



PROFESSIONAL SURVEYORS & MAPPERS
I N C O R P O R A T E D

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SURVEYOR'S REPORT

Specific Purpose Survey of the United States
Geological Survey Well **OSF-4**
in
Osceola County, Florida

Prepared for:

South Florida Water Management District

3301 Gun Club Road
West Palm Beach, Florida 33406

Prepared by:

Peter Andersen, PSM, Vice President
Florida Professional Surveyor and Mapper
License Number 5199
State of Florida

GCY, Inc. LB 4108
PO Box 1469/1505 SW Martin Highway
Palm City, Florida 33491/33490
772-286-8083

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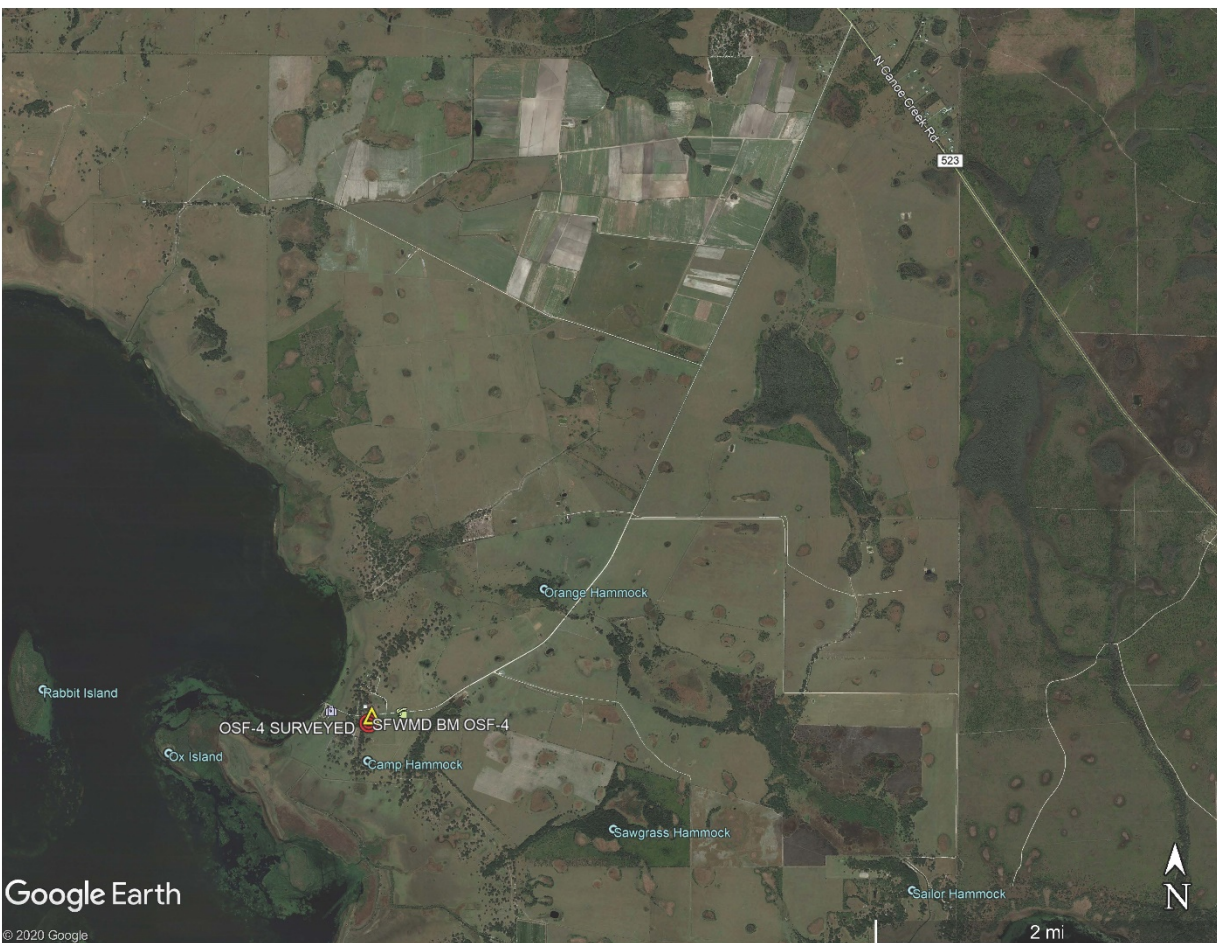
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PURPOSE

The Purpose of this survey is to set an Elevation Referenced Mark (Benchmark) using the guidelines for a National Geodetic Survey (NGS), Class "C" concrete monument and to establish a North American Vertical Datum of 1988 (NAVD 88) on said Benchmark and on an additional Reference Point with a Brass Plate, both at United States Geological Survey Well "OSF-4".

LOCATION OF PROJECT

The United States Geological Survey Well "OSF-4" is located in the Section 28, Township 29 South, Range 31 East, Osceola County, Florida.



General Location (Not to Scale)

PROJECT VERTICAL DATUM

The project vertical datum is the North American Vertical Datum (NAVD) of 1988.

To convert the NAVD 88 elevation to the National Geodetic Vertical Datum (NGVD) of 1929 at **Station OSF-4 add 1.214**. These values are based on Corpscon 6.0.1, a U.S. Army Corps of Engineers, Engineering Research and Development Center Windows based program to convert coordinates and elevations between datums using the updated vertcon05.txt and the vertcone.05 files supplied by the U.S Army Corps of Engineers. South Atlantic Division, Jacksonville, Florida.

PROJECT HORIZONTAL DATUM

The project horizontal datum is the State Plane Coordinate System, Florida East Zone, North American Datum 83, adjustment of 2011.

LEVELING METHODS

The leveling for this project was performed in accordance with standard survey practice using conventional third order methods, techniques and equipment.

The allowable error on this project meets or exceeds closures as required by SFWMD (.02 v miles).

Leveling was run from National Geodetic Survey (NGS) monument "OSC 5" (NGSPID AF7098) to the site benchmarks and closing on SFWMD disk "Overstreet Landing". Leveling was done using a Leica DNA 10 digital level S/N 331745

GPS METHODS

Latitude and longitude for the New Benchmark "OSF-4" were established by observing a 6+ hour Static Session on July 7, 2020 using a Trimble 5700 dual frequency receiver S/N 0220381397. The data from this session was sent to the NGS "OPUS" site for post processing on July 20, 2020 and a report was received from the "OPUS" site the same day. The data was also sent to "OPUS Shared" and accepted on August 17, 2020, (NGSPID BBGW90).



