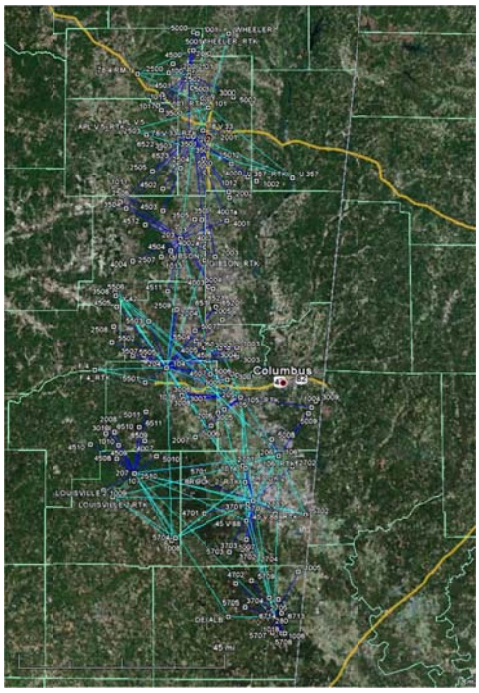
LiDAR GROUND CONTROL SURVEY REPORT



NRCS TUPELO, MS 1M NPS LIDAR

TUPELO, MS

USGS – ROLLA, MO

April, 2012

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LIDAR GROUND CONTROL SURVEY REPORT

NRCS TUPELO, MS 1M NPS LIDAR

United States Geological Survey (USGS)

April, 2012

Prepared by:

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NOTICE OF PROPRIETARY INFORMATION

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INTRODUCTION

Report Date: April 2012

Project Name: NRCS Tupelo MS 1.0m NPS LiDAR Task Order

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This report contains a comprehensive outline of the LiDAR Ground Control Survey that supported the Tupelo, MS 1.0m NPS LiDAR Task Order. All surveys were performed in such a way as to achieve ground control accuracies that meet or exceed the National Mapping Accuracy Standards.

PROJECT AREA

The project area consists of 3,697 square miles in and near Tupelo, Mississippi, consisting of portions of five (5) HUC's in NE Mississippi.

PURPOSE

The purpose of this survey was to establish three-dimensional coordinates for 18 ground

control points (GCPs) and a minimum of 20 quality control (QC) points uniformly dispersed over the project area and in each of the land cover classifications in which there is more than 10% coverage.

The GCPs were located on open, bare earth surfaces with a level slope to enable effective assessment of swath-to-swath reproducibility and absolute accuracy. The QC points were collected uniformly dispersed over the project area in the appropriate land cover categories to verify fundamental, supplemental, and consolidated vertical accuracies throughout the task order AOI.

DATE OF SURVEY

Ground control field operations took place between February 21, 2012 and March 01, 2012.

MONUMENTATION

Prior to aerial imagery acquisition, Woolpert field crews performed a field reconnaissance to verify the existence and suitability of pre-selected existing National Geodetic Survey (NGS) control stations. These existing control stations were utilized to ensure that quality *x, y,* and *z* coordinate values were computed for each of the newly established photogrammetric control stations. Recovery information sheets for the existing NGS control stations can be found in Section 4 of this report. A control diagram showing the ground control stations used to support this LiDAR mapping project can be found in Section 5 of this report.

ACCURACY STANDARDS

The data collected under this task order shall meet the National Standard for spatial Database Accuracy (NSSDA) standards. The NSSDA standards specify that vertical accuracy be reported at the 95 percent confidence level for data tested by an independent source of higher accuracy.

The Fundamental Vertical Accuracy (FVA) of the LiDAR Point Cloud: 24.5 cm at a 95% confidence level, derived according to NSSDA, i.e., based on RMSEZ of 12.5 cm in the "open terrain" land cover category.

Consolidated Vertical Accuracy (CVA): 26.86 cm at a 95% confidence level, derived according to ASPRS Guidelines, Vertical Accuracy Reporting for LiDAR Data, i.e., based on the 95% error in all land cover categories combined.

Supplemental Vertical Accuracy (SVA): shall be reported for each of the land cover classes identified within the task order AOI. The target SVA is: 36.3 cm at a 95th percentile level, derived according to ASPRS Guidelines, Vertical Accuracy Reporting for LiDAR Data, i.e., based on the 95th percentile error for each required land cover class.

The overall accuracy of the ground control survey is expressed in terms of standard deviation, at a 95% confidence level, based on the published NGS control monuments that were used throughout the task order AOI. The standard deviation of the ground control survey is 0.012m horizontally and 0.024m vertically at the 95% confidence level.

GPS EQUIPMENT

Woolpert utilized a Trimble Navigation R8 Model 2 GNSS dual-frequency GPS receiver with an Air Link Communications Raven CDMA cellular modem with a service plan provided by Verizon as a base station. Additionally, Woolpert utilized a Trimble Navigation 4700 and R7 receivers, each with an Air Link Communications Raven CDMA cellular modem with a service plan provided by Verizon as base stations.

Woolpert also utilized a Trimble Navigation R8 Model 2 GNSS dual-frequency GPS receiver; a Trimble Navigation 5800; a Trimble Navigation R8 with Air Link Communications Raven CDMA cellular modems; and three TSC2 data collectors as rovers for this project.

METHODOLOGY

REAL-TIME KINEMATIC (RTK) GPS

The field crew utilized Real-Time Kinematic (RTK) GPS surveying throughout most of the ground control data collection process. Using RTK GPS techniques, observations were performed on 18 Ground Control points and more than 90 ground control quality check points. The survey was conducted using a 1-second epoch rate, in a fixed solution RTK mode, with each observation lasting between 60 to 180 seconds. Each station was occupied twice to insure the necessary horizontal and vertical accuracies were being met for this photogrammetric project.

RAPID-STATIC GPS

In addition to the RTK GPS techniques, the project field crew utilized rapid-static (RS) GPS surveying techniques on those check points within areas lacking sufficient cellular coverage for RTK measurements.

Using RS GPS techniques, observations were performed on geodetic and Temporary Survey Marks (TSM), as well as any Ground Control Stations that could not be surveyed using RTK techniques due to lack of sufficient cellular coverage. The survey was conducted at a 15-second sync rate with each observation lasting between 20-40 minutes.

CONVENTIONAL SURVEY

In order to accurately survey the Forested and Fully Grown feature classes it was necessary to utilize conventional survey practices. A pair temporary mark was set using RTK or RS techniques in the open area outside of a tree line. A Trimble fully robotic total station was used to observe these points underneath the tree canopy.

GPS DATA ANALYSIS AND PROCESSING

The field crew chief processed all session baselines each day using *Trimble Navigation's* Trimble Business Center (TBC) Version 2.60 baseline processor with the accompanying broadcast ephemeris. Daily processing ensured the integrity of the network as it was

constructed, and allowed the field crews to immediately reschedule observations of poor baselines. Once the field work was complete, the processed baselines were then run through a rigorous loop closure analysis. As a result of this analysis, unacceptable GPS vectors were removed and field blunders, if any, were detected and eliminated. Once this process was completed, both unconstrained and constrained adjustments were conducted in order to effectively incorporate the static observation data.

The GPS control stations consisted of the following:

Dimension	New and Existing Control Stations
3-D	45 V 88, 78 4 RM 1, 78 V 33, APL V 5, B 350, BROOK 2, DEKALB, F 4, LOUISVILLE 2, U 357, WHEELER, Y 42, 100-107, 170 and 171
2-D	GIBSON

All 100 series stations were used as Temporary Survey Mark (TSM) base stations. These points were established by using an average location based on multiple days of results from the Online Positioning User Service (OPUS).

DATUM REFERENCE AND FINAL COORDINATES

New horizontal GPS control within the Tupelo, MS, area was based on the UTM Coordinate System Zone 16 North, referenced to North American Datum 1983, national re-adjustment of 2007 (NAD83/2007), expressed in meters All vertical control was based on the North American Vertical Datum of 1988 (NAVD88), also expressed in meters. These coordinates for the survey can be found in Section 2 of this report.

QUALITY ASSURANCE

Existing NGS published control stations were surveyed to assure that there were no discrepancies in the field observation data. Close examinations of the residuals showed no distortions in orientation or scale.

The ground control data meets positional accuracies necessary to support 1.0 point per 0.3 meters squared (1' GSD) data at 95% confidence level as outlined in the *Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (NSSDA),* published by the Federal Geographic Data Committee (FGDC-STD-007.3-1998).

SECTION 2: GROUND/GEODETIC CONTROL COORDINATE LISTINGS

COORDINATE SYSTEM: GRID

HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88
ZONE: UTM 16 N
GEOID MODEL: GEOID 09
UNITS: METER

LiDAR GROUND CONTROL

Station Name	Northing (M)	Easting (M)	Elevation (M)	Description
1001	3828059.68	339178.46	151.77	SHORT GRASS
1002	3776591.96	359517.39	102.95	PID-GRASS/GRAVEL-0.50' BELOW CONC PAD
1003	3719742.06	351851.00	65.46	PID-NW CRN STOP BAR
1004	3698700.59	377102.22	72.64	PID-SHORT GRASS/CONC
1005	3642287.52	371479.51	72.25	GRAVEL / GRASS
1006	3621505.27	365493.96	59.85	GRAVEL RD
1007	3653619.22	353934.47	73.82	SPOT ON ASPHALT
1008	3653605.71	327578.46	143.96	PID-NE CRN STOP BAR
1009	3671408.52	304627.49	179.34	PID-SW CRN CONC PAD/SHORT GRASS
1010	3690945.32	305808.94	108.59	PID-SE PNT OF STOP BAR
1011	3774251.31	311686.04	121.25	ASPHALT
1012	3773079.06	349959.16	76.39	PID-NW CRN CONC/GRAVEL
1013	3750847.03	329986.88	104.19	PID-SW CRN STOP BAR
1014	3679228.25	353131.89	87.27	PID
1015	3803554.62	325391.64	164.81	ASPHALT
1016	3704014.58	331897.07	115.04	PID-NW CRN CONC CURB
1017	3801960.55	326544.36	129.79	SHORT GRASS
1018	3621401.447	366480.213	63.107	DIRT ROAD

QUALITY CONTROL POINTS

Station Name	Northing (M)	Easting (M)	Elevatio (M)	Description
2000	3822158.46	336562.28	131.28	SHORT GRASS/GRAVEL
2001	3794751.85	350187.31	95.82	SHORT GRASS
2002	3771133.93	350123.14	73.22	SHORT GRASS
2003	3750926.66	344906.81	84.03	GRAVEL
2004	3733067.15	330006.77	107.06	SHORT GRASS
2005	3729506.74	347060.94	86.63	BARE EARTH/GRAVEL

Station Name	Northing (M)	Easting (M)	Elevatio (M)	Description
2006	3697368.31	345029.44	67.25	SHORT GRASS
2007	3689313.56	336409.36	83.28	GRAVEL
2008	3692678.14	306615.38	110.16	SHORT GRASS
2500	3814677.08	329249.54	111.21	BARE EARTH
2501	3815286.94	337170.43	115.80	GRAVEL
2502	3809256.55	337234.77	113.80	SHORT GRASS/GRAVEL
2503	3793576.53	321314.56	119.06	BARE EARTH GRAVEL
2504	3781774.26	332859.23	81.93	BARE EARTH SHORT GRASS
2505	3780868.73	323242.44	155.15	BARE EARTH GRAVEL
2506	3770361.84	312015.39	114.19	BARE EARTH GRAVEL BARE EARTH
2507	3751241.37	325822.98	94.56	BARE EARTH SHORT GRASS
2508	3727829.92	309143.29	91.53	BARE EARTH SHORT GRASS
2509	3733318.69	330888.02	94.89	BARE EARTH GRAVEL
2510	3677192.58	315180.97	157.60	BARE EARTH SHORT GRASS
2701	3678387.63	354139.85	78.43	GRAVEL ROAD
2702	3678674.91	370178.95	69.64	GRAVEL ROAD
2703	3662590.76	363952.41	65.36	SHORT GRASS
2704	3647865.81	356511.80	75.03	GRAVEL RD
2705	3632895.51	364482.54	59.94	SHORT GRASS
3000	3806141.40	344848.93	107.47	URBAN
3001	3710668.69	350076.57	59.75	URBAN
3002	3717718.41	347129.21	63.31	URBAN
3003	3716494.72	351764.85	55.04	URBAN
3004	3719845.69	348936.76	68.95	URBAN
3005	3698451.84	347183.65	69.44	URBAN
3006	3702660.86	332027.39	113.12	URBAN
3007	3702207.04	332583.78	112.18	URBAN
3008	3703635.96	332055.68	115.99	URBAN
3009	3700879.13	378541.25	96.40	URBAN
3010	3691323.65	308803.08	102.75	URBAN
3500	3803579.66	330699.26	110.10	URBAN
3501	3792742.21	335653.98	102.29	URBAN/CONC
3502	3784844.07	340832.46	91.51	URBAN CONC
3503	3786617.15	326980.27	101.41	URBAN SHORT GRASS
3504	3768070.05	314051.51	118.23	URBAN SHORT GRASS
3504 Alt.	3768067.77	314053.17	118.21	URBAN SHORT GRASS
3505	3763870.42	337479.31	103.01	URBAN CONC
3506	3763719.80	339891.24	98.42	URBAN CONC
3507	3717646.13	319322.25	85.15	URBAN CONC.
3508	3739728.90	309739.21	103.61	URBAN CONC
3701	3666064.97	354638.26	68.70	CONC
3702	3650353.51	354170.77	64.36	URBAN CONC

Station Name	Northing (M)	Easting (M)	Elevatio (M)	Description
3703	3650156.94	352701.27	67.91	URBAN CONC
3704	3633490.15	361336.18	67.58	URBAN CONC
4000	3778030.87	356467.56	99.35	BRUSH
4001	3763218.15	349126.97	96.86	BRUSH
4001 Alt.	3763210.03	349124.73	96.71	BRUSH
4002	3754334.26	340950.97	98.21	BRUSH
4002 Alt.	3754334.54	340950.60	98.12	BRUSH
4003	3740955.86	342503.49	73.52	BRUSH
4004	3750024.61	316041.11	94.37	BRUSH
4005	3719990.19	339779.92	58.04	BRUSH
4006	3692989.33	342557.08	99.55	BRUSH
4007	3688339.25	319122.53	97.51	BRUSH
4500	3817745.05	330719.62	133.27	BRUSH
4501	3807236.46	326976.15	142.76	BRUSH
4502	3774631.17	326700.67	156.18	BRUSH
4503	3767037.66	326657.71	101.85	BRUSH
4504	3753291.08	329120.08	106.12	BRUSH
4505	3734607.42	310256.38	98.62	BRUSH
4506	3719916.79	340229.97	56.87	BRUSH
4507	3710740.12	342658.97	74.62	BRUSH
4508	3682286.75	309407.80	99.59	BRUSH
4509	3686910.60	310104.26	132.49	BRUSH
4510	3687333.43	300433.26	177.63	BRUSH
4511	3739624.95	327827.64	71.65	BRUSH
4512	3762325.44	320518.31	119.59	BRUSH
4701	3662935.72	339114.21	73.22	TALL GRASS
4702	3638536.51	349950.83	76.92	TALL GRASS BRUSH
5000	3828626.78	337836.06	213.35	BRUSH TREES
5001	3822246.67	337763.48	140.15	BRUSH TREES
5002	3805998.62	351971.21	139.89	BRUSH TREES
5003	3805755.74	340619.04	96.51	BRUSH TREES
5004	3740185.57	344050.12	86.42	BRUSH TREES
5005	3708733.58	348337.70	66.87	BRUSH TREES
5006	3710211.14	351809.07	54.64	BRUSH TREES
5007	3725992.61	336996.76	74.70	BRUSH TREES
5008	3688198.56	363294.60	73.00	BRUSH TREES
5009	3696686.46	375987.93	75.90	BRUSH TREES
5010	3682939.91	323015.66	84.43	BRUSH TREES
5011	3698124.20	319709.57	97.72	BRUSH TREES
5012	3782935.10	350924.45	92.01	BRUSH TREES
5500	3780154.24	341456.83	77.15	BRUSH TREES
5501	3708200.23	319635.39	89.74	BRUSH TREES

Station Name	Northing (M)	Easting (M)	Elevatio (M)	Description
5502	3722454.07	308416.23	118.05	BRUSH TREES
5503	3729473.23	321166.20	85.68	BRUSH TREES
5504	3722414.95	337219.15	76.74	BRUSH TREES
5505	3717427.10	315562.51	86.86	BRUSH TREES
5506	3738412.06	310014.91	101.14	BRUSH TREES
5701	3674409.63	337335.31	73.22	BRUSH TREES
5702	3661966.00	374344.99	64.81	BRUSH TREES
5703	3649374.90	347973.53	80.10	TREES BRUSH
5704	3654461.15	328982.25	124.64	BRUSH TREES
5705	3630552.15	353025.44	118.69	BRUSH AND TREES
5706	3628665.84	361058.33	62.43	BRUSH TREES
5707	3621688.06	362172.74	72.93	BRUSH TREES
5708	3621057.15	365909.66	55.29	BRUSH TREES
6500	3692839.61	317054.07	87.87	WOODS
6501	3692836.87	317070.34	87.75	WOODS
6502	3692836.74	317087.78	87.80	WOODS
6503	3692836.12	317103.97	87.79	WOODS
6504	3692834.81	317126.84	87.74	WOODS
6505	3692832.84	317142.11	87.80	WOODS
6506	3692835.20	317157.36	87.86	WOODS
6507	3692829.73	317181.65	87.77	WOODS
6508	3692823.22	317209.74	87.51	WOODS
6509	3692826.78	317233.57	87.63	WOODS
6510	3692825.39	317262.42	87.36	WOODS
6511	3692831.18	317301.47	87.22	WOODS
6512	3733972.20	344637.41	75.97	WOODS
6513	3733983.94	344662.20	76.03	WOODS
6514	3733988.73	344687.15	76.15	WOODS
6515	3733992.39	344718.23	76.34	WOODS
6516	3733994.02	344749.01	76.34	WOODS
6517	3734000.02	344771.75	76.55	WOODS
6518	3734001.13	344801.05	76.60	WOODS
6519	3733994.28	344832.54	76.78	WOODS
6520	3733993.06	344859.19	76.93	WOODS
6521	3733985.44	344891.00	77.11	WOODS
6522	3788845.09	325983.08	96.43	WOODS
6523	3788848.33	325954.51	96.27	WOODS
6524	3788860.28	325930.20	96.37	WOODS
6525	3788872.18	325905.77	96.48	WOODS
6526	3788884.23	325880.61	96.33	WOODS
6527	3788895.84	325849.91	96.47	WOODS
6528	3788909.29	325825.30	96.52	WOODS

Station Name	Northing (M)	Easting (M)	Elevatio (M)	Description
6529	3788924.23	325799.47	96.63	WOODS
6530	3788937.18	325773.95	96.69	WOODS
6531	3788946.69	325749.11	96.78	WOODS
6701	3628373.32	365404.93	56.31	DEEP TREES
6702	3628336.00	365422.52	56.75	DEEP TREES
6703	3628295.99	365423.63	57.16	DEEP TREES
6704	3628270.28	365416.86	56.34	DEEP TREES
6705	3628242.40	365429.13	56.11	DEEP TREES
6711	3628389.56	365427.70	57.08	DEEP TREES
6712	3628365.65	365458.89	57.12	DEEP TREES
6713	3628342.95	365487.57	57.92	DEEP TREES
6714	3628320.79	365513.64	58.44	DEEP TREES
6715	3628298.20	365540.80	58.83	DEEP TREES
6716	3628276.09	365567.93	58.98	DEEP TREES

CONTROL BASE STATIONS

Station Name	Northing (M)	Easting (M)	Elevation (M)	Description
100	3813770.58	336112.54	118.03	TSM
101	3802513.18	343292.19	87.34	TSM
102	3792906.35	337306.82	106.51	TSM
103	3757347.37	332475.35	85.10	TSM
104	3713154.39	327035.23	78.30	TSM
105	3702605.15	352819.93	82.74	TSM
106	3682408.22	365543.71	59.76	TSM
107	3677190.27	315199.69	157.33	TSM
170	3667144.02	356503.94	71.39	TSM
171	3626707.08	362916.61	58.14	TSM

TEMPORARY SURVEY POINTS

Station Name	Northing (M)	Easting (M)	Elevation (M)	Description
200	3813671.74	336098.06	115.88	TSM
201	3802477.15	343259.87	87.52	TSM
202	3792668.41	337386.00	104.52	TSM
203	3757344.66	332461.47	85.30	TSM
204	3713150.43	327042.74	78.61	TSM
205	3702094.69	352822.34	78.10	TSM
206	3682284.08	365556.48	59.77	TSM
207	3677077.24	315403.19	157.91	TSM
250	3692892.68	317033.22	90.18	TSM
251	3693091.47	316976.63	90.59	TSM
252	3733568.07	344703.74	80.67	TSM
253	3733810.10	344655.44	77.00	TSM
255	3789045.24	325666.32	100.02	TSM
256	3788940.09	325847.93	100.18	TSM
280	3628422.49	365387.87	56.56	TSM
281	3628467.49	365147.02	56.05	TSM

NGS CONTROL CHECK POINTS

Station Name	Northing (M)	Easting (M)	Elevation (M)	Description
45 V 88	3660024.38	354020.64	53.38	DJ0699
78 4 RM 1	3814471.92	318527.69	153.56	EG0620
78 V 33	3794680.99	340705.43	96.42	EG0587
APL V 5	3795057.97	316011.89	121.26	EG1240
B 350	3719648.91	346093.63	66.08	DJ1528
BROOK 2	3673533.94	353844.87	75.09	DJ2131
DEKALB	3627321.87	347205.55	155.45	CO1288
F 4	3712784.00	302384.77	129.01	DJ1152
GIBSON	3749800.19	340712.10	90.51	DJ1022
LOUISVILLE 2	3669038.96	307736.87	174.58	DJ1300
U 357	3777484.96	371849.95	79.03	EG1453
WHEELER	3827775.50	350588.53	124.28	EG0791

COORDINATE SYSTEM: GEODETIC

HORIZONTAL DATUM: WGS 84
VERTICAL DATUM: NAVD88
GEOID MODEL: GEOID 09
UNITS: METER

LiDAR GROUND CONTROL

Statio Name	Northing (M)	Easting (M)	Elevatio (M)	Description
1001	N34°34'54.31244	W88°45'12.31955	124.43	SHORT GRASS
1002	N34°07'14.68768	W88°31'23.97096	75.22	PID-GRASS/GRAVEL-0.50' BELOW CONC
1003	N33°36'25.74853	W88°35'48.67962	37.46	PID-NW CRN STOP BAR
1004	N33°25'14.27041	W88°19'18.69852	44.26	PID-SHORT GRASS/CONC
1005	N32°54'40.55598	W88°22'27.69828	43.44	GRAVEL / GRASS
1006	N32°43'23.28782	W88°26'07.20329	31.11	GRAVEL RD
1007	N33°00'40.46825	W88°33'49.40827	45.26	SPOT ON ASPHALT
1008	N33°00'26.15917	W88°50'44.74536	115.65	PID-NE CRN STOP BAR
1009	N33°09'49.93582	W89°05'42.43640	151.30	PID-SW CRN CONC PAD/SHORT GRASS
1010	N33°20'24.67922	W89°05'11.91161	80.57	PID-SE PNT OF STOP BAR
1011	N34°05'31.64640	W89°02'28.41276	93.84	ASPHALT
1012	N34°05'15.89376	W88°37'34.78210	48.69	PID-NW CRN CONC/GRAVEL
1013	N33°53'03.43321	W88°50'18.23532	76.60	PID-SW CRN STOP BAR
1014	N33°14'31.35916	W88°34'35.16897	58.80	PID
1015	N34°21'31.07366	W88°53'55.16868	137.55	ASPHALT
1016	N33°27'44.65845	W88°48'31.99938	86.89	PID-NW CRN CONC CURB
1017	N34°20'40.04573	W88°53'08.90752	102.49	SHORT GRASS
1018	N32°43'20.34925	W88°25'29.27160	34.355	DIRT ROAD

QUALITY CONTROL POINTS

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
2000	N34°31'41.33401"	W88°46'50.87931"	103.97	SHORT GRASS/GRAVEL
2001	N34°16'59.38062"	W88°37'39.37947"	68.23	SHORT GRASS
2002	N34°04'12.84999"	W88°37'27.18006"	45.52	SHORT GRASS
2003	N33°53'14.30226"	W88°40'37.71446"	56.39	GRAVEL
2004	N33°43'26.44465"	W88°50'05.13188"	79.32	SHORT GRASS
2005	N33°41'40.23763"	W88°39'00.53024"	58.80	BARE EARTH/GRAVEL
2006	N33°24'16.07064"	W88°39'59.34543"	38.90	SHORT GRASS
2007	N33°19'50.03884"	W88°45'27.65869"	54.92	GRAVEL
2008	N33°21'21.43263"	W89°04'42.07051"	82.15	SHORT GRASS
2500	N34°27'34.30055"	W88°51'32.20122"	83.96	BARE EARTH
2501	N34°27'58.70116"	W88°46'22.31153"	88.47	GRAVEL

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
2502	N34°24'43.05035"	W88°46'15.65950"	86.43	SHORT GRASS/GRAVEL
2503	N34°16'04.80314"	W88°56'27.23119"	91.77	BARE EARTH GRAVEL
2504	N34°09'48.72916"	W88°48'47.78787"	54.40	BARE EARTH SHORT GRASS
2505	N34°09'13.63826"	W88°55'02.53308"	127.74	BARE EARTH GRAVEL
2506	N34°03'25.65766"	W89°02'12.54536"	86.74	BARE EARTH GRAVEL BARE EARTH
2507	N33°53'13.78239"	W88°53'00.53261"	66.98	BARE EARTH SHORT GRASS
2508	N33°40'23.72392"	W89°03'31.29923"	63.79	BARE EARTH SHORT GRASS
2509	N33°43'35.11526"	W88°49'31.07858"	67.15	BARE EARTH GRAVEL
2510	N33°13'04.31391"	W88°58'59.46349"	129.41	BARE EARTH SHORT GRASS
2701	N33°14'04.56436"	W88°33'55.74650"	49.96	GRAVEL ROAD
2702	N33°14'21.26011"	W88°23'36.34478"	41.13	GRAVEL ROAD
2703	N33°05'36.37791"	W88°27'28.22433"	36.77	SHORT GRASS
2704	N32°57'34.93595"	W88°32'06.87400"	46.41	GRAVEL RD
2705	N32°49'32.61565"	W88°26'52.03252"	31.19	SHORT GRASS
3000	N34°23'06.17459"	W88°41'15.49242"	80.02	URBAN
3001	N33°31'30.35603"	W88°36'52.02510"	31.57	URBAN
3002	N33°35'17.66481"	W88°38'50.58673"	35.28	URBAN
3003	N33°34'40.30443"	W88°35'50.07806"	26.98	URBAN
3004	N33°36'27.63808"	W88°37'41.78580"	40.96	URBAN
3005	N33°24'52.35182"	W88°38'36.64211"	41.08	URBAN
3006	N33°27'00.79709"	W88°48'26.04128"	84.96	URBAN
3007	N33°26'46.38194"	W88°48'04.19539"	84.00	URBAN
3008	N33°27'32.45994"	W88°48'25.60251"	87.84	URBAN
3009	N33°26'25.58163"	W88°18'24.05054"	68.04	URBAN
3010	N33°20'38.88702"	W89°03'16.44296"	74.70	URBAN
3500	N34°21'35.05922"	W88°50'27.51189"	82.76	URBAN
3501	N34°15'46.25137"	W88°47'06.18728"	74.80	URBAN/CONC
3502	N34°11'32.84221"	W88°43'38.54628"	63.90	URBAN CONC
3503	N34°12'22.42802"	W88°52'40.77075"	73.99	URBAN SHORT GRASS
3504	N34°02'12.60305"	W89°00'51.40830"	90.77	URBAN SHORT GRASS
3504 Alt.	N34°02'12.52990"	W89°00'51.34176"	90.74	URBAN SHORT GRASS
3505	N34°00'10.33749"	W88°45'35.38878"	75.41	URBAN CONC
3506	N34°00'06.78419"	W88°44'01.30584"	70.80	URBAN CONC
3507	N33°34'59.65515"	W88°56'48.79670"	57.26	URBAN CONC.
3508	N33°46'50.21446"	W89°03'17.37124"	75.99	URBAN CONC
3701	N33°07'24.80829"	W88°33'29.40969"	40.19	CONC
3702	N32°58'54.57295"	W88°33'38.43741"	35.78	URBAN CONC
3703	N32°58'47.48114"	W88°34'34.92147"	39.35	URBAN CONC
3704	N32°49'50.50390"	W88°28'53.32787"	38.88	URBAN CONC
4000	N34°07'59.89547"	W88°33'23.84387"	71.63	BRUSH

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
4001	N33°59'55.43042"	W88°38'01.10217"	69.19	BRUSH
4001 Alt.	N33°59'55.16571"	W88°38'01.18438"	69.04	BRUSH
4002	N33°55'02.76956"	W88°43'13.87544"	70.60	BRUSH
4002 Alt.	N33°55'02.77856"	W88°43'13.89020"	70.51	BRUSH
4003	N33°47'49.42082"	W88°42'04.82058"	45.85	BRUSH
4004	N33°52'28.31622"	W88°59'20.21852"	66.80	BRUSH
4005	N33°36'27.50997"	W88°43'37.05988"	30.08	BRUSH
4006	N33°21'52.64600"	W88°41'32.26632"	71.18	BRUSH
4007	N33°19'08.46022"	W88°56'35.28956"	69.33	BRUSH
4500	N34°29'14.72475"	W88°50'36.80066"	106.02	BRUSH
4501	N34°23'31.50162"	W88°52'55.84457"	115.49	BRUSH
4502	N34°05'53.31852"	W88°52'43.07083"	128.70	BRUSH
4503	N34°01'46.88133"	W88°52'39.30791"	74.33	BRUSH
4504	N33°54'22.24233"	W88°50'53.67403"	78.54	BRUSH
4505	N33°44'04.36417"	W89°02'53.31981"	70.94	BRUSH
4506	N33°36'25.37140"	W88°43'19.55592"	28.90	BRUSH
4507	N33°31'28.83382"	W88°41'39.51850"	46.48	BRUSH
4508	N33°15'46.01702"	W89°02'46.20796"	71.49	BRUSH
4509	N33°18'16.50899"	W89°02'22.79630"	104.41	BRUSH
4510	N33°18'23.93627"	W89°08'36.86361"	149.68	BRUSH
4511	N33°46'57.99431"	W88°51'34.35829"	43.99	BRUSH
4512	N33°59'10.25325"	W88°56'35.10360"	92.07	BRUSH
4701	N33°05'35.34912"	W88°43'26.26339"	44.79	TALL GRASS
4702	N32°52'28.92075"	W88°36'14.03918"	48.37	TALL GRASS BRUSH
5000	N34°35'11.95455"	W88°46'05.37723"	186.03	BRUSH TREES
5001	N34°31'44.88095"	W88°46'03.84226"	112.83	BRUSH TREES
5002	N34°23'05.29860"	W88°36'36.60495"	112.41	BRUSH TREES
5003	N34°22'51.34445"	W88°44'00.80475"	69.07	BRUSH TREES
5004	N33°47'25.24650"	W88°41'04.20725"	58.73	BRUSH TREES
5005	N33°30'26.66347"	W88°37'58.23094"	38.66	BRUSH TREES
5006	N33°31'16.37497"	W88°35'44.61206"	26.44	BRUSH TREES
5007	N33°39'40.79633"	W88°45'28.96987"	46.84	BRUSH TREES
5008	N33°19'27.35072"	W88°28'07.46131"	44.54	BRUSH TREES
5009	N33°24'08.42522"	W88°20'00.83497"	47.50	BRUSH TREES
5010	N33°16'15.55987"	W88°54'00.99745"	56.17	BRUSH TREES
5011	N33°24'26.36406"	W88°56'19.63912"	69.61	BRUSH TREES
5012	N34°10'36.26297"	W88°37'03.22027"	64.31	BRUSH TREES
5500	N34°09'00.98794"	W88°43'11.07367"	49.51	BRUSH TREES
5501	N33°29'53.30954"	W88°56'29.79524"	61.74	BRUSH TREES
5502	N33°37'28.81312"	W89°03'55.34699"	90.27	BRUSH TREES

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
5503	N33°41'24.58273"	W88°55'45.85917"	57.90	BRUSH TREES
5504	N33°37'44.80741"	W88°45'17.98140"	48.83	BRUSH TREES
5505	N33°34'50.22954"	W88°59'14.40461"	58.99	BRUSH TREES
5506	N33°46'07.66336"	W89°03'05.63875"	73.49	BRUSH TREES
5701	N33°11'46.80942"	W88°44'42.22828"	44.78	BRUSH TREES
5702	N33°05'20.60497"	W88°20'47.10675"	36.11	BRUSH TREES
5703	N32°58'19.76001"	W88°37'36.53724"	51.60	TREES BRUSH
5704	N33°00'54.72047"	W88°49'51.24443"	96.31	BRUSH TREES
5705	N32°48'11.23440"	W88°34'11.19960"	90.10	BRUSH AND TREES
5706	N32°47'13.76395"	W88°29'01.40838"	33.73	BRUSH TREES
5707	N32°43'27.74326"	W88°28'14.85297"	44.23	BRUSH TREES
5708	N32°43'08.92214"	W88°25'51.00552"	26.54	BRUSH TREES
6500	N33°21'33.24968"	W88°57'58.52731"	59.74	WOODS
6501	N33°21'33.17057"	W88°57'57.89604"	59.62	WOODS
6502	N33°21'33.17711"	W88°57'57.22151"	59.67	WOODS
6503	N33°21'33.16698"	W88°57'56.59498"	59.66	WOODS
6504	N33°21'33.13842"	W88°57'55.70967"	59.61	WOODS
6505	N33°21'33.08366"	W88°57'55.11748"	59.67	WOODS
6506	N33°21'33.16969"	W88°57'54.52950"	59.73	WOODS
6507	N33°21'33.00704"	W88°57'53.58612"	59.64	WOODS
6508	N33°21'32.81283"	W88°57'52.49525"	59.38	WOODS
6509	N33°21'32.94318"	W88°57'51.57616"	59.50	WOODS
6510	N33°21'32.91575"	W88°57'50.45957"	59.22	WOODS
6511	N33°21'33.12744"	W88°57'48.95367"	59.09	WOODS
6512	N33°44'03.90023"	W88°40'37.44905"	48.21	WOODS
6513	N33°44'04.29406"	W88°40'36.49322"	48.27	WOODS
6514	N33°44'04.46292"	W88°40'35.52721"	48.40	WOODS
6515	N33°44'04.59813"	W88°40'34.32197"	48.58	WOODS
6516	N33°44'04.66722"	W88°40'33.12767"	48.58	WOODS
6517	N33°44'04.87399"	W88°40'32.24788"	48.80	WOODS
6518	N33°44'04.92524"	W88°40'31.11050"	48.84	WOODS
6519	N33°44'04.71960"	W88°40'29.88300"	49.02	WOODS
6520	N33°44'04.69406"	W88°40'28.84679"	49.18	WOODS
6521	N33°44'04.46347"	W88°40'27.60622"	49.35	WOODS
6522	N34°13'34.12496"	W88°53'21.33135"	69.03	WOODS
6523	N34°13'34.21290"	W88°53'22.44993"	68.87	WOODS
6524	N34°13'34.58611"	W88°53'23.40797"	68.97	WOODS
6525	N34°13'34.95759"	W88°53'24.37120"	69.08	WOODS
6526	N34°13'35.33346"	W88°53'25.36277"	68.93	WOODS
6527	N34°13'35.69167"	W88°53'26.57068"	69.08	WOODS

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
6528	N34°13'36.11320"	W88°53'27.54150"	69.12	WOODS
6529	N34°13'36.58235"	W88°53'28.56150"	69.23	WOODS
6530	N34°13'36.98733"	W88°53'29.56795"	69.29	WOODS
6531	N34°13'37.28083"	W88°53'30.54536"	69.39	WOODS
6701	N32°47'06.21568"	W88°26'14.20290"	27.55	DEEP TREES
6702	N32°47'05.01189"	W88°26'13.50758"	27.99	DEEP TREES
6703	N32°47'03.71349"	W88°26'13.44385"	28.40	DEEP TREES
6704	N32°47'02.87588"	W88°26'13.69074"	27.58	DEEP TREES
6705	N32°47'01.97623"	W88°26'13.20461"	27.35	DEEP TREES
6711	N32°47'06.75306"	W88°26'13.33659"	28.32	DEEP TREES
6712	N32°47'05.99028"	W88°26'12.12505"	28.36	DEEP TREES
6713	N32°47'05.26605"	W88°26'11.01110"	29.16	DEEP TREES
6714	N32°47'04.55809"	W88°26'09.99775"	29.68	DEEP TREES
6715	N32°47'03.83690"	W88°26'08.94221"	30.07	DEEP TREES
6716	N32°47'03.13099"	W88°26'07.88781"	30.22	DEEP TREES

CONTROL BASE STATIONS

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
100	N34°27'08.89231"	W88°47'02.71235"	90.70	TSM
101	N34°21'07.58787"	W88°42'14.04351"	59.86	TSM
102	N34°15'52.51409"	W88°46'01.69714"	79.00	TSM
103	N33°56'35.81859"	W88°48'45.87391"	57.52	TSM
104	N33°32'38.48994"	W88°51'46.60631"	50.30	TSM
105	N33°27'10.00002"	W88°35'00.94326"	54.41	TSM
106	N33°16'20.40778"	W88°26'37.39701"	31.27	TSM
107	N33°13'04.25043"	W88°58'58.73900"	129.14	TSM
170	N33°08'00.72993"	W88°32'18.04809"	42.87	TSM
171	N32°46'11.01533"	W88°27'48.94850"	29.41	TSM

TEMPORARY SURVEY POINTS

Station Name	Northing (M)	Easting (M)	Ellips. Hgt. (M)	Description
200	N34°27'05.67676"	W88°47'03.21105"	88.55	TSM
201	N34°21'06.40097"	W88°42'15.28468"	60.04	TSM
202	N34°15'44.83736"	W88°45'58.44089"	77.00	TSM
203	N33°56'35.72266"	W88°48'46.41267"	57.72	TSM
204	N33°32'38.36592"	W88°51'46.31265"	50.61	TSM
205	N33°26'53.43261"	W88°35'00.54852"	49.76	TSM
206	N33°16'16.38369"	W88°26'36.83705"	31.29	TSM
207	N33°13'00.70738"	W88°58'50.79938"	129.72	TSM
250	N33°21'34.95892"	W88°57'59.37231"	62.05	TSM
251	N33°21'41.37552"	W88°58'01.70602"	62.46	TSM
252	N33°43'50.81888"	W88°40'34.61734"	52.91	TSM
253	N33°43'58.64871"	W88°40'36.64620"	49.24	TSM
255	N34°13'40.42874"	W88°53'33.85117"	72.63	TSM
256	N34°13'37.12613"	W88°53'26.68003"	72.784	TSM
280	N32°47'07.80443"	W88°26'14.88454"	27.81	TSM
281	N32°47'09.15885"	W88°26'24.16433"	27.29	TSM

NGS CONTROL CHECK POINTS

Station Name	Northing (M)	Easting (M)	Ellips. (M)	Description
45 V 88	N33°04'08.42794"	W88°33'49.76159"	24.78	DJ0699
78 4 RM 1	N34°27'21.05440"	W88°58'32.05051"	126.43	EG0620
78 V 33	N34°16'52.00027"	W88°43'50.03726"	68.89	EG0587
APL V 5	N34°16'49.53956"	W88°59'55.61291"	94.02	EG1240
B 350	N33°36'19.78565"	W88°39'31.94665"	38.11	DJ1528
BROOK 2	N33°11'26.87007"	W88°34'04.32938"	46.62	DJ2131
DEKALB	N32°46'23.51506"	W88°37'52.98359"	126.94	CO1288
F 4	N33°32'11.07034"	W89°07'41.57926"	101.17	DJ1152
GIBSON	N33°52'35.49125"	W88°43'20.21421"	62.94	DJ1022
LOUISVILLE 2	N33°08'35.04322"	W89°03'40.66597"	146.49	DJ1300
U 357	N34°07'49.38179"	W88°23'23.15372"	51.32	EG1453
WHEELER	N34°34'51.29547"	W88°37'44.45509"	96.84	EG0791

SECTION 3: GROUND/GEODETIC CONTROL LOGS AND PHOTOS

This section contains the station recovery information sheets and photographs for the ground control, geodetic control and checkpoint stations established for the project. The stations appear as they are ordered in the final coordinate listing of Section 2.

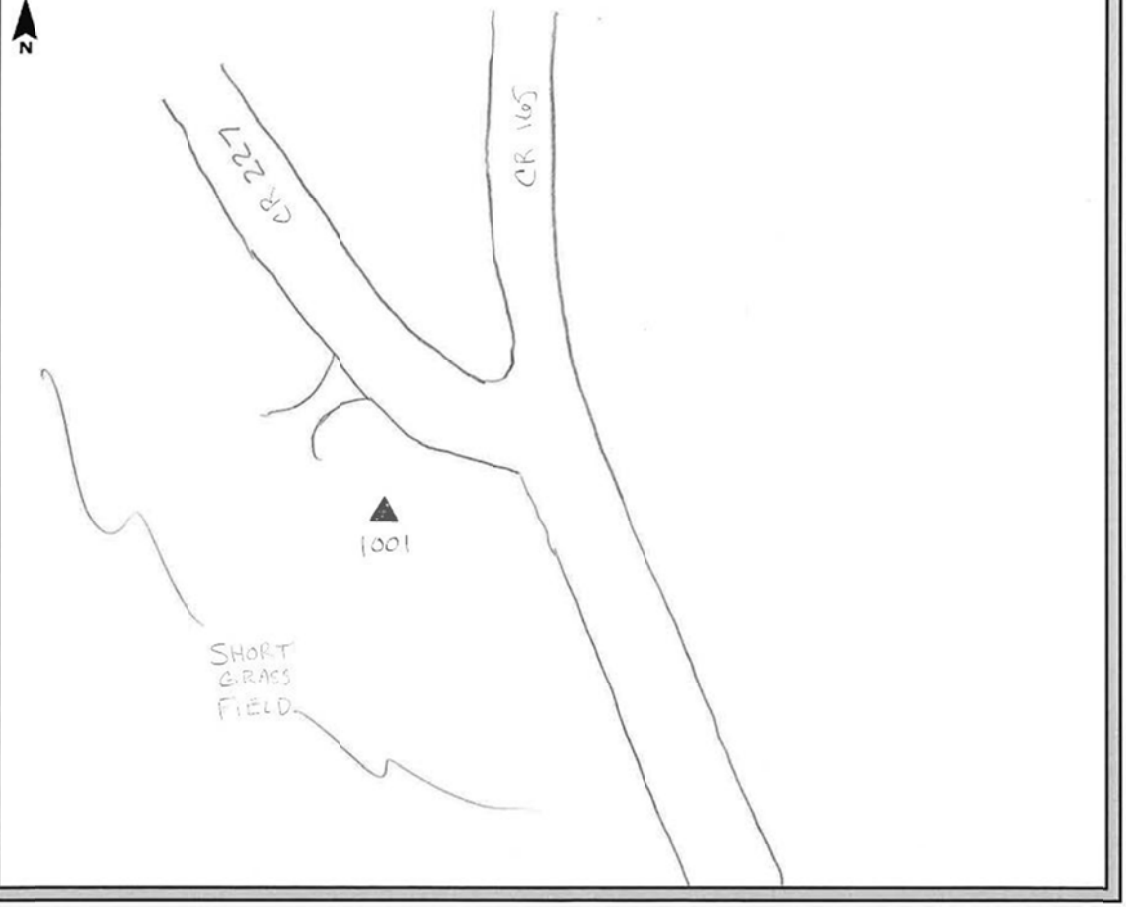
The data is assimilated on the following pages.

