

This is an example to be used for information purposes only

DESIGN SURVEY REPORT

(Project Name Information)

PROJECT REPORT #1

(Insure Project Report meets the requirements of F.A.C. 5J-17.050, .051 and .052)

CAiCE database: (Number)
(Firm Name), Inc. Project No.: (Number)

Project limits: (Description and Station Begin/End)

Purpose of survey: (i.e. Design Survey)

Project units: (US Survey Foot or Metric)
Horizontal datum: NAD 1983/ (Adjustment)
Vertical datum: (NGVD 1929 or NAVD 88)

Processors used: (i.e. EFB or something else)

(Firm Name) database: (Segments)

1) DTM database name:

A: DTM1

2) Settings:

- a) Max. triangle distance = (feet)
- b) Max. triangle slope = 0.1 to 1.0
- c) Max. breakline length = (feet)
- d) Max. triangle angle = (angle)

3) DTM survey data:

- a) All points and chains in zones 1 with ground attribute.

4) Survey control data and calculation data:

- a) (Zone)

5) Alignments name:

(Main line and side road alignments and whether approved or unapproved)

CALC BL

- 1) CALC Baselines.cdg CAiCE file, with ties and notes.
- 2) Text files, reports of calculated baselines.

GPS files

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Various, a GPS report to follow

TOPO files

- | | |
|-------------------|------------------------------------------|
| 1) TOPOEXSV01.dgn | 2D file of the survey data |
| 2) WestLL SB.dgn | 3D file of South bound's west lane line. |
| 3) WLF.dgn | 2D file of Wet Land locations |
| 4) SHW.dgn | 2D file of High water locations |

DTM files

- | | |
|-----------------|------------------------------------------------|
| 1) GDTMSV01.dgn | 3D file of DTM (Turnpike, from fence to fence) |
| 2) GDTMSV01.tin | TIN file (Triangulated Irregular Network) |
| 3) GDTMSV01.dat | TIN database |

Provide Separate Reports for each segment (samples below)

Segment "A" report

- 1) Survey data:
 - a) Location of south bound west lane line to be used as check section.
 - b) Location of top center of barrier wall for baseline calculations.
 - c) Location of existing monumentation along turnpike right of way lines.
- 2) Edits to the observation file have been redlined on a printout (see attached)
- 3) Add/change points' feature code, attribute and zone accordingly.
- 4) There were some bad locations and bad names in this segment.
- 5) Move data to proper place.

Segment "B" report

- 1) Survey data: Location of existing monumentation along Jog Road right of way lines.
- 2) Edits to the observation file have been redlined on a printout (see attached)
- 3) Add/change points' feature code, attribute and zone accordingly.
- 4) Move data to proper place.

Segment "C" report

- 1) Survey data: DTM survey
- 2) Edits to the observation file have been redlined on a printout (see attached)
- 3) Change to position 1 all those points with 2.
- 4) Add/change points' feature code, attribute and zone accordingly.
- 5) Move data to proper place.
- 6) Control point named A27 was changed to A17.
- 7) Mark as deleted data for A15 due to bad vertical angle (time 15:52:14 12/12/02)
- 8) The following points are bad shots: SLLF11,15,16

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*** Notes*** (Samples below)

1) Primary control point coordinates (A1-21, A24-30) were obtained by GPS survey. See files in GPS subdirectory, a GPS report to follow. **All control points were elevated by three wire bench run.**

2) For baselines of survey information see files in CALC BL subdirectory.

3) The point naming convention used follows the FDOT guidelines but includes a crew designator and a feature designator, i.e. "SLLA1" is the first lane line located on lane line "A" by crew "S".

5) All points that were manually input, moved, edited elevation or taped for use in the DTM are tagged with the field book and page in the comments field to support the X,Y,Z for the point. (SLLB55-57,59,60,83,84,SGRD151,152, GR1,LLE1,2, TREEPA1,2,LLB1-3,FNC1,STA1)

6) Any point that was moved to prevent crossing chains is noted in the comments field. (SWBW19,SWAL30,SSHD55,59,SSHB20,SAP10,STRE122)

7) No check x-sections were obtained, instead a check profile along the south bound's west edge of pavement was gathered. As was approved during scope and negotiation with Turnpike Enterprise Surveyor. (Segment A)

8) Utility and Drainage surveys will be performed after finishing with the Topography.

