT - 1.932 (meters) 6.34 (feet) COMP

AF3027 MODELED GRAV- 979,095.3 (mgal) NAVD 88

AF3027

AF3027 VERT ORDER - FIRST CLASS I

AF3027

AF3027.The horizontal coordinates were scaled from a topographic map and have
AF3027.an estimated accuracy of +/- 6 seconds.

AF3027

AF3027.The orthometric height was determined by differential leveling
AF3027.and adjusted in June 1991.

AF3027

AF3027.The geoid height was determined by GEOID03.

AF3027

AF3027.The dynamic height is computed by dividing the NAVD 88

AF3027.geopotential number by the normal gravity value computed on the

AF3027.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AF3027.degrees latitude (g = 980.6199 gals.).

AF3027

AF3027.The modeled gravity was interpolated from observed gravity values.

AF3027

AF3027; North East Units Estimated Accuracy

AF3027;SPC FL E - 296,420. 288,250. MT (+/- 180 meters Scaled)

AF3027

AF3027 SUPERSEDED SURVEY CONTROL

AF3027

AF3027 NGVD 29 (??/??/92) 2.394 (m) 7.85 (f) ADJ UNCH 1 1

AF3027

AF3027.Superseded values are not recommended for survey control.

AF3027.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AF3027.[See file dsdata.txt](#) to determine how the superseded data were derived.

AF3027

AF3027_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK882874(NAD 83)

AF3027_MARKER: DB = BENCH MARK DISK

AF3027_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AF3027_SP_SET: SET IN TOP OF CONCRETE MONUMENT

AF3027_STAMPING: Y 224 1965

AF3027_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AF3027+STABILITY: SURFACE MOTION

AF3027

AF3027	HISTORY	- Date	Condition	Report By
AF3027	HISTORY	- 1965	MONUMENTED	CGS
AF3027	HISTORY	- 1972	GOOD	NGS
AF3027	HISTORY	- 1987	GOOD	USPSQD
AF3027	HISTORY	- 1989	GOOD	USPSQD
AF3027	HISTORY	- 1990	GOOD	USPSQD

AF3027

AF3027

AF3027

AF3027'DESCRIBED BY COAST AND GEODETIC SURVEY 1965

AF3027'3.8 MI SE FROM HOBE SOUND.

AF3027'ABOUT 3.75 MILES SOUTHEAST ALONG THE FLORIDA EAST COAST RAILWAY
AF3027'FROM THE POST OFFICE AT HOBE SOUND, 348 FEET SOUTHEAST OF MILEPOST
AF3027'278, IN SECTION 11, R 42 E, T 40 S, 94 1/2 FEET EAST AND ACROSS
AF3027'TRACK FROM A TELEPHONE POLE, 48 FEET NORTHEAST OF THE NORTHEAST
AF3027'RAIL, 29 FEET SOUTHWEST OF THE CENTER LINE OF A BLACK TOP ROAD,
AF3027'1 1/2 FEET NORTHEAST OF A FENCE LINE, 1.6 FEET NORTHWEST OF A
AF3027'METAL WITNESS POST, SET IN THE TOP OF A CONCRETE POST PROJECTING
AF3027'3 INCHES ABOVE THE LEVEL OF THE GROUND. MARK IS 5.25 MILES NORTHWEST
AF3027'ALONG THE FLORIDA EAST COAST RAILWAY STATION FROM THE FREIGHT
AF3027'STATION AT JUPITER, PALM BEACH COUNTY, FLORIDA.

AF3027

AF3027

AF3027

STATION RECOVERY (1972)

AF3027'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1972

AF3027'RECOVERED IN GOOD CONDITION.

AF3027

AF3027

AF3027

STATION RECOVERY (1987)

AF3027'RECOVERY NOTE BY US POWER SQUADRON 1987 (FGH)

AF3027'RECOVERED IN GOOD CONDITION.

AF3027

AF3027

AF3027

STATION RECOVERY (1989)

AF3027'RECOVERY NOTE BY US POWER SQUADRON 1989 (DHF)

AF3027'RECOVERED IN GOOD CONDITION.