Surveyors' Notes:

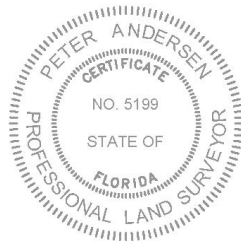
1. All measurements herein are in United States Survey feet and decimal thereof, unless otherwise specified.
2. Underground utilities were not located as part of this survey.
3. This survey report or copies thereof are not valid without the original signature and seal of a Florida licensed Surveyor and Mapper.
4. Additions or deletions to this survey report by other than the signing party (or parties) is prohibited without written consent of the signing party (or parties).
5. To convert from NAVD 88 to NGVD 29 add 1.214 feet. This value is based on Corpscon 6.0.1 a U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.
6. Date of last field work: July 7, 2020, GCY Job No. 20-1017-02-01.
7. SFWMD Data records (on file at the District's headquarters):
 - A. Electronic Data files:
Miscellaneous picture files
Digital level run
File names: XXXXXX.DAT
 - B. Conventional reporting
Field Book: 1869 pages 7-11

SURVEYOR'S CERTIFICATION

In my professional opinion this Specific Purpose Survey meets applicable portions of the Standards of Practice set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code. This report is prepared for the sole and specific use of the South Florida Water Management District and is not assignable.

July 7, 2020

Last date of Survey



Peter Andersen, PSM, Vice President
Florida Professional Surveyor and Mapper
License Number 5199
State of Florida
GCY, Inc. LB No 4108

NOTE:

This is an electronically signed and sealed document pursuant to Chapter 5J-17.062, Florida Administrative Code. The printed survey map or report or copies thereof are not valid without the original signature and seal of a Florida licensed surveyor or mapper.





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U.S.G.S. Station Name: OSF-4	U.S.G.S. Station Number: 275609081132001	Agency: GCY, INC.	Date of Field Work: 7/7/2020
Party Chief: LAPOLLA	Field Book: GCY 1869	Page(s): 7-11	Report Prepared by: ANDERSEN

SITE SPECIFIC DATA

Site Benchmark: OSF-4	Benchmark Elevation(s) (NAVD88): 57.150	Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) + 1.214	
Well Reference Elevation (NAVD88): 59.362	DTW: N/A Well Sealed up.	Ground Elevation (NAVD88): 57.8	Pad Elevation (NAVD88): N/A

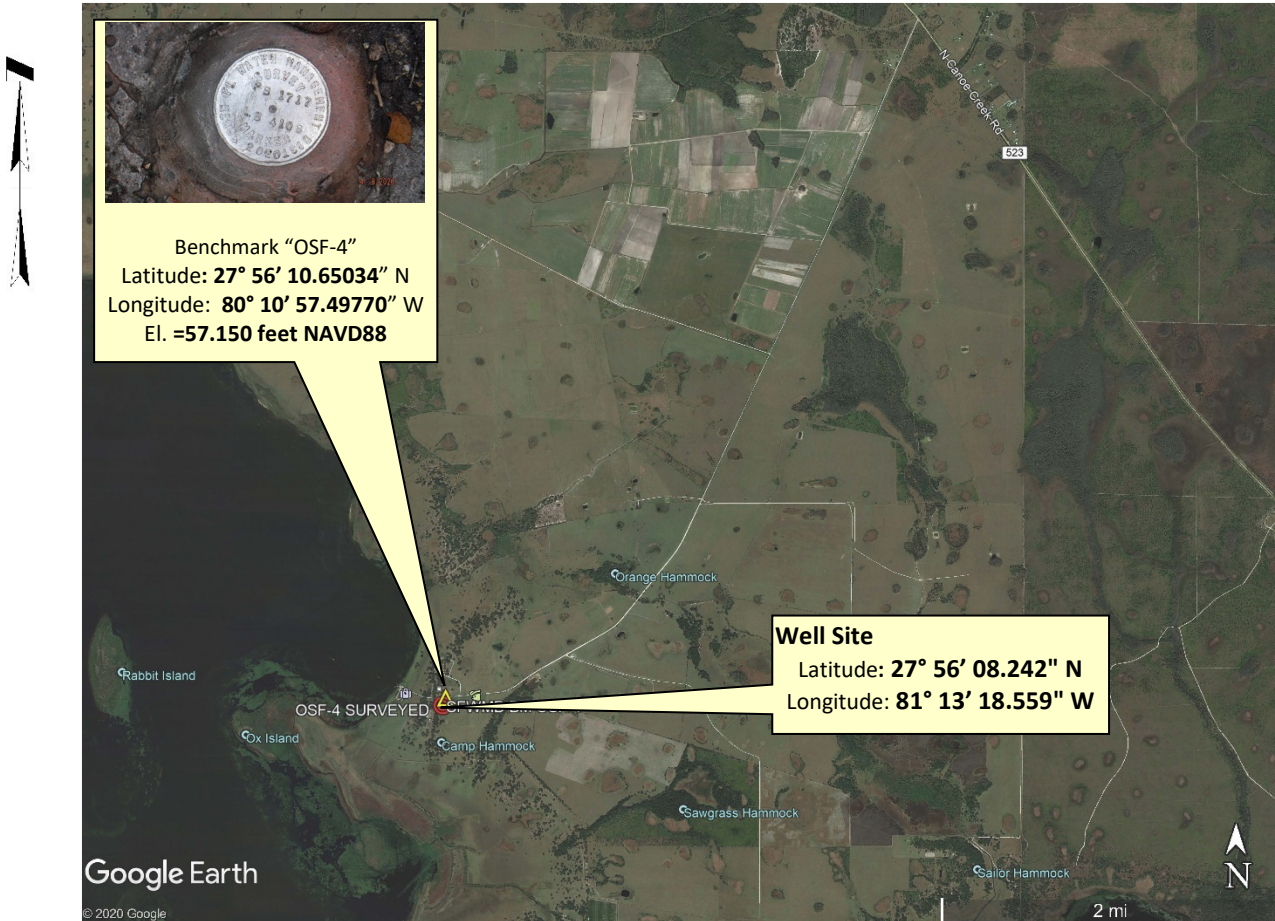
GEOGRAPHIC DATA

Section 28	Township 29 S	Range 31 E
Well Latitude: 27° 56' 08.242" N	Well Longitude: 81° 13' 18.559" W	Location Source: RTK GPS
State Plane Coordinates:	Northing (Y) = 1309364.14	Easting (X) = 584544.32

Notes: NAVD88 – North American Vertical Datum of 1988; NGVD29- National Geodetic Vertical Datum of 1929; **Corpscon 6.0.1** - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.

