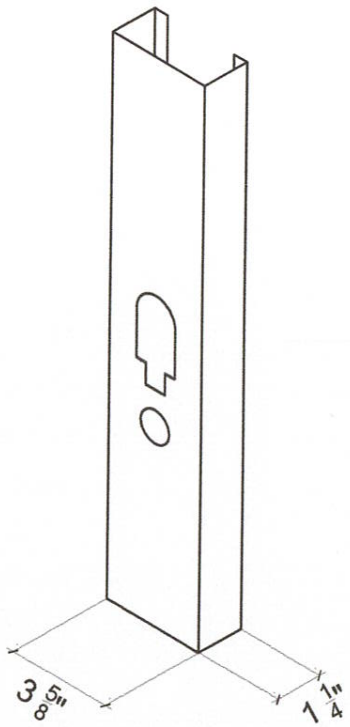

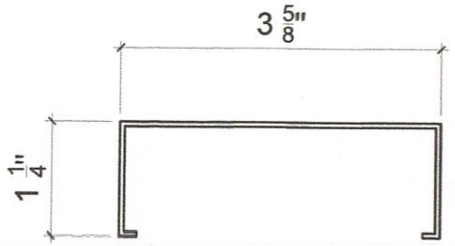

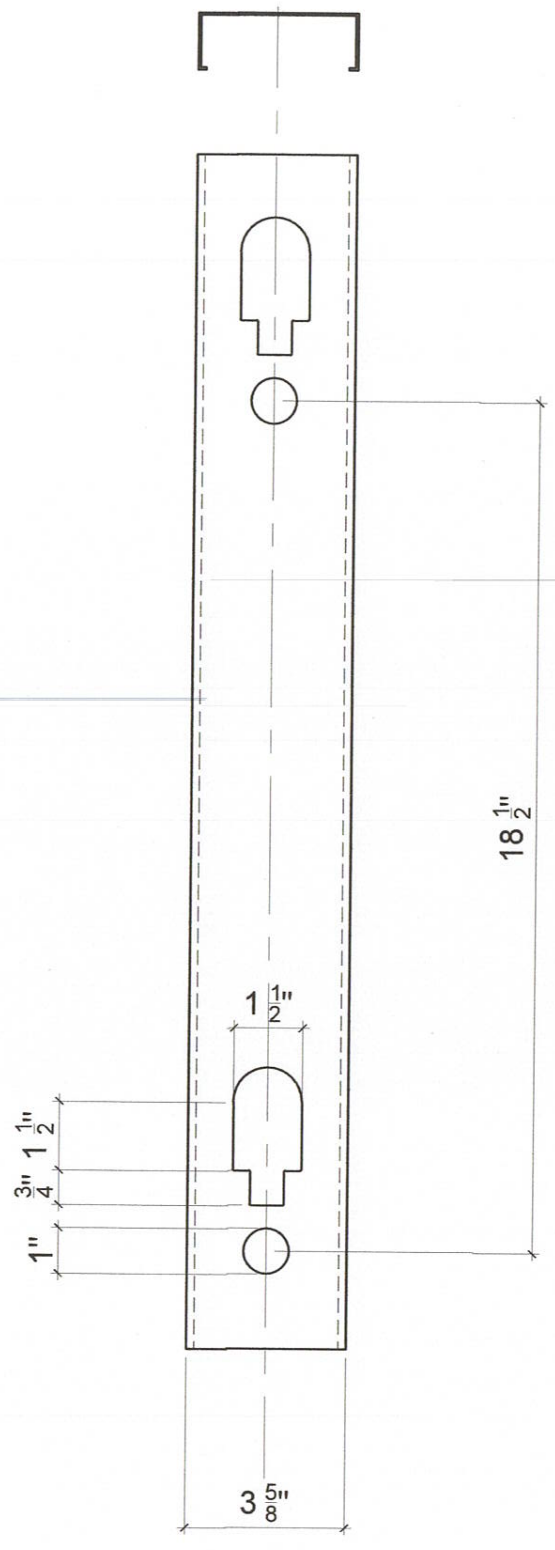

3-5/8" STUD/TRACK PROPERTIES

	Member	Design thickness (in)	Yield strenght Fy (ksi)	Gross Properties							Effective Properties				Torsional Properties						Lu (in)
				Area (in^2)	Weight (lb/ft)	Ix (in^4)	Sx (in^3)	Rx (in)	Iy (in^4)	Ry (in)	Ixe (in^4)	Sxe (in^3)	Ma (in-k)	Mad (in-k)	Jx1000 (in^4)	Cw (in^6)	Xo (in)	m (in)	Ro (in)	β	
3-5/8" Stud	350S137-33	0.0346	33	0.232	0.789	0.442	0.252	1.38	0.0587	0.503	0.442	0.223	4.41	4.55	0.0925	0.153	-1.02	0.621	1.79	0.676	34.8
	350S137-43	0.0451	33	0.300	1.02	0.568	0.324	1.38	0.0746	0.498	0.568	0.307	6.07	6.39	0.204	0.193	-1.00	0.615	1.77	0.679	34.7
	350S137-54	0.0566	50	0.372	1.27	0.696	0.398	1.37	0.0900	0.492	0.696	0.366	11.0	11.4	0.398	0.233	-0.991	0.607	1.76	0.683	28.0
	350S137-68	0.0713	50	0.461	1.57	0.849	0.485	1.36	0.107	0.483	0.849	0.472	14.1	14.5	0.782	0.280	-0.973	0.598	1.74	0.687	27.9
	350S162-33	0.0346	33	0.258	0.877	0.508	0.291	1.40	0.0981	0.617	0.508	0.257	5.09	5.22	0.103	0.277	-1.32	0.796	2.03	0.573	42.7
	350S162-43	0.0451	33	0.334	1.14	0.655	0.374	1.40	0.125	0.612	0.654	0.357	7.05	7.31	0.227	0.350	-1.31	0.789	2.01	0.575	42.6
	350S162-54	0.0566	50	0.415	1.41	0.805	0.460	1.39	0.152	0.606	0.804	0.426	12.7	13.1	0.443	0.426	-1.30	0.782	2.00	0.578	34.5
	350S162-68	0.0713	50	0.515	1.75	0.985	0.563	1.38	0.184	0.597	0.985	0.549	16.4	16.8	0.872	0.514	-1.28	0.772	1.98	0.581	34.5
	350S200-33	0.0346	33	0.292	0.995	0.599	0.342	1.43	0.175	0.773	0.593	0.283	5.59	5.95	0.117	0.541	-1.76	1.04	2.40	0.461	53.7
	350S200-43	0.0451	33	0.379	1.29	0.771	0.441	1.43	0.224	0.768	0.771	0.410	8.09	8.36	0.257	0.687	-1.75	1.03	2.38	0.462	53.7
	350S200-54	0.0566	50	0.471	1.60	0.950	0.543	1.42	0.274	0.762	0.950	0.470	14.1	14.9	0.503	0.838	-1.73	1.02	2.37	0.464	43.5
	350S200-68	0.0713	50	0.586	1.99	1.17	0.667	1.41	0.333	0.754	1.17	0.638	19.1	19.7	0.993	1.02	-1.71	1.01	2.35	0.465	43.5
