

May 20, 2015 (Revised: Sep 2, 2015, Nov 11, 2015)

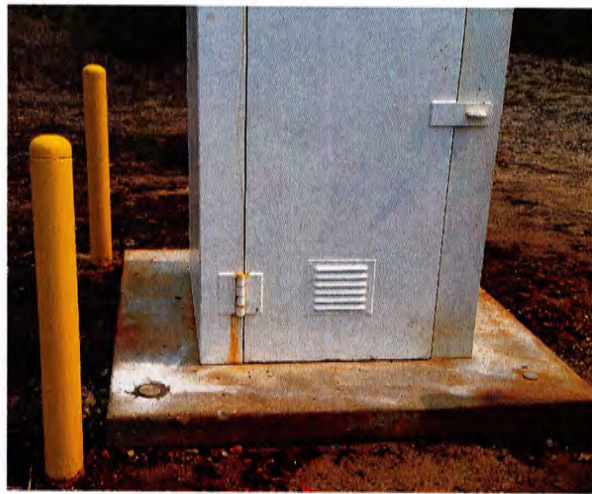
CPS Project No. 15033-A1  
Client: Florida Design Drilling Corporation

## CONTROL SURVEY

Location: BICY-TW Monitor Well, Big Cypress National Preserve, Collier County, Florida.

## SURVEYOR'S REPORT

Compass Point Surveyors established a site Benchmark on the BICY-TW Monitor Well concrete slab for use by South Florida Water Management District. The Benchmark Consists of a Brass Disc embedded into the slab and stamped "NGVD29 4.395" and "NAVD88 3.015".



### Published Benchmark of Origin:

National Geodetic Survey (NGS) Benchmark D 249 / PID – AC0601

Latitude (LAT) 25°54'04.828"N, Longitude (LON) 081°19'27.014"W

North American Vertical Datum (NAVD88) Elevation = 2.90 feet.

National Geodetic Vertical Datum (NGVD29) Elevation = 4.28 feet

NAVD88 to NGVD29 Conversion factor calculated using NGS Vertcon Software. NAVD88 to NGVD29 datum shift = 1.38 ft.

### BICY-TW Monitor Well Benchmark Elevations:

NAVD88 = 3.01 feet

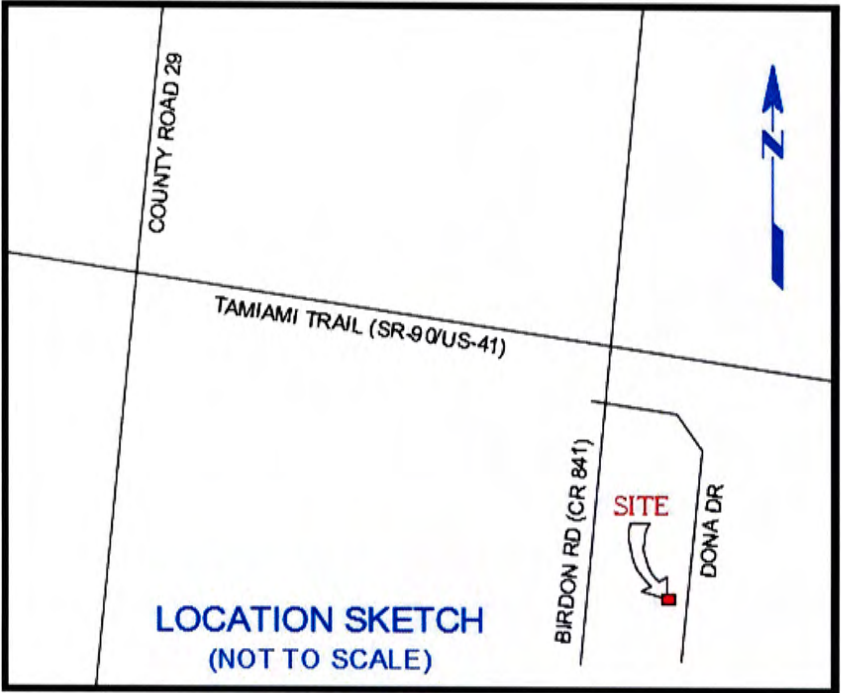
NGVD29 = 4.39 feet

BICY-TW Horizontal Location (Per SFWMD) [LAT 25.893781 N, LON 81.309375 W]

From the intersection of SR 29 and US 41 (Tamiami Trail), go east on US 41 approximately 3.5 miles to Dona Drive (BCNP Wildlife Check Station sign), turn right (south) on Dona Drive, then take an immediate left turn, go past check station (small building), follow trail/path to the east and then south for approximately one-half mile off paved road. Wellhead shelter is visible on the right.




