



Job Name: SMART Top of Rail Survey
 Job Number: 6167-09
 Client Name: Sonoma-Marin Area Rail Transit District
 Project Description: Top of Rail Survey MP 25.0 - 35.0
 Measurement Units: All Units are in U.S. Survey Feet

Rail Tolerance Measurements

	Within Tolerance
	1/16" Within Tolerance
	Out of Tolerance

Track Data					Track Deviations			Track Gauge		Mid Ordinate of 62' Chord Measurements	
Stationing calc.	Track easting	Track northing	Track height	Track long. slope [%]	Hor. dev.	Vert. dev.	Sup. dev.	Gauge meas.	Gauge dev.	Hor. meas.	Vert. meas.
0.000	6350988.811	1928145.646	137.016	-0.23549	0.0000	0.0065	0.01871	4.682	-0.0262	0.0043	-0.0115
58.316	6350956.209	1928193.998	136.865	-0.42714	0.0282	0.0352	0.01869	4.681	-0.0266	-0.0223	0.0285
59.076	6350955.783	1928194.627	136.862	-0.51079	0.0277	0.0342	0.01874	4.681	-0.0266	-0.0219	0.0284
61.327	6350954.520	1928196.490	136.847	-0.60910	0.0224	0.0267	0.00798	4.681	-0.0269	-0.0156	0.0226
66.204	6350951.785	1928200.527	136.821	-0.50627	0.0143	0.0152	0.00983	4.677	-0.0305	-0.0048	0.0146
70.912	6350949.147	1928204.428	136.799	-0.44627	0.0100	0.0074	0.01189	4.676	-0.0318	0.0021	0.0100
75.618	6350946.514	1928208.328	136.779	-0.39805	0.0094	0.0023	0.00842	4.679	-0.0285	0.0050	0.0081
80.490	6350943.790	1928212.367	136.760	-0.37239	0.0118	-0.0014	0.00742	4.690	-0.0180	0.0054	0.0081
85.054	6350941.239	1928216.152	136.743	-0.37766	0.0148	-0.0044	0.00755	4.694	-0.0144	0.0121	0.0161
89.019	6350939.023	1928219.439	136.728	-0.37860	0.0164	-0.0072	0.00771	4.689	-0.0187	0.0123	0.0154
93.297	6350936.631	1928222.986	136.712	-0.38189	0.0187	-0.0101	0.00692	4.688	-0.0197	0.0116	0.0151
97.527	6350934.266	1928226.494	136.696	-0.38614	0.0211	-0.0135	0.01117	4.689	-0.0187	0.0110	0.0137
101.163	6350932.234	1928229.509	136.682	-0.36143	0.0238	-0.0160	0.01314	4.689	-0.0187	0.0084	0.0134
104.076	6350930.606	1928231.924	136.671	-0.37098	0.0252	-0.0175	0.01294	4.687	-0.0210	0.0073	0.0138
106.395	6350929.309	1928233.847	136.663	-0.36653	0.0261	-0.0189	0.01224	4.686	-0.0223	0.0060	0.0146
107.696	6350928.582	1928234.926	136.658	-0.36385	0.0272	-0.0195	0.01155	4.686	-0.0220	0.0046	0.0154
109.170	6350927.758	1928236.147	136.653	-0.36198	0.0274	-0.0205	0.01140	4.686	-0.0217	0.0040	0.0158
109.769	6350927.423	1928236.644	136.650	-0.36121	0.0274	-0.0210	0.01035	4.686	-0.0217	0.0038	0.0162
110.378	6350927.082	1928237.149	136.648	-0.35852	0.0274	-0.0211	0.00969	4.686	-0.0217	0.0034	0.0169
112.684	6350925.794	1928239.061	136.640	-0.36242	0.0292	-0.0222	0.00801	4.685	-0.0233	0.0005	0.0189
116.323	6350923.758	1928242.077	136.627	-0.36798	0.0292	-0.0244	0.00865	4.680	-0.0282	-0.0003	0.0200
120.896	6350921.200	1928245.868	136.610	-0.38514	0.0296	-0.0273	0.00968	4.678	-0.0299	-0.0011	0.0184
125.620	6350918.556	1928249.783	136.590	-0.43558	0.0285	-0.0321	0.00730	4.674	-0.0338	-0.0017	0.0115
130.500	6350915.824	1928253.826	136.569	-0.42246	0.0260	-0.0387	0.00561	4.679	-0.0292	-0.0028	0.0010
135.538	6350913.005	1928258.002	136.550	-0.32430	0.0259	-0.0419	0.00096	4.681	-0.0266	-0.0079	-0.0083
140.405	6350910.281	1928262.036	136.536	-0.24754	0.0250	-0.0406	-0.00499	4.682	-0.0262	-0.0130	-0.0156
145.261	6350907.562	1928266.059	136.525	-0.23198	0.0219	-0.0368	-0.01147	4.682	-0.0259	-0.0163	-0.0207
149.991	6350904.912	1928269.977	136.514	-0.17802	0.0172	-0.0327	-0.01781	4.682	-0.0256	-0.0168	-0.0261
154.640	6350902.307	1928273.827	136.508	-0.12384	0.0121	-0.0246	-0.01715	4.682	-0.0256	-0.0149	-0.0283