PICTURES

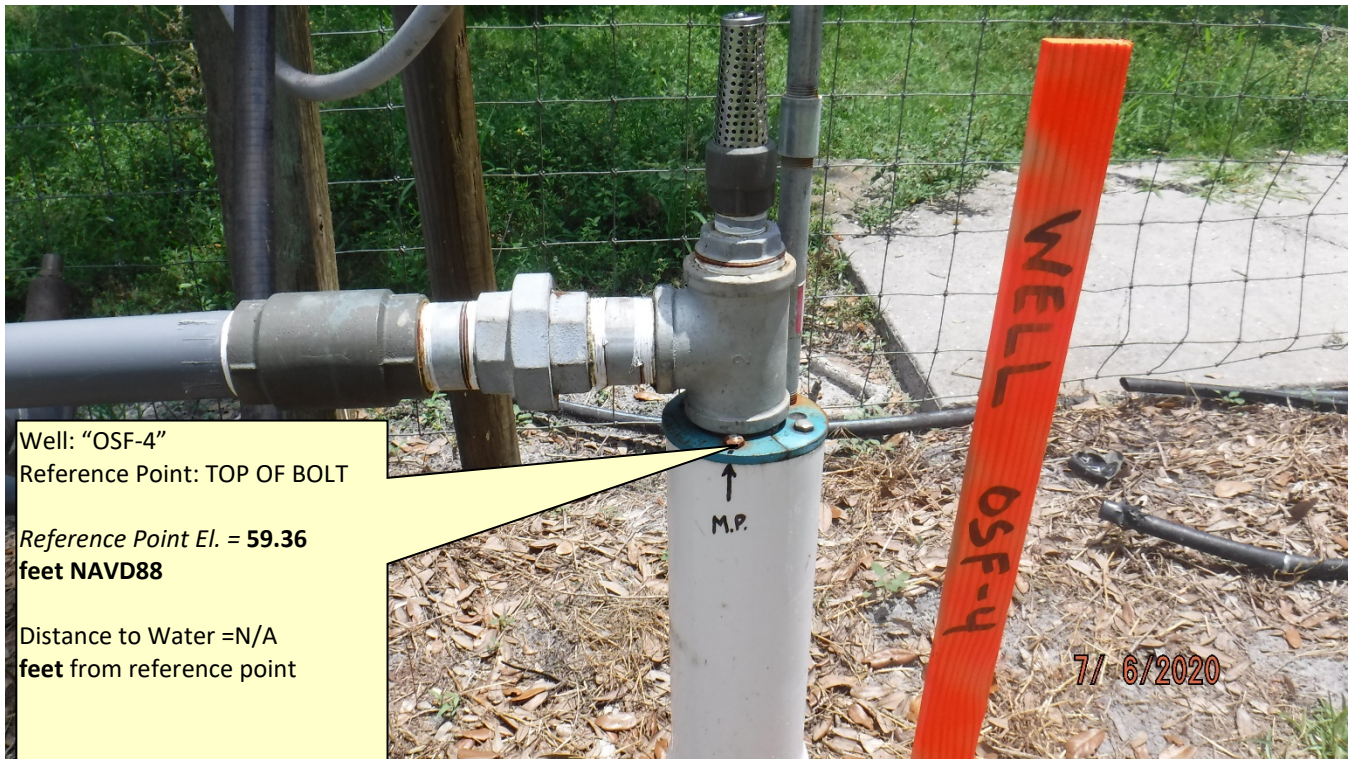
Aerial of Overall Well Site



Not to scale (GoogleEarth product)



Well Site and Well Head





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New Aluminum Tag





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USGS RMs - NONE



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Site Benchmark

Site Benchmark Overall Photo



Site BM: OSF-4



Latitude: $27^{\circ} 56' 10.65034''$ N
Longitude: $81^{\circ} 13' 17.53385''$ W
NAVD88 EL = 57.150





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Source Benchmarks





“OSC 5” Benchmark Datasheet (1 OF 2)

The NGS Data Sheet

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

PROGRAM = datasheet95, VERSION = 8.12.5.9
Starting Datasheet Retrieval...

1 National Geodetic Survey, Retrieval Date = AUGUST 27, 2020
AF7098 *****
AF7098 DESIGNATION - OSC 5 FLDNR
AF7098 PID - AF7098
AF7098 STATE/COUNTY- FL/OSCEOLA
AF7098 COUNTRY - US
AF7098 USGS QUAD - LAKE MARIAN NW (2018)
AF7098
AF7098 *CURRENT SURVEY CONTROL
AF7098
AF7098* NAD 83(1986) POSITION- 27 56 27. (N) 081 12 27. (W) SCALED
AF7098* NAVD 88 ORTHO HEIGHT - 18.464 (meters) 60.58 (feet) ADJUSTED
AF7098
AF7098 GEOID HEIGHT - -27.392 (meters) GEOID18
AF7098 DYNAMIC HEIGHT - 18.437 (meters) 60.49 (feet) COMP
AF7098 MODELED GRAVITY - 979,145.9 (mgal) NAVD 88
AF7098
AF7098 VERT ORDER - SECOND CLASS II
AF7098
AF7098.The horizontal coordinates were scaled from a map and have
AF7098.an estimated accuracy of +/- 6 seconds.
AF7098.
AF7098.The orthometric height was determined by differential leveling and
AF7098.adjusted by the NATIONAL GEODETIC SURVEY
AF7098.in June 1991.
AF7098
AF7098.Significant digits in the geoid height do not necessarily reflect accuracy.
AF7098.GEOID18 height accuracy estimate available [here](#).
AF7098
AF7098.Click [photographs](#) - Photos may exist for this station.
AF7098
AF7098.The dynamic height is computed by dividing the NAVD 88
AF7098.geopotential number by the normal gravity value computed on the
AF7098.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF7098.degrees latitude (g = 980.6199 gals.).
AF7098
AF7098.The modeled gravity was interpolated from observed gravity values.
AF7098
AF7098; North East Units Estimated Accuracy
AF7098;SPC FL E - 399,670. 179,580. MT (+/- 180 meters Scaled)
AF7098
AF7098_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML795906(NAD 83)
AF7098
AF7098 SUPERSEDED SURVEY CONTROL
AF7098
AF7098 NGVD 29 (09/01/92) 18.833 (m) 61.79 (f) ADJUSTED 2 2
AF7098
AF7098.Superseded values are not recommended for survey control.
AF7098
AF7098.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF7098.See file [dsdata.pdf](#) to determine how the superseded data were derived.
AF7098
AF7098_MARKER: DB = BENCH MARK DISK
AF7098_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AF7098_STAMPING: OSC 5 1983 BSM
AF7098_MARK LOGO: FLDNR