AF3027

AF3027

AF3027

STATION RECOVERY (1990)

AF3027'RECOVERY NOTE BY US POWER SQUADRON 1990 (DHF)

AF3027'RECOVERED IN GOOD CONDITION.

*** retrieval complete.

Elapsed Time = 00:00:00

APPENDIX D

SFWMD BENCHMARK FORMS



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	MARTIN	PROJECT	VDUP	DESIGNATION	RECORD 2008
SECTION	11	TOWNSHIP	40 SOUTH	RANGE	42 EAST
GEOGRAPHIC INDEX OF QUAD					
Established by <u>ERDMAN ANTHONY</u>			NAME OF QUADRANGLE		
____ Recovered by					
SURVEYOR <u>TONY WEATHERMAN</u>			FIELD BOOK <u>SFWMD</u> PAGE <u>12</u>		
DATE <u>2/28/08</u>					
HORIZONTAL DATUM: 1927 <u>1983</u> Other <u>2007</u> (circle one) ZONE <u>E</u> or W					
STATE PLANE COORDINATES			E 947749.41 ft	N 967637.02 ft	
LATITUDE: N 26 59 34.6			LONGITUDE: W 80 06 16.6		
VERTICAL DATUM: MSL 1929 <u>1988</u> Other (circle one)				6.251	EL. ft
VERTICAL DATUM: MSL <u>1929</u> 1988 Other (circle one)				7.741	EL. ft
CONTROL ACCURACY: HORIZONTAL 1 2 3 <u>SUB-METER</u> (circle one) VERTICAL 1 2 <u>3</u>					
DESCRIPTION					
<p>To reach:</p> <p>Benchmark is located on the west boundary of Jonathan Dickinson State Park east of US 1 in Martin County, Florida.</p> <p>Benchmark is a SFWMD Brass Disk stamped "RECORD 2008" and is set 0.20 of a mile south of SFWMD Benchmark "M34". Benchmark is located 2'+/- from the east edge of pavement of an abandoned road 15'+/- north of a SFWMD recorder box and dock on the west edge of a pond.</p> <p>Benchmark is approximately 4.1 miles north along the Florida East Coast Railway from the freight station in Jupiter.</p>					
Notable Land marks: Jonathan Dickinson State Park & Florida East Coast Railway					