Last Date of Field Work: 11/10/15  
Field Book 353B, Pages 1-5



**CERTIFICATION:**

I HEREBY CERTIFY : This Surveyors Report is true and correct to the best of my knowledge and belief as recently surveyed under my direction, and conforms to the standards of practice as set forth by the Florida Board of Professional Land Surveyors in Chapter 5J17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

 11/10/15  
\_\_\_\_\_  
SCOTT A. REID (DATE OF LAST FIELD WORK)  
Professional Surveyor & Mapper No. 6258  
Compass Point Surveyors, LB 7535  
State of Florida

*Not Valid Without The Signature And The Original Raised Seal Of A Florida Licensed Surveyor And Mapper.*



PEG TEST

BS FS  
 R1 1.449 2.399

PT 2 2.469 5.239  
 .70

4.350 5.100 .75  
 4.818 4.048 .77

4.470 5.140 .74  
 4.670 3.980 .75

4.450 5.700 .75  
 4.771 4.021 .75

M. D. ...  
 M. Beck  
 Toron ...

15033  
 EVERGLADES CITY  
 F.D.D.  
 BENCHMAN

BK 353  
 P601  
 S/1/15

|  | +                    | H1    | -                     | EL    | DESC          |
|--|----------------------|-------|-----------------------|-------|---------------|
|  | 7.80<br>6.24<br>4.81 | 9.14  | 6.25<br>5.17<br>3.99  | 2.90  | D249 C.C.B.M. |
|  | 6.51<br>5.20<br>3.89 | 9.26  | 6.19<br>5.11<br>4.04  | 4.06  | T.P.1         |
|  | 6.45<br>5.17<br>3.87 | 9.32  | 6.28<br>5.17<br>4.063 | 4.15  | T.P.2         |
|  | 6.36<br>5.12<br>3.87 | 9.27  | 6.30<br>5.15<br>4.01  | 4.12  | T.P.4         |
|  | 6.36<br>5.15<br>3.89 | 9.27  | 6.285<br>5.24<br>4.22 | 4.03  | T.P.5         |
|  | 6.47<br>5.27<br>4.07 | 9.30  | 6.14<br>5.02<br>3.90  | 4.28  | T.P.6         |
|  | 6.42<br>5.22<br>4.02 | 9.50  | 6.10<br>4.99<br>3.87  | 4.51  | T.P.7         |
|  | 6.56<br>5.31<br>4.01 | 9.82  | 6.07<br>4.98<br>3.88  | 4.84  | TP.8          |
|  | 4.17<br>2.93<br>1.69 | 7.77  | 5.41<br>4.35<br>3.20  | 3.425 | TP.9          |
|  | 6.02<br>4.76<br>3.50 | 8.185 | 7.06<br>5.98<br>4.903 | 2.205 | TP.10         |
|  | 6.53<br>5.39<br>4.25 | 7.595 | 6.01<br>4.90<br>3.79  | 2.695 | TP.11         |
|  | 5.75<br>4.53<br>3.31 | 7.225 | 6.56<br>5.26<br>3.96  | 1.965 | TP.12         |
|  | 6.33<br>5.08<br>3.84 | 7.045 | 6.47<br>5.07<br>3.87  | 1.975 | TP.13         |
|  | 6.10<br>5.07<br>4.04 | 7.045 | 6.01<br>4.81<br>3.62  | 2.235 | T.P.14        |
|  | 6.68<br>5.55<br>4.42 | 7.785 | 6.45<br>5.15<br>3.87  | 2.67  | T.P.15        |

|  |                      | 15033           |                      | BK53    |                   |
|--|----------------------|-----------------|----------------------|---------|-------------------|
|  |                      | EVERGLADES CITY |                      | R602    |                   |
|  |                      | F.D.D.          |                      | 5/19/15 |                   |
|  |                      | BENCH RUN       |                      |         |                   |
|  | +                    | H1              | -                    | EL      | DESC              |
|  | 6.62<br>5.40<br>4.28 | 8.07            | 5.56<br>5.04<br>4.52 | 2.67    | T.P.15            |
|  | 5.84<br>5.24<br>4.70 | 8.31            | 6.26<br>5.08<br>4.03 | 3.03    | BRESS DISK @ WELL |
|  | 6.68<br>5.45<br>4.33 | 8.355           | 7.59<br>6.16<br>4.83 | 2.235   | T.P.14            |
|  | 6.57<br>5.34<br>4.22 | 7.345           | 6.36<br>5.37<br>4.38 | 1.975   | TP.13             |
|  | 6.53<br>5.24<br>4.00 | 7.235           | 6.65<br>5.27<br>3.90 | 1.965   | TP.12             |
|  | 6.55<br>5.10<br>4.05 | 7.265           | 5.84<br>4.57<br>3.30 | 2.695   | TP.11             |
|  | 6.58<br>5.38<br>4.17 | 7.045           | 6.77<br>5.41<br>4.11 | 2.205   | TP.10             |
|  | 6.74<br>5.54<br>4.32 | 8.745           | 6.40<br>5.37<br>4.28 | 3.425   | TP.9              |
|  | 5.55<br>4.25<br>3.03 | 7.71            | 4.69<br>2.87<br>1.74 | 4.84    | TP.8              |
|  | 6.07<br>4.85<br>3.64 | 9.69            | 6.51<br>5.18<br>4.05 | 4.51    | TP.7              |
|  | 6.09<br>4.86<br>3.64 | 9.37            | 6.17<br>5.09<br>4.00 | 4.78    | TP.6              |
|  | 6.18<br>4.92<br>3.65 | 9.20            | 6.23<br>5.17<br>4.10 | 4.03    | TP.5              |
|  | 6.45<br>5.20<br>4.05 | 9.23            | 6.10<br>5.11<br>4.13 | 4.12    | TP.4              |