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"OSC 5" Benchmark Datasheet (2 OF 2)

AF7098_PROJECTION: FLUSH
AF7098_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AF7098+STABILITY: SURFACE MOTION

AF7098	HISTORY	- Date	Condition	Report By
AF7098	HISTORY	- 1983	MONUMENTED	FLDNR

AF7098
AF7098 STATION DESCRIPTION
AF7098

AF7098'DESCRIBED BY FL DEPT OF NAT RES 1983
AF7098'18.85 MI WNW FROM KENANSVILLE.
AF7098'BEGIN AT THE INTERSECTION OF U.S. HIGHWAY 441 AND STATE ROAD 523
AF7098'(CANOE CREEK ROAD) IN KENANSVILLE, GO 14.75 MILES NORTH AND WEST
AF7098'ALONG STATE ROAD 523 TO THE INTERSECTION OF JOE OVERSTREET ROAD,
AF7098'GO 4.2 MILES SOUTHWEST ON JOE OVERSTREET ROAD TO THE MARK.
AF7098'THE MARK BEARS 39.9 FEET SOUTHEAST OF THE CENTERLINE OF JOE
AF7098'OVERSTREET ROAD, 2.7 FEET NORTH-NORTHWEST OF A POWER POLE WITH
AF7098'A YELLOW NUMBER 8692 PAINTED ON IT (POWER POLE NUMBER R26EE-1394),
AF7098'AND 59.6 FEET SOUTHEAST OF A FENCE LINE.
AF7098'THE MARK IS ABOVE LEVEL WITH GROUND.

*** retrieval complete.
Elapsed Time = 00:00:01

/



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"OVERSTREET LANDING" Benchmark Datasheet (1 OF 2)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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DESIGNATION: OVERSTREET LANDING		PROJECT: KCOL	
ESTABLISHED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT		SURVEYOR: CHARLTON	(REC): WISE
RECOVERED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT		DATE: 15-mar-90	(REC) 08-may-19
GEOGRAPHIC POSITION			
SECTION 28	TOWNSHIP 29 SOUTH	RANGE 31 EAST	
COUNTY: OSCEOLA	NAME OF QUADRANGLE: LAKE MARIAN NW		
GEOGRAPHIC INDEX OF QUAD: 3210			
HORIZONTAL DATUM: 1927 (1983) 2022 Other _____ (circle one) ZONE (E) or W			
VERTICAL DATUM: MSL 1929 (1988) 2022 Other _____ (circle one)			
VERTICAL ACCURACY: 1 2 (3)			
STATE PLANE COORDINATE	(N) Y= 1309942.000	(E) X= 583271.803	NAVD 88 EL. 53.462 NGVD 29 EL. 54.673
CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): (A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL.)			
ACTUAL NGS or (ngvd29.txt file) OPUS Ortho Height 16.260m (53.346) Corpcon 1.214			
LATITUDE: 27°56'13.94099"(N)		LONGITUDE: 81°13'32.75936"(W) (Source) OPUS Session 08-may-19	
RECOVERY DATA			
Stamping: BM OVERSTREET LANDING 1990			
To Reach: In Kenansville Florida, from the intersection of United States Highway 441 (State Road 15, N. Kenansville Road and State Road 523 (South Canoe Creek Road and North Canoe Creek Road), go westerly and northwesterly along said State Road 523, 15.1 miles to Joe Overstreet Road on the left (West); turn left onto Joe Overstreet Road and go Southwesterly and westerly 5.4 miles more or less to the northwesterly end of a concrete median in the road and the station location. The station is a South Florida Water Management District aluminum disk stamped "BM Overstreet Landing 1990" set in the northwesterly end of a concrete median on the centerline extension of Joe Overstreet Road at a boat launching area 50 feet southeast of the southeast end of a concrete boat ramp located on the easterly shore of Lake Kissimmee.			
NGS-SOURCE BENCHMARK: OSC5 FLDNR (AF7908)			
FIELD BOOK KCOL18 PAGE 32 RECOVERED FIELD BOOK MISC 7G PAGE 1 (08-may-19)			

PICTURES

Aerial Overall Site



Benchmark
 "Overstreet Landing"
 Latitude: **27°56'13.94099"**
 Longitude: **81°13'32.75936"**
 El. **53.462 NAVD88**
 El. **54.673 NGVD29**



Not to scale



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"OVERSTREET LANDING" Benchmark Datasheet (2 OF 2)



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PICTURES



Looking Southeasterly – (Oblique not to scale)



Benchmark
"Overstreet Landing"
Latitude: 27°56'13.94099"
Longitude:
81°13'32.75936"
El. 53.462 NAVD88
El. 54.673 NGVD29



Looking Northwesterly – (Oblique not to scale)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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Field Notes (1 of 5)

00.938
 SFWM-D-USGS/PAH WELLS
 BENCH RUN FOR NEW BM OSF-4 (NAVD88)
 PEG TEST: (SOUTHERN UTIL UTILITIES)
 COLL. ERM. GLD= 8.5" COLL. ERM. NEW= 7.7"
 DIFF= -0.8" RETICLE: 4.792'
 STA TOTAL DIST ELEV AX
 NGS BM OSC 5 0.00 60.577'
 4 1550.61' 59.639'
 8 3576.35' 58.791'
 " NEW BM OSF-4 4573.59' 57.150'
 16 6049.39' 53.445'
 SFWM ON OVERSTREET LANDING

