Height Limitation Tables For Wind Load--6" Studs

DIETI

MEMBER			WIND LOAD																				
			5 PSF			15 PSF			20 PSF			25 PSF			30 PSF			35 PSF			40		
			DEFLECTION LIMIT																				
CODE	GAGE	SPACING O.C. (in.)	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/	
			ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.	ft. - in.
CWN	20	12	27 - 7	24 - 1	20 - 4	19 - 1	16 - 8	14 - 1	17 - 4	15 - 2	12 - 9	16 - 1	14 - 1	11 - 11	15 - 2	13 - 3	11 - 2	14 - 5	12 - 7	10 - 7	13 - 9	12 - 0	10 - 2
		16	25 - 0	21 - 10	18 - 5	17 - 4	15 - 2	12 - 9	15 - 9	13 - 9	11 - 7	14 - 8	12 - 9	10 - 9	13 - 9	12 - 0	10 - 2	13 - 1	11 - 5	9 - 8	12 - 6	10 - 11	9 - 3
		24	21 - 10	19 - 1	16 - 1	15 - 2	13 - 3	11 - 2	13 - 9	12 - 0	10 - 2	12 - 9	11 - 2	9 - 5	12 - 0	10 - 6	8 - 10	11 - 4	10 - 0	8 - 5	10 - 7	9 - 7	8 - 1
CSJ	20	12	28 - 9	25 - 1	21 - 2	19 - 11	17 - 5	14 - 8	18 - 1	15 - 10	13 - 4	16 - 10	14 - 8	12 - 5	15 - 10	13 - 10	11 - 8	15 - 0	13 - 1	11 - 1	14 - 4	12 - 7	10 - 7
		16	26 - 1	22 - 10	19 - 3	18 - 1	15 - 10	13 - 4	16 - 5	14 - 4	12 - 1	15 - 3	13 - 4	11 - 3	14 - 4	12 - 7	10 - 7	13 - 8	11 - 11	10 - 1	13 - 1	11 - 5	9 - 7
		24	22 - 10	19 - 11	16 - 10	15 - 10	13 - 10	11 - 8	14 - 4	12 - 7	10 - 7	13 - 4	11 - 8	9 - 10	12 - 7	11 - 0	9 - 3	11 - 11	10 - 5	8 - 9	11 - 4	10 - 0	8 - 5
CSW	20	12	30 - 0	26 - 2	22 - 1	20 - 9	18 - 2	15 - 4	18 - 10	16 - 6	13 - 11	17 - 6	15 - 4	12 - 11	16 - 6	14 - 5	12 - 2	15 - 8	13 - 8	11 - 6	15 - 0	13 - 1	11 - 0
		16	27 - 3	23 - 9	20 - 1	18 - 10	16 - 6	13 - 11	17 - 2	15 - 0	12 - 8	15 - 11	13 - 11	11 - 9	15 - 0	13 - 1	11 - 0	14 - 3	12 - 5	10 - 6	13 - 7	11 - 11	10 - 0
		24	23 - 9	20 - 9	17 - 6	16 - 6	14 - 5	12 - 2	15 - 0	13 - 1	11 - 0	13 - 11	12 - 2	10 - 3	13 - 1	11 - 5	9 - 8	12 - 4	10 - 10	9 - 2	11 - 7	10 - 5	8 - 9
CWN	18	12	29 - 11	26 - 2	22 - 0	20 - 9	18 - 1	15 - 3	18 - 10	16 - 6	13 - 11	17 - 6	15 - 3	12 - 11	16 - 6	14 - 5	12 - 2	15 - 8	13 - 8	11 - 6	15 - 0	13 - 1	11 - 0
		16	27 - 2	23 - 9	20 - 0	18 - 10	16 - 6	13 - 11	17 - 1	15 - 0	12 - 7	15 - 11	13 - 11	11 - 9	15 - 0	13 - 1	11 - 0	14 - 3	12 - 5	10 - 6	13 - 7	11 - 10	10 - 0
		24	23 - 9	20 - 9	17 - 6	16 - 6	14 - 5	12 - 2	15 - 0	13 - 1	11 - 0	13 - 11	12 - 2	10 - 3	13 - 1	11 - 5	9 - 8	12 - 5	10 - 10	9 - 2	11 - 10	10 - 4	8 - 9
CSJ	18	12	31 - 2	27 - 3	23 - 0	21 - 8	18 - 11	15 - 11	19 - 8	17 - 2	14 - 6	18 - 3	15 - 11	13 - 5	17 - 2	15 - 0	12 - 8	16 - 4	14 - 3	12 - 0	15 - 7	13 - 8	11 - 6
