



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

U.S.G.S. Station Name: G-2752	U.S.G.S. Station Number: 261643080055901	Agency: SFWM D	Date of Field Work: 09/25/19
Party Chief: T. AVERY	Field Book: SFWM D #1	Page(s): 62-63	Report Prepared by: DEWBERRY

SITE SPECIFIC DATA

Site Benchmark: G-2752	Benchmark Elevation(s) (NAVD88): 9.05 feet	Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) + 1.57 feet
Well Reference Elevation (NAVD88): 9.47'	Ground Elevation (NAVD88): 10.0'	Pad Elevation (NAVD88): N/A

GEOGRAPHIC DATA

Section 18	Township 48 SOUTH	Range 43 EAST
Well Latitude: 26°16'43.34"N	Well Longitude: 80°05'57.24"W	Location Source: AVERAGED FPRN & TRIMBLE VRSNOW RTK
State Plane Coordinates:	Northing (Y) = 708017'	Easting (X) = 951329'

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

Well Site
Latitude: 26°16'43.3"
Longitude: 80°05'57.2"

Benchmark "G-2752"
Latitude: 26°16'43.3"
Longitude: 80°05'57.4"
NAVD88 EL = 9.05 FEET

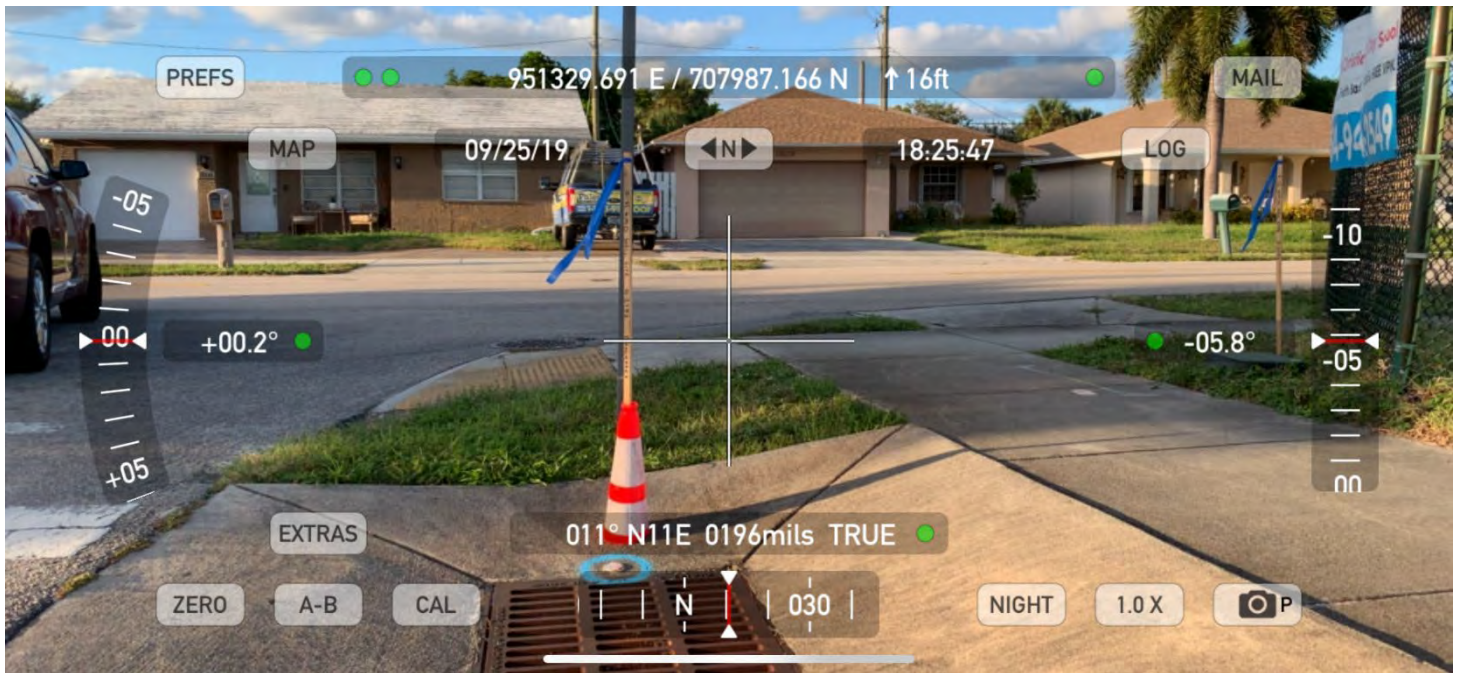
Not to scale (GoogleEarth product)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

