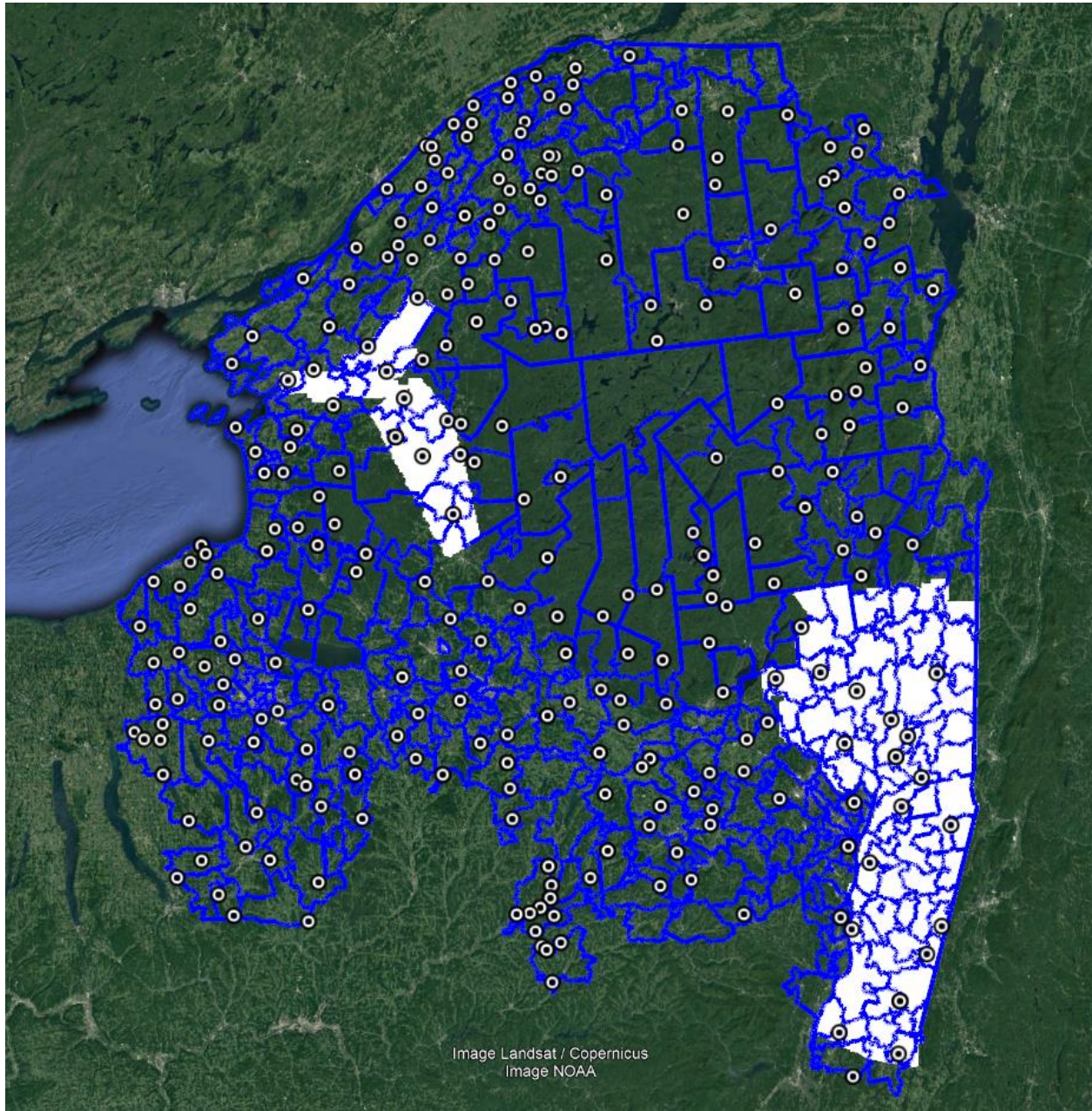


NVA REPORT

General Information	
Order#	NY_HudsonRiverRegion_2020_A20_201802
AOI/Block ID:	NY_HudsonRiverRegion_2020_A20
PTS Work Package ID:	192494
PTS Work Unit ID:	192491
Survey Company:	Woolpert and Compass Data
Survey Dates:	Woolpert - 8/31/2018 Compass Data - 8/2019
Report Completed By:	Drew Graves
Date of Report:	12/16/2019
Reviewed By:	Brian Perry

Spatial Reference	
Coordinate Reference System:	NAD83(2011) UTM Zone 18N
Zone:	18N
Horizontal Datum:	NAD83 (2011)
Vertical Datum:	NAVD88 2012 (GEOID12B)
Unit Reference:	Meters
# of NVA Points Used:	337
Horizontal: RMSEr (m) & (cm)	RMSEr: 0.18958 (m) / 18.958 (cm)
Vertical: RMSEz (m) & (cm)	RMSEz: 0.07217 (m) / 7.217 (cm)
Comments:	

NVA Points Graphic and Table





Name	X	Y	Z	Measured X	Measured Y	Measured Z	Delta X	Delta Y	Delta Z
ECP_0001	463161.69	4949542.25	88.70	463161.659	4949542.403	88.794	0.031	-0.153	-0.094
ECP_0003	474698.00	4952789.99	102.02	474697.858	4952790.02	102.11	0.142	-0.030	-0.090
ECP_0005	489128.25	4970583.72	76.14	489128.087	4970583.669	76.103	0.163	0.051	0.037
ECP_0007	497334.55	4972713.13	81.71	497334.467	4972713.26	81.658	0.083	-0.128	0.052
ECP_0008	501725.79	4966208.84	73.96	501725.703	4966208.87	74.003	0.087	-0.030	-0.043
ECP_0010	501633.06	4946452.51	133.63	501632.803	4946452.51	133.659	0.257	0.000	-0.029
ECP_0013	488737.94	4935135.89	116.64	488738.032	4935135.922	116.686	-0.092	-0.032	-0.046
ECP_0014	448631.58	4935694.36	94.86	448631.522	4935694.418	94.904	0.058	-0.058	-0.044
ECP_0015	485239.16	4938821.04	134.53	485239.23	4938821.20	134.573	-0.068	-0.156	-0.043
ECP_0016	468542.21	4940944.66	90.01	468542.146	4940944.802	90.041	0.064	-0.142	-0.031
ECP_0020R	459757.13	4936451.77	119.55	459757.051	4936451.85	119.725	0.079	-0.080	-0.175
ECP_0023R	495371.42	4935671.36	152.25	495371.39	4935671.411	152.301	0.030	-0.051	-0.051
ECP_0024R	499149.60	4940727.86	152.45	499149.53	4940728.015	152.509	0.070	-0.155	-0.059
ECP_0031	464236.35	4945153.39	103.35	464236.24	4945153.567	103.394	0.110	-0.177	-0.044
ECP_0101	510368.05	4975333.01	59.53	510368.08	4975333.047	59.539	-0.030	-0.037	-0.009
ECP_0102	528051.00	4979371.67	56.68	528050.99	4979371.636	56.674	0.010	0.034	0.006
ECP_212	482173.47	4924055.03	173.65	482173.336	4924055.153	173.774	0.134	-0.123	-0.124
ECP_220R	452993.78	4924694.02	102.91	452993.626	4924694.123	103.03	0.154	-0.103	-0.120
ECP_231R	498864.66	4931899.13	221.13	498864.531	4931899.173	221.191	0.129	-0.043	-0.061
ECP_237R	485396.76	4929005.29	150.91	485396.665	4929005.418	150.954	0.095	-0.128	-0.044
ECP_238R	474097.69	4926852.62	115.62	474097.5752	4926852.761	115.635	0.115	-0.141	-0.015
ECP_239R	463308.87	4929589.99	105.70	463308.717	4929590.022	105.88	0.153	-0.032	-0.180
ECP_0002_MOV	461369.34	4949809.71	84.17	461369.28	4949809.764	84.167	0.059	-0.058	0.005
ECP_0006_MOV	470414.98	4956954.64	83.88	470414.957	4956954.659	83.93	0.022	-0.015	-0.049
ECP_0012_MOV	502502.15	4939961.95	173.11	502502.10	4939962.03	173.16	0.048	-0.081	-0.051
ECP_0018R_MOV	476843.38	4963085.17	85.00	476843.321	4963085.231	85	0.061	-0.059	0.003
ECP_0027R_MOV	476392.93	4957220.72	111.38	476392.86	4957220.742	111.37	0.068	-0.025	0.010
ECP_0029R_MOV	488218.22	4965643.52	82.75	488218.219	4965643.67	82.81	0.001	-0.150	-0.059
ECP_0032R_MOV	493690.31	4957680.60	98.30	493690.279	4957680.678	98.29	0.030	-0.077	0.007
ECP_0051R_MOV	488044.18	4946813.93	105.56	488044.104	4946814.015	105.569	0.080	-0.086	-0.006
ECP_0054R_MOV	492352.17	4954011.67	86.97	492352.204	4954011.751	87.01	-0.035	-0.077	-0.037
ECP_0120R_MOV	511086.38	4941558.19	263.86	511086.369	4941558.293	263.89	0.012	-0.102	-0.032
ECP_0123R_MOV	503590.50	4946329.86	139.00	503590.482	4946329.975	139.03	0.014	-0.113	-0.035
ECP_0133R_MOV	579956.45	4960156.04	406.82	579956.329	4960156.217	406.723	0.121	-0.175	0.099
