

GPS Calibration Report

Project : U3456

TIP Number	U-3456		
User name	scranford	Date & Time	4:27:46 PM 7/8/03
Coordinate System	US State Plane 1983	Zone	North Carolina 3200
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum	NAVD88	Geoid Model	GEOID99 (Conus)
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

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	443559.494sft
Easting coordinate of rotation center	1787501.133sft
Rotation about the center point	0°00'00"
Translation north	2.185sft
Translation east	-2.198sft
Scale factor	1.00013274

Vertical Adjustment Parameters

Northing coordinate of origin point	418166.349sft
Easting coordinate of origin point	1758155.453sft
Vertical separation at origin	0.102sft
Slope north	-2.189ppm
Slope east	-0.216ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.039sft	0.006	R0000A-6
Vertical	0.047sft	0.007	U3456-3
Three-dimensional	0.048sft	0.009	U3456-3

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	CORDOVA RESET	Northing	418166.349sft	Point	CORDOVA RESET -
Latitude	34°53'46.64012"N	Easting	1758155.453sft	Northing	?
Longitude	79°48'23.58214"W	Elevation	294.512sft	Easting	?
Height	192.077sft	Horz error	?	Elevation	294.478sft
		Vert error	0.034sft	Utilized	Horz and Vert
		3D error	0.034sft	Quality	Survey quality
Point	R0000A-6	Northing	471503.157sft	Point	R0000A-6 - Local
Latitude	35°02'36.24304"N	Easting	1785651.965sft	Northing	471503.145sft
Longitude	79°42'58.12583"W	Elevation	399.738sft	Easting	1785652.003sft
Height	297.356sft	Horz error	0.039sft	Elevation	399.724sft
		Vert error	0.014sft	Utilized	Horz and Vert

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3D error	0.042sft
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Quality	Survey quality
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Point	R2502-1
Latitude	34°58'49.68449"N
Longitude	79°35'43.33520"W
Height	306.418sft

Northing	448358.224sft
Easting	1821667.443sft
Elevation	410.355sft
Horz error	0.027sft
Vert error	0.005sft
3D error	0.027sft

Point	R2502-1 - Local
Northing	448358.250sft
Easting	1821667.436sft
Elevation	410.350sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3456-1
Latitude	34°56'42.56353"N
Longitude	79°45'22.50428"W
Height	202.026sft

Northing	435833.979sft
Easting	1773374.566sft
Elevation	304.565sft
Horz error	0.017sft
Vert error	0.017sft
3D error	0.024sft

Point	U3456-1 - Local
Northing	435833.968sft
Easting	1773374.554sft
Elevation	304.583sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3456-2
Latitude	34°56'52.84894"N
Longitude	79°44'57.85655"W
Height	197.932sft

Northing	436858.306sft
Easting	1775434.327sft
Elevation	300.522sft
Horz error	0.017sft
Vert error	0.029sft
3D error	0.033sft

Point	U3456-2 - Local
Northing	436858.296sft
Easting	1775434.313sft
Elevation	300.551sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3456-4 - WGS84
Latitude	34°57'06.35987"N
Longitude	79°43'52.27136"W
Height	216.565sft

Northing	438183.591sft
Easting	1780904.136sft
Elevation	319.316sft
Horz error	0.005sft
Vert error	0.016sft
3D error	0.016sft

Point	U3456-4 - Local
Northing	438183.595sft
Easting	1780904.138sft
Elevation	319.301sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3456-3
Latitude	34°56'56.87156"N
Longitude	79°43'54.04724"W
Height	215.579sft

Northing	437225.382sft
Easting	1780749.236sft
Elevation	318.342sft
Horz error	0.011sft
Vert error	0.047sft
3D error	0.048sft

Point	U3456-3 - Local
Northing	437225.376sft
Easting	1780749.227sft
Elevation	318.388sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3456-5
Latitude	34°57'25.08340"N
Longitude	79°42'00.85112"W
Height	255.818sft

Northing	440009.738sft
Easting	1790192.444sft
Elevation	358.851sft
Horz error	0.006sft
Vert error	0.020sft

Point	U3456-5 - Local
Northing	440009.743sft
Easting	1790192.447sft
Elevation	358.831sft
Utilized	Horz and Vert

3D error	0.021sft
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Quality	Survey quality
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Point	U3456-6
Latitude	34°57'30.26724"N
Longitude	79°41'38.97096"W
Height	251.167sft

Northing	440521.053sft
Easting	1792017.365sft
Elevation	354.251sft
Horz error	0.004sft
Vert error	0.003sft
3D error	0.006sft

Point U3456-6 - Local	
Northing	440521.058sft
Easting	1792017.364sft
Elevation	354.248sft
Utilized	Horz and Vert
Quality	Survey quality