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Well Site and Well Head



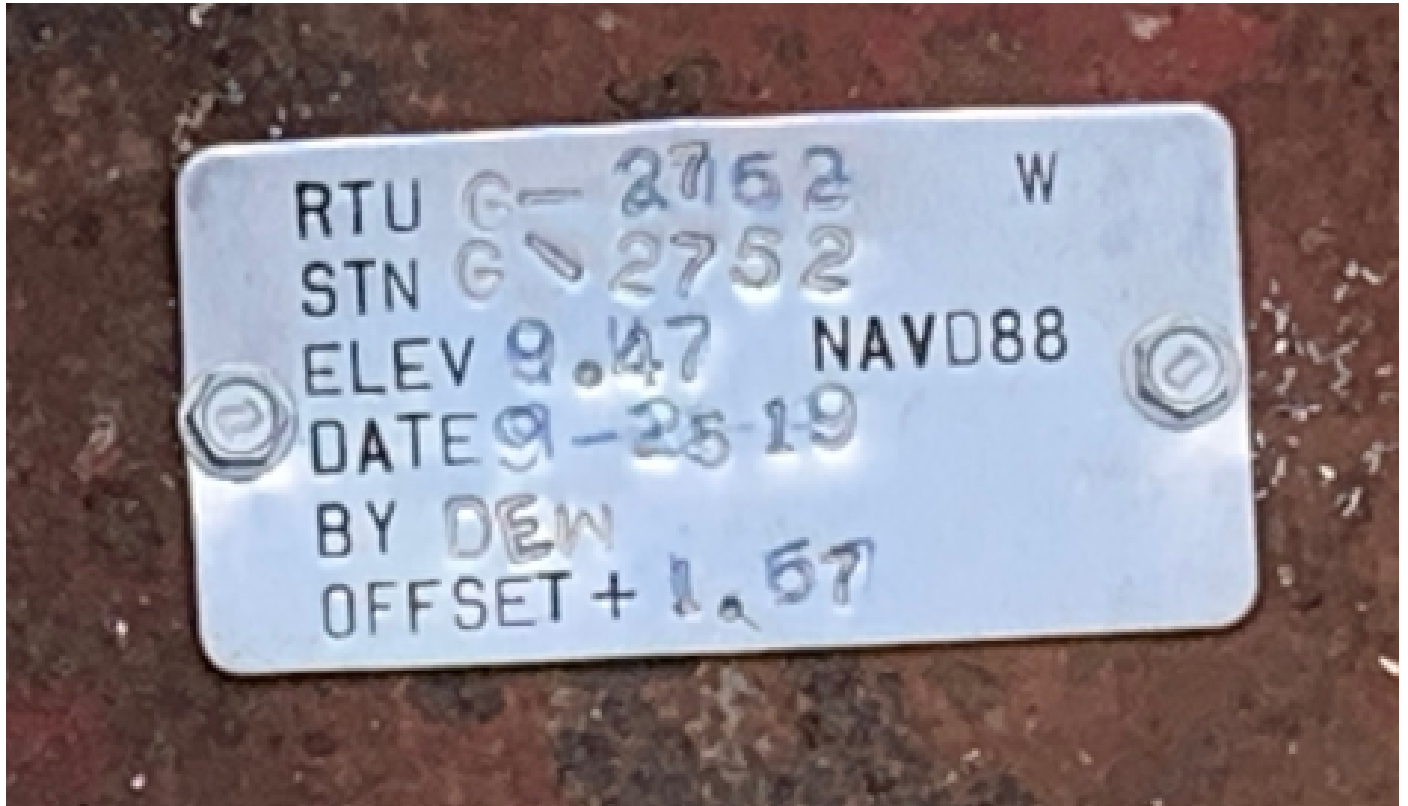
Well: 4" PVC
Reference Point: West edge at top of PVC casing at black mark
Reference Point El. = **9.47 feet NAVD88**
Distance to water =
-5.19 feet from reference point
(09/25/19 at 7:15 PM)