9) A DTM was run and delivered to Engineering Prime Consultant as requested.

10) Description of zones utilized

- 1 - Topo -DTM
- 2 - Inverts and drainage pipes
- 8 - Control points and calculated points.

Dated:

Signature _____

Name, P.S.M.

Florida Registration No

Firm Information

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REPORT OF SURVEY

FLORIDA TURNPIKE (Road Name/Number)

(Name) COUNTY

(Insure Project Report meets the requirements of F.A.C. 5J-17.050, .051 and .052)

INTRODUCTION

(Firm Name) established vertical & horizontal control as a sub consultant to (Prime Consultant Inc). The project manager is The scope is (brief project description).
FPID No. (full 11 digit number).

VERTICAL

Vertical data provided by:

Recovery of points:

Datum:

Source: (i.e. NGS, District Field Books, etc.)

Bench Marks Held: (list with all appropriate names and elevations)

HORIZONTAL

GPS (Acceptable Methods)

Instrumentation and support equipment that were utilized to perform the field observations:

- Receivers: (Number and type)
- Controllers: (Type); Sensors (Type); Antenna (Type)
- Controllers: (SN#)
- Sensors: (SN#)
- Antenna: (SN#)

Receiver Setup: (i.e. tripods, tribrachs, height measurements)

All observations will be of 30 minute duration or longer. All observations (Vectors) will have redundant measurements.

Procedures and network design meet or exceed standards and specifications for using G.P.S. relative positioning techniques as set forth by the Federal Geodetic Control Committee (FGCC).

RTK Methods and Procedures: (show if approved for use by Turnpike Surveyor)

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Horizontal values are referenced to the Florida State Plane System, (Zone and adjustment)

The (number of) stations held for control are: (List monumentation and identification)
Include final constrained report for the GPS network. (Example below)

THIS IS REPORT_FE.TXT
CREATION DATE: 2002.12.05 BY R HANCE
NETWORK S14_FE

FULLY CONSTRAINED HORIZONTAL ADJUSTMENT - PASS 1
ALL INFORMATION IS IN THE NAD 83 DATUM

7 FLORIDA EAST MERCATOR

DATA BELOW IS FROM INFO.VEC

| | | | | | | | |
|------|----------------|------------|---------------|-----------|----------|-----------|-------|
| GPS9 | 28 52 22.07964 | .0001 | 82 3 20.89839 | .0001 | -10.3000 | .0001 | 0 |
| GPS4 | 28 51 8.52033 | .0001 | 82 3 14.15780 | .0001 | -10.0800 | .0001 | 1 |
| A004 | A002 | -205.4804 | .0035 | -13.6149 | .0035 | 41.5192 | .0035 |
| A004 | A002 | -205.4788 | .0035 | -13.6158 | .0035 | 41.5168 | .0035 |
| A001 | A002 | -405.6181 | .0042 | 46.1899 | .0042 | 198.6312 | .0042 |
| A001 | A003 | -211.3966 | .0038 | -125.1788 | .0038 | -172.5076 | .0038 |
| A002 | A003 | 194.2201 | .0042 | -171.3619 | .0042 | -371.1420 | .0042 |
| A001 | A003 | -211.3971 | .0038 | -125.1773 | .0038 | -172.5064 | .0038 |
| A002 | A003 | 194.2230 | .0042 | -171.3637 | .0042 | -371.1406 | .0042 |
| A001 | A004 | -200.1373 | .0036 | 59.8047 | .0036 | 157.1136 | .0036 |
| A001 | A004 | -200.1392 | .0036 | 59.8110 | .0036 | 157.1151 | .0036 |
| A002 | A005 | 155.8565 | .0039 | 168.0258 | .0039 | 250.5836 | .0039 |
| A001 | A005 | -249.7629 | .0045 | 214.2130 | .0045 | 449.2163 | .0045 |
| A002 | A005 | 155.8565 | .0039 | 168.0185 | .0039 | 250.5888 | .0039 |
| A001 | A005 | -249.7617 | .0045 | 214.2096 | .0045 | 449.2198 | .0045 |
| A002 | GPS4 | -744.6541 | .0077 | 659.7826 | .0077 | 1359.0291 | .0077 |
| A001 | GPS4 | -1150.2716 | .0088 | 705.9757 | .0088 | 1557.6599 | .0088 |
| A002 | GPS9 | -1076.6835 | .0142 | 1717.3721 | .0142 | 3342.2721 | .0142 |
| A001 | GPS9 | -1482.3037 | .0151 | 1763.5696 | .0151 | 3540.9002 | .0151 |
| A002 | GPS9 | -1076.6948 | .0142 | 1717.3770 | .0142 | 3342.2710 | .0142 |
| A001 | GPS9 | -1482.3111 | .0151 | 1763.5612 | .0151 | 3540.9039 | .0151 |