ECP_0141R_MOV	545197.42	4961533.10	226.94	545197.4	4961533.182	226.97	0.021	-0.078	-0.033
ECP_1024R_MOV	507024.74	4961980.99	108.20	507024.7533	4961981.124	108.186	-0.015	-0.130	0.010
ECP_113R_MOV	509541.43	4970014.88	78.60	509541.41	4970014.93	78.58	0.016	-0.051	0.015
ECP_129R_MOV	543940.23	4950012.54	445.97	543940.213	4950012.62	445.98	0.016	-0.082	-0.007
ECP_307R_MOV	520503.77	4933715.85	376.75	520503.67	4933716.005	376.76	0.102	-0.152	-0.006
ECP_201	436186.84	4904406.11	124.34	436186.768	4904406.127	124.355	0.072	-0.017	-0.015
ECP_202	421087.23	4906341.21	82.69	421087.248	4906341.151	82.758	-0.018	0.059	-0.068
ECP_206	429721.70	4890605.79	106.90	429721.596	4890605.863	106.969	0.104	-0.073	-0.069
ECP_209	468433.21	4901155.43	205.13	468433.045	4901155.359	205.131	0.165	0.071	-0.001
ECP_210	489167.70	4898868.04	305.44	489167.593	4898867.899	305.469	0.107	0.141	-0.029
ECP_212	482173.47	4924055.03	173.65	482173.31	4924055.052	173.808	0.160	-0.022	-0.158
ECP_214	478026.07	4892145.84	239.42	478026.109	4892145.788	239.44	-0.039	0.052	-0.020
ECP_215R	462664.95	4918837.21	118.22	462664.871	4918837.303	118.291	0.079	-0.093	-0.071
ECP_216R	452361.31	4917151.67	116.41	452361.21	4917151.82	116.481	0.100	-0.150	-0.071
ECP_220R	452993.78	4924694.02	102.91	452993.695	4924694.146	103.03	0.085	-0.126	-0.120
ECP_222R	438572.47	4916373.46	118.71	438572.399	4916373.475	118.857	0.071	-0.015	-0.147



ECP_229R	494802.13	4915106.03	248.96	494802.045	4915106.175	249.038	0.085	-0.145	-0.078
ECP_230R	456898.13	4912587.55	109.53	456898.051	4912587.624	109.593	0.079	-0.074	-0.063
ECP_234R	458724.92	4900085.22	160.90	458724.857	4900085.275	161.046	0.063	-0.055	-0.146
ECP_235R	472738.70	4912864.88	176.12	472738.575	4912865.002	176.167	0.125	-0.122	-0.047
ECP_238R	474097.69	4926852.62	115.62	474097.564	4926852.834	115.726	0.126	-0.214	-0.106
ECP_211_MOV	483903.12	4912418.50	220.70	483903.028	4912418.55	220.68	0.092	-0.051	0.019
ECP_224R_MOV	448846.76	4913377.22	118.39	448846.651	4913377.27	118.347	0.110	-0.055	0.043
ECP_236_MOV	475104.99	4904510.46	211.78	475104.942	4904510.531	211.78	0.050	-0.073	-0.003
ECP_321R_MOV	520503.04	4912346.54	477.94	520502.972	4912346.62	477.94	0.069	-0.085	-0.002
ECP_327R_MOV_ALT	497242.95	4889637.01	453.74	497242.902	4889637.012	453.703	0.046	0.001	0.032
ECP_204	424638.87	4876630.44	128.89	424638.832	4876630.316	128.887	0.038	0.124	0.003
ECP_206	429721.70	4890605.79	106.90	429721.66	4890605.955	107.046	0.040	-0.165	-0.146
ECP_213	460448.39	4879657.81	249.69	460448.295	4879657.979	249.669	0.095	-0.169	0.021
ECP_214	478026.07	4892145.84	239.42	478026.095	4892145.79	239.508	-0.025	0.050	-0.088
ECP_217R	404478.65	4887549.20	105.73	404478.593	4887549.353	105.852	0.057	-0.153	-0.122
ECP_218R	442391.77	4884113.47	165.09	442391.676	4884113.531	165.279	0.094	-0.061	-0.189
ECP_223R	397789.95	4878567.15	78.59	397789.944	4878567.222	78.682	0.006	-0.072	-0.092
ECP_241	468023.59	4884349.71	277.89	468023.273	4884349.732	277.917	0.317	-0.022	-0.027
ECP_401	416240.55	4873094.77	79.15	416240.798	4873094.755	79.121	-0.248	0.015	0.029
ECP_402	419204.83	4856834.67	193.71	419204.661	4856834.626	193.638	0.169	0.044	0.072
ECP_406	431125.48	4864812.01	242.97	431125.428	4864812.089	242.962	0.052	-0.079	0.008
ECP_408	451541.01	4854561.38	415.17	451541.196	4854561.434	415.111	-0.186	-0.054	0.059
ECP_409	454319.90	4867127.14	227.87	454319.678	4867127.184	227.929	0.222	-0.044	-0.059
ECP_439R	472917.86	4858831.30	281.72	472917.85	4858831.365	281.68	0.010	-0.065	0.040
ECP_207_MOV	448555.56	4875946.19	219.29	448555.51	4875946.24	219.36	0.050	-0.046	-0.067
ECP_227R_MOV	505801.09	4888270.15	454.11	505801.081	4888270.146	454.141	0.009	0.005	-0.027
ECP_327R_MOV_ALT	497242.95	4889637.01	453.74	497243.096	4889636.96	453.778	-0.148	0.053	-0.043
