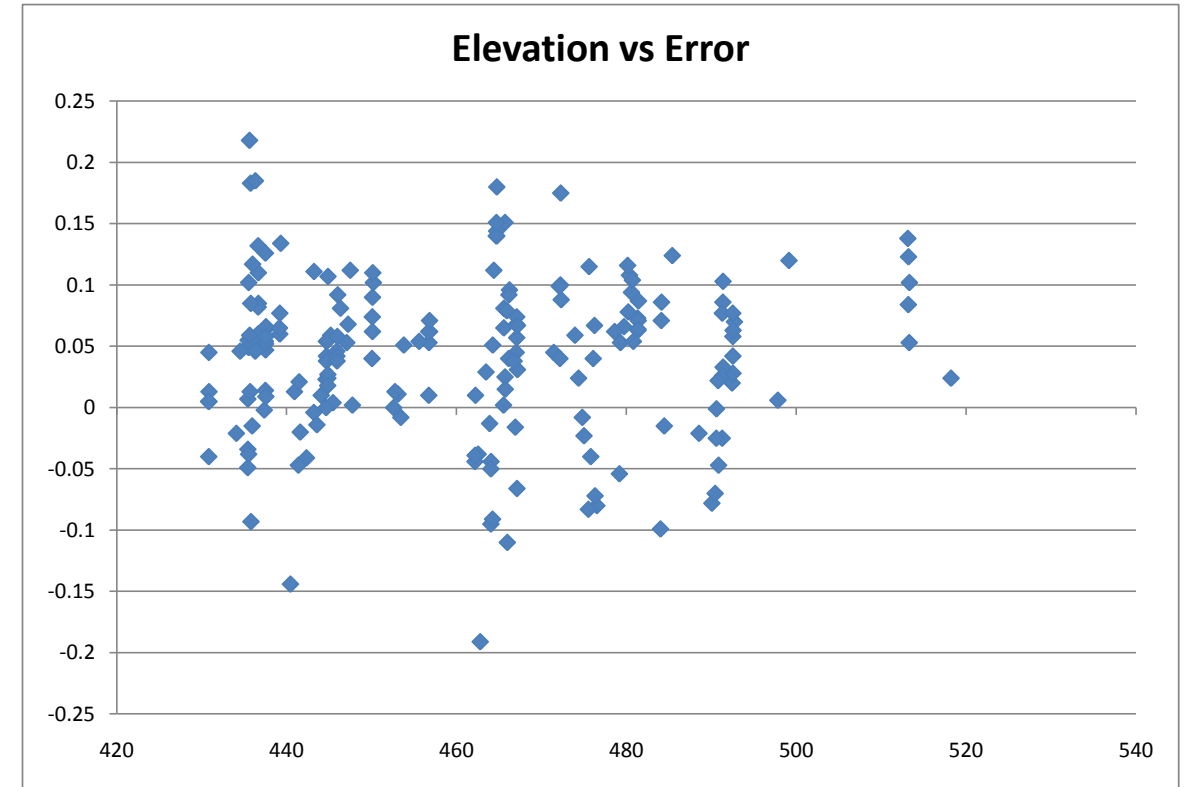
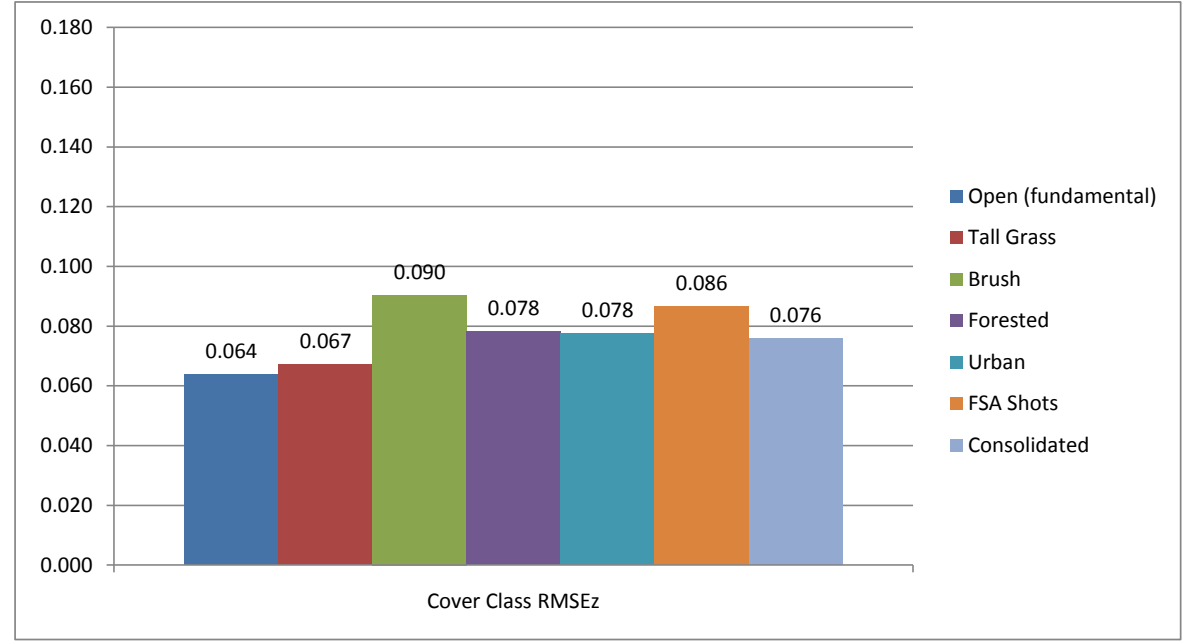


Rock County, MN Vertical Validation Report

Point Code	X	Y	Z	Surface Z	Z-Error	Z-Error Squared	Absolute Z-Error
FSA Target 1 Battle Plain Twp-5096	249494.816	4851654.957	471.451	471.406	0.045	0.002025	0.045
FSA Target 2 Rose Dell Twp-5097	223691.867	4851191.692	464.064	464.108	-0.044	0.001936	0.044
FSA Target 3 Spring Water Twp-5098	229833	4842816.619	499.131	499.011	0.12	0.0144	0.12
FSA Target 4 Martin Twp-5099	222532.531	4822103.442	447.494	447.382	0.112	0.012544	0.112
FSA Target 5 Kanaranzi Twp-5100	243770.398	4829306.107	450.057	450.017	0.04	0.0016	0.04
FSA Target 601 Luverne-5101	240649.372	4836984.605	443.233	443.122	0.111	0.012321	0.111
L10-4925	242717.456	4851655.219	481.353	481.29	0.063	0.003969	0.063
L10-4926	242719.192	4851655.323	481.316	481.243	0.073	0.005329	0.073
L10-4927	242715.835	4851655.291	481.389	481.318	0.071	0.005041	0.071
L10-4928	242717.152	4851652.833	481.352	481.288	0.064	0.004096	0.064
L10-4929	242717.642	4851657.63	481.412	481.325	0.087	0.007569	0.087
L10-4930	241060.099	4842943.387	491.381	491.348	0.033	0.001089	0.033
L10-4931	241058.557	4842943.468	491.354	491.268	0.086	0.007396	0.086
L10-4932	241056.725	4842943.505	491.287	491.21	0.077	0.005929	0.077
L10-4933	241058.871	4842945.596	491.325	491.299	0.026	0.000676	0.026
L10-4934	241058.927	4842941.476	491.368	491.265	0.103	0.010609	0.103
L10-4935	248443.441	4837195.596	450.113	450.023	0.09	0.0081	0.09
L10-4936	248442.094	4837195.659	450.109	450.047	0.062	0.003844	0.062
L10-4937	248440.044	4837195.826	450.091	450.017	0.074	0.005476	0.074
L10-4938	248441.945	4837198.078	450.213	450.111	0.102	0.010404	0.102
L10-4939	248442.223	4837193.462	450.147	450.037	0.11	0.0121	0.11
L10-4940	242236.377	4838489.96	437.528	437.481	0.047	0.002209	0.047
L10-4941	242234.027	4838489.938	437.524	437.472	0.052	0.002704	0.052
L10-4942	242231.481	4838489.81	437.542	437.478	0.064	0.004096	0.064
L10-4943	242233.758	4838493.442	437.507	437.493	0.014	0.000196	0.014
L10-4944	242234.795	4838487.289	437.512	437.458	0.054	0.002916	0.054
L10-4945	228703.131	4834006.872	456.829	456.767	0.062	0.003844	0.062
L10-4946	228700.714	4834006.799	456.76	456.707	0.053	0.002809	0.053
L10-4947	228697.425	4834006.303	456.724	456.662	0.062	0.003844	0.062
