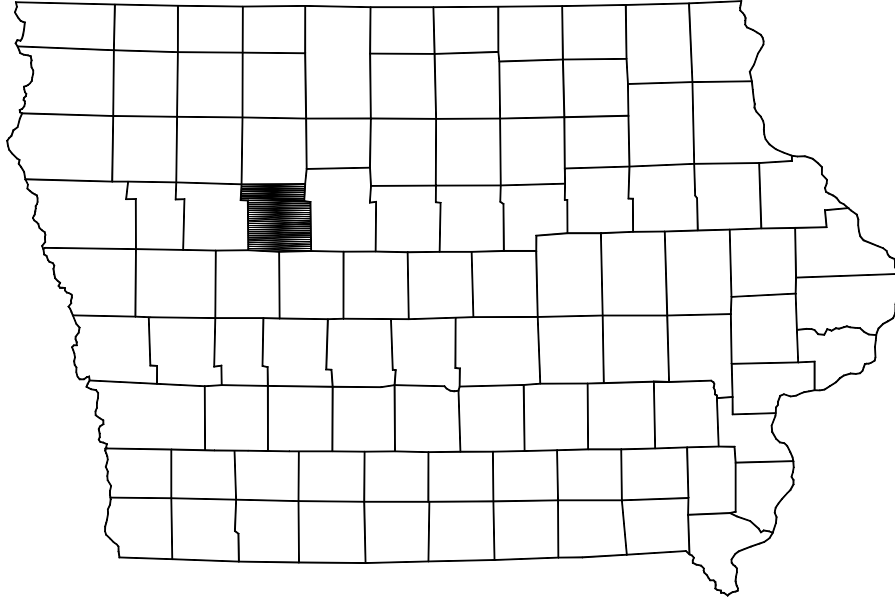
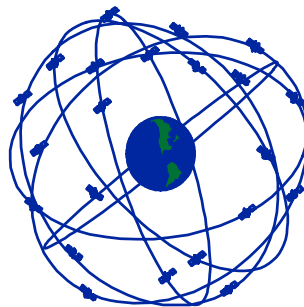


Calhoun County Iowa



2003 G.P.S. Survey Control Network



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Calhoun County Iowa

2003 G.P.S. Survey Control Network

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INTRODUCTION

In 2003 Calhoun County, Iowa, chose to embark on a high accuracy ground control survey for the purpose of establishing a county-wide GIS system. The County hired The Sidwell Company as the prime Contractor for this project. Aerial Services, Inc. was contracted by The Sidwell Company for the purpose of establishing the necessary ground control network needed to produce the base mapping layers for the new Geographic Information System (GIS).

Sixty-three new control stations were added within the county. Twenty-seven existing points, 9 being Webster County GPS control points, 4 others being Greene County GPS control points, 4 more being Carroll County GPS control points and 1 other being a Buena Vista County GPS control point, were recovered and tied into the GPS network. An additional 6 NGS first and second order benchmarks, and 1 USGS third order bench mark station, were all included in the network. And finally, 2 existing HARN stations were also included in this new network for additional horizontal control.

PROJECT REQUIREMENTS

The purpose of this survey was to establish throughout the project area, a new horizontal control network using GPS survey equipment and techniques. This network was horizontally referenced to the Iowa High Accuracy Reference Network (HARN) of 1996. Vertically the network was referenced to the North American Vertical Datum of 1988 (NAVD88). Because this control would be utilized to control the analytical triangulation of the aerial photography, the network geometry was ideal for a strong GPS survey. All new point locations for control were selected with the needs of both the analytical triangulation and GPS survey requirements in mind. In some instances, all of the needs could not be met due to physical obstructions or existing land features. In these instances, the needs of analytical triangulation were held primary and the GPS survey needs were satisfied second.

MONUMENTATION

To perpetuate the GPS control measurements, 63 new permanent monuments were set for Calhoun County. BERNTSEN driven aluminum rod monuments were selected for the permanent monuments. Each BERNTSEN station monument consists of one three-foot smooth rod section and one three-foot top security fluted rod section with a stamped cap fastened to the top, all constructed of aluminum material. There is a permanent magnet mounted on the underside of the monument cap for future recovery with a locator. These were driven to approximately 6" below the existing ground surface. For easy access and protection, a 24" long 5" diameter PVC pipe was placed over each rod monument along with a pre-cast aluminum access cover and backfilled with sand to facilitate drainage and to minimize frost movement.

The Engineer's Office from Calhoun County handled the coordination of marking the various underground utility locations for each new BERNTSEN site.

RECONNAISSANCE

The most important criterion for GPS observations at any given location is a clear view to the sky. In terms of network design, it is desirable that the horizontal control be located near the perimeter of the project site. With this in mind, two existing HARN horizontal stations were recovered in and/or near Calhoun County. Both were chosen to be included in the network.

Vertical control was selected to provide as much coverage as possible, both at the periphery and in the interior of the project area. In addition to the two HARN stations 6 existing NGS and 1 USGS benchmarks were recovered and included in this survey. All of the benchmarks were occupied directly, except for #204, where an iron pin was set and a closed level loop was run from the original disk. The iron pin was occupied with GPS equipment.

FIELD SURVEY

Four Ashtech Z-Xtreme dual frequency GPS with Z-tracking capabilities, were used in this survey. GPS observations began Monday afternoon, May 19, 2003. GPS observations were made during daylight hours from Monday, May 19, 2003, through Wednesday, May 21, 2003.

Rapid static GPS techniques were utilized to minimize the time and cost of the survey. The satellite “window”, where at least six satellites were observable, was open for much of the day. Each measurement period during which all receivers observe satellites simultaneously lasted from 10 minutes to 40 minutes, depending on the distance being measured and the geometry of the satellite constellation.

DATA ADJUSTMENT

A total number of 222 vectors were observed and processed. Based on statistical indicators from the ASHTECH SOLUTIONS processing software, 32 vectors were rejected and removed prior to data adjustment. These lines were either repeat vectors or considered unneeded for the adjustment. The final network is comprised of 90 stations and 190 baselines. All data adjustment was performed using the ASHTECH SOLUTIONS least squares adjustment software. An initial free adjustment was performed in NAD83 to check the overall quality of the GPS data and the nature of the control. The initial unconstrained (free) adjustment yielded baseline precisions which ranged from 1:250,000 to 1:1,500,000. Once the horizontal and vertical control was verified, subsequent adjustments were performed to arrive at the optimal solutions for each datum.

NAD83 (1996)

The initial free adjustment was performed holding point #9604 fixed horizontally with the vertical adjustment disabled. Coordinate values on the other HARN control station was then checked against the published values. One at a time, each of the HARN stations and other HARN-referenced stations from surrounding Counties were added to the network and a new adjustment performed. After each adjustment a comparison of adjusted coordinates vs.

published values was made. By holding the two existing HARN stations fixed, along with holding the twenty-five Webster County, Greene County, Carroll County and Buena Vista County GPS control stations fixed, the precision of the “free” adjustment degraded very little.

Once we were satisfied with the horizontal adjustment, we locked the horizontal positions and concentrated on the vertical adjustment. The Geoid 99 Central zone was utilized to provide a model of the height of the Geoid. Adjustments were then performed locking on to the vertical control stations one at a time. Elevations on the benchmarks were then checked against the published values

A final adjustment of both horizontal and vertical was then performed. All of the horizontal control points were held fixed in x and y and all vertical control were held fixed in z, except for points #204, #211 and #210. This fully constrained adjustment solved for scale and rotation. In the final adjusted network, 100% of the adjusted vectors have an estimated error of 1:100,000 or less in x, y and z. The baseline precision after adjustment was between 1:170,000 to 1:875,000. All of the processed data and error factors were computed using a 95% confidence level factor. The results are well in excess of the first-order precision.

CONCLUSION

All measured points will be usable for better than first-order control in horizontal position and with ± 0.10 ft. vertically for benchmark use.

2003
Calhoun County, Iowa
Iowa North Zone (1401)
Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **1**

Northing: **3540762.11 FT**

Northing: **1079226.450 M**

Easting: **4662339.51 FT**

Easting: **1421083.924 M**

Elev: **1120.50 FT**

Elev: **341.530 M**

Latitude: **N 42-12-33.28698**

Longitude: **W 094-27-20.47729**

Ellip. Ht: **313.894 M**

Theta: **- 0-38-51.765**

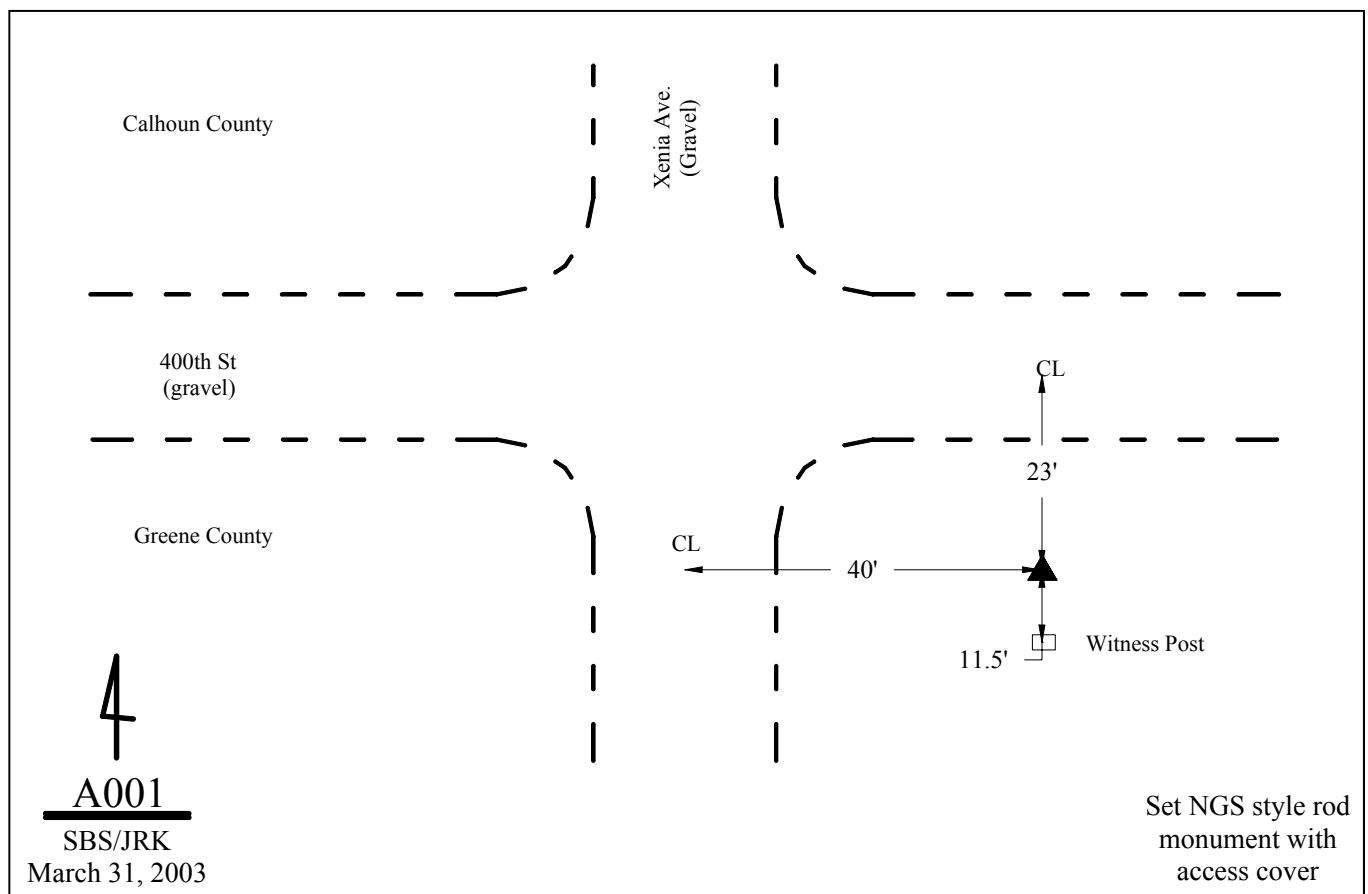
Combination Factor: **0.99992795**

99C Geoid Ht: **-27.636 M**

Designation: **GREENE COUNTY GPS CONTROL A001**

Location: **Near the NW Cor of Sec 3 T85N R31W.**

Monument Type: A standard disk set in the top of a poured-in-place concrete monument.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **2**

Northing: **3540931.66 FT**

Northing: **1079278.128 M**

Easting: **4646830.58 FT**

Easting: **1416356.794 M**

Elev: **1122.14 FT**

Elev: **342.030 M**

Latitude: **N 42-12-33.17797**

Longitude: **W 094-30-46.57216**

Ellip. Ht: **314.167 M**

Theta: **- 0-41-11.444**

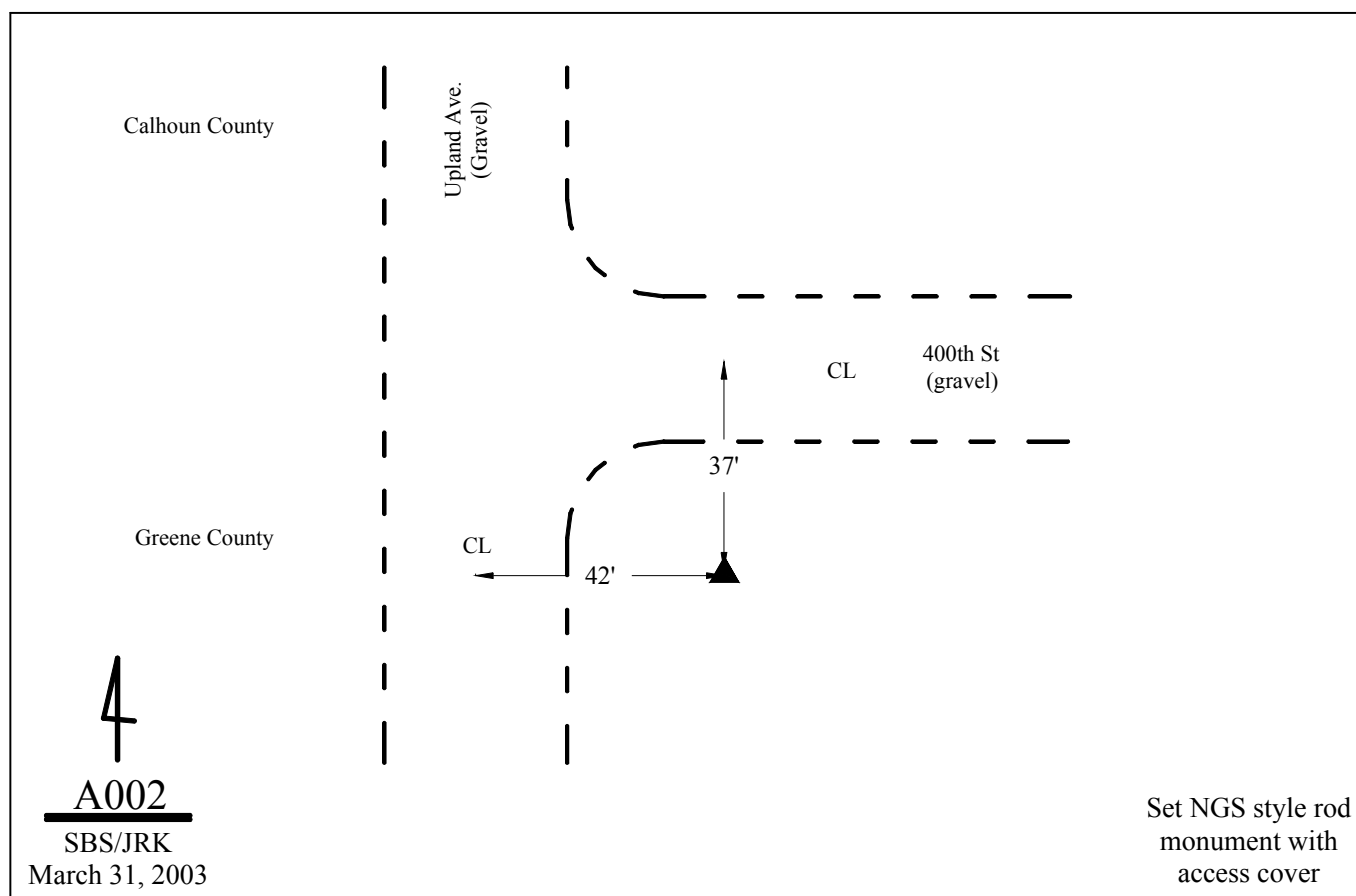
Combination Factor: **0.99992791**

99C Geoid Ht: **-27.863 M**

Designation: **GREENE COUNTY GPS CONTROL A002**

Location: **Near the NW Cor of Sec 6 T85N R31W.**

Monument Type: A standard disk set in the top of a poured-in-place concrete monument.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **3**

Northing: **3541180.05 FT**

Northing: **1079353.837 M**

Easting: **4630393.25 FT**

Easting: **1411346.686 M**

Elev: **1114.60 FT**

Elev: **339.730 M**

Latitude: **N 42-12-33.62769**

Longitude: **W 094-34-25.01573**

Ellip. Ht: **311.615 M**

Theta: **- 0-43-39.493**

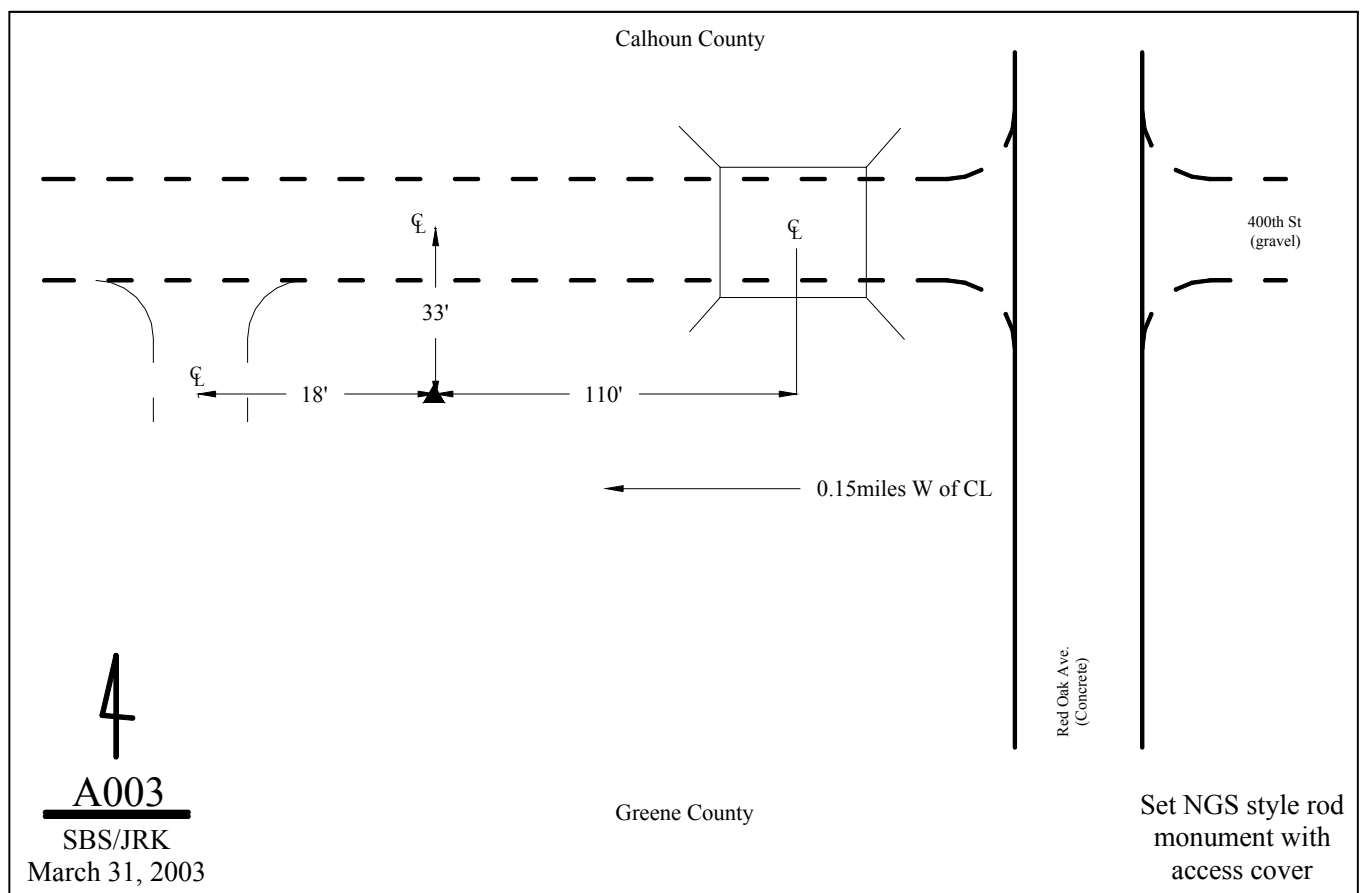
Combination Factor: **0.99992829**

99C Geoid Ht: **-28.115 M**

Designation: **GREENE COUNTY GPS CONTROL A003**

Location: **In the NE 1/4 of Sec 4 T85N R32W.**

Monument Type: A standard disk set in the top of a poured-in-place concrete monument.





2003
Calhoun County, Iowa
Iowa North Zone (1401)
Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **4**

Northing: **3541405.18 FT**

Northing: **1079422.458 M**

Easting: **4615481.96 FT**

Easting: **1406801.715 M**

Elev: **1194.39 FT**

Elev: **364.052 M**

Latitude: **N 42-12-33.93295**

Longitude: **W 094-37-43.17964**

Ellip. Ht: **335.715 M**

Theta: **- 0-45-53.798**

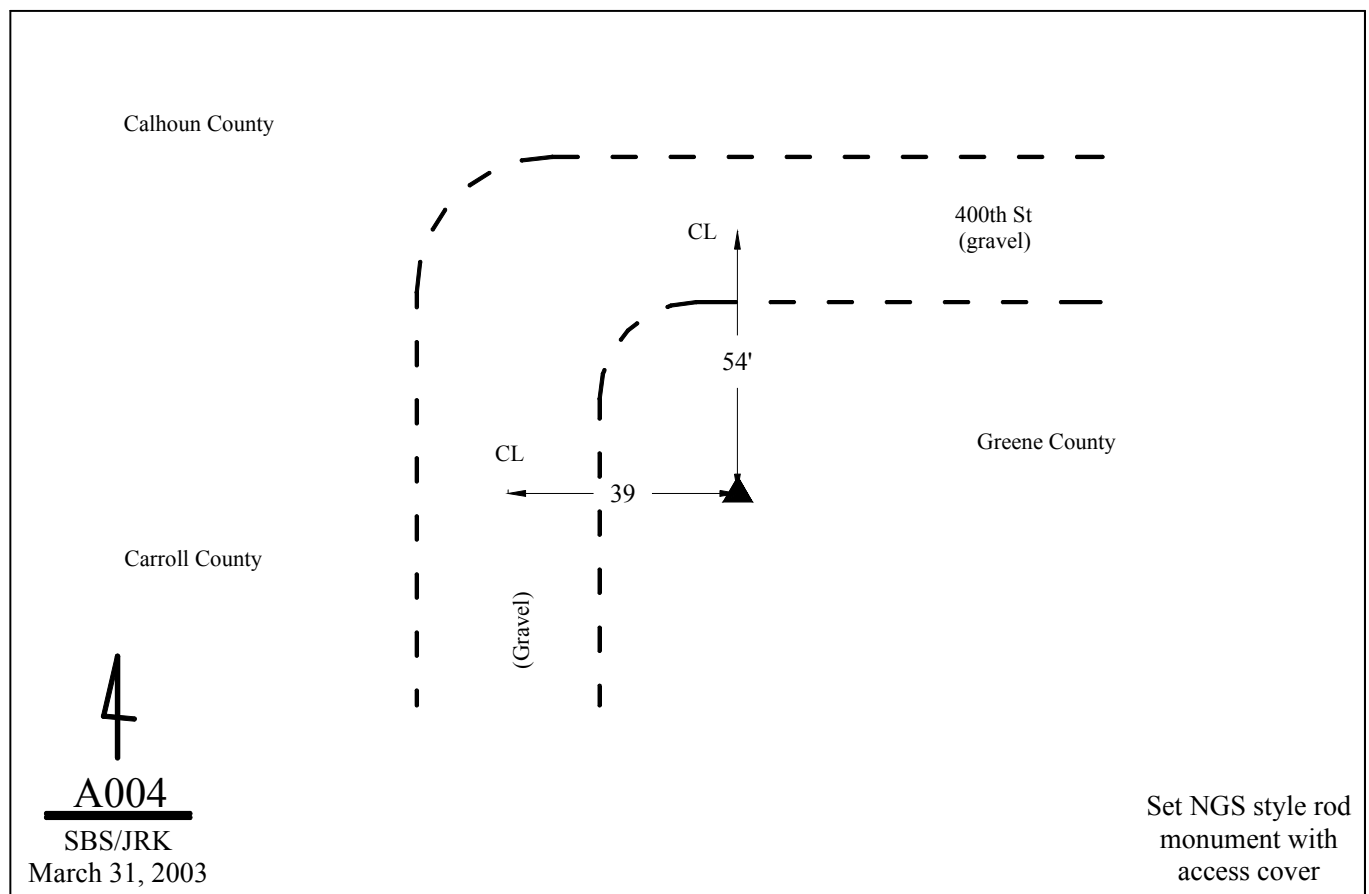
Combination Factor: **0.99992450**

99C Geoid Ht: **-28.337 M**

Designation: **GREENE COUNTY GPS CONTROL A004**

Location: **Near the NW Cor of Sec 6 T85N R32W.**

Monument Type: A standard disk set in the top of a poured-in-place concrete monument.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: 45

Northing: 3542171.43 FT

Northing: 1079656.010 M

Easting: 4553261.63 FT

Easting: 1387836.920 M

Elev: 1237.18 FT

Elev: 377.093 M

Latitude: N 42-12-32.46082

Longitude: W 094-51-30.02397

Ellip. Ht: 348.146 M

Theta: - 0-55-14.187

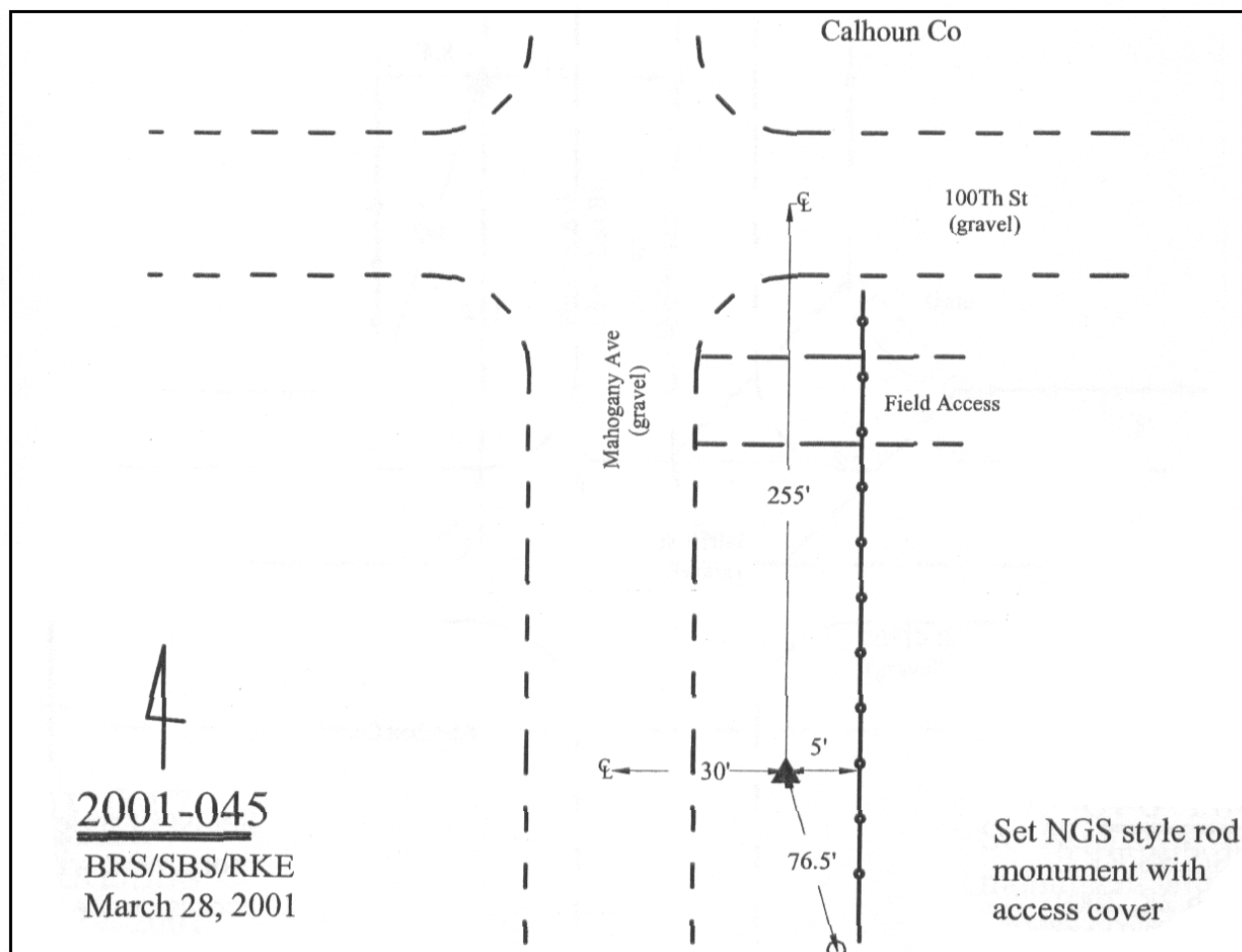
Combination Factor: 0.99992261

99C Geoid Ht: -28.947 M

Designation: CARROLL COUNTY GPS CONTROL PT 2001-45

Location: Near the NW Cor of Sec 6 T85N R34W.

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: 54

Northing: 3542237.54 FT

Northing: 1079676.162 M

Easting: 4568278.61 FT

Easting: 1392414.106 M

Elev: 1181.71 FT

Elev: 360.186 M

Latitude: N 42-12-35.44878

Longitude: W 094-48-10.51617

Ellip. Ht: 331.325 M

Theta: -0-52-58.972

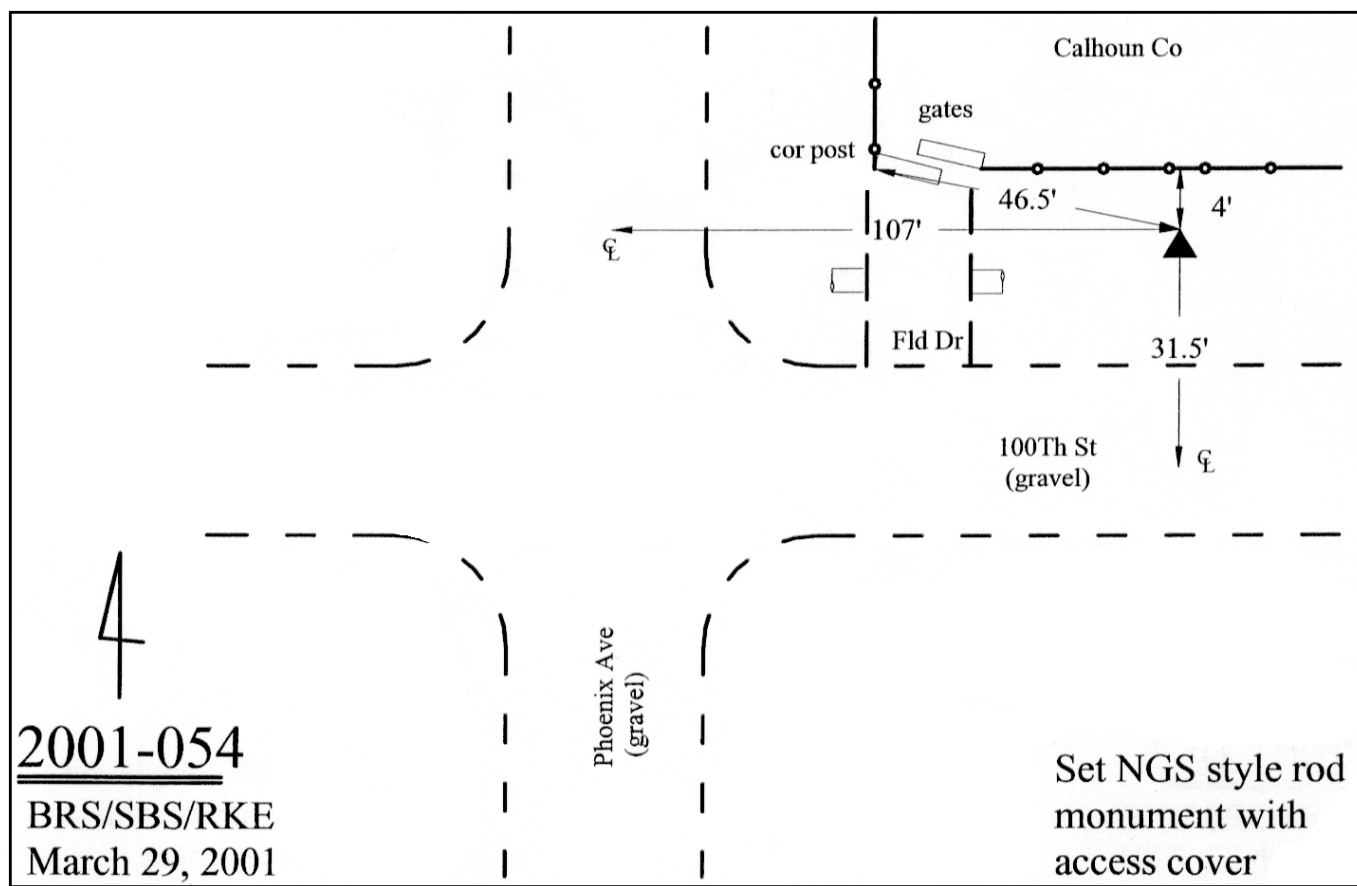
Combination Factor: 0.99992513

99C Geoid Ht: -28.861 M

Designation: CARROLL COUNTY GPS CONTROL PT 2001-54

Location: Near the SW Cor of Sec 34 T86N R34W.

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: 63

Northing: 3541877.71 FT

Northing: 1079566.485 M

Easting: 4581209.15 FT

Easting: 1396355.342 M

Elev: 1140.38 FT

Elev: 347.590 M

Latitude: N 42-12-33.82708

Longitude: W 094-45-18.64141

Ellip. Ht: 318.834 M

Theta: -0-51-02.485

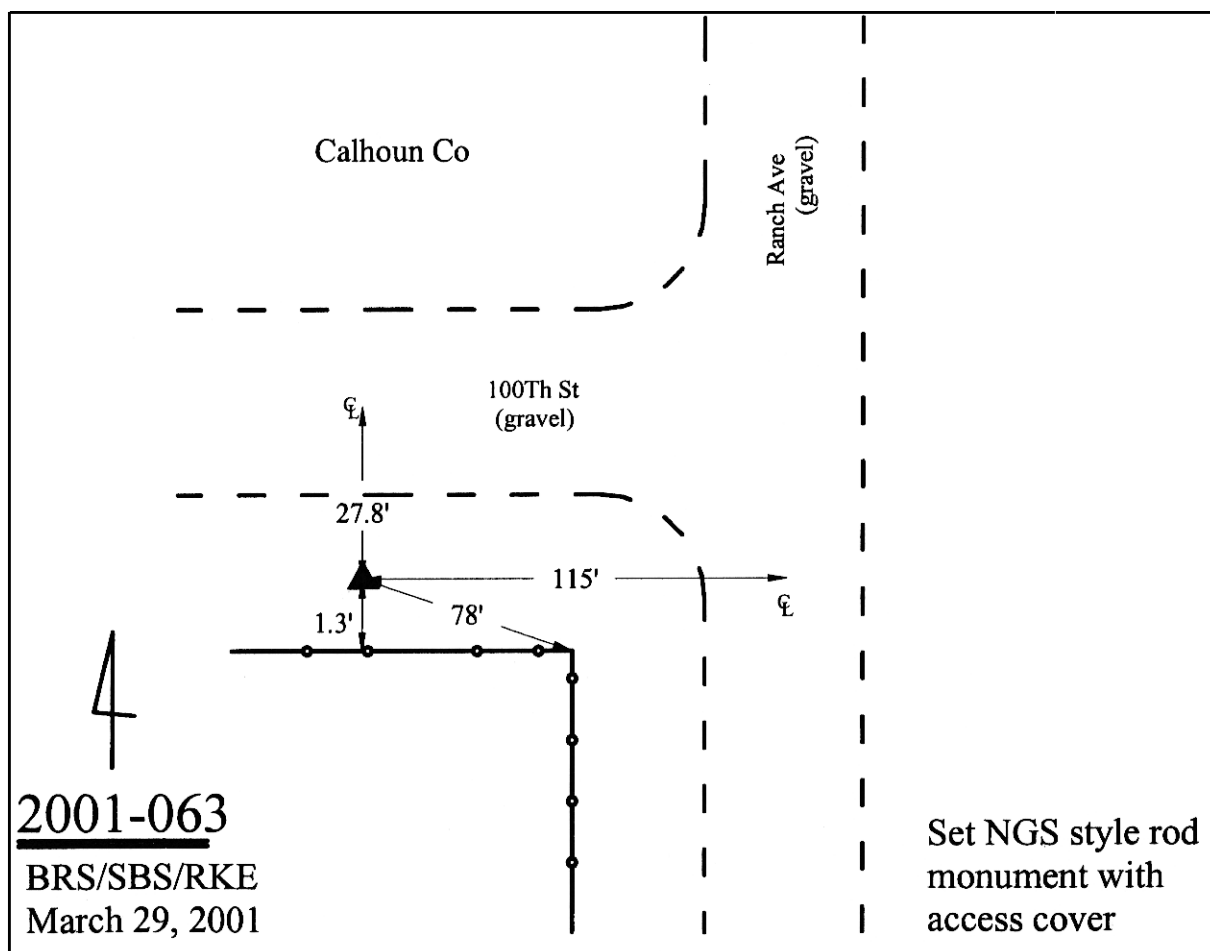
Combination Factor: 0.99992716

99C Geoid Ht: -28.756 M

Designation: CARROLL COUNTY GPS CONTROL PT 2001-63

Location: Near the N 1/4 Cor of Sec 1 T85N R34W.

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: 72

Northing: 3541710.64 FT

Northing: 1079515.561 M

Easting: 4599728.96 FT

Easting: 1402000.190 M

Elev: 1166.65 FT

Elev: 355.595 M

Latitude: N 42-12-34.81906

Longitude: W 094-41-12.54260

Ellip. Ht: 327.047 M

Theta: - 0-48-15.693

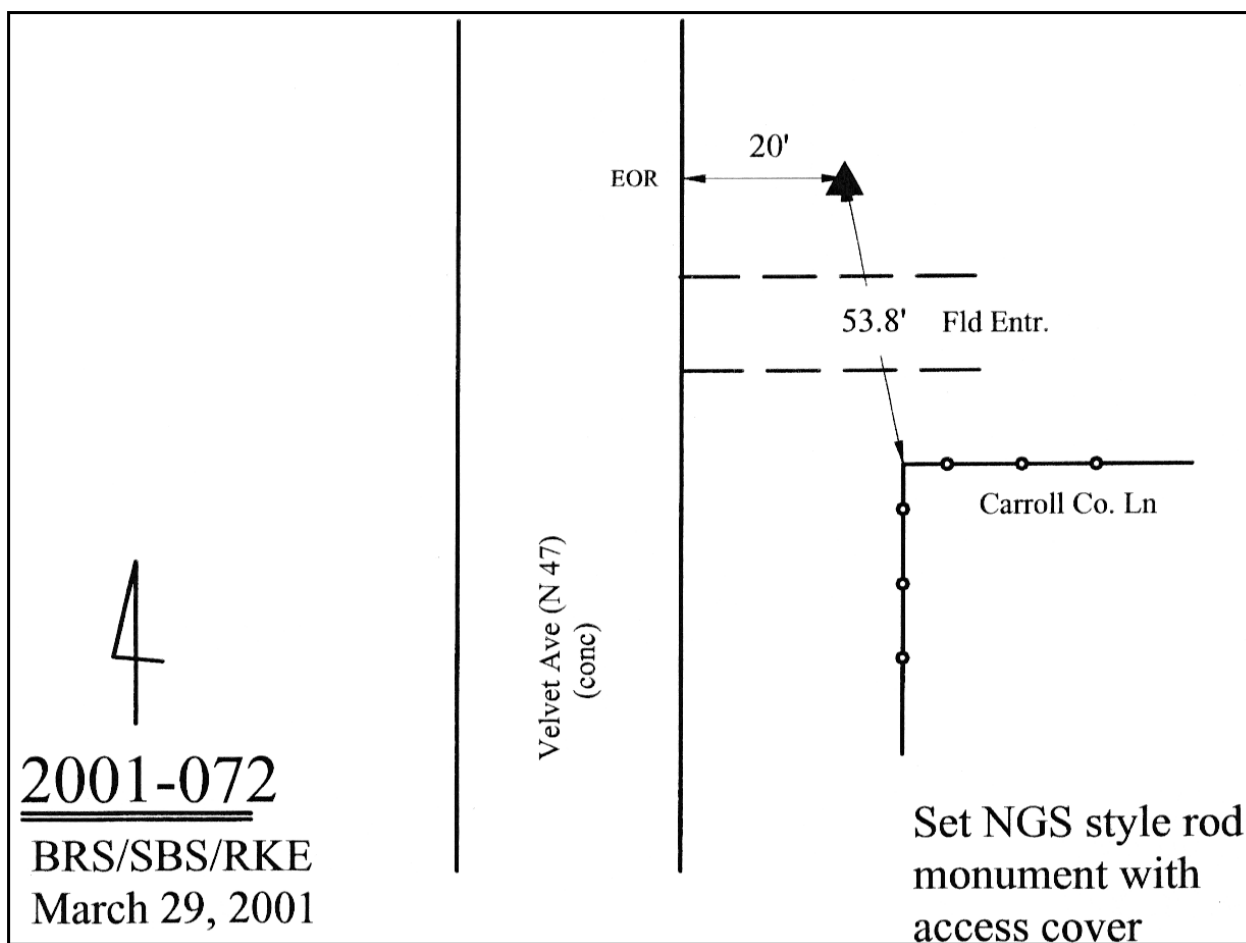
Combination Factor: 0.99992583

99C Geoid Ht: -28.548 M

Designation: CARROLL COUNTY GPS CONTROL PT 2001-72

Location: Near the SW Cor of Sec 34 T86N R33W.

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **101**

Northing: **3670397.08 FT**

Northing: **1118739.267 M**

Easting: **4540253.18 FT**

Easting: **1383871.937 M**

Elev: **1246.63 FT**

Elev: **379.975 M**

Latitude: **N 42-33-36.87880**

Longitude: **W 094-54-51.35831**

Ellip. Ht: **351.271 M**

Theta: **- 0-57-30.640**

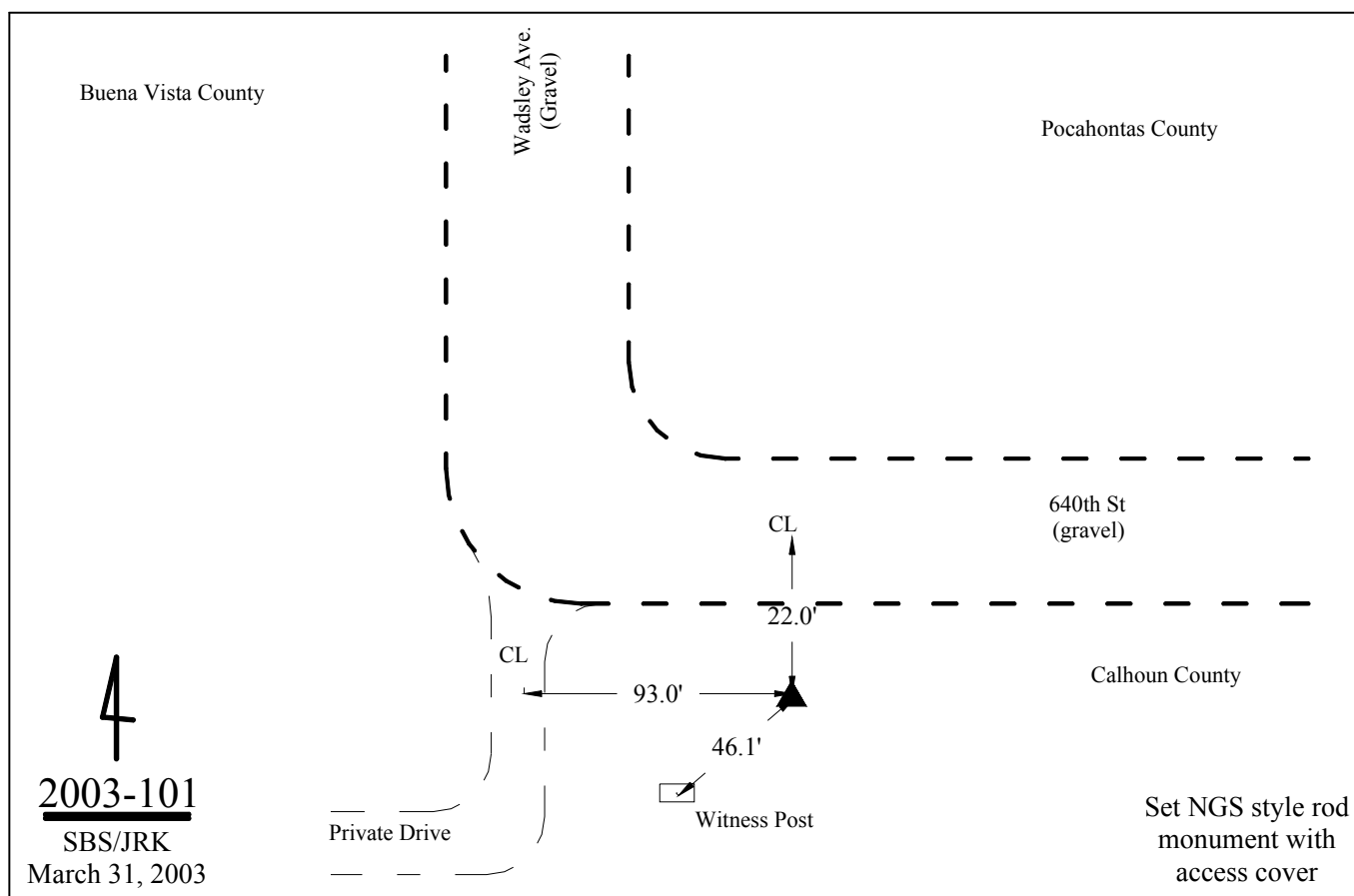
Combination Factor: **0.99989203**

99C Geoid Ht: **-28.704 M**

Designation: **BUENA VISTA COUNTY GPS CONTROL PT BV88**

Location: **Near the NW Cor of Sec 6 T89N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **102**

Northing: **3670049.75** FT

Northing: **1118633.401** M

Easting: **4556035.33** FT

Easting: **1388682.347** M

Elev: **1217.15** FT

Elev: **370.989** M

Latitude: **N 42-33-36.00220**

Longitude: **W 094-51-20.41984**

Ellip. Ht: **342.241** M

Theta: **- 0-55-07.678**

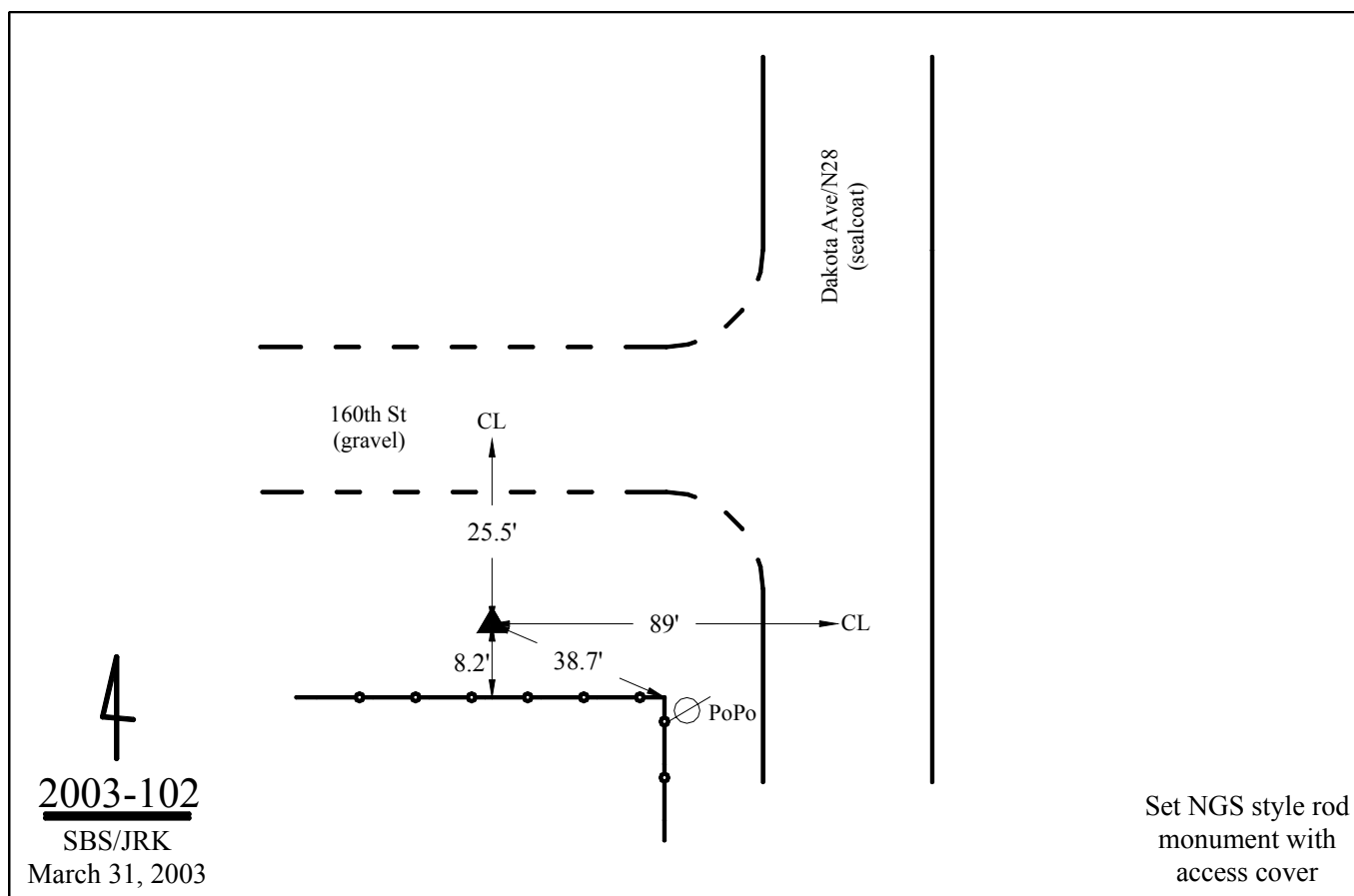
Combination Factor: **0.99989346**

99C Geoid Ht: **-28.748** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-102**

Location: **Near the NE Cor of Sec 4 T89N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **103**

Northing: **3669614.38 FT**

Northing: **1118500.699 M**

Easting: **4572043.22 FT**

Easting: **1393561.560 M**

Elev: **1226.53 FT**

Elev: **373.848 M**

Latitude: **N 42-33-34.18204**

Longitude: **W 094-47-46.44913**

Ellip. Ht: **345.054 M**

Theta: **- 0-52-42.661**

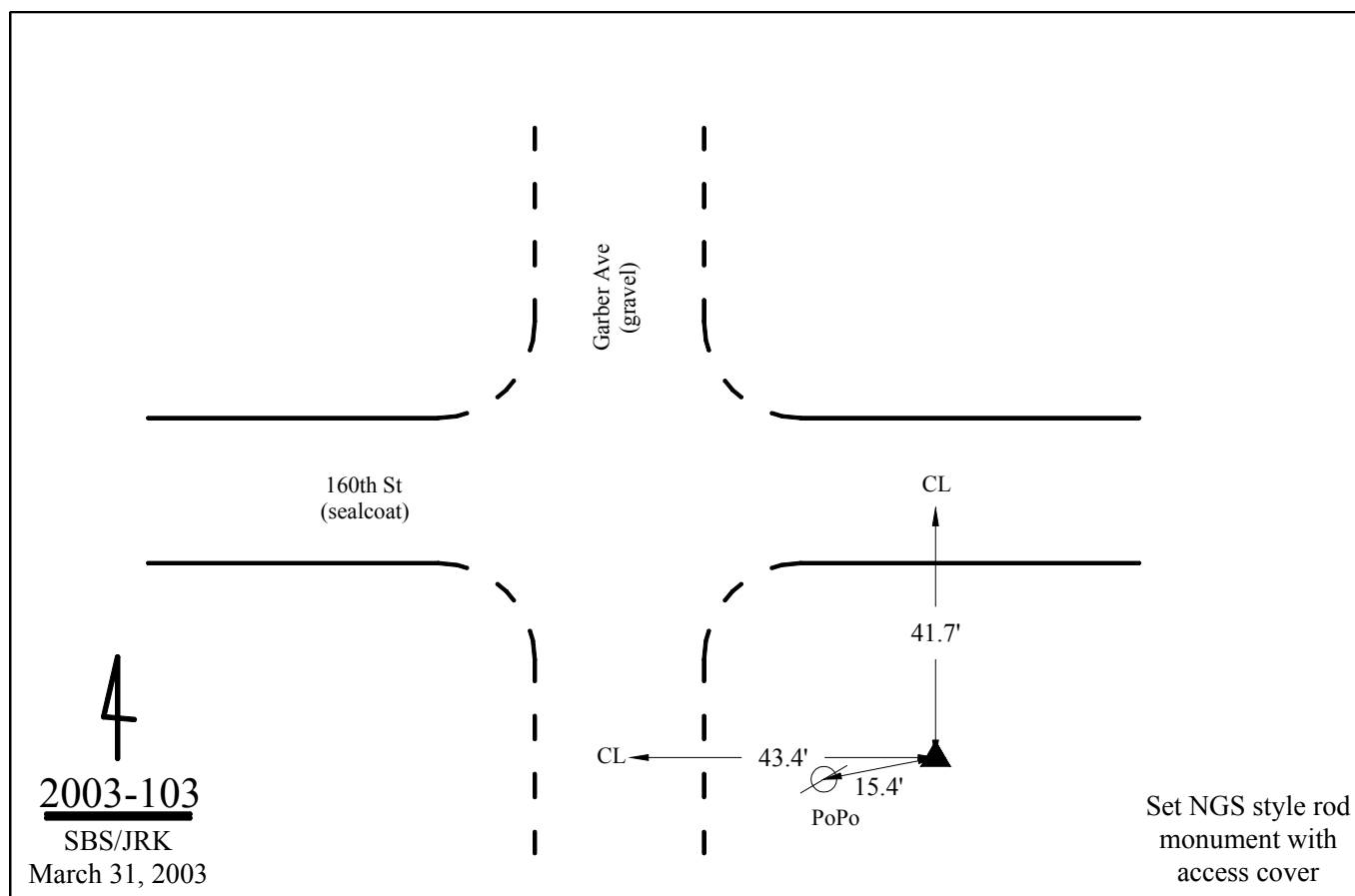
Combination Factor: **0.99989303**

99C Geoid Ht: **-28.794 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-103**

Location: **Near the NW Cor of Sec 6 T89N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **104**

Northing: **3669321.63 FT**

Northing: **1118411.470 M**

Easting: **4588148.64 FT**

Easting: **1398470.503 M**

Elev: **1254.32 FT**

Elev: **382.318 M**

Latitude: **N 42-33-33.67358**

Longitude: **W 094-44-11.20661**

Ellip. Ht: **353.468 M**

Theta: **- 0-50-16.781**

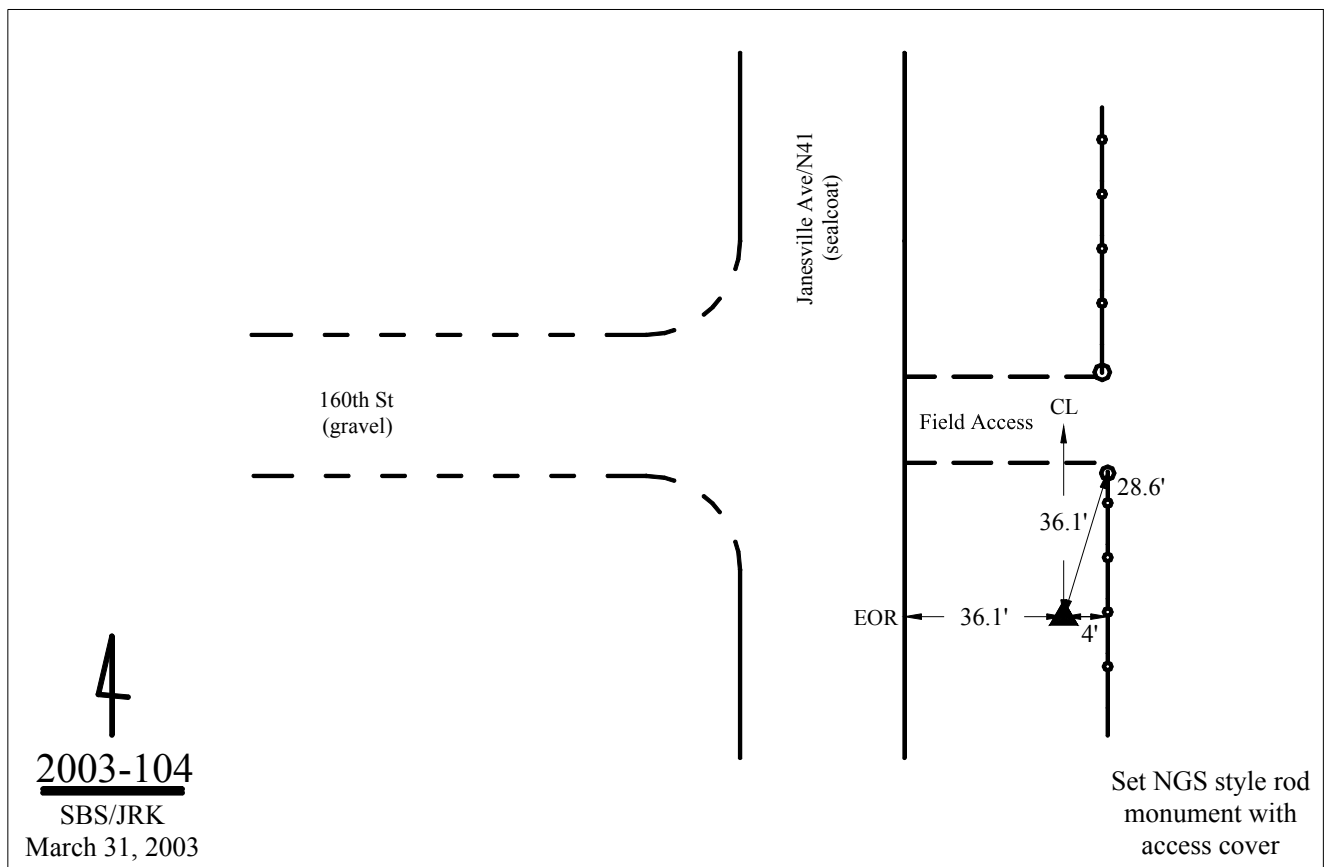
Combination Factor: **0.99989172**

99C Geoid Ht: **-28.850 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-104**

Location: **Near the NW Cor of Sec 3 T89N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **105**

Northing: **3669018.41** FT

Northing: **1118319.048** M

Easting: **4603787.60** FT

Easting: **1403237.266** M

Elev: **1226.99** FT

Elev: **373.988** M

Latitude: **N 42-33-32.88493**

Longitude: **W 094-40-42.19575**

Ellip. Ht: **345.084** M

Theta: **- 0-47-55.125**

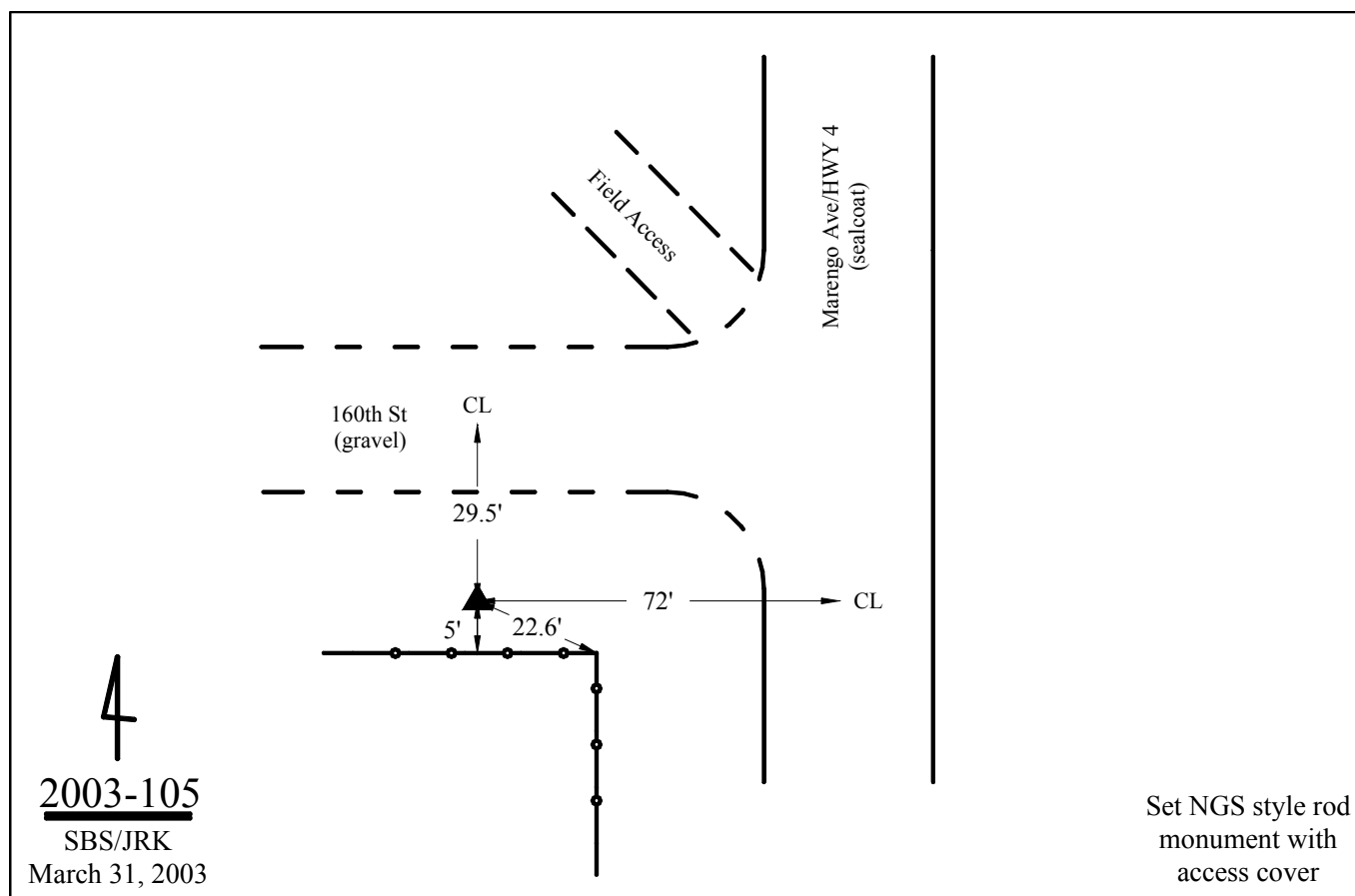
Combination Factor: **0.99989303**

99C Geoid Ht: **-28.904** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-105**

Location: **Near the NE Cor of Sec 1 T89N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **106**

Northing: **3669029.73** FT

Northing: **1118322.499** M

Easting: **4619808.57** FT

Easting: **1408120.468** M

Elev: **1224.26** FT

Elev: **373.154** M

Latitude: **N 42-33-35.14705**

Longitude: **W 094-37-08.13794**

Ellip. Ht: **344.224** M

Theta: **- 0-45-30.049**

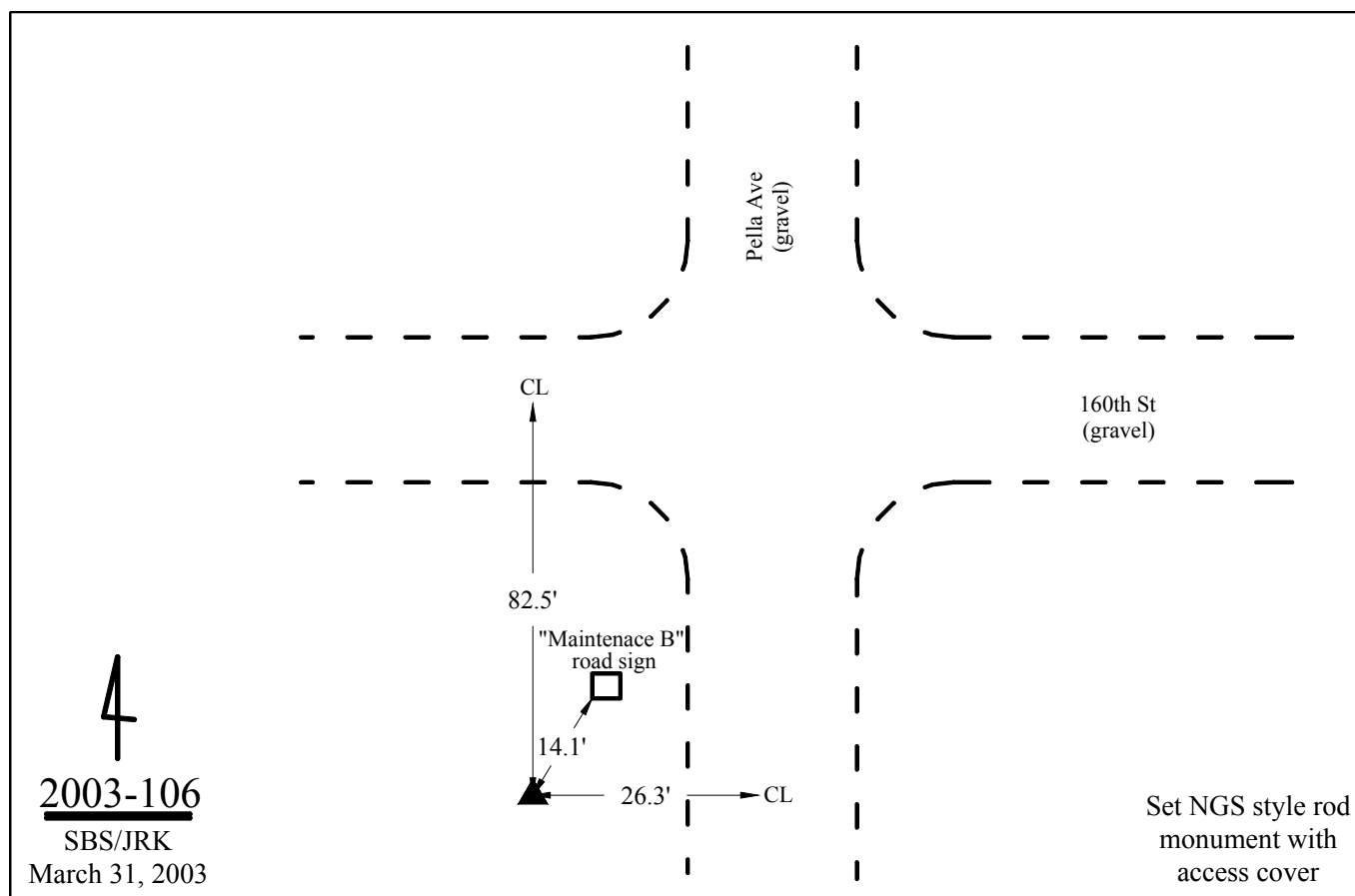
Combination Factor: **0.99989315**

99C Geoid Ht: **-28.930** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-106**

Location: **Near the NE Cor of Sec 4 T89N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **107**

