

**MINIMUM TECHNICAL STANDARDS, VOL. 1
FINAL REPORT OF LIDAR CONTROL AND
QA/QC CHECKPOINT SURVEY**



PROJECT AREA G

**STATE OF FLORIDA
DIVISION OF EMERGENCY MANAGEMENT**

**TASK ORDER NO. 20070525-492720
PURCHASE ORDER 4500091463
CONTRACT NO. 07-HS-34-14-00-22-469**

MAY 1, 2009

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**PREPARED BY:
WOOLPERT, INC.
3504 LAKE LYNDY DRIVE, SUITE 400
ORLANDO, FLORIDA 32817-1484
LB 0006777**

MAY 1, 2009

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MINIMUM TECHNICAL STANDARDS REPORT OF LiDAR GROUND CONTROL SURVEY

Task Order No. 20070525-492720
Purchase Order 4500091463
Contract No. 07-HS-34-14-00-22-469

PROJECT AREA G

For:

State of Florida, Division of Emergency Management
“State Emergency Response Team”
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Collier County, Florida
Community Development Services
2800 North Horseshoe Drive
Naples, Florida 34104-5917

By:

WOOLPERT, Inc.
Laurel Building
3504 Lake Lynda Drive, Suite 400
Orlando, FL 32817-1484
Tel 407.381.2192 / Fax 407.384.1185
Florida Certificate of Authorization LB 6777

Prepared by:

David Bruno, PSM
Florida Professional Surveyor and Mapper PSM 5670

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Name of Company	2

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REPORT OF LiDAR GROUND CONTROL SURVEY PROJECT AREA G FOR THE FLORIDA DIVISION OF EMERGENCY MANGEMENT

Introduction

This report contains an outline of the QA/QC Survey that supported LiDAR Data Acquisition in the general area of:

- Project Area G – Westernmost part of Collier County.

Project Area

Project Area G encompassed approximately +/-547 square miles of the approximately +/-3,774 square miles of the FY2007 State of Florida Division of Emergency Management Ground Control QA/QC Survey Mapping Project.

Purpose

The purpose of this survey was to acquire a minimum of twenty (20) independently surveyed LiDAR Control Points and a minimum of one-hundred twenty (120) three-dimensional LiDAR QA/QC Checkpoints per 500 square miles of project area. To the extent allowed by the terrain, the LiDAR Control Points and Checkpoints were distributed so that points were spaced at intervals of at least 10% of the diagonal distance across the dataset and at least 20% of the points were located in each quadrant of the +/-547 square-mile project area. All field surveying and related activities conformed to the *FEMA Flood Hazard Mapping Program, Guidelines and Specifications for Flood Hazard Mapping Partners Appendix A*.

LiDAR Control Points were defined as observations made on unobstructed, relatively flat, light-colored, hard uniform surfaces. Three-dimensional coordinate values were calculated for these points and then incorporated in the initial processing of the LiDAR data to ensure the proper horizontal and vertical geographical location of the LiDAR data set.

LiDAR QA/QC Checkpoints were ground truth observations distributed within the land cover classes of urban, bare-earth/low grass, brush land/sparse trees and dense trees/forested. These QA/QC Checkpoints were used to verify the accuracy of the LiDAR missions for final DTM and contour deliverables.

Date of Survey

All LiDAR Control Point and LiDAR QA/QC Checkpoint field operations took place between January 14-18, 2008, May 21-23 and June 8-13, 2008.

Map Reference

Maps illustrating project boundaries, LiDAR QA/QC Checkpoints, LiDAR Control Points and GPS control stations for this project area can be found in Appendix E of this report.

Name of Responsible Surveyor

David Bruno, PSM
Woolpert, Inc.
Laurel Building
3504 Lake Lynda Drive, Suite 400
Orlando, Florida 32817-1484
Professional Surveyor and Mapper Number 5670

Name of Company

Woolpert, Inc.
Laurel Building
3504 Lake Lynda Drive, Suite 400
Orlando, Florida 32817-1484
Florida Certificate of Authorization No. LB-0006777

Field and Office Personnel

Alex Antonio
Matthew Brown
Dave Bruno
Tim Cornwell
Jason Kail
Scott Lamb
Ben Messer
Steve Roberts
Jim Speelman
Kent Stewart

Abbreviations

1-D – One-Dimensional
2-D – Two-Dimensional
3-D – Three-Dimensional
cm – Centimeter
CP – Certified Photogrammetrist
DOI – Digital Orthophoto Imagery
FAC – Florida Administrative Code
FDEM – Florida Division of Emergency Mapping
FGDC – Federal Geodetic Control Committee
FL – Florida
GPS – Global Positioning System
Inc. – Incorporated
LiDAR – Light Detecting and Ranging
MTS – Florida Minimum Technical Standards (FAC 61G17)
NAD 83/99-HARN – North American Datum 1983 High Accuracy Reference Network 1999 adjustment
NAVD 88 – North American Vertical Datum of 1988

NGS – National Geodetic Survey
NOAA – National Oceanic and Atmospheric Administration
NSSDA – National Standards for Spatial Data Accuracy
PID – Photo Identifiable Point (feature)
QC – Quality Control
RMSE – Root Mean Square Error
RTK – Real-Time Kinematics
STD – Standard Deviations
TGO – Trimble Geomatics Office
TTC – Trimble Total Control
U.S. – United States
Woolpert – Woolpert, Inc

Data Sources

Existing Control Point Coordinates: NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
Phone: (301) 713-3242
Fax: (301) 713-4172
[Email: info_center@ngs.noaa.gov](mailto:info_center@ngs.noaa.gov)
<http://www.ngs.noaa.gov/>

Monumentation

Woolpert field crews performed a field reconnaissance to verify the existence and suitability of pre-selected existing National Geodetic Survey (NGS) control stations. These existing control stations were utilized to insure that quality X, Y, and Z coordinate values were computed for each of the newly established QA/QC Checkpoints throughout the project area. During the field reconnaissance, field crews recovered and verified sixteen(16) existing NGS control stations suitable for GPS observations: **15.94, 5127 274 9242, B 534, FANKA, I75 81 A05, I75 81 A13, I75 90 A24, I75 90 A28, J 527, JUSTIN, L 534, M 598, NAPL CORs, N 534 and R 598**. These NGS Data Sheets, which contain information such as coordinates, error estimates and to-reach descriptions, can be found in Appendix A of this report.

Woolpert installed three (3) new semi-permanent control stations in a pre-determined location for both GPS checkpoint observations and to ensure for a uniform GPS network triangulation consisting of a minimum of 3 GPS base stations. These newly established geodetic control stations; **NEW BASE 9, NEW BASE 10** and **PANTHER** consisted of a railroad spike or an 18-inch long, 5/8-inch diameter rebar with a plastic Woolpert survey cap (LB6777) or an aluminum cap and were set flush with the ground. The station recovery information sheets for these points can be found in Appendix B of this report.

Woolpert field crews also recovered and incorporated Woolpert control stations **COLLIER 102, COLLIER 118, GATOR, NEW BASE 8** and **MOCCASIN**. **COLLIER 102** and **COLLIER 118** were newly established photo control stations for the Collier County Orthophoto portion of this mapping project. **GATOR, NEW BASE 8** and **MOCCASIN** were established as a new Woolpert control stations for Project Area H of this mapping project. The station recovery information sheets for these points can be found in Appendix B of this report.

Woolpert established a total of twenty-four (24) LiDAR Control Points, 435 LiDAR QA/QC Checkpoints and nine (9) intermediate (traverse) control stations to be used for conventional surveying of the dense trees/forested LiDAR QA/QC Checkpoints. All of these stations consisted of one of the following: a PK Nail, 6" spike with a plastic washer, a paint mark, a railroad spike, a hub and tack or a scribe mark.

Methodology

All field reconnaissance, monumentation, observations, data adjustments, and final report development was performed under the direct supervision of David Bruno, PSM 5670, Professional Surveyor and Mapper in Charge. Rapid Static GPS survey techniques, along with conventional survey methods were utilized in collecting the LiDAR Control Points and the LiDAR QA/QC Checkpoints for this project. Woolpert's ISO 9001 2000 certified QA/QC process for ground control and GPS surveys was used as a guideline for this project.

All surveying was performed in such a way as to conform to the *Standards and Specifications for Geodetic Control Networks (1984)*, published by the Federal Geodetic Control Committee (FGCC). All GPS measurements pertaining to horizontal photogrammetric ground control were performed to meet or exceed Second Order Horizontal Control as set forth by the FGCC, *Geometric Geodetic Accuracy Standards and Specifications for using GPS Relative Positioning Techniques*, Version 5.0, August 1989. All GPS measurements for establishing vertical control were performed to meet or exceed Third Order Vertical Control Accuracy Standards and Specifications. Furthermore, the procedures used for GPS-Derived elevation differences met or exceeded the *Guidelines for Establishing GPS-Derived Ellipsoidal Heights (Standards: 2 centimeters and 5 centimeters)*, NGS-58, November 1977, and/or *Guidelines for Establishing GPS-Derived Orthometric Heights (Standards: 2 centimeters and 5 centimeters)*, NGS-59, October 2005.

Rapid Static GPS

Woolpert field crews utilized Rapid Static GPS surveying techniques for measuring 220 of the 435 LiDAR QA/QC Checkpoints, 18 of the 24 LiDAR Control Points and the intermediate (traverse) control stations. Rapid Static GPS surveying required a minimum of two receivers to occupy NGS Control Stations and LiDAR QA/QC Checkpoints or LiDAR Control Points for a minimum of 30 minutes, depending upon baseline length, number of satellites, and satellite geometry. This method is comparable in accuracy to static surveying; however, shorter observation time is made possible due to advancements in hardware and software. The final coordinates for the LiDAR Control Points, LiDAR QA/QC Checkpoints and intermediate (traverse) control stations can be found in Appendix C of this report.

For these surveys, Woolpert field crews utilized Woolpert-owned, Trimble Navigation R8 model 2 GNSS dual-frequency geodetic GPS receivers, Woolpert-owned, Trimble Navigation 5700 dual-frequency geodetic GPS receivers and Woolpert-owned, Trimble Navigation 4000 dual-frequency geodetic GPS receivers. Each observation session utilized a 5-second sync rate, lasting between 30-45 minutes each depending on distance from the furthest base station.

Using rapid-static GPS techniques, the field crews also observed sixteen (16) existing NGS Control Stations and eight (8) newly established control stations in the GPS network in an effort to establish survey quality control coordinates throughout the project. The Rapid Static GPS control network consisted of the following NGS and newly established stations: **15.94, 5127 274 9242, B 534, FANKA, I75 81 A05, I75 81 A13, I75 90 A24, I75 90 A28, J 527, JUSTIN, L 534, M 598, NAPL CORS, N 534, R 598, COLLIER 102, COLLIER 118, GATOR, MOCCASIN, NEW BASE 8, NEW BASE 9, NEW BASE 10 and PANTHER.**

Conventional Surveying

Using the paired intermediate (traverse) control stations set with Rapid-Static GPS, along with forty-seven (47) of the LiDAR QA/QC Checkpoints and eight (8) of the LiDAR Control Points, Woolpert field crews used a Woolpert-owned Topcon GTS-701 Total Station or a Woolpert-owned Topcon GTS-711 Total Station to acquire 120 LiDAR QA/QC Checkpoints in obscured areas (dense trees/forested) where GPS observations were limited as well as forty-four (44) urban observations, forty-six (46) brush observations and five (5) bare earth/low grass observations. The final coordinates for the LiDAR QA/QC Checkpoints can be found in Appendix C of this report.

Datum Reference and Final Coordinates

All horizontal GPS control was based on the Florida State Plane Coordinate System (East Zone), referenced to North American Datum 1983, adjustment of 1999 (NAD83/99) HARN, expressed in U.S. Survey Feet. All vertical control was based on the North American Vertical Datum of 1988 (NAVD88), also expressed in U.S. Survey Feet.

GPS Data Analysis and Processing

The field crew chief processed all session baselines each day using *Trimble Navigation's* Trimble Geomatics Office (TGO) Version 1.63 baseline processor with the broadcast ephemeris. *Trimble Navigation's* Trimble Geomatics Office (TGO) Wave Software User's Guide (November 1999) was used as a reference. The ratio and root-mean-square error (RMSE) criteria on pages 3-4 to 3-6 of the guide were followed. Other criteria used a maximum of 10.5 percent rejections, along with float-versus-fixed deltas of 10 cm. All cases that failed to meet any of these criteria were rejected and not used. Fixed solutions were obtained for all vector baselines.

Daily processing allowed the field crews to discover any weak links in the network and immediately schedule re-observations of the affected baselines. Once the fieldwork was complete, the processed baselines were then run through a rigorous loop closure analysis. Any baselines that failed this analysis were either reprocessed or removed from the network.

Rapid Static Adjustment

Upon completion of all field data processing, Woolpert performed a minimally constrained and fully constrained least-squares adjustments using *Trimble Navigation's* Trimble Geomatics Office (TGO) version 1.63. After an acceptable minimally constrained least-squares adjustment was obtained, a fully constrained least-squares adjustment was performed by fixing the GPS networks to existing NGS control stations. Geoid 03 was used to convert ellipsoidal heights to orthometric heights. For this survey, the following stations were held fixed:

DIMENSIONS	EXISTING NGS CONTROL STATIONS
3-D Control Stations	COLLIER 118, 5127 274 9242 (AC4817), B 534 (AJ7562), I75 81 A13 (AD5969), J 527 (AJ7741) and L 534 (AJ7572)
2-D Control Stations	FANKA (AC0646)

Accuracy Statement

The positional accuracy of the LiDAR Control Points was 0.06-feet (avg. 0.03-feet) horizontally and 0.24-feet (avg. 0.11-feet) vertically at the 95% confidence level. The positional accuracy of the LiDAR QA/QC checkpoints was 0.05-feet (avg. 0.02-feet) horizontally and 0.20-feet (avg. 0.10-feet) vertically at the 95% confidence level.

The ground control survey meets positional accuracies necessary to support a DTM to meet or exceed a 3.8-foot horizontal accuracy and 0.6-foot fundamental vertical accuracy at the 95% confidence level.

The positional accuracies information can be found in Appendix D of this report.

Notes

1. THIS REPORT OF SURVEY IS PART OF THE LIDAR MAPPING QA/QC GROUND CONTROL SURVEY. SIX (6) GROUND CONTROL LAYOUT MAPS SHALL ACCOMPANY THE SURVEY REPORT. NEITHER THE MAPS NOR THIS REPORT OF SURVEY IS FULL AND COMPLETE WITHOUT THE OTHER. THIS REPORT OF SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER IN RESPONSIBLE CHARGE.
2. THIS REPORT OF SURVEY CONSISTS OF ONE HUNDRED TWO (102) PAGES AND EACH PAGE SHALL NOT BE CONSIDERED FULL OR COMPLETE UNLESS ATTACHED TO THE OTHER(S). ADDITIONS OR DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
3. THIS LIDAR MAPPING QA/QC GROUND CONTROL SURVEY DATA AND REPORT IS CERTIFIED TO THE FLORIDA DIVISION OF EMERGENCY MANAGEMENT AS MEETING OR EXCEEDING, IN QUALITY AND PRECISION, THE STANDARDS APPLICABLE FOR THIS WORK, AS SET FORTH IN CHAPTER 61G17, FLORIDA ADMINISTRATIVE CODE & FEMA GUIDELINES AND SPECIFICATIONS FOR FLOOD HAZARD MAPPING PARTNERS.

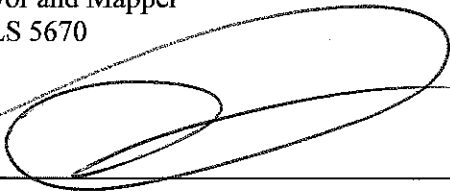
Surveyor and Mapper in Responsible Charge:

David Bruno PSM

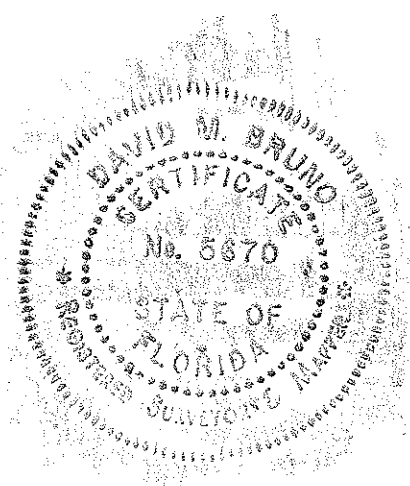
Professional Surveyor and Mapper

License Number: LS 5670

Signed: _____



Seal:



APPENDIX A: EXISTING GROUND CONTROL INFORMATION

This appendix contains the published National Geodetic Survey (NGS) data sheets for the geodetic control utilized in Project Area G of the FY2007 State of Florida Division of Emergency Management Ground Control QA/QC Survey Mapping Project.

The NGS Data Sheet

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

DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AC0637 *****
AC0637 DESIGNATION - 15.94
AC0637 PID - AC0637
AC0637 STATE/COUNTY- FL/COLLIER
AC0637 USGS QUAD - EVERGLADES CITY (1974)
AC0637
AC0637 *CURRENT SURVEY CONTROL
AC0637
AC0637* NAD 83(2007)- 25 52 18.54520(N) 081 22 57.63349(W) ADJUSTED
AC0637* NAVD 88 - 4.513 (meters) 14.81 (feet) ADJUSTED
AC0637
AC0637 EPOCH DATE - 2002.00
AC0637 X - 860,425.898 (meters) COMP
AC0637 Y - -5,677,689.715 (meters) COMP
AC0637 Z - 2,766,282.976 (meters) COMP
AC0637 LAPLACE CORR- -2.36 (seconds) DEFLEC99
AC0637 ELLIP HEIGHT- -19.121 (meters) (02/10/07) ADJUSTED
AC0637 GEOID HEIGHT- -23.62 (meters) GEOID03
AC0637 DYNAMIC HT - 4.505 (meters) 14.78 (feet) COMP
AC0637
AC0637 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AC0637 Type PID Designation North East Ellip
AC0637 -----
AC0637 NETWORK AC0637 15.94 0.67 0.67 1.37
AC0637 -----
AC0637 MODELED GRAV- 979,020.6 (mgal) NAVD 88
AC0637
AC0637 VERT ORDER - FIRST CLASS I
AC0637
AC0637.The horizontal coordinates were established by GPS observations
AC0637.and adjusted by the National Geodetic Survey in February 2007.
AC0637
AC0637.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AC0637.See [National Readjustment](#) for more information.
AC0637.The horizontal coordinates are valid at the epoch date displayed above.
AC0637.The epoch date for horizontal control is a decimal equivalence
AC0637.of Year/Month/Day.
AC0637
AC0637.The orthometric height was determined by differential leveling
AC0637.and adjusted in September 1992.
AC0637
AC0637.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AC0637
AC0637.The Laplace correction was computed from DEFLEC99 derived deflections.
AC0637
AC0637.The ellipsoidal height was determined by GPS observations
AC0637.and is referenced to NAD 83.
AC0637
AC0637.The geoid height was determined by GEOID03.
AC0637
AC0637.The dynamic height is computed by dividing the NAVD 88
AC0637.geopotential number by the normal gravity value computed on the
AC0637.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AC0637.degrees latitude (g = 980.6199 gals.).
AC0637
AC0637.The modeled gravity was interpolated from observed gravity values.

AC0637'RECOVERY NOTE BY FL DEPT OF NAT RES 1978
AC0637'RECOVERED AD DESCRIBED.
AC0637
AC0637 STATION RECOVERY (1990)
AC0637
AC0637'RECOVERY NOTE BY US POWER SQUADRON 1990 (HEA)
AC0637'RECOVERED IN GOOD CONDITION.
AC0637
AC0637 STATION RECOVERY (1992)
AC0637
AC0637'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
AC0637'50.6 KM (31.45 MI) EASTERLY ALONG U.S. HIGHWAY 41 FROM THE JUNCTION
AC0637'OF STATE HIGHWAY 84 IN NAPLES, THENCE 4.7 KM (2.90 MI) SOUTHERLY
AC0637'ALONG STATE HIGHWAY 29, IN TOP OF AND 1.4 M (4.6 FT) EAST OF THE WEST
AC0637'END OF THE NORTH CONCRETE ABUTMENT OF A BRIDGE SPANNING BARRON RIVER,
AC0637'5.4 M (17.7 FT) WEST OF AND LEVEL WITH THE CENTERLINE OF THE HIGHWAY.
AC0637
AC0637 STATION RECOVERY (2001)
AC0637
AC0637'RECOVERY NOTE BY CHARLEY FOSTER AND ASSOCIATES 2001 (JB)
AC0637'THE MONUMENT WAS RECOVERED AS DESCRIBED.
AC0637'
AC0637
AC0637 STATION RECOVERY (2002)
AC0637
AC0637'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
AC0637'RECOVERED AS DESCRIBED
AC0637'
AC0637
AC0637 STATION RECOVERY (2005)
AC0637
AC0637'RECOVERY NOTE BY US POWER SQUADRON 2005 (CAC)
AC0637'RECOVERED IN GOOD CONDITION.

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

The NGS Data Sheet

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

DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AC4817 *****
AC4817 DESIGNATION - 5127 274 9242
AC4817 PID - AC4817
AC4817 STATE/COUNTY- FL/COLLIER
AC4817 USGS QUAD - ROYAL PALM HAMMOCK (1973)
AC4817
AC4817 *CURRENT SURVEY CONTROL
AC4817
AC4817* NAD 83(2007)- 25 59 53.87820(N) 081 35 53.10657(W) ADJUSTED
AC4817* NAVD 88 - 1.084 (meters) 3.56 (feet) ADJUSTED
AC4817
AC4817 EPOCH DATE - 2002.00
AC4817 X - 838,178.143 (meters) COMP
AC4817 Y - -5,674,818.929 (meters) COMP
AC4817 Z - 2,778,882.801 (meters) COMP
AC4817 LAPLACE CORR- -1.90 (seconds) DEFLEC99
AC4817 ELLIP HEIGHT- -22.392 (meters) (02/10/07) ADJUSTED
AC4817 GEOID HEIGHT- -23.44 (meters) GEOID03
AC4817 DYNAMIC HT - 1.083 (meters) 3.55 (feet) COMP
AC4817
AC4817 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AC4817 Type PID Designation North East Ellip
AC4817 -----
AC4817 NETWORK AC4817 5127 274 9242 1.39 1.25 2.37
AC4817 -----
AC4817 MODELED GRAV- 979,037.5 (mgal) NAVD 88
AC4817
AC4817 VERT ORDER - FIRST CLASS II
AC4817
AC4817.The horizontal coordinates were established by GPS observations
AC4817.and adjusted by the National Geodetic Survey in February 2007.
AC4817
AC4817.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AC4817.See [National Readjustment](#) for more information.
AC4817.The horizontal coordinates are valid at the epoch date displayed above.
AC4817.The epoch date for horizontal control is a decimal equivalence
AC4817.of Year/Month/Day.
AC4817
AC4817.The orthometric height was determined by differential leveling
AC4817.and adjusted in March 2002.
AC4817
AC4817.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AC4817
AC4817.The Laplace correction was computed from DEFLEC99 derived deflections.
AC4817
AC4817.The ellipsoidal height was determined by GPS observations
AC4817.and is referenced to NAD 83.
AC4817
AC4817.The geoid height was determined by GEOID03.
AC4817
AC4817.The dynamic height is computed by dividing the NAVD 88
AC4817.geopotential number by the normal gravity value computed on the
AC4817.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AC4817.degrees latitude (g = 980.6199 gals.).
AC4817
AC4817.The modeled gravity was interpolated from observed gravity values.

The NGS Data Sheet

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

DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AJ7562 *****
AJ7562 DESIGNATION - B 534
AJ7562 PID - AJ7562
AJ7562 STATE/COUNTY- FL/COLLIER
AJ7562 USGS QUAD - BELLE MEADE NW (1987)
AJ7562
AJ7562 *CURRENT SURVEY CONTROL
AJ7562
AJ7562* NAD 83(2007)- 26 11 13.30922(N) 081 41 12.21837(W) ADJUSTED
AJ7562* NAVD 88 - 3.032 (meters) 9.95 (feet) ADJUSTED
AJ7562
AJ7562 EPOCH DATE - 2002.00
AJ7562 X - 828,068.201 (meters) COMP
AJ7562 Y - -5,667,010.628 (meters) COMP
AJ7562 Z - 2,797,661.863 (meters) COMP
AJ7562 LAPLACE CORR- -1.62 (seconds) DEFLEC99
AJ7562 ELLIP HEIGHT- -20.670 (meters) (02/10/07) ADJUSTED
AJ7562 GEOID HEIGHT- -23.70 (meters) GEOID03
AJ7562 DYNAMIC HT - 3.027 (meters) 9.93 (feet) COMP
AJ7562
AJ7562 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AJ7562 Type PID Designation North East Ellip
AJ7562 -----
AJ7562 NETWORK AJ7562 B 534 1.18 1.31 2.53
AJ7562 -----
AJ7562 MODELED GRAV- 979,045.6 (mgal) NAVD 88
AJ7562
AJ7562 VERT ORDER - FIRST CLASS II
AJ7562
AJ7562.The horizontal coordinates were established by GPS observations
AJ7562.and adjusted by the National Geodetic Survey in February 2007.
AJ7562
AJ7562.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AJ7562.See [National Readjustment](#) for more information.
AJ7562.The horizontal coordinates are valid at the epoch date displayed above.
AJ7562.The epoch date for horizontal control is a decimal equivalence
AJ7562.of Year/Month/Day.
AJ7562
AJ7562.The orthometric height was determined by differential leveling
AJ7562.and adjusted in February 2002.
AJ7562
AJ7562.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ7562
AJ7562.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ7562
AJ7562.The ellipsoidal height was determined by GPS observations
AJ7562.and is referenced to NAD 83.
AJ7562
AJ7562.The geoid height was determined by GEOID03.
AJ7562
AJ7562.The dynamic height is computed by dividing the NAVD 88
AJ7562.geopotential number by the normal gravity value computed on the
AJ7562.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7562.degrees latitude (g = 980.6199 gals.).
AJ7562
AJ7562.The modeled gravity was interpolated from observed gravity values.

AJ7562

	North	East	Units	Scale Factor	Converg.
AJ7562;SPC FL E	- 205,516.150	131,358.693	MT	0.99999933	-0 18 11.0
AJ7562;SPC FL E	- 674,264.24	430,965.98	sFT	0.99999933	-0 18 11.0
AJ7562;UTM 17	- 2,896,578.011	431,382.113	MT	0.99965813	-0 18 11.0

AJ7562

	Elev Factor	x	Scale Factor	=	Combined Factor
AJ7562!SPC FL E	- 1.00000325	x	0.99999933	=	1.00000258
AJ7562!UTM 17	- 1.00000325	x	0.99965813	=	0.99966138

AJ7562

SUPERSEDED SURVEY CONTROL

AJ7562

	NAD 83(1999)	- 26 11 13.30921(N)	081 41 12.21847(W)	AD() 1
AJ7562 ELLIP H (12/12/02)	-20.688 (m)			GP() 4 2
AJ7562 NAVD 88 (12/12/02)	3.03 (m)		9.9 (f)	LEVELING 3

AJ7562

AJ7562.Superseded values are not recommended for survey control.

AJ7562.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AJ7562.[See file dsdata.txt](#) to determine how the superseded data were derived.

AJ7562

AJ7562_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ3138296578(NAD 83)

AJ7562_MARKER: F = FLANGE-ENCASED ROD

AJ7562_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL

AJ7562+WITH SETTING: INFORMATION.

AJ7562_STAMPING: B 534 2001 CERP

AJ7562_MARK LOGO: NONE

AJ7562_PROJECTION: RECESSED 12 CENTIMETERS

AJ7562_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

AJ7562_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AJ7562_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AJ7562+SATELLITE: SATELLITE OBSERVATIONS - February 05, 2005

AJ7562_ROD/PIPE-DEPTH: 0.67 meters

AJ7562_SLEEVE-DEPTH : 0.40 meters

AJ7562

	History	- Date	Condition	Report By
AJ7562	HISTORY	- 2001 729	MONUMENTED	LDBLS
AJ7562	HISTORY	- 20020311	GOOD	MAPTEC
AJ7562	HISTORY	- 20050205	GOOD	INDIV

AJ7562

STATION DESCRIPTION

AJ7562

AJ7562'DESCRIBED BY LD BRADLEY LAND SURVEYORS 2001 (JCH)

AJ7562'THE MARK IS ABOUT 13.4 KM (8.3 MI) NORTHEAST OF NAPLES, IN SECTION 23,

AJ7562'TOWNSHIP

AJ7562'49 SOUTH, RANGE 26 EAST, COLLIER COUNTY, FLORIDA. OWNERSHIP - COLLIER

AJ7562'COUNTY

AJ7562'

AJ7562'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND

AJ7562'COUNTY

AJ7562'ROAD 951 (I-75 EXIT 15, NEAR NAPLES) GO NORTH ON COUNTY ROAD 951 2.54

AJ7562'KM (1.58

AJ7562'MI) TO THE JUNCTION WITH 25TH AVENUE SW, THEN EAST ON 25TH AVENUE SW

AJ7562'0.05 KM

AJ7562'(0.03 MI) TO THE JUNCTION WITH 39TH STREET SW, THEN NORTH ON 39TH

AJ7562'STREET SW

AJ7562'0.42 KM (0.26 MI) TO THE JUNCTION WITH 23RD AVENUE SW AND THE MARK ON

AJ7562'THE LEFT.

