

APPENDIX B

NETWORK ADJUSTMENT REPORT

2004

**GEODETTIC CONTROL DENSIFICATION
AND RESTORATION**

of

JEFFERSON COUNTY, KENTUCKY

JUNE 2004

**Fuller, Mossbarger, Scott & May
1901 Nelson Miller Parkway
Louisville, Kentucky 40223-2177**



**Jacobi, Toombs and Lanz, Inc.
401 West Main Street, Suite 600
Louisville, Kentucky 40202**



Network Adjustment Report

Project : 2004-01234

User name	tbooker	Date & Time	1:32:16 PM 6/28/2004
Coordinate System	US State Plane 1983	Zone	Kentucky North 1601
Project Datum	NAD 1983 (Conus)		
Vertical Datum		Geoid Model	GEOID99 (Conus)
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

Adjustment Style Settings - 95% Confidence Limits

Residual Tolerances

To End Iterations : 0.000033sft
Final Convergence Cutoff : 0.016404sft

Covariance Display

Horizontal

Propagated Linear Error [E] : U.S.
Constant Term [C] : 0.00000000sft
Scale on Linear Error [S] : 1.96

Three-Dimensional

Propagated Linear Error [E] : U.S.
Constant Term [C] : 0.00000000sft
Scale on Linear Error [S] : 1.96
Elevation Errors were used in the calculations.

Adjustment Controls

Compute Correlations for Geoid : False
Horizontal and Vertical adjustment performed

Set-up Errors

GPS

Error in Height of Antenna : 0.000sft
Centering Error : 0.000sft

[Back to top](#)

Statistical Summary

Successful Adjustment in 1 iteration(s)

Network Reference Factor : 1.02

Chi Square Test ($\alpha=95\%$) : PASS

Degrees of Freedom : 97.00

GPS Observation Statistics

Reference Factor : 1.02

Redundancy Number (r) : 96.01

Individual GPS Observation Statistics

Observation ID	Reference Factor	Redundancy Number
B2	0.71	1.93
B3	0.70	2.31
B4	0.20	1.30
B6	0.58	1.65
B8	1.13	0.73
B12	0.79	1.97
B13	0.74	0.78
B14	1.40	2.12
B16	0.69	2.68
B17	1.08	2.33
B18	1.42	0.57
B20	0.78	2.11
B21	0.36	2.42
B22	0.25	2.57
B23	0.45	1.05
B27	1.63	2.07
B29	1.43	1.69
B30	1.15	1.91
B33	0.26	2.83
B36	1.98	0.67
B38	0.41	1.85
B40	0.98	1.62
B42	0.94	1.94

B45	1.62	0.44
B49	0.64	0.97
B50	0.79	1.83
B52	0.77	2.57
B57	0.77	2.41
B58	0.86	2.16
B59	0.16	2.62
B60	0.58	2.28
B61	0.96	2.31
B65	0.46	1.56
B67	0.49	2.22
B71	0.92	2.19
B73	0.49	1.99
B79	0.29	2.20
B81	2.13	0.64
B83	1.71	0.91
B86	1.45	1.12
B87	1.60	2.10
B92	0.16	0.13
B96	0.81	2.37
B98	2.33	1.17
B103	1.66	1.53
B110	0.79	2.70
B112	1.08	2.39
B114	0.84	1.63
B115	1.15	2.15
B116	1.53	2.28
B117	1.18	1.13
B118	0.73	0.60
B119	1.87	2.50
B120	1.08	1.78

Geoid Model Statistics

Reference Factor : 0.23

Redundancy Number (r) : 0.99

Weighting Strategies

GPS Observations

User-defined Scalar Applied to All Observations

Scalar : 4.18

Geoid Observations

Alternative Scalar Applied to All Observations

Scalar : 1.00

[Back to top](#)

Adjusted Coordinates

Adjustment performed in **NAD 1983 (Conus)**

Number of Points : 25

Number of Constrained Points : 6

Horizontal Only : 2

Elevation Only : 1

Horizontal and Elevation Only : 3

Adjusted Grid Coordinates

Errors are reported using 1.96σ .

Point Name	Northing	N error	Easting	E error	Elevation	e error	Fix
BOWMAN-RESET	266533.000sft	0.000sft	1233750.623sft	0.000sft	537.233sft	0.842sft	N E
GPS86-29 RESET	307196.325sft	0.030sft	1264622.613sft	0.022sft	691.608sft	0.918sft	
STA 058-2004	272414.584sft	0.036sft	1282627.537sft	0.025sft	755.626sft	0.903sft	
STA 037-2001	280623.076sft	0.036sft	1291410.170sft	0.024sft	619.639sft	0.937sft	
AZI 058-2004	272421.198sft	0.037sft	1281909.911sft	0.027sft	738.147sft	0.900sft	
AZI 056-2004	262372.879sft	0.022sft	1269988.653sft	0.016sft	751.431sft	0.865sft	
STA 056-2004	261352.298sft	0.022sft	1270036.658sft	0.015sft	755.561sft	0.867sft	
STA 011-2001	227786.364sft	0.048sft	1247653.960sft	0.028sft	687.111sft	0.000sft	e
AZI 059-2004	241096.293sft	0.028sft	1271282.750sft	0.020sft	567.963sft	0.916sft	
AZI 055-2004	225289.787sft	0.069sft	1239949.843sft	0.051sft	633.908sft	0.911sft	
STA 055-2004	225367.512sft	0.060sft	1239130.253sft	0.047sft	633.593sft	0.911sft	
CA20-01	219430.888sft	0.040sft	1209811.805sft	0.028sft	516.339sft	0.955sft	

GPS86-15	195754.799sft	0.000sft	1160612.803sft	0.000sft	441.158sft	1.228sft	N E
AZI 054-2004	231592.446sft	0.024sft	1195661.247sft	0.018sft	461.017sft	0.973sft	
STA 050-2003	205024.017sft	0.032sft	1166763.972sft	0.020sft	440.126sft	1.169sft	
STA 054-2004	232192.256sft	0.020sft	1195973.396sft	0.013sft	479.531sft	0.971sft	
AZI 050-2003 RES	204425.728sft	0.029sft	1166282.452sft	0.015sft	438.042sft	1.175sft	
GOSHEN RM 1	333339.967sft	0.000sft	1263875.189sft	0.000sft	714.802sft	0.000sft	N E e
AZI 057-2004	241324.892sft	0.033sft	1283537.832sft	0.023sft	542.995sft	0.969sft	
STA 057-2004	242227.702sft	0.022sft	1283522.401sft	0.017sft	544.475sft	0.964sft	
LOUISVILLE S B	240989.436sft	0.000sft	1185268.161sft	0.000sft	470.199sft	0.000sft	N E e
AZI 8629-2001	305329.357sft	0.043sft	1264289.939sft	0.027sft	690.523sft	0.914sft	
STA 028-2001	254108.206sft	0.000sft	1289614.225sft	0.000sft	575.032sft	0.000sft	N E e
STA 059-2004	241750.702sft	0.024sft	1271939.409sft	0.018sft	587.935sft	0.916sft	
AZI 031-2001	234337.069sft	0.028sft	1204231.685sft	0.019sft	451.654sft	0.936sft	

Adjusted Geodetic Coordinates

Errors are reported using 1.96σ .