LiDAR GROUND CONTROL

GPS Observation Log Sheet

WOOLPERT

Project Name:		Project Number:	Survey Date: 02/21/2012
Station Name:	1001	Operator Name:	BEN CHRISTIE
Latitude:	34° 34' 54.37" N	Julian Day:	052 Session No.
Longitude:	88° 45' 12.31" W	Start Time:	End Time:
Ellip. Height:	411.32	Data File Name:	
Type of Mark:	SHORT GRASS	Type of Reciever:	R8
Stamping on Mark:		Type of Antenna:	
Weather Condition:	55° SUNNY	Antenna Height:	2m to bottom of antenna mount



1001-3N-21FEB2012

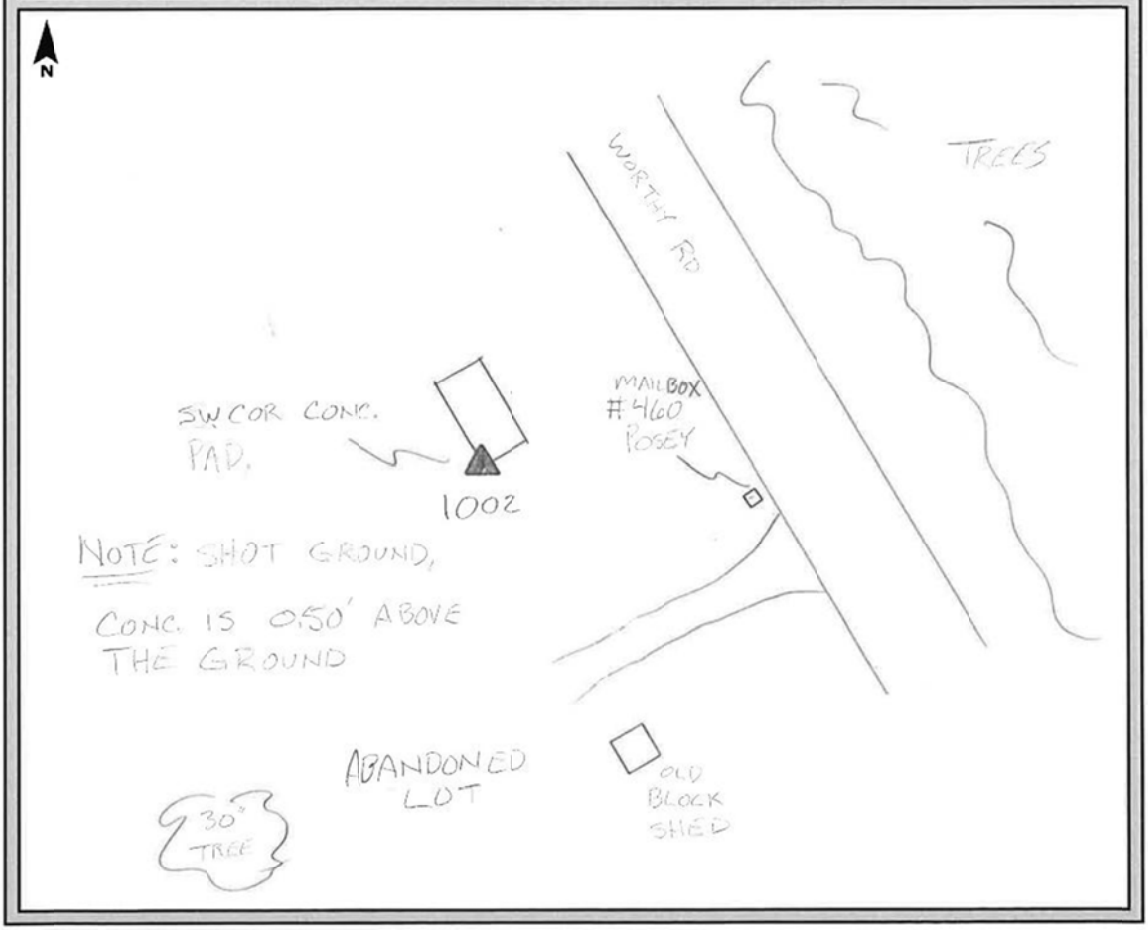
1001-3W-21FEB2012

1001-2-21FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS. LiDAR	Project Number:	Survey Date: 02/22/2012
Station Name:	1002	Operator Name:	BEN CHRISTIE
Latitude:	34° 07' 14.68" N	Julian Day: 053	Session No. —
Longitude:	88° 31' 23.97" W	Start Time: —	End Time:
Ellip. Height:	246.81 (M)	Data File Name: —	
Type of Mark:	SE CORNER CONCRETE	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	50°	Antenna Height:	2 m to bottom of antenna mount



1002-3NE-22FEB2012

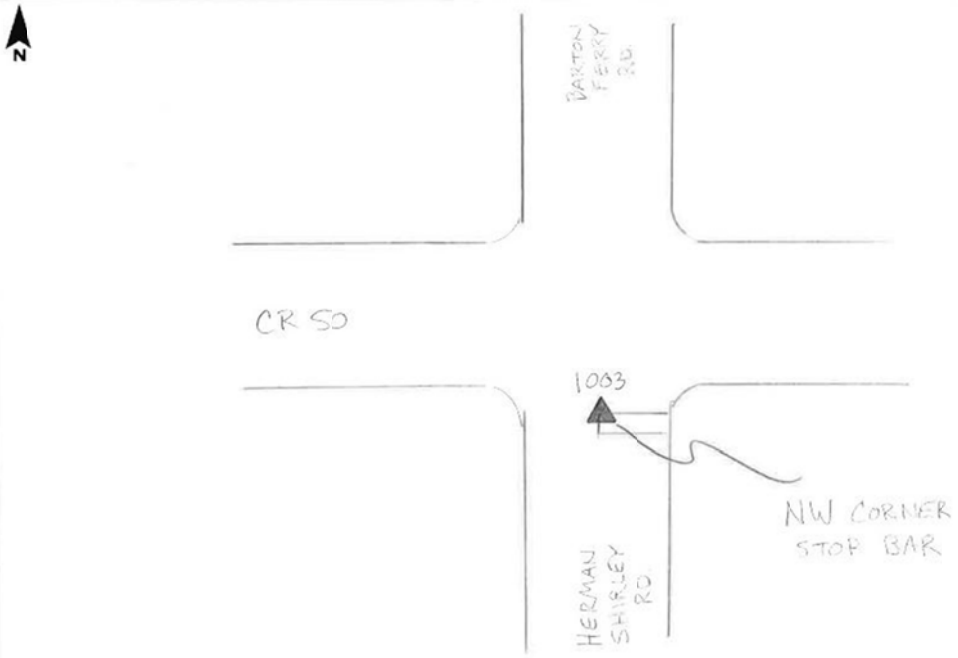
1002-3NW-22FEB2012

1002-2-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/25/2012
Station Name:	1003	Operator Name:	BEN CHRISTIE
Latitude:	33° 36' 25.76" N	Julian Day: 056	Session No. —
Longitude:	88° 35' 48.69" W	Start Time: —	End Time: —
Ellip. Height:	141.03	Data File Name: —	
Type of Mark:	NW COR. STOP BAR	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	55° SUNNY	Antenna Height:	2 m to bottom of antenna mount



1003-3N-25FEB2012

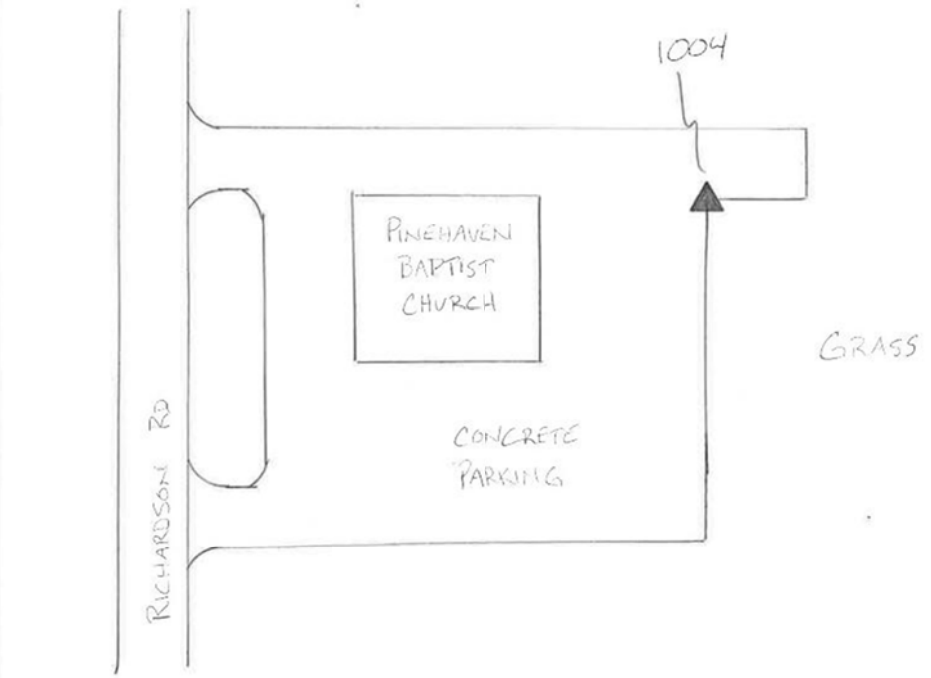
1003-3E-25FEB2012

1003-2-25FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/27/2012
Station Name:	1004	Operator Name:	BEN CHRISTIE
Latitude:	33° 25' 14.29" N	Julian Day: 058	Session No. —
Longitude:	88° 19' 18.68" W	Start Time: —	End Time: —
Ellip. Height:	149.15	Data File Name:	—
Type of Mark:	CORNER CONCRETE	Type of Reciever:	RB
Stamping on Mark:	—	Type of Antenna:	RB
Weather Condition:	55° PT. CLOUDY	Antenna Height:	2m to bottom of antenna mount



1004-3N-27FEB2012

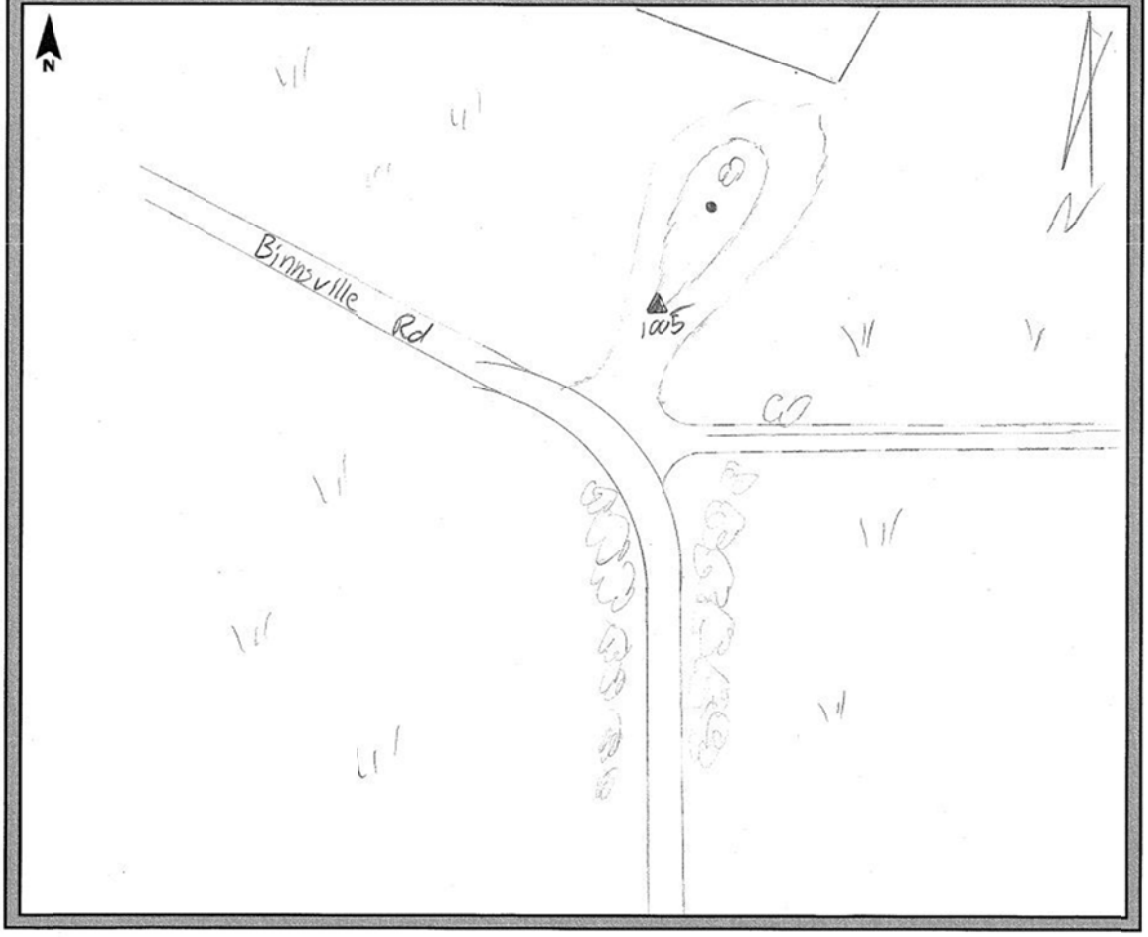
1004-3E-27FEB2012

1004-2-27FEB2012

GPS Observation Log Sheet

WOOLPERT

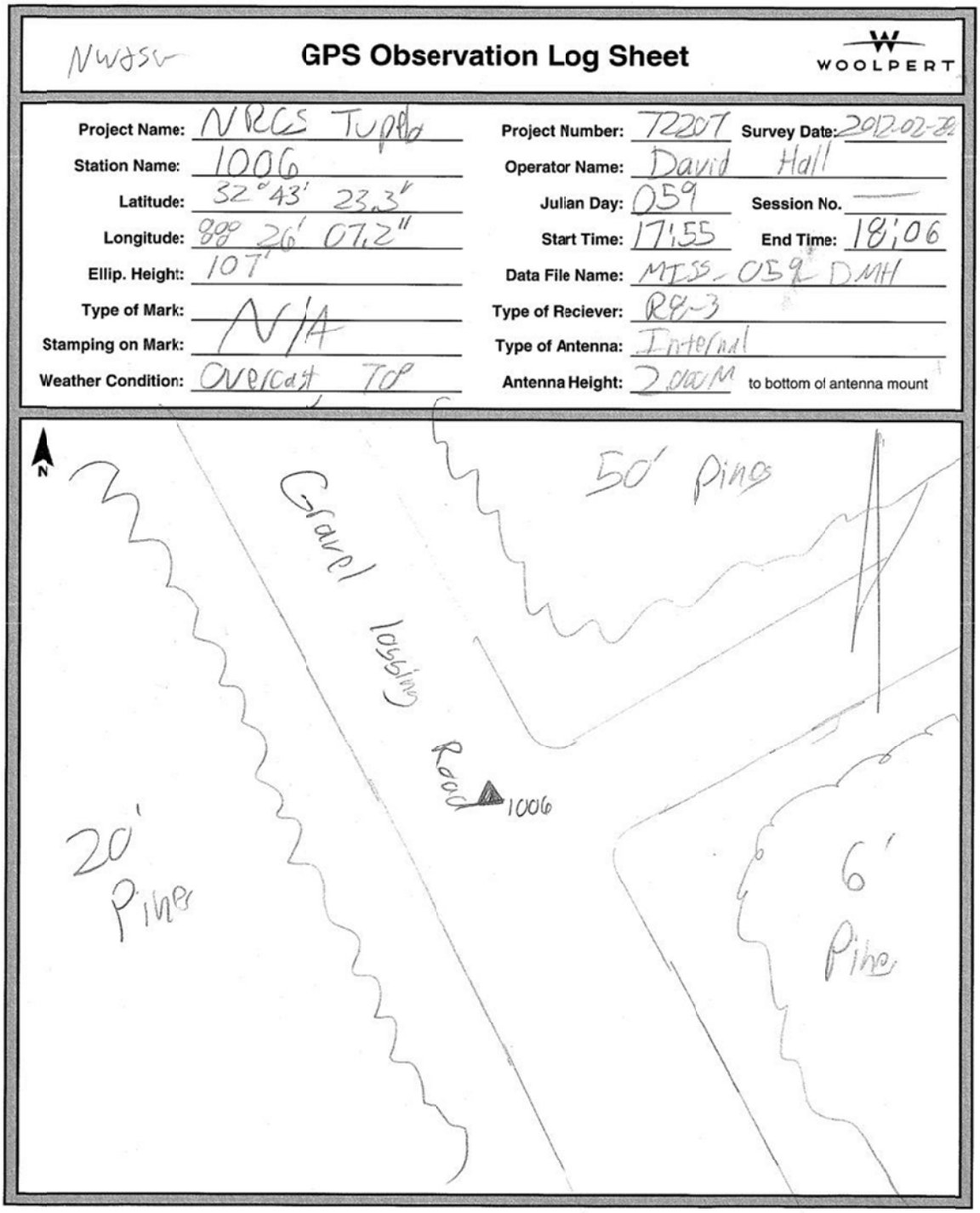
Project Name:	NRCS Tupelo	Project Number:	72207
Survey Date:	2012-02-28		
Station Name:	1005	Operator Name:	David Hall
Latitude:	32° 54' 40.6"	Julian Day:	059
Session No.	1		
Longitude:	88° 22' 27.7"	Start Time:	14:07
End Time:	14:17		
Ellip. Height:	148'	Data File Name:	MISS-059-DMH
Type of Mark:	N/A	Type of Reciever:	R8-3
Stamping on Mark:	N/A	Type of Antenna:	Internal
Weather Condition:	Overcast / 70°	Antenna Height:	2.000m to bottom of antenna mount



1005-3NE-28FEB2012

1005-3SE-28FEB2012

1005-2-28FEB2012



NWJSV

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Station Name:	1006	Operator Name:	David Hall
Latitude:	32° 43' 23.3"	Julian Day:	059
Longitude:	88° 26' 07.2"	Start Time:	17:55
Ellip. Height:	107'	Data File Name:	MISS_059a DMH
Type of Mark:	N/A	Type of Reciever:	R8-3
Stamping on Mark:		Type of Antenna:	Internal
Weather Condition:	Overcast TSP	Antenna Height:	2.000M to bottom of antenna mount

Survey Date: 2012-02-28

Session No.: —

End Time: 18:06

N

Gravel Logging Road

1006

50' Pine

20' Pine

6' Pine

1006-3NW-01MAR2012

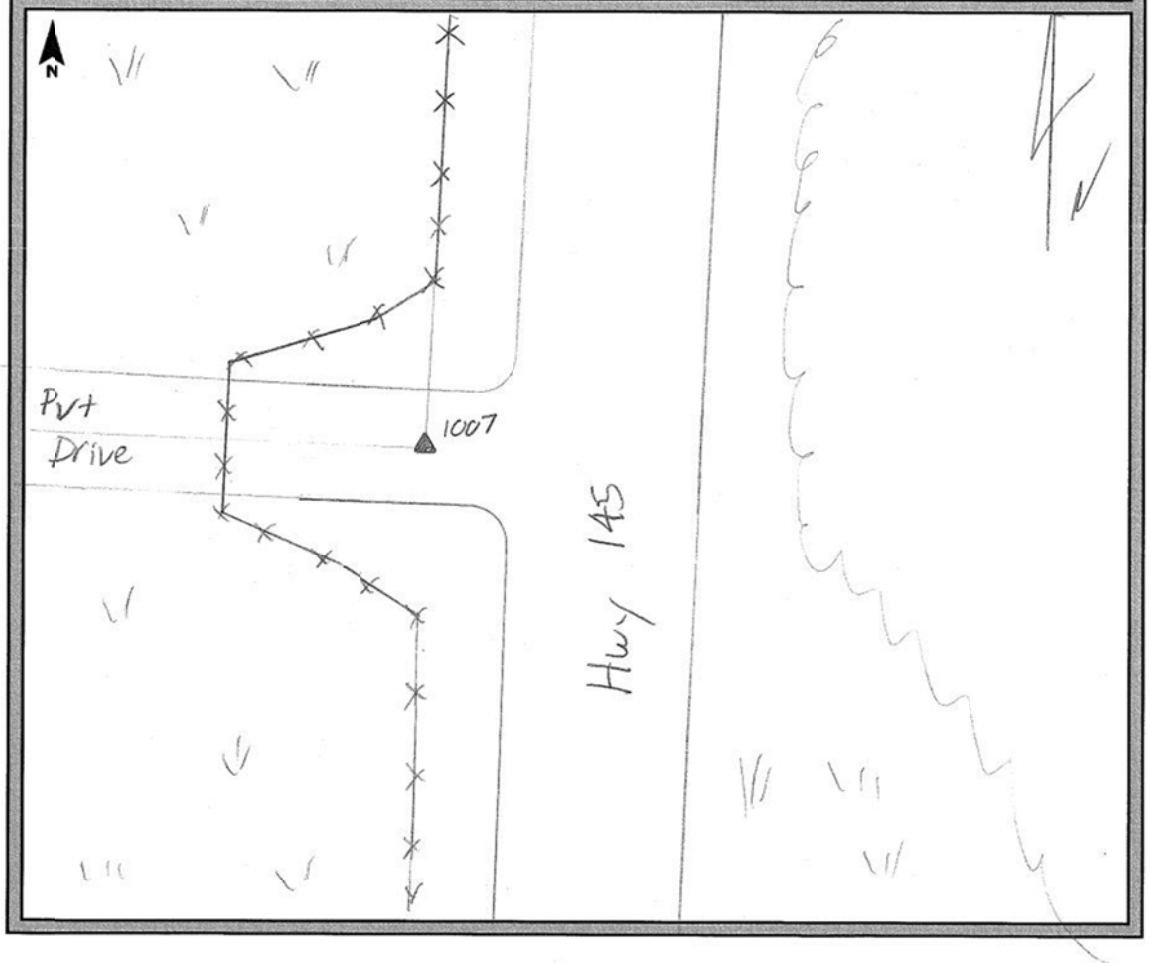
1006-3NE-01MAR2012

1006-2-01MAR2012

GPS Observation Log Sheet

WOOLPERT

Project Name: NRCS Tupelo	Project Number: 72207	Survey Date: 2012-022	
Station Name: 1007	Operator Name: David Hall		
Latitude: 33° 00' 40.5"	Julian Day: 058	Session No.	
Longitude: 88° 33' 49.4"	Start Time: 12:02	End Time: 12:12	
Ellip. Height: 166'	Data File Name: MISS_058_DMH		
Type of Mark: Asphalt	Type of Reciever: RE-3		
Stamping on Mark: N/A	Type of Antenna: RE-3		
Weather Condition: 60° overcast	Antenna Height: 2.000 m	to bottom of antenna mount	



1007-3N-27FEB2012

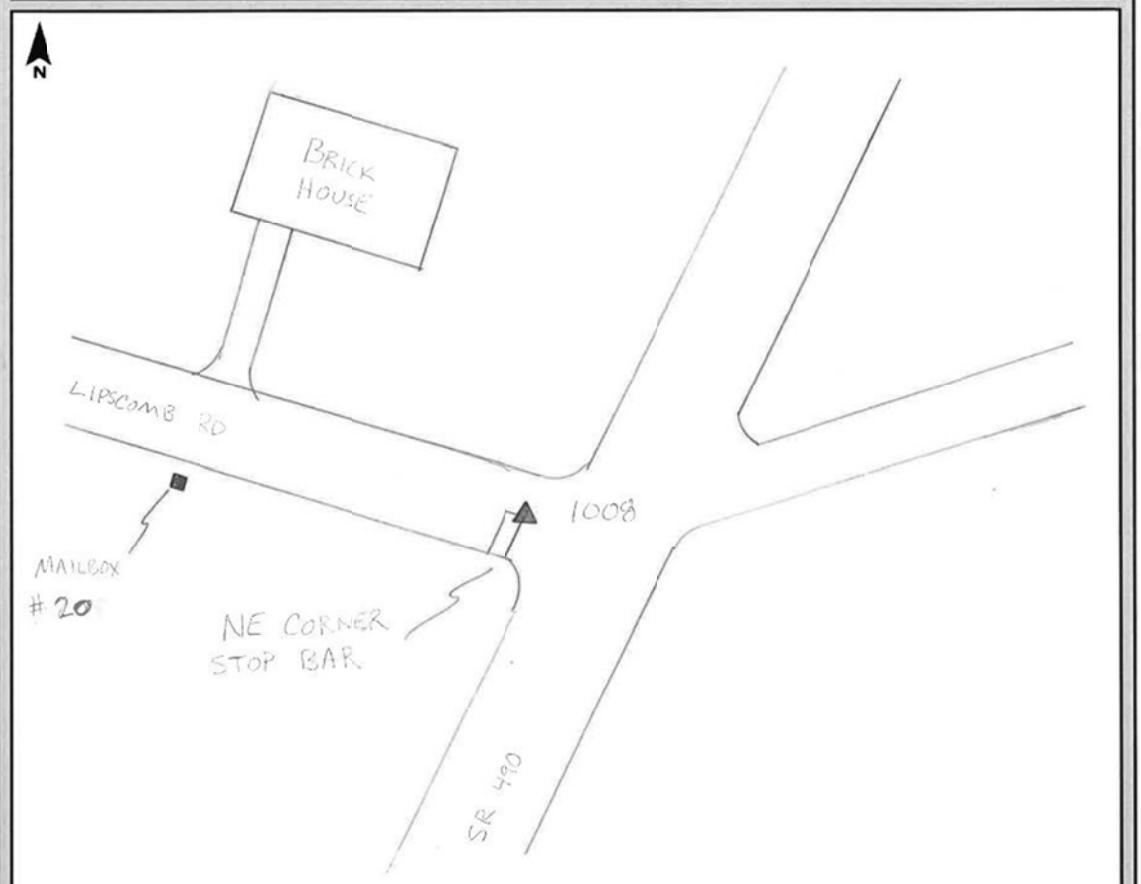
1007-3W-27FEB2012

1007-2-27FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/27/2012
Station Name:	1008	Operator Name:	BEN CHRISTIE
Latitude:	33° 00' 26.22" N	Julian Day: 058	Session No. 0
Longitude:	88° 50' 44.75" W	Start Time: 1449	End Time: 1706
Ellip. Height:	396.68 SFT	Data File Name:	10080580.
Type of Mark:	NE COR. STOP BAR	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	55° PT. CLOUDY	Antenna Height: 2.m	to bottom of antenna mount



1008-3SE-27FEB2012

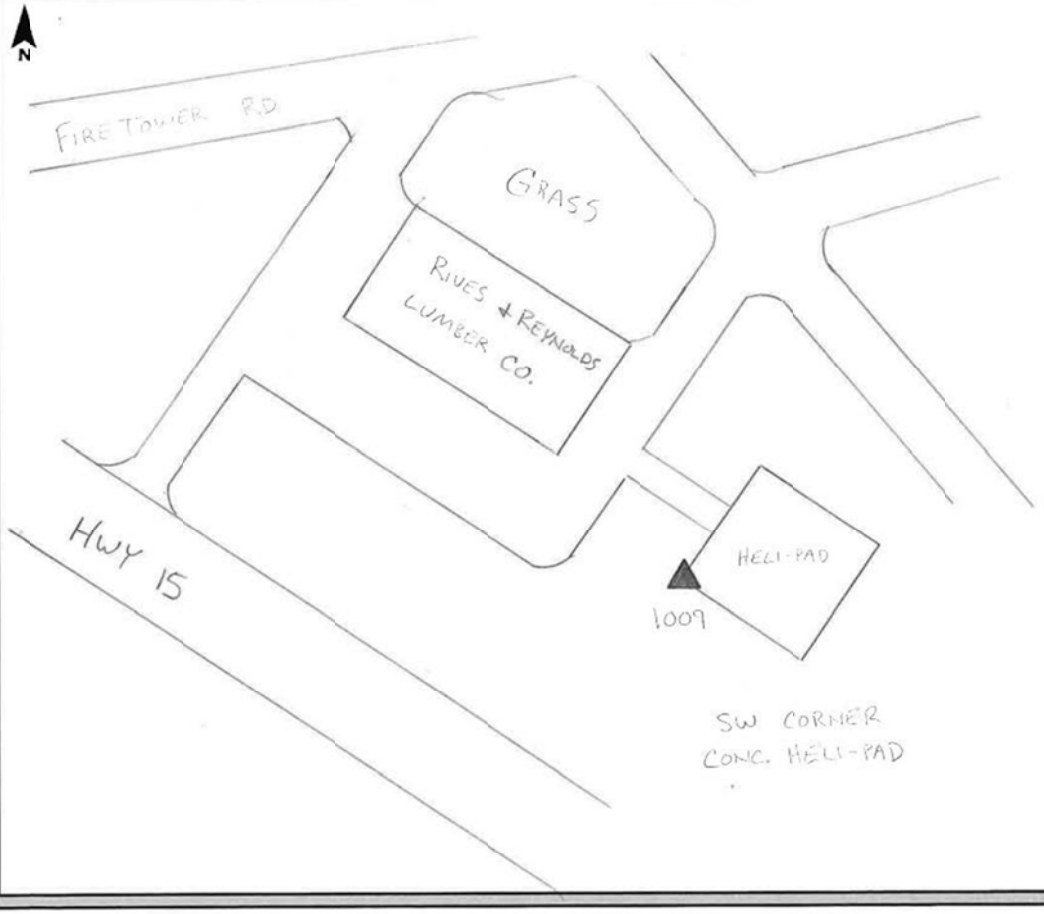
1008-3NE-27FEB2012

1008-2-27FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS	Project Number:	Survey Date: 02/28/2012
Station Name:	1009	Operator Name:	BEN CHRISTIE
Latitude:	33° 09' 49.98" N	Julian Day:	059 Session No. —
Longitude:	89° 05' 42.48" W	Start Time: —	End Time: —
Ellip. Height:	495.69 sft	Data File Name:	—
Type of Mark:	SW COR. CONC. HELI-PAD	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	50° CLOUDY	Antenna Height:	2M to bottom of antenna mount



1009-3SW-28FEB2012

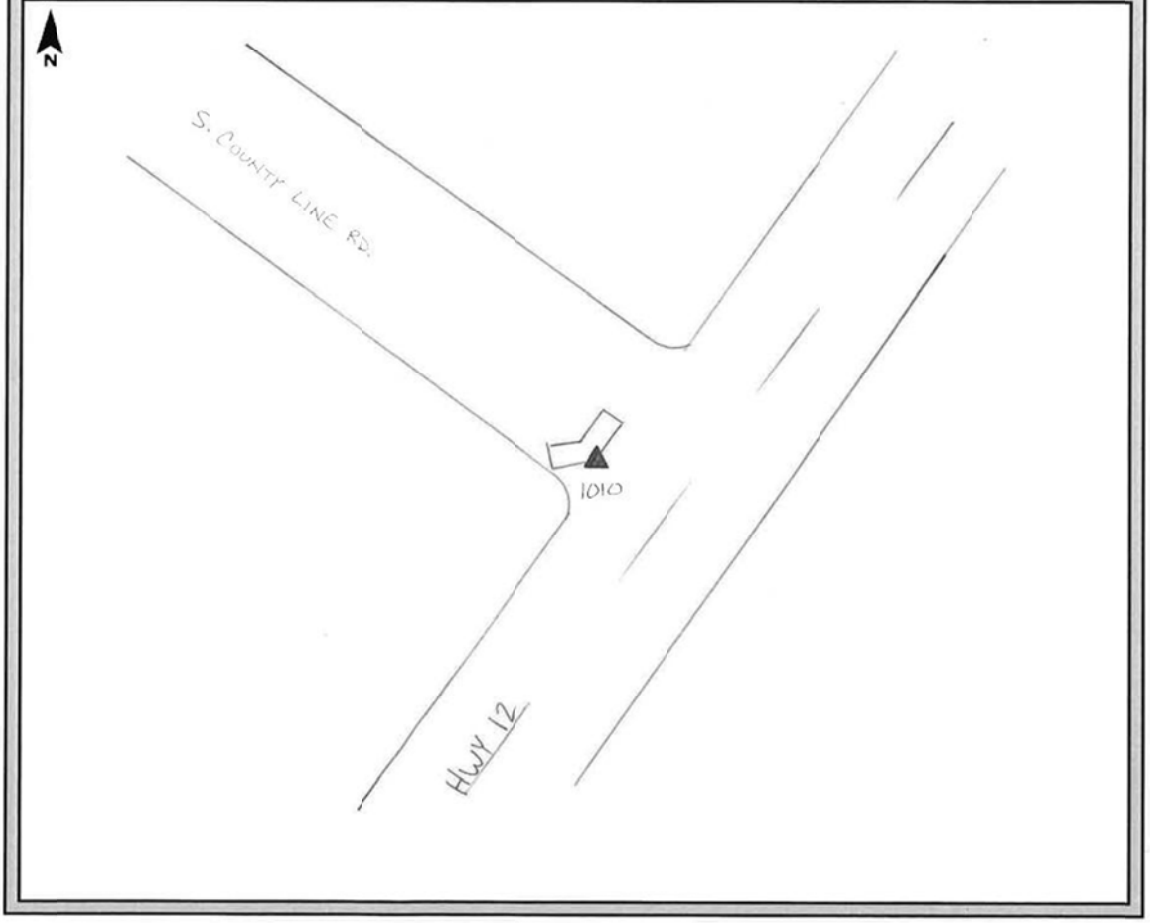
1009-3SE-28FEB2012

1009-2-28FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number: 72207	Survey Date: 02/28/2012
Station Name:	1010	Operator Name:	BEN CHRISTIE
Latitude:	33° 20' 24.73" N	Julian Day: 059	Session No. —
Longitude:	89° 05' 11.95" W	Start Time: —	End Time: —
Ellip. Height:	263.45 sft	Data File Name:	—
Type of Mark:	SE POINT OF STOP BAR	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	55° RAINY	Antenna Height:	2m to bottom of antenna mount



1010-3SW-28FEB2012

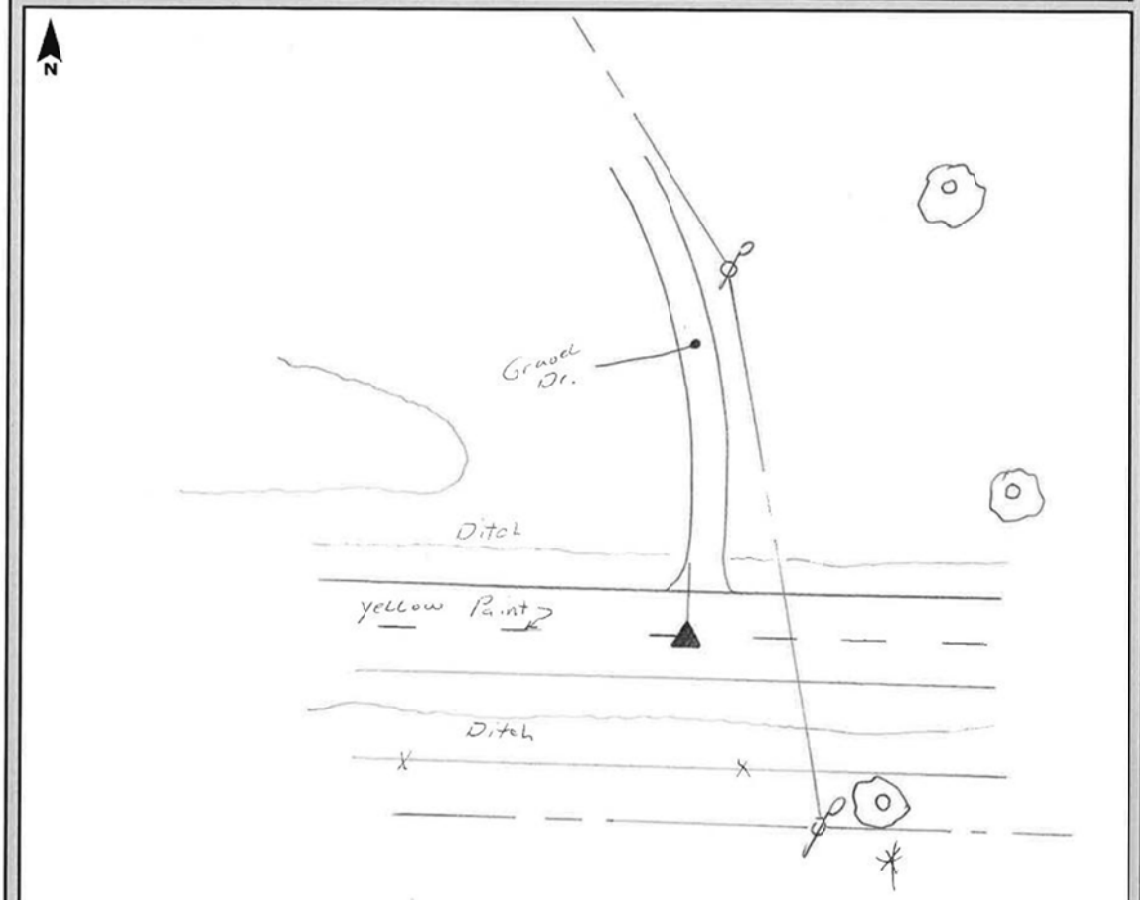
1010-3NE-28FEB2012

1010-2-28FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number: 72207	Survey Date: 2-24-2012
Station Name:	1011	Operator Name:	B. Welbaum
Latitude:	34-05-31.67	Julian Day: 055	Session No. 1
Longitude:	89-02-28.43	Start Time: 11:14	End Time: 11:17
Ellip. Height:	318.30	Data File Name:	Miss-055-WRW
Type of Mark:	PID Light Asphalt	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Sun	Antenna Height: 2.100m	to bottom of antenna mount



1011-3N-24FEB2012

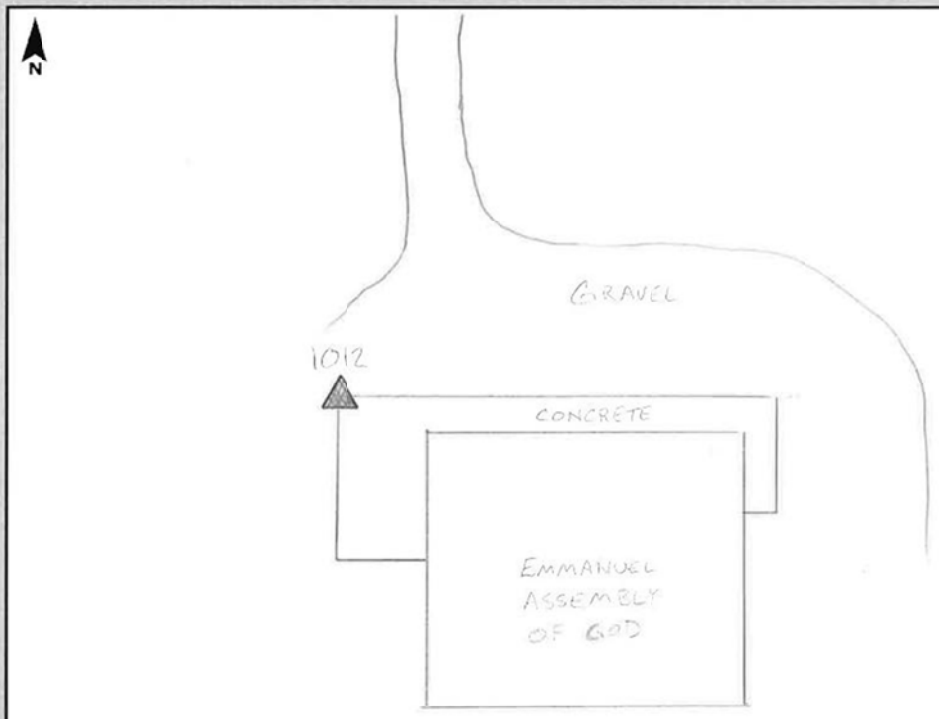
1011-3E-24FEB2012

1011-2-24FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS. LIDAR	Project Number:	Survey Date: 02/23/2012
Station Name:	1012	Operator Name:	BEN CHRISTIE
Latitude:	34° 05' 15.89" N	Julian Day: 054	Session No. —
Longitude:	88° 37' 34.78" W	Start Time: —	End Time: —
Ellip. Height:	159.84	Data File Name: —	
Type of Mark:	CORNER CONCRETE	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	50° PT CLOUDY	Antenna Height:	2 m to bottom of antenna mount



1012-3W-23FEB2012

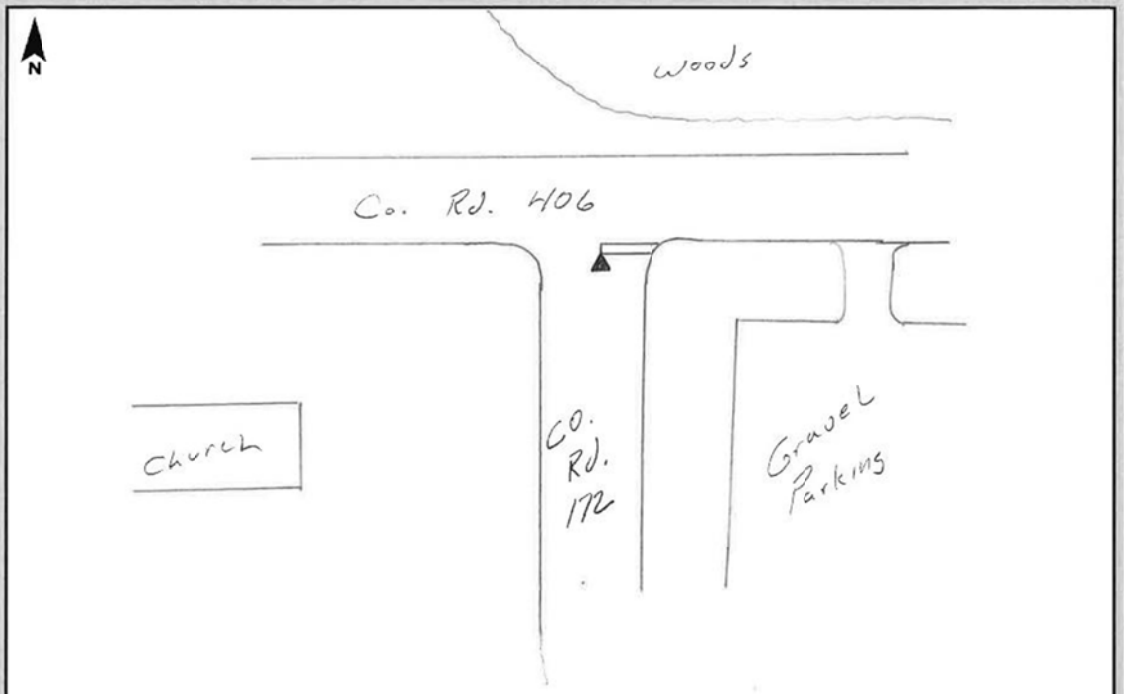
1012-3E-23FEB2012

1012-2-23FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss. Lidar	Project Number:	72207
Survey Date:	2/24/2012		
Station Name:	1013	Operator Name:	B. Welbaum
Latitude:	33-53-03.46	Julian Day:	055
Session No.	1		
Longitude:	88-50-18.26	Start Time:	2:05
End Time:	2:08		
Ellip. Height:	261.74	Data File Name:	Miss_055.WRW
Type of Mark:	Car Stop Bar, Asphalt	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Partly Cloudy, Wind	Antenna Height:	2.100m to bottom of antenna mount



1013-3W-24FEB2012

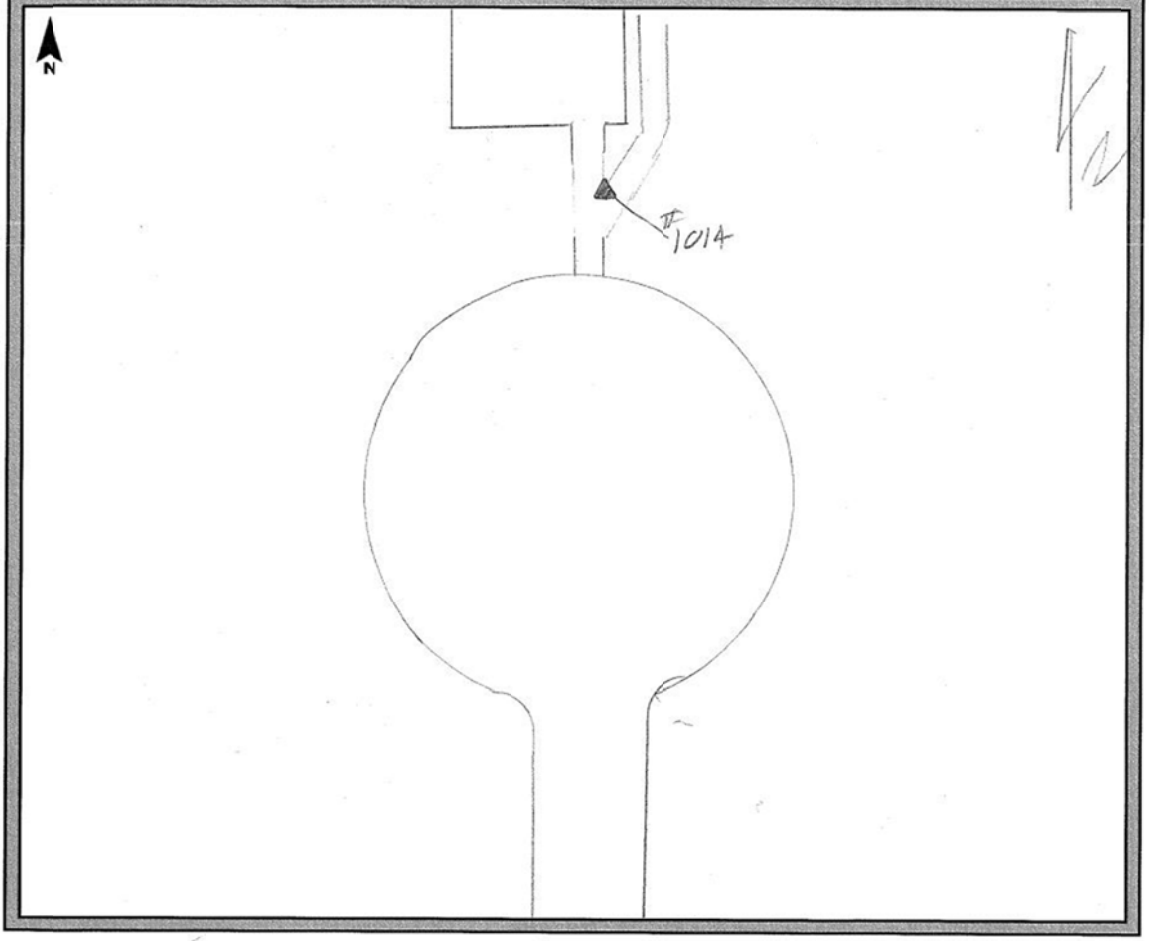
1013-3N-24FEB2012

1013-2-24FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Survey Date:	2012-02-26		
Station Name:	1014	Operator Name:	David Hull
Latitude:	33° 14' 31.40"	Julian Day:	057
Session No.	N/A		
Longitude:	88° 34' 35.10"	Start Time:	13:17
End Time:	13:27		
Ellip. Height:	210'	Data File Name:	MISS_057_DMH
Type of Mark:	PID	Type of Reciever:	R8-3
Stamping on Mark:	N/A	Type of Antenna:	Internal
Weather Condition:	60's, Clear	Antenna Height:	2.000M to bottom of antenna mount



1014-3N-26FEB2012

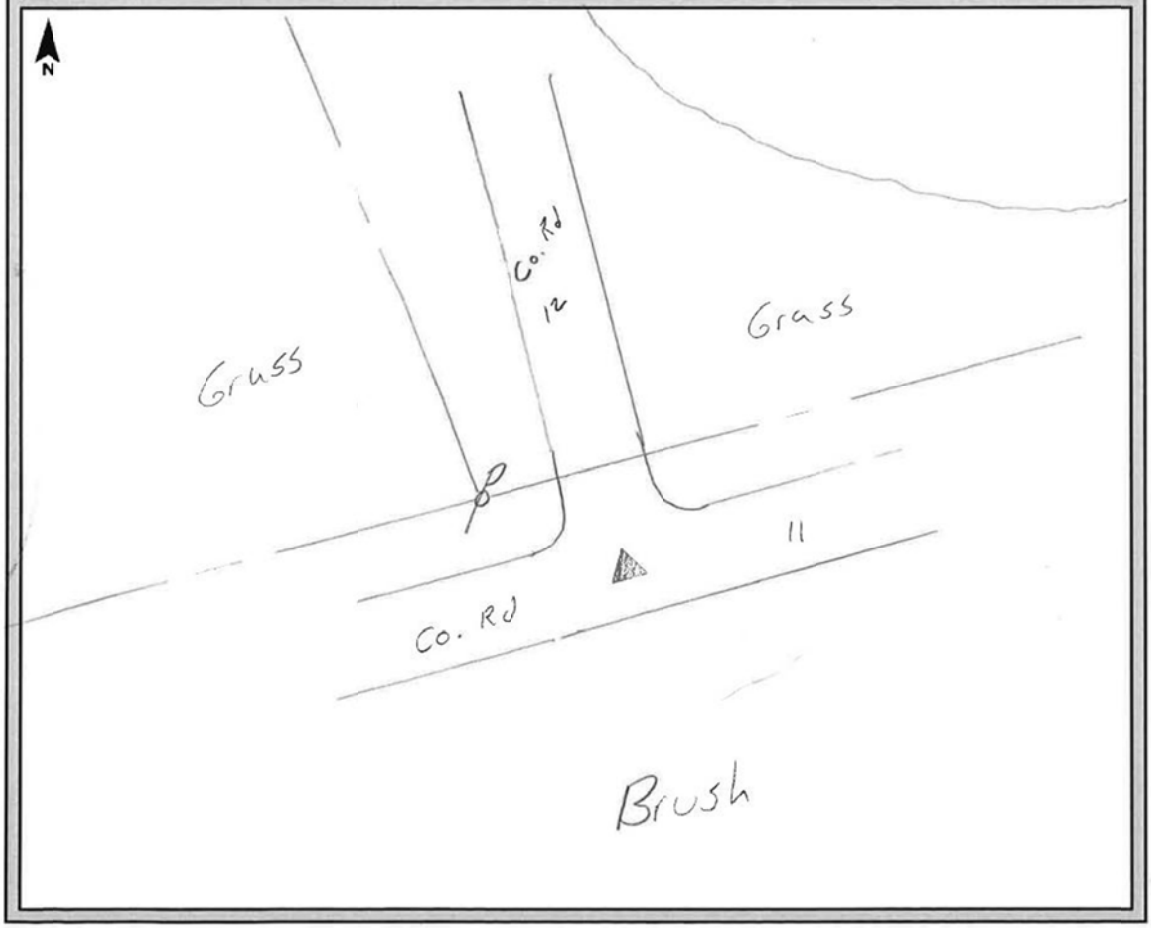
1014-3E-26FEB2012

1014-2-26FEB2012

GPS Observation Log Sheet

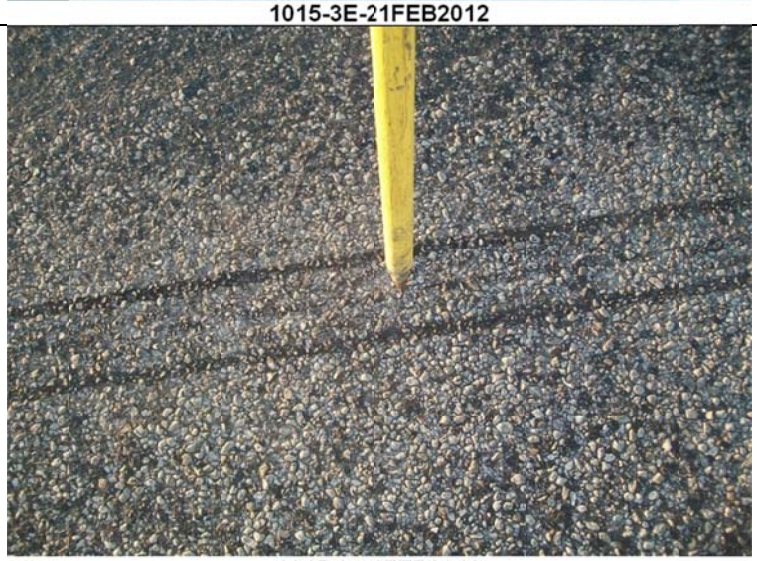
WOOLPERT

Project Name:	Miss. Lidar	Project Number:	72207
Survey Date:	2/21/2012		
Station Name:	1015	Operator Name:	B. Wellbaum
Latitude:	34-21-31.13	Julian Day:	052
Session No.	1		
Longitude:	88-53-55.16	Start Time:	5:21
End Time:	5:24		
Ellip. Height:	454.27	Data File Name:	Miss_052_WRW
Type of Mark:	Asphalt	Type of Reciever:	5800
Stamping on Mark:	N/A	Type of Antenna:	5800
Weather Condition:	65° Sun	Antenna Height:	2.100m to bottom of antenna mount



