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Global Positioning Services, Inc.
2603 Blueberry Road
Anchorage, Alaska

Phone: 907-569-2000
Fax: 907-569-2002

Project Information		Coordinate System	
Name:	L:\Mat-Su Borough\West Susitna \TBC_Proj\GPSI_11_12_E_19.vce	Name:	US State Plane 1983
Size:	1 MB	Datum:	NAD 1983 (Alaska)
Modified:	7/12/2011 12:29:47 PM	Zone:	Alaska Zone 4 5004
Reference number:		Geoid:	GEOID09 (Alaska)
Description:		Vertical datum:	

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.005 ft

Centering Error: 0.005 ft

Covariance Display

Horizontal:

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960
**Three-Dimensional
 Propagated Linear Error
 [E]:** U.S.
Constant Term [C]: 0.000 ft
Scale on Linear Error [S]: 1.960

Adjustment Statistics

**Number of Iterations for Successful
 Adjustment:** 2
Network Reference Factor: 1.00
Chi Square Test (95%): Passed
Precision Confidence Level: 95%
Degrees of Freedom: 79

Post Processed Vector Statistics

Reference Factor: 1.00
Redundancy Number: 79.00
A Priori Scalar: 0.83

Adjusted Grid Coordinates

Point ID	Easting (US survey foot)	Easting Error (US survey foot)	Northing (US survey foot)	Northing Error (US survey foot)	Elevation (US survey foot)	Elevation Error (US survey foot)	Fixed

1	2070103.4121	?	2861832.5929	?	2772.4961	0.038	LL
10	1697521.9789	?	3271673.1417	?	1647.6351	?	LLh
11	1882679.9569	0.008	3228964.7103	0.010	2365.8092	0.044	
12	2049545.7153	0.009	3201362.9384	0.010	4196.1495	0.043	
2	1942323.2578	?	2853252.0258	?	1630.6382	0.037	LL
9	1603269.7966	?	3180896.3029	?	741.5635	0.035	LL
EBASE	1826939.7971	0.008	3199494.9176	0.010	2496.8489	0.047	

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Fixed
1	N61°48'37.00792"	W147°30'54.95489"	2829.7207	0.038	LL
10	N62°57'11.81529"	W149°39'25.27183"	1690.5390	?	LLh
11	N62°49'45.98795"	W148°33'03.52919"	2414.5530	0.044	
12	N62°44'24.80136"	W147°33'36.13749"	4248.8274	0.043	
2	N61°47'53.49494"	W148°15'18.05244"	1682.8127	0.037	LL
9	N62°42'18.92453"	W150°13'16.45017"	779.7010	0.035	LL
EBASE	N62°45'06.81725"	W148°53'14.38628"	2543.9378	0.047	

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
11	0.013	0.010	172°
12	0.012	0.011	171°
EBASE	0.013	0.010	171°

Adjusted GPS Observations

Transformation Parameters

Azimuth Rotation: -0.002 sec (95%) 0.002 sec
Scale Factor: 1.00000008 (95%) 0.00000001

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
9 --> 10 (PV239)	Az.	45°52'46"	0.002 sec	0.005 sec	0.285
	ΔHt.	910.838 ft	0.035 ft	0.044 ft	0.856
	Ellip Dist.	130871.304 ft	0.002 ft	0.037 ft	3.746
9 --> 2 (PV294)	Az.	133°49'17"	0.002 sec	-0.011 sec	-2.648
	ΔHt.	903.111 ft	0.037 ft	0.013 ft	0.299
	Ellip Dist.	471528.092 ft	0.007 ft	-0.021 ft	-1.304
10 --> 2 (PV293)	Az.	149°58'17"	0.002 sec	-0.003 sec	-0.877
	ΔHt.	-7.727 ft	0.037 ft	0.080 ft	1.942
	Ellip Dist.	484799.920 ft	0.007 ft	-0.014 ft	-0.810
11 --> 2 (PV163)	Az.	172°15'45"	0.004 sec	-0.004 sec	-0.877