AJ7562'

AJ7562'THE MARK IS A STAINLESS STEEL ROD 32.16 M (105.5 FT) EAST THE

AJ7562'CENTERLINE OF THE

AJ7562'NORTHBOUND LANES OF COUNTY ROAD 951, 16.25 M (53.3 FT) WEST OF THE

AJ7562'CENTERLINE

AJ7562'OF 39TH STREET SW, 11.46 M (37.6 FT) NORTH OF AN EXTENDED CENTERLINE

AJ7562'OF 23RD
 AJ7562'AVENUE SW, 9.75 M (32.0 FT) EAST OF A EAST CANAL BANK, AND 0.30 M (1.0
 AJ7562'FT)
 AJ7562'EAST OF A CARSONITE WITNESS POST. THE DATUM POINT IS SET 12 CM (0.40
 AJ7562'FT) BELOW
 AJ7562'THE LEVEL OF THE GROUND, ABOUT 0.30 M (1.0 FT) BELOW THE LEVEL OF 39TH
 AJ7562'STREET
 AJ7562'SW, BEING THE TOP OF A STAINLESS STEEL ROD 0.67 M (2.20 FT) IN LENGTH,
 AJ7562'CEMENTED
 AJ7562'IN A DRILLED HOLE 0.30 M (1.0 FT) DEEP IN BEDROCK AND ENCASED IN A 5-
 AJ7562'INCH PVC
 AJ7562'PIPE WITH AN ACCESS COVER.
 AJ7562'
 AJ7562'NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.
 AJ7562'
 AJ7562'
 AJ7562'
 AJ7562'
 AJ7562'
 AJ7562' STATION RECOVERY (2002)
 AJ7562'
 AJ7562'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
 AJ7562'THE MARK IS ABOUT 13.4 KM (8.3 MI) NORTHEAST OF NAPLES, IN SECTION 23,
 AJ7562'TOWNSHIP
 AJ7562'49 SOUTH, RANGE 26 EAST, COLLIER COUNTY, FLORIDA. OWNERSHIP - COLLIER
 AJ7562'COUNTY
 AJ7562'
 AJ7562'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
 AJ7562'COUNTY
 AJ7562'ROAD 951 (I-75 EXIT 15, NEAR NAPLES) GO NORTH ON COUNTY ROAD 951 2.54
 AJ7562'KM (1.58
 AJ7562'MI) TO THE JUNCTION WITH 25TH AVENUE SW, THEN EAST ON 25TH AVENUE SW
 AJ7562'0.05 KM
 AJ7562'(0.03 MI) TO THE JUNCTION WITH 39TH STREET SW, THEN NORTH ON 39TH
 AJ7562'STREET SW
 AJ7562'0.42 KM (0.26 MI) TO THE JUNCTION WITH 23RD AVENUE SW AND THE MARK ON
 AJ7562'THE LEFT.
 AJ7562'
 AJ7562'THE MARK IS A STAINLESS STEEL ROD 32.16 M (105.5 FT) EAST THE
 AJ7562'CENTERLINE OF THE
 AJ7562'NORTHBOUND LANES OF COUNTY ROAD 951, 16.25 M (53.3 FT) WEST OF THE
 AJ7562'CENTERLINE
 AJ7562'OF 39TH STREET SW, 11.46 M (37.6 FT) NORTH OF AN EXTENDED CENTERLINE
 AJ7562'OF 23RD
 AJ7562'AVENUE SW, 9.75 M (32.0 FT) EAST OF A EAST CANAL BANK, AND 0.30 M (1.0
 AJ7562'FT)
 AJ7562'EAST OF A CARSONITE WITNESS POST. THE DATUM POINT IS SET 12 CM (0.40
 AJ7562'FT) BELOW
 AJ7562'THE LEVEL OF THE GROUND, ABOUT 0.30 M (1.0 FT) BELOW THE LEVEL OF 39TH
 AJ7562'STREET
 AJ7562'SW, BEING THE TOP OF A STAINLESS STEEL ROD 0.67 M (2.20 FT) IN LENGTH,
 AJ7562'CEMENTED
 AJ7562'IN A DRILLED HOLE 0.30 M (1.0 FT) DEEP IN BEDROCK AND ENCASED IN A 5-
 AJ7562'INCH PVC
 AJ7562'PIPE WITH AN ACCESS COVER.
 AJ7562'
 AJ7562'NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.
 AJ7562'
 AJ7562'RECOVERED AS DESCRIBED 2002 MAPECH INC (CP)
 AJ7562'
 AJ7562'
 AJ7562'
 AJ7562'
 AJ7562'

AJ7562
AJ7562 STATION RECOVERY (2005)
AJ7562
AJ7562'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005
AJ7562'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 = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AC0646 *****
AC0646 HT_MOD - This is a Height Modernization Survey Station.
AC0646 CBN - This is a Cooperative Base Network Control Station.
AC0646 DESIGNATION - FANKA
AC0646 PID - AC0646
AC0646 STATE/COUNTY- FL/COLLIER
AC0646 USGS QUAD - WEAVERS STATION (1972)
AC0646
AC0646 *CURRENT SURVEY CONTROL
AC0646
AC0646* NAD 83(2007)- 25 56 29.76097(N) 081 28 19.33013(W) ADJUSTED
AC0646* NAVD 88 - 0.10 (meters) 0.3 (feet) GPS OBS
AC0646
AC0646 EPOCH DATE - 2002.00
AC0646 X - 851,068.299 (meters) COMP
AC0646 Y - -5,675,680.546 (meters) COMP
AC0646 Z - 2,773,235.071 (meters) COMP
AC0646 LAPLACE CORR- -2.25 (seconds) DEFLEC99
AC0646 ELLIP HEIGHT- -23.470 (meters) (02/10/07) ADJUSTED AC0646 GEOID
HEIGHT- -23.57 (meters) GEOID03
AC0646
AC0646 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AC0646 Type PID Designation North East Ellip
AC0646 -----
AC0646 NETWORK AC0646 FANKA 0.45 0.43 1.14
AC0646 -----
AC0646
AC0646.The horizontal coordinates were established by GPS observations
AC0646.and adjusted by the National Geodetic Survey in February 2007.
AC0646
AC0646.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AC0646.See National Readjustment for more information.
AC0646.The horizontal coordinates are valid at the epoch date displayed above.
AC0646.The epoch date for horizontal control is a decimal equivalence
AC0646.of Year/Month/Day.
AC0646
AC0646.The orthometric height was determined by GPS observations and a
AC0646.high-resolution geoid model.
AC0646.The orthometric height was determined by GPS observations and a
AC0646.high-resolution geoid model using precise GPS observation and
AC0646.processing techniques. It supersedes the leveled height previously
AC0646.determined for this station.
AC0646
AC0646.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AC0646
AC0646.The Laplace correction was computed from DEFLEC99 derived deflections.
AC0646
AC0646.The ellipsoidal height was determined by GPS observations
AC0646.and is referenced to NAD 83.
AC0646
AC0646.The geoid height was determined by GEOID03.
AC0646
AC0646; North East Units Scale Factor Converg.
AC0646;SPC FL E - 178,230.465 152,719.926 MT 0.99996877 -0 12 23.4
AC0646;SPC FL E - 584,744.45 501,048.62 sFT 0.99996877 -0 12 23.4
AC0646;UTM 17 - 2,869,301.635 452,736.058 MT 0.999962758 -0 12 23.4
```

AC0646
AC0646! - Elev Factor x Scale Factor = Combined Factor
AC0646!SPC FL E - 1.00000369 x 0.99996877 = 0.99997246
AC0646!UTM 17 - 1.00000369 x 0.99962758 = 0.99963127
AC0646
AC0646|-----|
AC0646| PID Reference Object Distance Geod. Az |
AC0646| dddmmss.s |
AC0646| CW7425 FANKA AZ MK 3 08828 |
AC0646| CW7427 FANKA RM 1 31.806 METERS 09053 |
AC0646| CW7426 FANKA AZ MK RESET 1082347.8 |
AC0646| AC4533 SHELL CAMP 256.586 METERS 11017 |
AC0646| CW7429 FANKA RM 5 27.265 METERS 11049 |
AC0646| AC4518 EVERGLADES MUN TANK APPROX.12.1 KM 1335456.3 |
AC0646| AC4516 EVERGLADES SHERIFF DPT RAD MST APPROX.12.8 KM 1365213.8 |
AC0646| AC4515 AIRPORT BEACON EVERGLADES APT APPROX.13.1 KM 1410346.8 |
AC0646| AC0647 FANKA RM 4 13.671 METERS 20620 |
AC0646| AC0648 FANKA RM 3 18.637 METERS 29346 |
AC0646| CW7423 FANKA AZ MK 3134643.8 |
AC0646| CW7424 FANKA AZ MK 2 31808 |
AC0646| CW7428 FANKA RM 2 30.681 METERS 32743 |
AC0646|-----|
AC0646
AC0646 SUPERSEDED SURVEY CONTROL
AC0646
AC0646 ELLIP H (12/01/04) -23.401 (m) GP () 3 1
AC0646 NAD 83(1999)- 25 56 29.76083(N) 081 28 19.33107(W) AD () A
AC0646 ELLIP H (12/09/02) -23.507 (m) GP () 4 1
AC0646 NAD 83(1999)- 25 56 29.76083(N) 081 28 19.33107(W) AD () B
AC0646 ELLIP H (05/31/01) -23.399 (m) GP () 5 1
AC0646 NAD 83(1990)- 25 56 29.75954(N) 081 28 19.32998(W) AD () B
AC0646 ELLIP H (06/02/94) -23.391 (m) GP () 3 1
AC0646 NAD 83(1990)- 25 56 29.75898(N) 081 28 19.33133(W) AD () B
AC0646 ELLIP H (09/13/90) -23.629 (m) GP () 4 1
AC0646 NAD 83(1986)- 25 56 29.75411(N) 081 28 19.34471(W) AD () 1
AC0646 NAD 27 - 25 56 28.40297(N) 081 28 20.05364(W) AD () 1
AC0646 NAVD 88 (09/04/92) 0.145 (m) 0.48 (f) ADJUSTED 1 1
AC0646 NAVD 88 (06/15/91) 0.145 (m) 0.48 (f) UNKNOWN 1 1
AC0646 NGVD 29 (09/01/92) 0.556 (m) 1.82 (f) ADJUSTED 1 1
AC0646
AC0646.Superseded values are not recommended for survey control.
AC0646.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AC0646.[See file dsdata.txt](#) to determine how the superseded data were derived.
AC0646
AC0646_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ5273669302(NAD 83)
AC0646_MARKER: DS = TRIANGULATION STATION DISK
AC0646_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AC0646_SP_SET: CONCRETE POST
AC0646_STAMPING: FANKA 1934
AC0646_MARK LOGO: CGS
AC0646_PROJECTION: PROJECTING 13 CENTIMETERS
AC0646_MAGNETIC: N = NO MAGNETIC MATERIAL
AC0646_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AC0646+STABILITY: SURFACE MOTION
AC0646_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AC0646+SATELLITE: SATELLITE OBSERVATIONS - May 30, 2007
AC0646
AC0646 HISTORY - Date Condition Report By
AC0646 HISTORY - 1934 MONUMENTED CGS
AC0646 HISTORY - 1935 GOOD CGS
AC0646 HISTORY - 1952 GOOD CGS
AC0646 HISTORY - 1955 GOOD CGS
AC0646 HISTORY - 1956 GOOD CGS

AC0646 HISTORY - 1966 GOOD CGS
 AC0646 HISTORY - 1966 GOOD NGS
 AC0646 HISTORY - 1972 GOOD NGS
 AC0646 HISTORY - 1976 GOOD NGS
 AC0646 HISTORY - 1976 GOOD NGS
 AC0646 HISTORY - 19890227 GOOD NGS
 AC0646 HISTORY - 19920226 GOOD NGS
 AC0646 HISTORY - 19920730 GOOD DENI
 AC0646 HISTORY - 19930210 GOOD NGS
 AC0646 HISTORY - 19991231 GOOD USPSQD
 AC0646 HISTORY - 20010714 GOOD LDBLS
 AC0646 HISTORY - 2002 GOOD MAPTEC
 AC0646 HISTORY - 20020228 GOOD MAPTEC
 AC0646 HISTORY - 200402 GOOD FLDEP
 AC0646 HISTORY - 20070530 GOOD HOLE
 AC0646
 AC0646 STATION DESCRIPTION
 AC0646
 AC0646'DESCRIBED BY COAST AND GEODETIC SURVEY 1934 (JB)
 AC0646'THE STATION IS ABOUT 7 MILES WEST OF CARNESTOWN AND 28
 AC0646'MILES SOUTHEAST OF NAPLES, ON THE TAMiami TRAIL
 AC0646'(HIGHWAY 94), 0.15 MILE WEST OF THE BUS DEPOT
 AC0646'AND FILLING STATION THAT IS LOCATED AT THE OLD CONVICT
 AC0646'CAMP. THE MARK IS 59 FEET SOUTHWEST OF THE CENTER LINE OF THE
 AC0646'HIGHWAY, ON THE POINT OF INTERSECTION OF THE FIRST CURVE
 AC0646'WEST OF THE BUS DEPOT. THE MARK PROJECTS 4 INCHES.
 AC0646'
 AC0646'SURFACE, UNDERGROUND, REFERENCE AND AZIMUTH MARKS ARE STANDARD
 AC0646'BRONZE DISKS.
 AC0646'
 AC0646'REFERENCE MARK NO. 1 IS 104.35 FEET NORTHEAST OF THE STATION,
 AC0646'13.7 FEET SOUTHWEST OF THE CENTER LINE OF THE ROAD.
 AC0646'
 AC0646'REFERENCE MARK NO. 2 IS 100.66 FEET NORTHWEST OF THE CENTER
 AC0646'LINE OF THE ROAD. THE MARK PROJECTS 2 INCHES ABOVE THE GROUND.
 AC0646'
 AC0646'THE AZIMUTH MARK IS 0.3 MILE NORTHWEST OF THE STATION, 4.3 METERS
 AC0646'SOUTHWEST OF THE CENTER LINE OF THE ROAD, 10.10 METERS NORTHEAST
 AC0646'OF THE NORTHEAST END OF BRIDGE 89. THE MARK PROJECTS 3 INCHES.
 AC0646'
 AC0646'AN 85-FOOT TOWER USED.
 AC0646
 AC0646 STATION RECOVERY (1935)
 AC0646
 AC0646'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1935 (HEB)
 AC0646'FANKA 1934, A ROUND, BEVELED-CONCRETE POST 1.2 FEET IN DIAMETER
 AC0646'LOCATED 29.4 METERS EAST BY NORTH OF TELEGRAPH POLE 775 AND
 AC0646'14.4 METERS SOUTH OF GUARD FENCE ALONG U.S. HIGHWAY 94.
 AC0646'
 AC0646'FANKA 1934 NO. 1, A 1.2 FOOT SQUARE, BEVELED-CONCRETE MONUMENT
 AC0646'LOCATED 32.8 METERS EAST BY NORTH OF FANKA 1934. 4.6 METERS
 AC0646'NORTH OF TELEGRAPH POLE 775 AND 0.6 METER SOUTH OF GUARD FENCE
 AC0646'ALONG U.S. HIGHWAY 94.
 AC0646'
 AC0646'FANKA 1934 NO. 2, A 1.2 FOOT SQUARE, BEVELED-CONCRETE MONUMENT
 AC0646'LOCATED 54.9 METERS WEST OF FANKA NO. 1 1934. 54.6 METERS
 AC0646'WEST BY NORTH OF TELEGRAPH POLE 775, 30.7 METERS NORTHWEST OF
 AC0646'FANKA 1934, 4.4 METERS SOUTH OF CENTER LINE OF U.S. HIGHWAY 94,
 AC0646'(ORIGINAL DESCRIPTION SHOWS THIS TO BE 30.9 METERS), AND 0.6
 AC0646'METER SOUTH OF GUARD FENCE ALONG U.S. HIGHWAY 94.
 AC0646'
 AC0646'FANKA AZIMUTH MARK 1934, A 1.2 FOOT SQUARE, BEVELED-CONCRETE POST
 AC0646'LOCATED 10.1 METERS SOUTH OF SOUTH BANK OF CANAL AND 9.8 METERS

AC0646'WEST OF STATE HIGHWAY BRIDGE 89, (ORIGINAL DESCRIPTION GIVES
AC0646'BRIDGE 84 AND THE DISTANCE AS 42.6 METERS. NO BRIDGE IS LOCATED
AC0646'THAT CLOSE THAT HAS THE NUMBER GIVEN AS 89).
AC0646'
AC0646' STATION RECOVERY (1952)
AC0646'
AC0646'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1952 (JEW)
AC0646'THE ORIGINAL DESCRIPTION AND THE 1935 RECOVERY NOTE WERE
AC0646'INADEQUATE DUE TO NEW HIGHWAY CONSTRUCTION. NEW DESCRIPTION
AC0646'IS AS FOLLOWS--
AC0646'
AC0646'THE STATION IS ABOUT 7 MI. W OF THE CROSSING OF THE EVERGLADES
AC0646'CITY BRANCH OF THE ATLANTIC COAST LINE RAILROAD AND U.S. HIGHWAY
AC0646'41 (TAMIAMI TRAIL) AT CARNESTOWN. IT IS 0.15 MI. W OF WEAVERS
AC0646'FILLING STATION, ON THE POINT OF INTERSECTION OF THE FIRST CURVE
AC0646'W OF THE FILLING STATION, 58.5 FT. S OF THE CENTERLINE OF THE NEW
AC0646'(1952) HIGHWAY. A 4- BY 4-IN. CONCRETE WITNESS POST PROJECTING
AC0646'1.5 FT ABOVE THE GROUND IS 3 FT. S OF THE STATION. THE MARK
AC0646'PROJECTS 4 IN. ABOVE THE MARSH AND IS COVERED BY WATER DURING
AC0646'THE RAINY SEASON.
AC0646'
AC0646'REference MARK 1, Reference Mark 2, AND Azimuth Mark WERE
AC0646'DESTROYED BECAUSE OF NEW HIGHWAY.
AC0646'
AC0646'REference Mark 3 IS 61.2 FT. W OF THE STATION, AND 65 FT. S
AC0646'OF THE NEW CENTERLINE OF THE ROAD. IT IS A STANDARD Reference-MARK
AC0646'DISK PROJECTING 10 IN. ABOVE THE MARSH.
AC0646'
AC0646'REference Mark 4 IS 44.9 FT. S OF THE STATION, AND 103.4 FT. S
AC0646'OF THE NEW CENTERLINE OF THE HIGHWAY. IT IS A STANDARD
AC0646'REference-MARK DISK PROJECTING 10 IN. ABOVE THE MARSH.
AC0646'
AC0646'Azimuth Mark RESET IS ABOUT 0.1 MI. E OF THE STATION,
AC0646'67.7 FT. S OF THE NEW CENTERLINE OF THE HIGHWAY, AND 33 FT. W OF
AC0646'THE W BANK OF THE CANAL. IT IS A STANDARD Azimuth-MARK DISK
AC0646'SET IN THE TOP OF A CONCRETE POST PROJECTING 10 IN. ABOVE THE
AC0646'MARSH.
AC0646'
AC0646' STATION RECOVERY (1955)
AC0646'
AC0646'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1955 (RHT)
AC0646'STATION WAS RECOVERED AS DESCRIBED BY J.E.W. IN 1952, AND ALL
AC0646'MARKS FOUND IN GOOD CONDITION. A CHECK WAS MADE ON THE
AC0646'DISTANCES AND DIRECTIONS TO THE MARKS, AND A DIFFERENCE FOUND
AC0646'IN THE DIRECTIONS TO THE MARKS. THE RESULTS ARE SHOWN.
AC0646'
AC0646'THE 1952 TO REACH DESCRIPTION BY J.E.W. IS ADEQUATE.
AC0646'
AC0646' STATION RECOVERY (1956)
AC0646'
AC0646'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1956 (RHT)
AC0646'STATION RECOVERED AS DESCRIBED IN 1955, AND ALL MARKS FOUND IN
AC0646'GOOD CONDITION. THE 1955 DESCRIPTION IS ADEQUATE EXCEPT Reference
AC0646'MARK 5 WAS ESTABLISHED.
AC0646'
AC0646'REference Mark 5 IS 47 FT. SW OF THE APPROXIMATE CENTERLINE OF
AC0646'U.S. HIGHWAY 41. THE MARK PROJECTS 6 IN., AND THE DISK IS
AC0646'STAMPED FANKA NO 5 1956.
AC0646'
AC0646'FOR DISTANCES AND DIRECTIONS TO MARKS, SEE THE
AC0646'PREVIOUS DESCRIPTION DATED MARCH 1955.
AC0646'
AC0646' STATION RECOVERY (1966)

AC0646
AC0646'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1966 (RRG)
AC0646'THE STATION, REFERENCE MARKS 3 AND 4, WERE ALL FOUND IN GOOD
AC0646'CONDITION, THE AZIMUTH MARK WAS FOUND DESTROYED BY CONSTRUCTION
AC0646'WORK IN THE AREA.
AC0646'
AC0646'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND
AC0646'STATE HIGHWAY 92 AT ROYAL PALM HAMMOCK GO SOUTHEAST ALONG U.S.
AC0646'HIGHWAY 41 FOR ABOUT 9.05 MILES TO THE STATION ON THE SOUTH SIDE
AC0646'OF THE HIGHWAY, 0.15 MILES WEST OF A STORE AND SERVICE STATION,
AC0646'58.5 FEET SOUTH OF THE CENTER LINE OF THE HIGHWAY, 44.9 FEET
AC0646'NORTH OF R.M. 4, 61.2 FEET EAST OF R.M. 3, 3.0 FEET NORTH OF A
AC0646'CONCRETE WITNESS POST, ABOUT 3 FEET BELOW THE LEVEL OF THE
AC0646'HIGHWAY AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.4
AC0646'FOOT. STAMPED FANKA 1934.
AC0646'
AC0646'R.M. 3, 65.0 FEET SOUTH OF THE CENTER LINE OF THE HIGHWAY,
AC0646'74.4 FEET NORTHWEST OF R.M. 4, ABOUT 3 FEET BELOW THE LEVEL
AC0646'OF THE HIGHWAY AND SET IN THE TOP OF A CONCRETE POST PROJECTING
AC0646'0.9 FOOT. STAMPED FANKA NO 3 1934. R.M. 4, 103.4 FEET SOUTH OF
AC0646'THE CENTER LINE OF THE HIGHWAY, 1.5 FEET EAST OF A METAL WITNESS
AC0646'POST, ABOUT 2 FEET BELOW THE LEVEL OF THE HIGHWAY AND SET IN THE
AC0646'TOP OF A CONCRETE POST PROJECTING 0.9 FOOT. STAMPED FANKA NO 4
AC0646'1934. NO SUITABLE PLACE THAT IS VG FOR AZIMUTH MARK.
AC0646
AC0646 STATION RECOVERY (1966)
AC0646
AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1966
AC0646'9 MI SE FROM ROYAL PALM HAMMOCK.
AC0646'ABOUT 9.05 MILES SOUTHEAST ALONG U.S. HIGHWAY 41 FROM THE
AC0646'JUNCTION OF STATE HIGHWAY 92 AT ROYAL PALM HAMMOCK, ABOUT 7.05
AC0646'MILES NORTHWEST OF THE INTERSECTION OF STATE HIGHWAY 29, 0.15
AC0646'MILE WEST OF A STORE AND SERVICE STATION, 58.5 FEET SOUTH OF
AC0646'THE CENTER LINE OF THE HIGHWAY, 44.9 FEET NORTH OF R.M. 4
AC0646'DESCRIBED, 61.2 FEET EAST OF R. M. 3 DESCRIBED, 3.0 FEET NORTH
AC0646'OF A CONCRETE WITNESS POST, ABOUT 3 FEET BELOW THE LEVEL OF THE
AC0646'HIGHWAY AND SET IN THE TOP OF A CONCRETE POST PROJECTING 0.4 FOOT.
AC0646
AC0646 STATION RECOVERY (1972)
AC0646
AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1972 (HLM)
AC0646'STATION MARK, REFERENCE MARKS 3 AND 4 WERE RECOVERED IN GOOD
AC0646'CONDITION. THE AZIMUTH MARK WAS SEARCHED FOR BUT NOT
AC0646'FOUND. IT IS BELIEVED TO HAVE BEEN DESTROYED BY LAND EXCAVATION,
AC0646'ACCORDING TO LOCAL RESIDENTS. A NEW AZIMUTH MARK WAS ESTABLISHED
AC0646'AT THIS TIME. THE MEASUREMENT TO RM 3 WAS FOUND TO BE SHORTER BY
AC0646'.019 METERS. RM 4, .007 METERS. A SECOND MEASUREMENT WAS MADE
AC0646'AND THE RESULTS WAS THE SAME. THE ANGLE BETWEEN THE REFERENCE
AC0646'MARKS WAS MISSED BY 03 MINUTES AND 30 SECONDS. A SECOND
AC0646'OBSERVATION WAS MADE AND THE RESULTS WAS THE SAME. A NEW
AC0646'DESCRIPTION FOLLOWS.
AC0646'
AC0646'THE STATION IS ABOUT 23-1/2 MILES SOUTHEAST OF NAPLES, 15
AC0646'MILES SOUTH OF STATE HIGHWAY 84 (ALLIGATOR ALLEY), 7 MILES
AC0646'WEST OF THE JUNCTION OF U.S. HIGHWAY 41 (TAMIAMI TRAIL) AND STATE
AC0646'HIGHWAY 29 IN CARNESTOWN, AND ON THE SOUTH SIDE OF THE OLD
AC0646'HIGHWAY 41.
AC0646'
AC0646'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND
AC0646'STATE HIGHWAY 29 IN CARNESTOWN, GO WEST ON HIGHWAY 41 FOR 6.85
AC0646'MILES TO A SIDE ROAD LEFT (OLD HIGHWAY 41) AT A TEXACO SERVICE
AC0646'STATION ON THE LEFT AND BIG CYPRESS BEND INDIAN VILLAGE ON THE
AC0646'RIGHT. (TO REACH THE AZIMUTH MARK FROM THIS POINT, CONTINUE WEST

AC0646'ON HIGHWAY 41 FOR 0.4 MILES TO BRIDGE NUMBER 62 AND THE MARK IN
AC0646'THE NORTHEAST CORNER OF THE BRIDGE AS DESCRIBED). TURN LEFT
AC0646'AND GO WESTERLY ON OLD HIGHWAY 41 FOR 0.2 MILES TO THE CENTER
AC0646'OF A CURVE AND THE STATION ON THE LEFT AS DESCRIBED.
AC0646'
AC0646'STATION MARK, STAMPED FANKA 1934, IS A STANDARD DISK SET IN THE
AC0646'TOP OF A ROUND CONCRETE POST PROJECTING 6 INCHES ABOVE THE
AC0646'GROUND. IT IS 216 FEET SOUTHWEST OF A RAIN GAUGE, 56.5 FEET
AC0646'SOUTH OF CENTER OF THE OLD HIGHWAY AND 2.3 FEET NORTH OF A
AC0646'CONCRETE WITNESS POST.
AC0646'
AC0646'REFERENCE MARK 3, STAMPED FANKA NO 3 1934, IS A STANDARD DISK
AC0646'SET IN THE TOP OF A SQUARE MONUMENT THAT PROJECTS ABOUT 1.5
AC0646'FEET. IT IS 63 FEET SOUTH OF CENTER OF THE OLD HIGHWAY AND 1.2
AC0646'FEET EAST OF A METAL WITNESS POST.
AC0646'
AC0646'REFERENCE MARK 4, STAMPED FANKA NO 4 1934, IS A STANDARD DISK
AC0646'SET IN THE TOP OF A SQUARE MONUMENT THAT PROJECTS ABOUT 1 FOOT
AC0646'ABOVE THE GROUND. IT IS 101 FEET SOUTH OF CENTER OF THE OLD
AC0646'HIGHWAY AND 2 FEET NORTH OF A METAL WITNESS POST.
AC0646'
AC0646'AZIMUTH MARK, STAMPED FANKA 1934 1972, IS A STANDARD DISK
AC0646'CEMENTED IN A DRILL HOLE IN THE NORTHEAST CORNER OF BRIDGE NUMBER
AC0646'62. IT IS 22.5 FEET NORTH OF CENTER OF U.S. HIGHWAY 41, 5 FEET
AC0646'EAST OF A STATE ROAD DEPARTMENT BENCH MARK NUMBER 522 AND 0.5
AC0646'FOOT WEST OF THE EAST END OF THE BRIDGE ABUTMENT.
AC0646'
AC0646'HEIGHT OF LIGHT ABOVE STATION MARK 4 FEET.
AC0646'
AC0646'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN
AC0646'7 MILES WEST OF CARNESTOWN.
AC0646'
AC0646'
AC0646' STATION RECOVERY (1976)
AC0646'
AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1976 (CLN)
AC0646'STATION MARK, REFERENCE MARKS 3, 4 AND AZIMUTH MARK WERE
AC0646'RECOVERED AS DESCRIBED IN THE 1972 RECOVERY NOTE BY H.L.
AC0646'MILLER. THE DISTANCE AND DIRECTION TO MARKS WERE NOT CHECKED
AC0646'DUE TO HIGH WATER IN THE GRASSY MARSH SWAMP. PLEASE NOTIFY
AC0646'MR. JIM SIMMONS, PROPERTY OWNER WHO LIVES AT TEXACO SERVICE
AC0646'STATION AND BIG CYPRESS BEND INDIAN VILLAGE BEFORE VISITING
AC0646'STATION.
AC0646'
AC0646'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN
AC0646'7 MILES WEST OF CARNESTOWN.
AC0646'
AC0646'
AC0646' STATION RECOVERY (1976)
AC0646'
AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1976 (CLN)
AC0646'STATION MARK, REFERENCE MARKS 3, 4 AND THE AZIMUTH MARK WERE
AC0646'RECOVERED AS DESCRIBED AND FOUND IN GOOD CONDITION. REFERENCE
AC0646'MARK 5 WAS ALSO RECOVERED IN HIGH SWAMP GRASS THIS VISIT. THE
AC0646'DISTANCE AND DIRECTION TO REFERENCE MARKS 3 AND 4 CHECKED THE
AC0646'1972 RECOVERY NOTE BY H.L. MILLER. STATION WAS VISITED BY
AC0646'REQUEST OF THE FLORIDA DEPARTMENT OF TRANSPORTATION DUE TO THE
AC0646'AZIMUTH MARK WAS IN WAY OF BRIDGE CONSTRUCTION. A NEW AZIMUTH
AC0646'MARK WAS ESTABLISHED AT THIS TIME. DUE TO CHANGES, A COMPLETE NEW
AC0646'DESCRIPTION FOLLOWS.
AC0646'
AC0646'STATION IS ABOUT 23-1/2 MILES SOUTHEAST OF NAPLES, 15 MILES
AC0646'SOUTH OF STATE HIGHWAY 84 AND ON PROPERTY OF MR. JOE SIMMONS,
AC0646'BIG CYPRESS BEND. PLEASE NOTIFY MR. SIMMONS BEFORE VISITING
AC0646'THE STATION AS HE IS THE OWNER OF THE PROPERTY.

AC0646'
AC0646'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND
AC0646'STATE HIGHWAY 29 IN CARNESTOWN, GO WEST ON U.S. HIGHWAY 41 FOR
AC0646'6.95 MILES TO A SIDE ROAD LEFT AT SERVICE STATION AND BIG CYPRESS
AC0646'BEND INDIAN VILLAGE AND AZIMUTH MARK ON RIGHT. TURN LEFT OFF
AC0646'U.S. HIGHWAY 41 ONTO OLD HIGHWAY 41 AND GO WESTERLY 0.2 MILE TO
AC0646'CENTER OF CURVE AND STATION ON LEFT IN SWAMP GRASS.
AC0646'
AC0646'STATION MARK, A STANDARD DISK STAMPED FANKA 1934, IS SET IN THE
AC0646'TOP OF A 12-INCH ROUND CONCRETE MONUMENT THAT PROJECTS 6-INCHES
AC0646'ABOVE THE GROUND. IT IS 42 FEET SOUTHWEST OF THE SOUTHWEST EDGE
AC0646'OF OLD HIGHWAY, 2.5 FEET NORTHEAST OF A CONCRETE WITNESS POST, 2
AC0646'FEET NORTHEAST OF A METAL WITNESS POST AND 3 FEET LOWER THAN THE
AC0646'OLD HIGHWAY.
AC0646'
AC0646'REFERENCE MARK 3, A STANDARD DISK STAMPED FANKA NO 3 1934, IS
AC0646'SET IN THE TOP OF AN 8-INCH SQUARE CONCRETE MONUMENT THAT PROJECTS
AC0646'1.5 FEET ABOVE THE GROUND. IT IS 63 FEET SOUTHWEST OF THE CENTER
AC0646'OF OLD HIGHWAY AND 1.2 FEET EAST OF A METAL WITNESS POST.
AC0646'
AC0646'REFERENCE MARK 4, A STANDARD DISK STAMPED FANKA NO 4 1934, IS
AC0646'SET IN THE TOP OF AN 8-INCH SQUARE CONCRETE MONUMENT THAT PROJECTS
AC0646'1 FOOT ABOVE THE GROUND. IT IS 101 FEET SOUTHWEST OF THE CENTER
AC0646'OF OLD HIGHWAY AND 2 FEET NORTH OF A METAL WITNESS POST.
AC0646'
AC0646'REFERENCE MARK 5, A STANDARD DISK STAMPED FANKA NO 5 1956, IS
AC0646'SET IS THE TOP OF A 12-INCH SQUARE CONCRETE MONUMENT THAT
AC0646'PROJECTS 5-INCHES. IT IS 34 FEET SOUTHWEST OF THE SOUTHWEST EDGE
AC0646'OF OLD HIGHWAY AND 1.3 FEET NORTHWEST OF A METAL WITNESS
AC0646'POST.
AC0646'
AC0646'AZIMUTH MARK, A STANDARD DISK STAMPED FANKA 1934 1976, IS SET IN
AC0646'THE TOP OF A 12-INCH ROUND CONCRETE MONUMENT THAT PROJECTS 1-INCH
AC0646'ABOVE THE GROUND SURFACE. IT IS 41.5 FEET NORTHEAST OF THE CENTER
AC0646'OF U.S. HIGHWAY 41, 23 FEET NORTHWEST OF THE CENTER OF DRIVEWAY TO
AC0646'BIG CYPRESS BEND INDIAN VILLAGE, 52 FEET SOUTHWEST OF THE CENTER
AC0646'OF GATE OF THE INDIAN VILLAGE, 2 FEET NORTHWEST OF POWER LINE
AC0646'POLE NUMBER F 1375 25 AND 1.5 FEET NORTHWEST OF A METAL WITNESS
AC0646'POST.
AC0646'
AC0646'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN
AC0646'7 MILES WEST OF CARNESTOWN.
AC0646
AC0646 STATION RECOVERY (1989)
AC0646
AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989
AC0646'THE STATION IS LOCATED ABOUT 37.9 KM (23.55 MI) SOUTHEAST OF NAPLES,
AC0646'11.3 KM (7.00 MI) WEST-NORTHWEST OF CARNESTOWN, 13.7 KM (8.50 MI)
AC0646'SOUTHEAST OF THE JUNCTION OF U.S. HIGHWAY 41 AND STATE ROUTE 92 SOUTH
AC0646'LEADING TO MARCOS ISLAND, AT THE SOUTH SIDE OF OLD ABANDONED HIGHWAY
AC0646'41 WHICH PREVIOUSLY WAS MAIN HIGHWAY AND 0.32 KM (0.20 MI) WEST OF BIG
AC0646'CYPRESS BEND INDIAN VILLAGE. OWNERSHIP--UNKNOWN.
AC0646'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND STATE
AC0646'ROUTE 92 AT ROYAL PALM HAMMOCK, GO SOUTHEAST ALONG U.S.HIGHWAY 41 FOR
AC0646'13.7 KM (8.50 MI) TO THE BIG CYPRESS BEND INDIAN VILLAGE ON THE LEFT
AC0646'AND AN ASPHALT ROAD ON THE RIGHT, THEN GO RIGHT, SOUTH, ON OLD ASPHALT
AC0646'ROAD FOR ABOUT 0.16 KM (0.10 MI) TO OLD ABANDONED HIGHWAY BED ON THE
AC0646'RIGHT, THEN GO RIGHT, WEST, ALONG OLD HIGHWAY BED FOR 0.24 KM
AC0646'(0.15 MI) TO THE STATION ON THE LEFT IN SWAMP GRASS. ALSO, INDIAN
AC0646'VILLAGE CAN BE REACHED BY GOING 11 KM (6.85 MI) NORTHWEST ALONG U.S.
AC0646'HIGHWAY 41 FROM THE JUNCTION OF STATE ROUTE 29 SOUTH AT CARNESTOWN.
AC0646'THE STATION PROJECTS ABOUT 15 CM ABOVE GROUND IN SWAMP AREA. LOCATED
AC0646'ABOUT 82.3 M (270.0 FT) SOUTH OF THE CENTERLINE OF NEW HIGHWAY 41,

AC0646'17.4 M (57.1 FT) SOUTH OF THE APPROXIMATE CENTER OF THE ASPHALT ROAD,
AC0646'0.79 M (2.6 FT) NORTH OF A METAL WITNESS POST AND ABOUT 0.76 M
AC0646'(2.5 FT) BELOW THE LEVEL OF THE OLD HIGHWAY.

AC0646'DESCRIBED BY G.F. SMITH.

AC0646

STATION RECOVERY (1992)

AC0646

AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992

AC0646'39.4 KM (24.50 MI) EASTERLY ALONG U.S. HIGHWAY 41 FROM THE JUNCTION
AC0646'OF STATE HIGHWAY 84 IN NAPLES, THENCE 0.1 KM (0.05 MI) SOUTHERLY
AC0646'ALONG A PAVED ROAD AT THE BIG CYPRESS BEND INDIAN VILLAGE, THENCE 0.2
AC0646'KM (0.10 MI) WESTERLY ALONG A PAVED ROAD, 18.6 M (61.0 FT) EAST OF
AC0646'REFERENCE MARK 3, 17.5 M (57.4 FT) SOUTHWEST OF THE CENTER OF THE
AC0646'HIGHWAY, 13.7 M (44.9 FT) NORTH OF REFERENCE MARK 4, 1.4 M (4.6 FT)
AC0646'BELOW THE LEVEL OF THE HIGHWAY, 0.7 M (2.3 FT) NORTH OF A WITNESS
AC0646'POST, AND THE MONUMENT PROJECTS 0.25 M (0.82 FT) ABOVE THE GROUND
AC0646'SURFACE.

AC0646

STATION RECOVERY (1992)

AC0646

AC0646

AC0646'RECOVERY NOTE BY DENI ASSOCIATES INCORPORATED 1992

AC0646'RECOVERED IN GOOD CONDITION.

AC0646

STATION RECOVERY (1993)

AC0646

AC0646

AC0646'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993

AC0646'STATION IS LOCATED ABOUT 37.9 KM (23.55 MI) SOUTHEAST OF NAPLES, AND
AC0646'ABOUT 11.3 KM (7.00 MI) WEST-NORTHWEST OF CARNESTOWN, 13.7 KM
AC0646'(8.50 MI) SOUTHEAST OF THE JUNCTION OF U.S. HIGHWAY 41 AND STATE
AC0646'ROUTE 92 SOUTH LEADING TO MARCOS ISLAND, AT THE SOUTH SIDE OF OLD
AC0646'ABANDONED HIGHWAY 41 WHICH PREVIOUSLY WAS MAIN HIGHWAY, AND ABOUT
AC0646'0.32 KM (0.20 MI) WEST OF BIG CYPRESS BEND INDIAN VILLAGE.

AC0646'OWNERSHIP--UNKNOWN.

AC0646'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND STATE
AC0646'ROUTE 92 AT ROYAL PALM HAMMOCK, GO SOUTHEAST ALONG U.S. HIGHWAY 41
AC0646'FOR 14.4 KM (8.95 MI) TO THE BIG CYPRESS BEND INDIAN VILLAGE ON THE
AC0646'LEFT AND AN ASPHALT ROAD ON THE RIGHT, THEN GO RIGHT, SOUTH, ON OLD
AC0646'ASPHALT ROAD FOR ABOUT 0.08 KM (0.05 MI) TO OLD ABANDONED HIGHWAY BED
AC0646'ON THE RIGHT, THEN GO RIGHT, WEST, ALONG OLD HIGHWAY BED FOR 0.24 KM
AC0646'(0.15 MI) TO THE STATION ON THE LEFT IN SWAMP GRASS. ALSO, INDIAN
AC0646'VILLAGE CAN BE REACHED BY GOING 11 KM (6.85 MI) NORTHWEST ALONG U.S.
AC0646'HIGHWAY 41 FROM THE JUNCTION OF STATE ROUTE 29 SOUTH AT CARNESTOWN.
AC0646'STATION IS LOCATED IN THE TOP OF A 30-CM ROUND CONCRETE MONUMENT
AC0646'PROJECTING ABOUT 13-CM ABOVE THE GROUND SURFACE, IN SWAMP AREA. IT
AC0646'IS 17.4 M (57.1 FT) SOUTH OF THE APPROXIMATE CENTER OF THE ASPHALT
AC0646'ROAD, 0.79 M (2.59 FT) NORTH OF A METAL WITNESS POST, AND ABOUT 82.3
AC0646'M (270.0 FT) SOUTH OF THE CENTERLINE OF THE NEW PRESENT HIGHWAY 41.
AC0646'IT IS ABOUT 0.76 M (2.49 FT) BELOW THE LEVEL OF THE OLD HIGHWAY.
AC0646'NOTE- POSSIBLY NEED STAKES IF IT HAS BEEN WET FOR TRIPOD SET UP.
AC0646'HEAVY MOSQUITOS AT THIS STATION.

AC0646

STATION RECOVERY (1999)

AC0646

AC0646

AC0646'RECOVERY NOTE BY US POWER SQUADRON 1999

AC0646'RECOVERED IN GOOD CONDITION.

AC0646

STATION RECOVERY (2001)

AC0646

AC0646

AC0646'RECOVERY NOTE BY LD BRADLEY LAND SURVEYORS 2001 (JCH)

AC0646'THE MARK IS ABOUT 38.9 KM (24.2 MI) SOUTHEAST OF NAPLES, ABOUT 11.2 KM
AC0646'(6.94

AC0646'MI) NORTHWEST OF THE JUNCTION OF U.S. HIGHWAY 41 AND STATE ROAD 29, IN
AC0646'SECTION 13, TOWNSHIP 52 SOUTH, RANGE 28 EAST, CARNESTOWN, COLLIER

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AD5924 *****
AD5924 DESIGNATION - I75 81 A05
AD5924 PID - AD5924
AD5924 STATE/COUNTY- FL/COLLIER
AD5924 USGS QUAD - CORKSCREW SW (1987)
AD5924
AD5924 *CURRENT SURVEY CONTROL
AD5924
AD5924* NAD 83(1990)- 26 16 21.33573(N) 081 44 33.77745(W) ADJUSTED
AD5924* NAVD 88 - 11.672 (meters) 38.29 (feet) ADJUSTED
AD5924
AD5924 LAPLACE CORR- -1.63 (seconds) DEFLEC99
AD5924 GEOID HEIGHT- -23.81 (meters) GEOID03
AD5924 DYNAMIC HT - 11.653 (meters) 38.23 (feet) COMP
AD5924 MODELED GRAV- 979,048.5 (mgal) NAVD 88
AD5924
AD5924 HORZ ORDER - SECOND
AD5924 VERT ORDER - SECOND CLASS II
AD5924
AD5924.The horizontal coordinates were established by classical geodetic methods
AD5924.and adjusted by the National Geodetic Survey in May 1991.
AD5924
AD5924.The orthometric height was determined by differential leveling
AD5924.and adjusted in December 2001.
AD5924
AD5924.The Laplace correction was computed from DEFLEC99 derived deflections.
AD5924
AD5924.The geoid height was determined by GEOID03.
AD5924
AD5924.The dynamic height is computed by dividing the NAVD 88
AD5924.geopotential number by the normal gravity value computed on the
AD5924.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD5924.degrees latitude (g = 980.6199 gals.).
AD5924
AD5924.The modeled gravity was interpolated from observed gravity values.
AD5924
AD5924; North East Units Scale Factor Converg.
AD5924;SPC FL E - 215,026.537 125,816.520 MT 1.00000910 -0 19 43.6
AD5924;SPC FL E - 705,466.23 412,783.03 sFT 1.00000910 -0 19 43.6
AD5924;SPC FL W - 214,839.240 225,697.492 MT 0.99994933 +0 06 50.0
AD5924;SPC FL W - 704,851.74 740,475.86 sFT 0.99994933 +0 06 50.0
AD5924;UTM 17 - 2,906,085.153 425,841.831 MT 0.99966790 -0 19 43.6
AD5924
AD5924! - Elev Factor x Scale Factor = Combined Factor
AD5924!SPC FL E - 1.00000191 x 1.00000910 = 1.00001101
AD5924!SPC FL W - 1.00000191 x 0.99994933 = 0.99995124
AD5924!UTM 17 - 1.00000191 x 0.99966790 = 0.99966981
AD5924
AD5924|-----|
AD5924| PID Reference Object Distance Geod. Az |
AD5924| | | | | | | |
AD5924| AD5925 I75 81 A05 RM 1 10.624 METERS 07942 |
AD5924| AD5923 I75 81 A05 RM 2 11.213 METERS 27842 |
AD5924|-----|
AD5924
AD5924 SUPERSEDED SURVEY CONTROL
```