1015-3N-21FEB2012

1015-3E-21FEB2012

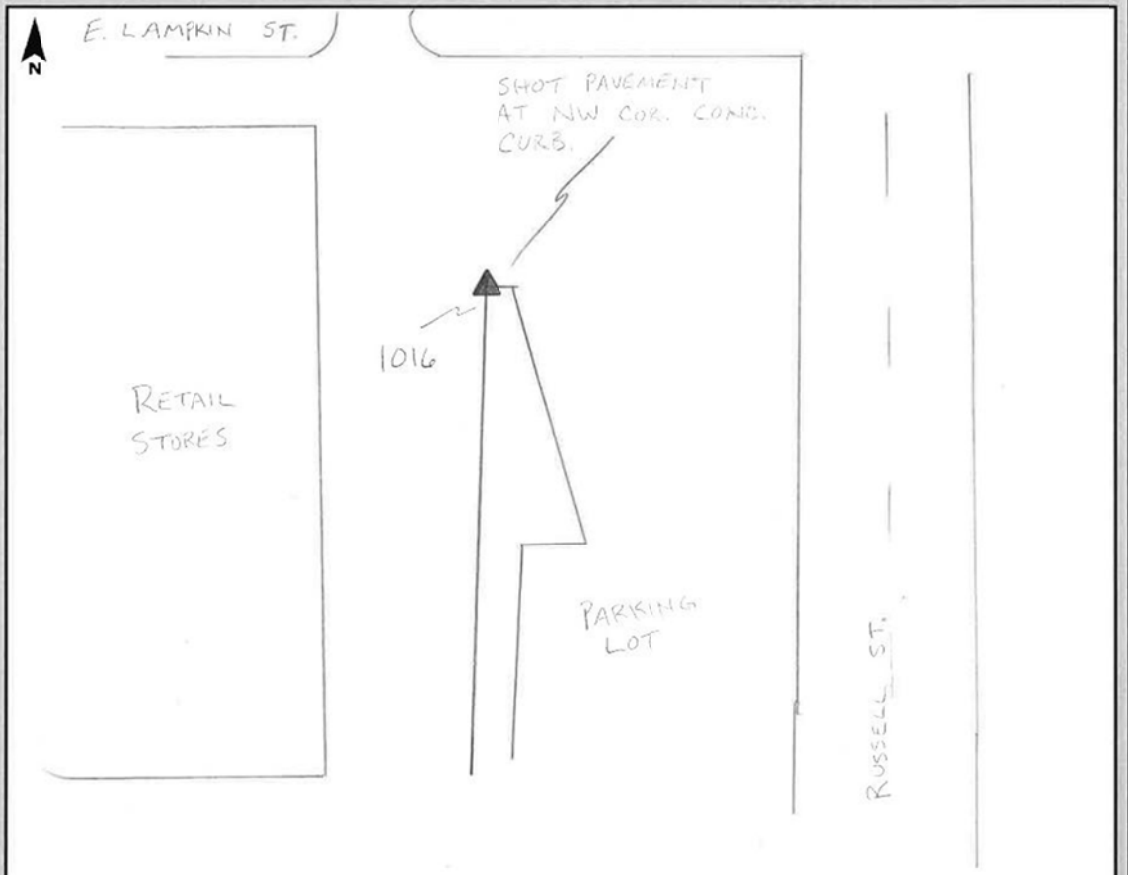


1015-2-21FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/26/2012
Station Name:	1016	Operator Name:	BEN CHRISTIE
Latitude:	33° 27' 44.69" N	Julian Day: 057	Session No. —
Longitude:	88° 48' 32.00" W	Start Time: —	End Time: —
Ellip. Height:	291.15 ft	Data File Name:	—
Type of Mark:	CORNER CURB	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	50° SUNNY	Antenna Height:	2 m to bottom of antenna mount



1016-3N-26FEB2012

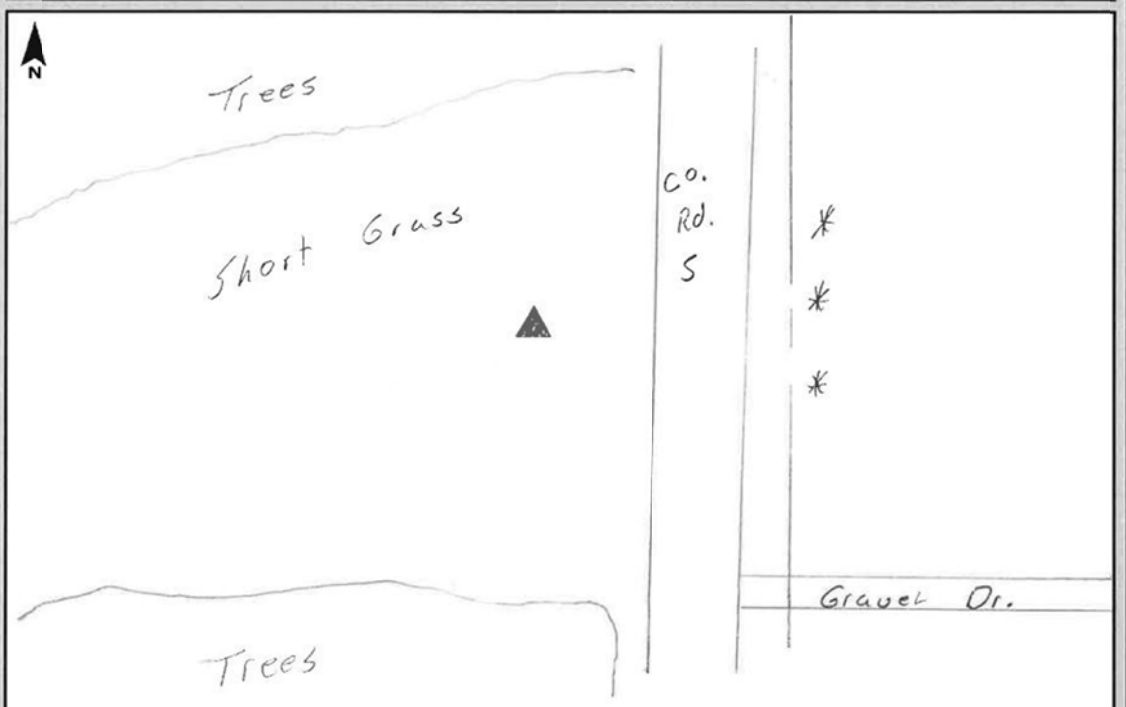
1016-2-26FEB2012

1016-3E-26FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss LiDar	Project Number:	72207
Survey Date:	2/21/2012		
Station Name:	~~TOMS A~~ 1017	Operator Name:	B. Weisbaum
Latitude:	34-20-40.10	Julian Day:	052
Session No.	1		
Longitude:	88-53-08.90	Start Time:	5:54
End Time:	5:57		
Ellip. Height:	339.26	Data File Name:	Miss_052_WRW
Type of Mark:	Short Grass	Type of Reciever:	5800
Stamping on Mark:	N/A	Type of Antenna:	5800
Weather Condition:	70° Sun	Antenna Height:	2.100m to bottom of antenna mount



1017-3N-21FEB2012

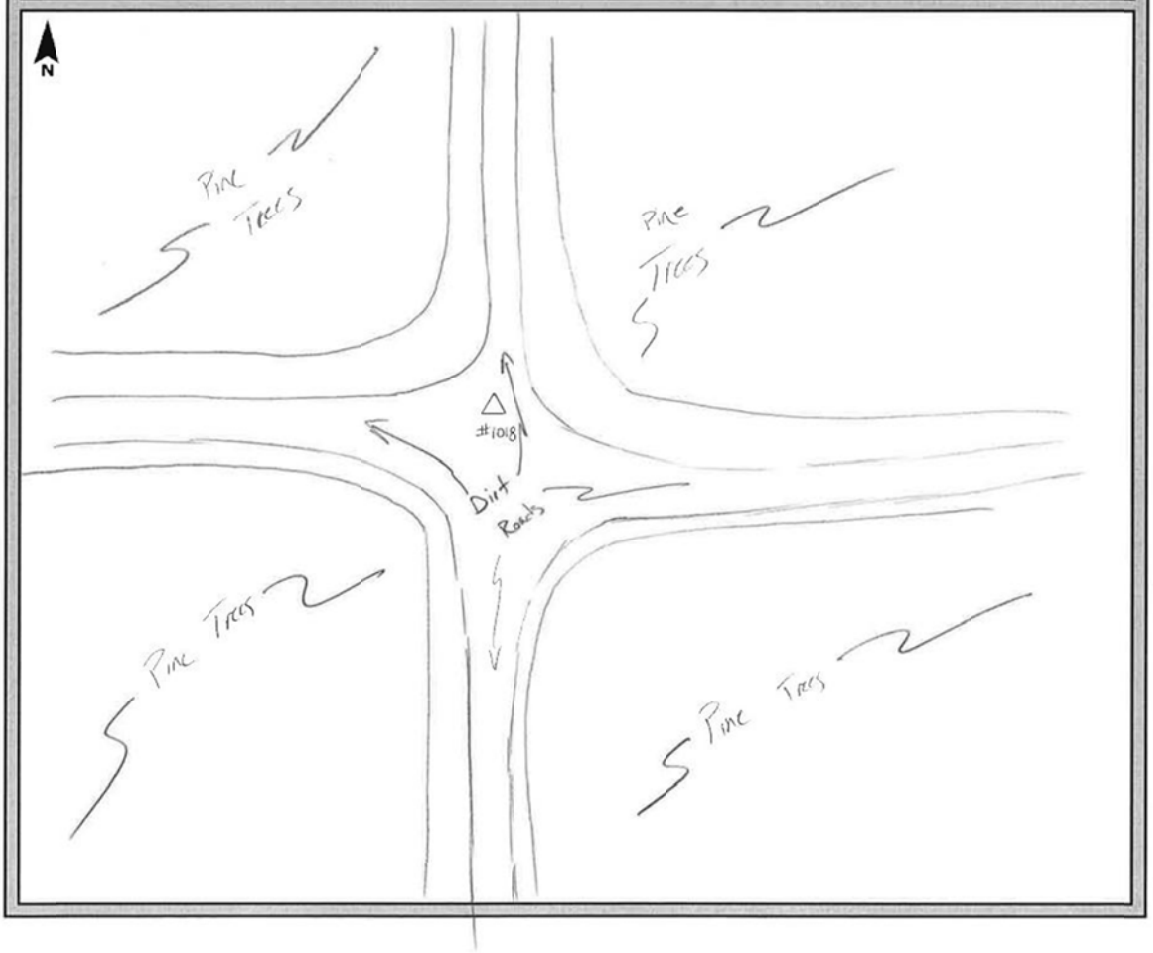
1017-3W-21FEB2012

1017-2-21FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207	Survey Date:	2012-03-01
Station Name:	1018	Operator Name:	David Hall		
Latitude:	32° 43' 20.3"	Julian Day:	061	Session No.	—
Longitude:	88° 25' 29.3"	Start Time:	11:06	End Time:	11:11
Ellip. Height:	113'	Data File Name:	MISS_061_DMH		
Type of Mark:	Dirt Road	Type of Reciever:	R8-3		
Stamping on Mark:	N/A	Type of Antenna:	R8-3		
Weather Condition:		Antenna Height:	2.000 M	to bottom of antenna mount	



1018-3W-01MAR2012

1018-3N-01MAR2012

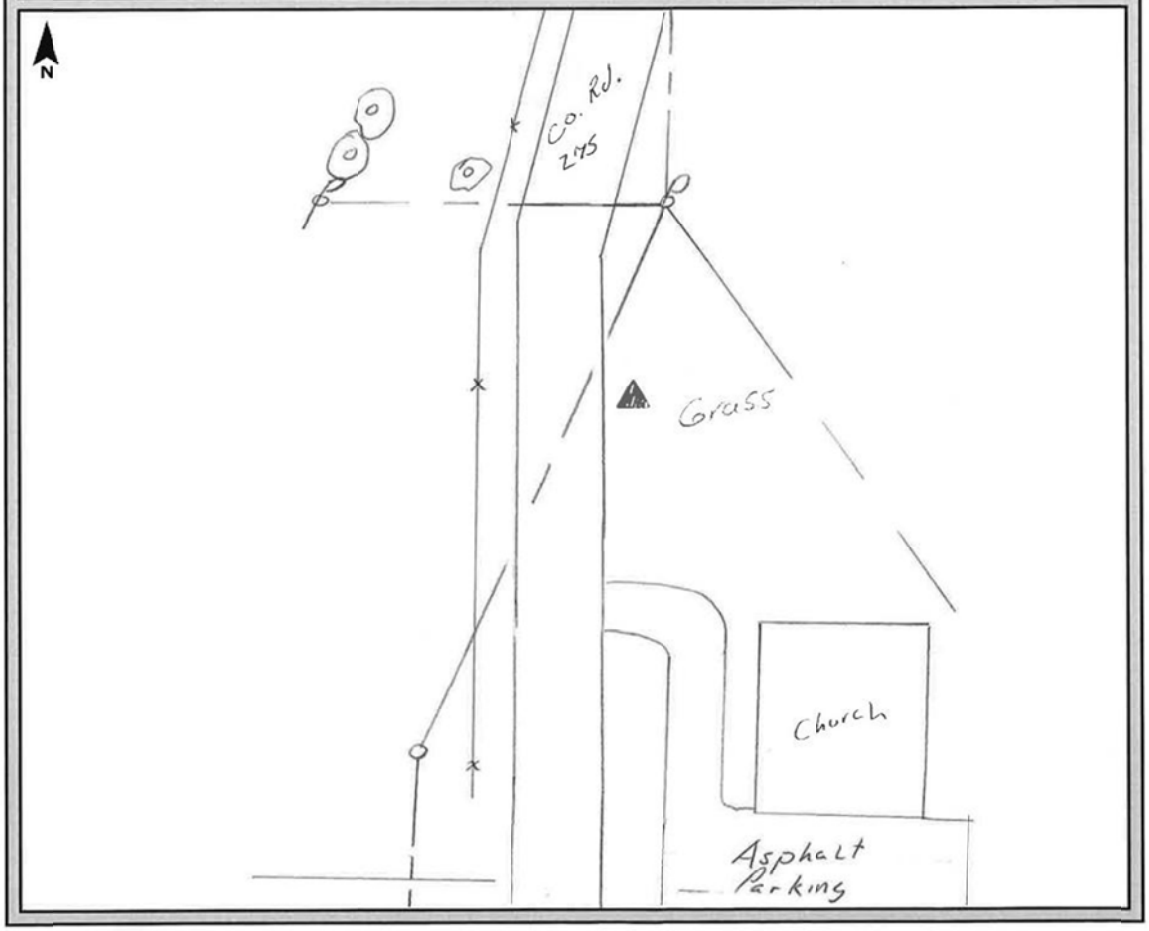
1018-2-01MAR2012

CONTROL BASE STATIONS

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss. Lidar	Project Number:	72207 Survey Date: 2/21/2012
Station Name:	100	Operator Name:	B. Welbaum
Latitude:	34-27-08.95	Julian Day:	052 Session No. 1
Longitude:	88-47-02.71	Start Time:	9:21 End Time: 6:30
Ellip. Height:	300.62	Data File Name:	95480520
Type of Mark:	iP with Red Cap	Type of Reciever:	R8 Mod 2
Stamping on Mark:	Woolpert Control Pt.	Type of Antenna:	R8 Mod 2
Weather Condition:	70° Sun	Antenna Height:	2.000m to bottom of antenna mount



100-3S-21FEB2012

100-3E-21FEB2012

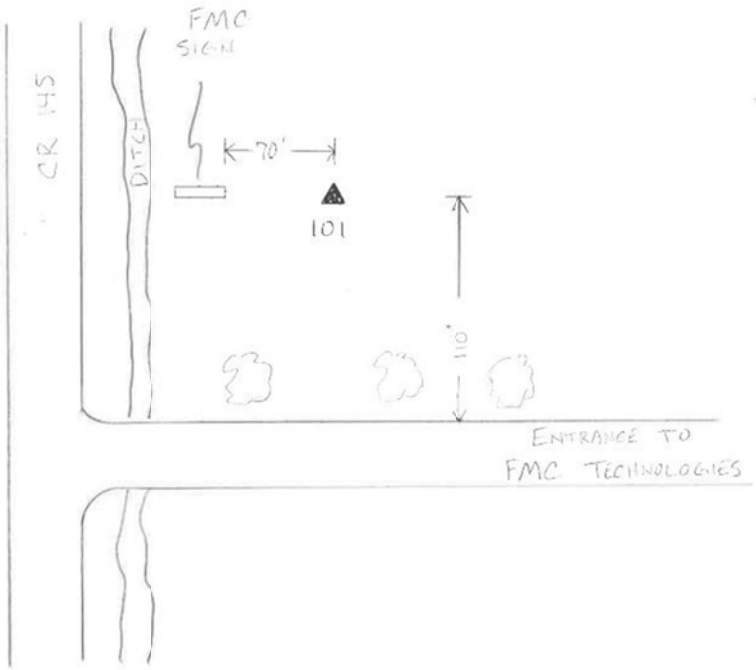
100-2-21FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number: 72207	Survey Date: 02/22/2012
Station Name:	101	Operator Name:	BEN CHRISTIE
Latitude:	34-21-07.6	Julian Day: 053	Session No. 0
Longitude:	88-42-14.3	Start Time: 0857	End Time: 1853
Ellip. Height:	198.43	Data File Name:	01010530
Type of Mark:	CAPPED REBAR	Type of Reciever:	5700
Stamping on Mark:	WOOLPERT INC. CONTROL STA.	Type of Antenna:	ZEPHYR GEOD.
Weather Condition:	40° CLOUDY	Antenna Height: 2 m	to bottom of antenna mount

N



101-3N-22FEB2012

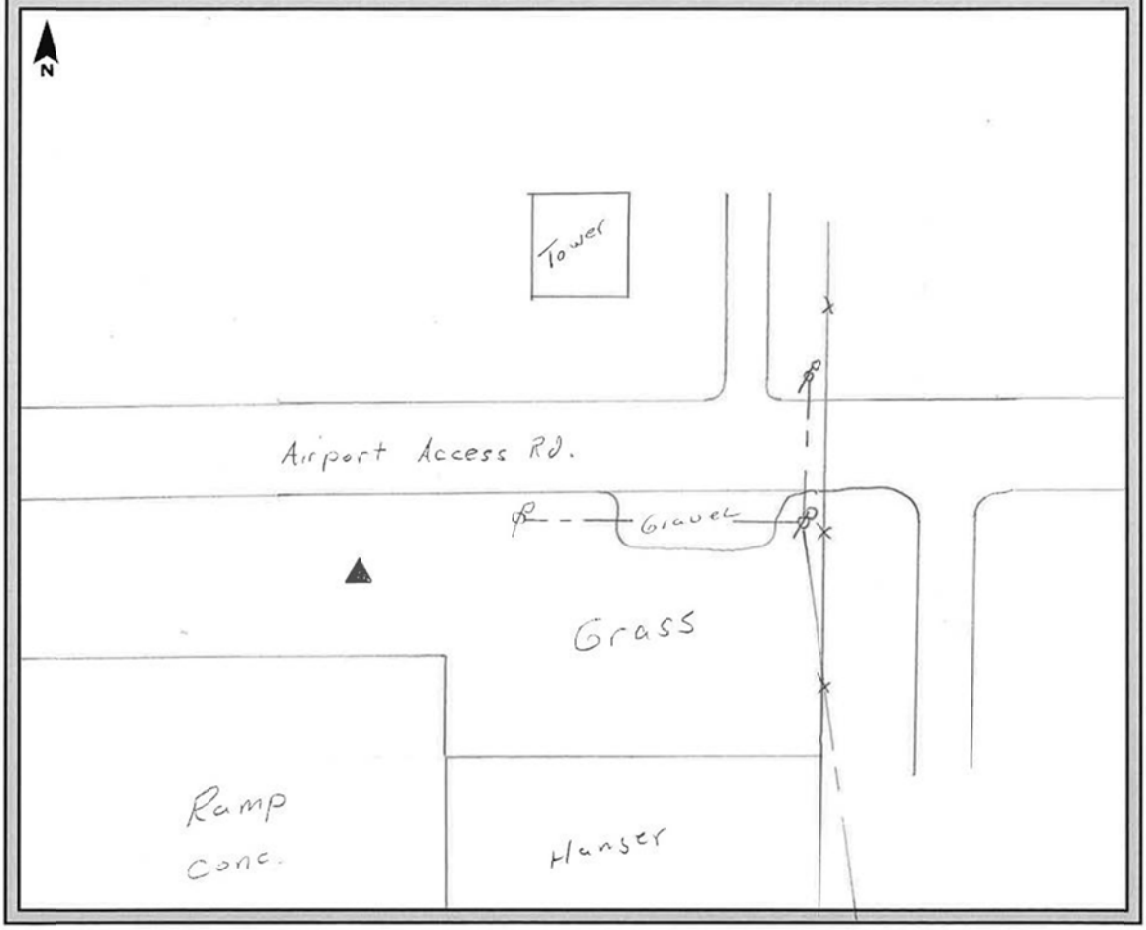
101-3W-22FEB2012

101-2-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss. Lidar	Project Number:	72207
Survey Date:	2/22/2012		
Station Name:	102 Airport Base	Operator Name:	B. Welbaum
Latitude:	34-15-52.54	Julian Day:	053
Session No.	1		
Longitude:	88-46-01.69	Start Time:	2:58
End Time:	6:24		
Ellip. Height:	266.07	Data File Name:	28460533
Type of Mark:	IP With Red Cap	Type of Reciever:	R8 Mod 2
Stamping on Mark:	Woolpert Control Pt.	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Cloudy	Antenna Height:	2.000M to bottom of antenna mount



102-3S-22FEB2012

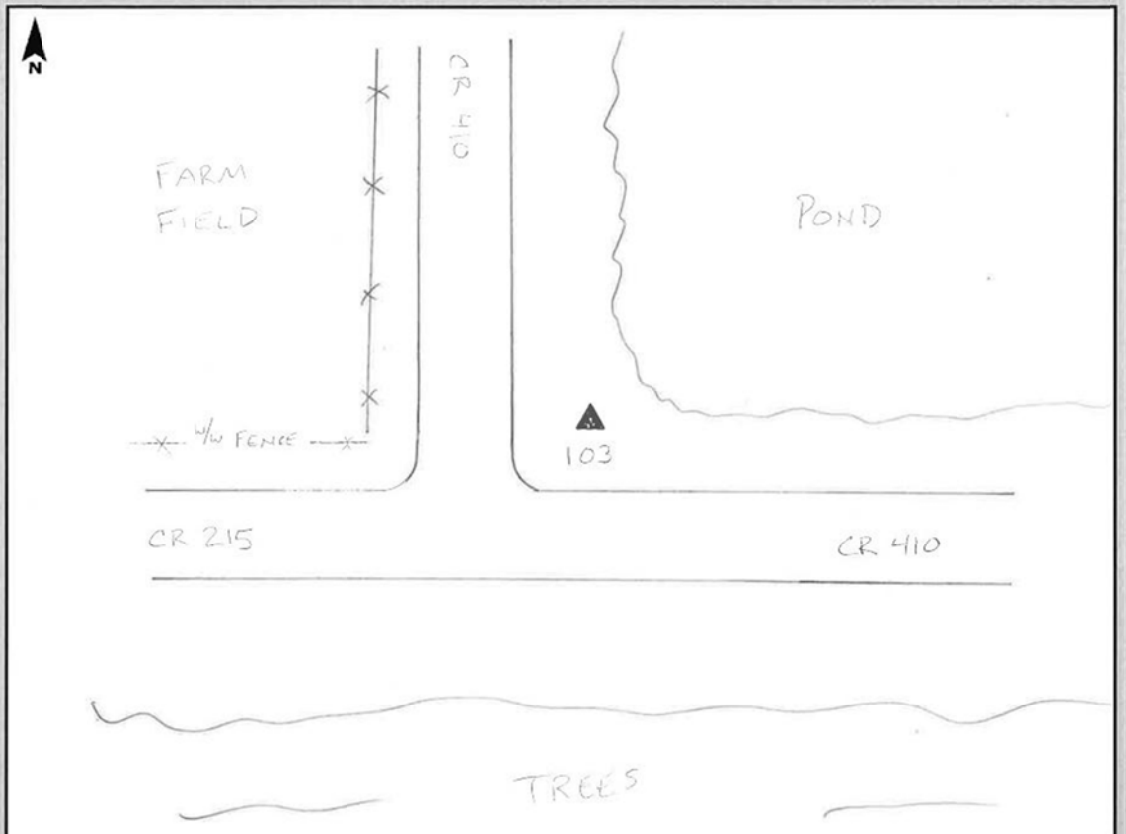
102-3W-22FEB2012

102-2-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS. LIDAR	Project Number:	72207
Survey Date:	02/23/2012		
Station Name:	103	Operator Name:	BEN CHRISTIE
Latitude:	33-56-35.85	Julian Day:	054
Session No.	1		
Longitude:	88-48-45.90	Start Time:	1407
End Time:	1810		
Ellip. Height:	199.16	Data File Name:	01030541
Type of Mark:	CAPPED REBAR	Type of Reciever:	5700
Stamping on Mark:		Type of Antenna:	ZEPHYR GEOD.
Weather Condition:	55° SUNNY	Antenna Height:	2 M to bottom of antenna mount



103-3N-24FEB2012

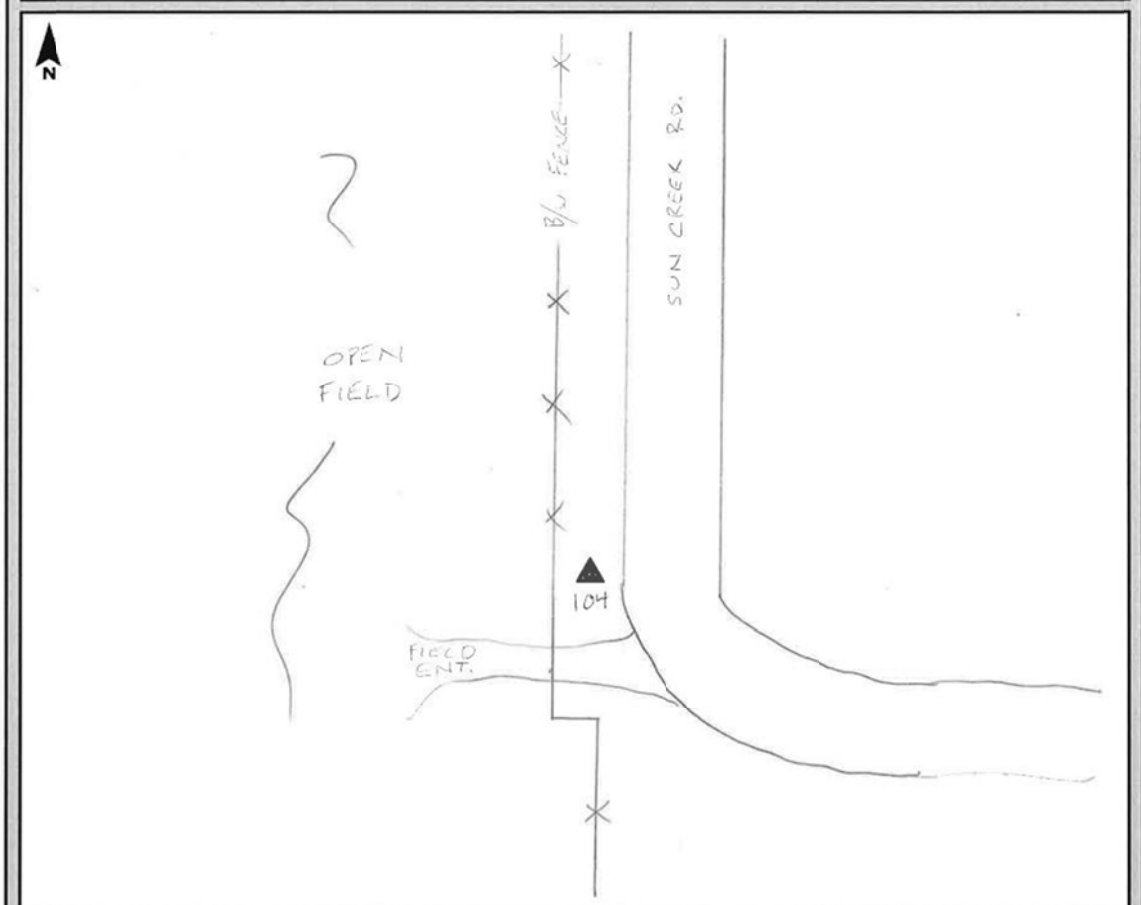
103-3E-24FEB2012

103-2-24FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS. LIDAR	Project Number:	72207
Survey Date:	02/24/2012		
Station Name:	104	Operator Name:	BEN CHRISTIE
Latitude:	33° 32' 38.4" N	Julian Day:	055
Session No.	0		
Longitude:	88° 51' 46.5" W	Start Time:	0946
End Time:	1724		
Ellip. Height:	170.1 s/t	Data File Name:	01040550.
Type of Mark:	CAPPED REBAR	Type of Reciever:	5700
Stamping on Mark:	WOOLPERT INC. CONTROL STA	Type of Antenna:	ZEPHYR GEOD.
Weather Condition:	40° CLOUDY	Antenna Height:	2m to bottom of antenna mount



104-3S-24FEB2012

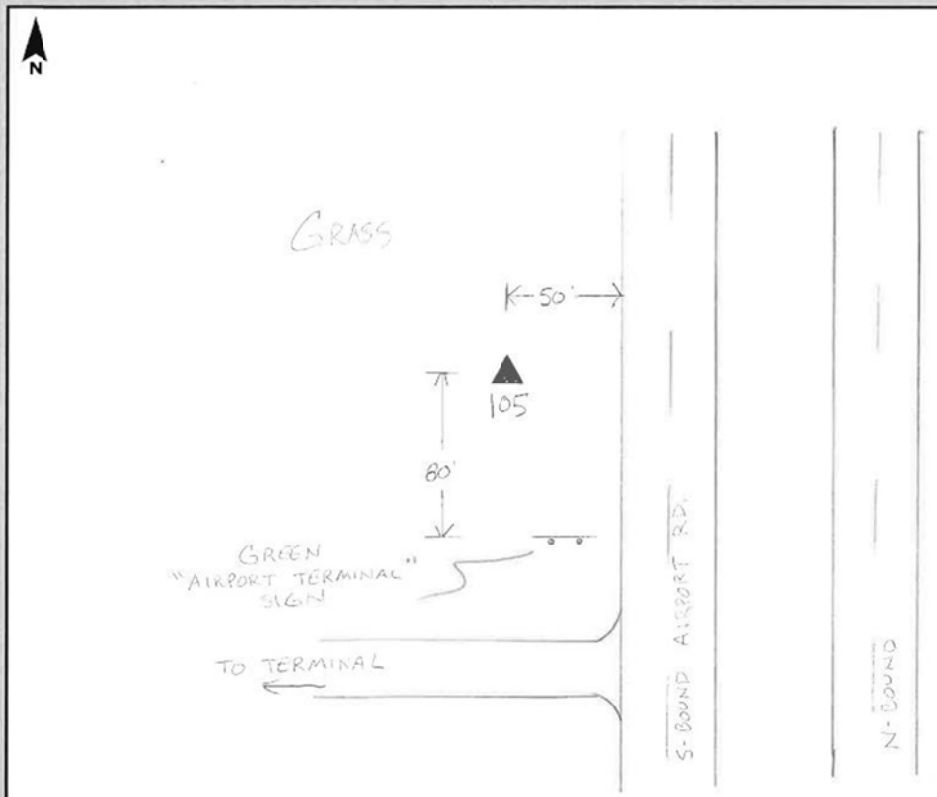
104-3W-24FEB2012

104-2-24FEB2012

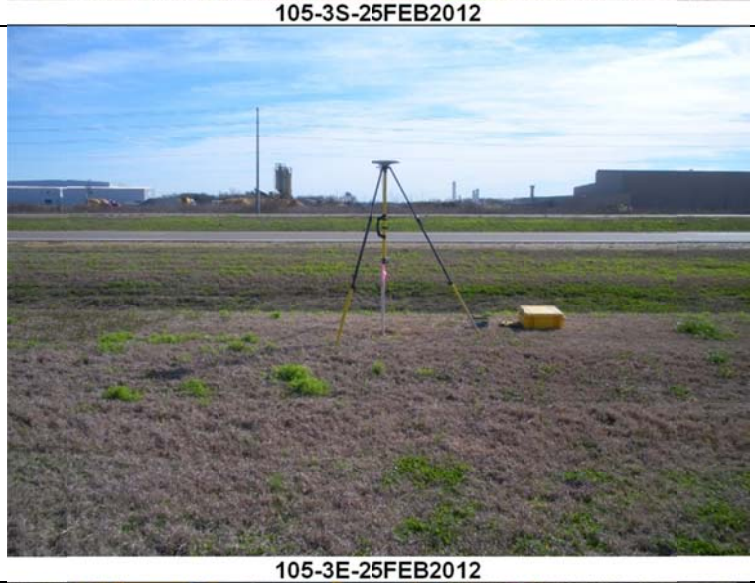
GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	72207
Survey Date:	02/25/2012		
Station Name:	105	Operator Name:	BEN CHRISTIE
Latitude:	33° 27' 10.07" N	Julian Day:	056
Session No.	0		
Longitude:	88° 35' 00.93" W	Start Time:	0913
End Time:	1843		
Ellip. Height:	186.3 sft	Data File Name:	01050560.
Type of Mark:	CAPPED REBAR	Type of Reciever:	5700
Stamping on Mark:	WOOLPERT INC CONTROL STA.	Type of Antenna:	ZEPHYR GEOD
Weather Condition:	45° SUNNY	Antenna Height:	2 M to bottom of antenna mount



105-3S-25FEB2012



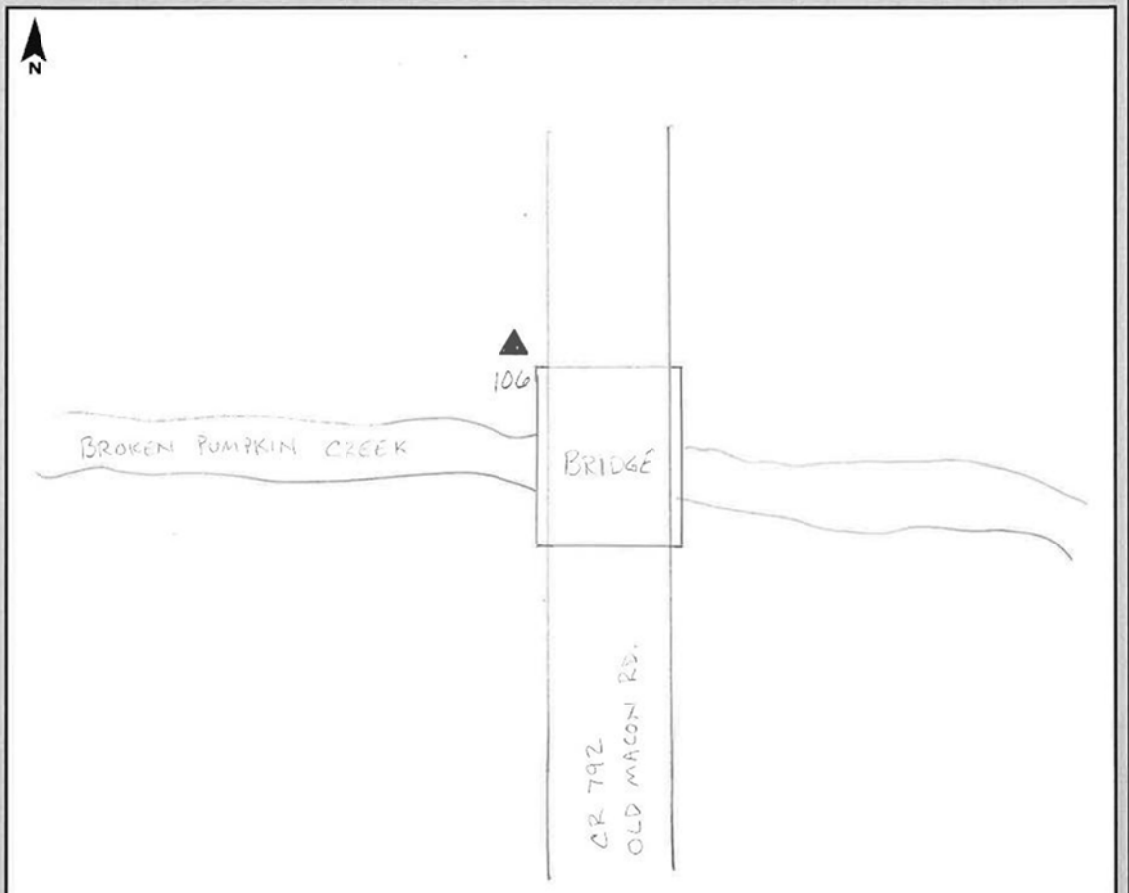
105-3E-25FEB2012

105-2-25FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number: 72207	Survey Date: 02/26/2012
Station Name:	106	Operator Name:	BEN CHRISTIE
Latitude:	33° 16' 20.44" N	Julian Day: 057	Session No. 0
Longitude:	88° 26' 37.40" W	Start Time: 0903	End Time: 1854
Ellip. Height:	108.85 s/t	Data File Name:	01060570.
Type of Mark:	CAPPED REBAR	Type of Reciever:	5700
Stamping on Mark:	WOOLPERT INC CONTROL STA.	Type of Antenna:	ZEPHYR GEOD.
Weather Condition:	45° SUNNY	Antenna Height:	2 m to bottom of antenna mount



106-3N-26FEB2012

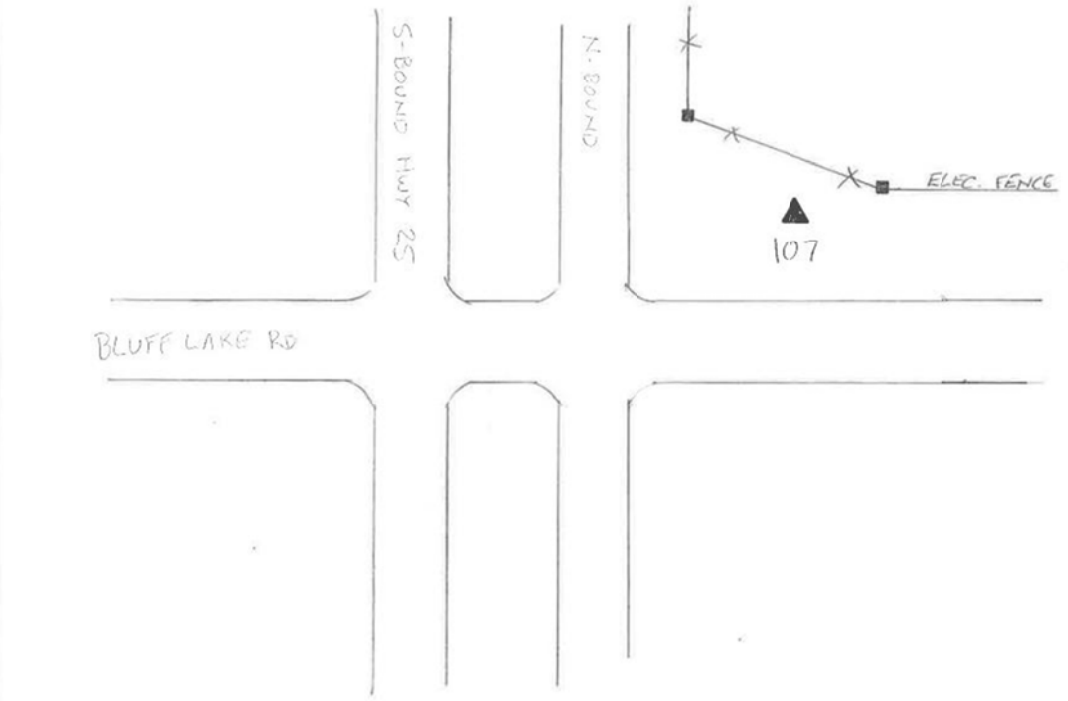
106-3W-26FEB2012

106-2-26FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/27/2012
Station Name:	107	Operator Name:	BEN CHRISTIE
Latitude:	33° 13' 04.28" N	Julian Day: 058	Session No. 0
Longitude:	88° 58' 58.73" W	Start Time: 0913	End Time: 1703
Ellip. Height:	426.13 mt	Data File Name:	01070580
Type of Mark:	CAPPED REBAR	Type of Reciever:	5700
Stamping on Mark:	WOOLPERT INC CONTRA STA	Type of Antenna:	ZEPHYR GEOD.
Weather Condition:	50° PT. CLOUDY	Antenna Height: 2 m	to bottom of antenna mount



107-3N-27FEB2012

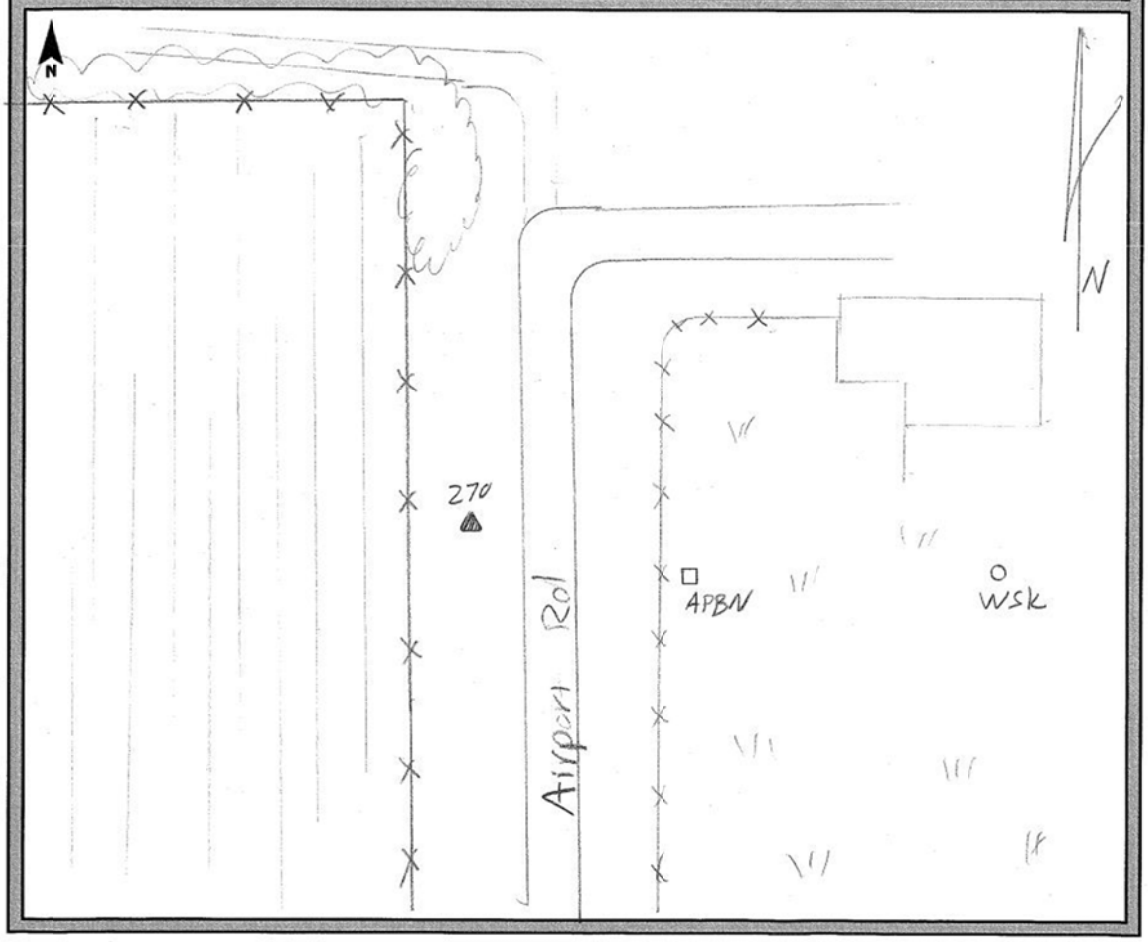
107-3E-27FEB2012

107-2-27FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207	Survey Date:	2012-02-26
Station Name:	~~270~~ (TSM) Should be 170	Operator Name:	David Hall		
Latitude:	33° 0' 00.77"	Julian Day:	057	Session No.	1-7
Longitude:	88° 32' 18.04"	Start Time:	08:47	End Time:	
Ellip. Height:	158.0'	Data File Name:	02290570.DAT		
Type of Mark:	Rebar w/ cap	Type of Reciever:	R7		
Stamping on Mark:	Woolpert Control Stn	Type of Antenna:	Zephyr Geodetic		
Weather Condition:	Clear & 60°	Antenna Height:	2.000M	to bottom of antenna mount	



170-3N-26FEB2012

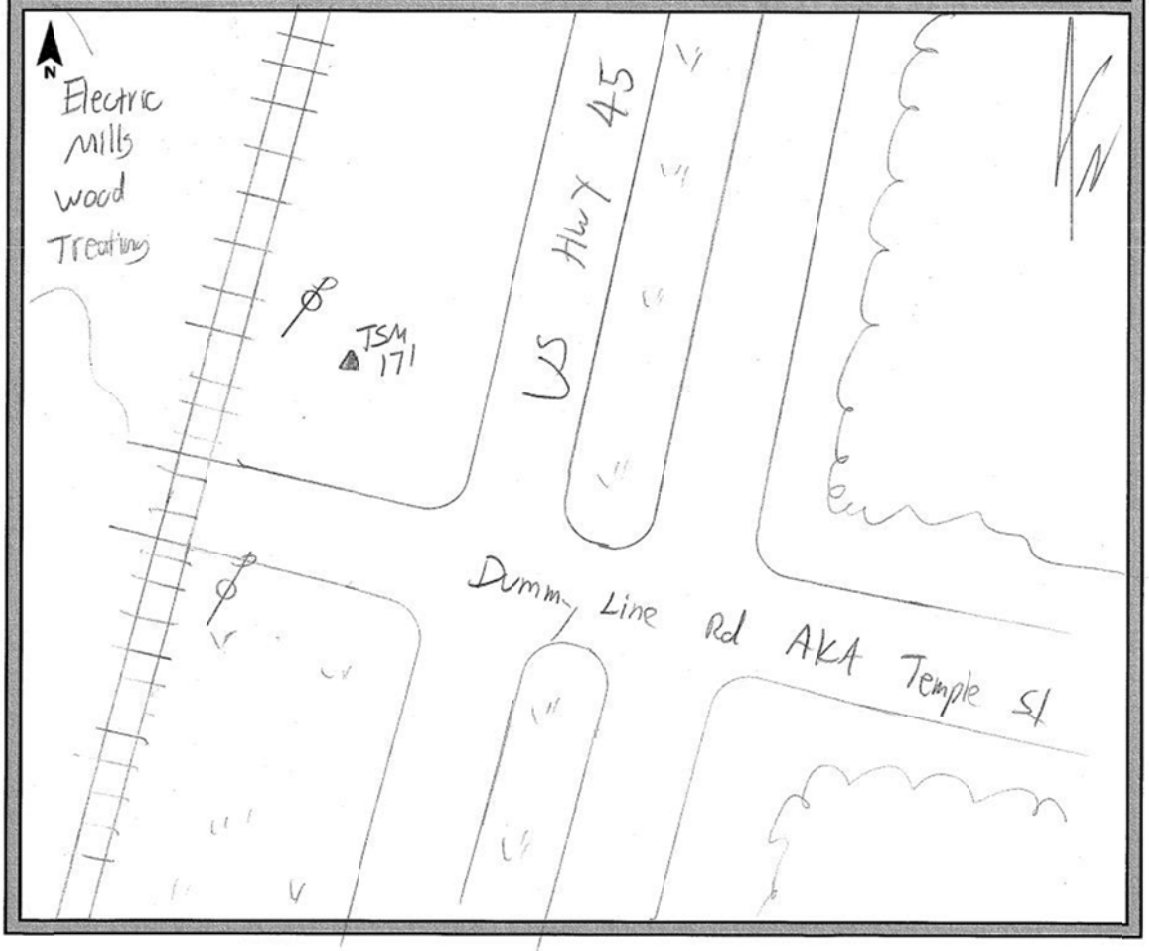
170-3E-26FEB2012

170-2-26FEB2012

TSM → TSM Baseline **GPS Observation Log Sheet**

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Survey Date:	2012-02-27		
Station Name:	171	Operator Name:	David Hall
Latitude:	32° 46' 11.05"	Julian Day:	058
Session No.	—		
Longitude:	088° 27' 48.85"	Start Time:	16:07
End Time:	17:27		
Ellip. Height:	99'	Data File Name:	09500583.DAT
Type of Mark:	Rebar w/ Cap	Type of Reciever:	R8-3
Stamping on Mark:	Woolpert Control STA	Type of Antenna:	Internal
Weather Condition:	Partly Cloudy & 65°	Antenna Height:	2.000M to bottom of antenna mount