ECP_420R_MOV	399122.64	4857732.54	98.89	399122.67	4857732.592	98.731	-0.033	-0.050	0.155
ECP_432R_MOV	486361.17	4858158.78	439.49	486361.087	4858158.82	439.37	0.082	-0.040	0.116
ECP_440R_MOV	468536.78	4859896.35	257.76	468536.825	4859896.356	257.632	-0.041	-0.006	0.129
ECP_402	419204.83	4856834.67	193.71	419204.71	4856834.62	193.656	0.120	0.050	0.054
ECP_403	408517.85	4842823.27	100.50	408517.796	4842823.372	100.534	0.054	-0.102	-0.034
ECP_405	409419.68	4817401.78	133.28	409419.694	4817402.102	133.323	-0.014	-0.322	-0.043
ECP_408	451541.01	4854561.38	415.17	451541.205	4854561.465	415.124	-0.195	-0.085	0.046
ECP_410	460358.38	4848279.73	270.02	460358.42	4848279.775	269.986	-0.040	-0.045	0.034
ECP_411	470365.54	4829364.32	256.85	470365.508	4829364.3	256.85	0.032	0.020	0.000
ECP_413R	405603.11	4849711.57	125.24	405603.05	4849711.59	125.28	0.060	-0.020	-0.040
ECP_414	414766.73	4843021.60	190.70	414766.665	4843021.711	190.682	0.065	-0.111	0.018
ECP_415	416981.57	4851364.12	175.31	416981.6	4851364.27	175.314	-0.030	-0.150	-0.004
ECP_416R	433140.07	4843495.06	470.39	433140.092	4843495.052	470.382	-0.022	0.008	0.008
ECP_417R	419563.81	4825145.43	246.05	419563.42	4825145.56	245.99	0.390	-0.130	0.060
ECP_418R	412003.65	4824566.11	135.21	412003.482	4824566.08	135.163	0.168	0.030	0.047
ECP_419R	389277.90	4816468.05	111.42	389277.93	4816468.192	111.41	-0.030	-0.142	0.010
ECP_421R	426072.53	4819293.03	268.57	426072.51	4819293.03	268.63	0.020	0.000	-0.060
ECP_422R	426516.83	4835202.77	424.84	426516.686	4835202.628	424.892	0.144	0.142	-0.052
ECP_426R	441884.06	4816520.65	318.71	441883.977	4816520.684	318.69	0.083	-0.034	0.020
ECP_427R	431586.11	4826185.39	319.98	431586.09	4826185.443	320.07	0.020	-0.053	-0.090
ECP_436R	472718.58	4848930.19	343.85	472718.491	4848930.259	343.916	0.089	-0.069	-0.066
ECP_438R	387867.89	4819213.55	87.75	387867.997	4819213.6	87.821	-0.107	-0.050	-0.071
ECP_441R	477337.75	4846387.27	385.14	477337.7	4846387.36	385.14	0.050	-0.090	0.000
ECP_405	409419.68	4817401.78	133.28	409419.659	4817402.095	133.331	0.021	-0.315	-0.051



ECP_419R	389277.90	4816468.05	111.42	389277.905	4816468.189	111.415	-0.005	-0.139	0.005
ECP_421R	426072.53	4819293.03	268.57	426072.51	4819293.02	268.62	0.020	0.010	-0.050
ECP_426R	441884.06	4816520.65	318.71	441883.927	4816520.647	318.67	0.133	0.003	0.040
ECP_438R	387867.89	4819213.55	87.75	387867.955	4819213.593	87.8	-0.065	-0.043	-0.050
ECP_601	384246.61	4813819.88	103.74	384246.593	4813819.87	103.766	0.017	0.010	-0.026
ECP_603	372174.37	4807439.03	109.84	372174.419	4807439.21	109.909	-0.049	-0.180	-0.069
ECP_605	384135.39	4798547.79	126.01	384135.456	4798547.762	126.02	-0.066	0.028	-0.010
ECP_607	406513.69	4795315.65	127.20	406513.751	4795315.729	127.221	-0.061	-0.079	-0.021
ECP_608	398924.30	4782141.80	121.97	398924.245	4782141.959	122.007	0.055	-0.159	-0.037
ECP_610	393109.78	4810099.54	139.88	393109.79	4810099.428	139.871	-0.010	0.112	0.009
ECP_611	395051.97	4773962.37	140.70	395051.9	4773962.517	140.759	0.070	-0.147	-0.059
ECP_612	380065.61	4769122.03	126.74	380065.512	4769122.158	126.806	0.098	-0.128	-0.066
ECP_613	375081.30	4760935.48	186.78	375081.135	4760935.508	186.79	0.165	-0.028	-0.010
ECP_614	388921.87	4779799.79	125.09	388921.874	4779799.834	125.198	-0.004	-0.044	-0.108
ECP_615	407614.91	4762664.47	167.10	407615.011	4762664.593	167.09	-0.101	-0.123	0.010
ECP_616	429504.74	4767116.75	133.92	429504.913	4767116.8	133.954	-0.173	-0.050	-0.034
ECP_617	412268.46	4781048.39	125.17	412268.459	4781048.457	125.218	0.001	-0.067	-0.048
ECP_618	452130.64	4757216.69	221.75	452130.627	4757216.793	221.862	0.013	-0.103	-0.112
ECP_619	453703.53	4776310.29	149.93	453703.467	4776310.23	150.018	0.063	0.060	-0.088
ECP_623	461194.42	4807446.34	418.11	461194.2	4807446.519	418.189	0.220	-0.179	-0.079