AD5924
AD5924 NAD 83(1986)- 26 16 21.33468(N) 081 44 33.79009(W) AD() 2
AD5924 NAVD 88 (06/15/91) 11.695 (m) 38.37 (f) UNKNOWN 2 2
AD5924 NGVD 29 (09/01/92) 12.067 (m) 39.59 (f) ADJUSTED 2 2
AD5924
AD5924.Superseded values are not recommended for survey control.
AD5924.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AD5924.[See file dsdata.txt](#) to determine how the superseded data were derived.
AD5924
AD5924_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK2584206085(NAD 83)
AD5924_MARKER: DD = SURVEY DISK
AD5924_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AD5924_SP_SET: CONCRETE POST
AD5924_STAMPING: I75 81 A05
AD5924_MARK LOGO: FLDT
AD5924_PROJECTION: RECESSED 13 CENTIMETERS
AD5924_MAGNETIC: N = NO MAGNETIC MATERIAL
AD5924_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AD5924+STABILITY: SURFACE MOTION
AD5924
AD5924 HISTORY - Date Condition Report By
AD5924 HISTORY - 1981 MONUMENTED FLDT
AD5924 HISTORY - 1981 GOOD FLDT
AD5924 HISTORY - 1990 GOOD USPSQD
AD5924 HISTORY - 19940426 GOOD FLDT
AD5924 HISTORY - 19991231 GOOD USPSQD
AD5924
AD5924 STATION DESCRIPTION
AD5924
AD5924'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1981 (CBM)
AD5924'STATION IS LOCATED ABOUT 9 MILES NORTH-NORTHEAST OF NAPLES, 5-1/4
AD5924'MILES SOUTHEAST OF BONITA SPRINGS AND 3 MILES SOUTH OF THE
AD5924'LEE-COLLIER COUNTY LINE, AT THE INTERSECTION OF INTERSTATE ROUTE 75
AD5924'AND COUNTY ROAD 846.
AD5924'
AD5924'TO REACH STATION FROM THE INTERSECTION OF U.S.ROUTE 41 AND COUNTY ROAD
AD5924'846, NORTH OF NAPLES, GO EAST ON COUNTY ROAD 846 FOR 3.75 MILES TO
AD5924'INTERSECTION OF INTERSTATE ROUTE 75 AND STATION IN MEDIAN OF
AD5924'INTERSTATE AT SOUTH END OF BRIDGE.
AD5924'
AD5924'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION BRASS
AD5924'DISK, STAMPED---I75 81 A05---, SET IN THE TOP OF A ROUND CONCRETE
AD5924'MONUMENT THAT IS 5 INCHES BELOW THE GROUND. IT IS 4.5 FEET SOUTH OF A
AD5924'METAL WITNESS POST, 5.2 FEET SOUTH OF WALL BETWEEN BRIDGES, 56.0 FEET
AD5924'WEST OF CENTER OF NORTHBOUND LANE AND 58.5 FEET EAST OF CENTER OF
AD5924'SOUTHBOUND LANE OF INTERSTATE ROUTE 75.
AD5924'
AD5924'REFERENCE MARK NUMBER 1 IS A STANDARD FLORIDA, DEPARTMENT OF
AD5924'TRANSPORTATION BRASS DISK, STAMPED---I75 81 A05 RM NO 1---, SET IN A
AD5924'DRILL HOLE IN THE CONCRETE WALL BETWEEN BRIDGES. IT IS 2.0 FEET WEST
AD5924'OF SOUTHEAST CORNER OF THE WALL AND 22.0 FEET WEST OF CENTER OF
AD5924'NORTHBOUND LANE.
AD5924'
AD5924'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA, DEPARTMENT OF
AD5924'TRANSPORTATION BRASS DISK, STAMPED---I75 81 A05 RM NO 2---, SET IN A
AD5924'DRILL HOLE IN THE CONCRETE WALL BETWEEN BRIDGES. IT IS 2.2 FEET EAST
AD5924'OF SOUTHWEST CORNER OF THE WALL AND 22.0 FEET EAST OF CENTER OF
AD5924'SOUTHBOUND LANE.
AD5924
AD5924 STATION RECOVERY (1981)
AD5924
AD5924'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1981
AD5924'6.0 MI SE FROM BONITA SPRINGS.

AD5924'FROM THE INTERSECTION OF INTERSTATE ROUTE 75 AND STATE ROAD 865, ABOUT
AD5924'1.8 MILES SOUTHEAST OF BONITA SPRINGS, GO SOUTHERLY ON INTERSTATE
AD5924'ROUTE 75 FOR ABOUT 4.2 MILES TO THE INTERSECTION OF STATE ROAD 846 AND
AD5924'THE MARK. IT IS 58.5 FEET EAST OF THE CENTER OF THE SOUTHBOUND LANES,
AD5924'56.0 FEET WEST OF THE CENTER OF THE NORTHBOUND LANES AND 5.2 FEET
AD5924'SOUTH OF THE SOUTH CONCRETE GUARDWALL BETWEEN THE NORTH AND SOUTHBOUND
AD5924'BRIDGES.

AD5924'THE MARK IS 4.5 FT S FROM A WITNESS POST.

AD5924

AD5924 STATION RECOVERY (1990)

AD5924

AD5924'RECOVERY NOTE BY US POWER SQUADRON 1990 (HEA)

AD5924'RECOVERED IN GOOD CONDITION.

AD5924

AD5924 STATION RECOVERY (1994)

AD5924

AD5924'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1994 (CDM)

AD5924'RECOVERED AS DESCRIBED IN L24746, SUBMITTED BY FLDT 1983.

AD5924

AD5924 STATION RECOVERY (1999)

AD5924

AD5924'RECOVERY NOTE BY US POWER SQUADRON 1999

AD5924'RECOVERED IN GOOD CONDITION.

*** retrieval complete.

Elapsed Time = 00:00:00

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AD5969 *****
AD5969 DESIGNATION - I75 81 A13
AD5969 PID - AD5969
AD5969 STATE/COUNTY- FL/LEE
AD5969 USGS QUAD - BONITA SPRINGS (1987)
AD5969
AD5969 *CURRENT SURVEY CONTROL
AD5969
AD5969* NAD 83(1990)- 26 21 49.83433(N) 081 45 49.69415(W) ADJUSTED
AD5969* NAVD 88 - 4.723 (meters) 15.50 (feet) ADJUSTED
AD5969
AD5969 LAPLACE CORR- -1.52 (seconds) DEFLEC99
AD5969 GEOID HEIGHT- -23.98 (meters) GEOID03
AD5969 DYNAMIC HT - 4.715 (meters) 15.47 (feet) COMP
AD5969 MODELED GRAV- 979,051.4 (mgal) NAVD 88
AD5969
AD5969 HORZ ORDER - SECOND
AD5969 VERT ORDER - SECOND CLASS II
AD5969
AD5969.The horizontal coordinates were established by classical geodetic methods
AD5969.and adjusted by the National Geodetic Survey in May 1991.
AD5969
AD5969.The orthometric height was determined by differential leveling
AD5969.and adjusted in June 1991.
AD5969
AD5969.The Laplace correction was computed from DEFLEC99 derived deflections.
AD5969
AD5969.The geoid height was determined by GEOID03.
AD5969
AD5969.The dynamic height is computed by dividing the NAVD 88
AD5969.geopotential number by the normal gravity value computed on the
AD5969.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD5969.degrees latitude (g = 980.6199 gals.).
AD5969
AD5969.The modeled gravity was interpolated from observed gravity values.
AD5969
AD5969; North East Units Scale Factor Converg.
AD5969;SPC FL W - 224,944.491 223,572.744 MT 0.99994803 +0 06 17.6
AD5969;SPC FL W - 738,005.38 733,504.91 sFT 0.99994803 +0 06 17.6
AD5969;SPC FL E - 225,148.558 123,769.904 MT 1.00001290 -0 20 21.1
AD5969;SPC FL E - 738,674.89 406,068.43 sFT 1.00001290 -0 20 21.1
AD5969;UTM 17 - 2,916,203.720 423,795.914 MT 0.99967169 -0 20 21.1
AD5969
AD5969! - Elev Factor x Scale Factor = Combined Factor
AD5969!SPC FL W - 1.00000303 x 0.99994803 = 0.99995106
AD5969!SPC FL E - 1.00000303 x 1.00001290 = 1.00001593
AD5969!UTM 17 - 1.00000303 x 0.99967169 = 0.99967471
AD5969
AD5969|-----|
AD5969| PID Reference Object Distance Geod. Az |
AD5969| | | | dddmmss.s |
AD5969| AD5970 I75 81 A13 RM 1 23.744 METERS 03056 |
AD5969| AD5968 I75 81 A13 RM 2 23.269 METERS 06903 |
AD5969|-----|
AD5969
AD5969
AD5969 SUPERSEDED SURVEY CONTROL
```

AD5969
AD5969 NAD 83(1986)- 26 21 49.83257(N) 081 45 49.70672(W) AD() 2
AD5969 NGVD 29 (09/01/92) 5.088 (m) 16.69 (f) ADJUSTED 2 2
AD5969
AD5969.Superseded values are not recommended for survey control.
AD5969.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AD5969.[See file dsdata.txt](#) to determine how the superseded data were derived.
AD5969
AD5969_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK2379616204(NAD 83)
AD5969_MARKER: DD = SURVEY DISK
AD5969_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AD5969_SP_SET: CONCRETE POST
AD5969_STAMPING: I75 81 A13
AD5969_MARK LOGO: FLDT
AD5969_PROJECTION: RECESSED 13 CENTIMETERS
AD5969_MAGNETIC: N = NO MAGNETIC MATERIAL
AD5969_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AD5969+STABILITY: SURFACE MOTION
AD5969
AD5969 HISTORY - Date Condition Report By
AD5969 HISTORY - 1981 MONUMENTED FLDT
AD5969 HISTORY - 1981 GOOD FLDT
AD5969 HISTORY - 1990 GOOD USPSQD
AD5969 HISTORY - 19971225 MARK NOT FOUND USPSQD
AD5969
AD5969 STATION DESCRIPTION
AD5969
AD5969'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1981 (CBM)
AD5969'STATION IS LOCATED ABOUT 1-3/4 MILES NORTHEAST OF BONITA SPRINGS AND
AD5969'3 MILES NORTH OF THE LEE-COLLIER COUNTY LINE, ON INTERSTATE ROUTE 75
AD5969'HIGHWAY RIGHT-OF-WAY.
AD5969'
AD5969'TO REACH STATION FROM THE INTERSECTION OF COUNTY ROAD 887 AND STATE
AD5969'ROAD 865 IN BONITA SPRINGS, GO EAST ON STATE ROAD 865 FOR 1.8 MILES
AD5969'TO INTERSECTION OF INTERSTATE ROUTE 75. GO NORTH ON INTERSTATE ROUTE
AD5969'75 FOR 2.6 MILES TO STATION ON RIGHT, EAST SHOULDER OF NORTHBOUND LANE
AD5969'IT IS ABOUT 400 FEET NORTHWEST OF AN OLD CANAL THAT CAN BE SEEN
AD5969'RUNNING NORTH.
AD5969'
AD5969'STATION MARK IS A STANDARD FLORIDA, DEPARTMENT OF TRANSPORTATION BRASS
AD5969'DISK, STAMPED---I75 81 A13---, SET IN THE TOP OF A ROUND CONCRETE
AD5969'MONUMENT THAT IS 5 INCHES BELOW THE GROUND. IT IS 29.0 FEET NORTHEAST
AD5969'OF THE CENTER OF THE NORTH BOUND LANE OF INTERSTATE ROUTE 75,
AD5969'74.5 FEET SOUTHWEST OF A METAL WITNESS POST AND 76.5 FEET SOUTHWEST
AD5969'OF A DOUBLE BRACE POST.
AD5969'
AD5969'REFERENCE MARK NUMBER 1 IS A STANDARD FLORIDA DEPARTMENT OF
AD5969'TRANSPORTATION BRASS DISK, STAMPED---I75 A13 RM 1---, SET IN THE TOP
AD5969'OF A ROUND CONCRETE MONUMENT THAT IS FLUSH WITH THE GROUND. IT IS
AD5969'2.0 FEET SOUTHWEST OF A METAL WITNESS POST, 4.3 FEET SOUTHWEST OF
AD5969'THE RIGHT-OF-WAY FENCE, 100.7 FEET NORTHEAST OF THE CENTER OF THE
AD5969'NORTHBOUND LANE AND 20.6 FEET NORTHWEST OF THE NORTHERN MOST POST OF
AD5969'DOUBLE BRACED FENCEPOSTS.
AD5969'
AD5969'REFERENCE MARK NUMBER 2 IS A STANDARD FLORIDA DEPARTMENT OF
AD5969'TRANSPORTATION BRASS DISK, STAMPED---I75 A13 RM 2---, SET IN THE TOP
AD5969'OF A ROUND CONCRETE MONUMENT THAT IS FLUSH WITH THE GROUND. IT IS
AD5969'1.3 FEET SOUTHWEST OF A METAL WITNESS POST, 2.7 FEET SOUTHWEST OF THE
AD5969'RIGHT-OF-WAY FENCE, 14.2 FEET SOUTH OF THE SOUTHERN MOST ONE OF DOUBLE
AD5969'FENCE BRACE POSTS AND 102.0 FEET NORTHEAST OF THE CENTER OF THE
AD5969'NORTHBOUND LANE.
AD5969
AD5969 STATION RECOVERY (1981)

AD5969
AD5969'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1981
AD5969'4.35 MI NE FROM BONITA SPRINGS.
AD5969'FROM THE INTERSECTION OF INTERSTATE ROUTE 75 AND STATE ROAD 865, ABOUT
AD5969'1.8 MILES SOUTHEAST OF BONITA SPRINGS, GO NORTHERLY ON INTERSTATE
AD5969'ROUTE 75 FOR ABOUT 1.0 MILE TO THE E TERRY ROAD OVERPASS, CONTINUE
AD5969'NORTHERLY FOR ABOUT 1.55 MILES TO THE MARK. IT IS 76.5 FEET SOUTHWEST
AD5969'OF THE SOUTH POST OF A DOUBLE POST BRACE IN THE EAST RIGHT OF WAY
AD5969'FENCE AND 29.0 FEET NORTHEAST OF THE CENTER OF THE NORTHBOUND LANES.
AD5969'THE MARK IS 74.5 FT SW FROM A WITNESS POST.
AD5969
AD5969 STATION RECOVERY (1990)
AD5969
AD5969'RECOVERY NOTE BY US POWER SQUADRON 1990 (HEA)
AD5969'RECOVERED IN GOOD CONDITION.
AD5969
AD5969 STATION RECOVERY (1997)
AD5969
AD5969'RECOVERY NOTE BY US POWER SQUADRON 1997
AD5969'MARK NOT FOUND.

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

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey,  Retrieval Date = FEBRUARY 25, 2009
AH1899 *****
AH1899 DESIGNATION -  I75 90 A24
AH1899 PID          -  AH1899
AH1899 STATE/COUNTY-  FL/COLLIER
AH1899 USGS QUAD    -  BELLE MEADE NE (1973)
AH1899
AH1899                      *CURRENT SURVEY CONTROL
AH1899
AH1899* NAD 83(2007)- 26 09 12.52135(N)    081 35 39.68938(W)    ADJUSTED
AH1899* NAVD 88      -          3.439 (meters)    11.28 (feet)    ADJUSTED
AH1899
AH1899 EPOCH DATE   -          2002.00
AH1899 X            -          837,442.872 (meters)                      COMP
AH1899 Y            -          -5,667,290.457 (meters)                  COMP
AH1899 Z            -          2,794,325.829 (meters)                  COMP
AH1899 LAPLACE CORR-          -1.60 (seconds)                      DEFLEC99
AH1899 ELLIP HEIGHT-          -20.318 (meters)                      (02/10/07) ADJUSTED
AH1899 GEOID HEIGHT-          -23.75 (meters)                      GEOID03
AH1899 DYNAMIC HT   -          3.433 (meters)    11.26 (feet)    COMP
AH1899
AH1899 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AH1899 Type   PID   Designation                      North   East   Ellip
AH1899 -----
AH1899 NETWORK AH1899 I75 90 A24                      1.43   1.43   2.74
AH1899 -----
AH1899 MODELED GRAV-          979,043.3 (mgal)                      NAVD 88
AH1899
AH1899 VERT ORDER -  FIRST      CLASS II
AH1899
AH1899.The horizontal coordinates were established by GPS observations
AH1899.and adjusted by the National Geodetic Survey in February 2007.
AH1899
AH1899.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AH1899.See National Readjustment for more information.
AH1899.The horizontal coordinates are valid at the epoch date displayed above.
AH1899.The epoch date for horizontal control is a decimal equivalence
AH1899.of Year/Month/Day.
AH1899
AH1899.The orthometric height was determined by differential leveling
AH1899.and adjusted in January 2002.
AH1899.WARNING-Repeat measurements at this control monument indicate possible
AH1899.vertical movement.
AH1899
AH1899.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AH1899
AH1899.The Laplace correction was computed from DEFLEC99 derived deflections.
AH1899
AH1899.The ellipsoidal height was determined by GPS observations
AH1899.and is referenced to NAD 83.
AH1899
AH1899.The geoid height was determined by GEOID03.
AH1899
AH1899.The dynamic height is computed by dividing the NAVD 88
AH1899.geopotential number by the normal gravity value computed on the
AH1899.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AH1899.degrees latitude (g = 980.6199 gals.).
```

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AH1906 *****
AH1906 DESIGNATION - I75 90 A28
AH1906 PID - AH1906
AH1906 STATE/COUNTY- FL/COLLIER
AH1906 USGS QUAD - BELLE MEADE NE (1973)
AH1906
AH1906 *CURRENT SURVEY CONTROL
AH1906
AH1906* NAD 83(1986)- 26 09 12. (N) 081 33 18. (W) SCALED
AH1906* NAVD 88 - 4.668 (meters) 15.31 (feet) ADJUSTED AH1906
AH1906 GEOID HEIGHT- -23.80 (meters) GEOID03
AH1906 DYNAMIC HT - 4.660 (meters) 15.29 (feet) COMP
AH1906 MODELED GRAV- 979,043.1 (mgal) NAVD 88
AH1906
AH1906 VERT ORDER - SECOND CLASS II
AH1906
AH1906.The horizontal coordinates were scaled from a topographic map and have
AH1906.an estimated accuracy of +/- 6 seconds.
AH1906
AH1906.The orthometric height was determined by differential leveling
AH1906.and adjusted in December 2001.
AH1906
AH1906.The geoid height was determined by GEOID03.
AH1906
AH1906.The dynamic height is computed by dividing the NAVD 88
AH1906.geopotential number by the normal gravity value computed on the
AH1906.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AH1906.degrees latitude (g = 980.6199 gals.).
AH1906
AH1906.The modeled gravity was interpolated from observed gravity values.
AH1906
AH1906; North East Units Estimated Accuracy
AH1906;SPC FL E - 201,720. 144,510. MT (+/- 180 meters Scaled)
AH1906
AH1906 SUPERSEDED SURVEY CONTROL
AH1906
AH1906.No superseded survey control is available for this station.
AH1906
AH1906_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ445927(NAD 83)
AH1906_MARKER: DD = SURVEY DISK
AH1906_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AH1906_STAMPING: I75 90 A28
AH1906_MARK LOGO: FLDT
AH1906_MAGNETIC: N = NO MAGNETIC MATERIAL
AH1906_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AH1906+STABILITY: SURFACE MOTION
AH1906
AH1906 HISTORY - Date Condition Report By
AH1906 HISTORY - 1990 MONUMENTED FLDT
AH1906 HISTORY - 20080311 GOOD INDIV
AH1906
AH1906 STATION DESCRIPTION
AH1906
AH1906'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1990 (CDM)
AH1906'STATION IS LOCATED APPROXIMATELY 14.2 MILES (22.9 KM) NORTHEAST OF
```

AH1906'NAPLES, IS IN MEDIAN OF INTERSTATE HIGHWAY 75 ON WEST SIDE OF CANAL.
AH1906'TO REACH STATION FROM INTERSECTION OF STATE ROAD 951 AND INTERSTATE
AH1906'HIGHWAY 75, PROCEED 8.35 MILES (13.44 KM) SOUTH ALONG INTERSTATE
AH1906'HIGHWAY 75 TO BRIDGE NUMBER 030001 AND STATION. STATION IS RECESSED
AH1906'0.3 FOOT, (9.1 CM) IS 7.0 FEET (2.1 M) WEST OF METAL WITNESS POST,
AH1906'40.0 FEET (12.2 M) NORTH OF NORTHWEST CORNER OF EASTBOUND LANE
AH1906'CONCRETE BRIDGE ABUTMENT, 36.5 FEET (11.1 M) SOUTH OF SOUTHWEST CORNER
AH1906'OF WESTBOUND LANE CONCRETE BRIDGE ABUTMENT.
AH1906
AH1906 STATION RECOVERY (2008)
AH1906
AH1906'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2008 (TF)
AH1906'RECOVERED IN GOOD CONDITION.

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

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AJ7741 *****
AJ7741 DESIGNATION - J 527
AJ7741 PID - AJ7741
AJ7741 STATE/COUNTY- FL/COLLIER
AJ7741 USGS QUAD - BELLE MEADE (1991)
AJ7741
AJ7741 *CURRENT SURVEY CONTROL
AJ7741
AJ7741* NAD 83(2007)- 26 01 51.80920(N) 081 38 53.22568(W) ADJUSTED
AJ7741* NAVD 88 - 1.345 (meters) 4.41 (feet) ADJUSTED
AJ7741
AJ7741 EPOCH DATE - 2002.00
AJ7741 X - 832,991.161 (meters) COMP
AJ7741 Y - -5,673,974.053 (meters) COMP
AJ7741 Z - 2,782,144.480 (meters) COMP
AJ7741 LAPLACE CORR- -1.66 (seconds) DEFLEC99
AJ7741 ELLIP HEIGHT- -22.088 (meters) (02/10/07) ADJUSTED
AJ7741 GEOID HEIGHT- -23.43 (meters) GEOID03
AJ7741 DYNAMIC HT - 1.343 (meters) 4.41 (feet) COMP
AJ7741
AJ7741 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AJ7741 Type PID Designation North East Ellip
AJ7741 -----
AJ7741 NETWORK AJ7741 J 527 1.67 1.98 3.57
AJ7741 -----
AJ7741 MODELED GRAV- 979,039.4 (mgal) NAVD 88
AJ7741
AJ7741 VERT ORDER - FIRST CLASS II
AJ7741
AJ7741.The horizontal coordinates were established by GPS observations
AJ7741.and adjusted by the National Geodetic Survey in February 2007.
AJ7741
AJ7741.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AJ7741.See National Readjustment for more information.
AJ7741.The horizontal coordinates are valid at the epoch date displayed above.
AJ7741.The epoch date for horizontal control is a decimal equivalence
AJ7741.of Year/Month/Day.
AJ7741
AJ7741.The orthometric height was determined by differential leveling
AJ7741.and adjusted in March 2002.
AJ7741
AJ7741.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ7741
AJ7741.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ7741
AJ7741.The ellipsoidal height was determined by GPS observations
AJ7741.and is referenced to NAD 83.
AJ7741
AJ7741.The geoid height was determined by GEOID03.
AJ7741
AJ7741.The dynamic height is computed by dividing the NAVD 88
AJ7741.geopotential number by the normal gravity value computed on the
AJ7741.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7741.degrees latitude (g = 980.6199 gals.).
AJ7741
AJ7741.The modeled gravity was interpolated from observed gravity values.
```

AJ7741

	North	East	Units	Scale Factor	Converg.
AJ7741; SPC FL E	- 188,216.534	135,131.914	MT	0.99999311	-0 17 04.0
AJ7741; SPC FL E	- 617,507.08	443,345.29	sFT	0.99999311	-0 17 04.0
AJ7741; UTM 17	- 2,879,284.297	435,154.047	MT	0.99965192	-0 17 04.0

AJ7741

	Elev Factor	x	Scale Factor	=	Combined Factor
AJ7741! SPC FL E	- 1.00000347	x	0.99999311	=	0.99999658
AJ7741! UTM 17	- 1.00000347	x	0.99965192	=	0.99965539

AJ7741

SUPERSEDED SURVEY CONTROL

AJ7741

AJ7741	NAD 83(1999)-	26 01 51.80913(N)	081 38 53.22618(W)	AD() 1
AJ7741	ELLIP H (12/12/02)	-22.129 (m)		GP() 4 1
AJ7741	NAVD 88 (12/12/02)	1.34 (m)	4.4 (f)	LEVELING	3

AJ7741

AJ7741.Superseded values are not recommended for survey control.