171-3N-27FEB2012

171-3E-27FEB2012

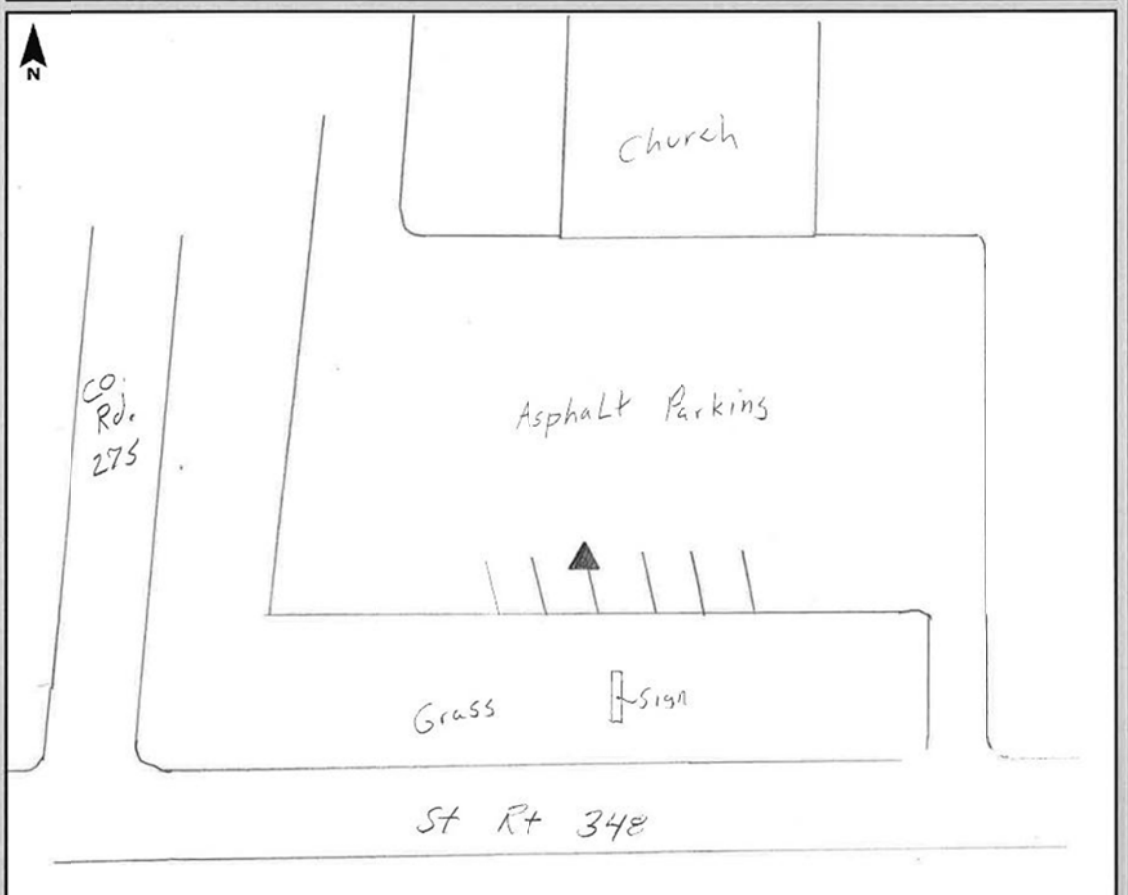
171-2-27FEB2012

TEMPORARY SURVEY POINTS

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss. Lidar	Project Number: 72207	Survey Date: 2/21/2012
Station Name:	200	Operator Name:	B. Welborn
Latitude:	34-27-05.73	Julian Day: 052	Session No. 1
Longitude:	88-47-03.20	Start Time: 10:00	End Time: 10:03
Ellip. Height:	293.52	Data File Name:	Miss_052_CORW
Type of Mark:	Mag Nail	Type of Reciever:	5800
Stamping on Mark:	Mag Nail	Type of Antenna:	5800
Weather Condition:	70° Sun	Antenna Height:	2.100 M to bottom of antenna mount



200-3N-21FEB2012

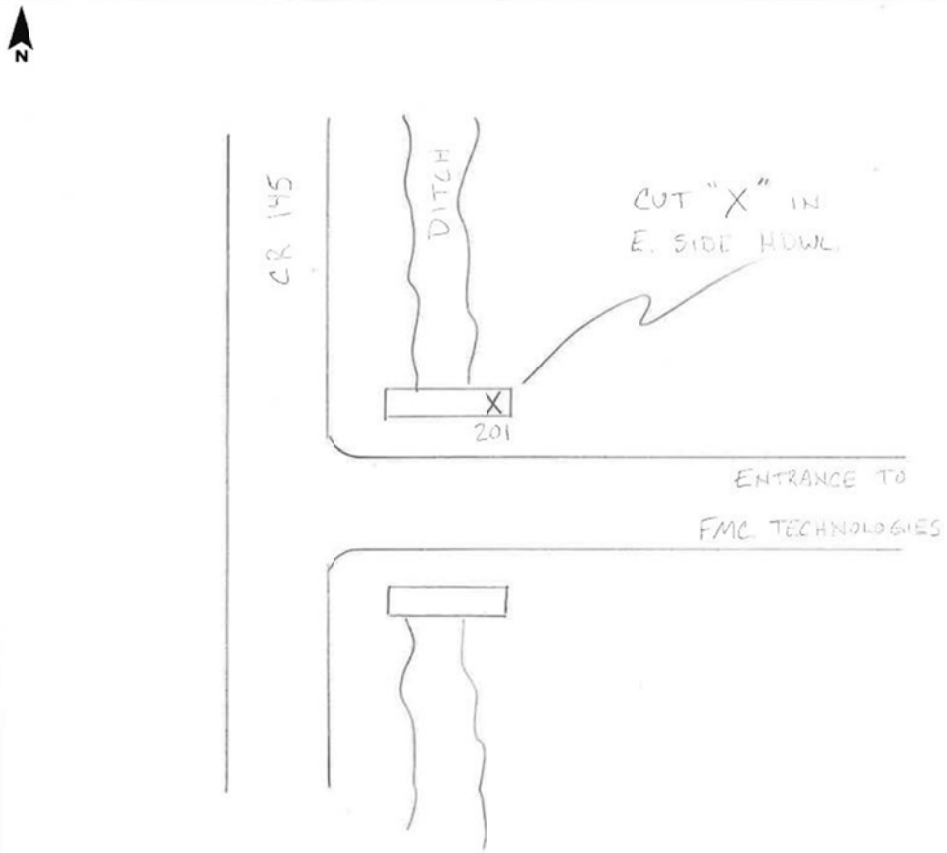
200-3E-21FEB2012

200-2-21FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/21/2012
Station Name:	201	Operator Name:	BEN CHRISTIE
Latitude:	34° 21' 06.46" N	Julian Day: 052	Session No.
Longitude:	88° 42' 15 28" W	Start Time: —	End Time: —
Ellip. Height:	199.99	Data File Name:	—
Type of Mark:	CHISELED X IN HDWL	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	45° CLOUDY	Antenna Height:	2 m to bottom of antenna mount



201-3N-22FEB2012

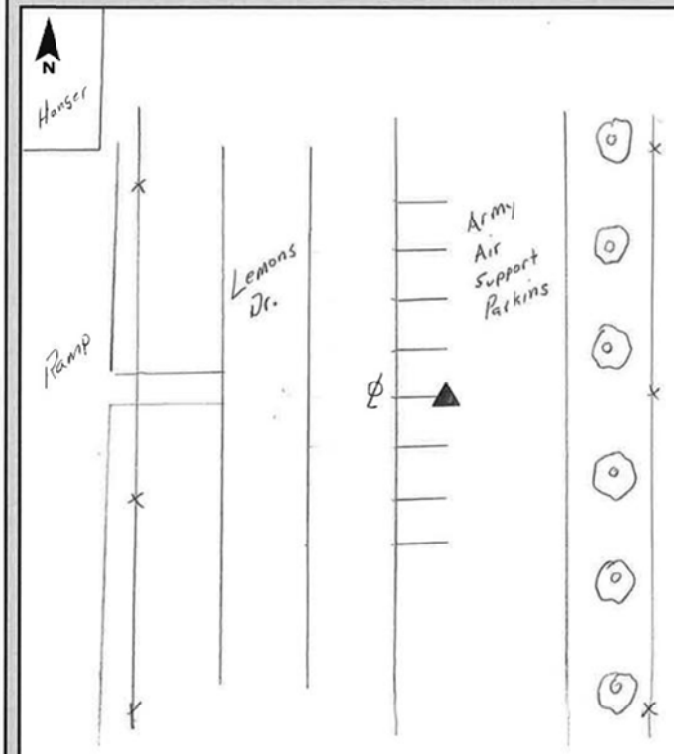
201-3E-22FEB2012

201-2-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss. Lidar	Project Number: 72207	Survey Date: 2/22/2012
Station Name:	202	Operator Name:	B Welbaum
Latitude:	34-15-44.83	Julian Day: 053	Session No. 1
Longitude:	88-45-38.44	Start Time: 2:59	End Time: 3:02
Ellip. Height:	252.66	Data File Name:	Miss_053_WIRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	Mag Nail	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Cloudy	Antenna Height:	2.100m to bottom of antenna mount



202-3N-22FEB2012

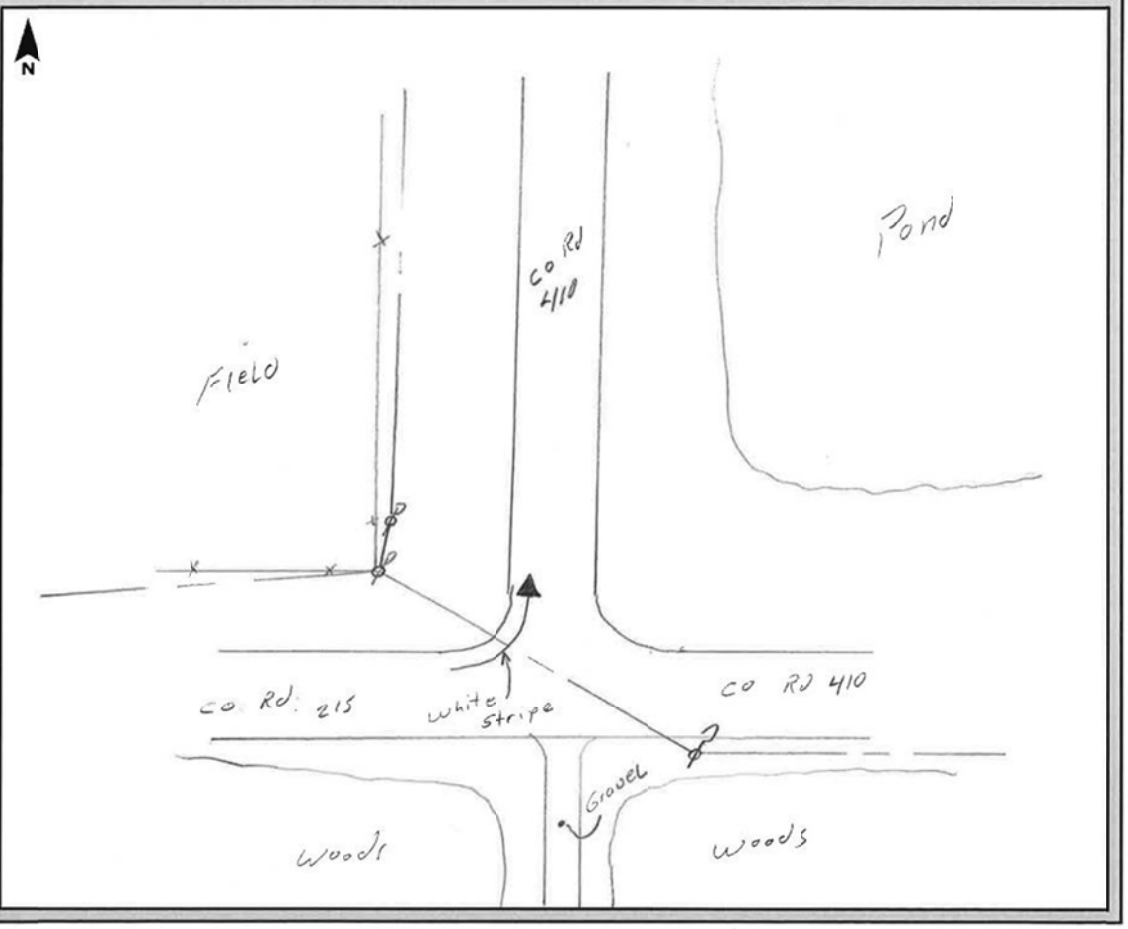
202-3W-22FEB2012

202-2-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss. LiDar	Project Number: 72207	Survey Date: 2/24/2012
Station Name:	203	Operator Name:	B. Wehbaum
Latitude:	33-56-35.75	Julian Day: 055	Session No. 1
Longitude:	88-48-46.43	Start Time: 9:13	End Time: 9:16
Ellip. Height:	199.83	Data File Name:	Miss_055_WRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	Mag Nail	Type of Antenna:	R8 Mod 2
Weather Condition:	50° Cloudy	Antenna Height:	2.00 m to bottom of antenna mount



203-3S-24FEB2012

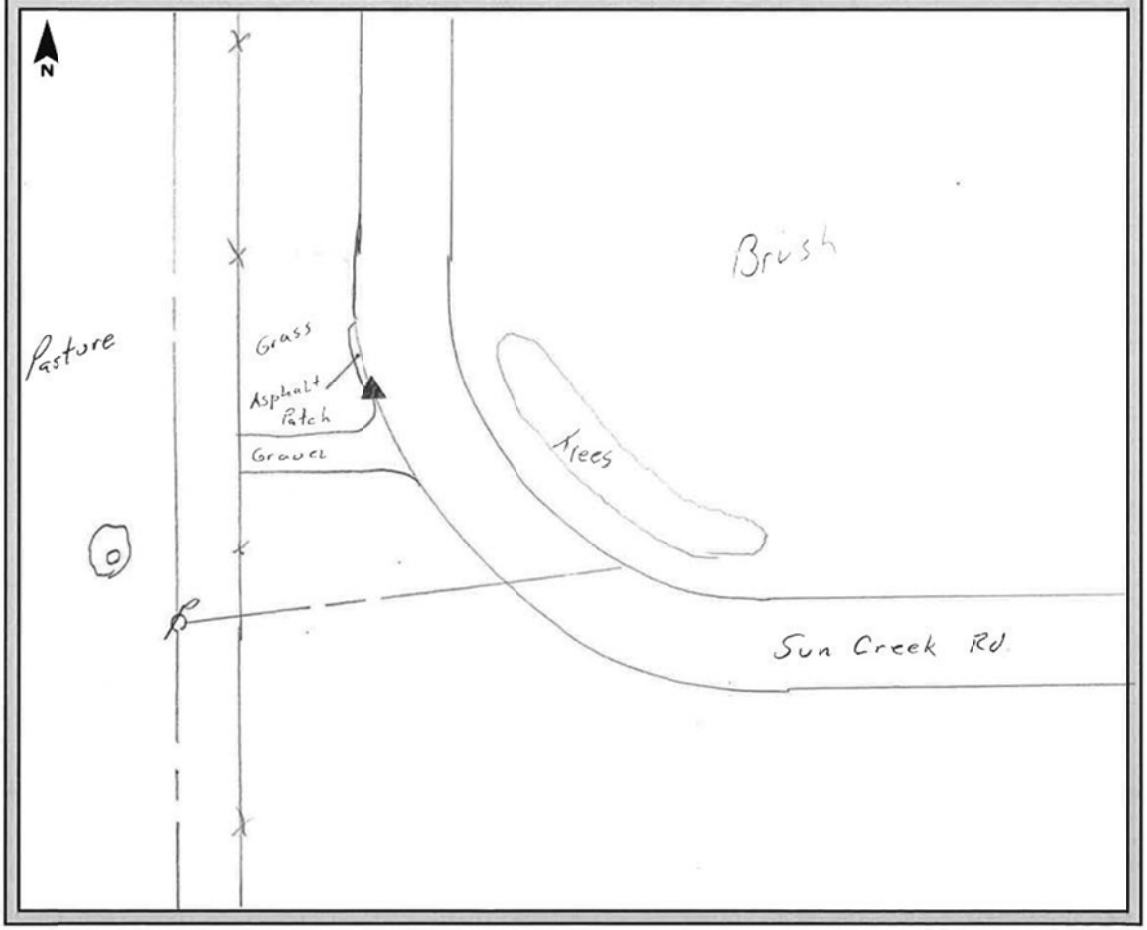
203-3W-24FEB2012

203-2-24FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207
Survey Date:	2/25/2012		
Station Name:	204	Operator Name:	B. Wellbaum
Latitude:	33-37-38.38	Julian Day:	056
Session No.	1		
Longitude:	88-51-46.32	Start Time:	9:40
End Time:	9:43		
Ellip. Height:	184.11	Data File Name:	Miss_056_0RW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	Mag Nail	Type of Antenna:	R8 Mod 2
Weather Condition:	55° Sun	Antenna Height:	2.100m to bottom of antenna mount



204-3N-25FEB2012

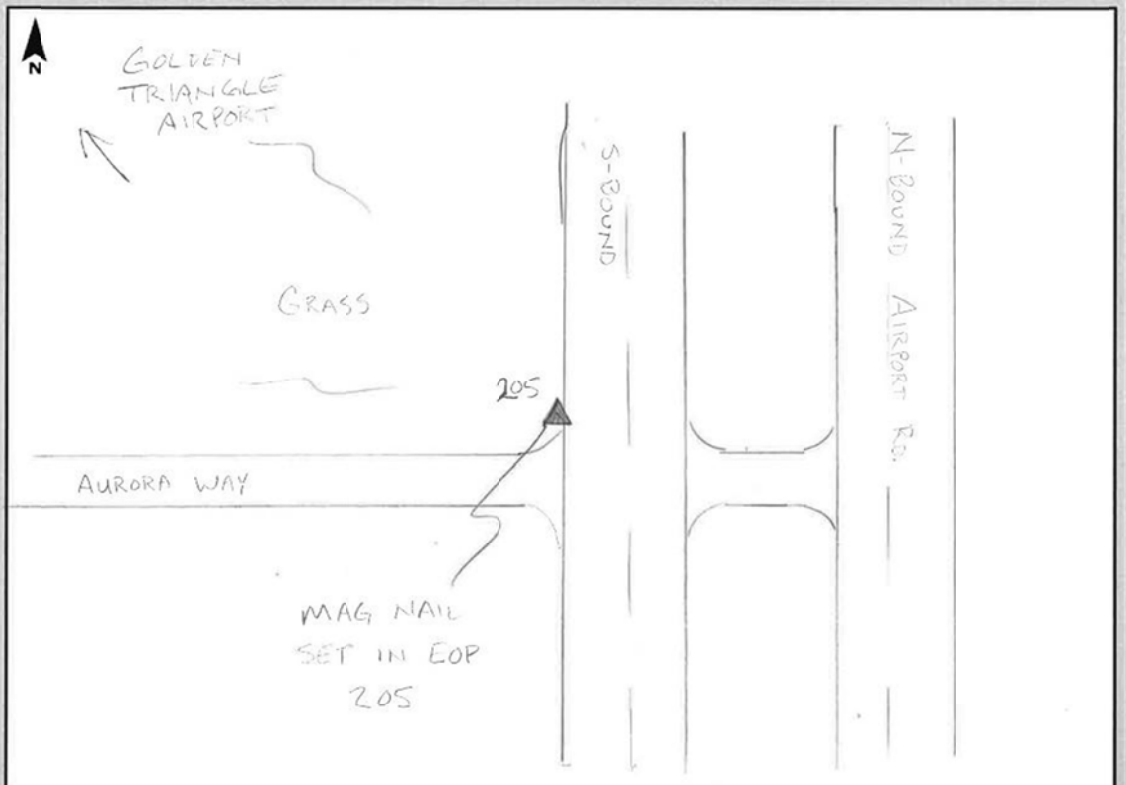
204-3E-25FEB2012

204-2-25FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/25/2012
Station Name:	205	Operator Name:	BEN CHRISTIE
Latitude:	33° 26' 53.44" N	Julian Day:	056 Session No. —
Longitude:	88° 35' 00.56" W	Start Time: —	End Time: —
Ellip. Height:	181.32	Data File Name:	—
Type of Mark:	MAG NAIL	Type of Reciever:	R8
Stamping on Mark:		Type of Antenna:	R8
Weather Condition:	50° CLOUDY	Antenna Height:	2m to bottom of antenna mount



205-3S-25FEB2012

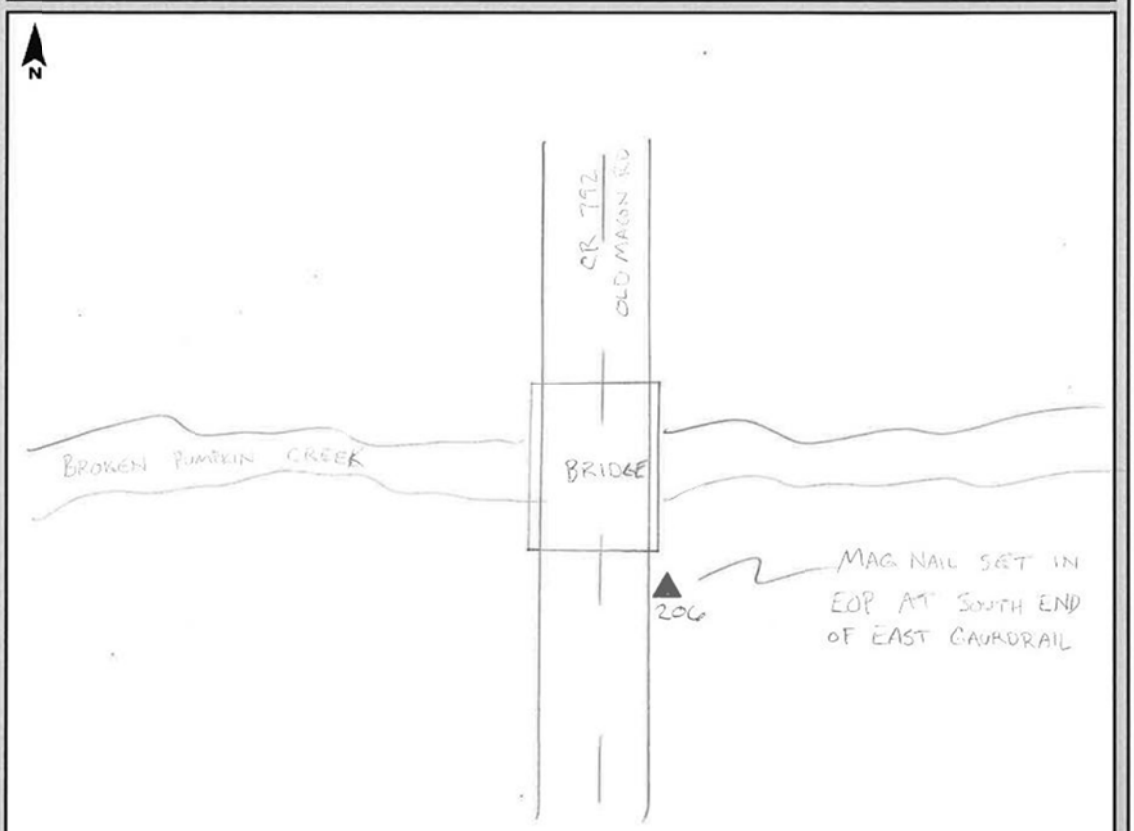
205-3W-25FEB2012

205-2-25FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/26/2012
Station Name:	206	Operator Name:	BEN CHRISTIE
Latitude:	33° 16' 16.42" N	Julian Day: 057	Session No. —
Longitude:	88° 26' 36.84" W	Start Time: —	End Time: —
Ellip. Height:	108.88 GPS	Data File Name:	—
Type of Mark:	MAG NAIL	Type of Reciever:	R8
Stamping on Mark:	—	Type of Antenna:	R8
Weather Condition:	50° SUNNY	Antenna Height:	2m to bottom of antenna mount



206-3N-26FEB2012

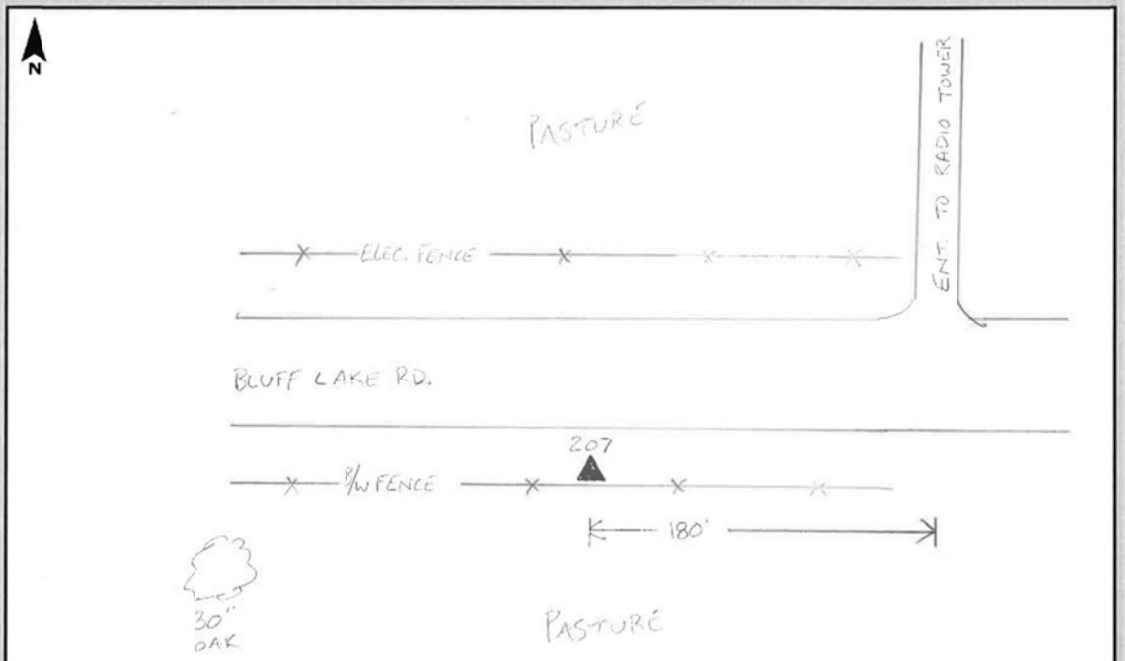
206-3W-26FEB2012

206-2-26FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/27/2012
Station Name:	207	Operator Name:	BEN CHRISTIE
Latitude:	33° 13' 00.72" N	Julian Day: 058	Session No. —
Longitude:	88° 58' 50.78" W	Start Time: —	End Time: —
Ellip. Height:	429.60 SIT	Data File Name:	—
Type of Mark:	CAPPED REBAR	Type of Reciever:	R8
Stamping on Mark:	WOOLPERT INC CONTROL STA	Type of Antenna:	R8
Weather Condition:	55° SUNNY	Antenna Height:	2M to bottom of antenna mount



207-3S-27FEB2012

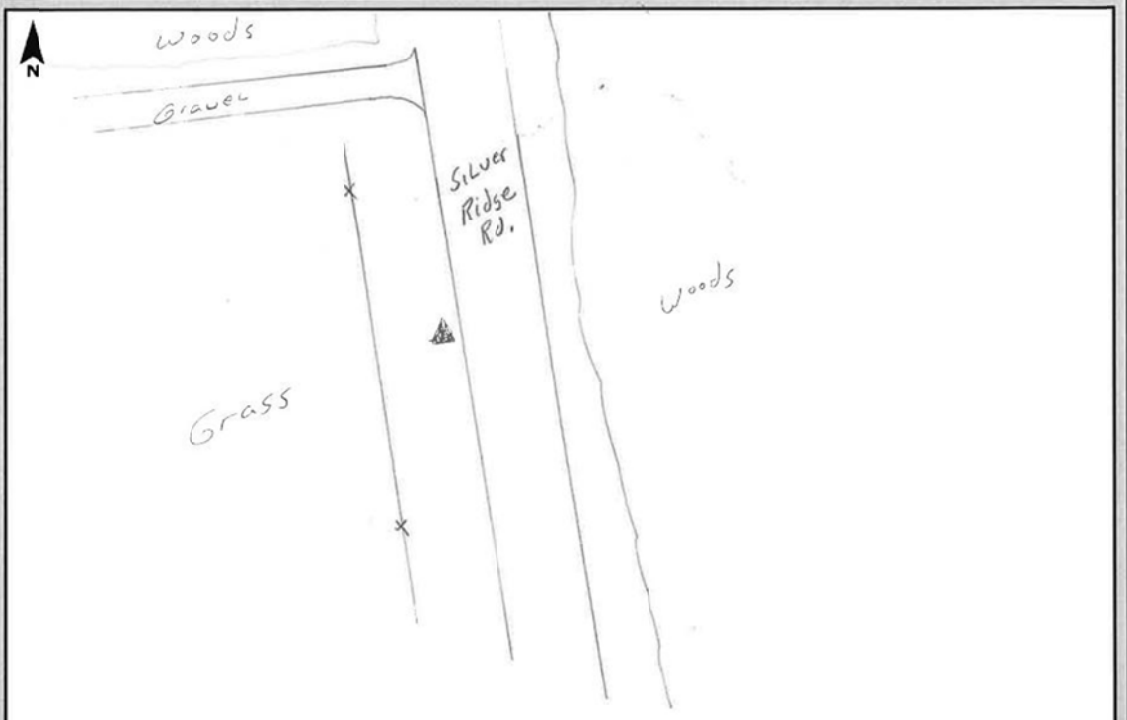
207-3W-27FEB2012

207-2-27FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number: 72207	Survey Date: 2/28/2012
Station Name:	250	Operator Name:	B. Welbaum
Latitude:	33-21-35.01	Julian Day: 059	Session No. 1
Longitude:	88-57-58.41	Start Time: 12:26	End Time: 12:30
Ellip. Height:	202.97	Data File Name:	Miss_059_wRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 1
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	60° overcast	Antenna Height: 2.100m	to bottom of antenna mount



T@ 250 0°@ 251 Hi 5.32
H△ 0.025 V△ 0.035 Hr 5.02
Start 6500
End 6511

250-3N-28FEB2012

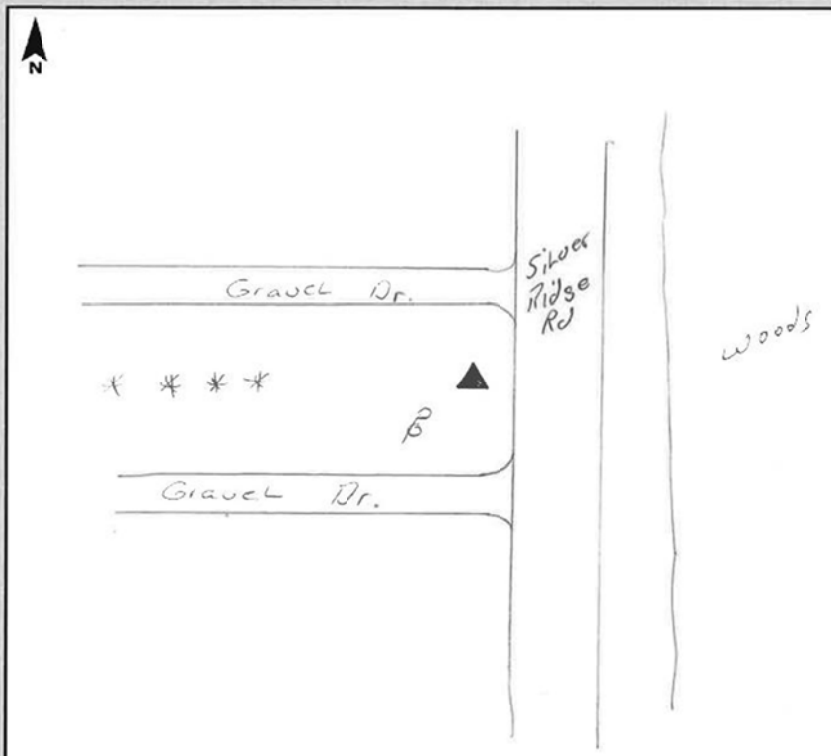
250-3E-28FEB2012

250-2-28FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207
Survey Date:	2/28/2012		
Station Name:	251	Operator Name:	B. Webbeum
Latitude:	33-21-41.42	Julian Day:	059
Session No.	1		
Longitude:	88-58-01.74	Start Time:	12:39
End Time:	12:42		
Ellip. Height:	204.31	Data File Name:	Miss_059_WRW
Type of Mark:	N/A	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Overcast	Antenna Height:	2.100 M to bottom of antenna mount



251-3N-28FEB2012

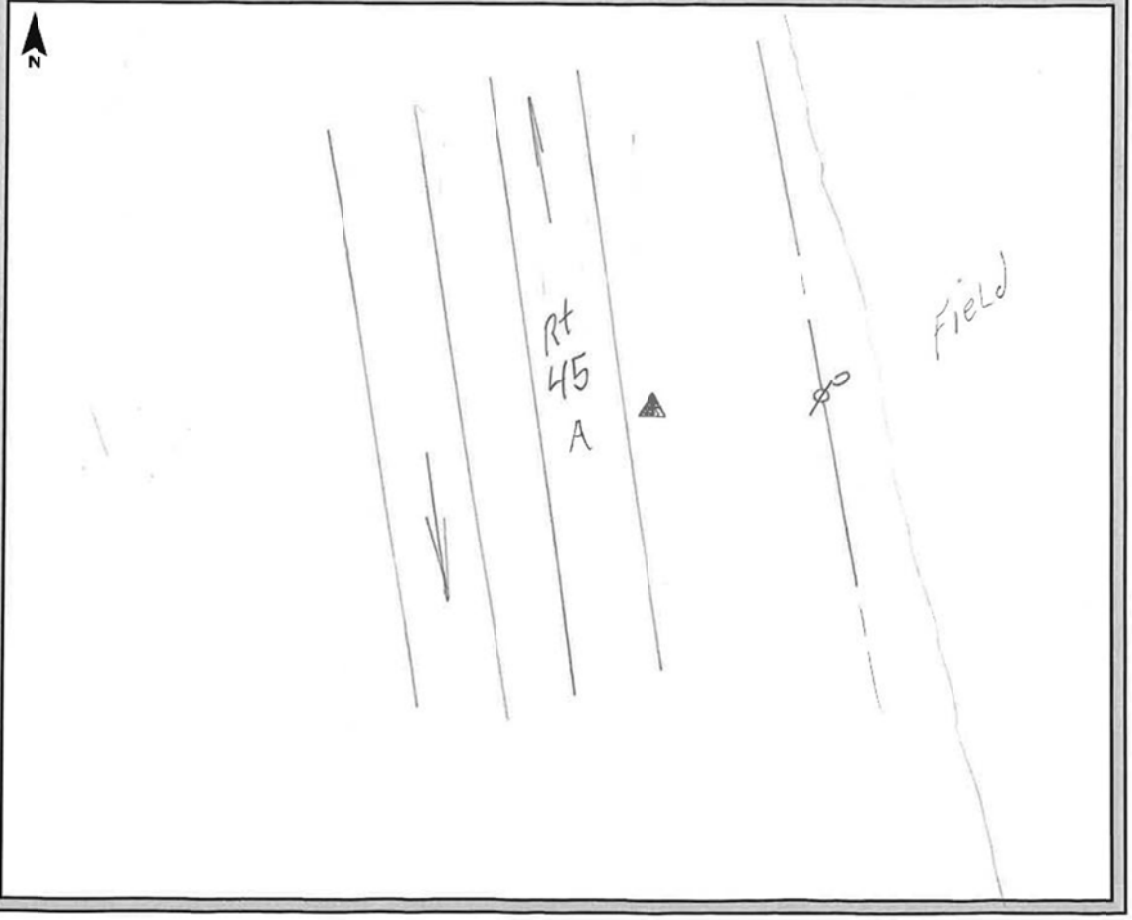
251-3E-28FEB2012

251-2-28FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207
Survey Date:	7/29/2012		
Station Name:	252	Operator Name:	B. Welbaum
Latitude:	33-43-50.83	Julian Day:	060
Session No.	1		
Longitude:	88-40-34.63	Start Time:	9:04
End Time:	9:07		
Ellip. Height:	191.70	Data File Name:	Miss_060_WRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	70° overcast	Antenna Height:	2.100m to bottom of antenna mount



252-3N-29FEB2012

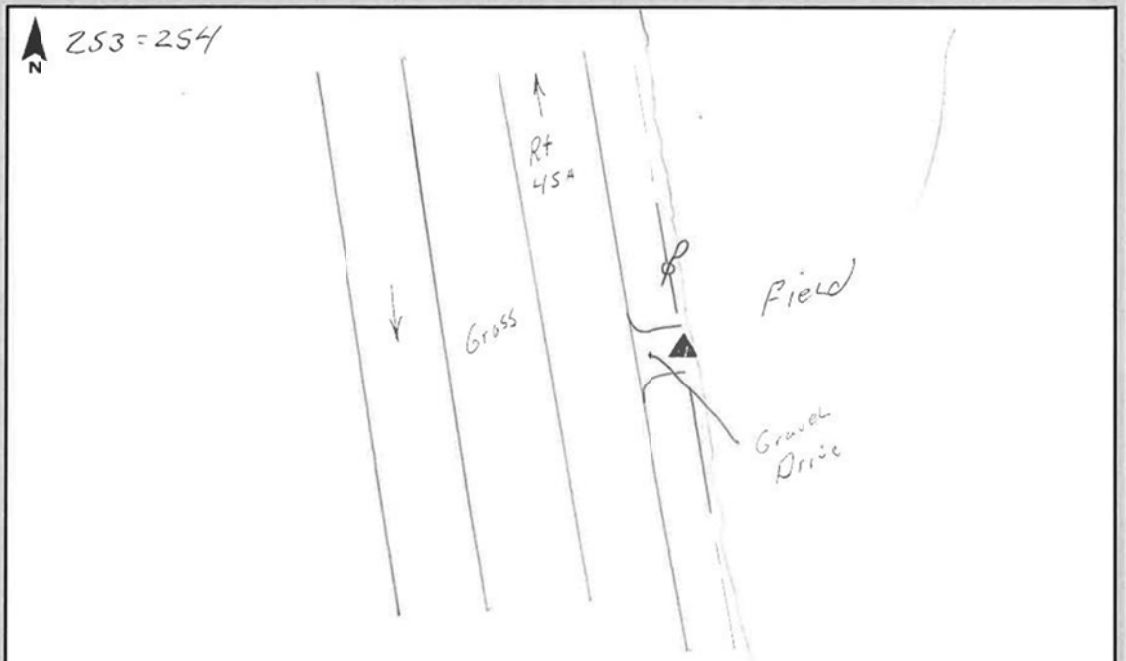
252-3E-29FEB2012

252-2-29FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number: 72207	Survey Date: 2/28/2012
Station Name:	253	Operator Name:	B. Wellborn
Latitude:	33-43-58.66	Julian Day: 060	Session No. 1
Longitude:	88-40-36.66	Start Time: 9:25	End Time: 9:30
Ellip. Height:	179.73	Data File Name:	Miss-060.WRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Overcast	Antenna Height:	2.100m to bottom of antenna mount



∠ @ 253 0° @ 252

H Δ 0.07 V Δ 0.030

Start 6512

End 6521

2:58 Start

253-3N-29FEB2012

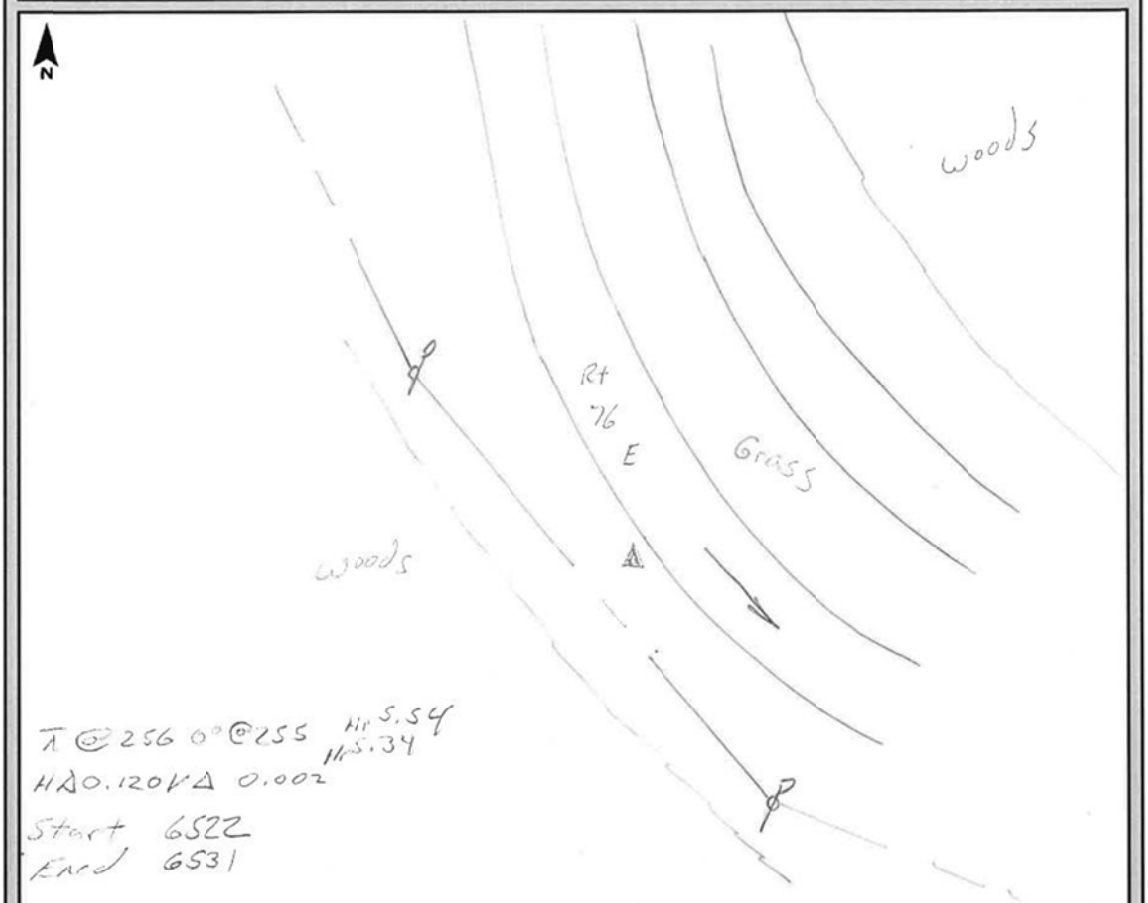
253-3E-29FEB2012

253-2-29FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number: 72207	Survey Date: 3/1/2012
Station Name:	255	Operator Name:	B Wellbaum
Latitude:	34-13-40.42	Julian Day: 061	Session No. 1
Longitude:	88-53-33.85	Start Time: 1:34	End Time: 1:38
Ellip. Height:	238.03	Data File Name:	Miss_061_WRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod2
Weather Condition:	75° Sun	Antenna Height: 2.100m	to bottom of antenna mount



255-3N-01MAR2012

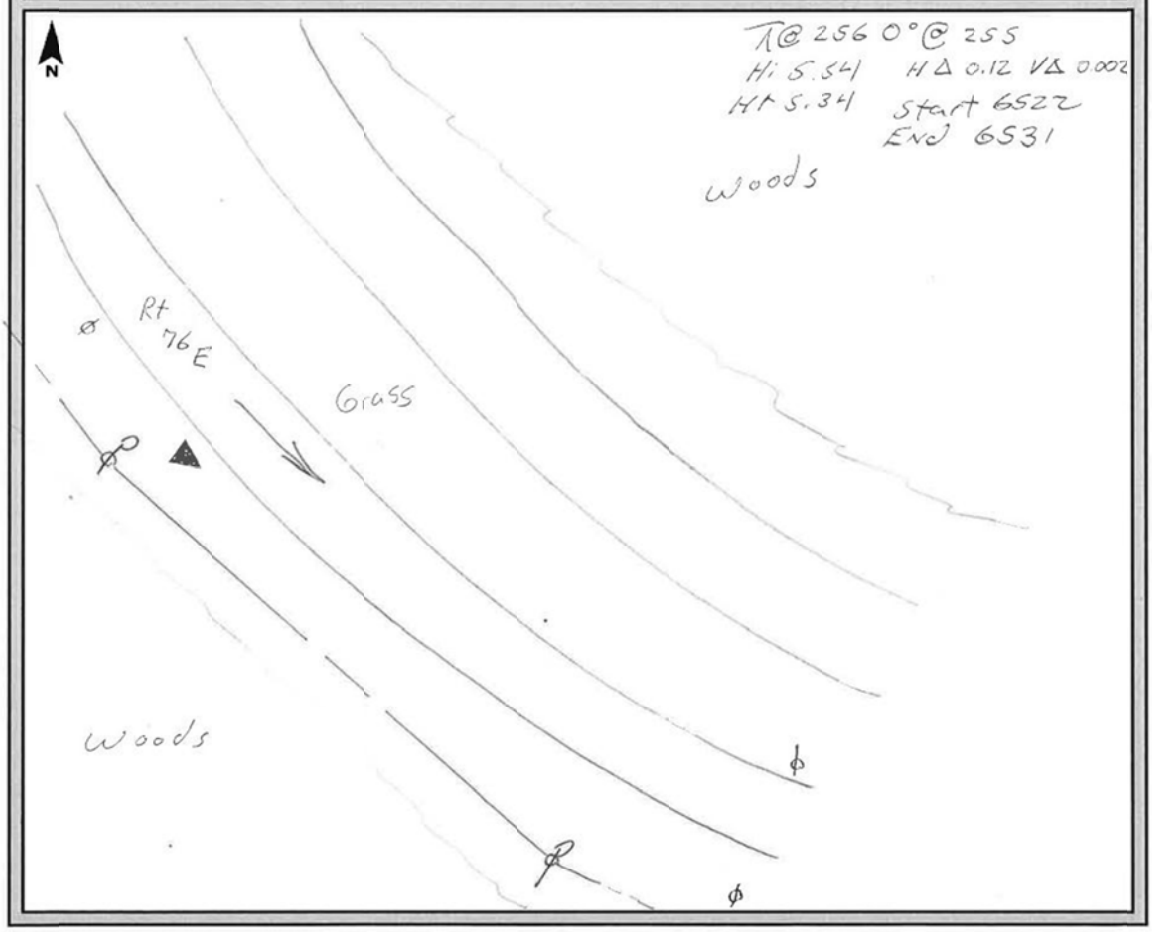
255-3W-01MAR2012

255-2-01MAR2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number: 72207	Survey Date: 3/1/2012
Station Name:	256	Operator Name:	B. Wellbaum
Latitude:	34-13-37.12	Julian Day: 061	Session No. 1
Longitude:	88-53-26.67	Start Time: 1:52	End Time: 1:55
Ellip. Height:	238.59	Data File Name:	Miss_061_WRW
Type of Mark:	Nail	Type of Reciever:	R8 Mod 2
Stamping on Mark:	N/A	Type of Antenna:	R8 Mod 2
Weather Condition:	75° Sun	Antenna Height: 2.100m	to bottom of antenna mount



