

GPS Calibration Report

Project : r2501c

TIP Number	R2501C	Date & Time	11:30:36 AM 1/29/2004
User name	mtwoodruff	Zone	North Carolina 3200
Coordinate System	US State Plane 1983(at ground)	Geoid Model	GEOID99 (Conus)
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum	NAVD88		
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around	
Latitude	34°55'20.63321"N
Longitude	79°39'13.80534"W
Site Scale Factor	1.0001330980
Height	?

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	448991.338sft
Easting coordinate of rotation center	1799836.333sft
Rotation about the center point	0°00'00"
Translation north	0.014sft
Translation east	-0.030sft

Scale factor 0.99999937

Vertical Adjustment Parameters

Northing coordinate of origin point 438183.593sft
 Easting coordinate of origin point 1780904.137sft
 Vertical separation at origin 0.015sft
 Slope north -0.867ppm
 Slope east 3.125ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.030sft	0.006	R2502-1_GPS
Vertical	0.065sft	0.011	U3456-4
Three-dimensional	0.065sft	0.012	U3456-4

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	U3456-4	Northing	438183.593sft	Point	U3456-4
Latitude	34°57'06.35998"N	Easting	1780904.137sft	Northing	438183.593sft
Longitude	79°43'52.27111"W	Elevation	319.366sft	Easting	1780904.137sft
Height	216.653sft	Horz error	?	Elevation	319.301sft
		Vert error	0.065sft	Utilized	Vertical
		3D error	0.065sft	Quality	Control quality
Point	R2502-1_GPS	Northing	448358.220sft	Point	R2502-1
Latitude	34°58'49.68464"N	Easting	1821667.435sft	Northing	448358.250sft
Longitude	79°35'43.33496"W	Elevation	410.382sft	Easting	1821667.433sft

Height	306.334sft
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Horz error	0.030sft
Vert error	0.032sft
3D error	0.043sft

Elevation	410.350sft
Utilized	Horz and Vert
Quality	Control quality

Point	R0000A-6_GPS
Latitude	35°02'36.24305"N
Longitude	79°42'58.12557"W
Height	297.322sft

Northing	471503.139sft
Easting	1785651.972sft
Elevation	399.724sft
Horz error	0.029sft
Vert error	0.001sft
3D error	0.029sft

Point	R0000A-6
Northing	471503.144sft
Easting	1785652.000sft
Elevation	399.724sft
Utilized	Horz and Vert
Quality	Control quality

Point	U3456-5_GPS
Latitude	34°57'25.08367"N
Longitude	79°42'00.85071"W
Height	255.765sft

Northing	440009.755sft
Easting	1790192.456sft
Elevation	358.793sft
Horz error	0.018sft
Vert error	0.038sft
3D error	0.042sft

Point	U3456-5
Northing	440009.741sft
Easting	1790192.444sft
Elevation	358.831sft
Utilized	Horz and Vert
Quality	Control quality

Point	U3456-6_GPS
Latitude	34°57'30.26754"N
Longitude	79°41'38.97067"W
Height	251.125sft

Northing	440521.072sft
Easting	1792017.367sft
Elevation	354.210sft
Horz error	0.015sft
Vert error	0.038sft
3D error	0.040sft

Point	U3456-6
Northing	440521.058sft
Easting	1792017.362sft
Elevation	354.248sft
Utilized	Horz and Vert
Quality	Control quality

Point	R2501C-1_GPS
Latitude	34°58'31.43193"N
Longitude	79°39'12.50279"W
Height	219.268sft

Northing	446622.279sft
Easting	1804249.541sft
Elevation	322.711sft
Horz error	0.012sft
Vert error	0.022sft
3D error	0.025sft

Point	R2501C-1
Northing	446622.268sft
Easting	1804249.536sft
Elevation	322.733sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2501C-2_GPS
Latitude	34°58'34.57577"N
Longitude	79°39'00.63741"W
Height	260.330sft

Northing	446933.650sft
Easting	1805239.051sft
Elevation	363.804sft
Horz error	0.008sft
Vert error	0.000sft
3D error	0.008sft

Point	R2501C-2
Northing	446933.656sft
Easting	1805239.045sft
Elevation	363.805sft
Utilized	Horz and Vert
Quality	Adjusted quality