	ΔHt.	-731.741 ft	0.046 ft	-0.074 ft	-1.660
	Ellip Dist.	380423.173 ft	0.011 ft	0.001 ft	0.080
2 --> 9 (PV198)	Az.	315°33'42"	0.002 sec	-0.007 sec	-1.637
	ΔHt.	-903.112 ft	0.037 ft	-0.019 ft	-0.326
	Ellip Dist.	471528.092 ft	0.007 ft	0.016 ft	0.992
12 --> 2 (PV187)	Az.	199°16'49"	0.005 sec	-0.003 sec	-0.642
	ΔHt.	-2566.015 ft	0.046 ft	0.093 ft	1.591
	Ellip Dist.	364233.349 ft	0.010 ft	0.026 ft	1.556
9 --> 10 (PV265)	Az.	45°52'46"	0.002 sec	0.019 sec	1.230
	ΔHt.	910.838 ft	0.035 ft	-0.015 ft	-0.388
	Ellip Dist.	130871.304 ft	0.002 ft	0.014 ft	1.572
12 --> 10 (PV241)	Az.	283°27'57"	0.005 sec	0.000 sec	-0.030
	ΔHt.	-2558.289 ft	0.043 ft	0.082 ft	1.537
	Ellip Dist.	358986.113 ft	0.008 ft	-0.014 ft	-1.140
EBASE --> 11 (PV38)	Az.	63°07'27"	0.038 sec	-0.016 sec	-0.637
	ΔHt.	-129.385 ft	0.049 ft	-0.002 ft	-0.072
	Ellip Dist.	63054.029 ft	0.010 ft	0.010 ft	1.489
10 --> 9 (PV179)	Az.	226°22'53"	0.002 sec	0.018 sec	1.224
	ΔHt.	-910.838 ft	0.035 ft	0.010 ft	0.239
	Ellip Dist.	130871.304 ft	0.002 ft	0.014 ft	1.465
1 --> 2 (PV292)	Az.	268°20'54"	0.002 sec	0.023 sec	1.308
	ΔHt.	-1146.908 ft	0.038 ft	0.006 ft	0.171
	Ellip Dist.	128061.029 ft	0.002 ft	-0.008 ft	-0.954
10 --> 2 (PV161)	Az.	149°58'17"	0.002 sec	0.002 sec	0.481

	ΔHt.	-7.727 ft	0.037 ft	-0.061 ft	-1.293
	Ellip Dist.	484799.920 ft	0.007 ft	0.012 ft	0.777
9 --> EBASE (PV215)	Az.	85°03'00"	0.009 sec	-0.012 sec	-1.288
	ΔHt.	1764.237 ft	0.048 ft	0.023 ft	0.449
	Ellip Dist.	224461.865 ft	0.008 ft	0.005 ft	0.444
12 --> 10 (PV132)	Az.	283°27'57"	0.005 sec	0.005 sec	0.959
	ΔHt.	-2558.289 ft	0.043 ft	-0.018 ft	-0.423
	Ellip Dist.	358986.113 ft	0.008 ft	-0.013 ft	-1.182
12 --> 1 (PV104)	Az.	178°41'43"	0.005 sec	0.005 sec	1.171
	ΔHt.	-1419.107 ft	0.045 ft	-0.036 ft	-0.839
	Ellip Dist.	340118.039 ft	0.011 ft	0.006 ft	0.353
10 --> 1 (PV286)	Az.	138°01'37"	0.002 sec	0.002 sec	0.498
	ΔHt.	1139.181 ft	0.038 ft	0.047 ft	1.109
	Ellip Dist.	553893.564 ft	0.008 ft	-0.008 ft	-0.526
10 --> 1 (PV129)	Az.	138°01'37"	0.002 sec	0.002 sec	0.615
	ΔHt.	1139.181 ft	0.038 ft	0.015 ft	0.331
	Ellip Dist.	553893.564 ft	0.008 ft	-0.015 ft	-1.069
9 --> 1 (PV288)	Az.	124°09'08"	0.002 sec	-0.002 sec	-0.677
	ΔHt.	2050.019 ft	0.038 ft	0.035 ft	0.817
	Ellip Dist.	565471.428 ft	0.008 ft	-0.015 ft	-1.031
9 --> 1 (PV176)	Az.	124°09'08"	0.002 sec	-0.004 sec	-1.005
	ΔHt.	2050.019 ft	0.038 ft	-0.010 ft	-0.225
	Ellip Dist.	565471.428 ft	0.008 ft	-0.004 ft	-0.329
11 --> 10 (PV133)	Az.	284°16'42"	0.011 sec	0.008 sec	0.786