AJ7741.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AJ7741.[See file dsdata.txt](#) to determine how the superseded data were derived.

AJ7741

AJ7741_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ3515479284(NAD 83)

AJ7741_MARKER: F = FLANGE-ENCASED ROD

AJ7741_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

AJ7741_STAMPING: J 527 2001 CERP

AJ7741_MARK LOGO: NONE

AJ7741_PROJECTION: RECESSED 14 CENTIMETERS

AJ7741_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

AJ7741_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AJ7741_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AJ7741+SATELLITE: SATELLITE OBSERVATIONS - 2002

AJ7741_ROD/PIPE-DEPTH: 11.2 meters

AJ7741_SLEEVE-DEPTH : 0.46 meters

AJ7741

	Date	Condition	Report By
AJ7741 HISTORY	- 20010711	MONUMENTED	LDBLS
AJ7741 HISTORY	- 2002	GOOD	MAPTEC

AJ7741

STATION DESCRIPTION

AJ7741

AJ7741'DESCRIBED BY LD BRADLEY LAND SURVEYORS 2001 (JCH)

AJ7741'THE MARK IS 18.0 KM (11.2 MI) SOUTHEAST OF NAPLES IN SECTION 18,

AJ7741'TOWNSHIP 51

AJ7741'SOUTH, RANGE 27 EAST COLLIER COUNTY, FLORIDA. OWNERSHIP - DESERET

AJ7741'FARMS OF

AJ7741'RUSKIN.

AJ7741'

AJ7741'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND

AJ7741'COUNTY

AJ7741'ROAD 951 (I-75 EXIT 15, NEAR NAPLES) GO SOUTH ON COUNTY ROAD 951

AJ7741'11.1KM (6.9

AJ7741'MI) TO THE INTERSECTION WITH U.S. HIGHWAY 41 (TAMIAMI TRAIL), GO

AJ7741'SOUTHEAST ON

AJ7741'U.S. HIGHWAY 41 6.2 KM (3.86 MI) TO A DIRT DRIVE LEADING NORTH INTO

AJ7741'DESERET

AJ7741'FARMS OF RUSKIN (15255 TAMIAMI TRAIL E.) AND THE MARK LEFT.

AJ7741'

AJ7741'THE MARK IS 33.44 M (109.7 FT) NORTHEAST OF THE CENTERLINE U.S.

AJ7741'HIGHWAY 41,

AJ7741'27.31 M (89.6 FT) NORTHEAST OF A STEEL GUARDRAIL, 21.88 M (71.8 FT)

AJ7741'NORTHEAST

AJ7741'OF A WOOD POWER POLE, 11.28 M (37.0 FT) NORTHEAST OF A WOOD GUY POLE,

AJ7741'4.27 M

AJ7741'(14.0 FT) NORTHEAST OF THE NORTHEAST TOP OF THE MOST NORTHERN CANAL

AJ7741'AND 0.30
 AJ7741'(1.0 FT) SOUTHWEST OF A CARSONITE WITNESS POST. THE DATUM POINT IS SET
 AJ7741'14 CM
 AJ7741'(0.46 FT) BELOW THE LEVEL OF THE GROUND, ABOUT 1.07 M (3.5 FT) BELOW
 AJ7741'THE LEVEL
 AJ7741'OF U.S. HIGHWAY 41, BEING THE TOP OF A STAINLESS STEEL ROD DRIVEN
 AJ7741'11.23 M
 AJ7741'(36.84 FT) TO REFUSAL AND ENCASED IN A 5-INCH PVC PIPE WITH AN ACCESS
 AJ7741'COVER.
 AJ7741'
 AJ7741'
 AJ7741'
 AJ7741'
 AJ7741'
 AJ7741
 AJ7741 STATION RECOVERY (2002)
 AJ7741
 AJ7741'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
 AJ7741'THE MARK IS 18.0 KM (11.2 MI) SOUTHEAST OF NAPLES IN SECTION 18,
 AJ7741'TOWNSHIP 51
 AJ7741'SOUTH, RANGE 27 EAST COLLIER COUNTY, FLORIDA. OWNERSHIP - DESERET
 AJ7741'FARMS OF
 AJ7741'RUSKIN.
 AJ7741'
 AJ7741'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
 AJ7741'COUNTY
 AJ7741'ROAD 951 (I-75 EXIT 15, NEAR NAPLES) GO SOUTH ON COUNTY ROAD 951
 AJ7741'11.1KM (6.9
 AJ7741'MI) TO THE INTERSECTION WITH U.S. HIGHWAY 41 (TAMIAMI TRAIL), GO
 AJ7741'SOUTHEAST ON
 AJ7741'U.S. HIGHWAY 41 6.2 KM (3.86 MI) TO A DIRT DRIVE LEADING NORTH INTO
 AJ7741'DESERET
 AJ7741'FARMS OF RUSKIN (15255 TAMIAMI TRAIL E.) AND THE MARK LEFT.
 AJ7741'
 AJ7741'THE MARK IS 33.44 M (109.7 FT) NORTHEAST OF THE CENTERLINE U.S.
 AJ7741'HIGHWAY 41,
 AJ7741'27.31 M (89.6 FT) NORTHEAST OF A STEEL GUARDRAIL, 21.88 M (71.8 FT)
 AJ7741'NORTHEAST
 AJ7741'OF A WOOD POWER POLE, 11.28 M (37.0 FT) NORTHEAST OF A WOOD GUY POLE,
 AJ7741'4.27 M
 AJ7741'(14.0 FT) NORTHEAST OF THE NORTHEAST TOP OF THE MOST NORTHERN CANAL
 AJ7741'AND 0.30
 AJ7741'(1.0 FT) SOUTHWEST OF A CARSONITE WITNESS POST. THE DATUM POINT IS SET
 AJ7741'14 CM
 AJ7741'(0.46 FT) BELOW THE LEVEL OF THE GROUND, ABOUT 1.07 M (3.5 FT) BELOW
 AJ7741'THE LEVEL
 AJ7741'OF U.S. HIGHWAY 41, BEING THE TOP OF A STAINLESS STEEL ROD DRIVEN
 AJ7741'11.23 M
 AJ7741'(36.84 FT) TO REFUSAL AND ENCASED IN A 5-INCH PVC PIPE WITH AN ACCESS
 AJ7741'COVER.
 AJ7741'
 AJ7741'
 AJ7741'
 AJ7741'STATION RECOVERY (2002)
 AJ7741'RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CP)
 AJ7741'RECOVERED AS DESCRIBED.
 AJ7741'
 AJ7741'
 AJ7741'

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

The NGS Data Sheet

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

DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AD8737 *****
AD8737 DESIGNATION - JUSTIN
AD8737 PID - AD8737
AD8737 STATE/COUNTY- FL/COLLIER
AD8737 USGS QUAD - BELLE MEADE (1991)
AD8737
AD8737 *CURRENT SURVEY CONTROL
AD8737
AD8737* NAD 83(2007)- 26 03 00.42355(N) 081 41 59.53634(W) ADJUSTED
AD8737* NAVD 88 - 3.210 (meters) 10.53 (feet) ADJUSTED
AD8737
AD8737 EPOCH DATE - 2002.00
AD8737 X - 827,732.179 (meters) COMP
AD8737 Y - -5,673,808.556 (meters) COMP
AD8737 Z - 2,784,042.532 (meters) COMP
AD8737 LAPLACE CORR- -1.48 (seconds) DEFLEC99
AD8737 ELLIP HEIGHT- -20.178 (meters) (02/10/07) ADJUSTED
AD8737 GEOID HEIGHT- -23.41 (meters) GEOID03
AD8737 DYNAMIC HT - 3.205 (meters) 10.52 (feet) COMP
AD8737
AD8737 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AD8737 Type PID Designation North East Ellip
AD8737 -----
AD8737 NETWORK AD8737 JUSTIN 0.76 0.84 1.96
AD8737 -----
AD8737 MODELED GRAV- 979,041.9 (mgal) NAVD 88
AD8737
AD8737 VERT ORDER - FIRST CLASS II
AD8737
AD8737.The horizontal coordinates were established by GPS observations
AD8737.and adjusted by the National Geodetic Survey in February 2007.
AD8737
AD8737.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AD8737.See [National Readjustment](#) for more information.
AD8737.The horizontal coordinates are valid at the epoch date displayed above.
AD8737.The epoch date for horizontal control is a decimal equivalence
AD8737.of Year/Month/Day.
AD8737
AD8737.The orthometric height was determined by differential leveling
AD8737.and adjusted in January 2002.
AD8737
AD8737.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AD8737
AD8737.The Laplace correction was computed from DEFLEC99 derived deflections.
AD8737
AD8737.The ellipsoidal height was determined by GPS observations
AD8737.and is referenced to NAD 83.
AD8737
AD8737.The geoid height was determined by GEOID03.
AD8737
AD8737.The dynamic height is computed by dividing the NAVD 88
AD8737.geopotential number by the normal gravity value computed on the
AD8737.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD8737.degrees latitude (g = 980.6199 gals.).
AD8737
AD8737.The modeled gravity was interpolated from observed gravity values.

AD8737

AD8737;		North	East	Units	Scale Factor	Converg.
AD8737;SPC FL E	-	190,354.830	129,963.295	MT	1.00000172	-0 18 26.5
AD8737;SPC FL E	-	624,522.47	426,387.91	sFT	1.00000172	-0 18 26.5
AD8737;UTM 17	-	2,881,421.863	429,987.192	MT	0.99966052	-0 18 26.5

AD8737

AD8737!		Elev Factor	x	Scale Factor	=	Combined Factor
AD8737!SPC FL E	-	1.00000317	x	1.00000172	=	1.00000489
AD8737!UTM 17	-	1.00000317	x	0.99966052	=	0.99966369

AD8737

AD8737:		Primary Azimuth Mark	Grid Az
AD8737:SPC FL E	-	JUSTIN AZ MK	182 26 50.0
AD8737:UTM 17	-	JUSTIN AZ MK	182 26 50.0

AD8737

AD8737	PID	Reference Object	Distance	Geod. Az
AD8737				ddmmss.s
AD8737	AD8746	JUSTIN AZ MK	APPROX. 0.7 KM	1820823.5

AD8737

AD8737

SUPERSEDED SURVEY CONTROL

AD8737

AD8737	ELLIP H (12/12/02)	-20.225 (m)	GP ()	4 1
AD8737	NAD 83(1999)- 26 03 00.42335(N)	081 41 59.53725(W)	AD ()	1
AD8737	ELLIP H (07/06/01) -20.109 (m)		GP ()	4 2
AD8737	NAD 83(1990)- 26 03 00.42206(N)	081 41 59.53730(W)	AD ()	1
AD8737	ELLIP H (08/16/94) -20.117 (m)		GP ()	4 1
AD8737	NAVD 88 (12/12/02) 3.21 (m)	10.5 (f)	LEVELING	3

AD8737

AD8737.Superseded values are not recommended for survey control.

AD8737.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AD8737.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD8737

AD8737_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ2998781422(NAD 83)

AD8737_MARKER: F = FLANGE-ENCASED ROD

AD8737_SETTING: 50 = ALUMINUM ALLOY ROD W/O SLEEVE (10 FT.+)

AD8737_SP_SET: 5/8 INCH ALUM ROD W/ACCESS COV

AD8737_STAMPING: JUSTIN 1993

AD8737_MARK LOGO: BANNER

AD8737_PROJECTION: FLUSH

AD8737_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

AD8737_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AD8737_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AD8737+SATELLITE: SATELLITE OBSERVATIONS - March 18, 2002

AD8737_ROD/PIPE-DEPTH: 4.27 meters

AD8737

AD8737	HISTORY	- Date	Condition	Report By
AD8737	HISTORY	- 1993	MONUMENTED	BANNER
AD8737	HISTORY	- 20010626	GOOD	LDBLS
AD8737	HISTORY	- 20020108	GOOD	FLDEP
AD8737	HISTORY	- 20020318	GOOD	MAPTEC

AD8737

AD8737

STATION DESCRIPTION

AD8737

AD8737'DESCRIBED BY BANNERMAN SURVEYORS INCORPORATED 1993

AD8737'STATION IS LOCATED ABOUT 1.2 KM (0.75 MI) SOUTH OF THE CENTERLINE

AD8737'JUNCTION OF STATE ROAD 41 AND COUNTY ROAD 951. STATION IS 3.7 M (12

AD8737'FT) SOUTH OF THE SOUTH EDGE OF HENDERSON CREEK BRIDGE IN THE MEDIUM OF

AD8737'STATE ROAD 951. STATION IS 1.4 M (4.5 FT) SOUTH AND 3.0 M (10 FT) EAST

AD8737'OF THE SOUTHWEST END OF BRIDGE.

AD8737'DESCRIBED BY T. FLECKER.

AD8737

AD8737

STATION RECOVERY (2001)

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AJ7572 *****
AJ7572 DESIGNATION - L 534
AJ7572 PID - AJ7572
AJ7572 STATE/COUNTY- FL/COLLIER
AJ7572 USGS QUAD - CORKSCREW SE (1973)
AJ7572
AJ7572 *CURRENT SURVEY CONTROL
AJ7572
AJ7572* NAD 83(2007)- 26 16 32.40905(N) 081 37 23.28093(W) ADJUSTED
AJ7572* NAVD 88 - 4.236 (meters) 13.90 (feet) ADJUSTED
AJ7572
AJ7572 EPOCH DATE - 2002.00
AJ7572 X - 833,725.385 (meters) COMP
AJ7572 Y - -5,661,794.581 (meters) COMP
AJ7572 Z - 2,806,471.331 (meters) COMP
AJ7572 LAPLACE CORR- -1.48 (seconds) DEFLEC99
AJ7572 ELLIP HEIGHT- -19.757 (meters) (02/10/07) ADJUSTED
AJ7572 GEOID HEIGHT- -23.97 (meters) GEOID03
AJ7572 DYNAMIC HT - 4.229 (meters) 13.87 (feet) COMP
AJ7572
AJ7572 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AJ7572 Type PID Designation North East Ellip
AJ7572 -----
AJ7572 NETWORK AJ7572 L 534 1.96 1.86 3.65
AJ7572 -----
AJ7572 MODELED GRAV- 979,045.7 (mgal) NAVD 88
AJ7572
AJ7572 VERT ORDER - FIRST CLASS II
AJ7572
AJ7572.The horizontal coordinates were established by GPS observations
AJ7572.and adjusted by the National Geodetic Survey in February 2007.
AJ7572
AJ7572.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AJ7572.See National Readjustment for more information.
AJ7572.The horizontal coordinates are valid at the epoch date displayed above.
AJ7572.The epoch date for horizontal control is a decimal equivalence
AJ7572.of Year/Month/Day.
AJ7572
AJ7572.The orthometric height was determined by differential leveling
AJ7572.and adjusted in February 2002.
AJ7572
AJ7572.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ7572
AJ7572.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ7572
AJ7572.The ellipsoidal height was determined by GPS observations
AJ7572.and is referenced to NAD 83.
AJ7572
AJ7572.The geoid height was determined by GEOID03.
AJ7572
AJ7572.The dynamic height is computed by dividing the NAVD 88
AJ7572.geopotential number by the normal gravity value computed on the
AJ7572.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7572.degrees latitude (g = 980.6199 gals.).
AJ7572
AJ7572.The modeled gravity was interpolated from observed gravity values.
```

AJ7572

	North	East	Units	Scale Factor	Converg.
AJ7572; SPC FL E	- 215,304.297	137,762.526	MT	0.99998898	-0 16 33.1
AJ7572; SPC FL E	- 706,377.51	451,975.89	sFT	0.99998898	-0 16 33.1
AJ7572; UTM 17	- 2,906,362.817	437,783.761	MT	0.99964779	-0 16 33.1

AJ7572

	Elev Factor	x	Scale Factor	=	Combined Factor
AJ7572! SPC FL E	- 1.00000310	x	0.99998898	=	0.99999208
AJ7572! UTM 17	- 1.00000310	x	0.99964779	=	0.99965089

AJ7572

SUPERSEDED SURVEY CONTROL

AJ7572

	NAD 83(1999)	-	26 16 32.40904(N)	081 37 23.28109(W)	AD () 1
AJ7572 ELLIP H (12/12/02)	-19.775	(m)			GP () 4 2
AJ7572 NAVD 88 (12/12/02)	4.24	(m)		13.9	(f) LEVELING 3

AJ7572

AJ7572.Superseded values are not recommended for survey control.

AJ7572.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AJ7572.[See file dsdata.txt](#) to determine how the superseded data were derived.

AJ7572

AJ7572_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK3778406363(NAD 83)

AJ7572_MARKER: F = FLANGE-ENCASED ROD

AJ7572_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL

AJ7572+WITH SETTING: INFORMATION.

AJ7572_STAMPING: L 534 2001 CERP

AJ7572_MARK LOGO: NONE

AJ7572_PROJECTION: RECESSED 10 CENTIMETERS

AJ7572_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

AJ7572_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AJ7572_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AJ7572+SATELLITE: SATELLITE OBSERVATIONS - January 15, 2008

AJ7572_ROD/PIPE-DEPTH: 2.7 meters

AJ7572_SLEEVE-DEPTH : 0.5 meters

AJ7572

	History	-	Date	Condition	Report By
AJ7572	HISTORY	-	20010807	MONUMENTED	LDBLS
AJ7572	HISTORY	-	20020311	GOOD	MAPTEC
AJ7572	HISTORY	-	20030612	GOOD	FLDEP
AJ7572	HISTORY	-	20080115	GOOD	AIMENG

AJ7572

STATION DESCRIPTION

AJ7572

AJ7572'DESCRIBED BY LD BRADLEY LAND SURVEYORS 2001 (JCH)

AJ7572'THE MARK IS ABOUT 29.6 KM (18.41 MI) NORTHEAST OF NAPLES, ABOUT 35.1

AJ7572'KM (21.82

AJ7572'MI) SOUTHWEST OF IMMOKALEE, IN COLLIER COUNTY, FLORIDA. OWNERSHIP -

AJ7572'COLLIER

AJ7572'COUNTY

AJ7572'

AJ7572'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND

AJ7572'COUNTY

AJ7572'ROAD 846 (I-75 EXIT 17) GO EAST ON COUNTY ROAD 846 5.3 KM (3.3 MI) TO

AJ7572'THE

AJ7572'INTERSECTION WITH COUNTY ROAD 951, CONTINUE EAST ON COUNTY ROAD 846

AJ7572'6.6 KM

AJ7572'(4.11 MI) TO THE MARK ON THE LEFT.

AJ7572'

AJ7572'THE MARK IS A STAINLESS STEEL ROD 45.48 M (149.2 FT) NORTHEAST OF A

AJ7572'WOOD POWER

AJ7572'POLE, 31.09 M (102.0 FT) NORTHWEST OF A WOOD POWER POLE, 14.54 M (47.7

AJ7572'FT)

AJ7572'NORTH OF THE CENTERLINE OF COUNTY ROAD 846, 1.22 M (4.0 FT) SOUTH OF A

AJ7572'SOUTH

AJ7572'CANAL BANK AND 0.61 M (2.0 FT) SOUTH OF A CARSONITE WITNESS POST. THE
 AJ7572'DATUM
 AJ7572'POINT IS SET 14 CM (0.45 FT) BELOW THE LEVEL OF THE GROUND, ABOUT 0.61
 AJ7572'M (2.0
 AJ7572'FT) BELOW THE LEVEL OF THE HIGHWAY, BEING THE TOP OF A STAINLESS STEEL
 AJ7572'ROD
 AJ7572'DRIVEN 2.68 M (8.79 FT) TO REFUSAL AND ENCASED IN A 5-INCH PVC PIPE
 AJ7572'WITH AN
 AJ7572'ACCESS COVER.
 AJ7572'
 AJ7572'NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572
 AJ7572 STATION RECOVERY (2002)
 AJ7572
 AJ7572
 AJ7572'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
 AJ7572'THE MARK IS ABOUT 29.6 KM (18.41 MI) NORTHEAST OF NAPLES, ABOUT 35.1
 AJ7572'KM (21.82
 AJ7572'MI) SOUTHWEST OF IMMOKALEE, IN COLLIER COUNTY, FLORIDA. OWNERSHIP -
 AJ7572'COLLIER
 AJ7572'COUNTY
 AJ7572'
 AJ7572'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND
 AJ7572'COUNTY
 AJ7572'ROAD 846 (I-75 EXIT 17) GO EAST ON COUNTY ROAD 846 5.3 KM (3.3 MI) TO
 AJ7572'THE
 AJ7572'INTERSECTION WITH COUNTY ROAD 951, CONTINUE EAST ON COUNTY ROAD 846
 AJ7572'6.6 KM
 AJ7572'(4.11 MI) TO THE MARK ON THE LEFT.
 AJ7572'
 AJ7572'THE MARK IS A STAINLESS STEEL ROD 45.48 M (149.2 FT) NORTHEAST OF A
 AJ7572'WOOD POWER
 AJ7572'POLE, 31.09 M (102.0 FT) NORTHWEST OF A WOOD POWER POLE, 14.54 M (47.7
 AJ7572'FT)
 AJ7572'NORTH OF THE CENTERLINE OF COUNTY ROAD 846, 1.22 M (4.0 FT) SOUTH OF A
 AJ7572'SOUTH
 AJ7572'CANAL BANK AND 0.61 M (2.0 FT) SOUTH OF A CARSONITE WITNESS POST. THE
 AJ7572'DATUM
 AJ7572'POINT IS SET 14 CM (0.45 FT) BELOW THE LEVEL OF THE GROUND, ABOUT 0.61
 AJ7572'M (2.0
 AJ7572'FT) BELOW THE LEVEL OF THE HIGHWAY, BEING THE TOP OF A STAINLESS STEEL
 AJ7572'ROD
 AJ7572'DRIVEN 2.68 M (8.79 FT) TO REFUSAL AND ENCASED IN A 5-INCH PVC PIPE
 AJ7572'WITH AN
 AJ7572'ACCESS COVER.
 AJ7572'
 AJ7572'NOTE - A MAGNET WAS PLACED INSIDE THE SLEEVE, BELOW THE ACCESS COVER.
 AJ7572'
 AJ7572'RECOVERED AS DESCRIBED 2002 MAPTECH INC (CP)
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572'
 AJ7572
 AJ7572 STATION RECOVERY (2003)
 AJ7572
 AJ7572
 AJ7572'RECOVERY NOTE BY FL DEPT OF ENV PRO 2003 (BPJ)
 AJ7572'RECOVERED AS DESCRIBED.

AJ7572

AJ7572

STATION RECOVERY (2008)

AJ7572

AJ7572'RECOVERY NOTE BY AIM ENGINEERING AND SURVEYING 2008 (BRH)

AJ7572'ROADWAY HAS BEEN WIDEN. WOOD POWER POLES TO THE SOUTH HAVE BEEN

AJ7572'REMOVED. (NEW REFERENCES) 0.6 FT SOUTH OF A CARSONITE WITNESS POST,

AJ7572'29.6 FT NORTH OF BACK OF TYPE F CONCRETE CURB, AND 101.5 FT EAST OF

AJ7572'CONCRETE POWER POLE A363M12.

*** retrieval complete.

Elapsed Time = 00:00:00

The NGS Data Sheet

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

DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1 National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
DG8590 *****
DG8590 HT_MOD - This is a Height Modernization Survey Station.
DG8590 DESIGNATION - M 598
DG8590 PID - DG8590
DG8590 STATE/COUNTY- FL/COLLIER
DG8590 USGS QUAD - BELLE MEADE SE (1973)
DG8590
DG8590 *CURRENT SURVEY CONTROL
DG8590
DG8590* NAD 83(2007)- 26 05 01.43400(N) 081 32 32.72554(W) ADJUSTED
DG8590* NAVD 88 - 2.00 (meters) 6.6 (feet) GPS OBS
DG8590
DG8590 EPOCH DATE - 2002.00
DG8590 X - 843,079.646 (meters) COMP
DG8590 Y - -5,669,892.579 (meters) COMP
DG8590 Z - 2,787,387.115 (meters) COMP
DG8590 LAPLACE CORR- -1.98 (seconds) DEFLEC99
DG8590 ELLIP HEIGHT- -21.686 (meters) (02/10/07) ADJUSTED
DG8590 GEOID HEIGHT- -23.69 (meters) GEOID03
DG8590
DG8590 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
DG8590 Type PID Designation North East Ellip
DG8590 -----
DG8590 NETWORK DG8590 M 598 0.69 0.84 1.84
DG8590 -----
DG8590
DG8590.The horizontal coordinates were established by GPS observations
DG8590.and adjusted by the National Geodetic Survey in February 2007.
DG8590
DG8590.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
DG8590.See [National Readjustment](#) for more information.
DG8590.The horizontal coordinates are valid at the epoch date displayed above.
DG8590.The epoch date for horizontal control is a decimal equivalence
DG8590.of Year/Month/Day.
DG8590
DG8590.The orthometric height was determined by GPS observations and a
DG8590.high-resolution geoid model.
DG8590.The orthometric height was determined by GPS observations and a
DG8590.high-resolution geoid model using precise GPS observation and
DG8590.processing techniques. It supersedes the leveled height previously
DG8590.determined for this station.
DG8590
DG8590.[Photographs](#) are available for this station.
DG8590
DG8590.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DG8590
DG8590.The Laplace correction was computed from DEFLEC99 derived deflections.
DG8590
DG8590.The ellipsoidal height was determined by GPS observations
DG8590.and is referenced to NAD 83.
DG8590
DG8590.The geoid height was determined by GEOID03.
DG8590
DG8590;
DG8590;SPC FL E - North East Units Scale Factor Converg.
DG8590;SPC FL E - 194,003.760 145,735.020 MT 0.99997752 -0 14 18.6
DG8590;SPC FL E - 636,494.00 478,132.31 sFT 0.99997752 -0 14 18.6

DG8590;UTM 17 - 2,885,069.548 445,753.535 MT 0.99963633 -0 14 18.6
 DG8590
 DG8590! - Elev Factor x Scale Factor = Combined Factor
 DG8590!SPC FL E - 1.00000341 x 0.99997752 = 0.99998093
 DG8590!UTM 17 - 1.00000341 x 0.99963633 = 0.99963974
 DG8590
 DG8590 SUPERSEDED SURVEY CONTROL
 DG8590
 DG8590 NAD 83(1999)- 26 05 01.43361(N) 081 32 32.72637(W) AD() 1
 DG8590 ELLIP H (12/01/04) -21.619 (m) GP() 3 1
 DG8590 NAVD 88 (01/23/08) 2.020 (m) 6.63 (f) ADJUSTED 2 1
 DG8590
 DG8590.Superseded values are not recommended for survey control.
 DG8590.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DG8590.[See file dsdata.txt](#) to determine how the superseded data were derived.
 DG8590
 DG8590_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ4575485070(NAD 83)
 DG8590_MARKER: F = FLANGE-ENCASED ROD
 DG8590_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+))
 DG8590_STAMPING: M 598 2004
 DG8590_MARK LOGO: NGS
 DG8590_PROJECTION: FLUSH
 DG8590_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
 DG8590_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 DG8590_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DG8590+SATELLITE: SATELLITE OBSERVATIONS - January 23, 2004
 DG8590_ROD/PIPE-DEPTH: 4.0 meters
 DG8590
 DG8590 HISTORY - Date Condition Report By
 DG8590 HISTORY - 20040204 MONUMENTED FLDEP
 DG8590 HISTORY - 20040123 GOOD FLDEP
 DG8590
 DG8590 STATION DESCRIPTION
 DG8590
 DG8590'DESCRIBED BY FL DEPT OF ENV PRO 2004 (BPJ)
 DG8590'THE MARK IS ABOUT 16.0 MI EAST OF NAPLES, ESTIMATED SECTION 30,
 DG8590'TOWNSHIP 50 SOUTH, RANGE 28 EAST.
 DG8590'
 DG8590'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE 75 AND COUNTY
 DG8590'ROAD 951 (EXIT 101, COLLIER BOULEVARD) ON THE EAST SIDE OF NAPLES, GO
 DG8590'NORTH ON COUNTY ROAD 951 (COLLIER BOULEVARD) FOR 3.6 MI TO THE
 DG8590'JUNCTION OF COUNTY ROAD 896 (PINE RIDGE ROAD) ON THE LEFT AND WHITE
 DG8590'BOULEVARD ON THE RIGHT, CONTINUE NORTH ON COUNTY ROAD 951 (COLLIER
 DG8590'BOULEVARD) FOR 1.2 MI TO THE JUNCTION OF GOLDEN GATE BOULEVARD (COUNTY
 DG8590'ROAD 876) ON THE RIGHT, TURN RIGHT ON GOLDEN GATE BOULEVARD (COUNTY
 DG8590'ROAD 876) AND GO EAST FOR 5.0 MI TO THE INTERSECTION OF WILSON
 DG8590'BOULEVARD, CONTINUE EAST ON GOLDEN GATE BOULEVARD (COUNTY ROAD 876)
 DG8590'FOR 3.85 MI TO THE INTERSECTION OF EVERGLADES BOULEVARD, TURN RIGHT
 DG8590'ON EVERGLADES BOULEVARD AND GO SOUTH FOR 5.3 MI TO THE UNDERPASS OF
 DG8590'INTERSTATE 75, CONTINUE SOUTH ON EVERGLADES BOULEVARD FOR 4.8 MI TO
 DG8590'THE MARK ON THE LEFT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A
 DG8590'DEPTH OF 13.2 FT WITH A NGS LOGO CAP FLUSH WITH THE GROUND AND LEVEL
 DG8590'WITH EVERGLADES BOULEVARD, THE DATUM POINT IS RECESSED 0.5 FT BELOW
 DG8590'THE LEVEL OF THE NGS LOGO CAP.
 DG8590'
 DG8590'LOCATED 22.0 FT NORTH OF THE APPROXIMATE CENTERLINE OF 84TH AVENUE SE,
 DG8590'20.8 FT EAST OF THE APPROXIMATE CENTERLINE OF EVERGLADES BOULEVARD
 DG8590'AND 1.4 FT WEST OF A CARSONITE WITNESS POST.
 DG8590'
 DG8590'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH NGS LOGO CAP.
 DG8590'
 DG8590'NOTE A MAGNET WAS PLACED INSIDE OF THE NGS LOGO CAP.
 DG8590

DG8590 STATION RECOVERY (2004)
DG8590
DG8590'RECOVERY NOTE BY FL DEPT OF ENV PRO 2004 (BPJ)
DG8590'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 = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
AJ7574 *****
AJ7574 DESIGNATION - N 534
AJ7574 PID - AJ7574
AJ7574 STATE/COUNTY- FL/COLLIER
AJ7574 USGS QUAD - CORKSCREW SE (1973)
AJ7574
AJ7574 *CURRENT SURVEY CONTROL
AJ7574
AJ7574* NAD 83(2007)- 26 17 11.07297(N) 081 35 40.20616(W) ADJUSTED
AJ7574* NAVD 88 - 5.366 (meters) 17.61 (feet) ADJUSTED
AJ7574
AJ7574 EPOCH DATE - 2002.00
AJ7574 X - 836,477.725 (meters) COMP
AJ7574 Y - -5,660,857.016 (meters) COMP
AJ7574 Z - 2,807,538.723 (meters) COMP
AJ7574 LAPLACE CORR- -1.39 (seconds) DEFLEC99
AJ7574 ELLIP HEIGHT- -18.662 (meters) (02/10/07) ADJUSTED
AJ7574 GEOID HEIGHT- -24.03 (meters) GEOID03
AJ7574 DYNAMIC HT - 5.358 (meters) 17.58 (feet) COMP
AJ7574
AJ7574 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AJ7574 Type PID Designation North East Ellip
AJ7574 -----
AJ7574 NETWORK AJ7574 N 534 2.29 2.16 4.41
AJ7574 -----
AJ7574 MODELED GRAV- 979,045.8 (mgal) NAVD 88
AJ7574
AJ7574 VERT ORDER - FIRST CLASS II
AJ7574
AJ7574.The horizontal coordinates were established by GPS observations
AJ7574.and adjusted by the National Geodetic Survey in February 2007.
AJ7574
AJ7574.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AJ7574.See National Readjustment for more information.
AJ7574.The horizontal coordinates are valid at the epoch date displayed above.
AJ7574.The epoch date for horizontal control is a decimal equivalence
AJ7574.of Year/Month/Day.
AJ7574
AJ7574.The orthometric height was determined by differential leveling
AJ7574.and adjusted in February 2002.
AJ7574
AJ7574.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ7574
AJ7574.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ7574
AJ7574.The ellipsoidal height was determined by GPS observations
AJ7574.and is referenced to NAD 83.
AJ7574
AJ7574.The geoid height was determined by GEOID03.
AJ7574
AJ7574.The dynamic height is computed by dividing the NAVD 88
AJ7574.geopotential number by the normal gravity value computed on the
AJ7574.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7574.degrees latitude (g = 980.6199 gals.).
AJ7574
AJ7574.The modeled gravity was interpolated from observed gravity values.
```

AJ7574

	North	East	Units	Scale Factor	Converg.
AJ7574;SPC FL E	- 216,480.720	140,627.758	MT	0.99998468	-0 15 47.8
AJ7574;SPC FL E	- 710,237.16	461,376.24	sFT	0.99998468	-0 15 47.8
AJ7574;UTM 17	- 2,907,538.839	440,648.016	MT	0.99964349	-0 15 47.8

AJ7574

	Elev Factor	x	Scale Factor	=	Combined Factor
AJ7574!SPC FL E	- 1.00000293	x	0.99998468	=	0.99998761
AJ7574!UTM 17	- 1.00000293	x	0.99964349	=	0.99964642

AJ7574

SUPERSEDED SURVEY CONTROL

AJ7574

AJ7574	NAD 83(1999)-	26 17 11.07297(N)	081 35 40.20633(W)	AD() 1
AJ7574	ELLIP H (12/12/02)	-18.679 (m)		GP() 4 2
AJ7574	NAVD 88 (12/12/02)	5.37 (m)	17.6	(f) LEVELING	3

AJ7574

AJ7574.Superseded values are not recommended for survey control.

