ATTACHMENT A

SURVEY DATA AND TEST LOCATIONS

CONSISTS OF:

Glenn Associates Surveying, Inc. Subsurface Investigation Location Report, Revision 1, September 29, 2006

Glenn Associates Surveying, Inc.
11547 State Highway 215 S
P.O. Box 12
Jenkinsville, South Carolina 29065
Tel: 803.345.5297
Fax: 803.345.0620
http://www.glennassociates.com/

NND
SUBSURFACE INVESTIGATION LOCATION

Project Client: MACTEC

Project Location:
Jenkinsville, South Carolina

Project Scope:
Initial Staking for Subsurface Investigation Location Sites

South Carolina State Plane Coordinates NAD 83 (2001) NAVD 88

Project Period:
Initial Staking: March 29, 2006 – April 7, 2006

As-drilled Location: August 28, 2006 – September 29, 2006

CREATED ON APRIL 20, 2006 REVISED ON SEPTEMBER 29, 2006

NND SUBSURFACE INVESTIGATION LOCATION- 8992
Controlled Report Revision Summary

Revision #	Description	Revised By:	Rev.Date
1	Completion of "as-drilled" Bore locations	Glenn Associates Surveying,Inc.	9/29/2006

Revisions to this report will be sent to SCE&G (Bob Whorton) for controlled distribution to all copy holders.

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Fax: 803.345.0620
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I hereby certify that the reports and data enclosed herein were produced as a result of field surveys performed under my direction in accordance with the "Minimum Standards Manual for the Practice of Land Surveying in South Carolina" and in compliance with the SCE&G Work Plan for site surveys as outlined below:

General - The Project Manager or Site Coordinator was informed by Glenn Associates Surveying, Inc. of the existing National Geodetic Survey (NGS), or South Carolina Geodetic Survey (SCGS) horizontal and vertical controls in the areas that were available for use. Glenn Associates Surveying, Inc. indicated on a copy of a site map the existing horizontal control stations that were used during the ground control survey. Reference NND Horizontal and Vertical Control report issued by Glenn Associates Surveying, Inc. on 4-26-06.

Horizontal Surveys - Static GPS and Real Time Kinematic (RTK) survey equipment and methodology was used to set base control, using First Order specifications. When GPS was not feasible, horizontal control was established by traverse. The traverse error of closure of base control met or exceeded the requirements for the order and class of survey being performed. The horizontal control was extended from existing survey control, and was correlated to the South Carolina State Plane Coordinate System, 1983 North American Datum, 2001 adjustment. Survey traverses closed on an existing triangulation or traverse station of at least third order class I accuracy or was a closed loop, using current NGS third order class I standards. Glenn Associates Surveying, Inc. provided relevant State Plane Coordinates of all horizontal survey locations. All field records and computations are included within the data report herein. (Raw Data)

Vertical Surveys - All basic vertical surveys extended from existing NGS, or SCGS bench marks and referenced to the National Geodetic Vertical Datum or North American Vertical Datum, 1988 adjustment (NAVD 88) using Static GPS, RTK GPS, and electronic Total Station. The vertical survey was established according to NGS standards and procedures, and the survey was of third order accuracy or higher. All basic vertical surveys were established as closed or looped lines and tied to monuments of third order accuracy or higher. The maximum length of a line between control or junction monuments did not exceed 10 km for a single-run line and 25 km for a double-run line. Error of closure of the third order circuit in feet was not greater than 0.05 times the square root of the length of the level line in miles. Glenn Associates Surveying, Inc. furnished elevations based on NAVD 88, and provided complete descriptions of all vertical control bench marks. All field records and computations are included within the data report herein.

Reporting
Glenn Associates Surveying, Inc. recorded the horizontal coordinates and elevations of the exploration and reference points established in the field for performance of the subsurface field investigation program and includes this data within this Data Report in both hard copy and electronic format as Excel Worksheets.

Michael R. Mills
SCPLS # 11606

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Technical Contacts:
Glenn Associates Surveying, Inc.

Michael R. Mills, SCPLS # 11606
803.345.5297 ext. 105
mrmills@glennassociates.com

Brian B. Bonds
803.345.5297 ext. 103
bbonds@glennassocaites.com

PROJECT SURVEYOR

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
MICHAEL R. MILLS SCPLS #11606

SURVEYED BY
GLENN ASSOCIATES SURVEYING, INC.
P.O. BOX 12
JENKINSVILLE, SOUTH CAROLINA 29065
Telephone (803) 345-5297
Fax (803) 345-0620
E-mail surveying@glennassociates.com

South Carolina
Board of Engineers & Land Surveyors
Certifies That
MICHAEL RALPH MILLS
Is Authorized To Practice
LAND SURVEYING

REG # 11606 Expiration Date: 6/30/2006

Registrant's Signature:

SOUTH CAROLINA REGISTERED LAND SURVEYOR 11606 MICHAEL RALPH MILLS

SOUTH CAROLINA GLENN ASSOCIATES SURVEYING INC. No.C02238 CERTIFICATE OF AUTHORIZATION

ACRONYMS/ DEFINITIONS

GPS- GLOBAL POSITIONING SYSTEM

RTK- REAL TIME KINEMATIC

OPUS- ONLINE POSITIONING USER SERVICE

CORS- CONTINUOUSLY OPERATING REFERENCE STATION

NGS- NATIONAL GEODETIC SURVEY

NAD- NORTH AMERICAN DATUM

NAD 83 (2001)- NORTH AMERICAN DATUM OF 1983, 2001 ADJUSTMENT

NAVD- NATIONAL AMERICAN VERTICAL DATUM

NGVD- NATIONAL GEODETIC VERTICAL DATUM

PDL- POSITIONING DATA LINK

DATUM- A SET OF CONSTANTS SPECIFYING THE COORDINATE SYSTEMS USED FOR GEODETIC CONTROL, I.E., FOR CALCULATING COORDINATES OF POINTS ON THE EARTH. SPECIFIC GEODETIC DATUMS ARE USUALLY GIVEN DISTINCTIVE NAMES (e.g., NAD 83 (2001), NGVD 29, NAVD 88).

EPOCH- (IN GPS) A SHORT PERIOD OF OBSERVATION TIME, IS GENERALLY JUST A SMALL PART OF A LONGER MEASUREMENT

Chapter

1

PROJECT LAYOUT

PROJECT CONTROL NAD 83 (2001)

THE PROJECT CONTROL NETWORK ESTABLISHED BY GLENN ASSOCIATES SURVEYING, INC. WAS USED AS THE BASIS FOR SUBSURFACE INVESTIGATION LOCATION SITE STAKING.

BORE SITE LOCATION

THE BORE SITE LOCATIONS TO BE STAKED BY GLENN ASSOCIATES SURVEYING, INC. WERE PROVIDED BY BECHTEL.

REFERENCE: BECHTEL: *JOB NO. 25242 DRAWING NO. 0-CY-0000-00001 REV 0*
JOB NO. 25242 DRAWING NO. 0-CY-0000-00002 REV 0

EXCEL WORKSHEET PREPARED BY CDICEY 3-27-06

FIELD STAKING

BORE SITE LOCATIONS WERE STAKED USING RTK-GPS WHEN POSSIBLE. WHEN TREE CANOPY OR OTHER OBSTRUCTIONS OCCURRED, COORDINATE TRAVERSE POINTS WERE ESTABLISHED USING RTK-GPS. CONVENTIONAL SURVEYING USING THE TOPCON GPT-8201A TOTAL STATION (SERIAL NUMBER 561002) WAS THEN USED TO STAKE PLANNED BORE SITE LOCATIONS FROM THOSE ESTABLISHED TRAVERSE POINTS. STAKES WERE DRIVEN IN PLACE AND DATA POINTS WERE COLLECTED AND RECORDED FOR THE STAKED LOCATIONS. A TABLE WAS PREPARED TO SHOW THE COMPARISON BETWEEN THE PLANNED AND STAKED LOCATIONS. (See TABLE 1A)

NOTE: THE ACTUAL BORE LOCATIONS WILL BE SURVEYED "AS-BUILT" AT A LATER DATE.

DAILY SURVEY ACTIVITY

- PRE-DATA COLLECTION CHECK

DAILY FIELD SURVEY ACTIVITIES BEGAN WITH PRE-DATA ACQUISITION CHECKS ON PROJECT CONTROL MONUMENTS. THE BASE RECEIVER WAS SET ON PROJECT CONTROL POINT 1009. THE SURVEY CREW COLLECTED CONTROL POINTS (101,1020,1021) USING A DIFFERENT QUALITY CHECK POINT NUMBER FOR EACH CONTROL POINT. A COORDINATE COMPARISON WAS MADE IN THE FIELD BETWEEN THE CONTROL MONUMENT COORDINATES AND THE QUALITY CHECK POINT COORDINATES FOR EACH CONTROL POINT OBSERVED TO ENSURE MATCHING COORDINATES. THE DAILY BORE SITE LOCATIONS WERE THEN STAKED.

- POST-DATA COLLECTION CHECK

DAILY FIELD SURVEY ACTIVITIES CONCLUDED WITH POST-DATA ACQUISITION CHECKS ON PROJECT CONTROL MONUMENTS. THE SURVEY CREW COLLECTED A MINIMUM OF ONE CONTROL POINT (101,1020,1021) USING A DIFFERENT QUALITY CHECK POINT NUMBER THAN THE MORNING QUALITY CHECK POINT NUMBER. A COORDINATE COMPARISON BETWEEN THE CONTROL MONUMENT COORDINATES AND POST DATA ACQUISITION CHECK POINT COORDINATES WAS OBSERVED TO ENSURE MATCHING COORDINATES REMAINED THE SAME THROUGHOUT THE WORKDAY.

- SUMMARY

DAILY SURVEY ACTIVITIES CONCLUDED BY PREPARING A DAILY QUALITY ASSURANCE REPORT. THE REPORT SHOWS A POINT TO POINT INVERSE COMPARISON BETWEEN CONTROL MONUMENT COORDINATES AND QUALITY CHECK POINT COORDINATES AND A COMPARISON BETWEEN PLANNED BORE SITE LOCATIONS AND STAKED BORE SITE LOCATIONS.

TABLE 1A

Boring No.	Point No.	Coordinates (Feet) - South Carolina State Plane (NAD 83)		Stake Point No.	Coordinates (Feet) - South Carolina State Plane (NAD 83)		Ground Surface Elev. (Feet)	Planned-Stake Comparison H Distance	Planned Depth - FT.	Location/Remarks
		North	East		North	East				
B-201(DH)	301	892742.5	1903286.3	602	892742.5	1903286.2	423.8	0.1	350	Nuclear Island/Down-hole Geophysical
B-202	302	892789.7	1903305.4	603	892789.5	1903305.5	423.9	0.2	175	Nuclear Island
B-203	303	892694.6	1903267.0	601	892694.6	1903267.1	423.7	0.1	150	Nuclear Island
B-204	304	892756.6	1903400.4	604	892757.1	1903400.6	425.0	0.5	150	Nuclear Island
B-205	305	892839.4	1903198.3	105	892839.4	1903198.3	422.9	0.1	175	Nuclear Island
B-206(DH)	306	892689.0	1903413.6	605	892689.1	1903413.8	424.4	0.2	215	Nuclear Island/Down-hole Geophysical
B-207(DH)	307	892824.4	1902950.1	62	892824.4	1902950.1	423.5	0.0	175	Power Block/Down-hole Geophysical
B-208	308	892989.7	1902926.3	626	892989.6	1902926.3	421.8	0.1	115	Power Block
B-209	309	893015.9	1903210.2	616	893015.5	1903210.3	408.7	0.4	b209	Power Block
B-210	310	892844.6	1903452.7	608	892844.7	1903452.5	417.9	0.2	115	Power Block
B-211(DH)	311	892582.5	1903221.8	600	892582.5	1903221.8	424.4	0.0	175	Adjacent to Power Block/Down-hole Geophysical
B-212	312	893101.6	1903029.8	621	893101.8	1903030.0	398.9	0.3	115	Adjacent to Power Block
B-213	313	892986.5	1903457.8	614	892986.5	1903457.9	400.4	0.2	150	Adjacent to Power Block
B-214	314	892739.6	1903159.9	59	892739.5	1903159.9	423.4	0.1	115	Power Block
B-215	315	892783.7	1903050.8	60	892783.7	1903050.8	423.5	0.1	175	Power Block
B-216	316	892855.9	1902872.2	635	892855.9	1902872.0	423.7	0.2	85	Power Block
B-217	317	892931.0	1902902.5	631	892931.1	1902902.2	423.3	0.3	175	Power Block
B-218	318	892899.5	1902980.5	628	892899.2	1902980.7	423.0	0.4	b218	Power Block
B-219	319	892858.8	1903081.2	634	892858.8	1903081.3	423.2	0.1	85	Power Block
B-220	320	892974.6	1903010.7	632	892974.4	1903010.7	421.8	0.2	115	Power Block
B-221	321	892933.9	1903111.6	633	892934.0	1903111.7	421.8	0.1	85	Power Block
B-222	322	892878.2	1903154.6	63	892878.1	1903154.6	423.6	0.1	115	Power Block
B-223	323	892968.1	1903328.4	612	892968.2	1903328.2	409.7	0.2	85	Power Block
B-224	324	892887.7	1903345.9	611	892887.6	1903345.7	420.8	0.2	115	Power Block
B-225	325	892923.2	1903241.5	615	892923.4	1903241.3	424.9	0.3	85	Power Block
B-226	326	892780.2	1903526.8	607	892780.1	1903526.8	419.8	0.1	115	Power Block
B-227	327	892504.4	1903415.4	670	892504.2	1903415.4	422.3	0.2	b-227/ow227	Adjacent to Power Block

Prepared by cdicey 3-27-06
Revised by bbonds 4-11-06

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		North	East		North	East				
B-228	328	892301.3	1903382.5	639	892301.4	1903382.7	419.2	0.3	85	Adjacent to Power Block
B-229	329	892396.6	1903146.7	638	892396.6	1903146.7	423.3	0.0	85	Adjacent to Power Block
B-230	330	892658.2	1903034.5	636	892658.1	1903034.5	424.4	0.1	85	Adjacent to Power Block
B-231	331	892518.8	1902843.9	29	892518.8	1902843.8	428.7	0.1	115	Adjacent to Power Block
B-232	332	892766.5	1902865.9	65	892766.5	1902865.9	423.9	0.1	55	Adjacent to Power Block
B-233	333	892784.9	1902686.9	102	892784.9	1902686.9	426.1	0.1	85	Adjacent to Power Block
B-234	334	893070.7	1902802.4	624	893070.7	1902802.4	420.7	0.1	55	Adjacent to Power Block
B-235	335	893191.7	1902941.7	622	893191.7	1902941.7	378.9	0.0	85	Adjacent to Power Block
B-236	336	893109.0	1903286.0	617	893108.9	1903286.2	380.6	0.2	115	Adjacent to Power Block
B-301(DH)	337	891908.1	1902949.3	677	891908.3	1902949.3	416.5	0.2	350	Nuclear Island/Down-hole Geophysical
B-302	338	891955.3	1902968.4	676	891955.4	1902968.4	417.1	0.1	175	Nuclear Island
B-303	339	891860.2	1902930.0	678	891860.1	1902929.8	415.1	0.2	150	Nuclear Island
B-304	340	891922.1	1903063.4	679	891921.9	1903063.5	415.1	0.2	150	Nuclear Island
B-305	341	892005.0	1902861.2	681	891878.8	1903162.8	413.0	0.1	175	Nuclear Island
B-306(DH)	342	891854.5	1903076.5	680	891854.6	1903076.6	413.0	0.1	215	Nuclear Island/Down-hole Geophysical
B-307(DH)	343	891989.9	1902613.0	690	891989.8	1902613.2	402.4	0.2	175	Power Block/Down-hole Geophysical
B-308	344	892155.3	1902589.1	49	892155.3	1902589.1	419.0	0.0	115	Power Block
B-309	345	892181.5	1902873.2	33	892181.5	1902873.2	423.9	0.1	150	Power Block
B-310	346	892010.2	1903115.7	674	892010.4	1903115.6	416.9	0.2	115	Power Block
B-311(DH)	347	891748.2	1902884.7	74	891748.2	1902884.7	417.7	0.0	175	Adjacent to Power Block/Down-hole Geophysical
B-312	348	892267.2	1902692.8	38	892267.9	1902692.4	425.2	0.8	115	Adjacent to Power Block
B-313	349	892152.2	1903120.7	28	892152.2	1903120.7	420.5	0.0	150	Adjacent to Power Block
B-314	350	891905.3	1902822.9	684	891905.3	1902822.8	417.3	0.1	115	Power Block
B-315	351	891949.4	1902713.7	688	891949.3	1902713.7	413.0	0.2	175	Power Block
B-316	352	892021.4	1902535.1	691	892021.5	1902534.8	401.2	0.3	85	Power Block
B-317	353	892096.5	1902565.4	48	892096.5	1902565.3	414.9	0.1	b 317	Power Block
B-318	354	892065.0	1902643.3	46	892064.9	1902643.0	419.5	0.3	115	Power Block

Prepared by cdicey 3-27-06
Revised by bbonds 4-11-06

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		North	East		North	East				
B-319	355	892024.4	1902744.1	689	892024.3	1902744.1	421.1	0.1	85	Power Block
B-320	356	892140.1	1902673.7	41	892140.3	1902673.8	422.7	0.2	115	Power Block
B-321	357	892099.5	1902774.5	44	892099.5	1902774.4	422.4	0.1	85	Power Block
B-322	358	892043.8	1902817.6	43	892043.8	1902817.6	425.5	0.0	115	Power Block
B-323	359	892133.8	1902991.4	34	892133.8	1902991.4	420.1	0.0	b 323	Power Block
B-324	360	892053.4	1903008.9	35	892053.4	1903008.9	418.9	0.1	115	Power Block
B-325	361	892088.8	1902904.5	36	892088.8	1902904.4	421.1	0.1	b 325	Power Block
B-326	362	891945.8	1903189.8	682	891945.7	1903190.0	413.7	0.2	115	Power Block
B-327	363	891669.9	1903078.3	685	891669.9	1903078.2	411.0	0.1	55	Adjacent to Power Block
B-328	364	891466.8	1903045.4	668	891466.8	1903045.4	428.2	0.0	85	Adjacent to Power Block
B-329	365	891562.1	1902809.5	665	891561.9	1902809.4	409.0	0.2	85	Adjacent to Power Block
B-330	366	891823.8	1902697.4	687	891823.7	1902697.5	403.0	0.2	85	Adjacent to Power Block
B-331	367	891684.4	1902506.8	660	891684.3	1902506.7	369.2	0.1	115	Adjacent to Power Block
B-332	368	891932.1	1902528.7	693	891932.1	1902529.0	398.5	0.3	55	Adjacent to Power Block
B-333	369	891950.4	1902349.9	658	891950.6	1902349.7	387.4	0.3	85	Adjacent to Power Block
B-334	370	892236.3	1902465.3	649	892236.6	1902465.3	418.3	0.3	55	Adjacent to Power Block
B-335	371	892357.2	1902604.7	39	892357.5	1902604.7	427.1	0.3	b 335	Adjacent to Power Block
B-336	372	892274.6	1902949.0	32	892274.7	1902949.1	423.5	0.1	115	Adjacent to Power Block
B-401	373	891038.5	1903511.3	15	891038.5	1903511.3	405.3	0.0	115	Cooling Tower
B-402	374	891105.1	1904007.3	107	891105.0	1904007.3	404.7	0.1	115	Cooling Tower
B-403	375	890641.5	1903820.0	106	890641.5	1903820.0	401.1	0.1	115	Cooling Tower
B-404	376	890228.8	1904180.5	109	890228.8	1904180.5	410.1	0.0	115	Cooling Tower
B-405	377	890177.9	1903632.7	16	890177.9	1903632.7	391.8	0.0	115	Cooling Tower
B-406	378	890111.4	1903136.8	81	890111.3	1903136.8	384.3	0.1	115	Cooling Tower
B-421	379	891529.6	1902578.5	662	891529.4	1902578.4	366.9	0.2	115	Cooling Tower
B-422	380	891421.7	1902845.6	71	891421.8	1902845.6	411.3	0.1	115	Cooling Tower
B-423	381	892029.6	1903527.5	698	892029.7	1903527.6	409.7	0.1	115	Cooling Tower

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		North	East		North	East				
B-424	382	891653.9	1903759.9	699	891654.1	1903760.0	356.5	0.2	115	Cooling Tower
B-501	383	897565.8	1903956.4	NOT STAKED-BIG ROCKS			Later	N/A	80	Makeup Water Structure
B-502	384	897565.8	1904038.1	NOT STAKED-BIG ROCKS			Later	N/A	80	Makeup Water Structure
B-601	385	892886.8	1902148.7	645	892886.9	1902148.6	418.5	0.2	85	Switchyard
B-602	386	892810.9	1902336.6	642	892810.8	1902336.4	438.3	0.2	115	Switchyard
B-603	387	892735.9	1902522.4	69	892735.8	1902522.4	429.2	0.1	55	Switchyard
B-604	388	892512.0	1902001.4	648	892512.1	1902001.5	414.5	0.2	85	Switchyard
B-605	389	892436.2	1902189.2	653	892436.1	1902189.1	430.8	0.1	55	Switchyard
B-606	390	892361.1	1902375.0	643	892360.9	1902376.1	425.9	1.1	b606	Switchyard
B-607	391	892137.4	1901854.0	70	892137.4	1901854.0	431.8	0.0	55	Switchyard
B-608	392	892061.4	1902041.9	656	892061.3	1902042.0	406.8	0.1	85	Switchyard
B-609	393	891993.4	1902230.6	657	891993.4	1902230.6	407.4	0.0	55	Switchyard
B-610	394	893450.6	1904186.3	706	893450.6	1904186.4	425.4	0.1	40	Relocated Access Road
B-611	395	892891.2	1904458.1	704	892891.2	1904458.1	405.1	0.0	40	Relocated Access Road
B-612	396	892395.7	1904221.9	27	892395.9	1904222.0	405.4	0.3	70	Relocated Access Road
B-613	397	891953.8	1903715.6	697	891953.8	1903715.4	388.3	0.2	B-613	Relocated Access Road
B-614	398	891687.7	1903545.1	23	891687.5	1903544.7	374.7	0.4	70	Relocated Access Road
B-615	399	890926.4	1903021.7	695	890926.6	1903021.7	389.1	0.2	B-615	Relocated Access Road
B-616	400	890520.9	1902635.6	79	890520.6	1902635.6	400.7	0.3	40	Relocated Access Road
B-617	401	889885.5	1902372.1	14	889885.5	1902372.1	447.1	0.1	70	Existing Access Road
B-618	402	890672.4	1901492.1	13	890672.3	1901493.8	318.2	1.7	70	South of Switchyard
B-619	403	892585.9	1901846.5	11	892585.9	1901846.5	405.2	0.0	70	West of Southern Nuclear Island
B-620	404	893599.5	1903011.4	10	893599.5	1903011.5	381.5	0.1	60	North of Northern Nuclear Island
B-621	405	893743.5	1903669.1	9	893743.5	1903668.8	421.0	0.3	60	North of Northern Nuclear Island
B-622	406	894643.3	1904246.6	4	894643.2	1904246.7	431.6	0.1	70	North of Northern Nuclear Island
B-623	407	893821.3	1904937.3	3	893821.6	1904936.8	440.8	0.6	70	Northeast of Nuclear Island

Prepared by cdicey 3-27-06
Revised by bbonds 4-11-06

Boring No.	Point No.	Coordinates (Feet) - South Carolina State Plane (NAD 83)		Stake Point No.	Coordinates (Feet) - South Carolina State Plane (NAD 83)		Ground Surface Elev. (Feet)	Planned-Stake Comparison H Distance	Planned Depth - FT.	Location/Remarks
		North	East		North	East				
B-624	408	891689.8	1904635.6	25	891689.9	1904635.6	345.6	0.1	70	East of Nuclear Island
B-625	409	889885.6	1904961.6	17	889885.7	1904961.7	400.9	0.1	70	East of Cooling Tower Area
B-626	410	893200.2	1904169.0	7	893200.2	1904169.1	425.5	0.1	70	Existing Access Road
B-627	411	891172.5	1902143.4	12	891172.7	1902143.2	318.5	0.2	100	South of Nuclear Island
C-201	412	892775.2	1903147.1	61	892775.2	1903147.1	423.4	0.0	50	Power Block
C-202(S)	413	892888.3	1903062.1	627	892888.4	1903062.0	422.8	0.1	50	Power Block/Seismic Cone
C-203	414	892916.3	1902938.8	630	892916.3	1902938.8	423.2	0.0	50	Power Block
C-204	415	892848.1	1903329.9	610	892848.1	1903329.7	428.5	0.2	c204	Power Block
C-205	416	892713.1	1903499.7	606	892712.9	1903499.6	423.5	0.2	50	Power Block
C-206	417	893044.7	1902877.6	625	893044.7	1902877.5	420.4	0.1	50	Outside Power Block
C-207(S)	418	892902.4	1903451.6	613	892902.6	1903451.6	413.0	0.2	50	Outside Power Block/Seismic Cone
C-208	419	892801.1	1902820.9	66	892801.0	1902821.0	423.6	0.2	50	Outside Power Block
C-209(S)	420	892472.1	1902959.3	67	892472.1	1902959.3	426.9	0.0	50	Outside Power Block/Seismic Cone
C-210	421	893240.7	1903128.5	619	893240.6	1903128.5	368.1	0.1	50	Outside Power Block
C-301	422	891940.9	1902810.1	683	891940.9	1902810.0	420.7	0.1	50	Power Block
C-302(S)	423	892053.9	1902725.1	45	892054.0	1902725.2	420.9	0.1	50	Power Block/Seismic Cone
C-303	424	892081.8	1902601.6	47	892081.9	1902601.5	418.2	0.1	50	Power Block
C-304	425	892013.7	1902992.9	675	892013.5	1902992.9	418.3	0.2	50	Power Block
C-305	426	891878.6	1903162.7	681	891878.8	1903162.8	413.0	0.2	50	Power Block
C-306	427	892210.2	1902540.5	50	892210.2	1902540.5	417.2	0.0	50	Outside Power Block
C-307(S)	428	892068.0	1903114.5	673	892068.1	1903114.5	418.3	0.1	B-307(DH)	Outside Power Block/Seismic Cone
C-308	429	891966.7	1902483.7	692	891966.7	1902483.7	400.1	0.0	C-308	Outside Power Block
C-309(S)	430	891637.8	1902622.3	663	891637.8	1902622.4	397.2	0.1	50	Outside Power Block/Seismic Cone
C-310	431	892406.3	1902791.5	37	892406.4	1902791.6	429.8	0.1	50	Outside Power Block
C-401	432	890689.0	1904365.3	108	890689.0	1904365.3	408.5	0.0	50	Cooling Tower