| +                    | H <sub>1</sub> | -                      | EL   | DESC           |
|----------------------|----------------|------------------------|------|----------------|
| 6.43<br>5.97<br>3.91 | 9.29           | 6.26<br>5.14<br>4.02   | 4.12 | T.P. 4         |
| 6.37<br>5.12<br>3.87 | 9.27           | 6.225<br>5.12<br>4.015 | 4.15 | T.P. 3         |
| 6.36<br>5.11<br>3.86 | 9.26           | 6.35<br>5.20<br>4.05   | 4.06 | T.P. 1         |
| 6.34<br>5.17<br>3.95 | 9.23           | 7.80<br>6.33<br>4.85   | 2.90 | D 249 C.C.B.M. |

M. CONRAD  
M. BICK  
TERRACE AFBZ

15083  
EVERGLADES CITY  
F.D.D.  
BENCH RUN

BK 353  
PG 03  
5/19/15

| + | H <sub>1</sub> | - | EL | DESC |
|---|----------------|---|----|------|
|---|----------------|---|----|------|

## JOB NAME

|                                |                             |
|--------------------------------|-----------------------------|
| Location: <u>Monroe County</u> | No. Legs: <b>32</b>         |
| Project No: <u>15033</u>       | Datum: <u>NAVD 88</u>       |
| Date: <u>5/19/2015</u>         | Fbk / Pgs: <u>353 / 2-3</u> |