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New Aluminum Tag





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USGS RMs

NOTE: THERE ARE NO USGS REFERENCE MONUMENTS IN THE VICINITY OF WELL G-2752.



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Site Benchmark



Site BM: G2752



Latitude: **26°16'43.3"**
Longitude: **80°05'57.4"**
NAVD88 EL = 9.05 FEET





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Source Benchmarks



NGS Benchmark "012" (DO2651)



Latitude: 26°17'09.1"
Longitude: 80°05'45.5"
NAVD88 EL = 9.85 FEET



NGS Benchmark "013" (DO2652)



Latitude: 26°16'19.3"
Longitude: 80°05'53.2"
NAVD88 EL = 9.51 FEET



South Florida Water Management District Benchmark Datasheet

Designation: G-2752	Project Name: USGS Ph 2, BROWARD	Type: V	State Plane Zone: FL East
Stamping: G2752 2019	Field Book Name: W203	Field Book Page: 72	
Established By: DEWBERRY / WHIDDEN	Recovered By: N/A	Recovery Date: N/A	
Surveyor: WILLIAM D. DONLEY	Established Date: 09/18/19	Status: New	

GEOGRAPHIC POSITION INFORMATION

Section: 18	Township: 48 SOUTH	Range: 43 EAST
County: BROWARD	Quadrangle: BOCA RATON	Quad Index: 1901
NAD83 Adj. Year: 2011	Vertical Datum: NAVD1988	Horizontal Datum: NAD1983
NAVD88 Elevation (feet): 9.05	NGVD29 Elevation (feet): 10.622	2022 Elevation: N/A
NAVD88 Class: N/A	NGVD29 Class: N/A	Other Elevation: N/A
NAVD88 Order: 3	NGVD29 Order: N/A	Other Elevation Type: N/A
		NGS Source BM(s): "013"
		NGS PID(s): DO2652
		NGS NAVD88 Elev (ft): 9.51
		NGS NAVD88 Elev (m): 2.898
		NGS 2022 Elev (ft): N/A

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: + 1.57	Actual NGS Elevation or ngvd29.txt file: N/A	OPUS Ortho Height: N/A
Northing (Y) (feet): 708012.9	Easting (X) (feet): 951319.4	Source of Latitude & Longitude: AVERAGED FPRN & TRIMBLE VRSNOW RTK
Latitude: 26	16	5
DD°	MM'	SS"
Longitude (Decimal Degrees): 26.278694	Longitude (Decimal Degrees): -80.099264	

RECOVERY DATA

How to Reach: **1. FROM US-1/FL-5/N FEDERAL HWY, HEAD WEST ALONG FL-834/NE 36TH ST/SAMPLE RD FOR 0.1 MI**
2. TURN RIGHT ONTO NE 18TH AVENUE, CONTINUE 0.2 MI TO THE INTERSECTION OF NE 39th STREET AND THE MARK ON THE RIGHT