1869 07

20-10-17
 90° Sunny
 JOB: PAH WELLS
 LINE: OSF-4
 DWA 10
 7.6 to man
 M. LaFolla PC
 B. Gorman *

DESC
 NGS BM OSC 5 FLDNR P.D: APT098
 NAVD 88 EL= 60.577'
 T.P. MAG. NAIL BM 1869-07A
 T.P. MAG. NAIL BM 1869-07B
 BM 1869-07C NEW BM OSF-4
 SET 1'12" (I.D.) IRON PIPE W/ 2" ALUMI
 DISC. " SFWM OSF-4 LAYERS 2020" I.P.
 IS 3' LONG W/ CONC COURT + GRADED IN
 DISC.
 SFWM "BM OVERSTREET LANDING" 2"
 ALUMI DISC. LISTED NAVD 88 EL= 53.462'
 DIST. IN METERS= 1.14 FIELD= 53.445'
 MTS @ .02= .021 ERR= .017
 * END RUN *

53.462'



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Field Notes (2 of 5)

SPIDMA-USGS / PA4 WELLS
M.P. + NG BENCH RUN @
WELL OSF-4 (NAVD88)

STA	+ I	HS	-	EL	ADJ
NEW BM OSF-4	6.512			57.15'	
	5.88				
	5.243				
	(5.878)	63.028'			
S.S. 1			5.22'	57.808'	
			4.341		
			3.667		
			2.99		
1			(3.666)	59.362'	
	4.47				
	3.797				
	3.115				
	(3.797)	63.156'	6.644		
			6.009		
			5.374		
NEW BM OSF-4			(6.009)	57.147'	

20-1017- 1869 08
A/P cloudy 7.10 Mon
M. LaBella PC
B. Gorman T

DESC
NEW BM OSF-4 NAVD88 EL = 57.15'
BM 1869-07C

NG @ WELL OSF-4

NEW MEASURING POINT @ WELL OSF-4
NORMAL TOP OF PVC BLEVE OVER THE
4" IRON WELL (BM 1869-08A)

✓ Back to BM OSF-4: BM 1869-07C
ERR = -0.005

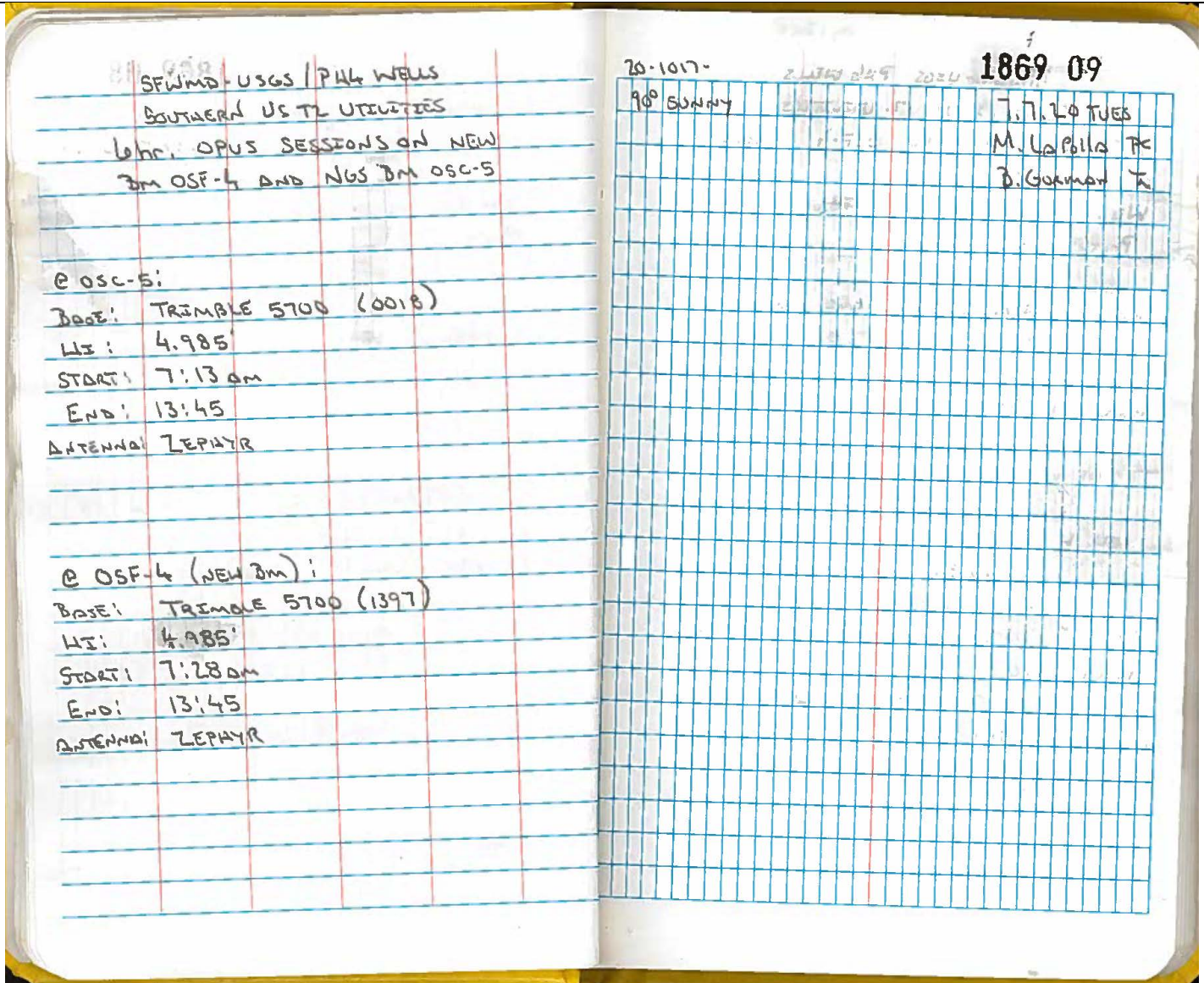
* END RUN *



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Field Notes (3 of 5)