C VECTOR CONSTANT ERROR EST. .0050 PPM ERROR EST. 5.0

DATA BELOW IS NETWORK ADJUSTMENT PASS STATISTICS FROM OUT.VEC

ANALYSIS IS PERFORMED ON THE NAD 83 DATUM

GPS NETWORK ADJUSTMENT

NUMBER OF CONTROL PTS. = 2
NUMBER OF STATIONS = 7
NUMBER OF MEASUREMENTS = 19
NUMBER OF REQUIRED TERMS FOR NORMAL EQUATIONS = 31

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RESULTS OF ADJUSTMENT

VECTOR RESIDUALS

| FROM | TO | HORZ. RES. | VERT. RES. | 3-D RES. | 3-D ERR. EST. | # | PPM | 3-D LENGTH |
|------|------|------------|------------|----------|---------------|-----|------|------------|
| A004 | A002 | -.0021 | .0012 | -.0024 | .0061 | .4 | 11.4 | 210.075 |
| A004 | A002 | .0013 | .0014 | .0019 | .0061 | .3 | 9.0 | 210.073 |
| A001 | A002 | .0008 | .0010 | .0013 | .0073 | .2 | 2.8 | 453.998 |
| A001 | A003 | -.0011 | -.0026 | -.0028 | .0066 | .4 | 9.5 | 300.195 |
| A002 | A003 | .0009 | .0040 | .0041 | .0073 | .6 | 9.0 | 452.585 |
| A001 | A003 | .0009 | -.0018 | .0020 | .0066 | .3 | 6.7 | 300.194 |
| A002 | A003 | -.0018 | .0014 | -.0023 | .0073 | .3 | 5.1 | 452.585 |
| A001 | A004 | .0017 | -.0011 | .0020 | .0062 | .3 | 7.8 | 261.374 |
| A001 | A004 | -.0030 | .0039 | -.0049 | .0062 | .8 | 18.7 | 261.378 |
| A002 | A005 | -.0008 | .0044 | -.0044 | .0068 | .7 | 13.1 | 339.582 |
| A001 | A005 | .0012 | .0025 | .0028 | .0078 | .4 | 4.9 | 556.834 |
| A002 | A005 | -.0008 | -.0045 | -.0046 | .0068 | .7 | 13.4 | 339.582 |
| A001 | A005 | -.0004 | -.0023 | -.0023 | .0078 | .3 | 4.2 | 556.835 |
| A002 | GPS4 | -.0128 | .0104 | -.0165 | .0133 | 1.2 | 9.8 | 1684.275 |
| A001 | GPS4 | -.0123 | .0144 | -.0189 | .0152 | 1.2 | 9.2 | 2061.027 |
| A002 | GPS9 | .0241 | -.0235 | .0336 | .0246 | 1.4 | 8.6 | 3908.887 |
| A001 | GPS9 | .0232 | -.0141 | .0272 | .0262 | 1.0 | 6.4 | 4224.379 |
| A002 | GPS9 | .0157 | -.0173 | .0234 | .0246 | 1.0 | 6.0 | 3908.891 |
| A001 | GPS9 | .0182 | -.0223 | .0287 | .0262 | 1.1 | 6.8 | 4224.381 |