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		North	East		North	East				
C-402(S)	433	890574.9	1903324.1	80	890574.8	1903324.1	398.9	0.1	c 402 s	Cooling Tower/Seismic Cone
C-403	434	889765.1	1903993.5	76	889765.1	1903993.5	400.9	0.0	50	Cooling Tower
C-407	435	891794.8	1903672.8	696	891795.0	1903672.6	366.4	0.3	50	Cooling Tower
C-409	436	891307.9	1903127.3	667	891307.8	1903127.3	390.4	0.1	50	Cooling Tower
C-501	437	897482.7	1904029.3	NOT STAKED			Later	N/A	80	Makeup Water Structure
C-601	438	892736.6	1902204.4	646	892736.6	1902204.7	433.9	0.3	50	Switchyard
C-602	439	892664.9	1902387.1	641	892664.8	1902387.2	433.7	0.1	50	Switchyard
C-603	440	892285.3	1902022.8	651	892285.3	1902022.9	418.8	0.1	50	Switchyard
C-604	441	892215.1	1902211.8	654	892215.1	1902211.8	426.9	0.0	50	Switchyard
C-605	442	893092.1	1904058.4	702	893092.2	1904058.4	415.7	0.1	40	Relocated Access Road
C-606	443	893214.3	1904472.4	705	893214.3	1904472.3	412.4	0.1	40	Relocated Access Road
C-607	444	892577.2	1904318.2	703	892577.2	1904318.2	407.3	0.0	40	Relocated Access Road
C-608	445	892205.7	1903992.6	707	892205.9	1903992.8	385.9	0.3	40	Relocated Access Road
C-609	446	891462.9	1903404.0	72	891462.8	1903404.0	398.2	0.1	40	Relocated Access Road
C-610	447	890737.8	1902846.5	694	890737.9	1902846.6	372.2	0.1	40	Relocated Access Road
Note : Depths shown are estimated only. For 40 ft. CPT's, advance to 40 ft. or refusal, whichever comes first. For remainder, always advance to refusal.										
R-1	448	892453.6	1902088.3	652	892453.7	1902088.4	421.0	0.1	-	Electrical Resistivity Test/Switchyard
R-2	449	892453.6	1902088.3	652	892453.7	1902088.4	421.0	0.1	-	Electrical Resistivity Test/Switchyard
R-3	450	892273.3	1902534.4	701	892273.4	1902534.5	422.4	0.1	-	Electrical Resistivity Test/U2 Transformers
R-4	451	892273.3	1902534.4	701	892273.4	1902534.5	422.4	0.1	-	Electrical Resistivity Test/U2 Transformers
R-5	452	893107.8	1902871.5	700	893107.4	1902871.2	410.0	0.5	-	Electrical Resistivity Test/U1 Transformers
R-6	453	893107.8	1902871.5	700	893107.4	1902871.2	410.0	0.5	-	Electrical Resistivity Test/U1 Transformers
OW-205a	454	892839.4	1903198.3	105	892839.4	1903198.3	422.9	0.1	100	Nuclear Island
OW-205b	455	892839.4	1903198.3	105	892839.4	1903198.3	422.9	0.1	50	Nuclear Island

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		North	East		North	East				
OW-212	456	893101.6	1903029.8	621	893101.8	1903030.0	398.9	0.3	60	Adjacent to Power Block
OW-213	457	892986.5	1903457.8	614	892986.5	1903457.9	400.4	0.2	60	Adjacent to Power Block
OW-227	458	892504.4	1903415.4	670	892504.2	1903415.4	422.3	0.2	b-227/ow227	Adjacent to Power Block
OW-233	459	892784.9	1902686.9	102	892784.9	1902686.9	426.1	0.1	50	Adjacent to Power Block
OW-305a	460	892005.0	1902861.2	42	892005.1	1902861.2	424.0	0.1	100	Nuclear Island
OW-305b	461	892005.0	1902861.2	42	892005.1	1902861.2	424.0	0.1	60	Nuclear Island
OW-312	462	892267.2	1902692.8	38	892267.9	1902692.4	425.2	0.8	60	Adjacent to Power Block
OW-313	463	892152.2	1903120.7	28	892152.2	1903120.7	420.5	0.0	60	Adjacent to Power Block
OW-327	464	891669.9	1903078.3	685	891669.9	1903078.2	411.0	0.1	55	Adjacent to Power Block
OW-333	465	891950.4	1902349.9	658	891950.6	1902349.7	387.4	0.3	60	Adjacent to Power Block
OW-401a	466	891038.5	1903511.3	15	891038.5	1903511.3	405.3	0.0	115	Cooling Tower
OW-401b	467	891038.5	1903511.3	15	891038.5	1903511.3	405.3	0.0	70	Cooling Tower
OW-405	468	890177.9	1903632.7	16	890177.9	1903632.7	391.8	0.0	70	Cooling Tower
OW-501	469	897565.8	1903956.4	NOT STAKED- BIG ROCKS			Later	N/A	80	Makeup Water Structure
OW-612	470	892395.7	1904221.9	27	892395.9	1904222.0	405.4	0.3	70	Relocated Access Road
OW-614	471	891687.7	1903545.1	23	891687.5	1903544.7	374.7	0.4	70	Relocated Access Road
OW-617	472	889885.5	1902372.1	14	889885.5	1902372.1	447.1	0.1	70	Existing Access Road
OW-618	473	890672.4	1901492.1	13	890672.3	1901493.8	318.2	1.7	70	South of Switchyard
OW-619	474	892585.9	1901846.5	11	892585.9	1901846.5	405.2	0.0	70	West of Southern Nuclear Island
OW-620	475	893599.5	1903011.4	10	893599.5	1903011.5	381.5	0.1	60	North of Northern Nuclear Island
OW-621a	476	893743.5	1903669.1	9	893743.5	1903668.8	421.0	0.3	60	North of Northern Nuclear Island
OW-621b	477	893743.5	1903669.1	9	893743.5	1903668.8	421.0	0.3	60	North of Northern Nuclear Island
OW-622	478	894643.3	1904246.6	4	894643.2	1904246.7	431.6	0.1	70	North of Northern Nuclear Island
OW-623	479	893821.3	1904937.3	3	893821.6	1904936.8	440.8	0.6	70	Northeast of Nuclear Island
OW-624	480	891689.8	1904635.6	25	891689.9	1904635.6	345.6	0.1	70	East of Nuclear Island
OW-625	481	889885.6	1904961.6	17	889885.7	1904961.7	400.9	0.1	70	East of Cooling Tower Area

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		North	East		North	East				
OW-626	482	893200.2	1904169.0	7	893200.2	1904169.1	425.5	0.1	70	Existing Access Road
OW-627a	483	891172.5	1902143.4	12	891172.7	1902143.2	318.5	0.2	100	South of Nuclear Island
OW-627b	484	891172.5	1902143.4	12	891172.7	1902143.2	318.5	0.2	60	South of Nuclear Island

Chapter

2

EQUIPMENT

EQUIPMENT USED FOR DATA ACQUISITION

1) **RTK REFERENCE RECEIVER:** Topcon Legacy-E serial number 235-0495; PGA-1 Antenna; Pacific Crest Radio (PDL) Model # RFM96W serial number 99432876

2) **RTK REFERENCE RECEIVER:** Topcon Legacy-E serial number LE2286; LEGANT Antenna; Pacific Crest Radio (PDL) Model # PDL4535 serial number 04147189

3) **RTK ROVER:** Topcon Hiper GGD serial number 239-0144

4) **RTK ROVER:** Topcon Hiper GGD serial number 239-0111

5) **DATA COLLECTOR:** TDS RANGER serial number 00024868

6) **DATA COLLECTOR:** TDS RANGER serial number 00022372

7) **TOTAL STATION:** Topcon GPT-8201A serial number 561002

8) **STATIC GPS RECEIVER:** (UNIT 89) Spectra Precision-Geotracer GTR 32220 571 212 782 serial number 36110089 (Dual Frequency)

9) **STATIC GPS RECEIVER:** (UNIT 90) Spectra Precision-Geotracer GTR 2204 571 212 552 serial number 30910011 (Dual Frequency)

ALLEN PRECISION EQUIPMENT, INC.

1550 Boggs Road Duluth, GA 30136

770/279-7171 800/241-6223

FAX 770-279-7335

CERTIFICATE OF CALIBRATION

This instrument has been carefully inspected to assure that it has no mechanical, optical, or functional deficiencies and meets or exceeds all published specifications.

INSTRUMENT TYPE: TOPCON

MODEL NUMBER: GPT-8201A 1

SERIAL NUMBER: 561002

Customers Name: GLENN ASSOCIATES
11547 STATE HWY 215 S
JENKINSVILLE, SC. 29065

Calibrated by: Mark Robes (SIGNATURE)

MARK ROBES

Title: REPAIR TECHNICIAN

Date: 11-4-05

Chapter

3

RAW DATA FILES

FIELD DATA ACQUISITION DATES

1) MARCH 29, 2006
2) MARCH 30, 2006
3) MARCH 31, 2006
4) APRIL 03, 2006 – Series "A"
5) APRIL 03, 2006 – Series "B"
6) APRIL 04, 2006 – Series "A"
7) APRIL 04, 2006 – Series "B"
8) APRIL 05, 2006 – Series "A"
9) APRIL 05, 2006 – Series "B"
10) APRIL 07, 2006

Raw Data Report

Line# **Record Type**

1
2
3
4
5
6
7
8
9
10
11 12 13 14 15
16 17 18 19 20

```
    1  Job:                                Job Name: 8992g32906
Date: 03-29-2006                              Time: 07:54:23
    2  Mode Setup:                         Azimuth Direction: North
Distance Unit: Feet                           Scale Factor: 1.0
Earth Curvature: Off                  EDM Offset: 0.0ft
Angle Unit: Degrees
    3  Note:                               Data Collector Serial Number:
SS05A00978
    4  Note:                               No coordinate system is defined.
    5  Ellipsoid:                          Ellipsoid Radius: ---
Ellipse Inverse Flattening:                   Ellipse Name:
    6  Projection:                         Projection Type: Unknown
Latitude:                                     Longitude:
Height:                               Northing: ---
Easting: ---                            Elevation: ---                      Scale
Factor: 1.0000000000    Orientation One :             Orientation Two :
    7  Coordinate System Identity:         Coordinate System Option: Scale only
Zone Group:                                   Zone Name:
Datum Name:
    8  Note:                               Select zone record from database
    9  Ellipsoid:                          Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381  Ellipse Name: Geodetic Ref System
1980
   10  Local Site Settings:                Latitude:
Longitude:                                    Height:
Scale Factor: 1.0000000000            Northing: 0.0ft
Easting: 0.0ft
   11  Projection:                         Projection Type: Lambert Conformal
Conic Two Parallel                                                  Latitude:
31.5000                             Longitude: -81.0000
Height:                               Northing: 0.0ft
Easting: 2000000.0ft                    Elevation: ---                      Scale
Factor:                   North Parallel : 34.5000       South Parallel : 32.3000
   12  Datum:                              Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft           Ellipse Inverse Flattening:
298.2572229329  Rotation X: 0.00000000               Rotation Y: 0.00000000
Rotation Z: 0.00000000                  Translation X: 0.0ft
Translation Y: 0.0ft            Translation Z: 0.0ft            ppm Scale Factor:
0.000000
   13  Horizontal Calibration (Adjust):  Northing: ---
Easting: ---                                  Translation North: ---
Translation East: ---                 Rotation about Origin:
Scale Factor:
   14  Vertical Calibration:               Type of Vertical Adjustment: 2
Northing: ---                                 Easting: ---
Translation Z: ---                    Slope North:
Slope East:                             Geoid Model Name: Geoid03 (Conus)
   15  COGO Settings:                      Azimuth Orientation: North
Grid Orientation: NE
   16  Coordinate System Identity:         Coordinate System Option: Keyed in
Zone Group: US State Plane 1983               Zone Name: South Carolina 3900
Datum Name: NAD 1983 (Conus)
```

17 Note: >>
18 Note: >> Begin Adjust with Projection.
19 Note: >> End Adjust with Projection.
20 Note: >>
21 Note: Activating GPS Receiver: Topcon TPS Legacy E [base], COM1, 115200 baud, no parity
22 Note: Geodetic coordinates computed from plane coordinates for base setup.
23 GPS Edit Point: Geodetic Flags: 0 Setup Group: 0
24 Geodetic Position: Time: 13:34:07 Latitude: 34.173590453 Longitude: -81.190117299 Height: 334.685575 Horizontal RMS from Receiver: 0.0 Vertical RMS from Receiver: 0.0 GPS Measurement Method: User Input Classification: Normal
25 GPS Point: Point Name: 1009 GPS Point Type: USER_INPUT
26 Note: 08:34:10,Set BASE receiver at known position
27 Receiver Setup: Reciever Mode: BASE Reduced Antenna Height: 7.594514ft Recording Interval: 0 File Name:
28 Equipment: Reciever Mode: BASE Receiver Type: Legacy E Receiver Serial Number: AG3VLIT08HS Antenna Index: 0 Antenna Number: 1 Antenna Type: PGA-1 Antenna Serial Number: Tape Adjustment: 0.0 Horizontal Offset: 0.226378ft Vertical Offset: 0.087927ft
29 GPS Antenna Height: Reciever Mode: BASE Measured Antenna Height: 7.51ft Measurement Method: Uncorrected Reduced Antenna Height: 7.594514ft
30 Set Base Receiver Pos.: Point Name: 1009 Latitude: 34.173590453 Longitude: -81.190117299 Height: 334.685575 Setup Group: 0
31 Note: Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
32 Note: 08:36:55,Set ROVER receiver with base reference position:LA34.173590453,LN-81.190117299,HT334.685575
33 Receiver Setup: Reciever Mode: ROVER Reduced Antenna Height: 6.907769ft Recording Interval: 0 File Name:
34 Equipment: Reciever Mode: ROVER Receiver Type: HiPer Receiver Serial Number: 8RHNB0238JK Antenna Index: 0 Antenna Number: 0 Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset: 0.347769ft
35 GPS Antenna Height: Reciever Mode: ROVER Measured Antenna Height: 6.56ft Measurement Method: Uncorrected Reduced Antenna Height: 6.907769ft
36 Note: Position averaged from 5 epochs. Std.Dev. Lat: 0.00002", Lng: 0.00001", Ht: 0.002
37 Geodetic Position: Time: 08:51:03 Latitude: 34.19242752 Longitude: -81.171331662 Height: 344.249433 Horizontal RMS from Receiver: 0.025192 Vertical RMS from Receiver: 0.035968 HDOP from Receiver: 0.668184 VDOP from Receiver: 0.953981 GPS Measurement Method: Fixed Classification: Normal
38 GPS Store Point: Point Name: 1022 Northing: 906102.342523ft Easting: 1913344.02312ft Elevation: 444.290949ft Description: PT101
39 Cut Sheet: Elevation: 444.290949ft Design Grade: 444.28
40 Design Point/Location: Point Name: 101

Northing: 906102.39ft Easting: 1913343.98ft
Elevation: 444.28ft Description: lake monticello
41 Stakeout Deltas: Delta Northing: 0.047477ft
Delta Easting: -0.04312ft Delta Elevation: -0.010949ft
42 GPS Stakeout: Point Name: 1022
Northing: 906102.342523ft Easting: 1913344.02312ft
Elevation: 444.290949ft Description: PT101
43 Geodetic Position: Time: 09:02:42
Latitude: 34.154785574 Longitude: -81.182587798
Height: 335.501221 Horizontal RMS from Receiver: 0.027542
Vertical RMS from Receiver: 0.040173 HDOP from Receiver: 0.731114 VDOP
from Receiver: 1.066407 GPS Measurement Method: Fixed Classification: Normal
44 GPS Store Point: Point Name: 1023
Northing: 884244.586811ft Easting: 1907193.878925ft
Elevation: 435.505099ft Description: cp 1020
45 Geodetic Position: Time: 09:12:59
Latitude: 34.154404108 Longitude: -81.194757164
Height: 227.435577 Horizontal RMS from Receiver: 0.03011
Vertical RMS from Receiver: 0.042363 HDOP from Receiver: 0.791043 VDOP
from Receiver: 1.112963 GPS Measurement Method: Fixed Classification: Normal
46 GPS Store Point: Point Name: 1024
Northing: 883880.144059ft Easting: 1900336.876684ft
Elevation: 327.420024ft Description: cp 1021
47 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00005", Lng: 0.00007", Ht: 0.036
48 Geodetic Position: Time: 10:40:05
Latitude: 34.172226971 Longitude: -81.185381973
Height: 347.10212 Horizontal RMS from Receiver: 0.032901
Vertical RMS from Receiver: 0.056181 HDOP from Receiver: 1.318898 VDOP
from Receiver: 2.284053 GPS Measurement Method: Fixed Classification: Normal
49 GPS Store Point: Point Name: 1
Northing: 893794.762271ft Easting: 1904878.075988ft
Elevation: 447.105776ft Description: t nail
50 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00002", Lng: 0.00001", Ht: 0.018
51 Geodetic Position: Time: 10:43:33
Latitude: 34.172219032 Longitude: -81.185549773
Height: 356.357597 Horizontal RMS from Receiver: 0.018499
Vertical RMS from Receiver: 0.031983 HDOP from Receiver: 0.744583 VDOP
from Receiver: 1.288937 GPS Measurement Method: Fixed Classification: Normal
52 GPS Store Point: Point Name: 2
Northing: 893787.166867ft Easting: 1904737.276354ft
Elevation: 456.360933ft Description: t nail
53 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
54 Note: Foresight Target:My Prism, HR:6.0 (6.0
+ 0.0 Offset), Prism Const.:0.0mm
55 Occupy Pt: Occupy Point: 1
Northing: 893794.762271ft Easting: 1904878.075988ft
Elevation: 447.105776ft Description: t nail
56 Note: HR:6.0 (6.0 + 0.0 Offset)
57 Line of Sight (HI/HR): Height of Instrument: 5.26ft
Height of Rod: 6.0ft
58 Backsight: Occupy Point: 1
Backsight Point: 2 Backsight Azimuth: 266.5444
Backsight Circle: 0.0000
59 Note: Fixed HR at Backsight:5.74 (5.74 + 0.0
Offset), Prism Const.:0.0mm
60 Note: BS check 1 -
2:ZE85.5922,SD141.375283,HD err= 0.024705, VD err= 0.153008
61 Note: BS Circle check : angular err= 0.0000
62 Note: Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm

63 Note: HR:5.0 (5.0 + 0.0 Offset)
64 Line of Sight (HI/HR): Height of Instrument: 5.26ft
Height of Rod: 5.0ft
65 Store Point: Point Name: 3
Northing: 893821.647372ft Easting: 1904936.845458ft
Elevation: 440.845828ft Description: b 623 0w 623
66 Cut Sheet: Elevation: 440.845828ft
Design Grade: 400.0
67 Design Point/Location: Point Name: 407
Northing: 893821.3ft Easting: 1904937.3ft
Elevation: 400.0ft Description: B-623
68 Stakeout Deltas: Delta Northing: -0.347372ft
Delta Easting: 0.454542ft Delta Elevation: -40.845828ft
69 Stakeout: Occupy Point: 1
Foresight Point: 3 Angle Right: 158.3019
Zenith Angle: 95.4539 Slope Distance: 64.95513ft
Description: b 623 0w 623
70 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
71 Geodetic Position: Time: 11:25:05
Latitude: 34.173064483 Longitude: -81.190137708
Height: 331.610054 Horizontal RMS from Receiver: 0.10562
Vertical RMS from Receiver: 0.179249 HDOP from Receiver: 3.666656 VDOP
from Receiver: 6.222706 GPS Measurement Method: Fixed Classification: Normal
72 GPS Store Point: Point Name: 4
Northing: 894643.240595ft Easting: 1904246.650683ft
Elevation: 431.613727ft Description: ow 622 b622
73 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00015", Lng: 0.00018", Ht: 0.021
74 Geodetic Position: Time: 11:55:30
Latitude: 34.171641337 Longitude: -81.190349494
Height: 317.226605 Horizontal RMS from Receiver: 0.029204
Vertical RMS from Receiver: 0.045336 HDOP from Receiver: 1.114492 VDOP
from Receiver: 1.747094 GPS Measurement Method: Fixed Classification: Normal
75 GPS Store Point: Point Name: 5
Northing: 893205.300116ft Easting: 1904064.556566ft
Elevation: 417.227815ft Description: t nail
76 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00018", Ht: 0.026
77 Geodetic Position: Time: 12:01:02
Latitude: 34.17133071 Longitude: -81.190514019
Height: 315.574799 Horizontal RMS from Receiver: 0.030055
Vertical RMS from Receiver: 0.04819 HDOP from Receiver: 1.169827 VDOP
from Receiver: 1.877105 GPS Measurement Method: Fixed Classification: Normal
78 GPS Store Point: Point Name: 6
Northing: 892891.75013ft Easting: 1903925.559497ft
Elevation: 415.575352ft Description: t nail
79 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
80 Occupy Pt: Occupy Point: 5
Northing: 893205.300116ft Easting: 1904064.556566ft
Elevation: 417.227815ft Description: t nail
81 Note: HR:5.0 (5.0 + 0.0 Offset)
82 Line of Sight (HI/HR): Height of Instrument: 5.17ft
Height of Rod: 5.0ft
83 Backsight: Occupy Point: 5
Backsight Point: 6 Backsight Azimuth: 203.5428
Backsight Circle: 0.0000
84 Note: Fixed HR at Backsight:5.46 (5.46 + 0.0
Offset), Prism Const.:0.0mm
85 Note: BS check 5 -
6:ZE90.1433,SD343.015686,HD err= 0.034806, VD err= -0.088489
86 Note: BS Circle check : angular err= 0.0000

87 Store Point: Point Name: 7
Northing: 893200.200397ft Easting: 1904169.067249ft
Elevation: 425.525335ft Description: ow 622 b622
88 Cut Sheet: Elevation: 425.525335ft
Design Grade: 400.0
89 Design Point/Location: Point Name: 482
Northing: 893200.2ft Easting: 1904169.0ft
Elevation: 400.0ft Description: OW-626
90 Stakeout Deltas: Delta Northing: -0.000397ft
Delta Easting: -0.067249ft Delta Elevation: -25.525335ft
91 Stakeout: Occupy Point: 5
Foresight Point: 7 Angle Right: 248.5309
Zenith Angle: 85.3331 Slope Distance: 104.95021ft
Description: ow 622 b622
92 Side Shot: Occupy Point: 5
Foresight Point: 8 Angle Right: 249.2043
Zenith Angle: 90.0756 Slope Distance: 79.76516ft
Description: new ow626 b626
93 Store Point: Point Name: 7
Northing: 893200.200397ft Easting: 1904169.067249ft
Elevation: 425.525335ft Description: ow 626 b626
94 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
95 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00002", Lng: 0.00015", Ht: 0.013
96 Geodetic Position: Time: 13:17:31
Latitude: 34.172172618 Longitude: -81.190823199
Height: 320.974893 Horizontal RMS from Receiver: 0.032486
Vertical RMS from Receiver: 0.054079 HDOP from Receiver: 1.097914 VDOP
from Receiver: 1.827069 GPS Measurement Method: Fixed Classification: Normal
97 GPS Store Point: Point Name: 9
Northing: 893743.531379ft Easting: 1903668.792434ft
Elevation: 420.976003ft Description: ow 621 b621
98 Cut Sheet: Elevation: 420.976003ft
Design Grade: 400.0
99 Design Point/Location: Point Name: 476
Northing: 893743.5ft Easting: 1903669.1ft
Elevation: 400.0ft Description: OW-621a
100 Stakeout Deltas: Delta Northing: -0.031379ft
Delta Easting: 0.307566ft Delta Elevation: -20.976003ft
101 GPS Stakeout: Point Name: 9
Northing: 893743.531379ft Easting: 1903668.792434ft
Elevation: 420.976003ft Description: ow 621 b621
102 Geodetic Position: Time: 13:33:37
Latitude: 34.172028074 Longitude: -81.191606149
Height: 281.543747 Horizontal RMS from Receiver: 0.028242
Vertical RMS from Receiver: 0.041611 HDOP from Receiver: 0.94998 VDOP
from Receiver: 1.399674 GPS Measurement Method: Fixed Classification: Normal
103 GPS Store Point: Point Name: 10
Northing: 893599.463475ft Easting: 1903011.482807ft
Elevation: 381.543499ft Description: ow 620 b620
104 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00009", Lng: 0.00016", Ht: 0.053
105 Geodetic Position: Time: 13:56:22
Latitude: 34.171023491 Longitude: -81.19299145
Height: 305.210419 Horizontal RMS from Receiver: 0.02916
Vertical RMS from Receiver: 0.050131 HDOP from Receiver: 1.123794 VDOP
from Receiver: 1.926036 GPS Measurement Method: Fixed Classification: Normal
106 GPS Store Point: Point Name: 99
Northing: 892587.687019ft Easting: 1901846.085939ft
Elevation: 405.207034ft Description: Offset Reference
107 GPS Offset Shot: Point Name: 11
Azimuth: 168.0000 Zenith Angle: 90.0000