L10-4948	228701.002	4834003.082	456.825	456.754	0.071	0.005041	0.071
L10-4949	228700.36	4834010.339	456.739	456.729	0.01	0.0001	0.01
L10-5040	227411.445	4825100.18	453.799	453.748	0.051	0.002601	0.051
L10-5041	228140.255	4824739.557	442.343	442.384	-0.041	0.001681	0.041
L10-5042	228707.517	4824491.884	447.753	447.751	0.002	0.000004	0.002
L10-5043	228744.368	4824384.727	445.466	445.462	0.004	0.000016	0.004
L10-5044	228581.019	4824399.925	443.212	443.216	-0.004	0.000016	0.004
L10-5060	227207.236	4860656.172	488.537	488.558	-0.021	0.000441	0.021
L10-5061	223292.287	4860977.501	490.596	490.597	-0.001	0.000001	0.001
L10-5062	223629.367	4860963.845	492.436	492.416	0.02	0.0004	0.02
L10-5063	229327.184	4859819.815	497.822	497.816	0.006	0.000036	0.006
L10-5064	229879.51	4854176.368	518.207	518.183	0.024	0.000576	0.024
L10-5080	252659.296	4849044.827	479.713	479.647	0.066	0.004356	0.066
L10-5081	252732.285	4849263.15	478.613	478.551	0.062	0.003844	0.062
L10-5082	254343.824	4849481.808	480.218	480.14	0.078	0.006084	0.078
L10-5083	252877.064	4855034.261	485.396	485.272	0.124	0.015376	0.124
L10-5084	252908.119	4855027.021	484.105	484.034	0.071	0.005041	0.071
L10-5085	252941.868	4855039.422	484.13	484.044	0.086	0.007396	0.086
L2T-4950	227982.454	4834798.164	430.857	430.812	0.045	0.002025	0.045
L2T-4951	227981.216	4834800.815	430.855	430.85	0.005	0.000025	0.005
L2T-4952	227979.858	4834803.481	430.868	430.855	0.013	0.000169	0.013



L2T-4953	227978.526	4834799.639	430.835	430.83	0.005	0.000025	0.005
L2T-4954	227983.573	4834802.493	430.841	430.881	-0.04	0.0016	0.04
L2T-4955	240664.827	4835927.34	436.654	436.522	0.132	0.017424	0.132
L2T-4956	240662.153	4835927.351	436.641	436.581	0.06	0.0036	0.06
L2T-4957	240658.444	4835927.166	436.681	436.596	0.085	0.007225	0.085
L2T-4958	240662.214	4835930.133	436.677	436.567	0.11	0.0121	0.11
L2T-4959	240662.708	4835924.113	436.658	436.576	0.082	0.006724	0.082
L2T-4960	240311.159	4831433.819	435.541	435.439	0.102	0.010404	0.102
L2T-4961	240313.275	4831434.276	435.478	435.428	0.05	0.0025	0.05
L2T-4962	240316.293	4831435.489	435.429	435.478	-0.049	0.002401	0.049
L2T-4963	240314.113	4831432.175	435.441	435.434	0.007	0.000049	0.007
L2T-4964	240311.291	4831436.683	435.537	435.488	0.049	0.002401	0.049
L2T-4965	241751.532	4842413.355	467.087	467.03	0.057	0.003249	0.057
