

GPS Calibration Report

Project : U3308

TIP Number		Date & Time	4:16:47 PM 8/23/2005
User name	aspielvogel	Zone	North Carolina 3200
Coordinate System	US State Plane 1983		
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum		Geoid Model	Geoid03 (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	806047.0164sft
Easting coordinate of rotation center	2028149.2155sft
Rotation about the center point	0°00'00"
Translation north	-0.3463sft
Translation east	-0.2689sft

Scale factor 1.00005747

Vertical Adjustment Parameters

Northing coordinate of origin point 840519.8109sft
 Easting coordinate of origin point 1975512.3961sft
 Vertical separation at origin -0.1436sft
 Slope north -0.629ppm
 Slope east -0.302ppm

Geoid Model Definition

Geoid03 (Conus) NC Sub Grid

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.010sft	0.002	TURNKEY_WGS84
Vertical	0.078sft	0.011	TURNKEY_WGS84
Three-dimensional	0.079sft	0.011	TURNKEY_WGS84

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	NEALS_WGS84	Northing	840519.8109sft	Point	NEALS_Local
Latitude	36°03'33.70562"N	Easting	1975512.3961sft	Northing	840519.8117sft
Longitude	79°04'58.20354"W	Elevation	617.0749sft	Easting	1975512.4040sft
Height	516.9051sft	Horz error	0.008sft	Elevation	617.0919sft
		Vert error	0.017sft	Utilized	Horz and Vert
		3D error	0.019sft	Quality	Survey quality
Point	A EARL SMITH WGS	Northing	727654.5545sft	Point	A EARL SMITH Loc
Latitude	35°44'57.32992"N	Easting	2043745.3942sft	Northing	727654.5486sft
Longitude	78°51'09.25788"W	Elevation	488.3649sft	Easting	2043745.3974sft

Height	382.9815sft
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Horz error	0.007sft
Vert error	0.004sft
3D error	0.008sft

Elevation	488.3684sft
Utilized	Horz and Vert
Quality	Survey quality

Point	TURNKEY_WGS84
Latitude	35°59'14.51009"N
Longitude	78°50'47.43883"W
Height	267.6865sft

Northing	814333.7648sft
Easting	2045409.8586sft
Elevation	371.0434sft
Horz error	0.010sft
Vert error	0.078sft
3D error	0.079sft

Point	TURNKEY_Local
Northing	814333.7683sft
Easting	2045409.8495sft
Elevation	371.1213sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3308-1_WGS84
Latitude	35°58'52.77432"N
Longitude	78°53'19.19115"W
Height	283.7035sft

Northing	812119.1554sft
Easting	2032940.7021sft
Elevation	386.5564sft
Horz error	0.004sft
Vert error	0.015sft
3D error	0.016sft

Point	U3308-1_Local
Northing	812119.1566sft
Easting	2032940.6979sft
Elevation	386.5412sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3308-2_WGS84
Latitude	35°58'57.96845"N
Longitude	78°53'31.18917"W
Height	293.4541sft

Northing	812643.3091sft
Easting	2031954.0107sft
Elevation	396.2549sft
Horz error	0.003sft
Vert error	0.019sft
3D error	0.019sft

Point	U3308-2_Local
Northing	812643.3091sft
Easting	2031954.0135sft
Elevation	396.2361sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3308-3_WGS84
Latitude	35°59'42.51098"N
Longitude	78°53'09.71889"W
Height	231.9418sft

Northing	817149.5425sft
Easting	2033713.4559sft
Elevation	334.7078sft
Horz error	0.002sft
Vert error	0.033sft
3D error	0.033sft

Point	U3308-3_Local
Northing	817149.5402sft
Easting	2033713.4555sft
Elevation	334.6745sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3308-4_WGS84
Latitude	35°59'49.99641"N
Longitude	78°53'09.05905"W
Height	246.3414sft

Northing	817906.5538sft
Easting	2033766.8087sft
Elevation	349.0921sft
Horz error	0.003sft
Vert error	0.031sft
3D error	0.031sft

Point	U3308-4_Local
Northing	817906.5564sft
Easting	2033766.8084sft
Elevation	349.0610sft
Utilized	Horz and Vert
Quality	Survey quality