Slope Distance: 1.8ft Height of Instrument: 0.0ft
Height of Rod: 0.0ft Description: ow 619 b 619
108 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00010", Lng: 0.00016", Ht: 0.092
109 Deleted Point: Point Name: 99
110 Geodetic Position: Time: 14:46:59
Latitude: 34.165614707 Longitude: -81.192643284
Height: 218.461992 Horizontal RMS from Receiver: 0.041648
Vertical RMS from Receiver: 0.132685 HDOP from Receiver: 1.350684 VDOP
from Receiver: 4.310904 GPS Measurement Method: Fixed Classification: Normal
111 GPS Store Point: Point Name: 99
Northing: 891162.803992ft Easting: 1902133.726906ft
Elevation: 318.457262ft Description: Offset Reference
112 GPS Offset Shot: Point Name: 12
Azimuth: 44.0000 Zenith Angle: 90.0000
Slope Distance: 13.7ft Height of Instrument: 0.0ft
Height of Rod: 0.0ft Description: ow 627ab b627
113 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00016", Lng: 0.00018", Ht: 0.075
114 Geodetic Position: Time: 15:30:22
Latitude: 34.165127459 Longitude: -81.193404146
Height: 218.245689 Horizontal RMS from Receiver: 0.03395
Vertical RMS from Receiver: 0.08601 HDOP from Receiver: 1.20498 VDOP
from Receiver: 3.02989 GPS Measurement Method: Fixed Classification: Normal
115 GPS Store Point: Point Name: 13
Northing: 890672.314216ft Easting: 1901493.794962ft
Elevation: 318.240374ft Description: ow618 b 618
116 Geodetic Position: Time: 16:00:53
Latitude: 34.164351808 Longitude: -81.192354359
Height: 347.124267 Horizontal RMS from Receiver: 0.021987
Vertical RMS from Receiver: 0.037111 HDOP from Receiver: 0.669078 VDOP
from Receiver: 1.129307 GPS Measurement Method: Fixed Classification: Normal
117 GPS Store Point: Point Name: 14
Northing: 889885.538502ft Easting: 1902372.147829ft
Elevation: 447.118524ft Description: ow 617 b 617
118 Geodetic Position: Time: 16:10:29
Latitude: 34.165495934 Longitude: -81.191000939
Height: 305.341448 Horizontal RMS from Receiver: 0.023102
Vertical RMS from Receiver: 0.033195 HDOP from Receiver: 0.724214 VDOP
from Receiver: 1.040611 GPS Measurement Method: Fixed Classification: Normal
119 GPS Store Point: Point Name: 15
Northing: 891038.461962ft Easting: 1903511.314313ft
Elevation: 405.339101ft Description: ow 401ab b 401
120 Geodetic Position: Time: 16:26:37
Latitude: 34.164644945 Longitude: -81.190853114
Height: 291.779686 Horizontal RMS from Receiver: 0.024223
Vertical RMS from Receiver: 0.028539 HDOP from Receiver: 0.742107 VDOP
from Receiver: 0.874321 GPS Measurement Method: Fixed Classification: Normal
121 GPS Store Point: Point Name: 16
Northing: 890177.920299ft Easting: 1903632.687981ft
Elevation: 391.776738ft Description: ow 405 b 405
122 Geodetic Position: Time: 16:53:37
Latitude: 34.164359852 Longitude: -81.185268161
Height: 300.906217 Horizontal RMS from Receiver: 0.034908
Vertical RMS from Receiver: 0.040571 HDOP from Receiver: 1.000894 VDOP
from Receiver: 1.163264 GPS Measurement Method: Fixed Classification: Normal
123 GPS Store Point: Point Name: 17
Northing: 889885.677781ft Easting: 1904961.65816ft
Elevation: 400.906134ft Description: ow 625 b625
124 Geodetic Position: Time: 17:12:16
Latitude: 34.15440407 Longitude: -81.194757124
Height: 227.376967 Horizontal RMS from Receiver: 0.046411
Vertical RMS from Receiver: 0.110811 HDOP from Receiver: 1.219305 VDOP

from Receiver: 2.911206 GPS Measurement Method: Fixed Classification: Normal
125 GPS Store Point: Point Name: 18
Northing: 883880.104768ft Easting: 1900336.910154ft
Elevation: 327.361414ft Description: bm otis fngr hil
126 Geodetic Position: Time: 17:28:11
Latitude: 34.154785592 Longitude: -81.182587771
Height: 335.424398 Horizontal RMS from Receiver: 0.038912
Vertical RMS from Receiver: 0.077772 HDOP from Receiver: 1.006921 VDOP
from Receiver: 2.012501 GPS Measurement Method: Fixed Classification: Normal
127 GPS Store Point: Point Name: 19
Northing: 884244.604985ft Easting: 1907193.902054ft
Elevation: 435.428276ft Description: bm ntc 1020
128 Geodetic Position: Time: 17:42:12
Latitude: 34.192427584 Longitude: -81.171331707
Height: 344.270335 Horizontal RMS from Receiver: 0.036677
Vertical RMS from Receiver: 0.065825 HDOP from Receiver: 0.972838 VDOP
from Receiver: 1.745963 GPS Measurement Method: Fixed Classification: Normal
129 GPS Store Point: Point Name: 20
Northing: 906102.406987ft Easting: 1913343.985693ft
Elevation: 444.311851ft Description: cp 101

Raw Data Report

Line# **Record Type**

1

2

3 **4**

5 **6**

7 **8**

9 **10** **11** **12** **13** **14** **15**

16 **17** **18** **19** **20**

1 Job: Job Name: 8992g033006
Date: 03-30-2006 Time: 07:39:22
2 Mode Setup: Azimuth Direction: North
Distance Unit: Feet Scale Factor: 1.0
Earth Curvature: Off EDM Offset: 0.0ft
Angle Unit: Degrees
3 Note: Data Collector Serial Number:
SS05A00978
4 Store Point: Point Name: 18
Northing: 883880.104768ft Easting: 1900336.910154ft
Elevation: 327.361414ft Description: cp 1021
5 Note: Switch projection mode to H: Mapping
Plane and V: Localization (+ Geoid)
6 Note: No coordinate system is defined.
7 Ellipsoid: Ellipsoid Radius: ---
Ellipse Inverse Flattening: Ellipse Name:
8 Projection: Projection Type: Unknown
Latitude: Longitude:
Height: Northing: ---
Easting: --- Elevation: --- Scale
Factor: 1.0000000000 Orientation One : Orientation Two :
9 Coordinate System Identity: Coordinate System Option: Scale only
Zone Group: Zone Name:
Datum Name:
10 Note: Select zone record from database
11 Ellipsoid: Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381 Ellipse Name: Geodetic Ref System
1980
12 Local Site Settings: Latitude:
Longitude: Height:
Scale Factor: 1.0000000000 Northing: 0.0ft
Easting: 0.0ft
13 Projection: Projection Type: Lambert Conformal
Conic Two Parallel Latitude:
31.5000 Longitude: -81.0000
Height: Northing: 0.0ft
Easting: 2000000.0ft Elevation: --- Scale
Factor: North Parallel : 34.5000 South Parallel : 32.3000
14 Datum: Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft Ellipse Inverse Flattening:
298.2572229329 Rotation X: 0.00000000 Rotation Y: 0.00000000
Rotation Z: 0.00000000 Translation X: 0.0ft
Translation Y: 0.0ft Translation Z: 0.0ft ppm Scale Factor:
0.000000
15 Horizontal Calibration (Adjust): Northing: ---
Easting: --- Translation North: ---
Translation East: --- Rotation about Origin:
Scale Factor:
16 Vertical Calibration: Type of Vertical Adjustment: 2
Northing: --- Easting: ---
Translation Z: --- Slope North:
Slope East: Geoid Model Name: Geoid03 (Conus)

60 Note: HR:5.0 (5.0 + 0.0 Offset)
61 Line of Sight (HI/HR): Height of Instrument: 5.06ft
Height of Rod: 5.0ft
62 Backsight: Occupy Point: 21
Backsight Point: 22 Backsight Azimuth: 168.5751
Backsight Circle: 0.0000
63 Note: Fixed HR at Backsight:5.32 (5.32 + 0.0
Offset), Prism Const.:0.0mm
64 Note: BS check 21 -
22:ZE90.0255,SD186.950374,HD err= 0.056592, VD err= -0.058523
65 Note: BS Circle check : angular err= 0.0000
66 Side Shot: Occupy Point: 21
Foresight Point: 23 Angle Right: 248.1054
Zenith Angle: 101.0250 Slope Distance: 115.720231ft
Description: ow 614 b 614
67 Occupy Pt: Occupy Point: 21
Northing: 891625.840208ft Easting: 1903449.321606ft
Elevation: 396.808784ft Description: t nail
68 Backsight: Occupy Point: 21
Backsight Point: 22 Backsight Azimuth: 168.5751
Backsight Circle: 0.0000
69 Note: Fixed HR at Backsight:5.32 (5.32 + 0.0
Offset), Prism Const.:0.0mm
70 Note: BS check 21 -
22:ZE90.0252,SD186.950374,HD err= 0.056594, VD err= -0.056257
71 Note: BS Circle check : angular err= 0.0005
72 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
73 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00024", Lng: 0.00004", Ht: 0.041
74 Geodetic Position: Time: 11:26:25
Latitude: 34.170889095 Longitude: -81.1902084
Height: 312.461793 Horizontal RMS from Receiver: 0.035389
Vertical RMS from Receiver: 0.039164 HDOP from Receiver: 1.35719 VDOP
from Receiver: 1.501253 GPS Measurement Method: Fixed Classification: Normal
75 GPS Store Point: Point Name: 24
Northing: 892444.587748ft Easting: 1904180.595185ft
Elevation: 412.462356ft Description: t nail
76 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00006", Ht: 0.005
77 Geodetic Position: Time: 11:28:32
Latitude: 34.171023184 Longitude: -81.190107743
Height: 308.450343 Horizontal RMS from Receiver: 0.016856
Vertical RMS from Receiver: 0.025884 HDOP from Receiver: 0.650029 VDOP
from Receiver: 0.998319 GPS Measurement Method: Fixed Classification: Normal
78 GPS Store Point: Point Name: 26
Northing: 892579.862907ft Easting: 1904265.460911ft
Elevation: 408.451239ft Description: t nail
79 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
80 Occupy Pt: Occupy Point: 24
Northing: 892444.587748ft Easting: 1904180.595185ft
Elevation: 412.462356ft Description: t nail
81 Note: HR:5.0 (5.0 + 0.0 Offset)
82 Line of Sight (HI/HR): Height of Instrument: 5.05ft
Height of Rod: 5.0ft
83 Backsight: Occupy Point: 24
Backsight Point: 26 Backsight Azimuth: 32.0609
Backsight Circle: 0.0000
84 Note: Fixed HR at Backsight:5.79 (5.79 + 0.0
Offset), Prism Const.:0.0mm
85 Note: BS check 24 -
26:ZE91.1028,SD159.76032,HD err= 0.034687, VD err= -0.003021

Northing: 906102.379684ft Easting: 1913344.008563ft
Elevation: 444.29458ft Description: ck cp 101
41 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00006", Lng: 0.00013", Ht: 0.008
42 Geodetic Position: Time: 08:43:57
Latitude: 34.154785568 Longitude: -81.182587725
Height: 335.464432 Horizontal RMS from Receiver: 0.021857
Vertical RMS from Receiver: 0.033202 HDOP from Receiver: 0.66637 VDOP
from Receiver: 1.012252 GPS Measurement Method: Fixed Classification: Normal
43 GPS Store Point: Point Name: 1026
Northing: 884244.581021ft Easting: 1907193.940151ft
Elevation: 435.468311ft Description: ck cp 1020
44 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00005", Ht: 0.013
45 Geodetic Position: Time: 08:52:00
Latitude: 34.154404119 Longitude: -81.19475715
Height: 227.354738 Horizontal RMS from Receiver: 0.022127
Vertical RMS from Receiver: 0.03319 HDOP from Receiver: 0.65994 VDOP
from Receiver: 0.994025 GPS Measurement Method: Fixed Classification: Normal
46 GPS Store Point: Point Name: 1027
Northing: 883880.1548ft Easting: 1900336.888319ft
Elevation: 327.339185ft Description: ck cp 1021
47 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00007", Lng: 0.00019", Ht: 0.010
48 Geodetic Position: Time: 10:15:28
Latitude: 34.170142007 Longitude: -81.185660641
Height: 245.58539 Horizontal RMS from Receiver: 0.024897
Vertical RMS from Receiver: 0.037117 HDOP from Receiver: 0.931387 VDOP
from Receiver: 1.389251 GPS Measurement Method: Fixed Classification: Normal
49 GPS Store Point: Point Name: 99
Northing: 891688.041106ft Easting: 1904637.849601ft
Elevation: 345.586158ft Description: Offset Reference
50 GPS Offset Shot: Point Name: 25
Azimuth: 309.0000 Zenith Angle: 90.0000
Slope Distance: 2.94ft Height of Instrument: 0.0ft
Height of Rod: 0.0ft Description: ow 624 b 624
51 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00043", Lng: 0.00037", Ht: 0.042
52 Geodetic Position: Time: 10:46:30
Latitude: 34.170076855 Longitude: -81.191076991
Height: 296.810626 Horizontal RMS from Receiver: 0.043085
Vertical RMS from Receiver: 0.069217 HDOP from Receiver: 1.86428 VDOP
from Receiver: 2.93299 GPS Measurement Method: Fixed Classification: Normal
53 GPS Store Point: Point Name: 21
Northing: 891625.840208ft Easting: 1903449.321606ft
Elevation: 396.808784ft Description: t nail
54 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00026", Lng: 0.00019", Ht: 0.038
55 Geodetic Position: Time: 10:51:00
Latitude: 34.165895485 Longitude: -81.191033675
Height: 296.451118 Horizontal RMS from Receiver: 0.021082
Vertical RMS from Receiver: 0.035365 HDOP from Receiver: 0.783905 VDOP
from Receiver: 1.314501 GPS Measurement Method: Fixed Classification: Normal
56 GPS Store Point: Point Name: 22
Northing: 891442.402581ft Easting: 1903485.097266ft
Elevation: 396.449147ft Description: t nail
57 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
58 Note: Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm
59 Occupy Pt: Occupy Point: 21
Northing: 891625.840208ft Easting: 1903449.321606ft
Elevation: 396.808784ft Description: t nail

17 COGO Settings: Azimuth Orientation: North
Grid Orientation: NE
18 Coordinate System Identity: Coordinate System Option: Keyed in
Zone Group: US State Plane 1983 Zone Name: South Carolina 3900
Datum Name: NAD 1983 (Conus)
19 Note: >>
20 Note: >> Begin Adjust with Projection.
21 Note: >> End Adjust with Projection.
22 Note: >>
23 Note: Activating GPS Receiver: Topcon TPS
Legacy E [base], COM1, 115200 baud, no parity
24 Note: Geodetic coordinates computed from
plane coordinates for base setup.
25 GPS Edit Point: Geodetic Flags: 0
Setup Group: 0
26 Geodetic Position: Time: 13:10:07
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.685575 Horizontal RMS from Receiver: 0.0
Vertical RMS from Receiver: 0.0 GPS Measurement Method: User Input
Classification: Normal
27 GPS Point: Point Name: 1009
GPS Point Type: USER_INPUT
28 Note: 08:10:11,Set BASE receiver at known
position
29 Receiver Setup: Reciever Mode: BASE
Reduced Antenna Height: 6.163711ft Recording Interval: 0
File Name:
30 Equipment: Reciever Mode: BASE
Receiver Type: Legacy E Receiver Serial Number: AG3VLIT08HS
Antenna Index: 0 Antenna Number: 1
Antenna Type: PGA-1 Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.226378ft Vertical Offset:
0.087927ft
31 GPS Antenna Height: Reciever Mode: BASE
Measured Antenna Height: 6.08ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.163711ft
32 Set Base Receiver Pos.: Point Name: 1009
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.685575 Setup Group: 0
33 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
34 Note: 08:11:32,Set ROVER receiver with base
reference position:LA34.173590453,LN-81.190117299,HT334.685575
35 Receiver Setup: Reciever Mode: ROVER
Reduced Antenna Height: 6.909449ft Recording Interval: 0
File Name:
36 Equipment: Reciever Mode: ROVER
Receiver Type: HiPer Receiver Serial Number: 8RHNB0238JK
Antenna Index: 0 Antenna Number: 0
Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset:
0.347769ft
37 GPS Antenna Height: Reciever Mode: ROVER
Measured Antenna Height: 6.56168ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.909449ft
38 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00008", Ht: 0.009
39 Geodetic Position: Time: 08:30:46
Latitude: 34.192427557 Longitude: -81.171331679
Height: 344.253063 Horizontal RMS from Receiver: 0.023762
Vertical RMS from Receiver: 0.038334 HDOP from Receiver: 0.723811 VDOP
from Receiver: 1.167539 GPS Measurement Method: Fixed Classification: Normal
40 GPS Store Point: Point Name: 1025

86 Note: BS Circle check : angular err= 0.0000
87 Side Shot: Occupy Point: 24
Foresight Point: 27 Angle Right: 107.2859
Zenith Angle: 96.1934 Slope Distance: 64.320129ft
Description: ow 612 b 612
88 Occupy Pt: Occupy Point: 24
Northing: 892444.587748ft Easting: 1904180.595185ft
Elevation: 412.462356ft Description: t nail
89 Backsight: Occupy Point: 24
Backsight Point: 26 Backsight Azimuth: 32.0609
Backsight Circle: 0.0000
90 Note: Fixed HR at Backsight:5.79 (5.79 + 0.0
Offset), Prism Const.:0.0mm
91 Note: BS check 24 -
26:ZE91.1028,SD159.76532,HD err= 0.039686, VD err= -0.003123
92 Note: BS Circle check : angular err= 0.0002
93 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
94 Geodetic Position: Time: 12:07:17
Latitude: 34.170596575 Longitude: -81.191470638
Height: 320.51207 Horizontal RMS from Receiver: 0.01958
Vertical RMS from Receiver: 0.035102 HDOP from Receiver: 0.632828 VDOP
from Receiver: 1.134501 GPS Measurement Method: Fixed Classification: Normal
95 GPS Store Point: Point Name: 28
Northing: 892152.184109ft Easting: 1903120.678923ft
Elevation: 420.510205ft Description: ow 313 b 313
96 Geodetic Position: Time: 12:43:35
Latitude: 34.170958451 Longitude: -81.191801952
Height: 328.691522 Horizontal RMS from Receiver: 0.042287
Vertical RMS from Receiver: 0.099502 HDOP from Receiver: 1.380892 VDOP
from Receiver: 3.249228 GPS Measurement Method: Fixed Classification: Normal
97 GPS Store Point: Point Name: 29
Northing: 892518.823872ft Easting: 1902843.847859ft
Elevation: 428.689609ft Description: b 231
98 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00006", Ht: 0.018
99 Geodetic Position: Time: 12:52:16
Latitude: 34.170855361 Longitude: -81.191732305
Height: 326.665969 Horizontal RMS from Receiver: 0.026795
Vertical RMS from Receiver: 0.072116 HDOP from Receiver: 1.041516 VDOP
from Receiver: 2.859604 GPS Measurement Method: Fixed Classification: Normal
100 GPS Store Point: Point Name: 30
Northing: 892414.440674ft Easting: 1902901.956066ft
Elevation: 426.664029ft Description: t nail
101 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00005", Lng: 0.00004", Ht: 0.007
102 Geodetic Position: Time: 12:56:52
Latitude: 34.170748647 Longitude: -81.191421388
Height: 322.045228 Horizontal RMS from Receiver: 0.020013
Vertical RMS from Receiver: 0.033654 HDOP from Receiver: 0.764513 VDOP
from Receiver: 1.286448 GPS Measurement Method: Fixed Classification: Normal
103 GPS Store Point: Point Name: 31
Northing: 892305.766284ft Easting: 1903162.476831ft
Elevation: 422.043621ft Description: t nail
104 Geodetic Position: Time: 13:09:52
Latitude: 34.170717223 Longitude: -81.191675628
Height: 323.508479 Horizontal RMS from Receiver: 0.044856
Vertical RMS from Receiver: 0.082801 HDOP from Receiver: 1.454736 VDOP
from Receiver: 2.685364 GPS Measurement Method: Fixed Classification: Normal
105 GPS Store Point: Point Name: 32
Northing: 892274.66609ft Easting: 1902949.073582ft
Elevation: 423.506451ft Description: b 336
106 Geodetic Position: Time: 13:20:58

Latitude: 34.170624839 Longitude: -81.19176566
Height: 323.948257 Horizontal RMS from Receiver: 0.106371
Vertical RMS from Receiver: 0.168582 HDOP from Receiver: 3.440893 VDOP from Receiver: 5.453288 GPS Measurement Method: Fixed Classification: Normal
107 GPS Store Point: Point Name: 33
Northing: 892181.5222ft Easting: 1902873.247236ft
Elevation: 423.945984ft Description: b 309
108 Geodetic Position: Time: 13:27:16
Latitude: 34.17057796 Longitude: -81.191624642
Height: 320.094034 Horizontal RMS from Receiver: 0.033993
Vertical RMS from Receiver: 0.047466 HDOP from Receiver: 1.098105 VDOP from Receiver: 1.533315 GPS Measurement Method: Fixed Classification: Normal
109 GPS Store Point: Point Name: 34
Northing: 892133.769875ft Easting: 1902991.412134ft
Elevation: 420.091913ft Description: b 323
110 Geodetic Position: Time: 13:32:20
Latitude: 34.17049854 Longitude: -81.191603548
Height: 318.882362 Horizontal RMS from Receiver: 0.072984
Vertical RMS from Receiver: 0.177985 HDOP from Receiver: 2.352382 VDOP from Receiver: 5.73669 GPS Measurement Method: Fixed Classification: Normal
111 GPS Store Point: Point Name: 35
Northing: 892053.438942ft Easting: 1903008.861138ft
Elevation: 418.880177ft Description: b 324
112 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00016", Lng: 0.00008", Ht: 0.051
113 Deleted Point: Point Name: 99
114 Geodetic Position: Time: 13:46:41
Latitude: 34.170553768 Longitude: -81.191738263
Height: 321.130156 Horizontal RMS from Receiver: 0.031373
Vertical RMS from Receiver: 0.04767 HDOP from Receiver: 1.389475 VDOP from Receiver: 2.325133 GPS Measurement Method: Fixed Classification: Normal
115 GPS Store Point: Point Name: 99
Northing: 892109.61293ft Easting: 1902896.00886ft
Elevation: 421.127837ft Description: Offset Reference
116 GPS Offset Shot: Point Name: 36
Azimuth: 158.0000 Zenith Angle: 90.0000
Slope Distance: 22.45ft Height of Instrument: 0.0ft
Height of Rod: 0.0ft Description: b 325
117 Note: Activating Total Station: Topcon GTS-800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
118 Note: Activating Total Station: Topcon GTS/GPT Robotic [820/8200 W/ RADIOS & RC2], COM1, 9600 baud, no parity
119 Note: Foresight Target:My Prism, HR:5.66 (5.66 + 0.0 Offset), Prism Const.:0.0mm
120 Occupy Pt: Occupy Point: 30
Northing: 892414.440674ft Easting: 1902901.956066ft
Elevation: 426.664029ft Description: t nail
121 Note: HR:5.66 (5.66 + 0.0 Offset)
122 Line of Sight (HI/HR): Height of Instrument: 5.43ft
Height of Rod: 5.66ft
123 Backsight: Occupy Point: 30
Backsight Point: 31 Backsight Azimuth: 112.3835
Backsight Circle: 0.0000
124 Note: Fixed HR at Backsight:5.91 (5.91 + 0.0 Offset), Prism Const.:0.0mm
125 Note: BS check 30 - 31:ZE90.5044,SD282.360565,HD err= 0.051245, VD err= -0.026442
126 Note: BS Circle check : angular err= 0.0001
127 Note: BS check 30 - 31:ZE90.5043,SD282.360565,HD err= 0.051266, VD err= -0.025073
128 Note: BS Circle check : angular err= 0.0000
129 Store Point: Point Name: 37
Northing: 892406.364118ft Easting: 1902791.580895ft

Elevation: 429.759459ft Description: c 310
130 Cut Sheet: Elevation: 429.759459ft
Design Grade: 400.0
131 Design Point/Location: Point Name: 431
Northing: 892406.3ft Easting: 1902791.5ft
Elevation: 400.0ft Description: C-310
132 Stakeout Deltas: Delta Northing: -0.064118ft
Delta Easting: -0.080895ft Delta Elevation: -29.759459ft
133 Stakeout: Occupy Point: 30
Foresight Point: 37 Angle Right: 153.1019
Zenith Angle: 88.1644 Slope Distance: 110.720221ft
Description: c 310
134 Side Shot: Occupy Point: 30
Foresight Point: 38 Angle Right: 122.2258
Zenith Angle: 90.1701 Slope Distance: 255.700511ft
Description: ow 312 b 312
135 Side Shot: Occupy Point: 30
Foresight Point: 39 Angle Right: 146.3026
Zenith Angle: 89.5229 Slope Distance: 302.620605ft
Description: b 335
136 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
137 Note: Activating Total Station: Topcon
GTS/GPT Robotic [820/8200 W/ RADIOS & RC2], COM1, 9600 baud, no parity
138 Side Shot: Occupy Point: 30
Foresight Point: 40 Angle Right: 114.3901
Zenith Angle: 90.3717 Slope Distance: 383.080766ft
Description: t nail
139 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
140 Note: Activating Total Station: Topcon
GTS/GPT Robotic [820/8200 W/ RADIOS & RC2], COM1, 9600 baud, no parity
141 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
142 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00065", Lng: 0.00020", Ht: 0.374
143 Geodetic Position: Time: 15:10:49
Latitude: 34.170583396 Longitude: -81.192003202
Height: 322.654985 Horizontal RMS from Receiver: 0.036726
Vertical RMS from Receiver: 0.079776 HDOP from Receiver: 1.494179 VDOP
from Receiver: 3.940387 GPS Measurement Method: Fixed Classification: Normal
144 GPS Store Point: Point Name: 41
Northing: 892140.253116ft Easting: 1902673.820083ft
Elevation: 422.652318ft Description: b 320
145 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00007", Lng: 0.00015", Ht: 0.020
146 Deleted Point: Point Name: 99
147 Geodetic Position: Time: 15:22:12
Latitude: 34.17044527 Longitude: -81.191772155
Height: 324.016797 Horizontal RMS from Receiver: 0.037473
Vertical RMS from Receiver: 0.066452 HDOP from Receiver: 1.418572 VDOP
from Receiver: 2.51432 GPS Measurement Method: Fixed Classification: Normal
148 GPS Store Point: Point Name: 99
Northing: 892000.034318ft Easting: 1902867.233057ft
Elevation: 424.014297ft Description: Offset Reference
149 GPS Offset Shot: Point Name: 42
Azimuth: 310.0000 Zenith Angle: 90.0000
Slope Distance: 7.86ft Height of Instrument: 0.0ft
Height of Rod: 0.0ft Description: b 305 ow 305 ow
150 Note: Activating Total Station: Topcon
GTS/GPT Robotic [820/8200 W/ RADIOS & RC2], COM1, 9600 baud, no parity
151 Occupy Pt: Occupy Point: 40
Northing: 892154.633538ft Easting: 1902620.470945ft