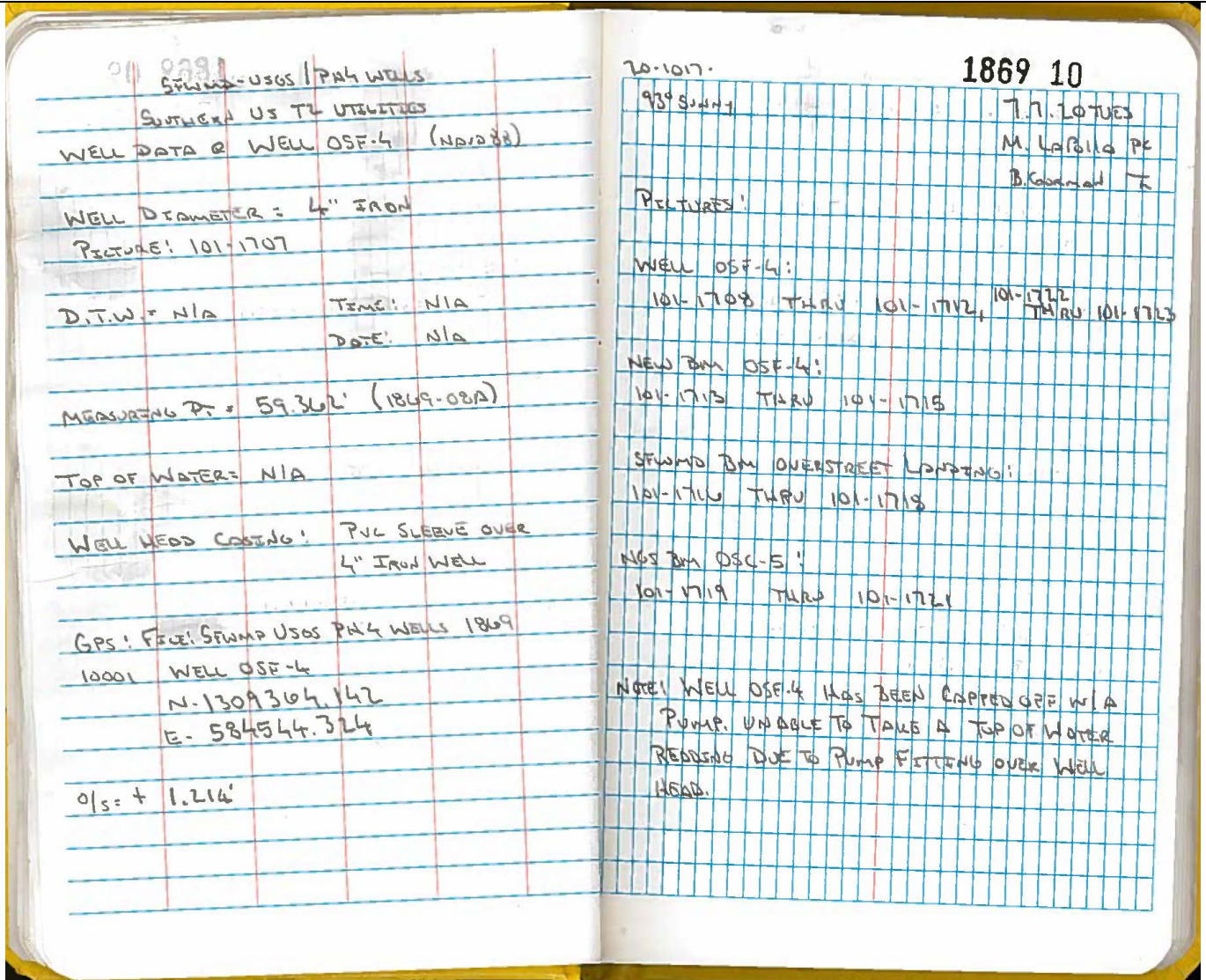




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Field Notes (4 of 5)

