

# GPS Calibration Report

*Project : U3804calib*

## TIP Number

User name	aspielvogel	Date & Time	9:58:48 AM 1/17/2008
Coordinate System	US State Plane 1983	Zone	North Carolina 3200
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		

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## LOCAL SITE INFORMATION

Localized around

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

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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.

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## Datum Transformation Parameters

Datum Transformation computation not requested

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## Updated Default Projection (Transverse Mercator) Definition

Updated default projection not requested

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## Horizontal Adjustment Parameters

Northing coordinate of rotation center	831627.933sft
Easting coordinate of rotation center	2018487.911sft
Rotation about the center point	0°00'00"
Translation north	-0.035sft
Translation east	0.008sft
Scale factor	1.00004850

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## Vertical Adjustment Parameters

Northing coordinate of origin point	828914.968sft
Easting coordinate of origin point	2017649.262sft
Vertical separation at origin	0.389sft
Slope north	-13.699ppm
Slope east	2.146ppm

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# 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	0.005sft	0.001	U3804-1_WGS84
Vertical	0.003sft	0.000	U3804-6_WGS84
Three-dimensional	0.005sft	0.001	U3804-3_WGS84

### Point Residuals

#### WGS84 Coordinates

Point	U3804-1_WGS84
Latitude	36°01'39.00801"N
Longitude	78°56'25.12770"W
Height	289.445sft

#### Calculated point FOR DISPLAY ONLY

Northing	828914.968sft
Easting	2017649.262sft
Elevation	391.868sft
Horz error	0.005sft
Vert error	0.001sft
3D error	0.005sft

#### Local Coordinates

Point	U3804-1_Local
Northing	828914.971sft
Easting	2017649.259sft
Elevation	391.867sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3804-2_WGS84
Latitude	36°01'45.27715"N
Longitude	78°56'10.05567"W
Height	313.792sft

Northing	829549.695sft
Easting	2018886.909sft
Elevation	416.243sft
Horz error	0.004sft
Vert error	0.000sft
3D error	0.004sft

Point	U3804-2_Local
Northing	829549.696sft
Easting	2018886.913sft
Elevation	416.243sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3804-3_WGS84
Latitude	36°02'11.60828"N
Longitude	78°56'30.43527"W
Height	327.572sft

Northing	832211.365sft
Easting	2017211.352sft
Elevation	429.870sft
Horz error	0.005sft
Vert error	0.002sft
3D error	0.005sft

Point	U3804-3_Local
Northing	832211.362sft
Easting	2017211.348sft
Elevation	429.872sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3804-4_WGS84
Latitude	36°02'13.96022"N
Longitude	78°56'18.60280"W
Height	327.591sft

Northing	832449.788sft
Easting	2018183.044sft
Elevation	429.921sft
Horz error	0.002sft
Vert error	0.000sft
3D error	0.002sft

Point	U3804-4_Local
Northing	832449.786sft
Easting	2018183.044sft
Elevation	429.921sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3804-5_WGS84
Latitude	36°02'15.87892"N
Longitude	78°55'58.09947"W
Height	312.385sft

Northing	832644.905sft
Easting	2019866.905sft
Elevation	414.775sft
Horz error	0.004sft
Vert error	0.002sft
3D error	0.005sft

Point	U3804-5_Local
Northing	832644.906sft
Easting	2019866.909sft
Elevation	414.777sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3804-6_WGS84
Latitude	36°02'29.25117"N

Northing	833996.670sft
Easting	2019130.044sft

Point	U3804-6_Local
Northing	833996.669sft

<b>Longitude</b>	78°56'07.06040"W
<b>Height</b>	292.030sft

<b>Elevation</b>	394.350sft
<b>Horz error</b>	<b>0.001sft</b>
<b>Vert error</b>	<b>0.003sft</b>
<b>3D error</b>	<b>0.003sft</b>

<b>Easting</b>	2019130.044sft
<b>Elevation</b>	394.347sft
<b>Utilized</b>	Horz and Vert
<b>Quality</b>	Survey quality