L2T-4966	241754.172	4842412.043	467.041	466.973	0.068	0.004624	0.068
L2T-4967	241757.387	4842411.159	467.026	466.981	0.045	0.002025	0.045
L2T-4968	241754.913	4842415.162	467.118	467.184	-0.066	0.004356	0.066
L2T-4969	241753.657	4842408.902	466.921	466.937	-0.016	0.000256	0.016
L2T-4970	241133.643	4855272.43	513.199	513.076	0.123	0.015129	0.123
L2T-4971	241133.809	4855274.929	513.179	513.095	0.084	0.007056	0.084
L2T-4972	241133.818	4855277.761	513.282	513.229	0.053	0.002809	0.053
L2T-4973	241130.38	4855274.878	513.305	513.203	0.102	0.010404	0.102
L2T-4974	241136.785	4855274.371	513.124	512.986	0.138	0.019044	0.138
L2T-5045	229002.129	4823093.346	434.535	434.489	0.046	0.002116	0.046
L2T-5046	228997.7	4823156.752	435.479	435.424	0.055	0.003025	0.055
L2T-5047	230709.901	4825160.198	434.093	434.114	-0.021	0.000441	0.021
L2T-5048	230761.24	4824839.411	447.083	447.03	0.053	0.002809	0.053
L2T-5049	230709.871	4823720.075	440.934	440.921	0.013	0.000169	0.013
L2T-5065	228092.298	4854182.373	492.711	492.641	0.07	0.0049	0.07
L2T-5066	228046.687	4854257.8	490.844	490.891	-0.047	0.002209	0.047
L2T-5067	226832.578	4854232.073	479.3	479.247	0.053	0.002809	0.053
L2T-5068	226845.018	4854291.664	479.176	479.23	-0.054	0.002916	0.054
L2T-5069	224647.479	4854342.99	474.368	474.344	0.024	0.000576	0.024
L2T-5086	252974.198	4855037.83	484.012	484.111	-0.099	0.009801	0.099
L2T-5087	252890.93	4855011.399	484.455	484.47	-0.015	0.000225	0.015
L2T-5088	249693.151	4856066.677	467.089	467.015	0.074	0.005476	0.074
L2T-5089	249690.988	4856038.479	467.172	467.141	0.031	0.000961	0.031
L2T-5090	249700.978	4856018.304	467.173	467.106	0.067	0.004489	0.067
L3B-4975	243736.096	4845001.804	464.049	464.144	-0.095	0.009025	0.095
L3B-4976	243739.11	4845000.284	464.05	464.1	-0.05	0.0025	0.05
L3B-4977	243743.357	4844998.683	464.266	464.215	0.051	0.002601	0.051
L3B-4978	243737.976	4844997.269	464.242	464.333	-0.091	0.008281	0.091
L3B-4979	243738.44	4845002.819	463.897	463.91	-0.013	0.000169	0.013
L3B-4985	240628.501	4840365.632	465.535	465.533	0.002	0.000004	0.002
L3B-4986	240632.207	4840365.029	465.574	465.509	0.065	0.004225	0.065
L3B-4987	240636.307	4840364.663	465.576	465.495	0.081	0.006561	0.081
L3B-4988	240631.907	4840371.834	465.712	465.687	0.025	0.000625	0.025