| LEG | BS (+) |         |       | FS (-) |         |          | Elev  | Adj by Leg<br>Adj by Dist | DESCRIPTION        |
|-----|--------|---------|-------|--------|---------|----------|-------|---------------------------|--------------------|
|     | WIRES  | BS Dist | HI    | WIRES  | FS Dist | Run Dist |       |                           |                    |
|     |        |         |       |        |         |          | 2.900 |                           | D 249 / PID AC0601 |
| 1   | 7.800  |         |       | 6.250  |         |          |       |                           | TP1                |
|     | 6.240  | 6.243   | 9.143 | 5.120  | 5.120   | 4.023    | 4.024 |                           |                    |
|     | 4.690  |         |       | 3.990  |         |          | 4.024 |                           |                    |
|     |        | 311.0   |       |        | 226.0   | 537.0    |       |                           |                    |
| 2   | 6.510  |         |       | 6.190  |         |          |       |                           | TP2                |
|     | 5.200  | 5.197   | 9.220 | 5.110  | 5.113   | 4.107    | 4.109 |                           |                    |
|     | 3.880  |         |       | 4.040  |         |          | 4.109 |                           |                    |
|     |        | 263.0   |       |        | 215.0   | 1015.0   |       |                           |                    |
| 3   | 6.425  |         |       | 6.280  |         |          |       |                           | TP3                |
|     | 5.170  | 5.174   | 9.281 | 5.170  | 5.171   | 4.110    | 4.113 |                           |                    |
|     | 3.928  |         |       | 4.063  |         |          | 4.114 |                           |                    |
|     |        | 249.7   |       |        | 221.7   | 1486.4   |       |                           |                    |
| 4   | 6.360  |         |       | 6.300  |         |          |       |                           | TP4                |
|     | 5.120  | 5.123   | 9.233 | 5.150  | 5.153   | 4.080    | 4.085 |                           |                    |
|     | 3.890  |         |       | 4.010  |         |          | 4.085 |                           |                    |
|     |        | 247.0   |       |        | 229.0   | 1962.4   |       |                           |                    |
| 5   | 6.360  |         |       | 6.265  |         |          |       |                           | TP5                |
|     | 5.150  | 5.150   | 9.230 | 5.240  | 5.242   | 3.988    | 3.994 |                           |                    |
|     | 3.940  |         |       | 4.220  |         |          | 3.994 |                           |                    |
|     |        | 242.0   |       |        | 204.5   | 2408.9   |       |                           |                    |
| 6   | 6.470  |         |       | 6.140  |         |          |       |                           | TP6                |
|     | 5.270  | 5.270   | 9.258 | 5.020  | 5.020   | 4.238    | 4.245 |                           |                    |
|     | 4.070  |         |       | 3.900  |         |          | 4.245 |                           |                    |
|     |        | 240.0   |       |        | 224.0   | 2872.9   |       |                           |                    |
| 7   | 6.420  |         |       | 6.100  |         |          |       |                           | TP7                |
|     | 5.220  | 5.220   | 9.458 | 4.990  | 4.990   | 4.468    | 4.476 |                           |                    |
|     | 4.020  |         |       | 3.880  |         |          | 4.476 |                           |                    |
|     |        | 240.0   |       |        | 222.0   | 3334.9   |       |                           |                    |
| 8   | 6.560  |         |       | 6.070  |         |          |       |                           | TP8                |
|     | 5.310  | 5.310   | 9.778 | 4.980  | 4.977   | 4.801    | 4.810 |                           |                    |
|     | 4.060  |         |       | 3.880  |         |          | 4.810 |                           |                    |
|     |        | 250.0   |       |        | 219.0   | 3803.9   |       |                           |                    |
| 9   | 4.180  |         |       | 5.490  |         |          |       |                           | TP9                |
|     | 2.930  | 2.933   | 7.734 | 4.345  | 4.345   | 3.389    | 3.399 |                           |                    |
|     | 1.690  |         |       | 3.200  |         |          | 3.399 |                           |                    |
|     |        | 249.0   |       |        | 229.0   | 4281.9   |       |                           |                    |
| 10  | 6.020  |         |       | 7.060  |         |          |       |                           | TP10               |
|     | 4.760  | 4.760   | 8.149 | 5.980  | 5.981   | 2.168    | 2.179 |                           |                    |
|     | 3.500  |         |       | 4.903  |         |          | 2.180 |                           |                    |
|     |        | 252.0   |       |        | 215.7   | 4749.6   |       |                           |                    |
| 11  | 6.530  |         |       | 6.010  |         |          |       |                           | TP11               |
|     | 5.390  | 5.390   | 7.558 | 4.900  | 4.900   | 2.658    | 2.670 |                           |                    |
|     | 4.250  |         |       | 3.790  |         |          | 2.671 |                           |                    |
|     |        | 228.0   |       |        | 222.0   | 5199.6   |       |                           |                    |
| 12  | 5.750  |         |       | 6.560  |         |          |       |                           | TP12               |
|     | 4.530  | 4.530   | 7.188 | 5.260  | 5.260   | 1.928    | 1.942 |                           |                    |
|     | 3.310  |         |       | 3.960  |         |          | 1.942 |                           |                    |
|     |        | 244.0   |       |        | 260.0   | 5703.6   |       |                           |                    |
| 13  | 6.330  |         |       | 6.470  |         |          |       |                           | TP13               |
|     | 5.080  | 5.083   | 7.011 | 5.070  | 5.073   | 1.938    | 1.953 |                           |                    |
|     | 3.840  |         |       | 3.680  |         |          | 1.953 |                           |                    |
|     |        | 249.0   |       |        | 279.0   | 6231.6   |       |                           |                    |
| 14  | 6.100  |         |       | 6.010  |         |          |       |                           | TP14               |
|     | 5.070  | 5.070   | 7.008 | 4.810  | 4.813   | 2.195    | 2.211 |                           |                    |
|     | 4.040  |         |       | 3.620  |         |          | 2.211 |                           |                    |
|     |        | 206.0   |       |        | 239.0   | 6676.6   |       |                           |                    |
| 15  | 6.680  |         |       | 6.450  |         |          |       |                           | TP15               |
|     | 5.550  | 5.550   | 7.745 | 5.115  | 5.115   | 2.630    | 2.647 |                           |                    |
|     | 4.420  |         |       | 3.780  |         |          | 2.647 |                           |                    |
|     |        | 226.0   |       |        | 267.0   | 7169.6   |       |                           |                    |
| 16  | 6.020  |         |       | 5.560  |         |          |       |                           | BRASS DISC AT WELL |
|     | 5.400  | 5.400   | 8.030 | 5.040  | 5.040   | 2.990    | 3.008 |                           |                    |
|     | 4.780  |         |       | 4.520  |         |          | 3.008 |                           |                    |
|     |        | 124.0   |       |        | 104.0   | 7397.6   |       |                           |                    |

## JOB NAME

|                                |                             |
|--------------------------------|-----------------------------|
| Location: <u>Monroe County</u> | No. Legs: <b>32</b>         |
| Project No: <u>15033</u>       | Datum: <u>NAVD 88</u>       |
| Date: <u>5/19/2015</u>         | Fbk / Pgs: <u>353 / 2-3</u> |

