

GPS Calibration Report

Project : R3833RTK

TIP Number	R-3833B	Date & Time	9:43:22 AM 10/20/2005
User name	tbovender	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	35^34'57.49760"N
Longitude	80^52'34.83502"W
Site Scale Factor	1.00014865
Height	867.570sft

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	667348.563sft
Easting coordinate of rotation center	1442208.222sft
Rotation about the center point	0°00'00"
Translation north	-0.729sft
Translation east	0.011sft
Scale factor	1.00014872

Vertical Adjustment Parameters

Northing coordinate of origin point	661098.014sft
Easting coordinate of origin point	1426587.503sft
Vertical separation at origin	0.031sft
Slope north	1.892ppm
Slope east	-1.548ppm

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	0.003sft	0.000	R3833-9_WGS84
Vertical	0.069sft	0.007	5 JS 21_WGS84
Three-dimensional	0.069sft	0.007	5 JS 21_WGS84

Point Residuals

WGS84 Coordinates

Point	R3833-1_WGS84
Latitude	35°33'04.25735"N
Longitude	80°55'40.45948"W
Height	735.911sft

Calculated point FOR DISPLAY ONLY

Northing	661098.014sft
Easting	1426587.503sft
Elevation	838.928sft
Horz error	0.001sft
Vert error	0.011sft
3D error	0.011sft

Local Coordinates

Point	R3833-1_Local
Northing	661098.014sft
Easting	1426587.503sft
Elevation	838.939sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-2_WGS84
Latitude	35°33'11.16854"N
Longitude	80°55'29.32477"W
Height	732.584sft

Northing	661778.872sft
Easting	1427521.006sft
Elevation	835.605sft
Horz error	0.000sft
Vert error	0.011sft
3D error	0.011sft

Point	R3833-2_Local
Northing	661778.872sft
Easting	1427521.006sft
Elevation	835.616sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-3_WGS84
Latitude	35°34'15.11015"N
Longitude	80°54'35.94241"W
Height	736.713sft

Northing	668158.121sft
Easting	1432055.774sft
Elevation	839.839sft
Horz error	0.001sft
Vert error	0.008sft
3D error	0.008sft

Point	R3833-3_Local
Northing	668158.121sft
Easting	1432055.775sft
Elevation	839.831sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-4_WGS84
Latitude	35°34'09.34916"N
Longitude	80°54'23.55302"W
Height	747.787sft

Northing	667556.014sft
Easting	1433067.959sft
Elevation	850.881sft
Horz error	0.001sft
Vert error	0.006sft
3D error	0.007sft

Point	R3833-4_Local
Northing	667556.015sft
Easting	1433067.958sft
Elevation	850.875sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-5_WGS84
Latitude	35°35'15.38167"N
Longitude	80°52'27.75769"W
Height	760.506sft

Northing	674049.749sft
Easting	1442759.016sft
Elevation	863.645sft
Horz error	0.001sft
Vert error	0.018sft
3D error	0.018sft

Point	R3833-5_Local
Northing	674049.750sft
Easting	1442759.015sft
Elevation	863.627sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-6_WGS84
Latitude	35°35'02.80060"N

Northing	672775.265sft
Easting	1442869.015sft

Point	R3833-6_Local
Northing	672775.265sft

Longitude	80°52'26.13495"W
Height	757.085sft

Elevation	860.186sft
Horz error	0.001sft
Vert error	0.010sft
3D error	0.010sft

Easting	1442869.014sft
Elevation	860.176sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-7_WGS84
Latitude	35°34'52.30361"N
Longitude	80°51'24.02377"W
Height	704.525sft

Northing	671617.614sft
Easting	1447978.791sft
Elevation	807.532sft
Horz error	0.002sft
Vert error	0.000sft
3D error	0.002sft

Point	R3833-7_Local
Northing	671617.615sft
Easting	1447978.793sft
Elevation	807.532sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-8_WGS84
Latitude	35°34'40.98571"N
Longitude	80°51'21.05133"W
Height	714.847sft

Northing	670468.775sft
Easting	1448202.894sft
Elevation	817.818sft
Horz error	0.000sft
Vert error	0.006sft
3D error	0.006sft

Point	R3833-8_Local
Northing	670468.775sft
Easting	1448202.894sft
Elevation	817.824sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-9_WGS84
Latitude	35°34'44.16643"N
Longitude	80°50'25.68877"W
Height	744.077sft

Northing	670705.209sft
Easting	1452781.487sft
Elevation	847.000sft
Horz error	0.003sft
Vert error	0.010sft
3D error	0.010sft

Point	R3833-9_Local
Northing	670705.207sft
Easting	1452781.485sft
Elevation	847.010sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R3833-10_WGS84
Latitude	35°34'35.90939"N
Longitude	80°50'30.08729"W
Height	736.534sft

Northing	669877.153sft
Easting	1452402.709sft
Elevation	839.437sft
Horz error	0.000sft
Vert error	0.014sft
3D error	0.014sft

Point	R3833-10_Local
Northing	669877.153sft
Easting	1452402.709sft
Elevation	839.451sft
Utilized	Horz and Vert
Quality	Survey quality

Point	EXIT33-3_WGS84
Latitude	35°33'24.60094"N
Longitude	80°51'29.39697"W
Height	714.023sft

Northing	662759.145sft
Easting	1447369.024sft
Elevation	816.771sft
Horz error	0.001sft
Vert error	0.032sft
3D error	0.032sft

Point	EXIT33-3_Local
Northing	662759.144sft
Easting	1447369.025sft
Elevation	816.803sft
Utilized	Horz and Vert
Quality	Survey quality

Point	EXIT33-4_WGS84
Latitude	35°33'37.16007"N
Longitude	80°51'30.90579"W
Height	695.494sft

Northing	664031.208sft
Easting	1447268.147sft
Elevation	798.285sft
Horz error	0.001sft
Vert error	0.028sft
3D error	0.028sft

Point	EXIT33-4_Local
Northing	664031.207sft
Easting	1447268.147sft
Elevation	798.313sft
Utilized	Horz and Vert
Quality	Survey quality

Point	5 JS 21_WGS84
Latitude	35°33'03.80154"N
Longitude	80°51'23.17533"W
Height	764.965sft

Northing	660646.707sft
Easting	1447843.701sft
Elevation	867.640sft
Horz error	0.001sft
Vert error	0.069sft
3D error	0.069sft

Point	5 JS 21_Local
Northing	660646.708sft
Easting	1447843.701sft
Elevation	867.571sft
Utilized	Horz and Vert
Quality	Survey quality