L3B-4989	240635.414	4840371.953	465.739	465.724	0.015	0.000225	0.015
L3B-5000	242576.256	4836896.065	436.023	435.967	0.056	0.003136	0.056
L3B-5001	242577.946	4836898.996	435.784	435.699	0.085	0.007225	0.085
L3B-5002	242575.832	4836901.208	435.759	435.576	0.183	0.033489	0.183
L3B-5003	242575.286	4836904.176	435.638	435.42	0.218	0.047524	0.218
L3B-5004	242572.258	4836900.476	435.997	435.88	0.117	0.013689	0.117
L3B-5010	242779.903	4837393.055	436.331	436.146	0.185	0.034225	0.185
L3B-5011	242778.502	4837394.194	436.315	436.269	0.046	0.002116	0.046

L3B-5012	242776.086	4837391.489	435.95	435.965	-0.015	0.000225	0.015
L3B-5013	242774.868	4837389.491	435.81	435.903	-0.093	0.008649	0.093
L3B-5014	242770.726	4837388.814	435.658	435.599	0.059	0.003481	0.059
L3B-5051	230784.709	4824483.113	440.456	440.6	-0.144	0.020736	0.144
L3B-5052	230807.514	4824489.572	441.477	441.456	0.021	0.000441	0.021
L3B-5053	230820.368	4824494.359	441.389	441.436	-0.047	0.002209	0.047
L3B-5054	230841.402	4824483.597	441.608	441.628	-0.02	0.0004	0.02
L3B-5070	227039.239	4854639.77	476.517	476.597	-0.08	0.0064	0.08
L3B-5071	227032.475	4854640.57	476.305	476.377	-0.072	0.005184	0.072
L3B-5072	227029.106	4854636.001	476.242	476.175	0.067	0.004489	0.067
L3B-5073	227006.288	4854646.316	475.803	475.843	-0.04	0.0016	0.04
L3B-5074	226973.122	4854650.283	475.523	475.606	-0.083	0.006889	0.083
L3B-5091	249587.902	4855034.676	462.793	462.984	-0.191	0.036481	0.191
L3B-5092	249591.389	4855045.813	462.547	462.585	-0.038	0.001444	0.038
L3B-5093	249459.527	4855557.453	462.173	462.217	-0.044	0.001936	0.044
L3B-5094	249406.165	4855550.579	462.18	462.219	-0.039	0.001521	0.039
L3B-5095	249382.365	4855535.768	462.237	462.227	0.01	0.0001	0.01
L4F-4980	242943.284	4845688.457	472.172	472.132	0.04	0.0016	0.04
L4F-4981	242941.944	4845686.036	472.237	472.137	0.1	0.01	0.1
L4F-4982	242940.959	4845684.269	472.269	472.094	0.175	0.030625	0.175
L4F-4983	242946.208	4845685.421	472.101	472.002	0.099	0.009801	0.099
L4F-4984	242940.769	4845688.768	472.322	472.234	0.088	0.007744	0.088
L4F-4990	240796.703	4840197.068	466.232	466.136	0.096	0.009216	0.096
L4F-4991	240794.386	4840197.022	466.169	466.077	0.092	0.008464	0.092
L4F-4993	240794.997	4840200.438	466.139	466.099	0.04	0.0016	0.04
L4F-4994	240791.781	4840200.662	465.98	466.09	-0.11	0.0121	0.11
