

GPS Calibration Report

Project : I-4411

TIP Number	I-4411		
User name	jgordon	Date & Time	9:29:58 AM 6/30/03
Coordinate System	Site	Zone	North Carolina 3200
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum		Geoid Model	GEOID99 (Conus)
Coordinate Units	Meters		
Distance Units	Meters		
Height Units	Meters		

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	202652.645m
Easting coordinate of rotation center	438957.019m
Rotation about the center point	0°00'00"
Translation north	-0.333m
Translation east	-0.090m
Scale factor	1.00014866

Vertical Adjustment Parameters

Northing coordinate of origin point	225172.457m
Easting coordinate of origin point	433113.877m
Vertical separation at origin	0.000m
Slope north	0.006ppm
Slope east	-0.012ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.001m	0.000	SCHOOL - WGS84
Vertical	0.000m	0.000	I-0077-1 - WGS84
Three-dimensional	0.001m	0.000	SCHOOL - WGS84

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	STATES - WGS84	Northing	225172.457m	Point	STATES - Local
Latitude	35°45'50.97308"N	Easting	433113.877m	Northing	225172.457m
Longitude	80°57'06.84774"W	Elevation	292.486m	Easting	433113.877m
Height	260.496m	Horz error	0.000m	Elevation	292.486m
		Vert error	0.000m	Utilized	Horz and Vert
		3D error	0.000m	Quality	Survey quality
Point	CONCOR - WGS84	Northing	203523.714m	Point	CONCOR - Local
Latitude	35°34'23.11943"N	Easting	457408.554m	Northing	203523.714m
Longitude	80°40'45.31562"W	Elevation	282.969m	Easting	457408.554m
Height	251.797m	Horz error	0.000m	Elevation	282.969m
		Vert error	0.000m	Utilized	Horz and Vert

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3D error	0.000m
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Quality	Survey quality
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Point	HUNTER - WGS84
Latitude	35°24'40.86560"N
Longitude	80°50'24.42238"W
Height	216.938m

Northing	185840.051m
Easting	442495.918m
Elevation	247.808m
Horz error	0.000m
Vert error	0.000m
3D error	0.000m

Point	HUNTER - Local
Northing	185840.051m
Easting	442495.918m
Elevation	247.808m
Utilized	Horz and Vert
Quality	Survey quality

Point	POTTS - WGS84
Latitude	35°32'10.01412"N
Longitude	81°07'38.22813"W
Height	281.857m

Northing	200200.886m
Easting	416713.902m
Elevation	313.466m
Horz error	0.000m
Vert error	0.000m
3D error	0.000m

Point	POTTS - Local
Northing	200200.886m
Easting	416713.902m
Elevation	313.466m
Utilized	Horz and Vert
Quality	Survey quality

Point	SCHOOL - WGS84
Latitude	35°34'57.49758"N
Longitude	80°52'34.83501"W
Height	233.119m

Northing	204903.034m
Easting	439565.262m
Elevation	264.539m
Horz error	0.001m
Vert error	0.000m
3D error	0.001m

Point	SCHOOL - Local
Northing	204903.034m
Easting	439565.261m
Elevation	264.539m
Utilized	Horz and Vert
Quality	Survey quality

Point	BOSTWA - WGS84
Latitude	35°34'16.91209"N
Longitude	80°54'29.33103"W
Height	232.033m

Northing	203707.330m
Easting	436658.994m
Elevation	263.462m
Horz error	0.000m
Vert error	0.000m
3D error	0.000m

Point	BOSTWA - Local
Northing	203707.330m
Easting	436658.994m
Elevation	263.462m
Utilized	Horz and Vert
Quality	Survey quality

Point	PP03 - WGS84
Latitude	35°33'06.36965"N
Longitude	80°55'37.24022"W
Height	223.575m

Northing	201566.596m
Easting	434907.074m
Elevation	254.978m
Horz error	0.001m
Vert error	0.000m
3D error	0.001m

Point	PP03 - Local
Northing	201566.596m
Easting	434907.074m
Elevation	254.978m
Utilized	Horz and Vert
Quality	Survey quality

Point	5-JS-21 - WGS84
Latitude	35°33'03.80154"N
Longitude	80°51'23.17575"W
Height	233.128m

Northing	201365.520m
Easting	441303.632m
Elevation	264.436m
Horz error	?
Vert error	0.000m

Point	5-JS-21 - Local
Northing	201365.521m
Easting	441303.632m
Elevation	264.436m
Utilized	Vertical

3D error	0.000m
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Quality	Survey quality
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Point	PP20 - WGS84
Latitude	35°32'40.59429"N
Longitude	80°50'49.24729"W
Height	229.097m

Northing	200634.441m
Easting	442144.750m
Elevation	260.373m
Horz error	0.000m
Vert error	0.000m
3D error	0.000m

Point	PP20 - Local
Northing	200634.441m
Easting	442144.750m
Elevation	260.373m
Utilized	Horz and Vert
Quality	Survey quality

Point	I-0077-4 - WGS84
Latitude	35°33'37.16055"N
Longitude	80°51'30.90614"W
Height	211.974m

Northing	202397.133m
Easting	441128.205m
Elevation	243.313m
Horz error	0.000m
Vert error	0.000m
3D error	0.000m

Point	I-0077-4 - Local
Northing	202397.133m
Easting	441128.205m
Elevation	243.313m
Utilized	Horz and Vert
Quality	Survey quality

Point	I-0077-3 - WGS84
Latitude	35°33'24.60136"N
Longitude	80°51'29.39692"W
Height	217.623m

Northing	202009.405m
Easting	441158.962m
Elevation	248.951m
Horz error	0.001m
Vert error	0.000m
3D error	0.001m

Point	I-0077-3 - Local
Northing	202009.405m
Easting	441158.962m
Elevation	248.951m
Utilized	Horz and Vert
Quality	Survey quality

Point	I-0077-2 - WGS84
Latitude	35°32'54.71544"N
Longitude	80°51'29.97058"W
Height	225.232m

Northing	201088.732m
Easting	441127.275m
Elevation	256.535m
Horz error	0.001m
Vert error	0.000m
3D error	0.001m

Point	I-0077-2 - Local
Northing	201088.732m
Easting	441127.275m
Elevation	256.535m
Utilized	Horz and Vert
Quality	Survey quality

Point	I-0077-1 - WGS84
Latitude	35°32'44.78800"N
Longitude	80°51'32.39942"W
Height	217.331m

Northing	200783.960m
Easting	441060.378m
Elevation	248.627m
Horz error	0.000m
Vert error	0.000m
3D error	0.001m

Point	I-0077-1 - Local
Northing	200783.960m
Easting	441060.378m
Elevation	248.627m
Utilized	Horz and Vert
Quality	Survey quality