Northing: **3668512.58 FT**

Northing: **1118164.872 M**

Easting: **4635680.21 FT**

Easting: **1412958.155 M**

Elev: **1243.51 FT**

Elev: **379.024 M**

Latitude: **N 42-33-32.05933**

Longitude: **W 094-33-35.98259**

Ellip. Ht: **350.078 M**

Theta: **- 0-43-06.261**

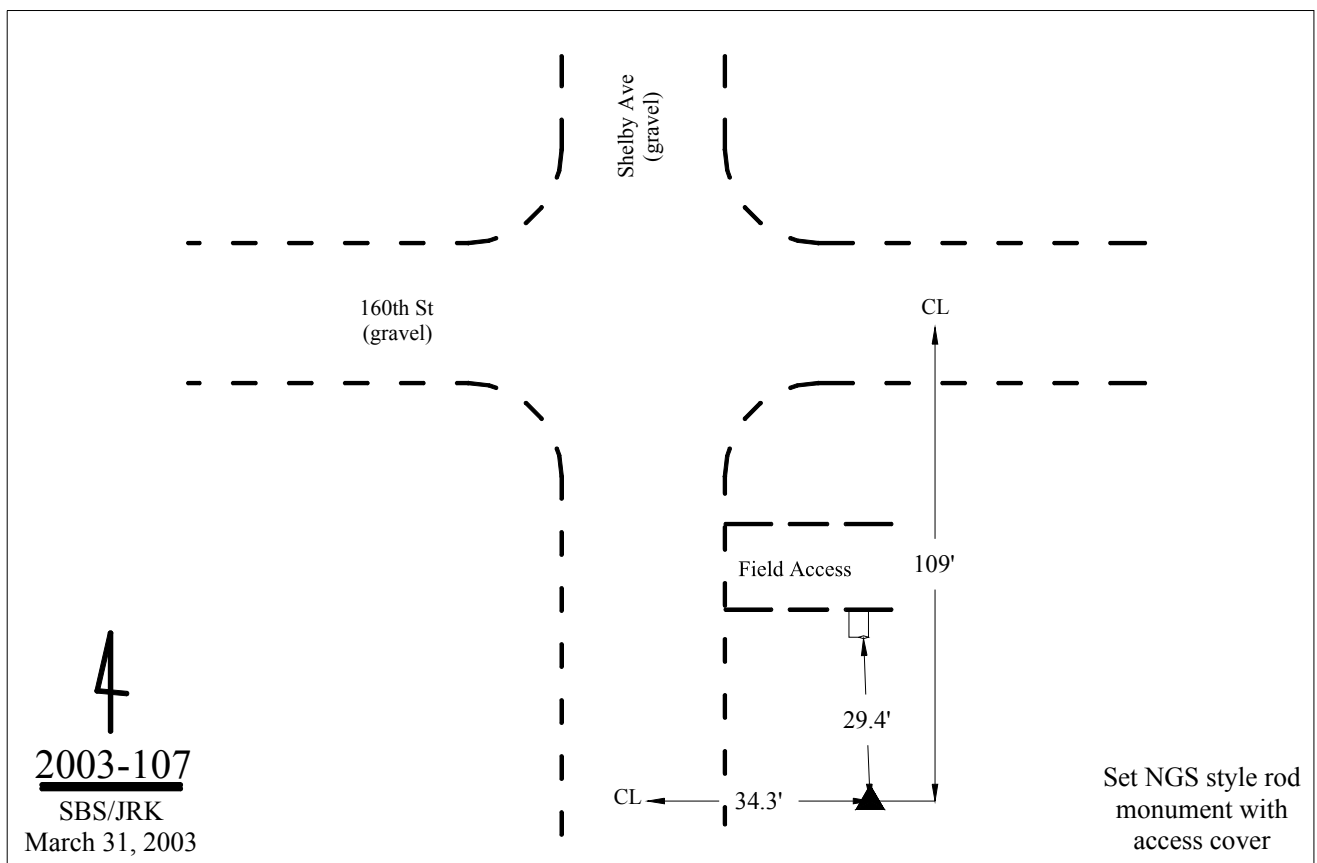
Combination Factor: **0.99989226**

99C Geoid Ht: **-28.946 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-107**

Location: **Near the NW Cor of Sec 6 T89N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **108**

Northing: **3668244.75 FT**

Northing: **1118083.237 M**

Easting: **4651686.42 FT**

Easting: **1417836.857 M**

Elev: **1211.43 FT**

Elev: **369.245 M**

Latitude: **N 42-33-31.34072**

Longitude: **W 094-30-02.07470**

Ellip. Ht: **340.291 M**

Theta: **- 0-40-41.287**

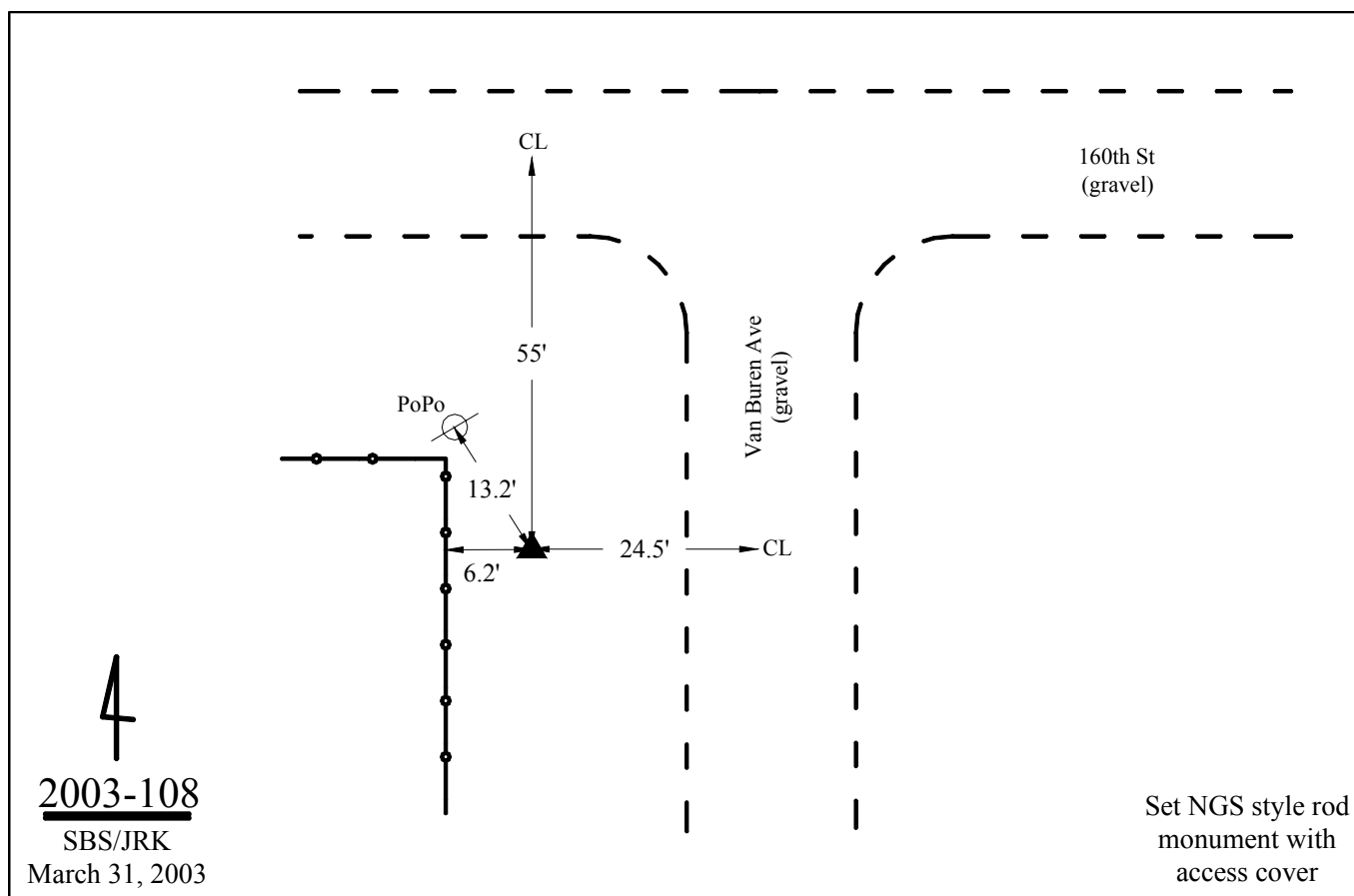
Combination Factor: **0.99989380**

99C Geoid Ht: **-28.954 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-108**

Location: **Near the NE Cor of Sec 4 T89N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **109**

Northing: **3654998.75 FT**

Northing: **1114045.846 M**

Easting: **4539955.38 FT**

Easting: **1383781.168 M**

Elev: **1206.33 FT**

Elev: **367.689 M**

Latitude: **N 42-31-04.73867**

Longitude: **W 094-54-51.89468**

Ellip. Ht: **338.974 M**

Theta: **- 0-57-31.004**

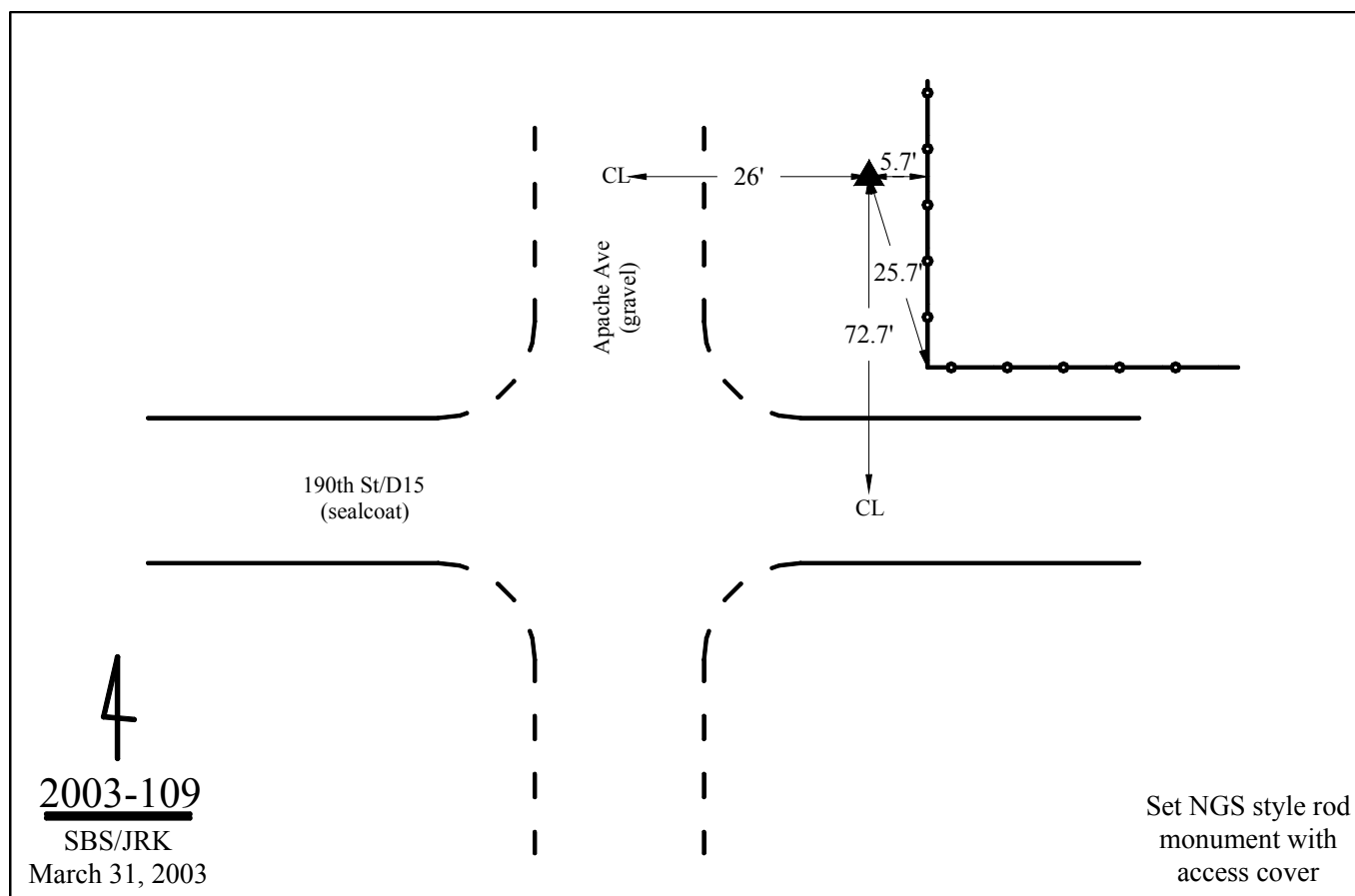
Combination Factor: **0.99989560**

99C Geoid Ht: **-28.715 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-109**

Location: **Near the SW Cor of Sec 18 T89N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **110**

Northing: **3654655.53 FT**

Northing: **1113941.233 M**

Easting: **4555817.77 FT**

Easting: **1388616.035 M**

Elev: **1209.89 FT**

Elev: **368.774 M**

Latitude: **N 42-31-03.91569**

Longitude: **W 094-51-20.02828**

Ellip. Ht: **340.008 M**

Theta: **- 0-55-07.413**

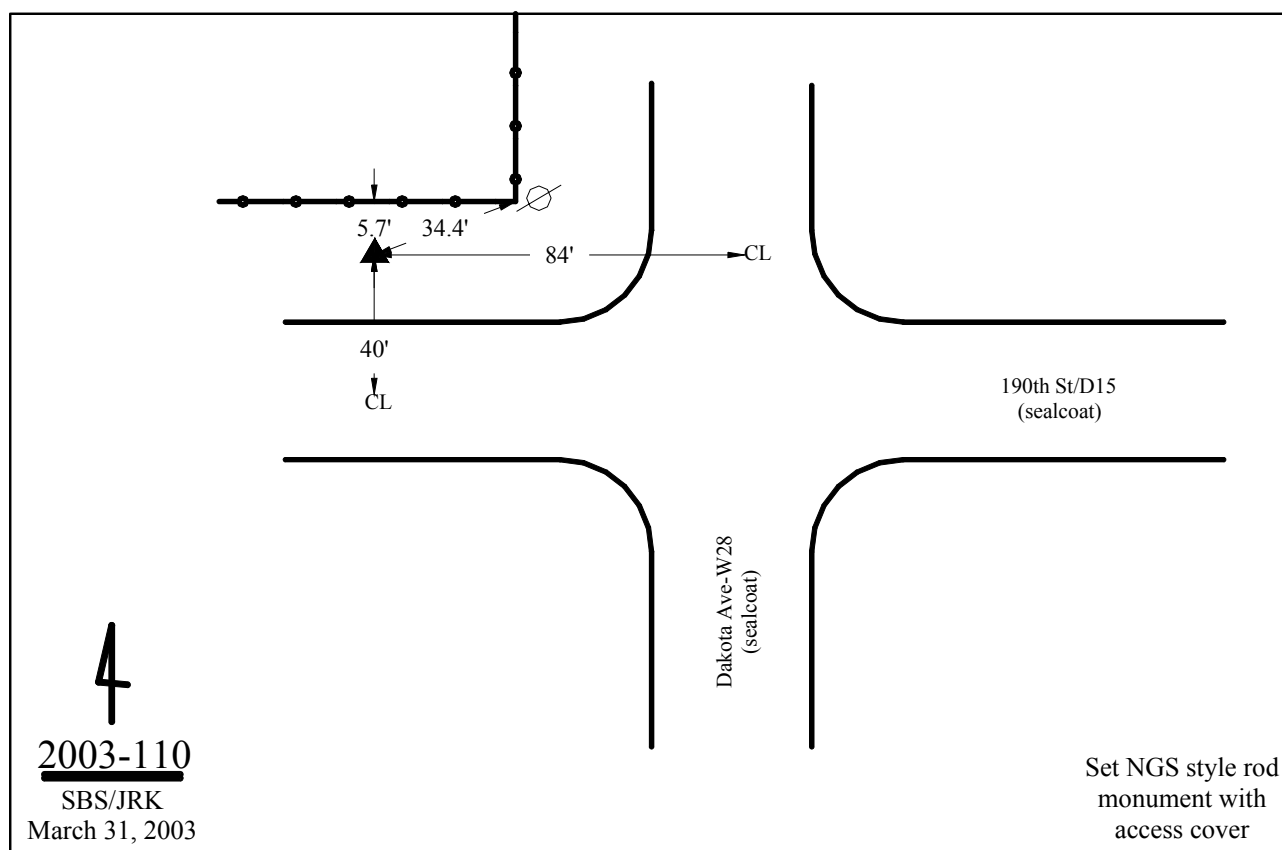
Combination Factor: **0.99989545**

99C Geoid Ht: **-28.766 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-110**

Location: **Near the SE Cor of Sec 16 T89N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **111**

Northing: **3654193.46 FT**

Northing: **1113800.393 M**

Easting: **4571689.67 FT**

Easting: **1393453.799 M**

Elev: **1224.44 FT**

Elev: **373.211 M**

Latitude: **N 42-31-01.81103**

Longitude: **W 094-47-48.01235**

Ellip. Ht: **344.390 M**

Theta: **- 0-52-43.720**

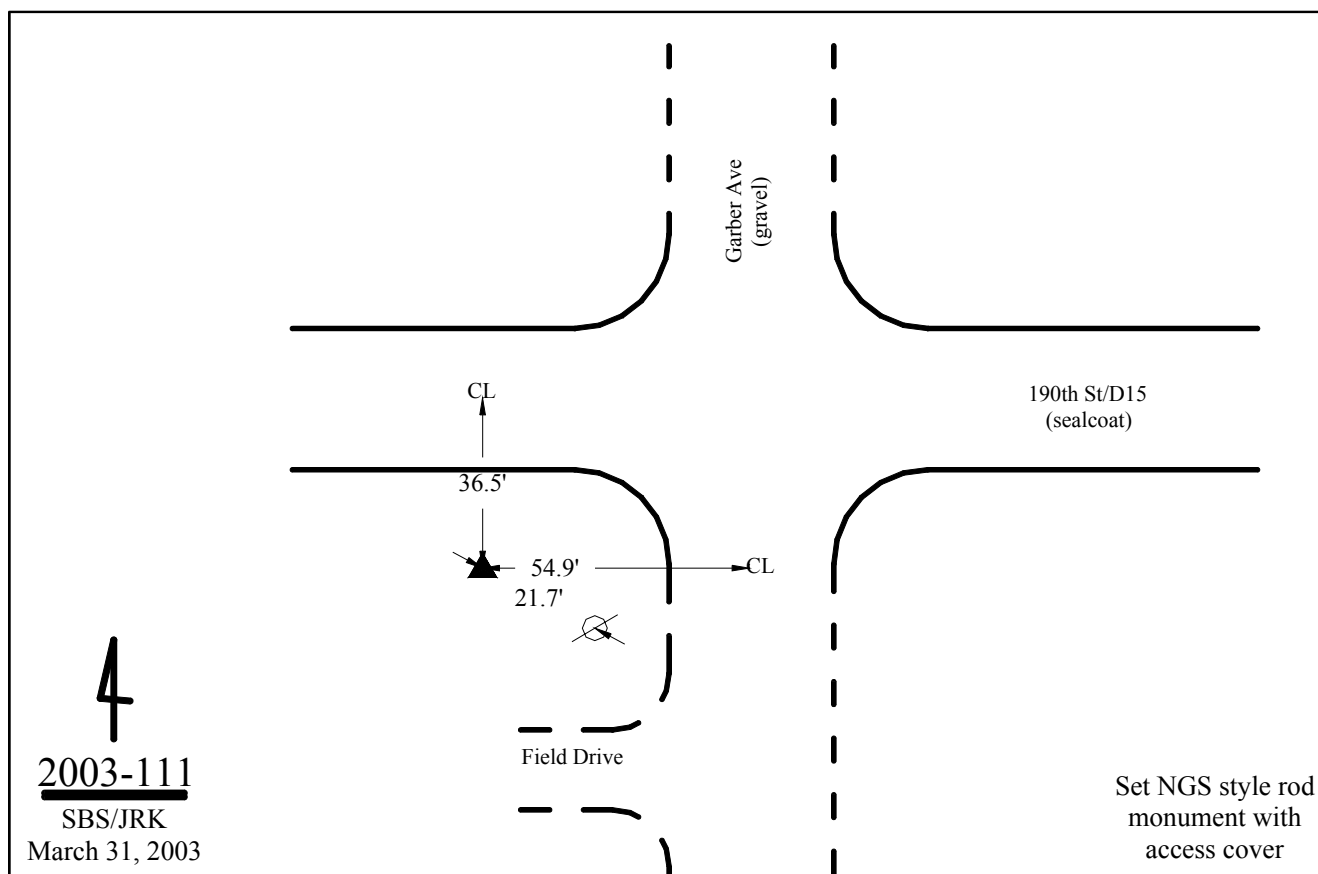
Combination Factor: **0.99989479**

99C Geoid Ht: **-28.821 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-111**

Location: **Near the NE Cor of Sec 24 T89N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **112**

Northing: **3653779.85** FT

Northing: **1113674.326** M

Easting: **4587624.51** FT

Easting: **1398310.746** M

Elev: **1218.43** FT

Elev: **371.378** M

Latitude: **N 42-31-00.08499**

Longitude: **W 094-44-15.16957**

Ellip. Ht: **342.504** M

Theta: **- 0-50-19.467**

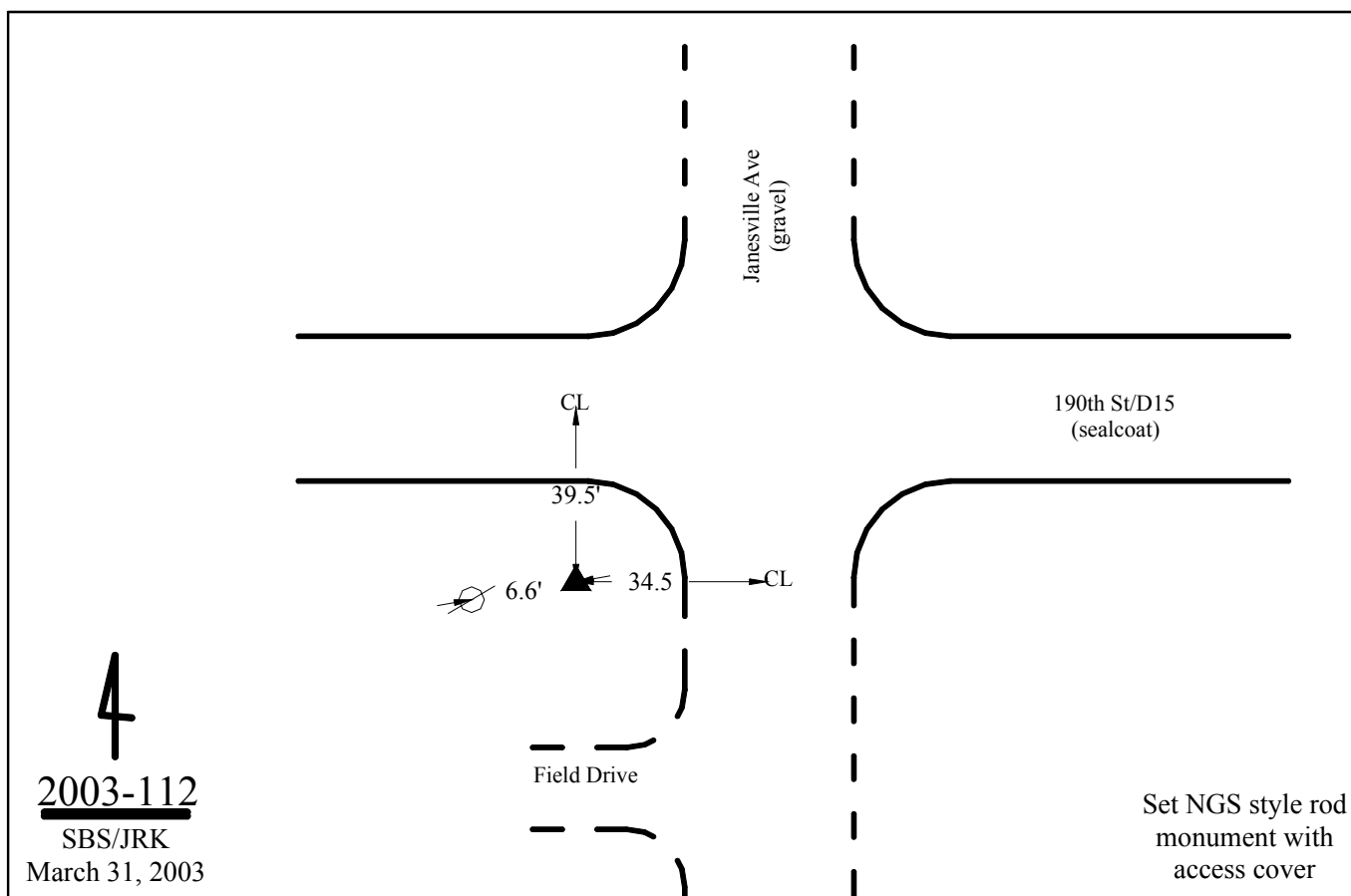
Combination Factor: **0.99989511**

99C Geoid Ht: **-28.874** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-112**

Location: **Near the NE Cor of Sec 21 T89N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **113**

Northing: **3653531.61** FT

Northing: **1113598.662** M

Easting: **4603410.79** FT

Easting: **1403122.415** M

Elev: **1217.88** FT

Elev: **371.212** M

Latitude: **N 42-30-59.86175**

Longitude: **W 094-40-44.34443**

Ellip. Ht: **342.295** M

Theta: **- 0-47-56.581**

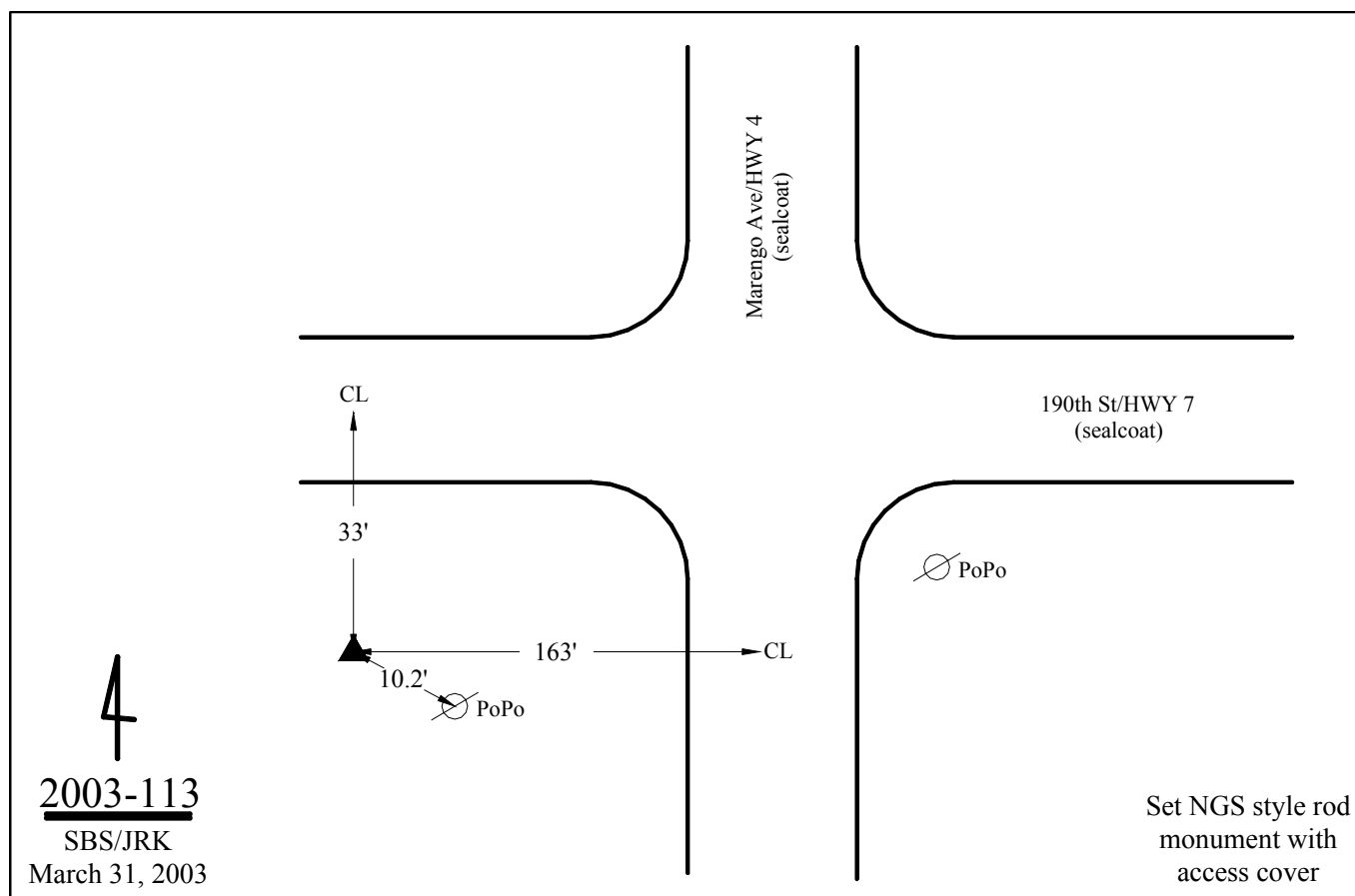
Combination Factor: **0.99989515**

99C Geoid Ht: **-28.917** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-113**

Location: **Near the NE Cor of Sec 24 T89N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **114**

Northing: **3653616.12 FT**

Northing: **1113624.420 M**

Easting: **4619662.09 FT**

Easting: **1408075.821 M**

Elev: **1224.14 FT**

Elev: **373.118 M**

Latitude: **N 42-31-02.87806**

Longitude: **W 094-37-07.36962**

Ellip. Ht: **344.183 M**

Theta: **- 0-45-29.528**

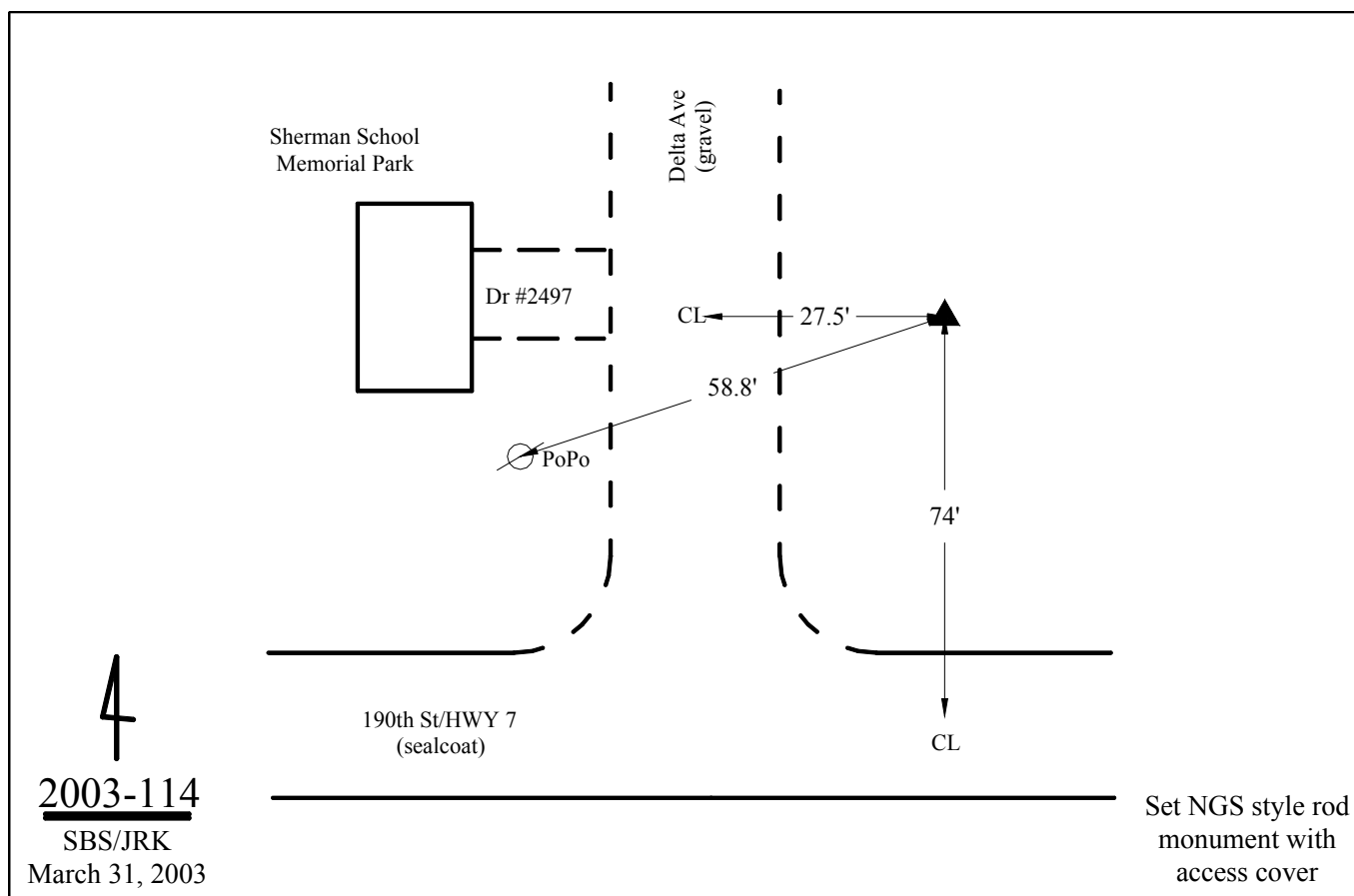
Combination Factor: **0.99989481**

99C Geoid Ht: **-28.935 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-114**

Location: **Near the SW Cor of Sec 15 T89N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **115**

Northing: **3653392.54 FT**

Northing: **1113556.272 M**

Easting: **4635376.82 FT**

Easting: **1412865.681 M**

Elev: **1222.24 FT**

Elev: **372.541 M**

Latitude: **N 42-31-02.67027**

Longitude: **W 094-33-37.50208**

Ellip. Ht: **343.607 M**

Theta: **- 0-43-07.291**

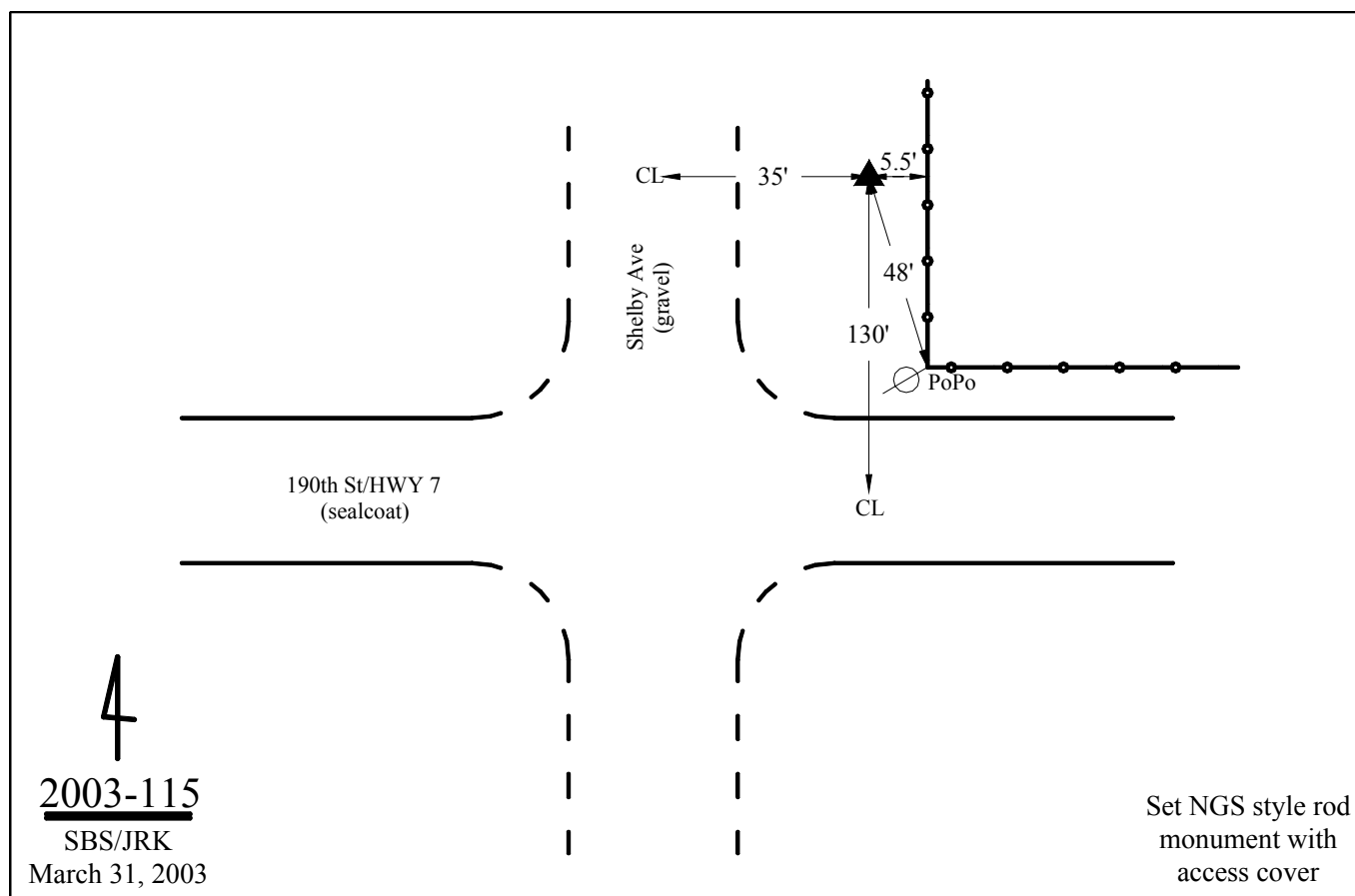
Combination Factor: **0.99989490**

99C Geoid Ht: **-28.934 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-115**

Location: **Near the SW Cor of Sec 18 T89N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **116**

Northing: **3652897.37 FT**

Northing: **1113405.344 M**

Easting: **4651268.37 FT**

Easting: **1417709.434 M**

Elev: **1228.84 FT**

Elev: **374.552 M**

Latitude: **N 42-30-59.69346**

Longitude: **W 094-30-05.23117**

Ellip. Ht: **345.636 M**

Theta: **- 0-40-43.426**

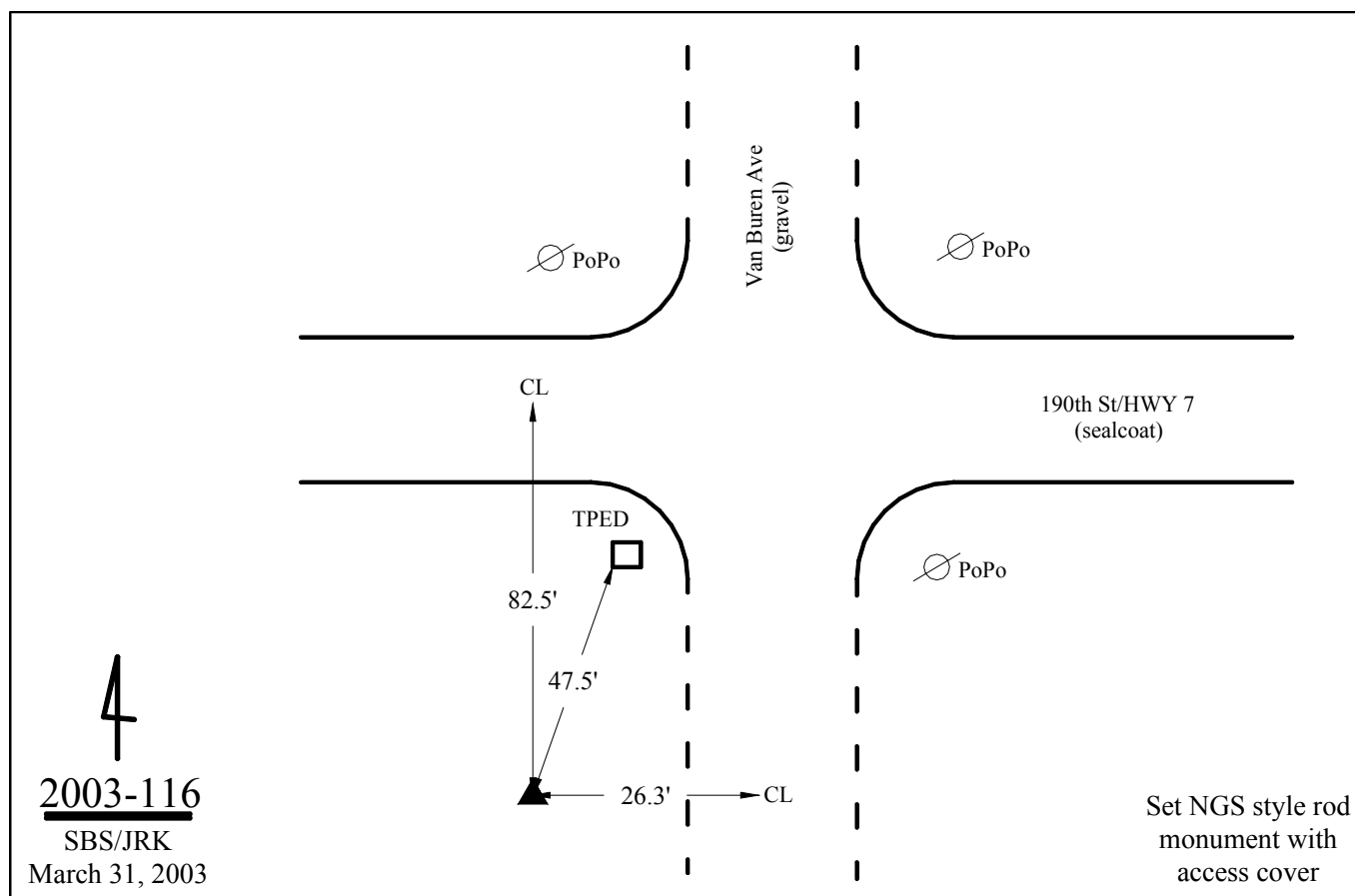
Combination Factor: **0.99989463**

99C Geoid Ht: **-28.916 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-116**

Location: **Near the NE Cor of Sec 21 T89N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **117**

Northing: **3639073.52** FT

Northing: **1109191.827** M

Easting: **4539828.29** FT

Easting: **1383742.431** M

Elev: **1204.51** FT

Elev: **367.136** M

Latitude: **N 42-28-27.42168**

Longitude: **W 094-54-50.03500**

Ellip. Ht: **338.371** M

Theta: **- 0-57-29.744**

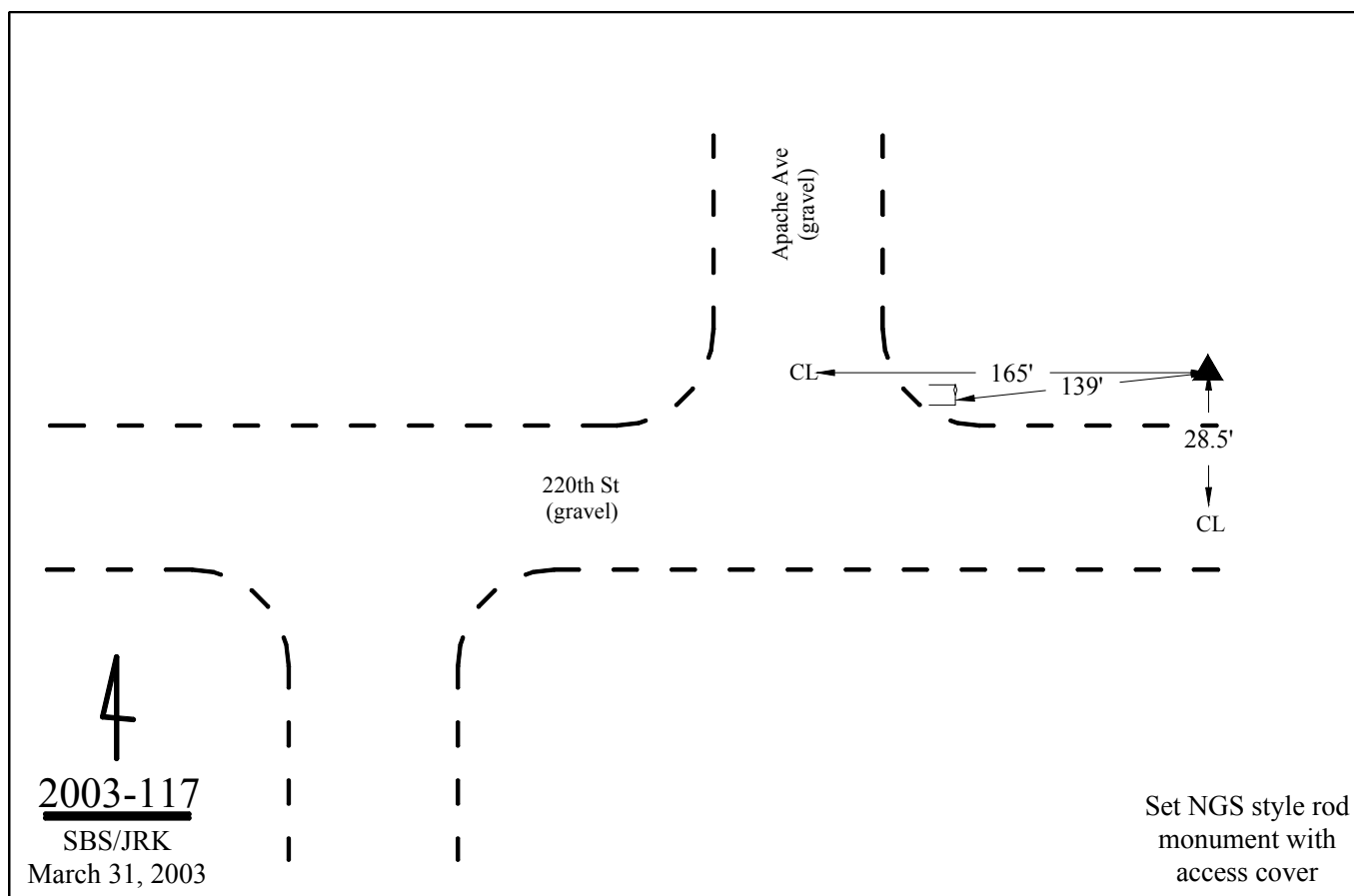
Combination Factor: **0.99989798**

99C Geoid Ht: **-28.765** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-117**

Location: **Near the SW Cor of Sec 31 T89N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **118**

Northing: **3638681.11 FT**

Northing: **1109072.221 M**

Easting: **4555232.33 FT**

Easting: **1388437.592 M**

Elev: **1211.42 FT**

Elev: **369.242 M**

Latitude: **N 42-28-26.03927**

Longitude: **W 094-51-24.42164**

Ellip. Ht: **340.427 M**

Theta: **- 0-55-10.390**

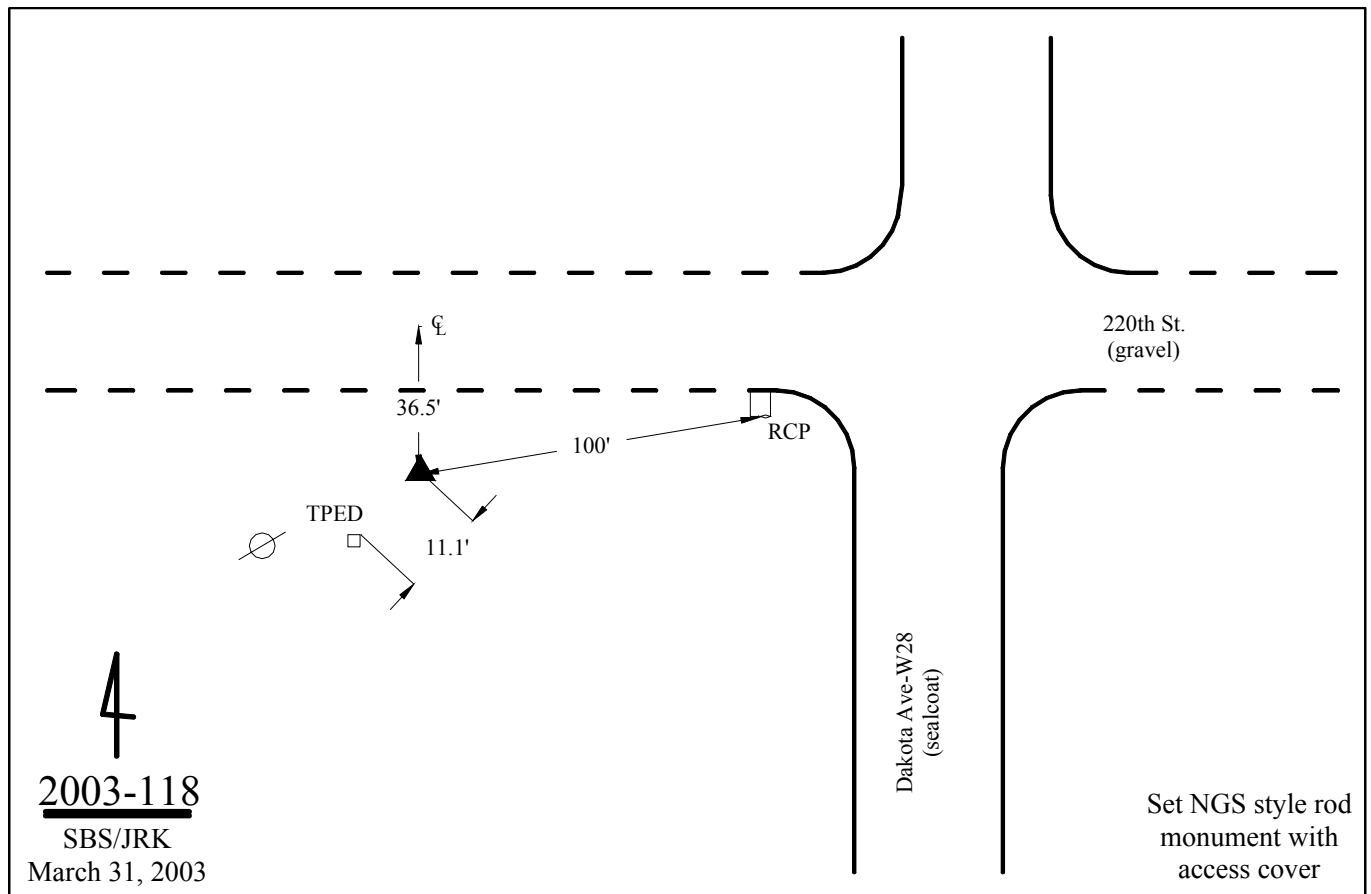
Combination Factor: **0.99989767**

99C Geoid Ht: **-28.815 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-118**

Location: **Near the NE Cor of Sec 1 T88N R35W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **119**

Northing: **3638492.60** FT

Northing: **1109014.762** M

Easting: **4571546.16** FT

Easting: **1393410.057** M

Elev: **1227.95** FT

Elev: **374.279** M

Latitude: **N 42-28-26.70597**

Longitude: **W 094-47-46.71369**

Ellip. Ht: **345.405** M

Theta: **- 0-52-42.840**

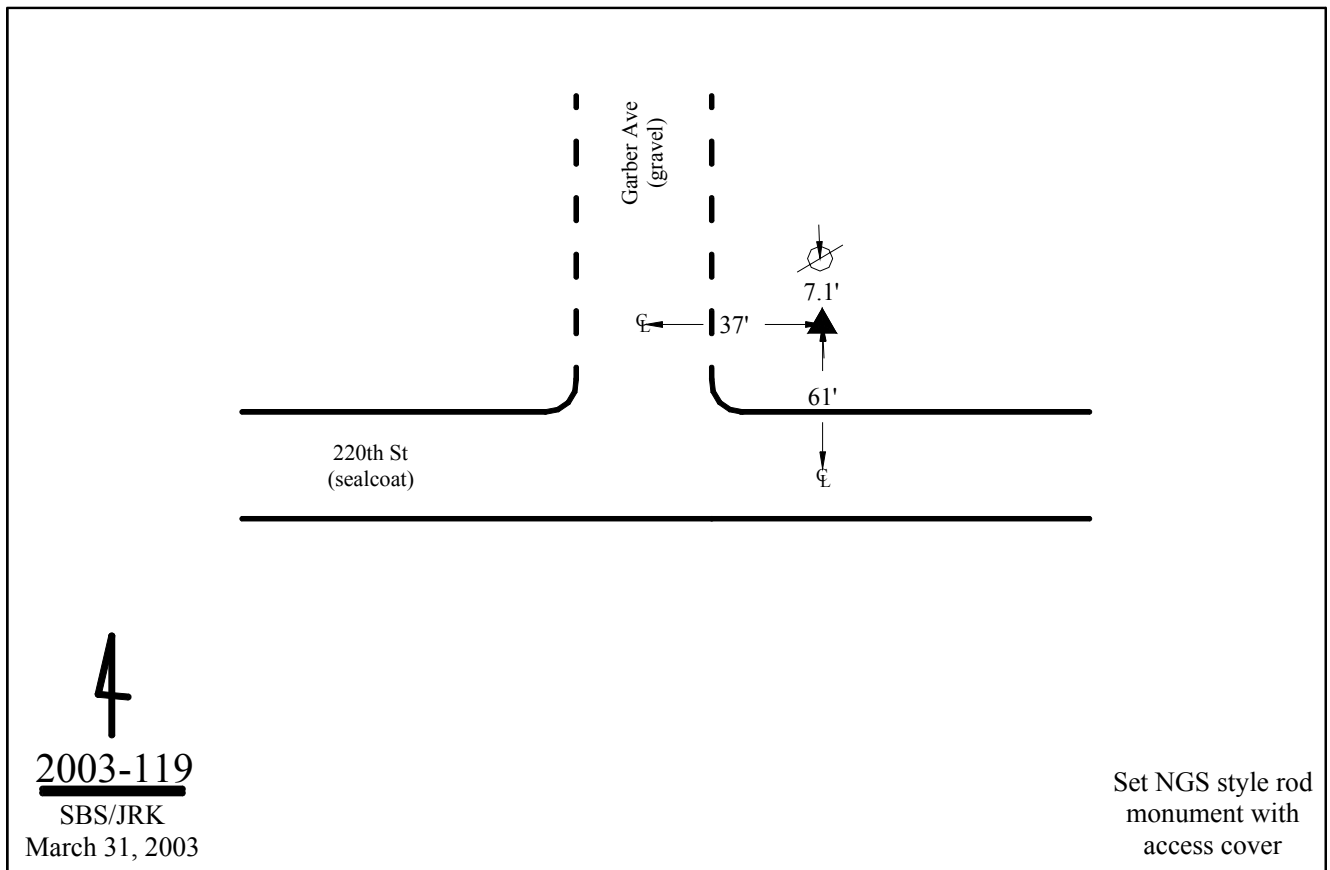
Combination Factor: **0.99989688**

99C Geoid Ht: **-28.874** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-119**

Location: **Near the SW Cor of Sec 31 T89N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **120**

Northing: **3638156.51** FT

Northing: **1108912.321** M

Easting: **4584730.24** FT

Easting: **1397428.572** M

Elev: **1208.44** FT

Elev: **368.333** M

Latitude: **N 42-28-25.34559**

Longitude: **W 094-44-50.73520**

Ellip. Ht: **339.427** M

Theta: **- 0-50-43.571**

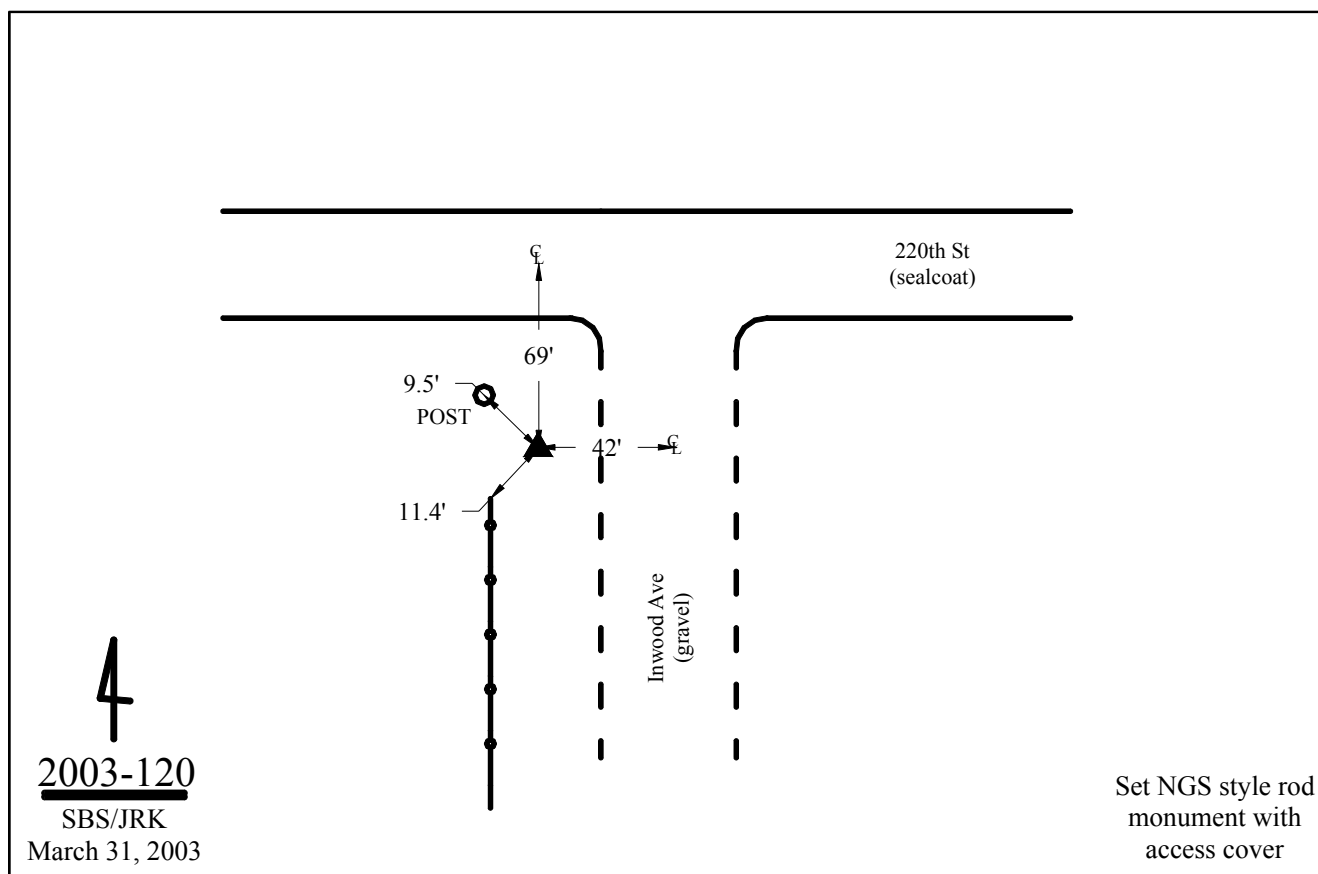
Combination Factor: **0.99989784**

99C Geoid Ht: **-28.906** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-120**

Location: **Near the NE Cor of Sec 1 T88N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **121**

Northing: **3638000.20 FT**

Northing: **1108864.679 M**

Easting: **4603392.19 FT**

Easting: **1403116.747 M**

Elev: **1215.64 FT**

Elev: **370.527 M**

Latitude: **N 42-28-26.44641**

Longitude: **W 094-40-41.70222**

Ellip. Ht: **341.595 M**

Theta: **- 0-47-54.791**

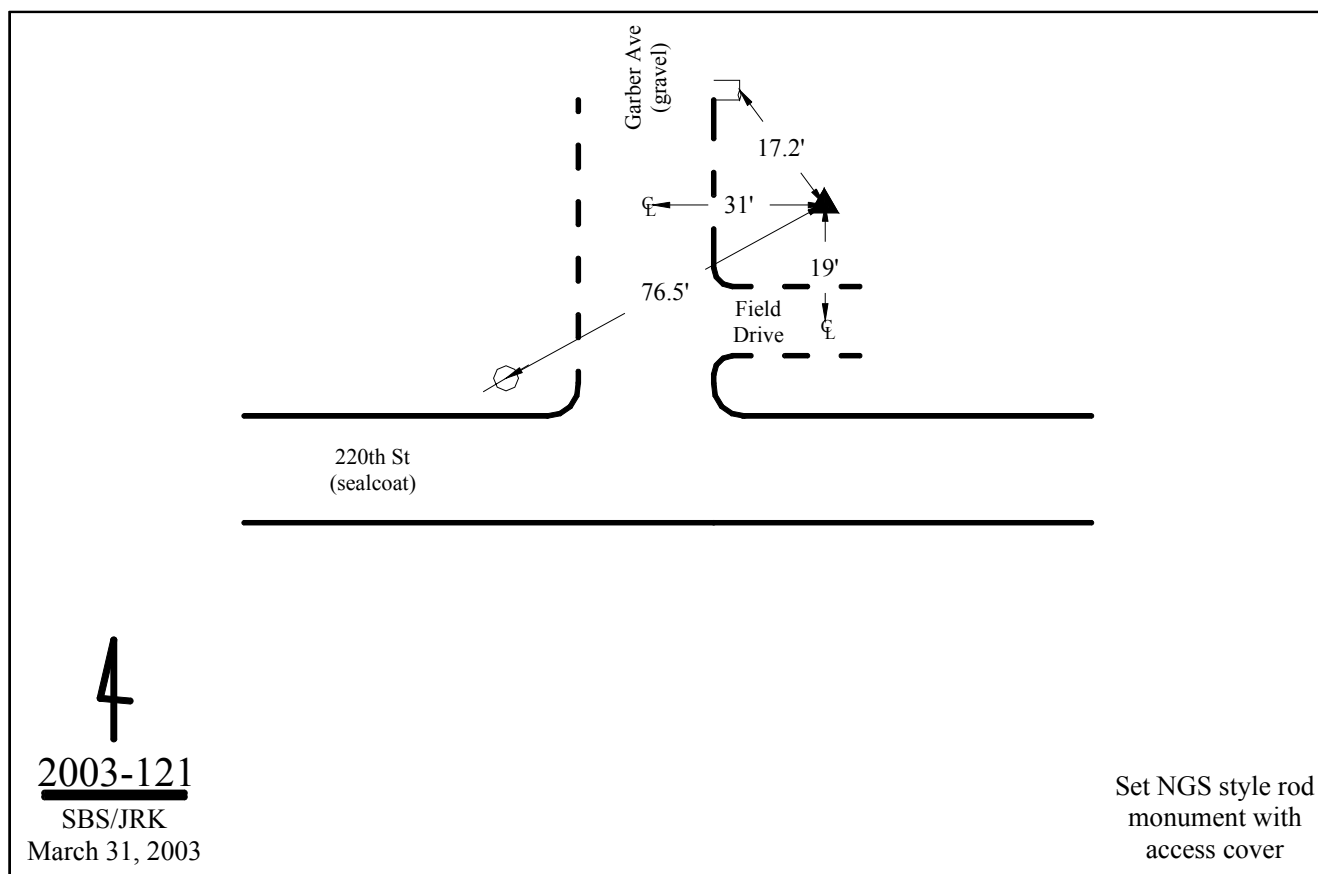
Combination Factor: **0.99989748**

99C Geoid Ht: **-28.932 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-121**

Location: **Near the SW Cor of Sec 31 T89N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **122**

Northing: **3637755.75** FT

Northing: **1108790.170** M

Easting: **4616328.07** FT

Easting: **1407059.611** M

Elev: **1220.26** FT

Elev: **371.936** M

Latitude: **N 42-28-25.77653**

Longitude: **W 094-37-49.05480**

Ellip. Ht: **343.005** M

Theta: **- 0-45-57.780**

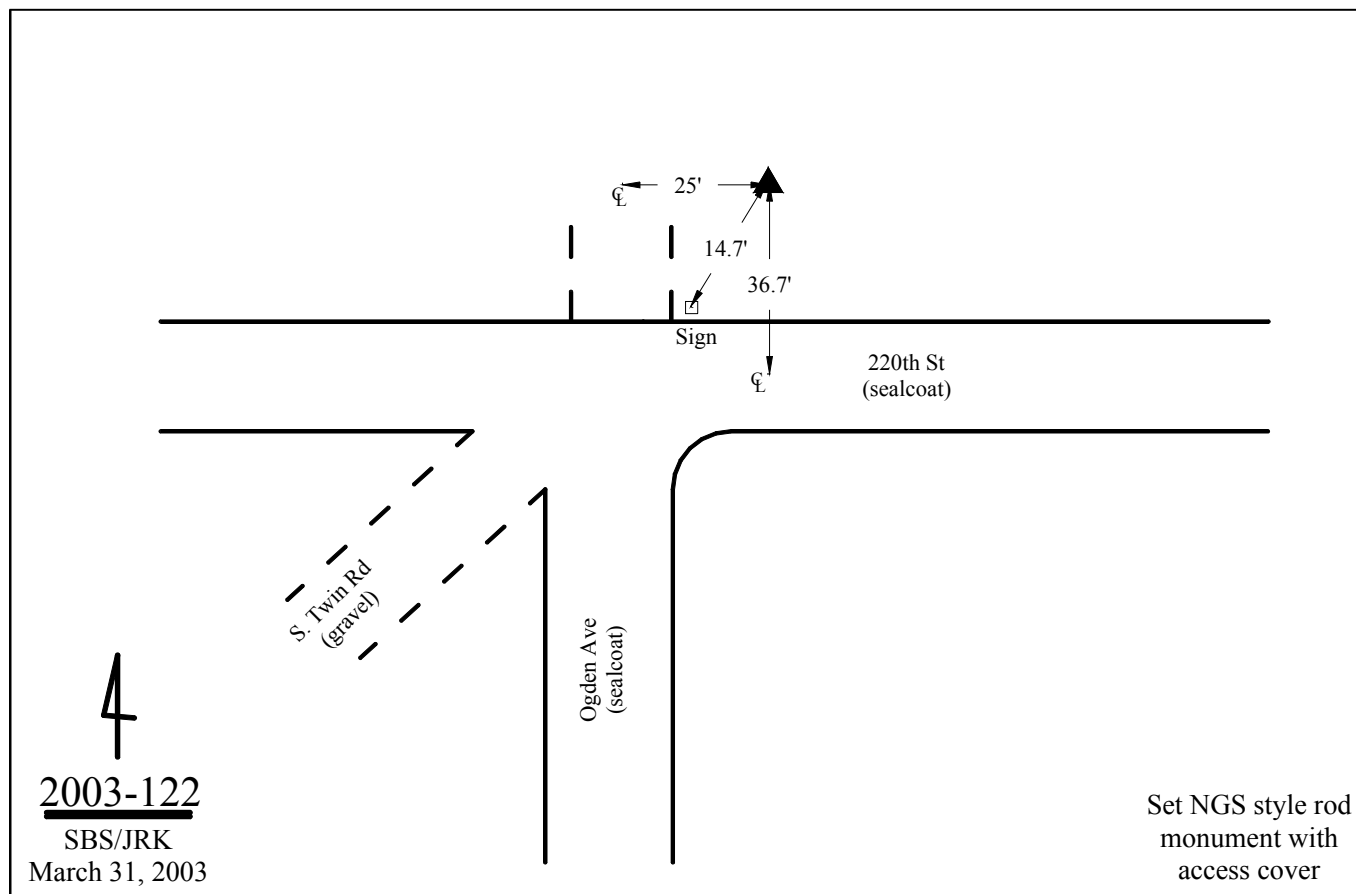
Combination Factor: **0.99989727**

99C Geoid Ht: **-28.931** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-122**

Location: **Near the S 1/4 Cor of Sec 33 T89N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **123**