L4F-4995	242634.476	4836871.694	439.2	439.14	0.06	0.0036	0.06
L4F-4996	242633.817	4836873.429	439.206	439.129	0.077	0.005929	0.077
L4F-4997	242632.892	4836875.043	439.159	439.094	0.065	0.004225	0.065
L4F-4998	242631.614	4836872.547	439.313	439.179	0.134	0.017956	0.134
L4F-5005	242514.403	4837435.172	437.576	437.51	0.066	0.004356	0.066
L4F-5006	242515.515	4837437.554	437.557	437.499	0.058	0.003364	0.058
L4F-5007	242516.345	4837440.49	437.511	437.385	0.126	0.015876	0.126
L4F-5008	242511.813	4837440.56	437.375	437.377	-0.002	0.000004	0.002
L4F-5009	242517.404	4837436.001	437.562	437.553	0.009	0.000081	0.009
L4F-5015	228048.714	4834484.202	435.446	435.48	-0.034	0.001156	0.034
L4F-5016	228051.392	4834483.909	435.534	435.572	-0.038	0.001444	0.038
L4F-5019	228044.871	4834479.426	435.711	435.698	0.013	0.000169	0.013
L4F-5020	232003.52	4823352.064	443.572	443.586	-0.014	0.000196	0.014
L4F-5021	232016.918	4823363.335	444.076	444.066	0.01	0.0001	0.01
L4F-5022	232024.071	4823394.81	445.194	445.135	0.059	0.003481	0.059
L4F-5023	232027.52	4823421.211	446.349	446.268	0.081	0.006561	0.081
L4F-5024	232034.727	4823444.428	447.24	447.172	0.068	0.004624	0.068
L4F-5025	227974.975	4854193.858	490.795	490.773	0.022	0.000484	0.022
L4F-5026	227988.263	4854192.318	491.273	491.298	-0.025	0.000625	0.025
L4F-5027	227977.41	4854172.522	490.577	490.602	-0.025	0.000625	0.025
L4F-5028	227973.206	4854157.698	490.058	490.136	-0.078	0.006084	0.078
L4F-5029	227982.031	4854151.924	490.442	490.512	-0.07	0.0049	0.07
L4F-5030	248468.353	4855120.167	464.397	464.285	0.112	0.012544	0.112
L4F-5031	248473.139	4855113.262	463.473	463.444	0.029	0.000841	0.029
L4F-5032	248469.494	4855098.25	465.929	465.85	0.079	0.006241	0.079
L4F-5033	248472.882	4855085.317	465.711	465.56	0.151	0.022801	0.151
L4F-5034	248444.439	4855064.849	466.778	466.74	0.038	0.001444	0.038
L5U-4900	241524.463	4838457.868	444.698	444.656	0.042	0.001764	0.042

L5U-4901	241529.35	4838457.61	444.698	444.66	0.038	0.001444	0.038
L5U-4902	241529.363	4838461.013	444.639	444.616	0.023	0.000529	0.023
L5U-4903	241524.649	4838461.174	444.656	444.656	0	0	0
L5U-4904	241526.727	4838455.485	444.685	444.631	0.054	0.002916	0.054
L5U-4905	241179.284	4838488.747	444.859	444.835	0.024	0.000576	0.024
L5U-4906	241180.912	4838488.634	444.877	444.77	0.107	0.011449	0.107