ECP_624	469494.00	4795357.23	180.51	469493.916	4795357.253	180.496	0.084	-0.023	0.014
ECP_625	473038.81	4778425.06	130.62	473038.726	4778425.158	130.762	0.084	-0.098	-0.142
ECP_627	501222.56	4763765.34	120.63	501222.496	4763765.396	120.615	0.064	-0.056	0.015
ECP_629	492150.21	4798677.65	383.29	492150.197	4798677.648	383.334	0.013	0.002	-0.044
ECP_630	380835.86	4805795.74	95.95	380835.735	4805795.95	95.958	0.125	-0.210	-0.008
ECP_631	372711.46	4767423.72	124.92	372711.493	4767423.881	124.99	-0.033	-0.161	-0.070
ECP_634	413002.97	4765265.35	143.43	413003.014	4765265.552	143.497	-0.044	-0.202	-0.067
ECP_635	393728.46	4767132.77	126.62	393728.519	4767132.755	126.681	-0.059	0.015	-0.061
ECP_636	472707.47	4768718.75	169.22	472707.49	4768718.805	169.288	-0.020	-0.055	-0.068
ECP_638	479413.18	4788064.37	204.26	479412.99	4788064.35	204.334	0.190	0.020	-0.074
ECP_639	481764.29	4807583.18	367.09	481764.156	4807583.109	367.024	0.134	0.071	0.066
ECP_640	458987.25	4764460.19	249.06	458987.338	4764460.24	249.093	-0.088	-0.050	-0.033
ECP_641R	438716.32	4810613.64	287.82	438716.292	4810613.619	287.959	0.028	0.021	-0.139
ECP_643R	488162.60	4757665.30	441.15	488162.67	4757665.422	441.306	-0.070	-0.122	-0.156
ECP_650R	365761.55	4758284.55	162.05	365761.496	4758284.663	162.075	0.054	-0.113	-0.025
ECP_651R	422969.71	4798295.09	185.23	422969.596	4798295.175	185.322	0.114	-0.085	-0.092
ECP_754R	504466.34	4796109.51	435.00	504466.311	4796109.439	435.11	0.029	0.071	-0.110
ECP_814	405037.93	4755096.07	147.27	405037.894	4755096.252	147.3	0.036	-0.182	-0.030
ECP_816	466988.45	4744571.88	372.37	466988.469	4744572.056	372.356	-0.019	-0.176	0.014
ECP_817	458170.52	4749722.02	366.26	458170.601	4749722.058	366.259	-0.081	-0.038	0.001
ECP_819	479270.79	4754823.04	377.12	479270.785	4754823.189	377.12	0.005	-0.149	0.000
ECP_820	488159.30	4748455.22	377.73	488159.339	4748455.299	377.717	-0.039	-0.079	0.013
ECP_825	438282.64	4744630.90	468.77	438283.041	4744630.751	468.74	-0.401	0.149	0.030
ECP_827	422445.83	4752716.81	377.96	422445.793	4752716.796	378.045	0.037	0.014	-0.085
ECP_828R	390137.71	4755436.94	292.83	390137.7	4755437.065	292.934	0.010	-0.125	-0.104
ECP_829	374353.33	4755694.35	236.91	374353.322	4755694.415	236.941	0.008	-0.065	-0.031
ECP_830R	368987.12	4755886.38	181.46	368987.104	4755886.493	181.544	0.016	-0.113	-0.084
ECP_856	438253.52	4744651.87	470.56	438252.936	4744652.367	470.635	0.584	-0.497	-0.075
ECP_438R_MOV	387876.85	4819202.16	87.92	387876.99	4819202.193	87.953	-0.137	-0.037	-0.029
ECP_604_MOV	367627.86	4792849.46	113.46	367627.903	4792849.465	113.424	-0.042	-0.010	0.031
ECP_606_MOV	380466.64	4784332.53	132.16	380466.572	4784332.633	132.212	0.067	-0.103	-0.055



ECP_609_MOV	372164.62	4780987.43	129.99	372164.6	4780987.573	130.05	0.015	-0.146	-0.059
ECP_633_MOV	394138.66	4787925.47	113.49	394138.677	4787925.5	113.534	-0.021	-0.026	-0.049
ECP_653R_MOV	501218.44	4815251.72	556.74	501218.377	4815251.684	556.62	0.059	0.033	0.120
ECP_815_MOV	436500.25	4751865.92	435.98	436500.223	4751865.988	435.94	0.029	-0.064	0.038
ECP_851R_MOV	375183.57	4744384.43	227.06	375183.6	4744384.631	226.952	-0.031	-0.198	0.105
ECP_556R	488996.02	4740070.53	417.60	488996.005	4740070.53	417.684	0.015	0.000	-0.084
ECP_804	383634.97	4729285.73	225.23	383634.9	4729285.859	225.275	0.070	-0.129	-0.045
ECP_805	402334.32	4720863.46	348.86	402334.227	4720863.462	348.861	0.093	-0.002	-0.001
ECP_807	398352.31	4698251.05	367.58	398352.203	4698251.04	367.565	0.107	0.010	0.015
ECP_808	426213.44	4709309.15	319.48	426213.34	4709309.157	319.528	0.100	-0.007	-0.048
ECP_810	410315.39	4716538.56	354.44	410315.37	4716538.677	354.453	0.020	-0.117	-0.013
ECP_811	427146.33	4734129.08	396.97	427146.161	4734129.005	396.987	0.169	0.075	-0.017
