

OPUS solution : 018697_14_259_A1.14O OP1411073214467

opus <opus@ngs.noaa.gov>

Thu 9/18/2014 2:51 PM

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

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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 18, 2014
 RINEX FILE: 0186259r.14o TIME: 20:50:58 UTC

SOFTWARE: page5 1209.04 master51.pl 022814 START: 2014/09/16 17:32:00
 EPHEMERIS: igr18102.eph [rapid] STOP: 2014/09/16 19:53:00
 NAV FILE: brdc2590.14n OBS USED: 5228 / 5594 : 93%
 ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 28 / 30 : 93%
 ARP HEIGHT: 1.800 OVERALL RMS: 0.013(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.7090)

X:	-1376324.728(m)	0.010(m)	-1376325.587(m)	0.010(m)
Y:	-4295662.023(m)	0.017(m)	-4295660.769(m)	0.017(m)
Z:	4496399.584(m)	0.022(m)	4496399.541(m)	0.022(m)

LAT:	45 6 3.63443	0.012(m)	45 6 3.65483	0.012(m)
E LON:	252 14 4.58321	0.004(m)	252 14 4.52831	0.004(m)
W LON:	107 45 55.41679	0.004(m)	107 45 55.47169	0.004(m)
EL HGT:	1581.937(m)	0.023(m)	1581.249(m)	0.023(m)
ORTHO HGT:	1593.575(m)	0.040(m)	[NAVD88 (Computed using GEOID12A)]	

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters]	4997892.090	96101.138
Easting (X) [meters]	282428.169	736508.478
Convergence [degrees]	-1.95963850	1.26887191
Point Scale	1.00018210	0.99994087
Combined Factor	0.99993409	0.99969292

US NATIONAL GRID DESIGNATOR: 13TBK8242897892(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	68349.7
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	97043.4
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	98402.6

NEAREST NGS PUBLISHED CONTROL POINT

QV0349	SPRING	N450430.189	W1074418.593	3580.2
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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.