256-3N-01MAR2012

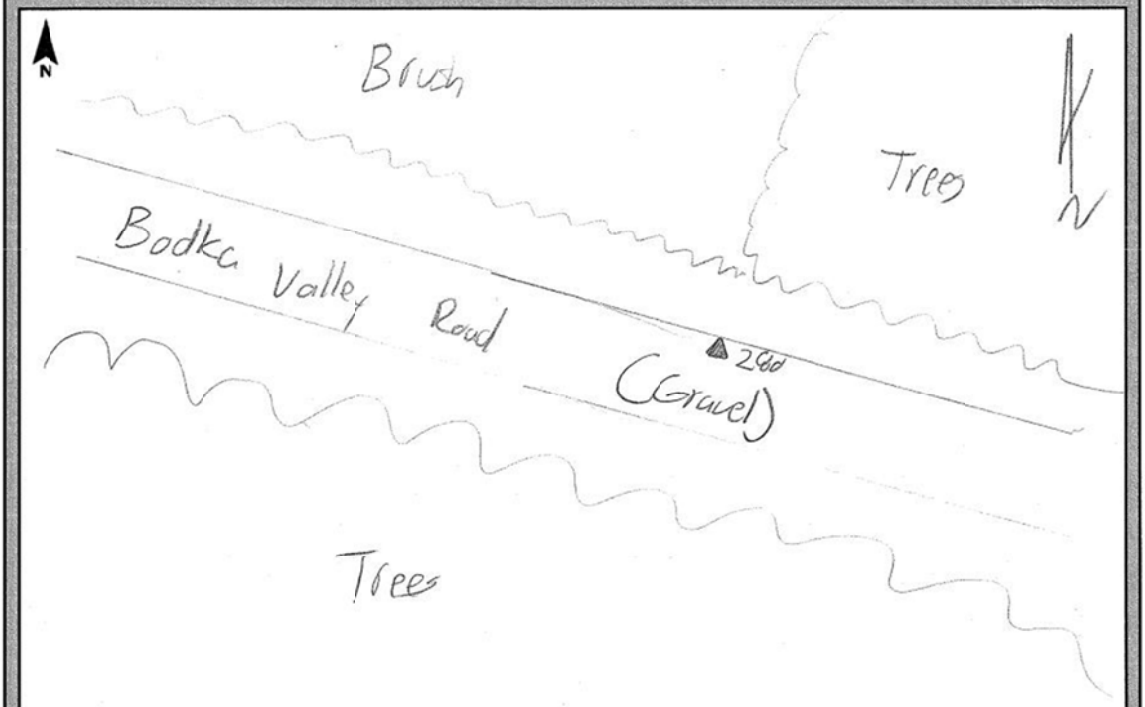
256-3E-01MAR2012

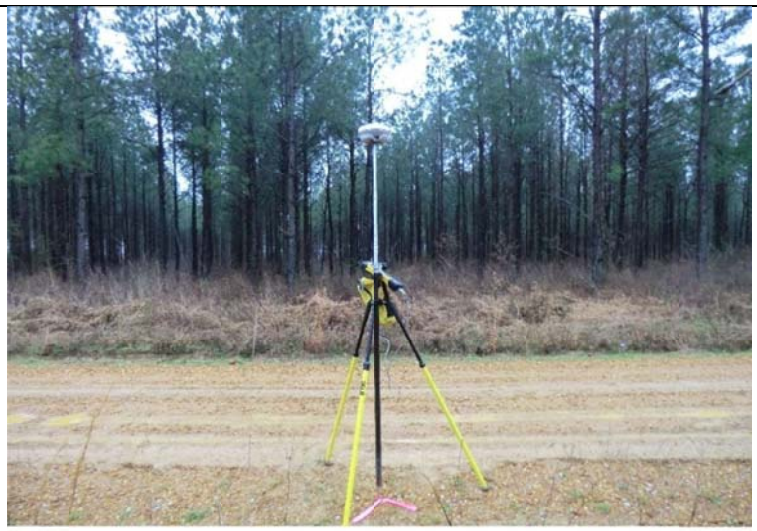
256-2-01MAR2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Station Name:	280	Operator Name:	David Hall
Latitude:	32° 47' 07.9"	Julian Day:	059
Longitude:	88° 26' 14.9"	Start Time:	15:21
Ellip. Height:	95'	Data File Name:	MISS-059-DMH
Type of Mark:	Rebar w/ cap	Type of Reciever:	R8-3
Stamping on Mark:	Woolpert Control Sta	Type of Antenna:	Internal
Weather Condition:	Overcast 70°	Antenna Height:	2.000M to bottom of antenna mount
		Survey Date:	2012-02-28
		Session No.	
		End Time:	15:36





280-3N-28FEB2012

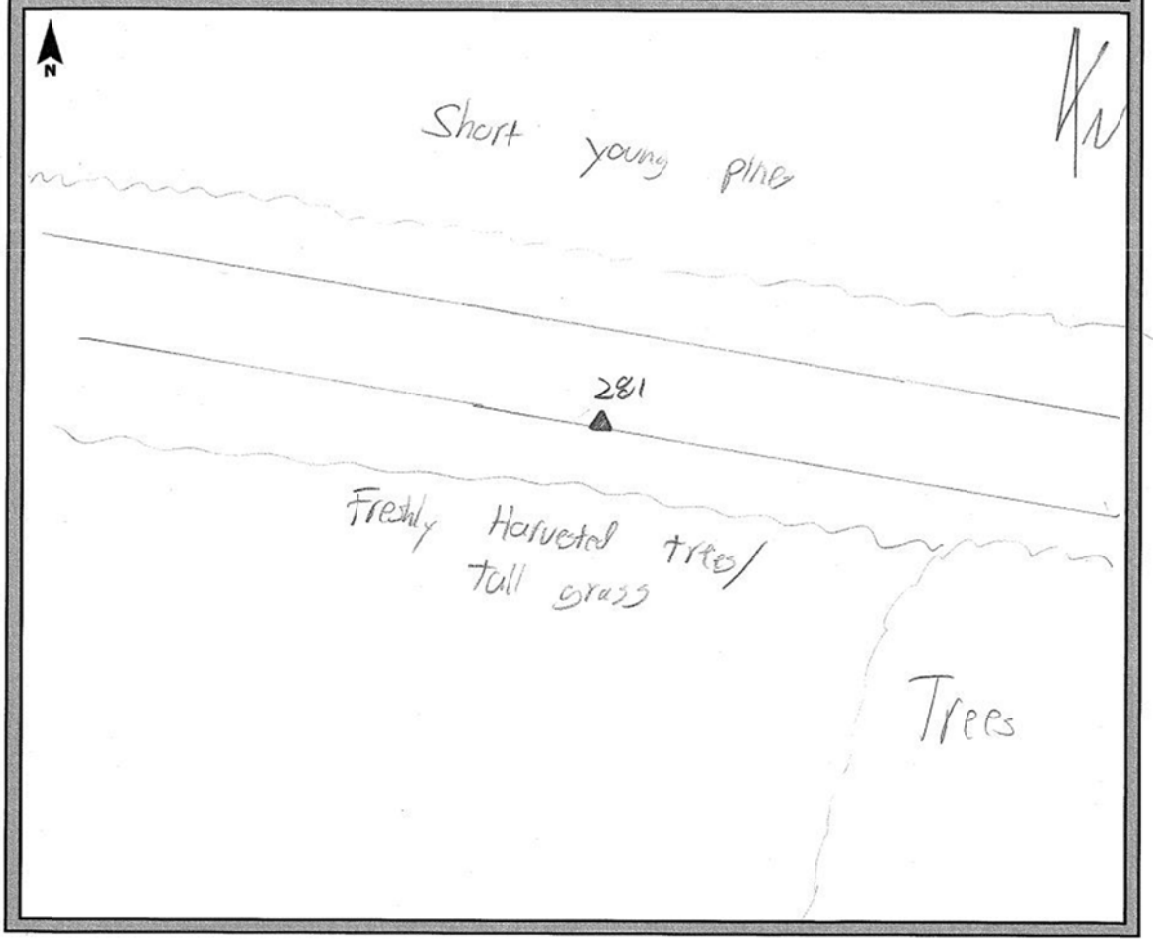
280-3E-28FEB2012

280-2-28FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Survey Date:	2012-02-28		
Station Name:	281	Operator Name:	David Hall
Latitude:	32° 47' 09.2"	Julian Day:	059
Session No.	—		
Longitude:	88° 20' 24.2"	Start Time:	15:36
End Time:	15:46		
Ellip. Height:	95'	Data File Name:	MISS_059_DnH
Type of Mark:	Rebar w/ Cap	Type of Reciever:	R8-3
Stamping on Mark:	Woolpert Control Stn	Type of Antenna:	Internal
Weather Condition:	Overcast 70°	Antenna Height:	2.000m to bottom of antenna mount



281-3N-28FEB2012

281-3E-28FEB2012

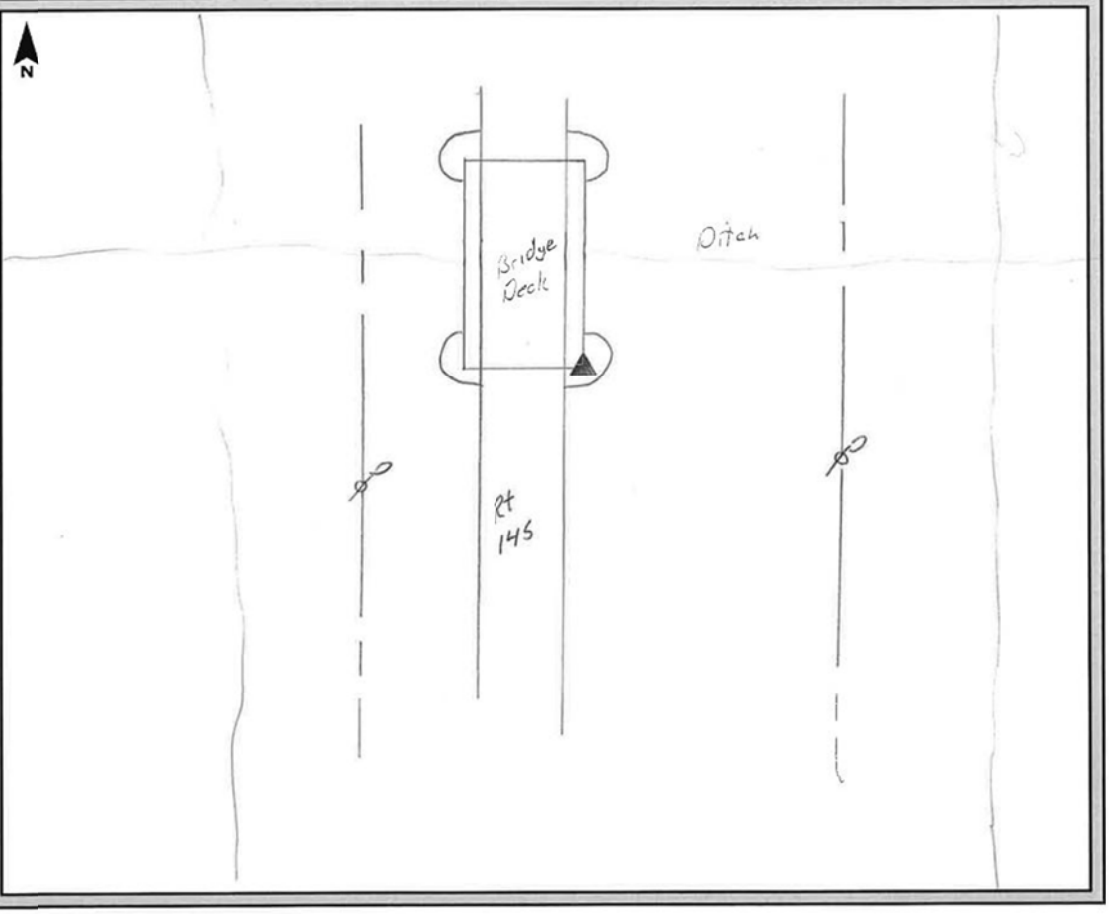
281-2-28FEB2012

NGS CONTROL CHECK POINTS

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207
Survey Date:	2/27/2012		
Station Name:	45V-88	Operator Name:	B. Webbaum
Latitude:	33-04-08.45	Julian Day:	058
Session No.	1		
Longitude:	88-33-49.77	Start Time:	11:17
End Time:			
Ellip. Height:	83.72	Data File Name:	
Type of Mark:	Brass Cap in Headwall	Type of Reciever:	R8 Mod 2
Stamping on Mark:	45V-88 1964	Type of Antenna:	R8 Mod 2
Weather Condition:	70° Partly Cloudy	Antenna Height:	2.100m to bottom of antenna mount



45_V_88-DJ0699-BM-3W-26FEB2012

45_V_88-DJ0699-BM-3S-26FEB2012

45_V_88-DJ0699-BM-3N-26FEB2012

45_V_88-DJ0699-BM-3E-26FEB2012

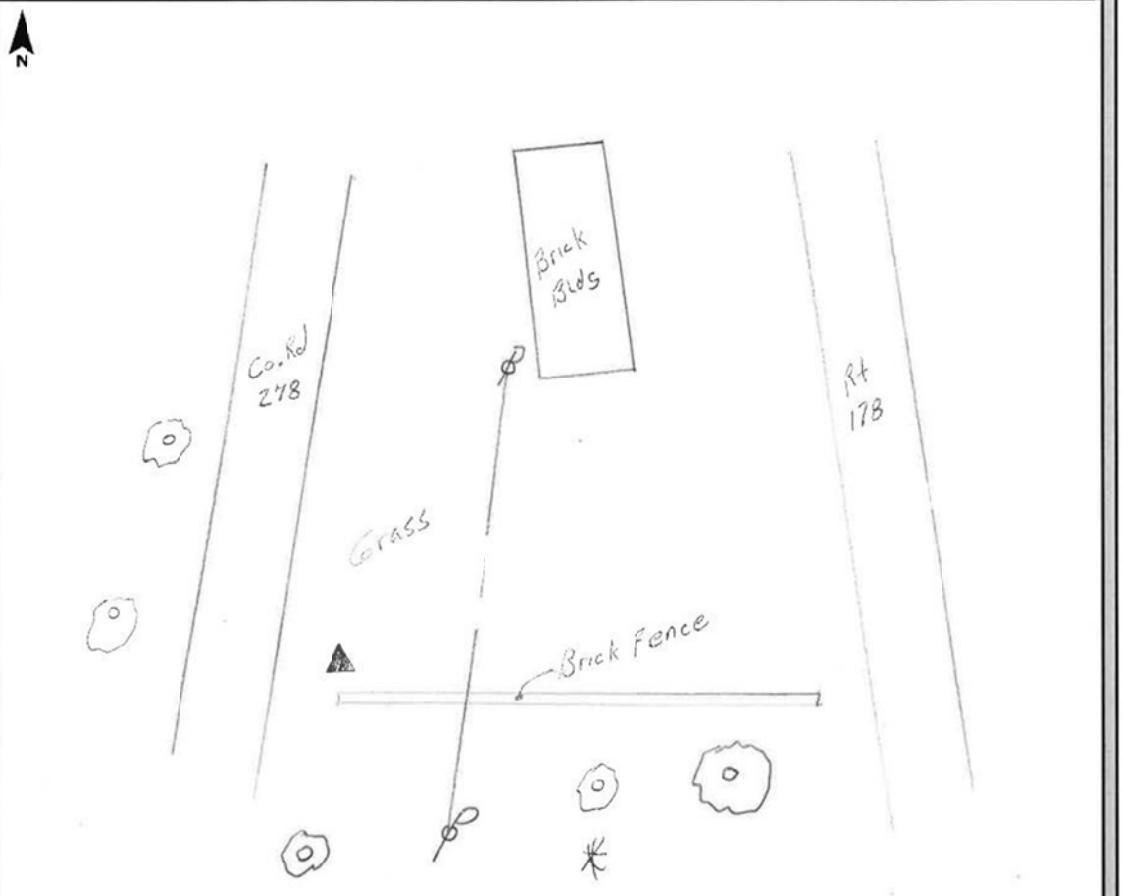
45_V_88-DJ0699-BM-2-26FEB2012

45_V_88-DJ0699-BM-1-26FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207
Survey Date:	2/21/2012		
Station Name:	78_4_RM1	Operator Name:	B. Wellbaum
Latitude:	34-27-21.08	Julian Day:	052
Session No.	1		
Longitude:	88-58-32.06	Start Time:	12:45
End Time:	1:49		
Ellip. Height:	411.64	Data File Name:	78-4-RM1-052
Type of Mark:	Conc Mon. M.S.H.D.	Type of Reciever:	S800
Stamping on Mark:	RM-1 78-4-1959	Type of Antenna:	S800
Weather Condition:	73° Sun	Antenna Height:	2.100 to bottom of antenna mount



78-4-RM1-3W-21FEB2012

78-4-RM1-3S-21FEB2012

78-4-RM1-3N-21FEB2012

78-4-RM1-3E-21FEB2012

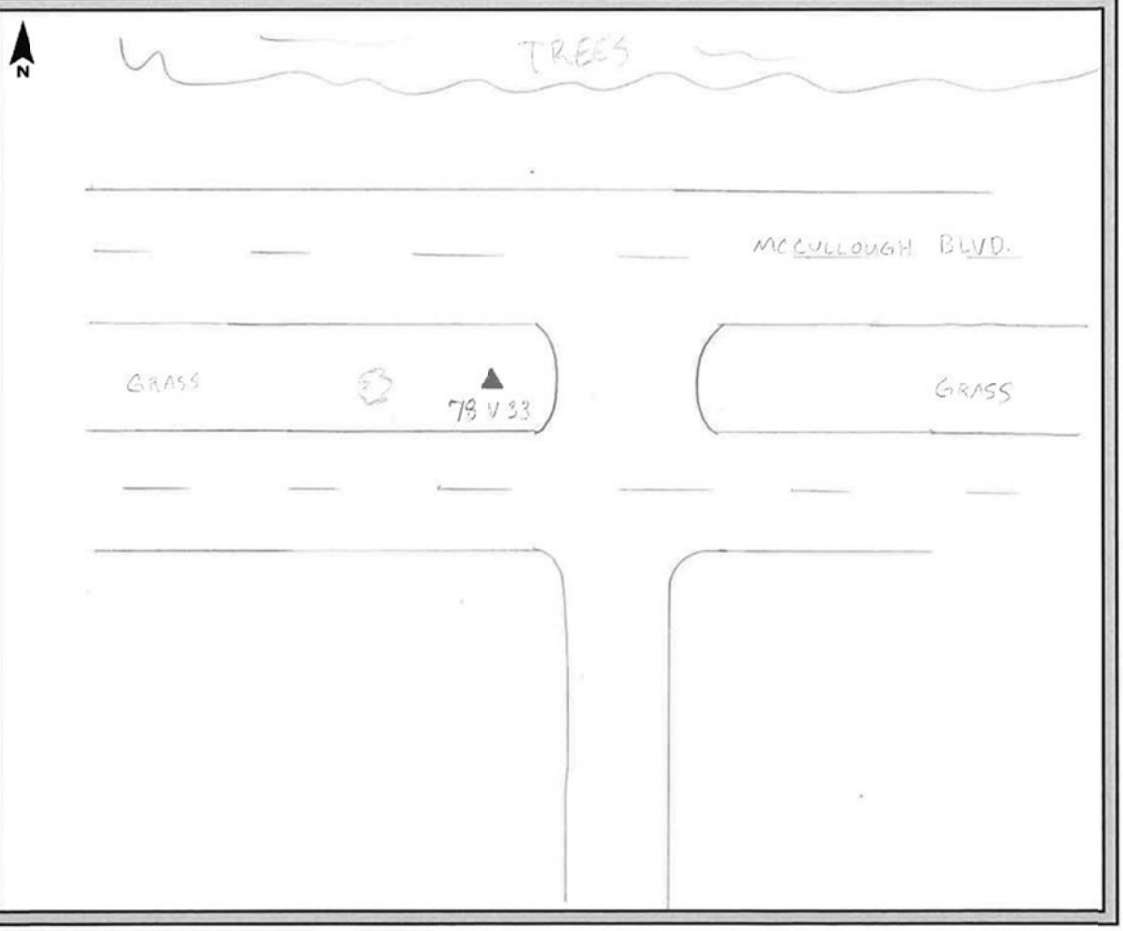
78-4-RM1-2-21FEB2012

78-4-RM1-1-21FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/22/2012
Station Name:	78 V 33	Operator Name:	BEN CHRISTIE
Latitude:	34°16' 52.06"N	Julian Day: 053	Session No. 0
Longitude:	88°43' 50.03"W	Start Time: 1117	End Time: 1210
Ellip. Height:	229.06	Data File Name:	78V33053a
Type of Mark:	DISK	Type of Reciever:	R8
Stamping on Mark:	78V-33 BM 1965	Type of Antenna:	R8
Weather Condition:	45° CLOUDY	Antenna Height:	2 m to bottom of antenna mount



78_V_33-EG0587-BM-3W-22FEB2012

78_V_33-EG0587-BM-3S-22FEB2012

78_V_33-EG0587-BM-3N-22FEB2012

78_V_33-EG0587-BM-3E-22FEB2012

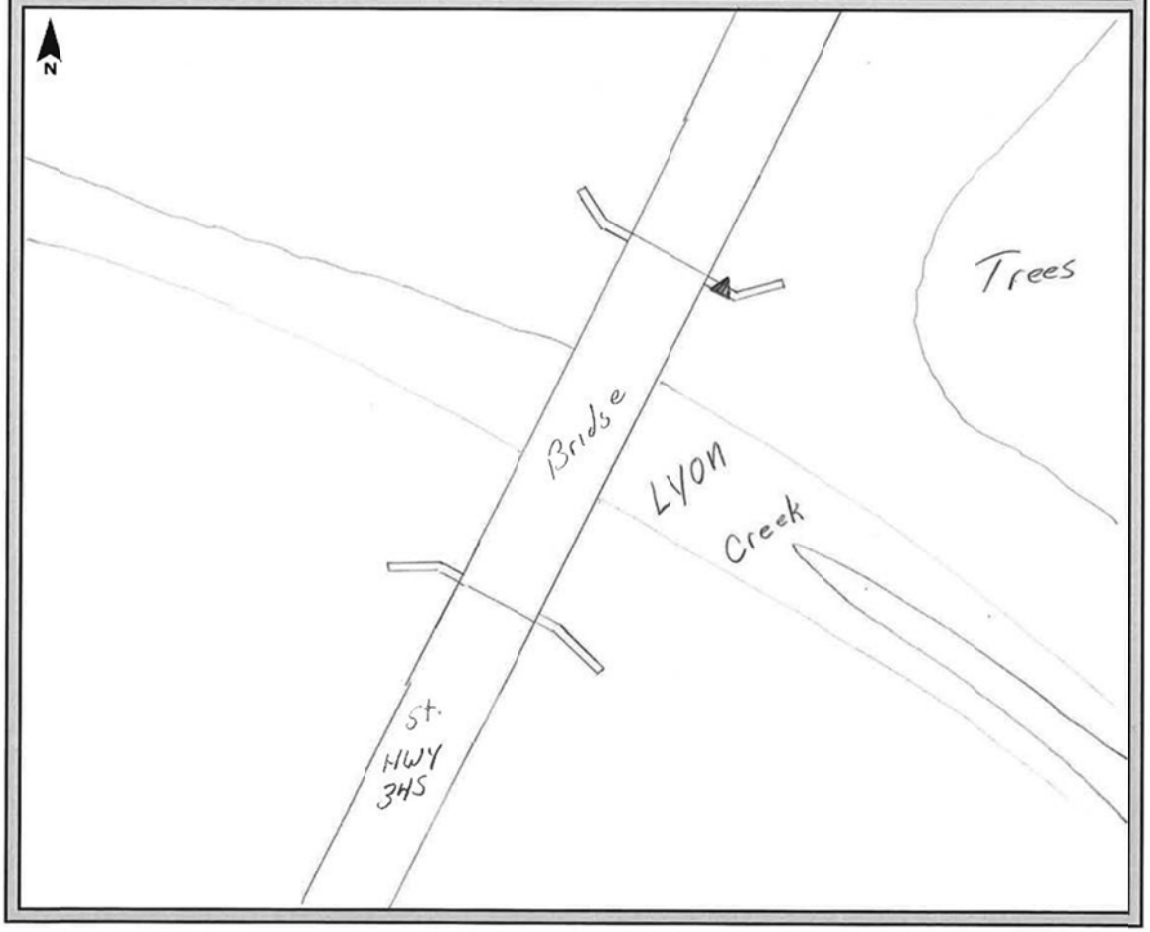
78_V_33-EG0587-BM-2-22FEB2012

78_V_33-EG0587-BM-1-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207 Survey Date: 2/22/2012
Station Name:	APL V 5	Operator Name:	B Weltbaum
Latitude:	34-16-49.59	Julian Day:	053 Session No. 1
Longitude:	88-59-55.66	Start Time:	4.15 End Time: 5:18
Ellip. Height:	309.73	Data File Name:	APL_V_5_053
Type of Mark:	MSHD	Type of Reciever:	R8 Mod 2
Stamping on Mark:	APL V 5 1977	Type of Antenna:	R8 Mod 2
Weather Condition:	60° Cloudy	Antenna Height:	2.100m to bottom of antenna mount



APL-V-5-3W-22FEB2012

APL-V-5-3S-22FEB2012

APL-V-5-3N-22FEB2012

APL-V-5-3E-22FEB2012

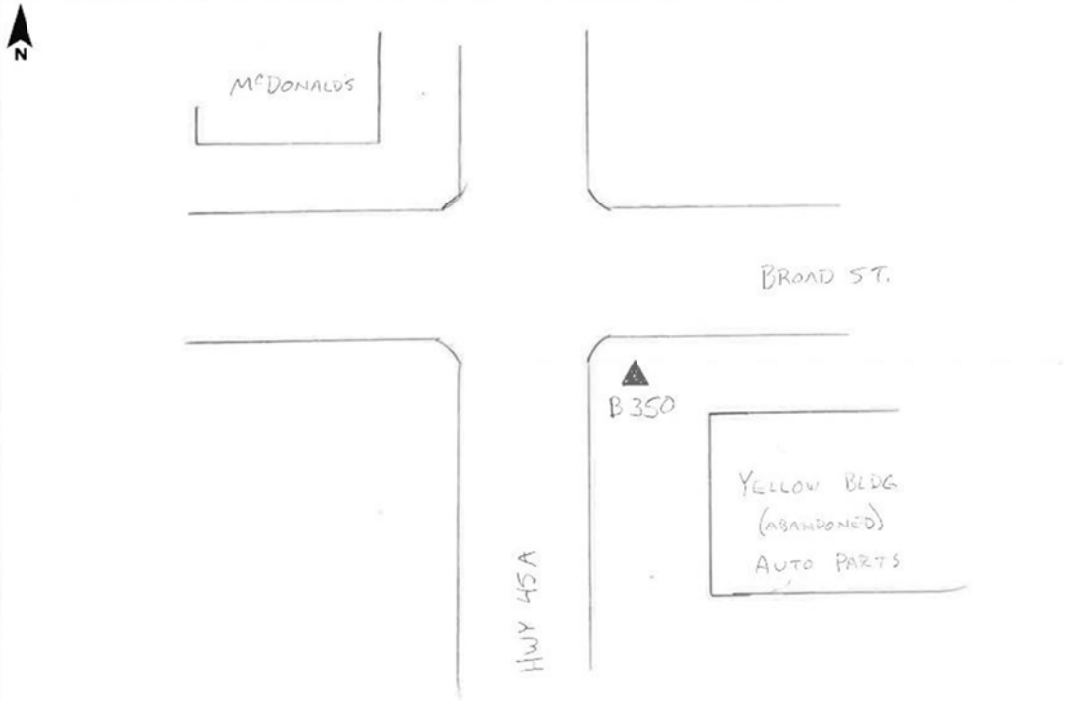
APL-V-5-2-22FEB2012

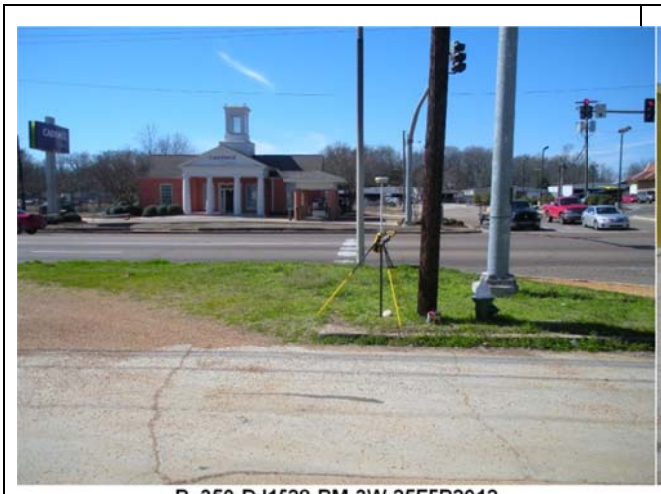
APL-V-5-1-22FEB2012

GPS Observation Log Sheet

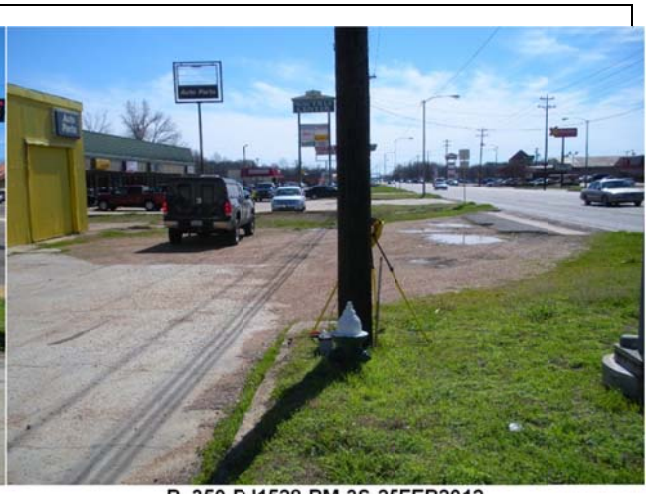
WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/25/2012
Station Name:	B 350	Operator Name:	BEN CHRISTIE
Latitude:	33° 36' 19.82" N	Julian Day: 056	Session No. 0
Longitude:	88° 39' 31.94" W	Start Time: 1248	End Time: 1341
Ellip. Height:	118.33 ±	Data File Name:	B3500560.
Type of Mark:	STEEL ROD	Type of Reciever:	R8
Stamping on Mark:	B 350 1988	Type of Antenna:	R8
Weather Condition:	50° SUNNY	Antenna Height: 2 m	to bottom of antenna mount





B_350-DJ1528-BM-3W-25FEB2012



B_350-DJ1528-BM-3S-25FEB2012

B_350-DJ1528-BM-3N-25FEB2012

B_350-DJ1528-BM-3E-25FEB2012

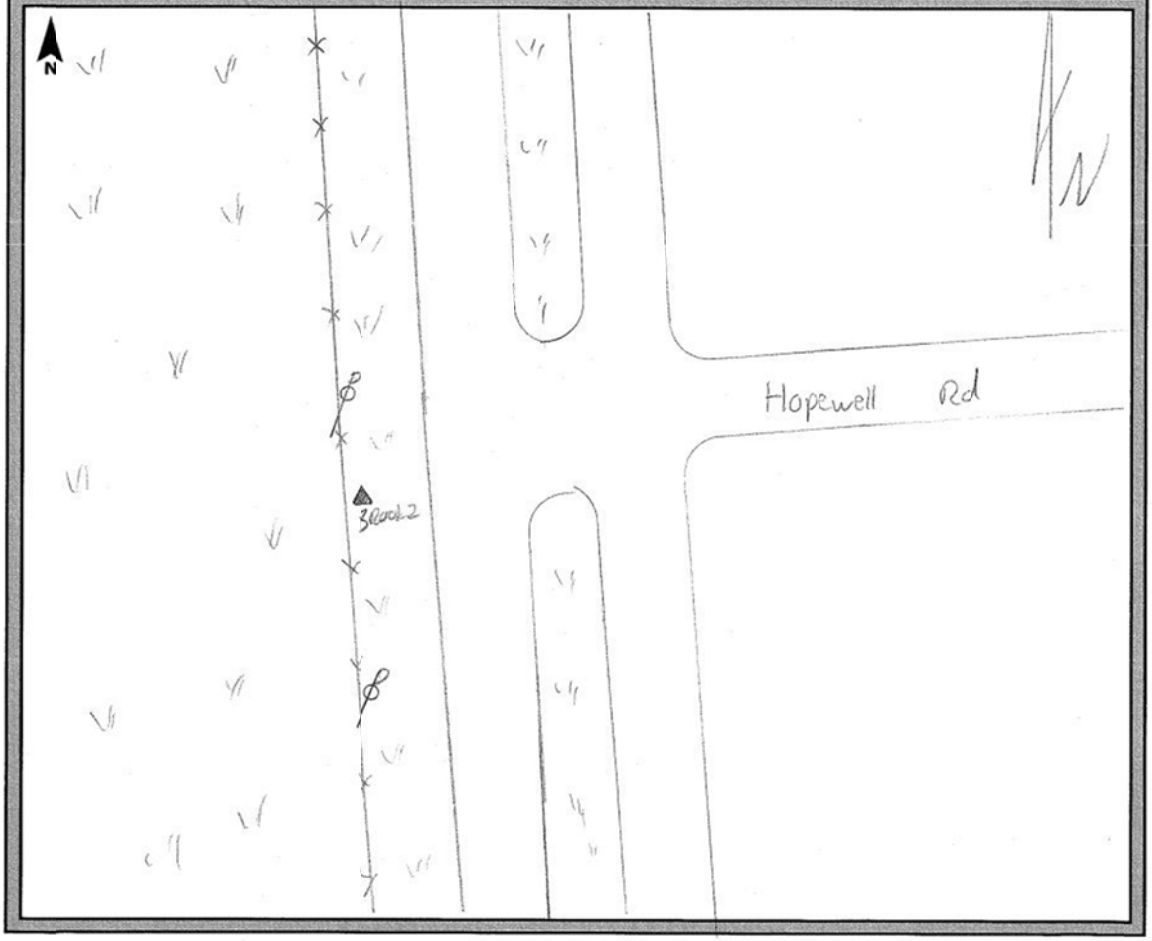
B_350-DJ1528-BM-2-25FEB2012

B_350-DJ1528-BM-1-25FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Survey Date:	2012-02-26		
Station Name:	BROOK 2	Operator Name:	David Hall
Latitude:	33° 11' 26.87"	Julian Day:	057
Session No.	2		
Longitude:	88° 34' 04.32"	Start Time:	10:59
End Time:	11:59		
Ellip. Height:	150'	Data File Name:	09500571.DAT
Type of Mark:	DISC	Type of Reciever:	R8-3
Stamping on Mark:	BROOK 2	Type of Antenna:	Internal
Weather Condition:	60° & Clear	Antenna Height:	2.000m to bottom of antenna mount



BROOK_2-JD2131-CBN-3W-26FEB2012

BROOK_2-JD2131-CBN-3S-26FEB2012

BROOK_2-JD2131-CBN-3N-26FEB2012

BROOK_2-JD2131-CBN-3E-26FEB2012

BROOK_2-JD2131-CBN-2-26FEB2012

BROOK_2-JD2131-CBN-1-26FEB2012

GPS Observation Log Sheet

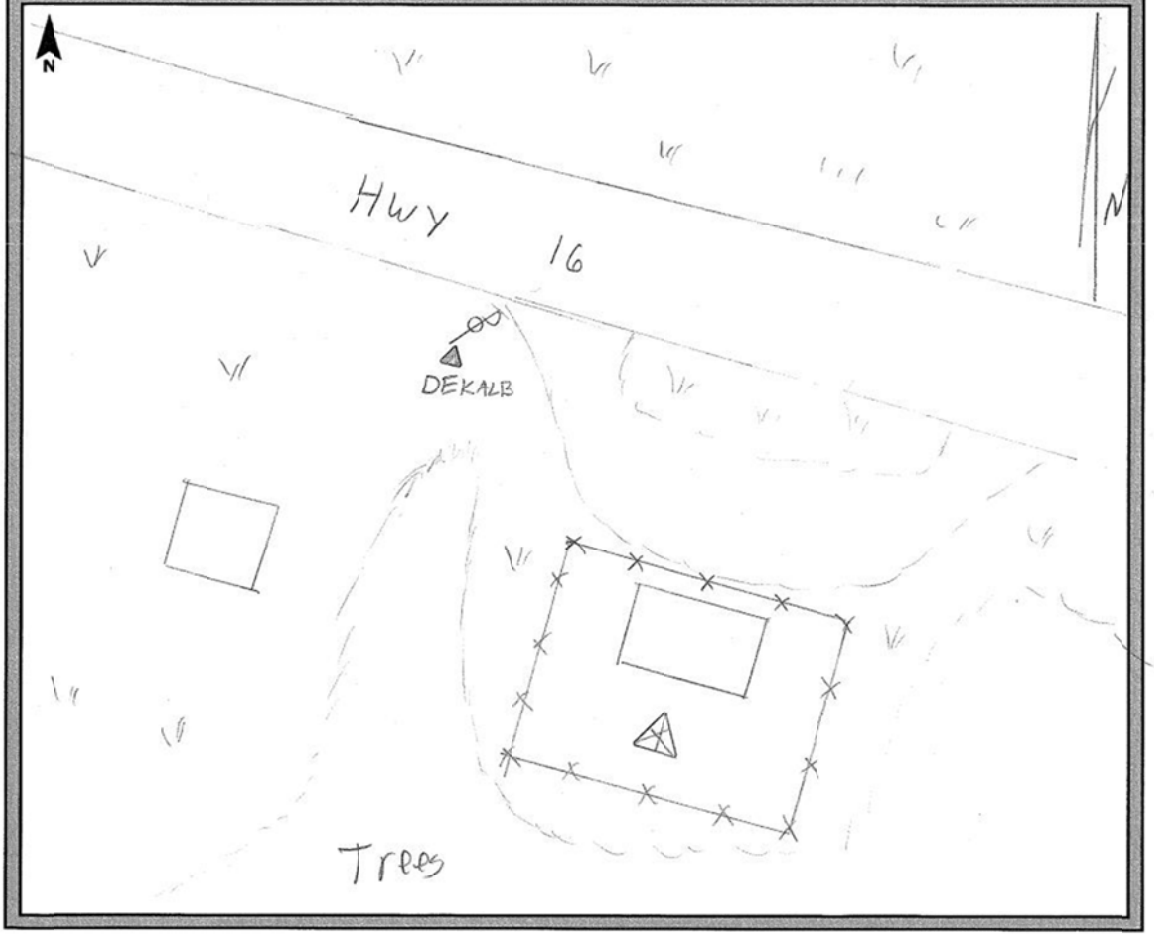
WOOLPERT

Project Name:	NRCS Tupelo	Project Number:	72207
Station Name:	DEKALB	Operator Name:	David Hal
Latitude:	32° 46' 23.56"	Julian Day:	059
Longitude:	88° 37' 53.01"	Start Time:	10:45
Ellip. Height:	421'	Data File Name:	09500591.DAT
Type of Mark:	BM Disc	Type of Reciever:	R8-3
Stamping on Mark:	DEKALB 1955	Type of Antenna:	Internal
Weather Condition:	Overcast, 70°	Antenna Height:	2.000M to bottom of antenna mount

Survey Date: 2012-02-28

Session No. 1

End Time: 11158



DEKALB-CO1228-BM-3W-28FEB2012

DEKALB-CO1228-BM-3S-28FEB2012

DEKALB-CO1228-BM-3N-28FEB2012

DEKALB-CO1228-BM-3E-28FEB2012

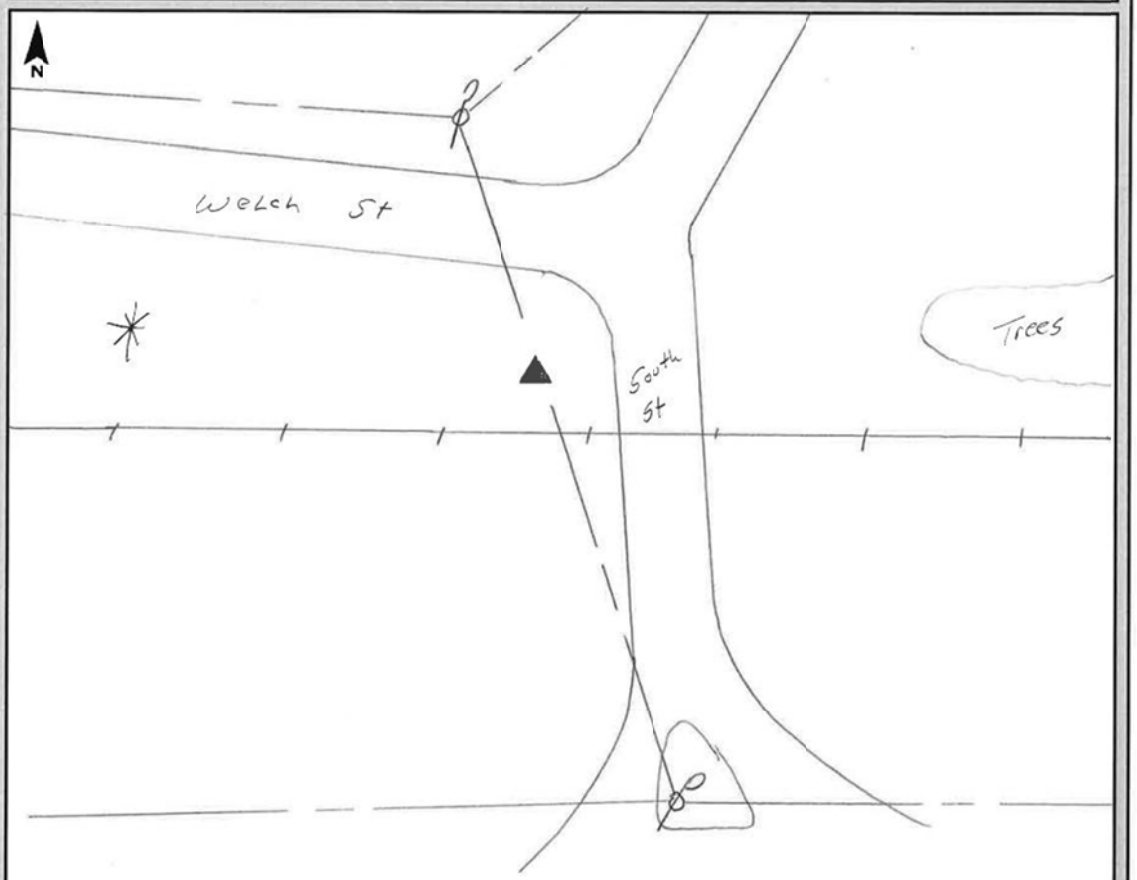
DEKALB-CO1228-BM-2-28FEB2012

DEKALB-CO1228-BM-1-28FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number: 12207	Survey Date: 2/25/2012
Station Name:	F-4	Operator Name:	B. Welbaum
Latitude:	33-32-11.13	Julian Day: 056	Session No. 1
Longitude:	89-07-41.59	Start Time: 11:16	End Time: 12:73
Ellip. Height:	328.13	Data File Name:	29460568
Type of Mark:	C.B.N. Control Point	Type of Reciever:	R8 Mod 2
Stamping on Mark:	F-4 1933 NGS B.M.	Type of Antenna:	R8 Mod 2
Weather Condition:		Antenna Height: 2.100m	to bottom of antenna mount



F-4-3W-25FEB2012

F-4-3S-25FEB2012

F-4-3N-25FEB2012

F-4-3E-25FEB2012

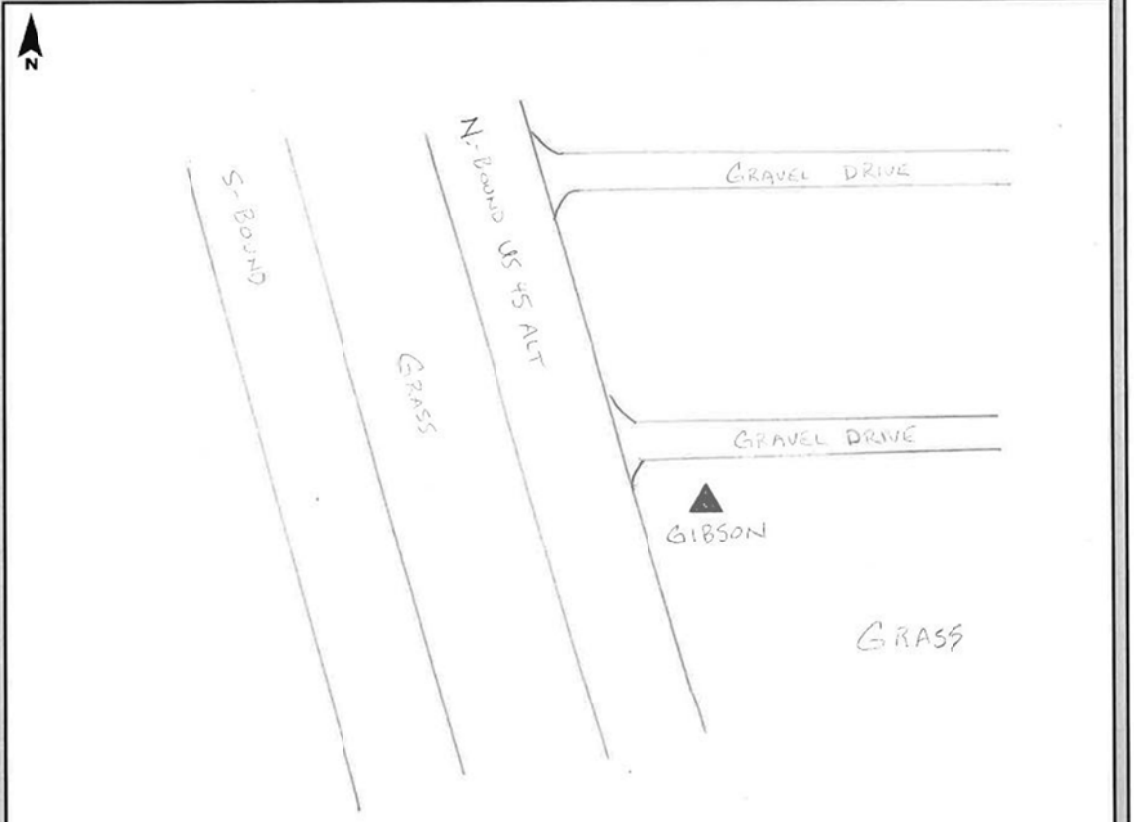
F-4-2-25FEB2012

F-4-1-25FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS. LIDAR	Project Number:	Survey Date: 02/24/2012
Station Name:	GIBSON	Operator Name:	BEN CHRISTIE
Latitude:	33° 52' 35.49" N	Julian Day: 055	Session No. 0
Longitude:	88° 43' 20.21" W	Start Time: 1243	End Time: 1331
Ellip. Height:	175.8 sH	Data File Name:	GIBSON 0550.
Type of Mark:	DISK	Type of Reciever:	R8
Stamping on Mark:	GIBSON 1950 1979	Type of Antenna:	
Weather Condition:	45° PT. CLOUDY	Antenna Height: 2M	to bottom of antenna mount



GIBSON-DJ1022-BM-3W-24FEB2012

GIBSON-DJ1022-BM-3E-24FEB2012

GIBSON-DJ1022-BM-3N-24FEB2012

GIBSON-DJ1022-BM-3S-24FEB2012

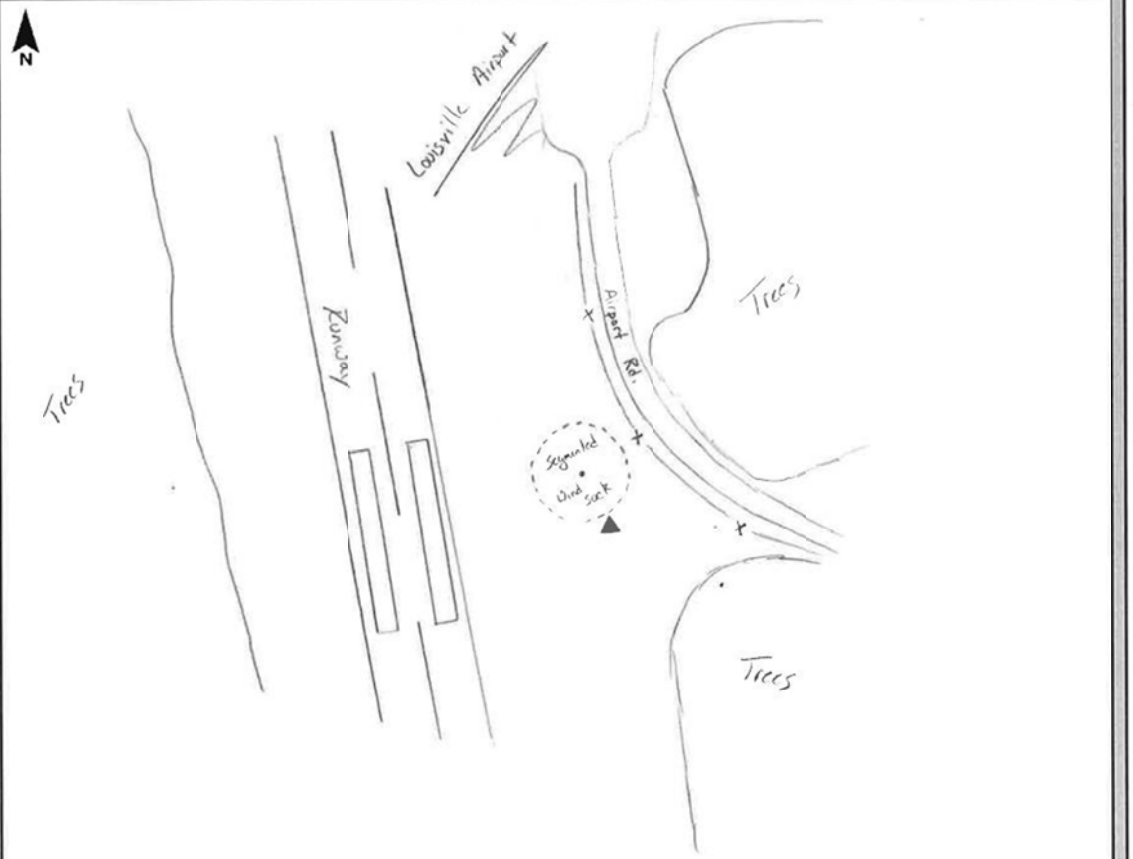
GIBSON-DJ1022-BM-2-24FEB2012

GIBSON-DJ1022-BM-1-24FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	Miss Lidar	Project Number:	72207
Station Name:	Louisville 2	Survey Date:	2/27/2012
Latitude:	33-08-35.04	Operator Name:	B. Welborn
Longitude:	89-03-40.67	Julian Day:	058
Ellip. Height:	479.0	Session No.	1
Type of Mark:	Disk	Start Time:	3:50
Stamping on Mark:	LOUISVILLE NO 2 1958	End Time:	4:32
Weather Condition:		Data File Name:	29460584
		Type of Reciever:	R8 Mod 2
		Type of Antenna:	R8 Mod 2
		Antenna Height:	2.100 m to bottom of antenna mount