	ΔHt.	-724.014 ft	0.044 ft	0.013 ft	0.314
	Ellip Dist.	190033.229 ft	0.009 ft	-0.009 ft	-0.930
2 --> 1 (PV159)	Az.	87°41'47"	0.002 sec	-0.010 sec	-0.607
	ΔHt.	1146.908 ft	0.038 ft	-0.013 ft	-0.312
	Ellip Dist.	128061.029 ft	0.002 ft	-0.007 ft	-0.808
2 --> 9 (PV177)	Az.	315°33'42"	0.002 sec	-0.003 sec	-0.797
	ΔHt.	-903.112 ft	0.037 ft	0.034 ft	0.716
	Ellip Dist.	471528.092 ft	0.007 ft	0.009 ft	0.620
11 --> 9 (PV181)	Az.	261°31'39"	0.007 sec	0.005 sec	0.790
	ΔHt.	-1634.852 ft	0.045 ft	0.024 ft	0.580
	Ellip Dist.	283537.584 ft	0.009 ft	0.002 ft	0.215
12 --> 9 (PV180)	Az.	269°32'35"	0.004 sec	0.003 sec	0.733
	ΔHt.	-3469.127 ft	0.045 ft	-0.008 ft	-0.189
	Ellip Dist.	446763.609 ft	0.009 ft	0.004 ft	0.401
EBASE --> 12 (PV42)	Az.	90°30'30"	0.011 sec	-0.003 sec	-0.331
	ΔHt.	1704.889 ft	0.050 ft	0.028 ft	0.719
	Ellip Dist.	222612.492 ft	0.010 ft	-0.006 ft	-0.582
2 --> 10 (PV240)	Az.	331°12'50"	0.002 sec	0.003 sec	0.702
	ΔHt.	7.726 ft	0.037 ft	0.019 ft	0.315
	Ellip Dist.	484799.920 ft	0.007 ft	0.004 ft	0.205
11 --> 12 (PV45)	Az.	100°40'52"	0.014 sec	0.006 sec	0.572
	ΔHt.	1834.274 ft	0.048 ft	0.027 ft	0.698
	Ellip Dist.	169129.244 ft	0.010 ft	0.004 ft	0.380
2 --> EBASE (PV216)	Az.	343°06'49"	0.005 sec	0.002 sec	0.333

	ΔHt.	861.125 ft	0.049 ft	0.033 ft	0.583
	Ellip Dist.	364973.547 ft	0.011 ft	0.012 ft	0.668
EBASE --> 1 (PV102)	Az.	145°13'27"	0.004 sec	0.001 sec	0.203
	ΔHt.	285.782 ft	0.048 ft	0.000 ft	0.002
	Ellip Dist.	416100.530 ft	0.011 ft	-0.009 ft	-0.659
11 --> 1 (PV105)	Az.	154°14'14"	0.004 sec	0.001 sec	0.276
	ΔHt.	415.167 ft	0.046 ft	-0.010 ft	-0.226
	Ellip Dist.	412192.585 ft	0.011 ft	-0.007 ft	-0.436
EBASE --> 10 (PV238)	Az.	300°08'20"	0.013 sec	0.001 sec	0.065
	ΔHt.	-853.399 ft	0.047 ft	0.008 ft	0.152
	Ellip Dist.	148196.644 ft	0.009 ft	-0.001 ft	-0.091

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
1	9	Az.	306°32'50"	0.000 sec	1 : 0	1 : 4046400850
		ΔHt.	-2050.020 ft	0.038 ft		
		ΔElev.	-2030.933 ft	0.038 ft		
		Ellip Dist.	565471.473 ft	0.000 ft		
10	1	Az.	138°01'37"	0.000 sec	1 : 0	1 : 7072609445
		ΔHt.	1139.182 ft	0.038 ft		
		ΔElev.	1124.861 ft	0.038 ft		
		Ellip Dist.	553893.608 ft	0.000 ft		

10	2	Az.	149°58'17"	0.000 sec	1 : 0	1 : 53479325888
		ΔHt.	-7.726 ft	0.037 ft		
		ΔElev.	-16.997 ft	0.037 ft		
		Ellip Dist.	484799.958 ft	0.000 ft		
10	9	Az.	226°22'53"	0.000 sec	1 : 0	1 : 534753541
		ΔHt.	-910.838 ft	0.035 ft		
		ΔElev.	-906.072 ft	0.035 ft		
		Ellip Dist.	130871.314 ft	0.000 ft		
10	EBASE	Az.	119°27'15"	0.013 sec	1 : 16786749	1 : 16743832
		ΔHt.	853.399 ft	0.047 ft		
		ΔElev.	849.214 ft	0.047 ft		
		Ellip Dist.	148196.656 ft	0.009 ft		
11	1	Az.	154°14'14"	0.004 sec	1 : 41862072	1 : 41757152
		ΔHt.	415.168 ft	0.046 ft		
		ΔElev.	406.687 ft	0.046 ft		
		Ellip Dist.	412192.617 ft	0.010 ft		
11	10	Az.	284°16'42"	0.011 sec	1 : 22567760	1 : 22528155
		ΔHt.	-724.014 ft	0.044 ft		
		ΔElev.	-718.174 ft	0.044 ft		
		Ellip Dist.	190033.244 ft	0.008 ft		
11	12	Az.	100°40'52"	0.014 sec	1 : 16340394	1 : 16406331
		ΔHt.	1834.274 ft	0.048 ft		
		ΔElev.	1830.340 ft	0.048 ft		
		Ellip Dist.	169129.257 ft	0.010 ft		
11	2	Az.	172°15'45"	0.004 sec	1 : 37903860	1 : 37916894
		ΔHt.	-731.740 ft	0.046 ft		

