

Project:

XXXX

2/21/2023

Point Number	Point Name	Northing	Easting	Ortho Height	Diff in z (Ortho)	Diff in x (Long)	Diff in y (Lat)	Point Horizontal Accuracy (95% Confidence) (sft)	Point Vertical Accuracy (95% Confidence) (sft)	
OPUS Static Solutions										
PNT#	NR x									
	OPUS-RS 08682891.dat 001017573									
	meters									
	sft	0	0	0	0	0	0	0	0	
PNT#	NR x									
	OPUS-RS 08682891.dat 001017573									
	meters									
	sft	0	0	0	0	0	0	0	0	
OPUS Rapid Static Solutions										
PNT#	NR x									
	OPUS-RS 08682891.dat 001017573									
	meters									
	sft	0	0	0	0	0	0	0	0	
PNT#	NR x									
	OPUS-RS 08682891.dat 001017573									
	meters									
	sft	0	0	0	0	0	0	0	0	
VRS Solutions										
	NR x	(sft)	(sft)	(sft)	(sft)	(sft)	(sft)			
PNT#	VRS 1	0	0	0	0	0	0			
PNT#	Check	0	0	0	0	0	0			
	Average VRS	0	0	0				0	0	
	NR x	(sft)	(sft)	(sft)	(sft)	(sft)	(sft)			
PNT#	VRS 1	0	0	0	0	0	0			
PNT#	Check	0	0	0	0	0	0			
	Average VRS	0	0	0				0	0	
	NR x	(sft)	(sft)	(sft)	(sft)	(sft)	(sft)			
PNT#	VRS 1	0	0	0	0	0	0			
PNT#	Check	0	0	0	0	0	0			
	Average VRS	0	0	0				0	0	
	NR x	(sft)	(sft)	(sft)	(sft)	(sft)	(sft)			
PNT#	VRS 1	0	0	0	0	0	0			
PNT#	Check	0	0	0	0	0	0			
	Average VRS	0	0	0				0	0	
	NR x	(sft)	(sft)	(sft)	(sft)	(sft)	(sft)			
PNT#	VRS 1	0	0	0	0	0	0			
PNT#	Check	0	0	0	0	0	0			
	Average VRS	0	0	0				0	0	
								Average Site GPS Accuracy (95% Confidence)(sft)	0.00	0.00

----- Original Message -----

Subject: [SPAM] RE: OPUS Reports
From: "Thompson, Gary" <gary.thompson@ncdenr.gov>
Date: Wed, October 14, 2009 11:38 am
To: "redmonds@rlgreenesurveying.com" <redmonds@rlgreenesurveying.com>
Cc: Clay Pate <clayp@duncan-parnell.com>

1.96 for vertical and 1.7308 for horizontal per the FDGC document. I emailed Clay to clarify my first email.

Below is the information from the FGDC document.

The extended OPUS-S report provides a horizontal and vertical network accuracy statement. NGS has not

REF FRAME: NAD_83(CORS96)(EPOCH:2002.0000) ITRF00 (EPOCH:2009.1822)

X:	726220.426(m)	0.018(m)	726219.712(m)	0.018(m)
Y:	-5137714.680(m)	0.014(m)	-5137713.215(m)	0.014(m)
Z:	3697253.498(m)	0.013(m)	3697253.346(m)	0.013(m)

LAT: 35 39 13.38532 0.009(m) 35 39 13.41063 0.009(m)

E LON: 278 2 43.82667 0.018(m) 278 2 43.80672 0.018(m)

W LON: 81 57 16.17333 0.018(m) 81 57 16.19328 0.018(m)

EL HGT: 366.988(m) 0.018(m) 365.639(m) 0.018(m)

ORTHO HGT: 398.752(m) 0.031(m) [NAVD88 (Computed using GEOID03)]

Covariance Matrix for the xyz OPUS Position (meters²).

0.0000004644	-0.0000000014	0.0000000102
-0.0000000014	0.0000008067	-0.0000000370
0.0000000102	-0.0000000370	0.0000004644

Covariance Matrix for the enu OPUS Position (meters²).

0.0000004708	0.0000000308	-0.0000000347
0.0000000308	0.0000005416	-0.0000001463
-0.0000000347	-0.0000001463	0.0000007232

Horizontal network accuracy = 0.00174 meters

provided us the foundation for this report and our review of different solutions indicates that the statements ar

Rick,

After reviewing the emails from last week and discussions with Gary Thompson here is what we have determined

OPUS Static

Horizontal Positional Accuracy at 95% Confidence

= Square Root (Latitude Peak to Peak2 + Longitude Peak to Peak2)

Vertical Positional Accuracy at 95% Confidence

The Value of the Peak to Peak Orthometric Height

OPUS Rapid Static

If the Latitude and Longitude RMSE Errors are equal use the following

1.7308 * RMSE

If the Latitude and Longitude RMSE Errors are not equal use the following

2.4477 * 0.5 * (Latitude RMSE + Longitude RMSE)

Clay

Clay Pate, PE
Duncan-Parnell, Inc

1208 Copeland Oaks Drive
Morrisville, NC 27560
Office: 919-460-8886 x 2203
Fax: 919-460-8896

ined is the best way for computing positional accuracy with OPUS Static and OPUS Rapid Static.