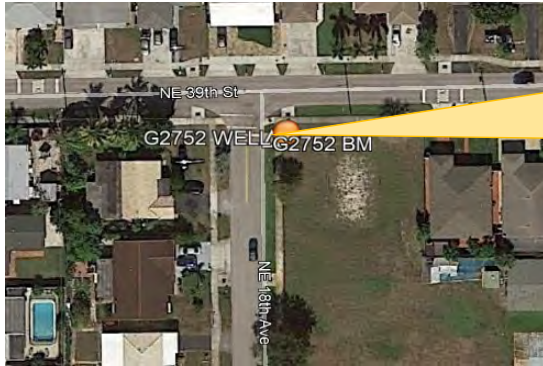
Description/Notes: **2" ALUMINUM SFWMD DISK SET IN CONCRETE SPILLWAY, ON THE NORTH SIDE OF A STORM CATCH BASIN**

Notable Landmarks: **INTERSECTION OF NE 18th AVE AND NE 39th STREET**

Other Source Benchmarks: **NGS BENCHMARK "012" (DO2651)**

PICTURES

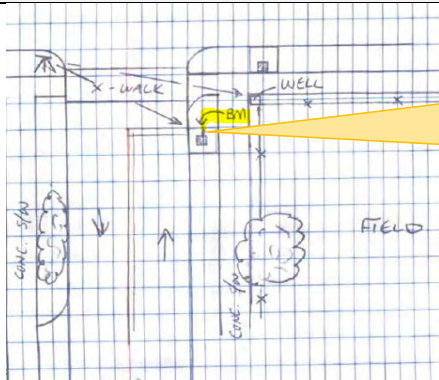
Aerial View of Overall Site



NOT TO SCALE. AERIAL FROM GOOGLE EARTH.

PICTURES

Site Sketch





"012" Benchmark Datasheet (1 of 2)

The NGS Data Sheet

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

PROGRAM = datasheet95, VERSION = 8.12.5.2
1 National Geodetic Survey, Retrieval Date = MAY 20, 2019
D02651 *****
D02651 DESIGNATION - 012
D02651 PID - D02651
D02651 STATE/COUNTY- FL/BROWARD
D02651 COUNTRY - US
D02651 USGS QUAD - BOCA RATON (1983)
D02651
D02651 *CURRENT SURVEY CONTROL
D02651
D02651* NAD 83(1986) POSITION- 26 17 09. (N) 080 05 45. (W) SCALED
D02651* [NAVD 88](#) ORTHO HEIGHT - 3.001 (meters) 9.85 (feet) ADJUSTED
D02651
D02651 GEOID HEIGHT - -25.907 (meters) GEOID12B
D02651 DYNAMIC HEIGHT - 2.997 (meters) 9.83 (feet) COMP
D02651 MODELED GRAVITY - 979,075.5 (mgal) NAVD 88
D02651
D02651 VERT ORDER - SECOND CLASS II
D02651
D02651.The horizontal coordinates were scaled from a topographic map and have
D02651.an estimated accuracy of +/- 6 seconds.
D02651.
D02651.The orthometric height was determined by differential leveling and
D02651.adjusted by the NATIONAL GEODETIC SURVEY
D02651.in December 2012.
D02651
D02651.Significant digits in the geoid height do not necessarily reflect accuracy.
D02651.GEOID12B height accuracy estimate available [here](#).
D02651
D02651.[Photographs](#) are available for this station.
D02651
D02651.The dynamic height is computed by dividing the NAVD 88
D02651.geopotential number by the normal gravity value computed on the
D02651.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
D02651.degrees latitude (g = 980.6199 gals.).
D02651
D02651.The modeled gravity was interpolated from observed gravity values.
D02651
D02651;
D02651;SPC FL E - North East Units Estimated Accuracy
216,600. 290,300. MT (+/- 180 meters Scaled)
D02651
D02651_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK902076(NAD 83)
D02651
D02651 SUPERSEDED SURVEY CONTROL
D02651
D02651.No superseded survey control is available for this station.
D02651
D02651_MARKER: DB = BENCH MARK DISK
D02651_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
D02651_STAMPING: 012 2011
D02651_MARK LOGO: FL2570
D02651_PROJECTION: RECESSED 5 CENTIMETERS
D02651_MAGNETIC: R = STEEL ROD IMBEDDED IN MONUMENT
D02651_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
D02651+STABILITY: SURFACE MOTION