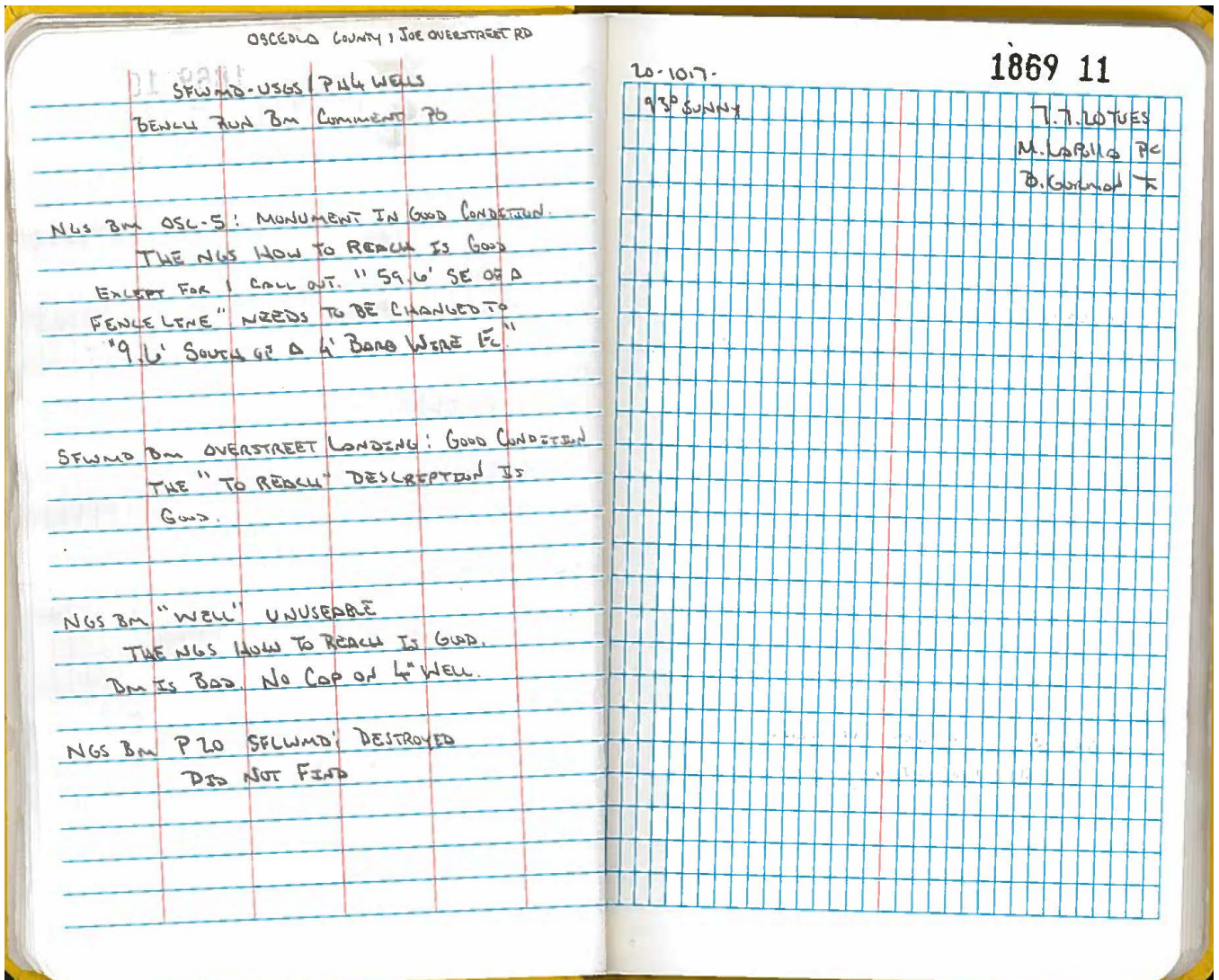




SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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Field Notes (5 of 5)





South Florida Water Management District Benchmark Datasheet

Designation: OSF-4 Project Name: USGS PHASE 4 WELLS Type: V State Plane Zone: FL East
Stamping: OSC-4 LB4108 2020 Field Book Name: GCY 1869 Field Book Page: 7 TO 11
Established By: GCY INC Recovered By: Recovery Date:
Surveyor: ANDERSEN Established Date: 07/07/20 Status: New

GEOGRAPHIC POSITION INFORMATION

Section: 28 Township: 29 SOUTH Range: 31 EAST
County: OSCEOLA Quadrangle: LAKE MARIAN NW Quad Index: 3210 NGS Source BM(s): OSC 5 FLDNR
NAD83 Adj. Year: 2011 Vertical Datum: NAVD1988 Horizontal Datum: NAD1983 NGS PID(s): AF7098
NAVD88 Elevation (feet): 57.15 NGVD29 Elevation (feet): 58.364 2022 Elevation: NGS NAVD88 Elev (ft): 60.577
NAVD88 Class: 3rd NGVD29 Class: 3rd Other Elevation: NGS NAVD88 Elev (m): 18.464
NAVD88 Order: NGVD29 Order: Other Elevation Type: NGS 2022 Elev (ft):

CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): (A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville FL)

Vertical Datum Offset: + 1.214 Actual NGS Elevation or ngvd29.txt file: OPUS Ortho Height: 57.021
Northing (Y) (feet): 1309607.187 Easting (X) (feet): 584636.754 Source of Latitude & Longitude: OPUS SOLUTION
Latitude: 27 56 10.65034 Longitude: -81 13 17.53385
Latitude (Decimal Degrees): 27.93629176 Longitude (Decimal Degrees): 80.77846282

RECOVERY DATA

How to Reach: FROM THE INTERSECTION OF US 441 AND SOUTH CANOE CREEK ROAD IN KENANSVILLE, GO WESTERLY AND NORTHERLY 15.1 MILES TO JOE OVERSTREET ROAD ON THE LEFT. THENCE WESTERLY ON JOE OVERSTREET ROAD FOR 5.1 MILES TO THE MARK ON THE LEFT. MARK IS A STANDARD SOUTH FLORIDA WATER MANAGEMENT SURVEY MARKER DISC SET IN THE TOP OF A 1-1/4" IRON PIPE WITH A CONCRETE COLLAR. MARK IS 28' +/- SOUTH OF THE CENTERLINE OF JOE OVERSTREET ROAD, 12' +/- WESTERLY OF A FENCE-LINE INTERSECTION, AND 35' +/- EAST OF A PINE TREE.

Description/Notes:

Notable Landmarks:
Other Source Benchmarks:

PICTURES

Aerial View of Overall Site



PICTURES

Site Sketch



From: opus
To: Pete Andersen
Subject: OPUS solution : 13971890.t01 OP1595271548343
Date: Monday, July 20, 2020 3:00:10 PM

FILE: 13971890.t01 OP1595271548343

NGS OPUS SOLUTION REPORT
=====

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

USER: petea@gcyinc.com DATE: July 20, 2020
RINEX FILE: 13971891.20o TIME: 18:59:51 UTC

SOFTWARE: page5 1801.18 master50.pl 160321 START: 2020/07/07 11:28:00
EPHEMERIS: igr21132.eph [rapid] STOP: 2020/07/07 17:51:00
NAV FILE: brdc1890.20n OBS USED: 14527 / 15405 : 94%
ANT NAME: TRM39105.00 NONE # FIXED AMB: 83 / 91 : 91%
ARP HEIGHT: 1.5194 OVERALL RMS: 0.018(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) ITRF2014 (EPOCH:2020.5153)

X: 860595.727(m) 0.003(m) 860594.887(m) 0.003(m)
Y: -5572965.588(m) 0.018(m) -5572964.023(m) 0.018(m)
Z: 2970265.078(m) 0.016(m) 2970264.918(m) 0.016(m)

LAT: 27 56 10.65034 0.011(m) 27 56 10.67125 0.011(m)
E LON: 278 46 42.46615 0.005(m) 278 46 42.44452 0.005(m)
W LON: 81 13 17.53385 0.005(m) 81 13 17.55548 0.005(m)
EL HGT: -9.985(m) 0.023(m) -11.540(m) 0.023(m)
ORTHO HGT: 17.380(m) 0.055(m) [NAVD88 (Computed using GEOID18)]

UTM COORDINATES STATE PLANE COORDINATES

 UTM (Zone 17) SPC (0901 FL E)
Northing (Y) [meters] 3090164.855 399169.069
Easting (X) [meters] 478205.078 178197.639
Convergence [degrees] -0.10378889 -0.10378889
Point Scale 0.99960586 0.99994704
Combined Factor 0.99960743 0.99994861