Elevation: 422.28042ft Description: t nail
152 Note: HR:5.66 (5.66 + 0.0 Offset)
153 Line of Sight (HI/HR): Height of Instrument: 5.23ft
Height of Rod: 5.66ft
154 Backsight: Occupy Point: 40
Backsight Point: 30 Backsight Azimuth: 47.1736
Backsight Circle: 0.0000
155 Note: Fixed HR at Backsight:5.91 (5.91 + 0.0
Offset), Prism Const.:0.0mm
156 Note: BS check 40 -
30:ZE89.1433,SD383.100766,HD err= 0.009038, VD err= 0.001169
157 Note: BS Circle check : angular err= 0.0000
158 Side Shot: Occupy Point: 40
Foresight Point: 43 Angle Right: 53.1925
Zenith Angle: 90.0953 Slope Distance: 281.040562ft
Description: tmp
159 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
160 Note: Activating Total Station: Topcon
GTS/GPT Robotic [820/8200 W/ RADIOS & RC2], COM1, 9600 baud, no parity
161 Deleted Point: Point Name: 43
162 Side Shot: Occupy Point: 40
Foresight Point: 43 Angle Right: 72.0302
Zenith Angle: 89.0500 Slope Distance: 226.180452ft
Description: b 322
163 Side Shot: Occupy Point: 40
Foresight Point: 44 Angle Right: 62.2423
Zenith Angle: 89.4832 Slope Distance: 163.520327ft
Description: b b 321
164 Side Shot: Occupy Point: 40
Foresight Point: 45 Angle Right: 86.3419
Zenith Angle: 90.2158 Slope Distance: 145.280291ft
Description: c 302 s
165 Side Shot: Occupy Point: 40
Foresight Point: 46 Angle Right: 118.3604
Zenith Angle: 91.2650 Slope Distance: 92.520185ft
Description: b 318
166 Side Shot: Occupy Point: 40
Foresight Point: 47 Angle Right: 147.1937
Zenith Angle: 92.4630 Slope Distance: 75.280151ft
Description: c-303
167 Side Shot: Occupy Point: 40
Foresight Point: 48 Angle Right: 176.1021
Zenith Angle: 94.5907 Slope Distance: 80.440161ft
Description: b 317
168 Side Shot: Occupy Point: 40
Foresight Point: 49 Angle Right: 223.5437
Zenith Angle: 95.1057 Slope Distance: 31.480063ft
Description: b 308
169 Side Shot: Occupy Point: 40
Foresight Point: 50 Angle Right: 257.2914
Zenith Angle: 92.4354 Slope Distance: 97.520195ft
Description: c 306
170 Occupy Pt: Occupy Point: 40
Northing: 892154.633538ft Easting: 1902620.470945ft
Elevation: 422.28042ft Description: t nail
171 Backsight: Occupy Point: 40
Backsight Point: 30 Backsight Azimuth: 47.1736
Backsight Circle: 0.0000
172 Note: Fixed HR at Backsight:5.91 (5.91 + 0.0
Offset), Prism Const.:0.0mm
173 Note: BS check 40 -
30:ZE89.1405,SD383.080766,HD err= -0.011664, VD err= 0.05383

174 Note: BS Circle check : angular err= 0.0015
175 Occupy Pt: Occupy Point: 40
Northing: 892154.633538ft Easting: 1902620.470945ft
Elevation: 422.28042ft Description: t nail
176 Backsight: Occupy Point: 40
Backsight Point: 30 Backsight Azimuth: 47.1736
Backsight Circle: 0.0000
177 Note: Fixed HR at Backsight:5.91 (5.91 + 0.0
Offset), Prism Const.:0.0mm
178 Note: BS check 40 -
30:ZE89.1422,SD383.080766,HD err= -0.011231, VD err= 0.021332
179 Note: BS Circle check : angular err= 0.0009
180 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
181 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00004", Lng: 0.00015", Ht: 0.023
182 Geodetic Position: Time: 17:03:33
Latitude: 34.170597347 Longitude: -81.192066761
Height: 322.379881 Horizontal RMS from Receiver: 0.032597
Vertical RMS from Receiver: 0.073145 HDOP from Receiver: 1.24028 VDOP
from Receiver: 2.784386 GPS Measurement Method: Fixed Classification: Normal
183 GPS Store Point: Point Name: 51
Northing: 892154.520153ft Easting: 1902620.538674ft
Elevation: 422.377142ft Description: point 40
184 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00007", Lng: 0.00012", Ht: 0.023
185 Geodetic Position: Time: 17:31:39
Latitude: 34.154404099 Longitude: -81.194757169
Height: 227.368829 Horizontal RMS from Receiver: 0.031522
Vertical RMS from Receiver: 0.050535 HDOP from Receiver: 0.950112 VDOP
from Receiver: 1.523673 GPS Measurement Method: Fixed Classification: Normal
186 GPS Store Point: Point Name: 52
Northing: 883880.135029ft Easting: 1900336.872715ft
Elevation: 327.353276ft Description: cp 1021

Raw Data Report

```
Line#          Record Type
                                                    1
                                                    2
                                                    3                                   4
                                                    5                                   6
                                                    7                                   8
                                                    9                                   10                  11  12  13  14  15
16  17  18  19  20
    1  Job:                                  Job Name: 8992G033106
Date: 03-31-2006                                Time: 07:03:11
    2  Mode Setup:                           Azimuth Direction: North
Distance Unit: Feet                             Scale Factor: 1.0
Earth Curvature: Off                    EDM Offset: 0.0ft
Angle Unit: Degrees
    3  Note:                                 Data Collector Serial Number:
SS05A00978
    4  Note:                                 Switch projection mode to H: Mapping
Plane and V: Localization (+ Geoid)
    5  Note:                                 No coordinate system is defined.
    6  Ellipsoid:                            Ellipsoid Radius: ---
Ellipse Inverse Flattening:                     Ellipse Name:
    7  Projection:                           Projection Type: Unknown
Latitude:                                       Longitude:
Height:                                 Northing: ---
Easting: ---                              Elevation: ---                          Scale
Factor: 1.0000000000    Orientation One :              Orientation Two :
    8  Coordinate System Identity:           Coordinate System Option: Scale only
Zone Group:                                     Zone Name:
Datum Name:
    9  Note:                                 Select zone record from database
   10  Ellipsoid:                            Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381  Ellipse Name: Geodetic Ref System
1980
   11  Local Site Settings:                  Latitude:
Longitude:                                      Height:
Scale Factor: 1.0000000000              Northing: 0.0ft
Easting: 0.0ft
   12  Projection:                           Projection Type: Lambert Conformal
Conic Two Parallel                                                          Latitude:
31.5000                                 Longitude: -81.0000
Height:                                   Northing: 0.0ft
Easting: 2000000.0ft                      Elevation: ---                          Scale
Factor:                       North Parallel : 34.5000       South Parallel : 32.3000
   13  Datum:                                Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft             Ellipse Inverse Flattening:
298.2572229329  Rotation X: 0.00000000                 Rotation Y: 0.00000000
Rotation Z: 0.00000000                    Translation X: 0.0ft
Translation Y: 0.0ft              Translation Z: 0.0ft              ppm Scale Factor:
0.000000
   14  Horizontal Calibration (Adjust):  Northing: ---
Easting: ---                                    Translation North: ---
Translation East: ---                   Rotation about Origin:
Scale Factor:
   15  Vertical Calibration:                 Type of Vertical Adjustment: 2
Northing: ---                                   Easting: ---
Translation Z: ---                      Slope North:
Slope East:                               Geoid Model Name: Geoid03 (Conus)
   16  COGO Settings:                        Azimuth Orientation: North
Grid Orientation: NE
   17  Coordinate System Identity:           Coordinate System Option: Keyed in
```

Zone Group: US State Plane 1983 Zone Name: South Carolina 3900
Datum Name: NAD 1983 (Conus)
18 Note: >>
19 Note: >> Begin Adjust with Projection.
20 Note: >> End Adjust with Projection.
21 Note: >>
22 Note: Activating GPS Receiver: Topcon TPS Legacy E [base], COM1, 115200 baud, no parity
23 Note: Geodetic coordinates computed from plane coordinates for base setup.
24 GPS Edit Point: Geodetic Flags: 0
Setup Group: 0
25 Geodetic Position: Time: 12:46:04
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.685575 Horizontal RMS from Receiver: 0.0
Vertical RMS from Receiver: 0.0 GPS Measurement Method: User Input
Classification: Normal
26 GPS Point: Point Name: 1009
GPS Point Type: USER_INPUT
27 Note: 07:46:07,Set BASE receiver at known position
28 Receiver Setup: Reciever Mode: BASE
Reduced Antenna Height: 6.163711ft Recording Interval: 0
File Name:
29 Equipment: Reciever Mode: BASE
Receiver Type: Legacy E Receiver Serial Number: AG3VLIT08HS
Antenna Index: 0 Antenna Number: 1
Antenna Type: PGA-1 Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.226378ft Vertical Offset: 0.087927ft
30 GPS Antenna Height: Reciever Mode: BASE
Measured Antenna Height: 6.08ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.163711ft
31 Set Base Receiver Pos.: Point Name: 1009
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.685575 Setup Group: 0
32 Note: Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
33 Note: 07:47:15,Set ROVER receiver with base reference position:LA34.173590453,LN-81.190117299,HT334.685575
34 Receiver Setup: Reciever Mode: ROVER
Reduced Antenna Height: 6.909449ft Recording Interval: 0
File Name:
35 Equipment: Reciever Mode: ROVER
Receiver Type: HiPer Receiver Serial Number: 8RHNB0238JK
Antenna Index: 0 Antenna Number: 0
Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset: 0.347769ft
36 GPS Antenna Height: Reciever Mode: ROVER
Measured Antenna Height: 6.56168ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.909449ft
37 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00012", Lng: 0.00005", Ht: 0.011
38 Geodetic Position: Time: 08:15:29
Latitude: 34.192427548 Longitude: -81.1713317
Height: 344.204031 Horizontal RMS from Receiver: 0.02437
Vertical RMS from Receiver: 0.038772 HDOP from Receiver: 0.742348 VDOP from Receiver: 1.181002 GPS Measurement Method: Fixed Classification: Normal
39 GPS Store Point: Point Name: 1000
Northing: 906102.370692ft Easting: 1913343.990792ft
Elevation: 444.245547ft Description: qa ck 101
40 Note: Position averaged from 5 epochs.

Std.Dev. Lat: 0.00005", Lng: 0.00012", Ht: 0.021
41 Geodetic Position: Time: 08:28:15
Latitude: 34.154785548 Longitude: -81.182587763
Height: 335.430402 Horizontal RMS from Receiver: 0.024113
Vertical RMS from Receiver: 0.03661 HDOP from Receiver: 0.735223 VDOP from Receiver: 1.116051 GPS Measurement Method: Fixed Classification: Normal
42 GPS Store Point: Point Name: 1001
Northing: 884244.560131ft Easting: 1907193.908228ft
Elevation: 435.434281ft Description: qa ck 1020
43 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00010", Lng: 0.00008", Ht: 0.007
44 Geodetic Position: Time: 08:36:39
Latitude: 34.154404118 Longitude: -81.194757139
Height: 227.350998 Horizontal RMS from Receiver: 0.023099
Vertical RMS from Receiver: 0.032951 HDOP from Receiver: 0.696197 VDOP from Receiver: 0.993079 GPS Measurement Method: Fixed Classification: Normal
45 GPS Store Point: Point Name: 1002
Northing: 883880.154139ft Easting: 1900336.898003ft
Elevation: 327.335445ft Description: qa ck 1021
46 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00013", Lng: 0.00006", Ht: 0.048
47 Geodetic Position: Time: 09:16:24
Latitude: 34.170986012 Longitude: -81.191095685
Height: 322.799808 Horizontal RMS from Receiver: 0.035558
Vertical RMS from Receiver: 0.051578 HDOP from Receiver: 1.126836 VDOP from Receiver: 1.58013 GPS Measurement Method: Fixed Classification: Normal
48 GPS Store Point: Point Name: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
49 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00010", Ht: 0.014
50 Geodetic Position: Time: 09:20:50
Latitude: 34.171115758 Longitude: -81.190956838
Height: 322.717739 Horizontal RMS from Receiver: 0.047566
Vertical RMS from Receiver: 0.072921 HDOP from Receiver: 1.839923 VDOP from Receiver: 2.821328 GPS Measurement Method: Fixed Classification: Normal
51 GPS Store Point: Point Name: 54
Northing: 892675.62772ft Easting: 1903553.375131ft
Elevation: 422.717305ft Description: backsite
52 Note: Activating Total Station: Topcon GTS/GPT Robotic [820/8200 W/ RADIOS & RC2], COM1, 9600 baud, no parity
53 Note: Foresight Target:My Prism, HR:5.66 (5.66 + 0.0 Offset), Prism Const.:0.0mm
54 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
55 Occupy Pt: Occupy Point: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
56 Note: HR:5.0 (5.0 + 0.0 Offset)
57 Line of Sight (HI/HR): Height of Instrument: 5.34ft Height of Rod: 5.0ft
58 Backsight: Occupy Point: 53
Backsight Point: 54 Backsight Azimuth: 41.4726
Backsight Circle: 0.0000
59 Note: Fixed HR at Backsight:5.5 (5.5 + 0.0 Offset), Prism Const.:0.0mm
60 Occupy Pt: Occupy Point: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
61 Backsight: Occupy Point: 53
Backsight Point: 54 Backsight Azimuth: 41.4726
Backsight Circle: 0.0000
62 Note: Fixed HR at Backsight:5.5 (5.5 + 0.0

Offset), Prism Const.:0.0mm
63 Occupy Pt: Occupy Point: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
64 Backsight: Occupy Point: 53
Backsight Point: 54 Backsight Azimuth: 41.4726
Backsight Circle: 0.0000
65 Note: Fixed HR at Backsight:5.5 (5.5 + 0.0
Offset), Prism Const.:0.0mm
66 Occupy Pt: Occupy Point: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
67 Backsight: Occupy Point: 53
Backsight Point: 54 Backsight Azimuth: 41.4726
Backsight Circle: 0.0000
68 Note: Fixed HR at Backsight:5.5 (5.5 + 0.0
Offset), Prism Const.:0.0mm
69 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
70 Occupy Pt: Occupy Point: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
71 Backsight: Occupy Point: 53
Backsight Point: 54 Backsight Azimuth: 41.4726
Backsight Circle: 0.0000
72 Note: Fixed HR at Backsight:5.5 (5.5 + 0.0
Offset), Prism Const.:0.0mm
73 Note: BS check 53 -
54:ZE89.5808,SD175.445351,HD err= 0.034226, VD err= 0.017381
74 Note: BS Circle check : angular err= 0.0000
75 Note: BS check 53 -
54:ZE89.5808,SD175.445351,HD err= 0.034226, VD err= 0.017381
76 Note: BS Circle check : angular err= 0.0000
77 Side Shot: Occupy Point: 53
Foresight Point: 100 Angle Right: 165.4430
Zenith Angle: 90.4357 Slope Distance: 45.630091ft
Description: backsite
78 Occupy Pt: Occupy Point: 53
Northing: 892544.843593ft Easting: 1903436.479597ft
Elevation: 422.798995ft Description: t nail
79 Backsight: Occupy Point: 53
Backsight Point: 54 Backsight Azimuth: 41.4726
Backsight Circle: 0.0000
80 Note: Fixed HR at Backsight:5.5 (5.5 + 0.0
Offset), Prism Const.:0.0mm
81 Note: BS check 53 -
54:ZE89.5817,SD175.455351,HD err= 0.04423, VD err= 0.009305
82 Note: BS Circle check : angular err= 0.0001
83 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
84 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
85 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
86 Geodetic Position: Time: 10:28:35
Latitude: 34.171221158 Longitude: -81.191990036
Height: 326.08912 Horizontal RMS from Receiver: 0.039033
Vertical RMS from Receiver: 0.063862 HDOP from Receiver: 1.28407 VDOP
from Receiver: 2.100867 GPS Measurement Method: Fixed Classification: Normal
87 GPS Store Point: Point Name: 102
Northing: 892784.853658ft Easting: 1902686.875954ft
Elevation: 426.087276ft Description: ow 233 b233
88 Note: Position averaged from 5 epochs.

Std.Dev. Lat: 0.00012", Lng: 0.00013", Ht: 0.024
89 Geodetic Position: Time: 11:13:40
Latitude: 34.171234066 Longitude: -81.191337254
Height: 323.567552 Horizontal RMS from Receiver: 0.036846
Vertical RMS from Receiver: 0.046797 HDOP from Receiver: 1.446276 VDOP from Receiver: 1.934962 GPS Measurement Method: Fixed Classification: Normal
90 GPS Store Point: Point Name: 103
Northing: 892796.198452ft Easting: 1903234.584727ft
Elevation: 423.56667ft Description: t nail
91 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00006", Lng: 0.00005", Ht: 0.014
92 Geodetic Position: Time: 11:18:35
Latitude: 34.171223291 Longitude: -81.191522403
Height: 323.316806 Horizontal RMS from Receiver: 0.034102
Vertical RMS from Receiver: 0.048314 HDOP from Receiver: 1.323584 VDOP from Receiver: 1.874974 GPS Measurement Method: Fixed Classification: Normal
93 GPS Store Point: Point Name: 104
Northing: 892785.788838ft Easting: 1903079.21605ft
Elevation: 423.315632ft Description: t nail
94 Note: Activating Total Station: Topcon GTS-800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
95 Occupy Pt: Occupy Point: 103
Northing: 892796.198452ft Easting: 1903234.584727ft
Elevation: 423.56667ft Description: t nail
96 Note: HR:5.0 (5.0 + 0.0 Offset)
97 Line of Sight (HI/HR): Height of Instrument: 5.22ft
Height of Rod: 5.0ft
98 Backsight: Occupy Point: 103
Backsight Point: 104 Backsight Azimuth: 266.1001
Backsight Circle: 0.0000
99 Note: Fixed HR at Backsight:5.32 (5.32 + 0.0 Offset), Prism Const.:0.0mm
100 Note: BS check 103 - 104:ZE90.0240,SD155.750312,HD err= 0.03326, VD err= 0.030599
101 Note: BS Circle check : angular err= 0.0000
102 Side Shot: Occupy Point: 103
Foresight Point: 105 Angle Right: 53.4823
Zenith Angle: 90.5407 Slope Distance: 56.360113ft
Description: ow 205 b 205
103 Occupy Pt: Occupy Point: 103
Northing: 892796.198452ft Easting: 1903234.584727ft
Elevation: 423.56667ft Description: t nail
104 Backsight: Occupy Point: 103
Backsight Point: 104 Backsight Azimuth: 266.1001
Backsight Circle: 0.0000
105 Note: Fixed HR at Backsight:5.32 (5.32 + 0.0 Offset), Prism Const.:0.0mm
106 Note: BS check 103 - 104:ZE90.0239,SD155.750312,HD err= 0.03326, VD err= 0.030977
107 Note: BS Circle check : angular err= 0.0000
108 Note: Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
109 Note: Activating GPS Receiver: Topcon TPS Legacy E [base], COM1, 115200 baud, no parity
110 Note: 13:18:17,Set BASE receiver at known position
111 Receiver Setup: Reciever Mode: BASE
Reduced Antenna Height: 6.163711ft Recording Interval: 0
File Name:
112 Equipment: Reciever Mode: BASE
Receiver Type: Legacy E Receiver Serial Number: AG3VLIT08HS
Antenna Index: 0 Antenna Number: 1
Antenna Type: PGA-1 Antenna Serial Number: Tape

Adjustment: 0.0 Horizontal Offset: 0.226378ft Vertical Offset: 0.087927ft
113 GPS Antenna Height: Reciever Mode: BASE
Measured Antenna Height: 6.08ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.163711ft
114 Set Base Receiver Pos.: Point Name: 1009
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.685575 Setup Group: 0
115 Note: Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
116 Note: 13:19:03,Set ROVER receiver with base reference position:LA34.173590453,LN-81.190117299,HT334.685575
117 Receiver Setup: Reciever Mode: ROVER
Reduced Antenna Height: 6.907769ft Recording Interval: 0
File Name:
118 Equipment: Reciever Mode: ROVER
Receiver Type: HiPer Receiver Serial Number: 8RHNB0238JK
Antenna Index: 0 Antenna Number: 0
Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset: 0.347769ft
119 GPS Antenna Height: Reciever Mode: ROVER
Measured Antenna Height: 6.56ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.907769ft
120 Note: Position averaged from 5 epochs. Std.Dev. Lat: 0.00011", Lng: 0.00021", Ht: 0.026
121 Geodetic Position: Time: 13:56:57
Latitude: 34.17119228 Longitude: -81.190993211
Height: 324.729503 Horizontal RMS from Receiver: 0.029124
Vertical RMS from Receiver: 0.062413 HDOP from Receiver: 1.133166 VDOP from Receiver: 2.42077 GPS Measurement Method: Fixed Classification: Normal
122 GPS Store Point: Point Name: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
123 Note: Position averaged from 5 epochs. Std.Dev. Lat: 0.00060", Lng: 0.00021", Ht: 0.093
124 Geodetic Position: Time: 14:05:52
Latitude: 34.170540635 Longitude: -81.191594941
Height: 319.298408 Horizontal RMS from Receiver: 0.025589
Vertical RMS from Receiver: 0.041008 HDOP from Receiver: 1.123014 VDOP from Receiver: 1.68222 GPS Measurement Method: Fixed Classification: Normal
125 GPS Store Point: Point Name: 56
Northing: 892095.964621ft Easting: 1903016.214383ft
Elevation: 419.296287ft Description: t nail
126 Note: Activating Total Station: Topcon GTS-800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
127 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
128 Note: HR:5.0 (5.0 + 0.0 Offset)
129 Line of Sight (HI/HR): Height of Instrument: 5.09ft
Height of Rod: 5.0ft
130 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
131 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0 Offset), Prism Const.:0.0mm
132 Note: BS check 55 - 56:ZE90.2038,SD830.06166,HD err= 0.157853, VD err= 0.180822
133 Note: BS Circle check : angular err= 0.0000
134 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail

135 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
136 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
137 Note: BS check 55 -
56:ZE90.2036,SD830.06166,HD err= 0.157914, VD err= 0.190882
138 Note: BS Circle check : angular err= 0.0000
139 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
140 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
141 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
142 Note: BS check 55 -
56:ZE90.2040,SD830.05666,HD err= 0.152817, VD err= 0.174816
143 Note: BS Circle check : angular err= 0.0000
144 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
145 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
146 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
147 Note: BS check 55 -
56:ZE90.2040,SD830.06666,HD err= 0.162805, VD err= 0.172743
148 Note: BS Circle check : angular err= 0.0000
149 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
150 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
151 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
152 Note: BS check 55 -
56:ZE90.2038,SD830.06166,HD err= 0.157865, VD err= 0.182834
153 Note: BS Circle check : angular err= 0.0000
154 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
155 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
156 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
157 Note: BS check 55 -
56:ZE90.2039,SD830.06166,HD err= 0.157841, VD err= 0.17881
158 Note: BS Circle check : angular err= 0.0000
159 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
160 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
161 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
162 Note: BS check 55 -
56:ZE90.2039,SD830.06166,HD err= 0.157829, VD err= 0.176798
163 Note: BS Circle check : angular err= 0.0000

164 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
165 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
166 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
167 Note: BS check 55 -
56:ZE90.2038,SD830.06166,HD err= 0.157853, VD err= 0.180822
168 Note: BS Circle check : angular err= 0.0000
169 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
170 Note: HR:5.0 (5.0 + 0.0 Offset)
171 Line of Sight (HI/HR): Height of Instrument: 5.07ft
Height of Rod: 5.0ft
172 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
173 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
174 Note: BS check 55 -
56:ZE90.2035,SD830.06166,HD err= 0.157938, VD err= 0.174906
175 Note: BS Circle check : angular err= 0.0000
176 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
177 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
178 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
179 Note: BS check 55 -
56:ZE90.2035,SD830.07166,HD err= 0.167937, VD err= 0.174847
180 Note: BS Circle check : angular err= 0.0000
181 Occupy Pt: Occupy Point: 55
Northing: 892753.067974ft Easting: 1903523.097698ft
Elevation: 424.729103ft Description: t nail
182 Backsight: Occupy Point: 55
Backsight Point: 56 Backsight Azimuth: 217.3847
Backsight Circle: 0.0000
183 Note: Fixed HR at Backsight:5.36 (5.36 + 0.0
Offset), Prism Const.:0.0mm
184 Note: BS check 55 -
56:ZE90.2031,SD830.06166,HD err= 0.158022, VD err= 0.188991
185 Note: BS Circle check : angular err= 0.0000
186 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
187 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00016", Lng: 0.00009", Ht: 0.035
188 Geodetic Position: Time: 14:53:41
Latitude: 34.171192206 Longitude: -81.190993208
Height: 324.713131 Horizontal RMS from Receiver: 0.022267
Vertical RMS from Receiver: 0.045859 HDOP from Receiver: 0.863847 VDOP
from Receiver: 1.779359 GPS Measurement Method: Fixed Classification: Normal
189 GPS Store Point: Point Name: 57
Northing: 892752.99399ft Easting: 1903523.100542ft
Elevation: 424.712732ft Description: t nail
190 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00022", Lng: 0.00006", Ht: 0.023
191 Geodetic Position: Time: 14:59:53
Latitude: 34.170540605 Longitude: -81.191594935

