

GPS Calibration Report

Project : I2808CALB

TIP Number

User name	tbovender	Date & Time	9:38:59 AM 3/1/2007
Coordinate System	US State Plane 1983	Zone	North Carolina 3200
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum		Geoid Model	Geoid96 (Conus) NC Sub Grid
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around	
Latitude	N/A
Longitude	N/A
Site Scale Factor	N/A
Height	N/A

The North Carolina Department of Transportation uses a **Localized Coordinate System** which is very similar to North Carolina Zone 3200 from which it is derived.

Please take care in utilizing these coordinates to eliminate confusion of the two systems.

This file is to aid in the use of Real Time Kinematic (RTK) GPS during construction layout.

Datum Transformation Parameters

Datum Transformation computation not requested

Updated Default Projection (Transverse Mercator) Definition

Updated default projection not requested

Horizontal Adjustment Parameters

Northing coordinate of rotation center	878376.385sft
Easting coordinate of rotation center	1463777.496sft
Rotation about the center point	0°00'00"
Translation north	-0.496sft
Translation east	0.058sft
Scale factor	1.00001236

Vertical Adjustment Parameters

Northing coordinate of origin point	933423.229sft
Easting coordinate of origin point	1466783.639sft
Vertical separation at origin	-0.035sft
Slope north	-1.436ppm
Slope east	-0.918ppm

Geoid Model Definition

Geoid96 (Conus) NC Sub Grid

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary			
	Maximum error	Root Mean Square error	Point
Horizontal	0.207sft	0.019	UNION GROVE_WGS8
Vertical	0.080sft	0.009	TRIVETTE_WGS84
Three-dimensional	0.207sft	0.021	UNION GROVE_WGS8

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	BRENDA_WGS84	Northing	933423.229sft	Point	BRENDA_Local
Latitude	36°18'04.46058"N	Easting	1466783.639sft	Northing	933423.239sft
Longitude	80°48'34.14701"W	Elevation	1066.694sft	Easting	1466783.637sft
Height	957.305sft	Horz error	0.011sft	Elevation	1066.727sft
		Vert error	0.033sft	Utilized	Horz and Vert
		3D error	0.034sft	Quality	Survey quality
Point	RONDA 2_WGS84	Northing	909110.030sft	Point	RONDA 2_Local
Latitude	36°13'57.90598"N	Easting	1433501.507sft	Northing	909110.080sft
Longitude	80°55'14.89514"W	Elevation	1143.175sft	Easting	1433501.519sft
Height	1033.876sft	Horz error	0.051sft	Elevation	1143.207sft
		Vert error	0.032sft	Utilized	Horz and Vert
		3D error	0.060sft	Quality	Survey quality
Point	UNION GROVE_WGS8	Northing	832934.945sft	Point	UNION GROVE_Loca
Latitude	36°01'27.52265"N	Easting	1448150.739sft	Northing	832934.961sft
Longitude	80°51'58.64822"W	Elevation	1122.042sft	Easting	1448150.946sft
Height	1013.633sft	Horz error	0.207sft	Elevation	1122.039sft
		Vert error	0.003sft	Utilized	Horz and Vert
		3D error	0.207sft	Quality	Survey quality
Point	HOUSTON RESET_WG	Northing	829416.785sft	Point	HOUSTON RESET_Lo
Latitude	36°01'00.76970"N	Easting	1493205.897sft	Northing	829416.692sft
Longitude	80°42'49.49237"W	Elevation	1046.668sft	Easting	1493205.835sft
Height	938.368sft	Horz error	0.112sft	Elevation	1046.698sft
		Vert error	0.030sft	Utilized	Horz and Vert
		3D error	0.116sft	Quality	Survey quality
Point	I2808-5_WGS84	Northing	868420.492sft	Point	I2808-5_Local
Latitude	36°07'21.21583"N	Easting	1463604.089sft	Northing	868420.483sft
Longitude	80°48'58.45481"W	Elevation	1065.881sft	Easting	1463604.091sft
Height	956.566sft	Horz error	0.010sft	Elevation	1065.894sft
		Vert error	0.013sft	Utilized	Horz and Vert
		3D error	0.016sft	Quality	Survey quality
Point	I2808-6_WGS84	Northing	867892.134sft	Point	I2808-6_Local
Latitude	36°07'16.23074"N	Easting	1464926.318sft	Northing	867892.121sft

Longitude	80°48'42.22362"W
Height	940.618sft

Elevation	1049.929sft
Horz error	0.015sft
Vert error	0.007sft
3D error	0.016sft

Eastng	1464926.312sft
Elevation	1049.936sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-7_WGS84
Latitude	36°09'24.72590"N
Longitude	80°48'26.98498"W
Height	995.192sft