RMS ERROR IN X = .0084

RMS ERROR IN Y = .0116

RMS ERROR IN Z = .0026

NETWORK PPM PRECISION = 7.53

LARGEST 3-RESIDUAL ON VECTOR A002 - GPS9 OF .034 METERS

STANDARD ERROR OF UNIT WEIGHT IS .883

WITH 42 DEGREES OF FREEDOM

CHI SQUARED TEST ON ANALYSIS

.748 < .883 < 1.208

(LOW) (HIGH)

PASSES AT THE 5 % SIGNIFICANCE LEVEL

95% CONFIDENCE F STATISTIC STANDARD ERROR MULTIPLIER FOR 42 D.F. IS 2.55

ALL COOR. STAN. ERRORS ARE AT 95% CONFIDENCE

CONTROL STATION COORDINATE RESIDUALS AND ERROR ESTIMATES

| STATION | X RES. | X ERR. EST. | Y RES. | Y ERR. EST. | Z RES. | Z ERR. EST. |
|---------|--------|-------------|--------|-------------|--------|-------------|
| GPS9 | .0000 | .0001 | .0000 | .0001 | .0000 | .0001 |
| GPS4 | .0000 | .0001 | .0000 | .0001 | .0000 | .0001 |

| STATION | LATITUDE | LONGITUDE | HEIGHT |
|---------|----------------|---------------|-------------|
| | SD (METERS) | SD (METERS) | SD (METERS) |
| A004 | 28 50 16.58561 | 82 2 42.74041 | -10.1092 |
| | .0110 | .0110 | .0110 |
| GPS4 | 28 51 8.52033 | 82 3 14.15780 | -10.0800 |
| | .0002 | .0002 | .0002 |
| GPS9 | 28 52 22.07964 | 82 3 20.89839 | -10.3000 |
| | .0002 | .0002 | .0002 |
| A001 | 28 50 10.75325 | 82 2 35.73399 | -9.7373 |
| | .0105 | .0105 | .0105 |

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| | | | |
|------|----------------|---------------|---------|
| A002 | 28 50 18.00110 | 82 2 50.31693 | -3.1769 |
| | .0104 | .0104 .0104 | |
| A003 | 28 50 4.36099 | 82 2 44.09603 | -9.9678 |
| | .0112 | .0112 .0112 | |
| A005 | 28 50 27.40026 | 82 2 43.76512 | -9.1801 |
| | .0113 | .0113 .0113 | |

ALL INFORMATION IS IN THE NAD 83 DATUM

7 FLORIDA EAST MERCATOR

| STATION | X (M.) | Y (M.) | SCALE FACTOR | CONVERGENCE |
|-----------------|-------------|--------------|--------------|--------------|
| A004 | 98000.8046 | 499518.0923 | 1.00006951 | - 0-30- 15.3 |
| U.S. SURVEY FT. | 321524.3063 | 1638835.6078 | | |
| GPS4 | 97163.2916 | 501124.5846 | 1.00007163 | - 0-30- 31.3 |
| U.S. SURVEY FT. | 318776.5657 | 1644106.2412 | | |
| GPS9 | 97000.7311 | 503390.9582 | 1.00007204 | - 0-30- 35.7 |
| U.S. SURVEY FT. | 318243.2319 | 1651541.8354 | | |
| A001 | 98189.1665 | 499336.8565 | 1.00006904 | - 0-30- 11.8 |
| U.S. SURVEY FT. | 322142.2903 | 1638241.0032 | | |
| A002 | 97795.7946 | 499563.4817 | 1.00007003 | - 0-30- 18.9 |
| U.S. SURVEY FT. | 320851.7027 | 1638984.5228 | | |
| A003 | 97960.7415 | 499142.0454 | 1.00006961 | - 0-30- 15.7 |
| U.S. SURVEY FT. | 321392.8662 | 1637601.8606 | | |
| A005 | 97975.9562 | 499851.2976 | 1.00006957 | - 0-30- 15.9 |
| U.S. SURVEY FT. | 321442.7829 | 1639928.7988 | | |

DATA BELOW IS POSITIONAL TOLERANCE TEST FROM PT.VEC

HECTOR THE VECTOR POSITIONAL TOLERANCE TEST

CONSTANT = .0100 METERS

PROPORTIONAL = 1/ 100000.