ECP_816	466988.45	4744571.88	372.37	466988.444	4744571.97	372.394	0.006	-0.090	-0.024
ECP_820	488159.30	4748455.22	377.73	488159.25	4748455.329	377.785	0.050	-0.109	-0.055
ECP_823	495493.28	4699341.87	329.17	495493.149	4699341.95	329.23	0.131	-0.080	-0.060
ECP_824	440631.56	4730133.76	413.63	440631.59	4730133.81	413.657	-0.030	-0.050	-0.027
ECP_832	406019.54	4732061.71	372.28	406019.54	4732061.79	372.261	0.000	-0.080	0.019
ECP_834R	422208.08	4740817.29	378.03	422208.07	4740817.35	378.115	0.010	-0.060	-0.085
ECP_835	419114.18	4742922.38	383.87	419114.15	4742922.5	383.875	0.030	-0.120	-0.005
ECP_837	498879.08	4701095.64	352.44	498879.17	4701095.75	352.476	-0.090	-0.110	-0.036
ECP_838R	501543.28	4714633.01	461.77	501543.225	4714633.016	461.896	0.055	-0.006	-0.126
ECP_1002	393356.85	4705110.81	332.64	393356.85	4705110.97	332.568	0.000	-0.160	0.072
ECP_1004R	502177.52	4704226.48	341.87	502177.562	4704226.545	341.859	-0.042	-0.065	0.011
ECP_1005R	500940.81	4687278.61	559.47	500940.792	4687278.686	559.514	0.018	-0.076	-0.044
ECP_1003R_MOV	497308.02	4693385.70	455.20	497307.921	4693385.749	455.22	0.094	-0.053	-0.020
ECP_1004R_MOV	502174.85	4704228.21	341.91	502174.85	4704228.26	341.9	-0.003	-0.053	0.005
ECP_1051R_MOV	422910.32	4696480.74	360.09	422910.31	4696480.71	360.1	0.013	0.028	-0.006
ECP_1052R_MOV	491131.38	4698951.22	334.15	491131.442	4698951.2	334.157	-0.063	0.023	-0.007
ECP_1053R_MOV	502841.01	4676625.69	407.43	502840.923	4676625.777	407.381	0.087	-0.088	0.053
ECP_1056R_MOV	499402.00	4688384.75	516.07	499401.802	4688384.768	516.006	0.199	-0.020	0.067
ECP_1152R_MOV	505618.08	4689678.68	673.78	505618.017	4689678.734	673.78	0.063	-0.052	-0.002
ECP_833R_MOV	379726.03	4710607.54	352.12	379725.979	4710607.503	352.1	0.050	0.041	0.023
ECP_836R	502531.34	4708479.53	353.36	502531.299	4708479.6	353.308	0.036	-0.067	0.048
ECP_840R_MOV	489724.01	4730069.28	469.22	489724.082	4730069.31	469.229	-0.076	-0.027	-0.009
ECP_851R_MOV	375183.57	4744384.43	227.06	375183.607	4744384.49	227.002	-0.038	-0.057	0.055
ECP_852R_MOV	387795.51	4716277.12	308.52	387795.43	4716276.996	308.517	0.079	0.121	0.005
ECP_855R	503396.79	4698441.29	397.47	503396.757	4698441.4	397.451	0.031	-0.109	0.022
ECP_0137R	595016.02	4940296.84	363.42	595016.033	4940296.88	363.41	-0.013	-0.040	0.010
ECP_301	534981.10	4897613.67	472.12	534981.069	4897613.744	472.18	0.031	-0.074	-0.060
ECP_302	582328.01	4901457.69	532.44	582327.943	4901457.779	532.51	0.067	-0.089	-0.070
ECP_305	597681.19	4909795.05	207.48	597681.3	4909795.002	207.487	-0.110	0.048	-0.007
ECP_309R	545644.25	4927515.36	481.87	545644.097	4927515.508	481.756	0.153	-0.148	0.114
ECP_0133R_MOV	579956.45	4960156.04	406.82	579956.406	4960156.084	406.79	0.044	-0.042	0.032
ECP_0136R_MOV	556166.03	4937122.55	482.07	556165.948	4937122.653	482.033	0.085	-0.104	0.040
ECP_0138R	605184.93	4955535.29	424.56	605184.951	4955535.397	424.551	-0.017	-0.106	0.012
ECP_114R	593931.97	4949609.48	517.74	593932.023	4949609.623	517.671	-0.057	-0.146	0.067
ECP_129R_MOV	543940.23	4950012.54	445.97	543940.123	4950012.734	445.93	0.106	-0.196	0.043
ECP_130R_MOV	556894.43	4945953.80	462.86	556894.32	4945953.827	462.759	0.113	-0.032	0.102
ECP_311R	598644.09	4929716.86	350.38	598644.133	4929716.91	350.324	-0.048	-0.046	0.051
ECP_313R	602761.21	4896036.81	476.79	602761.333	4896036.876	476.7	-0.122	-0.069	0.090
ECP_314R	606956.50	4918236.85	268.75	606956.574	4918236.863	268.735	-0.079	-0.017	0.011



ECP_321R_MOV	520503.04	4912346.54	477.94	520502.88	4912346.6	477.935	0.161	-0.065	0.003
ECP_332R_MOV	557246.94	4911435.87	497.68	557246.784	4911435.715	497.711	0.156	0.158	-0.031
ECP_335R_MOV	553067.22	4897733.02	533.65	553067.142	4897733.214	533.589	0.081	-0.190	0.056
ECP_336R_MOV	592072.20	4938368.16	357.08	592072.03	4938368.21	357.046	0.167	-0.046	0.036