AJ7574.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AJ7574.[See file dsdata.txt](#) to determine how the superseded data were derived.

AJ7574

AJ7574_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK4064807539(NAD 83)

AJ7574_MARKER: DD = SURVEY DISK

AJ7574_SETTING: 35 = SET IN A MAT FOUNDATION OR CONCRETE SLAB OTHER THAN

AJ7574+WITH SETTING: PAVEMENT

AJ7574_SP_SET: FLAGPOLE BASE

AJ7574_STAMPING: N 534 2001 CERP

AJ7574_MARK LOGO: USE

AJ7574_MAGNETIC: N = NO MAGNETIC MATERIAL

AJ7574_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AJ7574+STABILITY: SURFACE MOTION

AJ7574_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AJ7574+SATELLITE: SATELLITE OBSERVATIONS - June 30, 2008

AJ7574

	Date	Condition	Report By
AJ7574 HISTORY	- 20010808	MONUMENTED	LDBLS
AJ7574 HISTORY	- 20020311	GOOD	MAPTEC
AJ7574 HISTORY	- 20030612	GOOD	FLDEP
AJ7574 HISTORY	- 20080630	GOOD	MAPTEC

AJ7574

STATION DESCRIPTION

AJ7574

AJ7574'DESCRIBED BY LD BRADLEY LAND SURVEYORS 2001 (JCH)

AJ7574'THE MARK IS ABOUT 33.1 KM (20.58 MI) NORTHEAST OF NAPLES, ABOUT 31.6

AJ7574'KM (19.65

AJ7574'MI) SOUTHWEST OF IMMOKALEE, IN SECTION 23, TOWNSHIP 48 SOUTH, RANGE 27

AJ7574'EAST,

AJ7574'COLLIER COUNTY, FLORIDA. OWNERSHIP - ORANGETREE, 300 ORANGETREE

AJ7574'BOULEVARD,

AJ7574'NAPLES, FLORIDA.

AJ7574'

AJ7574'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE HIGHWAY 75 AND

AJ7574'COUNTY

AJ7574'ROAD 846 (I-75 EXIT 17) GO EAST ON COUNTY ROAD 846 5.3 KM (3.3 MI) TO

AJ7574'THE

AJ7574'INTERSECTION WITH COUNTY ROAD 951, CONTINUE EAST ON COUNTY ROAD 846

AJ7574'10.1 KM

AJ7574'(6.28 MI) TO ORANGETREE BOULEVARD AND THE MARK ON THE RIGHT.

AJ7574'

AJ7574'THE MARK IS A DISK SET IN THE NORTHWEST CORNER OF A CONCRETE FLAGPOLE

AJ7574'FOUNDATION 34.44 M (113.0 FT) EAST OF THE CENTERLINE OF COUNTY ROAD

AJ7574'846, 22.71

AJ7574'M (74.5 FT) NORTH OF THE CENTER ORANGETREE BOULEVARD, 11 CM (0.35 FT)

AJ7574'SOUTH OF

AJ7574
AJ7574 STATION RECOVERY (2008)
AJ7574
AJ7574'RECOVERY NOTE BY MAPTECH INCORPORATED 2008 (BH)
AJ7574'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 = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
DF7052 *****
DF7052  CORS           - This is a GPS Continuously Operating Reference Station.
DF7052  DESIGNATION - NAPLES CORS ARP
DF7052  CORS_ID       - NAPL
DF7052  PID           - DF7052
DF7052  STATE/COUNTY- FL/COLLIER
DF7052  USGS QUAD      - NAPLES NORTH (1987)
DF7052
DF7052                      *CURRENT SURVEY CONTROL
DF7052
DF7052*  NAD 83(CORS)- 26 08 55.10356(N)      081 46 34.62742(W)      ADJUSTED
DF7052*  NAVD 88      -           6.1      (meters)      20.      (feet)  GPS OBS
DF7052
DF7052  EPOCH DATE   -           2002.00
DF7052  X            -           819,477.897 (meters)                      COMP
DF7052  Y            -      -5,670,157.335 (meters)                      COMP
DF7052  Z            -      2,793,845.936 (meters)                      COMP
DF7052  ELLIP HEIGHT-           -17.439 (meters)      (08/??/03) ADJUSTED
DF7052  GEOID HEIGHT-           -23.51 (meters)                      GEOID03
DF7052  HORZ ORDER   - SPECIAL (CORS)
DF7052  ELLP ORDER   - SPECIAL (CORS)
DF7052
DF7052. ITRF positions are available for this station.
DF7052. The coordinates were established by GPS observations
DF7052. and adjusted by the National Geodetic Survey in August 2003.
DF7052. The coordinates are valid at the epoch date displayed above.
DF7052. The epoch date for horizontal control is a decimal equivalence
DF7052. of Year/Month/Day.
DF7052
DF7052. The orthometric height was determined by GPS observations and a
DF7052. high-resolution geoid model.
DF7052
DF7052. The PID for the CORS L1 Phase Center is DF7053.
DF7052
DF7052. The XYZ, and position/ellipsoidal ht. are equivalent.
DF7052
DF7052. The ellipsoidal height was determined by GPS observations
DF7052. and is referenced to NAD 83.
DF7052
DF7052. The geoid height was determined by GEOID03.
DF7052
DF7052;           North      East      Units Scale Factor Converg.
DF7052; SPC FL E    -    201,313.299    122,381.251    MT    1.00001554    -0 20 31.7
DF7052; SPC FL E    -    660,475.38     401,512.49    sFT    1.00001554    -0 20 31.7
DF7052
DF7052!           - Elev Factor x Scale Factor = Combined Factor
DF7052! SPC FL E    -    1.00000274 x    1.00001554 =    1.00001828
DF7052
DF7052                      SUPERSEDED SURVEY CONTROL
DF7052
DF7052. No superseded survey control is available for this station.
DF7052
DF7052_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ2240892377(NAD 83)
DF7052_MARKER: STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
DF7052
DF7052                      STATION DESCRIPTION
```

DF7052
DF7052'DESCRIBED BY NATIONAL GEODETIC SURVEY 2003
DF7052'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DF7052'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DF7052'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DF7052' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION_LOG
DF7052' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.

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

The NGS Data Sheet

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

