

OPUS-RS solution : 018773_14_250_A1.14O OP1410734184994

opus <opus@ngs.noaa.gov>

Sun 9/14/2014 4:40 PM

To: John Freetly <John.Freetly@neciusa.com>;

FILE: 018773_14_250_A1.14O OP1410734184994

NGS OPUS-RS SOLUTION REPORT

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All computed coordinate accuracies are listed as 1-sigma RMS values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: john.freetly@neciusa.com DATE: September 14, 2014
 RINEX FILE: 0187250u.14o TIME: 22:40:04 UTC

SOFTWARE: rsgps 1.37 RS52.prl 1.99.2 START: 2014/09/07 20:26:00
 EPHEMERIS: igr18090.eph [rapid] STOP: 2014/09/07 21:56:15
 NAV FILE: brdc2500.14n OBS USED: 5140 / 5175 : 99%
 ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 41.67/109.76
 ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.334

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.68461)

X: -1360201.543(m) 0.006(m) -1360202.402(m) 0.006(m)
 Y: -4298220.335(m) 0.010(m) -4298219.080(m) 0.010(m)
 Z: 4498471.413(m) 0.022(m) 4498471.370(m) 0.022(m)

LAT: 45 7 47.30212 0.010(m) 45 7 47.32265 0.010(m)
 E LON: 252 26 22.79229 0.006(m) 252 26 22.73749 0.006(m)
 W LON: 107 33 37.20771 0.006(m) 107 33 37.26251 0.006(m)
 EL HGT: 1317.922(m) 0.022(m) 1317.231(m) 0.022(m)
 ORTHO HGT: 1330.787(m) 0.024(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5000559.570 99678.722
 Easting (X) [meters] 298662.771 752563.589
 Convergence [degrees] -1.81513488 1.41887275
 Point Scale 1.00009846 0.99992457
 Combined Factor 0.99989185 0.99971800

US NATIONAL GRID DESIGNATOR: 13TBL9866200559(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	56800.5
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	99537.5
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	106393.9
DJ8992	P033 TENSLEEPTRWY2005 CORS ARP	N435710.415	W1072315.121	131526.3
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	161891.8

NEAREST NGS PUBLISHED CONTROL POINT

QV0340	WAVE	N450858.687	W1073149.176	3228.8
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.