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"012" Benchmark Datasheet (2 of 2)

DO2651_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DO2651+SATELLITE: SATELLITE OBSERVATIONS - December 22, 2011

DO2651

DO2651	HISTORY	- Date	Condition	Report By
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DO2651	HISTORY	- 20111222	MONUMENTED	STONER
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DO2651

DO2651 STATION DESCRIPTION

DO2651

DO2651'DESCRIBED BY STONER AND ASSOCIATES INC 2011 (DWS)

DO2651'THE MARK IS ABOUT 6.9 MI (11.1 KM) EAST-SOUTHEAST OF WEST DIXIE BEND,

DO2651'5.1 MI (8.2 KM) SOUTH OF BOCA RATON, 3.8 MI (6.1 KM) NORTH-NORTHEAST

DO2651'OF POMPANO BEACH, IN SECTION 18, TOWNSHIP 48 SOUTH, RANGE 43 EAST.

DO2651'OWNERSHIP IS THE FLORIDA DEPARTMENT OF TRANSPORTATION.

DO2651'

DO2651'TO REACH THE MARK FROM THE INTERSECTION OF WEST ATLANTIC BOULEVARD AND

DO2651'NORTH DIXIE HIGHWAY IN POMPANO BEACH, GO EAST ON EAST ATLANTIC

DO2651'BOULEVARD FOR 1.5 MI (2.4 KM) TO THE INTERSECTION OF FEDERAL HIGHWAY

DO2651'(U.S. HIGHWAY 1). TURN LEFT ON NORTH FEDERAL HIGHWAY (U.S. HIGHWAY 1)

DO2651'AND GO NORTH FOR 3.8 MI (6.1 KM) TO THE MARK ON THE LEFT, SET IN THE

DO2651'TOP OF A 10-INCH (25 CM) ROUND CONCRETE MONUMENT RECESSED 0.2 FT (6

DO2651'CM) BELOW THE LEVEL OF THE GROUND AND 0.3 FT (9 CM) ABOVE THE LEVEL OF

DO2651'NORTH FEDERAL HIGHWAY (U.S. HIGHWAY 1).

DO2651'

DO2651'LOCATED 250.0 FT (76.2 M) NORTH OF THE INTERSECTION OF NORTH FEDERAL

DO2651'HIGHWAY (U.S. HIGHWAY 1) AND NORTHEAST 44TH STREET, 200.0 FT (61.0 M)

DO2651'NORTH OF THE SOUTH END OF THE BULL NOSE MEDIAN, 85.4 FT (26.0 M) SOUTH

DO2651'OF A 12-INCH (30 CM) PALM TREE, 19.2 FT (5.9 M) SOUTHWEST OF A

DO2651'DRAINAGE MANHOLE AND 1.0 FT (0.3 M) WEST OF A CARSONITE WITNESS POST.

DO2651'

DO2651'NOTE REBAR ROD IS IMBEDDED IN THE MONUMENT.

*** retrieval complete.

Elapsed Time = 00:00:04



"013" Benchmark Datasheet (1 of 2)

The NGS Data Sheet

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

PROGRAM = datasheet95, VERSION = 8.12.5.2

1 National Geodetic Survey, Retrieval Date = MAY 20, 2019

DO2652 *****

DO2652 DESIGNATION - 013

DO2652 PID - DO2652

DO2652 STATE/COUNTY- FL/BROWARD

DO2652 COUNTRY - US

DO2652 USGS QUAD - BOCA RATON (1983)

