

OPUS-RS solution : 018772_14_259_A1.14O OP1411071562599

opus <opus@ngs.noaa.gov>

Thu 9/18/2014 2:23 PM

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

FILE: 018772_14_259_A1.14O OP1411071562599

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
RINEX FILE: 0187259w.14oDATE: September 18, 2014
TIME: 20:23:03 UTCSOFTWARE: rsgps 1.37 RS93.prl 1.99.2 START: 2014/09/16 22:45:55
EPHEMERIS: igr18102.eph [rapid] STOP: 2014/09/16 23:45:30
NAV FILE: brdc2590.14n OBS USED: 3265 / 3310 : 99%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 3.20/ 30.20
ARP HEIGHT: 1.800 NORMALIZED RMS: 0.325

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.70950)

X: -1375762.046(m) 0.017(m) -1375762.905(m) 0.017(m)
Y: -4293918.300(m) 0.032(m) -4293917.046(m) 0.032(m)
Z: 4497988.140(m) 0.048(m) 4497988.097(m) 0.048(m)LAT: 45 7 21.98235 0.011(m) 45 7 22.00276 0.011(m)
E LON: 252 14 4.75727 0.007(m) 252 14 4.70234 0.007(m)
W LON: 107 45 55.24273 0.007(m) 107 45 55.29766 0.007(m)
EL HGT: 1414.339(m) 0.059(m) 1413.650(m) 0.059(m)
ORTHO HGT: 1426.210(m) 0.060(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5000309.628 98519.114
Easting (X) [meters] 282514.708 736458.725
Convergence [degrees] -1.96034520 1.26890728
Point Scale 1.00018163 0.99992853
Combined Factor 0.99995989 0.99970685

US NATIONAL GRID DESIGNATOR: 13TBL8251400309(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	69549.5
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	95260.9
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	96023.4
DJ8992	P033 TENSLEEPTRWY2005 CORS ARP	N435710.415	W1072315.121	133449.4
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	146471.4

NEAREST NGS PUBLISHED CONTROL POINT

QV0349	SPRING	N450430.189	W1074418.593	5715.8
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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.