```
DATABASE = ,PROGRAM = datasheet, VERSION = 7.65
1      National Geodetic Survey, Retrieval Date = FEBRUARY 25, 2009
DG8594 *****
DG8594 HT_MOD      -   This is a Height Modernization Survey Station.
DG8594 DESIGNATION -   R 598
DG8594 PID        -   DG8594
DG8594 STATE/COUNTY- FL/COLLIER
DG8594 USGS QUAD   -   BELLE MEADE SE (1973)
DG8594
DG8594                      *CURRENT SURVEY CONTROL
DG8594
DG8594* NAD 83(2007)- 26 01 06.08982(N)    081 32 30.00980(W)    ADJUSTED
DG8594* NAVD 88      -           1.32      (meters)           4.3      (feet)    GPS OBS
DG8594
DG8594 EPOCH DATE   -           2002.00
DG8594 X            -           843,622.079 (meters)           COMP
DG8594 Y            -          -5,673,027.129 (meters)           COMP
DG8594 Z            -          2,780,880.082 (meters)           COMP
DG8594 LAPLACE CORR-          -2.09 (seconds)           DEFLEC99
DG8594 ELLIP HEIGHT-          -22.252 (meters)           (02/10/07) ADJUSTED
DG8594 GEOID HEIGHT-          -23.58 (meters)           GEOID03
DG8594
DG8594 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
DG8594 Type      PID      Designation           North      East      Ellip
DG8594 -----
DG8594 NETWORK DG8594 R 598                   0.69      0.82      1.76
DG8594 -----
DG8594
DG8594.The horizontal coordinates were established by GPS observations
DG8594.and adjusted by the National Geodetic Survey in February 2007.
DG8594
DG8594.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
DG8594.See National Readjustment for more information.
DG8594.The horizontal coordinates are valid at the epoch date displayed above.
DG8594.The epoch date for horizontal control is a decimal equivalence
DG8594.of Year/Month/Day.
DG8594
DG8594.The orthometric height was determined by GPS observations and a
DG8594.high-resolution geoid model.
DG8594.The orthometric height was determined by GPS observations and a
DG8594.high-resolution geoid model using precise GPS observation and
DG8594.processing techniques. It supersedes the leveled height previously
DG8594.determined for this station.
DG8594
DG8594.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DG8594
DG8594.The Laplace correction was computed from DEFLEC99 derived deflections.
DG8594
DG8594.The ellipsoidal height was determined by GPS observations
DG8594.and is referenced to NAD 83.
DG8594
DG8594.The geoid height was determined by GEOID03.
DG8594
DG8594;
DG8594;SPC FL E      -      186,761.035      145,780.420      MT      0.99997746      -0 14 15.4
DG8594;SPC FL E      -      612,731.83      478,281.26      sFT      0.99997746      -0 14 15.4
DG8594;UTM 17      - 2,877,829.294      445,798.919      MT      0.99963627      -0 14 15.4
DG8594
```


DG8594! - Elev Factor x Scale Factor = Combined Factor
 DG8594!SPC FL E - 1.00000350 x 0.99997746 = 0.99998096
 DG8594!UTM 17 - 1.00000350 x 0.99963627 = 0.99963976
 DG8594
 DG8594 SUPERSEDED SURVEY CONTROL
 DG8594
 DG8594 NAD 83(1999)- 26 01 06.08960(N) 081 32 30.01057(W) AD() 1
 DG8594 ELLIP H (12/01/04) -22.180 (m) GP() 3 1
 DG8594 NAVD 88 (01/23/08) 1.367 (m) 4.48 (f) ADJUSTED 2 1
 DG8594
 DG8594.Superseded values are not recommended for survey control.
 DG8594.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DG8594.[See file dsdata.txt](#) to determine how the superseded data were derived.
 DG8594
 DG8594_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMJ4579977829(NAD 83)
 DG8594_MARKER: F = FLANGE-ENCASED ROD
 DG8594_SETTING: 15 = METAL ROD DRIVEN INTO GROUND. SEE TEXT FOR ADDITIONAL
 DG8594+WITH SETTING: INFORMATION.
 DG8594_STAMPING: R 598 2004
 DG8594_MARK LOGO: NGS
 DG8594_PROJECTION: RECESSED 3 CENTIMETERS
 DG8594_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
 DG8594_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 DG8594_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DG8594+SATELLITE: SATELLITE OBSERVATIONS - May 30, 2007
 DG8594_ROD/PIPE-DEPTH: 2.4 meters
 DG8594
 DG8594 HISTORY - Date Condition Report By
 DG8594 HISTORY - 20040204 MONUMENTED FLDEP
 DG8594 HISTORY - 20040123 GOOD FLDEP
 DG8594 HISTORY - 20070530 GOOD HOLE
 DG8594
 DG8594 STATION DESCRIPTION
 DG8594
 DG8594'DESCRIBED BY FL DEPT OF ENV PRO 2004 (BPJ)
 DG8594'THE MARK IS ABOUT 16.0 MI EAST OF NAPLES, IN SECTION 19, TOWNSHIP 51
 DG8594'SOUTH, RANGE 28 EAST.
 DG8594'
 DG8594'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE 75 AND COUNTY
 DG8594'ROAD 951 (EXIT 101, COLLIER BOULEVARD) ON THE EAST SIDE OF NAPLES, GO
 DG8594'NORTH ON COUNTY ROAD 951 (COLLIER BOULEVARD) FOR 3.6 MI TO THE
 DG8594'JUNCTION OF COUNTY ROAD 896 (PINE RIDGE ROAD) ON THE LEFT AND WHITE
 DG8594'BOULEVARD ON THE RIGHT, CONTINUE NORTH ON COUNTY ROAD 951 (COLLIER
 DG8594'BOULEVARD) FOR 1.2 MI TO THE JUNCTION OF GOLDEN GATE BOULEVARD (COUNTY
 DG8594'ROAD 876) ON THE RIGHT, TURN RIGHT ON GOLDEN GATE BOULEVARD (COUNTY
 DG8594'ROAD 876) AND GO EAST FOR 5.0 MI TO THE INTERSECTION OF WILSON
 DG8594'BOULEVARD, CONTINUE EAST ON GOLDEN GATE BOULEVARD (COUNTY ROAD 876)
 DG8594'FOR 3.85 MI TO THE INTERSECTION OF EVERGLADES BOULEVARD, TURN RIGHT
 DG8594'ON EVERGLADES BOULEVARD AND GO SOUTH FOR 5.3 MI TO THE UNDERPASS OF
 DG8594'INTERSTATE 75, CONTINUE SOUTH ON EVERGLADES BOULEVARD FOR 9.3 MI TO
 DG8594'THE MARK ON THE RIGHT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A
 DG8594'DEPTH OF 7.8 FT WITH A NGS LOGO CAP RECESSED 0.1 FT BELOW THE LEVEL
 DG8594'OF THE GROUND AND ABOUT 0.5 FT ABOVE THE LEVEL OF EVERGLADES
 DG8594'BOULEVARD, THE DATUM POINT IS RECESSED 0.1 FT BELOW THE LEVEL OF THE
 DG8594'NGS LOGO CAP.
 DG8594'
 DG8594'LOCATED 62.3 FT NORTH OF THE APPROXIMATE CENTERLINE OF 120TH AVENUE
 DG8594'SE, 41.5 FT WEST OF THE APPROXIMATE CENTERLINE OF EVERGLADES
 DG8594'BOULEVARD AND 1.5 FT EAST-SOUTHEAST OF A CARSONITE WITNESS POST.
 DG8594'
 DG8594'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH NGS LOGO CAP.
 DG8594'
 DG8594'NOTE A MAGNET WAS PLACED INSIDE OF THE NGS LOGO CAP.

DG8594
DG8594 STATION RECOVERY (2004)
DG8594
DG8594'RECOVERY NOTE BY FL DEPT OF ENV PRO 2004 (BPJ)
DG8594'RECOVERED AS DESCRIBED.
DG8594
DG8594 STATION RECOVERY (2007)
DG8594
DG8594'RECOVERY NOTE BY HOLE MONTES AND ASSOCIATES INC 2007 (BRH)
DG8594'RECOVERED IN GOOD CONDITION.


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

APPENDIX B: NEW GROUND CONTROL STATION INFORMATION

This appendix contains the recovery information sheets for the newly established GPS control stations utilized in Project Area G of the FY2007 State of Florida Division of Emergency Management Ground Control QA/QC Survey Mapping Project.



GPS Station Recovery - GPS Log Sheet



Project Name: Cellier Co.

Station Name: 102

WGS 84 Coordinates

Latitude 26° 19' 49.7"

Longitude 81° 46' 43.4"

Ellip. Height _____

Type of Mark: IPC

Stamping on Mark: LB 6717

Operator Name JRS **Job No.** _____

Date of Survey: 2-27-08 **Julian Day** 57

File Name: 102 **Session #** 5

Type of Receiver: LB-2

Type of Antenna: LB-2

Antenna Height: 2.000

Circle one:

☐ USFT

☒ Meters

Circle one:

☐ ARP

☒ Phase Center

Start Time (local): 4:04

Weather Condition: _____

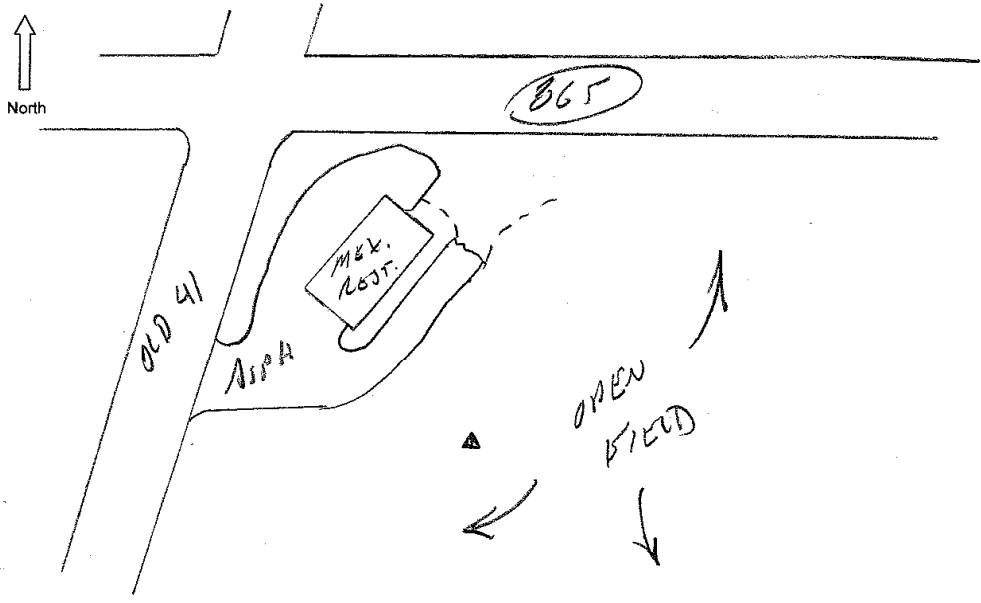
To-Reach Description:

Witness Ties:

Reference Object	Distance	Azimuth
1)		
2)		
3)		
4)		

Vertical Offset (Depth of STA. below Target): _____

Sketch:



GPS Station Recovery - GPS Log Sheet																	
Project Name: <u>COLLIER COUNTY BUY-UP</u>	Operator Name: <u>MBROWN</u>	Job No.: <u>44517</u>															
Station Name: <u>118</u>	Date of Survey: <u>02/20/08</u> Julian Day: <u>057</u>																
WGS 84 Coordinates:																	
Latitude: <u>26°09'11.344"</u>	File Name: <u>88100573</u> Session #: <u>0</u>																
Longitude: <u>81°29'02.680"</u>	Type of Receiver: <u>RB-2</u>																
Ellip. Height: <u>-71.214</u>	Type of Antenna: <u>RB-2</u>																
Type of Mark: <u>PED - SE COR. CATCH BASIN W/IRL</u>	Antenna Height: <u>3.0</u>																
Stamping on Mark: <u>WOOLPERT LB0777</u>	<div style="display: flex; justify-content: space-between;"> <input type="radio"/> Circle one: USFT <input checked="" type="radio"/> Circle one: ARP </div> <div style="display: flex; justify-content: space-between;"> Meters Phase Center </div>																
Start Time (local): <u>2:06 PM</u>		Weather Condition: <u>CLOUDY / WINDY</u>															
To Reach Description: FROM EXIT 80 (SR 29) ON I 75 GO WEST ON I 75 TO S. 60 MILES TO MARK IN CENTER MEDIAN AT THE SE. COR. OF CONC CATCH BASIN.																	
Witness Ties: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Reference Object</th> <th>Distance</th> <th>Azimuth</th> </tr> </thead> <tbody> <tr><td>1)</td><td></td><td></td></tr> <tr><td>2)</td><td></td><td></td></tr> <tr><td>3)</td><td></td><td></td></tr> <tr><td>4)</td><td></td><td></td></tr> </tbody> </table>			Reference Object	Distance	Azimuth	1)			2)			3)			4)		
Reference Object	Distance	Azimuth															
1)																	
2)																	
3)																	
4)																	
Sketch: 																	



GPS Station Recovery - GPS Log Sheet

Project Name: Florida Coastal Mapping ProjectOperator Name: S. LAMBJob No. 66517Station Name: GATORDate of Survey: 26 JAN 08 Julian Day 026

WGS 84 Coordinates

Latitude 25° 52' 21.65"Longitude 081° 22' 5.44"Ellip. Height -73'File Name: GATOR Session # 3Type of Receiver: TRIMBLEType of Antenna: 5800Antenna Height: 2.0mCircle one: ☒ USFT ☐ ARPMet/gs ☒ Phase CenterType of Mark: PIN / DISKStart Time (local): 10:20^{AM}Stamping on Mark: GATORWeather Condition: 75° / CLEAR

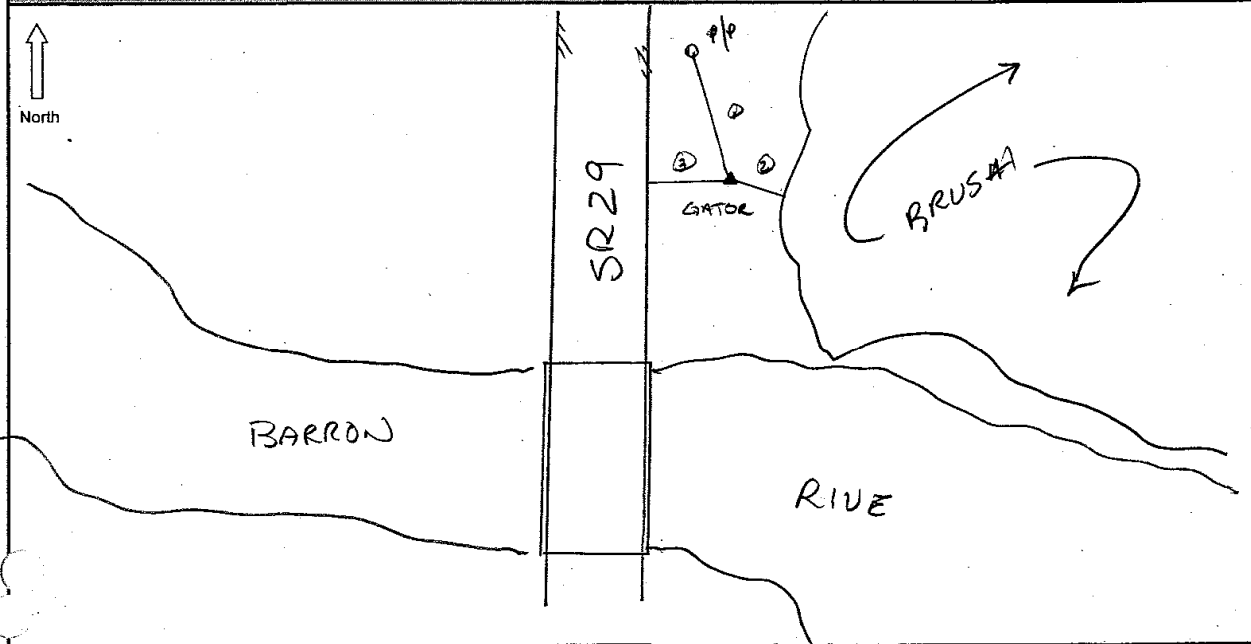
To Reach Description:

STATION GATOR IS LOCATED ON
SR 29 JUST NORTH OF THE BRIDGE
TO EVERGLADES CITY ON EAST SIDE
OF ROW.

Witness Notes:

Reference Object	Distance	Azimuth
1) TO CONC POWER POLE	63'	
2) TO EDGE OF BRUSH	10'	
3) TO EP OF SR 29	30'	
4)		

Sketch:



GPS Station Recovery - GPS Log Sheet

Project Name: Florida Coastal Mapping Project

Station Name: MOCCASIN

Latitude 25° 57' 33.99"

Longitude 081° 30' 49.53

Ellip. Height -39

Type of Mark: BRASS DISK IN CONC.

Stamping on Mark: USFW

Operator Name S. LUMB **Job No.** 66517

Date of Survey: 17 Jan 08 **Julian Day** 017

File Name: 7078 **Session #** #5

Type of Receiver: TRIMBLE

Type of Antenna: R8/5800

Antenna Height: 2.0m

Start Time (local): 11:45 AM

Weather Condition: -/- 75° / cloudy

Remarks Description:

STATION MOCCASIN IS LOCATED ON
 SOUTHSIDE OF US41 AT NEWPORT DR.
 STATION IS NE CORNER OF 10000 ISL.
 NEW REFUGE.

Witnesses:

Reference Object	Distance	Azimuth
1) TO EP OF US41	150'	
2) TO EP OF NEWPORT	50'	
3)		
4)		

Sketch:

North

GPS Station Recovery - GPS Log Sheet																			
Project Name: <u>Area G</u>	Operator Name: <u>M. Brown</u> Job No.: <u>66517</u>																		
Station Name: <u>NEW BASE B</u>	Date of Survey: <u>05/09/08</u> Julian Day: <u>130</u>																		
WGS 84 Coordinates: Latitude: <u>25° 57' 38.190"</u> Longitude: <u>81° 29' 51.067"</u> Ellip. Height: <u>-77.722 GFT</u>	File Name: <u>88101300</u> Session #: <u>A</u> Type of Receiver: <u>RB-2</u> Type of Antenna: <u>RB-2</u>																		
Type of Mark: <u>38 IRC</u>	Antenna Height: <u>2.0</u> <div style="display: flex; justify-content: space-between; font-size: small;"> Circle one: <input type="radio"/> USFT Circle one: <input checked="" type="radio"/> ARP </div> <div style="display: flex; justify-content: space-between; font-size: x-small;"> Meters Phase Center </div>																		
Stamping on Mark: <u>WOOLPERT</u>	Start Time (local): <u>8:30 AM</u> Weather Condition: <u>PIE</u>																		
To-Reach Description: MARK IS LOCATED ON THE SOUTH SIDE OF US-41 3372' EAST OF LAYS DR. AND 71- 20' SOUTH OF EP.	Witness Ties: <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Reference Object</th> <th>Distance</th> <th>Azimuth</th> </tr> </thead> <tbody> <tr><td>1)</td><td></td><td></td></tr> <tr><td>2)</td><td></td><td></td></tr> <tr><td>3)</td><td></td><td></td></tr> <tr><td>4)</td><td></td><td></td></tr> <tr> <td>Vertical Offset (Depth of STA. below Target)</td> <td colspan="2">N/A</td> </tr> </tbody> </table>	Reference Object	Distance	Azimuth	1)			2)			3)			4)			Vertical Offset (Depth of STA. below Target)	N/A	
Reference Object	Distance	Azimuth																	
1)																			
2)																			
3)																			
4)																			
Vertical Offset (Depth of STA. below Target)	N/A																		
Sketch: 																			

GPS Station Recovery - GPS Log Sheet																			
Project Name: <u>Area G</u>	Operator Name <u>W. Miller</u> Job No. <u>66517</u>																		
Station Name: <u>NEW BASE 9</u>	Date of Survey: <u>5-9-08</u> Julian Day <u> </u>																		
WGS 84 Coordinates:	File Name: <u>82721301</u> Session # <u>BASE</u>																		
Latitude <u>26-08-52.41</u>	Type of Receiver: <u>5700</u>																		
Longitude <u>81-46-34.97</u>	Type of Antenna: <u>ZEL GEO</u>																		
Ellip. Height <u>-83.528</u>																			
Type of Mark: <u>5/8" IRC WOOLPERT</u>	Antenna Height: <u>2</u> Circle one: <input type="radio"/> USFT <input checked="" type="radio"/> ARP Meters Phase Center																		
Stamping on Mark: <u>CONTROL POINT</u>	Start Time (local): <u>9:04 A.M.</u> Weather Condition: <u>CLOUDY 72° +/-</u>																		
To-Reach Description: <u>FROM US 84/DAVIS BVD</u> <u>3 CR31/AIRPORT RDS., GO NORTH 0.52 MI</u> <u>TO NORTH RD., GO WEST 0.50 MI TO</u> <u>ENTRANCE TO AIRPORT, MARK IS N.W. OF</u> <u>THE WEST LOT JUST SE. OF THE</u> <u>CONTROL TOWER</u>																			
Witness Ties: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Reference Object</th> <th>Distance</th> <th>Azimuth</th> </tr> </thead> <tbody> <tr><td>1)</td><td></td><td></td></tr> <tr><td>2)</td><td></td><td></td></tr> <tr><td>3)</td><td></td><td></td></tr> <tr><td>4)</td><td></td><td></td></tr> <tr> <td>Vertical Offset (Depth of STA. below Target)</td> <td colspan="2">N/A</td> </tr> </tbody> </table>		Reference Object	Distance	Azimuth	1)			2)			3)			4)			Vertical Offset (Depth of STA. below Target)	N/A	
Reference Object	Distance	Azimuth																	
1)																			
2)																			
3)																			
4)																			
Vertical Offset (Depth of STA. below Target)	N/A																		
Sketch:																			

GPS Station Recovery - GPS Log Sheet																		
Project Name: <u>Area G</u>		Operator Name: <u>W. Miller</u>	Job No.: <u>66517</u>															
Station Name: <u>NEW BASE 10</u>		Date of Survey: <u>5-11-08</u>	Julian Day: _____															
<div style="border: 1px solid black; padding: 2px;"> WGS 84 Coordinates Latitude: <u>25 54 39.88</u> Longitude: <u>81 42 16.27</u> Ellip. Height: <u>-93.23</u> </div>		File Name: <u>82721321</u>	Session #: _____															
		Type of Receiver: <u>5700</u>																
		Type of Antenna: <u>ZEL GEO</u>																
Type of Mark: <u>5/8" IRC WOOLPERT</u>	Antenna Height: <u>2</u>	<div style="display: flex; justify-content: space-between;"> Circle one: <u>USFT</u> Circle one: <u>ARP</u> </div> <div style="display: flex; justify-content: space-between;"> <u>Meters</u> Phase Center </div>																
Stamping on Mark: <u>CONTROL POINT</u>	Start Time (local): <u>8:50 AM</u>	Weather Condition: <u>M. CLOUDY 15°+/-</u>																
To-Reach Description: <u>FROM US 41 & CR 951 GO SOUTH 7.56 MI TO N. BARFIELD DR. GO S.E. 3.75 MI TO MARK</u>		Witness Ties: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Reference Object</th> <th>Distance</th> <th>Azimuth</th> </tr> </thead> <tbody> <tr><td>1)</td><td></td><td></td></tr> <tr><td>2)</td><td></td><td></td></tr> <tr><td>3)</td><td></td><td></td></tr> <tr><td>4)</td><td></td><td></td></tr> </tbody> </table>		Reference Object	Distance	Azimuth	1)			2)			3)			4)		
Reference Object	Distance	Azimuth																
1)																		
2)																		
3)																		
4)																		
Vertical Offset (Depth of STA. below Target):		N/A																
Sketch: <div style="border: 1px solid black; padding: 10px; height: 200px; position: relative;"> <div style="position: absolute; top: 10px; left: 10px;"> <div style="text-align: center;">↑</div> <div>North</div> </div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);"> <p>VACANT LOT</p> <p>17'</p> <p>12'</p> <p>conc S/W</p> <p>HEIGHTS COURT</p> <p>S. BARFIELD DR.</p> <p>MEDIAN</p> </div> </div>																		

GPS Station Recovery - GPS Log Sheet																		
Project Name: <u>COLLIER AREA HQ</u>		Operator Name: <u>JKAIL</u>	Job No. <u>66517</u>															
Station Name: <u>PANTHER</u>		Date of Survey: <u>27 JUN 09</u>	Julian Day <u>179</u>															
<div style="border: 1px solid black; padding: 2px;"> WGS 84 Coordinates Latitude _____ Longitude _____ Ellip. Height _____ </div>		File Name: _____	Session # <u>BASS</u>															
		Type of Receiver: <u>B700</u>	Type of Antenna: <u>ZEPHYR GEODETIC</u>															
Type of Mark: <u>R/K SPIKE W/ PUNCH MARK</u>		Antenna Height: <u>2.000</u>	<div style="display: flex; justify-content: space-between;"> Circle one: <u>USFT</u> Circle one: <u>ARP</u> </div> <div style="display: flex; justify-content: space-between;"> <u>Meters</u> Phase Center </div>															
Stamping on Mark: <u>N/A</u>		Start Time (local): _____	Weather Condition: <u>Hazy 80°</u>															
To Reach Description: <u>SW CORNER OF I 75 & EVERGLADES BLVD.</u>		<div style="border: 1px solid black; padding: 2px;"> Witness Ties <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Reference Object</th> <th>Distance</th> <th>Azimuth</th> </tr> </thead> <tbody> <tr><td>1)</td><td></td><td></td></tr> <tr><td>2)</td><td></td><td></td></tr> <tr><td>3)</td><td></td><td></td></tr> <tr><td>4)</td><td></td><td></td></tr> </tbody> </table> </div>		Reference Object	Distance	Azimuth	1)			2)			3)			4)		
Reference Object	Distance	Azimuth																
1)																		
2)																		
3)																		
4)																		
<div style="border: 1px solid black; padding: 5px;"> Sketch: </div>																		

APPENDIX C: FINAL GROUND QA/QC AND GEODETIC CONTROL COORDINATE LISTING

This appendix contains the final coordinate listings for the LiDAR QA/QC Checkpoints, LiDAR Control Points and the geodetic control stations utilized in Project Area G of the FY2007 State of Florida Division of Emergency Management Ground Control QA/QC Survey Mapping Project.

PROJECT AREA 'G'

HORIZONTAL DATUM: NAD83(1999)

VERTICAL DATUM: NAVD88

UNITS: US SURVEY FEET

STATE PLANE ZONE: FLORIDA EAST 0902

GEOID MODEL: GEOID03

COORDINATE SYSTEM: GRID

****NOTE: ALL ELEVATIONS ARE STATION ELEVATIONS****

STATIONS IN **BLUE** = CONVENTIONAL SURVEY METHODS

STATIONS IN **RED** = RAPID STATIC GPS METHODS

STATIONS IN **GREEN** = RAPID STATIC POINTS ALSO USED AS TRAVERSE POINTS

LIDAR QA/QC CHECKPOINTS AND LIDAR CONTROL POINTS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
7000	726325.83	386269.52	11.37	0.01	0.01	0.10	URBAN AREAS
7001	726459.04	385323.90	6.84	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
7002	726472.81	385433.22	8.22	0.01	0.01	0.10	BRUSH LANDS AND LOW TREES
7005	709085.63	407203.56	12.12	0.01	0.01	0.09	URBAN AREAS
7006	709029.77	407144.21	12.24	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7007	709132.90	407198.71	11.96	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7010	697508.12	391947.94	11.98	0.02	0.01	0.10	URBAN AREAS
7011	697665.10	391739.37	9.63	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
7012	697550.93	391922.66	10.60	0.02	0.01	0.10	BRUSH LANDS AND LOW TREES
7015	683820.91	409990.66	10.74	0.01	0.01	0.09	URBAN AREAS
7016	683792.17	409939.63	10.52	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7017	684328.90	409883.46	10.26	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7020	676008.33	394301.79	13.91	0.01	0.01	0.09	URBAN AREAS
7021	676203.42	394194.69	14.34	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7022	675976.47	394218.55	14.58	0.02	0.01	0.10	BRUSH LANDS AND LOW TREES
7025	665714.64	412919.92	9.22	0.01	0.01	0.09	URBAN AREAS
7026	665663.37	412836.31	8.57	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7027	665912.37	413231.80	7.92	0.01	0.02	0.10	BRUSH LANDS AND LOW TREES
7030	652401.78	392120.49	4.47	0.01	0.01	0.11	URBAN AREAS
7031	652483.33	392251.81	3.79	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
7032	652316.70	392032.78	5.04	0.01	0.01	0.10	BRUSH LANDS AND LOW TREES
7035	629753.13	419847.97	3.51	0.02	0.01	0.11	URBAN AREAS
7036	629742.67	420907.80	2.61	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
7037	629792.03	421118.73	2.61	0.02	0.02	0.12	BRUSH LANDS AND LOW TREES
7040	638059.20	425323.48	8.13	0.02	0.01	0.09	URBAN AREAS
7041	638208.33	425475.12	6.71	0.03	0.02	0.10	BARE EARTH AND LOW GRASS
7042	638470.76	425546.81	6.55	0.02	0.01	0.09	BRUSH LANDS AND LOW TREES
7045	615810.84	421951.05	5.16	0.01	0.01	0.10	URBAN AREAS
7046	613833.59	425990.75	4.01	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
7047	613812.03	425135.61	3.81	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7050	576598.15	417638.88	4.14	0.01	0.01	0.11	URBAN AREAS
7051	576711.32	417694.68	5.29	0.01	0.01	0.11	BARE EARTH AND LOW GRASS
7052	576661.57	417532.29	4.63	0.01	0.01	0.12	BRUSH LANDS AND LOW TREES
7055	578970.34	443977.48	8.72	0.04	0.03	0.12	URBAN AREAS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
7056	579074.00	443109.95	3.45	0.02	0.02	0.12	BARE EARTH AND LOW GRASS
7057	578555.20	444463.74	2.80	0.02	0.01	0.10	BRUSH LANDS AND LOW TREES
7060	602782.39	451936.46	3.25	0.02	0.01	0.10	URBAN AREAS
7061	596102.71	448378.55	2.74	0.02	0.01	0.10	BARE EARTH AND LOW GRASS
7062	602394.53	451955.85	3.20	0.01	0.01	0.10	BRUSH LANDS AND LOW TREES
7065	601515.63	466946.88	3.62	0.01	0.01	0.09	URBAN AREAS
7066	601487.92	466833.92	2.27	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7067	601415.61	466814.79	0.42	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7070	596567.03	474192.48	4.01	0.01	0.01	0.09	URBAN AREAS
7071	596626.08	474388.66	4.12	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7072	596482.15	474533.43	1.12	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7080	612324.43	451862.76	4.92	0.02	0.01	0.09	URBAN AREAS
7081	612369.21	451944.91	5.47	0.02	0.01	0.09	BARE EARTH AND LOW GRASS
7082	612189.66	451893.18	7.12	0.02	0.01	0.09	BRUSH LANDS AND LOW TREES
7085	618786.82	441224.42	5.01	0.01	0.02	0.09	URBAN AREAS
7086	615407.20	441270.73	3.63	0.01	0.02	0.10	BARE EARTH AND LOW GRASS
7087	617461.66	441875.40	5.53	0.01	0.02	0.10	BRUSH LANDS AND LOW TREES
7090	640777.22	438326.86	7.96	0.02	0.01	0.10	URBAN AREAS
7091	640871.87	438366.47	8.09	0.02	0.01	0.09	BARE EARTH AND LOW GRASS
7095	640919.74	453411.02	9.05	0.01	0.01	0.09	URBAN AREAS
7096	640969.59	453292.21	7.39	0.02	0.01	0.09	BARE EARTH AND LOW GRASS
7097	640976.44	453138.55	7.42	0.02	0.01	0.09	BRUSH LANDS AND LOW TREES
7100	625819.86	470250.65	6.44	0.01	0.01	0.09	URBAN AREAS
7101	625886.31	470268.70	5.73	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7102	625803.85	470219.48	4.94	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7105	601348.36	468757.02	5.46	0.01	0.01	0.10	URBAN AREAS
7106	601171.55	468832.09	2.09	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