Height: 319.283698 Horizontal RMS from Receiver: 0.020744
Vertical RMS from Receiver: 0.044235 HDOP from Receiver: 0.724625 VDOP
from Receiver: 1.545231 GPS Measurement Method: Fixed Classification: Normal
192 GPS Store Point: Point Name: 58
Northing: 892095.935107ft Easting: 1903016.218891ft
Elevation: 419.281577ft Description: t nail
193 Note: Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
194 Occupy Pt: Occupy Point: 57
Northing: 892752.99399ft Easting: 1903523.100542ft
Elevation: 424.712732ft Description: t nail
195 Note: HR:5.0 (5.0 + 0.0 Offset)
196 Line of Sight (HI/HR): Height of Instrument: 5.08ft
Height of Rod: 5.0ft
197 Backsight: Occupy Point: 57
Backsight Point: 58 Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
198 Note: Fixed HR at Backsight:5.33 (5.33 + 0.0
Offset), Prism Const.:0.0mm
199 Note: BS check 57 -
58:ZE90.2044,SD830.06166,HD err= 0.193948, VD err= 0.177027
200 Note: BS Circle check : angular err= 0.0001
201 Occupy Pt: Occupy Point: 57
Northing: 892752.99399ft Easting: 1903523.100542ft
Elevation: 424.712732ft Description: t nail
202 Backsight: Occupy Point: 57
Backsight Point: 58 Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
203 Note: Fixed HR at Backsight:5.33 (5.33 + 0.0
Offset), Prism Const.:0.0mm
204 Note: BS check 57 -
58:ZE90.2042,SD830.06166,HD err= 0.193997, VD err= 0.185075
205 Note: BS Circle check : angular err= 0.0000
206 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
207 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00005", Lng: 0.00004", Ht: 0.014
208 Geodetic Position: Time: 15:47:58
Latitude: 34.192427578 Longitude: -81.171331708
Height: 344.267663 Horizontal RMS from Receiver: 0.022222
Vertical RMS from Receiver: 0.036883 HDOP from Receiver: 0.677575 VDOP
from Receiver: 1.124513 GPS Measurement Method: Fixed Classification: Normal
209 GPS Store Point: Point Name: 1003
Northing: 906102.401209ft Easting: 1913343.984427ft
Elevation: 444.30918ft Description: qa ck 101

Raw Data Report

```
Line#          Record Type
                                                    1
                                                    2
                                                    3
                                                    4
                                                    5
                                                    6
                                                    7
                                                    8
                                                    9
                                                    10
                                                    11  12  13  14  15
16  17  18  19  20
    1  Job:                                Job Name: 8992G040306
Date: 04-03-2006                              Time: 06:21:37
    2  Mode Setup:                         Azimuth Direction: North
Distance Unit: Feet                           Scale Factor: 1.0
Earth Curvature: Off                  EDM Offset: 0.0ft
Angle Unit: Degrees
    3  Mode Setup:                         Azimuth Direction: North
Distance Unit: Feet                           Scale Factor: 1.0
Earth Curvature: Off                  EDM Offset: 0.0ft
Angle Unit: Degrees
    4  Note:                               Switch projection mode to H: Mapping
Plane and V: Localization (+ Geoid)
    5  Note:                               No projection record is defined.
    6  Ellipsoid:                          Ellipsoid Radius: ---
Ellipse Inverse Flattening:                   Ellipse Name:
    7  Projection:                         Projection Type: Unknown
Latitude:                                     Longitude:
Height:                               Northing: ---
Easting: ---                            Elevation: ---                      Scale
Factor: 1.0000000000    Orientation One :             Orientation Two :
    8  Coordinate System Identity:         Coordinate System Option: Scale only
Zone Group:                                   Zone Name:
Datum Name:
    9  Note:                               Select zone record from data base
   10  Ellipsoid:                          Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381  Ellipse Name: Geodetic Ref System
1980
   11  Local Site Settings:                Latitude:
Longitude:                                    Height:
Scale Factor: 1.0000000000            Northing: 0.0ft
Easting: 0.0ft
   12  Projection:                         Projection Type: Lambert Conformal
Conic Two Parallel                                                Latitude:
31.5000                           Longitude: -81.0000
Height:                             Northing: 0.0ft
Easting: 2000000.0ft                  Elevation: ---                      Scale
Factor:                   North Parallel : 34.5000       South Parallel : 32.3000
   13  Datum:                              Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft           Ellipse Inverse Flattening:
298.2572229329  Rotation X: 0.00000000              Rotation Y: 0.00000000
Rotation Z: 0.00000000                 Translation X: 0.0ft
Translation Y: 0.0ft           Translation Z: 0.0ft           ppm Scale Factor:
0.000000
   14  Horizontal Calibration (Adjust):  Northing: ---
Easting: ---                                  Translation North: ---
Translation East: ---                 Rotation about Origin:
Scale Factor:
   15  Vertical Calibration:               Type of Vertical Adjustment: 2
Northing: ---                                 Easting: ---
Translation Z: ---                    Slope North:
Slope East:                             Geoid Model Name: GEOID99 (Conus)
   16  COGO Settings:                      Azimuth Orientation: North
```

Grid Orientation: NE
17 Coordinate System Identity: Coordinate System Option: Chosen from library Zone Group: US State Plane 1983 Zone Name: South Carolina 3900 Datum Name: NAD 1983 (Conus)
18 Note: Calculate survey scale factor for projection South Carolina 3900 at point 1009.
19 Mode Setup: Azimuth Direction: North
Distance Unit: Feet Scale Factor: 0.999837
Earth Curvature: Off EDM Offset: 0.0ft
Angle Unit: Degrees
20 Note: Geodetic coordinates computed from plane coordinates for base setup.
21 GPS Edit Point: Geodetic Flags: 0
Setup Group: 0
22 Geodetic Position: Time: 12:04:28
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.66628 Horizontal RMS from Receiver: 0.0
Vertical RMS from Receiver: 0.0 GPS Measurement Method: User Input
Classification: Normal
23 GPS Point: Point Name: 1009
GPS Point Type: USER_INPUT
24 Note: 07:04:37,Set BASE receiver at known position
25 Receiver Setup: Reciever Mode: BASE
Reduced Antenna Height: 6.203738ft Recording Interval: 0
File Name:
26 Equipment: Reciever Mode: BASE
Receiver Type: Legacy E Receiver Serial Number: AG3VLIT08HS
Antenna Index: 0 Antenna Number: 1
Antenna Type: PGA-1 Antenna Serial Number: Tape Adjustment: 0.0 Horizontal Offset: 0.226378ft Vertical Offset: 0.087927ft
27 GPS Antenna Height: Reciever Mode: BASE
Measured Antenna Height: 6.12ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.203738ft
28 Set Base Receiver Pos.: Point Name: 1009
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.66628 Setup Group: 0
29 Note: 07:05:33,Set ROVER receiver with base reference position:LA34.173590453,LN-81.190117299,HT334.66628
30 Receiver Setup: Reciever Mode: ROVER
Reduced Antenna Height: 6.909449ft Recording Interval: 0
File Name:
31 Equipment: Reciever Mode: ROVER
Receiver Type: Legacy E Receiver Serial Number: 8RHNB0238JK
Antenna Index: 0 Antenna Number: 0
Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset: 0.347769ft
32 GPS Antenna Height: Reciever Mode: ROVER
Measured Antenna Height: 6.56168ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.909449ft
33 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00007", Lng: 0.00003", Ht: 0.010
34 Geodetic Position: Time: 07:34:51
Latitude: 34.192427609 Longitude: -81.171331719
Height: 344.316539 Horizontal RMS from Receiver: 0.034843
Vertical RMS from Receiver: 0.04306 HDOP from Receiver: 1.060825 VDOP from Receiver: 1.310072 GPS Measurement Method: Fixed Classification: Normal
35 GPS Store Point: Point Name: 1004
Northing: 906102.432134ft Easting: 1913343.975309ft
Elevation: 444.387615ft Description: qa ck 101

36 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00004", Lng: 0.00005", Ht: 0.006
37 Geodetic Position: Time: 07:52:43
Latitude: 34.154785566 Longitude: -81.18258779
Height: 335.494136 Horizontal RMS from Receiver: 0.031145
Vertical RMS from Receiver: 0.042949 HDOP from Receiver: 0.949597 VDOP
from Receiver: 1.309596 GPS Measurement Method: Fixed Classification: Normal
38 GPS Store Point: Point Name: 1005
Northing: 884244.578712ft Easting: 1907193.885977ft
Elevation: 435.515569ft Description: qa ck 1020
39 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00008", Lng: 0.00006", Ht: 0.005
40 Geodetic Position: Time: 08:02:45
Latitude: 34.154404109 Longitude: -81.194757188
Height: 227.37961 Horizontal RMS from Receiver: 0.03126
Vertical RMS from Receiver: 0.04365 HDOP from Receiver: 0.942195 VDOP
from Receiver: 1.315668 GPS Measurement Method: Fixed Classification: Normal
41 GPS Store Point: Point Name: 1006
Northing: 883880.144798ft Easting: 1900336.856423ft
Elevation: 327.377165ft Description: qa ck 1021
42 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00011", Lng: 0.00008", Ht: 0.022
43 Geodetic Position: Time: 08:47:29
Latitude: 34.171177773 Longitude: -81.191426083
Height: 323.36043 Horizontal RMS from Receiver: 0.028282
Vertical RMS from Receiver: 0.045402 HDOP from Receiver: 1.09663 VDOP
from Receiver: 1.760333 GPS Measurement Method: Fixed Classification: Normal
44 GPS Store Point: Point Name: 59
Northing: 892739.529559ft Easting: 1903159.883474ft
Elevation: 423.37698ft Description: b 214
45 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00017", Lng: 0.00011", Ht: 0.029
46 Geodetic Position: Time: 08:55:51
Latitude: 34.171221185 Longitude: -81.191556246
Height: 323.468988 Horizontal RMS from Receiver: 0.029169
Vertical RMS from Receiver: 0.045595 HDOP from Receiver: 1.132616 VDOP
from Receiver: 1.770226 GPS Measurement Method: Fixed Classification: Normal
47 GPS Store Point: Point Name: 60
Northing: 892783.74828ft Easting: 1903050.815298ft
Elevation: 423.485339ft Description: b 215
48 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00007", Lng: 0.00011", Ht: 0.021
49 Geodetic Position: Time: 09:16:29
Latitude: 34.171212999 Longitude: -81.19144144
Height: 323.34869 Horizontal RMS from Receiver: 0.032825
Vertical RMS from Receiver: 0.054626 HDOP from Receiver: 1.274144 VDOP
from Receiver: 2.120127 GPS Measurement Method: Fixed Classification: Normal
50 GPS Store Point: Point Name: 61
Northing: 892775.175592ft Easting: 1903147.109216ft
Elevation: 423.365264ft Description: c 201
51 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00016", Lng: 0.00009", Ht: 0.025
52 Geodetic Position: Time: 09:29:04
Latitude: 34.171266859 Longitude: -81.191677108
Height: 323.444292 Horizontal RMS from Receiver: 0.027492
Vertical RMS from Receiver: 0.046619 HDOP from Receiver: 1.067376 VDOP
from Receiver: 1.814827 GPS Measurement Method: Fixed Classification: Normal
53 GPS Store Point: Point Name: 99
Northing: 892830.230199ft Easting: 1902949.559237ft
Elevation: 423.460472ft Description: Offset Reference
54 GPS Offset Shot: Point Name: 62
Azimuth: 175.0000 Zenith Angle: 90.0000
Slope Distance: 5.88ft Height of Instrument: 0.0ft

Height of Rod: 0.0ft Description: b 207 dh
55 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00013", Lng: 0.00011", Ht: 0.011
56 Geodetic Position: Time: 10:26:43
Latitude: 34.171314885 Longitude: -81.191432933
Height: 323.595136 Horizontal RMS from Receiver: 0.02345
Vertical RMS from Receiver: 0.039068 HDOP from Receiver: 0.91226 VDOP
from Receiver: 1.520087 GPS Measurement Method: Fixed Classification: Normal
57 GPS Store Point: Point Name: 63
Northing: 892878.137076ft Easting: 1903154.565865ft
Elevation: 423.611889ft Description: b222
58 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00020", Lng: 0.00014", Ht: 0.051
59 Geodetic Position: Time: 13:03:38
Latitude: 34.171303639 Longitude: -81.191624037
Height: 323.348604 Horizontal RMS from Receiver: 0.043892
Vertical RMS from Receiver: 0.090179 HDOP from Receiver: 1.702561 VDOP
from Receiver: 3.48551 GPS Measurement Method: Fixed Classification: Normal
60 GPS Store Point: Point Name: 64
Northing: 892867.267941ft Easting: 1902994.199706ft
Elevation: 423.364949ft Description: t nail
61 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00049", Lng: 0.00031", Ht: 0.110
62 Geodetic Position: Time: 13:34:05
Latitude: 34.171203508 Longitude: -81.191776645
Height: 323.930197 Horizontal RMS from Receiver: 0.039182
Vertical RMS from Receiver: 0.074665 HDOP from Receiver: 1.176204 VDOP
from Receiver: 2.305193 GPS Measurement Method: Fixed Classification: Normal
63 GPS Store Point: Point Name: 65
Northing: 892766.45531ft Easting: 1902865.850417ft
Elevation: 423.946075ft Description: b232
64 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00056", Lng: 0.00034", Ht: 0.093
65 Geodetic Position: Time: 13:42:01
Latitude: 34.171237529 Longitude: -81.191830191
Height: 323.621425 Horizontal RMS from Receiver: 0.052834
Vertical RMS from Receiver: 0.081702 HDOP from Receiver: 2.44404 VDOP
from Receiver: 3.785624 GPS Measurement Method: Fixed Classification: Normal
66 GPS Store Point: Point Name: 66
Northing: 892800.982891ft Easting: 1902821.03391ft
Elevation: 423.637251ft Description: c 208
67 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00017", Lng: 0.00024", Ht: 0.053
68 Geodetic Position: Time: 14:26:19
Latitude: 34.170912589 Longitude: -81.191664149
Height: 326.907776 Horizontal RMS from Receiver: 0.029379
Vertical RMS from Receiver: 0.059686 HDOP from Receiver: 1.131344 VDOP
from Receiver: 2.295336 GPS Measurement Method: Fixed Classification: Normal
69 GPS Store Point: Point Name: 67
Northing: 892472.107918ft Easting: 1902959.318247ft
Elevation: 426.923419ft Description: c 209 s
70 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00016", Lng: 0.00007", Ht: 0.022
71 Geodetic Position: Time: 14:44:20
Latitude: 34.171333283 Longitude: -81.192162173
Height: 327.869184 Horizontal RMS from Receiver: 0.031136
Vertical RMS from Receiver: 0.050754 HDOP from Receiver: 1.061461 VDOP
from Receiver: 1.730273 GPS Measurement Method: Fixed Classification: Normal
72 GPS Store Point: Point Name: 68
Northing: 892898.637364ft Easting: 1902542.811235ft
Elevation: 427.884522ft Description: t nail
73 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00020", Lng: 0.00032", Ht: 0.053

74 Geodetic Position: Time: 14:59:11
Latitude: 34.171172132 Longitude: -81.192185954
Height: 329.147104 Horizontal RMS from Receiver: 0.026582
Vertical RMS from Receiver: 0.051502 HDOP from Receiver: 1.022131 VDOP from Receiver: 1.933695 GPS Measurement Method: Fixed Classification: Normal
75 GPS Store Point: Point Name: 69
Northing: 892735.811703ft Easting: 1902522.351241ft
Elevation: 429.162134ft Description: b603
76 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00011", Lng: 0.00012", Ht: 0.024
77 Geodetic Position: Time: 15:35:24
Latitude: 34.192427627 Longitude: -81.171331723
Height: 344.163262 Horizontal RMS from Receiver: 0.022748
Vertical RMS from Receiver: 0.037568 HDOP from Receiver: 0.691677 VDOP from Receiver: 1.140971 GPS Measurement Method: Fixed Classification: Normal
78 GPS Store Point: Point Name: 1007
Northing: 906102.451229ft Easting: 1913343.972392ft
Elevation: 444.234338ft Description: qa ck 101

Raw Data Report

```
Line#          Record Type
                                                  1
                                                  2
                                                  3                                4
                                                  5                                6
                                                  7                                8
                                                  9                               10          11  12  13  14  15  16
17  18  19  20
    1  Job:                                  Job Name: 8992G040306
Date: 04-03-2006                                Time: 07:10:59
    2  Mode Setup:                           Azimuth Direction: North
Distance Unit: Feet                             Scale Factor: 1.0
Earth Curvature: Off            EDM Offset: 0.0ft              Angle Unit: Degrees
    3  Note:                                 Data Collector Serial Number:
SS05A00978
    4  Note:                                 Switch projection mode to H: Mapping
Plane and V: Localization (+ Geoid)
    5  Note:                                 No coordinate system is defined.
    6  Ellipsoid:                            Ellipsoid Radius: ---
Ellipse Inverse Flattening:                     Ellipse Name:
    7  Projection:                           Projection Type: Unknown
Latitude:                                       Longitude:
Height:                         Northing: ---                  Easting: ---
Elevation: ---                       Scale Factor: 1.0000000000  Orientation One
:          Orientation Two :
    8  Coordinate System Identity:           Coordinate System Option: Scale only
Zone Group:                                     Zone Name:
Datum Name:
    9  Note:                                 Select zone record from database
   10  Ellipsoid:                            Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381  Ellipse Name: Geodetic Ref System
1980
   11  Local Site Settings:                  Latitude:
Longitude:                                      Height:
Scale Factor: 1.0000000000      Northing: 0.0ft                Easting: 0.0ft
   12  Projection:                           Projection Type: Lambert Conformal
Conic Two Parallel                                              Latitude: 31.5000
Longitude: -81.0000                             Height:
Northing: 0.0ft                 Easting: 2000000.0ft     Elevation: ---
Scale Factor:                 North Parallel : 34.5000  South Parallel : 32.3000
   13  Datum:                                Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft             Ellipse Inverse Flattening:
298.2572229329  Rotation X: 0.00000000          Rotation Y: 0.00000000
Rotation Z: 0.00000000   Translation X: 0.0ft                Translation Y:
0.0ft        Translation Z: 0.0ft      ppm Scale Factor: 0.000000
   14  Horizontal Calibration (Adjust):  Northing: ---
Easting: ---                                    Translation North: ---
Translation East: ---           Rotation about Origin:         Scale Factor:
   15  Vertical Calibration:                 Type of Vertical Adjustment: 2
Northing: ---                                   Easting: ---
Translation Z: ---              Slope North:                   Slope East:
Geoid Model Name: Geoid03 (Conus)
   16  COGO Settings:                        Azimuth Orientation: North
Grid Orientation: NE
   17  Coordinate System Identity:           Coordinate System Option: Keyed in
Zone Group: US State Plane 1983                 Zone Name: South Carolina 3900
Datum Name: NAD 1983 (Conus)
   18  Note:                                 >>
   19  Note:                                 >>  Begin Adjust with Projection.
   20  Note:                                 >>  End Adjust with Projection.
```

```
   21  Note:                                >>
   22  Note:                                Activating Total Station: Topcon GTS-
800 [820/8200 DIRECT CABLE], COM1, 1200 baud, even parity
   23  Note:                                Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm
   24  Note:                                Calculate survey scale factor for
projection South Carolina 3900 at point 1009.
   25  Mode Setup:                          Azimuth Direction: North
Distance Unit: Feet                            Scale Factor: 0.999837
Earth Curvature: Off          EDM Offset: 0.0ft             Angle Unit: Degrees
   26  Occupy Pt:                           Occupy Point: 57
Northing: 892752.99399ft                       Easting: 1903523.100542ft
Elevation: 424.712732ft       Description: t nail
   27  Note:                                HR:5.0 (5.0 + 0.0 Offset)
   28  Line of Sight (HI/HR):               Height of Instrument: 5.25ft
Height of Rod: 5.0ft
   29  Backsight:                           Occupy Point: 57
Backsight Point: 58                            Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
   30  Note:                                Fixed HR at Backsight:5.56 (5.56 + 0.0
Offset), Prism Const.:0.0mm
   31  Note:                                BS check 57 -
58:ZE90.2026,SD830.06666,HD err= 0.06395, VD err= 0.189433
   32  Note:                                BS Circle check : angular err= 0.0000
   33  Occupy Pt:                           Occupy Point: 57
Northing: 892752.99399ft                       Easting: 1903523.100542ft
Elevation: 424.712732ft       Description: t nail
   34  Backsight:                           Occupy Point: 57
Backsight Point: 58                            Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
   35  Note:                                Fixed HR at Backsight:5.56 (5.56 + 0.0
Offset), Prism Const.:0.0mm
   36  Note:                                BS check 57 -
58:ZE90.2030,SD830.07166,HD err= 0.068854, VD err= 0.173306
   37  Note:                                BS Circle check : angular err= 0.0002
   38  Side Shot:                           Occupy Point: 57
Foresight Point: 600                           Angle Right: 22.5040
Zenith Angle: 90.0537         Slope Distance: 346.255693ft  Description: b211dh
   39  Side Shot:                           Occupy Point: 57
Foresight Point: 601                           Angle Right: 39.3026
Zenith Angle: 90.1707         Slope Distance: 262.635525ft  Description: b203
   40  Side Shot:                           Occupy Point: 57
Foresight Point: 602                           Angle Right: 49.4851
Zenith Angle: 89.2450         Slope Distance: 236.835474ft  Description: b201dh
   41  Note:                                Foresight Target:My Prism, HR:8.55
(8.55 + 0.0 Offset), Prism Const.:0.0mm
   42  Note:                                HR:8.55 (8.55 + 0.0 Offset)
   43  Line of Sight (HI/HR):               Height of Instrument: 5.25ft
Height of Rod: 8.55ft
   44  Deleted Point:                       Point Name: 602
   45  Side Shot:                           Occupy Point: 57
Foresight Point: 602                           Angle Right: 49.4852
Zenith Angle: 89.2449         Slope Distance: 237.160474ft  Description: b201dh
   46  Note:                                Foresight Target:My Prism, HR:50.0
(50.0 + 0.0 Offset), Prism Const.:0.0mm
   47  Note:                                Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm
   48  Note:                                HR:5.0 (5.0 + 0.0 Offset)
   49  Line of Sight (HI/HR):               Height of Instrument: 5.25ft
Height of Rod: 5.0ft
   50  Side Shot:                           Occupy Point: 57
Foresight Point: 603                           Angle Right: 61.5300
Zenith Angle: 90.1636         Slope Distance: 220.665441ft  Description: b202
```

51 Occupy Pt: Occupy Point: 57
Northing: 892752.99399ft Easting: 1903523.100542ft
Elevation: 424.712732ft Description: t nail
52 Backsight: Occupy Point: 57
Backsight Point: 58 Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
53 Note: Fixed HR at Backsight:5.56 (5.56 + 0.0 Offset), Prism Const.:0.0mm
54 Occupy Pt: Occupy Point: 57
Northing: 892752.99399ft Easting: 1903523.100542ft
Elevation: 424.712732ft Description: t nail
55 Backsight: Occupy Point: 57
Backsight Point: 58 Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
56 Note: Fixed HR at Backsight:5.56 (5.56 + 0.0 Offset), Prism Const.:0.0mm
57 Note: BS check 57 - 58:ZE90.2026,SD830.07166,HD err= 0.068949, VD err= 0.189403
58 Note: BS Circle check : angular err= 0.0000
59 Side Shot: Occupy Point: 57
Foresight Point: 604 Angle Right: 54.1541
Zenith Angle: 89.5759 Slope Distance: 122.560245ft Description: b202
60 Side Shot: Occupy Point: 57
Foresight Point: 605 Angle Right: 22.0258
Zenith Angle: 90.1615 Slope Distance: 126.650253ft Description: b206dh
61 Side Shot: Occupy Point: 57
Foresight Point: 606 Angle Right: 352.4444
Zenith Angle: 91.4839 Slope Distance: 46.455093ft Description: c205
62 Side Shot: Occupy Point: 57
Foresight Point: 607 Angle Right: 150.0533
Zenith Angle: 100.4441 Slope Distance: 27.865056ft Description: b226
63 Side Shot: Occupy Point: 57
Foresight Point: 608 Angle Right: 104.4709
Zenith Angle: 93.3016 Slope Distance: 115.990232ft Description: b210
64 Occupy Pt: Occupy Point: 57
Northing: 892752.99399ft Easting: 1903523.100542ft
Elevation: 424.712732ft Description: t nail
65 Backsight: Occupy Point: 57
Backsight Point: 58 Backsight Azimuth: 217.3853
Backsight Circle: 0.0000
66 Note: Fixed HR at Backsight:5.56 (5.56 + 0.0 Offset), Prism Const.:0.0mm
67 Note: BS check 57 - 58:ZE90.2026,SD830.06666,HD err= 0.06395, VD err= 0.189433
68 Note: BS Circle check : angular err= 0.0000
69 Note: Foresight Target:My Prism, HR:5.21 (5.21 + 0.0 Offset), Prism Const.:0.0mm
70 Note: HR:5.21 (5.21 + 0.0 Offset)
71 Line of Sight (HI/HR): Height of Instrument: 5.25ft
Height of Rod: 5.21ft
72 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5955
73 Note: BS zenith: 90.2025, slope dist: 830.07166
74 Repeat Backsight: Occupy Point: 57
Backsight Point: 58 Angle Right: 359.5955
Zenith Angle: 90.2025 Slope Distance: 830.07166ft Height of Rod: 5.56ft Description: t nail
75 Repeat Directional: Foresight Direct
Set: 1 Angle: 105.0438
76 Repeat Directional: Zenith Direct
Set: 1 Zenith: 92.4901
77 Multiple Distances: Set: 1