| LEG | BS (+) |              |       | FS (-) |              | Elev           | Adj by Leg |             | DESCRIPTION |
|-----|--------|--------------|-------|--------|--------------|----------------|------------|-------------|-------------|
|     | WIRES  | BS Dist      | HI    | WIRES  | FS Dist      |                | Run Dist   | Adj by Dist |             |
| 17  | 5.810  |              |       | 6.260  |              |                |            |             | TP15        |
|     | 5.280  | 5.283        | 8.273 | 5.640  | 5.643        | 2.630          | 2.649      |             |             |
|     | 4.760  |              |       | 5.030  |              |                | 2.649      |             |             |
|     |        | <b>105.0</b> |       |        | <b>123.0</b> | <b>7625.6</b>  |            |             |             |
| 18  | 6.880  |              |       | 7.390  |              |                |            |             | TP14        |
|     | 5.685  | 5.685        | 8.315 | 6.120  | 6.120        | 2.195          | 2.215      |             |             |
|     | 4.490  |              |       | 4.850  |              |                | 2.215      |             |             |
|     |        | <b>239.0</b> |       |        | <b>254.0</b> | <b>8118.6</b>  |            |             |             |
| 19  | 6.370  |              |       | 6.360  |              |                |            |             | TP13        |
|     | 5.110  | 5.110        | 7.305 | 5.370  | 5.370        | 1.935          | 1.956      |             |             |
|     | 3.850  |              |       | 4.380  |              |                | 1.956      |             |             |
|     |        | <b>252.0</b> |       |        | <b>198.0</b> | <b>8568.6</b>  |            |             |             |
| 20  | 6.530  |              |       | 6.650  |              |                |            |             | TP12        |
|     | 5.260  | 5.263        | 7.198 | 5.270  | 5.273        | 1.925          | 1.948      |             |             |
|     | 4.000  |              |       | 3.900  |              |                | 1.947      |             |             |
|     |        | <b>253.0</b> |       |        | <b>275.0</b> | <b>9096.6</b>  |            |             |             |
| 21  | 6.550  |              |       | 5.840  |              |                |            |             | TP11        |
|     | 5.300  | 5.300        | 7.225 | 4.570  | 4.570        | 2.655          | 2.679      |             |             |
|     | 4.050  |              |       | 3.300  |              |                | 2.678      |             |             |
|     |        | <b>250.0</b> |       |        | <b>254.0</b> | <b>9600.6</b>  |            |             |             |
| 22  | 6.540  |              |       | 6.770  |              |                |            |             | TP10        |
|     | 5.250  | 5.253        | 7.908 | 5.740  | 5.740        | 2.168          | 2.193      |             |             |
|     | 3.970  |              |       | 4.710  |              |                | 2.192      |             |             |
|     |        | <b>257.0</b> |       |        | <b>206.0</b> | <b>10063.6</b> |            |             |             |
| 23  | 7.790  |              |       | 6.400  |              |                |            |             | TP9         |
|     | 6.540  | 6.537        | 8.705 | 5.320  | 5.320        | 3.385          | 3.411      |             |             |
|     | 5.280  |              |       | 4.240  |              |                | 3.411      |             |             |
|     |        | <b>251.0</b> |       |        | <b>216.0</b> | <b>10530.6</b> |            |             |             |
| 24  | 5.535  |              |       | 4.000  |              |                |            |             | TP8         |
|     | 4.285  | 4.283        | 7.668 | 2.870  | 2.870        | 4.798          | 4.825      |             |             |
|     | 3.030  |              |       | 1.740  |              |                | 4.825      |             |             |
|     |        | <b>250.5</b> |       |        | <b>226.0</b> | <b>11007.1</b> |            |             |             |
| 25  | 6.070  |              |       | 6.310  |              |                |            |             | TP7         |
|     | 4.850  | 4.853        | 9.651 | 5.180  | 5.180        | 4.471          | 4.499      |             |             |
|     | 3.640  |              |       | 4.050  |              |                | 4.499      |             |             |
|     |        | <b>243.0</b> |       |        | <b>226.0</b> | <b>11476.1</b> |            |             |             |
| 26  | 6.090  |              |       | 6.170  |              |                |            |             | TP6         |
|     | 4.860  | 4.863        | 9.334 | 5.090  | 5.087        | 4.247          | 4.276      |             |             |
|     | 3.640  |              |       | 4.000  |              |                | 4.276      |             |             |
|     |        | <b>245.0</b> |       |        | <b>217.0</b> | <b>11938.1</b> |            |             |             |
| 27  | 6.180  |              |       | 6.230  |              |                |            |             | TP5         |
|     | 4.920  | 4.917        | 9.164 | 5.170  | 5.167        | 3.997          | 4.027      |             |             |
|     | 3.650  |              |       | 4.100  |              |                | 4.027      |             |             |
|     |        | <b>253.0</b> |       |        | <b>213.0</b> | <b>12404.1</b> |            |             |             |
| 28  | 6.450  |              |       | 6.100  |              |                |            |             | TP4         |
|     | 5.200  | 5.200        | 9.197 | 5.110  | 5.113        | 4.084          | 4.116      |             |             |
|     | 3.950  |              |       | 4.130  |              |                | 4.115      |             |             |
|     |        | <b>250.0</b> |       |        | <b>197.0</b> | <b>12851.1</b> |            |             |             |
| 29  | 6.430  |              |       | 6.260  |              |                |            |             | TP3         |
|     | 5.170  | 5.170        | 9.254 | 5.140  | 5.140        | 4.114          | 4.147      |             |             |
|     | 3.910  |              |       | 4.020  |              |                | 4.146      |             |             |
|     |        | <b>252.0</b> |       |        | <b>224.0</b> | <b>13327.1</b> |            |             |             |
| 30  | 6.370  |              |       | 6.225  |              |                |            |             | TP2         |
|     | 5.120  | 5.120        | 9.234 | 5.120  | 5.120        | 4.114          | 4.148      |             |             |
|     | 3.870  |              |       | 4.015  |              |                | 4.148      |             |             |
|     |        | <b>250.0</b> |       |        | <b>221.0</b> | <b>13798.1</b> |            |             |             |
| 31  | 6.360  |              |       | 6.350  |              |                |            |             | TP1         |
|     | 5.110  | 5.110        | 9.224 | 5.200  | 5.200        | 4.024          | 4.059      |             |             |
|     | 3.860  |              |       | 4.050  |              |                | 4.059      |             |             |
|     |        | <b>250.0</b> |       |        | <b>230.0</b> | <b>14278.1</b> |            |             |             |
| 32  |        | 0.000        | 4.024 |        | 0.000        | 4.024          | 4.060      |             |             |
|     |        |              |       |        |              |                | 4.059      |             |             |
|     |        | <b>0.0</b>   |       |        | <b>0.0</b>   | <b>14278.1</b> |            |             |             |