LOUISVILLE2-3E-27FEB2012

LOUISVILLE2-3W-27FEB2012

LOUISVILLE2-3S-27FEB2012

LOUISVILLE2-3N-27FEB2012

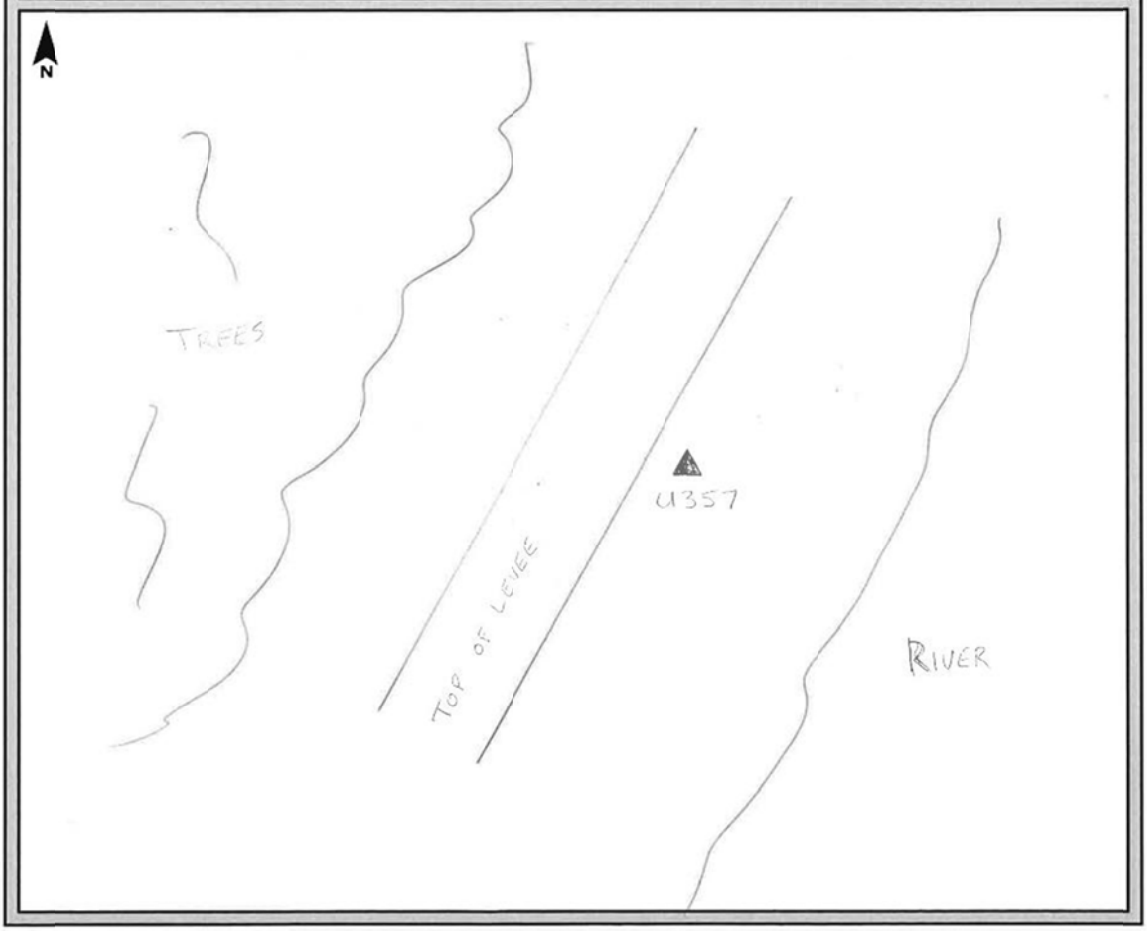
LOUISVILLE2-2-27FEB2012

LOUISVILLE2-1-27FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:	MISS LIDAR	Project Number:	Survey Date: 02/22/2012
Station Name:	U 357	Operator Name:	BEN CHRISTIE
Latitude:	34° 07' 49.38" N	Julian Day: 053	Session No. 1
Longitude:	88° 23' 23.15" W	Start Time: 1600	End Time: 1715
Ellip. Height:	168.60	Data File Name:	U3570531
Type of Mark:	STEEL ROD	Type of Reciever:	R8
Stamping on Mark:	U357 1985	Type of Antenna:	R8
Weather Condition:	55° CLOUDY	Antenna Height: 2 M	to bottom of antenna mount



U_357-EG1453-CBN-3SE-22FEB2012

U_357-EG1453-CBN-3NE-22FEB2012

U_357-EG1453-CBN-3NW-22FEB2012

U_357-EG1453-CBN-3SW-22FEB2012

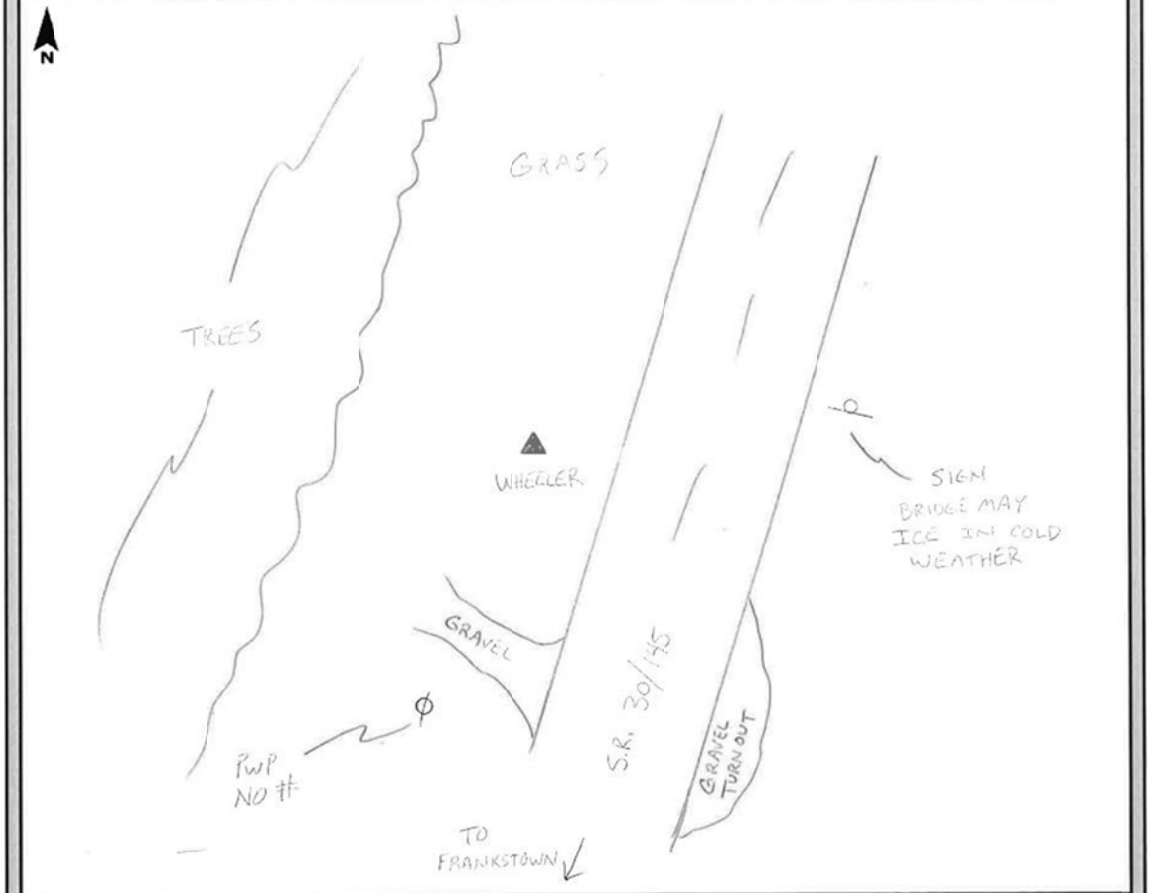
U_357-EG1453-CBN-2-22FEB2012

U_357-EG1453-CBN-1-22FEB2012

GPS Observation Log Sheet

WOOLPERT

Project Name:		Project Number:	Survey Date: 02/21/2012
Station Name:	WHEELER	Operator Name:	BEN CHRISTIE
Latitude:	34°34'51.35"N	Julian Day: 052	Session No. 0
Longitude:	88°37'44.45"W	Start Time: 1218	End Time: 1308
Ellip. Height:	32.0.87	Data File Name:	
Type of Mark:	DISK	Type of Reciever:	R8
Stamping on Mark:	WHEELER 1950	Type of Antenna:	
Weather Condition:	50° SUNNY	Antenna Height:	2 m to bottom of antenna mount



WHEELER-EG0791-FBN-3W-21FEB2012

WHEELER-EG0791-FBN-3E-21FEB2012

WHEELER-EG0791-FBN-3N-21FEB2012

WHEELER-EG0791-FBN-3S-21FEB2012

WHEELER-EG0791-FBN-2-21FEB2012

WHEELER-EG0791-FBN-1-21FEB2012

SECTION 4: EXISTING NGS DATA SHEETS

This section contains the published National Geodetic Survey (NGS) Data Sheets used in the final control network for this project.

```
DJ0699 **********************************************************************
 DJ0699  DESIGNATION -  45 V 88
 DJ0699  PID        -  DJ0699
 DJ0699  STATE/COUNTY-  MS/NOXUBEE
 DJ0699  USGS QUAD   -  MACON (1982)
 DJ0699
 DJ0699                    *CURRENT SURVEY CONTROL
 DJ0699 ______________________________________________________________________
 DJ0699* NAD 83(2007)-  33 04 08.42794(N)    088 33 49.76159(W)     ADJUSTED
 DJ0699* NAVD 88     -       53.381  (meters)     175.13   (feet)  ADJUSTED
 DJ0699 ______________________________________________________________________
 DJ0699  EPOCH DATE  -       2002.00
 DJ0699  X          -     134,097.287 (meters)                 COMP
 DJ0699  Y          - -5,348,642.663 (meters)                 COMP
 DJ0699  Z          -   3,460,388.255 (meters)                 COMP
 DJ0699  LAPLACE CORR-         -1.08  (seconds)                DEFLEC09
 DJ0699  ELLIP HEIGHT-         24.777 (meters)         (09/06/11) ADJUSTED
 DJ0699  GEOID HEIGHT-         -28.54  (meters)                GEOID09
 DJ0699  DYNAMIC HT  -         53.322 (meters)     174.94  (feet)  COMP
 DJ0699  MODELED GRAV-     979,535.5   (mgal)                   NAVD 88
 DJ0699
 DJ0699  HORZ ORDER  -  A
 DJ0699  VERT ORDER  -  FIRST     CLASS II
 DJ0699  ELLP ORDER  -  FOURTH    CLASS I
 DJ0699
 DJ0699.The horizontal coordinates were established by GPS observations
 DJ0699.and adjusted by the MAPTECH INCORPORATED in September 2011.
 DJ0699
 DJ0699.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 DJ0699.See National Readjustment for more information.
 DJ0699
 DJ0699.The horizontal coordinates are valid at the epoch date displayed above
 DJ0699.which is a decimal equivalence of Year/Month/Day.
 DJ0699
 DJ0699.The orthometric height was determined by differential leveling and
 DJ0699.adjusted in June 1991.
 DJ0699
 DJ0699.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 DJ0699
 DJ0699.The Laplace correction was computed from DEFLEC09 derived deflections.
 DJ0699
 DJ0699.The ellipsoidal height was determined by GPS observations
 DJ0699.and is referenced to NAD 83.
 DJ0699
 DJ0699.The geoid height was determined by GEOID09.
 DJ0699
 DJ0699.The dynamic height is computed by dividing the NAVD 88
 DJ0699.geopotential number by the normal gravity value computed on the
 DJ0699.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DJ0699.degrees latitude (g = 980.6199 gals.).
 DJ0699
 DJ0699.The modeled gravity was interpolated from observed gravity values.
 DJ0699
 DJ0699;                North         East     Units Scale Factor Converg.
 DJ0699;SPC MS E     -   395,724.588   325,165.793   MT  0.99995781   +0 08 49.4
```

DJ0699;SPC MS E - 1,298,306.42 1,066,814.77 sFT 0.99995781 +0 08 49.4
DJ0699;UTM 16 - 3,660,024.382 354,020.640 MT 0.99986275 -0 51 12.4
DJ0699
DJ0699! - Elev Factor x Scale Factor = Combined Factor
DJ0699!SPC MS E - 0.99999611 x 0.99995781 = 0.99995392
DJ0699!UTM 16 - 0.99999611 x 0.99986275 = 0.99985886
DJ0699
DJ0699 SUPERSEDED SURVEY CONTROL
DJ0699
DJ0699 NGVD 29 (??/??/92) 53.359 (m) 175.06 (f) ADJ UNCH 1 2
DJ0699
DJ0699.Superseded values are not recommended for survey control.
DJ0699.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DJ0699.See file dsdata.txt to determine how the superseded data were derived.
DJ0699
DJ0699_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCB5402060024(NAD 83)
DJ0699
DJ0699_MARKER: DD = SURVEY DISK
DJ0699_SETTING: 36 = SET IN A MASSIVE STRUCTURE
DJ0699_SP_SET: ABUTMENT
DJ0699_STAMPING: 45V-88 1964
DJ0699_MARK LOGO: MSHD
DJ0699_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DJ0699+STABILITY: SURFACE MOTION
DJ0699_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DJ0699+SATELLITE: SATELLITE OBSERVATIONS - August 18, 2008
DJ0699
DJ0699 HISTORY - Date Condition Report By
DJ0699 HISTORY - 1964 MONUMENTED MSHD
DJ0699 HISTORY - 1983 GOOD NGS
DJ0699 HISTORY - 20080818 GOOD MSDOT
DJ0699
DJ0699 STATION DESCRIPTION
DJ0699
DJ0699'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1964
DJ0699'2.7 MI S FROM MACON.
DJ0699'TO REACH THE MARK FROM THE COURTHOUSE IN MACON GO 2.7 MILES SOUTH ON
DJ0699'U. S. HIGHWAY 45 TO A CONCRETE BRIDGE AND THE MARK ON THE LEFT. THE
DJ0699'MARK IS A DISK SET IN CEMENT IN A DRILLED HOLE IN THE SOUTHEAST CORNER
DJ0699'OF A CONCRETE BRIDGE ABUTMENT, 15 FEET EAST OF THE CENTERLINE OF THE
DJ0699'HIGHWAY AND ABOUT LEVEL WITH THE HIGHWAY.
DJ0699
DJ0699 STATION RECOVERY (1983)
DJ0699
DJ0699'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983
DJ0699'RECOVERED IN GOOD CONDITION. NOTE, DELETE 2.7 MILES SOUTH ON U.S.
DJ0699'HIGHWAY 45, ADD 4.1 KM (2.55 MI) SOUTH ALONG U.S. HIGHWAY 45 BUSINESS.
DJ0699
DJ0699 STATION RECOVERY (2008)
DJ0699
DJ0699'RECOVERY NOTE BY MS DEPT TRANS 2008 (SOL)
DJ0699'RECOVERED AS DESCRIBED.
DJ0699'
DJ0699'ADDITIONAL REFERENCES = THE STATION IS 40 M (131.2 FT) NORTHEAST OF A
DJ0699'WOOD POWER POLE AND 32.5 M (106.6 FT) NORTHWEST OF A METAL POWER POLE.

```
EG0620 ***************************************************************************
 EG0620  HT_MOD      -  This is a Height Modernization Survey Station.
 EG0620  DESIGNATION -  78 4 RM 1
 EG0620  PID         -  EG0620
 EG0620  STATE/COUNTY-  MS/UNION
 EG0620  USGS QUAD   -  NEW ALBANY EAST (1980)
 EG0620
 EG0620                    *CURRENT SURVEY CONTROL
 EG0620  ______________________________________________________________________
 EG0620* NAD 83(2007)-  34 27 21.05440(N)    088 58 32.05051(W)     ADJUSTED
 EG0620* NAVD 88     -       153.63   (meters)     504.0    (feet)  GPS OBS
 EG0620  ______________________________________________________________________
 EG0620  EPOCH DATE  -       2002.00
 EG0620  X           -      94,130.091 (meters)                 COMP
 EG0620  Y           -  -5,264,078.622 (meters)                 COMP
 EG0620  Z           -   3,588,326.016 (meters)                 COMP
 EG0620  LAPLACE CORR-          -1.37  (seconds)                DEFLEC09
 EG0620  ELLIP HEIGHT-         126.432 (meters)          (09/06/11) ADJUSTED
 EG0620  GEOID HEIGHT-          -27.13  (meters)                GEOID09
 EG0620  HORZ ORDER  -  A
 EG0620  ELLP ORDER  -  FOURTH    CLASS I
 EG0620
 EG0620.The horizontal coordinates were established by GPS observations
 EG0620.and adjusted by the MAPTECH INCORPORATED in September 2011.
 EG0620
 EG0620.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 EG0620.See National Readjustment for more information.
 EG0620
 EG0620.The horizontal coordinates are valid at the epoch date displayed above
 EG0620.which is a decimal equivalence of Year/Month/Day.
 EG0620
 EG0620.The orthometric height was determined by GPS observations and a
 EG0620.high-resolution geoid model using precise GPS observation and
 EG0620.processing techniques. It supersedes the leveled height previously
 EG0620.determined for this station.
 EG0620
 EG0620.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 EG0620
 EG0620.The Laplace correction was computed from DEFLEC09 derived deflections.
 EG0620
 EG0620.The ellipsoidal height was determined by GPS observations
 EG0620.and is referenced to NAD 83.
 EG0620
 EG0620.The geoid height was determined by GEOID09.
 EG0620
 EG0620;                North         East      Units Scale Factor Converg.
 EG0620;SPC MS E     -   549,519.545   286,930.791   MT  0.99995210   -0 04 49.7
 EG0620;SPC MS E     - 1,802,882.04    941,372.10    sFT  0.99995210   -0 04 49.7
 EG0620;UTM  16      - 3,814,471.918   318,527.694   MT  1.00000594   -1 07 04.9
 EG0620
 EG0620!           - Elev Factor  x  Scale Factor =   Combined Factor
 EG0620!SPC MS E     -   0.99998015  x   0.99995210  =   0.99993225
 EG0620!UTM  16      -   0.99998015  x   1.00000594  =   0.99998609
 EG0620
 EG0620                     SUPERSEDED SURVEY CONTROL
```

EG0620
EG0620 NAD 83(2007)- 34 27 21.05408(N)   088 58 32.05042(W) AD(   ) 0
EG0620 ELLIP H (02/10/07) 126.443 (m)   GP(   )
EG0620 NAD 83(1993)- 34 27 21.05365(N)   088 58 32.05045(W) AD(   ) B
EG0620 ELLIP H (04/05/04) 126.458 (m)   GP(   ) 3 1
EG0620 NAVD 88 (04/05/04) 153.58   (m)   503.9   (f) LEVELING   3
EG0620 NAVD 88 (06/15/91) 153.577 (m)   503.86   (f) ADJUSTED   2 0
EG0620 NGVD 29 (??/??/92) 153.538 (m)   503.73   (f) ADJ UNCH   2 0
EG0620
EG0620.Superseded values are not recommended for survey control.
EG0620.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
EG0620.See file dsdata.txt to determine how the superseded data were derived.
EG0620
EG0620_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCD1852714471(NAD 83)
EG0620
EG0620_MARKER: DD = SURVEY DISK
EG0620_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
EG0620_SP_SET: SET IN TOP OF CONCRETE MONUMENT
EG0620_STAMPING: RM 1-78-4-1959
EG0620_MARK LOGO: MSHD
EG0620_PROJECTION: FLUSH
EG0620_MAGNETIC: N = NO MAGNETIC MATERIAL
EG0620_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
EG0620+STABILITY: SURFACE MOTION
EG0620_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
EG0620+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2008
EG0620
EG0620 HISTORY   - Date   Condition   Report By
EG0620 HISTORY   - 1959   MONUMENTED   MSHD
EG0620 HISTORY   - 1965   GOOD   MSHD
EG0620 HISTORY   - 20020501 GOOD   USACE
EG0620 HISTORY   - 20060809 GOOD   TVA
EG0620 HISTORY   - 20070714 GOOD   INDIV
EG0620 HISTORY   - 20081107 GOOD   MSDOT
EG0620
EG0620   STATION DESCRIPTION
EG0620
EG0620'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1965
EG0620'3.2 MI NW FROM NEW ALBANY.
EG0620'TO REACH THE MARK FROM THE COURTHOUSE IN NEW ALBANY GO 0.9 MILE TO THE
EG0620'INTERSECTION OF U. S. HIGHWAY 78 AND HIGHWAY 15, CONTINUE SOUTHEAST ON
EG0620'U. S. 78 FOR 2.2 MILES TO THE MARK ON THE RIGHT. THE MARK IS A DISK
EG0620'SET IN THE TOP OF AN 8-INCH SQUARE, CONCRETE POST. IT IS LOCATED NEAR
EG0620'THE SOUTHWEST PROPERTY CORNER OF BEACON HILL GROCERY, 98.87 FEET
EG0620'WEST-SOUTHWEST OF STA 78-4, 2.6 FEET NORTH OF THE SOUTHWEST CORNER OF
EG0620'A BRICK FENCE AND FLUSH WITH THE GROUND.
EG0620
EG0620   STATION RECOVERY (2002)
EG0620
EG0620'RECOVERY NOTE BY US ARMY CORPS OF ENGINEERS 2002 (JMH)
EG0620'OLD HWY 78 IS NOW HWY 178
EG0620
EG0620   STATION RECOVERY (2006)
EG0620
EG0620'RECOVERY NOTE BY TENNESSEE VALLEY AUTHORITY 2006 (CDM)

EG0620'RECOVERED IN GOOD CONDITION.
EG0620
EG0620 STATION RECOVERY (2007)
EG0620
EG0620'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2007 (CP)
EG0620'RECOVERED AS DESCRIBED
EG0620
EG0620 STATION RECOVERY (2008)
EG0620
EG0620'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
EG0620'RECOVERED AS DESCRIBED.