Northing: **3637499.91 FT**

Northing: **1108712.190 M**

Easting: **4635104.85 FT**

Easting: **1412782.784 M**

Elev: **1216.30 FT**

Elev: **370.730 M**

Latitude: **N 42-28-25.65298**

Longitude: **W 094-33-38.47093**

Ellip. Ht: **341.828 M**

Theta: **- 0-43-07.948**

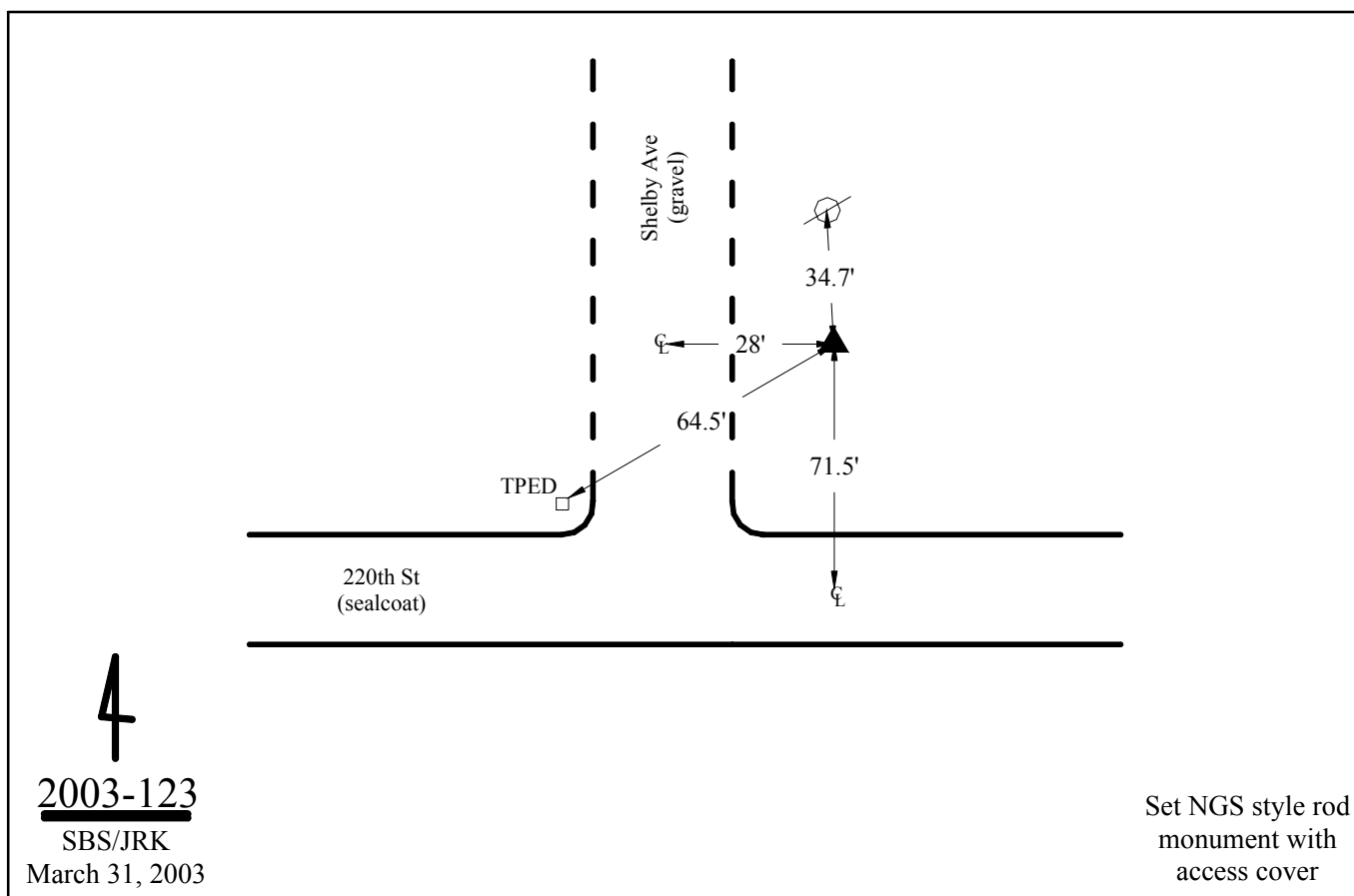
Combination Factor: **0.99989745**

99C Geoid Ht: **-28.902 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-123**

Location: **Near the SW Cor of Sec 31 T89N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **124**

Northing: **3637191.15 FT**

Northing: **1108618.080 M**

Easting: **4651168.21 FT**

Easting: **1417678.907 M**

Elev: **1186.22 FT**

Elev: **361.561 M**

Latitude: **N 42-28-24.53811**

Longitude: **W 094-30-04.08487**

Ellip. Ht: **332.707 M**

Theta: **- 0-40-42.649**

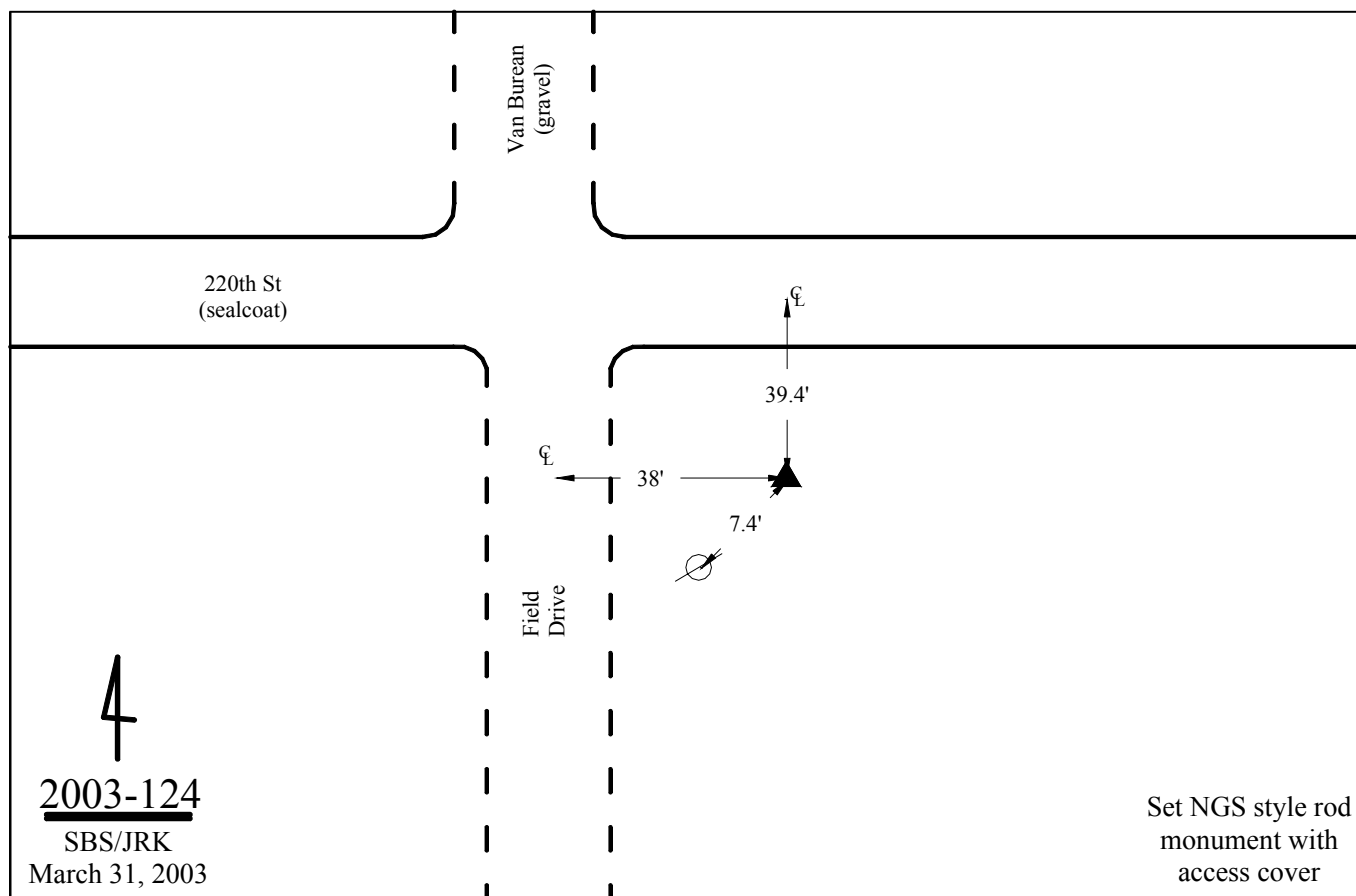
Combination Factor: **0.99989890**

99C Geoid Ht: **-28.854 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-124**

Location: **In the NE 1/4 of Sec 6 T88N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **125**

Northing: **3622157.01 FT**

Northing: **1104035.666 M**

Easting: **4554968.25 FT**

Easting: **1388357.098 M**

Elev: **1209.94 FT**

Elev: **368.789 M**

Latitude: **N 42-2542.78360**

Longitude: **W 094-51-24.40648**

Ellip. Ht: **339.909 M**

Theta: **- 0-55-10.380**

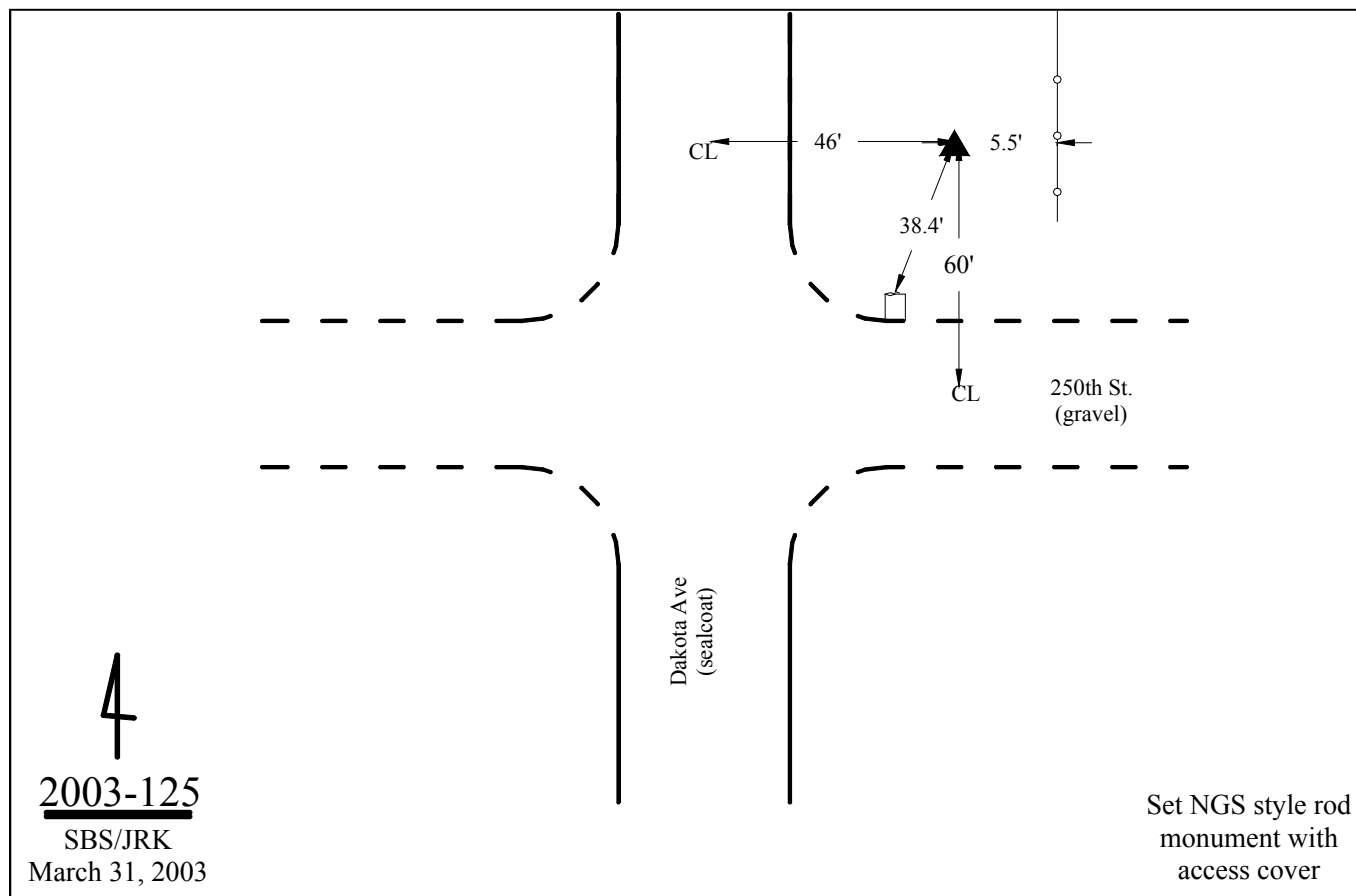
Combination Factor: **0.99990072**

99C Geoid Ht: **-28.880 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-125**

Location: **Near the SW Cor of Sec 18 T88N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **126**

Northing: **3621738.20** FT

Northing: **1103908.012** M

Easting: **4568860.82** FT

Easting: **1392591.563** M

Elev: **1210.82** FT

Elev: **369.060** M

Latitude: **N 42-25-40.80755**

Longitude: **W 094-48-19.09133**

Ellip. Ht: **340.143** M

Theta: **- 0-53-04.784**

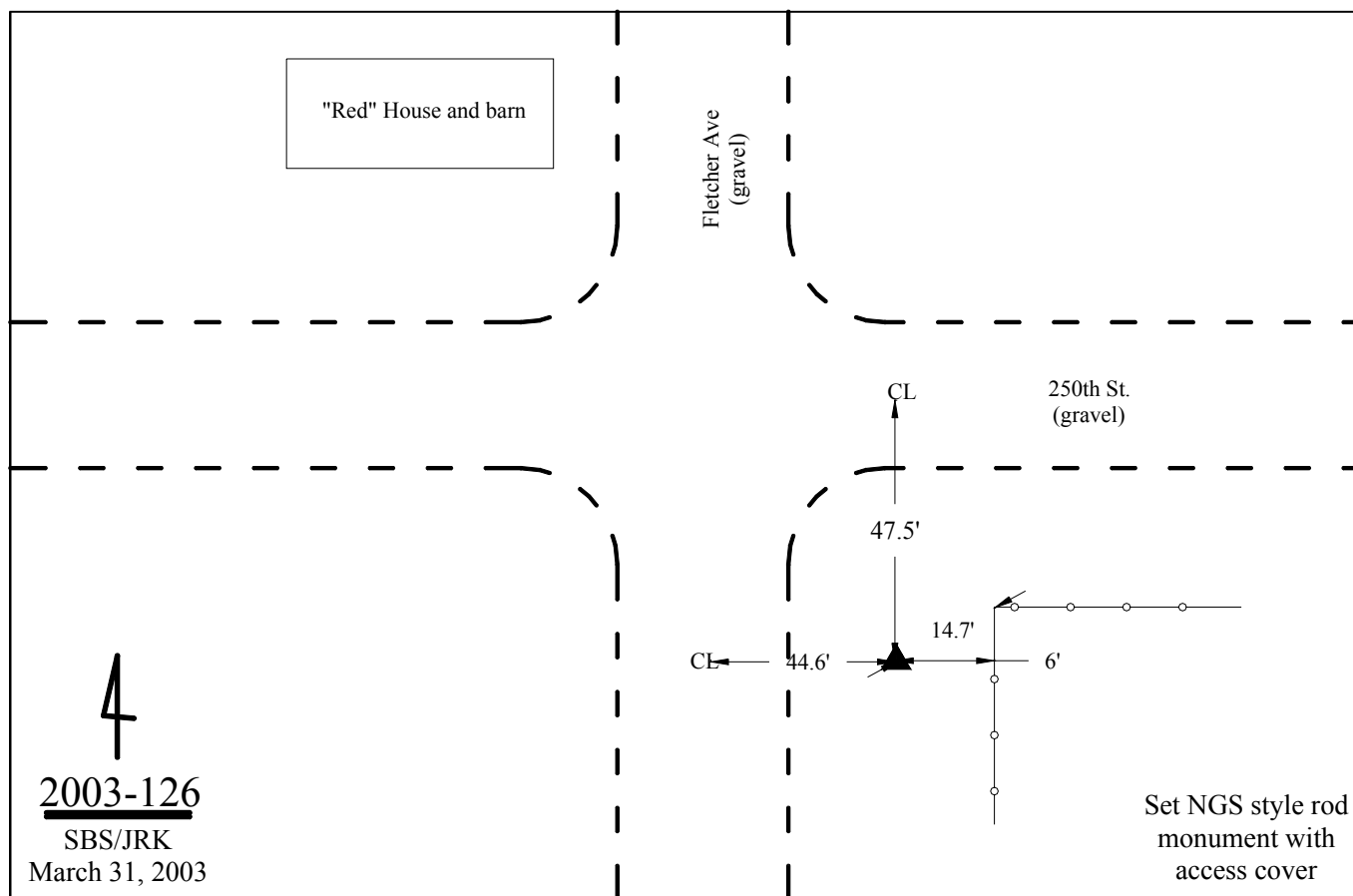
Combination Factor: **0.99990073**

99C Geoid Ht: **-28.917** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-126**

Location: **Near the NW Cor of Sec 22 T88N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **127**

Northing: **3621348.62 FT**

Northing: **1103789.267 M**

Easting: **4584569.65 FT**

Easting: **1397379.623 M**

Elev: **1219.32 FT**

Elev: **371.650 M**

Latitude: **N 42-25-39.30198**

Longitude: **W 094-44-49.56940**

Ellip. Ht: **342.712 M**

Theta: **- 0-50-42.781**

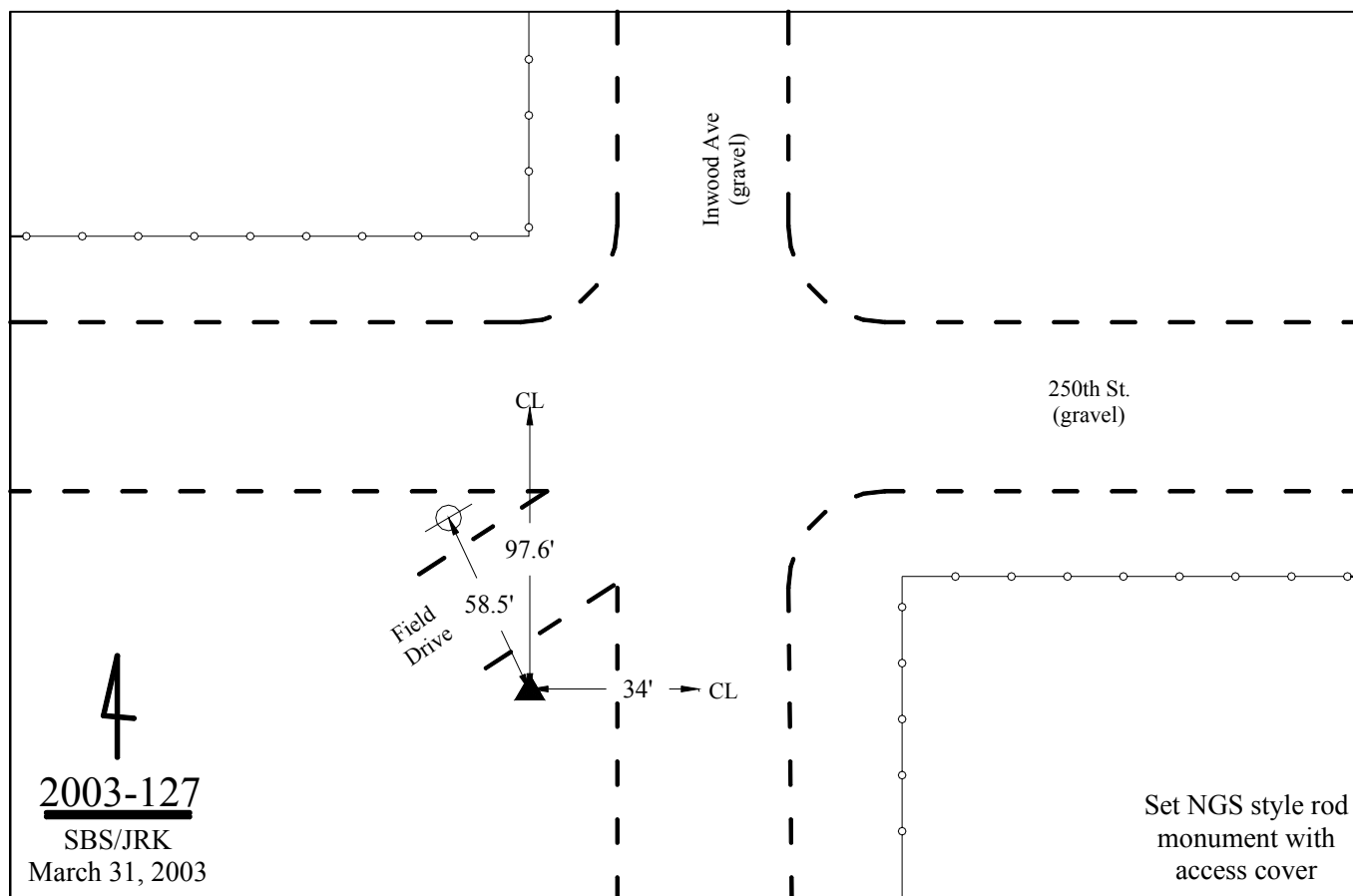
Combination Factor: **0.99990035**

99C Geoid Ht: **-28.938 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-127**

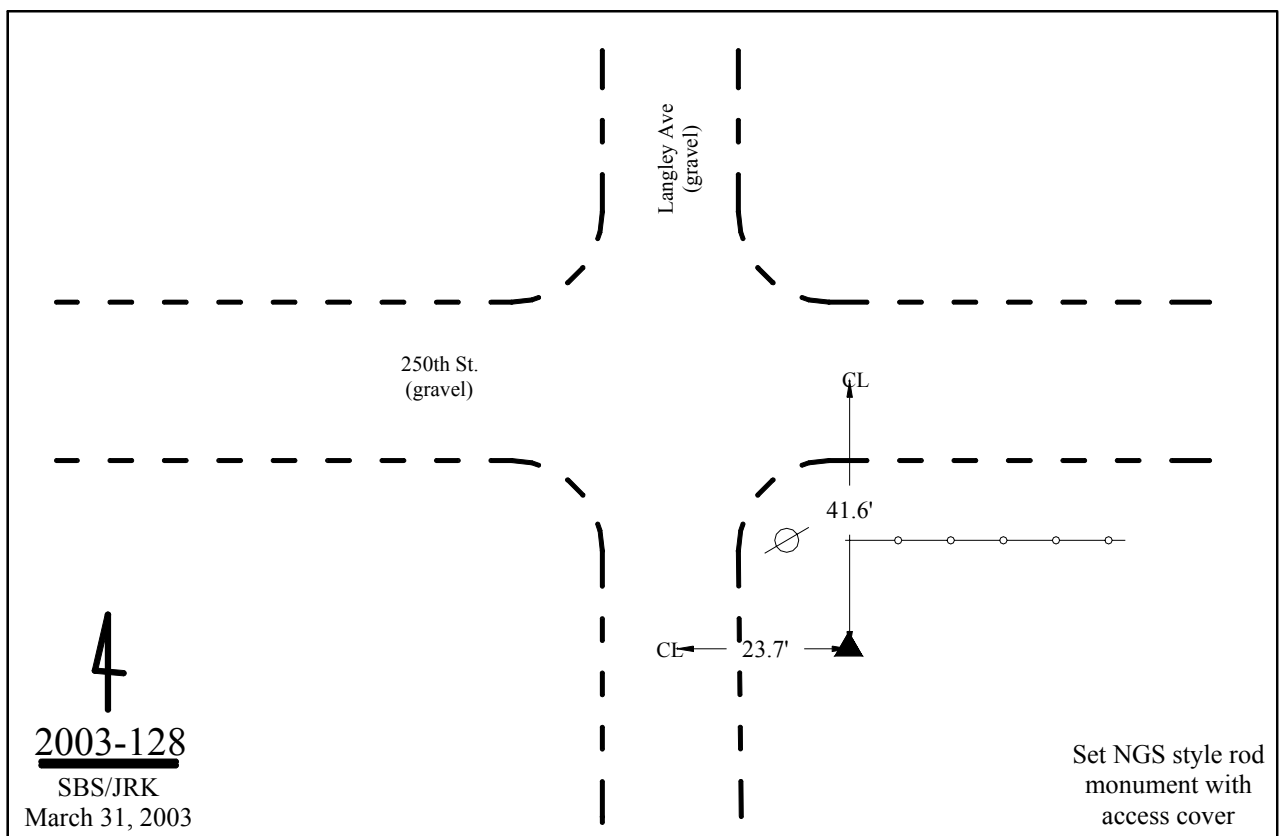
Location: **Near the NE Cor of Sec 24 T88N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.





Iowa North Zone (1401)



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **129**

Northing: **3620950.88 FT**

Northing: **1103668.035 M**

Easting: **4616156.33 FT**

Easting: **1407007.263 M**

Elev: **1228.07 FT**

Elev: **374.316 M**

Latitude: **N 42-25-39.76020**

Longitude: **W 094-37-48.34882**

Ellip. Ht: **345.408 M**

Theta: **- 0-45-57.301**

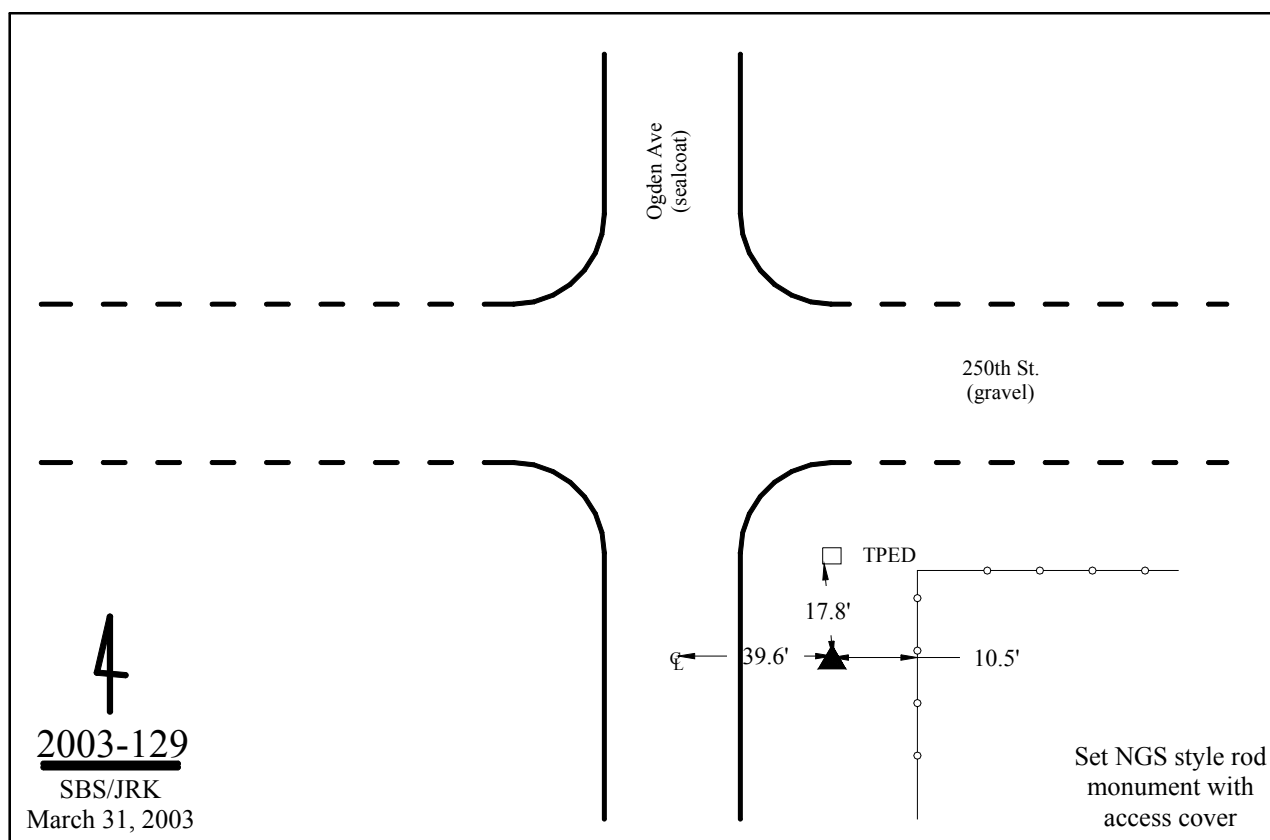
Combination Factor: **0.99989992**

99C Geoid Ht: **-28.908 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-129**

Location: **Near the NW Cor of Sec 19 T88N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **130**

Northing: **3620778.98 FT**

Northing: **1103615.640 M**

Easting: **4631564.75 FT**

Easting: **1411703.758 M**

Elev: **1191.98 FT**

Elev: **363.315 M**

Latitude: **N 42-25-40.04555**

Longitude: **W 094-34-22.87492**

Ellip. Ht: **334.458 M**

Theta: **- 0-43-38.042**

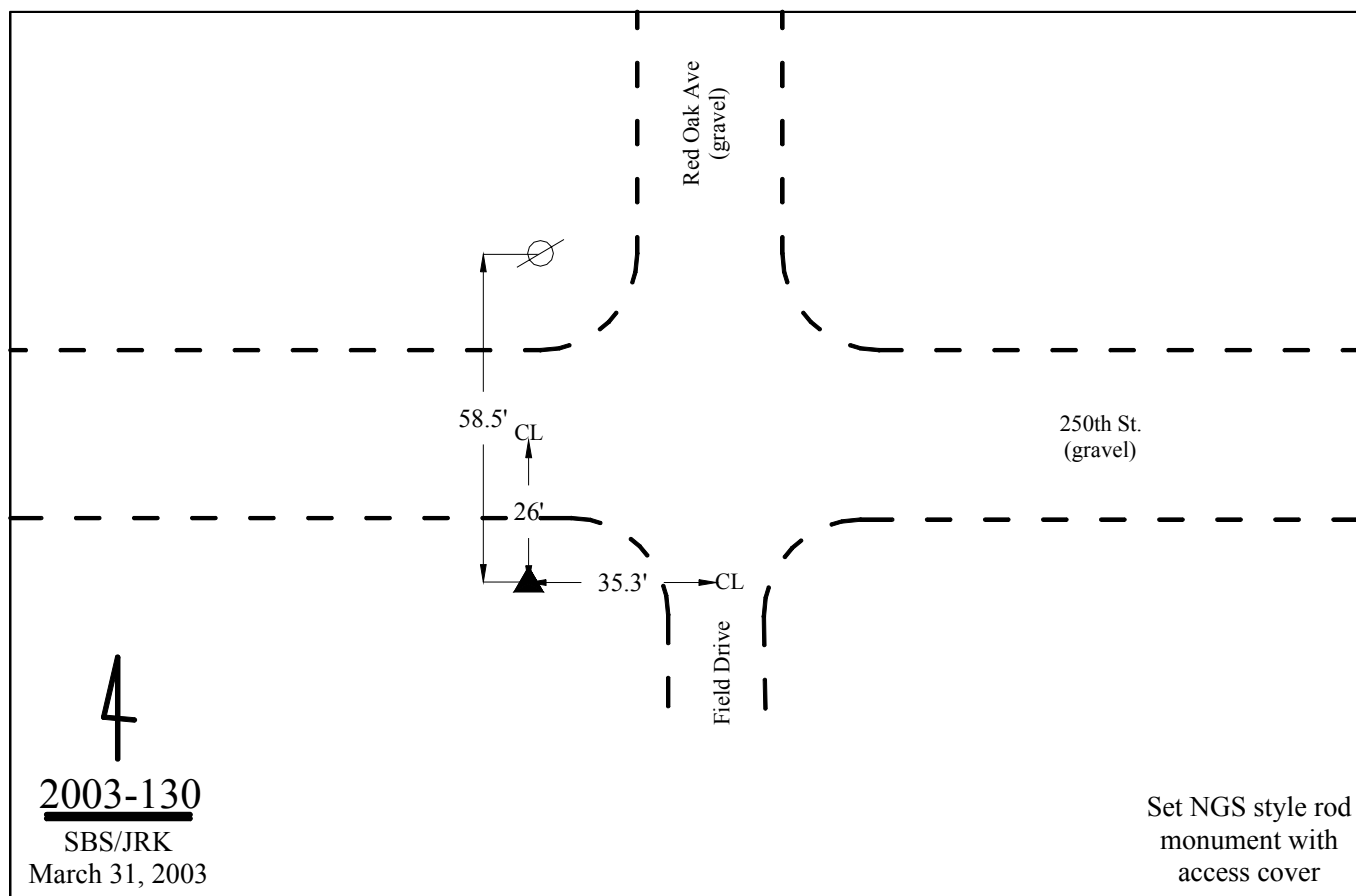
Combination Factor: **0.99990164**

99C Geoid Ht: **-28.857 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-130**

Location: **Near the NE Cor of Sec 21 T88N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **131**

Northing: **3620477.79 FT**

Northing: **1103523.838 M**

Easting: **4647516.33 FT**

Easting: **1416565.812 M**

Elev: **1183.07 FT**

Elev: **360.601 M**

Latitude: **N 42-25-39.01544**

Longitude: **W 094-30-50.13761**

Ellip. Ht: **331.824 M**

Theta: **- 0-41-13.861**

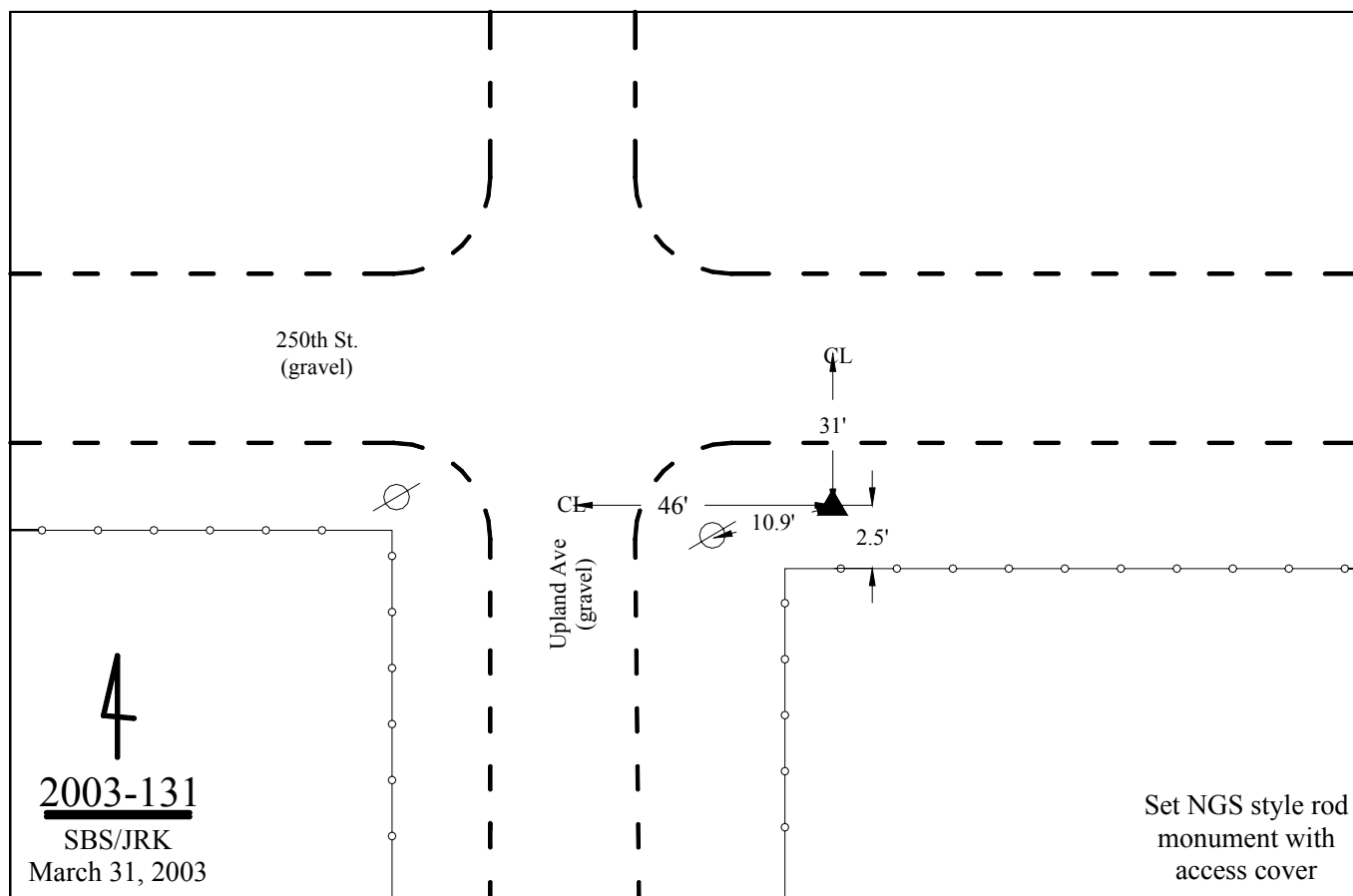
Combination Factor: **0.99990207**

99C Geoid Ht: **-28.777 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-131**

Location: **Near the NW Cor of Sec 19 T88N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **132**

Northing: **3620295.21** FT

Northing: **1103468.187** M

Easting: **4663161.18** FT

Easting: **1421334.371** M

Elev: **1155.07** FT

Elev: **352.067** M

Latitude: **N 42-25-39.01249**

Longitude: **W 094-27-21.51010**

Ellip. Ht: **323.399** M

Theta: **- 0-38-52.465**

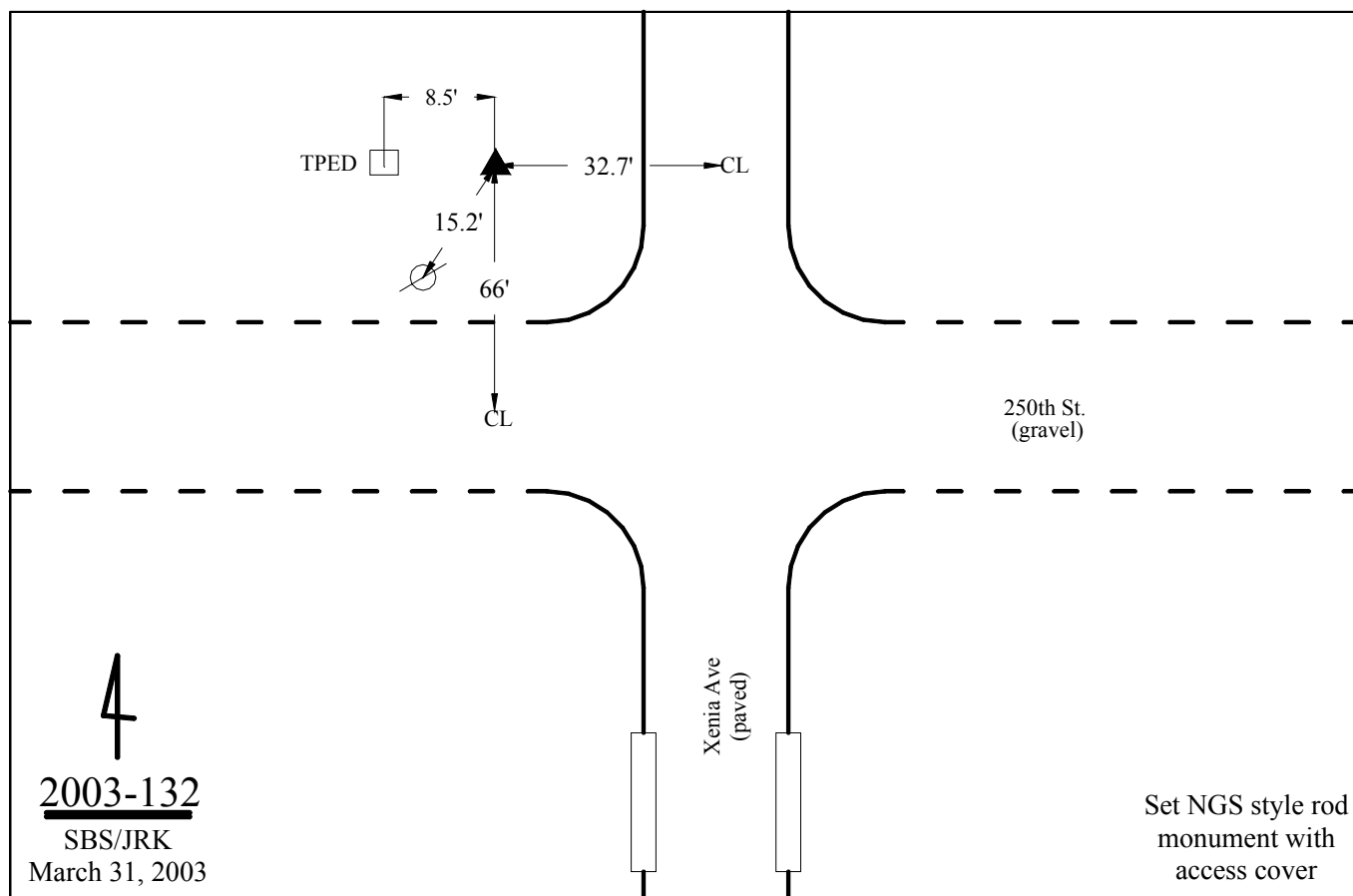
Combination Factor: **0.99990339**

99C Geoid Ht: **-28.668** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-132**

Location: **Near the SE Cor of Sec 16 T88N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **133**

Northing: **3606324.92 FT**

Northing: **1099210.035 M**

Easting: **4554662.63 FT**

Easting: **1388263.947 M**

Elev: **1230.03 FT**

Elev: **374.914 M**

Latitude: **N 42-23-06.35582**

Longitude: **W 094-51-25.09267**

Ellip. Ht: **345.983 M**

Theta: **- 0-55-10.845**

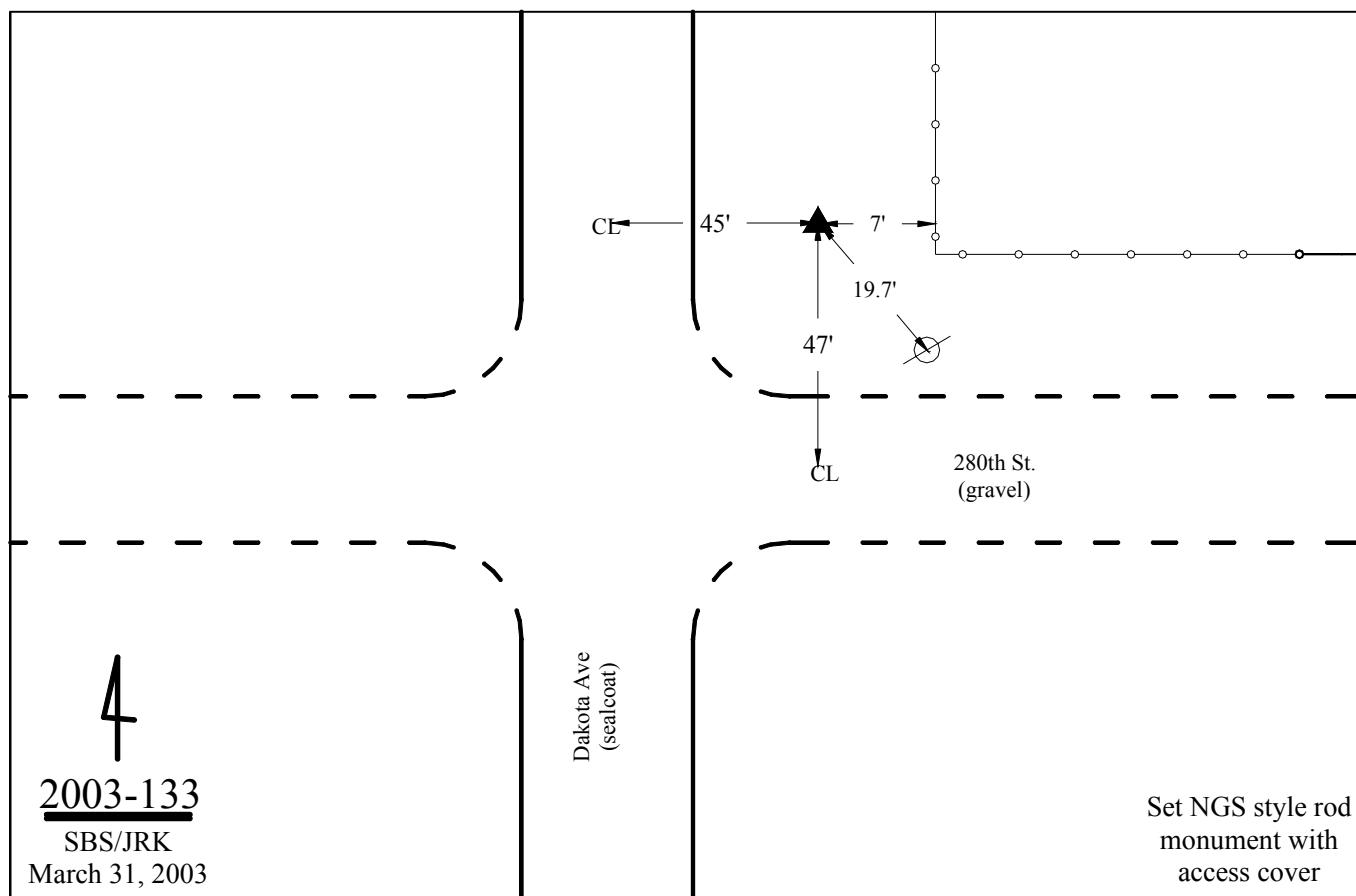
Combination Factor: **0.99990320**

99C Geoid Ht: **-28.931 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-133**

Location: **Near the SW Cor of Sec 31 T88N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **134**

Northing: **3605989.01** FT

Northing: **1099107.648** M

Easting: **4568626.18** FT

Easting: **1392520.044** M

Elev: **1194.70** FT

Elev: **364.146** M

Latitude: **N 42-23-05.20972**

Longitude: **W 094-48-18.97745**

Ellip. Ht: **335.195** M

Theta: **- 0-53-04.706**

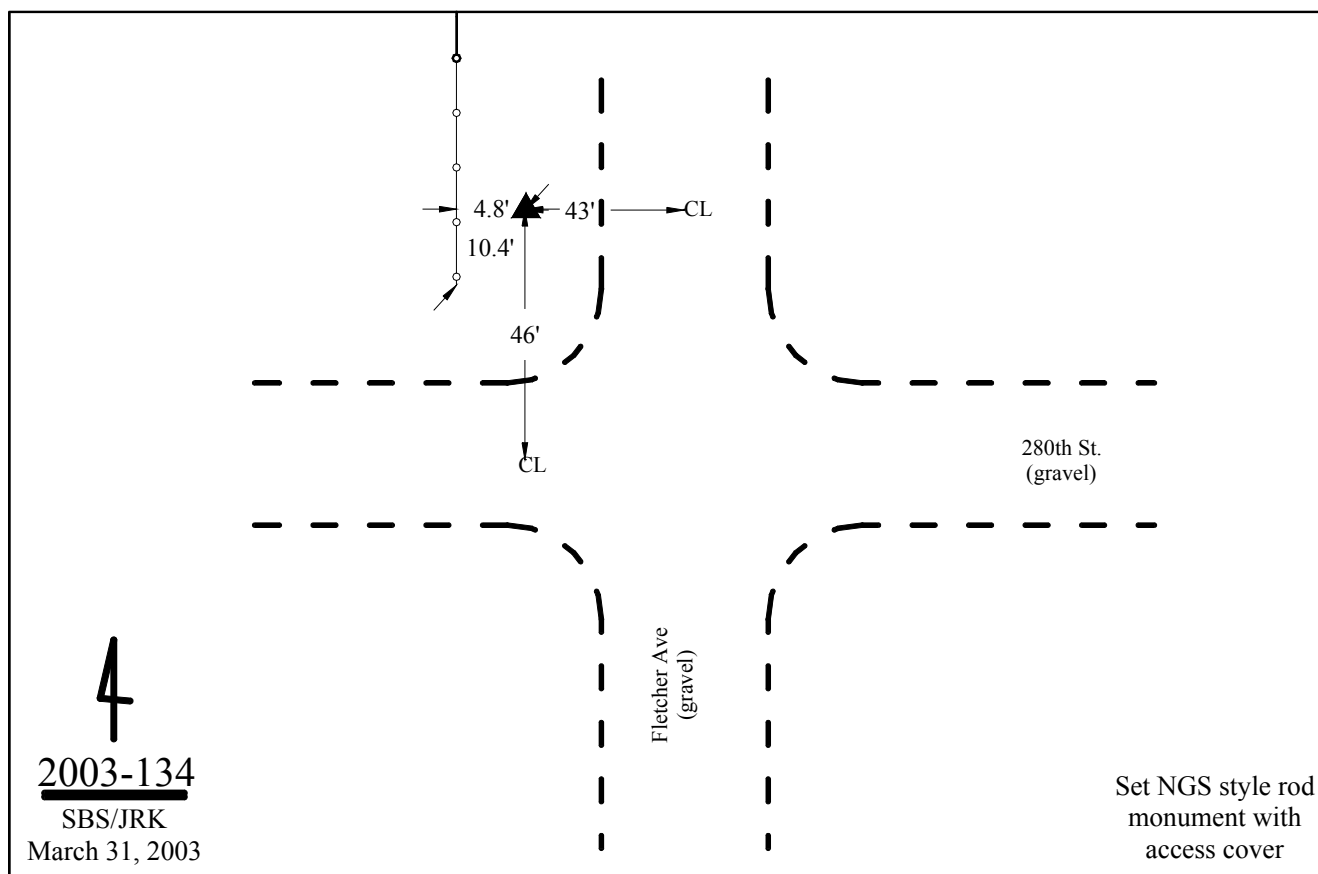
Combination Factor: **0.99990492**

99C Geoid Ht: **-28.951** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-134**

Location: **Near the SE Cor of Sec 33 T88N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **135**

Northing: **3605549.52 FT**

Northing: **1098973.692 M**

Easting: **4584551.32 FT**

Easting: **1397374.036 M**

Elev: **1226.50 FT**

Elev: **373.838 M**

Latitude: **N 42-23-03.24271**

Longitude: **W 094-44-46.70814**

Ellip. Ht: **344.891 M**

Theta: **- 0-50-40.842**

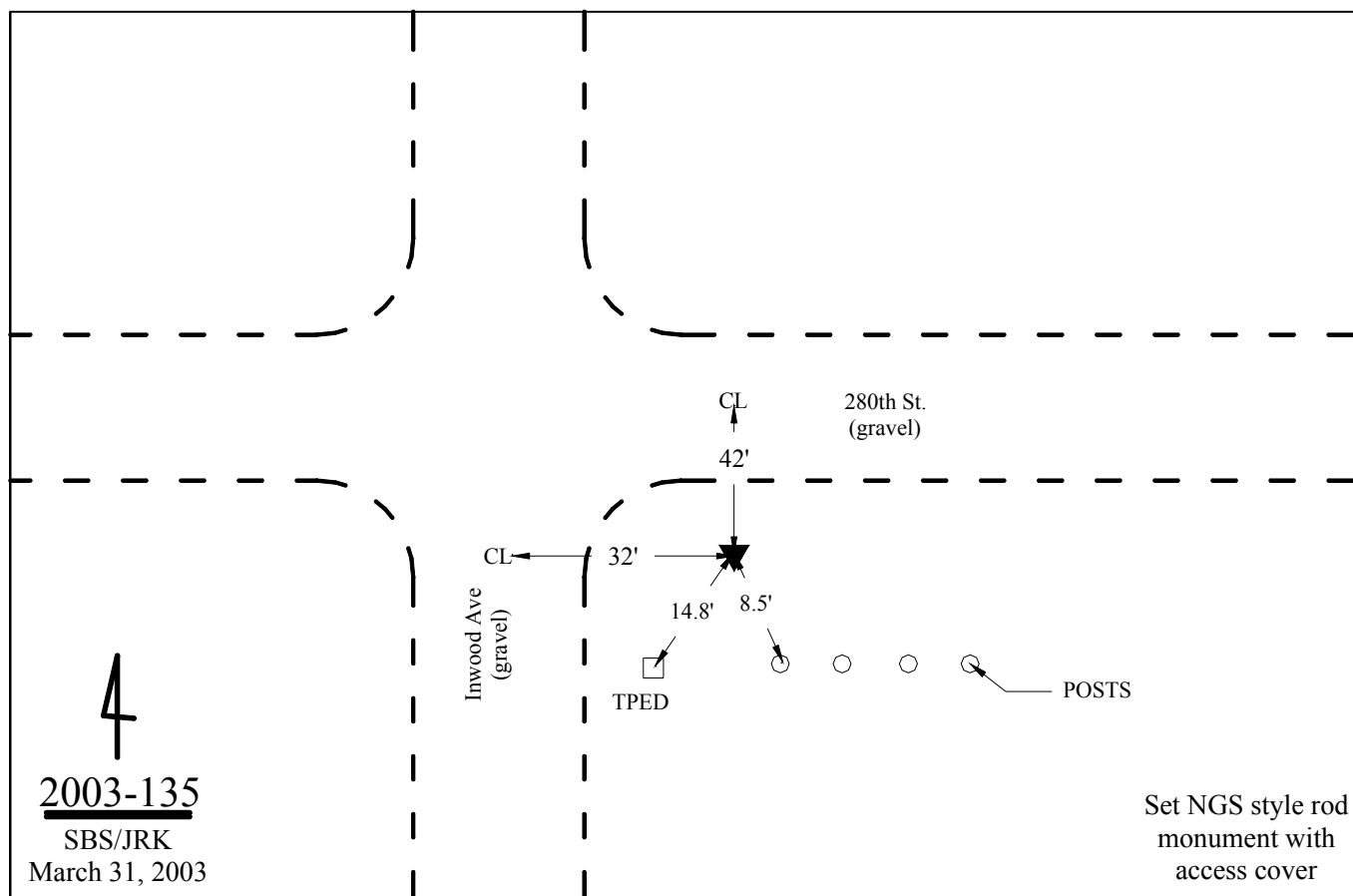
Combination Factor: **0.99990345**

99C Geoid Ht: **-28.947 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-135**

Location: **Near the NW Cor of Sec 6 T87N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **136**

Northing: **3605381.54 FT**

Northing: **1098922.490 M**

Easting: **4600175.46 FT**

Easting: **1402136.285 M**

Elev: **1227.17 FT**

Elev: **374.041 M**

Latitude: **N 42-23-03.80595**

Longitude: **W 094-41-18.50382**

Ellip. Ht: **345.127 M**

Theta: **- 0-48-19.733**

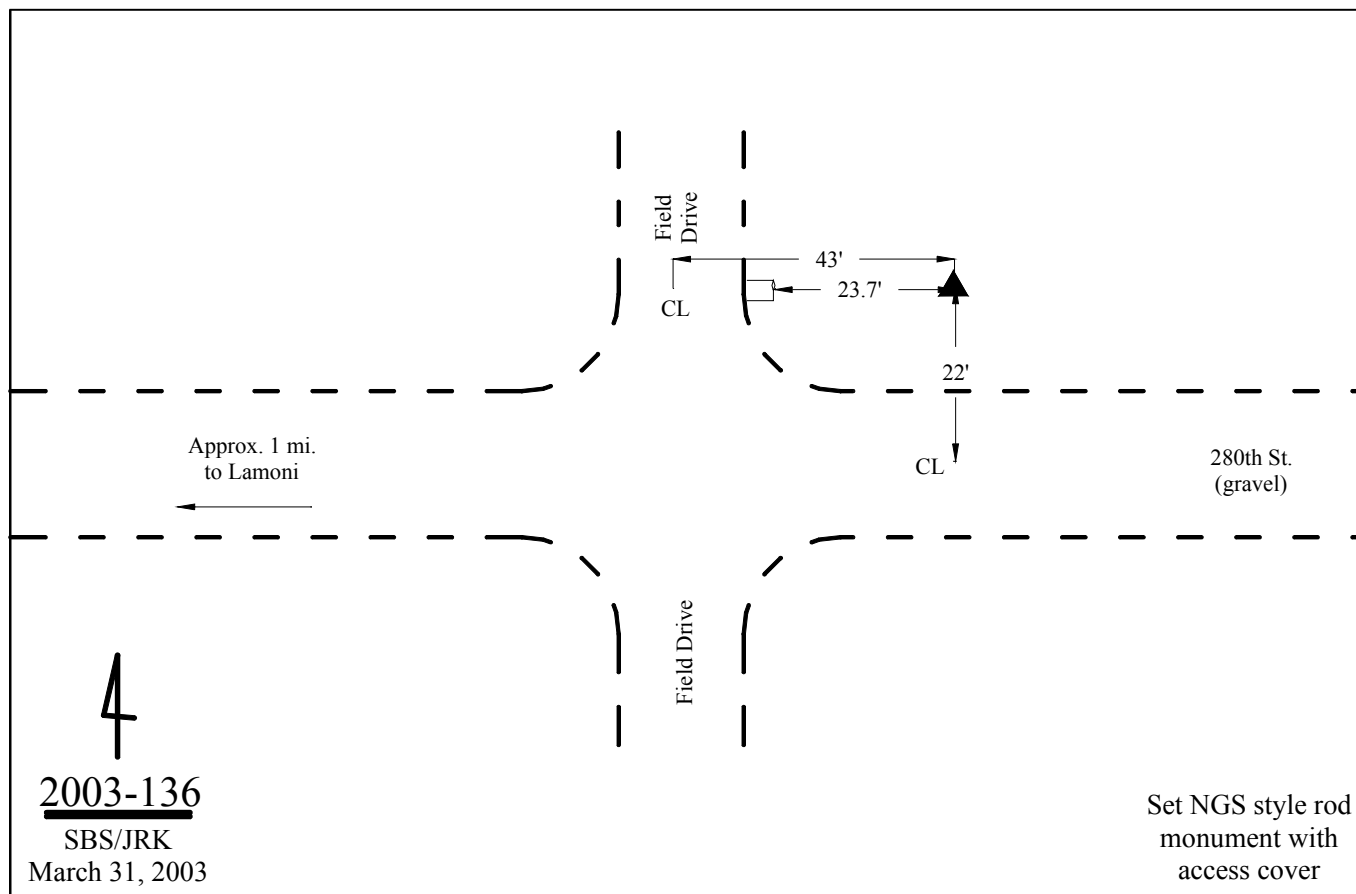
Combination Factor: **0.99990340**

99C Geoid Ht: **-28.914 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-136**

Location: **Near the SW Cor of Sec 34 T88N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **137**

Northing: **3605198.94 FT**

Northing: **1098866.836 M**

Easting: **4615931.95 FT**

Easting: **1406938.873 M**

Elev: **1217.09 FT**

Elev: **370.969 M**

Latitude: **N 42-23-04.13682**

Longitude: **W 094-37-48.53260**

Ellip. Ht: **342.110 M**

Theta: **- 0-45-57.426**

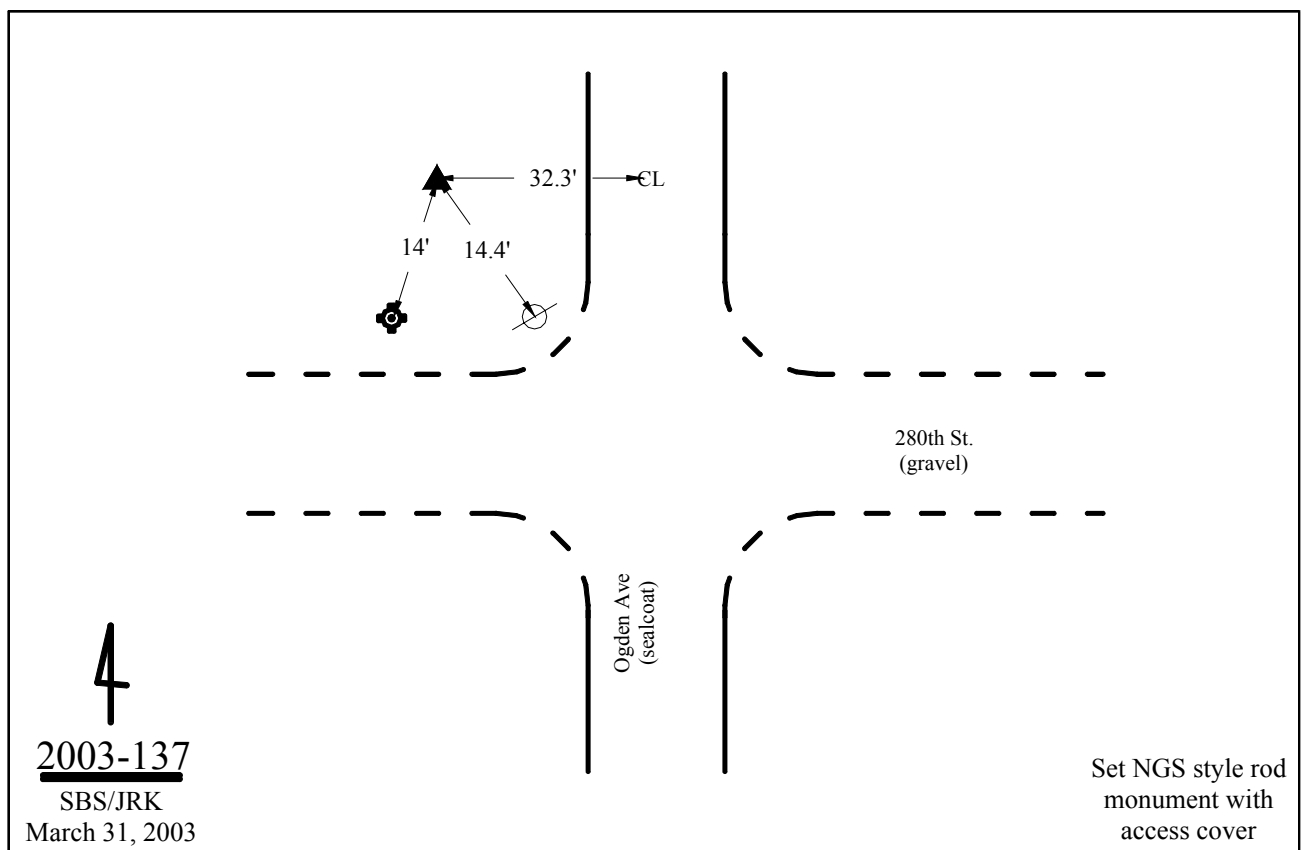
Combination Factor: **0.99990387**

99C Geoid Ht: **-28.859 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-137**

Location: **Near the SE Cor of Sec 36 T88N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **138**

Northing: **3604977.16 FT**

Northing: **1098799.237 M**

Easting: **4631489.51 FT**

Easting: **1411680.826 M**

Elev: **1188.41 FT**

Elev: **362.228 M**

Latitude: **N 42-23-03.94827**

Longitude: **W 094-34-21.20488**

Ellip. Ht: **333.453 M**

Theta: **- 0-43-36.911**

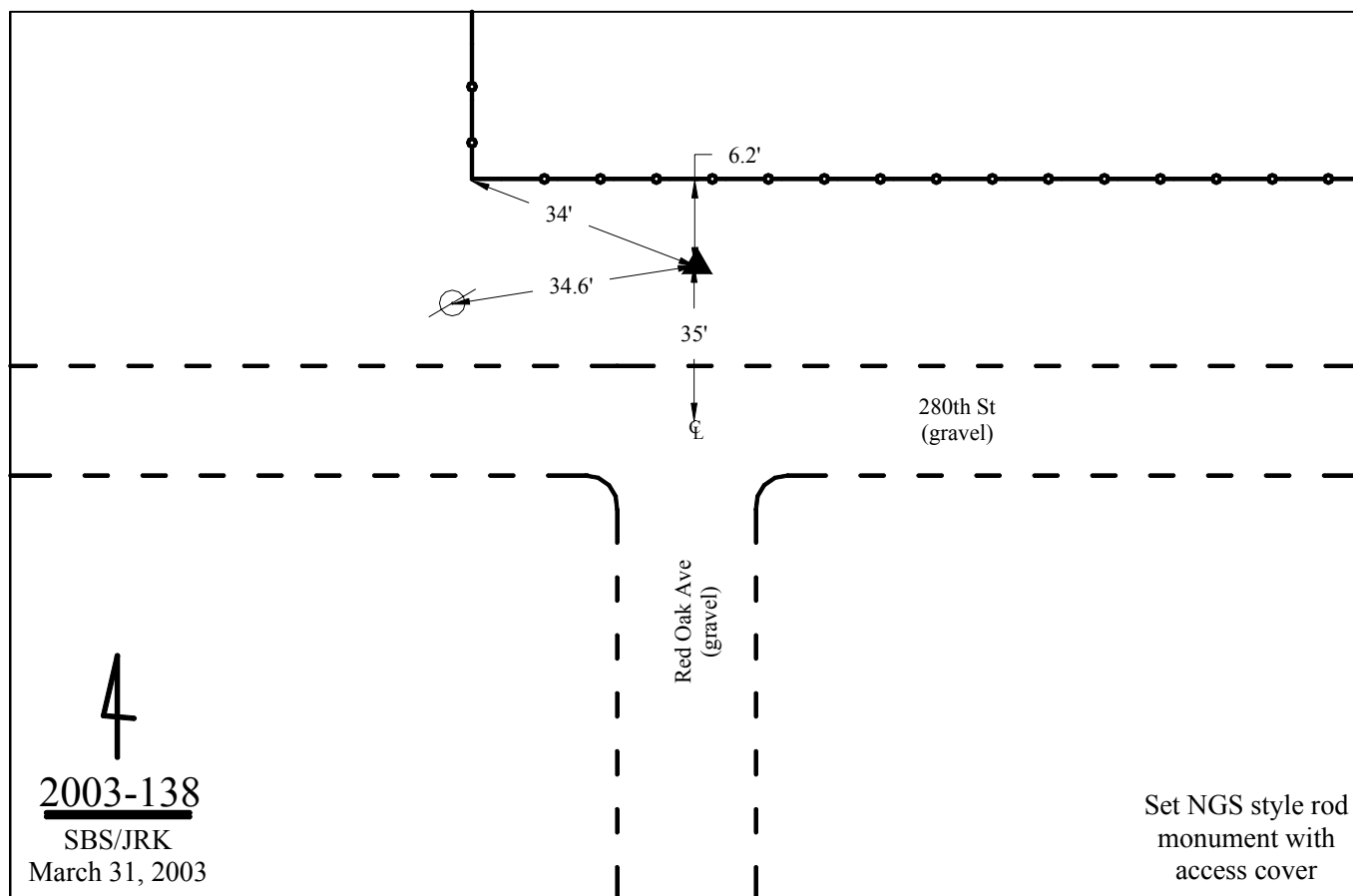
Combination Factor: **0.99990523**

99C Geoid Ht: **-28.775 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-138**

Location: **Near the SW Cor of Sec 34 T88N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **139**

Northing: **3604628.09 FT**

Northing: **1098692.839 M**

Easting: **4647343.87 FT**

Easting: **1416513.245 M**

Elev: **1169.42 FT**

Elev: **356.441 M**

Latitude: **N 42-23-02.43279**

Longitude: **W 094-30-49.90255**

Ellip. Ht: **327.785 M**

Theta: **- 0-41-13.702**

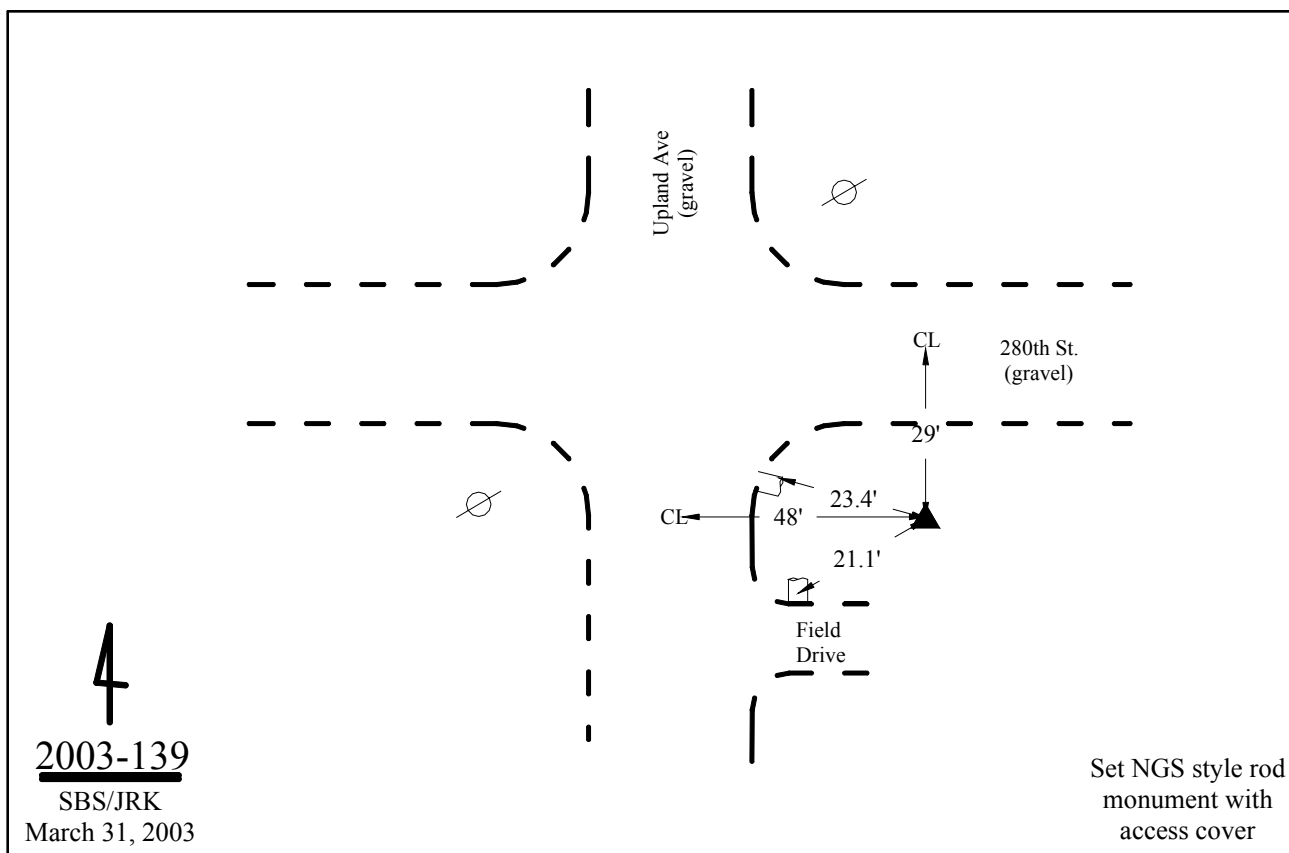
Combination Factor: **0.99990615**

99C Geoid Ht: **-28.656 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-139**