		16	28 - 4	24 - 9	20 - 11	19 - 8	17 - 2	14 - 6	17 - 10	15 - 7	13 - 2	16 - 7	14 - 6	12 - 3	15 - 7	13 - 8	11 - 6	14 - 10	12 - 11	10 - 11	14 - 2	12 - 5	10 - 5
		24	24 - 9	21 - 8	18 - 3	17 - 2	15 - 0	12 - 8	15 - 7	13 - 8	11 - 6	14 - 6	12 - 8	10 - 8	13 - 8	11 - 11	10 - 0	12 - 11	11 - 4	9 - 6	12 - 5	10 - 10	9 - 1
CSW	18	12	32 - 9	28 - 7	24 - 2	22 - 9	19 - 10	16 - 9	20 - 8	18 - 0	15 - 3	19 - 2	16 - 9	14 - 1	18 - 0	15 - 9	13 - 3	17 - 2	15 - 0	12 - 7	16 - 5	14 - 4	12 - 1
		16	29 - 9	26 - 0	21 - 11	20 - 8	18 - 0	15 - 3	18 - 9	16 - 5	13 - 10	17 - 5	15 - 3	12 - 10	16 - 5	14 - 4	12 - 1	15 - 7	13 - 7	11 - 6	14 - 11	13 - 0	11 - 0
		24	26 - 0	22 - 9	19 - 2	18 - 0	15 - 9	13 - 3	16 - 5	14 - 4	12 - 1	15 - 3	13 - 3	11 - 2	14 - 4	12 - 6	10 - 6	13 - 7	11 - 10	10 - 0	13 - 0	11 - 4	9 - 7
CWN	16	12	32 - 1	28 - 0	23 - 8	22 - 3	19 - 5	16 - 5	20 - 3	17 - 8	14 - 11	18 - 9	16 - 5	13 - 10	17 - 8	15 - 5	13 - 0	16 - 9	14 - 8	12 - 4	16 - 0	14 - 0	11 - 10
		16	29 - 2	25 - 6	21 - 6	20 - 3	17 - 8	14 - 11	18 - 4	16 - 0	13 - 6	17 - 1	14 - 11	12 - 7	16 - 0	14 - 0	11 - 10	15 - 3	13 - 4	11 - 3	14 - 7	12 - 9	10 - 9
		24	25 - 6	22 - 3	18 - 9	17 - 8	15 - 5	13 - 0	16 - 0	14 - 0	11 - 10	14 - 11	13 - 0	11 - 0	14 - 0	12 - 3	10 - 4	13 - 4	11 - 8	9 - 10	12 - 9	11 - 1	9 - 5
CSJ	16	12	33 - 6	29 - 3	24 - 8	23 - 3	20 - 3	17 - 1	21 - 1	18 - 5	15 - 6	19 - 7	17 - 1	14 - 5	18 - 5	16 - 1	13 - 7	17 - 6	15 - 3	12 - 11	16 - 9	14 - 7	12 - 4
		16	30 - 5	26 - 7	22 - 5	21 - 1	18 - 5	15 - 6	19 - 2	16 - 9	14 - 1	17 - 9	15 - 6	13 - 1	16 - 9	14 - 7	12 - 4	15 - 11	13 - 11	11 - 9	15 - 3	13 - 3	11 - 3
		24	26 - 7	23 - 3	19 - 7	18 - 5	16 - 1	13 - 7	16 - 9	14 - 7	12 - 4	15 - 6	13 - 7	11 - 5	14 - 7	12 - 9	10 - 9	13 - 11	12 - 2	10 - 3	13 - 3	11 - 7	9 - 9
CSW	16	12	35 - 2	30 - 9	25 - 11	24 - 5	21 - 4	18 - 0	22 - 2	19 - 4	16 - 4	20 - 7	18 - 0	15 - 2	19 - 4	16 - 11	14 - 3	18 - 5	16 - 1	13 - 7	17 - 7	15 - 4	13 - 0
		16	32 - 0	27 - 11	23 - 7	22 - 2	19 - 4	16 - 4	20 - 2	17 - 7	14 - 10	18 - 8	16 - 4	13 - 9	17 - 7	15 - 4	13 - 0	16 - 9	14 - 7	12 - 4	16 - 0	14 - 0	11 - 9
		24	27 - 11	24 - 5	20 - 7	19 - 4	16 - 11	14 - 3	17 - 7	15 - 4	13 - 0	16 - 4	14 - 3	12 - 0	15 - 4	13 - 5	11 - 4	14 - 7	12 - 9	10 - 9	14 - 0	12 - 2	10 - 3
CWN	14	12	34 - 4	30 - 0	25 - 4	23 - 10	20 - 10	17 - 7	21 - 8	18 - 11	15 - 11	20 - 1	17 - 7	14 - 10	18 - 11	16 - 6	13 - 11	18 - 0	15 - 8	13 - 3	17 - 2	15 - 0	12 - 8
		16	31 - 3	27 - 3	23 - 0	21 - 8	18 - 11	15 - 11	19 - 8	17 - 2	14 - 6	18 - 3	15 - 11	13 - 5	17 - 2	15 - 0	12 - 8	16 - 4	14 - 3	12 - 0	15 - 7	13 - 8	11 - 6
