

GPS Calibration Report

Project : R2635BCZA

TIP Number	R-2635B&C	Date & Time	3:11:08 PM 3/28/2005
User name	ggreen	Zone	North Carolina 3200
Coordinate System	US State Plane 1983(at ground)	Geoid Model	GEOID99 (Conus)
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum			
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around	
Latitude	35°41'28.03672"N
Longitude	78°41'39.87714"W
Site Scale Factor	1.0001066400
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	731648.834sft
Easting coordinate of rotation center	2033697.286sft
Rotation about the center point	0°00'00"
Translation north	0.024sft
Translation east	0.032sft

Scale factor 1.00000008

Vertical Adjustment Parameters

Northing coordinate of origin point 707462.190sft
 Easting coordinate of origin point 2036191.054sft
 Vertical separation at origin 0.466sft
 Slope north -7.201ppm
 Slope east 9.557ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.005sft	0.001	R2635-25 WGS84
Vertical	0.003sft	0.000	R2635-25 WGS84
Three-dimensional	0.005sft	0.001	R2635-25 WGS84

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	R2635-2 WGS84	Northing	707462.190sft	Point	R2635-2
Latitude	35°41'37.67037"N	Easting	2036191.054sft	Northing	707462.191sft
Longitude	78°52'41.13559"W	Elevation	343.221sft	Easting	2036191.055sft
Height	237.053sft	Horz error	0.002sft	Elevation	343.219sft
		Vert error	0.002sft	Utilized	Horz and Vert
		3D error	0.003sft	Quality	Adjusted quality
Point	R2635-1 WGS84	Northing	708136.657sft	Point	R2635-1
Latitude	35°41'44.32683"N	Easting	2037299.339sft	Northing	708136.656sft
Longitude	78°52'27.68941"W	Elevation	324.451sft	Easting	2037299.342sft

Height	218.251sft
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Horz error	0.003sft
Vert error	0.000sft
3D error	0.003sft

Elevation	324.451sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-24 WGS84
Latitude	35°42'09.50910"N
Longitude	78°51'31.39487"W
Height	289.366sft

Northing	710689.267sft
Easting	2041939.185sft
Elevation	395.700sft
Horz error	0.004sft
Vert error	0.001sft
3D error	0.004sft

Point	R2635-24
Northing	710689.269sft
Easting	2041939.188sft
Elevation	395.701sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-25 WGS84
Latitude	35°41'59.69304"N
Longitude	78°51'28.93721"W
Height	280.925sft

Northing	709696.981sft
Easting	2042143.308sft
Elevation	387.296sft
Horz error	0.005sft
Vert error	0.003sft
3D error	0.005sft

Point	R2635-25
Northing	709696.985sft
Easting	2042143.310sft
Elevation	387.299sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-3 WGS84
Latitude	35°42'27.61908"N
Longitude	78°52'52.50675"W
Height	287.631sft

Northing	712511.744sft
Easting	2035247.037sft
Elevation	393.605sft
Horz error	0.002sft
Vert error	0.001sft
3D error	0.002sft

Point	R2635-3
Northing	712511.743sft
Easting	2035247.036sft
Elevation	393.604sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-4 WGS84
Latitude	35°42'19.64090"N
Longitude	78°53'01.37051"W
Height	286.578sft

Northing	711704.144sft
Easting	2034516.961sft
Elevation	392.542sft
Horz error	0.003sft
Vert error	0.000sft
3D error	0.003sft

Point	R2635-4
Northing	711704.144sft
Easting	2034516.958sft
Elevation	392.542sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-22 WGS84
Latitude	35°43'20.90405"N
Longitude	78°53'11.44249"W
Height	266.092sft

Northing	717897.987sft
Easting	2033679.189sft
Elevation	371.822sft
Horz error	0.002sft
Vert error	0.001sft
3D error	0.002sft

Point	R2635-22
Northing	717897.988sft
Easting	2033679.187sft
Elevation	371.821sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-21 WGS84
Latitude	35°43'22.88403"N
Longitude	78°53'03.61874"W

Northing	718098.944sft
Easting	2034324.086sft
Elevation	392.220sft

Point	R2635-21
Northing	718098.942sft
Easting	2034324.084sft

Height	286.466sft
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Horz error	0.003sft
Vert error	0.000sft
3D error	0.003sft

Elevation	392.221sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-7 WGS84
Latitude	35°44'05.41685"N
Longitude	78°53'45.42328"W
Height	250.344sft

Northing	722395.981sft
Easting	2030872.485sft
Elevation	355.791sft
Horz error	0.005sft
Vert error	0.002sft
3D error	0.005sft

Point	R2635-7
Northing	722395.979sft
Easting	2030872.480sft
Elevation	355.794sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-8 WGS84
Latitude	35°44'10.32293"N
Longitude	78°53'33.25959"W
Height	244.074sft

Northing	722893.146sft
Easting	2031874.788sft
Elevation	349.554sft
Horz error	0.001sft
Vert error	0.002sft
3D error	0.003sft

Point	R2635-8
Northing	722893.147sft
Easting	2031874.788sft
Elevation	349.556sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-13 WGS84
Latitude	35°44'48.73828"N
Longitude	78°53'35.00484"W
Height	268.710sft

Northing	726777.506sft
Easting	2031726.717sft
Elevation	374.048sft
Horz error	0.001sft
Vert error	0.002sft
3D error	0.002sft

Point	R2635-13
Northing	726777.507sft
Easting	2031726.717sft
Elevation	374.047sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-14 WGS84
Latitude	35°44'51.13978"N
Longitude	78°53'05.33456"W
Height	263.868sft

Northing	727023.080sft
Easting	2034172.249sft
Elevation	369.315sft
Horz error	0.002sft
Vert error	0.002sft
3D error	0.003sft