Location: **Near the NW Cor of Sec 6 T87N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **140**

Northing: **3604489.52 FT**

Northing: **1098650.604 M**

Easting: **4663039.21 FT**

Easting: **1421297.194 M**

Elev: **1147.18 FT**

Elev: **349.661 M**

Latitude: **N 42-23-02.87018**

Longitude: **W 094-27-20.75374**

Ellip. Ht: **321.158 M**

Theta: **- 0-38-51.952**

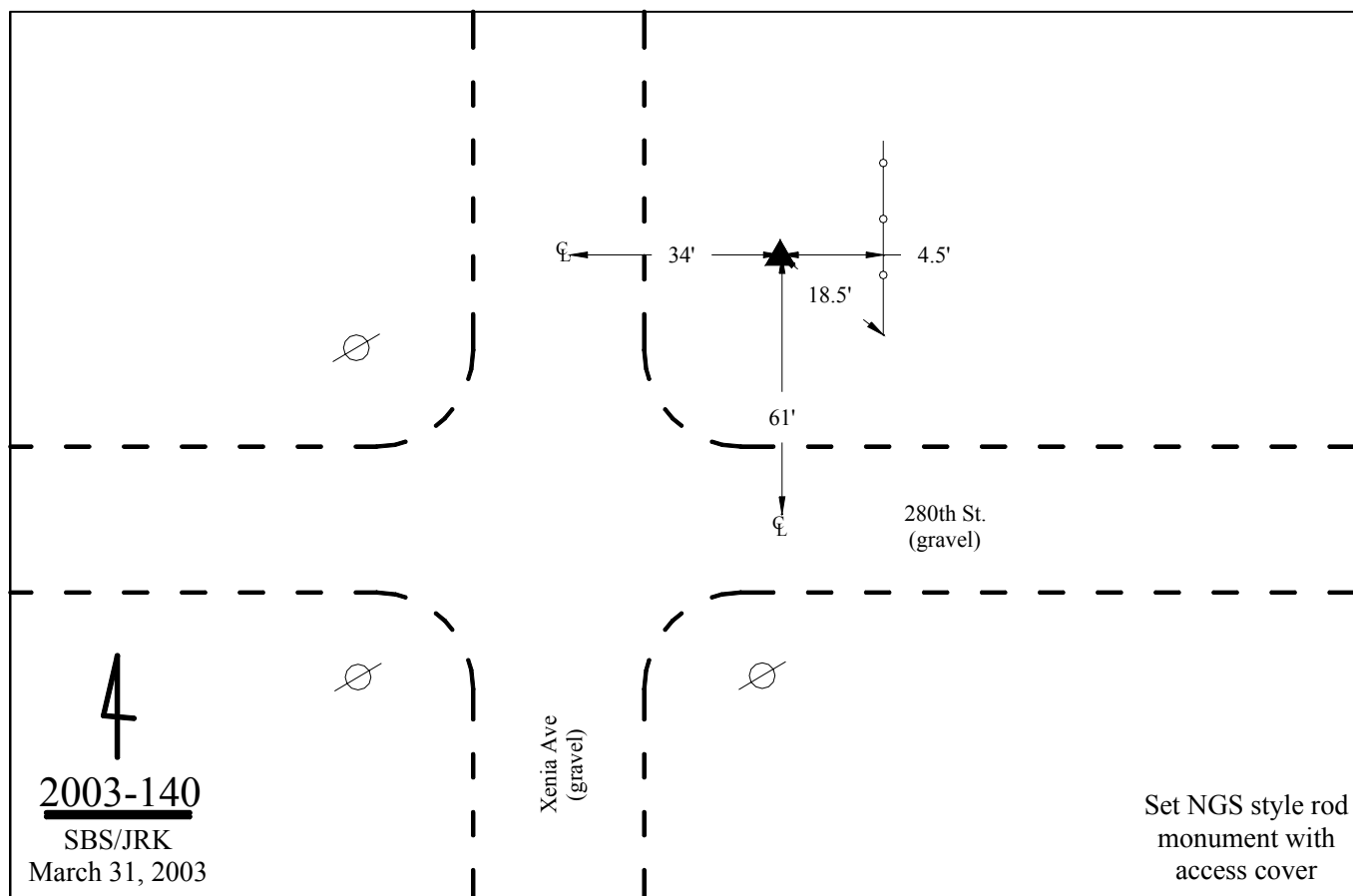
Combination Factor: **0.99990718**

99C Geoid Ht: **-28.503 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-140**

Location: **Near the SW Cor of Sec 34 T88N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **141**

Northing: **3589815.89 FT**

Northing: **1094178.073 M**

Easting: **4554308.39 FT**

Easting: **1388155.974 M**

Elev: **1219.12 FT**

Elev: **371.587 M**

Latitude: **N 42-20-23.23330**

Longitude: **W 094-51-26.28057**

Ellip. Ht: **342.616 M**

Theta: **- 0-55-11.650**

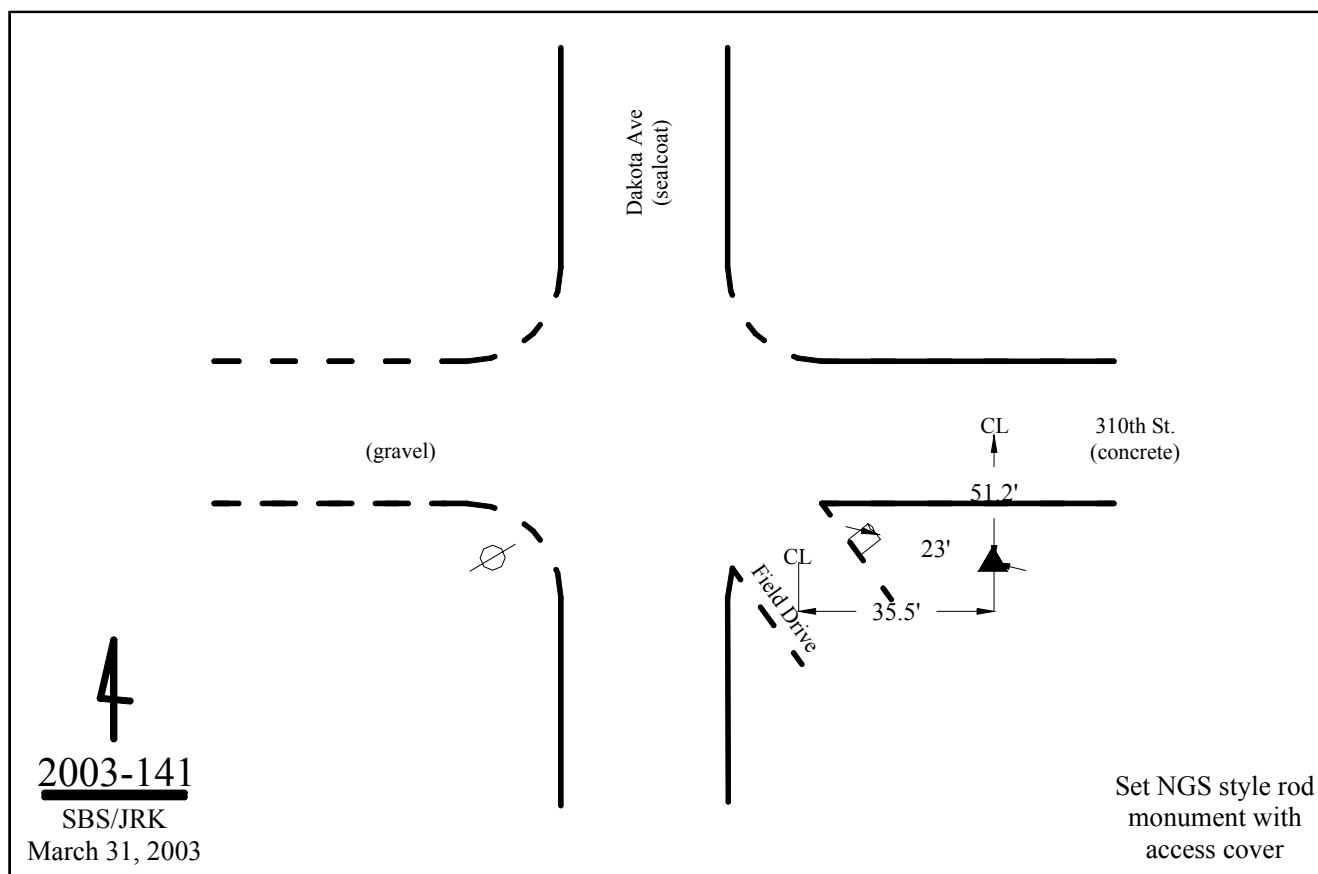
Combination Factor: **0.99990792**

99C Geoid Ht: **-28.971 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-141**

Location: **Near the NW Cor of Sec 19 T87N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **142**

Northing: **3589425.60** FT

Northing: **1094059.111** M

Easting: **4568483.15** FT

Easting: **1392476.450** M

Elev: **1167.99** FT

Elev: **356.005** M

Latitude: **N 42-20-21.58284**

Longitude: **W 094-48-17.47648**

Ellip. Ht: **327.034** M

Theta: **- 0-53-03.689**

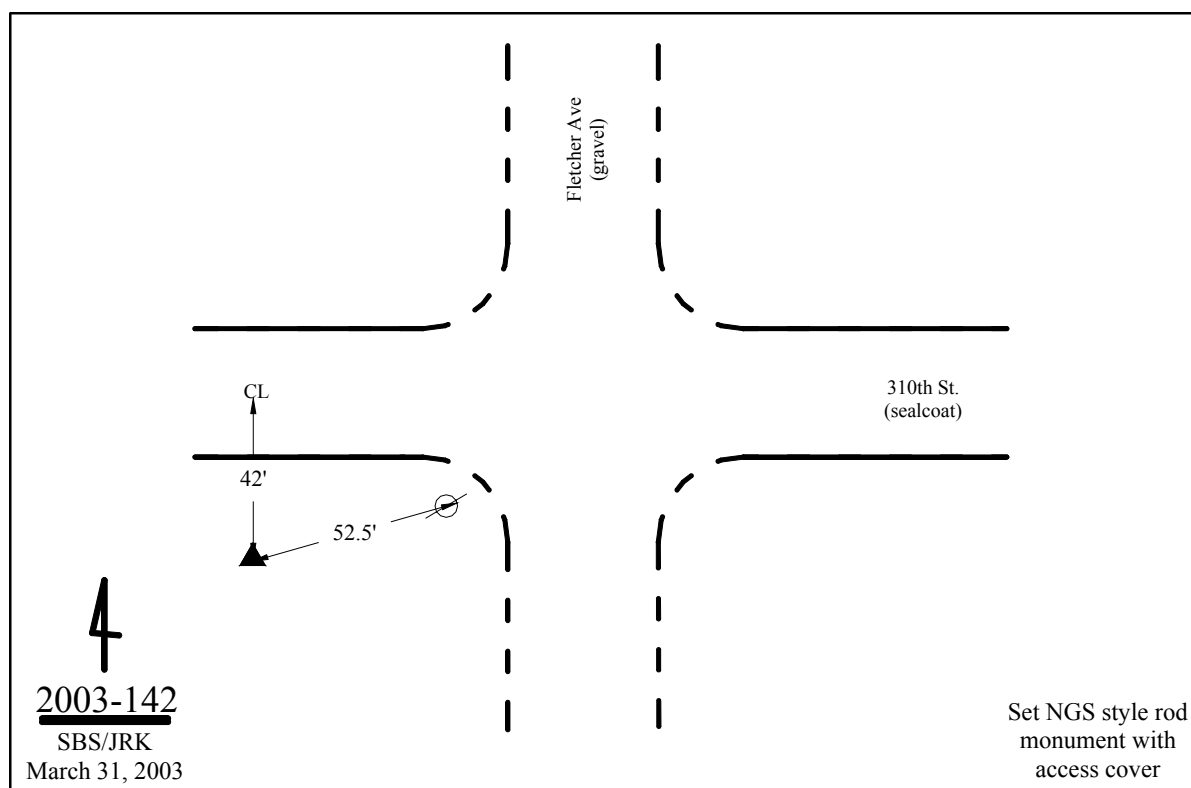
Combination Factor: **0.99991041**

99C Geoid Ht: **-28.971** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-142**

Location: **Near the NE Cor of Sec 21 T87N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **143**

Northing: **3589192.89** FT

Northing: **1093988.182** M

Easting: **4584368.24** FT

Easting: **1397318.235** M

Elev: **1193.64** FT

Elev: **363.822** M

Latitude: **N 42-20-21.65176**

Longitude: **W 094-44-45.93482**

Ellip. Ht: **334.890** M

Theta: **- 0-50-40.318**

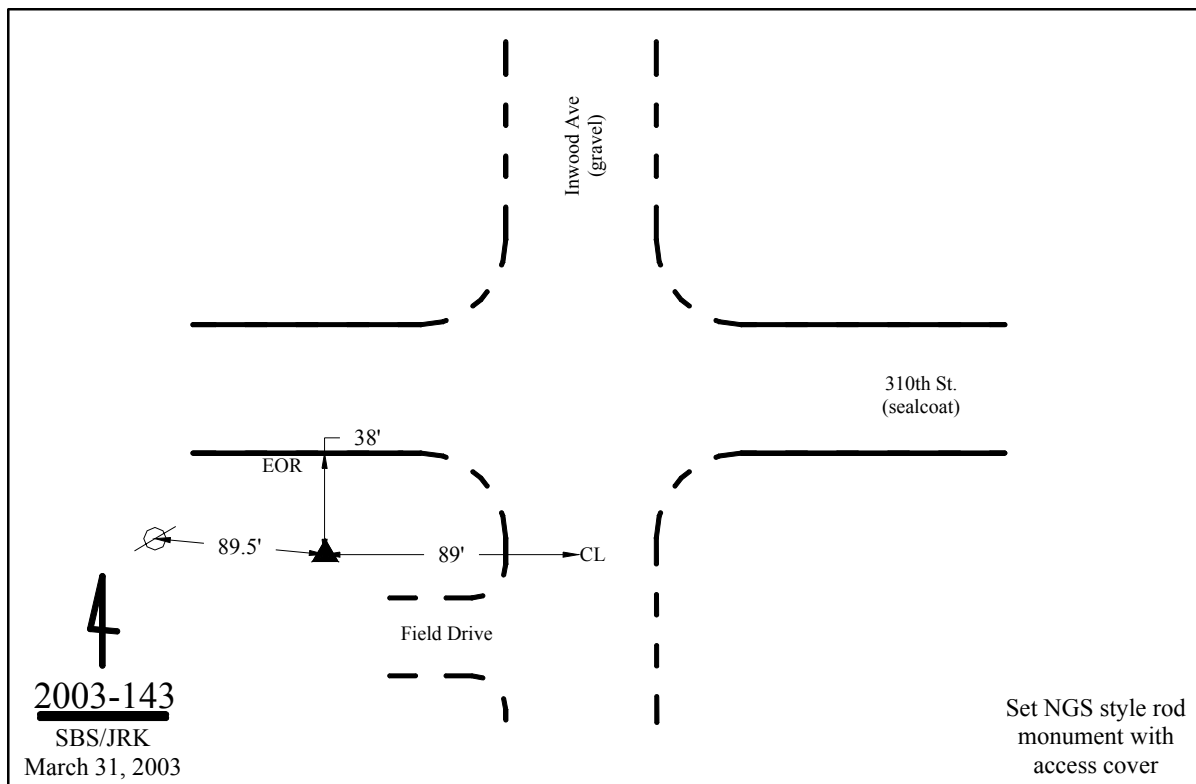
Combination Factor: **0.99990917**

99C Geoid Ht: **-28.932** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-143**

Location: **Near the NE Cor of Sec 24 T87N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **144**

Northing: **3589021.69 FT**

Northing: **1093935.998 M**

Easting: **4600072.50 FT**

Easting: **1402104.901 M**

Elev: **1231.95 FT**

Elev: **375.500 M**

Latitude: **N 42-20-22.19395**

Longitude: **W 094-41-16.81237**

Ellip. Ht: **346.637 M**

Theta: **- 0-48-18.586**

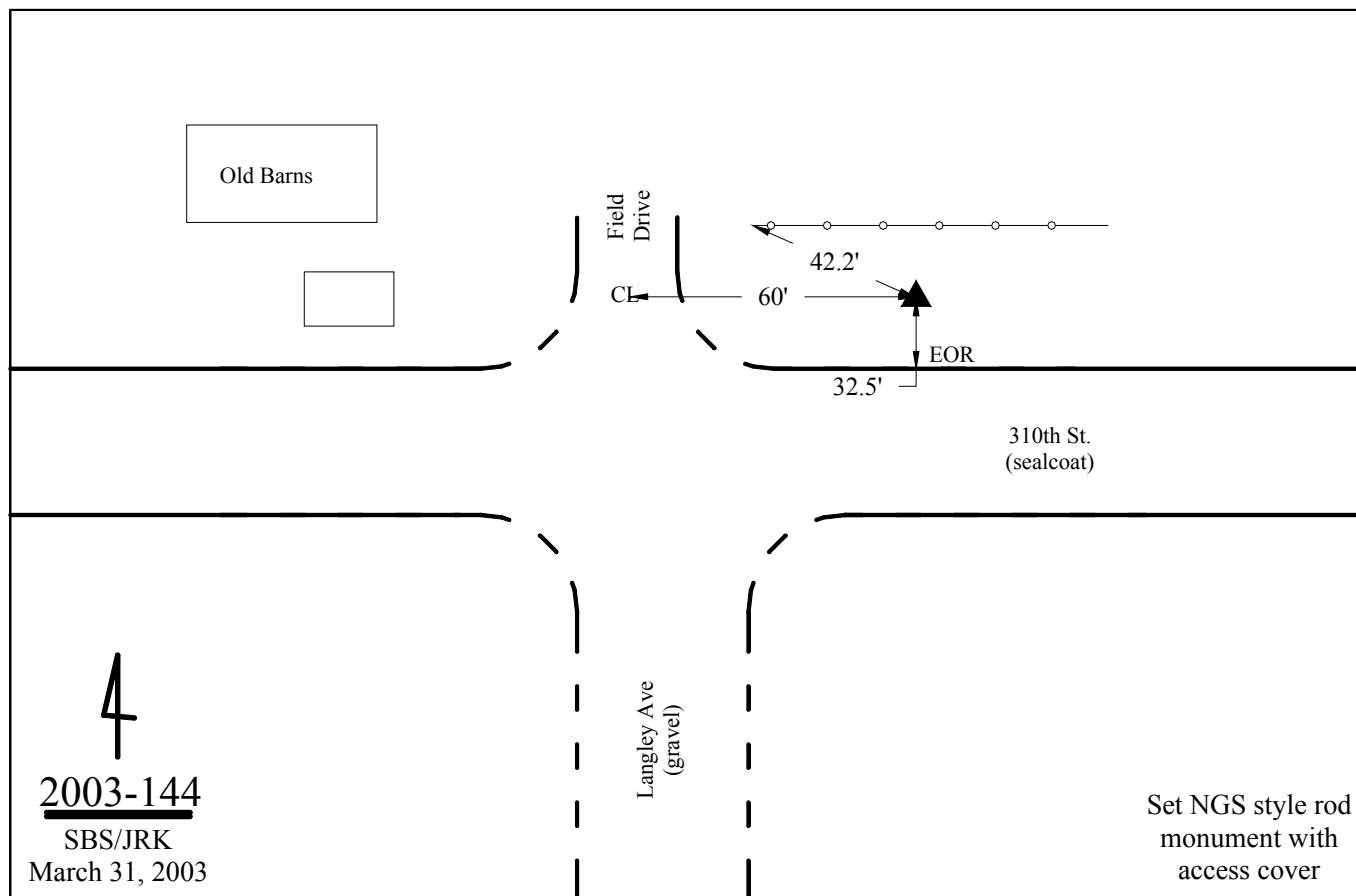
Combination Factor: **0.99990732**

99C Geoid Ht: **-28.863 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-144**

Location: **Near the SW Cor of Sec 15 T87N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **145**

Northing: **3588770.08 FT**

Northing: **1093859.308 M**

Easting: **4615812.14 FT**

Easting: **1406902.354 M**

Elev: **1199.31 FT**

Elev: **365.550 M**

Latitude: **N 42-20-21.84006**

Longitude: **W 094-37-47.20347**

Ellip. Ht: **336.785 M**

Theta: **- 0-45-56.525**

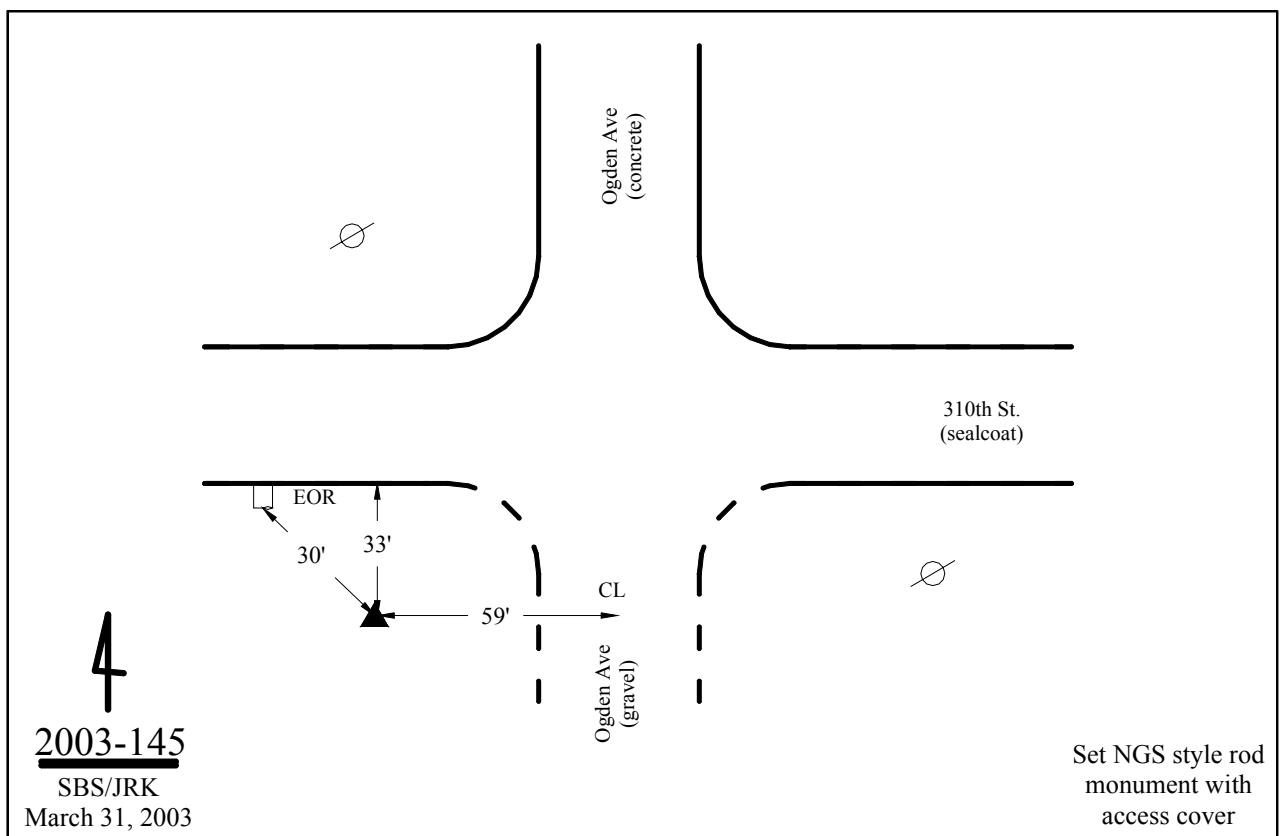
Combination Factor: **0.99990887**

99C Geoid Ht: **-28.765 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-145**

Location: **Near the NE Cor of Sec 24 T87N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **146**

Northing: **3588560.87 FT**

Northing: **1093795.540 M**

Easting: **4631415.04 FT**

Easting: **1411658.129 M**

Elev: **1177.21 FT**

Elev: **358.813 M**

Latitude: **N 42-20-21.78070**

Longitude: **W 094-34-19.42307**

Ellip. Ht: **330.171 M**

Theta: **- 0-43-35.703**

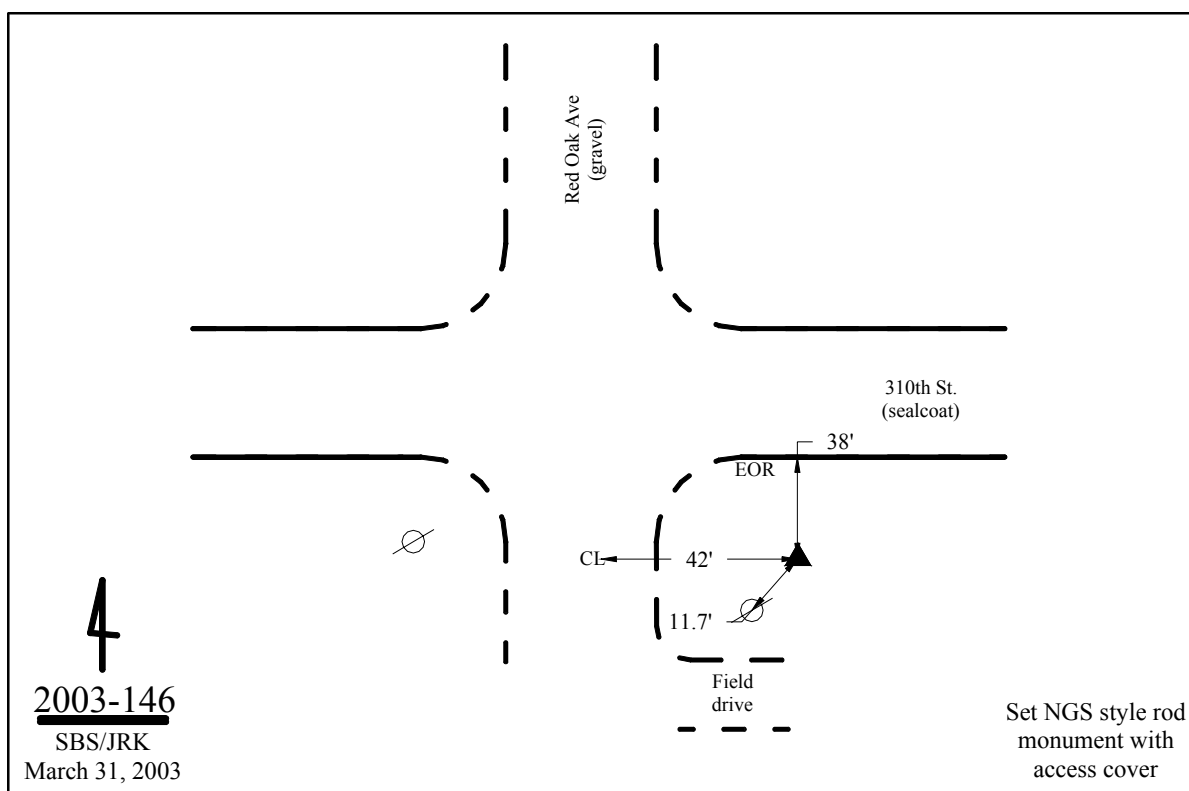
Combination Factor: **0.99990991**

99C Geoid Ht: **-28.642 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-146**

Location: **Near the NW Cor of Sec 22 T87N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **147**

Northing: **3588437.27 FT**

Northing: **1093757.867 M**

Easting: **4647076.94 FT**

Easting: **1416431.885 M**

Elev: **1172.66 FT**

Elev: **357.427 M**

Latitude: **N 42-20-22.46878**

Longitude: **W 094-30-50.87115**

Ellip. Ht: **328.950 M**

Theta: **- 0-41-14.358**

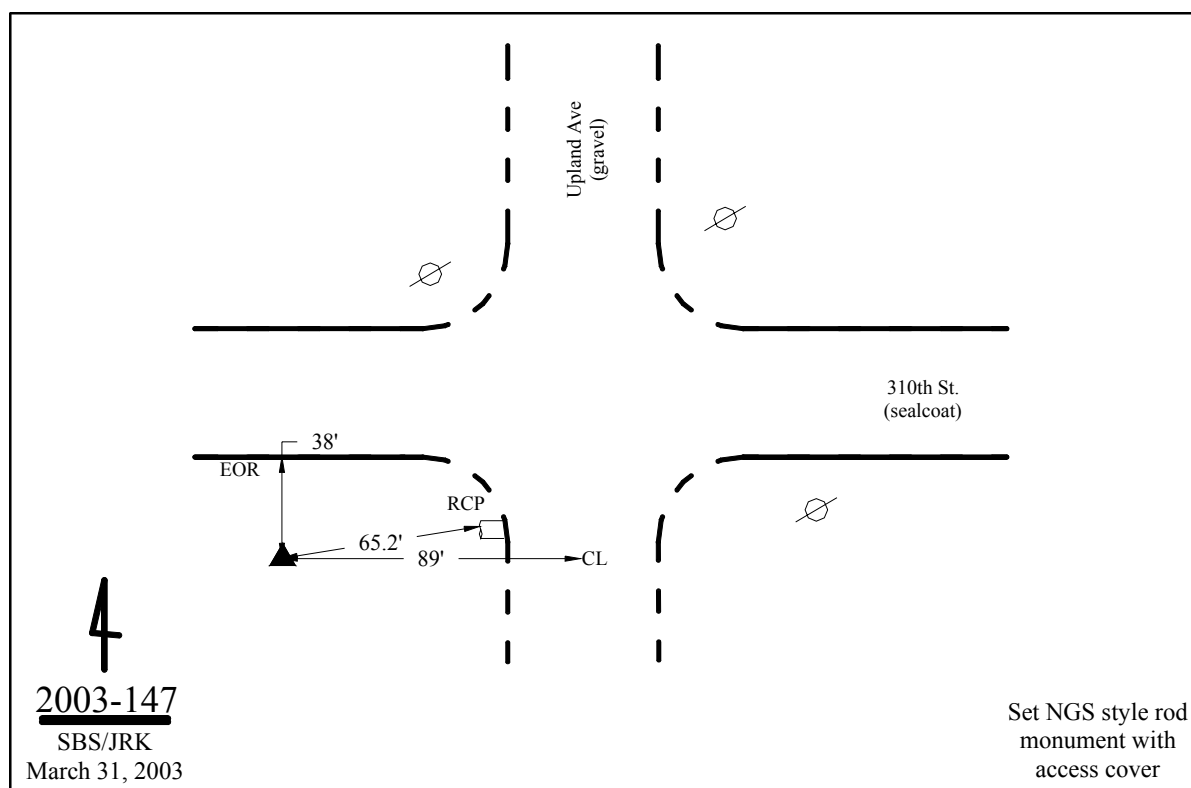
Combination Factor: **0.99991008**

99C Geoid Ht: **-28.477 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-147**

Location: **Near the NE Cor of Sec 24 T87N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **148**

Northing: **3588229.13 FT**

Northing: **1093694.425 M**

Easting: **4662866.14 FT**

Easting: **1421244.442 M**

Elev: **1157.03 FT**

Elev: **352.662 M**

Latitude: **N 42-20-22.22990**

Longitude: **W 094-27-20.61032**

Ellip. Ht: **324.379 M**

Theta: **- 0-38-51.855**

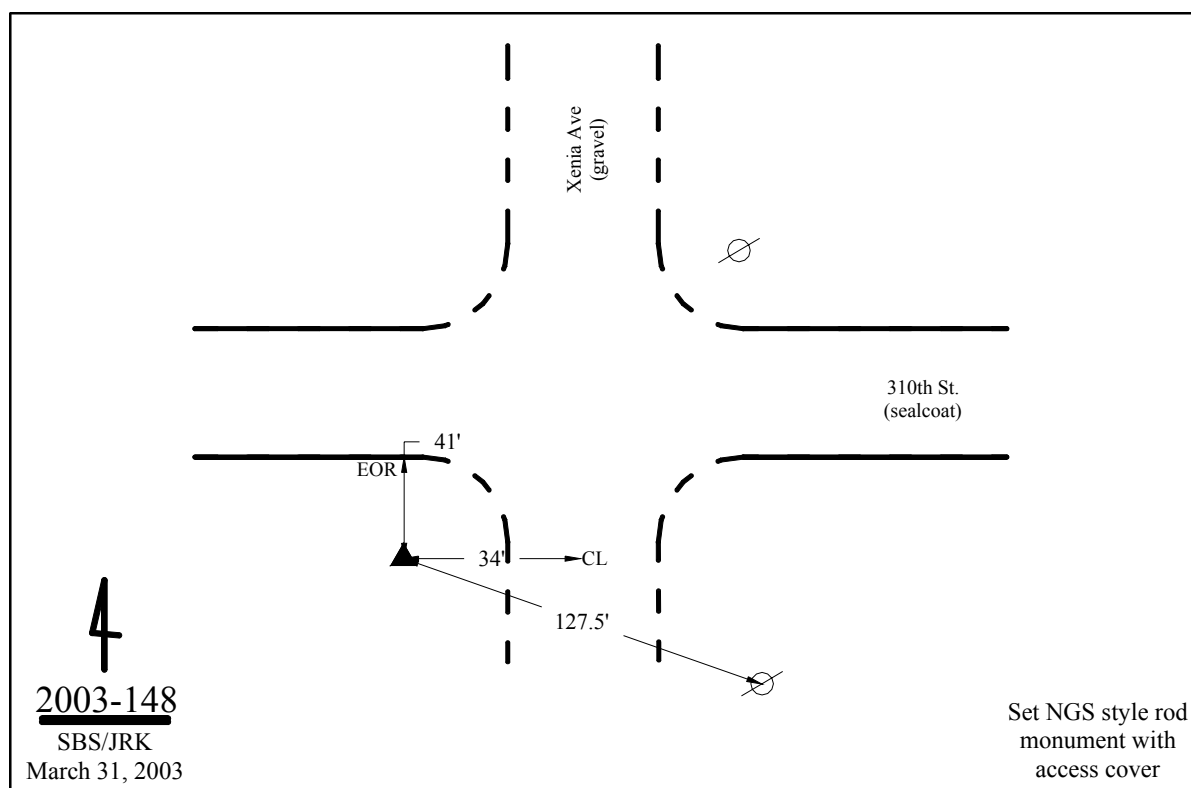
Combination Factor: **0.99991081**

99C Geoid Ht: **-28.283 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-148**

Location: **Near the NE Cor of Sec 21 T87N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **149**

Northing: **3573933.52 FT**

Northing: **1089337.116 M**

Easting: **4553898.02 FT**

Easting: **1388030.892 M**

Elev: **1209.14 FT**

Elev: **368.547 M**

Latitude: **N 42-17-46.29106**

Longitude: **W 094-51-28.34751**

Ellip. Ht: **339.557 M**

Theta: **- 0-55-13.051**

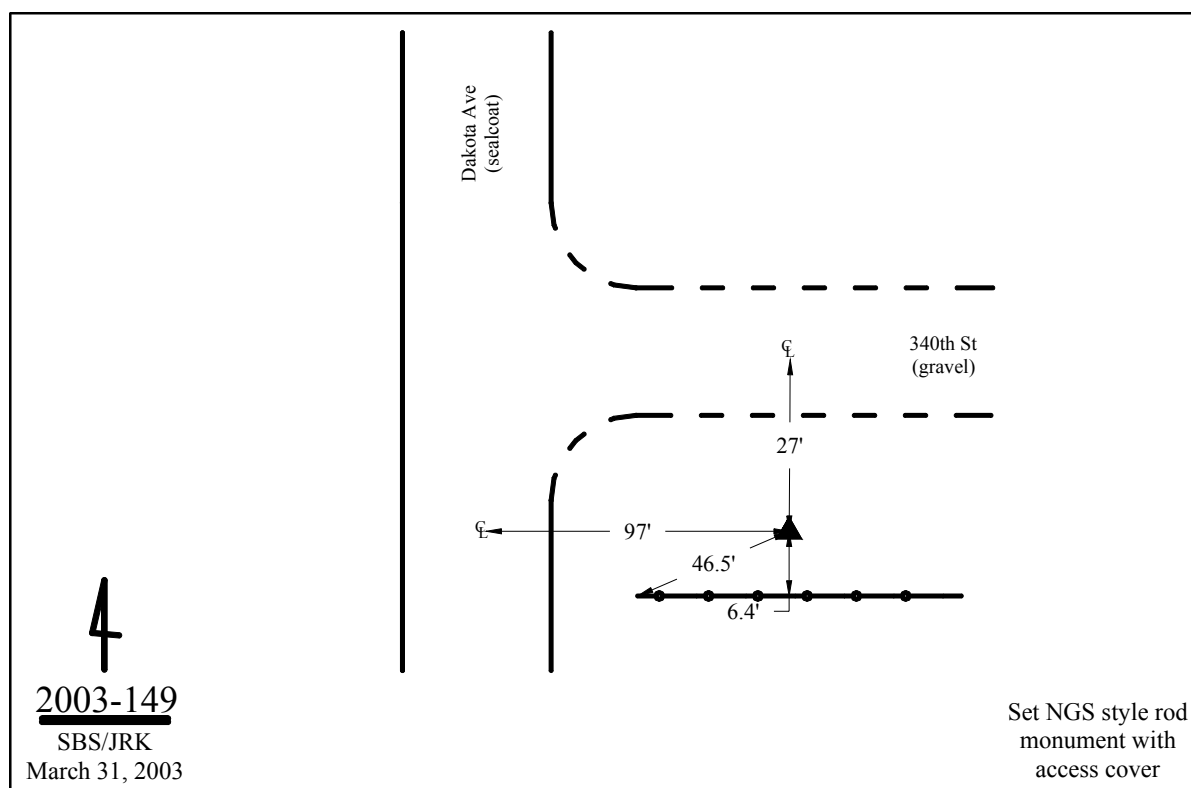
Combination Factor: **0.99991301**

99C Geoid Ht: **-28.990 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-149**

Location: **Near the NW Cor of Sec 6 T86N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **150**

Northing: **3573796.63 FT**

Northing: **1089295.392 M**

Easting: **4568505.35 FT**

Easting: **1392483.216 M**

Elev: **1171.12 FT**

Elev: **356.959 M**

Latitude: **N 42-17-47.21056**

Longitude: **W 094-48-13.97132**

Ellip. Ht: **328.000 M**

Theta: **- 0-53-01.314**

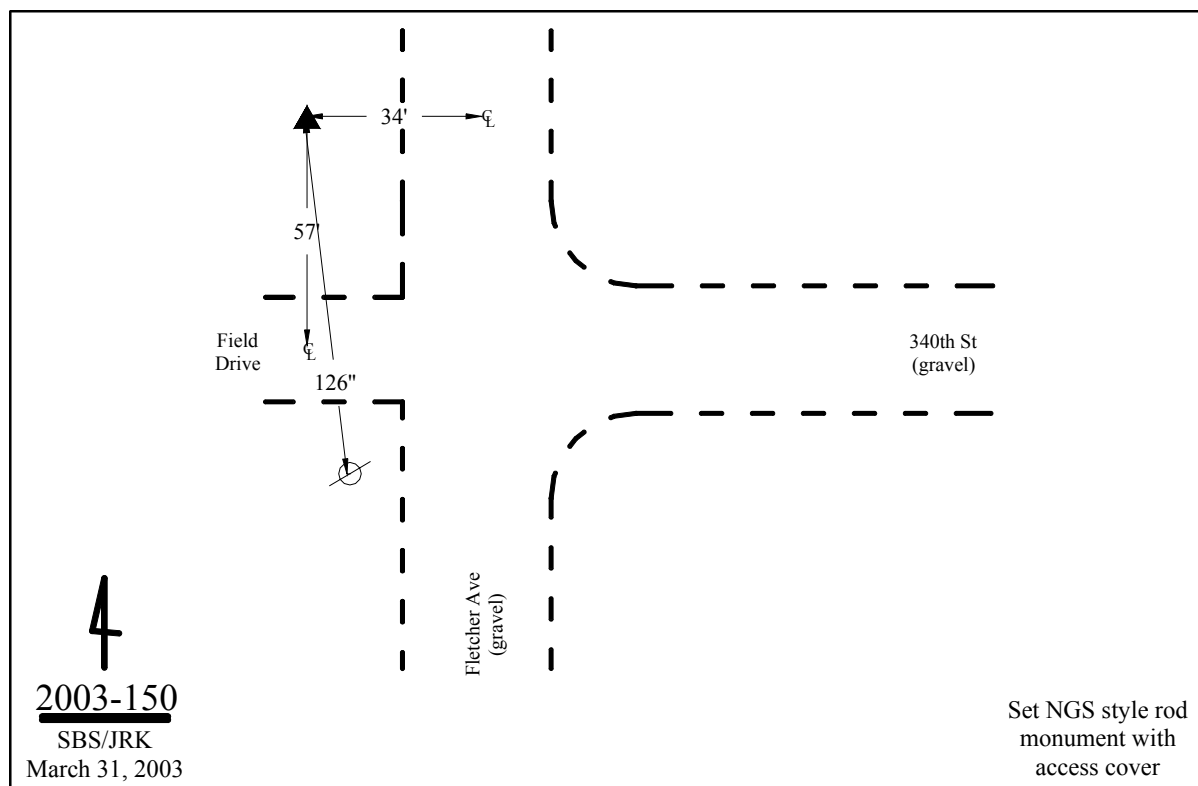
Combination Factor: **0.99991480**

99C Geoid Ht: **-28.959 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-150**

Location: **Near the SE Cor of Sec 33 T87N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **151**

Northing: **3573466.34 FT**

Northing: **1089194.720 M**

Easting: **4584392.31 FT**

Easting: **1397325.572 M**

Elev: **1201.71 FT**

Elev: **366.283 M**

Latitude: **N 42-17-46.31409**

Longitude: **W 094-44-42.53018**

Ellip. Ht: **337.396 M**

Theta: **- 0-50-38.010**

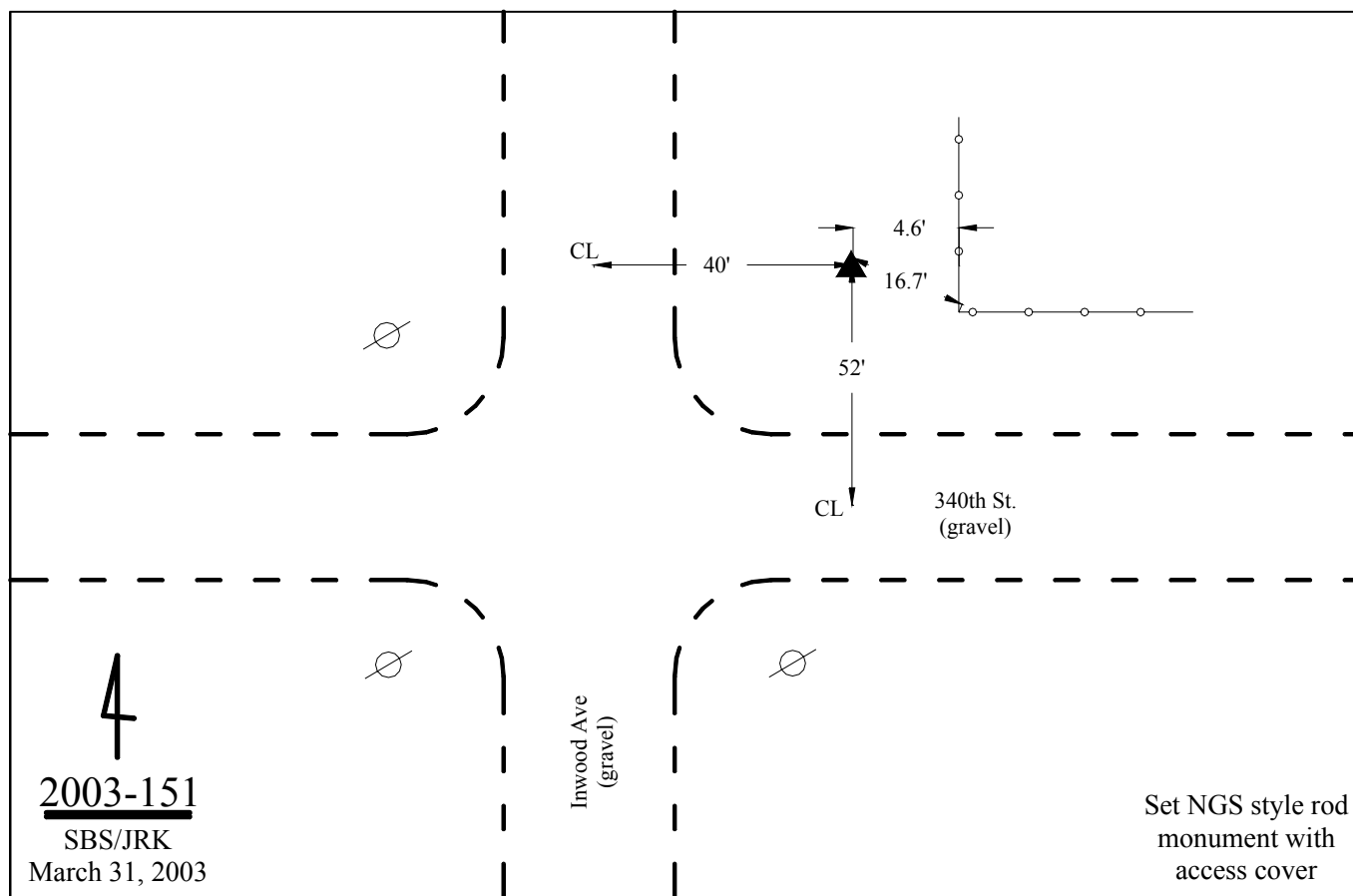
Combination Factor: **0.99991335**

99C Geoid Ht: **-28.887 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-151**

Location: **Near the SW Cor of Sec 31 T87N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **152**

Northing: **3573190.27 FT**

Northing: **1089110.572 M**

Easting: **4599920.52 FT**

Easting: **1402058.578 M**

Elev: **1201.32 FT**

Elev: **366.164 M**

Latitude: **N 42-17-45.79431**

Longitude: **W 094-41-15.87421**

Ellip. Ht: **337.382 M**

Theta: **- 0-48-17.951**

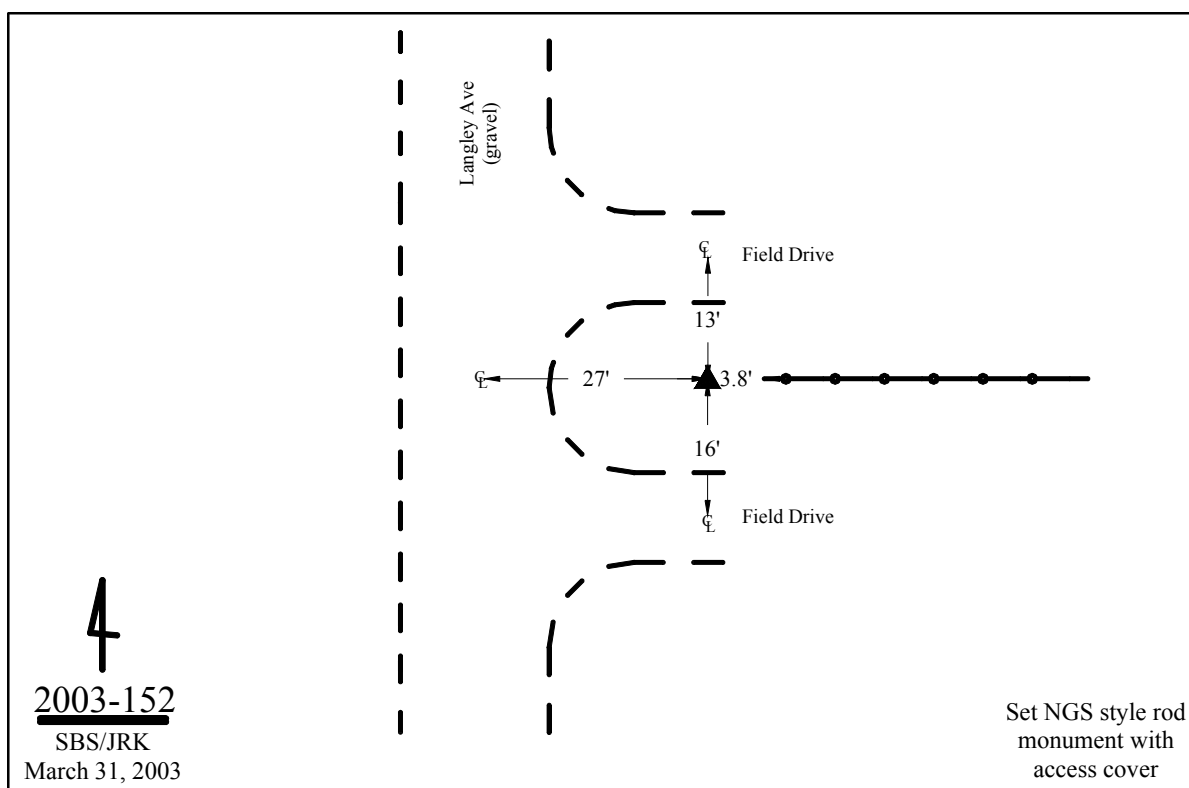
Combination Factor: **0.99991337**

99C Geoid Ht: **-28.782 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-152**

Location: **Near the SW Cor of Sec 34 T87N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **153**

Northing: **3572930.98 FT**

Northing: **1089031.542 M**

Easting: **4615737.40 FT**

Easting: **1406879.573 M**

Elev: **1186.47 FT**

Elev: **361.636 M**

Latitude: **N 42-17-45.37432**

Longitude: **W 094-37-45.38139**

Ellip. Ht: **332.995 M**

Theta: **- 0-45-55.290**

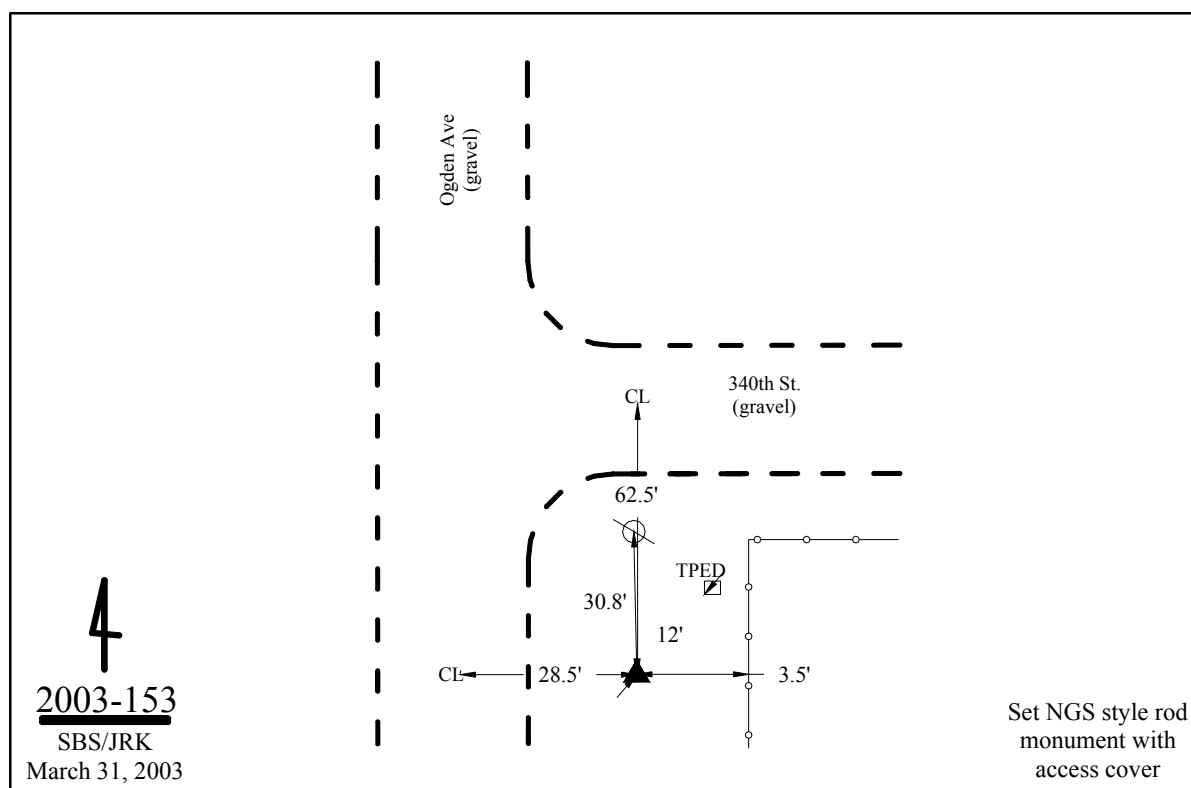
Combination Factor: **0.99991407**

99C Geoid Ht: **-28.641 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-153**

Location: **Near the NW Cor of Sec 6 T86N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **154**

Northing: **3572768.10** FT

Northing: **1088981.894** M

Easting: **4631187.16** FT

Easting: **1411588.669** M

Elev: **1160.58** FT

Elev: **353.744** M

Latitude: **N 42-17-45.75250**

Longitude: **W 094-34-19.79035**

Ellip. Ht: **325.269** M

Theta: **- 0-43-35.952**

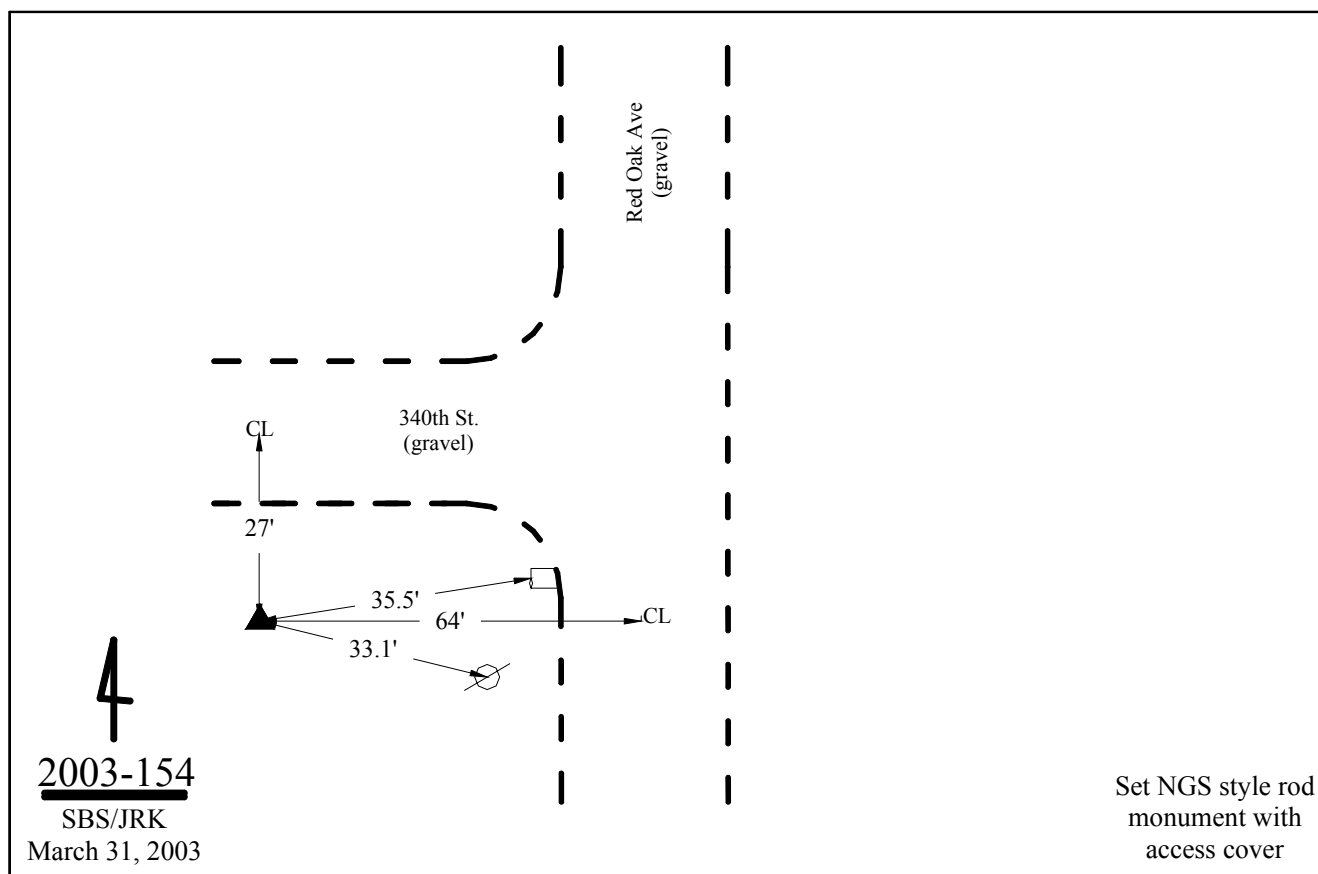
Combination Factor: **0.99991527**

99C Geoid Ht: **-28.475** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-154**

Location: **Near the NE Cor of Sec 4 T86N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.





2003
Calhoun County, Iowa
Iowa North Zone (1401)
Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **155**

Northing: **3572683.78 FT**

Northing: **1088956.194 M**

Easting: **4646977.17 FT**

Easting: **1416401.474 M**

Elev: **1146.89 FT**

Elev: **349.574 M**

Latitude: **N 42-17-46.84400**

Longitude: **W 094-30-49.68407**

Ellip. Ht: **321.298 M**

Theta: **- 0-41-13.554**

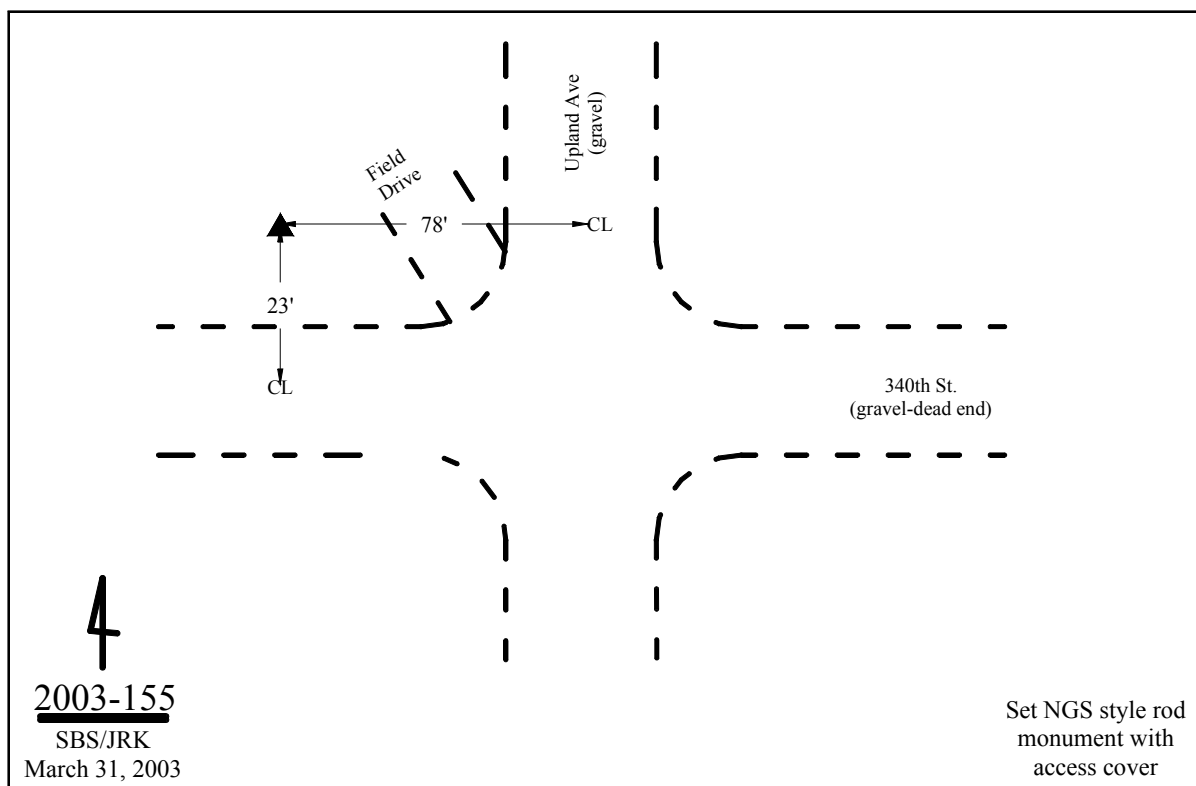
Combination Factor: **0.99991586**

99C Geoid Ht: **-28.276 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-155**

Location: **Near the SE Cor of Sec 36 T87N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **156**

Northing: **3572501.04 FT**

Northing: **1088900.495 M**

Easting: **4662595.59 FT**

Easting: **1421161.978 M**

Elev: **1149.46 FT**

Elev: **350.355 M**

Latitude: **N 42-17-46.83641**

Longitude: **W 094-27-21.84420**

Ellip. Ht: **322.299 M**

Theta: **- 0-38-52.691**

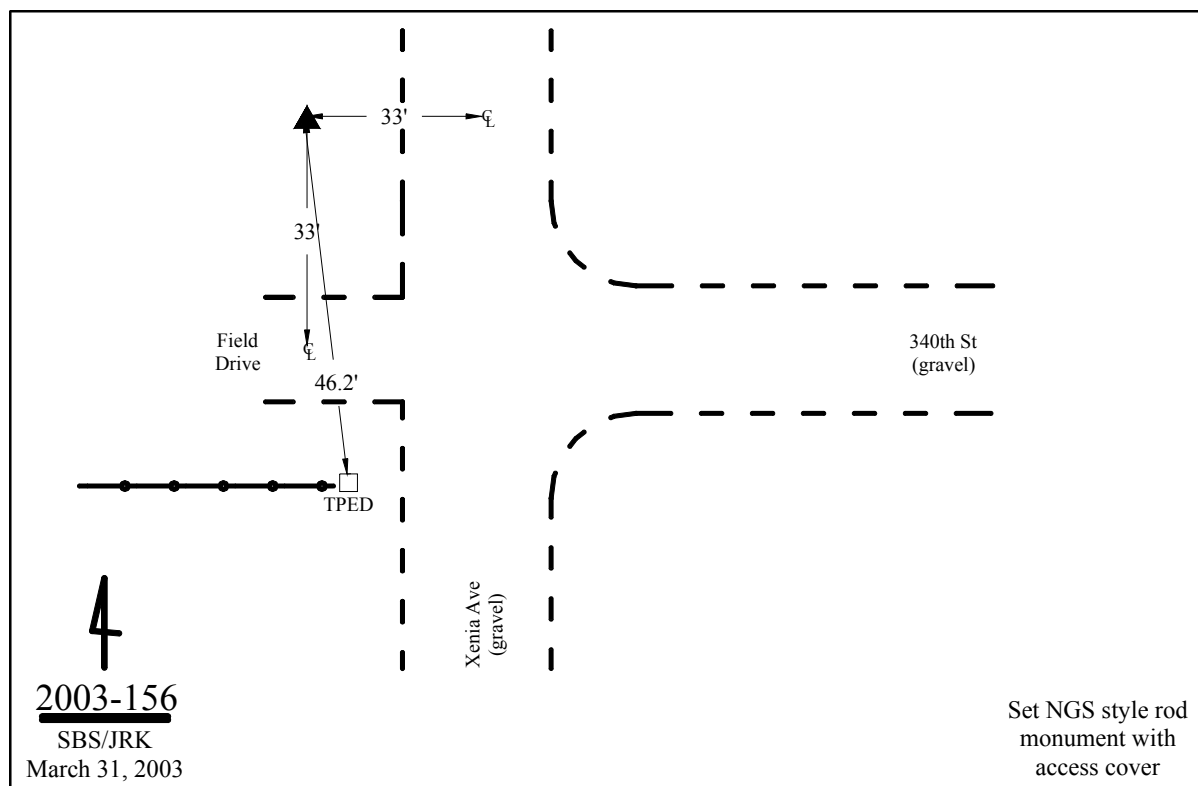
Combination Factor: **0.99991570**

99C Geoid Ht: **-28.056 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-156**

Location: **Near the SE Cor of Sec 33 T87N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **157**

Northing: **3558383.24 FT**

Northing: **1084597.382 M**

Easting: **4553572.24 FT**

Easting: **1387931.595 M**

Elev: **1210.97 FT**

Elev: **369.104 M**

Latitude: **N 42-15-12.64208**

Longitude: **W 094-51-29.35781**

Ellip. Ht: **340.118 M**

Theta: **- 0-55-13.736**

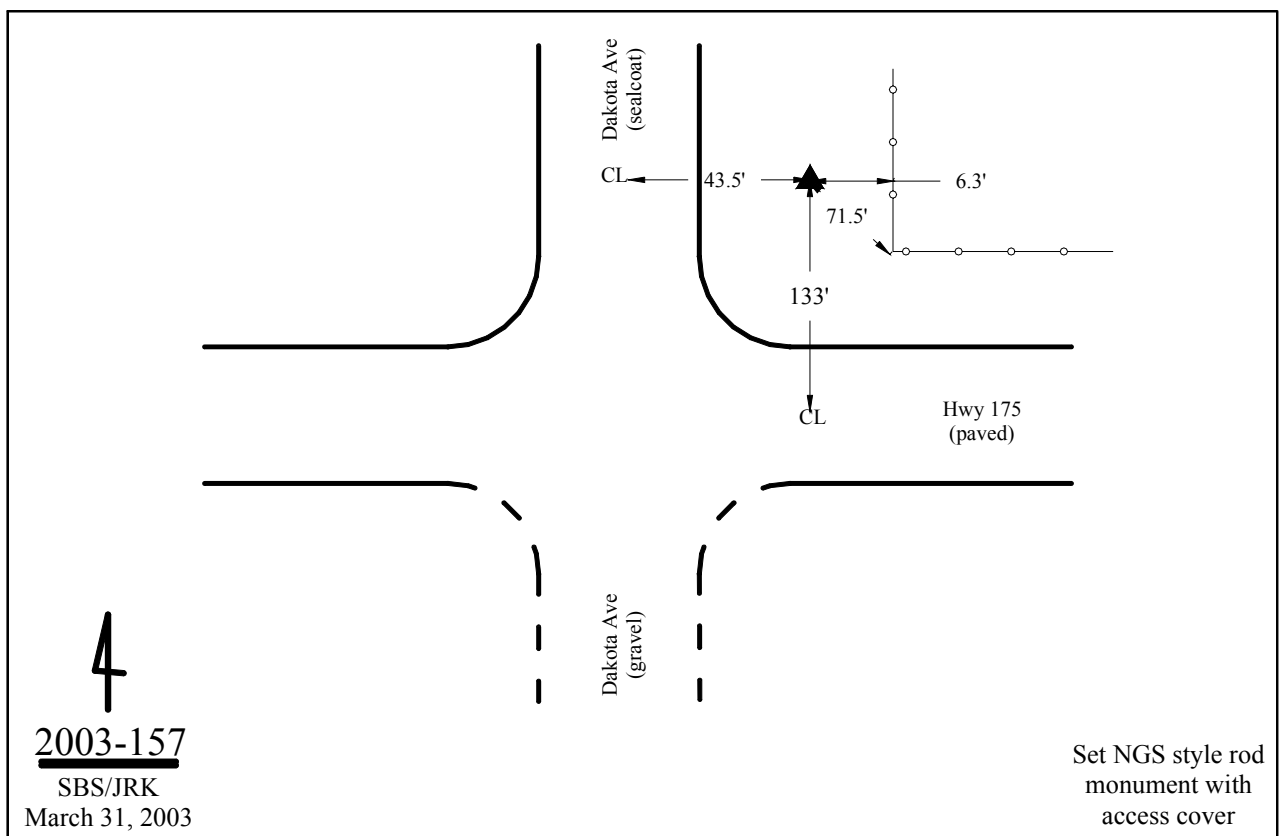
Combination Factor: **0.99991800**

99C Geoid Ht: **-28.986 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-157**

Location: **Near the SW Cor of Sec 18 T86N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **158**