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EG0587 ***************************************************************************
 EG0587  DESIGNATION -  78 V 33
 EG0587  PID         -  EG0587
 EG0587  STATE/COUNTY-  MS/LEE
 EG0587  USGS QUAD   -  TUPELO (1982)
 EG0587
 EG0587                    *CURRENT SURVEY CONTROL
 EG0587 ______________________________________________________________________
 EG0587* NAD 83(2007)-  34 16 52.00027(N)    088 43 50.03726(W)     ADJUSTED
 EG0587* NAVD 88     -       96.416  (meters)     316.32   (feet)  ADJUSTED
 EG0587 ______________________________________________________________________
 EG0587  EPOCH DATE  -       2002.00
 EG0587  X           -    116,880.364 (meters)                 COMP
 EG0587  Y           - -5,274,520.178 (meters)                 COMP
 EG0587  Z           -   3,572,293.732 (meters)                 COMP
 EG0587  LAPLACE CORR-         -1.32  (seconds)                DEFLEC09
 EG0587  ELLIP HEIGHT-         68.886 (meters)          (09/06/11) ADJUSTED
 EG0587  GEOID HEIGHT-         -27.53  (meters)                GEOID09
 EG0587  DYNAMIC HT  -         96.320 (meters)     316.01  (feet)  COMP
 EG0587  MODELED GRAV-     979,638.5   (mgal)                   NAVD 88
 EG0587
 EG0587  HORZ ORDER  -  A
 EG0587  VERT ORDER  -  SECOND    CLASS 0
 EG0587  ELLP ORDER  -  FOURTH    CLASS I
 EG0587
 EG0587.The horizontal coordinates were established by GPS observations
 EG0587.and adjusted by the MAPTECH INCORPORATED in September 2011.
 EG0587
 EG0587.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 EG0587.See National Readjustment for more information.
 EG0587
 EG0587.The horizontal coordinates are valid at the epoch date displayed above
 EG0587.which is a decimal equivalence of Year/Month/Day.
 EG0587
 EG0587.The orthometric height was determined by differential leveling and
 EG0587.adjusted in June 1991.
 EG0587
 EG0587.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 EG0587
 EG0587.The Laplace correction was computed from DEFLEC09 derived deflections.
 EG0587
 EG0587.The ellipsoidal height was determined by GPS observations
 EG0587.and is referenced to NAD 83.
 EG0587
 EG0587.The geoid height was determined by GEOID09.
 EG0587
 EG0587.The dynamic height is computed by dividing the NAVD 88
 EG0587.geopotential number by the normal gravity value computed on the
 EG0587.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 EG0587.degrees latitude (g = 980.6199 gals.).
 EG0587
 EG0587.The modeled gravity was interpolated from observed gravity values.
 EG0587
 EG0587;                North         East     Units Scale Factor Converg.
 EG0587;SPC MS E     -   530,132.676   309,462.287   MT  0.99995110   +0 03 28.4
```

EG0587;SPC MS E - 1,739,276.95 1,015,294.19 sFT 0.99995110 +0 03 28.4
EG0587;UTM 16 - 3,794,680.993 340,705.431 MT 0.99991279 -0 58 29.8
EG0587
EG0587! - Elev Factor x Scale Factor = Combined Factor
EG0587!SPC MS E - 0.99998919 x 0.99995110 = 0.99994029
EG0587!UTM 16 - 0.99998919 x 0.99991279 = 0.99990198
EG0587
EG0587 SUPERSEDED SURVEY CONTROL
EG0587
EG0587 NGVD 29 (??/??/92) 96.369 (m) 316.17 (f) ADJ UNCH 2 0
EG0587
EG0587.Superseded values are not recommended for survey control.
EG0587.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
EG0587.See file dsdata.txt to determine how the superseded data were derived.
EG0587
EG0587_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCC4070594680(NAD 83)
EG0587
EG0587_MARKER: DD = SURVEY DISK
EG0587_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
EG0587_SP_SET: SET IN TOP OF CONCRETE MONUMENT
EG0587_STAMPING: 78V-33 1965
EG0587_MARK LOGO: MSHD
EG0587_PROJECTION: FLUSH
EG0587_MAGNETIC: N = NO MAGNETIC MATERIAL
EG0587_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
EG0587+STABILITY: SURFACE MOTION
EG0587_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
EG0587+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2008
EG0587
EG0587 HISTORY - Date Condition Report By
EG0587 HISTORY - 1965 MONUMENTED MSHD
EG0587 HISTORY - 20081107 GOOD MSDOT
EG0587
EG0587 STATION DESCRIPTION
EG0587
EG0587'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1965
EG0587'2.45 MI NW FROM TUPELO.
EG0587'TO REACH THE MARK FROM THE U. S. POST OFFICE IN TUPELO GO WEST AND
EG0587'NORTHWEST ON U. S. HIGHWAY 78 FOR 2.45 MILES TO THE MARK ON THE LEFT.
EG0587'THE MARK IS A DISK SET IN THE TOP OF A 12-INCH ROUND, CONCRETE POST.
EG0587'IT IS 22 FEET SOUTH OF THE CENTERLINE OF THE NORTH LANE, 22 FEET NORTH
EG0587'OF THE CENTERLINE OF THE SOUTH LANE, 12 FEET NORTHWEST OF THE CURB AT
EG0587'THE INTERSECTION OF A TURN OUR ON TO THE NATCHEZ TRACE PARKWAY, 0.15
EG0587'MILE SOUTHEAST OF THE NATCHEZ TRACE OVERPASS, 1.5 FEET NORTHWEST OF A
EG0587'METAL WITNESS POST, 0.5 FOOT ABOVE THE LEVEL OF THE HIGHWAY AND FLUSH
EG0587'WITH THE GROUND.
EG0587
EG0587 STATION RECOVERY (2008)
EG0587
EG0587'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
EG0587'RECOVERED AS DESCRIBED.

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EG1240 ************************************************************************
 EG1240  CBN        -  This is a Cooperative Base Network Control Station.
 EG1240  DESIGNATION -  APL V 5
 EG1240  PID        -  EG1240
 EG1240  STATE/COUNTY-  MS/PONTOTOC
 EG1240  USGS QUAD   -  NORTHEAST PONTOTOC (1980)
 EG1240
 EG1240                    *CURRENT SURVEY CONTROL
 EG1240  ______________________________________________________________________
 EG1240* NAD 83(2007)-  34 16 49.53956(N)    088 59 55.61291(W)     ADJUSTED
 EG1240* NAVD 88     -       121.259  (meters)     397.83   (feet)  ADJUSTED
 EG1240  ______________________________________________________________________
 EG1240  EPOCH DATE  -       2002.00
 EG1240  X          -      92,188.973 (meters)                 COMP
 EG1240  Y          -  -5,275,072.996 (meters)                 COMP
 EG1240  Z          -   3,572,245.238 (meters)                 COMP
 EG1240  LAPLACE CORR-          -1.11  (seconds)                DEFLEC09
 EG1240  ELLIP HEIGHT-          94.022 (meters)          (09/06/11) ADJUSTED
 EG1240  GEOID HEIGHT-          -27.23  (meters)                GEOID09
 EG1240  DYNAMIC HT  -         121.139 (meters)     397.44  (feet)  COMP
 EG1240  MODELED GRAV-      979,642.6   (mgal)                   NAVD 88
 EG1240
 EG1240  HORZ ORDER  -  A
 EG1240  VERT ORDER  -  SECOND    CLASS 0
 EG1240  ELLP ORDER  -  FOURTH    CLASS I
 EG1240
 EG1240.The horizontal coordinates were established by GPS observations
 EG1240.and adjusted by the MAPTECH INCORPORATED in September 2011.
 EG1240
 EG1240.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 EG1240.See National Readjustment for more information.
 EG1240
 EG1240.The horizontal coordinates are valid at the epoch date displayed above
 EG1240.which is a decimal equivalence of Year/Month/Day.
 EG1240
 EG1240.The orthometric height was determined by differential leveling and
 EG1240.adjusted in June 1991.
 EG1240
 EG1240.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 EG1240
 EG1240.The Laplace correction was computed from DEFLEC09 derived deflections.
 EG1240
 EG1240.The ellipsoidal height was determined by GPS observations
 EG1240.and is referenced to NAD 83.
 EG1240
 EG1240.The geoid height was determined by GEOID09.
 EG1240
 EG1240.The dynamic height is computed by dividing the NAVD 88
 EG1240.geopotential number by the normal gravity value computed on the
 EG1240.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 EG1240.degrees latitude (g = 980.6199 gals.).
 EG1240
 EG1240.The modeled gravity was interpolated from observed gravity values.
 EG1240
 EG1240;                North        East     Units Scale Factor Converg.
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EG1240;SPC MS E - 530,064.466 284,766.284 MT 0.99995286 -0 05 35.5
EG1240;SPC MS E - 1,739,053.17 934,270.72 sFT 0.99995286 -0 05 35.5
EG1240;UTM 16 - 3,795,057.974 316,011.889 MT 1.00001729 -1 07 34.0
EG1240
EG1240! - Elev Factor x Scale Factor = Combined Factor
EG1240!SPC MS E - 0.99998524 x 0.99995286 = 0.99993810
EG1240!UTM 16 - 0.99998524 x 1.00001729 = 1.00000253
EG1240
EG1240 SUPERSEDED SURVEY CONTROL
EG1240
EG1240 NAD 83(2007)- 34 16 49.53923(N) 088 59 55.61294(W) AD( ) 0
EG1240 ELLIP H (02/10/07) 94.030 (m) GP( )
EG1240 ELLIP H (04/15/02) 94.037 (m) GP( ) 4 2
EG1240 NAD 83(1993)- 34 16 49.53907(N) 088 59 55.61268(W) AD( ) B
EG1240 ELLIP H (02/15/02) 94.035 (m) GP( ) 4 1
EG1240 NAVD 88 (02/15/02) 121.26 (m) 397.8 (f) LEVELING 3
EG1240 NGVD 29 (??/??/92) 121.204 (m) 397.65 (f) ADJ UNCH 2 0
EG1240
EG1240.Superseded values are not recommended for survey control.
EG1240.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
EG1240.See file dsdata.txt to determine how the superseded data were derived.
EG1240
EG1240_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCC1601195057(NAD 83)
EG1240
EG1240_MARKER: DB = BENCH MARK DISK
EG1240_SETTING: 38 = SET IN THE ABUTMENT OR PIER OF A LARGE BRIDGE
EG1240_SP_SET: BRIDGE ABUTMENT
EG1240_STAMPING: APL V 5 1977
EG1240_MARK LOGO: MSHD
EG1240_MAGNETIC: N = NO MAGNETIC MATERIAL
EG1240_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
EG1240_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
EG1240+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2008
EG1240
EG1240 HISTORY - Date Condition Report By
EG1240 HISTORY - 1977 MONUMENTED MSHD
EG1240 HISTORY - 20000808 GOOD MSHD
EG1240 HISTORY - 20081107 GOOD MSDOT
EG1240
EG1240 STATION DESCRIPTION
EG1240
EG1240'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1977
EG1240'2.5 MI NORTH FROM PONTOTOC.
EG1240'TO REACH FROM THE COURTHOUSE IN PONTOTOC GO NORTH ON STATE HIGHWAY
15
EG1240'FOR 0.4 MILE TO STATE HIGHWAYS 6 AND 9. CONTINUE NORTH ON HIGHWAY 9
EG1240'FOR 0.4 MILE TO STATE HIGHWAY 345. CONTINUE NORTH ON STATE HIGHWAY
EG1240'345 FOR 1.6 MILES TO THE BRIDGE AND THE MARK ON THE RIGHT. THE MARK
EG1240'IS LOCATED IN THE BASE OF THE NOOTHEAST ABUTMENT OF A BRIDGE OVER
EG1240'LYON CREEK ON STATE HIGHWAY 345 APPROXIMATELY 2.5 MILES NORTH OF
EG1240'DOWNTOWN PONTOTOC, IN SECTION 21, T 9S, R 3E. IT IS A DISK SET IN
EG1240'CEMENT IN A DRILL HOLE, 15.5 FEET EAST OF THE CENTER OF THE HIGHWAY
EG1240'AND 1 FOOT SOUTH OF A METAL WITNESS SIGNPOST.
EG1240
EG1240 STATION RECOVERY (2000)

EG1240
EG1240'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 2000
EG1240'RECOVERED AS DESCRIBED.
EG1240
EG1240 STATION RECOVERY (2008)
EG1240
EG1240'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
EG1240'RECOVERED AS DESCRIBED.

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DJ1528 ************************************************************************
 DJ1528  DESIGNATION -  B 350
 DJ1528  PID        -  DJ1528
 DJ1528  STATE/COUNTY-  MS/CLAY
 DJ1528  USGS QUAD   -  WEST POINT (1987)
 DJ1528
 DJ1528                    *CURRENT SURVEY CONTROL
 DJ1528  ______________________________________________________________________
 DJ1528* NAD 83(2007)-  33 36 19.78565(N)    088 39 31.94665(W)     ADJUSTED
 DJ1528* NAVD 88     -       66.078  (meters)     216.79   (feet)  ADJUSTED
 DJ1528  ______________________________________________________________________
 DJ1528  EPOCH DATE  -        2002.00
 DJ1528  X          -     124,458.832 (meters)                 COMP
 DJ1528  Y          -  -5,316,177.435 (meters)                 COMP
 DJ1528  Z          -   3,510,106.743 (meters)                 COMP
 DJ1528  LAPLACE CORR-          -0.33  (seconds)                DEFLEC09
 DJ1528  ELLIP HEIGHT-          38.107 (meters)          (09/06/11) ADJUSTED
 DJ1528  GEOID HEIGHT-          -27.99  (meters)                GEOID09
 DJ1528  DYNAMIC HT  -          66.008 (meters)     216.56  (feet)  COMP
 DJ1528  MODELED GRAV-      979,587.1   (mgal)                   NAVD 88
 DJ1528
 DJ1528  HORZ ORDER  -  A
 DJ1528  VERT ORDER  -  FIRST     CLASS II
 DJ1528  ELLP ORDER  -  FOURTH    CLASS I
 DJ1528
 DJ1528.The horizontal coordinates were established by GPS observations
 DJ1528.and adjusted by the MAPTECH INCORPORATED in September 2011.
 DJ1528
 DJ1528.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 DJ1528.See National Readjustment for more information.
 DJ1528
 DJ1528.The horizontal coordinates are valid at the epoch date displayed above
 DJ1528.which is a decimal equivalence of Year/Month/Day.
 DJ1528
 DJ1528.The orthometric height was determined by differential leveling and
 DJ1528.adjusted in June 1991.
 DJ1528
 DJ1528.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 DJ1528
 DJ1528.The Laplace correction was computed from DEFLEC09 derived deflections.
 DJ1528
 DJ1528.The ellipsoidal height was determined by GPS observations
 DJ1528.and is referenced to NAD 83.
 DJ1528
 DJ1528.The geoid height was determined by GEOID09.
 DJ1528
 DJ1528.The dynamic height is computed by dividing the NAVD 88
 DJ1528.geopotential number by the normal gravity value computed on the
 DJ1528.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DJ1528.degrees latitude (g = 980.6199 gals.).
 DJ1528
 DJ1528.The modeled gravity was interpolated from observed gravity values.
 DJ1528
 DJ1528;                North         East     Units Scale Factor Converg.
 DJ1528;SPC MS E     -   455,205.128   316,190.707   MT  0.99995323   +0 05 47.6
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DJ1528;SPC MS E - 1,493,452.16 1,037,369.01 sFT 0.99995323 +0 05 47.6
DJ1528;UTM 16 - 3,719,648.908 346,093.633 MT 0.99989203 -0 55 06.0
DJ1528
DJ1528! - Elev Factor x Scale Factor = Combined Factor
DJ1528!SPC MS E - 0.99999402 x 0.99995323 = 0.99994725
DJ1528!UTM 16 - 0.99999402 x 0.99989203 = 0.99988605
DJ1528
DJ1528 SUPERSEDED SURVEY CONTROL
DJ1528
DJ1528.No superseded survey control is available for this station.
DJ1528
DJ1528_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCC4609319648(NAD 83)
DJ1528
DJ1528_MARKER: F = FLANGE-ENCASED ROD
DJ1528_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
DJ1528_SP_SET: STAINLESS STEEL ROD
DJ1528_STAMPING: B 350 1983
DJ1528_MARK LOGO: NGS
DJ1528_PROJECTION: RECESSED 4 CENTIMETERS
DJ1528_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DJ1528_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DJ1528+SATELLITE: SATELLITE OBSERVATIONS - November 17, 2008
DJ1528_ROD/PIPE-DEPTH: 8.28 meters
DJ1528
DJ1528 HISTORY - Date Condition Report By
DJ1528 HISTORY - 1983 MONUMENTED NGS
DJ1528 HISTORY - 20081117 GOOD MSDOT
DJ1528
DJ1528 STATION DESCRIPTION
DJ1528
DJ1528'DESCRIBED BY NATIONAL GEODETIC SURVEY 1983
DJ1528'IN WEST POINT.
DJ1528'IN WEST POINT, AT THE SOUTHEAST CORNER OF THE INTERSECTION OF U.S.
DJ1528'HIGHWAY 45 ALTERNATE AND WEST BROAD STREET, 1.0 KM (0.65 MI) WEST
DJ1528'ALONG WEST BROAD STREET FROM THE POLICE STATION (OLD POST OFFICE),
DJ1528'17.3 METERS (57.0 FT) EAST OF THE CENTER OF THE HIGHWAY, 14.0 METERS
DJ1528'(46.0 FT) SOUTH OF THE CENTER OF WEST BROAD STREET, 10.24 METERS
DJ1528'(33.6 FT) WEST OF THE WEST WALL OF WRAYS SERVICE STATION AND GARAGE,
DJ1528'5.64 METERS (18.5 FT) EAST OF A METAL STREET LIGHT POLE, 5.80 METERS
DJ1528'(19.0 FT) WEST-SOUTHWEST OF THE NORTH ONE OF TWO GAS PUMPS,
DJ1528'1.65 METERS (5.4 FT) SOUTH OF A FIRE PLUG, 0.73 METERS (2.4 FT) SOUTH
DJ1528'OF POWERLINE POLE NUMBER 202, AND 1.28 METERS (4.2 FT) NORTHWEST OF
DJ1528'THE SOUTHEAST CORNER OF A CONCRETE CURB. NOTE, THE ROD WAS DRIVEN TO
DJ1528'REFUSAL.
DJ1528'THE MARK IS 0.7 METERS S FROM A WITNESS POST.
DJ1528'THE MARK IS ABOVE LEVEL WITH HIGHWAY.
DJ1528
DJ1528 STATION RECOVERY (2008)
DJ1528
DJ1528'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
DJ1528'RECOVERED AS DESCRIBED.

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DJ2131 ******************************************************************************
 DJ2131  CBN        -  This is a Cooperative Base Network Control Station.
 DJ2131  DESIGNATION -  BROOK 2
 DJ2131  PID        -  DJ2131
 DJ2131  STATE/COUNTY-  MS/NOXUBEE
 DJ2131  USGS QUAD   -  BROOKSVILLE (1982)
 DJ2131
 DJ2131                    *CURRENT SURVEY CONTROL
 DJ2131  ______________________________________________________________________
 DJ2131* NAD 83(2007)-  33 11 26.87007(N)    088 34 04.32938(W)     ADJUSTED
 DJ2131* NAVD 88     -       75.09   (meters)     246.4    (feet)  RESET
 DJ2131  ______________________________________________________________________
 DJ2131  EPOCH DATE  -       2002.00
 DJ2131  X          -     133,535.483 (meters)                  COMP
 DJ2131  Y          -  -5,341,290.418 (meters)                  COMP
 DJ2131  Z          -   3,471,711.703 (meters)                  COMP
 DJ2131  LAPLACE CORR-          -0.37  (seconds)                DEFLEC09
 DJ2131  ELLIP HEIGHT-         46.620 (meters)          (02/10/07) ADJUSTED
 DJ2131  GEOID HEIGHT-         -28.48  (meters)                 GEOID09
 DJ2131
 DJ2131  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 DJ2131  Type    PID    Designation                    North   East  Ellip
 DJ2131  ----------------------------------------------------------------------
 DJ2131  NETWORK DJ2131 BROOK 2                        0.53   0.65   1.90
 DJ2131  ----------------------------------------------------------------------
 DJ2131  VERT ORDER  -  THIRD
 DJ2131
 DJ2131.The horizontal coordinates were established by GPS observations
 DJ2131.and adjusted by the National Geodetic Survey in February 2007.
 DJ2131
 DJ2131.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 DJ2131.See National Readjustment for more information.
 DJ2131
 DJ2131.The horizontal coordinates are valid at the epoch date displayed above
 DJ2131.which is a decimal equivalence of Year/Month/Day.
 DJ2131
 DJ2131.The orthometric height was computed from unverified reset data.
 DJ2131
 DJ2131.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 DJ2131
 DJ2131.The Laplace correction was computed from DEFLEC09 derived deflections.
 DJ2131
 DJ2131.The ellipsoidal height was determined by GPS observations
 DJ2131.and is referenced to NAD 83.
 DJ2131
 DJ2131.The geoid height was determined by GEOID09.
 DJ2131
 DJ2131;                North         East     Units Scale Factor Converg.
 DJ2131;SPC MS E     -   409,230.287   324,753.734   MT  0.99995755   +0 08 43.2
 DJ2131;SPC MS E     - 1,342,616.37  1,065,462.88   sFT  0.99995755   +0 08 43.2
 DJ2131;UTM  16      - 3,673,533.944   353,844.872   MT  0.99986338   -0 51 30.4
 DJ2131
 DJ2131!            -  Elev Factor  x  Scale Factor =   Combined Factor
 DJ2131!SPC MS E     -   0.99999268  x   0.99995755  =   0.99995023
 DJ2131!UTM  16      -   0.99999268  x   0.99986338  =   0.99985606
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DJ2131
DJ2131:              Primary Azimuth Mark                  Grid Az
DJ2131:SPC MS E     -  BROOK AZ MK                          174 06 01.5
DJ2131:UTM  16      -  BROOK AZ MK                         175 06 15.1
DJ2131
DJ2131|---------------------------------------------------------------------|
DJ2131| PID    Reference Object                Distance      Geod. Az  |
DJ2131|                                       dddmmss.s |
DJ2131| DJ0718 BROOK RM 1                        51.515 METERS 08808     |
DJ2131| DJ0716 BROOK                            37.110 METERS 11956     |
DJ2131| DJ0715 BROOK AZ MK                       APPROX. 0.6 KM 1741444.7 |
DJ2131|---------------------------------------------------------------------|
DJ2131
DJ2131                    SUPERSEDED SURVEY CONTROL
DJ2131
DJ2131  ELLIP H (04/15/02)   46.627  (m)                  GP(      ) 4 2
DJ2131  ELLIP H (02/15/02)   46.624  (m)                  GP(      ) 4 1
DJ2131  ELLIP H (08/20/99)   46.666  (m)                  GP(      ) 4 1
DJ2131  ELLIP H (05/22/95)   42.666  (m)                  GP(      ) 3 2
DJ2131  NAD 83(1986)-  33 11 26.88092(N)    088 34 04.32692(W) AD(       ) 1
DJ2131  NAD 83(1993)-  33 11 26.86996(N)    088 34 04.32920(W) AD(       ) B
DJ2131  ELLIP H (01/12/94)   46.666  (m)                  GP(      ) 4 1
DJ2131  NAVD 88 (08/20/99)   75.10   (m)        246.4    (f) LEVELING    3
DJ2131  NAVD 88 (01/12/94)   75.1    (m)        246.     (f) GPS OBS
DJ2131  NGVD 29 (08/12/04)   75.05   (m)        246.2    (f) RESET       3
DJ2131
DJ2131.Superseded values are not recommended for survey control.
DJ2131.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DJ2131.See file dsdata.txt to determine how the superseded data were derived.
DJ2131
DJ2131_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCB5384473533(NAD 83)
DJ2131
DJ2131_MARKER: DS = TRIANGULATION STATION DISK
DJ2131_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DJ2131_SP_SET: CONCRETE POST
DJ2131_STAMPING: BROOK 2 1991
DJ2131_MARK LOGO: NGS
DJ2131_MAGNETIC: N = NO MAGNETIC MATERIAL
DJ2131_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DJ2131+STABILITY: SURFACE MOTION
DJ2131_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DJ2131+SATELLITE: SATELLITE OBSERVATIONS - August 01, 2000
DJ2131
DJ2131  HISTORY     - Date     Condition       Report By
DJ2131  HISTORY     - 1991     MONUMENTED      MSHD
DJ2131  HISTORY     - 19910501 GOOD            MSHD
DJ2131  HISTORY     - 19921006 GOOD            MSHD
DJ2131  HISTORY     - 19930528 GOOD
DJ2131  HISTORY     - 19940123 GOOD            NOS
DJ2131  HISTORY     - 20000801 GOOD            NGS
DJ2131
DJ2131                      STATION DESCRIPTION
DJ2131
DJ2131'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1991
DJ2131'7.1 KM (4.4 MI) NORTH ALONG OLD HIGHWAY 45 (JEFFERSON STREET) FROM THE
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DJ2131'COURTHOUSE IN MACON, THENCE 2.1 KM (1.3 MI) NORTH ALONG U.S. HIGHWAY
DJ2131'45 TO A GRAVEL ROAD ON THE RIGHT AND MARK ON THE LEFT, 55.63 M
DJ2131'(182.51 FT) NORTH OF A POWER POLE, 14.32 M (46.98 FT) WEST OF THE
DJ2131'CENTER OF THE SOUTH BOUND LANES OF HIGHWAY 45, 11.12 M (36.48 FT)
DJ2131'SOUTH OF A POWER POLE WITH METER ATTACHED, 1.2 M (3.9 FT) EAST OF A
DJ2131'CARSONITE WITNESS POST SET IN FENCELINE, IN TOP OF A ROUND CONCRETE
DJ2131'POST, FLUSH WITH THE GROUND.
DJ2131
DJ2131 STATION RECOVERY (1991)
DJ2131
DJ2131'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1991 (DDR)
DJ2131'MARK IS LOCATED ALONG THE WEST SIDE OF U.S. HIGHWAY 45 ABOUT 6.0 MI
DJ2131'(9.7 KM) NORTH OF MACON, 3.0 MI (4.8 KM) SOUTHEAST OF BROOKSVILLE AND
DJ2131'ON HIGHWAY RIGHT OF WAY.
DJ2131'TO REACH FROM THE JUNCTION OF U.S HIGHWAY 45 AND STATE HIGHWAY 14 IN
DJ2131'THE EAST EDGE OF MACON, GO NORTH ON U.S. HIGHWAY 45 FOR 6.15 MI (9.90
DJ2131'KM) TO A SIDE ROAD ON THE RIGHT AND MARK ON THE LEFT.
DJ2131'STATION MARKS ARE STANDARD NGS DISKS STAMPED---BROOK 2 1991---SURFACE
DJ2131'MARK IS SET IN TOP OF A ROUND CONCRETE POST, 1 INCH BELOW THE SURFACE
DJ2131'OF GROUND. IT IS 612.368 M (2009.077 FT) NORTH OF BROOK AZIMUTH MARK
DJ2131'1955 IN AZIMUTH 354-14-14.8 FROM NORTH, 55.63 M (182.51 FT) NORTH OF A
DJ2131'POWER POLE, 14.32 M (46.98 FT) WEST OF THE CENTER OF THE SOUTH BOUND
DJ2131'LANES OF HIGHWAY 45, 11.12 M (36.48 FT) SOUTH OF POWER POLE WITH METER
DJ2131'ATTACHED, 1.22 M (4.00 FT) EAST OF A FENCE AND 1.10 M (3.61 FT) EAST
DJ2131'OF A CARSONITE WITNESS POST.
DJ2131
DJ2131 STATION RECOVERY (1992)
DJ2131
DJ2131'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1992
DJ2131'THE STATION IS LOCATED ABOUT 6 MI (9.7 KM) NORTH OF MACON ON THE WEST
DJ2131'R.O.W. OF U.S. HIGHWAY 45, 3 MI (4.8 KM) SOUTHEAST OF BROOKSVILLE
DJ2131'OPPOSITE A SIDE ROAD LEADING EAST AND IS IN SECTION 4, T 15N, R 17E.
DJ2131'TO REACH FROM THE JUNCTION OF U.S. HIGHWAY 45 AND STATE HIGHWAY 14 AT
DJ2131'THE EAST EDGE OF MACON, GO NORTH ON U.S. HIGHWAY 45 FOR 6.15 MI
DJ2131'(9.90 KM) TO A SIDE ROAD RIGHT AND THE MARK ON THE LEFT.
DJ2131'MARK IS A STANDARD NGS DISK SET IN THE TOP OF A ROUND CONCRETE POST, 1
DJ2131'INCH BELOW THE GROUND, 182.5 FT (55.6 M) NORTH OF A POWER POLE, 47 FT
DJ2131'(14.3 M) WEST OF THE CENTER OF THE SOUTH BOUND LANE OF HIGHWAY 45,
DJ2131'36.5 FT (11.1 M) SOUTH OF A POWER POLE WITH A METER ON IT, 4 FT
DJ2131'(1.2 M) EAST OF A FENCE AND 3.6 FT (1.1 M) EAST OF A CARSONITE
DJ2131'WITNESS POST.
DJ2131'MARK IS LOCATED ALONG THE WEST SIDE OF U.S. HIGHWAY 45 ABOUT 6.0 MI
DJ2131'(9.7 KM) NORTH OF MACON, 3.0 MI (4.8 KM) SOUTHEAST OF BROOKSVILLE AND
DJ2131'ON HIGHWAY RIGHT OF WAY.
DJ2131'TO REACH FROM THE JUNCTION OF U.S HIGHWAY 45 AND STATE HIGHWAY 14 IN
DJ2131'THE EAST EDGE OF MACON, GO NORTH ON U.S. HIGHWAY 45 FOR 6.15 MI
DJ2131'(9.90 KM) TO A SIDE ROAD ON THE RIGHT AND MARK ON THE LEFT.
DJ2131'STATION MARKS ARE STANDARD NGS DISKS, STAMPED---BROOK 2 1991---SURFACE
DJ2131'MARK IS SET IN TOP OF A ROUND CONCRETE POST, 1 INCH BELOW THE SURFACE
DJ2131'OF GROUND. IT IS 612.368 M (2009.077 FT) NORTH OF BROOK AZIMUTH MARK
DJ2131'1955 IN AZIMUTH 354-14-14.8 FROM NORTH, 55.63 M (182.51 FT) NORTH OF
DJ2131'A POWER POLE, 14.32 M (46.98 FT) WEST OF THE CENTER OF THE SOUTH
DJ2131'BOUND LANES OF HIGHWAY 45, 11.12 M (36.48 FT) SOUTH OF POWER POLE
DJ2131'WITH METER ATTACHED, 1.22 M (4.00 FT) EAST OF A FENCE AND 1.10 M
DJ2131'(3.61 FT) EAST OF A CARSONITE WITNESS POST.

DJ2131
DJ2131 STATION RECOVERY (1993)
DJ2131
DJ2131'RECOVERED 1993
DJ2131'RECOVERED IN GOOD CONDITION.
DJ2131
DJ2131 STATION RECOVERY (1994)
DJ2131
DJ2131'RECOVERY NOTE BY NATIONAL OCEAN SERVICE 1994 (RPB)
DJ2131'RECOVERED AS DESCRIBED.
DJ2131
DJ2131 STATION RECOVERY (2000)
DJ2131
DJ2131'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000
DJ2131'RECOVERED AS DESCRIBED.

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CO1288 ***********************************************************************
 CO1288  FBN        -  This is a Federal Base Network Control Station.
 CO1288  DESIGNATION -  DEKALB
 CO1288  PID        -  CO1288
 CO1288  STATE/COUNTY-  MS/KEMPER
 CO1288  USGS QUAD   -  DE KALB (1982)
 CO1288
 CO1288                    *CURRENT SURVEY CONTROL
 CO1288 ______________________________________________________________________
 CO1288* NAD 83(2007)-  32 46 23.51506(N)    088 37 52.98359(W)     ADJUSTED
 CO1288* NAVD 88     -       155.5    (meters)     510.     (feet)  GPS OBS
 CO1288 ______________________________________________________________________
 CO1288  EPOCH DATE  -       2002.00
 CO1288  X          -     128,218.123 (meters)                 COMP
 CO1288  Y          -  -5,366,707.510 (meters)                 COMP
 CO1288  Z          -   3,432,905.363 (meters)                 COMP
 CO1288  LAPLACE CORR-         -1.78  (seconds)                DEFLEC09
 CO1288  ELLIP HEIGHT-        126.942 (meters)          (09/06/11) ADJUSTED
 CO1288  GEOID HEIGHT-         -28.51  (meters)                GEOID09
 CO1288  HORZ ORDER  -  A
 CO1288  ELLP ORDER  -  FOURTH    CLASS I
 CO1288
 CO1288.The horizontal coordinates were established by GPS observations
 CO1288.and adjusted by the MAPTECH INCORPORATED in September 2011.
 CO1288
 CO1288.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 CO1288.See National Readjustment <http://www.ngs.noaa.gov/NationalReadjustment> for more
information.
 CO1288
 CO1288.The horizontal coordinates are valid at the epoch date displayed above
 CO1288.which is a decimal equivalence of Year/Month/Day.
 CO1288
 CO1288.The orthometric height was determined by GPS observations and a
 CO1288.high-resolution geoid model.
 CO1288
 CO1288.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 CO1288
 CO1288.The Laplace correction was computed from DEFLEC09 derived deflections.
 CO1288
 CO1288.The ellipsoidal height was determined by GPS observations
 CO1288.and is referenced to NAD 83.
 CO1288
 CO1288.The geoid height was determined by GEOID09.
 CO1288
 CO1288;                 North         East     Units Scale Factor Converg.
 CO1288;SPC MS E     -   362,905.845   318,919.992   MT  0.99995441   +0 06 33.5
 CO1288;SPC MS E     - 1,190,633.59  1,046,323.34   sFT  0.99995441   +0 06 33.5
 CO1288;UTM  16      - 3,627,321.874   347,205.546   MT  0.99988787   -0 52 59.8
 CO1288
 CO1288!           -  Elev Factor  x  Scale Factor =   Combined Factor
 CO1288!SPC MS E     -   0.99998007  x   0.99995441  =   0.99993448
 CO1288!UTM  16      -   0.99998007  x   0.99988787  =   0.99986794
 CO1288
 CO1288:              Primary Azimuth Mark                  Grid Az
 CO1288:SPC MS E     -  DE KALB MUNICIPAL TANK                 280 12 24.8
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CO1288:UTM  16      -  DE KALB MUNICIPAL TANK                281 11 58.1
CO1288
CO1288|----------------------------------------------------------------------|
CO1288| PID    Reference Object                 Distance      Geod. Az  |
CO1288|                                        dddmmss.s |
CO1288| CF9542 DEKALB RM 1                        4.781 METERS 09439     |
CO1288| CF9543 DEKALB RM 2                        9.043 METERS 18419     |
CO1288| CO1286 DE KALB MUNICIPAL TANK          APPROX. 2.0 KM 2801858.3 |
CO1288| CF9541 DEKALB AZ MK                          2864552.4 |
CO1288| DN3963 DEKA                         219.839 METERS 29420     |
CO1288|----------------------------------------------------------------------|
CO1288
CO1288                     SUPERSEDED SURVEY CONTROL
CO1288
CO1288  NAD 83(2007)-  32 46 23.51455(N)    088 37 52.98370(W) AD(       ) 0
CO1288  ELLIP H (02/10/07)  126.955  (m)                    GP(       )
CO1288  ELLIP H (09/12/01)  126.952  (m)                    GP(       ) 3 1
CO1288  NAD 83(1993)-  32 46 23.51446(N)    088 37 52.98321(W) AD(       ) A
CO1288  ELLIP H (04/06/99)  126.987  (m)                    GP(       ) 3 1
CO1288  NAD 83(1993)-  32 46 23.51328(N)    088 37 52.98437(W) AD(       ) 3
CO1288  NAD 83(1992)-  32 46 23.52130(N)    088 37 52.98596(W) AD(       ) 3
CO1288  NAD 83(1986)-  32 46 23.52418(N)    088 37 52.98686(W) AD(       ) 3
CO1288  NAD 27      -  32 46 23.04500(N)    088 37 52.82000(W) AD(       ) 3
CO1288  NAVD 88 (04/06/99)  155.5    (m)          510.     (f) GPS OBS
CO1288
CO1288.Superseded values are not recommended for survey control.
CO1288.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
CO1288.See file dsdata.txt  <http://www.ngs.noaa.gov/cgi-bin/ds_lookup.prl?Item=HOW_SUP_DET>to
determine how the superseded data were derived.
CO1288
CO1288_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCB4720527321(NAD 83)
CO1288
CO1288_MARKER: DS = TRIANGULATION STATION DISK
CO1288_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
CO1288_STAMPING: DEKALB 1955
CO1288_MARK LOGO: CGS
CO1288_PROJECTION: PROJECTING 5 CENTIMETERS
CO1288_MAGNETIC: N = NO MAGNETIC MATERIAL
CO1288_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
CO1288+STABILITY: SURFACE MOTION
CO1288_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
CO1288+SATELLITE: SATELLITE OBSERVATIONS - December 02, 2008
CO1288
CO1288  HISTORY     - Date     Condition       Report By
CO1288  HISTORY     - 1955     MONUMENTED      CGS
CO1288  HISTORY     - 1956     GOOD            CGS
CO1288  HISTORY     - 1963     GOOD            MSHD
CO1288  HISTORY     - 19980206 GOOD            NGS
CO1288  HISTORY     - 20000701 GOOD            NGS
CO1288  HISTORY     - 20081202 GOOD            MSDOT
CO1288
CO1288                     STATION DESCRIPTION
CO1288
CO1288'DESCRIBED BY COAST AND GEODETIC SURVEY 1955 (ELJ)
CO1288'STATION IS LOCATED ALONG STATE HIGHWAY 16 ABOUT 1 MILE EAST OF
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CO1288'DEKALB AND IS ON ROAD RIGHT-OF-WAY. IT IS 68 FEET NORTHWEST OF
CO1288'THE NORTHWEST CORNER OF A LARGE CONCRETE BLOCK BUILDING, 59 FEET
CO1288'SOUTH OF THE CENTER OF HIGHWAY 16, 13 FEET SOUTH OF A WHITE
CO1288'WITNESS POST AND 11 FEET SOUTHWEST OF A POWER LINE POLE. THE
CO1288'MARK IS FLUSH AND THE DISK IS STAMPED DEKALB 1955.
CO1288'
CO1288'REFERENCE MARK NO. 1 IS 58 FEET SOUTH OF THE CENTER OF THE
CO1288'HIGHWAY, 54 FEET NORTHWEST OF THE NORTHWEST CORNER OF THE CONCRETE
CO1288'BLOCK BUILDING AND 13 FEET SOUTHEAST OF THE POWER LINE POLE.
CO1288'THE MARK IS FLUSH AND THE DISK IS STAMPED DEKALB NO 1 1955.
CO1288'
CO1288'REFERENCE MARK NO. 2 IS 61 FEET WEST OF THE NORTHWEST CORNER OF
CO1288'THE CONCRETE BLOCK BUILDING AND 40 FEET SOUTH OF THE POWER LINE
CO1288'POLE. THE MARK IS FLUSH AND THE DISK IS STAMPED DEKLAB NO 2 1955.
CO1288'
CO1288'AZIMUTH MARK IS 100 FEET NORTHWEST OF THE INTERSECTION OF STATE
CO1288'HIGHWAY 16 AND A DIRT ROAD, 63 FEET NORTH OF THE CENTER OF
CO1288'HIGHWAY 16, 21 FEET SOUTHWEST OF A POWER LINE POLE AND 2 FEET
CO1288'NORTHEAST OF A WHITE WITNESS POST. THE MARK PROJECTS 2 INCHES
CO1288'AND THE DISK IS STAMPED DEKALB 1955.
CO1288'
CO1288'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAYS 39 AND
CO1288'16 AT THE NORTH EDGE OF DEKALB, GO EAST ON HIGHWAY 16 FOR 0.8
CO1288'MILE TO THE AZIMUTH MARK ON THE LEFT ON TOP OF ROAD CUT AS
CO1288'DESCRIBED, CONTINUE EAST ON HIGHWAY 16 FOR 0.35 MILE TO A LARGE
CO1288'CONCRETE BLOCK BUILDING ON THE RIGHT AND THE STATION AS
CO1288'DESCRIBED.
CO1288'
CO1288'HEIGHT OF LIGHT ABOVE STATION MARK 1 METER.
CO1288
CO1288   STATION RECOVERY (1956)
CO1288
CO1288'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1956 (RAG)
CO1288'THE STATION WAS VISITED 8-15-56 AND ALL MARKS WERE FOUND IN GOOD
CO1288'CONDTITION. THE AZIMUTH MARK WAS RESET, AT THE REQUEST OF MR.
CO1288'THURLOW RUSSELL, 75.2 FEET WEST OF AND IN LINE WITH THE 1955
CO1288'AZIMUTH MARK AND THE STATION. A DESCRIPTION OF THE NEW AZIMUTH
CO1288'MARK AND A TO REACH FOLLOWS-
CO1288'
CO1288'THE AZIMUTH MARK IS LOCATED 0.35 MILE WEST OF THE STATION IN THE
CO1288'NORTHWEST ANGLE OF STATE HIGHWAY 16 AND A DIRT ROAD LEADING
CO1288'NORTHWEST AND WEST OF THE EAST SIDE GROCERY STORE. IT IS 162
CO1288'FEET WEST OF THE CENTER OF THE DIRT ROAD, 74 FEET NORTH OF THE
CO1288'CENTER OF STATE HIGHWAY 16, 37 FEET NORTHEAST OF A POWER POLE
CO1288'WITH A TRANSFORMER, 29 FEET EAST OF A TELEPHONE POLE AND
CO1288'DIRECTLY UNDER THE TELEPHONE LINE. IT IS ON A TEN FOOT CUT BANK
CO1288'AND 2 FEET WEST OF A WITNESS POST. IT IS A STANDARD DISK,
CO1288'STAMPED DEKALB 1955 RESET 1956, PROJECTING 6 INCHES.
CO1288'
CO1288'TO REACH THE STATION FROM THE COURTHOUSE IN DEKALB GO NORTH ON
CO1288'STATE HIGHWAY 39 FOR 0.55 MILE TO THE JUNCTION WITH STATE HIGHWAY
CO1288'16, TURN RIGHT AND GO 0.9 MILE TO THE AZIMUTH MARK ON THE LEFT.
CO1288'CONTINUE EAST FOR 0.35 MILE TO THE STATION AND A CONCRETE BLOCK
CO1288'BUILDING ON THE RIGHT AT THE TOP OF THE HILL.
CO1288

CO1288 STATION RECOVERY (1963)
CO1288
CO1288'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1963 (AMC)
CO1288'THE STATION WAS VISITED NOVEMBER 1963 AND ALL MARKS WERE FOUND
CO1288'IN GOOD CONDITION.
CO1288'
CO1288'THE 1956 RECOVERY BY R.A.G. IS ADEQUATE.
CO1288'
CO1288'METAL WITNESS POSTS WERE SET 1.0 FOOT NORTH OF THE STATION AND
CO1288'1.0 FOOT SOUTH OF THE AZIMUTH MARK.
CO1288
CO1288 STATION RECOVERY (1998)
CO1288
CO1288'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
CO1288'THE STATION IS LOCATED AT THE EAST EDGE OF DEKALB, ALONG THE SOUTH
CO1288'SIDE OF STATE HIGHWAY 16, ON TOP OF A LOW BANK NORTHWEST OF A TALL
CO1288'TOWER SURROUNDED BY A CHAIN-LINK FENCE, JUST WEST OF THE GRAVEL
CO1288'ENTRANCE TO THE TOWER. OWNERSHIP--MISSISSIPPI STATE HIGHWAY
CO1288'DEPARTMENT, 412 WOODROW WILSON, JACKSON MS 39216, PHONE 601-944-9098.
CO1288'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAYS 16 AND 39
CO1288'NEAR THE NORTH SIDE OF DEKALB, GO EAST FOR 1.9 KM (1.20 MI) ON HIGHWAY
CO1288'16 TO THE STATION ON THE RIGHT. STATION IS 45.8 M (150.3 FT) EAST OF
CO1288'THE CENTER OF BEALMAN RD, 19.2 M (63.0 FT) WEST-NORTHWEST OF THE
CO1288'NORTHWEST CORNER OF A CHAIN-LINK FENCE AROUND THE TOWER, 18.9 M (62.0
CO1288'FT) SOUTH OF THE CENTER OF HIGHWAY 16, 15.65 M (51.35 FT) NORTHEAST OF
CO1288'THE NORTHEAST CORNER OF A SMALL GREEN BUILDING, 3.6 M (11.8 FT)
CO1288'SOUTHWEST OF A UTILITY POLE WITH TRANSFORMER, LIGHT AND 2 GUY WIRES,
CO1288'0.3 M (1.0 FT) SOUTH OF A METAL PIPE WITH WITNESS SIGN, ABOUT 1.4 M
CO1288'(4.6 FT) ABOVE THE HIGHWAY LEVEL AND FLUSH WITH GROUND.
CO1288
CO1288 STATION RECOVERY (2000)
CO1288
CO1288'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000
CO1288'RECOVERED AS DESCRIBED.
CO1288
CO1288 STATION RECOVERY (2008)
CO1288
CO1288'RECOVERY NOTE BY MS DEPT TRANS 2008 (SOL)
CO1288'RECOVERED AS DESCRIBED.

DJ1152 **********
DJ1152 CBN - This is a Cooperative Base Network Control Station.
DJ1152 DESIGNATION - F 4
DJ1152 PID - DJ1152
DJ1152 STATE/COUNTY- MS/WEBSTER
DJ1152 USGS QUAD - SAPA (1972)
DJ1152
DJ1152 *CURRENT SURVEY CONTROL
DJ1152 _____
DJ1152* NAD 83(2007)- 33 32 11.07034(N) 089 07 41.57926(W) ADJUSTED
DJ1152* NAVD 88 - 129.011 (meters) 423.26 (feet) ADJUSTED
DJ1152 _____
DJ1152 EPOCH DATE - 2002.00
DJ1152 X - 80,972.574 (meters) COMP
DJ1152 Y - -5,321,307.979 (meters) COMP
DJ1152 Z - 3,503,756.867 (meters) COMP
DJ1152 LAPLACE CORR- -0.77 (seconds) DEFLEC09
DJ1152 ELLIP HEIGHT- 101.173 (meters) (09/06/11) ADJUSTED
DJ1152 GEOID HEIGHT- -27.83 (meters) GEOID09
DJ1152 DYNAMIC HT - 128.871 (meters) 422.80 (feet) COMP
DJ1152 MODELED GRAV- 979,554.6 (mgal) NAVD 88
DJ1152
DJ1152 HORZ ORDER - A
DJ1152 VERT ORDER - FIRST CLASS II
DJ1152 ELLP ORDER - FOURTH CLASS I
DJ1152
DJ1152.The horizontal coordinates were established by GPS observations
DJ1152.and adjusted by the MAPTECH INCORPORATED in September 2011.
DJ1152
DJ1152.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
DJ1152.See National Readjustment <http://www.ngs.noaa.gov/NationalReadjustment> for more information.
DJ1152
DJ1152.The horizontal coordinates are valid at the epoch date displayed above
DJ1152.which is a decimal equivalence of Year/Month/Day.
DJ1152
DJ1152.The orthometric height was determined by differential leveling and
DJ1152.adjusted in June 1991.
DJ1152
DJ1152.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DJ1152
DJ1152.The Laplace correction was computed from DEFLEC09 derived deflections.
DJ1152
DJ1152.The ellipsoidal height was determined by GPS observations
DJ1152.and is referenced to NAD 83.
DJ1152
DJ1152.The geoid height was determined by GEOID09.
DJ1152
DJ1152.The dynamic height is computed by dividing the NAVD 88
DJ1152.geopotential number by the normal gravity value computed on the
DJ1152.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DJ1152.degrees latitude (g = 980.6199 gals.).
DJ1152
DJ1152.The modeled gravity was interpolated from observed gravity values.
DJ1152

DJ1152;   North   East   Units Scale Factor Converg.
DJ1152;SPC MS E   -   447,567.980   272,611.508   MT 0.99995924   -0 09 46.5
DJ1152;SPC MS E   - 1,468,395.95   894,392.92   sFT 0.99995924   -0 09 46.5
DJ1152;UTM 16   - 3,712,783.997   302,384.767   MT 1.00008147   -1 10 34.1
DJ1152
DJ1152!   - Elev Factor x Scale Factor =   Combined Factor
DJ1152!SPC MS E   -   0.99998412 x   0.99995924 =   0.99994336
DJ1152!UTM 16   -   0.99998412 x   1.00008147 =   1.00006559
DJ1152
DJ1152   SUPERSEDED SURVEY CONTROL
DJ1152
DJ1152 NAD 83(2007)- 33 32 11.06999(N)   089 07 41.57926(W) AD(   ) 0
DJ1152 ELLIP H (02/10/07) 101.175 (m)   GP(   )
DJ1152 ELLIP H (04/15/02) 101.173 (m)   GP(   ) 4 2
DJ1152 NAD 83(1993)- 33 32 11.06988(N)   089 07 41.57927(W) AD(   ) B
DJ1152 ELLIP H (02/15/02) 101.170 (m)   GP(   ) 4 1
DJ1152 NAVD 88 (02/15/02) 129.0   (m)   423.   (f) GPS OBS
DJ1152 NGVD 29 (??/??/92) 128.939 (m)   423.03   (f) ADJ UNCH   1 2
DJ1152
DJ1152.Superseded values are not recommended for survey control.
DJ1152.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DJ1152.See file dsdata.txt <http://www.ngs.noaa.gov/cgi-bin/ds_lookup.prl?Item=HOW_SUP_DET>to
determine how the superseded data were derived.
DJ1152
DJ1152_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCC0238412783(NAD 83)
DJ1152
DJ1152_MARKER: DD = SURVEY DISK
DJ1152_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DJ1152_SP_SET: SET IN TOP OF CONCRETE MONUMENT
DJ1152_STAMPING: F 4 1933
DJ1152_MARK LOGO: NGS
DJ1152_PROJECTION: FLUSH
DJ1152_MAGNETIC: T = STEEL SPIKE ADJACENT TO MONUMENT
DJ1152_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DJ1152+STABILITY: SURFACE MOTION
DJ1152_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DJ1152+SATELLITE: SATELLITE OBSERVATIONS - November 06, 2008
DJ1152
DJ1152 HISTORY   - Date   Condition   Report By
DJ1152 HISTORY   - 1933   MONUMENTED   CGS
DJ1152 HISTORY   - 1971   GOOD   NGS
DJ1152 HISTORY   - 20000609 GOOD   NGS
DJ1152 HISTORY   - 20081106 GOOD   MSDOT
DJ1152
DJ1152   STATION DESCRIPTION
DJ1152
DJ1152'DESCRIBED BY NATIONAL GEODETIC SURVEY 1971
DJ1152'IN MATHISTON.
DJ1152'THE BENCH MARK IS 215 FEET NORTH OF THE NORTHWEST CORNER OF THE
DJ1152'MATHISTON GRAMMAR SCHOOL BUILDING, 13.5 FEET NORTH OF THE CENTER LINE
DJ1152'OF THE COLUMBUS AND GREENVILLE RAILROAD TRACKS, AND 33 FEET WEST OF
DJ1152'THE CENTER LINE OF THE BLACKTOP ROAD CROSSING THE RAILROAD TRACK. DUE
DJ1152'TO A NOTCH CUT IN THE FACE OF THE DISK, THE STAMPING F 4 HAS BEEN
DJ1152'REMOVED, BUT THE DATE 1933 IS STILL CLEAR. A RUBBING OF THE DISK IS
DJ1152'ENCLOSED WHICH SHOWS THE NOTCH. IT IS A STANDARD BENCH MARK DISK SET

DJ1152'IN A 10-INCH SQUARE CONCRETE POST PROJECTING 1 1/2 INCHES ABOVE GROUND
DJ1152'LEVEL.
DJ1152
DJ1152 STATION RECOVERY (2000)
DJ1152
DJ1152'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000
DJ1152'THE STATION F4 IS IN MATHISTON, MS. TO REACH THE STATION FROM THE
DJ1152'INTERSECTION OF ROUTES 15, 403, AND US 82 ON THE NORTH SIDE OF
DJ1152'MATHISTON, DRIVE SOUTH ON RTE 15 (HORTON ST.) FOR 0.2 MI (0.3 KM) TO
DJ1152'SCOTT AVE. (THE POST OFFICE IS ON THE OPPOSITE CORNER), TURN RIGHT AND
DJ1152'PROCEED WEST ON SCOTT AVE. FOR 0.2 MI (0.3 KM) TO A RAILROAD CROSSING
DJ1152'ON THE LEFT AND A Y INTERSECTION. TAKE THE ANGLE WOUTHWARD TOWARD THE
DJ1152'RR TRACKS TO THE MARK ON THE RIGHT, WEST OF THE ROAD, NORTH OF THE
DJ1152'TRACKS, AND ABOUT 150 NORTH OF A 1 STORY BRICK AND METAL ROOF SCHOOL
DJ1152'BUILDING. THE STATION MARK IS 11.3 FT (3.4 M) NORTH OF THE NORTH
DJ1152'RAIL, 20.6 FT (6.3 M) SW OF AN RR XING SIGN, 36 FT (11.0 M) WEST OF
DJ1152'THE CENTERLINE OF THE PAVE ROAD THAT CROSSES THE TRACKS, 52 FT (15.8
DJ1152'M) SOUTH OF THE CENTERLINE OF WELCH ST., 72.7 FT (22.2 M) NORTH OF A
DJ1152'WOODEN POWER POLE P15 WITH DOUBLE CROSS ARMS, A LIGHT, AND 2 GUYS, AND
DJ1152'1 FT (0.3 M) SOUTH OF AN ORANGE WITNESS POST. THE DESIGNATION F 4 HAS
DJ1152'BEEN RESTAMPED ON THE DISK.
DJ1152
DJ1152 STATION RECOVERY (2008)
DJ1152
DJ1152'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
DJ1152'RECOVERED AS DESCRIBED.

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DJ1022 ***************************************************************************
 DJ1022  DESIGNATION -  GIBSON
 DJ1022  PID        -  DJ1022
 DJ1022  STATE/COUNTY-  MS/CHICKASAW
 DJ1022  USGS QUAD   -  EGYPT (1965)
 DJ1022
 DJ1022                    *CURRENT SURVEY CONTROL
 DJ1022  ______________________________________________________________________
 DJ1022* NAD 83(2007)-  33 52 35.49125(N)    088 43 20.21421(W)     ADJUSTED
 DJ1022* NAVD 88     -       90.509  (meters)     296.94   (feet)  ADJUSTED
 DJ1022  ______________________________________________________________________
 DJ1022  EPOCH DATE  -        2002.00
 DJ1022  X           -     118,203.616 (meters)                  COMP
 DJ1022  Y           - -5,299,638.985 (meters)                  COMP
 DJ1022  Z           -   3,535,118.931 (meters)                  COMP
 DJ1022  LAPLACE CORR-          -0.73  (seconds)                DEFLEC09
 DJ1022  ELLIP HEIGHT-          62.936 (meters)          (09/06/11) ADJUSTED
 DJ1022  GEOID HEIGHT-          -27.62  (meters)                 GEOID09
 DJ1022  DYNAMIC HT  -          90.417 (meters)     296.64  (feet)  COMP
 DJ1022  MODELED GRAV-      979,622.3   (mgal)                    NAVD 88
 DJ1022
 DJ1022  HORZ ORDER  -  A
 DJ1022  VERT ORDER  -  SECOND    CLASS 0
 DJ1022  ELLP ORDER  -  FOURTH    CLASS I
 DJ1022
 DJ1022.The horizontal coordinates were established by GPS observations
 DJ1022.and adjusted by the MAPTECH INCORPORATED in September 2011.
 DJ1022
 DJ1022.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 DJ1022.See National Readjustment for more information.
 DJ1022
 DJ1022.The horizontal coordinates are valid at the epoch date displayed above
 DJ1022.which is a decimal equivalence of Year/Month/Day.
 DJ1022
 DJ1022.The orthometric height was determined by differential leveling and
 DJ1022.adjusted in June 1991.
 DJ1022
 DJ1022.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 DJ1022
 DJ1022.The Laplace correction was computed from DEFLEC09 derived deflections.
 DJ1022
 DJ1022.The ellipsoidal height was determined by GPS observations
 DJ1022.and is referenced to NAD 83.
 DJ1022
 DJ1022.The geoid height was determined by GEOID09.
 DJ1022
 DJ1022.The dynamic height is computed by dividing the NAVD 88
 DJ1022.geopotential number by the normal gravity value computed on the
 DJ1022.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DJ1022.degrees latitude (g = 980.6199 gals.).
 DJ1022
 DJ1022.The modeled gravity was interpolated from observed gravity values.
 DJ1022
 DJ1022;               North         East      Units Scale Factor Converg.
 DJ1022;SPC MS E     -   485,257.487   310,273.788   MT  0.99995130   +0 03 42.8