Point Name	Latitude	N error	Longitude	E error	Height	h error	Fix
BOWMAN- RESET	38° 13'23.97898"N	0.000sft	85° 39'56.27911"W	0.000sft	427.943sft	0.400sft	Lat Long
GPS86-29 RESET	38° 20'10.43169"N	0.030sft	85° 33'36.69846"W	0.022sft	582.093sft	0.542sft	
STA 058- 2004	38° 14'29.09673"N	0.036sft	85° 29'44.83747"W	0.025sft	646.253sft	0.516sft	
STA 037- 2001	38° 15'51.39557"N	0.036sft	85° 27'56.11919"W	0.024sft	510.220sft	0.574sft	
AZI 058-2004	38° 14'29.06606"N	0.037sft	85° 29'53.83284"W	0.027sft	628.777sft	0.511sft	
AZI 056-2004	38° 12'48.11801"N	0.022sft	85° 32'21.48195"W	0.016sft	642.096sft	0.447sft	
STA 056- 2004	38° 12'38.03653"N	0.022sft	85° 32'20.70156"W	0.015sft	646.225sft	0.450sft	
STA 011- 2001	38° 07'03.06006"N	0.048sft	85° 36'54.87370"W	0.028sft	577.917sft	0.513sft	e
AZI 059-2004	38°	0.028sft	85°	0.020sft	458.554sft	0.539sft	

	09'17.98364"N		32'01.55336"W				
AZI 055-2004	38° 06'37.24245"N	0.069sft	85° 38'30.79329"W	0.051sft	524.704sft	0.531sft	
STA 055-2004	38° 06'37.88817"N	0.060sft	85° 38'41.06147"W	0.047sft	524.395sft	0.530sft	
CA20-01	38° 05'34.65893"N	0.040sft	85° 44'46.63703"W	0.028sft	407.413sft	0.602sft	
GPS86-15	38° 01'32.28886"N	0.000sft	85° 54'56.60713"W	0.000sft	332.846sft	0.979sft	Lat Long
AZI 054-2004	38° 07'32.55820"N	0.024sft	85° 47'46.17387"W	0.018sft	352.140sft	0.631sft	
STA 050-2003	38° 03'05.00027"N	0.032sft	85° 53'41.81477"W	0.020sft	331.696sft	0.905sft	
STA 054-2004	38° 07'38.53871"N	0.020sft	85° 47'42.39394"W	0.013sft	370.648sft	0.628sft	
AZI 050-2003 RES	38° 02'59.00162"N	0.029sft	85° 53'47.69996"W	0.015sft	329.621sft	0.911sft	
GOSHEN RM 1	38° 24'28.74243"N	0.000sft	85° 33'50.75965"W	0.000sft	605.050sft	0.728sft	Lat Long e
AZI 057-2004	38° 09'21.90380"N	0.033sft	85° 29'28.17731"W	0.023sft	433.475sft	0.625sft	
STA 057-2004	38° 09'30.82585"N	0.022sft	85° 29'28.52280"W	0.017sft	434.961sft	0.617sft	
LOUISVILLE S B	38° 09'03.69569"N	0.000sft	85° 49'58.24028"W	0.000sft	361.327sft	0.697sft	Lat Long e
AZI 8629-2001	38° 19'51.93080"N	0.043sft	85° 33'40.53981"W	0.027sft	581.023sft	0.535sft	
STA 028-2001	38° 11'29.06715"N	0.000sft	85° 28'14.22983"W	0.000sft	465.483sft	0.609sft	Lat Long e
STA 059-2004	38° 09'24.54270"N	0.024sft	85° 31'53.44705"W	0.018sft	478.522sft	0.539sft	
AZI 031-2001	38° 08'01.09560"N	0.028sft	85° 45'59.49878"W	0.019sft	342.678sft	0.572sft	

Coordinate Deltas

Point Name	ΔNorthing	ΔEasting	ΔElevation	ΔHeight	ΔGeoid Separation
BOWMAN-RESET	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft

GPS86-29 RESET	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 058-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 037-2001	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 058-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 056-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 056-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 011-2001	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 059-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 055-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 055-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
CA20-01	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
GPS86-15	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 054-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 050-2003	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 054-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 050-2003 RES	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
GOSHEN RM 1	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 057-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 057-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
LOUISVILLE S B	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 8629-2001	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 028-2001	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
STA 059-2004	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft
AZI 031-2001	0.000sft	0.000sft	0.000sft	0.000sft	0.000sft

[Back to top](#)

Control Coordinate Comparisons

Values shown are control coord minus adjusted coord.

Point Name	Δ Northing	Δ Easting	Δ Elevation	Δ Height
BOWMAN-RESET	N/A	N/A	0.158sft	N/A
STA 037-2001	-0.052sft	-0.020sft	0.025sft	N/A
STA 011-2001	0.004sft	-0.028sft	N/A	N/A
CA20-01	-0.018sft	0.011sft	-0.143sft	N/A

GPS86-15	N/A	N/A	-0.155sft	N/A
STA 050-2003	0.022sft	0.020sft	0.011sft	N/A
GOSHEN RM 1	N/A	N/A	N/A	-0.015sft
LOUISVILLE S B	N/A	N/A	N/A	N/A
AZI 8629-2001	-0.060sft	-0.001sft	0.037sft	N/A
STA 028-2001	N/A	N/A	N/A	N/A
AZI 031-2001	0.041sft	-0.015sft	0.036sft	N/A

[Back to top](#)

Adjusted Observations

Adjustment performed in **NAD 1983 (Conus)**

GPS Observations

GPS Transformation Group: <GPS Default>

Deflection in Longitude : 0°00'00.0719" **(1.96σ)** : 0°00'02.1367"
Deflection in Latitude : 0°00'00.0400" **(1.96σ)** : 0°00'01.9741"
Azimuth Rotation : -0°00'00.0289" **(1.96σ)** : 0°00'00.0522"
Network Scale : 0.99999988 **(1.96σ)** : 0.00000024

Number of Observations : 54

Number of Outliers : 0

Observation Adjustment (Critical Tau = 3.54). Any outliers are in **red**.