STATION ACTUAL ALLOWABLE STATUS

| | | | |
|------|-------|-------|--------|
| A004 | .0110 | .0281 | PASSED |
| A001 | .0105 | .0306 | PASSED |
| A002 | .0104 | .0268 | PASSED |
| A003 | .0112 | .0314 | PASSED |
| A005 | .0113 | .0251 | PASSED |

CONGRATULATIONS - ALL YOUR POINTS PASS POSITIONAL TOLERANCE

ALIGNMENT

Define recovery of monumentation used, reference to prior maps or surveys, analysis and method to re-establish survey baseline.

Utilize a Station/Offset report for recovered right of way monumentation to support final alignment. (Sample report below).

The report is as follows:

| | | | | |
|-------|--------------------------------------------------------|----------------|-----------|-----------|
| BRW1 | 1,638,224.7667 | 321,416.061100 | 170+17.50 | -9.211006 |
| | Feature : OM | | | |
| | Description : FND BOX CUT IN PAVEMENT (NOTHING INSIDE) | | | |
| ----- | | | | |
| BARW1 | 1,638,220.9987 | 321,422.229500 | 170+13.80 | -3.001795 |
| | Feature : NL | | | |

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Description : FND CASEHARD NAIL (NO ID)

BARW2 1,638,006.7494 321,297.130700 167+98.19 -125.751700
Feature : CMON
Description : FND 4"X4" CM SRD W/"X" IN MIDDLE BROKE & LEANING (NO ID)

BARW3 1,637,822.5502 321,344.669900 166+14.52 -76.202316
Feature : CMON
Description : FND 4"X4" CM SRD TOP BROKEN (NO ID)

BARW4 1,637,769.4099 321,369.323700 165+61.66 -50.969244
Feature : IRC
Description : FND 5/8" IRON ROD (NO ID) LEANING SOUTHWEST

BARW5 1,638,067.0457 321,503.031000 168+60.73 79.477356
Feature : CMON
Description : FND 4"X4" CM SRD W/"X" IN MIDDLE (NO ID)

BARW6 1,638,541.0471 321,429.373400 173+33.90 0.644026
Feature : NL
Description : FND PK NAIL & DISK W/3"X3" PLATE STAMPED "P.O.T."

BARW7 1,638,541.9784 321,428.142600 173+34.82 -0.596878
Feature : NL
Description : FND PK NAIL & DISK MARKED "LS 3423"

ARW8 1,641,335.0482 321,460.421800 is out of chain.
Feature : NL
Description : FND PK NAIL & DISK (NO ID)

ARW9 1,641,314.7782 321,459.950600 is out of chain.
Feature : NL
Description : FND PK NAIL & DISK LB6707 TRAV

ARW10 1,641,273.2064 321,467.387500 is out of chain.
Feature : NL
Description : FND PK NAIL & DISK (NO ID)

ARW11 1,638,851.1049 321,515.884500 176+44.89 83.761491
Feature : IRC
Description : FND 1/2" ROD & CAP STAMPED PLS 2700

ARW12 1,639,854.0378 321,528.725000 186+47.93 85.506202
Feature : CMON
Description : FND 4"X4" CM STAMPED PLS 4393

ARW13 1,639,578.9781 321,525.529200 183+72.85 85.396602
Feature : CMON
Description : FND 4"X4" CM STAMPED LB 1723

ARW14 1,639,554.0580 321,524.603100 183+47.92 84.750149
Feature : NL
Description : FND PK NAIL & DISK STAMPED PSM LB 3522