	350S250-43	0.0451	33	0.424	1.44	0.906	0.518	1.46	0.380	0.946	0.906	0.431	8.53	9.01	0.288	1.15	-2.22	1.29	2.82	0.381	64.3
	350S250-54	0.0566	50	0.528	1.80	1.12	0.639	1.46	0.467	0.940	1.11	0.494	14.8	15.9	0.564	1.41	-2.20	1.28	2.80	0.382	52.1
	350S250-68	0.0713	50	0.657	2.24	1.38	0.787	1.45	0.570	0.931	1.38	0.661	19.8	21.3	1.11	1.72	-2.19	1.27	2.78	0.383	52.2
3-5/8" Track	350T125-33	0.0346	33	0.207	0.706	0.405	0.222	1.40	0.0299	0.379	0.355	0.165	3.27	—	0.083	0.070	-0.668	0.414	1.59	0.824	—
	350T125-43	0.0451	33	0.270	0.919	0.528	0.288	1.40	0.0385	0.377	0.490	0.233	4.61	—	0.183	0.090	-0.663	0.412	1.59	0.826	—
	350T125-54	0.0566	50	0.339	1.15	0.668	0.361	1.40	0.0477	0.375	0.626	0.297	8.90	—	0.362	0.114	-0.658	0.408	1.59	0.830	—
	350T125-68	0.0713	50	0.427	1.45	0.851	0.454	1.41	0.0591	0.372	0.839	0.407	12.2	—	0.723	0.144	-0.650	0.403	1.60	0.835	—
	350T150-33	0.0346	33	0.225	0.765	0.461	0.253	1.43	0.0494	0.469	0.382	0.171	3.39	—	0.090	0.114	-0.866	0.527	1.74	0.752	—
	350T150-43	0.0451	33	0.293	1.00	0.601	0.329	1.43	0.0638	0.467	0.531	0.243	4.80	—	0.198	0.148	-0.861	0.525	1.74	0.754	—
	350T150-54	0.0566	50	0.367	1.25	0.762	0.412	1.44	0.0793	0.465	0.679	0.310	9.28	—	0.392	0.187	-0.855	0.521	1.74	0.758	—
	350T150-68	0.0713	50	0.462	1.57	0.972	0.518	1.45	0.0986	0.462	0.919	0.428	12.8	—	0.783	0.238	-0.847	0.516	1.74	0.763	—
	350T200-33	0.0346	33	0.259	0.883	0.574	0.315	1.49	0.108	0.646	0.428	0.181	3.57	—	0.103	0.249	-1.29	0.761	2.07	0.614	—
	350T200-43	0.0451	33	0.338	1.15	0.749	0.409	1.49	0.140	0.645	0.601	0.257	5.09	—	0.229	0.323	-1.28	0.758	2.07	0.616	—
	350T200-54	0.0566	50	0.424	1.44	0.949	0.513	1.50	0.175	0.642	0.770	0.329	9.85	—	0.453	0.409	-1.27	0.754	2.07	0.621	—
	350T200-68	0.0713	50	0.534	1.82	1.21	0.647	1.51	0.218	0.639	1.05	0.458	13.7	—	0.904	0.522	-1.26	0.749	2.07	0.627	—
	350T300-54	0.0566	50	0.537	1.83	1.32	0.716	1.57	0.525	0.989	0.912	0.353	10.6	—	0.573	1.24	-2.16	1.23	2.85	0.424	—
	350T300-68	0.0713	50	0.676	2.30	1.70	0.904	1.58	0.657	0.986	1.27	0.496	14.8	—	1.15	1.59	-2.15	1.23	2.85	0.428	—