ECP_334R	597987.81	4890247.68	343.18	597987.658	4890247.986	343.203	0.152	-0.306	-0.023
ECP_504	600024.08	4858358.50	269.66	600023.99	4858358.54	269.652	0.090	-0.040	0.008
ECP_509R	602186.80	4869597.17	266.89	602186.878	4869597.224	266.901	-0.078	-0.054	-0.011
ECP_518	551522.37	4816470.55	529.89	551522.35	4816470.5	529.893	0.020	0.050	-0.003
ECP_533R	569053.12	4820044.38	416.22	569053.24	4820044.422	416.285	-0.120	-0.042	-0.065
ECP_534R	585436.66	4831700.50	325.29	585436.697	4831700.55	325.19	-0.037	-0.050	0.100
ECP_558R	576495.96	4843448.88	322.53	576496.022	4843448.957	322.5	-0.062	-0.077	0.030
ECP_227R_MOV	505801.09	4888270.15	454.11	505801.186	4888270.254	454.112	-0.096	-0.103	0.002
ECP_233R_MOV	500597.46	4890453.36	437.41	500597.407	4890453.65	437.3784	0.051	-0.295	0.032
ECP_313R	602761.21	4896036.81	476.79	602761.338	4896036.945	476.68	-0.127	-0.138	0.110
ECP_324R_MOV	536988.09	4885911.18	476.60	536987.991	4885911.371	476.584	0.103	-0.192	0.013
ECP_334R_MOV	598062.56	4890120.68	346.47	598062.61	4890120.76	346.515	-0.046	-0.082	-0.046
ECP_339R	605412.57	4877367.29	311.91	605412.702	4877367.263	311.858	-0.128	0.027	0.052
ECP_437R_MOV	493535.68	4834230.20	505.64	493535.524	4834230.186	505.607	0.156	0.018	0.036
ECP_509R_MOV	602186.81	4869597.19	266.94	602186.878	4869597.224	266.901	-0.067	-0.036	0.043
ECP_511R_MOV	590899.36	4855650.52	456.23	590899.483	4855650.664	456.125	-0.121	-0.148	0.103
ECP_522R_MOV	505452.26	4841550.96	603.86	505452.17	4841551.025	603.783	0.088	-0.067	0.075
ECP_529R_MOV	548796.48	4823425.02	557.99	548796.466	4823425.099	557.9	0.018	-0.076	0.089
ECP_530R_MOV	556441.70	4847750.84	509.92	556441.7	4847750.835	509.92	0.002	0.003	-0.002
ECP_532R_MOV	576612.50	4843376.89	323.71	576612.557	4843377.01	323.715	-0.059	-0.125	-0.006
ECP_534R_MOV	585478.02	4831637.00	325.36	585478.076	4831637.08	325.32	-0.061	-0.077	0.041
ECP_536R	595745.13	4868200.03	369.75	595745.201	4868200.068	369.767	-0.067	-0.038	-0.020
ECP_537R_MOV	576416.49	4865561.10	533.27	576416.511	4865561.105	533.29	-0.017	-0.009	-0.020
ECP_557_MOV	552286.24	4815900.35	528.61	552286.228	4815900.409	528.612	0.016	-0.056	-0.006
ECP_653R_MOV	501218.44	4815251.72	556.74	501218.356	4815251.752	556.643	0.080	-0.035	0.097
ECP_757R_MOV	575283.20	4806923.17	461.52	575283.233	4806923.016	461.504	-0.035	0.150	0.011
ECP_758R_MOV	555374.09	4809708.18	517.88	555374.179	4809708.133	517.841	-0.089	0.048	0.037
ECP_0137R	595016.02	4940296.84	363.42	595015.859	4940296.829	363.441	0.161	0.011	-0.021
ECP_0138R	605184.88	4955535.30	424.60	605184.947	4955535.385	424.574	-0.067	-0.085	0.026
ECP_114R	593931.97	4949609.47	517.66	593932.128	4949609.443	517.655	-0.158	0.027	0.005
ECP_117R	602857.44	4947816.06	226.41	602857.437	4947816.174	226.4	0.003	-0.114	0.010
ECP_303	623420.90	4878063.56	52.63	623420.9	4878063.6	52.663	0.000	-0.040	-0.033
ECP_305	597681.19	4909795.05	207.48	597681.196	4909794.969	207.464	-0.006	0.081	0.016
ECP_306	613244.10	4924694.27	166.78	613244.191	4924694.3	166.79	-0.091	-0.030	-0.010
ECP_311R	598644.10	4929716.86	350.37	598644.103	4929716.95	350.374	-0.003	-0.090	-0.004
ECP_313R	602761.24	4896036.79	476.73	602761.17	4896036.842	476.683	0.070	-0.052	0.047
ECP_314R	606956.25	4918236.81	268.69	606956.56	4918236.904	268.725	-0.310	-0.094	-0.035
ECP_317	613271.77	4890304.11	357.37	613271.76	4890304.2	357.365	0.010	-0.090	0.005
ECP_318	627658.80	4902777.48	75.29	627658.856	4902777.546	75.358	-0.056	-0.066	-0.068
ECP_334R	597987.81	4890247.68	343.18	597987.557	4890247.923	343.22	0.253	-0.243	-0.040
ECP_337R	616535.39	4934426.61	133.05	616535.435	4934426.593	133.02	-0.045	0.017	0.030
ECP_338R	616912.36	4910092.95	199.99	616912.355	4910093.019	200.037	0.005	-0.069	-0.047
ECP_339R	605412.57	4877367.29	311.85	605412.607	4877367.301	311.829	-0.037	-0.011	0.021