## JOB NAME

|                                |                             |
|--------------------------------|-----------------------------|
| Location: <u>Monroe County</u> | No. Legs: <b>32</b>         |
| Project No: <u>15033</u>       | Datum: <u>NAVD 88</u>       |
| Date: <u>5/19/2015</u>         | Fbk / Pgs: <u>353 / 2-3</u> |

| LEG | WIRES                   | BS (+)  |       | WIRES                   | FS (-)  |                 | Elev | Adj by Leg              |  | DESCRIPTION   |
|-----|-------------------------|---------|-------|-------------------------|---------|-----------------|------|-------------------------|--|---|
|     |                         | BS Dist | HI    |                         | FS Dist | Run Dist        |      | Adj by Dist             |  |   |
| 97  |                         | 0.000   | 4.024 |                         | 0.000   | 4.024           |      | 4.133                   |  |   |
|     |                         | 0.0     |       |                         | 0.0     | 14278.1         |      | 4.059                   |  |   |
| 98  |                         | 0.000   | 4.024 |                         | 0.000   | 4.024           |      | 4.134                   |  |   |
|     |                         | 0.0     |       |                         | 0.0     | 14278.1         |      | 4.059                   |  |   |
| 99  |                         | 0.000   | 4.024 |                         | 0.000   | 4.024           |      | 4.135                   |  |   |
|     |                         | 0.0     |       |                         | 0.0     | 14278.1         |      | 4.059                   |  |   |
| 32  | 6.380<br>5.170<br>3.950 | 5.167   | 9.191 | 7.800<br>6.330<br>4.850 | 6.327   | 2.864<br>-0.036 |      | 2.900<br>2.900<br>2.900 |  | D 249 / PID AC0601<br>BM ADJUSTED TO CLOSE<br>ERROR (AFTER ADJ) |
|     |                         | 243.0   |       |                         | 295.0   | 14816.1         |      |                         |  |   |

**ADJUST BY 2.43E-06 PER FOOT ALONG RUN**

**0.036 TOTAL ERROR**

**14816.1 FT TOTAL DISTANCE**

**2.806 MILES**

|                                 |
|---------------------------------|
| <b>MEETS 3RD ORDER ACCURACY</b> |
| 0.084 ALLOWABLE ERROR           |



# The NGS Data Sheet

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

```

PROGRAM = datasheet95, VERSION = 8.8
1      National Geodetic Survey,      Retrieval Date = NOVEMBER  6, 2015
AC0601 *****
AC0601 DESIGNATION - D 249
AC0601 PID - AC0601
AC0601 STATE/COUNTY- FL/COLLIER
AC0601 COUNTRY - US
AC0601 USGS QUAD - OCHOPEE (1990)
AC0601
AC0601 *CURRENT SURVEY CONTROL
AC0601
AC0601* NAD 83(2011) POSITION- 25 54 04.82781(N) 081 19 27.01473(W) ADJUSTED
AC0601* NAD 83(2011) ELLIP HT- -22.969 (meters) (06/27/12) ADJUSTED
AC0601* NAD 83(2011) EPOCH - 2010.00
AC0601* NAVD 88 ORTHO HEIGHT - 0.884 (meters) 2.90 (feet) ADJUSTED
AC0601
AC0601 NAD 83(2011) X - 866,007.063 (meters) COMP
AC0601 NAD 83(2011) Y - -5,675,393.114 (meters) COMP
AC0601 NAD 83(2011) Z - 2,769,223.837 (meters) COMP
AC0601 LAPLACE CORR - -2.40 (seconds) DEFLEC12B
AC0601 GEOID HEIGHT - -23.865 (meters) GEOID12B
AC0601 DYNAMIC HEIGHT - 0.882 (meters) 2.89 (feet) COMP
AC0601 MODELED GRAVITY - 979,017.9 (mgal) NAVD 88
AC0601
AC0601 VERT ORDER - FIRST CLASS I
AC0601
AC0601 Network accuracy estimates per FGDC Geospatial Positioning Accuracy
AC0601 Standards:
AC0601 FGDC (95% conf, cm) Standard deviation (cm) CorrNE
AC0601 Horiz Ellip SD_N SD_E SD_h (unitless)
AC0601 -----
AC0601 NETWORK 5.27 8.31 2.04 2.24 4.24 -0.19570109
AC0601 -----
AC0601 Click here for local accuracies and other accuracy information.
AC0601
AC0601
AC0601.The horizontal coordinates were established by GPS observations
AC0601.and adjusted by the National Geodetic Survey in June 2012.
AC0601
AC0601.NAD 83(2011) refers to NAD 83 coordinates where the reference
AC0601.frame has been affixed to the stable North American tectonic plate. See
AC0601.NA2011 for more information.
AC0601
AC0601.The horizontal coordinates are valid at the epoch date displayed above
AC0601.which is a decimal equivalence of Year/Month/Day.
AC0601
AC0601.The orthometric height was determined by differential leveling and
AC0601.adjusted by the NATIONAL GEODETIC SURVEY
AC0601.in September 1992.
AC0601
AC0601.Significant digits in the geoid height do not necessarily reflect accuracy.
AC0601.GEOID12B height accuracy estimate available here.
AC0601
AC0601.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AC0601
AC0601.The Laplace correction was computed from DEFLEC12B derived deflections.
AC0601