Obs. ID	From Pt.	To Pt.		Observation	A-posteriori Error (1.96σ)	Residual	Stand. Residual
B98	AZI 056-2004	STA 057-2004	Az.	145° 18'15.8964"	0° 00'00.1377"	0° 00'00.1133"	1.91
			ΔHt.	-207.144sft	0.042sft	-0.004sft	-0.27
			Dist.	24269.752sft	0.020sft	-0.025sft	-2.63
B87	CA20-01	AZI 054-2004	Az.	309° 44'46.1906"	0° 00'00.3828"	-0° 00'00.7630"	-2.54
			ΔHt.	-55.266sft	0.086sft	-0.106sft	-1.40
			Dist.	18658.901sft	0.036sft	-0.023sft	-0.79

B119	BOWMAN- RESET	LOUISVILLE S B	Az.	241° 20'09.6956"	0° 00'00.0523"	-0° 00'00.0959"	-0.96
			ΔHt.	-66.604sft	0.101sft	-0.036sft	-0.37
			Dist.	54801.260sft	0.013sft	-0.054sft	-2.27
B83	AZI 059- 2004	STA 059- 2004	Az.	44° 17'59.0311"	0° 00'03.8665"	0° 00'00.4463"	0.32
			ΔHt.	19.968sft	0.049sft	0.039sft	2.23
			Dist.	927.087sft	0.019sft	0.000sft	-0.03
B81	STA 059- 2004	STA 057- 2004	Az.	86° 50'40.9886"	0° 00'00.2776"	-0° 00'00.0523"	-0.67
			ΔHt.	-43.565sft	0.030sft	0.012sft	1.72
			Dist.	11593.080sft	0.012sft	0.008sft	2.19
B103	LOUISVILLE S B	AZI 054- 2004	Az.	131° 08'02.3819"	0° 00'00.2929"	-0° 00'00.3099"	-2.00
			ΔHt.	-9.193sft	0.046sft	0.016sft	0.69
			Dist.	14011.712sft	0.022sft	0.004sft	0.32
B29	STA 056- 2004	AZI 059- 2004	Az.	175° 40'40.3168"	0° 00'00.1777"	-0° 00'00.1647"	-1.49
			ΔHt.	-187.675sft	0.061sft	0.078sft	1.86
			Dist.	20294.815sft	0.025sft	0.020sft	1.51
B14	CA20-01	STA 055- 2004	Az.	77° 37'21.1383"	0° 00'00.4696"	-0° 00'00.6391"	-1.24
			ΔHt.	116.973sft	0.156sft	-0.123sft	-0.84
			Dist.	29913.983sft	0.051sft	0.069sft	1.82
B8	AZI 056- 2004	STA 056- 2004	Az.	176° 30'17.7175"	0° 00'02.1399"	-0° 00'00.9729"	-1.77
			ΔHt.	4.128sft	0.037sft	-0.004sft	-0.34
			Dist.	1021.738sft	0.017sft	0.006sft	1.14
B30	STA 011- 2001	AZI 056- 2004	Az.	32° 00'13.5521"	0° 00'00.1655"	-0° 00'00.0939"	-0.83
			ΔHt.	64.179sft	0.093sft	-0.111sft	-1.76
			Dist.	41172.157sft	0.041sft	0.017sft	0.59
B115	CA20-01	STA 050- 2003	Az.	250° 33'53.6180"	0° 00'00.1868"	-0° 00'00.0954"	-0.59
			ΔHt.	-75.705sft	0.102sft	0.125sft	1.14
			Dist.	45395.288sft	0.031sft	0.054sft	1.74
	STA 054-	AZI 054-		206°	0°	0°	

B86	2004	2004	Az.	31'54.6649"	00'05.9975"	00'04.3281"	1.74
			ΔHt.	-18.508sft	0.042sft	-0.014sft	-0.92
			Dist.	676.186sft	0.021sft	0.005sft	0.61
B120	BOWMAN- RESET	AZI 031- 2001	Az.	221° 38'07.5602"	0° 00'00.1316"	-0° 00'00.1018"	-0.86
			ΔHt.	-85.261sft	0.096sft	0.006sft	0.12
			Dist.	43681.133sft	0.024sft	0.027sft	1.74
B42	STA 037- 2001	AZI 056- 2004	Az.	228° 48'50.9584"	0° 00'00.2176"	-0° 00'00.0800"	-0.55
			ΔHt.	131.881sft	0.065sft	-0.068sft	-1.57
			Dist.	28142.466sft	0.029sft	0.012sft	0.41
B116	STA 050- 2003	LOUISVILLE S B	Az.	26° 12'09.6576"	0° 00'00.1246"	0° 00'00.1900"	1.50
			ΔHt.	29.632sft	0.082sft	0.076sft	1.05
			Dist.	40447.166sft	0.030sft	0.032sft	0.98
B27	AZI 059- 2004	AZI 057- 2004	Az.	88° 07'58.2877"	0° 00'00.5232"	0° 00'00.2122"	0.50
			ΔHt.	-25.083sft	0.077sft	-0.100sft	-1.48
			Dist.	12257.496sft	0.021sft	-0.001sft	-0.06
B45	AZI 057- 2004	STA 057- 2004	Az.	358° 14'55.3872"	0° 00'03.7704"	-0° 00'00.0351"	-0.04
			ΔHt.	1.486sft	0.065sft	-0.021sft	-1.48
			Dist.	902.963sft	0.025sft	-0.003sft	-0.48
B36	STA 050- 2003	AZI 050- 2003 RES	Az.	217° 48'17.4568"	0° 00'06.4010"	0° 00'03.1310"	1.45
			ΔHt.	-2.075sft	0.076sft	-0.003sft	-0.11
			Dist.	768.000sft	0.025sft	0.008sft	1.01
B17	STA 050- 2003	STA 054- 2004	Az.	46° 03'01.8370"	0° 00'00.1616"	0° 00'00.1695"	0.79
			ΔHt.	38.947sft	0.082sft	-0.065sft	-0.98
			Dist.	39891.791sft	0.028sft	0.039sft	1.39
B61	STA 028- 2001	AZI 058- 2004	Az.	336° 25'26.5525"	0° 00'00.3297"	0° 00'00.4834"	1.36
			ΔHt.	163.300sft	0.083sft	0.044sft	0.60
			Dist.	19868.176sft	0.035sft	-0.005sft	-0.15
B71	CA20-01	AZI 050- 2003 RES	Az.	250° 02'56.5139"	0° 00'00.1909"	-0° 00'00.0293"	-0.14