[1] Web-height-to-thickness ratio exceeds 200. Web stiffeners are required at all support points and concentrated loads.
*Allowable moment includes cold work of forming.

Gross Properties:
Ix = Moment of Inertia of cross-section about the x-axis.
Sx = Section Modulus about the x-axis.
Rx = Radius of Gyration of cross-section about the x-axis.
Iy = Moment of Inertia of cross-section about the y-axis.
Ry = Radius of Gyration of cross-section about the y-axis.

Effective Properties:
Ixe = Effective Moment of Inertia of cross-section about the x-axis.
Sxe = Effective Section Modulus about the x-axis.
Ma = Allowable Moment based on local buckling.
Mad = Allowable Moment based on distortional buckling, assuming Kφ=0.

Torsional and Other Properties:
J = St. Venant Torsional Constant. The values of J shown in the tables have been factored by 1000.
Cw = Warping Torsion Constant.
Xo = Distance from shear center to the centroid along the principal axis.
m = Distance from shear center to mid-plane of web.

Ro = Polar Radius of Gyration of cross-section about the shear center.
Beta = 1-(Xo/Ro).2
Lu = Critical unbraced length for lateral-torsional buckling. Members are considered fully braced when unbraced length is less than Lu.

Seyed A. Pishvaei, PhD, P.Eng.

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ISSUE	DESCRIPTION	DATE
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PROJECT No. :
2019-19-A-39

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PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — Dr. S. PISHVAEI # 28707

SEP 2 0 2019

DRAWING TITLE:
3 5/8" STUD/TRACK PROPERTIES

DATE: JUN.25.2019
DRAWN BY: A.V
DESIGNED BY: S.P.

DRAWING: ST2

CENTIMETER / INCH