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

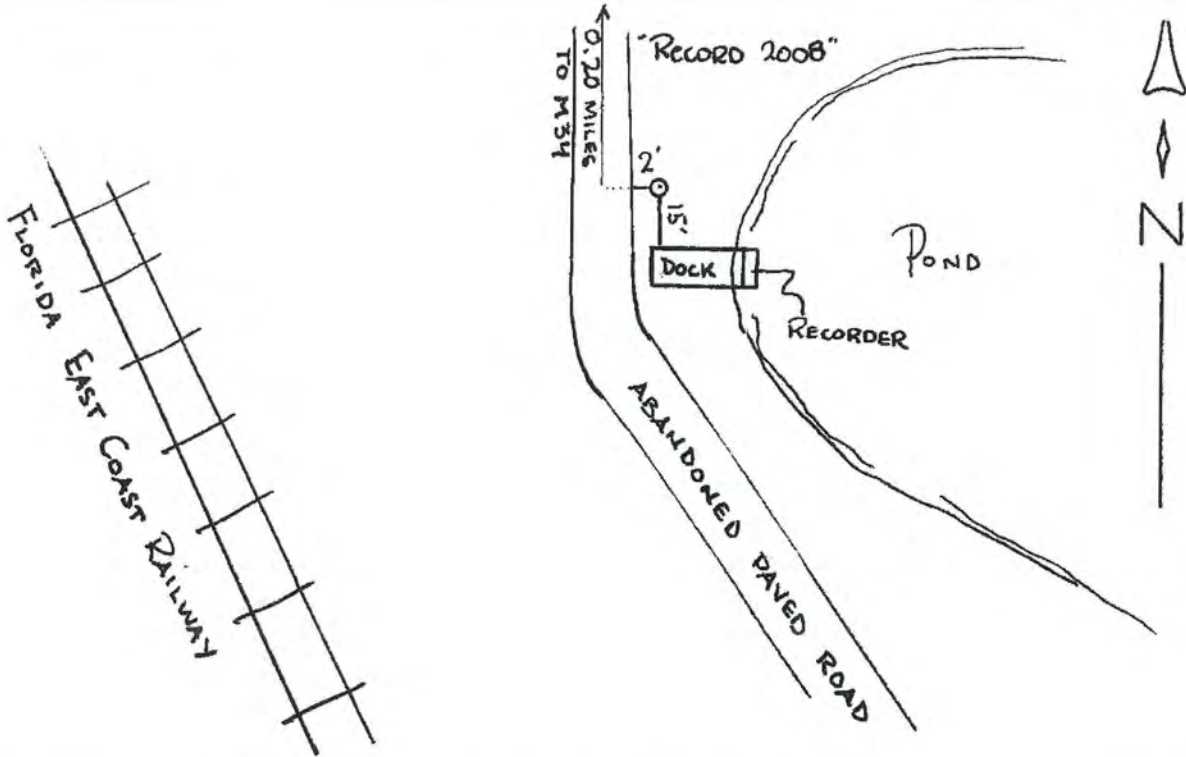
COUNTY	MARTIN	PROJECT	VDUP	DESIGNATION	RECORD 2008
SECTION	11	TOWNSHIP	40 SOUTH	RANGE	42 EAST
GEOGRAPHIC INDEX OF QUAD					
Established by <u>ERDMAN ANTHONY</u>			NAME OF QUADRANGLE		
____ Recovered by					
SURVEYOR <u>TONY WEATHERMAN</u>			FIELD BOOK <u>SFWMD</u> PAGE <u>12</u>		
DATE <u>2/28/08</u>					
HORIZONTAL DATUM: 1927 (1983) Other 2007 (circle one) ZONE (E) or W					
STATE PLANE COORDINATES		E 947749.41 ft		N 967637.02 ft	
LATITUDE: N 26 59 34.6		LONGITUDE: W 80 06 16.6			
VERTICAL DATUM: MSL 1929 (1988) Other (circle one)				6.251 EL. ft	
VERTICAL DATUM: MSL (1929) 1988 Other (circle one)				7.741 EL. ft	
CONTROL ACCURACY: HORIZONTAL 1 2 3 (SUB-METER) (circle one) VERTICAL 1 2 (3)					
DESCRIPTION					
<p>To reach:</p> <p>Benchmark is located on the west boundary of Jonathan Dickinson State Park east of US 1 in Martin County, Florida.</p> <p>Benchmark is a SFWMD Brass Disk stamped "RECORD 2008" and is set 0.20 of a mile south of SFWMD Benchmark "M34". Benchmark is located 2'+/- from the east edge of pavement of an abandoned road 15'+/- north of a SFWMD recorder box and dock on the west edge of a pond.</p> <p>Benchmark is approximately 4.1 miles north along the Florida East Coast Railway from the freight station in Jupiter.</p>					
Notable Land marks: Jonathan Dickinson State Park & Florida East Coast Railway					



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

SKETCH



Scanned Copy of Field book page

Current picture of mark





20/02/2008

A photograph of a surveying station. A wooden marker with the word 'SURVEY' written vertically is placed in a hole in the ground. The hole is filled with concrete, and a small orange cap is visible in the center of the concrete. The station is surrounded by dense green vegetation and dry brush. A white object is partially visible on the left side of the frame.

SURVEY

20/02/2008



20/02/2008



20/02/2008





20/02/2008



20/02/2008



20/02/2008



20/02/2008

S. FL. WATER MGT. DISTRICT
STATION DESIGNATION

RECORD

YEAR 2008

DO NOT DISTURB
SURVEY MARKER

20/02/2008

A photograph of a surveying marker. The marker is a vertical orange post with a white label at the top that reads "SURVEY" vertically. The post is placed in a hole dug into the ground, which contains a small amount of water. The hole is surrounded by dark soil and some dry twigs. The background is filled with dense green foliage. A yellow date stamp "20/02/2008" is visible in the bottom right corner.

SURVEY

20/02/2008



20/02/2008