Northing: **3557955.54 FT**

Northing: **1084467.018 M**

Easting: **4571024.95 FT**

Easting: **1393251.191 M**

Elev: **1117.58 FT**

Elev: **340.639 M**

Latitude: **N 42-15-11.12145**

Longitude: **W 094-47-37.22279**

Ellip. Ht: **311.725 M**

Theta: **- 0-52-36.407**

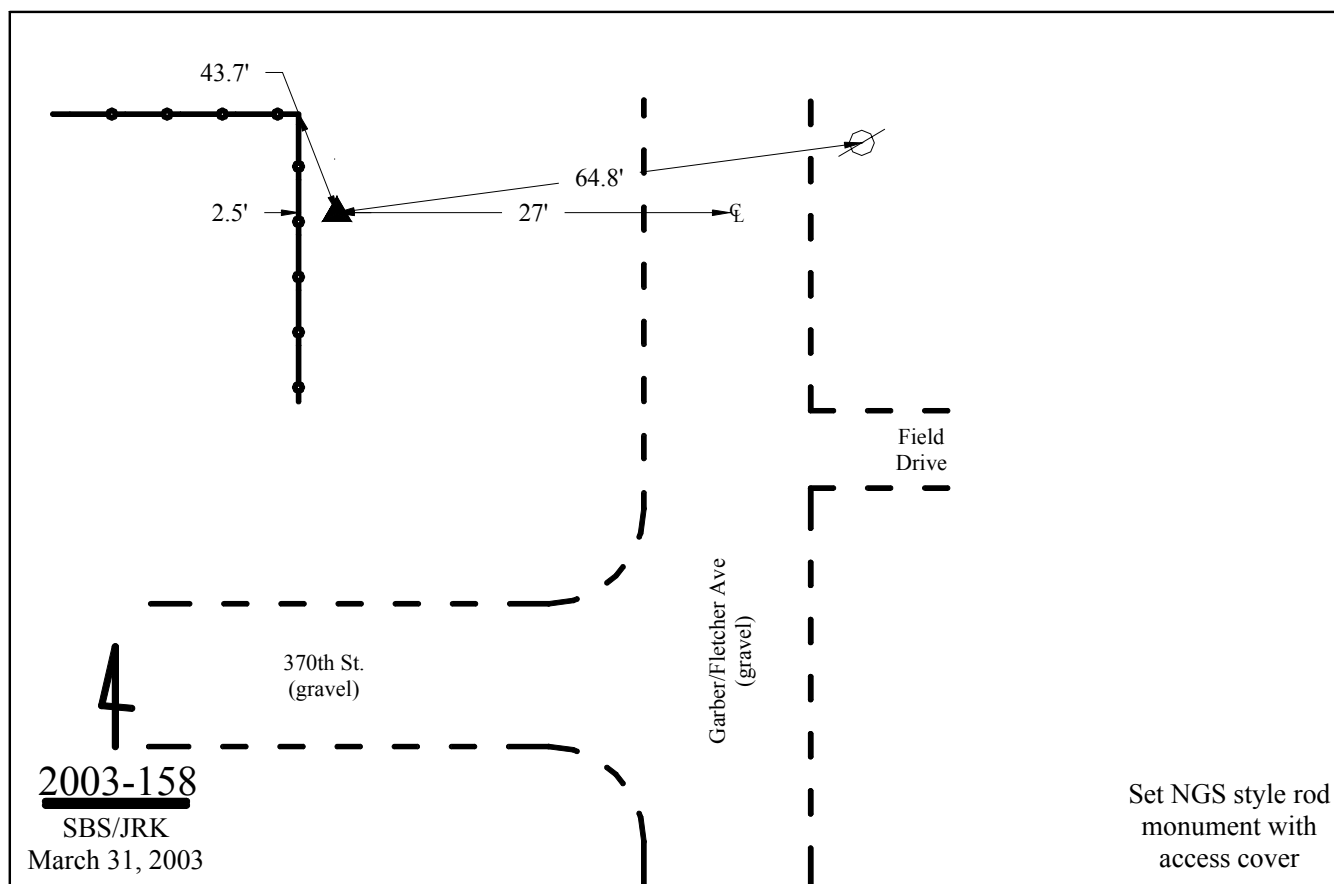
Combination Factor: **0.99992250**

99C Geoid Ht: **-28.914 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-158**

Location: **Near the N 1/4 Cor of Sec 22 T86N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **159**

Northing: **3557784.63 FT**

Northing: **1084414.925 M**

Easting: **4581502.33 FT**

Easting: **1396444.703 M**

Elev: **1189.66 FT**

Elev: **362.609 M**

Latitude: **N 42-15-10.99338**

Longitude: **W 094-45-17.88372**

Ellip. Ht: **333.764 M**

Theta: **- 0-51-01.971**

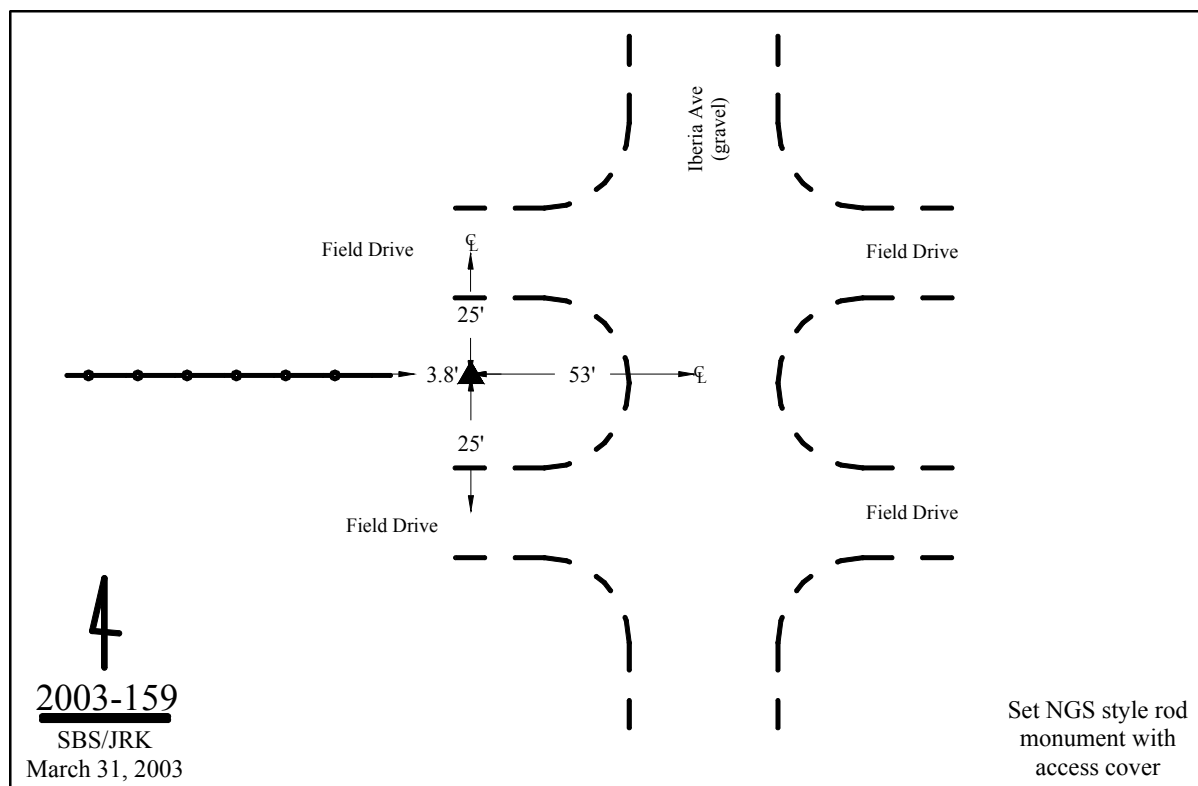
Combination Factor: **0.99991905**

99C Geoid Ht: **-28.845 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-159**

Location: **Near the N 1/4 Cor of Sec 24 T86N R34W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **160**

Northing: **3557464.35** FT

Northing: **1084317.303** M

Easting: **4599797.49** FT

Easting: **1402021.078** M

Elev: **1229.15** FT

Elev: **374.646** M

Latitude: **N 42-15-10.44037**

Longitude: **W 094-41-14.57218**

Ellip. Ht: **345.966** M

Theta: **- 0-48-17.068**

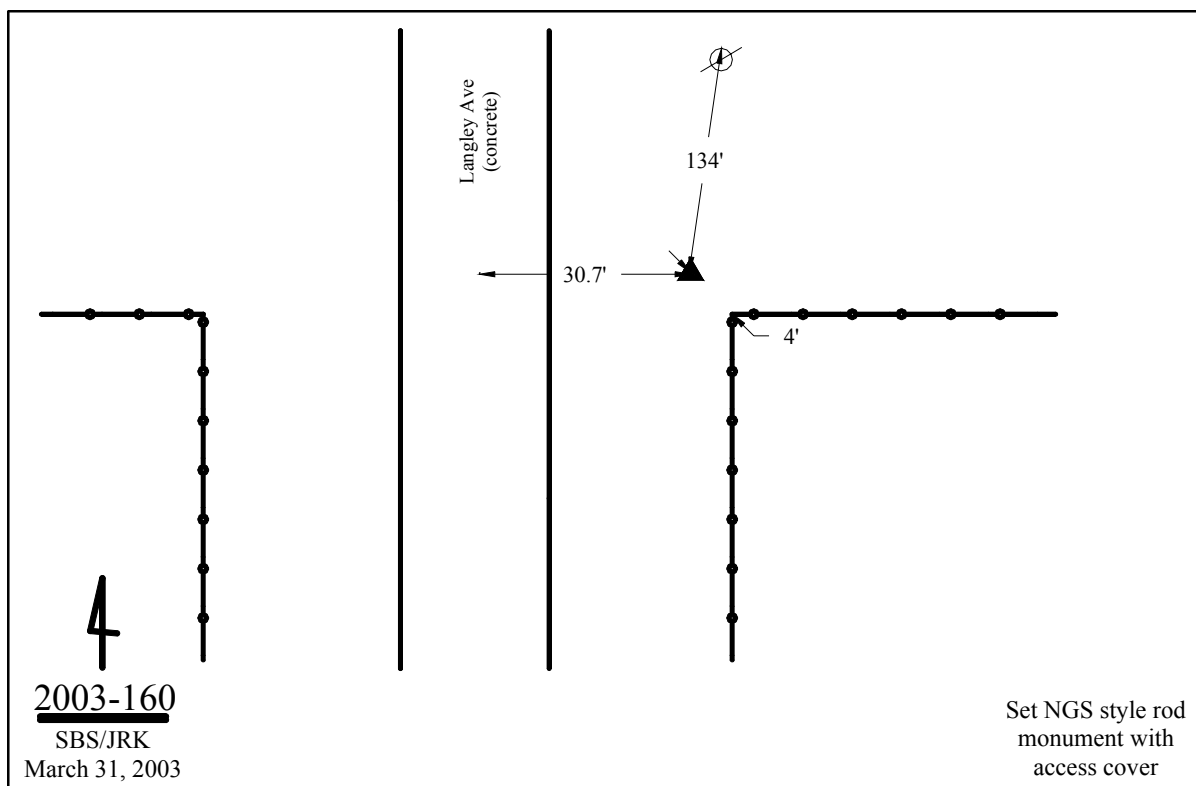
Combination Factor: **0.99991715**

99C Geoid Ht: **-28.680** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-160**

Location: **Near the SW Cor of Sec 15 T86N R33W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **161**

Northing: **3557293.53 FT**

Northing: **1084265.237 M**

Easting: **4615639.70 FT**

Easting: **1406849.795 M**

Elev: **1174.31 FT**

Elev: **357.929 M**

Latitude: **N 42-15-10.89691**

Longitude: **W 094-37-43.90285**

Ellip. Ht: **329.425 M**

Theta: **- 0-45-54.288**

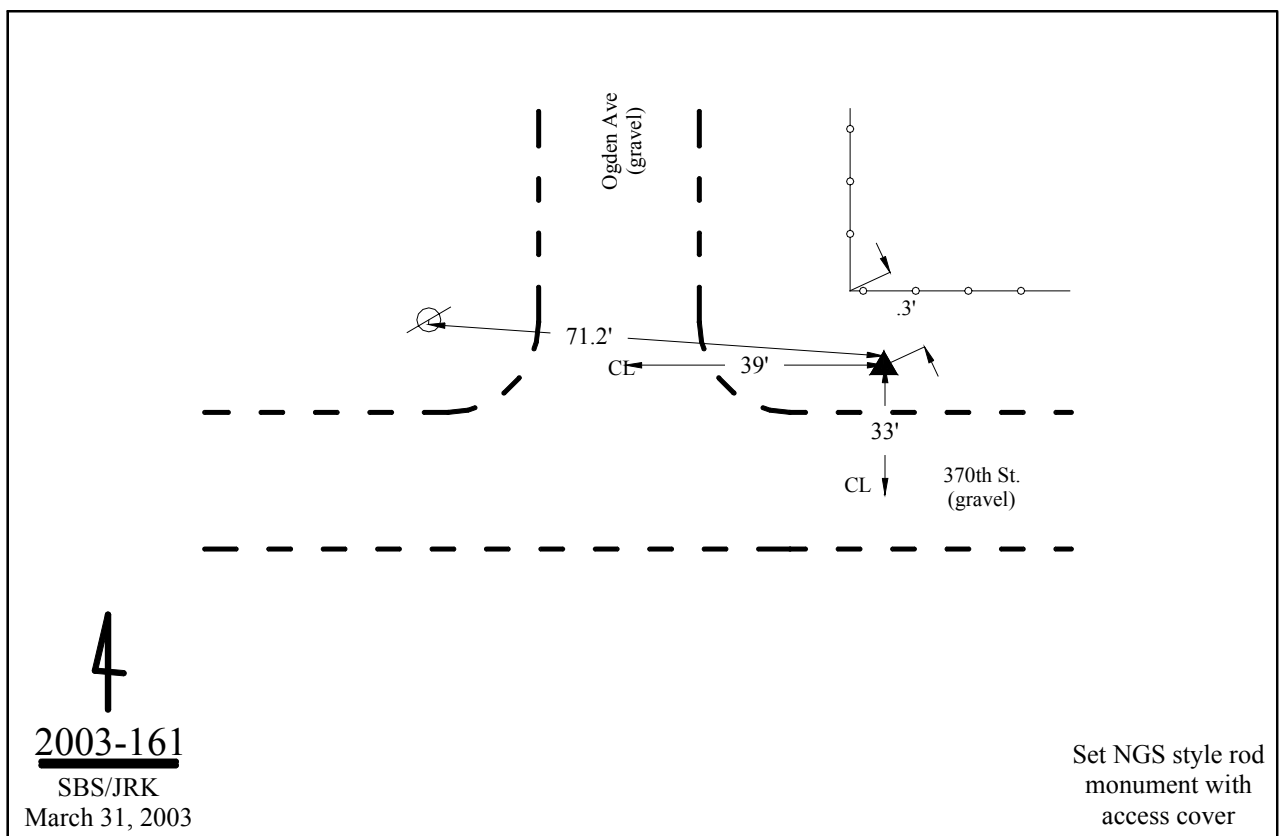
Combination Factor: **0.99991974**

99C Geoid Ht: **-28.504 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-161**

Location: **Near the SW Cor of Sec 18 T86N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **162**

Northing: **3556944.68 FT**

Northing: **1084158.908 M**

Easting: **4631424.96 FT**

Easting: **1411661.150 M**

Elev: **1154.53 FT**

Elev: **351.900 M**

Latitude: **N 42-15-09.47946**

Longitude: **W 094-34-13.96015**

Ellip. Ht: **323.609 M**

Theta: **- 0-43-32.001**

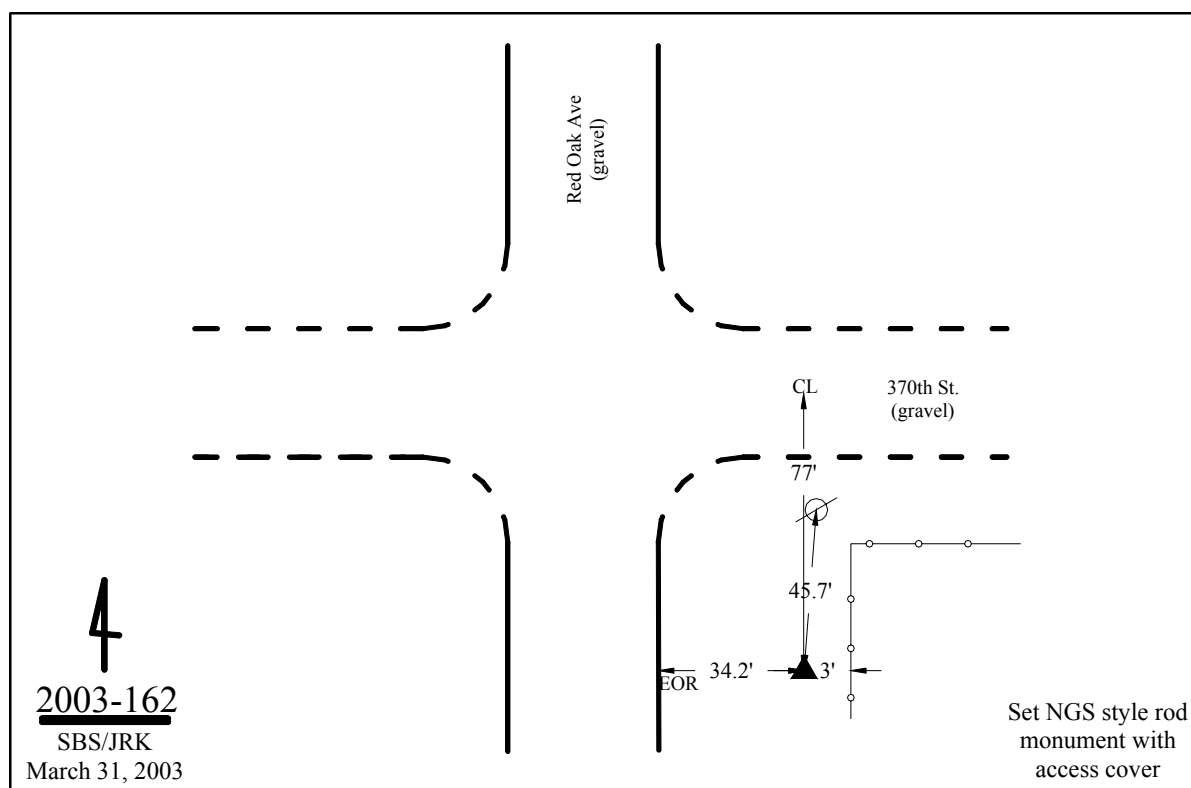
Combination Factor: **0.99992070**

99C Geoid Ht: **-28.291 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-162**

Location: **Near the NW Cor of Sec 22 T86N R32W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **163**

Northing: **3556735.22 FT**

Northing: **1084095.062 M**

Easting: **4646986.30 FT**

Easting: **1416404.257 M**

Elev: **1133.48 FT**

Elev: **345.486 M**

Latitude: **N 42-15-09.30474**

Longitude: **W 094-30-47.01957**

Ellip. Ht: **317.420 M**

Theta: **- 0-41-11.748**

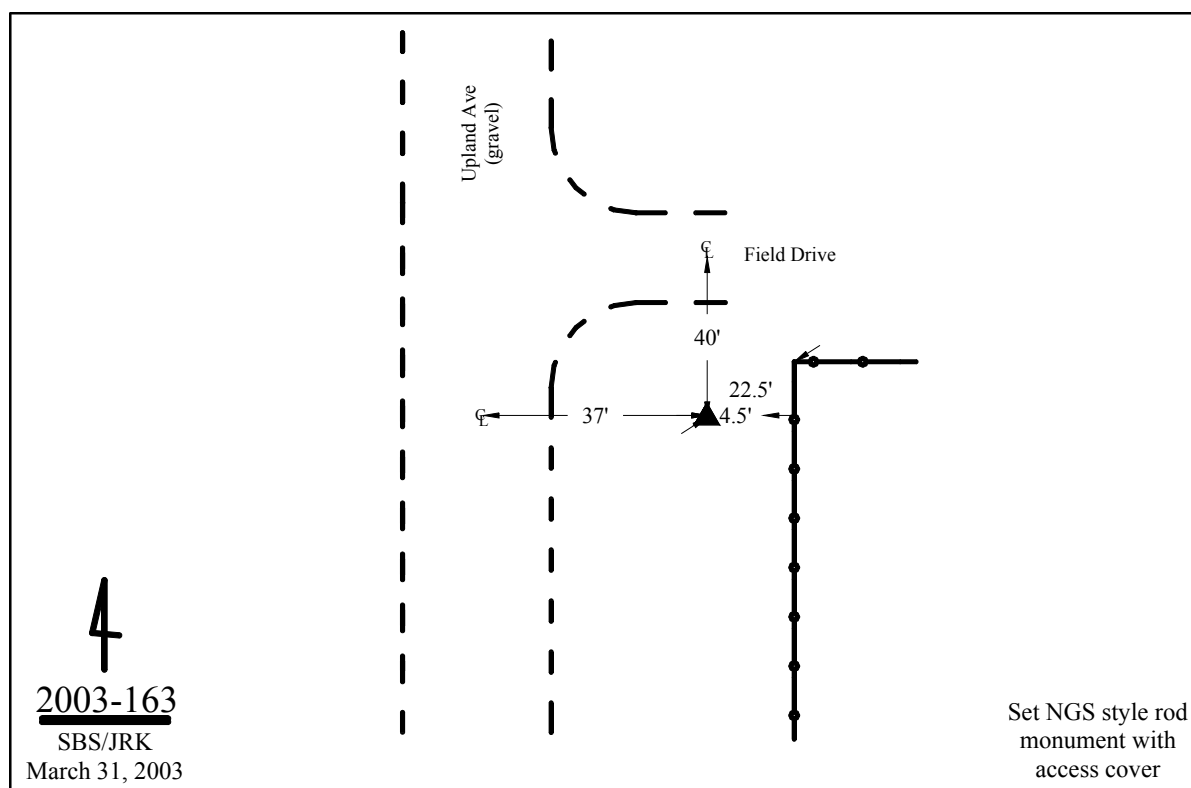
Combination Factor: **0.99992167**

99C Geoid Ht: **-28.066 M**

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-163**

Location: **Near the NW Cor of Sec 19 T86N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **164**

Northing: **3556552.01** FT

Northing: **1084039.222** M

Easting: **4662419.30** FT

Easting: **1421108.245** M

Elev: **1135.97** FT

Elev: **346.243** M

Latitude: **N 42-15-09.27056**

Longitude: **W 094-27-21.78983**

Ellip. Ht: **318.405** M

Theta: **- 0-38-52.654**

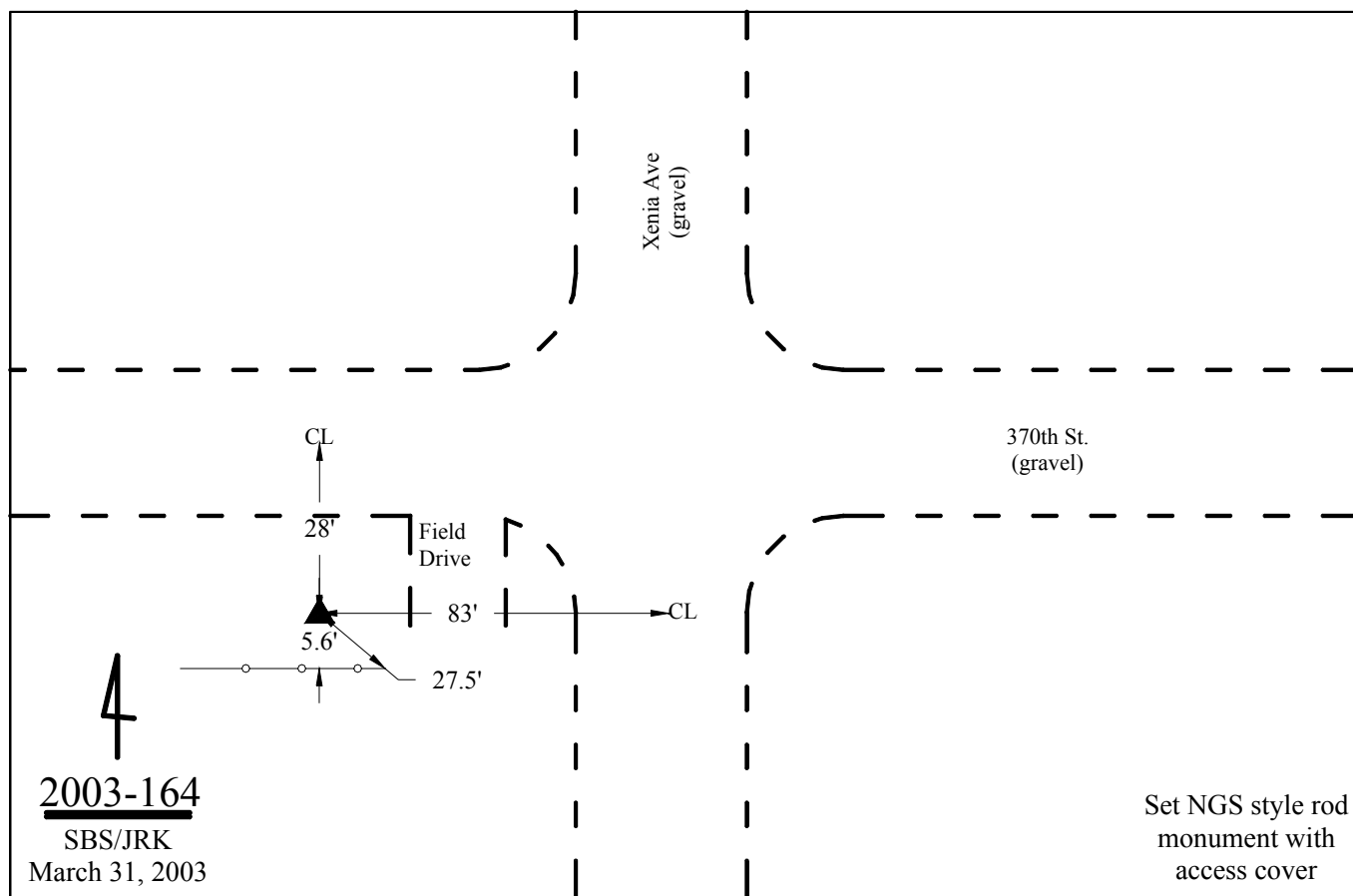
Combination Factor: **0.99992151**

99C Geoid Ht: **-27.838** M

Designation: **CALHOUN COUNTY GPS CONTROL PT 2003-164**

Location: **Near the NE Cor of Sec 21 T86N R31W.**

Monument Type: 5/8" dia driven aluminum rod with a 2-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003
Calhoun County, Iowa
Iowa North Zone (1401)
Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **202**

Northing: **3677324.97 FT**

Northing: **1120850.894 M**

Easting: **4558245.04 FT**

Easting: **1389355.866 M**

Elev: **1229.15 FT**

Elev: **374.646 M**

Latitude: **N 42-34-48.20992**

Longitude: **W 094-50-52.44620**

Ellip. Ht: **345.887 M**

Theta: **- 0-54-48.719**

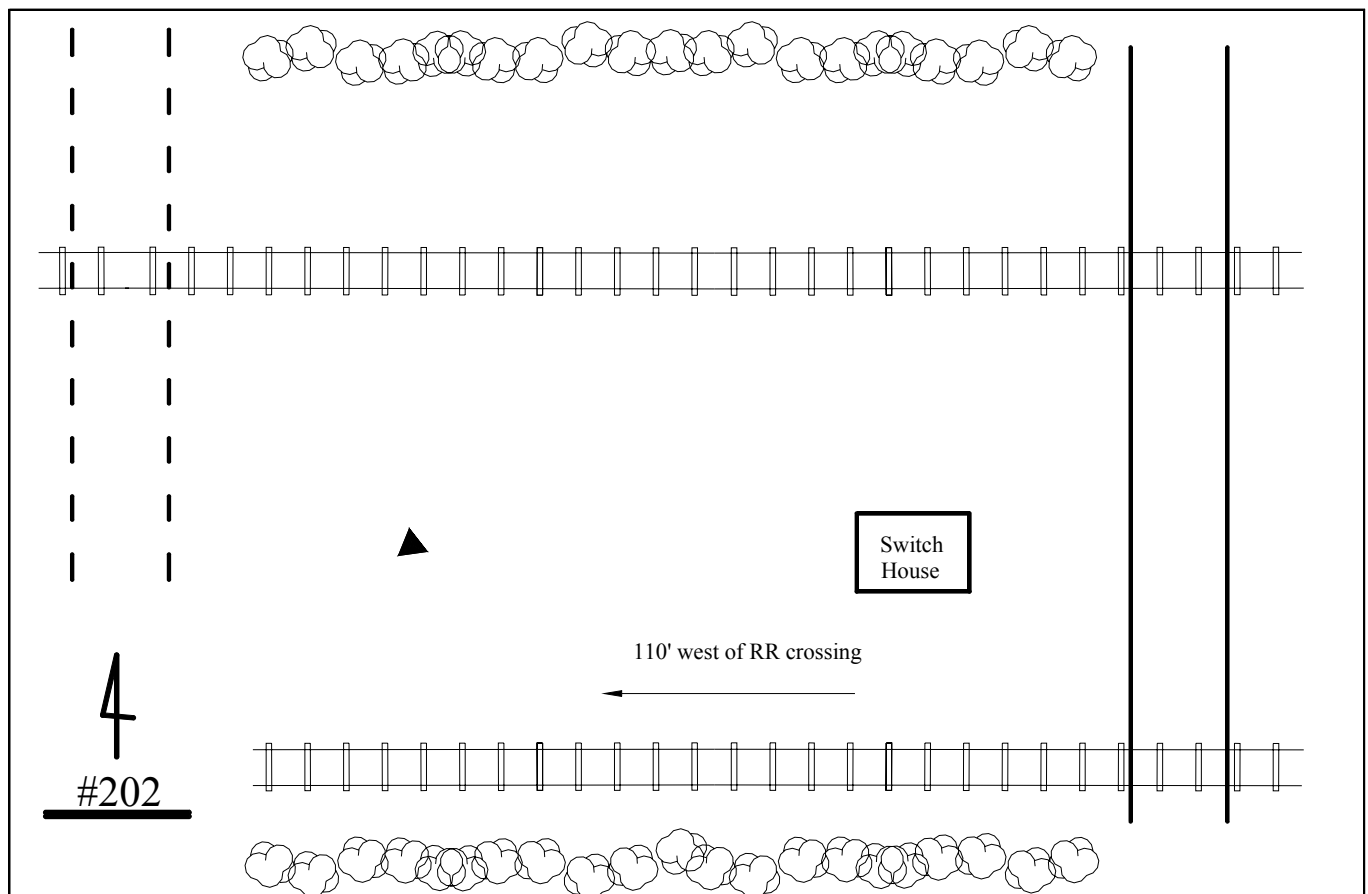
Combination Factor: **0.99989229**

99C Geoid Ht: **-28.759 M**

Designation: **NGS second order bench mark "X 22" PID NL0247**

Location: **In the SW 1/4 of Sec 27 T90N 34W.**

Monument Type: A standard bench disk set in the top of a concrete monument



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **203**

Northing: **3648195.46 FT**

Northing: **1111972.201 M**

Easting: **4622565.10 FT**

Easting: **1408960.659 M**

Elev: **1240.96 FT**

Elev: **378.246 M**

Latitude: **N 42-30-09.71223**

Longitude: **W 094-36-27.65927**

Ellip. Ht: **349.312 M**

Theta: **- 0-45-02.614**

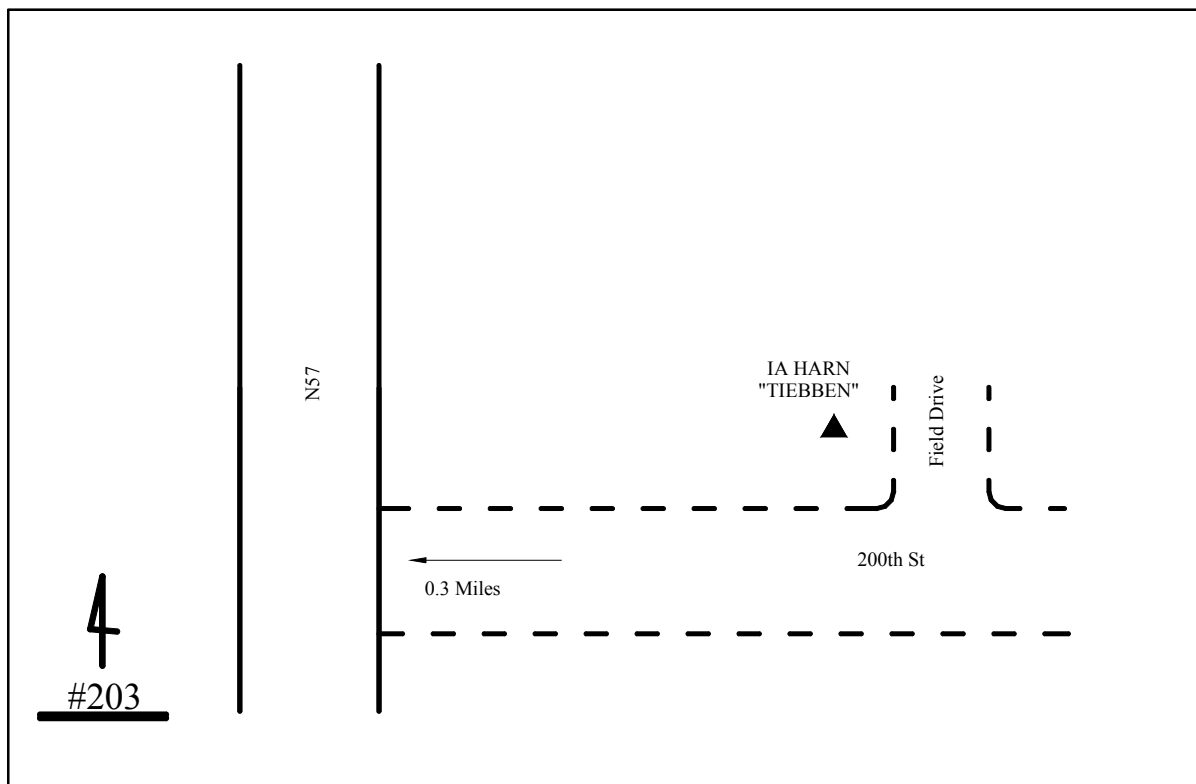
Combination Factor: **0.99989471**

99C Geoid Ht: **-28.934 M**

Designation: **CBN horizontal control station "TIEBBEN" PID NL0870**

Location: **Near the S 1/4 Cor of Sec 22 T89N R32W.**

Monument Type: A standard triangulation disk set in the top of a square concrete monument



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **204**

Northing: **3612159.79** FT

Northing: **1100988.507** M

Easting: **4613418.27** FT

Easting: **1406172.700** M

Elev: **1224.09** FT

Elev: **373.102** M

Latitude: **N 42-24-12.56105**

Longitude: **W 094-38-23.27534**

Ellip. Ht: **344.208** M

Theta: **- 0-46-20.973**

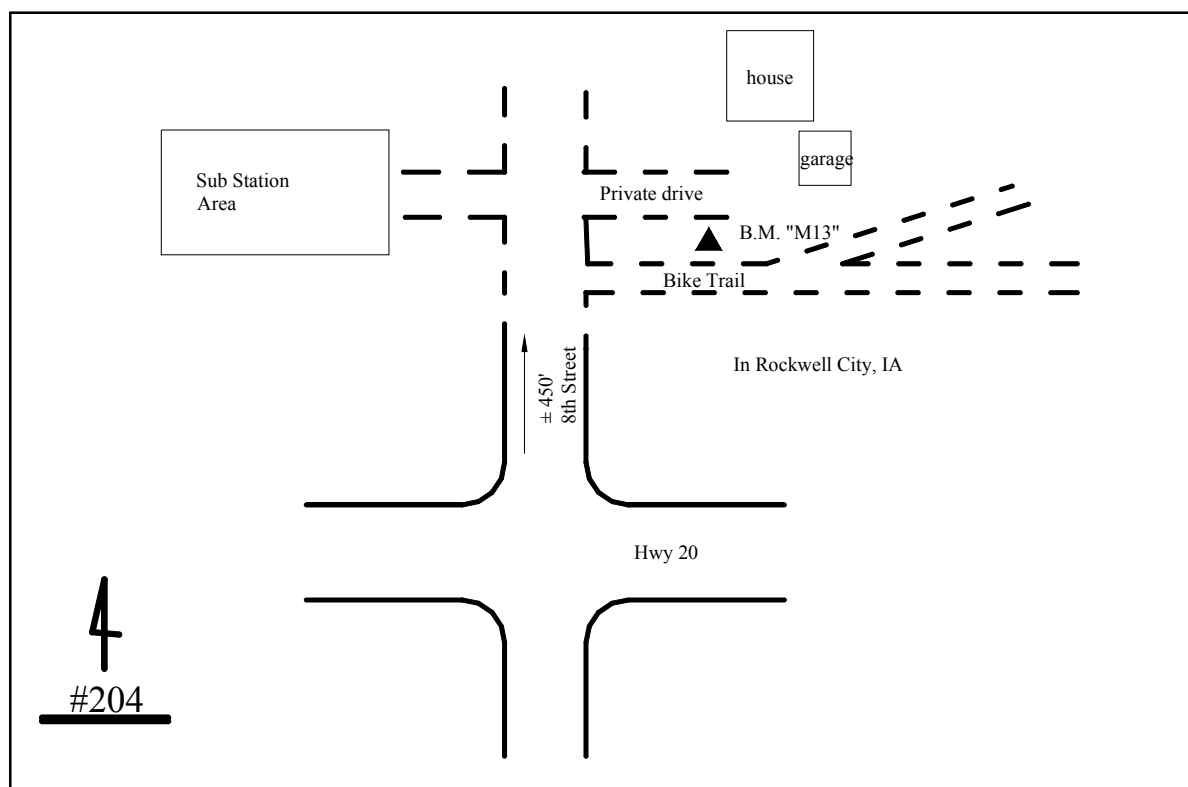
Combination Factor: **0.99990196**

99C Geoid Ht: **-28.894** M

Designation: **Original disk is NGS first order bench mark "M 13" PID NL0145**

Location: **Near the S 1/4 Cor of Sec 25 T88N R33W.**

Monument Type: Temporary 5/8" x 30" rebar. Original bench disk set in square concrete monument



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **205**

Northing: **3608958.57** FT

Northing: **1100012.771** M

Easting: **4614903.23** FT

Easting: **1406625.319** M

Elev: **1234.26** FT

Elev: **376.204** M

Latitude: **N 42-23-41.13740**

Longitude: **W 094-38-02.91130**

Ellip. Ht: **347.326** M

Theta: **- 0-46-07.171**

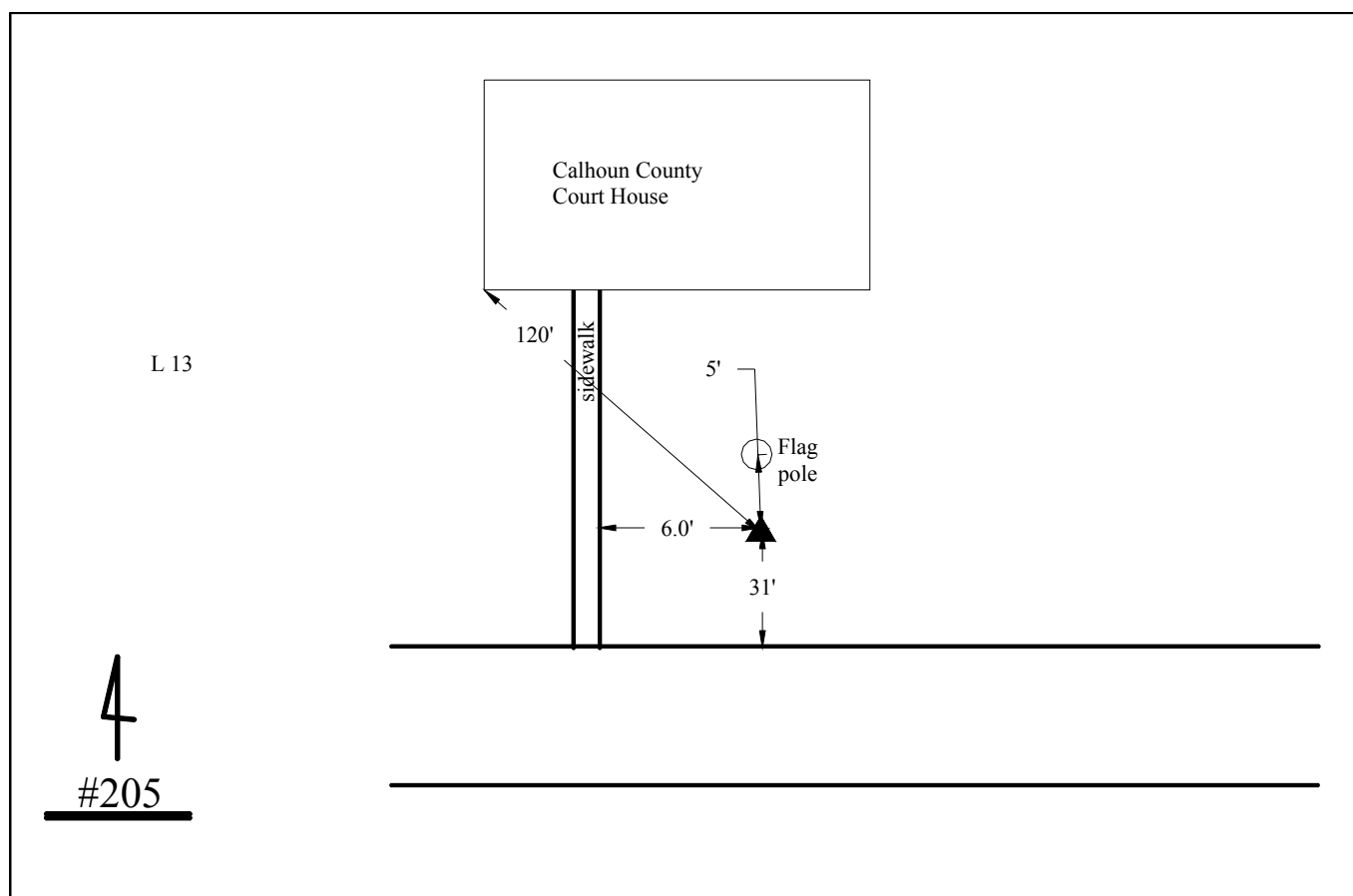
Combination Factor: **0.99990218**

99C Geoid Ht: **-28.878** M

Designation: **NGS first order bench mark "L 13" PID NL0144**

Location: **In the NE 1/4 of Sec 36 T88N R33W.**

Monument Type: A standard bench disk set in the top of a concrete monument



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **209**

Northing: **3535663.69 FT**

Northing: **1077672.449 M**

Easting: **4651090.91 FT**

Easting: **1417655.345 M**

Elev: **1121.95 FT**

Elev: **341.972 M**

Latitude: **N 42-11-41.64092**

Longitude: **W 094-29-49.13934**

Ellip. Ht: **314.236 M**

Theta: **- 0-40-32.520**

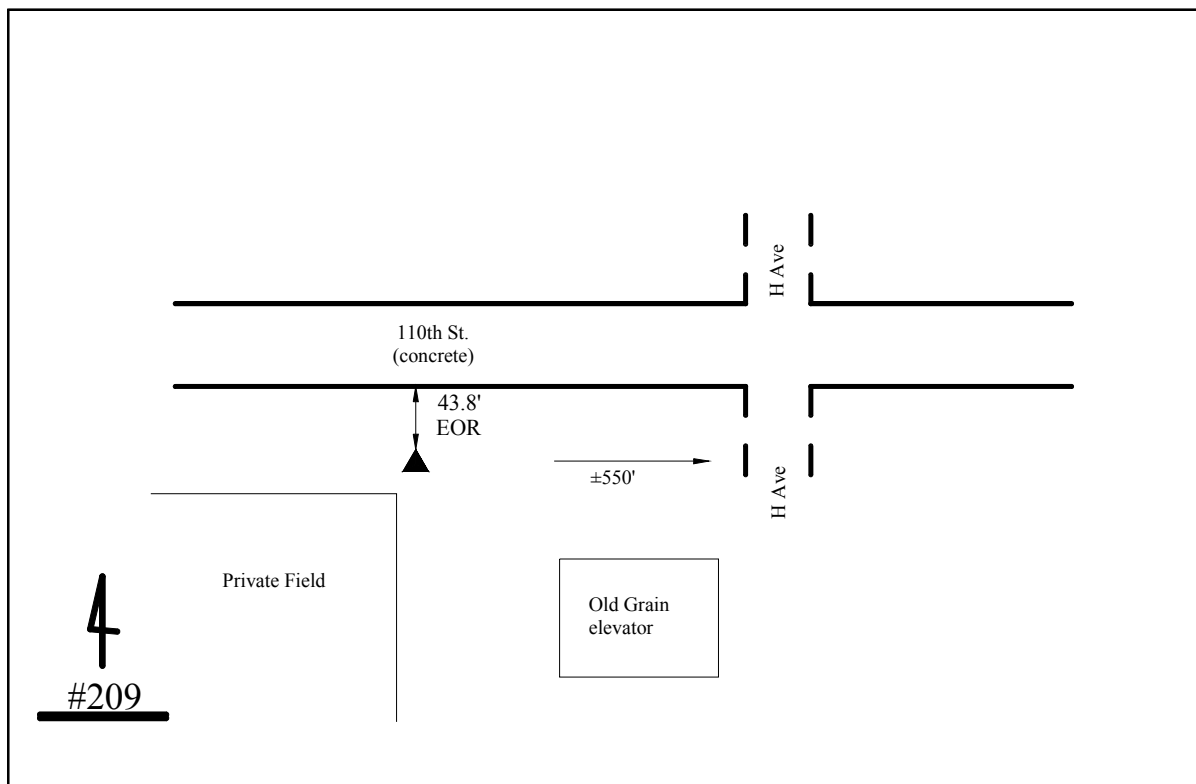
Combination Factor: **0.99992992**

99C Geoid Ht: **-27.736 M**

Designation: **NGS second order bench mark "Q 101" PID NL0092**

Location: **In the NE 1/4 of Sec 7 T85N R31W.**

Monument Type: A standard bench disk set in the top of a concrete monument



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **210**

Northing: **3551299.59 FT**

Northing: **1082438.280 M**

Easting: **4667682.50 FT**

Easting: **1422712.471 M**

Elev: **1127.82 FT**

Elev: **343.761 M**

Latitude: **N 42-14-17.96836**

Longitude: **W 094-26-11.03486**

Ellip. Ht: **316.068 M**

Theta: **- 0-38-04.701**

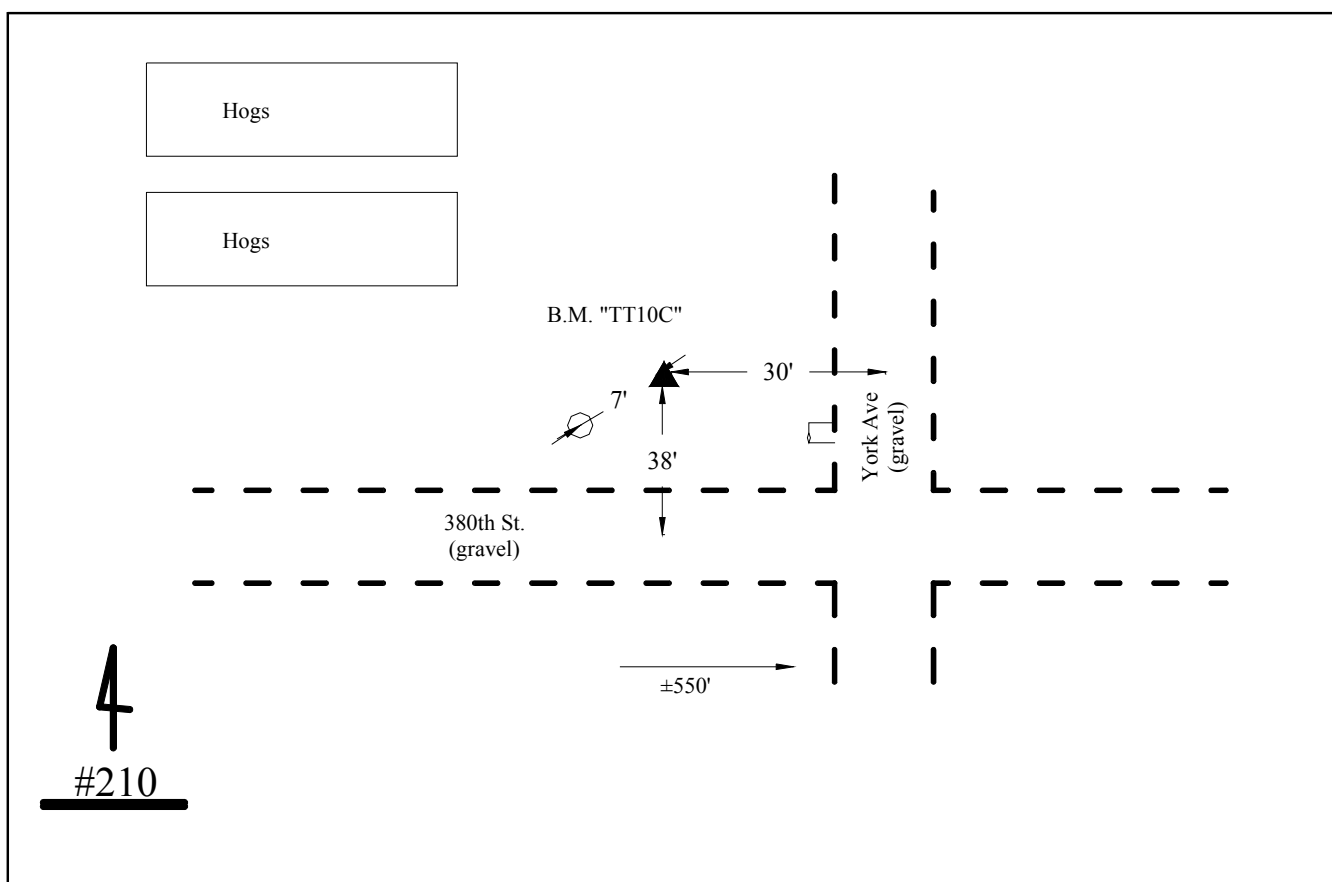
Combination Factor: **0.99992370**

99C Geoid Ht: **-27.693 M**

Designation: **USGS third order bench mark "TT 10 C"**

Location: **Near the SE Cor of Sec 22 T86N R31W.**

Monument Type: A standard bench disk set in the top of a concrete monument



2003
Calhoun County, Iowa
 Iowa North Zone (1401)
 Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88

Point Number: **211**

Northing: **3605092.42 FT**

Northing: **1098834.368 M**

Easting: **4617640.85 FT**

Easting: **1407459.747 M**

Elev: **1212.84 FT**

Elev: **369.673 M**

Latitude: **N 42-23-03.30965**

Longitude: **W 094-37-25.74437**

Ellip. Ht: **340.822 M**

Theta: **- 0-45-41.981**

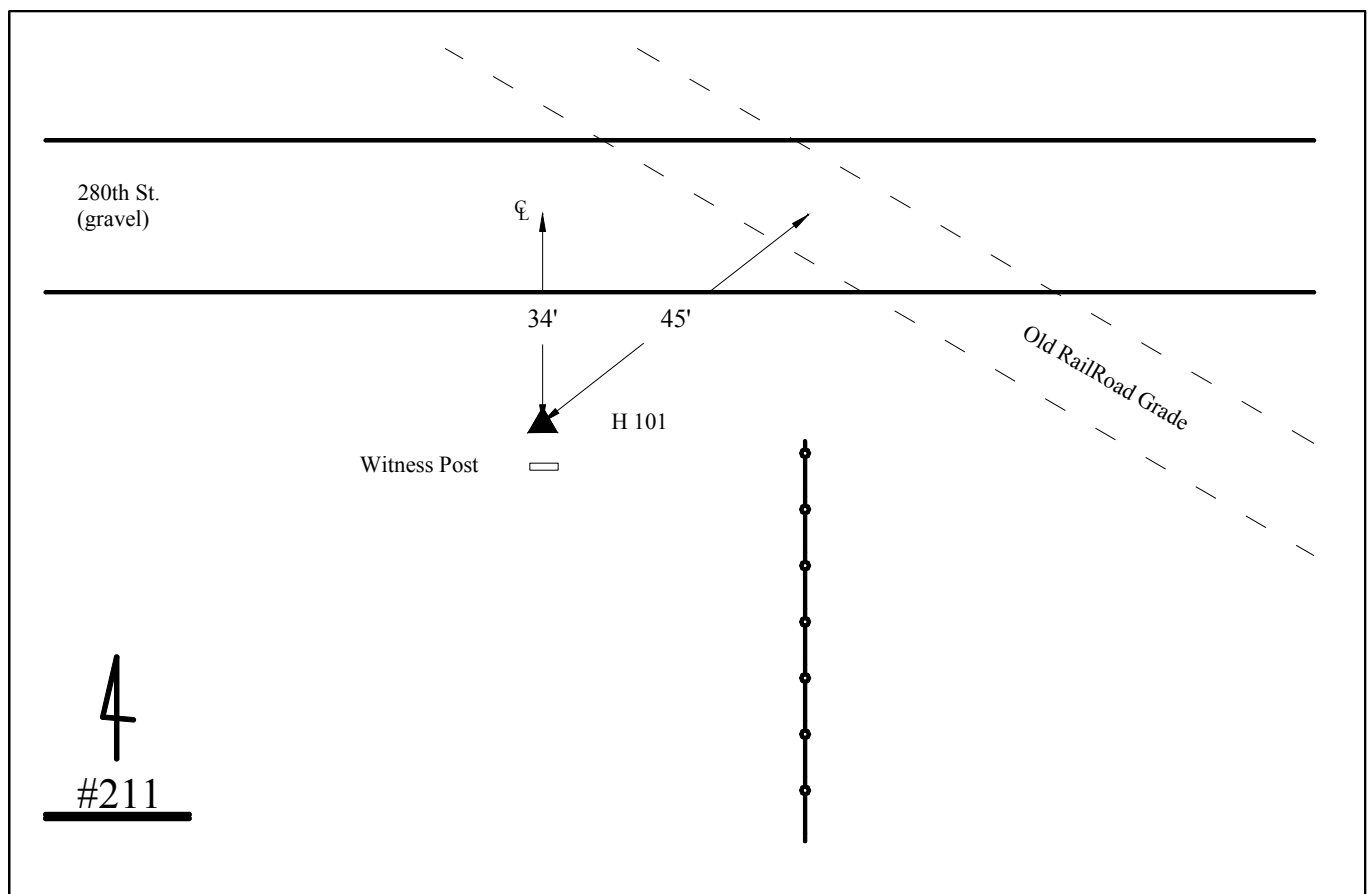
Combination Factor: **0.99990409**

99C Geoid Ht: **-28.851 M**

Designation: **NGS second order bench mark "H 101" PID NL0166**

Location: **In the NW 1/4 of Sec 6 T87N R32W.**

Monument Type: A standard bench disk set in the top of a concrete monument



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **212**

Northing: **3619659.06 FT**

Northing: **1103274.287 M**

Easting: **4533767.47 FT**

Easting: **1381895.088 M**

Elev: **1228.02 FT**

Elev: **374.300 M**

Latitude: **N 42-25-14.65243**

Longitude: **W 094-56-06.50289**

Ellip. Ht: **345.482 M**

Theta: **- 0-58-21.569**

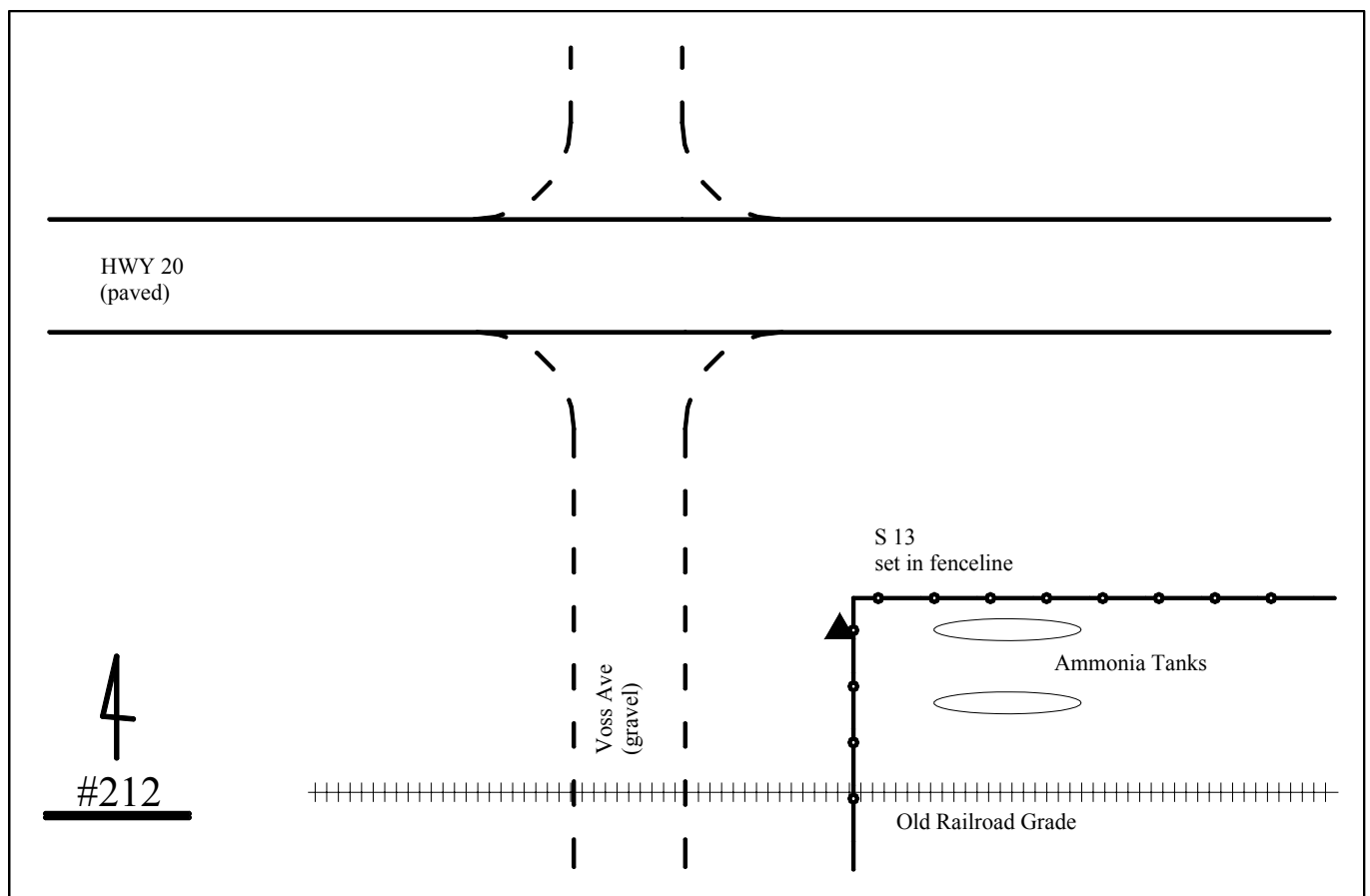
Combination Factor: **0.99990043**

99C Geoid Ht: **-28.818 M**

Designation: **NGS third order bench mark "S 13 RESET" PID NL0151**

Location: **In the SW 1/4 of Sec 21 T88N R35W.**

Monument Type: A standard bench disk set in the top of a concrete monument



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6003**

Northing: **3668153.82 FT**

Northing: **1118055.521 M**

Easting: **4667229.84 FT**

Easting: **1422574.500 M**

Elev: **1186.90 FT**

Elev: **361.769 M**

Latitude: **N 42-33-32.20737**

Longitude: **W 094-26-34.37820**

Ellip. Ht: **332.847 M**

Theta: **- 0-38-20.521**

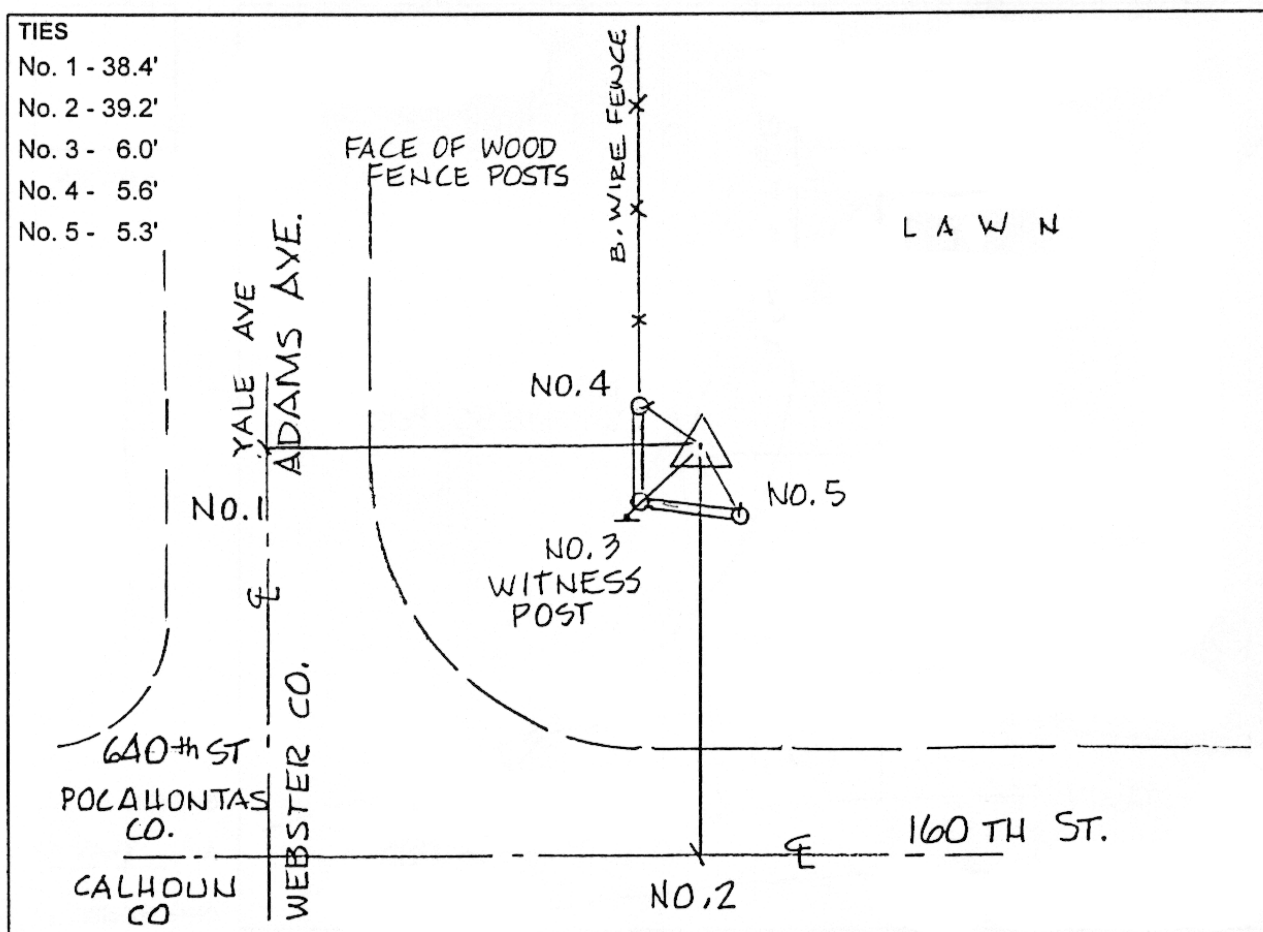
Combination Factor: **0.99989496**

99C Geoid Ht: **-28.922 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6003**

Location: **Near the SW Cor of Sec 31 T90N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6058**

Northing: **3604134.28 FT**

Northing: **1098542.325 M**

Easting: **4678858.11 FT**

Easting: **1426118.805 M**

Elev: **1150.94 FT**

Elev: **350.806 M**

Latitude: **N 42-23-01.07360**

Longitude: **W 094-23-49.92715**

Ellip. Ht: **322.507 M**

Theta: **- 0-36-29.066**

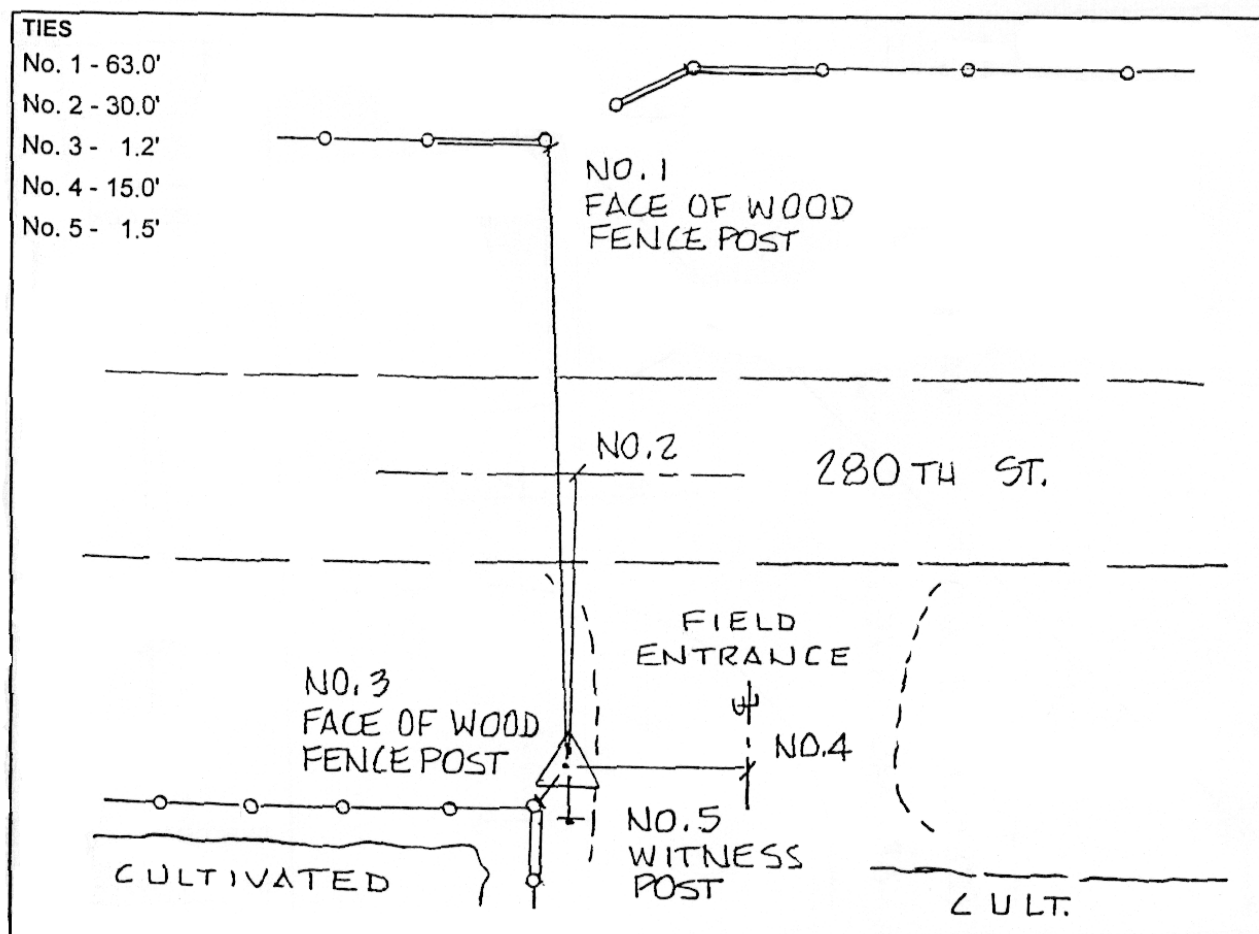
Combination Factor: **0.99990701**

99C Geoid Ht: **-28.299 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6058**

Location: **Near the NW Cor of Sec 6 T87N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6059**