```

AC0601.The ellipsoidal height was determined by GPS observations  
 AC0601.and is referenced to NAD 83.

AC0601

AC0601.The dynamic height is computed by dividing the NAVD 88  
 AC0601.geopotential number by the normal gravity value computed on the  
 AC0601.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 AC0601.degrees latitude (g = 980.6199 gals.).

AC0601

AC0601.The modeled gravity was interpolated from observed gravity values.

AC0601

AC0601. The following values were computed from the NAD 83(2011) position.

AC0601

| AC0601;         |   | North         | East        | Units        | Scale Factor | Converg.        |
|-----------------|---|---------------|-------------|--------------|--------------|-----------------|
| AC0601;SPC FL E | - | 173,725.476   | 167,519.506 | MT           | 0.99995420   | -0 08 29.8      |
| AC0601;SPC FL E | - | 569,964.33    | 549,603.58  | sFT          | 0.99995420   | -0 08 29.8      |
| AC0601;UTM 17   | - | 2,864,798.183 | 467,530.588 | MT           | 0.99961302   | -0 08 29.8      |
| AC0601!         | - | Elev Factor   | x           | Scale Factor | =            | Combined Factor |
| AC0601!SPC FL E | - | 1.00000361    | x           | 0.99995420   | =            | 0.99995781      |
| AC0601!UTM 17   | - | 1.00000361    | x           | 0.99961302   | =            | 0.99961663      |

AC0601

| AC0601 | PID          | Reference Object | Distance      | Geod. Az |
|--------|--------------|------------------|---------------|----------|
| AC0601 |              |                  |               | ddmmss.s |
| AC0601 | AC0602 P 249 |                  | 86.008 METERS | 24317    |

AC0601

AC0601

AC0601

| SUPERSEDED SURVEY CONTROL |                    |         |             |        |             |             |     |
|---------------------------|--------------------|---------|-------------|--------|-------------|-------------|-----|
| AC0601                    | NAD 83(2007)-      | 25 54   | 04.82809(N) | 081 19 | 27.01512(W) | AD(2002.00) | 0   |
| AC0601                    | ELLIP H (02/10/07) | -22.964 | (m)         |        |             | GP(2002.00) |     |
| AC0601                    | NAD 83(1999)-      | 25 54   | 04.82806(N) | 081 19 | 27.01508(W) | AD( )       | 1   |
| AC0601                    | ELLIP H (12/12/02) | -22.965 | (m)         |        |             | GP( )       | 4 1 |
| AC0601                    | NAVD 88 (12/12/02) | 0.88    | (m)         | 2.9    | (f)         | LEVELING    | 3   |
| AC0601                    | NAVD 88 (06/15/91) | 0.884   | (m)         | 2.90   | (f)         | SUPERSEDED  | 1 1 |
| AC0601                    | NGVD 29 (??/??/92) | 1.305   | (m)         | 4.28   | (f)         | SUPERSEDED  | 1 1 |
| AC0601                    | NGVD 29 (09/01/92) | 1.305   | (m)         | 4.28   | (f)         | ADJUSTED    | 1 1 |

AC0601

AC0601.Superseded values are not recommended for survey control.

AC0601

AC0601.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AC0601.[See file dsdata.txt](#) to determine how the superseded data were derived.

AC0601

AC0601\_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ6753064798 (NAD 83)

AC0601

AC0601\_MARKER: DD = SURVEY DISK

AC0601\_SETTING: 38 = SET IN THE ABUTMENT OR PIER OF A LARGE BRIDGE

AC0601\_SP\_SET: BRIDGE ABUTMENT

AC0601\_STAMPING: D 249

AC0601\_MARK LOGO: FLDT

AC0601\_MAGNETIC: N = NO MAGNETIC MATERIAL

AC0601\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AC0601\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC0601+SATELLITE: SATELLITE OBSERVATIONS - March 11, 2015