			ΔHt.	-77.779sft	0.112sft	-0.045sft	-0.33
			Dist.	46043.664sft	0.029sft	-0.030sft	-1.30
B40	STA 037-2001	GPS86-29 RESET	Az.	314° 00'48.9180"	0° 00'00.1525"	-0° 00'00.0791"	-0.77
			ΔHt.	71.888sft	0.068sft	0.065sft	1.28
			Dist.	37733.356sft	0.028sft	-0.022sft	-1.26
B57	BOWMAN-RESET	AZI 056-2004	Az.	95° 40'06.4789"	0° 00'00.1290"	-0° 00'00.0768"	-0.43
			ΔHt.	214.141sft	0.055sft	0.018sft	0.40
			Dist.	36477.075sft	0.017sft	-0.028sft	-1.26
B114	CA20-01	AZI 031-2001	Az.	338° 32'44.8521"	0° 00'00.3858"	0° 00'00.0012"	0.00
			ΔHt.	-64.730sft	0.081sft	0.010sft	0.27
			Dist.	15916.705sft	0.041sft	0.031sft	1.24
B112	BOWMAN-RESET	STA 011-2001	Az.	159° 22'48.4161"	0° 00'00.1544"	-0° 00'00.2028"	-1.21
			ΔHt.	149.961sft	0.101sft	-0.120sft	-1.05
			Dist.	41166.576sft	0.046sft	-0.006sft	-0.12
B52	LOUISVILLE S B	GPS86-15	Az.	207° 36'28.6526"	0° 00'00.0524"	-0° 00'00.0108"	-0.09
			ΔHt.	-28.481sft	0.094sft	0.107sft	0.97
			Dist.	51518.378sft	0.012sft	0.062sft	1.21
B18	GPS86-15	AZI 050-2003 RES	Az.	32° 08'35.7597"	0° 00'00.4228"	0° 00'00.1460"	1.16
			ΔHt.	-3.225sft	0.073sft	0.006sft	0.31
			Dist.	10360.118sft	0.025sft	0.004sft	0.58
B2	BOWMAN-RESET	GPS86-29 RESET	Az.	36° 19'32.3118"	0° 00'00.1077"	-0° 00'00.1021"	-1.13
			ΔHt.	154.147sft	0.055sft	0.006sft	0.18
			Dist.	51056.383sft	0.024sft	0.007sft	0.40
B117	LOUISVILLE S B	STA 054-2004	Az.	128° 25'39.3023"	0° 00'00.2395"	0° 00'00.0713"	0.70
			ΔHt.	9.315sft	0.043sft	-0.021sft	-1.12
			Dist.	13856.431sft	0.017sft	-0.004sft	-0.64
B96	STA 028-2001	STA 059-2004	Az.	234° 16'51.2532"	0° 00'00.2201"	-0° 00'00.1290"	-0.44
			ΔHt.	13.043sft	0.054sft	-0.034sft	-0.53

			Dist.	21566.874sft	0.019sft	-0.018sft	-1.09
B20	BOWMAN-RESET	GOSHEN RM 1	Az.	23° 23'27.7548"	0° 00'00.0524"	-0° 00'00.0624"	-1.05
			ΔHt.	177.110sft	0.059sft	0.016sft	0.51
			Dist.	73287.272sft	0.018sft	0.020sft	1.01
B110	BOWMAN-RESET	STA 059-2004	Az.	122° 06'03.0263"	0° 00'00.1033"	-0° 00'00.0557"	-0.33
			ΔHt.	50.562sft	0.067sft	0.066sft	0.57
			Dist.	45526.409sft	0.022sft	0.045sft	1.02
B118	STA 054-2004	AZI 031-2001	Az.	74° 28'47.6650"	0° 00'00.5945"	-0° 00'00.1025"	-0.60
			ΔHt.	-27.972sft	0.050sft	-0.008sft	-0.68
			Dist.	8532.442sft	0.016sft	0.004sft	0.99
B16	GPS86-15	AZI 054-2004	Az.	43° 19'34.5472"	0° 00'00.1055"	-0° 00'00.0005"	0.00
			ΔHt.	19.289sft	0.098sft	-0.148sft	-0.93
			Dist.	50127.867sft	0.023sft	0.052sft	0.81
B13	AZI 055-2004	STA 055-2004	Az.	274° 33'05.4678"	0° 00'16.6940"	-0° 00'02.9782"	-0.49
			ΔHt.	-0.309sft	0.116sft	0.018sft	0.54
			Dist.	823.283sft	0.045sft	0.015sft	0.91
B12	STA 011-2001	AZI 059-2004	Az.	59° 45'31.1658"	0° 00'00.3222"	0° 00'00.2132"	0.89
			ΔHt.	-119.368sft	0.095sft	0.005sft	0.08
			Dist.	27120.198sft	0.033sft	0.009sft	0.38
B58	BOWMAN-RESET	STA 056-2004	Az.	97° 14'42.0771"	0° 00'00.1279"	-0° 00'00.0531"	-0.48
			ΔHt.	218.269sft	0.058sft	0.041sft	0.87
			Dist.	36655.041sft	0.017sft	-0.012sft	-0.74
B3	BOWMAN-RESET	STA 058-2004	Az.	82° 15'28.7223"	0° 00'00.1464"	0° 00'00.1031"	0.84
			ΔHt.	218.294sft	0.080sft	-0.033sft	-0.40
			Dist.	49230.970sft	0.025sft	-0.017sft	-0.68
B60	AZI 058-2004	STA 056-2004	Az.	226° 13'52.9649"	0° 00'00.3890"	0° 00'00.0051"	0.02
			ΔHt.	17.450sft	0.076sft	0.065sft	0.81
			Dist.	16232.989sft	0.035sft	0.027sft	0.74

B73	GPS86-29 RESET	AZI 056- 2004	Az.	172° 21'29.9226"	0° 00'00.0987"	0° 00'00.0530"	0.71
			ΔHt.	59.993sft	0.059sft	0.020sft	0.51
			Dist.	45144.946sft	0.032sft	0.000sft	0.00
B50	BOWMAN- RESET	STA 055- 2004	Az.	171° 40'26.4768"	0° 00'00.2280"	0° 00'00.0939"	0.67
			ΔHt.	96.442sft	0.125sft	-0.025sft	-0.24
			Dist.	41516.509sft	0.059sft	0.033sft	0.69
B49	BOWMAN- RESET	AZI 055- 2004	Az.	170° 34'16.8487"	0° 00'00.2664"	0° 00'00.0780"	0.69
			ΔHt.	96.751sft	0.122sft	0.016sft	0.33
			Dist.	41707.509sft	0.065sft	0.003sft	0.12
B65	STA 028- 2001	STA 057- 2004	Az.	206° 23'14.9789"	0° 00'00.2904"	-0° 00'00.0218"	-0.12
			ΔHt.	-30.523sft	0.050sft	0.016sft	0.66
			Dist.	13351.612sft	0.021sft	0.009sft	0.65
B6	STA 037- 2001	AZI 058- 2004	Az.	228° 26'19.2106"	0° 00'00.4152"	0° 00'00.1603"	0.66
			ΔHt.	118.559sft	0.058sft	0.012sft	0.36
			Dist.	12551.313sft	0.030sft	0.005sft	0.23
B23	STA 058- 2004	AZI 058- 2004	Az.	269° 45'11.0715"	0° 00'08.2305"	-0° 00'01.9080"	-0.62
			ΔHt.	-17.475sft	0.056sft	-0.006sft	-0.31
			Dist.	717.678sft	0.022sft	0.005sft	0.50
B79	STA 028- 2001	STA 056- 2004	Az.	289° 32'45.7542"	0° 00'00.2176"	0° 00'00.0331"	0.15
			ΔHt.	180.750sft	0.060sft	-0.022sft	-0.45
			Dist.	20875.383sft	0.018sft	0.000sft	0.00
B21	GOSHEN RM 1	BOWMAN- RESET	Az.	203° 27'14.3745"	0° 00'00.0524"	-0° 00'00.0012"	-0.02
			ΔHt.	-177.110sft	0.059sft	0.027sft	0.45
			Dist.	73287.272sft	0.018sft	-0.008sft	-0.38
B67	STA 011- 2001	STA 059- 2004	Az.	59° 15'05.9336"	0° 00'00.3071"	0° 00'00.1125"	0.43
			ΔHt.	-99.400sft	0.093sft	0.038sft	0.42
			Dist.	28014.624sft	0.032sft	0.005sft	0.15
	BOWMAN-	STA 054-		226°	0°	0°	