		ΔElev.	-735.171 ft	0.046 ft		
		Ellip Dist.	380423.203 ft	0.010 ft		
11	9	Az.	261°31'39"	0.007 sec	1 : 34695350	1 : 34850700
		ΔHt.	-1634.852 ft	0.045 ft		
		ΔElev.	-1624.246 ft	0.045 ft		
		Ellip Dist.	283537.606 ft	0.008 ft		
11	EBASE	Az.	243°25'24"	0.038 sec	1 : 6333932	1 : 6353208
		ΔHt.	129.385 ft	0.049 ft		
		ΔElev.	131.040 ft	0.049 ft		
		Ellip Dist.	63054.034 ft	0.010 ft		
12	1	Az.	178°41'43"	0.005 sec	1 : 35104561	1 : 35173570
		ΔHt.	-1419.107 ft	0.045 ft		
		ΔElev.	-1423.653 ft	0.045 ft		
		Ellip Dist.	340118.066 ft	0.010 ft		
12	10	Az.	283°27'57"	0.006 sec	1 : 41105281	1 : 41049381
		ΔHt.	-2558.288 ft	0.043 ft		
		ΔElev.	-2548.514 ft	0.043 ft		
		Ellip Dist.	358986.141 ft	0.009 ft		
12	2	Az.	199°16'49"	0.005 sec	1 : 38364727	1 : 38577100
		ΔHt.	-2566.015 ft	0.046 ft		
		ΔElev.	-2565.511 ft	0.046 ft		
		Ellip Dist.	364233.377 ft	0.009 ft		
12	9	Az.	269°32'35"	0.004 sec	1 : 51905659	1 : 52007768
		ΔHt.	-3469.126 ft	0.045 ft		
		ΔElev.	-3454.586 ft	0.045 ft		
		Ellip Dist.	446763.644 ft	0.009 ft		

12	EBASE	Az.	271°41'18"	0.011 sec	1 : 21201989	1 : 21231746
		ΔHt.	-1704.890 ft	0.050 ft		
		ΔElev.	-1699.301 ft	0.050 ft		
		Ellip Dist.	222612.510 ft	0.010 ft		
2	1	Az.	87°41'47"	0.000 sec	1 : 0	1 : 372350967
		ΔHt.	1146.908 ft	0.038 ft		
		ΔElev.	1141.858 ft	0.038 ft		
		Ellip Dist.	128061.039 ft	0.000 ft		
2	9	Az.	315°33'42"	0.000 sec	1 : 0	1 : 6530197230
		ΔHt.	-903.112 ft	0.037 ft		
		ΔElev.	-889.075 ft	0.037 ft		
		Ellip Dist.	471528.129 ft	0.000 ft		
EBASE	1	Az.	145°13'27"	0.004 sec	1 : 42758547	1 : 42635646
		ΔHt.	285.783 ft	0.048 ft		
		ΔElev.	275.647 ft	0.048 ft		
		Ellip Dist.	416100.562 ft	0.010 ft		
EBASE	2	Az.	162°33'14"	0.005 sec	1 : 36248247	1 : 36231326
		ΔHt.	-861.125 ft	0.049 ft		
		ΔElev.	-866.211 ft	0.049 ft		
		Ellip Dist.	364973.576 ft	0.010 ft		
EBASE	9	Az.	266°14'09"	0.009 sec	1 : 28090646	1 : 28056843
		ΔHt.	-1764.237 ft	0.048 ft		
		ΔElev.	-1755.285 ft	0.048 ft		
		Ellip Dist.	224461.882 ft	0.008 ft		

Date: 7/12/2011 2:11:01 PM

Project: L:\Mat-Su Borough\West
Susitna\TBC_Proj
\GPSI_11_12_E_19.vce

Trimble Business Center

Global Positioning Services, Inc.
2603 Blueberry Road
Anchorage, Alaska

Phone: 907-569-2000
Fax: 907-569-2002

Project Information		Coordinate System	
Name:	L:\Mat-Su Borough\West Susitna\TBC_Proj\GPSI_11_12_E_19.vce	Name:	US State Plane 1983
Size:	1 MB	Datum:	NAD 1983 (Alaska)
Modified:	7/12/2011 12:29:47 PM	Zone:	Alaska Zone 4 5004
Reference number:		Geoid:	GEOID09 (Alaska)
Description:		Vertical datum:	

Network Adjustment Report

Adjustment Settings

Set-Up Errors

GNSS

Error in Height of Antenna: 0.005 ft

Centering Error: 0.005 ft

Covariance Display

Horizontal:

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960

Three-Dimensional

Propagated Linear Error [E]: U.S.