Slope Distance: 213.270427ft
78 Repeat Foresight: Occupy Point: 57
Foresight Point: 609 Angle Right: 105.0438
Zenith Angle: 92.4901 Slope Distance: 213.270427ft Height of Rod: 5.21ft Description: TR
79 Repeat Directional: Foresight Reverse
Set: 1 Angle: 285.0439
80 Note: RD,ZV 1:267.1044
81 Note: Not shooting reverse distances.
82 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5951
83 Note: Horizontal Angle Error: 0.0005
84 Note: Zenith Angle Error: 0.0000
85 Note: Horizontal Angle Error compares to the average: 0.0000
86 Note: Zenith Angle Error compares to the average: 0.0000
87 Note: Slope Distance Error compares to the average: 0.0
88 Traverse: Occupy Point: 57
Foresight Point: 609 Angle Right: 105.0446
Zenith Angle: 92.4901 Slope Distance: 213.270427ft Description: TR
89 Occupy Pt: Occupy Point: 609
Northing: 892922.47389ft Easting: 1903394.119236ft
Elevation: 414.271525ft Description: TR
90 Backsight: Occupy Point: 609
Backsight Point: 57 Backsight Azimuth: 142.4338
Backsight Circle: 0.0000
91 Note: Fixed HR at Backsight:5.56 (5.56 + 0.0 Offset), Prism Const.:0.0mm
92 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
93 Occupy Pt: Occupy Point: 609
Northing: 892922.47389ft Easting: 1903394.119236ft
Elevation: 414.271525ft Description: TR
94 Note: HR:5.0 (5.0 + 0.0 Offset)
95 Line of Sight (HI/HR): Height of Instrument: 5.04ft
Height of Rod: 5.0ft
96 Backsight: Occupy Point: 609
Backsight Point: 57 Backsight Azimuth: 142.4338
Backsight Circle: 0.0000
97 Note: Fixed HR at Backsight:5.25 (5.25 + 0.0 Offset), Prism Const.:0.0mm
98 Note: BS check 609 - 57:ZE87.0809,SD213.275427,HD err= -0.003742, VD err= 0.006324
99 Note: BS Circle check : angular err= 0.0000
100 Side Shot: Occupy Point: 609
Foresight Point: 610 Angle Right: 78.0949
Zenith Angle: 81.4634 Slope Distance: 99.455199ft Description: c204
101 Side Shot: Occupy Point: 609
Foresight Point: 611 Angle Right: 91.3256
Zenith Angle: 83.5025 Slope Distance: 60.00512ft Description: b224
102 Side Shot: Occupy Point: 609
Foresight Point: 612 Angle Right: 162.0234
Zenith Angle: 93.1750 Slope Distance: 80.395161ft Description: b223
103 Side Shot: Occupy Point: 609
Foresight Point: 613 Angle Right: 326.2002
Zenith Angle: 91.1432 Slope Distance: 60.875122ft Description: c207s
104 Occupy Pt: Occupy Point: 609
Northing: 892922.47389ft Easting: 1903394.119236ft
Elevation: 414.271525ft Description: TR
105 Backsight: Occupy Point: 609
Backsight Point: 57 Backsight Azimuth: 142.4338

Backsight Circle: 0.0000
106 Note: Fixed HR at Backsight:5.25 (5.25 + 0.0 Offset), Prism Const.:0.0mm
107 Side Shot: Occupy Point: 609
Foresight Point: 614 Angle Right: 262.1217
Zenith Angle: 98.4631 Slope Distance: 91.455183ft Description: ow213 b213
108 Side Shot: Occupy Point: 609
Foresight Point: 615 Angle Right: 127.3612
Zenith Angle: 86.0252 Slope Distance: 153.235306ft Description: b225
109 Side Shot: Occupy Point: 609
Foresight Point: 616 Angle Right: 154.0617
Zenith Angle: 91.3319 Slope Distance: 206.155412ft Description: b209
110 Note: Foresight Target:My Prism, HR:8.5 (8.5 + 0.0 Offset), Prism Const.:0.0mm
111 Note: HR:8.5 (8.5 + 0.0 Offset)
112 Line of Sight (HI/HR): Height of Instrument: 5.04ft
Height of Rod: 8.5ft
113 Side Shot: Occupy Point: 609
Foresight Point: 617 Angle Right: 187.1204
Zenith Angle: 97.5840 Slope Distance: 217.575435ft Description: b236
114 Note: Foresight Target:My Prism, HR:5.14 (5.14 + 0.0 Offset), Prism Const.:0.0mm
115 Note: HR:5.14 (5.14 + 0.0 Offset)
116 Line of Sight (HI/HR): Height of Instrument: 5.04ft
Height of Rod: 5.14ft
117 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5959
118 Note: BS zenith: 87.0814, slope dist: 213.275427
119 Repeat Backsight: Occupy Point: 609
Backsight Point: 57 Angle Right: 359.5959
Zenith Angle: 87.0814 Slope Distance: 213.275427ft Height of Rod: 5.25ft Description: t nail
120 Repeat Directional: Foresight Direct
Set: 1 Angle: 158.1709
121 Repeat Directional: Zenith Direct
Set: 1 Zenith: 92.3033
122 Multiple Distances: Set: 1
Slope Distance: 278.300557ft
123 Repeat Foresight: Occupy Point: 609
Foresight Point: 618 Angle Right: 158.1709
Zenith Angle: 92.3033 Slope Distance: 278.300557ft Height of Rod: 5.14ft Description: TR
124 Repeat Directional: Foresight Reverse
Set: 1 Angle: 338.1709
125 Note: RD,ZV 1:267.2927
126 Note: Not shooting reverse distances.
127 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5955
128 Note: Horizontal Angle Error: 0.0004
129 Note: Zenith Angle Error: 0.0000
130 Note: Horizontal Angle Error compares to the average: 0.0000
131 Note: Zenith Angle Error compares to the average: 0.0000
132 Note: Slope Distance Error compares to the average: 0.0
133 Traverse: Occupy Point: 609
Foresight Point: 618 Angle Right: 158.1712
Zenith Angle: 92.3033 Slope Distance: 278.300557ft Description: TR
134 Occupy Pt: Occupy Point: 618
Northing: 893065.706765ft Easting: 1903155.871693ft

Elevation: 401.988417ft Description: TR
135 Backsight: Occupy Point: 618
Backsight Point: 609 Backsight Azimuth: 121.0050
Backsight Circle: 0.0000
136 Note: Fixed HR at Backsight:5.25 (5.25 + 0.0 Offset), Prism Const.:0.0mm
137 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
138 Occupy Pt: Occupy Point: 618
Northing: 893065.706765ft Easting: 1903155.871693ft
Elevation: 401.988417ft Description: TR
139 Note: HR:5.0 (5.0 + 0.0 Offset)
140 Line of Sight (HI/HR): Height of Instrument: 4.97ft
Height of Rod: 5.0ft
141 Backsight: Occupy Point: 618
Backsight Point: 609 Backsight Azimuth: 121.0050
Backsight Circle: 0.0000
142 Note: Fixed HR at Backsight:5.04 (5.04 + 0.0 Offset), Prism Const.:0.0mm
143 Note: BS check 618 - 609:ZE87.2725,SD278.305557,HD err= -0.002319, VD err= -0.003983
144 Note: BS Circle check : angular err= 0.0000
145 Side Shot: Occupy Point: 618
Foresight Point: 619 Angle Right: 230.0546
Zenith Angle: 100.4941 Slope Distance: 180.290361ft Description: c210
146 Occupy Pt: Occupy Point: 618
Northing: 893065.706765ft Easting: 1903155.871693ft
Elevation: 401.988417ft Description: TR
147 Backsight: Occupy Point: 618
Backsight Point: 609 Backsight Azimuth: 121.0050
Backsight Circle: 0.0000
148 Note: Fixed HR at Backsight:5.04 (5.04 + 0.0 Offset), Prism Const.:0.0mm
149 Repeat Directional: Backsight Direct
Set: 1 Angle: 0.0002
150 Note: BS zenith: 87.2725, slope dist: 278.305557
151 Repeat Backsight: Occupy Point: 618
Backsight Point: 609 Angle Right: 0.0002
Zenith Angle: 87.2725 Slope Distance: 278.305557ft Height of Rod: 5.04ft Description: TR
152 Repeat Directional: Foresight Direct
Set: 1 Angle: 174.4904
153 Repeat Directional: Zenith Direct
Set: 1 Zenith: 94.1520
154 Multiple Distances: Set: 1
Slope Distance: 235.360471ft
155 Repeat Foresight: Occupy Point: 618
Foresight Point: 620 Angle Right: 174.4904
Zenith Angle: 94.1520 Slope Distance: 235.360471ft Height of Rod: 5.0ft Description: TR
156 Repeat Directional: Foresight Reverse
Set: 1 Angle: 354.4907
157 Note: RD,ZV 1:265.4433
158 Note: Not shooting reverse distances.
159 Repeat Directional: Backsight Reverse
Set: 1 Angle: 180.0000
160 Note: Horizontal Angle Error: 0.0005
161 Note: Zenith Angle Error: 0.0000
162 Note: Horizontal Angle Error compares to the average: 0.0000
163 Note: Zenith Angle Error compares to the average: 0.0000

164 Note: Slope Distance Error compares to the average: 0.0
165 Traverse: Occupy Point: 618
Foresight Point: 620 Angle Right: 174.4905
Zenith Angle: 94.1520 Slope Distance: 235.360471ft Description: TR
166 Occupy Pt: Occupy Point: 620
Northing: 893167.961597ft Easting: 1902944.647877ft
Elevation: 384.493449ft Description: TR
167 Backsight: Occupy Point: 620
Backsight Point: 618 Backsight Azimuth: 115.4955
Backsight Circle: 0.0000
168 Note: Fixed HR at Backsight:5.04 (5.04 + 0.0 Offset), Prism Const.:0.0mm
169 Occupy Pt: Occupy Point: 620
Northing: 893167.961597ft Easting: 1902944.647877ft
Elevation: 384.493449ft Description: TR
170 Note: HR:5.0 (5.0 + 0.0 Offset)
171 Line of Sight (HI/HR): Height of Instrument: 4.82ft
Height of Rod: 5.0ft
172 Backsight: Occupy Point: 620
Backsight Point: 618 Backsight Azimuth: 115.4955
Backsight Circle: 0.0000
173 Note: Fixed HR at Backsight:4.97 (4.97 + 0.0 Offset), Prism Const.:0.0mm
174 Note: BS check 620 - 618:ZE85.4214,SD235.375471,HD err= 0.002494, VD err= -0.012176
175 Note: BS Circle check : angular err= 0.0000
176 Side Shot: Occupy Point: 620
Foresight Point: 621 Angle Right: 11.5728
Zenith Angle: 82.1650 Slope Distance: 108.955218ft Description: ow212 b212
177 Side Shot: Occupy Point: 620
Foresight Point: 622 Angle Right: 237.0537
Zenith Angle: 102.4659 Slope Distance: 24.510049ft Description: b235
178 Occupy Pt: Occupy Point: 620
Northing: 893167.961597ft Easting: 1902944.647877ft
Elevation: 384.493449ft Description: TR
179 Backsight: Occupy Point: 620
Backsight Point: 618 Backsight Azimuth: 115.4955
Backsight Circle: 0.0000
180 Note: Fixed HR at Backsight:4.97 (4.97 + 0.0 Offset), Prism Const.:0.0mm
181 Note: BS check 620 - 618:ZE85.4217,SD235.365471,HD err= -0.00722, VD err= -0.016339
182 Note: BS Circle check : angular err= 0.0012
183 Note: Foresight Target:My Prism, HR:5.3 (5.3 + 0.0 Offset), Prism Const.:0.0mm
184 Note: HR:5.3 (5.3 + 0.0 Offset)
185 Line of Sight (HI/HR): Height of Instrument: 4.82ft
Height of Rod: 5.3ft
186 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5958
187 Note: BS zenith: 85.4214, slope dist: 235.375471
188 Repeat Backsight: Occupy Point: 620
Backsight Point: 618 Angle Right: 359.5958
Zenith Angle: 85.4214 Slope Distance: 235.375471ft Height of Rod: 4.97ft Description: TR
189 Repeat Directional: Foresight Direct
Set: 1 Angle: 84.5524
190 Repeat Directional: Zenith Direct
Set: 1 Zenith: 71.1547
191 Multiple Distances: Set: 1

Slope Distance: 113.770228ft
192 Repeat Foresight: Occupy Point: 620
Foresight Point: 623 Angle Right: 84.5524
Zenith Angle: 71.1547 Slope Distance: 113.770228ft Height of Rod:
5.3ft Description: TR
193 Repeat Directional: Foresight Reverse
Set: 1 Angle: 264.5522
194 Note: RD,ZV 1:288.4417
195 Note: Not shooting reverse distances.
196 Repeat Directional: Backsight Reverse
Set: 1 Angle: 180.0000
197 Note: Horizontal Angle Error: 0.0005
198 Note: Zenith Angle Error: 0.0000
199 Note: Horizontal Angle Error compares to the
average: 0.0000
200 Note: Zenith Angle Error compares to the
average: 0.0000
201 Note: Slope Distance Error compares to the
average: 0.0
202 Traverse: Occupy Point: 620
Foresight Point: 623 Angle Right: 84.5524
Zenith Angle: 71.1547 Slope Distance: 113.770228ft Description: TR
203 Occupy Pt: Occupy Point: 623
Northing: 893067.229467ft Easting: 1902906.47317ft
Elevation: 420.559402ft Description: TR
204 Backsight: Occupy Point: 623
Backsight Point: 620 Backsight Azimuth: 20.4519
Backsight Circle: 0.0000
205 Note: Fixed HR at Backsight:4.97 (4.97 + 0.0
Offset), Prism Const.:0.0mm
206 Occupy Pt: Occupy Point: 623
Northing: 893067.229467ft Easting: 1902906.47317ft
Elevation: 420.559402ft Description: TR
207 Note: HR:5.3 (5.3 + 0.0 Offset)
208 Line of Sight (HI/HR): Height of Instrument: 5.12ft
Height of Rod: 5.3ft
209 Backsight: Occupy Point: 623
Backsight Point: 620 Backsight Azimuth: 20.4519
Backsight Circle: 0.0000
210 Note: Fixed HR at Backsight:4.82 (4.82 + 0.0
Offset), Prism Const.:0.0mm
211 Note: BS check 623 -
620:ZE108.3934,SD113.710227,HD err= -0.007334, VD err= -0.014514
212 Note: BS Circle check : angular err= 0.0000
213 Side Shot: Occupy Point: 623
Foresight Point: 624 Angle Right: 251.0741
Zenith Angle: 89.4952 Slope Distance: 104.180208ft Description: b234
214 Side Shot: Occupy Point: 623
Foresight Point: 625 Angle Right: 211.2246
Zenith Angle: 90.0037 Slope Distance: 36.685073ft Description: c206
215 Side Shot: Occupy Point: 623
Foresight Point: 626 Angle Right: 144.5359
Zenith Angle: 88.5908 Slope Distance: 80.18016ft Description: b208
216 Side Shot: Occupy Point: 623
Foresight Point: 627 Angle Right: 118.1343
Zenith Angle: 89.2523 Slope Distance: 237.095474ft Description: c202
217 Side Shot: Occupy Point: 623
Foresight Point: 628 Angle Right: 135.2548
Zenith Angle: 89.1134 Slope Distance: 183.755368ft Description: b218
218 Occupy Pt: Occupy Point: 623
Northing: 893067.229467ft Easting: 1902906.47317ft
Elevation: 420.559402ft Description: TR
219 Backsight: Occupy Point: 623

Backsight Point: 620 Backsight Azimuth: 20.4519
Backsight Circle: 0.0000
220 Note: Fixed HR at Backsight:4.82 (4.82 + 0.0 Offset), Prism Const.:0.0mm
221 Note: BS check 623 - 620:ZE108.3934,SD113.705227,HD err= -0.012071, VD err= -0.012915
222 Note: BS Circle check : angular err= 0.0009
223 Store Point: Point Name: 629
Northing: 892867.268ft Easting: 1902994.2ft
Elevation: 423.365ft Description: tr 64
224 Store Point: Point Name: 64
Northing: 892867.268ft Easting: 1902994.2ft
Elevation: 423.365ft Description: tr 629
225 Repeat Directional: Backsight Direct
Set: 1 Angle: 0.0002
226 Note: BS zenith: 108.3936, slope dist: 113.715227
227 Repeat Backsight: Occupy Point: 623
Backsight Point: 620 Angle Right: 0.0002
Zenith Angle: 108.3936 Slope Distance: 113.715227ft Height of Rod: 4.82ft Description: TR
228 Repeat Directional: Foresight Direct
Set: 1 Angle: 135.3255
229 Repeat Directional: Zenith Direct
Set: 1 Zenith: 89.1352
230 Multiple Distances: Set: 1
Slope Distance: 218.385437ft
231 Repeat Foresight: Occupy Point: 623
Foresight Point: 629 Angle Right: 135.3255
Zenith Angle: 89.1352 Slope Distance: 218.385437ft Height of Rod: 5.3ft Description: TR
232 Repeat Directional: Foresight Reverse
Set: 1 Angle: 315.3254
233 Note: RD,ZV 1:270.4606
234 Note: Not shooting reverse distances.
235 Repeat Directional: Backsight Reverse
Set: 1 Angle: 180.0006
236 Note: Horizontal Angle Error: 0.0005
237 Note: Zenith Angle Error: 0.0000
238 Note: Horizontal Angle Error compares to the average: 0.0000
239 Note: Zenith Angle Error compares to the average: 0.0000
240 Note: Slope Distance Error compares to the average: 0.0
241 Deleted Point: Point Name: 629
242 Traverse: Occupy Point: 623
Foresight Point: 629 Angle Right: 135.3250
Zenith Angle: 89.1352 Slope Distance: 218.385437ft Description: TR
243 Occupy Pt: Occupy Point: 629
Northing: 892867.30881ft Easting: 1902994.221578ft
Elevation: 423.309969ft Description: TR
244 Backsight: Occupy Point: 629
Backsight Point: 623 Backsight Azimuth: 336.1809
Backsight Circle: 0.0000
245 Note: Fixed HR at Backsight:4.82 (4.82 + 0.0 Offset), Prism Const.:0.0mm
246 Note: Foresight Target:My Prism, HR:5.18 (5.18 + 0.0 Offset), Prism Const.:0.0mm
247 Occupy Pt: Occupy Point: 623
Northing: 893067.229467ft Easting: 1902906.47317ft
Elevation: 420.559402ft Description: TR
248 Note: HR:5.18 (5.18 + 0.0 Offset)

249 Line of Sight (HI/HR): Height of Instrument: 5.12ft
Height of Rod: 5.18ft
250 Backsight: Occupy Point: 623
Backsight Point: 620 Backsight Azimuth: 20.4519
Backsight Circle: 0.0000
251 Note: Fixed HR at Backsight:4.82 (4.82 + 0.0
Offset), Prism Const.:0.0mm
252 Note: BS check 623 -
620:ZE108.3938,SD113.715227,HD err= -0.003303, VD err= -0.018203
253 Note: BS Circle check : angular err= 0.0000
254 Store Point: Point Name: 629
Northing: 892867.30881ft Easting: 1902994.221578ft
Elevation: 423.43ft Description: TR
255 Note: Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm
256 Occupy Pt: Occupy Point: 629
Northing: 892867.30881ft Easting: 1902994.221578ft
Elevation: 423.43ft Description: TR
257 Note: HR:5.0 (5.0 + 0.0 Offset)
258 Line of Sight (HI/HR): Height of Instrument: 4.99ft
Height of Rod: 5.0ft
259 Backsight: Occupy Point: 629
Backsight Point: 620 Backsight Azimuth: 350.3813
Backsight Circle: 0.0000
260 Note: Fixed HR at Backsight:5.13 (5.13 + 0.0
Offset), Prism Const.:0.0mm
261 Occupy Pt: Occupy Point: 629
Northing: 892867.30881ft Easting: 1902994.221578ft
Elevation: 423.43ft Description: TR
262 Backsight: Occupy Point: 629
Backsight Point: 623 Backsight Azimuth: 336.1809
Backsight Circle: 0.0000
263 Note: Fixed HR at Backsight:5.13 (5.13 + 0.0
Offset), Prism Const.:0.0mm
264 Note: BS check 629 -
623:ZE90.4330,SD218.375437,HD err= -0.00781, VD err= -0.032043
265 Note: BS Circle check : angular err= 0.0001
266 Side Shot: Occupy Point: 629
Foresight Point: 630 Angle Right: 335.1022
Zenith Angle: 90.1102 Slope Distance: 73.995148ft Description: c203
267 Side Shot: Occupy Point: 629
Foresight Point: 631 Angle Right: 328.2519
Zenith Angle: 90.0305 Slope Distance: 111.935224ft Description: b217
268 Side Shot: Occupy Point: 629
Foresight Point: 632 Angle Right: 32.2540
Zenith Angle: 90.5213 Slope Distance: 108.395217ft Description: b220
269 Side Shot: Occupy Point: 629
Foresight Point: 633 Angle Right: 84.0746
Zenith Angle: 90.4051 Slope Distance: 135.13027ft Description: b221
270 Side Shot: Occupy Point: 629
Foresight Point: 634 Angle Right: 119.1513
Zenith Angle: 90.0647 Slope Distance: 87.500175ft Description: b219
271 Side Shot: Occupy Point: 629
Foresight Point: 635 Angle Right: 288.2110
Zenith Angle: 89.5330 Slope Distance: 122.820246ft Description: b216
272 Side Shot: Occupy Point: 629
Foresight Point: 636 Angle Right: 192.4742
Zenith Angle: 89.4425 Slope Distance: 213.060426ft Description: b230
273 Occupy Pt: Occupy Point: 629
Northing: 892867.30881ft Easting: 1902994.221578ft
Elevation: 423.43ft Description: TR
274 Backsight: Occupy Point: 629
Backsight Point: 623 Backsight Azimuth: 336.1809

Backsight Circle: 0.0000
275 Note: Fixed HR at Backsight:5.13 (5.13 + 0.0 Offset), Prism Const.:0.0mm
276 Note: BS check 629 - 623:ZE90.4335,SD218.375437,HD err= -0.007878, VD err= -0.037336
277 Note: BS Circle check : angular err= 0.0018
278 Note: Foresight Target:My Prism, HR:5.57 (5.57 + 0.0 Offset), Prism Const.:0.0mm
279 Note: HR:5.57 (5.57 + 0.0 Offset)
280 Line of Sight (HI/HR): Height of Instrument: 4.99ft Height of Rod: 5.57ft
281 Repeat Directional: Backsight Direct Set: 1 Angle: 359.5943
282 Note: BS zenith: 90.4338, slope dist: 218.375437
283 Repeat Backsight: Occupy Point: 629 Backsight Point: 623 Angle Right: 359.5943 Zenith Angle: 90.4338 Slope Distance: 218.375437ft Height of Rod: 5.13ft Description: TR
284 Repeat Directional: Foresight Direct Set: 1 Angle: 193.0533
285 Repeat Directional: Zenith Direct Set: 1 Zenith: 89.3327
286 Multiple Distances: Set: 1 Slope Distance: 280.18556ft
287 Repeat Foresight: Occupy Point: 629 Foresight Point: 637 Angle Right: 193.0533 Zenith Angle: 89.3327 Slope Distance: 280.18556ft Height of Rod: 5.57ft Description: TR
288 Repeat Directional: Foresight Reverse Set: 1 Angle: 13.0533
289 Note: RD,ZV 1:270.2626
290 Note: Not shooting reverse distances.
291 Repeat Directional: Backsight Reverse Set: 1 Angle: 179.5943
292 Note: Horizontal Angle Error: 0.0000
293 Note: Zenith Angle Error: 0.0000
294 Note: Horizontal Angle Error compares to the average: 0.0000
295 Note: Zenith Angle Error compares to the average: 0.0000
296 Note: Slope Distance Error compares to the average: 0.0
297 Traverse: Occupy Point: 629 Foresight Point: 637 Angle Right: 193.0550 Zenith Angle: 89.3327 Slope Distance: 280.18556ft Description: TR
298 Occupy Pt: Occupy Point: 637 Northing: 892591.957998ft Easting: 1903045.75389ft Elevation: 425.014554ft Description: TR
299 Backsight: Occupy Point: 637 Backsight Point: 629 Backsight Azimuth: 349.2359 Backsight Circle: 0.0000
300 Note: Fixed HR at Backsight:5.13 (5.13 + 0.0 Offset), Prism Const.:0.0mm
301 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
302 Occupy Pt: Occupy Point: 637 Northing: 892591.957998ft Easting: 1903045.75389ft Elevation: 425.014554ft Description: TR
303 Note: HR:5.0 (5.0 + 0.0 Offset)
304 Line of Sight (HI/HR): Height of Instrument: 5.15ft Height of Rod: 5.0ft
305 Backsight: Occupy Point: 637

Backsight Point: 629 Backsight Azimuth: 349.2359
Backsight Circle: 0.0000
306 Note: Fixed HR at Backsight:4.88 (4.88 + 0.0
Offset), Prism Const.:0.0mm
307 Note: BS check 637 -
629:ZE90.2132,SD280.17556,HD err= -0.00713, VD err= 0.100283
308 Note: BS Circle check : angular err= 0.0000
309 Occupy Pt: Occupy Point: 637
Northing: 892591.957998ft Easting: 1903045.75389ft
Elevation: 425.014554ft Description: TR
310 Backsight: Occupy Point: 637
Backsight Point: 629 Backsight Azimuth: 349.2359
Backsight Circle: 0.0000
311 Note: Fixed HR at Backsight:4.98 (4.98 + 0.0
Offset), Prism Const.:0.0mm
312 Note: BS check 637 -
629:ZE90.2132,SD280.17056,HD err= -0.012129, VD err= 0.000314
313 Note: BS Circle check : angular err= 0.0000
314 Side Shot: Occupy Point: 637
Foresight Point: 638 Angle Right: 163.1619
Zenith Angle: 90.2856 Slope Distance: 219.98544ft Description: b229
315 Side Shot: Occupy Point: 637
Foresight Point: 639 Angle Right: 141.2206
Zenith Angle: 90.4614 Slope Distance: 445.04089ft Description: b228
316 Store Point: Point Name: 67
Northing: 892898.673ft Easting: 1902542.811ft
Elevation: 427.885ft Description: tr ck 640
317 Store Point: Point Name: 68
Northing: 892898.673ft Easting: 1902542.811ft
Elevation: 427.885ft Description: tr ck 640
318 Deleted Point: Point Name: 67
319 Occupy Pt: Occupy Point: 637
Northing: 892591.957998ft Easting: 1903045.75389ft
Elevation: 425.014554ft Description: TR
320 Backsight: Occupy Point: 637
Backsight Point: 629 Backsight Azimuth: 349.2359
Backsight Circle: 0.0000
321 Note: Fixed HR at Backsight:4.98 (4.98 + 0.0
Offset), Prism Const.:0.0mm
322 Note: BS check 637 -
629:ZE90.2126,SD280.17056,HD err= -0.012082, VD err= 0.007785
323 Note: BS Circle check : angular err= 0.0005
324 Note: Foresight Target:My Prism, HR:5.29
(5.29 + 0.0 Offset), Prism Const.:0.0mm
325 Note: HR:5.29 (5.29 + 0.0 Offset)
326 Line of Sight (HI/HR): Height of Instrument: 5.15ft
Height of Rod: 5.29ft
327 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5955
328 Note: BS zenith: 90.2128, slope dist:
280.17556
329 Repeat Backsight: Occupy Point: 637
Backsight Point: 629 Angle Right: 359.5955
Zenith Angle: 90.2128 Slope Distance: 280.17556ft Height of Rod:
4.98ft Description: TR
330 Repeat Directional: Foresight Direct
Set: 1 Angle: 311.5809
331 Repeat Directional: Zenith Direct
Set: 1 Zenith: 89.4209
332 Multiple Distances: Set: 1
Slope Distance: 589.131178ft
333 Repeat Foresight: Occupy Point: 637
Foresight Point: 640 Angle Right: 311.5809