Northing: **3620047.47 FT**

Northing: **1103392.676 M**

Easting: **4679010.15 FT**

Easting: **1426165.147 M**

Elev: **1160.80 FT**

Elev: **353.814 M**

Latitude: **N 42-25-38.28140**

Longitude: **W 094-23-50.15182**

Ellip. Ht: **325.304 M**

Theta: **- 0-36-29.218**

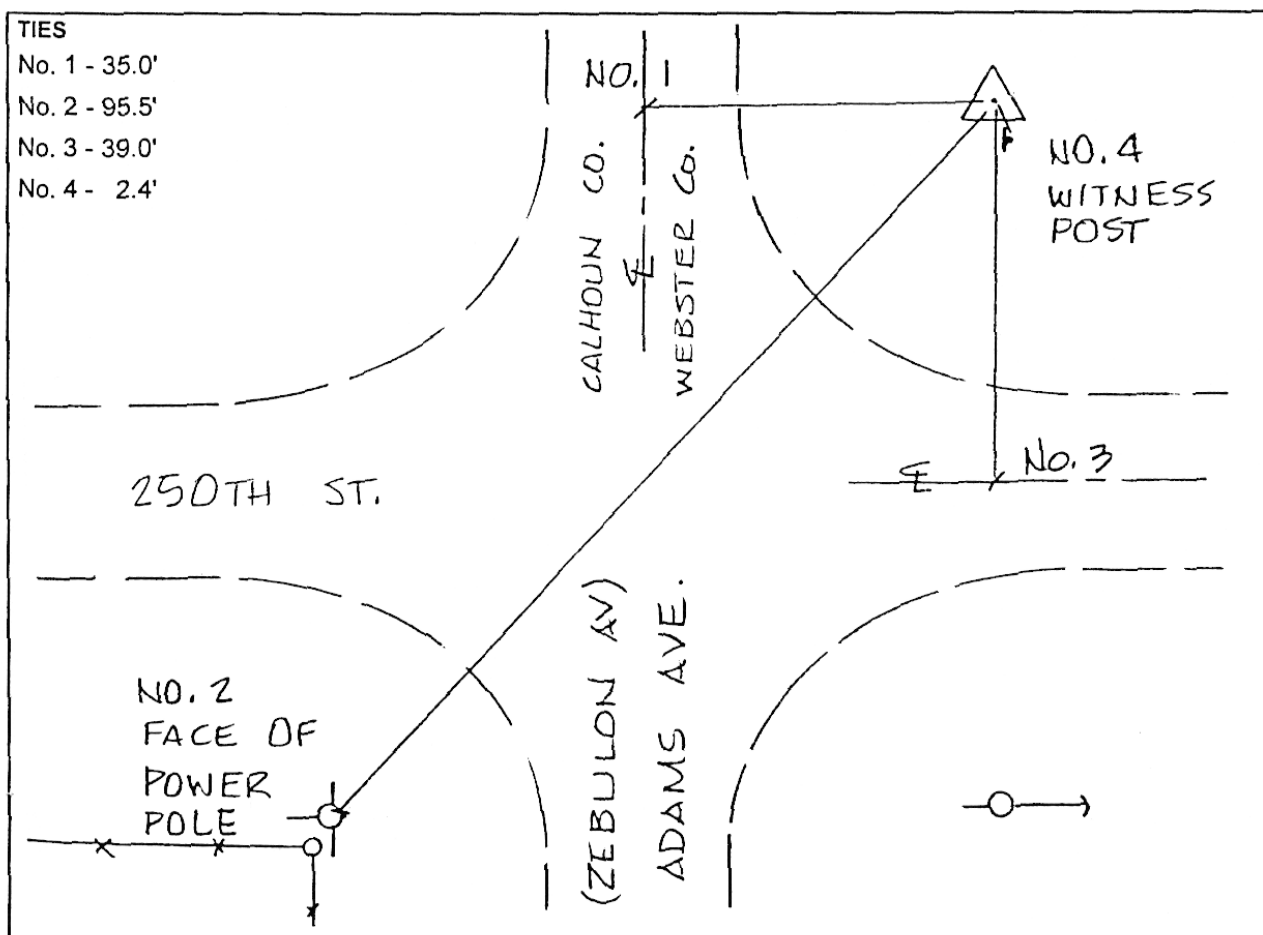
Combination Factor: **0.99990310**

99C Geoid Ht: **-28.510 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6059**

Location: **Near the SW Cor of Sec 18 T88N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6060**

Northing: **3636757.38 FT**

Northing: **1108485.867 M**

Easting: **4680340.84 FT**

Easting: **1426570.740 M**

Elev: **1181.15 FT**

Elev: **360.014 M**

Latitude: **N 42-28-23.48174**

Longitude: **W 094-23-34.76267**

Ellip. Ht: **331.346 M**

Theta: **-0-36-18.788**

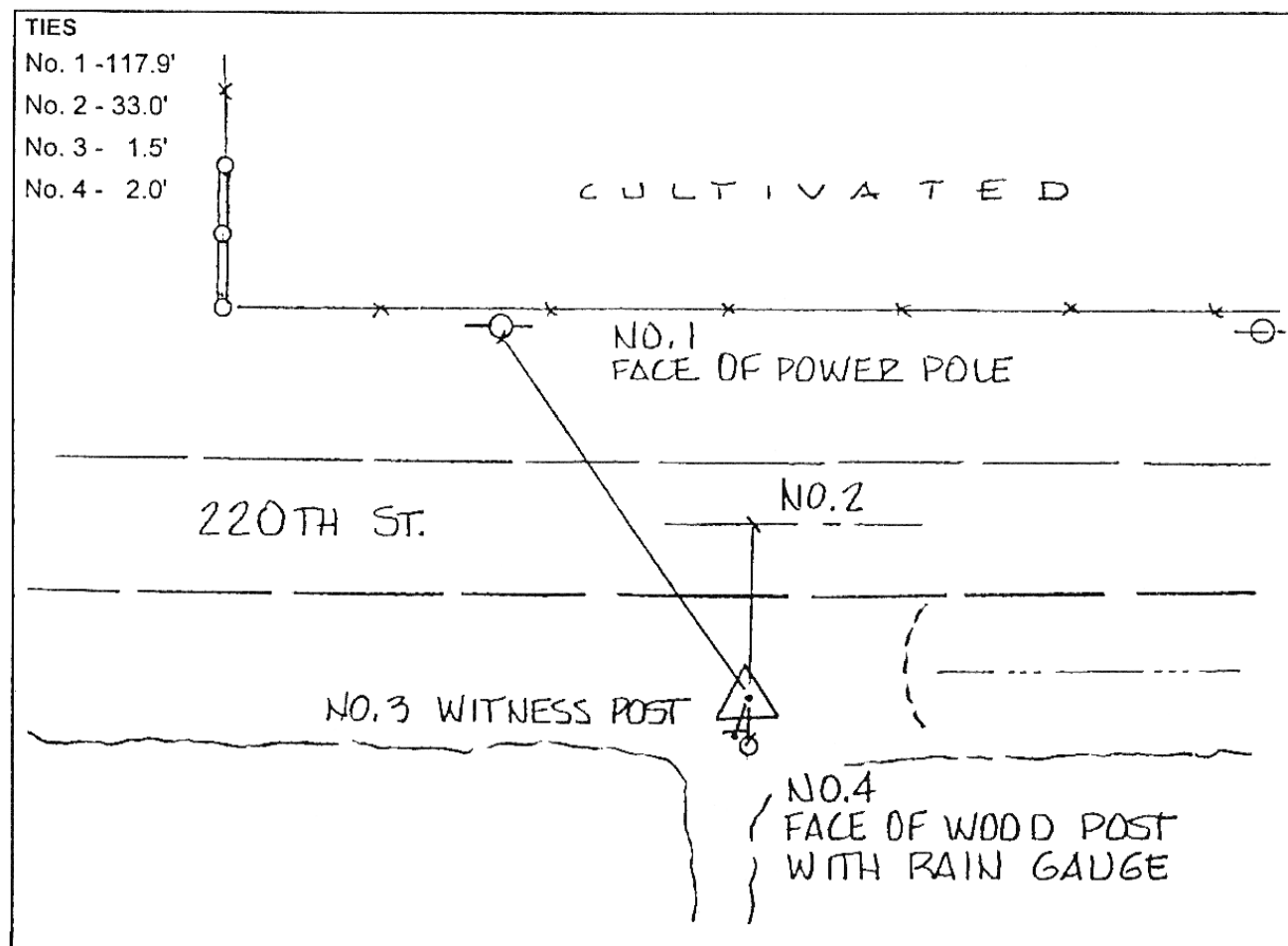
Combination Factor: **0.99989914**

99C Geoid Ht: **-28.668 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6060**

Location: **In the NW 1/4 of Sec 6 T88N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6062**

Northing: **3653539.76 FT**

Northing: **1113601.145 M**

Easting: **4667033.00 FT**

Easting: **1422514.503 M**

Elev: **1216.46 FT**

Elev: **370.777 M**

Latitude: **N 42-31-07.82985**

Longitude: **W 094-26-34.83004**

Ellip. Ht: **341.912 M**

Theta: **- 0-38-20.828**

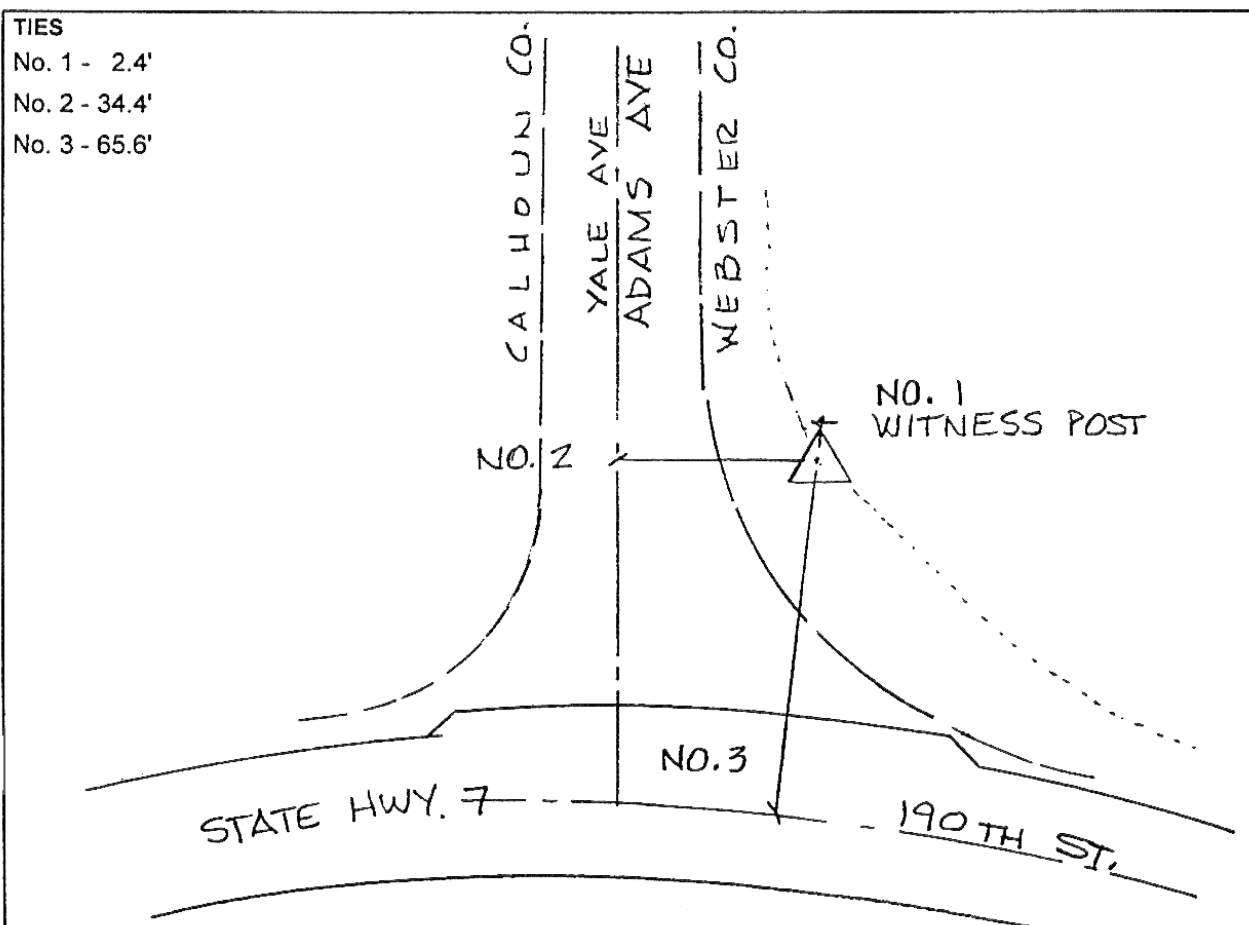
Combination Factor: **0.99989511**

99C Geoid Ht: **-28.865 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6062**

Location: **In the SW 1/4 of Sec 18 T89N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6063**

Northing: **3636990.40 FT**

Northing: **1108556.892 M**

Easting: **4666829.48 FT**

Easting: **1422452.471 M**

Elev: **1167.28 FT**

Elev: **355.788 M**

Latitude: **N 42-28-24.33412**

Longitude: **W 094-26-35.08231**

Ellip. Ht: **327.012 M**

Theta: **- 0-38-20.999**

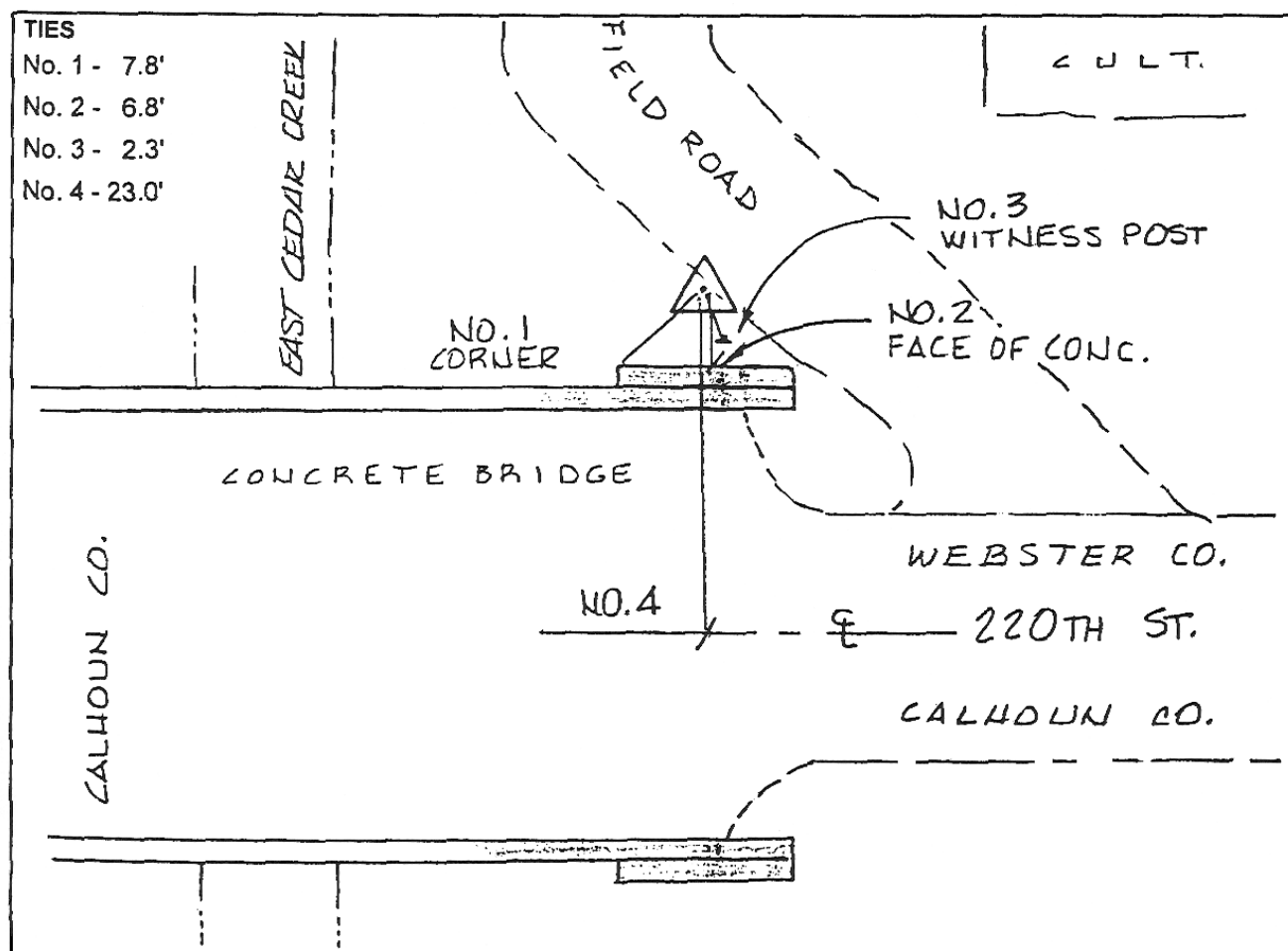
Combination Factor: **0.99989981**

99C Geoid Ht: **-28.776 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6063**

Location: **Near the SW Cor of Sec 31 T89N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6064**

Northing: **3588014.96 FT**

Northing: **1093629.147 M**

Easting: **4678676.00 FT**

Easting: **1426063.298 M**

Elev: **1150.59 FT**

Elev: **350.702 M**

Latitude: **N 42-20-21.82595**

Longitude: **W 094-23-50.07399**

Ellip. Ht: **322.641 M**

Theta: **- 0-36-29.165**

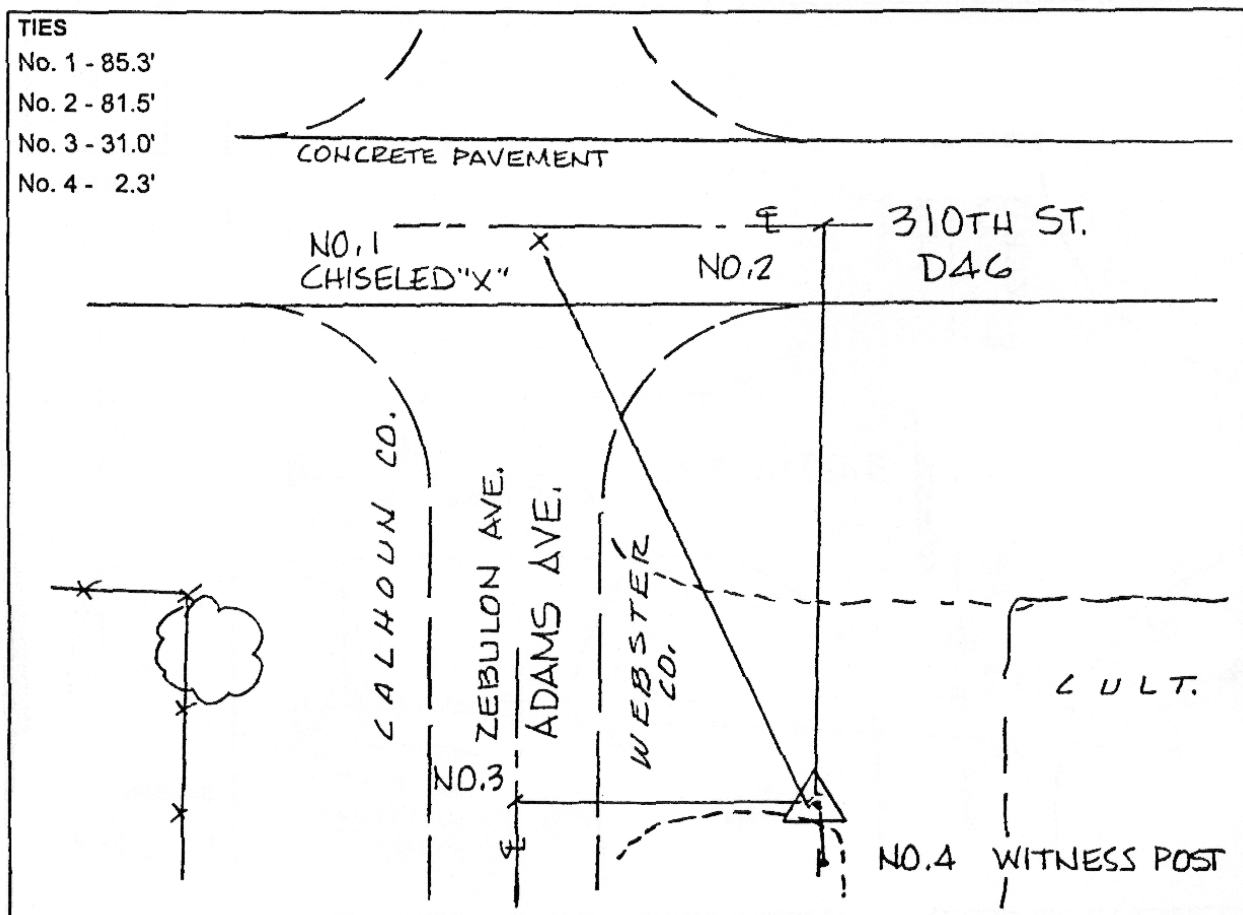
Combination Factor: **0.99991109**

99C Geoid Ht: **-28.061 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6064**

Location: **Near the NW Cor of Sec 19 T87N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6065**

Northing: **3572233.33 FT**

Northing: **1088818.896 M**

Easting: **4678487.02 FT**

Easting: **1426005.697 M**

Elev: **1141.59 FT**

Elev: **347.956 M**

Latitude: **N 42-17-45.91274**

Longitude: **W 094-23-50.35975**

Ellip. Ht: **320.126 M**

Theta: **- 0-36-29.359**

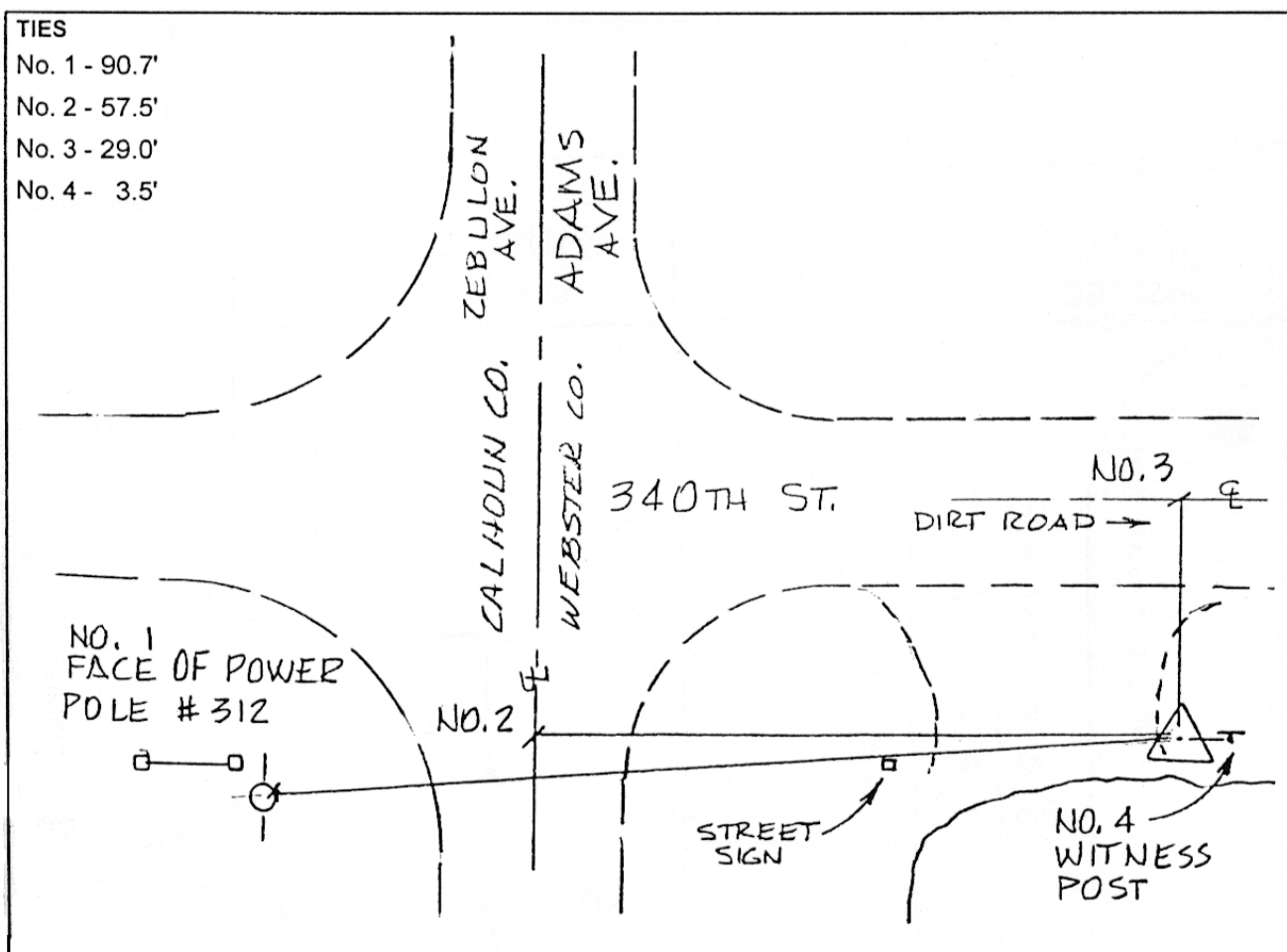
Combination Factor: **0.99991608**

99C Geoid Ht: **-27.830 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6065**

Location: **Near the NW Cor of Sec 6 T86N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: **6066**

Northing: **3540571.99 FT**

Northing: **1079168.500 M**

Easting: **4678674.56 FT**

Easting: **1426062.859 M**

Elev: **1111.53 FT**

Elev: **338.796 M**

Latitude: **N 42-12-33.17557**

Longitude: **W 094-23-43.40237**

Ellip. Ht: **311.373 M**

Theta: **- 0-36-24.643**

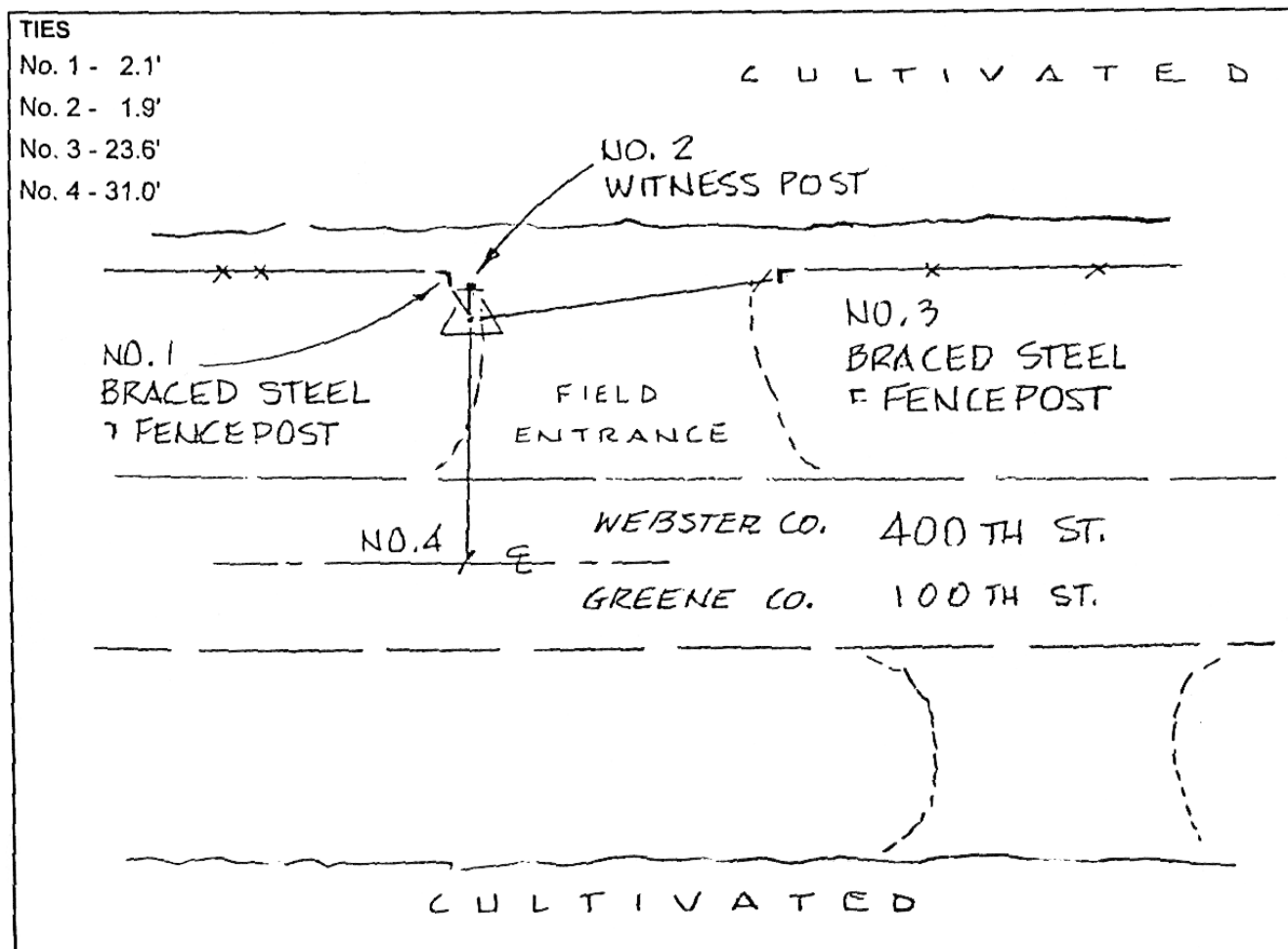
Combination Factor: **0.99992835**

99C Geoid Ht: **-27.423 M**

Designation: **WEBSTER COUNTY GPS CONTROL PT 6066**

Location: **In the SW 1/4 of Sec 31 T86N R30W.**

Monument Type: 5/8" dia driven aluminum rod with a 3-1/2" dia aluminum cap and permanent magnet encased in a 5" dia PVC pipe with an aluminum access cover.



2003

Calhoun County, Iowa

Iowa North Zone (1401)

Horizontal Datum: NAD_83(1996) & Vertical Datum: NAVD_88



Point Number: 9604

Northing: 3556339.48 FT

Northing: 1083974.442 M

Easting: 4683263.30 FT

Easting: 1427461.508 M

Elev: 1121.90 FT

Elev: 341.957 M

Latitude: N 42-15-09.40599

Longitude: W 094-22-44.60915

Ellip. Ht: 314.404 M

Theta: -0-35-44.797

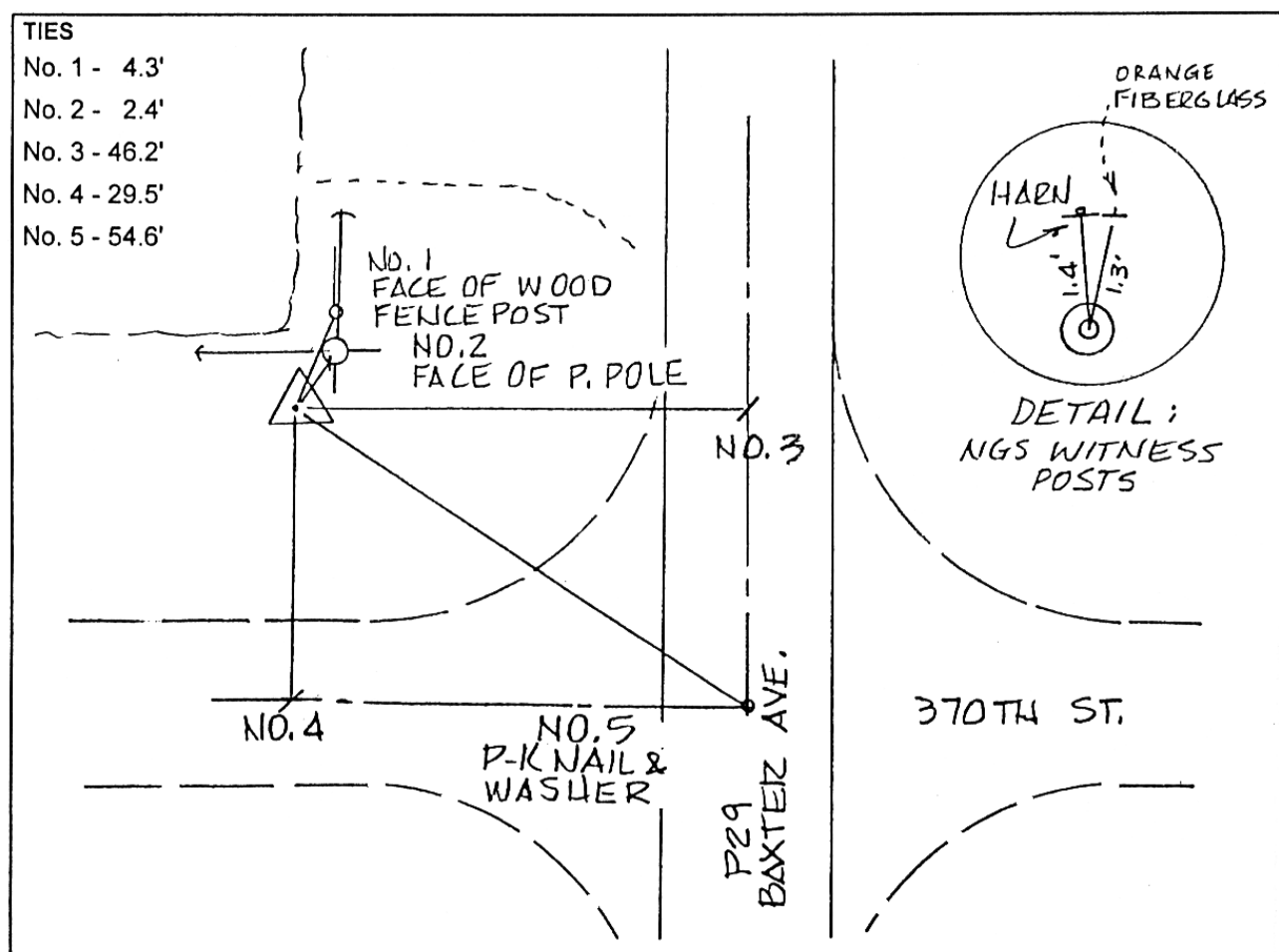
Combination Factor: 0.99992214

99C Geoid Ht: -27.553 M

Designation: CBN horizontal control station "ET 1 HK" PID NL0804

Location: Near the SE Cor of Sec 18 T86N R30W.

Monument Type: A standard triangulation disk set in the top of a square concrete monument



Project Summary: Calhoun County, Iowa - 2003-

Project file: FinalAdj_NAD83_88SP_feet.spr

Date: 06/01/03

Client Name: The Sidwell Company & Calhoun County, IA

Project Name: FinalAdj_NAD83_88SP_feet

Project Comments: Hor. Datum: NAD83(1996) Iowa North Zone
Vert. Datum: NAVD88
Units: US Survey Feet
Adjustment performed by: Ben Sullivan, Survey Dept. Manager

Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.

Horizontal Coordinate System: State Plane Coordinate 1983
Height System: Ortho. Ht. (GEOID99)
Linear Units: US Feet

Number of Sites: 90
Number of Vectors: 241

Survey Company Name: Aerial Services, Inc., Cedar Falls, Iowa

Adjustment Summary

Adjustment Type: Fully Constrained

Variance of Unit Weight: 1.0

Adjustment scale factor: 1.25

Vectors Failing Tau Test: 2

Site Pairs Failing Relative Accuracy QA Test: 0

Vector Total: 190
Site Total: 90
Horizontally Constrained Sites: 20
Vertically Constrained Sites: 23

Horizontal Coordinate System: State Plane Coordinate 1983
Height System: Ortho. Ht. (GEOID99)

Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.

Adjusted Vectors

FinalAdj_NAD83_88SP_feet

Vector Stage: Adjusted **Date:** 06/01/03
Horizontal Coordinate System: State Plane Coordinate 1983 **Project file:** FinalAdj_NAD83_88SP_feet.spr
Height System: Ortho. Ht. (GEOID99)
Linear Units of Measure: US Feet

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
1	6003-0108	5/21 17:03	15545.312	0.016	X	-15503.754	-0.013	
					Y	1134.910	-0.007	
					Z	-48.120	0.005	
2	6003-0116	5/21 17:03	22082.356	0.015	X	-16554.922	-0.015	
					Y	-9207.081	-0.004	
					Z	-11348.773	-0.003	
3	6003-6062	5/21 16:01	14616.927	0.042	X	-800.966	-0.036	
					Y	-9871.842	0.019	
					Z	-10749.872	-0.010	
4	0123-0115	5/21 18:01	15896.575	0.024	X	925.859	-0.020	
					Y	10694.488	-0.012	
					Z	11724.837	-0.008	
5	0123-0124	5/21 18:07	16067.961	0.022	X	16013.046	0.011	
					Y	-1323.265	-0.005	
					Z	-103.444	0.019	
6	0123-0130	5/21 18:34	17093.278	0.014	X	-4218.175	-0.001	
					Y	-10997.480	0.012	
					Z	-12387.195	-0.007	
7	0131-0123	5/21 18:32	21068.600	0.014	X	-11682.242	-0.011	
					Y	12325.196	-0.009	
					Z	12469.990	0.003	
8	6062-6060	5/21 15:31	21420.566	0.067	X	12586.698	0.000	
					Y	-12220.322	0.064	
					Z	-12291.436	-0.022	
9	6062-6063	5/21 15:31	16552.347	0.055	X	-882.270	0.035	
					Y	-11110.713	0.041	
					Z	-12237.396	0.010	
10	0131-0130	5/21 18:34	15955.969	0.013	X	-15900.417	-0.012	
					Y	1327.716	0.004	
					Z	82.796	-0.002	
11	0131-0132	5/21 18:58	15647.430	0.019	X	15601.071	0.018	
					Y	-1203.448	0.001	
					Z	-18.858	0.002	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
12	0054-0063	5/21 12:53	12936.539	0.028	X	12883.800	-0.001	
					Y	-1157.366	0.020	
					Z	-149.123	-0.019	
13	0063-0159	5/21 12:56	15910.894	0.035	X	940.288	0.008	
					Y	10616.292	0.027	
					Z	11813.837	-0.022	
14	0115-0106	5/21 17:31	22067.939	0.038	X	-14884.576	0.002	
					Y	11663.600	0.015	
					Z	11375.577	-0.034	
15	0115-0107	5/21 17:30	15124.692	0.015	X	925.126	0.005	
					Y	10168.200	0.006	
					Z	11158.322	-0.012	
16	0115-0203	5/21 17:40	13827.138	0.037	X	-12995.223	-0.031	
					Y	-2606.389	-0.014	
					Z	-3939.628	0.014	
17	0115-0124	5/21 18:07	22626.484	0.033	X	15087.186	0.028	
					Y	-12017.752	0.004	
					Z	-11828.281	0.016	
18	0147-0139	5/21 20:14	16194.482	0.036	X	931.506	0.016	
					Y	10875.124	-0.005	
					Z	11963.495	0.032	
19	0147-0148	5/21 20:18	15791.960	0.015	X	15743.171	0.012	
					Y	-1240.072	0.008	
					Z	-27.962	-0.001	
20	0107-0108	5/21 17:04	16010.161	0.015	X	15957.925	0.014	
					Y	-1290.043	0.007	
					Z	-75.293	-0.003	
21	0107-0116	5/21 17:04	22066.440	0.015	X	14906.757	0.014	
					Y	-11632.034	0.005	
					Z	-11375.946	-0.000	
22	0107-0106	5/21 17:31	15881.754	0.020	X	-15809.702	-0.003	
					Y	1495.400	0.005	
					Z	217.255	-0.020	
23	0107-0203	5/21 17:40	24185.002	0.038	X	-13920.349	-0.029	
					Y	-12774.590	-0.016	
					Z	-15097.950	0.018	
24	0156-6064	5/21 13:56	22346.055	0.016	X	16678.541	-0.011	
					Y	9303.184	0.005	
					Z	11602.725	-0.010	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
25	6058-6064	5/21 13:58	16121.784	0.061	X	-843.881	-0.001	
					Y	-10830.449	0.024	
					Z	-11912.227	-0.056	
26	6058-0140	5/21 14:28	15824.331	0.028	X	-15766.372	0.012	
					Y	1346.744	-0.015	
					Z	131.349	-0.020	
27	6058-6059	5/21 14:29	15915.409	0.049	X	805.569	0.021	
					Y	10695.847	-0.044	
					Z	11757.982	-0.006	
28	0116-0108	5/21 17:03	15354.689	0.002	X	1051.168	-0.000	
					Y	10341.991	0.001	
					Z	11300.653	-0.002	
29	0128-0121	5/21 19:27	17144.110	0.026	X	3820.080	0.012	
					Y	11139.782	0.020	
					Z	12459.243	-0.011	
30	0128-0122	5/21 19:30	23112.759	0.026	X	16712.733	0.019	
					Y	10040.799	-0.010	
					Z	12412.354	0.015	
31	0139-0140	5/21 14:28	15697.399	0.029	X	15652.848	-0.008	
					Y	-1181.683	0.001	
					Z	18.061	0.028	
32	0139-0148	5/21 20:18	22582.259	0.011	X	14811.665	0.001	
					Y	-12115.196	-0.004	
					Z	-11991.458	0.010	
33	6059-0140	5/21 14:29	22298.286	0.032	X	-16571.941	-0.008	
					Y	-9349.103	0.028	
					Z	-11626.633	-0.014	
34	6059-0132	5/21 14:56	15852.410	0.025	X	-15800.739	-0.009	
					Y	1277.900	-0.013	
					Z	50.403	-0.020	
35	6059-6060	5/21 15:02	16764.451	0.059	X	2014.345	-0.014	
					Y	11152.114	0.001	
					Z	12353.930	-0.057	
36	6059-6063	5/21 14:58	20869.020	0.033	X	-11454.623	0.016	
					Y	12261.724	-0.019	
					Z	12407.970	-0.022	
37	6060-0132	5/21 15:02	23796.094	0.037	X	-17815.084	0.012	
					Y	-9874.214	-0.002	
					Z	-12303.527	0.034	

	<u>Vector Identifier</u>			<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
38	6060-6063	5/21	15:02	13514.706	0.051	X	-13468.969	0.038	
						Y	1109.609	-0.011	
						Z	54.040	0.033	
39	6063-0132	5/21	14:58	17095.103	0.025	X	-4346.115	-0.020	
						Y	-10983.823	0.015	
						Z	-12357.567	-0.004	
40	6063-0124	5/21	18:07	15664.112	0.035	X	-15616.383	-0.024	
						Y	1221.555	0.003	
						Z	27.838	-0.026	
41	6064-6065	5/21	13:58	15784.103	0.057	X	-835.685	-0.022	
						Y	-10587.483	-0.047	
						Z	-11676.675	0.024	
42	0121-0122	5/21	19:30	12939.492	0.045	X	12892.653	0.020	
						Y	-1098.983	-0.039	
						Z	-46.889	0.010	
43	0121-0129	5/21	19:27	21300.069	0.043	X	12029.194	0.023	
						Y	-12416.245	-0.031	
						Z	-12443.002	0.018	
44	0129-0122	5/21	19:30	16807.426	0.045	X	863.459	0.003	
						Y	11317.262	0.027	
						Z	12396.113	-0.036	
45	0001-0002	5/20	20:47	15510.938	0.067	X	-15464.083	-0.000	
						Y	1204.691	0.015	
						Z	-7.584	-0.065	
46	0001-6066	5/20	21:16	16337.307	0.067	X	16288.479	0.039	
						Y	-1262.092	-0.047	
						Z	-13.900	0.028	
47	0001-0209	5/20	20:49	12350.945	0.030	X	-11429.780	-0.003	
						Y	-2628.910	-0.016	
						Z	-3872.314	-0.025	
48	0001-0210	5/20	20:49	11815.511	0.019	X	5761.058	-0.001	
						Y	6689.980	-0.002	
						Z	7852.432	0.018	
49	0002-0162	5/20	20:18	22222.156	0.025	X	-14713.612	-0.009	
						Y	11814.315	-0.004	
						Z	11736.941	0.023	
50	0002-0163	5/20	22:14	15805.492	0.039	X	801.701	-0.016	
						Y	10584.985	-0.020	
						Z	11710.206	0.030	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
51	0002-0209	5/20 20:49	6775.561	0.046	X	4034.303	-0.004	
					Y	-3833.601	-0.024	
					Z	-3864.730	0.039	
52	0002-0210	5/20 20:49	23288.942	0.082	X	21225.141	-0.002	
					Y	5485.288	-0.006	
					Z	7860.015	0.082	
53	0003-0002	5/20 20:18	16440.361	0.025	X	16385.722	0.023	
					Y	-1338.946	-0.009	
					Z	-28.085	0.005	
54	0003-0004	5/20 16:31	14914.269	0.097	X	-14868.996	0.008	
					Y	1158.706	-0.070	
					Z	76.000	0.067	
55	0003-0161	5/20 16:23	21849.161	0.092	X	-14060.117	0.009	
					Y	11823.706	-0.051	
					Z	11827.888	0.076	
56	0003-0162	5/20 20:13	15799.577	0.026	X	1672.111	0.013	
					Y	10475.369	-0.008	
					Z	11708.856	0.021	
57	0045-0158	5/20 13:23	23764.966	0.042	X	18368.471	-0.005	
					Y	9371.968	0.027	
					Z	11812.667	-0.032	
58	0054-0045	5/20 13:15	15018.344	0.054	X	-14982.417	0.007	
					Y	1021.210	-0.039	
					Z	-186.984	0.036	
59	0054-0157	5/20 13:11	21841.131	0.016	X	-14007.775	-0.001	
					Y	11896.390	-0.015	
					Z	11802.252	-0.003	
60	0054-0158	5/20 13:23	15957.444	0.016	X	3386.054	0.004	
					Y	10393.178	-0.015	
					Z	11625.683	-0.003	
61	0054-0159	5/20 15:49	20411.816	0.072	X	13824.088	-0.013	
					Y	9458.926	0.038	
					Z	11664.714	-0.059	
62	0072-0004	5/20 16:31	15757.139	0.050	X	15698.217	-0.007	
					Y	-1360.577	-0.049	
					Z	-47.326	0.008	
63	0072-0159	5/20 15:47	24303.768	0.106	X	-17522.396	-0.011	
					Y	12093.347	-0.082	
					Z	11721.337	0.066	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
64	0072-0161	5/20 16:23	22272.253	0.043	X	16507.096	-0.011	
					Y	9304.422	-0.034	
					Z	11704.562	0.023	
65	0102-0101	5/19 16:35	15787.667	0.042	X	-15726.791	0.013	
					Y	1382.454	0.020	
					Z	85.395	-0.034	
66	0102-0103	5/19 17:27	16015.483	0.022	X	15946.589	-0.005	
					Y	-1478.252	0.005	
					Z	-129.478	0.020	
67	0102-0110	5/19 17:24	15397.358	0.020	X	-851.481	0.003	
					Y	-10369.718	-0.011	
					Z	-11350.003	0.016	
68	0102-0202	5/19 17:37	7604.210	0.003	X	2503.342	-0.002	
					Y	4741.863	0.001	
					Z	5391.848	-0.002	
69	0103-0111	5/19 18:05	15426.583	0.013	X	-988.549	-0.004	
					Y	-10381.439	0.005	
					Z	-11367.848	0.011	
70	0103-0112	5/19 18:05	22217.371	0.019	X	14887.760	-0.002	
					Y	-11819.362	0.016	
					Z	-11500.819	0.011	
71	0103-0202	5/19 17:37	15808.092	0.011	X	-13443.247	0.010	
					Y	6220.115	0.006	
					Z	5521.326	-0.001	
72	0104-0103	5/19 18:05	16109.812	0.033	X	-16049.413	0.010	
					Y	1393.558	-0.011	
					Z	19.235	-0.029	
73	0104-0105	5/19 18:32	15643.573	0.035	X	15587.807	-0.013	
					Y	-1317.444	0.008	
					Z	-77.402	0.031	
74	0104-0111	5/19 18:04	22357.665	0.016	X	-17037.962	0.006	
					Y	-8987.882	-0.001	
					Z	-11348.613	-0.015	
75	0104-0112	5/19 18:05	15552.287	0.015	X	-1161.653	0.001	
					Y	-10425.805	0.007	
					Z	-11481.584	-0.013	
76	0105-0106	5/19 18:42	16022.656	0.031	X	15981.038	-0.008	
					Y	-1141.972	0.013	
					Z	166.792	0.027	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
77	0106-0114	5/19 19:18	15415.918	0.012	X	-781.929	-0.000	
					Y	-10393.107	0.007	
					Z	-11358.805	-0.010	
78	0109-0101	5/19 16:35	15402.874	0.050	X	929.561	0.010	
					Y	10342.362	0.039	
					Z	11376.290	-0.030	
79	0109-0102	5/19 16:23	22027.218	0.020	X	16656.352	-0.004	
					Y	8959.908	0.019	
					Z	11290.895	-0.003	
80	0109-0110	5/19 20:56	15867.735	0.025	X	15804.871	-0.006	
					Y	-1409.810	-0.024	
					Z	-59.108	-0.000	
81	0109-0117	5/19 21:28	15927.350	0.018	X	-782.716	-0.003	
					Y	-10730.082	-0.017	
					Z	-11744.496	0.005	
82	0109-0118	5/19 21:26	22355.132	0.025	X	14562.774	-0.007	
					Y	-12141.545	-0.023	
					Z	-11843.159	0.005	
83	0110-0103	5/19 17:27	22071.101	0.020	X	16798.070	-0.006	
					Y	8891.467	0.017	
					Z	11220.525	0.008	
84	0110-0118	5/19 20:47	15986.770	0.019	X	-1242.097	0.001	
					Y	-10731.735	-0.019	
					Z	-11784.051	0.001	
85	0110-0119	5/19 20:47	22554.966	0.049	X	15019.288	0.001	
					Y	-12071.185	-0.048	
					Z	-11723.225	0.007	
86	0112-0111	5/19 18:05	15941.847	0.006	X	-15876.309	0.001	
					Y	1437.923	-0.005	
					Z	132.972	-0.004	
87	0112-0120	5/19 20:20	15890.791	0.015	X	-3529.820	-0.004	
					Y	-10318.722	0.014	
					Z	-11557.749	-0.003	
88	0113-0104	5/19 18:33	21962.700	0.043	X	-14573.695	0.022	
					Y	11736.593	0.000	
					Z	11498.696	-0.037	
89	0113-0105	5/19 18:33	15493.000	0.010	X	1014.112	0.007	
					Y	10419.150	0.003	
					Z	11421.294	-0.006	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
90	0113-0106	5/19 19:08	22565.125	0.011	X	16995.150	0.009	
					Y	9277.177	-0.002	
					Z	11588.086	0.007	
91	0113-0114	5/19 19:18	16253.197	0.014	X	16213.221	0.012	
					Y	-1115.930	0.007	
					Z	229.281	-0.003	
92	0113-0121	5/19 19:47	15533.006	0.033	X	-658.368	-0.006	
					Y	-10471.649	-0.031	
					Z	-11453.618	0.011	
93	0113-0122	5/19 19:48	20391.639	0.034	X	12234.285	-0.027	
					Y	-11570.633	0.018	
					Z	-11500.508	0.008	
94	0118-0117	5/19 21:28	15410.581	0.008	X	-15345.490	0.001	
					Y	1411.463	0.007	
					Z	98.663	-0.004	
95	0118-0119	5/19 20:47	16316.570	0.031	X	16261.385	-0.001	
					Y	-1339.450	-0.030	
					Z	60.826	0.007	
96	0119-0112	5/19 20:20	22188.150	0.037	X	16666.542	0.005	
					Y	9143.289	-0.035	
					Z	11442.930	0.013	
97	0119-0120	5/19 20:20	13189.704	0.027	X	13136.722	-0.000	
					Y	-1175.433	-0.025	
					Z	-114.819	0.008	
98	0120-0126	5/19 22:50	22836.425	0.027	X	-16503.355	-0.018	
					Y	-9905.156	0.020	
					Z	-12289.404	-0.004	
99	0121-0112	5/19 20:12	22309.613	0.029	X	-15076.980	-0.006	
					Y	11782.438	0.026	
					Z	11470.730	-0.010	
100	0121-0120	5/19 20:20	18664.486	0.031	X	-18606.800	-0.017	
					Y	1463.715	0.026	
					Z	-87.019	-0.004	
101	0125-0117	5/19 21:28	22704.366	0.021	X	-14402.236	0.004	
					Y	12525.920	0.020	
					Z	12294.924	-0.002	
102	0125-0118	5/19 21:26	16527.845	0.011	X	943.253	0.002	
					Y	11114.457	0.011	
					Z	12196.261	-0.001	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
103	0125-0134	5/19 22:17	21166.698	0.013	X	12957.627	0.002	
					Y	-11880.212	0.000	
					Z	-11789.384	-0.013	
104	0125-0212	5/19 22:03	21349.521	0.019	X	-21246.630	-0.003	
					Y	-121.896	-0.014	
					Z	-2089.948	0.012	
105	0127-0120	5/19 22:48	16810.326	0.016	X	852.553	0.011	
					Y	11322.282	0.008	
					Z	12396.214	-0.009	
106	0127-0126	5/19 22:50	15715.193	0.028	X	-15650.803	0.000	
					Y	1417.126	0.025	
					Z	106.810	-0.011	
107	0127-0134	5/19 23:20	22140.600	0.051	X	-16531.182	-0.004	
					Y	-9157.503	-0.034	
					Z	-11535.439	0.038	
108	0127-0135	5/19 23:19	15800.633	0.013	X	-668.174	-0.005	
					Y	-10641.097	-0.010	
					Z	-11661.071	0.007	
109	0127-0136	5/19 23:24	22329.024	0.021	X	14908.430	-0.012	
					Y	-11888.496	-0.008	
					Z	-11618.420	-0.015	
110	0128-0204	5/20 18:37	15937.156	0.008	X	12756.871	-0.003	
					Y	-6996.825	-0.007	
					Z	-6503.816	-0.004	
111	0129-0128	5/20 18:32	15900.601	0.008	X	-15849.274	0.008	
					Y	1276.463	0.002	
					Z	-16.241	0.001	
112	0129-0130	5/20 19:01	15410.919	0.005	X	15364.867	0.002	
					Y	-1190.496	-0.004	
					Z	-2.902	0.001	
113	0129-0138	5/20 19:12	22144.102	0.009	X	14640.313	-0.009	
					Y	-11821.369	-0.003	
					Z	-11673.806	-0.002	
114	0129-0204	5/20 18:37	9208.509	0.013	X	-3092.403	0.004	
					Y	-5720.362	-0.011	
					Z	-6520.057	0.004	
115	0129-0211	5/20 18:59	15929.330	0.011	X	829.688	-0.005	
					Y	-10772.268	0.008	
					Z	-11705.272	0.005	

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
116	0130-0138	5/20 19:12	15803.495	0.018	X	-724.554	-0.009	
					Y	-10630.873	0.008	
					Z	-11670.904	-0.013	
117	0133-0125	5/19 21:59	15836.577	0.014	X	956.778	0.003	
					Y	10651.914	0.013	
					Z	11679.832	-0.006	
118	0133-0134	5/19 22:17	13968.943	0.026	X	13914.404	0.008	
					Y	-1228.297	0.007	
					Z	-109.552	-0.024	
119	0133-0142	5/20 14:19	21833.117	0.026	X	13093.385	-0.002	
					Y	-12340.597	-0.019	
					Z	-12367.616	0.018	
120	0133-0212	5/19 22:03	24789.621	0.010	X	-20289.853	-0.004	
					Y	10530.019	-0.005	
					Z	9589.884	0.007	
121	0134-0126	5/19 22:50	15752.454	0.035	X	880.379	0.007	
					Y	10574.629	-0.033	
					Z	11642.249	0.012	
122	0135-0134	5/19 23:20	15932.729	0.038	X	-15863.008	0.002	
					Y	1483.594	-0.024	
					Z	125.633	0.030	
123	0135-0136	5/19 23:24	15626.529	0.023	X	15576.604	-0.007	
					Y	-1247.398	0.005	
					Z	42.651	-0.021	
124	0137-0136	5/20 18:01	15759.040	0.012	X	-15709.350	0.003	
					Y	1250.327	0.002	
					Z	-18.082	0.011	
125	0137-0144	5/20 17:32	22656.597	0.011	X	-16484.139	-0.004	
					Y	-9751.176	-0.002	
					Z	-12104.094	-0.010	
126	0137-0145	5/20 17:32	16430.821	0.012	X	-793.144	-0.004	
					Y	-11030.120	0.000	
					Z	-12152.335	-0.011	
127	0138-0139	5/20 19:36	15859.681	0.022	X	15801.992	-0.021	
					Y	-1345.610	0.006	
					Z	-125.847	-0.004	
128	0138-0146	5/20 19:38	16417.958	0.026	X	-747.857	-0.005	
					Y	-11029.755	0.001	
					Z	-12138.144	-0.026	

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129	0139-0146	5/20	19:38	22626.875	0.029	X	-16549.850	0.018	
						Y	-9684.145	-0.007	
						Z	-12012.297	-0.022	
130	0141-0133	5/20	14:18	16514.364	0.029	X	1030.352	0.004	
						Y	11071.859	0.015	
						Z	12209.690	-0.024	
131	0141-0142	5/20	14:19	14181.487	0.005	X	14123.737	0.001	
						Y	-1268.738	0.000	
						Z	-157.926	-0.005	
132	0141-0149	5/20	13:51	15889.074	0.024	X	-1059.893	-0.005	
						Y	-10637.749	-0.005	
						Z	-11754.897	0.022	
133	0141-0150	5/20	13:51	21406.829	0.016	X	13504.755	-0.008	
						Y	-11777.672	-0.007	
						Z	-11711.548	0.012	
134	0143-0135	5/20	14:46	16359.190	0.010	X	852.183	0.001	
						Y	10965.726	-0.010	
						Z	12109.903	0.003	
135	0143-0142	5/20	14:19	15888.217	0.012	X	-15831.845	-0.000	
						Y	1337.020	0.011	
						Z	-22.529	-0.005	
136	0144-0145	5/20	17:32	15743.105	0.001	X	15690.995	-0.000	
						Y	-1278.944	-0.000	
						Z	-48.241	0.001	
137	0150-0143	5/20	14:44	22107.939	0.018	X	16450.826	-0.010	
						Y	9171.914	0.005	
						Z	11576.150	-0.013	
138	0150-0149	5/20	13:48	14609.253	0.011	X	-14564.648	0.003	
						Y	1139.923	-0.003	
						Z	-43.349	0.011	
139	0151-0143	5/20	14:48	15727.940	0.008	X	621.483	0.004	
						Y	10578.222	-0.001	
						Z	11622.524	0.006	
140	0151-0150	5/20	14:48	15891.758	0.027	X	-15829.344	0.013	
						Y	1406.308	-0.010	
						Z	46.374	0.022	
141	0151-0152	5/20	15:18	15531.974	0.029	X	15476.382	-0.009	
						Y	-1312.364	0.006	
						Z	-38.941	-0.027	

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142	0151-0159	5/20	15:21	15947.099	0.006	X	-3524.044	0.001	
						Y	-10312.079	-0.004	
						Z	-11642.685	0.005	
143	0151-0160	5/20	15:19	22214.089	0.010	X	14707.666	-0.004	
						Y	-11885.291	0.001	
						Z	-11657.193	-0.009	
144	0152-0160	5/20	15:19	15727.729	0.017	X	-768.716	0.005	
						Y	-10572.927	-0.004	
						Z	-11618.251	0.016	
145	0153-0144	5/20	17:29	22458.631	0.011	X	-14967.462	0.003	
						Y	11910.195	0.001	
						Z	11769.131	0.011	
146	0153-0145	5/20	17:32	15840.652	0.010	X	723.533	0.004	
						Y	10631.251	0.000	
						Z	11720.890	0.009	
147	0153-0152	5/20	17:01	15820.347	0.033	X	-15766.561	0.010	
						Y	1302.783	-0.019	
						Z	41.124	0.025	
148	0153-0161	5/20	17:01	15639.037	0.032	X	-737.494	-0.002	
						Y	-10485.856	0.015	
						Z	-11579.395	-0.028	
149	0154-0146	5/20	19:38	15795.776	0.035	X	874.256	-0.004	
						Y	10586.440	0.002	
						Z	11690.572	0.034	
150	0154-0147	5/20	22:43	22318.007	0.015	X	16492.599	0.010	
						Y	9395.462	-0.004	
						Z	11739.374	0.011	
151	0154-0153	5/20	17:04	15451.928	0.016	X	-15405.642	0.012	
						Y	1195.050	-0.007	
						Z	-11.273	0.009	
152	0154-0155	5/20	22:43	15791.545	0.014	X	15748.193	-0.006	
						Y	-1167.038	-0.009	
						Z	72.978	-0.008	
153	0154-0161	5/20	17:04	21937.719	0.020	X	-16143.136	0.009	
						Y	-9290.806	0.005	
						Z	-11590.668	-0.017	
154	0154-0162	5/20	20:13	15826.474	0.035	X	-410.909	-0.008	
						Y	-10639.143	0.011	
						Z	-11709.700	-0.032	

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155	0155-0147	5/20	22:39	15755.169	0.026	X	744.406	0.017	
						Y	10562.500	0.001	
						Z	11666.396	0.020	
156	0155-0148	5/20	22:40	22230.632	0.022	X	16487.578	-0.021	
						Y	9322.428	-0.007	
						Z	11638.434	-0.001	
157	0155-0163	5/20	22:15	15949.840	0.021	X	-643.789	0.004	
						Y	-10701.434	0.006	
						Z	-11809.413	-0.020	
158	0156-6065	5/20	21:47	15894.999	0.046	X	15842.856	-0.017	
						Y	-1284.299	-0.042	
						Z	-73.950	0.012	
159	0156-0155	5/20	22:15	15620.773	0.027	X	-15572.711	0.020	
						Y	1224.437	0.019	
						Z	-1.651	0.002	
160	0156-0163	5/20	22:14	22187.600	0.037	X	-16216.499	0.023	
						Y	-9476.997	0.023	
						Z	-11811.064	-0.016	
161	0156-0164	5/20	21:47	15951.276	0.012	X	-828.857	-0.010	
						Y	-10688.595	-0.005	
						Z	-11811.442	0.001	
162	0157-0045	5/20	13:15	16216.080	0.044	X	-974.643	0.008	
						Y	-10875.180	-0.021	
						Z	-11989.235	0.038	
163	0157-0149	5/20	13:48	15554.978	0.037	X	961.915	0.001	
						Y	10420.847	0.003	
						Z	11508.172	-0.037	
164	0157-0150	5/20	13:48	21462.696	0.033	X	15526.563	-0.005	
						Y	9280.923	0.004	
						Z	11551.521	-0.033	
165	0157-0158	5/20	13:23	17459.556	0.027	X	17393.828	-0.002	
						Y	-1503.212	0.003	
						Z	-176.568	0.026	
166	0159-0152	5/20	15:21	24013.703	0.032	X	19000.426	-0.010	
						Y	8999.715	0.009	
						Z	11603.744	-0.029	
167	0159-0160	5/20	15:21	18299.466	0.016	X	18231.710	-0.004	
						Y	-1573.212	0.005	
						Z	-14.507	-0.014	

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168	0161-0004	5/20 16:31	15890.355	0.024	X	-808.879	-0.001	
					Y	-10664.999	-0.021	
					Z	-11751.888	-0.010	
169	0161-0152	5/20 17:01	22358.026	0.065	X	-15029.067	0.012	
					Y	11788.639	-0.035	
					Z	11620.520	0.054	
170	0164-6065	5/20 21:42	22453.408	0.043	X	16671.714	-0.010	
					Y	9404.295	-0.039	
					Z	11737.491	0.013	
171	0203-0106	5/19 19:16	21018.034	0.012	X	-1889.353	-0.001	
					Y	14269.989	-0.007	
					Z	15315.204	0.010	
172	0203-0113	5/19 19:44	19885.775	0.020	X	-18884.503	0.019	
					Y	4992.812	-0.005	
					Z	3727.119	-0.003	
173	0203-0114	5/19 19:18	6149.721	0.004	X	-2671.282	-0.002	
					Y	3876.882	-0.003	
					Z	3956.400	0.003	
174	0203-0121	5/19 19:47	21717.281	0.036	X	-19542.871	0.015	
					Y	-5478.837	-0.032	
					Z	-7726.500	0.005	
175	0203-0122	5/19 19:48	12162.184	0.017	X	-6650.219	-0.007	
					Y	-6577.821	0.015	
					Z	-7773.389	0.001	
176	0205-0128	5/20 18:32	19054.887	0.016	X	-14105.875	0.009	
					Y	9265.966	0.012	
					Z	8846.180	-0.002	
177	0205-0129	5/20 18:31	12058.777	0.008	X	1743.399	0.003	
					Y	7989.503	0.003	
					Z	8862.421	-0.006	
178	0205-0136	5/20 18:04	15157.381	0.009	X	-14836.717	0.005	
					Y	-1341.315	0.001	
					Z	-2796.231	0.007	
179	0205-0137	5/20 18:04	3898.231	0.004	X	872.633	0.000	
					Y	-2591.641	-0.003	
					Z	-2778.149	-0.003	
180	0205-0204	5/20 18:37	3529.232	0.005	X	-1349.004	-0.001	
					Y	2269.141	0.005	
					Z	2342.364	-0.001	

	<u>Vector Identifier</u>			<u>Vector Length</u>	<u>Radial Resid.</u>		<u>Vector Components</u>	<u>Resid.</u>	<u>Tau Test</u>
181	0205-0211	5/20	18:04	4737.759	0.002	X	2573.087	-0.001	
						Y	-2782.766	0.002	
						Z	-2842.851	0.000	
182	0210-6066	5/20	21:16	15360.377	0.066	X	10527.420	0.059	
						Y	-7952.071	-0.011	
						Z	-7866.332	0.027	
183	0211-0130	5/20	19:01	20976.826	0.013	X	14535.178	0.006	
						Y	9581.773	-0.009	
						Z	11702.370	-0.007	
184	0211-0136	5/20	18:01	17469.437	0.013	X	-17409.804	0.003	
						Y	1441.451	0.003	
						Z	46.620	0.012	
185	0211-0137	5/20	18:01	1712.384	0.001	X	-1700.454	0.000	
						Y	191.124	0.001	
						Z	64.702	0.001	
186	0211-0138	5/20	19:12	13850.449	0.014	X	13810.624	-0.004	
						Y	-1049.101	-0.002	
						Z	31.466	-0.013	
187	9604-6065	5/20	21:42	16597.322	0.075	X	-4114.479	-0.006	
						Y	10991.126	-0.070	
						Z	11736.154	0.025	
188	9604-0156	5/20	21:47	26238.519	0.034	X	-19957.336	0.012	
						Y	12275.425	-0.030	
						Z	11810.105	0.009	
189	9604-0164	5/20	21:40	20846.675	0.030	X	-20786.193	0.008	
						Y	1586.831	-0.027	
						Z	-1.337	0.009	
190	9604-0210	5/20	21:19	16376.879	0.082	X	-15750.395	0.069	
						Y	-2301.269	-0.010	
						Z	-3851.151	-0.044	

Network Relative Accuracy

FinalAdj_NAD83_88SP_feet

Desired Horizontal Accuracy: 0.033USft + 10ppm

Date: 06/01/03

Desired Vertical Accuracy: 0.066USft + 10ppm

Project file:

FinalAdj_NAD83_88SP_feet.spr

Confidence Level: 95% Err.