ECP_501	594516.40	4843261.19	263.33	594516.607	4843261.173	263.344	-0.207	0.017	-0.014
ECP_502	602506.70	4828695.06	226.36	602506.752	4828695.081	226.35	-0.052	-0.021	0.010
ECP_504	600024.08	4858358.50	269.66	600024.099	4858358.439	269.688	-0.019	0.061	-0.028
ECP_508R	617513.48	4864302.06	287.19	617513.416	4864302.081	287.162	0.064	-0.021	0.028



ECP_509R	602186.80	4869597.17	266.89	602186.811	4869597.183	266.863	-0.011	-0.013	0.027
ECP_515R	620769.20	4819613.01	34.81	620769.16	4819612.959	34.884	0.040	0.051	-0.074
ECP_516	608586.39	4823423.33	109.46	608586.503	4823423.197	109.397	-0.113	0.133	0.063
ECP_517	597889.19	4817755.94	241.76	597889.13	4817755.93	241.72	0.060	0.010	0.040
ECP_534R	585436.66	4831700.50	325.29	585436.644	4831700.487	325.203	0.016	0.013	0.087
ECP_536R	595745.16	4868200.01	369.72	595745.157	4868200.058	369.7452	0.003	-0.048	-0.025
ECP_703	538821.67	4781895.13	478.90	538821.5	4781895.114	478.908	0.170	0.016	-0.008
ECP_704	536956.48	4804874.93	526.85	536956.719	4804874.939	526.805	-0.239	-0.009	0.045
ECP_706	584143.54	4792713.36	238.86	584143.574	4792713.283	238.798	-0.034	0.077	0.062
ECP_715R	527568.14	4803079.00	584.95	527568.6276	4803078.799	584.899	-0.488	0.201	0.051
ECP_716R	554849.58	4802170.95	317.38	554849.464	4802170.45	317.29	0.116	0.500	0.090
ECP_718R	527543.24	4784045.81	433.15	527542.913	4784045.741	433.115	0.327	0.069	0.035
ECP_719R	507239.65	4784112.60	529.58	507239.581	4784112.618	529.67	0.069	-0.018	-0.090
ECP_729	603916.90	4809448.44	122.56	603916.804	4809448.425	122.603	0.096	0.015	-0.043
ECP_754R	504466.34	4796109.51	435.00	504466.145	4796109.466	435.014	0.195	0.044	-0.014
ECP_755R	519326.27	4796219.19	644.24	519326.176	4796219.196	644.227	0.094	-0.006	0.013
ECP_756R	559761.93	4799519.29	271.02	559761.978	4799519.272	270.892	-0.048	0.018	0.128
ECP_758R	555362.84	4809523.54	523.24	555362.558	4809523.499	523.362	0.282	0.041	-0.122
ECP_765R	554076.09	4787575.68	393.60	554076.093	4787575.688	393.58	-0.003	-0.008	0.020
ECP_627	501222.56	4763765.34	120.63	501222.34	4763765.35	120.62	0.220	-0.010	0.010
ECP_701	518695.06	4772292.21	243.93	518695.121	4772291.905	244.041	-0.061	0.305	-0.111
ECP_702	526124.60	4760851.79	106.88	526124.509	4760851.94	106.953	0.091	-0.150	-0.073
ECP_703	538821.67	4781895.13	478.90	538821.454	4781895.008	478.856	0.216	0.122	0.044
ECP_710	602445.74	4771804.38	81.67	602445.742	4771804.3	81.629	-0.002	0.080	0.041
ECP_711	590516.35	4777892.32	204.03	590516.298	4777892.3	204.102	0.052	0.020	-0.072
ECP_712	566412.60	4756031.20	187.55	566412.41	4756031.238	187.567	0.190	-0.038	-0.017
ECP_713	558568.15	4771426.87	253.75	558568.185	4771426.98	253.706	-0.035	-0.110	0.044
ECP_714	540001.85	4767683.07	325.36	540001.842	4767682.958	325.311	0.008	0.112	0.049
ECP_718R	527543.24	4784045.81	433.15	527542.973	4784045.687	433.091	0.267	0.123	0.059
ECP_719R	507239.65	4784112.60	529.58	507239.55	4784112.566	529.646	0.100	0.034	-0.066
ECP_720	508403.36	4768163.22	241.32	508403.117	4768163.234	241.334	0.243	-0.014	-0.014
ECP_722	525029.68	4768915.06	334.92	525029.629	4768914.967	334.929	0.051	0.093	-0.009
ECP_726R	575857.14	4775904.82	401.40	575857.131	4775904.745	401.42	0.009	0.075	-0.020
ECP_728	613801.99	4762443.02	28.95	613801.866	4762442.937	28.965	0.124	0.083	-0.015
ECP_730R	573258.01	4761613.94	257.85	573257.99	4761613.935	257.825	0.020	0.005	0.025
ECP_761R	628770.96	4777633.18	128.42	628770.841	4777633.14	128.48	0.119	0.040	-0.060
ECP_762R	619216.04	4756972.00	195.55	619215.907	4756971.856	195.536	0.133	0.144	0.014
ECP_901	518185.73	4751739.73	210.82	518185.734	4751739.705	210.844	-0.004	0.025	-0.024
ECP_905	534682.01	4749814.49	134.19	534681.959	4749814.587	134.155	0.051	-0.097	0.035
ECP_915	598512.86	4754685.13	56.71	598512.933	4754685.15	56.752	-0.073	-0.020	-0.042