7107	601285.12	468736.55	0.77	0.01	0.01	0.10	BRUSH LANDS AND LOW TREES
7110	640436.20	478076.10	8.07	0.01	0.01	0.08	URBAN AREAS
7111	640435.27	478003.97	7.68	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
7112	640505.99	477996.74	7.59	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
7115	654951.02	477948.58	9.73	0.01	0.01	0.08	URBAN AREAS
7116	654952.18	478066.68	8.95	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
7117	655093.29	478105.80	9.51	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
7120	661899.64	477748.24	12.14	0.01	0.01	0.08	URBAN AREAS
7121	661969.81	477726.38	10.48	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
7122	661918.11	477672.89	11.00	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
7125	693800.69	472530.97	12.18	0.01	0.02	0.08	URBAN AREAS
7126	693734.94	472486.34	10.70	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
7127	693849.76	472565.02	10.65	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
7130	695105.12	445994.43	13.19	0.01	0.01	0.09	URBAN AREAS
7131	689796.04	448657.02	11.10	0.01	0.02	0.09	BARE EARTH AND LOW GRASS
7132	690156.12	448641.33	10.67	0.01	0.02	0.08	BRUSH LANDS AND LOW TREES
7135	679032.40	452270.95	12.04	0.01	0.01	0.08	URBAN AREAS
7136	678628.86	450095.13	12.11	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
7137	678823.73	450103.08	11.88	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
7140	663400.13	432559.66	12.60	0.01	0.01	0.08	URBAN AREAS
7141	663051.68	432590.73	12.29	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
7142	662470.60	431406.03	9.14	0.02	0.01	0.08	BRUSH LANDS AND LOW TREES
7145	680823.33	430301.74	11.97	0.01	0.01	0.08	URBAN AREAS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
7146	680953.13	430811.32	15.75	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
7147	679474.67	430610.01	12.58	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
7150	705367.37	414823.65	13.42	0.02	0.01	0.09	URBAN AREAS
7151	705439.81	415058.96	11.13	0.03	0.02	0.08	BARE EARTH AND LOW GRASS
7152	705313.79	415119.69	10.76	0.03	0.02	0.08	BRUSH LANDS AND LOW TREES
7155	705518.08	438036.91	16.67	0.01	0.01	0.08	URBAN AREAS
7156	705526.37	437546.10	16.91	0.02	0.01	0.08	BARE EARTH AND LOW GRASS
7160	714251.80	458667.50	14.20	0.01	0.01	0.08	URBAN AREAS
7161	714464.63	461221.85	19.17	0.02	0.01	0.08	BARE EARTH AND LOW GRASS
7162	714275.08	458752.04	13.27	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
7300	705409.22	437660.28	12.25	N/A	N/A	N/A	FORESTED AREAS
7301	705346.38	437555.66	12.13	N/A	N/A	N/A	FORESTED AREAS
7302	705366.39	437464.52	12.63	N/A	N/A	N/A	FORESTED AREAS
7303	705399.98	437353.08	12.25	N/A	N/A	N/A	FORESTED AREAS
7304	714319.22	461073.62	14.89	N/A	N/A	N/A	FORESTED AREAS
7305	714423.51	461065.04	15.26	N/A	N/A	N/A	FORESTED AREAS
7306	714492.04	461090.43	15.28	N/A	N/A	N/A	FORESTED AREAS
7307	714656.37	461104.82	14.47	N/A	N/A	N/A	FORESTED AREAS
7308	708993.39	407557.94	11.83	N/A	N/A	N/A	FORESTED AREAS
7309	709155.74	407741.80	11.54	N/A	N/A	N/A	FORESTED AREAS
7310	709201.33	407621.48	11.68	N/A	N/A	N/A	FORESTED AREAS
7311	709168.71	407559.75	12.00	N/A	N/A	N/A	FORESTED AREAS
7312	662354.99	431207.55	8.59	N/A	N/A	N/A	FORESTED AREAS
7313	662347.66	431305.09	8.03	N/A	N/A	N/A	FORESTED AREAS
7314	662378.02	431463.02	8.41	N/A	N/A	N/A	FORESTED AREAS
7315	662382.46	431582.97	8.66	N/A	N/A	N/A	FORESTED AREAS
7316	662422.10	477669.29	10.27	N/A	N/A	N/A	FORESTED AREAS
7317	662334.98	477639.83	10.40	N/A	N/A	N/A	FORESTED AREAS
7318	662319.54	477574.93	10.29	N/A	N/A	N/A	FORESTED AREAS
7319	662258.30	477613.76	10.14	N/A	N/A	N/A	FORESTED AREAS
7320	654842.47	477776.97	9.41	N/A	N/A	N/A	FORESTED AREAS
7321	654801.65	477823.49	9.07	N/A	N/A	N/A	FORESTED AREAS
7322	654703.00	477885.47	8.99	N/A	N/A	N/A	FORESTED AREAS
7323	654752.64	478009.94	8.30	N/A	N/A	N/A	FORESTED AREAS
7324	640328.75	477926.91	7.24	N/A	N/A	N/A	FORESTED AREAS
7325	640388.63	477757.40	7.01	N/A	N/A	N/A	FORESTED AREAS
7326	640490.59	477796.16	7.15	N/A	N/A	N/A	FORESTED AREAS
7327	640545.85	477845.89	7.11	N/A	N/A	N/A	FORESTED AREAS
7328	625943.10	470172.56	5.95	N/A	N/A	N/A	FORESTED AREAS
7329	625887.71	470061.59	7.26	N/A	N/A	N/A	FORESTED AREAS
7330	625758.14	470107.96	5.62	N/A	N/A	N/A	FORESTED AREAS
7331	625695.36	470174.66	5.63	N/A	N/A	N/A	FORESTED AREAS
7332	619011.58	441409.14	4.08	N/A	N/A	N/A	FORESTED AREAS
7333	619052.60	441342.83	4.15	N/A	N/A	N/A	FORESTED AREAS
7334	619111.08	441331.13	4.23	N/A	N/A	N/A	FORESTED AREAS
7335	619194.81	441309.68	4.30	N/A	N/A	N/A	FORESTED AREAS
10192	625966.51	484181.90	7.39	0.03	0.02	0.10	URBAN AREAS
10193	625961.43	483796.03	6.18	0.03	0.03	0.12	LIDAR CONTROL POINT
10194	619199.72	470313.28	5.53	0.01	0.02	0.09	LIDAR CONTROL POINT
10195	619844.31	470304.26	5.23	0.02	0.02	0.09	URBAN AREAS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
10196	620624.58	451914.63	7.62	0.02	0.02	0.10	URBAN AREAS
10197	620626.94	451876.98	5.80	0.03	0.02	0.11	BARE EARTH AND LOW GRASS
10199	658870.62	409752.60	7.05	0.02	0.01	0.09	URBAN AREAS
10201	662158.65	407006.89	9.46	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
10202	662009.31	406936.59	8.17	0.01	0.01	0.09	LIDAR CONTROL POINT
10203	659536.08	420695.57	11.74	0.02	0.02	0.09	TRAVERSE POINT
10204	659532.20	420545.09	12.46	0.02	0.02	0.11	URBAN AREAS
10205	662059.70	427221.29	16.38	0.02	0.03	0.11	URBAN AREAS
10206	662244.16	427080.53	16.10	0.02	0.02	0.09	URBAN AREAS
10207	653295.03	431006.57	12.36	0.04	0.03	0.13	BARE EARTH AND LOW GRASS
10208	653299.00	430963.29	11.66	0.02	0.02	0.10	URBAN AREAS
10209	715603.44	388077.98	8.15	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
10210	715318.93	388080.49	8.25	0.01	0.01	0.10	URBAN AREAS
10211	705533.32	388484.27	9.53	0.02	0.01	0.10	LIDAR CONTROL POINT
10212	705547.58	388249.29	9.31	0.02	0.01	0.10	URBAN AREAS
10213	705204.43	399874.36	7.46	0.01	0.01	0.10	URBAN AREAS
10215	716352.87	406527.39	15.39	0.01	0.01	0.09	URBAN AREAS
10217	704915.61	419947.96	16.12	0.01	0.01	0.09	TRAVERSE POINT
10218	704923.09	419900.01	15.94	0.01	0.01	0.09	URBAN AREAS
10219	700244.44	433001.44	14.60	0.01	0.01	0.08	TRAVERSE POINT
10220	700240.76	432923.09	14.17	0.01	0.01	0.08	URBAN AREAS
10221	708217.81	430464.20	14.72	0.01	0.02	0.09	TRAVERSE POINT
10222	708266.06	430474.61	14.85	0.01	0.02	0.09	TRAVERSE POINT
10224	582474.00	433340.74	5.02	0.01	0.01	0.10	LIDAR CONTROL POINT
10225	582451.22	433319.99	6.36	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
10227	581905.01	434015.58	5.46	0.02	0.01	0.10	URBAN AREAS
10228	581945.29	434006.55	5.48	0.01	0.02	0.11	LIDAR CONTROL POINT
10230	584400.66	420920.16	4.87	0.01	0.01	0.11	URBAN AREAS
10231	689668.10	444703.79	12.67	0.03	0.04	0.19	TRAVERSE POINT
10232	689580.87	444662.28	13.84	0.03	0.03	0.12	LIDAR CONTROL POINT
10233	689512.42	444809.84	12.73	0.02	0.02	0.09	BARE EARTH AND LOW GRASS
10234	688475.83	442127.60	10.26	0.04	0.03	0.14	BRUSH LANDS AND LOW TREES
10235	679074.83	438238.68	11.74	N/A	N/A	N/A	URBAN AREAS
10236	679258.74	438237.01	12.00	N/A	N/A	N/A	URBAN AREAS
10237	679209.21	438159.55	11.42	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10238	679142.06	438064.32	11.51	N/A	N/A	N/A	FORESTED AREAS
10239	679090.14	438061.63	11.33	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10240	679119.80	437952.18	11.24	N/A	N/A	N/A	FORESTED AREAS
10241	689677.02	444718.63	12.28	N/A	N/A	N/A	URBAN AREAS
10242	689785.84	444718.51	12.27	N/A	N/A	N/A	URBAN AREAS
10243	689898.50	444716.31	12.28	N/A	N/A	N/A	LIDAR CONTROL POINT
10244	689769.47	444758.87	11.22	N/A	N/A	N/A	FORESTED AREAS
10245	689694.04	444761.38	10.81	N/A	N/A	N/A	FORESTED AREAS
10246	689494.49	444676.77	11.09	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10247	695312.77	452591.08	12.55	N/A	N/A	N/A	URBAN AREAS
10248	695303.14	452528.03	12.09	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10249	695333.74	452350.52	11.73	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10250	695530.60	452318.38	11.68	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10251	695460.69	452398.79	12.51	N/A	N/A	N/A	LIDAR CONTROL POINT
10252	695422.19	452589.45	12.37	N/A	N/A	N/A	URBAN AREAS

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10253	683792.26	458899.56	11.02	N/A	N/A	N/A	FORESTED AREAS
10254	683705.61	458920.44	10.23	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10255	683773.43	458668.02	11.68	N/A	N/A	N/A	URBAN AREAS
10256	683885.26	458667.23	11.95	N/A	N/A	N/A	URBAN AREAS
10257	683923.35	458707.12	11.35	N/A	N/A	N/A	FORESTED AREAS
10258	683824.49	458598.55	10.21	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10259	677935.54	474416.91	12.66	N/A	N/A	N/A	URBAN AREAS
10260	677937.02	474527.00	13.07	N/A	N/A	N/A	URBAN AREAS
10261	677880.54	474484.65	12.61	N/A	N/A	N/A	FORESTED AREAS
10262	677890.51	474542.23	12.63	N/A	N/A	N/A	FORESTED AREAS
10263	677939.84	474651.38	12.99	N/A	N/A	N/A	LIDAR CONTROL POINT
10264	678002.56	474764.39	13.08	N/A	N/A	N/A	FORESTED AREAS
10265	678030.08	474554.98	12.69	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10266	700265.54	433103.48	15.43	N/A	N/A	N/A	LIDAR CONTROL POINT
10267	700330.69	433067.51	11.52	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10273	708250.42	430353.78	15.32	N/A	N/A	N/A	URBAN AREAS
10274	708072.42	430327.77	13.16	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10275	707961.38	430304.04	13.86	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10276	707918.63	430409.63	15.14	N/A	N/A	N/A	URBAN AREAS
10277	707855.48	430556.09	12.53	N/A	N/A	N/A	FORESTED AREAS
10278	708127.20	430659.01	12.00	N/A	N/A	N/A	FORESTED AREAS
10279	704810.35	419929.51	15.74	N/A	N/A	N/A	URBAN AREAS
10280	704701.70	419906.67	15.34	N/A	N/A	N/A	URBAN AREAS
10281	704696.15	420114.44	11.76	N/A	N/A	N/A	FORESTED AREAS
10282	704910.72	420097.24	11.79	N/A	N/A	N/A	FORESTED AREAS
10283	705046.25	419869.63	11.41	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10284	704867.32	419811.73	11.38	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10285	715243.24	388131.18	7.99	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10286	715430.88	388161.04	7.34	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10287	715438.34	388084.45	8.32	N/A	N/A	N/A	URBAN AREAS
10288	715665.49	388133.31	5.71	N/A	N/A	N/A	FORESTED AREAS
10289	715794.29	388054.33	8.63	N/A	N/A	N/A	URBAN AREAS
10290	715853.45	388073.19	8.18	N/A	N/A	N/A	FORESTED AREAS
10291	705601.22	388381.30	8.61	N/A	N/A	N/A	URBAN AREAS
10292	705461.73	388332.41	8.86	N/A	N/A	N/A	FORESTED AREAS
10293	705460.78	388475.02	9.16	N/A	N/A	N/A	FORESTED AREAS
10294	705493.77	388601.82	9.51	N/A	N/A	N/A	URBAN AREAS
10295	691998.95	420750.19	11.29	N/A	N/A	N/A	URBAN AREAS
10296	691912.01	420832.81	11.22	N/A	N/A	N/A	FORESTED AREAS
10297	691725.74	420828.96	10.88	N/A	N/A	N/A	FORESTED AREAS
10298	691745.46	420752.55	11.04	N/A	N/A	N/A	URBAN AREAS
10299	691609.60	420787.40	11.21	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10300	691846.32	420652.69	11.34	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10301	687187.07	408831.25	11.26	N/A	N/A	N/A	URBAN AREAS
10302	687227.57	408617.08	11.71	N/A	N/A	N/A	URBAN AREAS
10303	687263.21	408507.20	11.30	N/A	N/A	N/A	URBAN AREAS
10304	687372.29	408526.56	13.91	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10305	687484.44	408527.00	13.45	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10306	687488.21	408643.17	14.23	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10307	687472.51	408736.74	13.70	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES

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10308	659628.88	420604.87	9.31	N/A	N/A	N/A	FORESTED AREAS
10309	659646.15	420701.52	9.42	N/A	N/A	N/A	FORESTED AREAS
10310	659625.42	420830.02	9.48	N/A	N/A	N/A	FORESTED AREAS
10311	659452.12	420589.29	9.32	N/A	N/A	N/A	FORESTED AREAS
10312	659455.49	420709.38	9.11	N/A	N/A	N/A	FORESTED AREAS
10313	659474.69	420740.66	10.47	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10314	659396.98	420836.73	10.24	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10315	659532.73	420946.65	12.00	N/A	N/A	N/A	URBAN AREAS
10316	659530.32	420840.60	12.20	N/A	N/A	N/A	URBAN AREAS
10317	662227.96	426911.21	9.27	N/A	N/A	N/A	FORESTED AREAS
10318	662139.18	426966.90	9.60	N/A	N/A	N/A	FORESTED AREAS
10319	662072.40	427006.01	9.77	N/A	N/A	N/A	FORESTED AREAS
10320	661989.33	427028.01	9.71	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10321	661895.54	426991.48	9.85	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10322	661798.05	426909.96	10.09	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10323	661632.64	427012.99	9.97	N/A	N/A	N/A	FORESTED AREAS
10324	661685.03	427127.52	9.77	N/A	N/A	N/A	FORESTED AREAS
10325	661772.98	427192.44	9.75	N/A	N/A	N/A	FORESTED AREAS
10326	661848.08	427290.30	9.41	N/A	N/A	N/A	FORESTED AREAS
10327	661937.26	427352.72	9.54	N/A	N/A	N/A	FORESTED AREAS
10328	662003.67	427446.42	9.66	N/A	N/A	N/A	FORESTED AREAS
10329	662072.43	427570.06	9.49	N/A	N/A	N/A	FORESTED AREAS
10330	662215.15	427417.31	9.58	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10331	662149.12	427333.20	9.29	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10332	662162.99	427272.71	9.59	N/A	N/A	N/A	FORESTED AREAS
10333	653200.23	430970.47	8.78	N/A	N/A	N/A	FORESTED AREAS
10334	653415.49	431004.23	11.57	N/A	N/A	N/A	URBAN AREAS
10335	653521.47	431000.77	11.98	N/A	N/A	N/A	LIDAR CONTROL POINT
10336	645567.36	430240.42	11.84	N/A	N/A	N/A	LIDAR CONTROL POINT
10337	645607.54	430331.84	7.91	N/A	N/A	N/A	FORESTED AREAS
10338	645355.91	430237.30	11.62	N/A	N/A	N/A	URBAN AREAS
10339	634486.97	418918.09	4.22	N/A	N/A	N/A	URBAN AREAS
10340	634277.45	419054.62	3.94	N/A	N/A	N/A	FORESTED AREAS
10341	641103.39	408470.87	4.13	N/A	N/A	N/A	URBAN AREAS
10342	641185.17	408364.04	2.56	N/A	N/A	N/A	FORESTED AREAS
10343	621213.73	426361.88	3.34	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10344	620846.91	426112.48	2.31	N/A	N/A	N/A	FORESTED AREAS
10345	620705.30	426206.02	5.36	N/A	N/A	N/A	URBAN AREAS
10346	584378.49	421001.60	4.36	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
10347	584310.20	420946.48	4.89	N/A	N/A	N/A	BARE EARTH AND LOW GRASS
10348	584278.08	420994.08	4.87	N/A	N/A	N/A	URBAN AREAS
10349	584186.25	421047.92	4.98	N/A	N/A	N/A	URBAN AREAS
10350	584095.37	421099.96	4.90	N/A	N/A	N/A	URBAN AREAS
10351	584246.54	420791.70	6.51	N/A	N/A	N/A	FORESTED AREAS
10352	582463.72	433265.43	7.37	N/A	N/A	N/A	URBAN AREAS
10353	582488.06	433165.21	8.02	N/A	N/A	N/A	URBAN AREAS
10354	582401.11	433355.18	7.22	N/A	N/A	N/A	URBAN AREAS
10355	582333.33	433451.84	6.96	N/A	N/A	N/A	URBAN AREAS
10356	634006.09	430232.44	8.43	N/A	N/A	N/A	URBAN AREAS
10357	633906.86	430192.62	8.43	N/A	N/A	N/A	URBAN AREAS

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10358	633904.44	430084.58	9.55	N/A	N/A	N/A	URBAN AREAS
10359	633832.60	430148.95	5.57	N/A	N/A	N/A	FORESTED AREAS
10360	633889.35	430369.67	9.17	N/A	N/A	N/A	URBAN AREAS
20043	695530.77	452588.99	12.65	0.01	0.01	0.09	URBAN AREAS
20044	695211.02	452575.45	12.88	0.03	0.02	0.11	TRAVERSE POINT
20045	683656.79	458668.90	11.97	0.02	0.02	0.08	LIDAR CONTROL POINT
20046	683696.68	458800.59	10.81	0.02	0.02	0.08	BRUSH LANDS AND LOW TREES
20047	677935.06	474275.63	12.57	0.02	0.02	0.10	URBAN AREAS
20048	677921.76	474553.36	12.32	0.02	0.02	0.11	URBAN AREAS
20049	657586.10	477029.30	10.93	0.05	0.05	0.14	BARE EARTH AND LOW GRASS
20050	657440.11	477026.42	10.44	0.05	0.06	0.15	BRUSH LANDS AND LOW TREES
20051	657647.44	484188.95	10.95	0.07	0.08	0.34	LIDAR CONTROL POINT
20052	657528.59	484189.70	9.77	0.08	0.08	0.37	BRUSH LANDS AND LOW TREES
20053	657628.26	471689.88	9.08	0.03	0.03	0.14	BARE EARTH AND LOW GRASS
20054	657535.97	471723.71	9.53	0.03	0.03	0.14	BARE EARTH AND LOW GRASS
20055	640416.52	470120.01	8.84	0.02	0.01	0.09	URBAN AREAS
20056	640362.82	470313.87	8.40	0.02	0.01	0.09	BRUSH LANDS AND LOW TREES
20057	658996.17	474812.55	9.36	0.01	0.02	0.10	BRUSH LANDS AND LOW TREES
20058	658876.74	474062.39	9.60	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20059	645666.33	478029.72	8.55	0.02	0.02	0.09	LIDAR CONTROL POINT
20060	645713.98	477997.33	8.21	0.02	0.02	0.09	BARE EARTH AND LOW GRASS
20061	645559.01	475000.30	7.24	0.03	0.02	0.10	BRUSH LANDS AND LOW TREES
20062	645755.36	475198.13	7.73	0.03	0.02	0.10	BRUSH LANDS AND LOW TREES
20063	636428.95	478112.08	7.12	0.02	0.02	0.10	URBAN AREAS
20064	633767.09	483054.49	6.89	0.02	0.02	0.09	BRUSH LANDS AND LOW TREES
20065	633890.07	484463.57	8.06	0.02	0.02	0.09	BRUSH LANDS AND LOW TREES
20066	649551.33	468213.69	7.80	0.03	0.03	0.11	BRUSH LANDS AND LOW TREES
20067	649541.34	468062.83	8.57	0.03	0.03	0.12	BRUSH LANDS AND LOW TREES
20068	640802.89	460966.02	8.54	0.07	0.04	0.23	BRUSH LANDS AND LOW TREES
20069	640809.09	460913.73	8.14	0.05	0.03	0.18	BRUSH LANDS AND LOW TREES
20070	620050.53	439810.41	8.40	0.01	0.01	0.08	LIDAR CONTROL POINT
20071	620352.82	439541.10	5.02	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
20072	642422.47	441435.64	8.35	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20073	642547.01	441439.42	8.23	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20074	642992.04	450015.67	8.92	0.02	0.02	0.09	BARE EARTH AND LOW GRASS
20075	644121.45	454421.04	8.68	0.02	0.02	0.08	BRUSH LANDS AND LOW TREES
20076	644296.35	454510.16	9.07	0.02	0.02	0.08	BRUSH LANDS AND LOW TREES
20077	625841.29	470229.15	6.45	0.01	0.01	0.08	TRAVERSE POINT
20078	625800.48	470250.83	6.47	0.01	0.01	0.08	LIDAR CONTROL POINT
20079	678962.72	438238.21	11.67	0.02	0.02	0.09	BRUSH LANDS AND LOW TREES
20080	679051.57	438127.50	10.94	0.04	0.03	0.14	BRUSH LANDS AND LOW TREES
20081	674492.15	430976.74	9.82	0.02	0.02	0.10	BARE EARTH AND LOW GRASS
20082	612223.06	477779.31	3.68	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20084	621929.80	443682.51	6.55	0.01	0.01	0.09	URBAN AREAS
20086	624564.57	438465.03	4.35	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
20087	634088.89	430284.18	8.27	0.01	0.01	0.09	URBAN AREAS
20088	634004.75	430418.00	7.46	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20089	645465.71	430267.26	11.43	0.01	0.01	0.08	URBAN AREAS
20090	645509.20	430108.43	8.50	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
20091	644047.40	425334.27	9.18	0.01	0.01	0.09	BARE EARTH AND LOW GRASS

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20093	645176.98	421393.78	7.97	0.02	0.02	0.11	URBAN AREAS
20094	640996.69	432466.77	8.14	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20095	640922.18	432679.15	8.51	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20096	617528.37	443375.13	4.38	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20098	684222.71	420794.75	11.92	0.01	0.02	0.09	URBAN AREAS
20099	692738.86	425406.35	11.85	0.02	0.02	0.09	LIDAR CONTROL POINT
20100	692737.77	425258.48	12.06	0.03	0.02	0.09	URBAN AREAS
20101	692049.41	420689.42	11.43	0.03	0.02	0.09	BARE EARTH AND LOW GRASS
20102	691839.78	420690.61	11.11	0.03	0.02	0.09	BRUSH LANDS AND LOW TREES
20103	687353.29	408728.81	14.19	0.01	0.01	0.09	URBAN AREAS
20104	687241.43	408733.99	11.71	0.01	0.01	0.09	TRAVERSE POINT
20105	690892.92	408705.57	12.01	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20106	690775.40	408939.55	10.53	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20107	691174.72	404633.78	14.17	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20108	691057.96	404733.47	12.53	0.01	0.01	0.09	LIDAR CONTROL POINT
20109	684851.59	401142.94	9.80	0.01	0.01	0.10	BRUSH LANDS AND LOW TREES
20110	684777.72	401094.12	10.07	0.01	0.01	0.10	URBAN AREAS
20111	673211.32	404112.11	9.83	0.01	0.01	0.09	URBAN AREAS
20112	673144.92	404068.43	11.80	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20113	671025.54	404276.71	7.31	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20114	671419.99	404314.23	9.13	0.01	0.01	0.09	BARE EARTH AND LOW GRASS
20115	663679.49	394796.15	9.74	0.01	0.02	0.10	URBAN AREAS
20117	620873.29	426236.39	6.11	0.01	0.02	0.10	BRUSH LANDS AND LOW TREES
20118	614914.70	429085.11	2.24	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20119	614748.73	429150.32	4.25	0.01	0.01	0.09	LIDAR CONTROL POINT
20120	606414.52	433869.88	4.54	0.01	0.01	0.09	URBAN AREAS
20121	606356.62	433939.32	5.48	0.01	0.01	0.09	BRUSH LANDS AND LOW TREES
20122	662082.14	456757.71	10.67	0.02	0.02	0.09	BARE EARTH AND LOW GRASS
20123	673168.68	427705.10	11.63	0.02	0.02	0.10	BARE EARTH AND LOW GRASS
20124	671584.33	427358.71	12.91	0.03	0.02	0.11	LIDAR CONTROL POINT
30045	614522.61	478305.31	4.76	0.02	0.02	0.09	BRUSH LANDS AND LOW TREES
30046	614527.73	478376.98	4.21	0.01	0.02	0.09	BRUSH LANDS AND LOW TREES
30047	613333.77	451822.50	6.01	0.01	0.01	0.09	URBAN AREAS
30049	659276.91	399861.85	2.99	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
30050	659406.73	399996.74	3.14	0.01	0.01	0.09	URBAN AREAS
30053	634501.90	419042.66	4.08	0.02	0.01	0.09	BARE EARTH AND LOW GRASS
30054	634576.52	419014.55	3.80	N/A	N/A	N/A	FORESTED AREAS
30055	640965.03	408427.01	4.12	N/A	N/A	N/A	FORESTED AREAS
30056	641117.48	408485.46	4.09	N/A	N/A	N/A	FORESTED AREAS
30057	643065.42	416602.72	5.39	0.01	0.02	0.10	BARE EARTH AND LOW GRASS
30058	657517.90	484149.78	10.46	N/A	N/A	N/A	FORESTED AREAS
30059	657475.36	484187.19	9.90	N/A	N/A	N/A	FORESTED AREAS
30060	657567.46	484306.83	10.13	N/A	N/A	N/A	FORESTED AREAS
30061	657792.61	484244.62	9.95	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30062	657829.83	484191.89	10.28	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30063	657733.69	484118.52	10.07	N/A	N/A	N/A	FORESTED AREAS
30064	657645.10	483997.06	10.38	N/A	N/A	N/A	BARE EARTH AND LOW GRASS
30065	657348.04	477047.09	10.75	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30066	657411.78	476886.34	10.75	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30067	657583.88	477123.29	11.04	N/A	N/A	N/A	BARE EARTH AND LOW GRASS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
30068	657812.76	471715.44	9.31	N/A	N/A	N/A	BARE EARTH AND LOW GRASS
30069	657479.95	471760.01	9.21	N/A	N/A	N/A	FORESTED AREAS
30070	657478.69	471902.43	10.07	N/A	N/A	N/A	FORESTED AREAS
30071	657439.71	471599.94	7.83	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30072	645623.99	477930.46	8.02	N/A	N/A	N/A	FORESTED AREAS
30073	645806.76	477844.59	7.74	N/A	N/A	N/A	FORESTED AREAS
30075	645828.29	478201.73	8.48	N/A	N/A	N/A	FORESTED AREAS
30076	645606.11	478164.73	8.10	N/A	N/A	N/A	FORESTED AREAS
30077	636557.42	478396.21	7.57	N/A	N/A	N/A	FORESTED AREAS
30078	636489.26	478437.91	6.91	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30079	636524.90	477994.55	5.93	N/A	N/A	N/A	FORESTED AREAS
30080	626038.35	484144.58	5.81	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30081	626132.36	484263.16	6.03	N/A	N/A	N/A	FORESTED AREAS
30082	626098.43	484176.10	5.97	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30083	625865.07	484243.95	5.89	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30084	614354.48	478463.49	4.40	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30085	614535.10	478598.05	4.63	N/A	N/A	N/A	FORESTED AREAS
30086	614782.73	478406.49	5.19	N/A	N/A	N/A	FORESTED AREAS
30087	614621.73	477927.79	4.64	N/A	N/A	N/A	FORESTED AREAS
30088	614392.84	478014.33	4.50	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30089	625749.48	470342.06	4.94	N/A	N/A	N/A	FORESTED AREAS
30090	625954.60	470097.31	6.16	N/A	N/A	N/A	FORESTED AREAS