Linear Units of Measure: US Feet

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
1	6003 0108	Lat	0.016	0.048	1:536044	1:353302	15545.312	
		Lng	0.029	0.048				
		Elv	0.044	0.051				
2	6003 0116	Lat	0.018	0.068	1:669161	1:441646	22082.356	
		Lng	0.033	0.068				
		Elv	0.050	0.070				
3	6003 6062	Lat	0.000	0.046	1:0	1:0	14616.927	
		Lng	0.000	0.046				
		Elv	0.000	0.049				
4	0123 0115	Lat	0.023	0.049	1:548158	1:397414	15896.575	
		Lng	0.029	0.049				
		Elv	0.040	0.052				
5	0123 0124	Lat	0.026	0.050	1:518320	1:391901	16067.961	
		Lng	0.031	0.050				
		Elv	0.041	0.053				
6	0123 0130	Lat	0.025	0.053	1:569776	1:449823	17093.278	
		Lng	0.030	0.053				
		Elv	0.038	0.056				
7	0131 0123	Lat	0.029	0.065	1:619664	1:489967	21068.600	
		Lng	0.034	0.065				
		Elv	0.043	0.067				
8	6062 6060	Lat	0.000	0.066	1:0	1:0	21420.566	
		Lng	0.000	0.066				
		Elv	0.000	0.068				
9	6062 6063	Lat	0.000	0.051	1:0	1:0	16552.347	
		Lng	0.000	0.051				
		Elv	0.000	0.054				
10	0131 0130	Lat	0.026	0.050	1:514708	1:419893	15955.969	
		Lng	0.031	0.050				
		Elv	0.038	0.053				
11	0131 0132	Lat	0.029	0.049	1:488981	1:381644	15647.430	
		Lng	0.032	0.049				
		Elv	0.041	0.052				

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
12	0054 0063	Lat Lng Elv	0.000 0.000 0.000	0.041 0.041 0.044	1:0	1:0	12936.539	
13	0063 0159	Lat Lng Elv	0.019 0.024 0.029	0.050 0.050 0.053	1:662953	1:548651	15910.894	
14	0115 0106	Lat Lng Elv	0.019 0.028 0.039	0.068 0.068 0.070	1:788141	1:565844	22067.939	
15	0115 0107	Lat Lng Elv	0.017 0.027 0.039	0.047 0.047 0.050	1:560173	1:387812	15124.692	
16	0115 0203	Lat Lng Elv	0.016 0.023 0.035	0.043 0.043 0.047	1:601178	1:395060	13827.138	
17	0115 0124	Lat Lng Elv	0.025 0.031 0.045	0.070 0.070 0.072	1:729886	1:502810	22626.484	
18	0147 0139	Lat Lng Elv	0.022 0.030 0.039	0.050 0.050 0.053	1:539815	1:415242	16194.482	
19	0147 0148	Lat Lng Elv	0.026 0.032 0.040	0.049 0.049 0.052	1:493498	1:394798	15791.960	
20	0107 0108	Lat Lng Elv	0.016 0.029 0.045	0.050 0.050 0.053	1:552074	1:355781	16010.161	
21	0107 0116	Lat Lng Elv	0.019 0.034 0.052	0.068 0.068 0.070	1:649012	1:424354	22066.440	
22	0107 0106	Lat Lng Elv	0.018 0.028 0.039	0.049 0.049 0.052	1:567205	1:407224	15881.754	
23	0107 0203	Lat Lng Elv	0.016 0.026 0.040	0.074 0.074 0.076	1:930191	1:604624	24185.002	
24	0156 6064	Lat Lng Elv	0.016 0.022 0.031	0.069 0.069 0.071	1:1015730	1:720840	22346.055	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
25	6058 6064	Lat Lng Elv	0.000 0.000 0.000	0.050 0.050 0.053	1:0	1:0	16121.784	
26	6058 0140	Lat Lng Elv	0.018 0.028 0.039	0.049 0.049 0.052	1:565155	1:405752	15824.331	
27	6058 6059	Lat Lng Elv	0.000 0.000 0.000	0.050 0.050 0.053	1:0	1:0	15915.409	
28	0116 0108	Lat Lng Elv	0.017 0.031 0.046	0.048 0.048 0.051	1:495312	1:333797	15354.689	
29	0128 0121	Lat Lng Elv	0.019 0.028 0.038	0.053 0.053 0.056	1:612289	1:451160	17144.110	
30	0128 0122	Lat Lng Elv	0.020 0.029 0.041	0.071 0.071 0.073	1:796991	1:563725	23112.759	
31	0139 0140	Lat Lng Elv	0.020 0.031 0.043	0.049 0.049 0.052	1:506367	1:365055	15697.399	
32	0139 0148	Lat Lng Elv	0.029 0.036 0.046	0.070 0.070 0.072	1:627285	1:490918	22582.259	
33	6059 0140	Lat Lng Elv	0.018 0.028 0.039	0.069 0.069 0.071	1:796367	1:571750	22298.286	
34	6059 0132	Lat Lng Elv	0.022 0.025 0.032	0.049 0.049 0.052	1:634096	1:495387	15852.410	
35	6059 6060	Lat Lng Elv	0.000 0.000 0.000	0.052 0.052 0.055	1:0	1:0	16764.451	
36	6059 6063	Lat Lng Elv	0.000 0.000 0.000	0.064 0.064 0.067	1:0	1:0	20869.020	
37	6060 0132	Lat Lng Elv	0.022 0.025 0.032	0.073 0.073 0.075	1:951844	1:743628	23796.094	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
38	6060 6063	Lat Lng Elv	0.000 0.000 0.000	0.042 0.042 0.046	1:0	1:0	13514.706	
39	6063 0132	Lat Lng Elv	0.022 0.025 0.032	0.053 0.053 0.056	1:683804	1:534222	17095.103	
40	6063 0124	Lat Lng Elv	0.024 0.029 0.040	0.049 0.049 0.052	1:540140	1:391602	15664.112	
41	6064 6065	Lat Lng Elv	0.000 0.000 0.000	0.049 0.049 0.052	1:0	1:0	15784.103	
42	0121 0122	Lat Lng Elv	0.015 0.023 0.033	0.041 0.041 0.044	1:562585	1:392105	12939.492	
43	0121 0129	Lat Lng Elv	0.017 0.025 0.034	0.066 0.066 0.068	1:852001	1:626472	21300.069	
44	0129 0122	Lat Lng Elv	0.017 0.025 0.036	0.052 0.052 0.055	1:672297	1:466873	16807.426	
45	0001 0002	Lat Lng Elv	0.000 0.000 0.000	0.048 0.048 0.051	1:0	1:0	15510.938	
46	0001 6066	Lat Lng Elv	0.000 0.000 0.000	0.051 0.051 0.054	1:0	1:0	16337.307	
47	0001 0209	Lat Lng Elv	0.014 0.017 0.000	0.039 0.039 0.043	1:726525	1:0	12350.945	
48	0001 0210	Lat Lng Elv	0.017 0.021 0.027	0.037 0.037 0.041	1:562642	1:437611	11815.511	
49	0002 0162	Lat Lng Elv	0.020 0.028 0.036	0.068 0.068 0.071	1:793647	1:617281	22222.156	
50	0002 0163	Lat Lng Elv	0.021 0.029 0.039	0.049 0.049 0.052	1:545016	1:405268	15805.492	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
51	0002 0209	Lat	0.014	0.023	1:398563	1:0	6775.561	
		Lng	0.017	0.023				
		Elv	0.000	0.029				
52	0002 0210	Lat	0.017	0.072	1:1108996	1:862552	23288.942	
		Lng	0.021	0.072				
		Elv	0.027	0.074				
53	0003 0002	Lat	0.000	0.051	1:0	1:0	16440.361	
		Lng	0.000	0.051				
		Elv	0.000	0.054				
54	0003 0004	Lat	0.000	0.047	1:0	1:0	14914.269	
		Lng	0.000	0.047				
		Elv	0.000	0.050				
55	0003 0161	Lat	0.013	0.067	1:949963	1:682786	21849.161	
		Lng	0.023	0.067				
		Elv	0.032	0.070				
56	0003 0162	Lat	0.020	0.049	1:564270	1:438876	15799.577	
		Lng	0.028	0.049				
		Elv	0.036	0.052				
57	0045 0158	Lat	0.025	0.073	1:792165	1:625394	23764.966	
		Lng	0.030	0.073				
		Elv	0.038	0.075				
58	0054 0045	Lat	0.000	0.047	1:0	1:0	15018.344	
		Lng	0.000	0.047				
		Elv	0.000	0.050				
59	0054 0157	Lat	0.021	0.067	1:840043	1:661852	21841.131	
		Lng	0.026	0.067				
		Elv	0.033	0.070				
60	0054 0158	Lat	0.025	0.050	1:531915	1:419933	15957.444	
		Lng	0.030	0.050				
		Elv	0.038	0.053				
61	0054 0159	Lat	0.019	0.063	1:850493	1:703856	20411.816	
		Lng	0.024	0.063				
		Elv	0.029	0.065				
62	0072 0004	Lat	0.000	0.049	1:0	1:0	15757.139	
		Lng	0.000	0.049				
		Elv	0.000	0.052				
63	0072 0159	Lat	0.019	0.075	1:1012657	1:838061	24303.768	
		Lng	0.024	0.075				
		Elv	0.029	0.077				

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
64	0072 0161	Lat Lng Elv	0.013 0.023 0.032	0.069 0.069 0.071	1:968359	1:696008	22272.253	
65	0102 0101	Lat Lng Elv	0.016 0.027 0.025	0.049 0.049 0.052	1:584728	1:631507	15787.667	
66	0102 0103	Lat Lng Elv	0.017 0.025 0.036	0.050 0.050 0.053	1:640619	1:444874	16015.483	
67	0102 0110	Lat Lng Elv	0.017 0.027 0.036	0.048 0.048 0.051	1:570272	1:427704	15397.358	
68	0102 0202	Lat Lng Elv	0.015 0.020 0.025	0.025 0.025 0.031	1:380210	1:304168	7604.210	
69	0103 0111	Lat Lng Elv	0.025 0.030 0.039	0.048 0.048 0.051	1:514219	1:395553	15426.583	
70	0103 0112	Lat Lng Elv	0.022 0.028 0.036	0.068 0.068 0.071	1:793478	1:617149	22217.371	
71	0103 0202	Lat Lng Elv	0.019 0.027 0.034	0.049 0.049 0.052	1:585485	1:464944	15808.092	
72	0104 0103	Lat Lng Elv	0.022 0.028 0.036	0.050 0.050 0.053	1:575350	1:447495	16109.812	
73	0104 0105	Lat Lng Elv	0.025 0.030 0.039	0.049 0.049 0.052	1:521452	1:401117	15643.573	
74	0104 0111	Lat Lng Elv	0.027 0.032 0.043	0.069 0.069 0.071	1:698676	1:519945	22357.665	
75	0104 0112	Lat Lng Elv	0.023 0.028 0.037	0.048 0.048 0.051	1:555438	1:420331	15552.287	
76	0105 0106	Lat Lng Elv	0.024 0.029 0.038	0.050 0.050 0.053	1:552505	1:421649	16022.656	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
77	0106	Lat	0.019	0.048	1:642329	1:481747	15415.918	
	0114	Lng	0.024	0.048				
		Elv	0.032	0.051				
78	0109	Lat	0.016	0.048	1:550102	1:427857	15402.874	
	0101	Lng	0.028	0.048				
		Elv	0.036	0.051				
79	0109	Lat	0.018	0.068	1:759559	1:579663	22027.218	
	0102	Lng	0.029	0.068				
		Elv	0.038	0.070				
80	0109	Lat	0.019	0.049	1:587694	1:453363	15867.735	
	0110	Lng	0.027	0.049				
		Elv	0.035	0.052				
81	0109	Lat	0.025	0.050	1:530911	1:419140	15927.350	
	0117	Lng	0.030	0.050				
		Elv	0.038	0.053				
82	0109	Lat	0.022	0.069	1:798397	1:620975	22355.132	
	0118	Lng	0.028	0.069				
		Elv	0.036	0.071				
83	0110	Lat	0.020	0.068	1:735703	1:538319	22071.101	
	0103	Lng	0.030	0.068				
		Elv	0.041	0.070				
84	0110	Lat	0.022	0.050	1:570955	1:456764	15986.770	
	0118	Lng	0.028	0.050				
		Elv	0.035	0.053				
85	0110	Lat	0.024	0.069	1:727578	1:563873	22554.966	
	0119	Lng	0.031	0.069				
		Elv	0.040	0.072				
86	0112	Lat	0.025	0.050	1:531394	1:408765	15941.847	
	0111	Lng	0.030	0.050				
		Elv	0.039	0.053				
87	0112	Lat	0.020	0.049	1:567528	1:429480	15890.791	
	0120	Lng	0.028	0.049				
		Elv	0.037	0.052				
88	0113	Lat	0.024	0.068	1:757335	1:577966	21962.700	
	0104	Lng	0.029	0.068				
		Elv	0.038	0.070				
89	0113	Lat	0.023	0.048	1:553321	1:430361	15493.000	
	0105	Lng	0.028	0.048				
		Elv	0.036	0.051				

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
90	0113 0106	Lat Lng Elv	0.020 0.026 0.034	0.070 0.070 0.072	1:867889	1:663679	22565.125	
91	0113 0114	Lat Lng Elv	0.019 0.024 0.032	0.051 0.051 0.053	1:677216	1:507912	16253.197	
92	0113 0121	Lat Lng Elv	0.018 0.025 0.034	0.048 0.048 0.051	1:621319	1:456852	15533.006	
93	0113 0122	Lat Lng Elv	0.019 0.026 0.036	0.063 0.063 0.065	1:784295	1:566435	20391.639	
94	0118 0117	Lat Lng Elv	0.024 0.029 0.037	0.048 0.048 0.051	1:531399	1:416502	15410.581	
95	0118 0119	Lat Lng Elv	0.024 0.030 0.038	0.051 0.051 0.054	1:543885	1:429383	16316.570	
96	0119 0112	Lat Lng Elv	0.023 0.031 0.041	0.068 0.068 0.071	1:715746	1:541174	22188.150	
97	0119 0120	Lat Lng Elv	0.020 0.028 0.036	0.041 0.041 0.045	1:471060	1:366380	13189.704	
98	0120 0126	Lat Lng Elv	0.027 0.036 0.045	0.070 0.070 0.072	1:634344	1:507475	22836.425	
99	0121 0112	Lat Lng Elv	0.022 0.030 0.039	0.069 0.069 0.071	1:743653	1:572041	22309.613	
100	0121 0120	Lat Lng Elv	0.021 0.029 0.039	0.058 0.058 0.060	1:643602	1:478576	18664.486	
101	0125 0117	Lat Lng Elv	0.028 0.035 0.044	0.070 0.070 0.072	1:648695	1:516008	22704.366	
102	0125 0118	Lat Lng Elv	0.025 0.030 0.037	0.051 0.051 0.054	1:550927	1:446698	16527.845	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
103	0125 0134	Lat Lng Elv	0.024 0.031 0.040	0.065 0.065 0.068	1:682796	1:529167	21166.698	
104	0125 0212	Lat Lng Elv	0.031 0.043 0.037	0.066 0.066 0.068	1:496500	1:577014	21349.521	
105	0127 0120	Lat Lng Elv	0.022 0.031 0.039	0.052 0.052 0.055	1:542268	1:431034	16810.326	
106	0127 0126	Lat Lng Elv	0.023 0.031 0.039	0.049 0.049 0.052	1:506941	1:402953	15715.193	
107	0127 0134	Lat Lng Elv	0.021 0.029 0.038	0.068 0.068 0.070	1:763469	1:582647	22140.600	
108	0127 0135	Lat Lng Elv	0.020 0.028 0.037	0.049 0.049 0.052	1:564308	1:427044	15800.633	
109	0127 0136	Lat Lng Elv	0.023 0.032 0.041	0.069 0.069 0.071	1:697781	1:544610	22329.024	
110	0128 0204	Lat Lng Elv	0.020 0.024 0.032	0.050 0.050 0.053	1:664048	1:498036	15937.156	
111	0129 0128	Lat Lng Elv	0.019 0.024 0.032	0.049 0.049 0.052	1:662525	1:496894	15900.601	
112	0129 0130	Lat Lng Elv	0.021 0.025 0.031	0.048 0.048 0.051	1:616436	1:497126	15410.919	
113	0129 0138	Lat Lng Elv	0.021 0.026 0.033	0.068 0.068 0.070	1:851696	1:671033	22144.102	
114	0129 0204	Lat Lng Elv	0.015 0.017 0.023	0.030 0.030 0.035	1:541676	1:400369	9208.509	
115	0129 0211	Lat Lng Elv	0.015 0.017 0.024	0.050 0.050 0.053	1:937019	1:663722	15929.330	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
116	0130 0138	Lat Lng Elv	0.022 0.027 0.035	0.049 0.049 0.052	1:585314	1:451528	15803.495	
117	0133 0125	Lat Lng Elv	0.021 0.029 0.038	0.049 0.049 0.052	1:546088	1:416751	15836.577	
118	0133 0134	Lat Lng Elv	0.021 0.028 0.037	0.044 0.044 0.047	1:498890	1:377538	13968.943	
119	0133 0142	Lat Lng Elv	0.021 0.034 0.046	0.067 0.067 0.070	1:642150	1:474632	21833.117	
120	0133 0212	Lat Lng Elv	0.032 0.044 0.038	0.076 0.076 0.078	1:563400	1:652358	24789.621	
121	0134 0126	Lat Lng Elv	0.023 0.031 0.040	0.049 0.049 0.052	1:508144	1:393811	15752.454	
122	0135 0134	Lat Lng Elv	0.020 0.029 0.037	0.050 0.050 0.053	1:549404	1:430614	15932.729	
123	0135 0136	Lat Lng Elv	0.021 0.030 0.037	0.049 0.049 0.052	1:520884	1:422338	15626.529	
124	0137 0136	Lat Lng Elv	0.017 0.022 0.030	0.049 0.049 0.052	1:716320	1:525301	15759.040	
125	0137 0144	Lat Lng Elv	0.022 0.035 0.049	0.070 0.070 0.072	1:647331	1:462379	22656.597	
126	0137 0145	Lat Lng Elv	0.019 0.030 0.042	0.051 0.051 0.054	1:547693	1:391209	16430.821	
127	0138 0139	Lat Lng Elv	0.020 0.029 0.038	0.049 0.049 0.052	1:546886	1:417360	15859.681	
128	0138 0146	Lat Lng Elv	0.021 0.031 0.042	0.051 0.051 0.054	1:529610	1:390903	16417.958	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
129	0139 0146	Lat Lng Elv	0.022 0.034 0.046	0.070 0.070 0.072	1:665496	1:491888	22626.875	
130	0141 0133	Lat Lng Elv	0.019 0.031 0.042	0.051 0.051 0.054	1:532721	1:393199	16514.364	
131	0141 0142	Lat Lng Elv	0.019 0.029 0.042	0.044 0.044 0.048	1:489016	1:337654	14181.487	
132	0141 0149	Lat Lng Elv	0.022 0.031 0.041	0.049 0.049 0.052	1:512551	1:387538	15889.074	
133	0141 0150	Lat Lng Elv	0.022 0.031 0.042	0.066 0.066 0.068	1:690543	1:509686	21406.829	
134	0143 0135	Lat Lng Elv	0.022 0.032 0.042	0.051 0.051 0.054	1:511224	1:389504	16359.190	
135	0143 0142	Lat Lng Elv	0.021 0.032 0.044	0.049 0.049 0.052	1:496506	1:361095	15888.217	
136	0144 0145	Lat Lng Elv	0.020 0.032 0.045	0.049 0.049 0.052	1:491972	1:349846	15743.105	
137	0150 0143	Lat Lng Elv	0.022 0.031 0.042	0.068 0.068 0.070	1:713159	1:526379	22107.939	
138	0150 0149	Lat Lng Elv	0.021 0.028 0.038	0.046 0.046 0.049	1:521759	1:384454	14609.253	
139	0151 0143	Lat Lng Elv	0.021 0.030 0.039	0.049 0.049 0.052	1:524264	1:403280	15727.940	
140	0151 0150	Lat Lng Elv	0.020 0.029 0.039	0.049 0.049 0.052	1:547992	1:407481	15891.758	
141	0151 0152	Lat Lng Elv	0.022 0.028 0.035	0.048 0.048 0.051	1:554713	1:443770	15531.974	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
142	0151 0159	Lat Lng Elv	0.023 0.027 0.034	0.050 0.050 0.053	1:590633	1:469032	15947.099	
143	0151 0160	Lat Lng Elv	0.028 0.033 0.041	0.068 0.068 0.071	1:673154	1:541807	22214.089	
144	0152 0160	Lat Lng Elv	0.026 0.031 0.038	0.049 0.049 0.052	1:507346	1:413887	15727.729	
145	0153 0144	Lat Lng Elv	0.022 0.035 0.049	0.069 0.069 0.071	1:641675	1:458339	22458.631	
146	0153 0145	Lat Lng Elv	0.019 0.030 0.042	0.049 0.049 0.052	1:528021	1:377158	15840.652	
147	0153 0152	Lat Lng Elv	0.016 0.029 0.042	0.049 0.049 0.052	1:545529	1:376675	15820.347	
148	0153 0161	Lat Lng Elv	0.014 0.027 0.039	0.049 0.049 0.052	1:579223	1:401000	15639.037	
149	0154 0146	Lat Lng Elv	0.021 0.031 0.042	0.049 0.049 0.052	1:509540	1:376089	15795.776	
150	0154 0147	Lat Lng Elv	0.022 0.032 0.041	0.069 0.069 0.071	1:697437	1:544341	22318.007	
151	0154 0153	Lat Lng Elv	0.016 0.028 0.041	0.048 0.048 0.051	1:551855	1:376876	15451.928	
152	0154 0155	Lat Lng Elv	0.019 0.028 0.036	0.049 0.049 0.052	1:563983	1:438654	15791.545	
153	0154 0161	Lat Lng Elv	0.016 0.028 0.041	0.068 0.068 0.070	1:783489	1:535066	21937.719	
154	0154 0162	Lat Lng Elv	0.021 0.030 0.040	0.049 0.049 0.052	1:527548	1:395661	15826.474	

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
155	0155 0147	Lat	0.021	0.049	1:543281	1:425814	15755.169	
		Lng	0.029	0.049				
		Elv	0.037	0.052				
156	0155 0148	Lat	0.028	0.069	1:617518	1:494014	22230.632	
		Lng	0.036	0.069				
		Elv	0.045	0.071				
157	0155 0163	Lat	0.022	0.050	1:531660	1:398745	15949.840	
		Lng	0.030	0.050				
		Elv	0.040	0.053				
158	0156 6065	Lat	0.016	0.049	1:722500	1:512742	15894.999	
		Lng	0.022	0.049				
		Elv	0.031	0.052				
159	0156 0155	Lat	0.020	0.049	1:578547	1:422183	15620.773	
		Lng	0.027	0.049				
		Elv	0.037	0.052				
160	0156 0163	Lat	0.022	0.068	1:715729	1:541161	22187.600	
		Lng	0.031	0.068				
		Elv	0.041	0.071				
161	0156 0164	Lat	0.023	0.050	1:514557	1:370959	15951.276	
		Lng	0.031	0.050				
		Elv	0.043	0.053				
162	0157 0045	Lat	0.021	0.050	1:623695	1:491396	16216.080	
		Lng	0.026	0.050				
		Elv	0.033	0.053				
163	0157 0149	Lat	0.025	0.048	1:518500	1:398846	15554.978	
		Lng	0.030	0.048				
		Elv	0.039	0.052				
164	0157 0150	Lat	0.024	0.066	1:715423	1:550326	21462.696	
		Lng	0.030	0.066				
		Elv	0.039	0.068				
165	0157 0158	Lat	0.028	0.054	1:529077	1:415703	17459.556	
		Lng	0.033	0.054				
		Elv	0.042	0.057				
166	0159 0152	Lat	0.022	0.074	1:857632	1:667047	24013.703	
		Lng	0.028	0.074				
		Elv	0.036	0.076				
167	0159 0160	Lat	0.027	0.057	1:571858	1:457486	18299.466	
		Lng	0.032	0.057				
		Elv	0.040	0.059				

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
168	0161 0004	Lat	0.013	0.049	1:690884	1:496572	15890.355	
		Lng	0.023	0.049				
		Elv	0.032	0.052				
169	0161 0152	Lat	0.017	0.069	1:745267	1:519954	22358.026	
		Lng	0.030	0.069				
		Elv	0.043	0.071				
170	0164 6065	Lat	0.023	0.069	1:748447	1:534605	22453.408	
		Lng	0.030	0.069				
		Elv	0.042	0.071				
171	0203 0106	Lat	0.017	0.065	1:913827	1:656813	21018.034	
		Lng	0.023	0.065				
		Elv	0.032	0.067				
172	0203 0113	Lat	0.017	0.061	1:903899	1:641477	19885.775	
		Lng	0.022	0.061				
		Elv	0.031	0.064				
173	0203 0114	Lat	0.013	0.021	1:384357	1:292843	6149.721	
		Lng	0.016	0.021				
		Elv	0.021	0.027				
174	0203 0121	Lat	0.016	0.067	1:944229	1:638743	21717.281	
		Lng	0.023	0.067				
		Elv	0.034	0.069				
175	0203 0122	Lat	0.016	0.038	1:552826	1:380068	12162.184	
		Lng	0.022	0.038				
		Elv	0.032	0.042				
176	0205 0128	Lat	0.019	0.059	1:793953	1:614673	19054.887	
		Lng	0.024	0.059				
		Elv	0.031	0.061				
177	0205 0129	Lat	0.014	0.038	1:753673	1:548126	12058.777	
		Lng	0.016	0.038				
		Elv	0.022	0.042				
178	0205 0136	Lat	0.017	0.047	1:688972	1:522668	15157.381	
		Lng	0.022	0.047				
		Elv	0.029	0.050				
179	0205 0137	Lat	0.008	0.016	1:433136	1:259881	3898.231	
		Lng	0.009	0.016				
		Elv	0.015	0.023				
180	0205 0204	Lat	0.012	0.015	1:294102	1:196068	3529.232	
		Lng	0.012	0.015				
		Elv	0.018	0.023				

	<u>Site Pair</u>		<u>Relative Error</u>	<u>Allow. Error</u>	<u>Horizontal Relative Acc</u>	<u>Vertical Relative Acc</u>	<u>Distance</u>	<u>Site Pair QA</u>
181	0205 0211	Lat Lng Elv	0.008 0.009 0.015	0.018 0.018 0.025	1:526417	1:315850	4737.759	
182	0210 6066	Lat Lng Elv	0.017 0.021 0.027	0.048 0.048 0.051	1:731445	1:568901	15360.377	
183	0211 0130	Lat Lng Elv	0.022 0.026 0.031	0.065 0.065 0.067	1:806801	1:676671	20976.826	
184	0211 0136	Lat Lng Elv	0.017 0.022 0.030	0.054 0.054 0.057	1:794065	1:582314	17469.437	
185	0211 0137	Lat Lng Elv	0.006 0.006 0.010	0.011 0.011 0.021	1:285397	1:171238	1712.384	
186	0211 0138	Lat Lng Elv	0.020 0.025 0.031	0.043 0.043 0.047	1:554018	1:446788	13850.449	
187	9604 6065	Lat Lng Elv	0.000 0.000 0.000	0.052 0.052 0.054	1:0	1:0	16597.322	
188	9604 0156	Lat Lng Elv	0.016 0.022 0.030	0.081 0.081 0.082	1:1192660	1:874617	26238.519	
189	9604 0164	Lat Lng Elv	0.023 0.030 0.042	0.064 0.064 0.067	1:694889	1:496349	20846.675	
190	9604 0210	Lat Lng Elv	0.017 0.021 0.027	0.051 0.051 0.054	1:779853	1:606553	16376.879	

Control Site Positions

FinalAdj_NAD83_88SP_feet

Horizontal Coordinate System: State Plane Coordinate 1983 **Date:** 06/01/03
Height System: Ortho. Ht. (GEOID99) **Project file:**
 FinalAdj_NAD83_88SP_feet.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	<u>Site ID</u>	<u>Control Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Control Type</u>	<u>Fix Status</u>
1	0054	Carroll Co. 2001-054	East.	4568278.612	0.000	Hor/Ver	Fixed
			Nrth.	3542237.540	0.000		Fixed
			Elev.	1181.710	0.000		Fixed
2	0063	Carroll Co. 2001-063	East.	4581209.150	0.000	Hor/Ver	Fixed
			Nrth.	3541877.711	0.000		Fixed
			Elev.	1140.385	0.000		Fixed
3	0072	Carroll Co. 2001-072	East.	4599728.956	0.000	Hor/Ver	Fixed
			Nrth.	3541710.636	0.000		Fixed
			Elev.	1166.648	0.000		Fixed
4	0203	Harn TJEbben	East.	4622565.095	0.000	Hor.	Fixed
			Nrth.	3648195.462	0.000		Fixed
			Elev.	1241.005	0.000		
5	6003	Webster Co. #6003	East.	4667229.837	0.000	Hor/Ver	Fixed
			Nrth.	3668153.820	0.000		Fixed
			Elev.	1186.904	0.000		Fixed
6	6058	Webster Co. #6058	East.	4678858.112	0.000	Hor/Ver	Fixed
			Nrth.	3604134.277	0.000		Fixed
			Elev.	1150.936	0.000		Fixed
7	6059	Webster Co. #6059	East.	4679010.153	0.000	Hor/Ver	Fixed
			Nrth.	3620047.473	0.000		Fixed
			Elev.	1160.805	0.000		Fixed
8	6060	Webster Co. #6060	East.	4680340.837	0.000	Hor/Ver	Fixed
			Nrth.	3636757.383	0.000		Fixed
			Elev.	1181.146	0.000		Fixed
9	6062	Webster Co. #6062	East.	4667032.998	0.000	Hor/Ver	Fixed
			Nrth.	3653539.758	0.000		Fixed
			Elev.	1216.458	0.000		Fixed
10	6063	Webster Co. #6063	East.	4666829.481	0.000	Hor/Ver	Fixed
			Nrth.	3636990.403	0.000		Fixed
			Elev.	1167.281	0.000		Fixed

	<u>Site ID</u>	<u>Control Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Control Type</u>	<u>Fix Status</u>
11	6064	Webster Co. #6064	East.	4678676.005	0.000	Hor/Ver	Fixed
			Nrth.	3588014.961	0.000		Fixed
			Elev.	1150.595	0.000		Fixed
12	6065	Webster Co. #6065	East.	4678487.026	0.000	Hor/Ver	Fixed
			Nrth.	3572233.328	0.000		Fixed
			Elev.	1141.586	0.000		Fixed
13	0001	Greene Co. A001	East.	4662339.506	0.000	Hor/Ver	Fixed
			Nrth.	3540762.110	0.000		Fixed
			Elev.	1120.503	0.000		Fixed
14	0002	Greene Co. A002	East.	4646830.583	0.000	Hor/Ver	Fixed
			Nrth.	3540931.658	0.000		Fixed
			Elev.	1122.143	0.000		Fixed
15	6066	Webster Co. #6066	East.	4678674.563	0.000	Hor/Ver	Fixed
			Nrth.	3540571.987	0.000		Fixed
			Elev.	1111.533	0.000		Fixed
16	0209	NGS BM "Q 101"	East.	4651090.914	0.000	Ver.	
			Nrth.	3535663.690	0.000		
			Elev.	1121.953	0.000		Fixed
17	0003	Greene Co. A003	East.	4630393.251	0.000	Hor/Ver	Fixed
			Nrth.	3541180.045	0.000		Fixed
			Elev.	1114.598	0.000		Fixed
18	0004	Greene Co. A004	East.	4615481.960	0.000	Hor/Ver	Fixed
			Nrth.	3541405.182	0.000		Fixed
			Elev.	1194.394	0.000		Fixed
19	0045	Carroll Co. 2001-045	East.	4553261.629	0.000	Hor/Ver	Fixed
			Nrth.	3542171.425	0.000		Fixed
			Elev.	1237.179	0.000		Fixed
20	0101	Buena Vista Co. #88	East.	4540253.179	0.000	Hor/Ver	Fixed
			Nrth.	3670397.078	0.000		Fixed
			Elev.	1246.635	0.000		Fixed
21	0202	NGS BM "X 22"	East.	4558245.039	0.000	Ver.	
			Nrth.	3677324.974	0.000		
			Elev.	1229.151	0.000		Fixed
22	0212	NGS BM "S 13 RESET"	East.	4533767.470	0.000	Ver.	
			Nrth.	3619659.054	0.000		
			Elev.	1228.016	0.000		Fixed
23	0204	TBM for "M 13"	East.	4613414.501	0.000	Ver.	
			Nrth.	3612160.772	0.000		
			Elev.	1223.910	0.000		

	<u>Site ID</u>	<u>Control Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Control Type</u>	<u>Fix Status</u>
24	0211	NGS BM "H 101"	East. Nrth. Elev.	4617640.893 3605092.331 1212.934	0.000 0.000 0.000	Ver.	
25	0205	NGS BM "L 13"	East. Nrth. Elev.	4614903.234 3608958.565 1234.263	0.000 0.000 0.000	Ver.	Fixed
26	9604	Harn ET 1 HK	East. Nrth. Elev.	4683263.298 3556339.481 1121.904	0.000 0.000 0.000	Hor/Ver	Fixed Fixed Fixed

	<u>Site ID</u>	<u>Control Site Descriptor</u>	<u>Convergence</u>	<u>Scale Factor</u>	<u>Elevation Factor</u>
1	0054	Carroll Co. 2001-054	- 0 52.983	0.99997709	0.99994804
2	0063	Carroll Co. 2001-063	- 0 51.041	0.99997716	0.99995000
3	0072	Carroll Co. 2001-072	- 0 48.262	0.99997712	0.99994871
4	0203	Harn TJEBBEN	- 0 45.044	0.99994949	0.99994522
5	6003	Webster Co. #6003	- 0 38.342	0.99994716	0.99994780
6	6058	Webster Co. #6058	- 0 36.484	0.99995759	0.99994942
7	6059	Webster Co. #6059	- 0 36.487	0.99995412	0.99994898
8	6060	Webster Co. #6060	- 0 36.313	0.99995110	0.99994804
9	6062	Webster Co. #6062	- 0 38.347	0.99994873	0.99994638
10	6063	Webster Co. #6063	- 0 38.350	0.99995109	0.99994872
11	6064	Webster Co. #6064	- 0 36.486	0.99996169	0.99994940
12	6065	Webster Co. #6065	- 0 36.489	0.99996628	0.99994980
13	0001	Greene Co. A001	- 0 38.863	0.99997718	0.99995077
14	0002	Greene Co. A002	- 0 41.191	0.99997718	0.99995073
15	6066	Webster Co. #6066	- 0 36.411	0.99997718	0.99995117
16	0209	NGS BM "Q 101"	- 0 40.542	0.99997920	0.99995072

	<u>Site ID</u>	<u>Control Site Descriptor</u>	<u>Convergence</u>	<u>Scale Factor</u>	<u>Elevation Factor</u>
17	0003	Greene Co. A003	- 0 43.658	0.99997716	0.99995113
18	0004	Greene Co. A004	- 0 45.897	0.99997715	0.99994735
19	0045	Carroll Co. 2001-045	- 0 55.236	0.99997721	0.99994540
20	0101	Buena Vista Co. #88	- 0 57.511	0.99994712	0.99994491
21	0202	NGS BM "X 22"	- 0 54.812	0.99994653	0.99994576
22	0212	NGS BM "S 13 RESET"	- 0 58.359	0.99995461	0.99994582
23	0204	TBM for "M 13"	- 0 46.350	0.99995594	0.99994602
24	0211	NGS BM "H 101"	- 0 45.700	0.99995754	0.99994655
25	0205	NGS BM "L 13"	- 0 46.120	0.99995665	0.99994553
26	9604	Harn ET 1 HK	- 0 35.747	0.99997145	0.99995069

Control Tie Analysis

FinalAdj_NAD83_88SP_feet

Coordinate System: State Plane Coordinate 1983 **Date:** 06/01/03
Height System: Ortho. Ht. (GEOID99) **Project file:**
 FinalAdj_NAD83_88SP_feet.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

<u>Site ID</u>	<u>Control Site Descriptor</u>	<u>Control Type</u>	<u>Misclosure</u>		<u>Relative Accuracy</u>	<u>Control QA</u>
1 0054	Carroll Co. 2001-054	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
2 0063	Carroll Co. 2001-063	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
3 0072	Carroll Co. 2001-072	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
4 0203	Harn TJEBBEN	Hor.	East	Fixed	0.000	
			Nrth	Fixed		
			Elev		1:921412	
5 6003	Webster Co. #6003	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
6 6058	Webster Co. #6058	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
7 6059	Webster Co. #6059	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
8 6060	Webster Co. #6060	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
9 6062	Webster Co. #6062	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		
10 6063	Webster Co. #6063	Hor/Ver	East	Fixed		
			Nrth	Fixed		
			Elev	Fixed		

	<u>Site ID</u>	<u>Control Site Descriptor</u>	<u>Control Type</u>	<u>Misclosure</u>		<u>Relative Accuracy</u>	<u>Control QA</u>
11	6064	Webster Co. #6064	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
12	6065	Webster Co. #6065	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
13	0001	Greene Co. A001	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
14	0002	Greene Co. A002	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
15	6066	Webster Co. #6066	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
16	0209	NGS BM "Q 101"	Ver.	East Nrth Elev		1:2310192	
					Fixed	0.000	
17	0003	Greene Co. A003	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
18	0004	Greene Co. A004	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
19	0045	Carroll Co. 2001-045	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
20	0101	Buena Vista Co. #88	Hor/Ver	East Nrth Elev	Fixed Fixed Fixed		
21	0202	NGS BM "X 22"	Ver.	East Nrth Elev		1:16796769	
					Fixed	0.000	
22	0212	NGS BM "S 13 RESET"	Ver.	East Nrth Elev		1:13792029	
					Fixed	0.000	
23	0204	TBM for "M 13"	Ver.	East Nrth Elev		1:9552	
					-0.175	1:20148	Fail

	<u>Site</u> <u>ID</u>	<u>Control Site</u> <u>Descriptor</u>	<u>Control</u> <u>Type</u>	<u>Misclosure</u>		<u>Relative</u> <u>Accuracy</u>	<u>Control</u> <u>QA</u>
24	0211	NGS BM "H 101"	Ver.	East		1:439914	
				Nrth			
				Elev	0.100	1:47500	Fail
25	0205	NGS BM "L 13"	Ver.	East		1:32582274	
				Nrth			
				Elev	Fixed	0.000	
26	9604	Harn ET 1 HK	Hor/Ver	East	Fixed		
				Nrth	Fixed		
				Elev	Fixed		

Coordinate System Definition Summary

FinalAdj_NAD83_88SP_feet

Linear Units of Measure: US Feet

Date: 06/01/03

Project file:

FinalAdj_NAD83_88SP_feet.spr

Local Grid System

Name:

Transformation Parameters:

E Translation	=	0.000m
N Translation	=	0.000m
Z Rotation	=	0.000000"
Scale Diff. (ppm)	=	0.000000
Centroid Easting	=	0.000m
Centroid Northing	=	0.000m

Note: Parameters define transformation from BASE GRID SYSTEM to LOCAL GRID SYSTEM

Geodetic Datum

Name:

North American 1983-CONUS

Reference Ellipsoid:

GRS80
a = 6378137.000m
1/f = 298.257222000

Transformation Parameters:

X Translation	=	0.000m
Y Translation	=	0.000m
Z Translation	=	0.000m
X Rotation	=	0.000000"
Y Rotation	=	0.000000"
Z Rotation	=	0.000000"
Scale Diff. (ppm)	=	0.000000

Note: Parameters define transformation from LOCAL SYSTEM to WGS84

Grid System

Name:

State Plane Coordinate 1983

Projection Type:

LC83

Zone Name:

Iowa (North)

Zone Parameters:

Latitude of Southern Standard parallel	=	42°04'00.00"N
Latitude of Northern Standard parallel	=	43°16'00.00"N
Longitude of the grid origin	=	093°30'00.00"W
Latitude of grid origin	=	41°30'00.00"N
False easting (m)	=	1500000.000 m
False northing (m)	=	1000000.000 m

Loop Closure Analysis

FinalAdj_NAD83_88SP_feet

Desired Horizontal Accuracy: 0.033USft + 10ppm

Date: 06/01/03

Desired Vertical Accuracy: 0.066USft + 10ppm

Project file:

FinalAdj_NAD83_88SP_feet.spr

Confidence Level: 95% Err.

Linear Units of Measure: US Feet

	<u>Loop Vectors</u>	<u>Loop Length</u>	<u>Misclosure</u>	<u>Horizontal Relatv Acc</u>	<u>Vertical Relatv Acc</u>	<u>Loop QA</u>
1	0157-0045 05/20 13:15					
	0157-0149 05/20 13:48					
	0150-0149 05/20 13:48					
	0151-0150 05/20 14:48					
	0151-0159 05/20 15:21					
	0063-0159 05/21 12:56					
	0054-0063 05/21 12:53					
	0054-0045 05/20 13:15					
		122085.014	E: 0.016	1:2088998	1:-5293008	
			N: 0.056			
			U: -0.023			

Observation Information

FinalAdj_NAD83_88SP_feet

Time System: UTC
Linear Units of Measure: US Feet
FinalAdj_NAD83_88SP_feet.spr

Date: 06/01/03
Project file:

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
1	0054	0.000	0.000	4.698	12:52:35 PM	1:21:20 PM	B0054A03.141
2	0063	0.000	0.000	4.698	12:53:05 PM	1:21:25 PM	B0063A03.141
3	0072	0.000	0.000	4.698	1:06:35 PM	1:20:25 PM	B0072A03.141
4	0106	0.000	0.000	4.698	5:31:05 PM	5:48:05 PM	B0106H03.141
5	0107	0.000	0.000	4.698	5:04:05 PM	5:20:15 PM	B0107G03.141
6	0107	0.000	0.000	4.698	5:26:35 PM	5:49:15 PM	B0107H03.141
7	0108	0.000	0.000	4.698	5:03:35 PM	5:18:55 PM	B0108G03.141
8	0115	0.000	0.000	4.698	5:30:05 PM	5:49:15 PM	B0115H03.141
9	0115	0.000	0.000	4.698	5:58:05 PM	6:22:15 PM	B0115I03.141
10	0116	0.000	0.000	4.698	5:03:05 PM	5:20:15 PM	B0116G03.141
11	0121	0.000	0.000	4.698	7:27:05 PM	7:42:20 PM	B0121I03.141
12	0122	0.000	0.000	4.698	7:30:50 PM	7:42:20 PM	B0122N03.141
13	0123	0.000	0.000	4.698	6:01:05 PM	7:14:30 PM	B0123H03.141
14	0124	0.000	0.000	4.698	6:07:05 PM	6:21:00 PM	B0124I03.141
15	0128	0.000	0.000	4.698	7:25:35 PM	7:42:15 PM	B0128K03.141
16	0129	0.000	0.000	4.698	7:26:35 PM	7:40:55 PM	B0129K03.141
17	0130	0.000	0.000	4.698	6:34:05 PM	7:14:15 PM	B0130J03.141
18	0131	0.000	0.000	4.698	6:32:05 PM	7:14:15 PM	B0131J03.141
19	0132	0.000	0.000	4.698	2:56:35 PM	3:10:00 PM	B0132D03.141
20	0132	0.000	0.000	4.698	6:58:05 PM	7:14:15 PM	B0132M03.141
21	0139	0.000	0.000	4.698	2:26:35 PM	2:43:15 PM	B0139C03.141
22	0139	0.000	0.000	4.698	8:14:05 PM	8:29:15 PM	B0139L03.141
23	0140	0.000	0.000	4.698	2:28:35 PM	2:43:30 PM	B0140C03.141

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
24	0147	0.000	0.000	4.698	8:10:30 PM	8:34:40 PM	B0147L03.141
25	0148	0.000	0.000	4.698	8:18:35 PM	8:29:15 PM	B0148O03.141
26	0156	0.000	0.000	4.698	1:51:05 PM	2:12:15 PM	B0156B03.141
27	0159	0.000	0.000	4.698	12:56:35 PM	1:21:15 PM	B0159A03.141
28	0203	0.000	0.000	4.698	5:40:05 PM	5:49:20 PM	B0203G03.141
29	????	0.000	0.000	4.698	3:26:35 PM	3:43:20 PM	B0206E03.141
30	????	0.000	0.000	4.698	3:56:05 PM	4:45:20 PM	B0206F03.141
31	????	0.000	0.000	4.698	3:58:35 PM	4:45:15 PM	B0207F03.141
32	6003	0.000	0.000	4.698	4:01:05 PM	5:20:20 PM	B6003F03.141
33	6058	0.000	0.000	4.698	1:58:35 PM	2:11:10 PM	B6058B03.141
34	6058	0.000	0.000	4.698	2:25:05 PM	2:43:00 PM	B6058C03.141
35	6059	0.000	0.000	4.698	2:29:05 PM	2:43:35 PM	B6059C03.141
36	6059	0.000	0.000	4.698	2:54:35 PM	3:11:15 PM	B6059D03.141
37	6060	0.000	0.000	4.698	3:02:35 PM	3:11:40 PM	B6060D03.141
38	6060	0.000	0.000	4.698	3:26:35 PM	3:43:15 PM	B6060E03.141
39	6062	0.000	0.000	4.698	3:31:05 PM	3:43:20 PM	B6062E03.141
40	6062	0.000	0.000	4.698	3:57:05 PM	4:45:15 PM	B6062F03.141
41	6063	0.000	0.000	4.698	2:58:35 PM	3:11:20 PM	B6063D03.141
42	6063	0.000	0.000	4.698	3:30:35 PM	3:43:20 PM	B6063E03.141
43	6063	0.000	0.000	4.698	6:06:05 PM	6:22:15 PM	B6063I03.141
44	6064	0.000	0.000	4.698	1:56:35 PM	2:12:15 PM	B6064B03.141
45	6065	0.000	0.000	4.698	1:58:05 PM	2:11:35 PM	B6065B03.141
46	0001	0.000	0.000	4.698	8:47:05 PM	9:02:15 PM	#0001
47	0002	0.000	0.000	4.698	8:47:05 PM	9:02:15 PM	#0002
48	0001	0.000	0.000	4.698	9:16:35 PM	9:28:15 PM	#0003
49	6066	0.000	0.000	4.698	9:16:35 PM	9:28:15 PM	#0004
50	0209	0.000	0.000	4.698	8:49:35 PM	9:01:20 PM	#0005

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
51	0210	0.000	0.000	4.698	8:49:35 PM	9:02:15 PM	#0006
52	0002	0.000	0.000	4.698	8:18:05 PM	8:31:05 PM	#0007
53	0162	0.000	0.000	4.698	8:18:05 PM	8:31:05 PM	#0008
54	0002	0.000	0.000	4.698	10:14:05 PM	10:27:25 PM	#0009
55	0163	0.000	0.000	4.698	10:14:05 PM	10:27:25 PM	#0010
56	0003	0.000	0.000	4.698	8:18:05 PM	8:31:05 PM	#0011
57	0003	0.000	0.000	4.698	4:31:05 PM	4:44:05 PM	#0012
58	0004	0.000	0.000	4.698	4:31:05 PM	4:44:05 PM	#0013
59	0161	0.000	0.000	4.698	4:23:35 PM	4:45:10 PM	#0014
60	0045	0.000	0.000	4.698	1:23:35 PM	1:34:05 PM	#0015
61	0158	0.000	0.000	4.698	1:23:35 PM	1:34:05 PM	#0016
62	0054	0.000	0.000	4.698	1:15:05 PM	1:34:15 PM	#0017
63	0054	0.000	0.000	4.698	3:49:05 PM	4:04:45 PM	#0018
64	0072	0.000	0.000	4.698	3:49:05 PM	4:04:45 PM	#0019
65	0157	0.000	0.000	4.698	1:11:05 PM	1:33:50 PM	#0020
66	0159	0.000	0.000	4.698	3:49:05 PM	4:04:45 PM	#0021
67	0072	0.000	0.000	4.698	4:31:05 PM	4:44:05 PM	#0022
68	0102	0.000	0.000	4.698	4:35:35 PM	5:08:20 PM	#0023
69	0101	0.000	0.000	4.698	4:35:35 PM	5:08:20 PM	#0024
70	0102	0.000	0.000	4.698	5:27:35 PM	5:49:20 PM	#0025
71	0103	0.000	0.000	4.698	5:27:35 PM	5:49:20 PM	#0026
72	0110	0.000	0.000	4.698	5:24:35 PM	5:49:15 PM	#0027
73	????	0.000	0.000	4.698	4:32:05 PM	5:08:20 PM	#0028
74	0202	0.000	0.000	4.698	5:37:05 PM	5:49:25 PM	#0029
75	0103	0.000	0.000	4.698	6:05:05 PM	6:16:45 PM	#0030
76	0111	0.000	0.000	4.698	6:05:05 PM	6:16:45 PM	#0031
77	0112	0.000	0.000	4.698	6:05:05 PM	6:17:15 PM	#0032

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
78	0104	0.000	0.000	4.698	6:05:05 PM	6:17:00 PM	#0033
79	0104	0.000	0.000	4.698	6:32:05 PM	6:56:55 PM	#0034
80	0105	0.000	0.000	4.698	6:32:05 PM	6:56:55 PM	#0035
81	0106	0.000	0.000	4.698	6:42:35 PM	6:57:15 PM	#0036
82	0106	0.000	0.000	4.698	7:18:05 PM	7:31:15 PM	#0037
83	0114	0.000	0.000	4.698	7:18:05 PM	7:31:15 PM	#0038
84	0109	0.000	0.000	4.698	4:35:35 PM	5:09:15 PM	#0039
85	0109	0.000	0.000	4.698	8:56:05 PM	9:10:40 PM	#0040
86	0110	0.000	0.000	4.698	8:56:05 PM	9:10:40 PM	#0041
87	0109	0.000	0.000	4.698	9:28:05 PM	9:43:25 PM	#0042
88	0117	0.000	0.000	4.698	9:28:05 PM	9:43:25 PM	#0043
89	0118	0.000	0.000	4.698	9:26:05 PM	9:43:25 PM	#0044
90	0118	0.000	0.000	4.698	8:47:05 PM	9:10:40 PM	#0045
91	0119	0.000	0.000	4.698	8:47:05 PM	9:10:40 PM	#0046
92	0112	0.000	0.000	4.698	8:20:05 PM	8:33:40 PM	#0047
93	0120	0.000	0.000	4.698	8:20:05 PM	8:33:40 PM	#0048
94	0113	0.000	0.000	4.698	6:33:35 PM	6:56:55 PM	#0049
95	0113	0.000	0.000	4.698	7:08:05 PM	7:31:30 PM	#0050
96	0113	0.000	0.000	4.698	7:47:35 PM	8:02:55 PM	#0051
97	0121	0.000	0.000	4.698	7:47:35 PM	8:02:55 PM	#0052
98	0122	0.000	0.000	4.698	7:48:35 PM	8:02:55 PM	#0053
99	0119	0.000	0.000	4.698	8:20:35 PM	8:33:40 PM	#0054
100	0120	0.000	0.000	4.698	10:50:05 PM	11:05:00 PM	#0055
101	0126	0.000	0.000	4.698	10:50:05 PM	11:05:00 PM	#0056
102	0121	0.000	0.000	4.698	8:12:05 PM	8:33:40 PM	#0057
103	0125	0.000	0.000	4.698	9:28:05 PM	9:43:45 PM	#0058
104	0125	0.000	0.000	4.698	10:17:05 PM	10:31:25 PM	#0059

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
105	0134	0.000	0.000	4.698	10:17:05 PM	10:31:25 PM	#0060
106	0212	0.000	0.000	4.698	10:03:35 PM	10:31:00 PM	#0061
107	0127	0.000	0.000	4.698	10:48:35 PM	11:05:00 PM	#0062
108	0127	0.000	0.000	4.698	11:20:35 PM	11:41:15 PM	#0063
109	0134	0.000	0.000	4.698	11:20:35 PM	11:41:15 PM	#0064
110	0135	0.000	0.000	4.698	11:19:05 PM	11:40:35 PM	#0065
111	0136	0.000	0.000	4.698	11:24:35 PM	11:40:50 PM	#0066
112	0128	0.000	0.000	4.698	6:37:05 PM	6:51:00 PM	#0067
113	0204	0.000	0.000	4.698	6:37:05 PM	6:51:00 PM	#0068
114	0129	0.000	0.000	4.698	6:32:35 PM	6:52:15 PM	#0069
115	0129	0.000	0.000	4.698	7:01:35 PM	7:21:35 PM	#0070
116	0130	0.000	0.000	4.698	7:01:35 PM	7:21:35 PM	#0071
117	0138	0.000	0.000	4.698	7:12:35 PM	7:22:15 PM	#0072
118	0211	0.000	0.000	4.698	6:59:35 PM	7:21:40 PM	#0073
119	0133	0.000	0.000	4.698	9:59:05 PM	10:31:15 PM	#0074
120	0133	0.000	0.000	4.698	2:19:55 PM	2:32:45 PM	#0075
121	0142	0.000	0.000	4.698	2:19:55 PM	2:32:45 PM	#0076
122	0134	0.000	0.000	4.698	10:50:05 PM	11:05:40 PM	#0077
123	0137	0.000	0.000	4.698	6:01:35 PM	6:20:05 PM	#0078
124	0136	0.000	0.000	4.698	6:01:35 PM	6:20:05 PM	#0079
125	0137	0.000	0.000	4.698	5:32:45 PM	5:47:55 PM	#0080
126	0144	0.000	0.000	4.698	5:32:45 PM	5:47:55 PM	#0081
127	0145	0.000	0.000	4.698	5:32:45 PM	5:48:10 PM	#0082
128	0138	0.000	0.000	4.698	7:36:05 PM	7:54:45 PM	#0083
129	0139	0.000	0.000	4.698	7:36:05 PM	7:54:45 PM	#0084
130	0146	0.000	0.000	4.698	7:38:05 PM	7:55:15 PM	#0085
131	0141	0.000	0.000	4.698	2:18:35 PM	2:33:10 PM	#0086

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
132	0141	0.000	0.000	4.698	1:51:05 PM	2:06:15 PM	#0087
133	0149	0.000	0.000	4.698	1:51:05 PM	2:06:15 PM	#0088
134	0150	0.000	0.000	4.698	1:51:05 PM	2:06:15 PM	#0089
135	0143	0.000	0.000	4.698	2:46:30 PM	3:03:15 PM	#0090
136	0135	0.000	0.000	4.698	2:46:30 PM	3:03:15 PM	#0091
137	0143	0.000	0.000	4.698	2:19:55 PM	2:32:45 PM	#0092
138	0148	0.000	0.000	4.698	10:40:05 PM	10:54:25 PM	#0093
139	0147	0.000	0.000	4.698	10:40:05 PM	10:54:25 PM	#0094
140	0150	0.000	0.000	4.698	2:44:05 PM	3:02:20 PM	#0095
141	0151	0.000	0.000	4.698	2:48:35 PM	3:03:15 PM	#0096
142	0151	0.000	0.000	4.698	3:18:20 PM	3:32:15 PM	#0097
143	0152	0.000	0.000	4.698	3:18:20 PM	3:32:15 PM	#0098
144	0159	0.000	0.000	4.698	3:21:35 PM	3:32:15 PM	#0099
145	0160	0.000	0.000	4.698	3:19:05 PM	3:32:10 PM	#0100
146	0153	0.000	0.000	4.698	5:29:35 PM	5:47:55 PM	#0101
147	0153	0.000	0.000	4.698	5:01:35 PM	5:17:50 PM	#0102
148	0152	0.000	0.000	4.698	5:01:35 PM	5:17:50 PM	#0103
149	0161	0.000	0.000	4.698	5:01:35 PM	5:18:15 PM	#0104
150	0154	0.000	0.000	4.698	7:38:05 PM	7:55:15 PM	#0105
151	0154	0.000	0.000	4.698	10:43:05 PM	10:54:25 PM	#0106
152	0154	0.000	0.000	4.698	5:04:05 PM	5:17:30 PM	#0107
153	0155	0.000	0.000	4.698	10:43:05 PM	10:55:15 PM	#0108
154	0154	0.000	0.000	4.698	8:13:35 PM	8:30:30 PM	#0109
155	0155	0.000	0.000	4.698	10:15:05 PM	10:27:25 PM	#0110
156	0156	0.000	0.000	4.698	9:47:05 PM	9:57:15 PM	#0111
157	6065	0.000	0.000	4.698	9:47:05 PM	9:57:15 PM	#0112
158	0156	0.000	0.000	4.698	10:15:05 PM	10:28:15 PM	#0113

	<u>Site ID</u>	<u>Antenna Slant</u>	<u>Antenna Radius</u>	<u>Antenna Offset</u>	<u>Start Time</u>	<u>End Time</u>	<u>File Name</u>
159	0164	0.000	0.000	4.698	9:47:05 PM	9:57:15 PM	#0114
160	0157	0.000	0.000	4.698	1:48:35 PM	2:05:30 PM	#0115
161	0203	0.000	0.000	4.698	7:16:05 PM	7:31:30 PM	#0116
162	0203	0.000	0.000	4.698	7:44:40 PM	8:02:55 PM	#0117
163	0205	0.000	0.000	4.698	6:32:35 PM	6:50:50 PM	#0118
164	0205	0.000	0.000	4.698	6:04:05 PM	6:20:15 PM	#0119
165	0211	0.000	0.000	4.698	6:04:05 PM	6:20:15 PM	#0120
166	0210	0.000	0.000	4.698	9:16:35 PM	9:28:15 PM	#0121
167	9604	0.000	0.000	4.698	9:42:35 PM	9:56:30 PM	#0122
168	9604	0.000	0.000	4.698	9:19:05 PM	9:28:30 PM	#0123

Project Files

FinalAdj_NAD83_88SP_feet

Time System: UTC

Date: 06/01/03

Project file: FinalAdj_NAD83_88SP_feet.spr

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
1	B0054A03.141	5/21/2003 12:52:35 PM	5/21/2003	5.0	346	258206	L1/L2 GPS
2	B0063A03.141	5/21/2003 12:53:05 PM	5/21/2003	5.0	341	253894	L1/L2 GPS
3	B0072A03.141	5/21/2003 1:06:35 PM	5/21/2003	5.0	167	124672	L1/L2 GPS
4	B0106H03.141	5/21/2003 5:31:05 PM	5/21/2003	5.0	210	182746	L1/L2 GPS
5	B0107G03.141	5/21/2003 5:04:05 PM	5/21/2003	5.0	205	178434	L1/L2 GPS
6	B0107H03.141	5/21/2003 5:26:35 PM	5/21/2003	5.0	281	243860	L1/L2 GPS
7	B0108G03.141	5/21/2003 5:03:35 PM	5/21/2003	5.0	191	163722	L1/L2 GPS
8	B0115H03.141	5/21/2003 5:30:05 PM	5/21/2003	5.0	239	207678	L1/L2 GPS
9	B0115I03.141	5/21/2003 5:58:05 PM	5/21/2003	5.0	301	271584	L1/L2 GPS
10	B0116G03.141	5/21/2003 5:03:05 PM	5/21/2003	5.0	214	188349	L1/L2 GPS
11	B0121I03.141	5/21/2003 7:27:05 PM	5/21/2003	5.0	192	167475	L1/L2 GPS
12	B0122N03.141	5/21/2003 7:30:50 PM	5/21/2003	5.0	141	117983	L1/L2 GPS
13	B0123H03.141	5/21/2003 6:01:05 PM	5/21/2003	5.0	889	837690	L1/L2 GPS
14	B0124I03.141	5/21/2003 6:07:05 PM	5/21/2003	5.0	179	155061	L1/L2 GPS
15	B0128K03.141	5/21/2003 7:25:35 PM	5/21/2003	5.0	208	183000	L1/L2 GPS
16	B0129K03.141	5/21/2003 7:26:35 PM	5/21/2003	5.0	182	159045	L1/L2 GPS
17	B0130J03.141	5/21/2003 6:34:05 PM	5/21/2003	5.0	489	471972	L1/L2 GPS
18	B0131J03.141	5/21/2003 6:32:05 PM	5/21/2003	5.0	514	490040	L1/L2 GPS
19	B0132D03.141	5/21/2003 2:56:35 PM	5/21/2003	5.0	171	140848	L1/L2 GPS
20	B0132M03.141	5/21/2003 6:58:05 PM	5/21/2003	5.0	206	192954	L1/L2 GPS

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
21	B0139C03.141	5/21/2003 2:26:35 PM	5/21/2003	5.0	211	136835	L1/L2 GPS
22	B0139L03.141	5/21/2003 8:14:05 PM	5/21/2003	5.0	189	200448	L1/L2 GPS
23	B0140C03.141	5/21/2003 2:28:35 PM	5/21/2003	5.0	186	120513	L1/L2 GPS
24	B0147L03.141	5/21/2003 8:10:30 PM	5/21/2003	5.0	291	305446	L1/L2 GPS
25	B0148O03.141	5/21/2003 8:18:35 PM	5/21/2003	5.0	138	130004	L1/L2 GPS
26	B0156B03.141	5/21/2003 1:51:05 PM	5/21/2003	5.0	266	196683	L1/L2 GPS
27	B0159A03.141	5/21/2003 12:56:35 PM	5/21/2003	5.0	297	221652	L1/L2 GPS
28	B0203G03.141	5/21/2003 5:40:05 PM	5/21/2003	5.0	123	110278	L1/L2 GPS
29	B0206E03.141	5/21/2003 3:26:35 PM	5/21/2003	5.0	207	154512	L1/L2 GPS
30	B0206F03.141	5/21/2003 3:56:05 PM	5/21/2003	5.0	599	507375	L1/L2 GPS
31	B0207F03.141	5/21/2003 3:58:35 PM	5/21/2003	5.0	570	482928	L1/L2 GPS
32	B6003F03.141	5/21/2003 4:01:05 PM	5/21/2003	5.0	962	841126	L1/L2 GPS
33	B6058B03.141	5/21/2003 1:58:35 PM	5/21/2003	5.0	158	116794	L1/L2 GPS
34	B6058C03.141	5/21/2003 2:25:05 PM	5/21/2003	5.0	226	146764	L1/L2 GPS
35	B6059C03.141	5/21/2003 2:29:05 PM	5/21/2003	5.0	185	120155	L1/L2 GPS
36	B6059D03.141	5/21/2003 2:54:35 PM	5/21/2003	5.0	212	172986	L1/L2 GPS
37	B6060D03.141	5/21/2003 3:02:35 PM	5/21/2003	5.0	121	100541	L1/L2 GPS
38	B6060E03.141	5/21/2003 3:26:35 PM	5/21/2003	5.0	207	154124	L1/L2 GPS
39	B6062E03.141	5/21/2003 3:31:05 PM	5/21/2003	5.0	152	113482	L1/L2 GPS
40	B6062F03.141	5/21/2003 3:57:05 PM	5/21/2003	5.0	590	498721	L1/L2 GPS
41	B6063D03.141	5/21/2003 2:58:35 PM	5/21/2003	5.0	165	136954	L1/L2 GPS
42	B6063E03.141	5/21/2003 3:30:35 PM	5/21/2003	5.0	163	120718	L1/L2 GPS

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
43	B6063I03.141	5/21/2003 6:06:05 PM	5/21/2003	5.0	196	174630	L1/L2 GPS
44	B6064B03.141	5/21/2003 1:56:35 PM	5/21/2003	5.0	199	147186	L1/L2 GPS
45	B6065B03.141	5/21/2003 1:58:05 PM	5/21/2003	5.0	171	126783	L1/L2 GPS
46	#0001	5/20/2003 8:47:05 PM	5/20/2003	0.0	0	0	Unknown
47	#0002	5/20/2003 8:47:05 PM	5/20/2003	0.0	0	0	Unknown
48	#0003	5/20/2003 9:16:35 PM	5/20/2003	0.0	0	0	Unknown
49	#0004	5/20/2003 9:16:35 PM	5/20/2003	0.0	0	0	Unknown
50	#0005	5/20/2003 8:49:35 PM	5/20/2003	0.0	0	0	Unknown
51	#0006	5/20/2003 8:49:35 PM	5/20/2003	0.0	0	0	Unknown
52	#0007	5/20/2003 8:18:05 PM	5/20/2003	0.0	0	0	Unknown
53	#0008	5/20/2003 8:18:05 PM	5/20/2003	0.0	0	0	Unknown
54	#0009	5/20/2003 10:14:05 PM	5/20/2003	0.0	0	0	Unknown
55	#0010	5/20/2003 10:14:05 PM	5/20/2003	0.0	0	0	Unknown
56	#0011	5/20/2003 8:18:05 PM	5/20/2003	0.0	0	0	Unknown
57	#0012	5/20/2003 4:31:05 PM	5/20/2003	0.0	0	0	Unknown
58	#0013	5/20/2003 4:31:05 PM	5/20/2003	0.0	0	0	Unknown
59	#0014	5/20/2003 4:23:35 PM	5/20/2003	0.0	0	0	Unknown
60	#0015	5/20/2003 1:23:35 PM	5/20/2003	0.0	0	0	Unknown
61	#0016	5/20/2003 1:23:35 PM	5/20/2003	0.0	0	0	Unknown
62	#0017	5/20/2003 1:15:05 PM	5/20/2003	0.0	0	0	Unknown
63	#0018	5/20/2003 3:49:05 PM	5/20/2003	0.0	0	0	Unknown
64	#0019	5/20/2003 3:49:05 PM	5/20/2003	0.0	0	0	Unknown
65	#0020	5/20/2003 1:11:05 PM	5/20/2003	0.0	0	0	Unknown

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
66	#0021	5/20/2003 3:49:05 PM	5/20/2003	0.0	0	0	Unknown
67	#0022	5/20/2003 4:31:05 PM	5/20/2003	0.0	0	0	Unknown
68	#0023	5/19/2003 4:35:35 PM	5/19/2003	0.0	0	0	Unknown
69	#0024	5/19/2003 4:35:35 PM	5/19/2003	0.0	0	0	Unknown
70	#0025	5/19/2003 5:27:35 PM	5/19/2003	0.0	0	0	Unknown
71	#0026	5/19/2003 5:27:35 PM	5/19/2003	0.0	0	0	Unknown
72	#0027	5/19/2003 5:24:35 PM	5/19/2003	0.0	0	0	Unknown
73	#0028	5/19/2003 4:32:05 PM	5/19/2003	0.0	0	0	Unknown
74	#0029	5/19/2003 5:37:05 PM	5/19/2003	0.0	0	0	Unknown
75	#0030	5/19/2003 6:05:05 PM	5/19/2003	0.0	0	0	Unknown
76	#0031	5/19/2003 6:05:05 PM	5/19/2003	0.0	0	0	Unknown
77	#0032	5/19/2003 6:05:05 PM	5/19/2003	0.0	0	0	Unknown
78	#0033	5/19/2003 6:05:05 PM	5/19/2003	0.0	0	0	Unknown
79	#0034	5/19/2003 6:32:05 PM	5/19/2003	0.0	0	0	Unknown
80	#0035	5/19/2003 6:32:05 PM	5/19/2003	0.0	0	0	Unknown
81	#0036	5/19/2003 6:42:35 PM	5/19/2003	0.0	0	0	Unknown
82	#0037	5/19/2003 7:18:05 PM	5/19/2003	0.0	0	0	Unknown
83	#0038	5/19/2003 7:18:05 PM	5/19/2003	0.0	0	0	Unknown
84	#0039	5/19/2003 4:35:35 PM	5/19/2003	0.0	0	0	Unknown
85	#0040	5/19/2003 8:56:05 PM	5/19/2003	0.0	0	0	Unknown
86	#0041	5/19/2003 8:56:05 PM	5/19/2003	0.0	0	0	Unknown
87	#0042	5/19/2003 9:28:05 PM	5/19/2003	0.0	0	0	Unknown

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
88	#0043	5/19/2003 9:28:05 PM	5/19/2003	0.0	0	0	Unknown
89	#0044	5/19/2003 9:26:05 PM	5/19/2003	0.0	0	0	Unknown
90	#0045	5/19/2003 8:47:05 PM	5/19/2003	0.0	0	0	Unknown
91	#0046	5/19/2003 8:47:05 PM	5/19/2003	0.0	0	0	Unknown
92	#0047	5/19/2003 8:20:05 PM	5/19/2003	0.0	0	0	Unknown
93	#0048	5/19/2003 8:20:05 PM	5/19/2003	0.0	0	0	Unknown
94	#0049	5/19/2003 6:33:35 PM	5/19/2003	0.0	0	0	Unknown
95	#0050	5/19/2003 7:08:05 PM	5/19/2003	0.0	0	0	Unknown
96	#0051	5/19/2003 7:47:35 PM	5/19/2003	0.0	0	0	Unknown
97	#0052	5/19/2003 7:47:35 PM	5/19/2003	0.0	0	0	Unknown
98	#0053	5/19/2003 7:48:35 PM	5/19/2003	0.0	0	0	Unknown
99	#0054	5/19/2003 8:20:35 PM	5/19/2003	0.0	0	0	Unknown
100	#0055	5/19/2003 10:50:05 PM	5/19/2003	0.0	0	0	Unknown
101	#0056	5/19/2003 10:50:05 PM	5/19/2003	0.0	0	0	Unknown
102	#0057	5/19/2003 8:12:05 PM	5/19/2003	0.0	0	0	Unknown
103	#0058	5/19/2003 9:28:05 PM	5/19/2003	0.0	0	0	Unknown
104	#0059	5/19/2003 10:17:05 PM	5/19/2003	0.0	0	0	Unknown
105	#0060	5/19/2003 10:17:05 PM	5/19/2003	0.0	0	0	Unknown
106	#0061	5/19/2003 10:03:35 PM	5/19/2003	0.0	0	0	Unknown
107	#0062	5/19/2003 10:48:35 PM	5/19/2003	0.0	0	0	Unknown
108	#0063	5/19/2003 11:20:35 PM	5/19/2003	0.0	0	0	Unknown
109	#0064	5/19/2003 11:20:35 PM	5/19/2003	0.0	0	0	Unknown
110	#0065	5/19/2003 11:19:05 PM	5/19/2003	0.0	0	0	Unknown

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
111	#0066	5/19/2003 11:24:35 PM	5/19/2003	0.0	0	0	Unknown
112	#0067	5/20/2003 6:37:05 PM	5/20/2003	0.0	0	0	Unknown
113	#0068	5/20/2003 6:37:05 PM	5/20/2003	0.0	0	0	Unknown
114	#0069	5/20/2003 6:32:35 PM	5/20/2003	0.0	0	0	Unknown
115	#0070	5/20/2003 7:01:35 PM	5/20/2003	0.0	0	0	Unknown
116	#0071	5/20/2003 7:01:35 PM	5/20/2003	0.0	0	0	Unknown
117	#0072	5/20/2003 7:12:35 PM	5/20/2003	0.0	0	0	Unknown
118	#0073	5/20/2003 6:59:35 PM	5/20/2003	0.0	0	0	Unknown
119	#0074	5/19/2003 9:59:05 PM	5/19/2003	0.0	0	0	Unknown
120	#0075	5/20/2003 2:19:55 PM	5/20/2003	0.0	0	0	Unknown
121	#0076	5/20/2003 2:19:55 PM	5/20/2003	0.0	0	0	Unknown
122	#0077	5/19/2003 10:50:05 PM	5/19/2003	0.0	0	0	Unknown
123	#0078	5/20/2003 6:01:35 PM	5/20/2003	0.0	0	0	Unknown
124	#0079	5/20/2003 6:01:35 PM	5/20/2003	0.0	0	0	Unknown
125	#0080	5/20/2003 5:32:45 PM	5/20/2003	0.0	0	0	Unknown
126	#0081	5/20/2003 5:32:45 PM	5/20/2003	0.0	0	0	Unknown
127	#0082	5/20/2003 5:32:45 PM	5/20/2003	0.0	0	0	Unknown
128	#0083	5/20/2003 7:36:05 PM	5/20/2003	0.0	0	0	Unknown
129	#0084	5/20/2003 7:36:05 PM	5/20/2003	0.0	0	0	Unknown
130	#0085	5/20/2003 7:38:05 PM	5/20/2003	0.0	0	0	Unknown
131	#0086	5/20/2003 2:18:35 PM	5/20/2003	0.0	0	0	Unknown
132	#0087	5/20/2003 1:51:05 PM	5/20/2003	0.0	0	0	Unknown

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
133	#0088	5/20/2003 1:51:05 PM	5/20/2003	0.0	0	0	Unknown
134	#0089	5/20/2003 1:51:05 PM	5/20/2003	0.0	0	0	Unknown
135	#0090	5/20/2003 2:46:30 PM	5/20/2003	0.0	0	0	Unknown
136	#0091	5/20/2003 2:46:30 PM	5/20/2003	0.0	0	0	Unknown
137	#0092	5/20/2003 2:19:55 PM	5/20/2003	0.0	0	0	Unknown
138	#0093	5/20/2003 10:40:05 PM	5/20/2003	0.0	0	0	Unknown
139	#0094	5/20/2003 10:40:05 PM	5/20/2003	0.0	0	0	Unknown
140	#0095	5/20/2003 2:44:05 PM	5/20/2003	0.0	0	0	Unknown
141	#0096	5/20/2003 2:48:35 PM	5/20/2003	0.0	0	0	Unknown
142	#0097	5/20/2003 3:18:20 PM	5/20/2003	0.0	0	0	Unknown
143	#0098	5/20/2003 3:18:20 PM	5/20/2003	0.0	0	0	Unknown
144	#0099	5/20/2003 3:21:35 PM	5/20/2003	0.0	0	0	Unknown
145	#0100	5/20/2003 3:19:05 PM	5/20/2003	0.0	0	0	Unknown
146	#0101	5/20/2003 5:29:35 PM	5/20/2003	0.0	0	0	Unknown
147	#0102	5/20/2003 5:01:35 PM	5/20/2003	0.0	0	0	Unknown
148	#0103	5/20/2003 5:01:35 PM	5/20/2003	0.0	0	0	Unknown
149	#0104	5/20/2003 5:01:35 PM	5/20/2003	0.0	0	0	Unknown
150	#0105	5/20/2003 7:38:05 PM	5/20/2003	0.0	0	0	Unknown
151	#0106	5/20/2003 10:43:05 PM	5/20/2003	0.0	0	0	Unknown
152	#0107	5/20/2003 5:04:05 PM	5/20/2003	0.0	0	0	Unknown
153	#0108	5/20/2003 10:43:05 PM	5/20/2003	0.0	0	0	Unknown
154	#0109	5/20/2003 8:13:35 PM	5/20/2003	0.0	0	0	Unknown
155	#0110	5/20/2003 10:15:05 PM	5/20/2003	0.0	0	0	Unknown

	<u>File Name</u>	<u>Start Date & Time</u>	<u>End Date & Time</u>	<u>Recording Intrvl (sec)</u>	<u>Epochs</u>	<u>File Size (bytes)</u>	<u>Type</u>
156	#0111	5/20/2003 9:47:05 PM	5/20/2003	0.0	0	0	Unknown
157	#0112	5/20/2003 9:47:05 PM	5/20/2003	0.0	0	0	Unknown
158	#0113	5/20/2003 10:15:05 PM	5/20/2003	0.0	0	0	Unknown
159	#0114	5/20/2003 9:47:05 PM	5/20/2003	0.0	0	0	Unknown
160	#0115	5/20/2003 1:48:35 PM	5/20/2003	0.0	0	0	Unknown
161	#0116	5/19/2003 7:16:05 PM	5/19/2003	0.0	0	0	Unknown
162	#0117	5/19/2003 7:44:40 PM	5/19/2003	0.0	0	0	Unknown
163	#0118	5/20/2003 6:32:35 PM	5/20/2003	0.0	0	0	Unknown
164	#0119	5/20/2003 6:04:05 PM	5/20/2003	0.0	0	0	Unknown
165	#0120	5/20/2003 6:04:05 PM	5/20/2003	0.0	0	0	Unknown
166	#0121	5/20/2003 9:16:35 PM	5/20/2003	0.0	0	0	Unknown
167	#0122	5/20/2003 9:42:35 PM	5/20/2003	0.0	0	0	Unknown
168	#0123	5/20/2003 9:19:05 PM	5/20/2003	0.0	0	0	Unknown

Repeat Vector Analysis

FinalAdj_NAD83_88SP_feet

Desired Horizontal Accuracy: 0.033USft + 10ppm

Date: 06/01/03

Desired Vertical Accuracy: 0.066USft + 10ppm

Project file:

FinalAdj_NAD83_88SP_feet.spr

Confidence Level: 95% Err.

