



**BLACK HAWK COUNTY, Ia.  
PRIMARY CONTROL NETWORK (GPS Net) README**

Last updated on:  
Wednesday, August 25, 2010

Current Details regarding Network Stations, and any Station changes & comments reported:  
(Status / Summary after initial 2007 Adjustment)

| <u>STATION</u>   | <u>SUMMARY / DETAILS / REMARKS</u>   |
|------------------|--|
| <b>Sta. #155</b> | Orig. DESTROYED 2008 / Station RESET August, 2009 and re-adjusted (GT)<br>(per ref. G:\Survey Library\TopconTools Jobs\GPSnet-Updates09.ttp)   |
| <b>Sta. #210</b> | CAP Broke off / Mower 2007 – Established New Casing August, 2009 and<br>verified per static set. Obs. Tol. (N.=+0.015' E.=+0.017' Z=-0.035')<br>Therefore, currently <b>HELD as Published</b> .<br>(per ref. G:\Survey Library\TopconTools Jobs\GPSnet-Updates09.ttp) (GT) |
| <b>Sta. #211</b> | Unable to locate during 2008 Flooding / Railroad repairs at location.<br>Recovered in Aug. 2009, and re-observed per static set to verify position.<br><b>Held as Published</b> .<br>(per ref. G:\Survey Library\TopconTools Jobs\GPSnet-Updates09.ttp) (GT)               |
| <b>Sta. #299</b> | Added Station per Azimuth Mark #2 for NGS Sta. "Cedar" due to location of<br>"Cedar" (Point #300) in private yard. Observed and Adjusted, Feb. 2008<br>(per ref. G:\Survey Library\TopconTools Jobs\CedarAZ-08.ttp) (GT)   |

**STATION REQUESTS, FOR NEW LOCATIONS:**

Cedar Falls:

**ASI facilities** - Update & new request due to flooding / 2008 (Need to contact Walt, pend.  
New facility being constructed in 2009, Pend. Completion Fall 09 / Spr. 10

Waterloo:

None, to date

Rural:

None, to date

Adjustment

Adjustment type: Plane + Height, Constraint

Confidence level: 95 %

Number of adjusted points: 5

Number of plane control points: 4

Number of used GPS vectors: 6

A posteriori plane or 3D UWE: 1.962397 , Bounds: ( 0.5700877 , 1.431083 )

Number of height control points: 4

A posteriori height UWE: 0.9493071 , Bounds: ( 0.4076763 , 1.601874 )

Point Summary

| Name      | Grid Northing (USft) | Grid Easting (USft) | Elevation (USft) | Geoid Code Separation (USft) | Combined Ground to Grid Scale Factor | Convergence   |
|-----------|----------------------|---------------------|------------------|------------------------------|--------------------------------------|---------------|
| 155-Reset | 3700232.713          | 5302885.481         | 976.103          | -30.844                      | 0.999903613820374                    | 0°57'40.9572" |

2002  
 Fayette County, Iowa  
 Iowa North Zone (1401)  
 Horizontal Datum: NAD\_83(1996) & Vertical Datum: NAVD\_88

Point Number: 155 *RESET IN 2009*

Northing: ~~3700233.22 FT~~ *3700232.71* Northing: ~~1127833.342 M~~

Easting: ~~5302877.27 FT~~ *5302885.48* Easting: ~~1616320.225 M~~

Elev: ~~976.29 FT~~ *976.103* Elev: ~~297.573 M~~

Latitude: ~~N 42-38-31.46634~~ Longitude: ~~W 092-04-53.52915~~ Ellip Ht: ~~266.761 M~~

Theta: ~~0-57-40.883~~ Combination Factor: ~~0.99990364~~ *0.99990361* 99C Geoid Ht: ~~30.812 M~~  
*-30.844 m*

Designation: BLACKHAWK COUNTY GPS CONTROL PT. 94-155

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.