B33	RESET	2004	Az.	50'50.1288"	00'00.0893"	00'00.0486"	0.16
			Δ Ht.	-57.289sft	0.097sft	0.075sft	0.41
			Dist.	51054.234sft	0.019sft	-0.006sft	-0.11
B38	GOSHEN RM 1	GPS86-29 RESET	Az.	177° 32'41.7974"	0° 00'00.1902"	0° 00'00.0415"	0.30
			Δ Ht.	-22.962sft	0.066sft	-0.014sft	-0.40
			Dist.	26155.274sft	0.032sft	0.010sft	0.40
B22	GPS86-29 RESET	STA 058- 2004	Az.	151° 48'59.3642"	0° 00'00.1379"	-0° 00'00.0711"	-0.40
			Δ Ht.	64.147sft	0.076sft	-0.037sft	-0.32
			Dist.	39166.920sft	0.034sft	-0.013sft	-0.26
B4	STA 037- 2001	STA 058- 2004	Az.	226° 10'44.7322"	0° 00'00.4020"	0° 00'00.0654"	0.30
			Δ Ht.	136.035sft	0.059sft	-0.005sft	-0.14
			Dist.	12021.768sft	0.024sft	-0.002sft	-0.14
B92	AZI 8629- 2001	GPS86-29 RESET	Az.	9° 17'15.9684"	0° 00'01.7836"	-0° 00'00.0397"	-0.20
			Δ Ht.	1.070sft	0.073sft	0.000sft	-0.02
			Dist.	1896.443sft	0.032sft	0.000sft	-0.08
B59	AZI 8629- 2001	STA 058- 2004	Az.	150° 03'40.1807"	0° 00'00.1849"	-0° 00'00.0506"	-0.19
			Δ Ht.	65.217sft	0.103sft	0.005sft	0.03
			Dist.	37679.474sft	0.043sft	-0.001sft	-0.01

Geoid Observations

Number of Observations : 25

Number of Outliers : 0

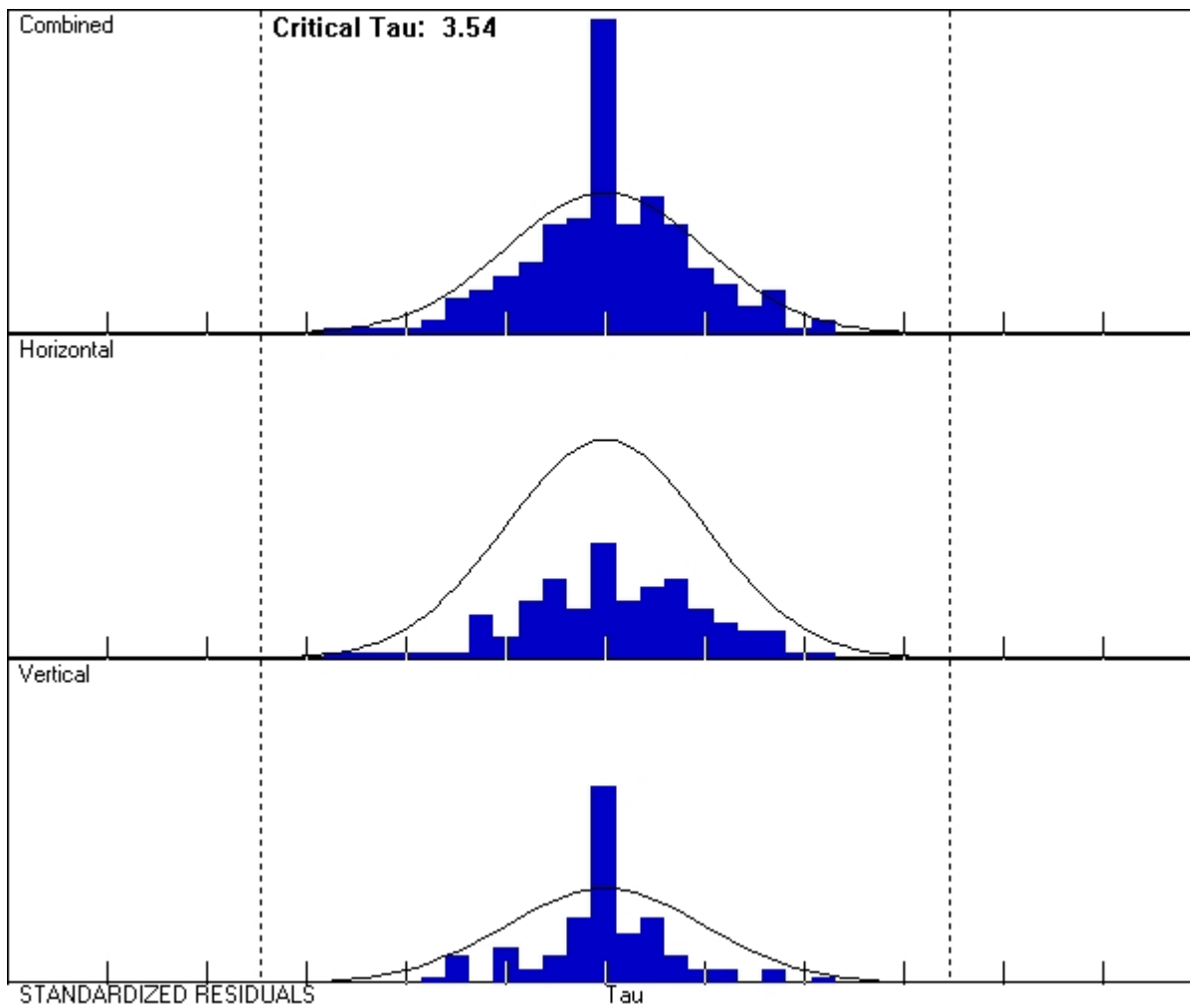
Observation Adjustment (Critical Tau = 3.54). Any outliers are in red.