Linear Units of Measure: US Feet

	<u>Repeat Vector</u>		<u>Vector Difference</u>	<u>Vector Length</u>	<u>Horizontal Relatv Acc</u>	<u>Vertical Relatv Acc</u>	<u>Repeat QA</u>
1	0054-0072	5/21 13:06 5/20 15:49	E: -0.009 N: -0.031 U: 0.010	31457.043	1:3507491	1:3121793	
2	0054-0159	5/21 12:56 5/20 15:49	E: -0.018 N: -0.020 U: -0.006	20411.815	1:1158087	1:3355603	
3	0159-0072	5/21 13:06 5/20 15:47	E: 0.000 N: -0.008 U: 0.007	24303.775	1:55500459	1:3453735	
4	0147-0148	5/21 20:18 5/20 22:40	E: -0.045 N: -0.035 U: 0.004	15791.948	1:449749	1:3555989	
5	0156-6065	5/21 13:58 5/20 21:47	E: 0.015 N: -0.003 U: -0.000	15895.027	1:1058830	1:50801739	
6	0106-0203	5/21 17:40 5/19 19:16	E: 0.016 N: -0.017 U: -0.068	21018.050	1:1332965	1:308781	
7	0128-0129	5/21 19:26 5/20 18:32	E: -0.051 N: 0.001 U: 0.015	15900.558	1:19044498	1:1027039	
8	6060-6063	5/21 15:02 5/21 15:30	E: -0.001 N: -0.009 U: 0.009	13514.744	1:9787618	1:1449030	
9	0121-0122	5/21 19:30 5/19 19:48	E: -0.049 N: 0.047 U: -0.070	12939.469	1:278157	1:184348	

Processed Vectors FinalAdj_NAD83_88SP_feet

Vector Stage: Processed
Horizontal Coordinate System: State Plane Coordinate 1983
 FinalAdj_NAD83_88SP_feet.spr
Height System: Ortho. Ht. (GEOID99)
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

Date: 06/01/03
Project file:

Vector Identifier			Vector Length	95% Error	Vector Components			95% Error	Process QA	SVs	PDOP	Meas. Type
1	6003-0108	5/21 17:03	15545.300	0.062	X	-15503.741	0.033			9	1.8	L1/L2 GPS
					Y	1134.917	0.036					
					Z	-48.125	0.038					
2	6003-0116	5/21 17:03	22082.342	0.083	X	-16554.908	0.045			9	1.8	L1/L2 GPS
					Y	-9207.077	0.048					
					Z	-11348.770	0.050					
3	6003-6062	5/21 16:01	14616.932	0.055	X	-800.930	0.030			11	1.2	L1/L2 GPS
					Y	-9871.862	0.032					
					Z	-10749.862	0.033					
4	0123-0115	5/21 18:01	15896.590	0.060	X	925.879	0.033			10	1.5	L1/L2 GPS
					Y	10694.500	0.035					
					Z	11724.845	0.037					
5	0123-0124	5/21 18:07	16067.950	0.062	X	16013.035	0.034			9	1.7	L1/L2 GPS
					Y	-1323.259	0.036					
					Z	-103.463	0.038					
6	0123-0130	5/21 18:34	17093.280	0.064	X	-4218.174	0.035			10	1.4	L1/L2 GPS
					Y	-10997.492	0.037					
					Z	-12387.187	0.038					
7	0131-0123	5/21 18:32	21068.598	0.077	X	-11682.232	0.043			10	1.4	L1/L2 GPS
					Y	12325.205	0.045					
					Z	12469.988	0.046					
8	6062-6060	5/21 15:31	21420.590	0.082	X	12586.698	0.044			7	1.7	L1/L2 GPS
					Y	-12220.386	0.046					
					Z	-12291.415	0.051					
9	6062-6063	5/21 15:31	16552.384	0.067	X	-882.306	0.035			7	1.7	L1/L2 GPS
					Y	-11110.754	0.037					
					Z	-12237.406	0.043					
10	0131-0130	5/21 18:34	15955.957	0.059	X	-15900.405	0.033			10	1.4	L1/L2 GPS
					Y	1327.712	0.034					
					Z	82.798	0.035					
11	0131-0132	5/21 18:58	15647.412	0.063	X	15601.053	0.033			9	1.8	L1/L2 GPS
					Y	-1203.449	0.037					
					Z	-18.860	0.039					
12	0054-0063	5/21 12:53	12936.542	0.048	X	12883.802	0.027			7	1.3	L1/L2 GPS
					Y	-1157.386	0.027					
					Z	-149.104	0.028					
13	0063-0159	5/21 12:56	15910.892	0.059	X	940.279	0.033			6	1.3	L1/L2 GPS
					Y	10616.266	0.034					
					Z	11813.858	0.035					

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
14	0115-0106	5/21 17:31	22067.950	0.083	X	-14884.579	0.045		9	1.4	L1/L2 GPS
					Y	11663.585	0.049				
					Z	11375.611	0.049				
15	0115-0107	5/21 17:30	15124.697	0.059	X	925.121	0.032		9	1.4	L1/L2 GPS
					Y	10168.194	0.035				
					Z	11158.334	0.035				
16	0115-0203	5/21 17:40	13827.110	0.054	X	-12995.192	0.029		9	1.4	L1/L2 GPS
					Y	-2606.376	0.032				
					Z	-3939.642	0.032				
17	0115-0124	5/21 18:07	22626.476	0.085	X	15087.158	0.047		9	1.7	L1/L2 GPS
					Y	-12017.756	0.049				
					Z	-11828.298	0.052				
18	0147-0139	5/21 20:14	16194.461	0.062	X	931.490	0.034		11	1.1	L1/L2 GPS
					Y	10875.129	0.036				
					Z	11963.463	0.036				
19	0147-0148	5/21 20:18	15791.948	0.059	X	15743.159	0.033		10	1.6	L1/L2 GPS
					Y	-1240.080	0.034				
					Z	-27.961	0.036				
20	0107-0108	5/21 17:04	16010.148	0.062	X	15957.912	0.033		9	1.8	L1/L2 GPS
					Y	-1290.050	0.037				
					Z	-75.290	0.038				
21	0107-0116	5/21 17:04	22066.433	0.082	X	14906.743	0.045		9	1.8	L1/L2 GPS
					Y	-11632.039	0.048				
					Z	-11375.945	0.049				
22	0107-0106	5/21 17:31	15881.751	0.060	X	-15809.700	0.033		9	1.5	L1/L2 GPS
					Y	1495.395	0.035				
					Z	217.274	0.035				
23	0107-0203	5/21 17:40	24184.989	0.090	X	-13920.320	0.050		9	1.4	L1/L2 GPS
					Y	-12774.574	0.054				
					Z	-15097.968	0.053				
24	0156-6064	5/21 13:56	22346.067	0.083	X	16678.552	0.046		7	1.3	L1/L2 GPS
					Y	9303.179	0.049				
					Z	11602.735	0.049				
25	6058-6064	5/21 13:58	16121.758	0.062	X	-843.879	0.034		7	1.4	L1/L2 GPS
					Y	-10830.472	0.037				
					Z	-11912.171	0.037				
26	6058-0140	5/21 14:28	15824.345	0.059	X	-15766.384	0.033		6	1.7	L1/L2 GPS
					Y	1346.759	0.034				
					Z	131.369	0.035				
27	6058-6059	5/21 14:29	15915.441	0.059	X	805.547	0.033		6	1.7	L1/L2 GPS
					Y	10695.891	0.034				
					Z	11757.987	0.035				
28	0116-0108	5/21 17:03	15354.690	0.059	X	1051.168	0.032		9	1.9	L1/L2 GPS
					Y	10341.990	0.035				
					Z	11300.655	0.036				
29	0128-0121	5/21 19:27	17144.102	0.071	X	3820.068	0.038		9	1.6	L1/L2 GPS
					Y	11139.762	0.042				
					Z	12459.254	0.043				
30	0128-0122	5/21 19:30	23112.741	0.090	X	16712.713	0.049		9	1.7	L1/L2 GPS
					Y	10040.809	0.052				
					Z	12412.339	0.054				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
31	0139-0140	5/21 14:28	15697.407	0.060	X	15652.856	0.033		6	1.7	L1/L2 GPS
					Y	-1181.684	0.035				
					Z	18.032	0.036				
32	0139-0148	5/21 20:18	22582.262	0.085	X	14811.664	0.047		10	1.5	L1/L2 GPS
					Y	-12115.191	0.049				
					Z	-11991.467	0.051				
33	6059-0140	5/21 14:29	22298.284	0.082	X	-16571.932	0.046		6	1.7	L1/L2 GPS
					Y	-9349.131	0.048				
					Z	-11626.619	0.049				
34	6059-0132	5/21 14:56	15852.403	0.062	X	-15800.730	0.034		8	1.2	L1/L2 GPS
					Y	1277.913	0.036				
					Z	50.424	0.038				
35	6059-6060	5/21 15:02	16764.494	0.066	X	2014.360	0.036		8	1.2	L1/L2 GPS
					Y	11152.113	0.038				
					Z	12353.987	0.040				
36	6059-6063	5/21 14:58	20869.053	0.079	X	-11454.639	0.043		8	1.2	L1/L2 GPS
					Y	12261.742	0.045				
					Z	12407.992	0.047				
37	6060-0132	5/21 15:02	23796.120	0.092	X	-17815.096	0.050		8	1.2	L1/L2 GPS
					Y	-9874.212	0.053				
					Z	-12303.561	0.056				
38	6060-6063	5/21 15:02	13514.744	0.056	X	-13469.007	0.030		8	1.2	L1/L2 GPS
					Y	1109.620	0.032				
					Z	54.008	0.035				
39	6063-0132	5/21 14:58	17095.105	0.066	X	-4346.095	0.036		8	1.2	L1/L2 GPS
					Y	-10983.838	0.038				
					Z	-12357.563	0.040				
40	6063-0124	5/21 18:07	15664.088	0.060	X	-15616.360	0.033		9	1.7	L1/L2 GPS
					Y	1221.553	0.034				
					Z	27.864	0.037				
41	6064-6065	5/21 13:58	15784.088	0.061	X	-835.663	0.033		7	1.3	L1/L2 GPS
					Y	-10587.436	0.036				
					Z	-11676.699	0.036				
42	0121-0122	5/21 19:30	12939.469	0.051	X	12892.632	0.028		10	1.7	L1/L2 GPS
					Y	-1098.945	0.030				
					Z	-46.899	0.031				
43	0121-0129	5/21 19:27	21300.049	0.082	X	12029.170	0.045		9	1.6	L1/L2 GPS
					Y	-12416.215	0.048				
					Z	-12443.020	0.049				
44	0129-0122	5/21 19:30	16807.435	0.067	X	863.456	0.036		8	1.8	L1/L2 GPS
					Y	11317.235	0.039				
					Z	12396.148	0.041				
45	0001-0002	5/20 20:47	15510.936	0.065	X	-15464.082	0.036		11	0.0	Unknown
					Y	1204.676	0.038				
					Z	-7.519	0.038				
46	0001-6066	5/20 21:16	16337.265	0.064	X	16288.440	0.035		10	0.0	Unknown
					Y	-1262.045	0.036				
					Z	-13.928	0.039				
47	0001-0209	5/20 20:49	12350.931	0.052	X	-11429.777	0.028		11	0.0	Unknown
					Y	-2628.894	0.030				
					Z	-3872.289	0.031				

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48	0001-0210	5/20	20:49	11815.501	0.050	X	5761.060	0.027		11	0.0	Unknown
						Y	6689.982	0.029				
						Z	7852.413	0.031				
49	0002-0162	5/20	20:18	22222.140	0.081	X	-14713.603	0.046		11	0.0	Unknown
						Y	11814.319	0.047				
						Z	11736.918	0.048				
50	0002-0163	5/20	22:14	15805.484	0.060	X	801.717	0.033		9	0.0	Unknown
						Y	10585.005	0.035				
						Z	11710.177	0.035				
51	0002-0209	5/20	20:49	6775.572	0.029	X	4034.306	0.016		11	0.0	Unknown
						Y	-3833.577	0.017				
						Z	-3864.769	0.018				
52	0002-0210	5/20	20:49	23288.918	0.086	X	21225.142	0.048		11	0.0	Unknown
						Y	5485.294	0.050				
						Z	7859.934	0.051				
53	0003-0002	5/20	20:18	16440.338	0.060	X	16385.700	0.034		11	0.0	Unknown
						Y	-1338.937	0.035				
						Z	-28.090	0.036				
54	0003-0004	5/20	16:31	14914.282	0.058	X	-14869.004	0.031		8	0.0	Unknown
						Y	1158.776	0.034				
						Z	75.933	0.035				
55	0003-0161	5/20	16:23	21849.153	0.080	X	-14060.126	0.044		8	0.0	Unknown
						Y	11823.756	0.047				
						Z	11827.812	0.047				
56	0003-0162	5/20	20:13	15799.565	0.059	X	1672.098	0.033		11	0.0	Unknown
						Y	10475.377	0.034				
						Z	11708.835	0.035				
57	0045-0158	5/20	13:23	23764.976	0.088	X	18368.476	0.049		7	0.0	Unknown
						Y	9371.941	0.051				
						Z	11812.699	0.052				
58	0054-0045	5/20	13:15	15018.355	0.057	X	-14982.425	0.032		7	0.0	Unknown
						Y	1021.249	0.033				
						Z	-187.020	0.034				
59	0054-0157	5/20	13:11	21841.140	0.081	X	-14007.773	0.045		7	0.0	Unknown
						Y	11896.406	0.047				
						Z	11802.255	0.048				
60	0054-0158	5/20	13:23	15957.456	0.062	X	3386.050	0.034		7	0.0	Unknown
						Y	10393.193	0.036				
						Z	11625.687	0.037				
61	0054-0159	5/20	15:49	20411.842	0.074	X	13824.101	0.041		8	0.0	Unknown
						Y	9458.889	0.042				
						Z	11664.773	0.044				
62	0072-0004	5/20	16:31	15757.141	0.060	X	15698.224	0.033		8	0.0	Unknown
						Y	-1360.529	0.035				
						Z	-47.334	0.036				
63	0072-0159	5/20	15:47	24303.770	0.087	X	-17522.386	0.049		8	0.0	Unknown
						Y	12093.429	0.050				
						Z	11721.271	0.052				
64	0072-0161	5/20	16:23	22272.264	0.081	X	16507.108	0.045		8	0.0	Unknown
						Y	9304.456	0.047				
						Z	11704.539	0.048				

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65	0102-0101	5/19	16:35	15787.678	0.061	X	-15726.803	0.033		9	0.0	Unknown
						Y	1382.433	0.036				
						Z	85.430	0.037				
66	0102-0103	5/19	17:27	16015.489	0.061	X	15946.594	0.033		8	0.0	Unknown
						Y	-1478.257	0.036				
						Z	-129.499	0.036				
67	0102-0110	5/19	17:24	15397.363	0.059	X	-851.483	0.032		8	0.0	Unknown
						Y	-10369.707	0.035				
						Z	-11350.019	0.035				
68	0102-0202	5/19	17:37	7604.211	0.034	X	2503.344	0.017		8	0.0	Unknown
						Y	4741.863	0.020				
						Z	5391.849	0.021				
69	0103-0111	5/19	18:05	15426.595	0.059	X	-988.546	0.032		9	0.0	Unknown
						Y	-10381.445	0.034				
						Z	-11367.858	0.035				
70	0103-0112	5/19	18:05	22217.386	0.083	X	14887.762	0.046		9	0.0	Unknown
						Y	-11819.378	0.048				
						Z	-11500.830	0.050				
71	0103-0202	5/19	17:37	15808.098	0.062	X	-13443.257	0.033		8	0.0	Unknown
						Y	6220.109	0.036				
						Z	5521.327	0.038				
72	0104-0103	5/19	18:05	16109.823	0.061	X	-16049.423	0.034		9	0.0	Unknown
						Y	1393.569	0.036				
						Z	19.264	0.037				
73	0104-0105	5/19	18:32	15643.587	0.058	X	15587.820	0.032		10	0.0	Unknown
						Y	-1317.451	0.034				
						Z	-77.433	0.035				
74	0104-0111	5/19	18:04	22357.662	0.086	X	-17037.969	0.047		9	0.0	Unknown
						Y	-8987.880	0.050				
						Z	-11348.598	0.051				
75	0104-0112	5/19	18:05	15552.282	0.063	X	-1161.654	0.034		9	0.0	Unknown
						Y	-10425.811	0.037				
						Z	-11481.572	0.039				
76	0105-0106	5/19	18:42	16022.665	0.061	X	15981.046	0.033		10	0.0	Unknown
						Y	-1141.985	0.035				
						Z	166.765	0.037				
77	0106-0114	5/19	19:18	15415.915	0.057	X	-781.929	0.032		8	0.0	Unknown
						Y	-10393.113	0.034				
						Z	-11358.795	0.034				
78	0109-0101	5/19	16:35	15402.869	0.059	X	929.551	0.032		9	0.0	Unknown
						Y	10342.323	0.035				
						Z	11376.320	0.036				
79	0109-0102	5/19	16:23	22027.215	0.081	X	16656.356	0.045		10	0.0	Unknown
						Y	8959.889	0.048				
						Z	11290.898	0.048				
80	0109-0110	5/19	20:56	15867.739	0.059	X	15804.877	0.033		10	0.0	Unknown
						Y	-1409.786	0.034				
						Z	-59.108	0.035				
81	0109-0117	5/19	21:28	15927.342	0.058	X	-782.713	0.033		10	0.0	Unknown
						Y	-10730.065	0.033				
						Z	-11744.501	0.035				

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82	0109-0118	5/19 21:26	22355.126	0.082	X	14562.781	0.046		10	0.0	Unknown
					Y	-12141.522	0.047				
					Z	-11843.164	0.049				
83	0110-0103	5/19 17:27	22071.095	0.082	X	16798.076	0.045		8	0.0	Unknown
					Y	8891.450	0.048				
					Z	11220.517	0.049				
84	0110-0118	5/19 20:47	15986.757	0.059	X	-1242.099	0.033		11	0.0	Unknown
					Y	-10731.715	0.034				
					Z	-11784.052	0.035				
85	0110-0119	5/19 20:47	22554.944	0.082	X	15019.287	0.046		11	0.0	Unknown
					Y	-12071.137	0.047				
					Z	-11723.232	0.049				
86	0112-0111	5/19 18:05	15941.849	0.061	X	-15876.311	0.034		9	0.0	Unknown
					Y	1437.928	0.035				
					Z	132.975	0.037				
87	0112-0120	5/19 20:20	15890.796	0.059	X	-3529.816	0.033		11	0.0	Unknown
					Y	-10318.736	0.034				
					Z	-11557.746	0.035				
88	0113-0104	5/19 18:33	21962.734	0.082	X	-14573.717	0.046		10	0.0	Unknown
					Y	11736.593	0.047				
					Z	11498.733	0.050				
89	0113-0105	5/19 18:33	15493.002	0.058	X	1014.105	0.032		10	0.0	Unknown
					Y	10419.146	0.033				
					Z	11421.300	0.035				
90	0113-0106	5/19 19:08	22565.116	0.081	X	16995.141	0.046		8	0.0	Unknown
					Y	9277.179	0.047				
					Z	11588.079	0.048				
91	0113-0114	5/19 19:18	16253.185	0.062	X	16213.209	0.034		8	0.0	Unknown
					Y	-1115.937	0.036				
					Z	229.284	0.037				
92	0113-0121	5/19 19:47	15532.993	0.058	X	-658.362	0.033		10	0.0	Unknown
					Y	-10471.619	0.034				
					Z	-11453.630	0.034				
93	0113-0122	5/19 19:48	20391.671	0.077	X	12234.312	0.043		10	0.0	Unknown
					Y	-11570.651	0.045				
					Z	-11500.516	0.045				
94	0118-0117	5/19 21:28	15410.582	0.058	X	-15345.491	0.032		10	0.0	Unknown
					Y	1411.456	0.033				
					Z	98.667	0.035				
95	0118-0119	5/19 20:47	16316.569	0.060	X	16261.386	0.034		11	0.0	Unknown
					Y	-1339.420	0.035				
					Z	60.819	0.036				
96	0119-0112	5/19 20:20	22188.154	0.081	X	16666.537	0.046		11	0.0	Unknown
					Y	9143.324	0.047				
					Z	11442.918	0.048				
97	0119-0120	5/19 20:20	13189.702	0.050	X	13136.722	0.028		11	0.0	Unknown
					Y	-1175.408	0.029				
					Z	-114.827	0.030				
98	0120-0126	5/19 22:50	22836.419	0.086	X	-16503.338	0.049		9	0.0	Unknown
					Y	-9905.176	0.050				
					Z	-12289.400	0.050				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
99	0121-0112	5/19 20:12	22309.600	0.081	X	-15076.974	0.046		11	0.0	Unknown
					Y	11782.412	0.047				
					Z	11470.740	0.047				
100	0121-0120	5/19 20:20	18664.467	0.069	X	-18606.783	0.039		11	0.0	Unknown
					Y	1463.689	0.040				
					Z	-87.015	0.041				
101	0125-0117	5/19 21:28	22704.358	0.083	X	-14402.240	0.047		10	0.0	Unknown
					Y	12525.900	0.048				
					Z	12294.926	0.049				
102	0125-0118	5/19 21:26	16527.838	0.062	X	943.252	0.034		10	0.0	Unknown
					Y	11114.446	0.035				
					Z	12196.262	0.037				
103	0125-0134	5/19 22:17	21166.690	0.077	X	12957.624	0.043		8	0.0	Unknown
					Y	-11880.212	0.045				
					Z	-11789.372	0.045				
104	0125-0212	5/19 22:03	21349.519	0.079	X	-21246.627	0.044		9	0.0	Unknown
					Y	-121.881	0.046				
					Z	-2089.960	0.046				
105	0127-0120	5/19 22:48	16810.326	0.064	X	852.542	0.036		10	0.0	Unknown
					Y	11322.274	0.037				
					Z	12396.223	0.037				
106	0127-0126	5/19 22:50	15715.191	0.060	X	-15650.803	0.034		9	0.0	Unknown
					Y	1417.101	0.035				
					Z	106.821	0.035				
107	0127-0134	5/19 23:20	22140.603	0.081	X	-16531.178	0.046		9	0.0	Unknown
					Y	-9157.469	0.046				
					Z	-11535.476	0.048				
108	0127-0135	5/19 23:19	15800.631	0.059	X	-668.168	0.033		9	0.0	Unknown
					Y	-10641.087	0.034				
					Z	-11661.078	0.035				
109	0127-0136	5/19 23:24	22329.020	0.083	X	14908.442	0.047		9	0.0	Unknown
					Y	-11888.488	0.048				
					Z	-11618.405	0.050				
110	0128-0204	5/20 18:37	15937.154	0.061	X	12756.874	0.033		10	0.0	Unknown
					Y	-6996.819	0.035				
					Z	-6503.812	0.037				
111	0129-0128	5/20 18:32	15900.609	0.059	X	-15849.282	0.033		10	0.0	Unknown
					Y	1276.461	0.034				
					Z	-16.243	0.036				
112	0129-0130	5/20 19:01	15410.916	0.057	X	15364.865	0.032		9	0.0	Unknown
					Y	-1190.492	0.033				
					Z	-2.903	0.034				
113	0129-0138	5/20 19:12	22144.106	0.083	X	14640.322	0.046		8	0.0	Unknown
					Y	-11821.367	0.048				
					Z	-11673.804	0.049				
114	0129-0204	5/20 18:37	9208.507	0.039	X	-3092.407	0.020		10	0.0	Unknown
					Y	-5720.351	0.022				
					Z	-6520.061	0.024				
115	0129-0211	5/20 18:59	15929.339	0.059	X	829.693	0.033		9	0.0	Unknown
					Y	-10772.276	0.034				
					Z	-11705.277	0.035				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
116	0130-0138	5/20 19:12	15803.490	0.060	X	-724.545	0.033		8	0.0	Unknown
					Y	-10630.881	0.036				
					Z	-11670.891	0.036				
117	0133-0125	5/19 21:59	15836.573	0.058	X	956.775	0.033		9	0.0	Unknown
					Y	10651.902	0.034				
					Z	11679.838	0.034				
118	0133-0134	5/19 22:17	13968.935	0.054	X	13914.396	0.030		8	0.0	Unknown
					Y	-1228.304	0.032				
					Z	-109.528	0.032				
119	0133-0142	5/20 14:19	21833.118	0.080	X	13093.387	0.045		7	0.0	Unknown
					Y	-12340.578	0.047				
					Z	-12367.635	0.047				
120	0133-0212	5/19 22:03	24789.617	0.091	X	-20289.849	0.051		9	0.0	Unknown
					Y	10530.024	0.054				
					Z	9589.877	0.053				
121	0134-0126	5/19 22:50	15752.467	0.058	X	880.372	0.033		9	0.0	Unknown
					Y	10574.662	0.034				
					Z	11642.237	0.034				
122	0135-0134	5/19 23:20	15932.734	0.059	X	-15863.011	0.033		9	0.0	Unknown
					Y	1483.618	0.034				
					Z	125.603	0.035				
123	0135-0136	5/19 23:24	15626.536	0.058	X	15576.611	0.033		9	0.0	Unknown
					Y	-1247.403	0.033				
					Z	42.672	0.035				
124	0137-0136	5/20 18:01	15759.043	0.059	X	-15709.354	0.033		10	0.0	Unknown
					Y	1250.325	0.034				
					Z	-18.093	0.036				
125	0137-0144	5/20 17:32	22656.588	0.084	X	-16484.135	0.047		8	0.0	Unknown
					Y	-9751.174	0.050				
					Z	-12104.084	0.050				
126	0137-0145	5/20 17:32	16430.813	0.063	X	-793.140	0.034		9	0.0	Unknown
					Y	-11030.120	0.037				
					Z	-12152.324	0.038				
127	0138-0139	5/20 19:36	15859.702	0.059	X	15802.013	0.033		10	0.0	Unknown
					Y	-1345.616	0.035				
					Z	-125.843	0.035				
128	0138-0146	5/20 19:38	16417.939	0.062	X	-747.852	0.035		10	0.0	Unknown
					Y	-11029.756	0.036				
					Z	-12138.118	0.037				
129	0139-0146	5/20 19:38	22626.873	0.084	X	-16549.867	0.047		10	0.0	Unknown
					Y	-9684.138	0.049				
					Z	-12012.275	0.049				
130	0141-0133	5/20 14:18	16514.371	0.063	X	1030.348	0.035		7	0.0	Unknown
					Y	11071.843	0.037				
					Z	12209.714	0.037				
131	0141-0142	5/20 14:19	14181.486	0.055	X	14123.735	0.030		7	0.0	Unknown
					Y	-1268.738	0.032				
					Z	-157.922	0.033				
132	0141-0149	5/20 13:51	15889.087	0.060	X	-1059.888	0.033		7	0.0	Unknown
					Y	-10637.744	0.035				
					Z	-11754.920	0.035				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
133	0141-0150	5/20 13:51	21406.836	0.080	X	13504.763	0.045		7	0.0	Unknown
					Y	-11777.665	0.047				
					Z	-11711.560	0.047				
134	0143-0135	5/20 14:46	16359.195	0.061	X	852.182	0.034		8	0.0	Unknown
					Y	10965.736	0.035				
					Z	12109.900	0.036				
135	0143-0142	5/20 14:19	15888.216	0.060	X	-15831.844	0.033		7	0.0	Unknown
					Y	1337.010	0.035				
					Z	-22.524	0.036				
136	0144-0145	5/20 17:32	15743.105	0.060	X	15690.995	0.033		8	0.0	Unknown
					Y	-1278.944	0.035				
					Z	-48.242	0.036				
137	0150-0143	5/20 14:44	22107.951	0.080	X	16450.837	0.045		8	0.0	Unknown
					Y	9171.909	0.046				
					Z	11576.164	0.047				
138	0150-0149	5/20 13:48	14609.256	0.057	X	-14564.650	0.031		7	0.0	Unknown
					Y	1139.926	0.033				
					Z	-43.360	0.034				
139	0151-0143	5/20 14:48	15727.936	0.060	X	621.479	0.033		8	0.0	Unknown
					Y	10578.223	0.034				
					Z	11622.518	0.036				
140	0151-0150	5/20 14:48	15891.772	0.059	X	-15829.357	0.033		8	0.0	Unknown
					Y	1406.318	0.034				
					Z	46.352	0.035				
141	0151-0152	5/20 15:18	15531.984	0.058	X	15476.391	0.032		7	0.0	Unknown
					Y	-1312.371	0.033				
					Z	-38.915	0.035				
142	0151-0159	5/20 15:21	15947.101	0.060	X	-3524.045	0.033		7	0.0	Unknown
					Y	-10312.075	0.034				
					Z	-11642.690	0.037				
143	0151-0160	5/20 15:19	22214.087	0.081	X	14707.671	0.045		7	0.0	Unknown
					Y	-11885.292	0.046				
					Z	-11657.183	0.049				
144	0152-0160	5/20 15:19	15727.738	0.059	X	-768.721	0.032		7	0.0	Unknown
					Y	-10572.923	0.033				
					Z	-11618.267	0.036				
145	0153-0144	5/20 17:29	22458.627	0.083	X	-14967.466	0.046		8	0.0	Unknown
					Y	11910.194	0.049				
					Z	11769.120	0.049				
146	0153-0145	5/20 17:32	15840.645	0.060	X	723.529	0.033		9	0.0	Unknown
					Y	10631.251	0.035				
					Z	11720.881	0.036				
147	0153-0152	5/20 17:01	15820.358	0.061	X	-15766.571	0.033		9	0.0	Unknown
					Y	1302.802	0.036				
					Z	41.099	0.037				
148	0153-0161	5/20 17:01	15639.026	0.060	X	-737.492	0.032		9	0.0	Unknown
					Y	-10485.871	0.035				
					Z	-11579.368	0.036				
149	0154-0146	5/20 19:38	15795.749	0.060	X	874.260	0.033		10	0.0	Unknown
					Y	10586.438	0.035				
					Z	11690.538	0.035				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
150	0154-0147	5/20 22:43	22317.995	0.083	X	16492.589	0.046		9	0.0	Unknown
					Y	9395.466	0.049				
					Z	11739.363	0.048				
151	0154-0153	5/20 17:04	15451.940	0.062	X	-15405.654	0.033		9	0.0	Unknown
					Y	1195.057	0.037				
					Z	-11.282	0.038				
152	0154-0155	5/20 22:43	15791.550	0.060	X	15748.199	0.033		10	0.0	Unknown
					Y	-1167.029	0.035				
					Z	72.987	0.035				
153	0154-0161	5/20 17:04	21937.719	0.084	X	-16143.145	0.045		9	0.0	Unknown
					Y	-9290.811	0.050				
					Z	-11590.651	0.051				
154	0154-0162	5/20 20:13	15826.457	0.059	X	-410.901	0.033		11	0.0	Unknown
					Y	-10639.154	0.034				
					Z	-11709.668	0.035				
155	0155-0147	5/20 22:39	15755.153	0.059	X	744.389	0.033		9	0.0	Unknown
					Y	10562.499	0.035				
					Z	11666.376	0.035				
156	0155-0148	5/20 22:40	22230.652	0.083	X	16487.599	0.047		10	0.0	Unknown
					Y	9322.435	0.049				
					Z	11638.435	0.048				
157	0155-0163	5/20 22:15	15949.830	0.059	X	-643.793	0.033		9	0.0	Unknown
					Y	-10701.441	0.035				
					Z	-11809.393	0.034				
158	0156-6065	5/20 21:47	15895.012	0.059	X	15842.873	0.033		9	0.0	Unknown
					Y	-1284.258	0.034				
					Z	-73.962	0.034				
159	0156-0155	5/20 22:15	15620.792	0.058	X	-15572.730	0.032		9	0.0	Unknown
					Y	1224.418	0.034				
					Z	-1.654	0.034				
160	0156-0163	5/20 22:14	22187.618	0.081	X	-16216.523	0.045		9	0.0	Unknown
					Y	-9477.021	0.047				
					Z	-11811.048	0.047				
161	0156-0164	5/20 21:47	15951.273	0.062	X	-828.847	0.034		9	0.0	Unknown
					Y	-10688.589	0.037				
					Z	-11811.443	0.037				
162	0157-0045	5/20 13:15	16216.095	0.060	X	-974.650	0.034		7	0.0	Unknown
					Y	-10875.160	0.035				
					Z	-11989.274	0.036				
163	0157-0149	5/20 13:48	15555.003	0.060	X	961.914	0.033		6	0.0	Unknown
					Y	10420.844	0.035				
					Z	11508.208	0.036				
164	0157-0150	5/20 13:48	21462.715	0.078	X	15526.568	0.044		6	0.0	Unknown
					Y	9280.919	0.046				
					Z	11551.554	0.046				
165	0157-0158	5/20 13:23	17459.559	0.069	X	17393.831	0.038		7	0.0	Unknown
					Y	-1503.215	0.040				
					Z	-176.595	0.042				
166	0159-0152	5/20 15:21	24013.721	0.087	X	19000.436	0.049		7	0.0	Unknown
					Y	8999.705	0.050				
					Z	11603.773	0.053				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
167	0159-0160	5/20 15:21	18299.470	0.068	X	18231.714	0.037		7	0.0	Unknown
					Y	-1573.218	0.038				
					Z	-14.493	0.042				
168	0161-0004	5/20 16:31	15890.333	0.060	X	-808.878	0.033		8	0.0	Unknown
					Y	-10664.978	0.035				
					Z	-11751.878	0.036				
169	0161-0152	5/20 17:01	22358.025	0.083	X	-15029.079	0.046		9	0.0	Unknown
					Y	11788.675	0.049				
					Z	11620.466	0.050				
170	0164-6065	5/20 21:42	22453.425	0.083	X	16671.724	0.046		9	0.0	Unknown
					Y	9404.335	0.049				
					Z	11737.479	0.049				
171	0203-0106	5/19 19:16	21018.032	0.076	X	-1889.352	0.043		8	0.0	Unknown
					Y	14269.997	0.045				
					Z	15315.195	0.045				
172	0203-0113	5/19 19:44	19885.795	0.074	X	-18884.523	0.042		10	0.0	Unknown
					Y	4992.817	0.043				
					Z	3727.122	0.044				
173	0203-0114	5/19 19:18	6149.720	0.026	X	-2671.280	0.014		8	0.0	Unknown
					Y	3876.885	0.015				
					Z	3956.397	0.016				
174	0203-0121	5/19 19:47	21717.288	0.081	X	-19542.886	0.045		10	0.0	Unknown
					Y	-5478.805	0.047				
					Z	-7726.504	0.048				
175	0203-0122	5/19 19:48	12162.189	0.049	X	-6650.212	0.027		10	0.0	Unknown
					Y	-6577.836	0.028				
					Z	-7773.390	0.029				
176	0205-0128	5/20 18:32	19054.889	0.073	X	-14105.884	0.040		9	0.0	Unknown
					Y	9265.953	0.043				
					Z	8846.182	0.044				
177	0205-0129	5/20 18:31	12058.780	0.050	X	1743.396	0.026		9	0.0	Unknown
					Y	7989.500	0.029				
					Z	8862.428	0.030				
178	0205-0136	5/20 18:04	15157.387	0.059	X	-14836.722	0.032		8	0.0	Unknown
					Y	-1341.315	0.034				
					Z	-2796.238	0.036				
179	0205-0137	5/20 18:04	3898.227	0.021	X	872.633	0.010		8	0.0	Unknown
					Y	-2591.639	0.012				
					Z	-2778.146	0.014				
180	0205-0204	5/20 18:37	3529.230	0.022	X	-1349.003	0.010		9	0.0	Unknown
					Y	2269.136	0.013				
					Z	2342.365	0.015				
181	0205-0211	5/20 18:04	4737.761	0.023	X	2573.088	0.011		8	0.0	Unknown
					Y	-2782.767	0.013				
					Z	-2842.851	0.015				
182	0210-6066	5/20 21:16	15360.345	0.058	X	10527.361	0.032		10	0.0	Unknown
					Y	-7952.061	0.033				
					Z	-7866.359	0.035				
183	0211-0130	5/20 19:01	20976.830	0.076	X	14535.172	0.043		9	0.0	Unknown
					Y	9581.782	0.044				
					Z	11702.376	0.045				

	<u>Vector Identifier</u>		<u>Vector Length</u>	<u>95% Error</u>		<u>Vector Components</u>	<u>95% Error</u>	<u>Process QA</u>	<u>SVs</u>	<u>PDOP</u>	<u>Meas. Type</u>
184	0211-0136	5/20 18:01	17469.440	0.064	X	-17409.807	0.036		10	0.0	Unknown
					Y	1441.448	0.037				
					Z	46.608	0.038				
185	0211-0137	5/20 18:01	1712.384	0.011	X	-1700.454	0.005		10	0.0	Unknown
					Y	191.123	0.006				
					Z	64.701	0.008				
186	0211-0138	5/20 19:12	13850.453	0.054	X	13810.628	0.030		8	0.0	Unknown
					Y	-1049.099	0.032				
					Z	31.479	0.033				
187	9604-6065	5/20 21:42	16597.350	0.062	X	-4114.473	0.035		9	0.0	Unknown
					Y	10991.196	0.037				
					Z	11736.129	0.037				
188	9604-0156	5/20 21:47	26238.538	0.097	X	-19957.347	0.054		9	0.0	Unknown
					Y	12275.456	0.057				
					Z	11810.095	0.057				
189	9604-0164	5/20 21:40	20846.685	0.078	X	-20786.201	0.043		9	0.0	Unknown
					Y	1586.858	0.046				
					Z	-1.347	0.046				
190	9604-0210	5/20 21:19	16376.933	0.063	X	-15750.464	0.035		10	0.0	Unknown
					Y	-2301.259	0.036				
					Z	-3851.107	0.038				

Site Positions FinalAdj_NAD83_88SP_feet

Horizontal Coordinate System: State Plane Coordinate 1983 **Date:** 06/01/03
Height System: Ortho. Ht. (GEOID99) **Project file:**
 FinalAdj_NAD83_88SP_feet.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	<u>Site ID</u>	<u>Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Fix Status</u>	<u>Position Status</u>
1	0054	Carroll Co. 2001-054	East.	4568278.612	0.000	Fixed	Adjusted
			Nrth.	3542237.540	0.000	Fixed	
			Elev.	1181.710	0.000	Fixed	
2	0063	Carroll Co. 2001-063	East.	4581209.150	0.000	Fixed	Adjusted
			Nrth.	3541877.711	0.000	Fixed	
			Elev.	1140.385	0.000	Fixed	
3	0072	Carroll Co. 2001-072	East.	4599728.956	0.000	Fixed	Adjusted
			Nrth.	3541710.636	0.000	Fixed	
			Elev.	1166.648	0.000	Fixed	
4	0106		East.	4619808.568	0.023		Adjusted
			Nrth.	3669029.732	0.017		
			Elev.	1224.255	0.042		
5	0107		East.	4635680.215	0.026		Adjusted
			Nrth.	3668512.584	0.016		
			Elev.	1243.514	0.043		
6	0108		East.	4651686.422	0.029		Adjusted
			Nrth.	3668244.755	0.016		
			Elev.	1211.432	0.044		
7	0115		East.	4635376.823	0.023		Adjusted
			Nrth.	3653392.534	0.016		
			Elev.	1222.244	0.039		
8	0116		East.	4651268.369	0.033		Adjusted
			Nrth.	3652897.366	0.018		
			Elev.	1228.842	0.050		
9	0121		East.	4603392.195	0.023		Adjusted
			Nrth.	3638000.202	0.016		
			Elev.	1215.637	0.034		
10	0122		East.	4616328.074	0.022		Adjusted
			Nrth.	3637755.749	0.016		
			Elev.	1220.261	0.036		

	Site ID	Site Descriptor	Position	95% Error	Fix Status	Position Status
11	0123	East. Nrth. Elev.	4635104.852 3637499.911 1216.304	0.028 0.023 0.038		Adjusted
12	0124	East. Nrth. Elev.	4651168.213 3637191.151 1186.220	0.029 0.024 0.040		Adjusted
13	0128	East. Nrth. Elev.	4600258.493 3621146.665 1228.478	0.029 0.021 0.031		Adjusted
14	0129	East. Nrth. Elev.	4616156.327 3620950.878 1228.069	0.024 0.017 0.022		Adjusted
15	0130	East. Nrth. Elev.	4631564.746 3620778.980 1191.977	0.027 0.022 0.030		Adjusted
16	0131	East. Nrth. Elev.	4647516.334 3620477.793 1183.073	0.032 0.028 0.040		Adjusted
17	0132	East. Nrth. Elev.	4663161.183 3620295.209 1155.074	0.025 0.022 0.032		Adjusted
18	0139	East. Nrth. Elev.	4647343.871 3604628.091 1169.422	0.029 0.020 0.038		Adjusted
19	0140	East. Nrth. Elev.	4663039.209 3604489.523 1147.178	0.028 0.018 0.039		Adjusted
20	0147	East. Nrth. Elev.	4647076.941 3588437.270 1172.659	0.032 0.023 0.042		Adjusted
21	0148	East. Nrth. Elev.	4662866.139 3588229.126 1157.026	0.039 0.030 0.050		Adjusted
22	0156	East. Nrth. Elev.	4662595.589 3572501.039 1149.458	0.022 0.016 0.031		Adjusted
23	0159	East. Nrth. Elev.	4581502.330 3557784.632 1189.659	0.024 0.019 0.029		Adjusted

	<u>Site ID</u>	<u>Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Fix Status</u>	<u>Position Status</u>
24	0203	Harn TJEBBEN	East.	4622565.095	0.000	Fixed	Adjusted
			Nrth.	3648195.462	0.000	Fixed	
			Elev.	1240.961	0.036		
25	6003	Webster Co. #6003	East.	4667229.837	0.000	Fixed	Adjusted
			Nrth.	3668153.820	0.000	Fixed	
			Elev.	1186.904	0.000	Fixed	
26	6058	Webster Co. #6058	East.	4678858.112	0.000	Fixed	Adjusted
			Nrth.	3604134.277	0.000	Fixed	
			Elev.	1150.936	0.000	Fixed	
27	6059	Webster Co. #6059	East.	4679010.153	0.000	Fixed	Adjusted
			Nrth.	3620047.473	0.000	Fixed	
			Elev.	1160.805	0.000	Fixed	
28	6060	Webster Co. #6060	East.	4680340.837	0.000	Fixed	Adjusted
			Nrth.	3636757.383	0.000	Fixed	
			Elev.	1181.146	0.000	Fixed	
29	6062	Webster Co. #6062	East.	4667032.998	0.000	Fixed	Adjusted
			Nrth.	3653539.758	0.000	Fixed	
			Elev.	1216.458	0.000	Fixed	
30	6063	Webster Co. #6063	East.	4666829.481	0.000	Fixed	Adjusted
			Nrth.	3636990.403	0.000	Fixed	
			Elev.	1167.281	0.000	Fixed	
31	6064	Webster Co. #6064	East.	4678676.005	0.000	Fixed	Adjusted
			Nrth.	3588014.961	0.000	Fixed	
			Elev.	1150.595	0.000	Fixed	
32	6065	Webster Co. #6065	East.	4678487.026	0.000	Fixed	Adjusted
			Nrth.	3572233.328	0.000	Fixed	
			Elev.	1141.586	0.000	Fixed	
33	0001	Greene Co. A001	East.	4662339.506	0.000	Fixed	Adjusted
			Nrth.	3540762.110	0.000	Fixed	
			Elev.	1120.503	0.000	Fixed	
34	0002	Greene Co. A002	East.	4646830.583	0.000	Fixed	Adjusted
			Nrth.	3540931.658	0.000	Fixed	
			Elev.	1122.143	0.000	Fixed	
35	6066	Webster Co. #6066	East.	4678674.563	0.000	Fixed	Adjusted
			Nrth.	3540571.987	0.000	Fixed	
			Elev.	1111.533	0.000	Fixed	
36	0209	NGS BM "Q 101"	East.	4651090.912	0.017		Adjusted
			Nrth.	3535663.692	0.014		
			Elev.	1121.953	0.000	Fixed	

	<u>Site ID</u>	<u>Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Fix Status</u>	<u>Position Status</u>
37	0210	USGS BM "TT 10 C"	East.	4667682.499	0.021		Adjusted
			Nrth.	3551299.589	0.017		
			Elev.	1127.823	0.027		
38	0162		East.	4631424.957	0.028		Adjusted
			Nrth.	3556944.683	0.020		
			Elev.	1154.524	0.036		
39	0163		East.	4646986.299	0.029		Adjusted
			Nrth.	3556735.218	0.021		
			Elev.	1133.481	0.039		
40	0003	Greene Co. A003	East.	4630393.251	0.000	Fixed	Adjusted
			Nrth.	3541180.045	0.000	Fixed	
			Elev.	1114.598	0.000	Fixed	
41	0004	Greene Co. A004	East.	4615481.960	0.000	Fixed	Adjusted
			Nrth.	3541405.182	0.000	Fixed	
			Elev.	1194.394	0.000	Fixed	
42	0161		East.	4615639.702	0.023		Adjusted
			Nrth.	3557293.530	0.013		
			Elev.	1174.306	0.032		
43	0045	Carroll Co. 2001-045	East.	4553261.629	0.000	Fixed	Adjusted
			Nrth.	3542171.425	0.000	Fixed	
			Elev.	1237.179	0.000	Fixed	
44	0158		East.	4571024.950	0.030		Adjusted
			Nrth.	3557955.543	0.025		
			Elev.	1117.580	0.038		
45	0157		East.	4553572.241	0.026		Adjusted
			Nrth.	3558383.243	0.021		
			Elev.	1210.967	0.033		
46	0102		East.	4556035.334	0.027		Adjusted
			Nrth.	3670049.751	0.016		
			Elev.	1217.151	0.025		
47	0101	Buena Vista Co. #88	East.	4540253.179	0.000	Fixed	Adjusted
			Nrth.	3670397.078	0.000	Fixed	
			Elev.	1246.635	0.000	Fixed	
48	0103		East.	4572043.217	0.030		Adjusted
			Nrth.	3669614.376	0.020		
			Elev.	1226.534	0.034		
49	0110		East.	4555817.776	0.030		Adjusted
			Nrth.	3654655.530	0.020		
			Elev.	1209.887	0.036		

	<u>Site ID</u>	<u>Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Fix Status</u>	<u>Position Status</u>
50	0202	NGS BM "X 22"	East.	4558245.038	0.032	Fixed	Adjusted
			Nrth.	3677324.975	0.021		
			Elev.	1229.151	0.000		
51	0111		East.	4571689.671	0.036		Adjusted
			Nrth.	3654193.456	0.028		
			Elev.	1224.442	0.045		
52	0112		East.	4587624.506	0.029		Adjusted
			Nrth.	3653779.853	0.021		
			Elev.	1218.429	0.038		
53	0104		East.	4588148.642	0.030		Adjusted
			Nrth.	3669321.631	0.023		
			Elev.	1254.323	0.041		
54	0105		East.	4603787.598	0.030		Adjusted
			Nrth.	3669018.411	0.024		
			Elev.	1226.992	0.046		
55	0114		East.	4619662.089	0.016		Adjusted
			Nrth.	3653616.118	0.013		
			Elev.	1224.139	0.040		
56	0109		East.	4539955.381	0.028		Adjusted
			Nrth.	3654998.746	0.016		
			Elev.	1206.327	0.036		
57	0117		East.	4539828.294	0.036		Adjusted
			Nrth.	3639073.519	0.027		
			Elev.	1204.512	0.045		
58	0118		East.	4555232.332	0.031		Adjusted
			Nrth.	3638681.111	0.023		
			Elev.	1211.422	0.037		
59	0119		East.	4571546.161	0.032		Adjusted
			Nrth.	3638492.599	0.023		
			Elev.	1227.947	0.040		
60	0120		East.	4584730.239	0.030		Adjusted
			Nrth.	3638156.507	0.021		
			Elev.	1208.439	0.037		
61	0113		East.	4603410.789	0.022		Adjusted
			Nrth.	3653531.612	0.017		
			Elev.	1217.885	0.038		
62	0126		East.	4568860.820	0.038		Adjusted
			Nrth.	3621738.203	0.028		
			Elev.	1210.825	0.046		

	<u>Site ID</u>	<u>Site Descriptor</u>	<u>Position</u>	<u>95% Error</u>	<u>Fix Status</u>	<u>Position Status</u>
63	0125		East. Nrth. Elev.	4554968.247 3622157.014 1209.934	0.035 0.026 0.037	Adjusted
64	0134		East. Nrth. Elev.	4568626.176 3605989.009 1194.702	0.033 0.024 0.039	Adjusted
65	0212	NGS BM "S 13 RESET"	East. Nrth. Elev.	4533767.467 3619659.057 1228.016	0.052 0.038 0.000	Adjusted Fixed
66	0127		East. Nrth. Elev.	4584569.648 3621348.620 1219.321	0.033 0.024 0.039	Adjusted
67	0135		East. Nrth. Elev.	4584551.315 3605549.522 1226.499	0.032 0.023 0.038	Adjusted
68	0136		East. Nrth. Elev.	4600175.462 3605381.535 1227.167	0.029 0.021 0.029	Adjusted
69	0204	TBM for "M 13"	East. Nrth. Elev.	4613418.268 3612159.794 1224.085	0.025 0.019 0.018	Adjusted
70	0138		East. Nrth. Elev.	4631489.509 3604977.164 1188.409	0.027 0.020 0.031	Adjusted
71	0211	NGS BM "H 101"	East. Nrth. Elev.	4617640.854 3605092.422 1212.834	0.024 0.017 0.015	Adjusted
72	0133		East. Nrth. Elev.	4554662.631 3606324.924 1230.030	0.034 0.025 0.038	Adjusted
73	0142		East. Nrth. Elev.	4568483.155 3589425.601 1167.992	0.037 0.026 0.048	Adjusted
74	0137		East. Nrth. Elev.	4615931.953 3605198.944 1217.086	0.024 0.017 0.015	Adjusted
75	0144		East. Nrth. Elev.	4600072.495 3589021.686 1231.953	0.038 0.024 0.050	Adjusted

	Site ID	Site Descriptor	Position	95% Error	Fix Status	Position Status
76	0145	East. Nrth. Elev.	4615812.140 3588770.080 1199.308	0.033 0.021 0.043		Adjusted
77	0146	East. Nrth. Elev.	4631415.046 3588560.868 1177.205	0.033 0.022 0.044		Adjusted
78	0141	East. Nrth. Elev.	4554308.393 3589815.896 1219.115	0.035 0.025 0.044		Adjusted
79	0149	East. Nrth. Elev.	4553898.020 3573933.521 1209.142	0.034 0.026 0.044		Adjusted
80	0150	East. Nrth. Elev.	4568505.352 3573796.633 1171.124	0.031 0.023 0.039		Adjusted
81	0143	East. Nrth. Elev.	4584368.244 3589192.894 1193.640	0.032 0.023 0.041		Adjusted
82	0151	East. Nrth. Elev.	4584392.313 3573466.344 1201.712	0.028 0.021 0.036		Adjusted
83	0152	East. Nrth. Elev.	4599920.518 3573190.269 1201.322	0.028 0.018 0.037		Adjusted
84	0160	East. Nrth. Elev.	4599797.486 3557464.352 1229.150	0.035 0.028 0.044		Adjusted
85	0153	East. Nrth. Elev.	4615737.399 3572930.985 1186.469	0.027 0.016 0.037		Adjusted
86	0154	East. Nrth. Elev.	4631187.159 3572768.099 1160.575	0.025 0.016 0.034		Adjusted
87	0155	East. Nrth. Elev.	4646977.170 3572683.781 1146.894	0.027 0.019 0.035		Adjusted
88	0164	East. Nrth. Elev.	4662419.300 3556552.013 1135.966	0.030 0.023 0.042		Adjusted

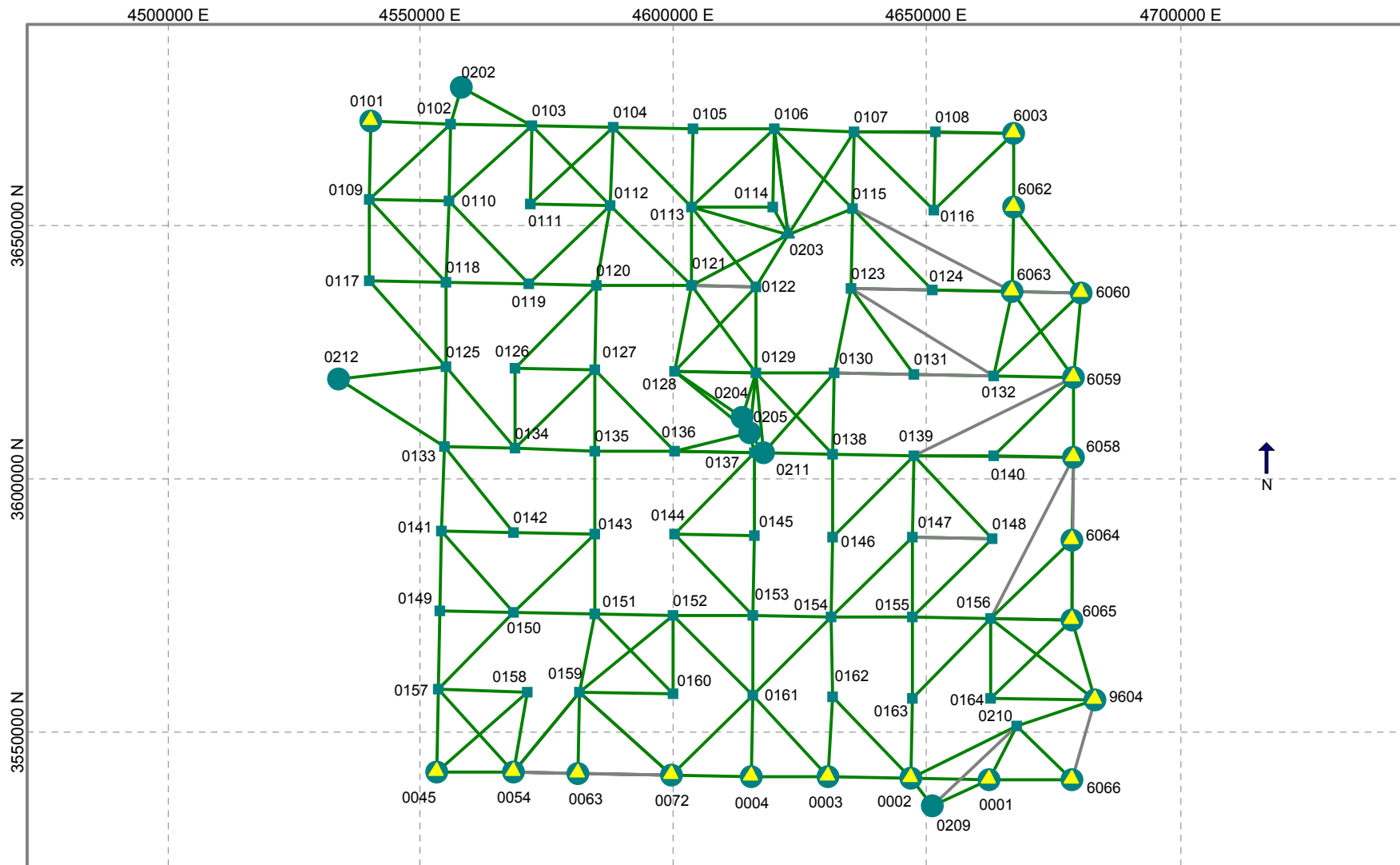
	<u>Site ID</u>	<u>Site Descriptor</u>		<u>Position</u>	<u>95% Error</u>	<u>Fix Status</u>	<u>Position Status</u>
89	0205	NGS BM "L 13"	East.	4614903.233	0.024		Adjusted
			Nrth.	3608958.566	0.017		
			Elev.	1234.263	0.000	Fixed	
90	9604	Harn ET 1 HK	East.	4683263.298	0.000	Fixed	Adjusted
			Nrth.	3556339.481	0.000	Fixed	
			Elev.	1121.904	0.000	Fixed	

	<u>Site ID</u>	<u>Site Descriptor</u>	<u>Convergence</u>	<u>Scale Factor</u>	<u>Elevation Factor</u>
1	0054	Carroll Co. 2001-054	- 0 52.983	0.99997709	0.99994804
2	0063	Carroll Co. 2001-063	- 0 51.041	0.99997716	0.99995000
3	0072	Carroll Co. 2001-072	- 0 48.262	0.99997712	0.99994871
4	0106		- 0 45.501	0.99994713	0.99994602
5	0107		- 0 43.104	0.99994716	0.99994510
6	0108		- 0 40.688	0.99994717	0.99994663
7	0115		- 0 43.122	0.99994879	0.99994611
8	0116		- 0 40.724	0.99994883	0.99994580
9	0121		- 0 47.913	0.99995105	0.99994643
10	0122		- 0 45.963	0.99995106	0.99994621
11	0123		- 0 43.132	0.99995106	0.99994639
12	0124		- 0 40.711	0.99995108	0.99994782
13	0128		- 0 48.350	0.99995410	0.99994582
14	0129		- 0 45.955	0.99995409	0.99994583
15	0130		- 0 43.634	0.99995409	0.99994755
16	0131		- 0 41.231	0.99995411	0.99994796
17	0132		- 0 38.874	0.99995411	0.99994928
18	0139		- 0 41.228	0.99995756	0.99994859
19	0140		- 0 38.866	0.99995755	0.99994963
20	0147		- 0 41.239	0.99996167	0.99994841

	<u>Site ID</u>	<u>Site Descriptor</u>	<u>Convergence</u>	<u>Scale Factor</u>	<u>Elevation Factor</u>
21	0148		- 0 38.864	0.99996168	0.99994913
22	0156		- 0 38.878	0.99996625	0.99994945
23	0159		- 0 51.033	0.99997139	0.99994766
24	0203	Harn TJEBBEN	- 0 45.044	0.99994949	0.99994522
25	6003	Webster Co. #6003	- 0 38.342	0.99994716	0.99994780
26	6058	Webster Co. #6058	- 0 36.484	0.99995759	0.99994942
27	6059	Webster Co. #6059	- 0 36.487	0.99995412	0.99994898
28	6060	Webster Co. #6060	- 0 36.313	0.99995110	0.99994804
29	6062	Webster Co. #6062	- 0 38.347	0.99994873	0.99994638
30	6063	Webster Co. #6063	- 0 38.350	0.99995109	0.99994872
31	6064	Webster Co. #6064	- 0 36.486	0.99996169	0.99994940
32	6065	Webster Co. #6065	- 0 36.489	0.99996628	0.99994980
33	0001	Greene Co. A001	- 0 38.863	0.99997718	0.99995077
34	0002	Greene Co. A002	- 0 41.191	0.99997718	0.99995073
35	6066	Webster Co. #6066	- 0 36.411	0.99997718	0.99995117
36	0209	NGS BM "Q 101"	- 0 40.542	0.99997920	0.99995072
37	0210	USGS BM "TT 10 C"	- 0 38.078	0.99997327	0.99995043
38	0162		- 0 43.533	0.99997145	0.99994925
39	0163		- 0 41.196	0.99997145	0.99995022
40	0003	Greene Co. A003	- 0 43.658	0.99997716	0.99995113
41	0004	Greene Co. A004	- 0 45.897	0.99997715	0.99994735
42	0161		- 0 45.905	0.99997140	0.99994834
43	0045	Carroll Co. 2001-045	- 0 55.236	0.99997721	0.99994540
44	0158		- 0 52.607	0.99997139	0.99995111
45	0157		- 0 55.229	0.99997134	0.99994666
46	0102		- 0 55.128	0.99994713	0.99994633
47	0101	Buena Vista Co. #88	- 0 57.511	0.99994712	0.99994491

	<u>Site ID</u>	<u>Site Descriptor</u>	<u>Convergence</u>	<u>Scale Factor</u>	<u>Elevation Factor</u>
48	0103		- 0 52.711	0.99994714	0.99994589
49	0110		- 0 55.124	0.99994877	0.99994668
50	0202	NGS BM "X 22"	- 0 54.812	0.99994653	0.99994576
51	0111		- 0 52.729	0.99994880	0.99994599
52	0112		- 0 50.324	0.99994882	0.99994629
53	0104		- 0 50.280	0.99994715	0.99994457
54	0105		- 0 47.919	0.99994715	0.99994588
55	0114		- 0 45.492	0.99994879	0.99994602
56	0109		- 0 57.517	0.99994876	0.99994684
57	0117		- 0 57.496	0.99995104	0.99994694
58	0118		- 0 55.173	0.99995106	0.99994661
59	0119		- 0 52.714	0.99995105	0.99994583
60	0120		- 0 50.726	0.99995107	0.99994677
61	0113		- 0 47.943	0.99994883	0.99994632
62	0126		- 0 53.080	0.99995407	0.99994666
63	0125		- 0 55.173	0.99995403	0.99994669
64	0134		- 0 53.078	0.99995749	0.99994743
65	0212	NGS BM "S 13 RESET"	- 0 58.359	0.99995461	0.99994582
66	0127		- 0 50.713	0.99995410	0.99994625
67	0135		- 0 50.681	0.99995754	0.99994591
68	0136		- 0 48.329	0.99995752	0.99994588
69	0204	TBM for "M 13"	- 0 46.350	0.99995594	0.99994602
70	0138		- 0 43.615	0.99995752	0.99994771
71	0211	NGS BM "H 101"	- 0 45.700	0.99995754	0.99994655
72	0133		- 0 55.181	0.99995746	0.99994574
73	0142		- 0 53.061	0.99996170	0.99994871
74	0137		- 0 45.957	0.99995752	0.99994635

	<u>Site ID</u>	<u>Site Descriptor</u>	<u>Convergence</u>	<u>Scale Factor</u>	<u>Elevation Factor</u>
75	0144		- 0 48.310	0.99996168	0.99994564
76	0145		- 0 45.942	0.99996169	0.99994718
77	0146		- 0 43.595	0.99996169	0.99994822
78	0141		- 0 55.194	0.99996165	0.99994627
79	0149		- 0 55.218	0.99996626	0.99994675
80	0150		- 0 53.022	0.99996624	0.99994856
81	0143		- 0 50.672	0.99996169	0.99994748
82	0151		- 0 50.634	0.99996626	0.99994709
83	0152		- 0 48.299	0.99996628	0.99994709
84	0160		- 0 48.284	0.99997141	0.99994574
85	0153		- 0 45.922	0.99996629	0.99994778
86	0154		- 0 43.599	0.99996628	0.99994899
87	0155		- 0 41.226	0.99996625	0.99994961
88	0164		- 0 38.878	0.99997145	0.99995006
89	0205	NGS BM "L 13"	- 0 46.120	0.99995665	0.99994553
90	9604	Harn ET 1 HK	- 0 35.747	0.99997145	0.99995069



MAP

Project Name: FinalAdj_NAD83_88SP_feet.spr
 Client: The Sidwell Company & Calhoun County, Iowa
 Date: Sunday June 15, 2003
 Coordinate System: State Plane Coordinate 1983

LEGEND

- △ Horizontal Control
- Vertical Control
- ⊙ Horizontal & Vertical Control
- New Site
- Map Grid Scale: 10000 f 