DO2652

DO2652 *CURRENT SURVEY CONTROL

DO2652

DO2652* NAD 83(1986) POSITION- 26 16 19. (N) 080 05 53. (W) SCALED

DO2652* [NAVD 88](#) ORTHO HEIGHT - 2.898 (meters) 9.51 (feet) ADJUSTED

DO2652

DO2652 GEOID HEIGHT - -25.893 (meters) GEOID12B

DO2652 DYNAMIC HEIGHT - 2.894 (meters) 9.49 (feet) COMP

DO2652 MODELED GRAVITY - 979,074.2 (mgal) NAVD 88

DO2652

DO2652 VERT ORDER - SECOND CLASS II

DO2652

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DO2652

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DO2652

DO2652; North East Units Estimated Accuracy

DO2652;SPC FL E - 215,060. 290,090. MT (+/- 180 meters Scaled)

DO2652

DO2652_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK900061(NAD 83)

DO2652

DO2652 SUPERSEDED SURVEY CONTROL

DO2652

DO2652.No superseded survey control is available for this station.

DO2652

DO2652_MARKER: DB = BENCH MARK DISK

DO2652_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

DO2652_STAMPING: 013 2011

DO2652_MARK LOGO: FL2570

DO2652_PROJECTION: RECESSED 5 CENTIMETERS

DO2652_MAGNETIC: R = STEEL ROD IMBEDDED IN MONUMENT

DO2652_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

DO2652+STABILITY: SURFACE MOTION



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"013" Benchmark Datasheet (2 of 2)

D02652_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
D02652+SATELLITE: SATELLITE OBSERVATIONS - December 22, 2011

D02652

D02652	HISTORY	- Date	Condition	Report By
D02652	HISTORY	- 20111222	MONUMENTED	STONER

D02652

D02652

STATION DESCRIPTION

D02652

D02652'DESCRIBED BY STONER AND ASSOCIATES INC 2011 (DWS)

D02652'THE MARK IS ABOUT 7.1 MI (11.4 KM) EAST-SOUTHEAST OF WEST DIXIE BEND,

D02652'6.0 MI (9.7 KM) SOUTH OF BOCA RATON, 2.9 MI (4.7 KM) NORTHEAST OF

D02652'POMPANO BEACH, IN SECTION 19, TOWNSHIP 48 SOUTH, RANGE 43 EAST.

D02652'OWNERSHIP IS THE FLORIDA DEPARTMENT OF TRANSPORTATION.

D02652'

D02652'TO REACH THE MARK FROM THE INTERSECTION OF WEST ATLANTIC BOULEVARD AND

D02652'NORTH DIXIE HIGHWAY IN POMPANO BEACH, GO EAST ON EAST ATLANTIC

D02652'BOULEVARD FOR 1.5 MI (2.4 KM) TO THE INTERSECTION OF FEDERAL HIGHWAY

D02652'(U.S. HIGHWAY 1). TURN LEFT ON NORTH FEDERAL HIGHWAY (U.S. HIGHWAY 1)

D02652'AND GO NORTH FOR 2.8 MI (4.5 KM) TO THE MARK ON THE LEFT, SET IN THE

D02652'TOP OF A 10-INCH (25 CM) ROUND CONCRETE MONUMENT RECESSED 0.2 FT (6

D02652'CM) BELOW THE LEVEL OF THE GROUND AND 0.5 FT (15 CM) ABOVE THE LEVEL

D02652'OF NORTH FEDERAL HIGHWAY (U.S. HIGHWAY 1).

D02652'

D02652'LOCATED 68.0 FT (20.7 M) WEST OF THE CENTERLINE OF NORTH FEDERAL

D02652'HIGHWAY (U.S. HIGHWAY 1), 58.0 FT (17.7 M) SOUTH OF THE INTERSECTION

D02652'OF NORTH FEDERAL HIGHWAY (U.S. HIGHWAY 1) AND NORTHEAST 33RD STREET,

D02652'20.4 FT (6.2 M) SOUTH OF A CROSS WALK SIGNAL POLE, 10.0 FT (3.0 M)

D02652'SOUTHEAST OF THE SOUTHEAST CORNER OF A CONCRETE PLANTER, 9.7 FT (3.0

D02652'M) SOUTHEAST OF A WOODEN POWER POLE, 7.0 FT (2.1 M) WEST OF A METAL

D02652'TRAFFIC SIGNAL POLE AND 1.3 FT (0.4 M) NORTHEAST OF A CARSONITE

D02652'WITNESS POST.