ARW15 1,639,080.6686 321,349.597300 178+72.62 -85.024568
Feature : IRC
Description : FND 5/8" ROD & CAP JB0 LS8717

ARW16 1,639,542.1161 321,440.125700 183+35.03 0.412046
Feature : NL
Description : FND PK NAIL & DISK (NO ID)

ARW17 1,639,377.9231 321,523.205900 181+71.75 85.325117
Feature : CMON
Description : FND 3" ROUND CM STAMPED RLS 1571

ARW18 1,639,177.9785 321,520.743200 179+71.79 85.047660
Feature : IRC
Description : FND 5/8" IRON ROD (NO ID)

This is an example to be used for information purposes only

ARW19 1,639,002.7638 321,518.549800 177+96.57 84.769226
Feature : CMON
Description : FND 4"X4" CM (NO ID)

ARW20 1,638,998.7595 321,718.668400 177+94.75 284.919637
Feature : IRC
Description : FND 5/8" IRON ROD (NO ID)

ARW21 1,639,368.9695 321,438.003700 181+61.87 0.225854
Feature : IRC
Description : FND 5/8" ROD & CAP REF PT LB2317

ARW22 1,639,470.1223 321,440.113600 182+63.04 1.207673
Feature : NL
Description : FND PK NAIL & DISK (NO ID)

ASEC1 1,640,886.1827 321,448.773800 196+79.11 -6.019990
Feature : CMON
Description : FND 4"X4" CM STAMPED BAKER PLS LB4393

(Name)
P.S.M. In Charge

Signature

Date

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CERTIFICATIONS TO BE USED ON REPORTS AND MAPS

(Insure Certification meets the requirements of F.A.C. 5J-17.050, .051 and .052. All required certifications may be found in the Right of Way Menu Bar in FDOT Workspaces but may require revisions to meet current statutory references.)

SURVEYOR'S CERTIFICATION: (Legal Descriptions)

I hereby certify that to the best of my knowledge and belief, the attached legal descriptions of Parcels XXX through XXX as shown on the Right of Way Maps designated as (Project Number) are true, accurate, and were prepared under my direction.

I further certify that said legal descriptions are in compliance with the Standards of Practice as set forth by the Florida Board of Professional Surveyors and Mappers, in Chapter 5J-17 Florida Administrative Code pursuant to Section 472.027, Florida Statutes.

(Name of Surveyor)

Florida Professional Surveyor and Mapper No.XXXX

Address:

(Complete Address)

Date: (Date of Signature)

NOT VALID WITHOUT SIGNATURE AND ORIGINAL RAISED SEAL

SURVEYOR'S CERTIFICATION: (R/W Control Survey)

I hereby certify this control survey was made for the purpose of surveying, referencing, describing and mapping the survey line, and providing horizontal position data for the support or control of right of way related maps for the transportation facility shown and depicted hereon. I further certify that said survey was done under my responsible charge and is in compliance with the Standards of Practice set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17 Florida Administrative Code pursuant to Section 472.027 Florida Statutes.

This drawing, consisting of sheets X through X is a true, accurate and complete depiction of a field survey performed under my direction and completed on (Date of Field Survey).

This is an example to be used for information purposes only

(Name of Surveyor)

Florida Professional Surveyor and Mapper No.XXXX

Address:

(Complete Address)

Date: (Date of Signature)

NOT VALID WITHOUT SIGNATURE AND ORIGINAL RAISED SEAL

SURVEYOR'S CERTIFICATION: (Report of Survey)

I hereby certify that to the best of my knowledge and belief, this Report of Survey is true, accurate, and was prepared under my direction.

I further certify that said Report of Survey is in compliance with the Standards of Practice as set forth by the Florida Board of Professional Surveyors and Mappers, in Chapter 5J-17 Florida Administrative Code pursuant to Section 472.027, Florida Statutes.