Constant Term [C]: 0.000 ft

Scale on Linear Error [S]: 1.960

Adjustment Statistics

Number of Iterations for Successful Adjustment:	2
Network Reference Factor:	1.00
Chi Square Test (95%):	Passed
Precision Confidence Level:	95%
Degrees of Freedom:	79

Post Processed Vector Statistics

Reference Factor:	1.00
Redundancy Number:	79.00
A Priori Scalar:	0.83

Adjusted Grid Coordinates

Point ID	Easting (US survey foot)	Easting Error (US survey foot)	Northing (US survey foot)	Northing Error (US survey foot)	Elevation (US survey foot)	Elevation Error (US survey foot)	Fixed
1	2070103.4121	?	2861832.5929	?	2772.4961	0.038	LL
10	1697521.9789	?	3271673.1417	?	1647.6351	?	LLh
11	1882679.9569	0.008	3228964.7103	0.010	2365.8092	0.044	
12	2049545.7153	0.009	3201362.9384	0.010	4196.1495	0.043	
2	1942323.2578	?	2853252.0258	?	1630.6382	0.037	LL
9	1603269.7966	?	3180896.3029	?	741.5635	0.035	LL
EBASE	1826939.7971	0.008	3199494.9176	0.010	2496.8489	0.047	

Adjusted Geodetic Coordinates

Point ID	Latitude	Longitude	Height (US survey foot)	Height Error (US survey foot)	Fixed
1	N61°48'37.00792"	W147°30'54.95489"	2829.7207	0.038	LL
10	N62°57'11.81529"	W149°39'25.27183"	1690.5390	?	LLh
11	N62°49'45.98795"	W148°33'03.52919"	2414.5530	0.044	
12	N62°44'24.80136"	W147°33'36.13749"	4248.8274	0.043	
2	N61°47'53.49494"	W148°15'18.05244"	1682.8127	0.037	LL
9	N62°42'18.92453"	W150°13'16.45017"	779.7010	0.035	LL
EBASE	N62°45'06.81725"	W148°53'14.38628"	2543.9378	0.047	

Error Ellipse Components

Point ID	Semi-major axis (US survey foot)	Semi-minor axis (US survey foot)	Azimuth
11	0.013	0.010	172°
12	0.012	0.011	171°
EBASE	0.013	0.010	171°

Adjusted GPS Observations

Transformation Parameters

Azimuth Rotation: -0.002 sec (95%) 0.002 sec

Scale Factor: 1.00000008 (95%) 0.00000001

Observation ID		Observation	A-posteriori Error	Residual	Standardized Residual
9 --> 10 (PV239)	Az.	45°52'46"	0.002 sec	0.005 sec	0.285
	ΔHt.	910.838 ft	0.035 ft	0.044 ft	0.856
	Ellip Dist.	130871.304 ft	0.002 ft	0.037 ft	3.746
9 --> 2 (PV294)	Az.	133°49'17"	0.002 sec	-0.011 sec	-2.648
	ΔHt.	903.111 ft	0.037 ft	0.013 ft	0.299
	Ellip Dist.	471528.092 ft	0.007 ft	-0.021 ft	-1.304