Observation ID	Point Name	Separation	A-posteriori Error (1.96 σ)	Residual	Standardized Residual
G97	STA 028-2001	-109.548sft	0.609sft	-0.058sft	-0.27
G82	STA 011-2001	-109.195sft	0.513sft	0.059sft	0.22
G92	GOSHEN RM 1	-109.752sft	0.728sft	0.015sft	0.21
G95	LOUISVILLE S B	-108.872sft	0.697sft	-0.016sft	-0.12

G99	AZI 031-2001	-108.977sft	0.741sft	0.000sft	0.00
G98	STA 059-2004	-109.412sft	0.741sft	0.000sft	0.00
G96	AZI 8629-2001	-109.500sft	0.741sft	0.000sft	0.00
G94	STA 057-2004	-109.515sft	0.741sft	0.000sft	0.00
G93	AZI 057-2004	-109.520sft	0.741sft	0.000sft	0.00
G91	AZI 050-2003 RES	-108.421sft	0.741sft	0.000sft	0.00
G90	STA 054-2004	-108.884sft	0.741sft	0.000sft	0.00
G89	STA 050-2003	-108.430sft	0.741sft	0.000sft	0.00
G88	AZI 054-2004	-108.877sft	0.741sft	0.000sft	0.00
G87	GPS86-15	-108.312sft	0.741sft	0.000sft	0.00
G86	CA20-01	-108.927sft	0.741sft	0.000sft	0.00
G85	STA 055-2004	-109.198sft	0.741sft	0.000sft	0.00
G84	AZI 055-2004	-109.204sft	0.741sft	0.000sft	0.00
G83	AZI 059-2004	-109.409sft	0.741sft	0.000sft	0.00
G81	STA 056-2004	-109.336sft	0.741sft	0.000sft	0.00
G80	AZI 056-2004	-109.334sft	0.741sft	0.000sft	0.00
G79	AZI 058-2004	-109.370sft	0.741sft	0.000sft	0.00
G78	STA 037-2001	-109.419sft	0.741sft	0.000sft	0.00
G77	STA 058-2004	-109.373sft	0.741sft	0.000sft	0.00
G76	GPS86-29 RESET	-109.515sft	0.741sft	0.000sft	0.00
G75	BOWMAN- RESET	-109.291sft	0.741sft	0.000sft	0.00

[Back to top](#)

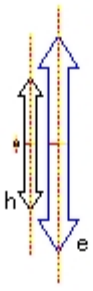
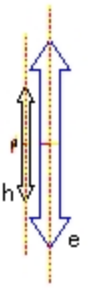
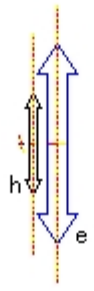
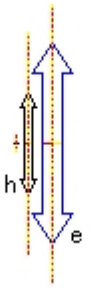
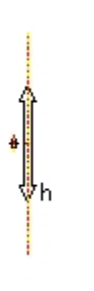
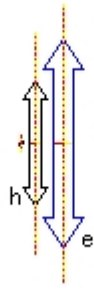
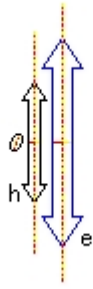
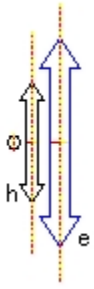
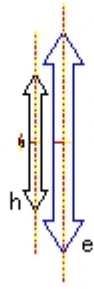
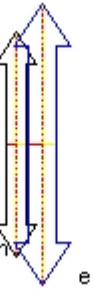
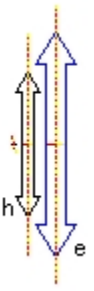
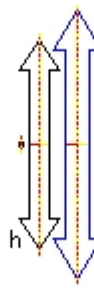
Histograms of Standardized Residuals

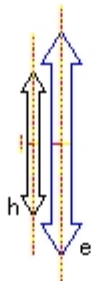
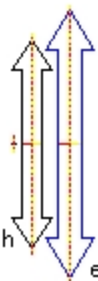
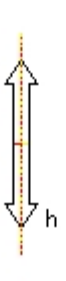
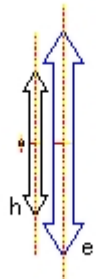
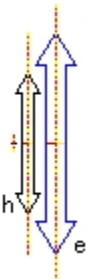
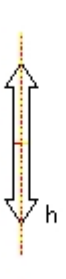
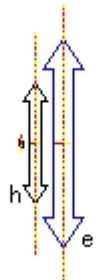
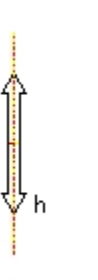
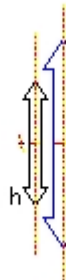
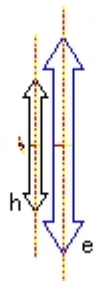


[Back to top](#)

Point Error Ellipses

BOWMAN-RESET	GPS86-29 RESET	STA 058-2004
<p>0°</p>	<p>-72°</p>	<p>87°</p>
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
STA 037-2001	AZI 058-2004	AZI 056-2004

		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
STA 056-2004	STA 011-2001	AZI 059-2004
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
AZI 055-2004	STA 055-2004	CA20-01
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
GPS86-15	AZI 054-2004	STA 050-2003
		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
STA 054-2004	AZI 050-2003 RES	GOSHEN RM 1

 -79°	 -85°	 0°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
AZI 057-2004	STA 057-2004	LOUISVILLE S B
 82°	 -82°	 0°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
AZI 8629-2001	STA 028-2001	STA 059-2004
 -86°	 0°	 -78°
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
AZI 031-2001		
 -76°		
Tick Size: 0.0100sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

[Back to top](#)

Covariant Terms

Adjustment performed in **NAD 1983 (Conus)**

From Point	To Point		Components	A-posteriori Error (1.96 σ)	Horiz. Precision (Ratio)	3D Precision (Ratio)
BOWMAN- RESET	GPS86-29 RESET	Az.	36° 19'32.3406"	0° 00'00.1114"	1:2097438	1:2097438
		ΔHt.	154.150sft	0.415sft		
		ΔElev.	154.374sft	1.246sft		
		Dist.	51056.389sft	0.024sft		
BOWMAN- RESET	STA 058- 2004	Az.	82° 15'28.7511"	0° 00'00.1487"	1:1939444	1:1939444
		ΔHt.	218.310sft	0.492sft		
		ΔElev.	218.393sft	1.235sft		
		Dist.	49230.976sft	0.025sft		
BOWMAN- RESET	AZI 056-2004	Az.	95° 40'06.5078"	0° 00'00.1235"	1:2277522	1:2277522
		ΔHt.	214.154sft	0.390sft		
		ΔElev.	214.198sft	1.207sft		
		Dist.	36477.080sft	0.016sft		
BOWMAN- RESET	STA 056- 2004	Az.	97° 14'42.1060"	0° 00'00.1221"	1:2343768	1:2343768
		ΔHt.	218.282sft	0.395sft		
		ΔElev.	218.328sft	1.208sft		
		Dist.	36655.046sft	0.016sft		
BOWMAN- RESET	STA 011- 2001	Az.	159° 22'48.4451"	0° 00'00.1558"	1:888813	1:888813
		ΔHt.	149.974sft	0.446sft		
		ΔElev.	149.878sft	0.842sft		
		Dist.	41166.581sft	0.046sft		
BOWMAN- RESET	AZI 055-2004	Az.	170° 34'16.8776"	0° 00'00.2711"	1:639133	1:639133
		ΔHt.	96.762sft	0.440sft		
		ΔElev.	96.675sft	1.241sft		
		Dist.	41707.514sft	0.065sft		