(Name of Surveyor)

Florida Professional Surveyor and Mapper No.3936

Address:

(Complete Address)

Date: (Date of Signature)

NOT VALID WITHOUT SIGNATURE AND ORIGINAL RAISED SEAL

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REPORT OF GPS CONTROL SURVEY FLORIDA TURNPIKE (COUNTY) COUNTY

(Insure Project Report meets the requirements of F.A.C. 5J-17.050, .051 and .052)

INTRODUCTION

(Name of Firm) used the Global Positioning System (GPS) in a static differential mode to establish a geodetic control network along the Florida Turnpike in (County) County, Florida. The project consisted of the establishment of (describe number and location of control monuments).

CONTROL USED

(Describe all existing control monumentation used, including published name, location, datum and value)

STATIONS ESTABLISHED

(Describe monuments established including name and location.)

GPS OBSERVATIONS

(Describe equipment and methodology used)

The following is an example of a station occupation summary (times are UTC):

```
AC3226 12/7/2000 6:29:30 PM 12/7/2000 6:50:30 PM 1.201 66973423.DAT
DADEGPS1 12/7/2000 6:30:30 PM 12/7/2000 6:51:30 PM 1.576 64823423.DAT
DADEGPS1 12/7/2000 5:52:45 PM 12/7/2000 6:12:45 PM 1.49 64823422.DAT
DADEGPS2 12/7/2000 5:45:15 PM 12/7/2000 6:13:00 PM 1.768 66973422.DAT
DADEGPS2 12/7/2000 5:22:30 PM 12/7/2000 5:42:00 PM 1.734 66973421.DAT
DADEGPS3 12/7/2000 5:20:45 PM 12/7/2000 5:42:45 PM 1.618 64823421.DAT
DADEGPS3 12/7/2000 4:38:00 PM 12/7/2000 5:00:30 PM 1.615 64823420.DAT
P586 12/7/2000 4:39:45 PM 12/7/2000 5:01:00 PM 1.539 66973420.DAT
```

(Include diagram of stations)

GPS DATA PROCESSING

(Describe methodology and results)

The following is an example of a summary of the baseline results:

```
FILENAME FROM TO DATE TIME DUR RATIO VAR RMS LENGH
00091568 mia3 DADEGPS1 12/07/00 18:30 21 18.73 1.79 0.015 24101 m
00091572 mia3 AC3226 12/07/00 18:29 21 8.11 2.32 0.017 25713 m
00091576 mia3 DADEGPS1 12/07/00 17:52 20 7.37 3.31 0.019 24101 m
00091580 mia3 DADEGPS2 12/07/00 17:45 28 16.01 2.20 0.016 23514 m
00091584 mia3 DADEGPS2 12/07/00 17:22 20 11.58 2.50 0.016 23514 m
00091588 mia3 DADEGPS3 12/07/00 17:20 22 10.88 3.26 0.018 22498 m
00091592 mia3 P586 12/07/00 16:40 21 10.41 2.09 0.016 22535 m
00091596 mia3 DADEGPS3 12/07/00 16:38 22 9.79 2.23 0.017 22498 m
00091600 DADEGPS2 DADEGPS1 12/07/00 17:52 20 30.34 19.89 0.013 2477 m
00091604 DADEGPS3 P586 12/07/00 16:40 21 19.59 5.81 0.008 1805 m
```

This is an example to be used for information purposes only

00091608 DADEGPS3 DADEGPS2 12/07/00 17:22 20 16.73 14.37 0.012 3094 m
00091612 DADEGPS1 AC3226 12/07/00 18:30 20 8.01 1.23 0.013 6118 m

(Describe any analysis and/or conjectures from results)

LEAST SQUARES ADJUSTMENTS

(Describe process used and results)

SUMMARY

(Describe what was done and accuracy of results)

The following is an example of residual results, figures and final coordinate values:
attached:

Adjustment Residuals

-0.02
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
0.02
0 5000 10000 15000 20000 25000 30000
Horizontal Residuals
Vertical Residuals

