

OPUS solution : 018772_14_253_A0.14O OP1410796541386

opus <opus@ngs.noaa.gov>

Mon 9/15/2014 9:58 AM

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

FILE: 018772_14_253_A0.14O OP1410796541386

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.

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

USER: john.freetly@neciusa.com DATE: September 15, 2014
 RINEX FILE: 0187253s.14o TIME: 15:58:30 UTC

SOFTWARE: page5 1209.04 master90.pl 022814 START: 2014/09/10 18:14:00
 EPHEMERIS: igr18093.eph [rapid] STOP: 2014/09/10 20:58:00
 NAV FILE: brdc2530.14n OBS USED: 6156 / 6441 : 96%
 ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 38 / 39 : 97%
 ARP HEIGHT: 1.8000 OVERALL RMS: 0.011(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.6926)

X: -1361489.297(m) 0.003(m) -1361490.156(m) 0.003(m)
 Y: -4302635.865(m) 0.012(m) -4302634.610(m) 0.012(m)
 Z: 4493925.203(m) 0.013(m) 4493925.159(m) 0.013(m)

LAT: 45 4 17.88379 0.014(m) 45 4 17.90428 0.014(m)
 E LON: 252 26 27.56691 0.001(m) 252 26 27.51218 0.001(m)
 W LON: 107 33 32.43309 0.001(m) 107 33 32.48782 0.001(m)
 EL HGT: 1343.385(m) 0.012(m) 1342.692(m) 0.012(m)
 ORTHO HGT: 1355.754(m) 0.022(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 4994094.021 93218.827
 Easting (X) [meters] 298562.482 752828.065
 Convergence [degrees] -1.81236070 1.41984294
 Point Scale 1.00009896 0.99995776
 Combined Factor 0.99988836 0.99974719

US NATIONAL GRID DESIGNATOR: 13TBK9856294094(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	110776.9
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	112434.7
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	52797.5

NEAREST NGS PUBLISHED CONTROL POINT

QV0344	LH 52	N450419.736	W1073520.458	2359.7
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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.