Point	R2635-14
Northing	727023.078sft
Easting	2034172.248sft
Elevation	369.313sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-20 WGS84
Latitude	35°45'21.87130"N
Longitude	78°53'21.05988"W
Height	302.467sft

Northing	730129.150sft
Easting	2032872.503sft
Elevation	407.745sft
Horz error	0.002sft
Vert error	0.000sft
3D error	0.002sft

Point	R2635-20
Northing	730129.149sft
Easting	2032872.502sft
Elevation	407.745sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-19 WGS84
Latitude	35°45'25.88092"N
Longitude	78°53'16.13930"W

Northing	730535.055sft
Easting	2033277.618sft
Elevation	404.466sft

Point	R2635-19
Northing	730535.056sft
Easting	2033277.618sft

Height	299.182sft
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Horz error	0.001sft
Vert error	0.002sft
3D error	0.002sft

Elevation	404.469sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-18_WGS84
Latitude	35°46'10.63892"N
Longitude	78°53'27.84101"W
Height	260.052sft

Northing	735059.889sft
Easting	2032308.166sft
Elevation	365.135sft
Horz error	0.001sft
Vert error	0.000sft
3D error	0.001sft

Point	R2635-18
Northing	735059.889sft
Easting	2032308.167sft
Elevation	365.135sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-17_WGS84
Latitude	35°46'04.53151"N
Longitude	78°53'15.28886"W
Height	264.908sft

Northing	734443.463sft
Easting	2033343.287sft
Elevation	370.061sft
Horz error	0.001sft
Vert error	0.002sft
3D error	0.003sft

Point	R2635-17
Northing	734443.464sft
Easting	2033343.288sft
Elevation	370.059sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-11_WGS84
Latitude	35°46'54.80761"N
Longitude	78°53'15.14842"W
Height	261.505sft

Northing	739527.391sft
Easting	2033349.101sft
Elevation	366.488sft
Horz error	0.001sft
Vert error	0.001sft
3D error	0.001sft

Point	R2635-11
Northing	739527.392sft
Easting	2033349.101sft
Elevation	366.487sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-12_WGS84
Latitude	35°47'02.96986"N
Longitude	78°53'02.17145"W
Height	273.097sft

Northing	740353.990sft
Easting	2034417.405sft
Elevation	378.104sft
Horz error	0.002sft
Vert error	0.003sft
3D error	0.004sft

Point	R2635-12
Northing	740353.988sft
Easting	2034417.407sft
Elevation	378.101sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-16_WGS84
Latitude	35°47'58.11145"N
Longitude	78°53'52.55277"W
Height	251.292sft

Northing	745925.374sft
Easting	2030260.497sft
Elevation	355.908sft
Horz error	0.002sft
Vert error	0.003sft
3D error	0.003sft

Point	R2635-16
Northing	745925.375sft
Easting	2030260.497sft
Elevation	355.911sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-15_WGS84
Latitude	35°48'02.13748"N
Longitude	78°53'39.97495"W

Northing	746333.572sft
Easting	2031296.219sft
Elevation	357.356sft

Point	R2635-15
Northing	746333.573sft
Easting	2031296.219sft

Height	252.703sft
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Horz error	0.001sft
Vert error	0.000sft
3D error	0.001sft

Elevation	357.356sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-5 WGS84
Latitude	35°48'49.04787"N
Longitude	78°53'45.46412"W
Height	243.284sft

Northing	751076.721sft
Easting	2030839.058sft
Elevation	347.767sft
Horz error	0.002sft
Vert error	0.002sft
3D error	0.002sft

Point	R2635-5
Northing	751076.719sft
Easting	2030839.057sft
Elevation	347.769sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-6 WGS84
Latitude	35°48'33.08843"N
Longitude	78°53'40.21717"W
Height	257.870sft

Northing	749463.340sft
Easting	2031272.939sft
Elevation	362.425sft
Horz error	0.002sft
Vert error	0.000sft
3D error	0.002sft

Point	R2635-6
Northing	749463.338sft
Easting	2031272.938sft
Elevation	362.426sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-10 WGS84
Latitude	35°49'22.15156"N
Longitude	78°53'34.02329"W
Height	241.223sft

Northing	754425.214sft
Easting	2031777.768sft
Elevation	345.646sft
Horz error	0.001sft
Vert error	0.000sft
3D error	0.001sft

Point	R2635-10
Northing	754425.214sft
Easting	2031777.768sft
Elevation	345.646sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-9 WGS84
Latitude	35°49'21.77485"N
Longitude	78°53'22.80086"W
Height	249.543sft

Northing	754388.133sft
Easting	2032702.042sft
Elevation	354.010sft
Horz error	0.002sft
Vert error	0.000sft
3D error	0.002sft

Point	R2635-9
Northing	754388.134sft
Easting	2032702.043sft
Elevation	354.011sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2000-29 WGS84
Latitude	35°49'57.22548"N
Longitude	78°53'30.91230"W
Height	272.043sft

Northing	757972.226sft
Easting	2032030.114sft
Elevation	376.365sft
Horz error	0.001sft
Vert error	0.000sft
3D error	0.001sft

Point	R2000-29
Northing	757972.227sft
Easting	2032030.114sft
Elevation	376.365sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	R2635-23 WGS84
Latitude	35°49'56.99353"N
Longitude	78°53'26.45540"W

Northing	757949.173sft
Easting	2032397.147sft
Elevation	373.466sft

Point	R2635-23
Northing	757949.174sft
Easting	2032397.146sft

Height	269.127sft
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Horz error	0.001sft
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Elevation	373.465sft
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Vert error	0.000sft
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Utilized	Horz and Vert
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3D error	0.002sft
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Quality	Adjusted quality
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