ECP_916	615383.10	4750299.59	92.76	615383.09	4750299.68	92.834	0.010	-0.090	-0.074
ECP_901	518185.73	4751739.73	210.82	518185.685	4751739.664	210.841	0.045	0.066	-0.021
ECP_903	520108.93	4738294.11	406.50	520109.242	4738293.982	406.597	-0.312	0.128	-0.097
ECP_904	538271.63	4734355.27	359.04	538271.67	4734355.37	359.068	-0.040	-0.100	-0.028
ECP_905	534682.01	4749814.49	134.19	534681.93	4749814.5	134.146	0.080	-0.010	0.044
ECP_909	577142.95	4736700.79	125.58	577142.907	4736700.855	125.6	0.043	-0.065	-0.020
ECP_910	565436.15	4745671.86	222.49	565436.146	4745671.72	222.528	0.004	0.140	-0.038
ECP_914	601708.19	4735407.87	93.22	601708.228	4735407.8	93.201	-0.038	0.070	0.019
ECP_916	615383.10	4750299.59	92.76	615383.05	4750299.664	92.82	0.050	-0.074	-0.060
ECP_918	617303.97	4734031.23	155.43	617304	4734031.1	155.469	-0.030	0.130	-0.039
ECP_919	633574.81	4727910.69	254.83	633574.67	4727910.641	254.814	0.140	0.049	0.016



ECP_922R	534564.07	4727950.46	362.56	534564.247	4727950.571	362.606	-0.177	-0.111	-0.046
ECP_928	599789.24	4721038.70	60.51	599789.3	4721038.6	60.511	-0.060	0.100	-0.001
ECP_933	554234.16	4745131.36	325.44	554234.139	4745131.385	325.441	0.021	-0.025	-0.001
ECP_934	555108.64	4733296.51	186.18	555108.735	4733296.603	186.17	-0.095	-0.093	0.010
ECP_935	549148.08	4739102.13	333.21	549148.08	4739102.127	333.21	0.000	0.003	0.000
ECP_936	532035.45	4747031.83	204.85	532035.509	4747032.05	204.85	-0.059	-0.220	0.000
ECP_953R	520909.05	4719710.19	489.91	520909.127	4719710.291	490.019	-0.077	-0.101	-0.109
ECP_957R	554481.44	4728291.15	192.71	554481.55	4728291.251	192.671	-0.110	-0.101	0.039
ECP_958R	623816.12	4743488.52	176.24	623816.041	4743488.5	176.19	0.079	0.020	0.050
ECP_836R	502531.27	4708479.81	353.30	502531.271	4708479.6	353.345	-0.001	0.210	-0.045
ECP_837	498879.08	4701095.64	352.44	498879.222	4701095.54	352.521	-0.142	0.100	-0.081
ECP_838R	501543.28	4714633.01	461.77	501543.25	4714633.181	461.853	0.030	-0.171	-0.083
ECP_902	515291.33	4710903.22	404.64	515291.213	4710903.354	404.712	0.117	-0.134	-0.072
ECP_906	548287.54	4710217.25	221.13	548287.56	4710217.26	221.17	-0.020	-0.010	-0.040
ECP_907	565569.26	4698897.83	256.39	565569.35	4698897.82	256.367	-0.090	0.010	0.023
ECP_913	606844.92	4715689.85	106.73	606844.786	4715689.698	106.704	0.134	0.152	0.026
ECP_923R	543644.94	4719177.12	522.06	543644.978	4719177.168	522.095	-0.038	-0.048	-0.035
ECP_925R	538135.60	4708213.72	616.81	538135.6	4708213.81	616.942	0.000	-0.090	-0.132
ECP_928	599789.24	4721038.70	60.51	599789.4	4721038.49	60.517	-0.160	0.210	-0.007
ECP_953R	520909.05	4719710.19	489.91	520909.07	4719710.282	490.04	-0.020	-0.092	-0.130
ECP_1004R	502177.52	4704226.48	341.87	502177.44	4704226.522	341.838	0.080	-0.042	0.032
ECP_1159R	597352.70	4697757.08	73.73	597352.815	4697756.997	73.725	-0.115	0.083	0.005
ECP_1005R	500940.81	4687278.61	559.47	500940.643	4687278.655	559.54	0.167	-0.045	-0.070
ECP_1102	601029.99	4693852.76	46.89	601030.04	4693852.691	46.919	-0.050	0.069	-0.029
ECP_1103	630713.62	4694734.02	321.27	630713.41	4694733.759	321.316	0.210	0.261	-0.046
ECP_1106	625816.21	4685588.19	344.40	625816.1	4685588.26	344.405	0.110	-0.070	-0.005
ECP_1108	617044.01	4670171.81	194.06	617044.02	4670171.75	194.072	-0.010	0.060	-0.012
ECP_1159R	597352.70	4697757.08	73.73	597352.77	4697757.04	73.779	-0.070	0.040	-0.049
ECP_1108	617044.01	4670171.81	194.06	617044.01	4670171.8	194.043	0.000	0.010	0.017
ECP_1109	597070.84	4659912.40	69.38	597070.84	4659912.38	69.372	0.000	0.020	0.008
ECP_1110	616640.70	4652738.45	166.71	616640.58	4652738.377	166.83	0.120	0.073	-0.120
ECP_1157R	601683.90	4645338.28	145.06	601684.04	4645337.94	145.1	-0.140	0.340	-0.040

Horizontal Accuracy:	
RMSEr (m)	0.155804832
RMSEr (cm)	15.58048316
Vertical Accuracy:	
RMSEz (m)	0.060310684
RMSEz (cm)	6.031068425