D02652'

D02652'NOTE REBAR ROD IS IMBEDDED IN THE MONUMENT.

*** retrieval complete.

Elapsed Time = 00:00:03



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Dewberry Field Notes (1 of 2)

SPECTRA SP80 S.F.W.M.D. 09/23/19
 S/N: 1165 USGS WELLS E.B.M.
 TRUMBLE NET JOB # 50099999
 AT: G 562 WELL SITE: G-2752

TASK: ESTABLISH HORIZONTAL LOCATION ON WELL MINUTEMAN POINT & REFERENCE MONUMENTATION AT SITE

PT#	(1) ELEV	(2) ELEV	(2) ELEV	PT#	DESCRIPTION
3/0	12	0.007	-0.038	C 0.023	5034 CLK-W BM @ G-2752

* LOCATED PT #'S 12045 & 12046

3/0	12	-0.015	-0.034	C 0.003	5035 CHECKOUT BM @ G-2752
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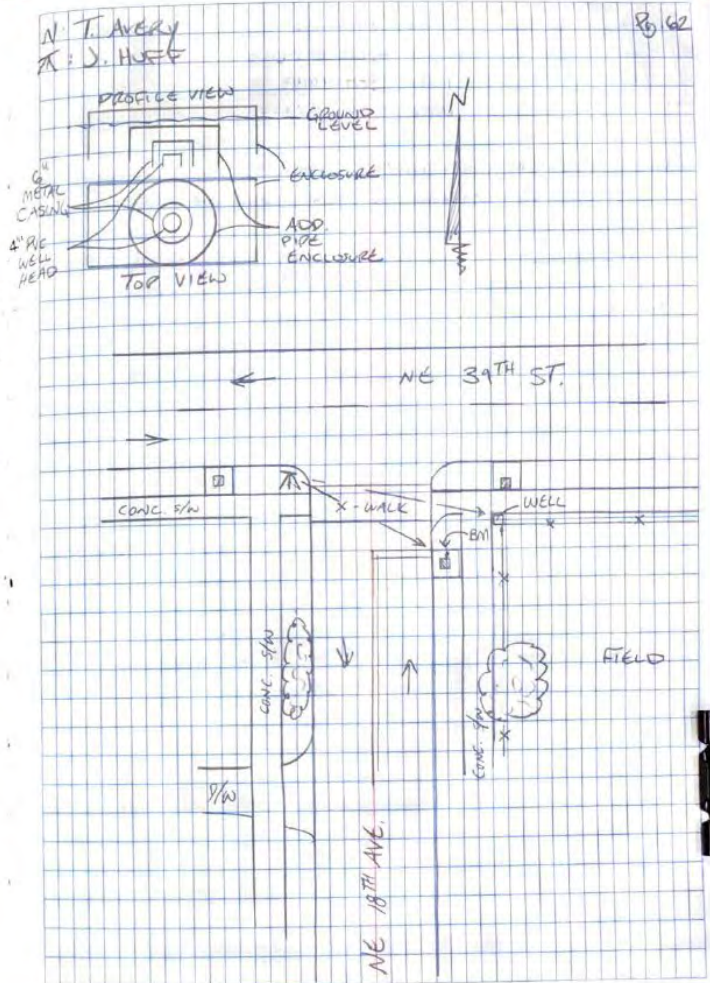
PT#	DESCRIPTION
12045	N. EDGE @ TOP OF METAL CASING (6")
12046	W. EDGE @ TOP OF 4" PVC CASING @ BLACK MARK

TASK: MEASURE & RECORD DISTANCE FROM MONUMENTARY POINT TO WATER LINE

MEASUREMENT: 3.19'; FROM WEST EDGE OF 4" PVC CASING @ BLACK MARK

TIME: 7:15 PM

THIS WELL IS LOCATED IN THE GROUND, IN A PLASTIC ENCLOSURE, & WAS FOUND 'DUMMY' LOCKED. THE WELL IS MORE APPROXIMATELY LOCATED JUST OFF THE EASTERLY R/W OF NE 18TH AVE, & JUST OFF THE SOUTHERLY R/W OF NE 39TH ST. BEHIND THE SIDEWALK & IN FRONT OF A 6' CHAIN LINK FENCE.