BOWMAN-RESET	STA 055-2004	Az.	171° 40'26.5058"	0° 00'00.2329"	1:700890	1:700890
		ΔHt.	96.452sft	0.437sft		
		ΔElev.	96.360sft	1.240sft		
		Dist.	41516.513sft	0.059sft		
BOWMAN-RESET	STA 054-2004	Az.	226° 50'50.1578"	0° 00'00.0740"	1:3365503	1:3365503
		ΔHt.	-57.295sft	0.420sft		
		ΔElev.	-57.702sft	1.285sft		
		Dist.	51054.240sft	0.015sft		
BOWMAN-RESET	GOSHEN RM 1	Az.	23° 23'27.7836"	0° 00'00.0000"	1:0	1:0
		ΔHt.	177.107sft	0.611sft		
		ΔElev.	177.569sft	0.842sft		
		Dist.	73287.281sft	0.000sft		
BOWMAN-RESET	LOUISVILLE S B	Az.	241° 20'09.7246"	0° 00'00.0000"	1:0	1:0
		ΔHt.	-66.616sft	0.476sft		
		ΔElev.	-67.034sft	0.842sft		
		Dist.	54801.267sft	0.000sft		
BOWMAN-RESET	STA 059-2004	Az.	122° 06'03.0552"	0° 00'00.0958"	1:2178948	1:2178948
		ΔHt.	50.580sft	0.525sft		
		ΔElev.	50.701sft	1.244sft		
		Dist.	45526.414sft	0.021sft		
BOWMAN-RESET	AZI 031-2001	Az.	221° 38'07.5892"	0° 00'00.1218"	1:1981475	1:1981475
		ΔHt.	-85.265sft	0.359sft		
		ΔElev.	-85.579sft	1.259sft		
		Dist.	43681.139sft	0.022sft		
GPS86-29 RESET	STA 058-2004	Az.	151° 48'59.3932"	0° 00'00.1443"	1:1132341	1:1132341
		ΔHt.	64.160sft	0.440sft		
		ΔElev.	64.018sft	1.288sft		
		Dist.	39166.925sft	0.035sft		
GPS86-29	STA 037-		133°	0°		

RESET	2001	Az.	57'17.8617"	00'00.1583"	1:1295692	1:1295692
		ΔHt.	-71.873sft	0.440sft		
		ΔElev.	-71.969sft	1.312sft		
		Dist.	37733.361sft	0.029sft		
GPS86-29 RESET	AZI 056-2004	Az.	172° 21'29.9515"	0° 00'00.1015"	1:1400642	1:1400642
		ΔHt.	60.004sft	0.455sft		
		ΔElev.	59.823sft	1.261sft		
		Dist.	45144.951sft	0.032sft		
GPS86-29 RESET	GOSHEN RM 1	Az.	357° 32'50.5551"	0° 00'00.1678"	1:872374	1:872374
		ΔHt.	22.957sft	0.260sft		
		ΔElev.	23.194sft	0.918sft		
		Dist.	26155.277sft	0.030sft		
GPS86-29 RESET	AZI 8629- 2001	Az.	189° 17'18.3799"	0° 00'01.7842"	1:59359	1:59359
		ΔHt.	-1.070sft	0.074sft		
		ΔElev.	-1.085sft	1.295sft		
		Dist.	1896.443sft	0.032sft		
STA 058- 2004	STA 037- 2001	Az.	46° 09'37.4501"	0° 00'00.4045"	1:505612	1:505612
		ΔHt.	-136.033sft	0.114sft		
		ΔElev.	-135.987sft	1.301sft		
		Dist.	12021.769sft	0.024sft		
STA 058- 2004	AZI 058-2004	Az.	269° 45'11.1004"	0° 00'08.2330"	1:32823	1:32823
		ΔHt.	-17.476sft	0.057sft		
		ΔElev.	-17.479sft	1.275sft		
		Dist.	717.678sft	0.022sft		
STA 058- 2004	AZI 8629- 2001	Az.	330° 06'06.2487"	0° 00'00.1896"	1:875291	1:875291
		ΔHt.	-65.230sft	0.432sft		
		ΔElev.	-65.103sft	1.285sft		
		Dist.	37679.479sft	0.043sft		
STA 037- 2001	AZI 058-2004	Az.	228° 26'19.2395"	0° 00'00.4183"	1:417111	1:417111

		ΔHt.	118.557sft	0.118sft		
		ΔElev.	118.508sft	1.299sft		
		Dist.	12551.314sft	0.030sft		
STA 037-2001	AZI 056-2004	Az.	228° 48'50.9873"	0° 00'00.2232"	1:926255	1:926255
		ΔHt.	131.877sft	0.240sft		
		ΔElev.	131.792sft	1.276sft		
		Dist.	28142.470sft	0.030sft		
AZI 058-2004	STA 056-2004	Az.	226° 13'52.9938"	0° 00'00.3916"	1:455510	1:455510
		ΔHt.	17.448sft	0.152sft		
		ΔElev.	17.414sft	1.249sft		
		Dist.	16232.991sft	0.036sft		
AZI 058-2004	STA 028-2001	Az.	156° 24'24.9636"	0° 00'00.3211"	1:577852	1:577852
		ΔHt.	-163.294sft	0.230sft		
		ΔElev.	-163.115sft	0.900sft		
		Dist.	19868.179sft	0.034sft		
AZI 056-2004	STA 056-2004	Az.	176° 30'17.7464"	0° 00'02.1388"	1:60005	1:60005
		ΔHt.	4.129sft	0.038sft		
		ΔElev.	4.130sft	1.225sft		
		Dist.	1021.738sft	0.017sft		
AZI 056-2004	STA 011-2001	Az.	212° 03'02.5191"	0° 00'00.1725"	1:969867	1:969867
		ΔHt.	-64.180sft	0.343sft		
		ΔElev.	-64.319sft	0.865sft		
		Dist.	41172.162sft	0.042sft		
AZI 056-2004	STA 057-2004	Az.	145° 18'15.9254"	0° 00'00.1408"	1:1177820	1:1177820
		ΔHt.	-207.136sft	0.277sft		
		ΔElev.	-206.955sft	1.295sft		
		Dist.	24269.755sft	0.021sft		
STA 056-2004	AZI 059-2004	Az.	175° 40'40.3457"	0° 00'00.1832"	1:789201	1:789201
		ΔHt.	-187.671sft	0.208sft		