US NATIONAL GRID DESIGNATOR: 17RML7820590164(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DQ7965	FLWE WEDGEFIELD FL CORS ARP	N282626.477	W0810533.176	57315.1
DE9138	OKCB OKEECHOBEE CORS ARP	N271557.715	W0805119.181	82604.0
DG9757	DLND DELAND CORS ARP	N290322.897	W0811547.480	124199.3

NEAREST NGS PUBLISHED CONTROL POINT

AF7094 WELL N275613.465 W0811331.487 391.2

*410044+00000000?.....1
*110045+000000000000OSC 5 83..51+00000000000060577
*110046+000000000000OSC 5 32...1+00000000000024083 331.21+0000000000005046
390...+0000000000000005 391.21+0000000000000000 71....+0000000000NGS BM
*110047+0000000000000001 32...1+00000000000022762 332.21+0000000000004548
390...+0000000000000005 391.21+0000000000000000
*110048+0000000000000001 573..1+0000000000001322 574..1+00000000000046845
83..21+00000000000061075
*110049+0000000000000001 32...1+000000000000251679 331.21+0000000000004273
390...+0000000000000005 391.21+0000000000000001
*110050+0000000000000002 32...1+000000000000254067 332.21+0000000000004534
390...+0000000000000005 391.21+0000000000000001
*110051+0000000000000002 573..1-0000000000001066 574..1+000000000000552591
83..21+00000000000060814
*110052+0000000000000002 32...1+000000000000254726 331.21+0000000000003837
390...+0000000000000005 391.21+0000000000000000
*110053+0000000000000003 32...1+000000000000255542 332.21+0000000000004656
390...+0000000000000005 391.21+0000000000000001
*110054+0000000000000003 573..1-0000000000001882 574..1+00000000001062860
83..21+00000000000059995
*110055+0000000000000003 32...1+000000000000247330 331.21+0000000000004231
390...+0000000000000005 391.21+0000000000000001
*110056+0000000000000004 32...1+000000000000246419 332.21+0000000000004587
390...+0000000000000005 391.21+0000000000000000 71....+00000BM 1869 07A
*110057+0000000000000004 573..1-0000000000000971 574..1+00000000001556609
83..21+00000000000059639
*110058+0000000000000004 32...1+000000000000255641 331.21+0000000000004641
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390...+0000000000000005 391.21+0000000000000001
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*110067+0000000000000007 32...1+000000000000254762 331.21+0000000000004795
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83..21+0000000000059552
*110073+000000000000009 32...1+0000000000233497 331.21+000000000003590
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390...+0000000000000005 391.21+000000000000000
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*110079+00000000BM OSF 4 32...1+0000000000124170 331.21+000000000005566
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390...+0000000000000005 391.21+000000000000000
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83..21+0000000000056917
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*110086+000000000000013 32...1+0000000000175423 332.21+000000000005840
390...+0000000000000005 391.21+000000000000001
*110087+000000000000013 573..1+000000000004545 574..1+0000000005522229
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390...+0000000000000005 391.21+000000000000001
*110089+000000000000014 32...1+0000000000126837 332.21+000000000004024
390...+0000000000000005 391.21+000000000000000
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390...+0000000000000005 391.21+000000000000000
*110095+000000000000016 32...1+000000000022521 332.21+000000000005129
390...+0000000000000005 391.21+000000000000000 71....+SFWMD BM OVERSTR
*110096+000000000000016 573..1+000000000002317 574..1+0000000006049393
83..21+0000000000053445

Office

Project

27 August 2020

INPUT

Geographic, fhpgn - Florida HPGN
Vertical - NAVD88, U.S. Feet

OUTPUT

State Plane, fhpgn - Florida HPGN
0901 - Florida East, U.S. Feet
Vertical - NGVD29 (Custom), U.S. Feet

OSC-4

1/1

Latitude: 27 56 10.65034
Longitude: 81 13 17.53385
Elevation/Z: 0

Northing/Y: 1309607.187
Easting/X: 584636.753
Elevation/Z: 1.214
Convergence: -0 06 13.63772
Scale Factor: 0.999947041
Combined Factor: 0.999951272

Remark:

Shared Solution

PID: BBGW90

Designation: OSF 4 LB 4108

Stamping: OSF-4 LB 4108 2020

Stability: May hold, commonly subject to ground movement

Setting: Set into or on top of metal pipe driven into ground

Description: FROM THE INTERSECTION OF US 441 AND SOUTH CANOE CREEK ROAD IN KENANSVILLE, GO WESTERLY AND NORTHERLY 15.1 MILES TO JOE OVERSTREET ROAD ON THE LEFT. THENCE WESTERLY ON JOE OVERSTREET ROAD FOR 5.1 MILES TO THE MARK ON THE LEFT. MARK IS A STANDARD SOUTH FLORIDA WATER MANAGEMENT SURVEY MARKER DISC SET IN THE TOP OF A 1-1/4" IRON PIPE WITH A CONCRETE COLLAR. MARK IS 28'+/- SOUTH OF THE CENTERLINE OF JOE OVERSTREET ROAD, 12' +/- WESTERLY OF A FENCE-LINE INTERSECTION, AND 35' +/- EAST OF A PINE TREE.

Observed: 2020-07-07T11:28:00Z

Source: OPUS - page5 1801.18



Close-up View

REF FRAME: NAD_83(2011)	EPOCH: 2010.0000	SOURCE: NAVD88 (Computed using GEOID18)	UNITS: m	SET PROFILE	DETAILS
LAT: 27° 56' 10.65034" ± 0.011 m LON: -81° 13' 17.53385" ± 0.005 m ELL HT: -9.985 ± 0.023 m X: 860595.727 ± 0.003 m Y: -5572965.588 ± 0.018 m Z: 2970265.078 ± 0.016 m ORTHO HT: 17.380 ± 0.055 m		UTM 17 SPC 901(FL E) NORTHING: 3090164.855m 399169.069m EASTING: 478205.078m 178197.639m CONVERGENCE: -0.10378889° -0.10378889° POINT SCALE: 0.99960586 0.99994704 COMBINED FACTOR: 0.99960743 0.99994861			

CONTRIBUTED BY

[petea](#)

[GCY Incorporated](#)



Horizon View



The numerical values for this position solution have satisfied the quality control criteria of the National Geodetic Survey. The contributor has verified that the information submitted is accurate and complete.