Zenith Angle: 89.4209 Slope Distance: 589.131178ft Height of Rod: 5.29ft Description: tr 68
334 Repeat Directional: Foresight Reverse
Set: 1 Angle: 131.5811
335 Note: RD,ZV 1:270.1752
336 Note: Not shooting reverse distances.
337 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5955
338 Note: Horizontal Angle Error: 0.0002
339 Note: Zenith Angle Error: 0.0000
340 Note: Horizontal Angle Error compares to the average: 0.0000
341 Note: Zenith Angle Error compares to the average: 0.0000
342 Note: Slope Distance Error compares to the average: 0.0
343 Traverse: Occupy Point: 637
Foresight Point: 640 Angle Right: 311.5815
Zenith Angle: 89.4209 Slope Distance: 589.131178ft Description: tr 68
344 Occupy Pt: Occupy Point: 640
Northing: 892898.587632ft Easting: 1902542.831222ft
Elevation: 427.933518ft Description: tr 68
345 Backsight: Occupy Point: 640
Backsight Point: 637 Backsight Azimuth: 121.2214
Backsight Circle: 0.0000
346 Note: Fixed HR at Backsight:4.98 (4.98 + 0.0 Offset), Prism Const.:0.0mm
347 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
348 Occupy Pt: Occupy Point: 640
Northing: 892898.587632ft Easting: 1902542.831222ft
Elevation: 427.933518ft Description: tr 68
349 Note: HR:5.0 (5.0 + 0.0 Offset)
350 Line of Sight (HI/HR): Height of Instrument: 5.12ft
Height of Rod: 5.0ft
351 Backsight: Occupy Point: 640
Backsight Point: 637 Backsight Azimuth: 121.2214
Backsight Circle: 0.0000
352 Note: Fixed HR at Backsight:5.14 (5.14 + 0.0 Offset), Prism Const.:0.0mm
353 Note: BS check 640 - 637:ZE90.1700,SD589.121178,HD err= -0.009253, VD err= -0.012859
354 Note: BS Circle check : angular err= 0.0000
355 Side Shot: Occupy Point: 640
Foresight Point: 641 Angle Right: 92.1714
Zenith Angle: 88.5122 Slope Distance: 280.955562ft Description: c602
356 Side Shot: Occupy Point: 640
Foresight Point: 642 Angle Right: 125.3543
Zenith Angle: 87.2345 Slope Distance: 224.610449ft Description: b602
357 Side Shot: Occupy Point: 640
Foresight Point: 643 Angle Right: 75.5056
Zenith Angle: 89.4459 Slope Distance: 563.481127ft Description: b606
358 Note: Foresight Target:My Prism, HR:9.5 (9.5 + 0.0 Offset), Prism Const.:0.0mm
359 Note: HR:9.5 (9.5 + 0.0 Offset)
360 Line of Sight (HI/HR): Height of Instrument: 5.12ft
Height of Rod: 9.5ft
361 Side Shot: Occupy Point: 640
Foresight Point: 644 Angle Right: 75.5138
Zenith Angle: 89.4546 Slope Distance: 563.061126ft Description: b606
362 Deleted Point: Point Name: 643
363 Store Point: Point Name: 643
Northing: 892360.890115ft Easting: 1902376.066924ft

Elevation: 425.884758ft Description: b606
364 Deleted Point: Point Name: 644
365 Note: Foresight Target:My Prism, HR:5.07 (5.07 + 0.0 Offset), Prism Const.:0.0mm
366 Note: HR:5.07 (5.07 + 0.0 Offset)
367 Line of Sight (HI/HR): Height of Instrument: 5.12ft Height of Rod: 5.07ft
368 Repeat Directional: Backsight Direct Set: 1 Angle: 359.5935
369 Note: BS zenith: 90.1659, slope dist: 589.121178
370 Repeat Backsight: Occupy Point: 640 Backsight Point: 637 Angle Right: 359.5935
Zenith Angle: 90.1659 Slope Distance: 589.121178ft Height of Rod: 5.14ft Description: TR
371 Repeat Directional: Foresight Direct Set: 1 Angle: 116.4909
372 Repeat Directional: Zenith Direct Set: 1 Zenith: 87.1444
373 Multiple Distances: Set: 1 Slope Distance: 278.640557ft
374 Repeat Foresight: Occupy Point: 640 Foresight Point: 644 Angle Right: 116.4909
Zenith Angle: 87.1444 Slope Distance: 278.640557ft Height of Rod: 5.07ft Description: TR
375 Repeat Directional: Foresight Reverse Set: 1 Angle: 296.4908
376 Note: RD,ZV 1:272.4513
377 Note: Not shooting reverse distances.
378 Repeat Directional: Backsight Reverse Set: 1 Angle: 179.5937
379 Note: Horizontal Angle Error: 0.0003
380 Note: Zenith Angle Error: 0.0000
381 Note: Horizontal Angle Error compares to the average: 0.0000
382 Note: Zenith Angle Error compares to the average: 0.0000
383 Note: Slope Distance Error compares to the average: 0.0
384 Traverse: Occupy Point: 640 Foresight Point: 644 Angle Right: 116.4933
Zenith Angle: 87.1444 Slope Distance: 278.640557ft Description: TR
385 Occupy Pt: Occupy Point: 644 Northing: 892751.934415ft Easting: 1902306.338511ft
Elevation: 441.374434ft Description: TR
386 Backsight: Occupy Point: 644 Backsight Point: 640 Backsight Azimuth: 58.1146
Backsight Circle: 0.0000
387 Note: Fixed HR at Backsight:5.14 (5.14 + 0.0 Offset), Prism Const.:0.0mm
388 Note: Data Collector Serial Number: SS05A00978
389 Note: Foresight Target:My Prism, HR:5.07 (5.07 + 0.0 Offset), Prism Const.:0.0mm

Raw Data Report

Line# **Record Type**

1
2
3 4
5 6
7 8
9 10 11 12 13 14 15
16 17 18 19 20

1 Job: **Job Name: 8992GA040406**
Date: 04-04-2006 Time: 05:51:56
2 Mode Setup: Azimuth Direction: North
Distance Unit: Feet Scale Factor: 1.0
Earth Curvature: Off EDM Offset: 0.0ft
Angle Unit: Degrees
3 Note: Switch projection mode to H: Mapping Plane and V: Localization (+ Geoid)
4 Note: No projection record is defined.
5 Ellipsoid: Ellipsoid Radius: ---
Ellipse Inverse Flattening: Ellipse Name:
6 Projection: Projection Type: Unknown
Latitude: Longitude:
Height: Northing: ---
Easting: --- Elevation: --- Scale Factor: 1.0000000000 Orientation One : Orientation Two :
7 Coordinate System Identity: Coordinate System Option: Scale only
Zone Group: Zone Name:
Datum Name:
8 Note: Select zone record from data base
9 Ellipsoid: Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381 Ellipse Name: Geodetic Ref System 1980
10 Local Site Settings: Latitude:
Longitude: Height:
Scale Factor: 1.0000000000 Northing: 0.0ft
Easting: 0.0ft
11 Projection: Projection Type: Lambert Conformal Conic Two Parallel Latitude: 31.5000 Longitude: -81.0000
Height: Northing: 0.0ft
Easting: 2000000.0ft Elevation: --- Scale Factor: North Parallel : 34.5000 South Parallel : 32.3000
12 Datum: Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft Ellipse Inverse Flattening: 298.2572229329 Rotation X: 0.00000000 Rotation Y: 0.00000000
Rotation Z: 0.00000000 Translation X: 0.0ft
Translation Y: 0.0ft Translation Z: 0.0ft ppm Scale Factor: 0.000000
13 Horizontal Calibration (Adjust): Northing: ---
Easting: --- Translation North: ---
Translation East: --- Rotation about Origin:
Scale Factor:
14 Vertical Calibration: Type of Vertical Adjustment: 2
Northing: --- Easting: ---
Translation Z: --- Slope North:
Slope East: Geoid Model Name: GEOID99 (Conus)
15 COGO Settings: Azimuth Orientation: North
Grid Orientation: NE
16 Coordinate System Identity: Coordinate System Option: Chosen from library Zone Group: US State Plane 1983 Zone Name: South Carolina 3900 Datum

Name: NAD 1983 (Conus)
17 Note: Calculate survey scale factor for projection South Carolina 3900 at point 1009.
18 Mode Setup: Azimuth Direction: North
Distance Unit: Feet Scale Factor: 0.999837
Earth Curvature: Off EDM Offset: 0.0ft
Angle Unit: Degrees
19 Note: Geodetic coordinates computed from plane coordinates for base setup.
20 GPS Edit Point: Geodetic Flags: 0
Setup Group: 0
21 Geodetic Position: Time: 13:05:29
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.66628 Horizontal RMS from Receiver: 0.0
Vertical RMS from Receiver: 0.0 GPS Measurement Method: User Input
Classification: Normal
22 GPS Point: Point Name: 1009
GPS Point Type: USER_INPUT
23 Note: 08:05:39,Set BASE receiver at known position
24 Receiver Setup: Reciever Mode: BASE
Reduced Antenna Height: 5.943552ft Recording Interval: 0
File Name:
25 Equipment: Reciever Mode: BASE
Receiver Type: Legacy E **Receiver Serial Number: AG3VLIT08HS**
Antenna Index: 0 Antenna Number: 1
Antenna Type: PGA-1 Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.226378ft Vertical Offset: 0.087927ft
26 GPS Antenna Height: Reciever Mode: BASE
Measured Antenna Height: 5.86ft Measurement Method: Uncorrected
Reduced Antenna Height: 5.943552ft
27 Set Base Receiver Pos.: Point Name: 1009
Latitude: 34.173590453 Longitude: -81.190117299
Height: 334.66628 Setup Group: 0
28 Note: 08:06:54,Set ROVER receiver with base reference position:LA34.173590453,LN-81.190117299,HT334.66628
29 Receiver Setup: Reciever Mode: ROVER
Reduced Antenna Height: 6.909449ft Recording Interval: 0
File Name:
30 Equipment: Reciever Mode: ROVER
Receiver Type: Legacy E **Receiver Serial Number: 8RHNB0238JK**
Antenna Index: 0 Antenna Number: 0
Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset: 0.347769ft
31 GPS Antenna Height: Reciever Mode: ROVER
Measured Antenna Height: 6.56168ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.909449ft
32 Note: 08:07:15,Set ROVER receiver with base reference position:LA34.173590453,LN-81.190117299,HT334.66628
33 Receiver Setup: Reciever Mode: ROVER
Reduced Antenna Height: 6.909449ft Recording Interval: 0
File Name:
34 Equipment: Reciever Mode: ROVER
Receiver Type: Legacy E Receiver Serial Number: 8RHNB0238JK
Antenna Index: 0 Antenna Number: 0
Antenna Type: Topcon HiPer GGD Antenna Serial Number: Tape
Adjustment: 0.0 Horizontal Offset: 0.0ft Vertical Offset: 0.347769ft
35 GPS Antenna Height: Reciever Mode: ROVER
Measured Antenna Height: 6.56168ft Measurement Method: Uncorrected
Reduced Antenna Height: 6.909449ft

36 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00009", Lng: 0.00006", Ht: 0.025
37 Geodetic Position: Time: 08:22:46
Latitude: 34.192427535 Longitude: -81.17133173
Height: 344.273414 Horizontal RMS from Receiver: 0.021583
Vertical RMS from Receiver: 0.033116 HDOP from Receiver: 0.65744 VDOP
from Receiver: 1.008698 GPS Measurement Method: Fixed Classification: Normal
38 GPS Store Point: Point Name: 1010
Northing: 906102.357468ft Easting: 1913343.965713ft
Elevation: 444.34449ft Description: qa ck 101
39 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00010", Lng: 0.00005", Ht: 0.012
40 Geodetic Position: Time: 08:36:41
Latitude: 34.154785567 Longitude: -81.182587771
Height: 335.408365 Horizontal RMS from Receiver: 0.02571
Vertical RMS from Receiver: 0.040306 HDOP from Receiver: 0.783914 VDOP
from Receiver: 1.228944 GPS Measurement Method: Fixed Classification: Normal
41 GPS Store Point: Point Name: 1011
Northing: 884244.57952ft Easting: 1907193.901598ft
Elevation: 435.429799ft Description: qa ck 1020
42 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00005", Lng: 0.00005", Ht: 0.020
43 Geodetic Position: Time: 08:46:50
Latitude: 34.154404118 Longitude: -81.194757167
Height: 227.292475 Horizontal RMS from Receiver: 0.034463
Vertical RMS from Receiver: 0.054268 HDOP from Receiver: 1.040074 VDOP
from Receiver: 1.64017 GPS Measurement Method: Fixed Classification: Normal
44 GPS Store Point: Point Name: 1012
Northing: 883880.153491ft Easting: 1900336.874616ft
Elevation: 327.29003ft Description: qa ck 1021
45 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00009", Lng: 0.00014", Ht: 0.042
46 Geodetic Position: Time: 09:16:59
Latitude: 34.170578001 Longitude: -81.192980299
Height: 331.737568 Horizontal RMS from Receiver: 0.021166
Vertical RMS from Receiver: 0.041902 HDOP from Receiver: 0.80515 VDOP
from Receiver: 1.594189 GPS Measurement Method: Fixed Classification: Normal
47 GPS Store Point: Point Name: 70
Northing: 892137.366196ft Easting: 1901854.02581ft
Elevation: 431.750177ft Description: b 607
48 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00013", Lng: 0.00010", Ht: 0.017
49 Geodetic Position: Time: 10:16:35
Latitude: 34.165873117 Longitude: -81.191795793
Height: 311.320811 Horizontal RMS from Receiver: 0.025993
Vertical RMS from Receiver: 0.04672 HDOP from Receiver: 0.964829 VDOP
from Receiver: 1.73246 GPS Measurement Method: Fixed Classification: Normal
50 GPS Store Point: Point Name: 71
Northing: 891421.777655ft Easting: 1902845.600729ft
Elevation: 411.334603ft Description: b 422
51 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00010", Lng: 0.00014", Ht: 0.020
52 Geodetic Position: Time: 11:04:43
Latitude: 34.165915443 Longitude: -81.191130425
Height: 298.234686 Horizontal RMS from Receiver: 0.023107
Vertical RMS from Receiver: 0.035738 HDOP from Receiver: 0.883287 VDOP
from Receiver: 1.330351 GPS Measurement Method: Fixed Classification: Normal
53 GPS Store Point: Point Name: 72
Northing: 891462.827572ft Easting: 1903403.98484ft
Elevation: 398.249968ft Description: c 609
54 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00013", Lng: 0.00006", Ht: 0.020
55 Geodetic Position: Time: 14:39:09

Latitude: 34.16575092 Longitude: -81.19141128
Height: 290.351467 Horizontal RMS from Receiver: 0.018839
Vertical RMS from Receiver: 0.039683 HDOP from Receiver: 0.697251 VDOP from Receiver: 1.469907 GPS Measurement Method: Fixed Classification: Normal
56 GPS Store Point: Point Name: 73
Northing: 891297.261248ft Easting: 1903167.82874ft
Elevation: 390.365898ft Description: t nail
57 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00018", Lng: 0.00024", Ht: 0.039
58 Geodetic Position: Time: 14:51:31
Latitude: 34.170196216 Longitude: -81.191750427
Height: 317.702131 Horizontal RMS from Receiver: 0.034794
Vertical RMS from Receiver: 0.091303 HDOP from Receiver: 1.380655 VDOP from Receiver: 3.61511 GPS Measurement Method: Fixed Classification: Normal
59 GPS Store Point: Point Name: 74
Northing: 891748.240028ft Easting: 1902884.679043ft
Elevation: 417.716498ft Description: b 311 dh
60 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00016", Lng: 0.00015", Ht: 0.039
61 Geodetic Position: Time: 15:46:16
Latitude: 34.171141024 Longitude: -81.191042036
Height: 323.3647 Horizontal RMS from Receiver: 0.025733
Vertical RMS from Receiver: 0.033318 HDOP from Receiver: 1.000376 VDOP from Receiver: 1.297576 GPS Measurement Method: Fixed Classification: Normal
62 GPS Store Point: Point Name: 75
Northing: 892701.38695ft Easting: 1903481.974806ft
Elevation: 423.382005ft Description: t nail
63 Note: Position averaged from 5 epochs.
Std.Dev. Lat: 0.00009", Lng: 0.00013", Ht: 0.013
64 Geodetic Position: Time: 16:10:10
Latitude: 34.192427538 Longitude: -81.171331687
Height: 344.220744 Horizontal RMS from Receiver: 0.022939
Vertical RMS from Receiver: 0.026936 HDOP from Receiver: 0.698767 VDOP from Receiver: 0.820401 GPS Measurement Method: Fixed Classification: Normal
65 GPS Store Point: Point Name: 1008
Northing: 906102.360598ft Easting: 1913344.001701ft
Elevation: 444.291821ft Description: qa ck 101

Raw Data Report

Line# **Record Type**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

1 Job: **Job Name: 8992GB040406**
Date: 04-04-2006 **Time: 07:04:33**
2 Mode Setup: Azimuth Direction: North
Distance Unit: Feet Scale Factor: 1.0
Earth Curvature: Off EDM Offset: 0.0ft Angle Unit: Degrees
3 Note: **Data Collector Serial Number:**
SS05A00978
4 Note: Foresight Target:My Prism, HR:5.07
(5.07 + 0.0 Offset), Prism Const.:0.0mm
5 Note: **Data Collector Serial Number:**
SS05A00978
6 Note: Foresight Target:My Prism, HR:5.07
(5.07 + 0.0 Offset), Prism Const.:0.0mm
7 Note: Activating GPS Receiver: Topcon TPS
HiPer [rover], COM1, 115200 baud, no parity
8 Note: Switch projection mode to H: Mapping
Plane and V: Localization (+ Geoid)
9 Note: No coordinate system is defined.
10 Ellipsoid: Ellipsoid Radius: ---
Ellipse Inverse Flattening: Ellipse Name:
11 Projection: Projection Type: Unknown
Latitude: Longitude:
Height: Northing: --- Easting: ---
Elevation: --- Scale Factor: 1.0000000000 Orientation One
: Orientation Two :
12 Coordinate System Identity: Coordinate System Option: Scale only
Zone Group: Zone Name:
Datum Name:
13 Note: Select zone record from database
14 Ellipsoid: Ellipsoid Radius: 20925646.325459ft
Ellipse Inverse Flattening: 298.2572215381 Ellipse Name: Geodetic Ref System
1980
15 Local Site Settings: Latitude:
Longitude: Height:
Scale Factor: 1.0000000000 Northing: 0.0ft Easting: 0.0ft
16 Projection: Projection Type: Lambert Conformal
Conic Two Parallel Latitude: 31.5000
Longitude: -81.0000 Height:
Northing: 0.0ft Easting: 2000000.0ft Elevation: ---
Scale Factor: North Parallel : 34.5000 South Parallel : 32.3000
17 Datum: Datum Type: Molodensky
Ellipsoid Radius: 20925646.325459ft Ellipse Inverse Flattening:
298.2572229329 Rotation X: 0.00000000 Rotation Y: 0.00000000
Rotation Z: 0.00000000 Translation X: 0.0ft Translation Y:
0.0ft Translation Z: 0.0ft ppm Scale Factor: 0.000000
18 Horizontal Calibration (Adjust): Northing: ---
Easting: --- Translation North: ---
Translation East: --- Rotation about Origin: Scale Factor:
19 Vertical Calibration: Type of Vertical Adjustment: 2
Northing: --- Easting: ---
Translation Z: --- Slope North: Slope East:
Geoid Model Name: Geoid03 (Conus)

20 COGO Settings: Azimuth Orientation: North
Grid Orientation: NE
21 Coordinate System Identity: Coordinate System Option: Keyed in
Zone Group: US State Plane 1983 Zone Name: South Carolina 3900
Datum Name: NAD 1983 (Conus)
22 Note: >>
23 Note: >> Begin Adjust with Projection.
24 Note: >> End Adjust with Projection.
25 Note: >>
26 Note: **Activating Total Station: Topcon GTS-800 [820/8200 DIRECT CABLE]**, COM1, 1200 baud, even parity
27 Note: Calculate survey scale factor for projection South Carolina 3900 at point 1009.
28 Mode Setup: Azimuth Direction: North
Distance Unit: Feet Scale Factor: 0.999837
Earth Curvature: Off EDM Offset: 0.0ft Angle Unit: Degrees
29 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
30 Occupy Pt: Occupy Point: 644
Northing: 892751.934415ft Easting: 1902306.338511ft
Elevation: 441.374434ft Description: TR
31 Note: HR:5.0 (5.0 + 0.0 Offset)
32 Line of Sight (HI/HR): Height of Instrument: 5.5ft
Height of Rod: 5.0ft
33 Backsight: Occupy Point: 644
Backsight Point: 640 Backsight Azimuth: 58.1146
Backsight Circle: 0.0000
34 Note: Fixed HR at Backsight:5.48 (5.48 + 0.0 Offset), Prism Const.:0.0mm
35 Note: BS check 644 - 640:ZE92.4605,SD278.655557,HD err= 0.011857, VD err= 0.004508
36 Note: BS Circle check : angular err= 0.0000
37 Side Shot: Occupy Point: 644
Foresight Point: 645 Angle Right: 252.2111
Zenith Angle: 96.2558 Slope Distance: 208.960418ft Description: B-601
38 Side Shot: Occupy Point: 644
Foresight Point: 646 Angle Right: 203.1313
Zenith Angle: 94.2504 Slope Distance: 103.155206ft Description: c-601
39 Note: Foresight Target:My Prism, HR:5.21 (5.21 + 0.0 Offset), Prism Const.:0.0mm
40 Note: HR:5.21 (5.21 + 0.0 Offset)
41 Line of Sight (HI/HR): Height of Instrument: 5.5ft
Height of Rod: 5.21ft
42 Note: RD,BD 1:0.0000
43 Note: BS zenith: , slope dist:
44 Note: RB,OP644,BP640,AR0.0000,ZE,SD,HR5.48,--tr 68
45 Note: RD,FD 1:0.0000
46 Note: RD,ZD 1:
47 Note: MD,SD 1:
48 Note: RF,OP644,FP,AR0.0000,ZE,SD,HR5.21,--
49 Note: RD,FV 1:180.0000
50 Note: RD,ZV 1:
51 Note: Not shooting reverse distances.
52 Note: RD,BV 1:180.0000
53 Note: BS zenith: , slope dist:
54 Note: RB,OP644,BP640,AR180.0000,ZE,SD,HR5.48,--tr 68
55 Note: Horizontal Angle Error: 0.0000
56 Note: Zenith Angle Error: 0.0000
57 Repeat Directional: Backsight Direct
Set: 1 Angle: 0.0010
58 Note: BS zenith: 92.4558, slope dist:

278.655557
59 Repeat Backsight: Occupy Point: 644
Backsight Point: 640 Angle Right: 0.0010
Zenith Angle: 92.4558 Slope Distance: 278.655557ft Height of Rod: 5.48ft Description: tr 68
60 Repeat Directional: Foresight Direct
Set: 1 Angle: 144.1424
61 Repeat Directional: Zenith Direct
Set: 1 Zenith: 90.0739
62 Multiple Distances: Set: 1
Slope Distance: 250.725501ft
63 Repeat Foresight: Occupy Point: 644
Foresight Point: 647 Angle Right: 144.1424
Zenith Angle: 90.0739 Slope Distance: 250.725501ft Height of Rod: 5.21ft Description: TR-t nail
64 Repeat Directional: Foresight Reverse
Set: 1 Angle: 324.1415
65 Note: RD,ZV 1:269.5208
66 Note: Not shooting reverse distances.
67 Repeat Directional: Backsight Reverse
Set: 1 Angle: 180.0013
68 Note: Horizontal Angle Error: 0.0013
69 Note: Zenith Angle Error: 0.0000
70 Note: Horizontal Angle Error compares to the average: 0.0000
71 Note: Zenith Angle Error compares to the average: 0.0000
72 Note: Slope Distance Error compares to the average: 0.0
73 Traverse: Occupy Point: 644
Foresight Point: 647 Angle Right: 144.1408
Zenith Angle: 90.0739 Slope Distance: 250.725501ft Description: TR-t nail
74 Occupy Pt: Occupy Point: 647
Northing: 892520.21858ft Easting: 1902210.681699ft
Elevation: 441.106496ft Description: TR-t nail
75 Backsight: Occupy Point: 647
Backsight Point: 644 Backsight Azimuth: 22.2554
Backsight Circle: 0.0000
76 Note: Fixed HR at Backsight:5.48 (5.48 + 0.0 Offset), Prism Const.:0.0mm
77 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
78 Occupy Pt: Occupy Point: 647
Northing: 892520.21858ft Easting: 1902210.681699ft
Elevation: 441.106496ft Description: TR-t nail
79 Note: HR:5.0 (5.0 + 0.0 Offset)
80 Line of Sight (HI/HR): Height of Instrument: 5.21ft
Height of Rod: 5.0ft
81 Backsight: Occupy Point: 647
Backsight Point: 644 Backsight Azimuth: 22.2554
Backsight Circle: 0.0000
82 Note: Fixed HR at Backsight:5.66 (5.66 + 0.0 Offset), Prism Const.:0.0mm
83 Note: BS check 647 - 644:ZE89.5002,SD250.730501,HD err= 0.004565, VD err= 0.009583
84 Note: BS Circle check : angular err= 0.0001
85 Side Shot: Occupy Point: 647
Foresight Point: 648 Angle Right: 245.2109
Zenith Angle: 97.1806 Slope Distance: 211.095422ft Description: b-604
86 Side Shot: Occupy Point: 647
Foresight Point: 649 Angle Right: 115.3918
Zenith Angle: 93.2707 Slope Distance: 381.940764ft Description: b-334