30091	625749.28	470090.79	5.62	N/A	N/A	N/A	FORESTED AREAS
30092	619159.19	470361.27	4.93	N/A	N/A	N/A	FORESTED AREAS
30093	619277.76	470367.11	4.39	N/A	N/A	N/A	FORESTED AREAS
30094	640277.26	470297.28	7.43	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30095	640453.76	470284.76	7.87	N/A	N/A	N/A	FORESTED AREAS
30096	640524.91	470019.18	8.78	N/A	N/A	N/A	FORESTED AREAS
30097	640355.24	469977.30	8.69	N/A	N/A	N/A	BARE EARTH AND LOW GRASS
30098	649366.32	468305.92	9.34	N/A	N/A	N/A	FORESTED AREAS
30099	649252.64	468384.44	9.20	N/A	N/A	N/A	FORESTED AREAS
30100	649793.90	468029.44	8.94	N/A	N/A	N/A	FORESTED AREAS
30101	649776.74	468352.37	9.12	N/A	N/A	N/A	FORESTED AREAS
30102	640641.04	460963.04	8.90	N/A	N/A	N/A	FORESTED AREAS
30103	640585.50	460854.44	8.32	N/A	N/A	N/A	FORESTED AREAS
30104	643968.56	454768.64	9.45	N/A	N/A	N/A	FORESTED AREAS
30105	643812.57	454771.56	9.01	N/A	N/A	N/A	FORESTED AREAS
30106	643782.41	454612.67	8.69	N/A	N/A	N/A	FORESTED AREAS
30107	643918.04	454380.32	9.11	N/A	N/A	N/A	FORESTED AREAS
30108	644010.23	454124.23	8.29	N/A	N/A	N/A	FORESTED AREAS
30109	644213.52	454149.69	8.36	N/A	N/A	N/A	FORESTED AREAS
30110	644404.97	454185.00	8.31	N/A	N/A	N/A	FORESTED AREAS
30111	642687.67	441175.28	7.88	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30112	642540.84	441008.47	8.42	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30113	642383.77	441202.06	7.76	N/A	N/A	N/A	BRUSH LANDS AND LOW TREES
30114	642590.17	441505.69	8.07	N/A	N/A	N/A	FORESTED AREAS
30115	642616.70	441553.03	8.05	N/A	N/A	N/A	FORESTED AREAS
30116	642648.13	441602.52	7.98	N/A	N/A	N/A	FORESTED AREAS
30117	640879.19	432748.15	8.75	N/A	N/A	N/A	URBAN AREAS
30118	640880.01	432592.69	8.66	N/A	N/A	N/A	URBAN AREAS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
30119	640881.14	432441.41	8.46	N/A	N/A	N/A	URBAN AREAS
50001	656541.62	467335.32	10.36	0.03	0.03	0.14	BARE EARTH AND LOW GRASS
50002	656524.57	468934.68	8.51	0.03	0.03	0.13	BRUSH LANDS AND LOW TREES
50003	656649.35	467383.89	10.22	0.04	0.03	0.12	BRUSH LANDS AND LOW TREES
50004	656377.91	469112.55	9.25	0.02	0.02	0.10	BRUSH LANDS AND LOW TREES
50005	646963.78	470061.95	8.77	0.02	0.02	0.09	URBAN AREAS
50006	647336.42	470082.25	7.82	0.02	0.02	0.09	BRUSH LANDS AND LOW TREES
50007	709720.00	472213.94	15.54	0.01	0.01	0.10	LIDAR CONTROL POINT
50008	709761.21	472615.30	14.55	0.01	0.01	0.10	BARE EARTH AND LOW GRASS
50009	709634.43	472240.24	16.19	0.01	0.01	0.10	BRUSH LANDS AND LOW TREES
50010	709715.01	473544.10	15.23	0.01	0.01	0.10	URBAN AREAS
50012	704396.20	461258.07	13.65	0.02	0.03	0.11	BARE EARTH AND LOW GRASS
50013	704377.55	461058.74	14.02	0.03	0.03	0.12	BRUSH LANDS AND LOW TREES
50014	704315.01	460913.13	14.03	0.02	0.03	0.12	URBAN AREAS
50015	697632.69	457182.56	11.91	0.02	0.02	0.09	BARE EARTH AND LOW GRASS
50016	697708.06	457719.24	12.04	0.02	0.02	0.09	URBAN AREAS
50017	706335.30	452606.28	17.61	0.04	0.03	0.16	BARE EARTH AND LOW GRASS
50018	697675.33	451940.86	11.61	0.02	0.02	0.11	BRUSH LANDS AND LOW TREES
50019	683572.30	460268.16	10.77	0.02	0.02	0.09	LIDAR CONTROL POINT
50020	683710.59	460004.63	11.84	0.02	0.02	0.09	URBAN AREAS
50021	683744.11	457302.35	11.58	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
50022	683683.88	457829.83	12.61	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
50023	678672.51	463225.51	12.33	0.02	0.01	0.08	BARE EARTH AND LOW GRASS
50024	679417.91	463207.06	12.12	0.02	0.01	0.08	BRUSH LANDS AND LOW TREES
50026	669322.39	460449.82	9.73	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
50027	669179.70	460291.40	9.84	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
50028	667787.72	453045.98	9.03	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
50029	667824.37	452629.09	9.07	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
50030	668004.16	447832.24	9.26	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
50031	667893.14	448305.95	9.38	0.01	0.01	0.08	BARE EARTH AND LOW GRASS
50032	668076.54	447909.46	9.84	0.01	0.01	0.08	BRUSH LANDS AND LOW TREES
60121	627287.32	484433.50	7.18	0.02	0.02	0.06	BARE EARTH AND LOW GRASS
60124	690001.97	484333.00	12.49	0.09	0.09	0.31	BRUSH LANDS AND LOW TREES
20116A	621046.54	426243.57	5.18	0.01	0.02	0.10	URBAN AREAS

EXISTING NGS CONTROL STATIONS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
15.94	559286.00	530339.87	14.74	0.01	0.01	0.12	NGS CONTROL POINT
5127 274 9242	605521.94	459720.43	3.56	0.00	0.00	0.00	NGS CONTROL POINT
B 534	674264.24	430965.97	9.95	0.00	0.00	0.00	NGS CONTROL POINT
FANKA	584744.45	501048.63	0.42	0.00	0.00	0.10	NGS CONTROL POINT
I75 81 A05	705466.21	412783.59	38.18	0.00	0.00	0.08	NGS CONTROL POINT
I75 81 A13	738674.99	406068.84	15.50	0.00	0.00	0.00	NGS CONTROL POINT
I75 90 A24	661919.43	461201.88	11.28	0.02	0.02	0.10	NGS CONTROL POINT
I75 90 A28	661679.14	474034.80	15.28	0.02	0.02	0.10	NGS CONTROL POINT
J 527	617507.08	443345.29	4.41	0.00	0.00	0.00	NGS CONTROL POINT
JUSTIN	624522.50	426387.86	10.58	0.00	0.00	0.09	NGS CONTROL POINT
L 534	706377.51	451975.89	13.90	0.00	0.00	0.00	NGS CONTROL POINT
M 598	636494.07	478132.25	6.51	0.02	0.02	0.10	NGS CONTROL POINT
N 534	710237.10	461376.30	17.68	0.03	0.04	0.13	NGS CONTROL POINT
R 598	612731.77	478281.23	4.37	0.02	0.02	0.10	NGS CONTROL POINT

NEW WOOLPERT CONTROL STATIONS

GPS Station Name	Grid Northing (US FT)	Grid Easting (US FT)	Station Elevation (US FT)	Y Std. Dev. (US FT)	X Std. Dev. (US FT)	Z Std. Dev. (US FT)	Station Description
102	726588.90	401110.30	10.49	0.01	0.01	0.09	WOOLPERT CONTROL POINT
118	661650.70	497381.54	12.05	0.00	0.00	0.00	WOOLPERT CONTROL POINT
GATOR	559592.35	530434.51	3.37	0.01	0.01	0.12	WOOLPERT CONTROL POINT
MOCCASIN	591269.04	487356.93	2.61	0.01	0.01	0.09	WOOLPERT CONTROL POINT
NEW BASE 8	591680.23	492703.45	1.01	0.01	0.01	0.09	WOOLPERT CONTROL POINT
NEW BASE 9	660198.94	401478.92	3.70	0.00	0.00	0.09	WOOLPERT CONTROL POINT
NEW BASE 10	573987.51	424589.31	3.73	0.01	0.01	0.11	WOOLPERT CONTROL POINT
PANTHER	660905.84	477750.44	11.69	0.00	0.00	0.08	WOOLPERT CONTROL POINT

APPENDIX D: POSITIONAL ACCURACIES

This appendix contains the final positional accuracies for the LiDAR QA/QC Checkpoints (except the forest points) and the LiDAR Control Points for Project Area G of the FY2007 State of Florida Division of Emergency Management Ground Control QA/QC Survey Mapping Project.

AREA G POSITIONAL ACCURACIES

LiDAR QA/QC POINTS (no FOREST points)

CALCULATED ACCURACIES:

0.01	Meters RMSE _x
0.01	Meters RMSE _y
0.01	Meters RMSE _{xy}
0.01	Meters at 95% C.I.
0.03	RMSE _z
0.06	Meters at 95% C.I.

CALCULATED ACCURACIES:

0.02	Feet RMSE _x
0.02	Feet RMSE _y
0.03	Feet RMSE _{xy}
0.05	Feet at 95% C.I.
0.10	RMSE _z
0.20	Feet at 95% C.I.

METERS

STATION	V _x	V _y	V _{xy}	V _z
7000	0.002	0.003	0.004	0.029
7001	0.002	0.003	0.004	0.030
7002	0.002	0.003	0.004	0.030
7005	0.003	0.003	0.005	0.027
7006	0.004	0.004	0.006	0.028
7007	0.004	0.004	0.005	0.028
7010	0.003	0.005	0.005	0.030
7011	0.003	0.004	0.005	0.030
7012	0.003	0.005	0.005	0.030
7015	0.003	0.002	0.003	0.026
7016	0.002	0.002	0.003	0.026
7017	0.003	0.002	0.003	0.026
7020	0.003	0.004	0.005	0.029
7021	0.003	0.004	0.005	0.029
7022	0.003	0.005	0.006	0.029
7025	0.004	0.003	0.005	0.028
7026	0.003	0.003	0.005	0.028
7027	0.005	0.004	0.006	0.030
7030	0.003	0.003	0.005	0.033
7031	0.003	0.002	0.004	0.032
7032	0.003	0.002	0.004	0.031
7035	0.004	0.006	0.008	0.033
7036	0.004	0.004	0.005	0.030
7037	0.006	0.005	0.007	0.035
7040	0.004	0.006	0.008	0.027
7041	0.006	0.010	0.012	0.029
7042	0.004	0.005	0.006	0.028
7045	0.003	0.003	0.004	0.030
7046	0.003	0.004	0.005	0.029
7047	0.003	0.003	0.005	0.029
7050	0.003	0.003	0.004	0.035

US FEET

STATION	V _x	V _y	V _{xy}	V _z
7000	0.01	0.01	0.01	0.10
7001	0.01	0.01	0.01	0.10
7002	0.01	0.01	0.01	0.10
7005	0.01	0.01	0.01	0.09
7006	0.01	0.01	0.02	0.09
7007	0.01	0.01	0.02	0.09
7010	0.01	0.02	0.02	0.10
7011	0.01	0.01	0.02	0.10
7012	0.01	0.02	0.02	0.10
7015	0.01	0.01	0.01	0.09
7016	0.01	0.01	0.01	0.09
7017	0.01	0.01	0.01	0.09
7020	0.01	0.01	0.02	0.09
7021	0.01	0.01	0.02	0.09
7022	0.01	0.02	0.02	0.10
7025	0.01	0.01	0.02	0.09
7026	0.01	0.01	0.01	0.09
7027	0.02	0.01	0.02	0.10
7030	0.01	0.01	0.01	0.11
7031	0.01	0.01	0.01	0.10
7032	0.01	0.01	0.01	0.10
7035	0.01	0.02	0.03	0.11
7036	0.01	0.01	0.02	0.10
7037	0.02	0.02	0.02	0.12
7040	0.01	0.02	0.02	0.09
7041	0.02	0.03	0.04	0.10
7042	0.01	0.02	0.02	0.09
7045	0.01	0.01	0.01	0.10
7046	0.01	0.01	0.02	0.10
7047	0.01	0.01	0.01	0.09
7050	0.01	0.01	0.01	0.11

STATION	Vx	Vy	Vxy	Vz
7051	0.003	0.003	0.004	0.035
7052	0.003	0.004	0.005	0.035
7055	0.009	0.013	0.016	0.037
7056	0.007	0.005	0.008	0.038
7057	0.004	0.006	0.008	0.032
7060	0.004	0.005	0.006	0.029
7061	0.004	0.005	0.006	0.030
7062	0.004	0.003	0.005	0.030
7065	0.003	0.003	0.004	0.029
7066	0.003	0.003	0.004	0.029
7067	0.003	0.003	0.004	0.029
7070	0.002	0.003	0.004	0.027
7071	0.002	0.003	0.004	0.027
7072	0.002	0.003	0.004	0.027
7080	0.003	0.005	0.006	0.027
7081	0.003	0.005	0.006	0.027
7082	0.003	0.005	0.006	0.027
7085	0.005	0.004	0.006	0.027
7086	0.006	0.004	0.007	0.030
7087	0.006	0.004	0.007	0.030
7090	0.004	0.007	0.008	0.029
7091	0.004	0.007	0.008	0.029
7095	0.003	0.004	0.005	0.028
7096	0.004	0.005	0.006	0.027
7097	0.004	0.005	0.006	0.027
7100	0.003	0.002	0.004	0.027
7101	0.003	0.002	0.004	0.026
7102	0.003	0.002	0.004	0.026
7105	0.004	0.003	0.005	0.029
7106	0.004	0.003	0.005	0.029
7107	0.004	0.003	0.005	0.029
7110	0.003	0.003	0.004	0.025
7111	0.003	0.002	0.004	0.025
7112	0.003	0.003	0.004	0.025
7115	0.002	0.002	0.003	0.025
7116	0.002	0.002	0.003	0.025
7117	0.002	0.003	0.003	0.026
7120	0.002	0.002	0.003	0.025
7121	0.002	0.003	0.004	0.025
7122	0.002	0.002	0.003	0.025
7125	0.005	0.003	0.006	0.028
7126	0.004	0.002	0.004	0.027
7127	0.003	0.002	0.004	0.027
7130	0.003	0.002	0.004	0.025
7131	0.005	0.003	0.006	0.026
7132	0.005	0.004	0.006	0.025
7135	0.003	0.004	0.005	0.024
7136	0.003	0.003	0.004	0.024
7137	0.003	0.003	0.004	0.025
7140	0.002	0.002	0.003	0.024

STATION	Vx	Vy	Vxy	Vz
7051	0.01	0.01	0.01	0.11
7052	0.01	0.01	0.02	0.12
7055	0.03	0.04	0.05	0.12
7056	0.02	0.02	0.03	0.12
7057	0.01	0.02	0.03	0.10
7060	0.01	0.02	0.02	0.10
7061	0.01	0.02	0.02	0.10
7062	0.01	0.01	0.02	0.10
7065	0.01	0.01	0.01	0.09
7066	0.01	0.01	0.01	0.09
7067	0.01	0.01	0.01	0.09
7070	0.01	0.01	0.01	0.09
7071	0.01	0.01	0.01	0.09
7072	0.01	0.01	0.01	0.09
7080	0.01	0.02	0.02	0.09
7081	0.01	0.02	0.02	0.09
7082	0.01	0.02	0.02	0.09
7085	0.02	0.01	0.02	0.09
7086	0.02	0.01	0.02	0.10
7087	0.02	0.01	0.02	0.10
7090	0.01	0.02	0.03	0.10
7091	0.01	0.02	0.03	0.09
7095	0.01	0.01	0.02	0.09
7096	0.01	0.02	0.02	0.09
7097	0.01	0.02	0.02	0.09
7100	0.01	0.01	0.01	0.09
7101	0.01	0.01	0.01	0.09
7102	0.01	0.01	0.01	0.09
7105	0.01	0.01	0.02	0.10
7106	0.01	0.01	0.02	0.10
7107	0.01	0.01	0.02	0.10
7110	0.01	0.01	0.01	0.08
7111	0.01	0.01	0.01	0.08
7112	0.01	0.01	0.01	0.08
7115	0.01	0.01	0.01	0.08
7116	0.01	0.01	0.01	0.08
7117	0.01	0.01	0.01	0.08
7120	0.01	0.01	0.01	0.08
7121	0.01	0.01	0.01	0.08
7122	0.01	0.01	0.01	0.08
7125	0.02	0.01	0.02	0.09
7126	0.01	0.01	0.01	0.09
7127	0.01	0.01	0.01	0.09
7130	0.01	0.01	0.01	0.08
7131	0.02	0.01	0.02	0.08
7132	0.02	0.01	0.02	0.08
7135	0.01	0.01	0.02	0.08
7136	0.01	0.01	0.01	0.08
7137	0.01	0.01	0.01	0.08
7140	0.01	0.01	0.01	0.08

STATION	Vx	Vy	Vxy	Vz
7141	0.002	0.002	0.003	0.024
7142	0.003	0.005	0.006	0.027
7145	0.003	0.003	0.004	0.024
7146	0.002	0.003	0.004	0.024
7147	0.002	0.003	0.004	0.024
7150	0.004	0.007	0.008	0.025
7151	0.005	0.009	0.010	0.026
7152	0.005	0.009	0.010	0.026
7155	0.003	0.003	0.004	0.025
7156	0.003	0.005	0.005	0.024
7158	0.006	0.008	0.010	0.026
7160	0.003	0.003	0.005	0.025
7161	0.004	0.005	0.006	0.028
7162	0.004	0.004	0.005	0.026
10192	0.007	0.009	0.011	0.031
10195	0.005	0.006	0.008	0.026
10196	0.005	0.005	0.007	0.030
10197	0.006	0.008	0.010	0.032
10199	0.004	0.005	0.006	0.028
10201	0.004	0.003	0.005	0.028
10203	0.005	0.005	0.007	0.027
10204	0.006	0.005	0.008	0.034
10205	0.008	0.007	0.011	0.035
10206	0.005	0.005	0.007	0.028
10207	0.008	0.011	0.013	0.040
10208	0.007	0.005	0.009	0.030
10209	0.004	0.003	0.005	0.032
10210	0.004	0.004	0.006	0.032
10212	0.004	0.006	0.008	0.030
10213	0.004	0.004	0.005	0.029
10214	0.005	0.004	0.006	0.029
10215	0.003	0.003	0.004	0.026
10216	0.003	0.003	0.004	0.026
10217	0.004	0.004	0.006	0.028
10218	0.004	0.004	0.006	0.027
10219	0.004	0.004	0.006	0.025
10220	0.004	0.004	0.006	0.025
10221	0.006	0.004	0.007	0.027
10222	0.005	0.004	0.007	0.027
10225	0.004	0.004	0.005	0.032
10227	0.003	0.005	0.005	0.031
10229	0.004	0.003	0.005	0.033
10230	0.004	0.003	0.005	0.033
10231	0.011	0.009	0.015	0.057
10233	0.006	0.007	0.009	0.028
10234	0.009	0.011	0.014	0.042
20043	0.004	0.003	0.005	0.026
20044	0.007	0.008	0.011	0.034
20046	0.005	0.007	0.009	0.025
20047	0.007	0.006	0.009	0.032

STATION	Vx	Vy	Vxy	Vz
7141	0.01	0.01	0.01	0.08
7142	0.01	0.02	0.02	0.09
7145	0.01	0.01	0.01	0.08
7146	0.01	0.01	0.01	0.08
7147	0.01	0.01	0.01	0.08
7150	0.01	0.02	0.03	0.08
7151	0.02	0.03	0.03	0.09
7152	0.02	0.03	0.03	0.09
7155	0.01	0.01	0.01	0.08
7156	0.01	0.02	0.02	0.08
7158	0.02	0.03	0.03	0.08
7160	0.01	0.01	0.02	0.08
7161	0.01	0.02	0.02	0.09
7162	0.01	0.01	0.02	0.09
10192	0.02	0.03	0.04	0.10
10195	0.02	0.02	0.03	0.09
10196	0.02	0.02	0.02	0.10
10197	0.02	0.03	0.03	0.11
10199	0.01	0.02	0.02	0.09
10201	0.01	0.01	0.02	0.09
10203	0.02	0.02	0.02	0.09
10204	0.02	0.02	0.03	0.11
10205	0.03	0.02	0.03	0.11
10206	0.02	0.02	0.02	0.09
10207	0.03	0.04	0.04	0.13
10208	0.02	0.02	0.03	0.10
10209	0.01	0.01	0.02	0.10
10210	0.01	0.01	0.02	0.10
10212	0.01	0.02	0.03	0.10
10213	0.01	0.01	0.02	0.10
10214	0.02	0.01	0.02	0.10
10215	0.01	0.01	0.01	0.09
10216	0.01	0.01	0.01	0.09
10217	0.01	0.01	0.02	0.09
10218	0.01	0.01	0.02	0.09
10219	0.01	0.01	0.02	0.08
10220	0.01	0.01	0.02	0.08
10221	0.02	0.01	0.02	0.09
10222	0.02	0.01	0.02	0.09
10225	0.01	0.01	0.02	0.10
10227	0.01	0.02	0.02	0.10
10229	0.01	0.01	0.02	0.11
10230	0.01	0.01	0.02	0.11
10231	0.04	0.03	0.05	0.19
10233	0.02	0.02	0.03	0.09
10234	0.03	0.04	0.05	0.14
20043	0.01	0.01	0.02	0.09
20044	0.02	0.03	0.03	0.11
20046	0.02	0.02	0.03	0.08
20047	0.02	0.02	0.03	0.10

STATION	Vx	Vy	Vxy	Vz
20048	0.007	0.006	0.010	0.032
20049	0.015	0.014	0.020	0.042
20050	0.017	0.015	0.023	0.045
20052	0.025	0.023	0.034	0.112
20053	0.010	0.009	0.013	0.043
20054	0.010	0.009	0.013	0.041
20055	0.004	0.005	0.006	0.027
20056	0.004	0.005	0.006	0.027
20057	0.005	0.003	0.006	0.029
20058	0.004	0.003	0.005	0.028
20060	0.005	0.006	0.008	0.027
20061	0.007	0.009	0.011	0.030
20062	0.007	0.009	0.011	0.030
20063	0.007	0.006	0.009	0.031
20064	0.006	0.006	0.008	0.028
20065	0.006	0.006	0.008	0.028
20066	0.009	0.008	0.012	0.034
20067	0.009	0.009	0.013	0.037
20068	0.012	0.020	0.023	0.070
20069	0.009	0.016	0.018	0.055
20071	0.002	0.002	0.003	0.025
20072	0.004	0.003	0.005	0.027
20073	0.004	0.003	0.005	0.027
20074	0.005	0.006	0.008	0.029
20075	0.005	0.007	0.008	0.025
20076	0.005	0.007	0.009	0.026
20077	0.003	0.003	0.005	0.025
20079	0.005	0.006	0.007	0.027
20080	0.008	0.013	0.015	0.043
20081	0.006	0.006	0.008	0.029
20082	0.004	0.004	0.006	0.027
20084	0.004	0.004	0.005	0.027
20085	0.003	0.004	0.005	0.025
20086	0.003	0.004	0.005	0.026
20087	0.004	0.003	0.005	0.027
20088	0.004	0.003	0.005	0.027
20089	0.004	0.004	0.006	0.025
20090	0.004	0.004	0.006	0.026
20091	0.003	0.004	0.005	0.026
20093	0.005	0.005	0.008	0.035
20094	0.003	0.004	0.005	0.026
20095	0.004	0.004	0.005	0.027
20096	0.003	0.002	0.004	0.026
20098	0.005	0.004	0.006	0.029
20100	0.006	0.009	0.010	0.027
20101	0.006	0.008	0.010	0.028
20102	0.006	0.008	0.010	0.028
20103	0.004	0.003	0.005	0.027
20104	0.004	0.003	0.005	0.027
20105	0.003	0.003	0.005	0.026

STATION	Vx	Vy	Vxy	Vz
20048	0.02	0.02	0.03	0.11
20049	0.05	0.05	0.07	0.14
20050	0.06	0.05	0.07	0.15
20052	0.08	0.08	0.11	0.37
20053	0.03	0.03	0.04	0.14
20054	0.03	0.03	0.04	0.14
20055	0.01	0.02	0.02	0.09
20056	0.01	0.02	0.02	0.09
20057	0.02	0.01	0.02	0.10
20058	0.01	0.01	0.02	0.09
20060	0.02	0.02	0.03	0.09
20061	0.02	0.03	0.04	0.10
20062	0.02	0.03	0.04	0.10
20063	0.02	0.02	0.03	0.10
20064	0.02	0.02	0.03	0.09
20065	0.02	0.02	0.03	0.09
20066	0.03	0.03	0.04	0.11
20067	0.03	0.03	0.04	0.12
20068	0.04	0.07	0.08	0.23
20069	0.03	0.05	0.06	0.18
20071	0.01	0.01	0.01	0.08
20072	0.01	0.01	0.02	0.09
20073	0.01	0.01	0.02	0.09
20074	0.02	0.02	0.03	0.09
20075	0.02	0.02	0.03	0.08
20076	0.02	0.02	0.03	0.08
20077	0.01	0.01	0.01	0.08
20079	0.02	0.02	0.02	0.09
20080	0.03	0.04	0.05	0.14
20081	0.02	0.02	0.03	0.10
20082	0.01	0.01	0.02	0.09
20084	0.01	0.01	0.02	0.09
20085	0.01	0.01	0.02	0.08
20086	0.01	0.01	0.02	0.08
20087	0.01	0.01	0.02	0.09
20088	0.01	0.01	0.02	0.09
20089	0.01	0.01	0.02	0.08
20090	0.01	0.01	0.02	0.08
20091	0.01	0.01	0.02	0.09
20093	0.02	0.02	0.03	0.11
20094	0.01	0.01	0.02	0.09
20095	0.01	0.01	0.02	0.09
20096	0.01	0.01	0.01	0.09
20098	0.02	0.01	0.02	0.09
20100	0.02	0.03	0.03	0.09
20101	0.02	0.03	0.03	0.09
20102	0.02	0.03	0.03	0.09
20103	0.01	0.01	0.02	0.09
20104	0.01	0.01	0.02	0.09
20105	0.01	0.01	0.02	0.09

STATION	Vx	Vy	Vxy	Vz
20106	0.003	0.003	0.005	0.026
20107	0.004	0.004	0.005	0.028
20109	0.003	0.004	0.005	0.029
20110	0.004	0.004	0.006	0.029
20111	0.003	0.003	0.004	0.028
20112	0.003	0.003	0.004	0.028
20113	0.004	0.004	0.005	0.028
20114	0.004	0.004	0.005	0.028
20115	0.005	0.003	0.006	0.031
20117	0.005	0.004	0.007	0.031
20118	0.002	0.003	0.004	0.027
20120	0.003	0.003	0.004	0.028
20121	0.003	0.003	0.004	0.028
20122	0.007	0.007	0.010	0.029
20123	0.005	0.005	0.007	0.029
30045	0.005	0.005	0.006	0.027
30046	0.005	0.004	0.006	0.027
30047	0.004	0.004	0.005	0.029
30049	0.003	0.003	0.005	0.030
30050	0.003	0.004	0.005	0.029
30053	0.004	0.005	0.006	0.028
30054	0.004	0.004	0.006	0.029
30055	0.004	0.005	0.007	0.031
30056	0.004	0.005	0.006	0.030
30057	0.006	0.004	0.007	0.030
50001	0.010	0.009	0.014	0.042
50002	0.009	0.008	0.012	0.041
50003	0.009	0.012	0.015	0.035
50004	0.006	0.007	0.009	0.029
50005	0.005	0.005	0.007	0.027
50006	0.005	0.005	0.007	0.027
50008	0.004	0.003	0.005	0.030
50009	0.004	0.003	0.005	0.029
50010	0.004	0.003	0.005	0.029
50012	0.008	0.007	0.011	0.034
50013	0.009	0.008	0.012	0.037
50014	0.009	0.007	0.011	0.035
50015	0.005	0.005	0.007	0.027
50016	0.005	0.005	0.008	0.027
50017	0.009	0.013	0.016	0.048
50018	0.007	0.006	0.009	0.033
50020	0.005	0.005	0.006	0.026
50021	0.003	0.002	0.004	0.024
50022	0.003	0.002	0.004	0.025
50023	0.003	0.005	0.006	0.024
50024	0.004	0.005	0.007	0.025
50026	0.004	0.003	0.005	0.023
50027	0.003	0.003	0.004	0.023
50028	0.003	0.003	0.005	0.024
50029	0.003	0.003	0.005	0.024

STATION	Vx	Vy	Vxy	Vz
20106	0.01	0.01	0.02	0.09
20107	0.01	0.01	0.02	0.09
20109	0.01	0.01	0.02	0.10
20110	0.01	0.01	0.02	0.10
20111	0.01	0.01	0.01	0.09
20112	0.01	0.01	0.01	0.09
20113	0.01	0.01	0.02	0.09
20114	0.01	0.01	0.02	0.09
20115	0.02	0.01	0.02	0.10
20117	0.02	0.01	0.02	0.10
20118	0.01	0.01	0.01	0.09
20120	0.01	0.01	0.01	0.09
20121	0.01	0.01	0.01	0.09
20122	0.02	0.02	0.03	0.09
20123	0.02	0.02	0.02	0.10
30045	0.02	0.02	0.02	0.09
30046	0.02	0.01	0.02	0.09
30047	0.01	0.01	0.02	0.09
30049	0.01	0.01	0.01	0.10
30050	0.01	0.01	0.02	0.09
30053	0.01	0.02	0.02	0.09
30054	0.01	0.01	0.02	0.09
30055	0.01	0.02	0.02	0.10
30056	0.01	0.02	0.02	0.10
30057	0.02	0.01	0.02	0.10
50001	0.03	0.03	0.05	0.14
50002	0.03	0.03	0.04	0.13
50003	0.03	0.04	0.05	0.12
50004	0.02	0.02	0.03	0.10
50005	0.02	0.02	0.02	0.09
50006	0.02	0.02	0.02	0.09
50008	0.01	0.01	0.02	0.10
50009	0.01	0.01	0.02	0.10
50010	0.01	0.01	0.02	0.10
50012	0.03	0.02	0.03	0.11
50013	0.03	0.03	0.04	0.12
50014	0.03	0.02	0.04	0.12
50015	0.02	0.02	0.02	0.09
50016	0.02	0.02	0.02	0.09
50017	0.03	0.04	0.05	0.16
50018	0.02	0.02	0.03	0.11
50020	0.02	0.02	0.02	0.09
50021	0.01	0.01	0.01	0.08
50022	0.01	0.01	0.01	0.08
50023	0.01	0.02	0.02	0.08
50024	0.01	0.02	0.02	0.08
50026	0.01	0.01	0.02	0.08
50027	0.01	0.01	0.01	0.08
50028	0.01	0.01	0.02	0.08
50029	0.01	0.01	0.02	0.08

STATION	Vx	Vy	Vxy	Vz
50030	0.003	0.004	0.005	0.024
50031	0.002	0.003	0.004	0.023
50032	0.003	0.004	0.005	0.024
60121	0.005	0.007	0.009	0.019
60124	0.026	0.027	0.038	0.094
20116A	0.005	0.004	0.006	0.030
SUMSQ	0.01	0.01	0.02	0.23
COUNT	237.00	237.00	237.00	237.00
AVG ERROR	0.00	0.00	0.01	0.03
MAX ERROR	0.03	0.03	0.04	0.11
MIN ERROR	0.00	0.00	0.00	0.02
RMSE	0.01	0.01	0.01	0.03

STATION	Vx	Vy	Vxy	Vz
50030	0.01	0.01	0.02	0.08
50031	0.01	0.01	0.01	0.08
50032	0.01	0.01	0.02	0.08
60121	0.02	0.02	0.03	0.06
60124	0.09	0.09	0.12	0.31
20116A	0.02	0.01	0.02	0.10
SUMSQ	0.08	0.09	0.17	2.46
COUNT	237.00	237.00	237.00	237.00
AVG ERROR	0.02	0.02	0.02	0.10
MAX ERROR	0.09	0.09	0.12	0.37
MIN ERROR	0.01	0.01	0.01	0.06
RMSE	0.02	0.02	0.03	0.10

LIDAR CONTROL POINTS ONLY

CALCULATED ACCURACIES:

0.01	Meters RMSE_x
0.01	Meters RMSE_y
0.01	Meters RMSE_{xy}
0.02	Meters at 95% C.I.
0.04	RMSE_z
0.07	Meters at 95% C.I.

CALCULATED ACCURACIES:

0.02	Feet RMSE_x
0.02	Feet RMSE_y
0.03	Feet RMSE_{xy}
0.06	Feet at 95% C.I.
0.12	RMSE_z
0.24	Feet at 95% C.I.

METERS

<u>STATION</u>	<u>V_x</u>	<u>V_y</u>	<u>V_{xy}</u>	<u>V_z</u>
10193	0.010	0.009	0.013	0.035
10194	0.005	0.004	0.007	0.027
10202	0.004	0.004	0.005	0.028
10211	0.004	0.005	0.007	0.030
10224	0.003	0.003	0.005	0.031
10228	0.005	0.004	0.006	0.032
10232	0.009	0.010	0.014	0.037
20045	0.005	0.007	0.009	0.025
20051	0.023	0.021	0.031	0.102
20059	0.005	0.006	0.008	0.027
20070	0.002	0.003	0.004	0.025
20078	0.003	0.003	0.005	0.025
20099	0.005	0.007	0.009	0.027
20108	0.004	0.004	0.006	0.028
20119	0.002	0.003	0.004	0.027
20124	0.007	0.010	0.012	0.033
50007	0.004	0.004	0.006	0.030
50019	0.005	0.005	0.006	0.026
SUMSQ	0.00	0.00	0.00	0.03
COUNT	18.00	18.00	18.00	18.00
AVG ERROR	0.01	0.01	0.01	0.03
MAX ERROR	0.02	0.02	0.03	0.10
MIN ERROR	0.00	0.00	0.00	0.02
RMSE	0.01	0.01	0.01	0.04

US FEET

<u>STATION</u>	<u>V_x</u>	<u>V_y</u>	<u>V_{xy}</u>	<u>V_z</u>
10193	0.03	0.03	0.04	0.12
10194	0.02	0.01	0.02	0.09
10202	0.01	0.01	0.02	0.09
10211	0.01	0.02	0.02	0.10
10224	0.01	0.01	0.02	0.10
10228	0.02	0.01	0.02	0.11
10232	0.03	0.03	0.04	0.12
20045	0.02	0.02	0.03	0.08
20051	0.08	0.07	0.10	0.34
20059	0.02	0.02	0.02	0.09
20070	0.01	0.01	0.01	0.08
20078	0.01	0.01	0.02	0.08
20099	0.02	0.02	0.02	0.09
20108	0.01	0.01	0.02	0.09
20119	0.01	0.01	0.01	0.09
20124	0.02	0.03	0.04	0.11
50007	0.01	0.01	0.02	0.10
50019	0.02	0.02	0.02	0.09
SUMSQ	0.01	0.01	0.02	0.27
COUNT	18.00	18.00	18.00	18.00
AVG ERROR	0.02	0.02	0.03	0.11
MAX ERROR	0.08	0.07	0.10	0.34
MIN ERROR	0.01	0.01	0.01	0.08
RMSE	0.02	0.02	0.03	0.12

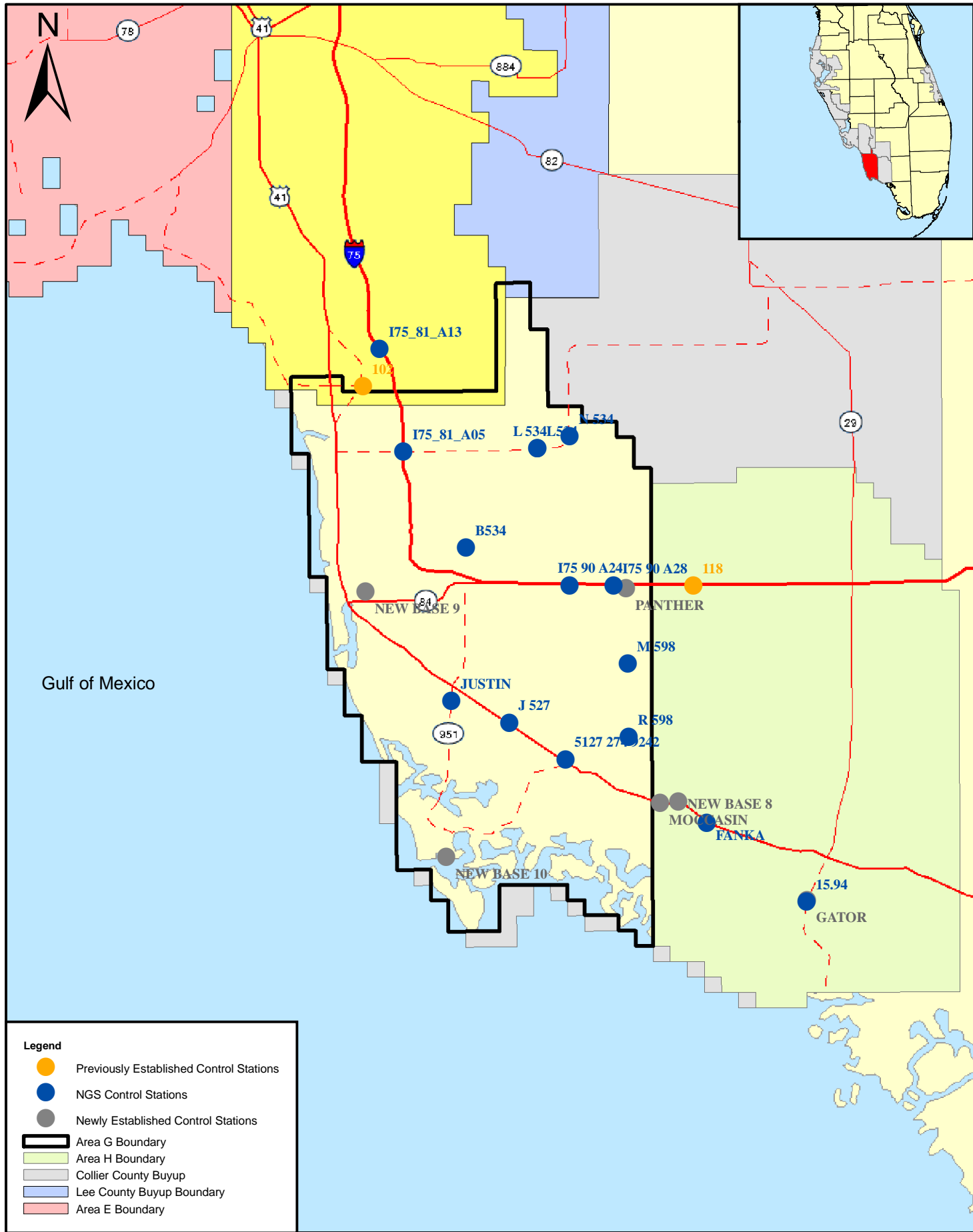
APPENDIX E: LAYOUT MAPS

This appendix contains layout maps of the GPS Ground Control Stations, LiDAR Control Points and LiDAR QA/QC Checkpoints (see below) for Project Area G of the FY2007 State of Florida Division of Emergency Management Ground Control QA/QC Survey Mapping Project.

- GPS Control Stations
- LiDAR Control Points
- Brush Observations
- Forested Observations
- Low Grass or Bare Earth Observations
- Urban Observations
- GPS Network Diagram

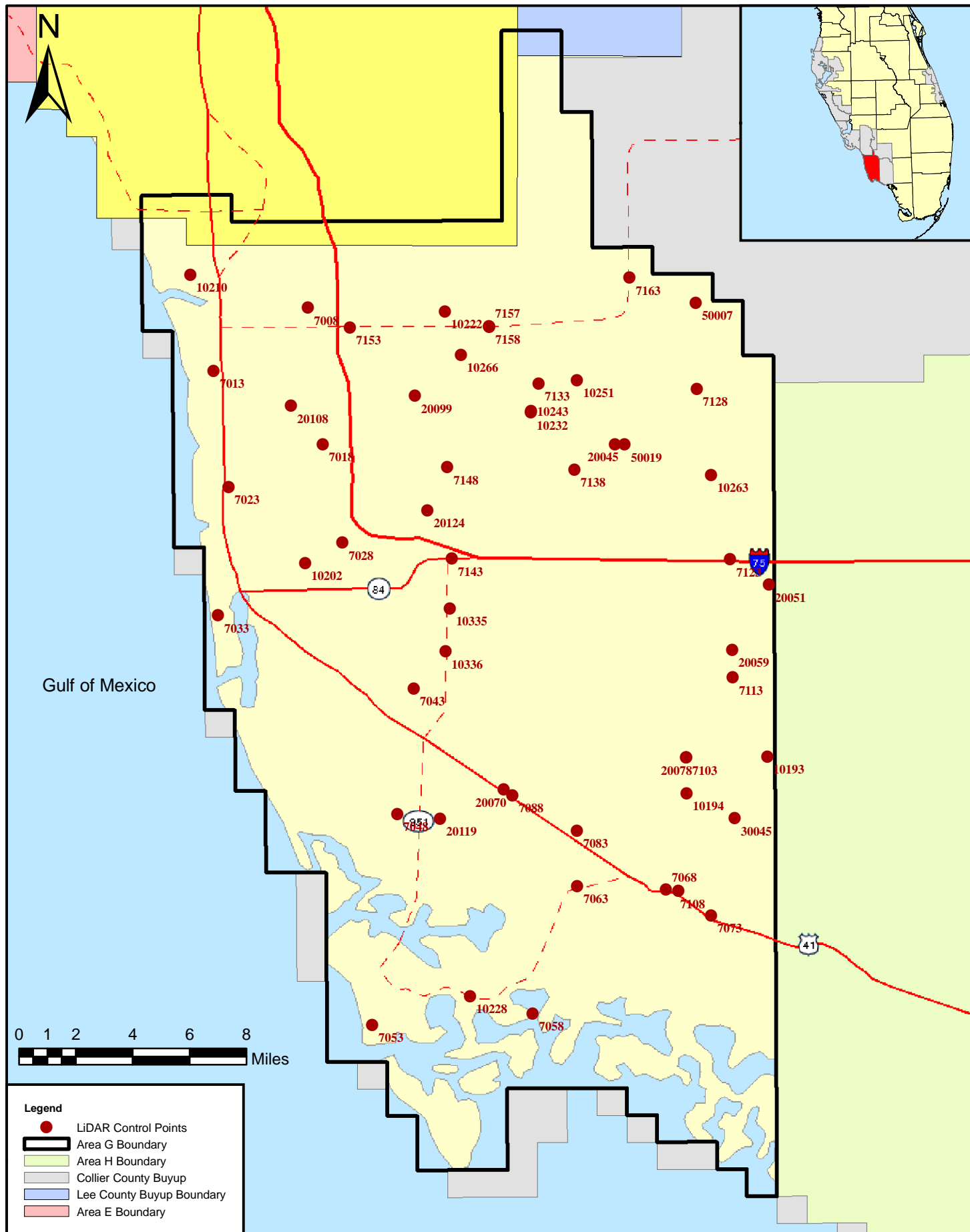


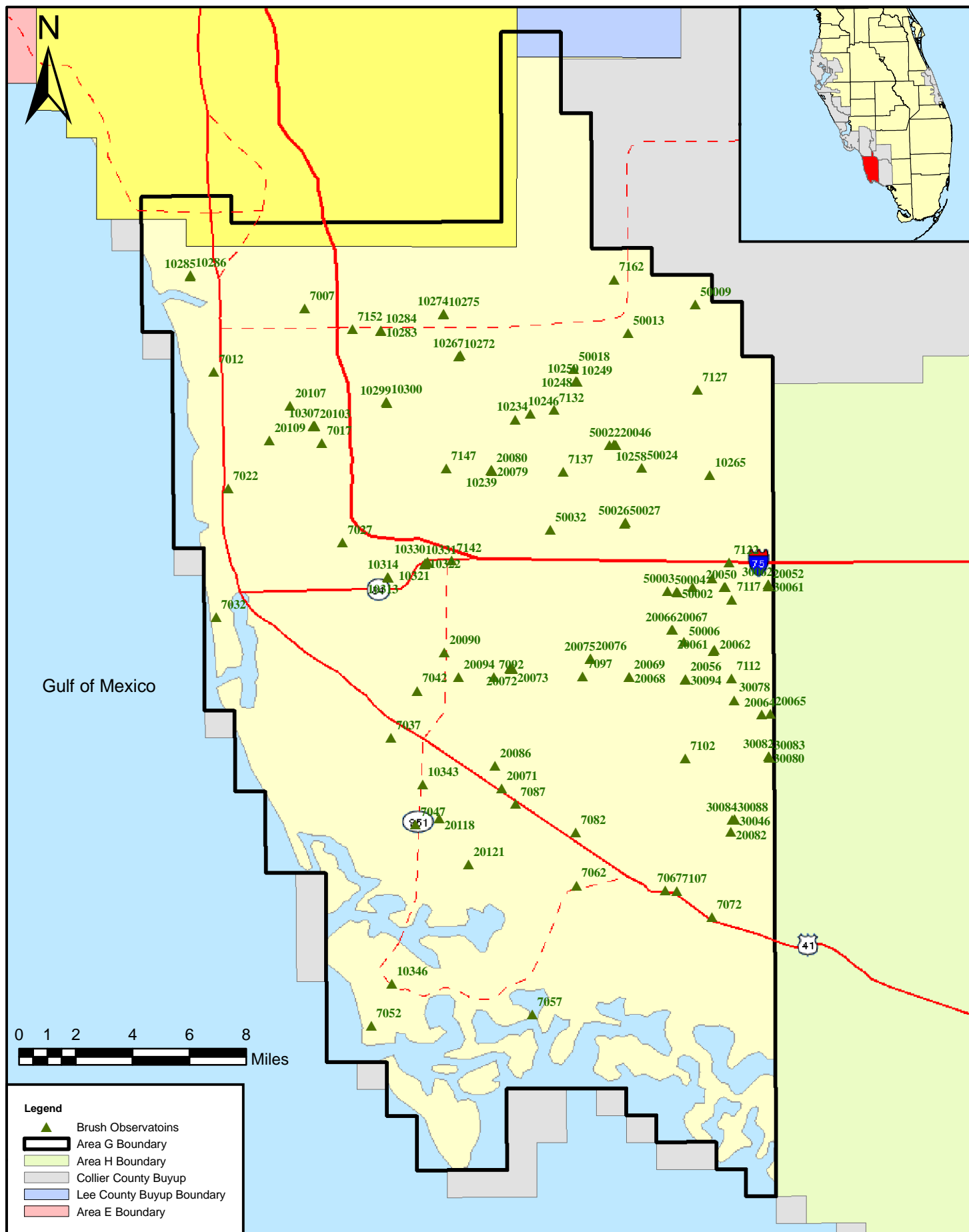
AREA G - GPS CONTROL STATIONS





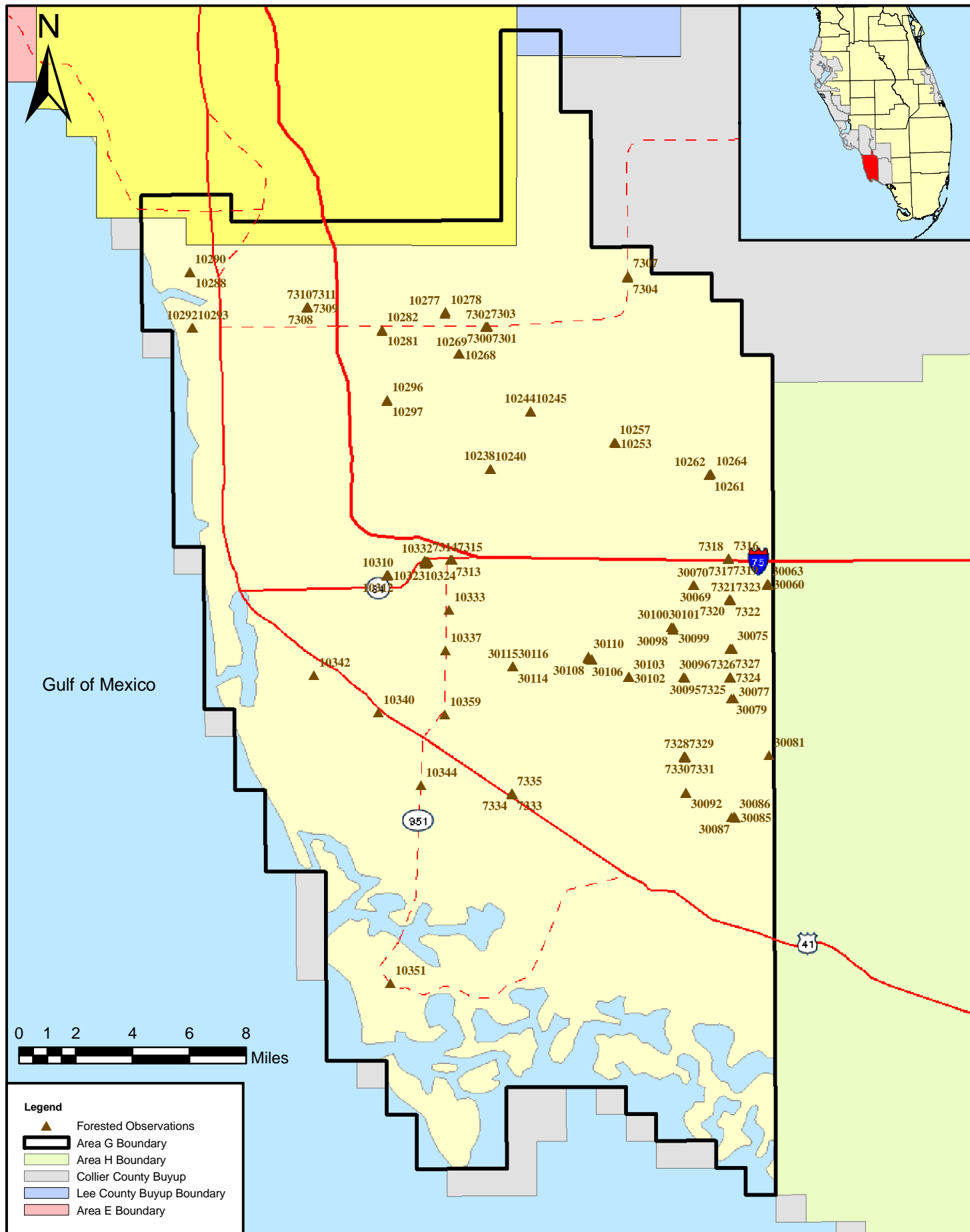
AREA G - LiDAR CONTROL POINTS

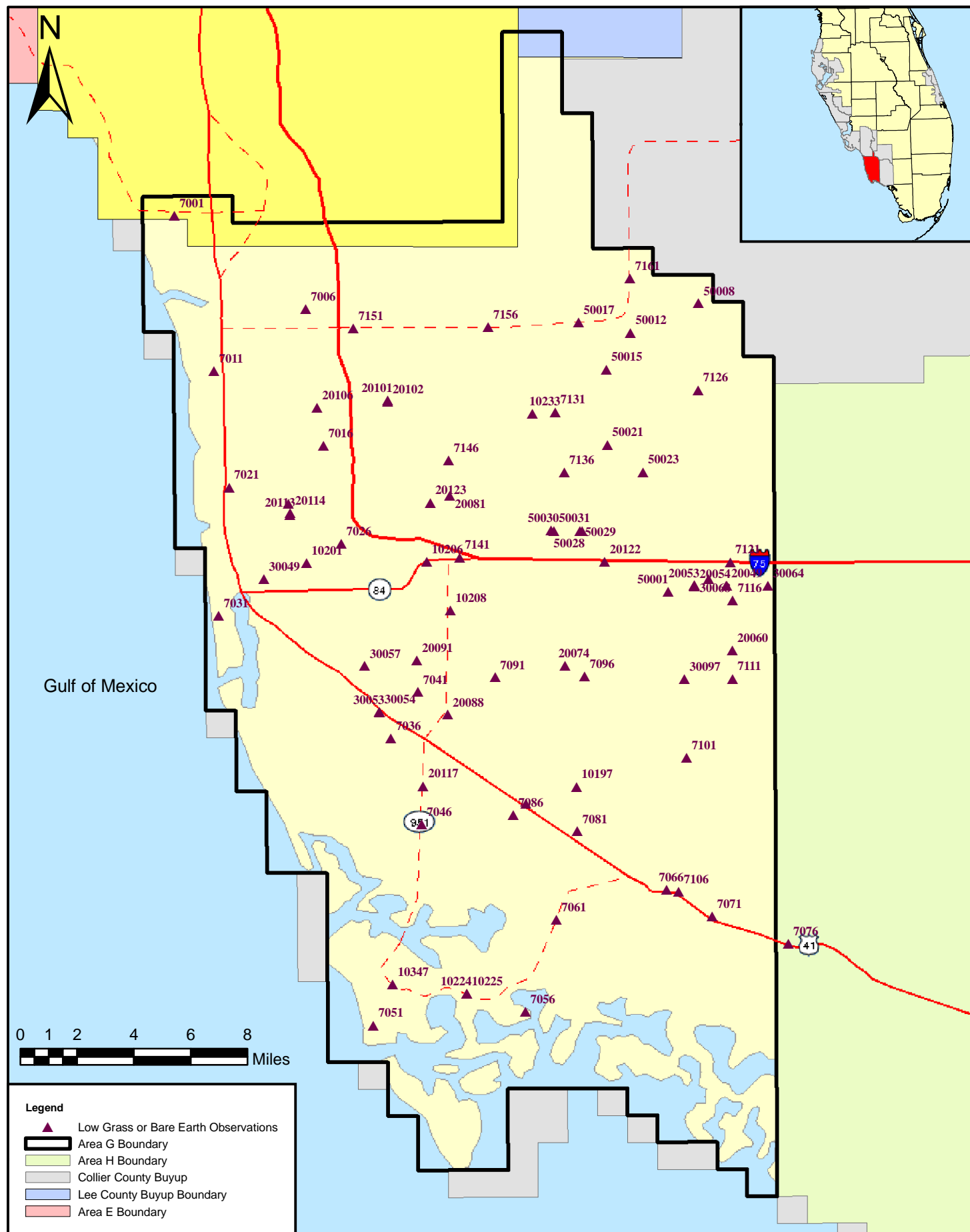






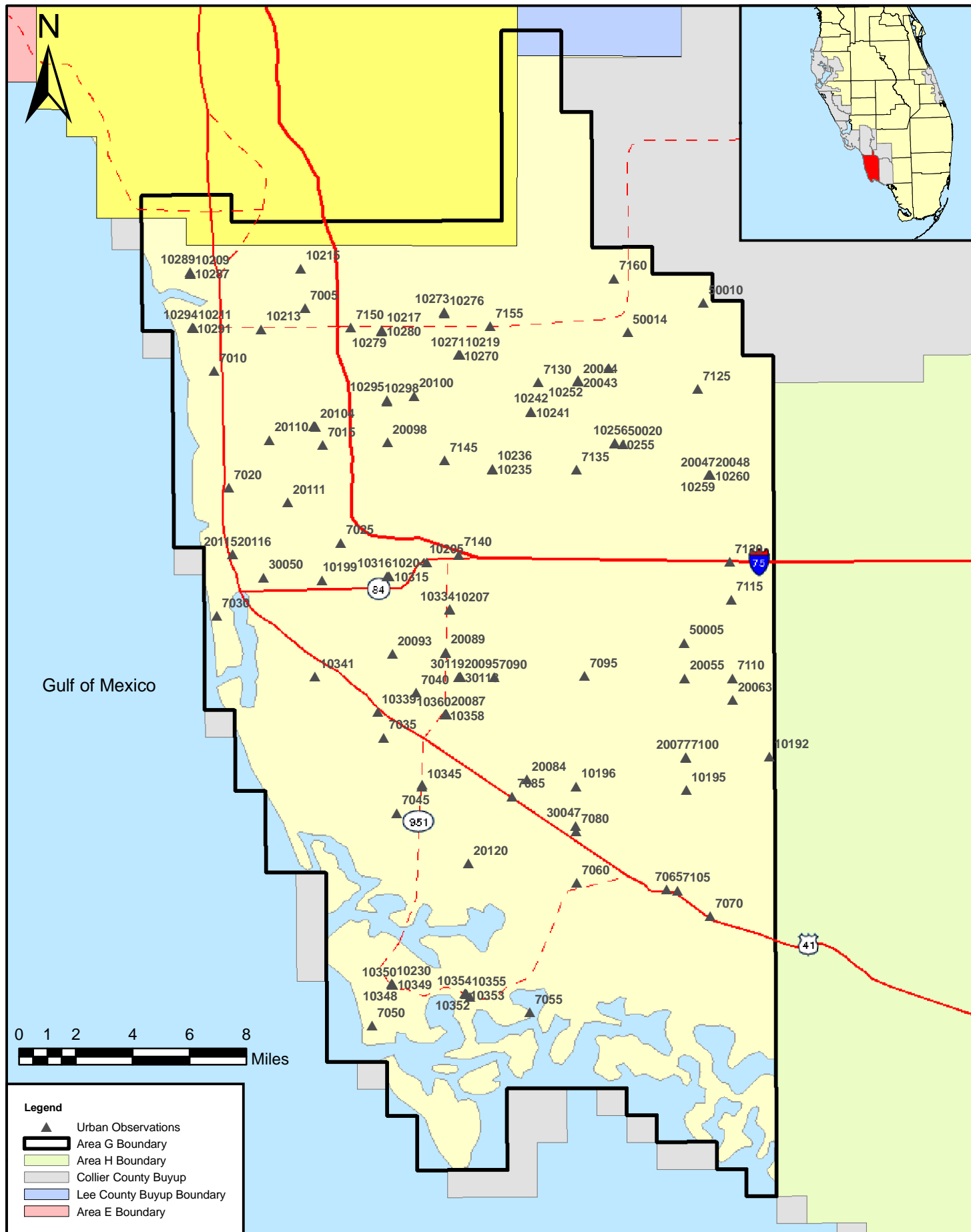
AREA G - FORESTED








AREA G - URBAN

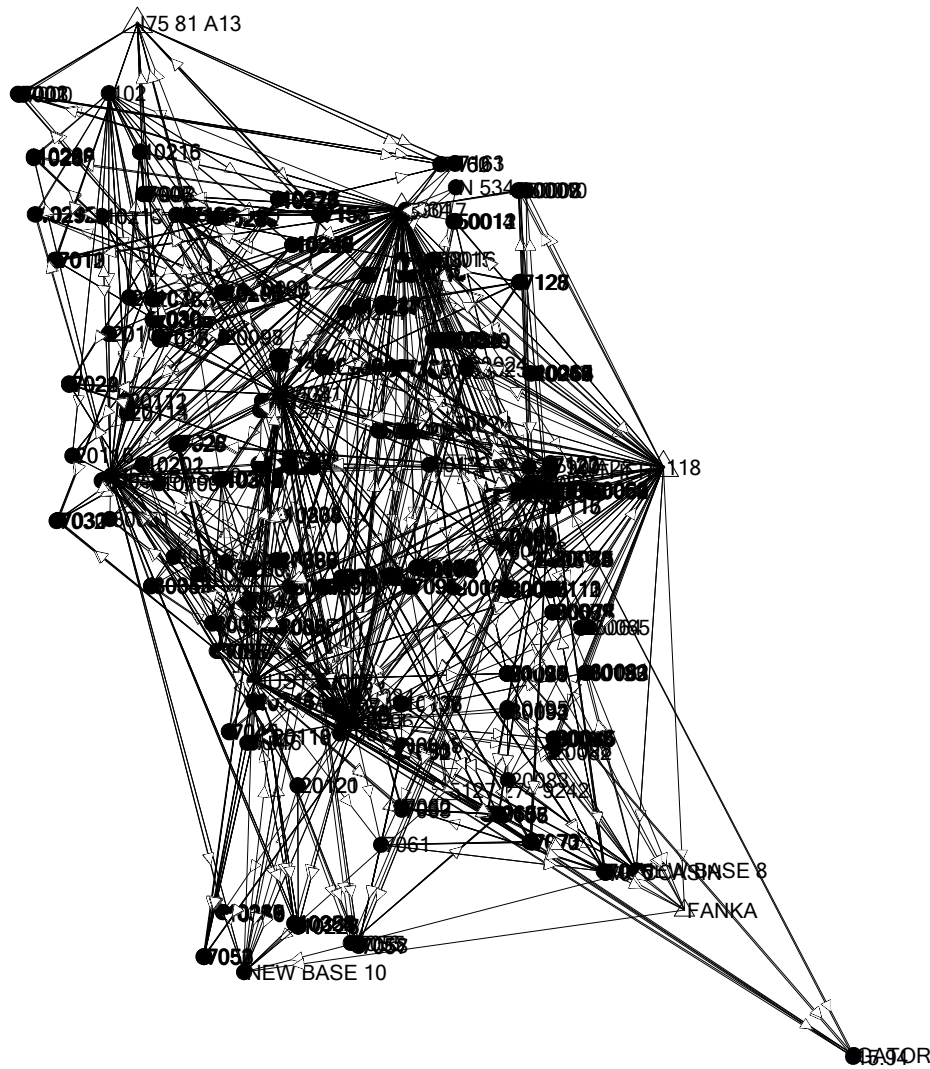


Scale 1" to 33333 ft

0 62500 sft



US survey feet



Plot Scale: 1" to 33333 ft
Printed on 4/8/2009, at 5:31:13 PM
Printed from Trimble Geomatics Office

Project: Collier County Area G May 9 2008
USFeet Template