		ΔElev.	-187.598sft	1.261sft		
		Dist.	20294.817sft	0.026sft		
STA 056-2004	STA 028-2001	Az.	109° 30'13.3596"	0° 00'00.2057"	1:1242161	1:1242161
		ΔHt.	-180.742sft	0.240sft		
		ΔElev.	-180.529sft	0.867sft		
		Dist.	20875.385sft	0.017sft		
STA 011-2001	AZI 059-2004	Az.	59° 45'31.1947"	0° 00'00.3250"	1:824466	1:824466
		ΔHt.	-119.363sft	0.251sft		
		ΔElev.	-119.149sft	0.916sft		
		Dist.	27120.201sft	0.033sft		
STA 011-2001	STA 059-2004	Az.	59° 15'05.9625"	0° 00'00.3095"	1:856885	1:856885
		ΔHt.	-99.394sft	0.256sft		
		ΔElev.	-99.177sft	0.916sft		
		Dist.	28014.628sft	0.033sft		
AZI 059-2004	AZI 057-2004	Az.	88° 07'58.3166"	0° 00'00.5246"	1:588231	1:588231
		ΔHt.	-25.079sft	0.147sft		
		ΔElev.	-24.967sft	1.334sft		
		Dist.	12257.497sft	0.021sft		
AZI 059-2004	STA 059-2004	Az.	44° 17'59.0600"	0° 00'03.8660"	1:49882	1:49882
		ΔHt.	19.968sft	0.049sft		
		ΔElev.	19.972sft	1.296sft		
		Dist.	927.087sft	0.019sft		
AZI 055-2004	STA 055-2004	Az.	274° 33'05.4967"	0° 00'16.6936"	1:18146	1:18146
		ΔHt.	-0.310sft	0.116sft		
		ΔElev.	-0.315sft	1.288sft		
		Dist.	823.283sft	0.045sft		
STA 055-2004	CA20-01	Az.	257° 41'06.7492"	0° 00'00.4625"	1:597528	1:597528
		ΔHt.	-116.982sft	0.321sft		
		ΔElev.	-117.254sft	1.319sft		

		Dist.	29913.986sft	0.050sft		
CA20-01	AZI 054-2004	Az.	309° 44'46.2195"	0° 00'00.3843"	1:513532	1:513532
		ΔHt.	-55.273sft	0.232sft		
		ΔElev.	-55.322sft	1.363sft		
		Dist.	18658.903sft	0.036sft		
CA20-01	STA 050-2003	Az.	250° 33'53.6470"	0° 00'00.1904"	1:1450648	1:1450648
		ΔHt.	-75.717sft	0.428sft		
		ΔElev.	-76.214sft	1.510sft		
		Dist.	45395.293sft	0.031sft		
CA20-01	AZI 050-2003 RES	Az.	250° 02'56.5428"	0° 00'00.1904"	1:1568260	1:1568260
		ΔHt.	-77.791sft	0.435sft		
		ΔElev.	-78.297sft	1.514sft		
		Dist.	46043.669sft	0.029sft		
CA20-01	AZI 031-2001	Az.	338° 32'44.8810"	0° 00'00.3859"	1:390828	1:390828
		ΔHt.	-64.735sft	0.190sft		
		ΔElev.	-64.685sft	1.337sft		
		Dist.	15916.707sft	0.041sft		
GPS86-15	AZI 054-2004	Az.	43° 19'34.5760"	0° 00'00.0922"	1:2526493	1:2526493
		ΔHt.	19.294sft	0.417sft		
		ΔElev.	19.859sft	1.567sft		
		Dist.	50127.873sft	0.020sft		
GPS86-15	AZI 050-2003 RES	Az.	32° 08'35.7885"	0° 00'00.4176"	1:424496	1:424496
		ΔHt.	-3.225sft	0.111sft		
		ΔElev.	-3.116sft	1.699sft		
		Dist.	10360.119sft	0.024sft		
GPS86-15	LOUISVILLE S B	Az.	27° 33'24.6263"	0° 00'00.0000"	1:0	1:0
		ΔHt.	28.481sft	0.434sft		
		ΔElev.	29.041sft	1.228sft		
		Dist.	51518.384sft	0.000sft		

AZI 054-2004	STA 054-2004	Az.	26° 31'52.3601"	0° 00'05.9950"	1:31950	1:31950
		ΔHt.	18.508sft	0.042sft		
		ΔElev.	18.514sft	1.375sft		
		Dist.	676.186sft	0.021sft		
AZI 054-2004	LOUISVILLE S B	Az.	311° 09'23.9701"	0° 00'00.2955"	1:630995	1:630995
		ΔHt.	9.187sft	0.168sft		
		ΔElev.	9.182sft	0.973sft		
		Dist.	14011.713sft	0.022sft		
STA 050-2003	STA 054-2004	Az.	46° 03'01.8658"	0° 00'00.1590"	1:1442221	1:1442221
		ΔHt.	38.951sft	0.335sft		
		ΔElev.	39.406sft	1.520sft		
		Dist.	39891.795sft	0.028sft		
STA 050-2003	AZI 050-2003 RES	Az.	217° 48'17.4857"	0° 00'06.3942"	1:30995	1:30995
		ΔHt.	-2.075sft	0.077sft		
		ΔElev.	-2.084sft	1.657sft		
		Dist.	768.000sft	0.025sft		
STA 050-2003	LOUISVILLE S B	Az.	26° 12'09.6864"	0° 00'00.1209"	1:1368558	1:1368558
		ΔHt.	29.631sft	0.344sft		
		ΔElev.	30.073sft	1.169sft		
		Dist.	40447.171sft	0.030sft		
STA 054-2004	LOUISVILLE S B	Az.	308° 27'03.2264"	0° 00'00.2417"	1:798059	1:798059
		ΔHt.	-9.321sft	0.165sft		
		ΔElev.	-9.332sft	0.971sft		
		Dist.	13856.432sft	0.017sft		
STA 054-2004	AZI 031-2001	Az.	74° 28'47.6939"	0° 00'00.5928"	1:537333	1:537333
		ΔHt.	-27.970sft	0.094sft		
		ΔElev.	-27.877sft	1.349sft		
		Dist.	8532.443sft	0.016sft		
AZI 057-	STA 057-		358°	0°		

2004	2004	Az.	14'55.4161"	00'03.7709"	1:36619	1:36619
		ΔHt.	1.486sft	0.065sft		
		ΔElev.	1.480sft	1.367sft		
		Dist.	902.963sft	0.025sft		
STA 057-2004	STA 028-2001	Az.	26° 22'29.0899"	0° 00'00.2952"	1:640558	1:640558
		ΔHt.	30.522sft	0.121sft		
		ΔElev.	30.556sft	0.964sft		
		Dist.	13351.614sft	0.021sft		
STA 057-2004	STA 059-2004	Az.	266° 52'10.5558"	0° 00'00.2818"	1:951757	1:951757
		ΔHt.	43.562sft	0.122sft		
		ΔElev.	43.459sft	1.330sft		
		Dist.	11593.081sft	0.012sft		
STA 028-2001	STA 059-2004	Az.	234° 16'51.2822"	0° 00'00.2202"	1:1147357	1:1147357
		ΔHt.	13.039sft	0.187sft		
		ΔElev.	12.903sft	0.916sft		
		Dist.	21566.877sft	0.019sft		

[Back to top](#)