AC0601

| AC0601 | HISTORY | - Date     | Condition      | Report By |
|--------|---------|------------|----------------|-----------|
| AC0601 | HISTORY | - UNK      | MONUMENTED     | FLDT      |
| AC0601 | HISTORY | - 1965     | GOOD           | CGS       |
| AC0601 | HISTORY | - 1983     | MARK NOT FOUND | USPSQD    |
| AC0601 | HISTORY | - 1990     | MARK NOT FOUND | USPSQD    |
| AC0601 | HISTORY | - 19920226 | GOOD           | NGS       |
| AC0601 | HISTORY | - 19991231 | GOOD           | USPSQD    |
| AC0601 | HISTORY | - 20010814 | GOOD           | LDBLS     |
| AC0601 | HISTORY | - 2002     | GOOD           | MAPTEC    |
| AC0601 | HISTORY | - 20140722 | GOOD           | FL-021    |
| AC0601 | HISTORY | - 20141008 | GOOD           | FLDT      |

AC0601 HISTORY - 20150311 GOOD GEOCAC

AC0601

AC0601 STATION DESCRIPTION

AC0601

AC0601'DESCRIBED BY COAST AND GEODETIC SURVEY 1965

AC0601'1.6 MI W FROM OCHOPEE.

AC0601'ABOUT 1.6 MILES WEST ALONG U.S. HIGHWAY 41 FROM THE POST OFFICE

AC0601'AT OCHOPEE, ABOUT 2.6 MILES EAST OF THE INTERSECTION OF STATE

AC0601'HIGHWAY 29, SET IN THE TOP OF THE SOUTH END OF THE WEST CONCRETE

AC0601'ABUTMENT OF HIGHWAY BRIDGE NO. 78, 17.0 FEET SOUTH OF THE CENTER

AC0601'LINE OF THE HIGHWAY, 0.8 FEET SOUTHEAST OF THE WEST END OF THE

AC0601'CURB OF THE BRIDGE, 1.9 FEET BELOW THE SOUTH CURB AND ABOUT

AC0601'1 FOOT BELOW THE LEVEL OF THE HIGHWAY.

AC0601

AC0601 STATION RECOVERY (1983)

AC0601

AC0601'RECOVERY NOTE BY US POWER SQUADRON 1983

AC0601'MARK NOT FOUND.

AC0601

AC0601 STATION RECOVERY (1990)

AC0601

AC0601'RECOVERY NOTE BY US POWER SQUADRON 1990 (HEA)

AC0601'MARK NOT FOUND.

AC0601

AC0601 STATION RECOVERY (1992)

AC0601

AC0601'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992

AC0601'55.0 KM (34.15 MI) EASTERLY ALONG U.S. HIGHWAY 41 FROM THE JUNCTION

AC0601'OF STATE HIGHWAY 84 IN NAPLES, IN TOP OF AND 0.1 M (0.3 FT) NORTH OF

AC0601'THE SOUTH END OF THE WEST CONCRETE ABUTMENT OF BRIDGE NUMBER 030078,

AC0601'5.2 M (17.1 FT) SOUTH OF THE CENTERLINE OF THE HIGHWAY, AND 0.4 M

AC0601'(1.3 FT) BELOW THE LEVEL OF THE HIGHWAY.

AC0601

AC0601 STATION RECOVERY (1999)

AC0601

AC0601'RECOVERY NOTE BY US POWER SQUADRON 1999

AC0601'RECOVERED IN GOOD CONDITION.

AC0601

AC0601 STATION RECOVERY (2001)

AC0601

AC0601'RECOVERY NOTE BY LD BRADLEY LAND SURVEYORS 2001 (JCH)

AC0601'THE MARK IS ABOUT 54.5 KM (33.87 MI) SOUTHEAST OF NAPLES, ABOUT 2.7 KM

AC0601'(1.67

AC0601'MI) NORTHWEST OF THE POST OFFICE IN OCHOPEE, IN SECTION , TOWNSHIP

AC0601'SOUTH,

AC0601'RANGE EAST, COLLIER COUNTY, FLORIDA. OWNERSHIP - FLORIDA DEPARTMENT OF

AC0601'TRANSPORTATION.

AC0601'

AC0601'TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY 41 (TAMIAMI

AC0601'TRAIL) AND

AC0601'STATE ROAD 29 IN CARNESTOWN, GO SOUTHEAST ON U.S. HIGHWAY 41 4.2 KM

AC0601'(2.63 MI)

AC0601'TO WEST END OF HIGHWAY BRIDGE NUMBER 030078 AND THE MARK ON THE RIGHT.

AC0601'THE MARK IS 5.18 M (17.0 FT) SOUTH OF THE CENTERLINE OF U.S. HIGHWAY

AC0601'41, 0.24

AC0601'M (0.8 FT) EAST OF THE WEST EDGE OF THE ABUTMENT, AND 0.21 M (0.7 FT)

AC0601'WEST OF

AC0601'THE EAST EDGE OF THE ABUTMENT. THE MARK IS A DISK SET FLUSH IN THE TOP

AC0601'OF A

AC0601'CONCRETE ABUTMENT ABOUT 0.40 M (1.3 FT) BELOW THE LEVEL OF THE

AC0601'HIGHWAY.

AC0601'

AC0601'

AC0601

AC0601 STATION RECOVERY (2002)

AC0601