L5U-4907	241182.915	4838488.48	444.861	444.834	0.027	0.000729	0.027
L5U-4908	241181.247	4838490.157	444.86	444.805	0.055	0.003025	0.055
L5U-4909	241181.383	4838492.775	444.838	444.82	0.018	0.000324	0.018
L5U-4910	228596.073	4834515.974	446.018	445.926	0.092	0.008464	0.092
L5U-4911	228594.644	4834516.034	445.971	445.913	0.058	0.003364	0.058
L5U-4912	228592.913	4834516.158	445.91	445.864	0.046	0.002116	0.046
L5U-4913	228594.183	4834517.314	445.925	445.883	0.042	0.001764	0.042
L5U-4914	228593.879	4834514.61	445.938	445.9	0.038	0.001444	0.038
L5U-4915	251640.897	4836977.371	464.737	464.597	0.14	0.0196	0.14
L5U-4916	251640.847	4836976.065	464.722	464.578	0.144	0.020736	0.144
L5U-4917	251640.773	4836973.849	464.68	464.54	0.14	0.0196	0.14
L5U-4918	251642.859	4836976.188	464.745	464.565	0.18	0.0324	0.18
L5U-4919	251639.327	4836976.41	464.697	464.546	0.151	0.022801	0.151
L5U-4920	242503.738	4851820.369	492.535	492.507	0.028	0.000784	0.028
L5U-4921	242504.895	4851820.405	492.527	492.485	0.042	0.001764	0.042
L5U-4922	242506.695	4851820.297	492.525	492.467	0.058	0.003364	0.058
L5U-4923	242505.6	4851821.66	492.511	492.434	0.077	0.005929	0.077
L5U-4924	242505.29	4851818.905	492.55	492.487	0.063	0.003969	0.063
L5U-5035	228774.104	4825071.724	455.602	455.548	0.054	0.002916	0.054
L5U-5036	228562.695	4824940.241	453.445	453.453	-0.008	0.000064	0.008
L5U-5037	228561.488	4824913.529	453.119	453.108	0.011	0.000121	0.011
L5U-5038	228560.424	4824886.404	452.759	452.746	0.013	0.000169	0.013
L5U-5039	228559.773	4824872.94	452.599	452.599	0	0	0
L5U-5055	226851.564	4860809.521	475.008	475.031	-0.023	0.000529	0.023
L5U-5056	226823.671	4860787.752	473.943	473.884	0.059	0.003481	0.059
L5U-5057	226843.848	4860809.174	474.808	474.816	-0.008	0.000064	0.008
L5U-5058	226872.021	4860817.681	475.608	475.493	0.115	0.013225	0.115
L5U-5059	226902.938	4860799.38	476.091	476.051	0.04	0.0016	0.04
L5U-5075	252632.952	4849160.786	480.356	480.248	0.108	0.011664	0.108
L5U-5076	252626.79	4849123.241	480.59	480.496	0.094	0.008836	0.094
L5U-5077	252626.116	4849091.971	480.698	480.594	0.104	0.010816	0.104
L5U-5078	252662.45	4849107.645	480.138	480.022	0.116	0.013456	0.116
L5U-5079	252608.442	4849110.768	480.814	480.76	0.054	0.002916	0.054

Mean Squared Error 0.006
Z-RMSE 0.076
NSSDA 0.149

Min Z-Error 0
Max Z-Error 0.218