10 --> 2 (PV293)	Az.	149°58'17"	0.002 sec	-0.003 sec	-0.877
	ΔHt.	-7.727 ft	0.037 ft	0.080 ft	1.942
	Ellip Dist.	484799.920 ft	0.007 ft	-0.014 ft	-0.810
11 --> 2 (PV163)	Az.	172°15'45"	0.004 sec	-0.004 sec	-0.877
	ΔHt.	-731.741 ft	0.046 ft	-0.074 ft	-1.660
	Ellip Dist.	380423.173 ft	0.011 ft	0.001 ft	0.080
2 --> 9 (PV198)	Az.	315°33'42"	0.002 sec	-0.007 sec	-1.637
	ΔHt.	-903.112 ft	0.037 ft	-0.019 ft	-0.326
	Ellip Dist.	471528.092 ft	0.007 ft	0.016 ft	0.992
12 --> 2 (PV187)	Az.	199°16'49"	0.005 sec	-0.003 sec	-0.642
	ΔHt.	-2566.015 ft	0.046 ft	0.093 ft	1.591
	Ellip Dist.	364233.349 ft	0.010 ft	0.026 ft	1.556
9 --> 10 (PV265)	Az.	45°52'46"	0.002 sec	0.019 sec	1.230
	ΔHt.	910.838 ft	0.035 ft	-0.015 ft	-0.388
	Ellip Dist.	130871.304 ft	0.002 ft	0.014 ft	1.572
12 --> 10 (PV241)	Az.	283°27'57"	0.005 sec	0.000 sec	-0.030
	ΔHt.	-2558.289 ft	0.043 ft	0.082 ft	1.537
	Ellip Dist.	358986.113 ft	0.008 ft	-0.014 ft	-1.140
EBASE --> 11 (PV38)	Az.	63°07'27"	0.038 sec	-0.016 sec	-0.637
	ΔHt.	-129.385 ft	0.049 ft	-0.002 ft	-0.072
	Ellip Dist.	63054.029 ft	0.010 ft	0.010 ft	1.489
10 --> 9 (PV179)	Az.	226°22'53"	0.002 sec	0.018 sec	1.224
	ΔHt.	-910.838 ft	0.035 ft	0.010 ft	0.239
	Ellip Dist.	130871.304 ft	0.002 ft	0.014 ft	1.465
1 --> 2 (PV292)	Az.	268°20'54"	0.002 sec	0.023 sec	1.308
	ΔHt.	-1146.908 ft	0.038 ft	0.006 ft	0.171
	Ellip Dist.	128061.029 ft	0.002 ft	-0.008 ft	-0.954
10 --> 2 (PV161)	Az.	149°58'17"	0.002 sec	0.002 sec	0.481
	ΔHt.	-7.727 ft	0.037 ft	-0.061 ft	-1.293
	Ellip Dist.	484799.920 ft	0.007 ft	0.012 ft	0.777

9 --> EBASE (PV215)	Az.	85°03'00"	0.009 sec	-0.012 sec	-1.288
	ΔHt.	1764.237 ft	0.048 ft	0.023 ft	0.449
	Ellip Dist.	224461.865 ft	0.008 ft	0.005 ft	0.444
12 --> 10 (PV132)	Az.	283°27'57"	0.005 sec	0.005 sec	0.959
	ΔHt.	-2558.289 ft	0.043 ft	-0.018 ft	-0.423
	Ellip Dist.	358986.113 ft	0.008 ft	-0.013 ft	-1.182
12 --> 1 (PV104)	Az.	178°41'43"	0.005 sec	0.005 sec	1.171
	ΔHt.	-1419.107 ft	0.045 ft	-0.036 ft	-0.839
	Ellip Dist.	340118.039 ft	0.011 ft	0.006 ft	0.353
10 --> 1 (PV286)	Az.	138°01'37"	0.002 sec	0.002 sec	0.498
	ΔHt.	1139.181 ft	0.038 ft	0.047 ft	1.109
	Ellip Dist.	553893.564 ft	0.008 ft	-0.008 ft	-0.526
10 --> 1 (PV129)	Az.	138°01'37"	0.002 sec	0.002 sec	0.615
	ΔHt.	1139.181 ft	0.038 ft	0.015 ft	0.331
	Ellip Dist.	553893.564 ft	0.008 ft	-0.015 ft	-1.069
9 --> 1 (PV288)	Az.	124°09'08"	0.002 sec	-0.002 sec	-0.677
	ΔHt.	2050.019 ft	0.038 ft	0.035 ft	0.817
	Ellip Dist.	565471.428 ft	0.008 ft	-0.015 ft	-1.031
9 --> 1 (PV176)	Az.	124°09'08"	0.002 sec	-0.004 sec	-1.005
	ΔHt.	2050.019 ft	0.038 ft	-0.010 ft	-0.225
	Ellip Dist.	565471.428 ft	0.008 ft	-0.004 ft	-0.329
11 --> 10 (PV133)	Az.	284°16'42"	0.011 sec	0.008 sec	0.786
	ΔHt.	-724.014 ft	0.044 ft	0.013 ft	0.314
	Ellip Dist.	190033.229 ft	0.009 ft	-0.009 ft	-0.930
2 --> 1 (PV159)	Az.	87°41'47"	0.002 sec	-0.010 sec	-0.607
	ΔHt.	1146.908 ft	0.038 ft	-0.013 ft	-0.312
	Ellip Dist.	128061.029 ft	0.002 ft	-0.007 ft	-0.808
2 --> 9 (PV177)	Az.	315°33'42"	0.002 sec	-0.003 sec	-0.797
	ΔHt.	-903.112 ft	0.037 ft	0.034 ft	0.716
	Ellip Dist.	471528.092 ft	0.007 ft	0.009 ft	0.620