87 Note: Foresight Target:My Prism, HR:5.23 (5.23 + 0.0 Offset), Prism Const.:0.0mm
88 Note: HR:5.23 (5.23 + 0.0 Offset)
89 Line of Sight (HI/HR): Height of Instrument: 5.21ft Height of Rod: 5.23ft
90 Repeat Directional: Backsight Direct Set: 1 Angle: 359.5944
91 Note: BS zenith: 89.4958, slope dist: 250.725501
92 Repeat Backsight: Occupy Point: 647 Backsight Point: 644 Angle Right: 359.5944 Zenith Angle: 89.4958 Slope Distance: 250.725501ft Height of Rod: 5.66ft Description: TR
93 Repeat Directional: Foresight Direct Set: 1 Angle: 176.5130
94 Repeat Directional: Zenith Direct Set: 1 Zenith: 92.2119
95 Multiple Distances: Set: 1 Slope Distance: 291.135582ft
96 Repeat Foresight: Occupy Point: 647 Foresight Point: 650 Angle Right: 176.5130 Zenith Angle: 92.2119 Slope Distance: 291.135582ft Height of Rod: 5.23ft Description: TR-t nail
97 Repeat Directional: Foresight Reverse Set: 1 Angle: 356.5130
98 Note: RD,ZV 1:267.3841
99 Note: Not shooting reverse distances.
100 Repeat Directional: Backsight Reverse Set: 1 Angle: 179.5937
101 Note: Horizontal Angle Error: 0.0007
102 Note: Zenith Angle Error: 0.0000
103 Note: Horizontal Angle Error compares to the average: 0.0000
104 Note: Zenith Angle Error compares to the average: 0.0000
105 Note: Slope Distance Error compares to the average: 0.0
106 Traverse: Occupy Point: 647 Foresight Point: 650 Angle Right: 176.5150 Zenith Angle: 92.2119 Slope Distance: 291.135582ft Description: TR-t nail
107 Occupy Pt: Occupy Point: 650 Northing: 892245.714182ft Easting: 1902114.574872ft Elevation: 429.122759ft Description: TR-t nail
108 Backsight: Occupy Point: 650 Backsight Point: 647 Backsight Azimuth: 19.1744 Backsight Circle: 0.0000
109 Note: Fixed HR at Backsight:5.66 (5.66 + 0.0 Offset), Prism Const.:0.0mm
110 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
111 Occupy Pt: Occupy Point: 650 Northing: 892245.714182ft Easting: 1902114.574872ft Elevation: 429.122759ft Description: TR-t nail
112 Note: HR:5.0 (5.0 + 0.0 Offset)
113 Line of Sight (HI/HR): Height of Instrument: 5.23ft Height of Rod: 5.0ft
114 Backsight: Occupy Point: 650 Backsight Point: 647 Backsight Azimuth: 19.1744 Backsight Circle: 0.0000
115 Note: Fixed HR at Backsight:5.38 (5.38 + 0.0 Offset), Prism Const.:0.0mm
116 Note: BS check 650 -

647:ZE87.3647,SD291.145582,HD err= 0.003305, VD err= -0.008109
117 Note: BS Circle check : angular err= 0.0000
118 Side Shot: Occupy Point: 650
Foresight Point: 651 Angle Right: 274.0409
Zenith Angle: 96.0148 Slope Distance: 100.465201ft Description: c-603
119 Side Shot: Occupy Point: 650
Foresight Point: 652 Angle Right: 333.3153
Zenith Angle: 92.1731 Slope Distance: 209.79542ft Description: r-1
120 Side Shot: Occupy Point: 650
Foresight Point: 653 Angle Right: 2.0538
Zenith Angle: 89.3517 Slope Distance: 204.500409ft Description: b-605
121 Side Shot: Occupy Point: 650
Foresight Point: 654 Angle Right: 88.1003
Zenith Angle: 91.2402 Slope Distance: 101.940204ft Description: c-604
122 Note: Foresight Target:My Prism, HR:5.42
(5.42 + 0.0 Offset), Prism Const.:0.0mm
123 Note: HR:5.42 (5.42 + 0.0 Offset)
124 Line of Sight (HI/HR): Height of Instrument: 5.23ft
Height of Rod: 5.42ft
125 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5951
126 Note: BS zenith: 87.3655, slope dist:
291.140582
127 Repeat Backsight: Occupy Point: 650
Backsight Point: 647 Angle Right: 359.5951
Zenith Angle: 87.3655 Slope Distance: 291.140582ft Height of Rod:
5.38ft Description: TR-t nail
128 Repeat Directional: Foresight Direct
Set: 1 Angle: 118.3239
129 Repeat Directional: Zenith Direct
Set: 1 Zenith: 94.0335
130 Multiple Distances: Set: 1
Slope Distance: 161.295323ft
131 Repeat Foresight: Occupy Point: 650
Foresight Point: 655 Angle Right: 118.3239
Zenith Angle: 94.0335 Slope Distance: 161.295323ft Height of Rod:
5.42ft Description: TR-t nail
132 Repeat Directional: Foresight Reverse
Set: 1 Angle: 298.3236
133 Note: RD,ZV 1:265.5624
134 Note: Not shooting reverse distances.
135 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5945
136 Note: Horizontal Angle Error: 0.0003
137 Note: Zenith Angle Error: 0.0000
138 Note: Horizontal Angle Error compares to the
average: 0.0000
139 Note: Zenith Angle Error compares to the
average: 0.0000
140 Note: Slope Distance Error compares to the
average: 0.0
141 Traverse: Occupy Point: 650
Foresight Point: 655 Angle Right: 118.3249
Zenith Angle: 94.0335 Slope Distance: 161.295323ft Description: TR-t
nail
142 Occupy Pt: Occupy Point: 655
Northing: 892126.464763ft Easting: 1902222.542106ft
Elevation: 417.514046ft Description: TR-t nail
143 Backsight: Occupy Point: 655
Backsight Point: 650 Backsight Azimuth: 317.5033
Backsight Circle: 0.0000
144 Note: Fixed HR at Backsight:5.38 (5.38 + 0.0
Offset), Prism Const.:0.0mm

145 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
146 Occupy Pt: Occupy Point: 655
Northing: 892126.464763ft Easting: 1902222.542106ft
Elevation: 417.514046ft Description: TR-t nail
147 Note: HR:5.0 (5.0 + 0.0 Offset)
148 Line of Sight (HI/HR): Height of Instrument: 5.42ft
Height of Rod: 5.0ft
149 Backsight: Occupy Point: 655
Backsight Point: 650 Backsight Azimuth: 317.5033
Backsight Circle: 0.0000
150 Note: Fixed HR at Backsight:5.4 (5.4 + 0.0 Offset), Prism Const.:0.0mm
151 Note: BS check 655 - 650:ZE85.5254,SD161.310323,HD err= 0.003168, VD err= -0.003955
152 Note: BS Circle check : angular err= 0.0000
153 Side Shot: Occupy Point: 655
Foresight Point: 656 Angle Right: 292.1945
Zenith Angle: 93.1858 Slope Distance: 192.320385ft Description: b-608
154 Side Shot: Occupy Point: 655
Foresight Point: 657 Angle Right: 218.4128
Zenith Angle: 94.3155 Slope Distance: 133.770268ft Description: b-609
155 Side Shot: Occupy Point: 655
Foresight Point: 658 Angle Right: 186.1747
Zenith Angle: 98.0013 Slope Distance: 219.185438ft Description: b-333/ow-333
156 Store Point: Point Name: 652
Northing: 892453.667205ft Easting: 1902088.403584ft
Elevation: 420.963273ft Description: r-1/r-2
157 Note: Foresight Target:My Prism, HR:5.05 (5.05 + 0.0 Offset), Prism Const.:0.0mm
158 Note: HR:5.05 (5.05 + 0.0 Offset)
159 Line of Sight (HI/HR): Height of Instrument: 5.42ft
Height of Rod: 5.05ft
160 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5956
161 Note: BS zenith: 85.5306, slope dist: 161.310323
162 Repeat Backsight: Occupy Point: 655
Backsight Point: 650 Angle Right: 359.5956
Zenith Angle: 85.5306 Slope Distance: 161.310323ft Height of Rod: 5.4ft Description: TR-t nail
163 Repeat Directional: Foresight Direct
Set: 1 Angle: 201.2055
164 Repeat Directional: Zenith Direct
Set: 1 Zenith: 96.1306
165 Multiple Distances: Set: 1
Slope Distance: 375.655751ft
166 Repeat Foresight: Occupy Point: 655
Foresight Point: 659 Angle Right: 201.2055
Zenith Angle: 96.1306 Slope Distance: 375.655751ft Height of Rod: 5.05ft Description: TR-t nail
167 Repeat Directional: Foresight Reverse
Set: 1 Angle: 21.2057
168 Note: RD,ZV 1:263.4650
169 Note: Not shooting reverse distances.
170 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5946
171 Note: Horizontal Angle Error: 0.0012
172 Note: Zenith Angle Error: 0.0000
173 Note: Horizontal Angle Error compares to the average: 0.0000
174 Note: Zenith Angle Error compares to the

average: 0.0000
175 Note: Slope Distance Error compares to the average: 0.0
176 Traverse: Occupy Point: 655
Foresight Point: 659 Angle Right: 201.2105
Zenith Angle: 96.1306 Slope Distance: 375.655751ft Description: TR-t nail
177 Occupy Pt: Occupy Point: 659
Northing: 891777.428864ft Easting: 1902355.16967ft
Elevation: 377.194876ft Description: TR-t nail
178 Backsight: Occupy Point: 659
Backsight Point: 655 Backsight Azimuth: 339.1139
Backsight Circle: 0.0000
179 Note: Fixed HR at Backsight:5.4 (5.4 + 0.0 Offset), Prism Const.:0.0mm
180 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
181 Occupy Pt: Occupy Point: 659
Northing: 891777.428864ft Easting: 1902355.16967ft
Elevation: 377.194876ft Description: TR-t nail
182 Note: HR:5.0 (5.0 + 0.0 Offset)
183 Line of Sight (HI/HR): Height of Instrument: 5.06ft
Height of Rod: 5.0ft
184 Backsight: Occupy Point: 659
Backsight Point: 655 Backsight Azimuth: 339.1139
Backsight Circle: 0.0000
185 Note: Fixed HR at Backsight:5.58 (5.58 + 0.0 Offset), Prism Const.:0.0mm
186 Note: BS check 659 - 655:ZE83.4626,SD375.675751,HD err= 0.014254, VD err= -0.096232
187 Note: BS Circle check : angular err= 0.0000
188 Note: BS check 659 - 655:ZE83.4602,SD375.675751,HD err= 0.009512, VD err= -0.052778
189 Note: BS Circle check : angular err= 0.0001
190 Occupy Pt: Occupy Point: 659
Northing: 891777.428864ft Easting: 1902355.16967ft
Elevation: 377.194876ft Description: TR-t nail
191 Backsight: Occupy Point: 659
Backsight Point: 655 Backsight Azimuth: 339.1139
Backsight Circle: 0.0000
192 Note: Fixed HR at Backsight:5.58 (5.58 + 0.0 Offset), Prism Const.:0.0mm
193 Note: BS check 659 - 655:ZE83.4535,SD375.675751,HD err= 0.004071, VD err= -0.002988
194 Note: BS Circle check : angular err= 0.0000
195 Side Shot: Occupy Point: 659
Foresight Point: 660 Angle Right: 142.2238
Zenith Angle: 92.3627 Slope Distance: 178.095356ft Description: b-331
196 Note: Foresight Target:My Prism, HR:4.84 (4.84 + 0.0 Offset), Prism Const.:0.0mm
197 Note: HR:4.84 (4.84 + 0.0 Offset)
198 Line of Sight (HI/HR): Height of Instrument: 5.06ft
Height of Rod: 4.84ft
199 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5956
200 Note: BS zenith: 83.4526, slope dist: 375.675751
201 Repeat Backsight: Occupy Point: 659
Backsight Point: 655 Angle Right: 359.5956
Zenith Angle: 83.4526 Slope Distance: 375.675751ft Height of Rod: 5.58ft Description: TR-t nail
202 Repeat Directional: Foresight Direct
Set: 1 Angle: 161.4126

203 Repeat Directional: Zenith Direct
Set: 1 Zenith: 88.0728
204 Multiple Distances: Set: 1
Slope Distance: 229.220458ft
205 Repeat Foresight: Occupy Point: 659
Foresight Point: 661 Angle Right: 161.4126
Zenith Angle: 88.0728 Slope Distance: 229.220458ft Height of Rod:
4.84ft Description: TR-t nail
206 Repeat Directional: Foresight Reverse
Set: 1 Angle: 341.4120
207 Note: RD,ZV 1:271.5238
208 Note: Not shooting reverse distances.
209 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5945
210 Note: Horizontal Angle Error: 0.0005
211 Note: Zenith Angle Error: 0.0000
212 Note: Horizontal Angle Error compares to the
average: 0.0000
213 Note: Zenith Angle Error compares to the
average: 0.0000
214 Note: Slope Distance Error compares to the
average: 0.0
215 Traverse: Occupy Point: 659
Foresight Point: 661 Angle Right: 161.4133
Zenith Angle: 88.0728 Slope Distance: 229.220458ft Description: TR-t
nail
216 Occupy Pt: Occupy Point: 661
Northing: 891599.701297ft Easting: 1902499.674076ft
Elevation: 384.91698ft Description: TR-t nail
217 Backsight: Occupy Point: 661
Backsight Point: 659 Backsight Azimuth: 320.5312
Backsight Circle: 0.0000
218 Note: Fixed HR at Backsight:5.58 (5.58 + 0.0
Offset), Prism Const.:0.0mm
219 Note: Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm
220 Occupy Pt: Occupy Point: 661
Northing: 891599.701297ft Easting: 1902499.674076ft
Elevation: 384.91698ft Description: TR-t nail
221 Note: HR:5.0 (5.0 + 0.0 Offset)
222 Line of Sight (HI/HR): Height of Instrument: 4.84ft
Height of Rod: 5.0ft
223 Backsight: Occupy Point: 661
Backsight Point: 659 Backsight Azimuth: 320.5312
Backsight Circle: 0.0000
224 Note: Fixed HR at Backsight:5.24 (5.24 + 0.0
Offset), Prism Const.:0.0mm
225 Note: BS check 661 -
659:ZE91.5008,SD229.215458,HD err= 0.000202, VD err= -0.019342
226 Note: BS Circle check : angular err= 0.0000
227 Side Shot: Occupy Point: 661
Foresight Point: 662 Angle Right: 170.5323
Zenith Angle: 99.3728 Slope Distance: 107.035214ft Description: b-421
228 Side Shot: Occupy Point: 661
Foresight Point: 663 Angle Right: 111.5059
Zenith Angle: 84.2926 Slope Distance: 129.090258ft Description: C-
309(S)
229 Note: Foresight Target:My Prism, HR:5.07
(5.07 + 0.0 Offset), Prism Const.:0.0mm
230 Note: HR:5.07 (5.07 + 0.0 Offset)
231 Line of Sight (HI/HR): Height of Instrument: 4.84ft
Height of Rod: 5.07ft
232 Repeat Directional: Backsight Direct

Set: 1 Angle: 0.0019
233 Note: BS zenith: 91.5008, slope dist.: 229.220458
234 Repeat Backsight: Occupy Point: 661
Backsight Point: 659 Angle Right: 0.0019
Zenith Angle: 91.5008 Slope Distance: 229.220458ft Height of Rod: 5.24ft Description: TR-t nail
235 Repeat Directional: Foresight Direct
Set: 1 Angle: 111.3744
236 Repeat Directional: Zenith Direct
Set: 1 Zenith: 85.0432
237 Multiple Distances: Set: 1
Slope Distance: 300.715601ft
238 Repeat Foresight: Occupy Point: 661
Foresight Point: 664 Angle Right: 111.3744
Zenith Angle: 85.0432 Slope Distance: 300.715601ft Height of Rod: 5.07ft Description: TR-t nail
239 Repeat Directional: Foresight Reverse
Set: 1 Angle: 291.3738
240 Note: RD,ZV 1:274.5542
241 Note: Not shooting reverse distances.
242 Repeat Directional: Backsight Reverse
Set: 1 Angle: 180.0019
243 Note: Horizontal Angle Error: 0.0006
244 Note: Zenith Angle Error: 0.0000
245 Note: Horizontal Angle Error compares to the average: 0.0000
246 Note: Zenith Angle Error compares to the average: 0.0000
247 Note: Slope Distance Error compares to the average: 0.0
248 Traverse: Occupy Point: 661
Foresight Point: 664 Angle Right: 111.3722
Zenith Angle: 85.0432 Slope Distance: 300.715601ft Description: TR-t nail
249 Occupy Pt: Occupy Point: 664
Northing: 891689.732724ft Easting: 1902785.381202ft
Elevation: 410.501006ft Description: TR-t nail
250 Backsight: Occupy Point: 664
Backsight Point: 661 Backsight Azimuth: 252.3034
Backsight Circle: 0.0000
251 Note: Fixed HR at Backsight:5.24 (5.24 + 0.0 Offset), Prism Const.:0.0mm
252 Note: Foresight Target:My Prism, HR:5.0 (5.0 + 0.0 Offset), Prism Const.:0.0mm
253 Occupy Pt: Occupy Point: 664
Northing: 891689.732724ft Easting: 1902785.381202ft
Elevation: 410.501006ft Description: TR-t nail
254 Note: HR:5.0 (5.0 + 0.0 Offset)
255 Line of Sight (HI/HR): Height of Instrument: 5.07ft
Height of Rod: 5.0ft
256 Backsight: Occupy Point: 664
Backsight Point: 661 Backsight Azimuth: 252.3034
Backsight Circle: 0.0000
257 Note: Fixed HR at Backsight:4.84 (4.84 + 0.0 Offset), Prism Const.:0.0mm
258 Note: BS check 664 - 661:ZE94.5553,SD300.720601,HD err= 0.00185, VD err= -0.036743
259 Note: BS Circle check : angular err= 0.0000
260 Side Shot: Occupy Point: 664
Foresight Point: 665 Angle Right: 276.5041
Zenith Angle: 90.4136 Slope Distance: 130.10526ft Description: B-329
261 Note: Foresight Target:My Prism, HR:5.25

(5.25 + 0.0 Offset), Prism Const.:0.0mm
262 Note: HR:5.25 (5.25 + 0.0 Offset)
263 Line of Sight (HI/HR): Height of Instrument: 5.07ft
Height of Rod: 5.25ft
264 Repeat Directional: Backsight Direct
Set: 1 Angle: 359.5950
265 Note: BS zenith: 94.5553, slope dist:
300.720601
266 Repeat Backsight: Occupy Point: 664
Backsight Point: 661 Angle Right: 359.5950
Zenith Angle: 94.5553 Slope Distance: 300.720601ft Height of Rod:
4.84ft Description: TR-t nail
267 Repeat Directional: Foresight Direct
Set: 1 Angle: 244.4659
268 Repeat Directional: Zenith Direct
Set: 1 Zenith: 87.5949
269 Multiple Distances: Set: 1
Slope Distance: 361.445723ft
270 Repeat Foresight: Occupy Point: 664
Foresight Point: 666 Angle Right: 244.4659
Zenith Angle: 87.5949 Slope Distance: 361.445723ft Height of Rod:
5.25ft Description: TR-t nail
271 Repeat Directional: Foresight Reverse
Set: 1 Angle: 64.4657
272 Note: RD,ZV 1:272.0006
273 Note: Not shooting reverse distances.
274 Repeat Directional: Backsight Reverse
Set: 1 Angle: 179.5952
275 Note: Horizontal Angle Error: 0.0004
276 Note: Zenith Angle Error: 0.0000
277 Note: Horizontal Angle Error compares to the
average: 0.0000
278 Note: Zenith Angle Error compares to the
average: 0.0000
279 Note: Slope Distance Error compares to the
average: 0.0
280 Traverse: Occupy Point: 664
Foresight Point: 666 Angle Right: 244.4707
Zenith Angle: 87.5949 Slope Distance: 361.445723ft Description: TR-t
nail
281 Occupy Pt: Occupy Point: 666
Northing: 891424.329838ft Easting: 1903030.334537ft
Elevation: 422.954544ft Description: TR-t nail
282 Backsight: Occupy Point: 666
Backsight Point: 664 Backsight Azimuth: 317.1740
Backsight Circle: 0.0000
283 Note: Fixed HR at Backsight:4.84 (4.84 + 0.0
Offset), Prism Const.:0.0mm
284 Note: Foresight Target:My Prism, HR:5.0 (5.0
+ 0.0 Offset), Prism Const.:0.0mm
285 Occupy Pt: Occupy Point: 666
Northing: 891424.329838ft Easting: 1903030.334537ft
Elevation: 422.954544ft Description: TR-t nail
286 Note: HR:5.0 (5.0 + 0.0 Offset)
287 Line of Sight (HI/HR): Height of Instrument: 5.09ft
Height of Rod: 5.0ft
288 Backsight: Occupy Point: 666
Backsight Point: 664 Backsight Azimuth: 317.1740
Backsight Circle: 0.0000
289 Note: Fixed HR at Backsight:5.07 (5.07 + 0.0
Offset), Prism Const.:0.0mm
290 Note: BS check 666 -
664:ZE91.5846,SD361.435723,HD err= -0.004818, VD err= -0.010796

291 Note: BS Circle check : angular err= 0.0000
292 Side Shot: Occupy Point: 666
Foresight Point: 667 Angle Right: 182.5613
Zenith Angle: 102.0800 Slope Distance: 155.12031ft Description: C-409
293 Side Shot: Occupy Point: 666
Foresight Point: 668 Angle Right: 62.1458
Zenith Angle: 83.2614 Slope Distance: 45.345091ft Description: b-328
294 Side Shot: Occupy Point: 666
Foresight Point: 669 Angle Right: 175.2714
Zenith Angle: 99.5108 Slope Distance: 190.11038ft Description: t nail
73
295 Store Point: Point Name: 73
Northing: 891297.261ft Easting: 1903167.829ft
Elevation: 390.366ft Description: t nail
296 Store Point: Point Name: 75
Northing: 892701.387ft Easting: 1903481.975ft
Elevation: 423.382ft Description: t nail
297 Occupy Pt: Occupy Point: 75
Northing: 892701.387ft Easting: 1903481.975ft
Elevation: 423.382ft Description: t nail
298 Note: HR:5.0 (5.0 + 0.0 Offset)
299 Line of Sight (HI/HR): Height of Instrument: 5.42ft
Height of Rod: 5.0ft
300 Backsight: Occupy Point: 75
Backsight Point: 58 Backsight Azimuth: 217.3412
Backsight Circle: 0.0000
301 Note: Fixed HR at Backsight:5.1 (5.1 + 0.0
Offset), Prism Const.:0.0mm
302 Note: BS check 75 -
58:ZE90.2013,SD764.051528,HD err= 0.04146, VD err= -0.070926
303 Note: BS Circle check : angular err= 0.0000
304 Side Shot: Occupy Point: 75
Foresight Point: 670 Angle Right: 341.0525
Zenith Angle: 90.2504 Slope Distance: 208.115416ft Description: b-
227/ow227
305 Side Shot: Occupy Point: 75
Foresight Point: 671 Angle Right: 0.0001
Zenith Angle: 90.2009 Slope Distance: 764.041528ft Description: ss bs
58
306 Note: Foresight Target:My Prism, HR:5.1 (5.1
+ 0.0 Offset), Prism Const.:0.0mm
307 Note: HR:5.1 (5.1 + 0.0 Offset)
308 Line of Sight (HI/HR): Height of Instrument: 5.42ft
Height of Rod: 5.1ft
309 Deleted Point: Point Name: 671
310 Side Shot: Occupy Point: 75
Foresight Point: 671 Angle Right: 0.0001
Zenith Angle: 90.2009 Slope Distance: 764.051528ft Description: ss bs
58
311 Repeat Directional: Backsight Direct
Set: 1 Angle: 0.0000
312 Note: BS zenith: 90.2012, slope dist:
764.046528
313 Repeat Backsight: Occupy Point: 75
Backsight Point: 58 Angle Right: 0.0000
Zenith Angle: 90.2012 Slope Distance: 764.046528ft Height of Rod:
5.1ft Description: t nail
314 Repeat Directional: Foresight Direct
Set: 1 Angle: 0.0000
315 Repeat Directional: Zenith Direct
Set: 1 Zenith: 90.2009
316 Multiple Distances: Set: 1
Slope Distance: 764.041528ft

317 Repeat Foresight: Occupy Point: 75
Foresight Point: 672 Angle Right: 0.0000
Zenith Angle: 90.2009 Slope Distance: 764.041528ft Height of Rod: 5.1ft Description: rs bs 58
318 Repeat Directional: Foresight Reverse
Set: 1 Angle: 180.0000
319 Note: RD,ZV 1:269.3940
320 Note: Not shooting reverse distances.
321 Repeat Directional: Backsight Reverse
Set: 1 Angle: 180.0002
322 Note: Horizontal Angle Error: 0.0002
323 Note: Zenith Angle Error: 0.0000
324 Note: Horizontal Angle Error compares to the average: 0.0000
325 Note: Zenith Angle Error compares to the average: 0.0000
326 Note: Slope Distance Error compares to the average: 0.0
327 Traverse: Occupy Point: 75
Foresight Point: 672 Angle Right: 359.5959
Zenith Angle: 90.2009 Slope Distance: 764.041528ft Description: rs bs 58
328 Occupy Pt: Occupy Point: 672
Northing: 892095.907287ft Easting: 1903016.203331ft
Elevation: 419.223675ft Description: rs bs 58
329 Backsight: Occupy Point: 672
Backsight Point: 75 Backsight Azimuth: 37.3411
Backsight Circle: 0.0000
330 Note: Fixed HR at Backsight:5.1 (5.1 + 0.0 Offset), Prism Const.:0.0mm