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DJ1022;SPC MS E     - 1,592,048.94  1,017,956.59   sFT  0.99995130   +0 03 42.8
DJ1022;UTM  16      - 3,749,800.191   340,712.103   MT  0.99991279   -0 57 36.8
DJ1022
DJ1022!            -  Elev Factor  x  Scale Factor =   Combined Factor
DJ1022!SPC MS E     -   0.99999012  x   0.99995130  =   0.99994142
DJ1022!UTM  16      -   0.99999012  x   0.99991279  =   0.99990291
DJ1022
DJ1022:              Primary Azimuth Mark                  Grid Az
DJ1022:SPC MS E     -  GIBSON AZ MK                        341 38 43.0
DJ1022:UTM  16      -  GIBSON AZ MK                        342 40 02.6
DJ1022
DJ1022|-----------------------------------------------------------------------|
DJ1022| PID    Reference Object                 Distance      Geod. Az  |
DJ1022|                                        dddmmss.s |
DJ1022| DJ1475 GIBSON RM 3                       16.757 METERS 08742     |
DJ1022| CF9832 GIBSON RM 1                       20.012 METERS 09034     |
DJ1022| DJ1024 GIBSON RM 2                       25.204 METERS 16602     |
DJ1022| DJ1023 GIBSON AZ MK                                 3414225.8 |
DJ1022|-----------------------------------------------------------------------|
DJ1022
DJ1022                      SUPERSEDED SURVEY CONTROL
DJ1022
DJ1022  NAD 83(1993)-  33 52 35.49188(N)    088 43 20.21106(W) AD(       ) 3
DJ1022  ELLIP H (05/13/94)   63.049  (m)                    GP(       ) 4 1
DJ1022  NAD 83(1992)-  33 52 35.50091(N)    088 43 20.21149(W) AD(       ) 3
DJ1022  NAD 83(1986)-  33 52 35.50057(N)    088 43 20.20952(W) AD(       ) 3
DJ1022  NAD 27      -  33 52 35.08600(N)    088 43 20.03300(W) AD(       ) 3
DJ1022  NGVD 29 (??/??/92)   90.448  (m)         296.74   (f) ADJ UNCH    2 0
DJ1022
DJ1022.Superseded values are not recommended for survey control.
DJ1022.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DJ1022.See file dsdata.txt to determine how the superseded data were derived.
DJ1022
DJ1022_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCC4071249800(NAD 83)
DJ1022
DJ1022_MARKER: DS = TRIANGULATION STATION DISK
DJ1022_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DJ1022_SP_SET: SET IN TOP OF CONCRETE MONUMENT
DJ1022_STAMPING: GIBSON 1950
DJ1022_MARK LOGO: NGS
DJ1022_PROJECTION: FLUSH
DJ1022_MAGNETIC: N = NO MAGNETIC MATERIAL
DJ1022_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DJ1022+STABILITY: SURFACE MOTION
DJ1022_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DJ1022+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2008
DJ1022
DJ1022  HISTORY     - Date     Condition        Report By
DJ1022  HISTORY     - 1950     MONUMENTED       CGS
DJ1022  HISTORY     - 1962     GOOD             MSHD
DJ1022  HISTORY     - 1966     GOOD             MSHD
DJ1022  HISTORY     - 1966     GOOD             MSHD
DJ1022  HISTORY     - 1978     POOR             MSHD
DJ1022  HISTORY     - 1979     GOOD             NGS
DJ1022  HISTORY     - 19810301 GOOD             MSSU
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DJ1022 HISTORY   - 1983   MARK NOT FOUND   NGS
DJ1022 HISTORY   - 1988   GOOD   NGS
DJ1022 HISTORY   - 20081107 GOOD   MSDOT
DJ1022
DJ1022   STATION DESCRIPTION
DJ1022
DJ1022'DESCRIBED BY COAST AND GEODETIC SURVEY 1950 (VRS)
DJ1022'THE STATION IS LOCATED ABOUT 3 MILES NORTH-NORTHWEST OF GIBSON,
DJ1022'60 FEET EAST OF THE CENTER OF STATE HIGHWAY NO. 45W, 24 FEET SOUTH
DJ1022'OF THE CENTER OF A DRIVEWAY TO A FARM HOUSE, AND 7 FEET EAST OF A
DJ1022'WITNESS POST.
DJ1022'
DJ1022'TO REACH THE STATION FROM GIBSON, GO WEST ON STATE HIGHWAY NO. 8 FOR
DJ1022'1.0 MILE TO THE JUNCTION WITH STATE HIGHWAY NO. 45W, THEN RIGHT,
DJ1022'NORTH, ON NO. 45W FOR 2.6 MILES TO THE STATION ON THE RIGHT
DJ1022'AS DESCRIBED. TO REACH THE AZIMUTH MARK FROM THE STATION, GO
DJ1022'NORTH ON NO. 45W FOR 0.3 MILE TO THE MARK ON THE LEFT AS
DJ1022'DESCRIBED.
DJ1022'
DJ1022'THE STATION MARK PROJECTS 4 INCHES, AND THE DISK IS STAMPED GIBSON
DJ1022'1950.
DJ1022'
DJ1022'REFERENCE MARK NO. 1 IS 23 FEET SOUTH OF THE CENTER OF A DRIVEWAY
DJ1022'TO A FARM HOUSE, AND 1 FOOT SOUTH OF A WIRE FENCE. IT PROJECTS
DJ1022'2 INCHES, AND THE DISK IS STAMPED GIBSON NO 1 1950.
DJ1022'
DJ1022'REFERENCE MARK NO. 2 IS 60 FEET EAST OF THE CENTER OF STATE HIGHWAY
DJ1022'NO. 45W. IT PROJECTS 3 INCHES, AND THE DISK IS STAMPED GIBSON
DJ1022'NO 2 1950.
DJ1022'
DJ1022'THE AZIMUTH MARK IS 49 FEET WEST OF THE CENTER OF STATE HIGHWAY NO.
DJ1022'45W, 3 FEET SOUTH OF A WITNESS POST, AND 1 FOOT EAST OF A WIRE
DJ1022'FENCE. IT PROJECTS 6 INCHES, AND THE DISK IS STAMPED GIBSON 1950.
DJ1022'
DJ1022'ALL MARKS ARE STANDARD DISKS SET IN THE TOPS OF 12-INCH CONCRETE
DJ1022'CYLINDERS.
DJ1022'
DJ1022'HEIGHT OF LIGHT ABOVE STATION MARK 26 METERS.
DJ1022
DJ1022   STATION RECOVERY (1962)
DJ1022
DJ1022'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1962 (AMC)
DJ1022'THE STATION WAS VISITED 12-6-62 AND ALL MARKS WERE FOUND IN GOOD
DJ1022'CONDITION. THE 1950 DESCRIPTION IS ADEQUATE. METAL WITNESS POSTS
DJ1022'WERE SET 2.0 FEET WEST OF THE STATION AND 1.0 FOOT SOUTH OF THE
DJ1022'AZIMUTH MARK.
DJ1022
DJ1022   STATION RECOVERY (1966)
DJ1022
DJ1022'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1966
DJ1022'THE STATION WAS VISITED 6-9-66 AND THE STATION, R.M. 2 AND AZIMUTH
DJ1022'MARK WERE FOUND IN GOOD CONDITION. R.M. 1 HAD BEEN DESTROYED AND
DJ1022'THE DISK WAS RECLAIMED.
DJ1022'
DJ1022'TO REACH THE STATION FROM THE U.S. POST OFFICE IN OKOLONA GO WEST

DJ1022'ON MAIN STREET FOR 0.25 MILE TO THE INTERSECTION OF MISSISSIPPI
DJ1022'HIGHWAY 45 WEST, TURN LEFT (SOUTH) AND CONTINUE ON HIGHWAY 45 WEST
DJ1022'FOR 9.2 MILES TO A TRACK ROAD AND THE AZIMUTH ON THE RIGHT. TO
DJ1022'REACH THE STATION CONTINUE SOUTH ON HIGHWAY 45 WEST FOR 0.35
DJ1022'MILE TO A TRACK ROAD AND THE MARK ON THE LEFT AS DESCRIBED. THE
DJ1022'STATION DISK IS STAMPED GIBSON (1950).
DJ1022'
DJ1022'IT IS 60 FEET EAST OF THE CENTER OF HIGHWAY 45 WEST, 24 FEET
DJ1022'SOUTH OF THE CENTER OF A TRACK ROAD, AND 1.1 FEET WEST OF A METAL
DJ1022'WITNESS POST.
DJ1022'
DJ1022'R.M. 2 IS 106.62 FEET SOUTH OF THE CENTER OF A TRACK ROAD, 60 FEET
DJ1022'EAST OF THE CENTER OF HIGHWAY 45 WEST, AND STAMPED GIBSON NO. 2
DJ1022'(1950).
DJ1022'
DJ1022'THE AZIMUTH MARK IS 49 FEET WEST OF THE CENTER OF HIGHWAY 45 WEST,
DJ1022'25 FEET NORTH OF THE CENTER OF A TRACK ROAD, 1.6 FEET NORTH
DJ1022'OF A METAL WITNESS POST, 1 FOOT EAST OF A FENCE, AND STAMPED
DJ1022'GIBSON (1950).
DJ1022
DJ1022 STATION RECOVERY (1966)
DJ1022
DJ1022'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1966
DJ1022'9.8 MI S FROM OKOLONA.
DJ1022'TO REACH FROM THE U.S. POST OFFICE IN OKOLONA GO WEST ON MAIN STREET
DJ1022'FOR 0.25 MILE TO THE INTERSECTION OF MISSISSIPPI HIGHWAY 45 WEST, TURN
DJ1022'LEFT (SOUTH) AND CONTINUE ON HIGHWAY 45 WEST FOR 9.55 MILES TO A TRACK
DJ1022'ROAD AND THE MARK ON THE LEFT AS DESCRIBED. IT IS 60 FEET EAST OF THE
DJ1022'CENTER OF HIGHWAY 45 WEST, 24 FEET SOUTH OF THE CENTER OF A TRACK
DJ1022'ROAD, AND 1.1 FEET WEST OF A METAL WITNESS POST.
DJ1022
DJ1022 STATION RECOVERY (1978)
DJ1022
DJ1022'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1978
DJ1022'THE MARK IS LOCATED 8.9 MILES SOUTH OF THE INTERSECTION OF U.S.
DJ1022'HIGHWAY 45 ALTERNATE AND STATE HIGHWAY 41 IN OKOLONA IN THE SOUTHEAST
DJ1022'ANGLE OF THE JUNCTION OF A DRIVEWAY AND U.S. HIGHWAY 45 ALTERNATE, 3
DJ1022'MILES NORTHWEST OF THE COMMUNITY OF GIBSON NEAR THE CENTER OF THE
DJ1022'EAST SIDE OF SECTION 12, T 14S, R 5E. IT IS 167.5 FEET SOUTH OF A
DJ1022'POWER POLE, 143 FEET NORTHEAST OF POLE NO. 29, 61.5 FEET EAST OF THE
DJ1022'CENTER OF HIGHWAY 45, 27 FEET SOUTH OF THE CENTER OF A DRIVEWAY, 11.5
DJ1022'FEET NORTHEAST OF A WATER TANK METER, 2.5 FEET EAST OF A METAL
DJ1022'WITNESS POST SET IN THE TOP OF A ROUND CONCRETE POST. TO REACH FROM
DJ1022'THE INTERSECTION OF U.S. HIGHWAY 45 ALTERNATE AND STATE HIGHWAY 8
DJ1022'ABOUT 1 MILE WEST OF GIBSON GO NORTH ON U.S. HIGHWAY 45 FOR 2.05
DJ1022'MILES TO A CROSSROAD JUST BEYOND THE COUNTY LINE. COUNTINUE NORTH ON
DJ1022'U.S. HIGHWAY 45 FOR 0.55 MILE TO A DRIVEWAY AND THE MARK ON THE
DJ1022'RIGHT.
DJ1022
DJ1022 STATION RECOVERY (1979)
DJ1022
DJ1022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979 (CLN)
DJ1022'THE STATION MARK WAS FOUND WITH THE TOP BROKEN OFF, REFERENCE MARK
DJ1022'NO.2 WAS FOUND IN FAIR CONDITION, REFERENCE MARK NO.1 WAS PREVIOUSLY
DJ1022'REPORTED DESTROYED. THE AZIMUTH MARK WAS RECOVERED IN GOOD

DJ1022'CONDITION. A NEW STATION SURFACE MARK AND REFERENCE MARK NO.3 WERE
DJ1022'ESTABLISHED AND REFERENCE MARK NO.2 WAS REPAIRED AT THIS DATE. A NEW
DJ1022'DESCRIPTION FOLLOWS--
DJ1022'
DJ1022'STATION IS LOCATED 9 MILES SOUTH OF OKOLONA, 3 MILES NORTHWEST OF
DJ1022'GIBSON, ON THE EAST SIDE OF U.S. HIGHWAY 45 ALT., IN THE CENTER OF THE
DJ1022'EAST SIDE OF SECTION 12, T14 S, R5 E.
DJ1022'
DJ1022'TO REACH FROM THE JUNCTION OF U.S. HIGHWAY 45 ALT. AND STATE HIGHWAY
DJ1022'8, ABOUT 1 MILE WEST OF GIBSON, GO NORTH ON U.S. HIGHWAY 45 ALT. FOR
DJ1022'2.6 MILES TO A GRAVEL DRIVE WAY AND STATION ON THE RIGHT.
DJ1022'
DJ1022'STATION MARK IS A STANDARD DISK, STAMPED---GIBSON 1950 1979---SET IN
DJ1022'TOP OF A ROUND CONCRETE POST PROJECTING 4 INCHES. IT IS 167.5 FEET
DJ1022'SOUTH OF A POWER POLE, 143 FEET NORTHEAST OF POLE NO. 29, 60 FEET
DJ1022'EAST OF THE CENTER OF HIGHWAY, 27 FEET SOUTH OF THE CENTER OF GRAVEL
DJ1022'DRIVE, 1.5 FEET WEST OF A METAL WITNESS POST AND 1 FOOT EAST OF A
DJ1022'METAL WITNESS POST AND SIGN.
DJ1022'
DJ1022'REFERENCE MARK NO.2 IS A STANDARD DISK, STAMPED---GIBSON NO.2 1950---
DJ1022'SET IN TOP OF A ROUND CONCRETE POST PROJECTING 2 INCHES. IT IS 109
DJ1022'FEET SOUTH OF CENTER OF GRAVEL DRIVE, 105 FEET EAST OF POLE NO.29, 59
DJ1022'FEET EAST OF THE CENTER OF HIGHWAY AND 1 FOOT NORTH OF A METAL WITNESS
DJ1022'POST AND SIGN.
DJ1022'
DJ1022'REFERENCE MARK NO.3 IS A STANDARD DISK, STAMPED---GIBSON 1950 NO 3
DJ1022'1979---SET IN TOP OF A ROUND CONCRETE POST, FLUSH WITH THE GROUND. IT
DJ1022'IS 115 FEET EAST OF THE CENTER OF HIGHWAY, 24 FEET SOUTH OF THE CENTER
DJ1022'OF GRAVEL DRIVE AND 1.4 FEET WEST OF A METAL WITNESS POST AND SIGN.
DJ1022'
DJ1022'AZIMUTH MARK IS A STANDARD DISK, STAMPED---GIBSON 1950---SET IN
DJ1022'TOP OF A ROUND CONCRETE POST PROJECTING 4 INCHES. IT IS 0.35 MILE
DJ1022'NORTH OF STATION, 111.5 FEET SOUTH OF A RIGHT-OF-WAY MARKER, 109 FEET
DJ1022'NORTH OF POLE NO. 23, 49 FEET WEST OF THE CENTER OF HIGHWAY, 25
DJ1022'FEET NORTH OF THE CENTER OF A TURNOUT AREA AND 1 FOOT SOUTH OF A
DJ1022'METAL WITNESS POST AND SIGN.
DJ1022'
DJ1022'TO REACH AZIMUTH MARK FROM STATION, GO NORTH ON U.S. HIGHWAY 45
DJ1022'ALT. FOR 0.35 MILE TO MARK ON THE LEFT.
DJ1022
DJ1022 STATION RECOVERY (1981)
DJ1022
DJ1022'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 1981 (RB)
DJ1022'RECOVERED IN GOOD CONDITION.
DJ1022
DJ1022 STATION RECOVERY (1983)
DJ1022
DJ1022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983
DJ1022'NOT RECOVERED, THIS MARK HAS BEEN RESET AND IS NOW GIBSON 1950 1979.
DJ1022
DJ1022 STATION RECOVERY (1988)
DJ1022
DJ1022'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988 (AJL)
DJ1022'THE STATION WAS RECOVERED AT THIS DATE.
DJ1022'AS DESCRIBED IN THE 1979 DESCRIPTION.

DJ1022'
DJ1022'TYPED BY C.L. SMITH.
DJ1022
DJ1022 STATION RECOVERY (2008)
DJ1022
DJ1022'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
DJ1022'RECOVERED AS DESCRIBED.

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DJ1300 ************************************************************************
 DJ1300  DESIGNATION -  LOUISVILLE 2
 DJ1300  PID        -  DJ1300
 DJ1300  STATE/COUNTY-  MS/WINSTON
 DJ1300  USGS QUAD   -  LOUISVILLE NORTH (1982)
 DJ1300
 DJ1300                    *CURRENT SURVEY CONTROL
 DJ1300  ______________________________________________________________________
 DJ1300* NAD 83(2007)-  33 08 35.04322(N)    089 03 40.66597(W)     ADJUSTED
 DJ1300* NAVD 88     -       174.584  (meters)     572.78   (feet)  ADJUSTED
 DJ1300  ______________________________________________________________________
 DJ1300  EPOCH DATE  -        2002.00
 DJ1300  X          -     87,581.134 (meters)                 COMP
 DJ1300  Y          - -5,345,221.590 (meters)                 COMP
 DJ1300  Z          -   3,467,335.127 (meters)                 COMP
 DJ1300  LAPLACE CORR-          -2.34  (seconds)                DEFLEC09
 DJ1300  ELLIP HEIGHT-         146.493 (meters)          (09/06/11) ADJUSTED
 DJ1300  GEOID HEIGHT-          -28.09  (meters)                 GEOID09
 DJ1300  DYNAMIC HT  -         174.388 (meters)     572.14  (feet)  COMP
 DJ1300  MODELED GRAV-      979,512.2   (mgal)                   NAVD 88
 DJ1300
 DJ1300  HORZ ORDER  -  A
 DJ1300  VERT ORDER  -  SECOND    CLASS II
 DJ1300  ELLP ORDER  -  FOURTH    CLASS I
 DJ1300
 DJ1300.The horizontal coordinates were established by GPS observations
 DJ1300.and adjusted by the MAPTECH INCORPORATED in September 2011.
 DJ1300
 DJ1300.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 DJ1300.See National Readjustment for more information.
 DJ1300
 DJ1300.The horizontal coordinates are valid at the epoch date displayed above
 DJ1300.which is a decimal equivalence of Year/Month/Day.
 DJ1300
 DJ1300.The orthometric height was determined by differential leveling and
 DJ1300.adjusted in June 1991.
 DJ1300
 DJ1300.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 DJ1300
 DJ1300.The Laplace correction was computed from DEFLEC09 derived deflections.
 DJ1300
 DJ1300.The ellipsoidal height was determined by GPS observations
 DJ1300.and is referenced to NAD 83.
 DJ1300
 DJ1300.The geoid height was determined by GEOID09.
 DJ1300
 DJ1300.The dynamic height is computed by dividing the NAVD 88
 DJ1300.geopotential number by the normal gravity value computed on the
 DJ1300.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DJ1300.degrees latitude (g = 980.6199 gals.).
 DJ1300
 DJ1300.The modeled gravity was interpolated from observed gravity values.
 DJ1300
 DJ1300;                North         East      Units Scale Factor Converg.
 DJ1300;SPC MS E     -  403,928.716   278,731.636   MT  0.99995558   -0 07 28.7
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DJ1300;SPC MS E - 1,325,222.80 914,472.04 sFT 0.99995558 -0 07 28.7
DJ1300;UTM 16 - 3,669,038.958 307,736.868 MT 1.00005578 -1 07 38.4
DJ1300
DJ1300! - Elev Factor x Scale Factor = Combined Factor
DJ1300!SPC MS E - 0.99997700 x 0.99995558 = 0.99993258
DJ1300!UTM 16 - 0.99997700 x 1.00005578 = 1.00003278
DJ1300
DJ1300 SUPERSEDED SURVEY CONTROL
DJ1300
DJ1300 NGVD 29 (??/??/92) 174.560 (m) 572.70 (f) ADJ UNCH 2 2
DJ1300
DJ1300.Superseded values are not recommended for survey control.
DJ1300.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DJ1300.See file dsdata.txt to determine how the superseded data were derived.
DJ1300
DJ1300_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCB0773669038(NAD 83)
DJ1300
DJ1300_MARKER: DR = REFERENCE MARK DISK
DJ1300_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
DJ1300_SP_SET: SET IN TOP OF CONCRETE MONUMENT
DJ1300_STAMPING: LOUISVILLE NO 2 1958
DJ1300_MARK LOGO: CGS
DJ1300_PROJECTION: PROJECTING 30 CENTIMETERS
DJ1300_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DJ1300+STABILITY: SURFACE MOTION
DJ1300_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DJ1300+SATELLITE: SATELLITE OBSERVATIONS - December 05, 2008
DJ1300
DJ1300 HISTORY - Date Condition Report By
DJ1300 HISTORY - 1958 MONUMENTED CGS
DJ1300 HISTORY - 1975 GOOD MSHD
DJ1300 HISTORY - 20081107 GOOD MSDOT
DJ1300 HISTORY - 20081205 GOOD MSSU
DJ1300
DJ1300 STATION DESCRIPTION
DJ1300
DJ1300'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1975
DJ1300'1.5 MI N FROM LOUISIVLLE.
DJ1300'THE MARK IS LOCATED 1.5 MILES NORTH OF LOUISVILLE ON THE WEST SIDE OF
DJ1300'THE ROAD LEADING TO THE LOUISVILLE AIRPORT ABOUT 0.1 MILE SOUTH OF THE
DJ1300'TERMINAL BUILDING IN THE SOUTHEAST 1/4 OF SECTION 21, T 15N, R 12E. IT
DJ1300'IS 90.06 FEET SOUTHEAST OF THE STATION, 130 FEET SOUTHWEST OF A
DJ1300'TELEPHONE CABLE POLE WITH A GUY WIRE, 35.5 FEET EAST OF A FENCE, 1
DJ1300'FOOT WEST OF A METAL WITNESS POST SET IN THE TOP OF A SQUARE CONCRETE
DJ1300'POST AND PROJECTS 4 INCHES. TO REACH FROM THE U.S. POST OFFICE IN
DJ1300'LOUISVILLE GO WEST ON MAIN STREET (STATE HIGHWAY 14) FOR 0.1 MILE TO
DJ1300'THE INTERSECTION OF CHURCH AVENUE (STATE HIGHWAY 15). TURN RIGHT AND
DJ1300'GO NORTH ON CHURCH AVENUE (STATE HIGHWAY 15). TURN RIGHT AND GO NORTH
DJ1300'ON CHURCH AVENUE FOR 0.9 MILE TO A SIDE ROAD RIGHT. TURN RIGHT AND GO
DJ1300'NORTH ON AIRPORT ROAD FOR 0.65 MILE TO THE MARK ON THE LEFT.
DJ1300
DJ1300 STATION RECOVERY (2008)
DJ1300
DJ1300'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)
DJ1300'RECOVERED AS DESCRIBED.

DJ1300
DJ1300 STATION RECOVERY (2008)
DJ1300
DJ1300'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 2008 (BH)
DJ1300'RECOVERED IN GOOD CONDITION.

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EG1453 ***********************************************************************
 EG1453  CBN        -  This is a Cooperative Base Network Control Station.
 EG1453  DESIGNATION -  U 357
 EG1453  PID        -  EG1453
 EG1453  STATE/COUNTY-  MS/ITAWAMBA
 EG1453  USGS QUAD   -  BEANS FERRY (1992)
 EG1453
 EG1453                    *CURRENT SURVEY CONTROL
 EG1453  ______________________________________________________________________
 EG1453* NAD 83(2007)-  34 07 49.38179(N)    088 23 23.15372(W)     ADJUSTED
 EG1453* NAVD 88     -       79.026  (meters)     259.27   (feet)  ADJUSTED
 EG1453  ______________________________________________________________________
 EG1453  EPOCH DATE  -       2002.00
 EG1453  X          -     148,515.194 (meters)                 COMP
 EG1453  Y          -  -5,283,112.707 (meters)                 COMP
 EG1453  Z          -   3,558,456.215 (meters)                 COMP
 EG1453  LAPLACE CORR-          0.81  (seconds)                DEFLEC09
 EG1453  ELLIP HEIGHT-         51.317 (meters)          (02/10/07) ADJUSTED
 EG1453  GEOID HEIGHT-         -27.70  (meters)                GEOID09
 EG1453  DYNAMIC HT  -         78.947 (meters)     259.01  (feet)  COMP
 EG1453
 EG1453  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 EG1453  Type    PID    Designation                   North   East  Ellip
 EG1453  ----------------------------------------------------------------
 EG1453  NETWORK EG1453 U 357                         0.71   0.73   2.86
 EG1453  ----------------------------------------------------------------
 EG1453  MODELED GRAV-     979,626.4   (mgal)                  NAVD 88
 EG1453
 EG1453  VERT ORDER  -  FIRST     CLASS II
 EG1453
 EG1453.The horizontal coordinates were established by GPS observations
 EG1453.and adjusted by the National Geodetic Survey in February 2007.
 EG1453
 EG1453.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 EG1453.See National Readjustment for more information.
 EG1453
 EG1453.The horizontal coordinates are valid at the epoch date displayed above
 EG1453.which is a decimal equivalence of Year/Month/Day.
 EG1453
 EG1453.The orthometric height was determined by differential leveling and
 EG1453.adjusted in June 1991.
 EG1453
 EG1453.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 EG1453
 EG1453.The Laplace correction was computed from DEFLEC09 derived deflections.
 EG1453
 EG1453.The ellipsoidal height was determined by GPS observations
 EG1453.and is referenced to NAD 83.
 EG1453
 EG1453.The geoid height was determined by GEOID09.
 EG1453
 EG1453.The dynamic height is computed by dividing the NAVD 88
 EG1453.geopotential number by the normal gravity value computed on the
 EG1453.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 EG1453.degrees latitude (g = 980.6199 gals.).
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EG1453
EG1453.The modeled gravity was interpolated from observed gravity values.
EG1453
EG1453; North East Units Scale Factor Converg.
EG1453;SPC MS E - 513,497.995 340,914.364 MT 0.99997063 +0 14 56.0
EG1453;SPC MS E - 1,684,701.34 1,118,483.21 sFT 0.99997063 +0 14 56.0
EG1453;UTM 16 - 3,777,484.963 371,849.949 MT 0.99980244 -0 46 47.5
EG1453
EG1453! - Elev Factor x Scale Factor = Combined Factor
EG1453!SPC MS E - 0.99999194 x 0.99997063 = 0.99996257
EG1453!UTM 16 - 0.99999194 x 0.99980244 = 0.99979439
EG1453
EG1453 SUPERSEDED SURVEY CONTROL
EG1453
EG1453 ELLIP H (04/15/02) 51.316 (m) GP( ) 4 2
EG1453 NAD 83(1993)- 34 07 49.38170(N) 088 23 23.15368(W) AD( ) B
EG1453 ELLIP H (02/15/02) 51.322 (m) GP( ) 4 1
EG1453 NAVD 88 (02/15/02) 79.0 (m) 259. (f) GPS OBS
EG1453 NGVD 29 (??/??/92) 78.959 (m) 259.05 (f) ADJ UNCH 1 2
EG1453
EG1453.Superseded values are not recommended for survey control.
EG1453.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
EG1453.See file dsdata.txt to determine how the superseded data were derived.
EG1453
EG1453_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCC7184977484(NAD 83)
EG1453
EG1453_MARKER: F = FLANGE-ENCASED ROD
EG1453_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
EG1453_SP_SET: STAINLESS STEEL ROD
EG1453_STAMPING: U 357 1985
EG1453_MARK LOGO: NGS
EG1453_PROJECTION: FLUSH
EG1453_MAGNETIC: N = NO MAGNETIC MATERIAL
EG1453_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
EG1453_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
EG1453+SATELLITE: SATELLITE OBSERVATIONS - April 02, 2008
EG1453_ROD/PIPE-DEPTH: 6.7 meters
EG1453
EG1453 HISTORY - Date Condition Report By
EG1453 HISTORY - 1985 MONUMENTED NGS
EG1453 HISTORY - 20000831 GOOD MSHD
EG1453 HISTORY - 20080402 GOOD TVA
EG1453
EG1453 STATION DESCRIPTION
EG1453
EG1453'DESCRIBED BY NATIONAL GEODETIC SURVEY 1985
EG1453'25.6 KM (15.9 MI) NORTH FROM AMORY.
EG1453'3.6 KM (2.25 MI) WEST ALONG U.S. HIGHWAY 278 FROM THE JUNCTION OF
EG1453'STATE HIGHWAY 25 NORTH IN AMORY. THENCE 22.0 KM (13.65 MI) NORTH
EG1453'ALONG THE TOP OF THE LEVEE ON THE WEST SIDE OF THE
EG1453'TENNESSEE-TOMBIGBEE WATERWAY TO THE MARK ON THE RIGHT, 4.88 METERS
EG1453'(16.0 FT) SOUTHEAST OF THE CENTER OF THE GRAVEL ROAD ON TOP OF THE
EG1453'LEVEE. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO
EG1453'CAP.
EG1453'THE MARK IS 0.7 METERS NW FROM A WITNESS POST

EG1453'THE MARK IS 0.3 M BELOW TOP OF LEVEE.
EG1453
EG1453 STATION RECOVERY (2000)
EG1453
EG1453'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 2000
EG1453'TO REACH THE STATION FROM THE INTERSECTION OF US 78 AND RTE 178 AT
EG1453'PEPPERTOWN, MS, DRIVE EAST ON RTE 178 FOR 0.3 MI (0.5 KM) TO
EG1453'PEPPERTOWN RD. TURN RIGHT (SOUTH) AND PROCEED 1.7 MI (2.7 KM) TO VAN
EG1453'BUREN RD. THEN TURN LEFT AND DRIVE EAST AND THEN SOUTH FOR 8.0 MI
EG1453'(12.9 KM) TO A SHARP RIGHT IN THE MAIN ROAD AND A GRAVEL ROAD AHEAD.
EG1453'CONTINUE SOUTH ON THE GRAVEL ROAD INTO THE CANAL SECTION WILDLIFE
EG1453'MANAGEMENT AREA FOR 1.4 MI (2.3 KM) TO THE TOP OF THE LEVEE ON THE
EG1453'WEST SIDE OF THE WATERWAY. AT THE LEVEE ROAD, TURN LEFT (NORTH) AND
EG1453'PROCEED 1000FT TO A LOCKED GATE AND THE IRONWOOD BLUFF BOAT RAMP. WALK
EG1453'PAST THE GATE AND CONTINUE NORTH ON THE LEVEE ROAD ABOUT 1600 FT
EG1453'(487.7 M) TO THE STATION ON THE RIGHT (AN EASY 6 MINUTE WALK).
EG1453
EG1453 STATION RECOVERY (2008)
EG1453
EG1453'RECOVERY NOTE BY TENNESSEE VALLEY AUTHORITY 2008 (CDM)
EG1453'RECOVERED IN GOOD CONDITION.

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EG0791 ****************************************************************************
 EG0791  FBN        -  This is a Federal Base Network Control Station.
 EG0791  DESIGNATION -  WHEELER
 EG0791  PID        -  EG0791
 EG0791  STATE/COUNTY-  MS/PRENTISS
 EG0791  USGS QUAD   -  BALDWYN (1973)
 EG0791
 EG0791                    *CURRENT SURVEY CONTROL
 EG0791  ______________________________________________________________________
 EG0791* NAD 83(2007)-  34 34 51.29547(N)    088 37 44.45509(W)     ADJUSTED
 EG0791* NAVD 88     -       124.278  (meters)     407.74   (feet)  ADJUSTED
 EG0791  ______________________________________________________________________
 EG0791  EPOCH DATE  -       2002.00
 EG0791  X          -     125,779.334 (meters)                  COMP
 EG0791  Y          -  -5,255,528.790 (meters)                  COMP
 EG0791  Z          -   3,599,740.767 (meters)                  COMP
 EG0791  LAPLACE CORR-         -1.03  (seconds)                 DEFLEC09
 EG0791  ELLIP HEIGHT-         96.835 (meters)          (02/10/07) ADJUSTED
 EG0791  GEOID HEIGHT-         -27.45  (meters)                 GEOID09
 EG0791  DYNAMIC HT  -         124.156 (meters)     407.34  (feet)  COMP
 EG0791
 EG0791  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 EG0791  Type    PID    Designation                    North   East  Ellip
 EG0791  ----------------------------------------------------------------------
 EG0791  NETWORK EG0791 WHEELER                          0.33   0.29   0.94
 EG0791  ----------------------------------------------------------------------
 EG0791  MODELED GRAV-     979,657.3   (mgal)                    NAVD 88
 EG0791
 EG0791  VERT ORDER  -  FIRST     CLASS II
 EG0791
 EG0791.The horizontal coordinates were established by GPS observations
 EG0791.and adjusted by the National Geodetic Survey in February 2007.
 EG0791
 EG0791.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 EG0791.See National Readjustment for more information.
 EG0791
 EG0791.The horizontal coordinates are valid at the epoch date displayed above
 EG0791.which is a decimal equivalence of Year/Month/Day.
 EG0791
 EG0791.The orthometric height was determined by differential leveling and
 EG0791.adjusted in June 1991.
 EG0791
 EG0791.WARNING-Repeat measurements at this control monument indicate possible
 EG0791.vertical movement.
 EG0791
 EG0791.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 EG0791
 EG0791.The Laplace correction was computed from DEFLEC09 derived deflections.
 EG0791
 EG0791.The ellipsoidal height was determined by GPS observations
 EG0791.and is referenced to NAD 83.
 EG0791
 EG0791.The geoid height was determined by GEOID09.
 EG0791
 EG0791.The dynamic height is computed by dividing the NAVD 88
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EG0791.geopotential number by the normal gravity value computed on the
EG0791.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
EG0791.degrees latitude (g = 980.6199 gals.).
EG0791
EG0791.The modeled gravity was interpolated from observed gravity values.
EG0791
EG0791;                North         East     Units Scale Factor Converg.
EG0791;SPC MS E    -   563,402.545   318,745.492   MT  0.99995433   +0 06 57.5
EG0791;SPC MS E    - 1,848,429.85  1,045,750.84   sFT  0.99995433   +0 06 57.5
EG0791;UTM  16     - 3,827,775.497   350,588.528   MT  0.99987516   -0 55 29.1
EG0791
EG0791!           -  Elev Factor  x  Scale Factor =   Combined Factor
EG0791!SPC MS E    -   0.99998480  x   0.99995433  =   0.99993913
EG0791!UTM  16     -   0.99998480  x   0.99987516  =   0.99985996
EG0791
EG0791:              Primary Azimuth Mark                  Grid Az
EG0791:SPC MS E    -  WHEELER AZ MK                        022 48 47.0
EG0791:UTM  16     -  WHEELER AZ MK                       023 51 13.6
EG0791
EG0791|-----------------------------------------------------------------------|
EG0791| PID    Reference Object                 Distance      Geod. Az  |
EG0791|                                        dddmmss.s |
EG0791| EG0794 WHEELER AZ MK                                  0225544.5 |
EG0791| EG0792 WHEELER RM 3                    17.723 METERS 02449     |
EG0791| CG5349 WHEELER RM 1                    17.723 METERS 02451     |
EG0791| EG1618 BOONEVILLE FED COMPRESS TANK        APPROX.10.9 KM 0352830.6 |
EG0791| EG1620 BOONEVILLE MUNICIPAL TANK          APPROX.10.4 KM 0360119.7 |
EG0791| EG1623 BALDWYN MUNICIPAL TANK            APPROX. 7.9 KM 1824654.2 |
EG0791| EG0793 WHEELER RM 4                    24.141 METERS 20449     |
EG0791| EG0790 WHEELER RM 2                    17.041 METERS 27956     |
EG0791|-----------------------------------------------------------------------|
EG0791
EG0791                      SUPERSEDED SURVEY CONTROL
EG0791
EG0791  ELLIP H (09/12/01)   96.831  (m)                    GP(      ) 3 1
EG0791  NAD 83(1993)-  34 34 51.29537(N)    088 37 44.45437(W) AD(      ) A
EG0791  ELLIP H (01/12/94)   96.874  (m)                    GP(      ) 4 1
EG0791  NAD 83(1990)-  34 34 51.30321(N)    088 37 44.45813(W) AD(      ) 3
EG0791  NAD 83(1986)-  34 34 51.30546(N)    088 37 44.45501(W) AD(      ) 3
EG0791  NAD 27     -  34 34 50.95300(N)    088 37 44.25800(W) AD(      ) 3
EG0791  NAVD 88 (02/15/02)  124.2    (m)          407.     (f) GPS OBS
EG0791  NAVD 88 (01/12/94)  124.28   (m)          407.7    (f) LEVELING    3
EG0791  NGVD 29 (??/??/92)  124.217  (m)          407.54   (f) ADJ UNCH    1 2
EG0791
EG0791.Superseded values are not recommended for survey control.
EG0791.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
EG0791.See file dsdata.txt to determine how the superseded data were derived.
EG0791
EG0791_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCD5058827775(NAD 83)
EG0791
EG0791_MARKER: DS = TRIANGULATION STATION DISK
EG0791_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
EG0791_SP_SET: CONCRETE POST
EG0791_STAMPING: WHEELER 1950
EG0791_MARK LOGO: CGS
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EG0791_MAGNETIC: N = NO MAGNETIC MATERIAL
EG0791_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
EG0791+STABILITY: SURFACE MOTION
EG0791_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
EG0791+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2009
EG0791
EG0791 HISTORY - Date Condition Report By
EG0791 HISTORY - 1950 MONUMENTED CGS
EG0791 HISTORY - 1962 GOOD CGS
EG0791 HISTORY - 1962 GOOD CGS
EG0791 HISTORY - 1962 GOOD MSHD
EG0791 HISTORY - 1965 GOOD CGS
EG0791 HISTORY - 1965 GOOD MSHD
EG0791 HISTORY - 19720502 GOOD USGS
EG0791 HISTORY - 1973 GOOD NGS
EG0791 HISTORY - 1979 GOOD MSHD
EG0791 HISTORY - 1980 GOOD MSSU
EG0791 HISTORY - 1983 GOOD NGS
EG0791 HISTORY - 1985 GOOD NGS
EG0791 HISTORY - 19920915 GOOD MSHD
EG0791 HISTORY - 19930514 GOOD
EG0791 HISTORY - 19980109 GOOD NGS
EG0791 HISTORY - 19980202 GOOD NGS
EG0791 HISTORY - 20000802 GOOD MSHD
EG0791 HISTORY - 20030118 GOOD INDIV
EG0791 HISTORY - 20040817 GOOD USACE
EG0791 HISTORY - 20060809 GOOD TVA
EG0791 HISTORY - 20091107 GOOD MSSU
EG0791
EG0791 STATION DESCRIPTION
EG0791
EG0791'DESCRIBED BY COAST AND GEODETIC SURVEY 1950 (VRS)
EG0791'STATION IS LOCATED ABOUT 6 MILES SOUTHWEST OF BOONEVILLE, ABOUT 1
EG0791'MILE WEST OF THE SMALL
EG0791'VILLAGE OF WHEELER, ABOUT 100 FEET EAST OF A FRAME HOUSE,
EG0791'54 FEET WEST OF THE
EG0791'CENTERLINE OF U S HIGHWAY 45, 29 FEET SOUTHEAST
EG0791'OF A WITNESS POST, AND ON HIGHWAY
EG0791'RIGHT-OF-WAY.
EG0791'
EG0791'TO REACH FROM THE JUNCTION OF U S HIGHWAY 45 AND STATE HIGHWAY 30 IN
EG0791'BOONEVILLE, GO
EG0791'SOUTH ON U S HIGHWAY 45 FOR 6.0 MILES TO THE AZIMUTH
EG0791'MARK ON RIGHT, CONTINUE FOR 0.5
EG0791'MILE TO THE STATION ON RIGHT.
EG0791'
EG0791'STATION MARK PROJECTS 2 INCHES, AND THE DISK IS STAMPED WHEELER 1950.
EG0791'
EG0791'REFERENCE MARK NO 1 IS 45 FEET WEST OF THE CENTERLINE OF U S HIGHWAY
EG0791'45. THE MARK PROJECTS 3
EG0791'INCHES, AND THE DISK IS STAMPED WHEELER NO 1 1950.
EG0791'
EG0791'REFERENCE MARK NO 2 IS 5 FEET SOUTH OF A WIRE FENCE. THE MARK
EG0791'PROJECTS 3 INCHES, AND
EG0791'THE DISK IS STAMPED WHEELER NO 2 1950.

EG0791'
EG0791'AZIMUTH MARK IS 54 FEET WEST OF THE CENTERLINE OF U S HIGHWAY 45, AND
EG0791'4 FEET SOUTHWEST OF A
EG0791'WITNESS POST. THE MARK PROJECTS 2 INCHES, AND THE
EG0791'DISK IS STAMPED WHEELER 1950.
EG0791'
EG0791'ALL MARKS ARE STANDARD DISKS SET IN THE TOPS OF 12-INCH CONCRETE
EG0791'CYLINDERS.
EG0791'
EG0791'HEIGHT OF LIGHT ABOVE STATION MARK - 23 METERS.
EG0791
EG0791 STATION RECOVERY (1962)
EG0791
EG0791'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1962 (JAW)
EG0791'STATION AND REFERENCE MARK NO 2 RECOVERED AS DESCRIBED AND FOUND TO
EG0791'BE IN GOOD CONDITION.
EG0791'
EG0791'THE TOP OF REFERENCE MARK NO 1 HAS BEEN BROKEN OFF.
EG0791'
EG0791'THE AZIMUTH MARK WAS NOT RECOVERED.
EG0791
EG0791 STATION RECOVERY (1962)
EG0791
EG0791'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1962 (AKH)
EG0791'THE STATION WAS VISITED 7-19-62 AND THE STATION MARK, THE AZIMUTH
EG0791'MARK AND REFERENCE MARK
EG0791'NO 2 WERE FOUND IN GOOD CONDITION. REFERENCE MARK NO
EG0791'1 WAS FOUND DESTROYED WITH THE
EG0791'TOP OF THE CONCRETE MONUMENT BROKEN
EG0791'OFF FLUSH WITH THE GROUND AND THE DISK GONE. A
EG0791'DISK STAMPED R M NO 3
EG0791'WAS SET IN A DRILL HOLE IN THE REMAINING PORTION OF THE MONUMENT
EG0791'AND USED AS
EG0791'REFERENCE MARK NO 3. A NEW DESCRIPTION FOLLOWS-
EG0791'
EG0791'THE STATION IS LOCATED ALONG U S HIGHWAY 45, ABOUT 6 MILES SOUTH OF
EG0791'BOONEVILLE, 1 MILE WEST OF
EG0791'THE VILLAGE OF WHEELER, AND 0.4 MILE NORTH OF THE
EG0791'CROSSROADS OF FRANKSTOWN, ON THE
EG0791'WEST SIDE OF THE HIGHWAY ON THE
EG0791'SECOND KNOLL SOUTH OF A SERIES OF THREE BRIDGES IN
EG0791'THE FLARS, 54 FEET
EG0791'WEST OF THE CENTERLINE OF THE HIGHWAY, 147 FEET SOUTH OF THE CENTER
EG0791'OF THE DRIVEWAY
EG0791'LEADING WEST TO A WHITE HOUSE ON THE TOP OF A HILL,
EG0791'70 FEET NORTH OF THE DRIVEWAY TO A
EG0791'SMALL RED TENANT HOUSE, 76.5 FEET
EG0791'NORTH OF A POWER POLE, 9 FEET EAST OF A LINE OF POLES
EG0791'TO THE SOUTH,
EG0791'114 FEET EAST OF THE NORTHEAST CORNER OF THE BRICK CHIMNEY OF THE OLD
EG0791'RED TENANT HOUSE,
EG0791'AND 1 FOOT WEST OF A METAL WITNESS POST. IT IS A
EG0791'STANDARD DISK, STAMPED WHEELER 1950, FLUSH WITH THE GROUND.
EG0791'REFERENCE MARK NO 2 IS 55.91 FEET WEST OF THE STATION, 109 FEET WEST
EG0791'OF THE CENTER OF THE

EG0791'HIGHWAY, 62.5 FEET EAST-NORTHEAST OF THE NORTHEAST
EG0791'CORNER OF THE BRICK CHIMNEY OF
EG0791'THE RED TENANT HOUSE, 87 FEET
EG0791'NORTHWEST OF A POWER POLE. IT IS A STANDARD
EG0791'DISK, STAMPED WHEELER NO
EG0791'2 1950, FLUSH WITH THE GROUND.
EG0791'
EG0791'REFERENCE MARK NO 3 IS 58.18 FEET NORTH-NORTHEAST OF THE STATION, 89
EG0791'FEET SOUTH OF THE DRIVEWAY
EG0791'TO THE WHITE HOUSE ON THE HILL, 44.5 FEET WEST OF THE
EG0791'CENTERLINE OF THE HIGHWAY AND 1
EG0791'FOOT WEST OF A METAL WITNESS POST.
EG0791'IT IS A STANDARD DISK, STAMPED WHEELER NO 3 1950,
EG0791'FLUSH WITH THE
EG0791'GROUND.
EG0791'
EG0791'THE AZIMUTH MARK IS 0.5 MILE NORTH-NORTHEAST OF THE STATION, ON THE
EG0791'TOP OF A 10 FOOT CUT BANK
EG0791'ABOUT 100 YARDS NORTH OF THE FIRST BRIDGE NORTH OF THE
EG0791'STATION AND ABOUT 300 YARDS
EG0791'SOUTH OF ANOTHER BRIDGE, 53 FEET WEST OF
EG0791'THE CENTER OF THE ROAD, AND 1 FOOT WEST OF A
EG0791'METAL WITNESS POST. IT
EG0791'IS A STANDARD DISK, STAMPED WHEELER 1950 FLUSH WITH THE GROUND.
EG0791'
EG0791'TO REACH THE STATION FROM FRANKTOWN (WHICH IS 6.5 MILES SOUTH ALONG U
EG0791'S HIGHWAY 45 FROM
EG0791'BOONEVILLE) GO NORTH ON U S HIGHWAY 45 FOR 0.4 MILE TO THE
EG0791'STATION ON THE LEFT,
EG0791'CONTINUE FOR 0.5 MILE TO THE AZIMUTH MARK ON THE
EG0791'LEFT.
EG0791
EG0791 STATION RECOVERY (1962)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1962 (AMC)
EG0791'THE STATION WAS VISITED AND ALL MARKS WERE FOUND IN GOOD CONDITION.
EG0791'
EG0791'NOTE- THE 1962 DESCRIPTION BY A K H IS ADEQUATE
EG0791
EG0791 STATION RECOVERY (1965)
EG0791
EG0791'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1965 (HBT)
EG0791'THE STATION WAS VISITED AND ALL MARKS WERE FOUND IN GOOD CONDITION.
EG0791'
EG0791'STATION IS LOCATED ABOUT 6 MILES SOUTHWEST OF BOONEVILLE, ABOUT 1
EG0791'MILE WEST OF THE
EG0791'SMALL VILLAGE OF WHEELER, ABOUT 100 FEET EAST OF A FRAME
EG0791'HOUSE, 54 FEET WEST OF THE
EG0791'CENTERLINE OF U S HIGHWAY 45, 29 FEET
EG0791'TO REACH FROM THE JUNCTION OF U S HIGHWAY 45
EG0791'AND STATE HIGHWAY 30 IN
EG0791'BOONEVILLE, GO SOUTH ON U S HIGHWAY 45 FOR 6.0 MILES TO THE
EG0791'AZIMUTH MARK ON
EG0791'RIGHT, CONTINUE FOR 0.5 MILE TO THE STATION IN THE RIGHT.
EG0791'

EG0791'STATION MARK PROJECTS 2 INCHES, AND THE DISK IS STAMPED WHEELER 1950.
EG0791'
EG0791'REFERENCE MARK NO 1 IS 45 FEET WEST OF THE CENTERLINE OF U S HIGHWAY
EG0791'45. THE MARK
EG0791'PROJECTS 3 INCHES, AND THE DISK IS STAMPED WHEELER NO 1
EG0791'1950.
EG0791'
EG0791'REFERENCE MARK NO 2 IS 5 FEET SOUTH OF A WIRE FENCE. THE MARK
EG0791'PROJECTS 2 INCHES
EG0791'AND THE DISK IS STAMPED WHEELER NO 2 1950.
EG0791
EG0791 STATION RECOVERY (1965)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1965
EG0791'0.4 MI N FROM FRANKSTOWN.
EG0791'TO REACH THE STATION FROM FRANKSTOWN (WHICH IS 6.5 MILES SOUTH ALONG
EG0791'U. S. HIGHWAY 45 FROM BOONEVILLE) GO NORTH ON U. S. HIGHWAY 45 FOR 0.4
EG0791'MILE TO THE STATION ON THE LEFT. THE MARK IS A DISK SET IN THE TOP OF
EG0791'A 12-INCH ROUND, CONCRETE POST. IT IS 54 FEET WEST OF THE CENTERLINE
EG0791'OF THE HIGHWAY, 147 FEET SOUTH OF THE CENTER OF A DRIVEWAY 70 FEET
EG0791'NORTH OF THE CENTER OF A DRIVEWAY, 76.5 FEET NORTH OF A POWER POLE,
EG0791'114 FEET EAST OF THE NORTHEAST CORNER OF A BRICK CHIMNEY AND 9 FEET
EG0791'EAST OF A LINE OF POLES TO THE SOUTH. IT IS 1 FOOT WEST OF A METAL
EG0791'WITNESS POST AND FLUSH WITH THE GROUND.
EG0791
EG0791 STATION RECOVERY (1972)
EG0791
EG0791'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1972 (JDS)
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (1973)
EG0791
EG0791'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973 (AKH)
EG0791'THE STATION WAS VISITED 8-28-73 AND THE STATION MARK, AZIMUTH MARK
EG0791'AND REFERENCE MARK NO. 3 WERE FOUND IN GOOD CONDITION. REFERENCE
EG0791'MARK NO. 2 WAS FOUND DISTURBED WITH PORTIONS OF THE DISK MISSING AND
EG0791'THE ARROW POINTING ABOUT 45 DEGREES TO THE SOUTH OF THE STATION,
EG0791'IT WAS LEFT AS FOUND AND A NEW MEASUREMENT AND DIRECTION WAS TAKEN
EG0791'TO THE MARK. R.M. NO. 4 WAS ESTABLISHED AT THIS DATE ON LINE
EG0791'WITH REFERENCE MARK NO. 3 AND THE STATION. A NEW DESCRIPTION
EG0791'FOLLOWS--
EG0791'
EG0791'THE STATION IS LOCATED 6.0 MILES SOUTH ALONG U.S. HIGHWAY 45 FROM
EG0791'BOONEVILLE, 1.0 MILE WEST OF THE VILLAGE OF WHEELER AND ABOUT 0.4
EG0791'MILE NORTH OF THE CROSSROAD OF FRANKSTOWN ON THE WEST RIGHT-OF-WAY
EG0791'OF U.S. HIGHWAY 45. IT IS 54 FEET WEST OF THE CENTER OF U.S.
EG0791'HIGHWAY 45, 147 FEET SOUTH OF A DRIVEWAY LEADING WEST TO A SMALL
EG0791'WHITE HOUSE ON THE TOP OF THE HILL, 70 FEET NORTH OF THE CENTER OF
EG0791'THE DRIVEWAY TO A SMALL TENNANT HOUSE, 76.5 FEET NORTH OF A POWER
EG0791'POLE, 9 FEET EAST OF THE CENTER OF THE POWER LINE, 114 FEET EAST
EG0791'OF THE BRICK CHIMNEY OF THE SMALL RED TENNANT HOUSE, AND 1 FOOT
EG0791'WEST OF A METAL WITNESS POST. IT IS STAMPED WHEELER 1950, FLUSH
EG0791'WITH THE GROUND.
EG0791'
EG0791'REFERENCE MARK NO. 2 IS 55.90 FEET WEST OF THE STATION, 109 FEET WEST

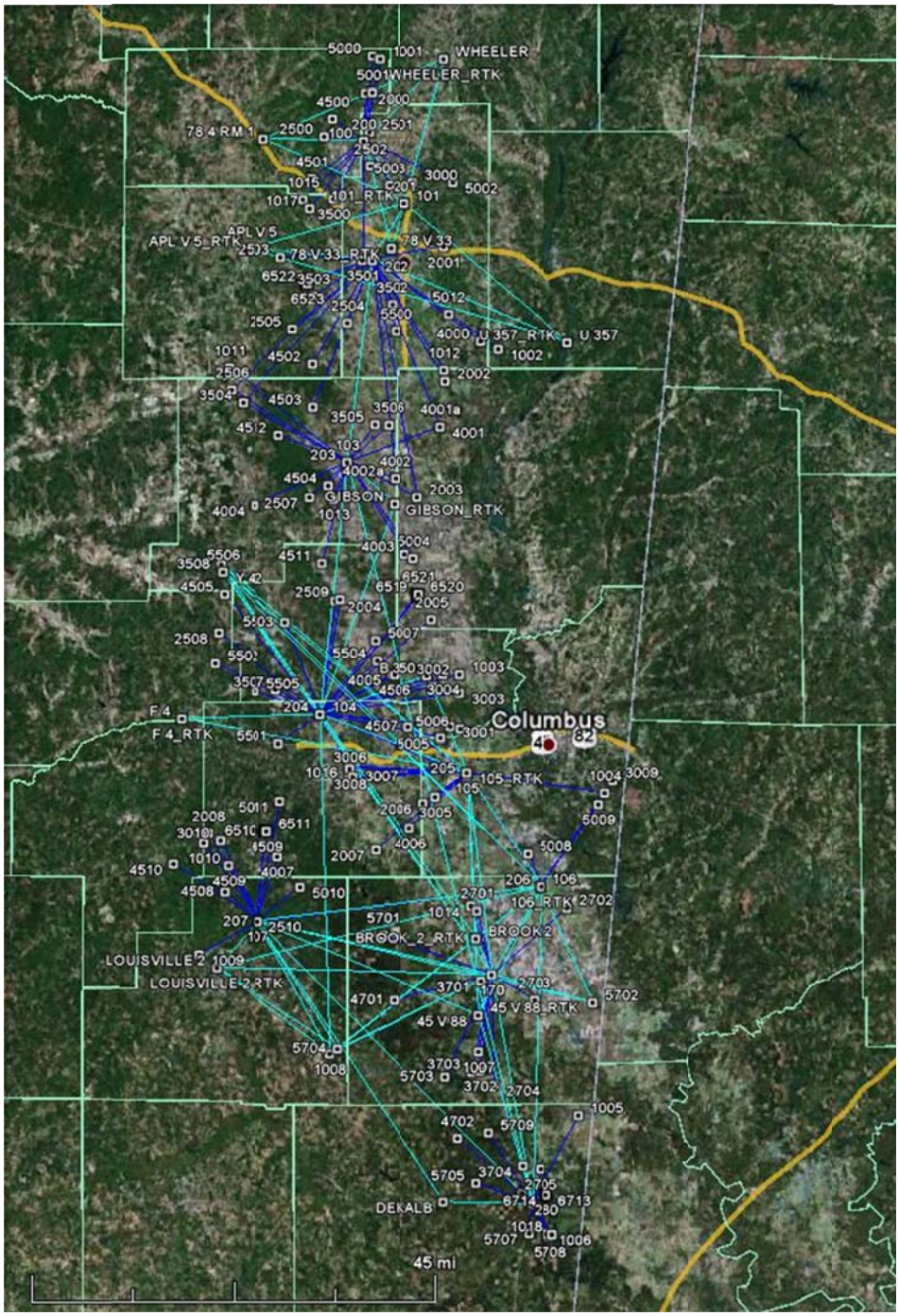
EG0791'OF THE CENTER OF THE U.S. HIGHWAY 45, 62.5 FEET ENE OF THE NE CORNER
EG0791'OF THE BRICK CHIMNEY OF THE RED TENANT HOUSE, AND 87 FEET NW OF A
EG0791'POWER POLE. IT IS A REFERENCE MARK DISK STAMPED WHEELER NO 2
EG0791'1950.
EG0791'
EG0791'REFERENCE MARK NO. 3 IS 58.15 FEET NNE OF THE STATION. IT IS 89 FEET
EG0791'SOUTH OF THE CENTER OF THE DRIVEWAY LEADING WEST OF THE WHITE HOUSE
EG0791'ON THE HILL, 44.5 FEET WEST OF THE CENTER OF U.S. HIGHWAY 45 AND 1
EG0791'FOOT WEST OF A METAL WITNESS POST. IT IS A REFERENCE MARK DISK,
EG0791'STAMPED WHEELER NO 3 1950, FLUSH.
EG0791'
EG0791'REFERENCE MARK NO. 4 IS 79.21 FEET WEST OF THE STATION, 66.5 FEET
EG0791'WEST OF THE CENTER OF THE HIGHWAY, 12 FEET SOUTH OF THE CENTER OF
EG0791'THE DRIVEWAY TO THE RED TENANT HOUSE, 7 FEET WEST OF A POWER POLE
EG0791'AND 1 FOOT SOUTH OF A METAL WITNESS POST. IT IS A REFERENCE MARK
EG0791'DISK STAMPED WHEELER 1950 NO 4 1973, PROJECTING 3 INCHES.
EG0791'
EG0791'THE AZIMUTH MARK IS 0.5 MILE NNE OF THE STATION, ABOUT 100 YARDS
EG0791'NORTH OF THE SECOND BRIDGE NORTH OF THE STATION AND ABOUT 300 YARDS
EG0791'SOUTH OF ANOTHER BRIDGE, 54 FEET WEST OF THE CENTER OF THE HIGHWAY
EG0791'AND 1 FOOT WEST OF A METAL WITNESS POST. IT IS AN AZIMUTH MARK
EG0791'DISK, STAMPED WHEELER 1950, FLUSH.
EG0791'
EG0791'TO REACH FROM THE CROSSROAD AT FRANKSTOWN, GO NORTH ON U.S. HIGHWAY
EG0791'45 FOR 0.4 MILE TO THE MARK ON THE LEFT, CONTINUE NORTH FOR 0.5
EG0791'MILE TO THE AZIMUTH MARK ON THE LEFT ON THE TOP OF A CUT BANK.
EG0791'
EG0791'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--6.0 MILES SW OF
EG0791'BOONEVILLE.
EG0791
EG0791 STATION RECOVERY (1979)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1979
EG0791'THE MARK IS LOCATED 0.35 MILE NORTH OF FRANKSTOWN NEAR THE WEST RIGHT
EG0791'OF WAY OF U.S. HIGHWAY 45, 5.7 MILES SOUTHWEST OF BOONEVILLE IN THE
EG0791'SOUTHWEST CORNER OF SECTION 1, T 6S, R 6E. IT IS 76.5 FEET NORTH OF
EG0791'POWER POLE NO. 126, 64 FEET NORTH OF THE CENTER OF AN ABANDONED
EG0791'DRIVEWAY, 54 FEET WEST OF THE CENTER OF HIGHWAY 45, 1 FOOT NORTH OF A
EG0791'METAL WITNESS POST SET IN THE TOP OF A ROUND CONCRETE POST ABOUT 4
EG0791'FEET ABOVE THE LEVEL OF THE HIGHWAY AND IS FLUSH WITH THE GROUND. TO
EG0791'REACH FROM THE JUNCTION OF STATE HIGHWAY 30 AND U.S. HIGHWAY 45 IN
EG0791'FRANKSTOWN GO NORTH ON U.S. HIGHWAY 45 FOR 0.35 MILE TO THE MARK ON
EG0791'THE LEFT.
EG0791
EG0791 STATION RECOVERY (1980)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 1980 (RB)
EG0791'STATION, REFERENCE MARKS 3 AND 4 RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (1983)
EG0791
EG0791'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (1985)

EG0791
EG0791'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1985
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (1992)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1992
EG0791'THE STATION IS LOCATED ABOUT 6 MI (9.7 KM) SOUTH OF BOONEVILLE, ON THE
EG0791'WEST R.O.W. OF U.S. HIGHWAY 45, 1 MI (1.6 KM) WEST OF THE VILLAGE OF
EG0791'WHEELER, 0.3 MI (0.5 KM) NORTH OF THE JUNCTION OF U.S. HIGHWAY 45 AND
EG0791'STATE HIGHWAY 362 AT FRANKSTOWN AND IS IN THE NORTHWEST CORNER OF
EG0791'SECTION 12, T 6S, R 6E.
EG0791'TO REACH FROM THE JUNCTION OF STATE HIGHWAY 30 AND U.S. HIGHWAY 45 AT
EG0791'FRANKSTOWN, GO NORTH ON U.S. HIGHWAY 45 FOR 0.45 MI (0.72 KM) TO THE
EG0791'MARK ON THE LEFT.
EG0791'MARK IS A STANDARD DISK SET IN THE TOP OF A ROUND CONCRETE POST, ABOUT
EG0791'3 FT (0.9 M) ABOVE THE LEVEL OF THE HIGHWAY, FLUSH WITH THE GROUND,
EG0791'76.5 FT (23.3 M) NORTHEAST OF A POWER POLE WITH GUY WIRES, 54.5 FT
EG0791'(16.6 M) NORTHWEST OF THE CENTER OF HIGHWAY 45, 22 FT (6.7 M) EAST OF
EG0791'THE NORTHWEST POST OF THE MISSISSIPPI MOVING AHEAD SIGN, 9 FT
EG0791'(2.7 M) SOUTHEAST OF THE CENTER OF A POWER LINE AND 1 FT (0.3 M)
EG0791'NORTHEAST OF A METAL WITNESS POST.
EG0791
EG0791 STATION RECOVERY (1993)
EG0791
EG0791'RECOVERED 1993
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (1998)
EG0791
EG0791'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
EG0791'THE STATION IS LOCATED ABOUT 9.7 KM (6.00 MI) SOUTH OF BOONVILLE, 1.6
EG0791'KM (1.00 MI) WEST-NORTHWEST OF WHEELER, 0.5 KM (0.30 MI) NORTH OF THE
EG0791'JUNCTION OF STATE HIGHWAYS 145 AND 362 IN FRANKSTOWN, ALONG THE WEST
EG0791'RIGHT-OF-WAY OF STATE HIGHWAY 145 ON TOP OF A BANK.
EG0791'OWNERSHIP--MISSISSIPPI DEPARTMENT OF TRANSPORTATION, PO BOX 6366,
EG0791'JACKSON MS 39208, PHONE 601-944-9098 OR FAX 601-944-9009. TO REACH
EG0791'THE STATION FROM THE JUNCTION OF STATE HIGHWAY 30 AND U.S. HIGHWAY 45
EG0791'AT THE WEST EDGE OF FRANKSTOWN, GO EAST FOR 0.48 KM (0.30 MI) ON
EG0791'HIGHWAY 30 TO THE JUNCTION OF STATE HIGHWAY 145 (OLD HIGHWAY 45). TURN
EG0791'LEFT, NORTH FOR 0.24 KM (0.15 MI) ON HIGHWAY 145 TO THE JUNCTION OF
EG0791'STATE HIGHWAY 362 EAST ON THE RIGHT. CONTINUE NORTH FOR 0.5 KM (0.30
EG0791'MI) ON HIGHWAY 145 TO THE STATION ON THE LEFT. LOCATED 23.25 M (76.28
EG0791'FT) NORTH-NORTHEAST OF A UTILITY POLE WITH 4 GUY WIRES AND A BIRDHOUSE
EG0791'ATTACHED, 22.95 M (75.30 FT) NORTH-NORTHEAST OF STATE BENCH MARK
EG0791'NUMBER 15, 16.5 M (54.1 FT) WEST-NORTHWEST OF THE CENTER OF HIGHWAY
EG0791'145, ABOUT 2.7 M (8.9 FT) SOUTHEAST OF THE CENTER OF AN OVERHEAD POWER
EG0791'LINE, 0.25 M (0.82 FT) NORTH-NORTHEAST OF A METAL WITNESS POST, ABOUT
EG0791'2.0 M (6.6 FT) ABOVE THE HIGHWAY LEVEL AND FLUSH WITH GROUND.
EG0791
EG0791 STATION RECOVERY (1998)
EG0791
EG0791'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1998 (CSM)
EG0791'RECOVERED AS DESCRIBED.
EG0791

EG0791 STATION RECOVERY (2000)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 2000
EG0791'RECOVERED AS DESCRIBED.
EG0791
EG0791 STATION RECOVERY (2003)
EG0791
EG0791'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2003 (JMT)
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (2004)
EG0791
EG0791'RECOVERY NOTE BY US ARMY CORPS OF ENGINEERS 2004 (DLB)
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (2006)
EG0791
EG0791'RECOVERY NOTE BY TENNESSEE VALLEY AUTHORITY 2006 (CDM)
EG0791'RECOVERED IN GOOD CONDITION.
EG0791
EG0791 STATION RECOVERY (2009)
EG0791
EG0791'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 2009
EG0791'RECOVERED IN GOOD CONDITION.

SECTION 5: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for the project.



Not to Scale