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Dewberry Field Notes (2 of 2)

TORCON		S.F. W.M.D.		09/25/19		
AT-G2		USGS WEIGS & Bms				
S/N: 1489		JOB# S009-9999				
		WELL SITE: G-2752				
TASK: ELEVATE MONITORING POINT REFERENCE MENTATION, & GROUND @ WELL SITE						
BACKSIGHT (+)		TR		FORESIGHT (-) ASMC. AN		
STATION	EDS	MEAN	ELEV	RD'S	MEAN	ELEV
	5.93			5.55		
BM	5.705	5.7067	105.7067	5.29	5.2883	100.4183 94.684
	5.485		14.7567	5.025		
	44.5' / 44.5'			52.5' / 97'		
				5.29		
"	"	"	"	5.03	5.0283	100.4183 9.7284
				4.765		
				52.5' / 97'		
				5.02		
"	"	"	"	4.76	4.76	100.4467 9.9967
				4.50		
				52' / 96.5'		
				5.285		
"	"	"	"	5.025	5.0250	100.6817 9.7317
				4.765		
				52' / 96.5'		
*BREAK SET-UP						
	5.455			6.10		
W. EDGE MC	5.20	5.1983	105.480	5.880	5.8800	100.00 9.0500
	1.94		14.93	5.660		
	51.5' / 148'			44' / 192'		

N: T. AVERY
 K: J. HUFF

(Written)
 (HAND BY) P. 62

ELEVATIONS	DESCRIPTION
BEGIN @ TOP OF 9.05	REC. ALUMINUM DISC IN CONCRETE SPILLWAY STAMPED "SF WMD SURVEY MARKER G-2752 2019" ON EAST R/W OF NE 18 TH AVE. & S. R/W OF NE 39 TH ST.
FORESIGHT (-)	DESCRIPTION
W. EDGE OF 4" PVC CASING @ BLACK SHARK MARK	*NOTE: THE ELEVATION WAS THE EXACT SAME @ THE W. EDGE OF 4" PVC CASING
N. EDGE OF 6" METAL CASING AROUND 4" PVC CASING	
GROUND SHOT, N. OF PLASTIC WELL ENCLOSURE	
W. EDGE OF 6" METAL CASING AROUND 4" PVC CASING (W. EDGE MC)	
CHECK IN = 0.00'	
BACK @ STARTING POINT (SITE BM)	

* END LEVEL LOOP

J. Avery



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Whidden Field Notes

STN	T	HI	FL
Q12			9.85
	3.626	13.416	
TP 1			4.237 9.210
	5.023	14.243	
TP 2			5.872 8.37
	5.911	14.082	
TP 3			4.714 9.367
	4.591	13.958	
TP 4			4.721 9.237
	5.217	14.454	
TP 5			5.583 8.871
	6.072	15.543	
TP 6			5.629 9.874
	5.363	15.230	
TP 7			5.222 10.035
	5.53	15.565	
Q2782			6.516 9.048 (DISC)
	6.418	15.496	
TP 9			5.442 10.050
	4.925	14.996	
TP 10			5.227 9.799
	4.728	14.497	
TP 11			5.478 9.068
	4.886	13.455	

STN	T	HI	FL
TP 12			5.543 8.452
	5.942	14.304	
TP 13			4.689 9.695
	5.797	14.890	
TP 14			5.464 7.467
	6.101	15.529	
TP 15			5.719 9.810
	5.62	15.46	
Q13			5.308 (DISC)

Dini S/N 735642
 Trimble RB-3 S/N 4615113539
 Trimble RB-4 S/N 022026650A