11 --> 9 (PV181)	Az.	261°31'39"	0.007 sec	0.005 sec	0.790
	ΔHt.	-1634.852 ft	0.045 ft	0.024 ft	0.580
	Ellip Dist.	283537.584 ft	0.009 ft	0.002 ft	0.215
12 --> 9 (PV180)	Az.	269°32'35"	0.004 sec	0.003 sec	0.733
	ΔHt.	-3469.127 ft	0.045 ft	-0.008 ft	-0.189
	Ellip Dist.	446763.609 ft	0.009 ft	0.004 ft	0.401
EBASE --> 12 (PV42)	Az.	90°30'30"	0.011 sec	-0.003 sec	-0.331
	ΔHt.	1704.889 ft	0.050 ft	0.028 ft	0.719
	Ellip Dist.	222612.492 ft	0.010 ft	-0.006 ft	-0.582
2 --> 10 (PV240)	Az.	331°12'50"	0.002 sec	0.003 sec	0.702
	ΔHt.	7.726 ft	0.037 ft	0.019 ft	0.315
	Ellip Dist.	484799.920 ft	0.007 ft	0.004 ft	0.205
11 --> 12 (PV45)	Az.	100°40'52"	0.014 sec	0.006 sec	0.572
	ΔHt.	1834.274 ft	0.048 ft	0.027 ft	0.698
	Ellip Dist.	169129.244 ft	0.010 ft	0.004 ft	0.380
2 --> EBASE (PV216)	Az.	343°06'49"	0.005 sec	0.002 sec	0.333
	ΔHt.	861.125 ft	0.049 ft	0.033 ft	0.583
	Ellip Dist.	364973.547 ft	0.011 ft	0.012 ft	0.668
EBASE --> 1 (PV102)	Az.	145°13'27"	0.004 sec	0.001 sec	0.203
	ΔHt.	285.782 ft	0.048 ft	0.000 ft	0.002
	Ellip Dist.	416100.530 ft	0.011 ft	-0.009 ft	-0.659
11 --> 1 (PV105)	Az.	154°14'14"	0.004 sec	0.001 sec	0.276
	ΔHt.	415.167 ft	0.046 ft	-0.010 ft	-0.226
	Ellip Dist.	412192.585 ft	0.011 ft	-0.007 ft	-0.436
EBASE --> 10 (PV238)	Az.	300°08'20"	0.013 sec	0.001 sec	0.065
	ΔHt.	-853.399 ft	0.047 ft	0.008 ft	0.152
	Ellip Dist.	148196.644 ft	0.009 ft	-0.001 ft	-0.091

Covariance Terms

From Point	To Point		Components	A-posteriori Error	Horiz. Precision (Ratio)	3D Precision (Ratio)
1	9	Az.	306°32'50"	0.000 sec	1 : 0	1 : 4046400850
		ΔHt.	-2050.020 ft	0.038 ft		
		ΔElev.	-2030.933 ft	0.038 ft		
		Ellip Dist.	565471.473 ft	0.000 ft		
10	1	Az.	138°01'37"	0.000 sec	1 : 0	1 : 7072609445
		ΔHt.	1139.182 ft	0.038 ft		
		ΔElev.	1124.861 ft	0.038 ft		
		Ellip Dist.	553893.608 ft	0.000 ft		
10	2	Az.	149°58'17"	0.000 sec	1 : 0	1 : 53479325888
		ΔHt.	-7.726 ft	0.037 ft		
		ΔElev.	-16.997 ft	0.037 ft		
		Ellip Dist.	484799.958 ft	0.000 ft		
10	9	Az.	226°22'53"	0.000 sec	1 : 0	1 : 534753541
		ΔHt.	-910.838 ft	0.035 ft		
		ΔElev.	-906.072 ft	0.035 ft		
		Ellip Dist.	130871.314 ft	0.000 ft		
10	EBASE	Az.	119°27'15"	0.013 sec	1 : 16786749	1 : 16743832
		ΔHt.	853.399 ft	0.047 ft		
		ΔElev.	849.214 ft	0.047 ft		
		Ellip Dist.	148196.656 ft	0.009 ft		
11	1	Az.	154°14'14"	0.004 sec	1 : 41862072	1 : 41757152
		ΔHt.	415.168 ft	0.046 ft		
		ΔElev.	406.687 ft	0.046 ft		
		Ellip Dist.	412192.617 ft	0.010 ft		
11	10	Az.	284°16'42"	0.011 sec	1 : 22567760	1 : 22528155
		ΔHt.	-724.014 ft	0.044 ft		
		ΔElev.	-718.174 ft	0.044 ft		
		Ellip Dist.	190033.244 ft	0.008 ft		
11	12	Az.	100°40'52"	0.014 sec	1 : 16340394	1 : 16406331
		ΔHt.	1834.274 ft	0.048 ft		
		ΔElev.	1830.340 ft	0.048 ft		