Figure 1 - Network Diagram

Figure 2 - Project location

Geographic Coordinates – NAD 1983 1990/NAVD 1988 meters

| Station | Latitude | Longitude | Ortho | H | Grid | Fact | Elev | Fact | Comb | Fact | Convergence | Zone |
|----------|---------------|---------------|-------|--------|------|---------|------|------|------|------|-------------|------|
| AC3226 | +25.364491812 | -80.224504631 | 901 | 2.848 | 88G1 | -22.215 | | | | | | |
| DADEGPS1 | +25.400112372 | -80.232051703 | 901 | 1.263 | 88G | -23.686 | | | | | | |
| DADEGPS2 | +25.412160954 | -80.232216601 | 901 | 3.257 | 88G | -21.661 | | | | | | |
| DADEGPS3 | +25.430035237 | -80.230120062 | 901 | 6.858 | 88G | -18.049 | | | | | | |
| MIA3 | +25.435809787 | -80.093660094 | 9011 | 11.291 | 88G | -14.345 | | | | | | |
| P586 | +25.420199632 | -80.225476945 | 901 | 2.163 | 88G | -22.765 | | | | | | |

Florida East State Plane Coordinates – NAD 1983 1990/NAVD 1988 meters

| Station | Name | Northing | Easting | Ortho | H | Grid | Fact | Elev | Fact | Comb | Fact | Convergence | Zone |
|----------|------|------------|------------|--------|------------|------------|------------|------|------|-------|---------|-------------|------|
| AC3226 | | 141831.688 | 262354.734 | 2.848 | 0.99998917 | 1.00000348 | 0.99999265 | 0 | 16 | 6.16 | FLE0901 | | |
| DADEGPS1 | | 147864.769 | 261337.225 | 1.263 | 0.99998762 | 1.00000373 | 0.99999134 | 0 | 15 | 52.71 | FLE0901 | | |
| DADEGPS2 | | 150341.296 | 261279.803 | 3.257 | 0.99998753 | 1.00000341 | 0.99999094 | 0 | 15 | 52.77 | FLE0901 | | |
| DADEGPS3 | | 153382.572 | 261850.195 | 6.858 | 0.99998840 | 1.00000285 | 0.99999124 | 0 | 16 | 2.82 | FLE0901 | | |
| MIA3 | | 155283.290 | 284268.401 | 11.291 | 1.00002883 | 1.00000215 | 1.00003098 | 0 | 21 | 52.76 | FLE0901 | | |
| P586 | | 151587.647 | 262037.876 | 2.163 | 0.99998868 | 1.00000358 | 0.99999227 | 0 | 16 | 5.04 | FLE0901 | | |

Florida East State Plane Coordinates – NAD 1983 1990/NAVD 1988 US Survey Feet

| Station | Name | Northing | Easting | Ortho | H | Grid | Fact | Elev | Fact | Comb | Fact | Convergence | Zone |
|----------|------|------------|------------|--------|------------|------------|------------|------|------|-------|---------|-------------|------|
| AC3226 | | 465326.130 | 860742.156 | 9.344 | 0.99998917 | 1.00000348 | 0.99999265 | 0 | 16 | 6.16 | FLE0901 | | |
| DADEGPS1 | | 485119.663 | 857403.879 | 4.144 | 0.99998762 | 1.00000373 | 0.99999134 | 0 | 15 | 52.71 | FLE0901 | | |
| DADEGPS2 | | 493244.735 | 857215.487 | 10.686 | 0.99998753 | 1.00000341 | 0.99999094 | 0 | 15 | 52.77 | FLE0901 | | |
| DADEGPS3 | | 503222.655 | 859086.848 | 22.500 | 0.99998840 | 1.00000285 | 0.99999124 | 0 | 16 | 2.82 | FLE0901 | | |
| MIA3 | | 509458.594 | 932637.246 | 37.044 | 1.00002883 | 1.00000215 | 1.00003098 | 0 | 21 | 52.76 | FLE0901 | | |
| P586 | | 497333.805 | 859702.598 | 7.096 | 0.99998868 | 1.00000358 | 0.99999227 | 0 | 16 | 5.04 | FLE0901 | | |