Northing	880861.201sft
Eastng	1466412.920sft
Elevation	1104.694sft
Horz error	0.027sft
Vert error	0.021sft
3D error	0.034sft

Point	I2808-7_Local
Northing	880861.177sft
Eastng	1466412.908sft
Elevation	1104.673sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-8_WGS84
Latitude	36°09'24.14460"N
Longitude	80°48'12.05521"W
Height	988.518sft

Northing	880780.161sft
Eastng	1467636.007sft
Elevation	1098.026sft
Horz error	0.032sft
Vert error	0.022sft
3D error	0.039sft

Point	I2808-8_Local
Northing	880780.133sft
Eastng	1467635.991sft
Elevation	1098.004sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-9_WGS84
Latitude	36°11'45.14943"N
Longitude	80°48'35.01226"W
Height	1015.690sft

Northing	895071.328sft
Eastng	1466013.584sft
Elevation	1125.284sft
Horz error	0.009sft
Vert error	0.023sft
3D error	0.024sft

Point	I2808-9_Local
Northing	895071.322sft
Eastng	1466013.577sft
Elevation	1125.261sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-10_WGS84
Latitude	36°11'33.95962"N
Longitude	80°48'32.68286"W
Height	1032.098sft

Northing	893936.444sft
Eastng	1466183.869sft
Elevation	1141.687sft
Horz error	0.009sft
Vert error	0.025sft
3D error	0.027sft

Point	I2808-10_Local
Northing	893936.439sft
Eastng	1466183.861sft
Elevation	1141.662sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-11_WGS84
Latitude	36°14'21.59675"N
Longitude	80°48'58.65982"W
Height	870.832sft

Northing	910925.293sft
Eastng	1464365.007sft
Elevation	980.448sft
Horz error	0.020sft
Vert error	0.013sft
3D error	0.024sft

Point	I2808-11_Local
Northing	910925.311sft
Eastng	1464364.998sft
Elevation	980.435sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-12_WGS84
Latitude	36°14'20.11565"N
Longitude	80°48'43.61847"W
Height	881.074sft

Northing	910753.019sft
Eastng	1465594.311sft
Elevation	990.700sft
Horz error	0.017sft
Vert error	0.016sft
3D error	0.024sft

Point	I2808-12_Local
Northing	910753.029sft
Eastng	1465594.298sft
Elevation	990.684sft
Utilized	Horz and Vert
Quality	Survey quality

Point	BL-42_WGS84
Latitude	36°14'45.12082"N
Longitude	80°49'10.99813"W
Height	837.272sft

Northing	913322.375sft
Eastng	1463397.980sft
Elevation	946.870sft
Horz error	0.021sft
Vert error	0.002sft
3D error	0.021sft

Point	BL-42_Local
Northing	913322.395sft
Eastng	1463397.974sft
Elevation	946.872sft
Utilized	Horz and Vert
Quality	Survey quality

Point	TRIVETTE_WGS84
Latitude	36°03'07.21309"N

Northing	842772.878sft
Eastng	1461310.969sft

Point	TRIVETTE_Local
Northing	842772.927sft

Longitude	80°49'20.66203"W
Height	953.850sft

Elevation	1062.578sft
Horz error	0.053sft
Vert error	0.080sft
3D error	0.096sft

Easting	1461310.949sft
Elevation	1062.498sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-2_WGS84
Latitude	36°03'00.74173"N
Longitude	80°49'03.90136"W
Height	954.421sft

Northing	842093.368sft
Easting	1462675.052sft
Elevation	1063.134sft
Horz error	0.041sft
Vert error	0.044sft
3D error	0.060sft

Point	I2808-2_Local
Northing	842093.374sft
Easting	1462675.011sft
Elevation	1063.178sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-3_WGS84
Latitude	36°05'58.78252"N
Longitude	80°48'43.23351"W
Height	899.450sft

Northing	860063.136sft
Easting	1464700.534sft
Elevation	1008.615sft
Horz error	0.008sft
Vert error	0.022sft
3D error	0.024sft

Point	I2808-3_Local
Northing	860063.138sft
Easting	1464700.526sft
Elevation	1008.637sft
Utilized	Horz and Vert
Quality	Survey quality

Point	I2808-4_WGS84
Latitude	36°06'04.41238"N
Longitude	80°48'30.49673"W
Height	919.365sft

Northing	860613.290sft
Easting	1465755.988sft
Elevation	1028.544sft
Horz error	0.009sft
Vert error	0.021sft
3D error	0.023sft

Point	I2808-4_Local
Northing	860613.287sft
Easting	1465755.979sft
Elevation	1028.565sft
Utilized	Horz and Vert
Quality	Survey quality