		Ellip Dist.	169129.257 ft	0.010 ft		
11	2	Az.	172°15'45"	0.004 sec	1 : 37903860	1 : 37916894
		ΔHt.	-731.740 ft	0.046 ft		
		ΔElev.	-735.171 ft	0.046 ft		
		Ellip Dist.	380423.203 ft	0.010 ft		
11	9	Az.	261°31'39"	0.007 sec	1 : 34695350	1 : 34850700
		ΔHt.	-1634.852 ft	0.045 ft		
		ΔElev.	-1624.246 ft	0.045 ft		
		Ellip Dist.	283537.606 ft	0.008 ft		
11	EBASE	Az.	243°25'24"	0.038 sec	1 : 6333932	1 : 6353208
		ΔHt.	129.385 ft	0.049 ft		
		ΔElev.	131.040 ft	0.049 ft		
		Ellip Dist.	63054.034 ft	0.010 ft		
12	1	Az.	178°41'43"	0.005 sec	1 : 35104561	1 : 35173570
		ΔHt.	-1419.107 ft	0.045 ft		
		ΔElev.	-1423.653 ft	0.045 ft		
		Ellip Dist.	340118.066 ft	0.010 ft		
12	10	Az.	283°27'57"	0.006 sec	1 : 41105281	1 : 41049381
		ΔHt.	-2558.288 ft	0.043 ft		
		ΔElev.	-2548.514 ft	0.043 ft		
		Ellip Dist.	358986.141 ft	0.009 ft		
12	2	Az.	199°16'49"	0.005 sec	1 : 38364727	1 : 38577100
		ΔHt.	-2566.015 ft	0.046 ft		
		ΔElev.	-2565.511 ft	0.046 ft		
		Ellip Dist.	364233.377 ft	0.009 ft		
12	9	Az.	269°32'35"	0.004 sec	1 : 51905659	1 : 52007768
		ΔHt.	-3469.126 ft	0.045 ft		
		ΔElev.	-3454.586 ft	0.045 ft		
		Ellip Dist.	446763.644 ft	0.009 ft		
12	EBASE	Az.	271°41'18"	0.011 sec	1 : 21201989	1 : 21231746
		ΔHt.	-1704.890 ft	0.050 ft		
		ΔElev.	-1699.301 ft	0.050 ft		
		Ellip Dist.	222612.510 ft	0.010 ft		

2	1	Az.	87°41'47"	0.000 sec	1 : 0	1 : 372350967
		ΔHt.	1146.908 ft	0.038 ft		
		ΔElev.	1141.858 ft	0.038 ft		
		Ellip Dist.	128061.039 ft	0.000 ft		
2	9	Az.	315°33'42"	0.000 sec	1 : 0	1 : 6530197230
		ΔHt.	-903.112 ft	0.037 ft		
		ΔElev.	-889.075 ft	0.037 ft		
		Ellip Dist.	471528.129 ft	0.000 ft		
EBASE	1	Az.	145°13'27"	0.004 sec	1 : 42758547	1 : 42635646
		ΔHt.	285.783 ft	0.048 ft		
		ΔElev.	275.647 ft	0.048 ft		
		Ellip Dist.	416100.562 ft	0.010 ft		
EBASE	2	Az.	162°33'14"	0.005 sec	1 : 36248247	1 : 36231326
		ΔHt.	-861.125 ft	0.049 ft		
		ΔElev.	-866.211 ft	0.049 ft		
		Ellip Dist.	364973.576 ft	0.010 ft		
EBASE	9	Az.	266°14'09"	0.009 sec	1 : 28090646	1 : 28056843
		ΔHt.	-1764.237 ft	0.048 ft		
		ΔElev.	-1755.285 ft	0.048 ft		
		Ellip Dist.	224461.882 ft	0.008 ft		

Date: 7/12/2011 2:11:01 PM	Project: L:\Mat-Su Borough\West Susitna\TBC_Proj \GPSI_11_12_E_19.vce	Trimble Business Center
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