		24	27 - 3	23 - 10	20 - 1	18 - 11	16 - 6	13 - 11	17 - 2	15 - 0	12 - 8	15 - 11	13 - 11	11 - 9	15 - 0	13 - 1	11 - 1	14 - 3	12 - 5	10 - 6	13 - 8	11 - 11	10 - 1
CSJ	14	12	35 - 11	31 - 4	26 - 5	24 - 11	21 - 9	18 - 4	22 - 7	19 - 9	16 - 8	21 - 0	18 - 4	15 - 6	19 - 9	17 - 3	14 - 7	18 - 9	16 - 5	13 - 10	17 - 11	15 - 8	13 - 3
		16	32 - 7	28 - 6	24 - 0	22 - 7	19 - 9	16 - 8	20 - 6	17 - 11	15 - 2	19 - 1	16 - 8	14 - 1	17 - 11	15 - 8	13 - 3	17 - 0	14 - 11	12 - 7	16 - 4	14 - 3	12 - 0
		24	28 - 6	24 - 11	21 - 0	19 - 9	17 - 3	14 - 7	17 - 11	15 - 8	13 - 3	16 - 8	14 - 7	12 - 3	15 - 8	13 - 8	11 - 7	14 - 11	13 - 0	11 - 0	14 - 3	12 - 5	10 - 6
CSW	14	12	37 - 9	33 - 0	27 - 10	26 - 2	22 - 10	19 - 3	23 - 9	20 - 9	17 - 6	22 - 1	19 - 3	16 - 3	20 - 9	18 - 2	15 - 4	19 - 9	17 - 3	14 - 6	18 - 10	16 - 6	13 - 11
		16	34 - 3	29 - 11	25 - 3	23 - 9	20 - 9	17 - 6	21 - 7	18 - 10	15 - 11	20 - 1	17 - 6	14 - 9	18 - 10	16 - 6	13 - 11	17 - 11	15 - 8	13 - 2	17 - 2	15 - 0	12 - 8
		24	29 - 11	26 - 2	22 - 1	20 - 9	18 - 2	15 - 4	18 - 10	16 - 6	13 - 11	17 - 6	15 - 4	12 - 11	16 - 6	14 - 5	12 - 2	15 - 8	13 - 8	11 - 6	15 - 0	13 - 1	11 - 0
CSJ	12	12	39 - 11	34 - 10	29 - 5	27 - 8	24 - 2	20 - 5	25 - 2	21 - 11	18 - 6	23 - 4	20 - 5	17 - 2	21 - 11	19 - 2	16 - 2	20 - 10	18 - 3	15 - 4	19 - 11	17 - 5	14 - 8
		16	36 - 3	31 - 8	26 - 8	25 - 2	21 - 11	18 - 6	22 - 10	19 - 11	16 - 10	21 - 2	18 - 6	15 - 7	19 - 11	17 - 5	14 - 8	18 - 11	16 - 7	14 - 0	18 - 1	15 - 10	13 - 4
		24	31 - 8	27 - 8	23 - 4	21 - 11	19 - 2	16 - 2	19 - 11	17 - 5	14 - 8	18 - 6	16 - 2	13 - 8	17 - 5	15 - 3	12 - 10	16 - 7	14 - 6	12 - 2	15 - 10	13 - 10	11 - 8
CSW	12	12	42 - 0	36 - 8	30 - 11	29 - 2	25 - 5	21 - 6	26 - 6	23 - 1	19 - 6	24 - 7	21 - 6	18 - 1	23 - 1	20 - 2	17 - 0	22 - 0	19 - 2	16 - 2	21 - 0	18 - 4	15 - 6
		16	38 - 2	33 - 4	28 - 1	26 - 6	23 - 1	19 - 6	24 - 0	21 - 0	17 - 9	22 - 4	19 - 6	16 - 5	21 - 0	18 - 4	15 - 6	19 - 11	17 - 5	14 - 8	19 - 1	16 - 8	14 - 1
		24	33 - 4	29 - 2	24 - 7	23 - 1	20 - 2	17 - 0	21 - 0	18 - 4	15 - 6	19 - 6	17 - 0	14 - 4	18 - 4	16 - 0	13 - 6	17 - 5	15 - 3	12 - 10	16 - 8	14 - 7	12 - 3

NOTE: Reference Wind Load Notes page 16.

CITY OF PORTLAND, MAINE RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 12/16/15

CITY OF PORTLAND, MAINE — RESURGAM
Reviewed for Code Compliance
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Physical Structural Properties–6" C Studs

MEMBER							GROSS SECTION PROPERTIES							EFFECTIVE SECTION PROPERTIES						TORSIONAL PROPER				
														33 KSI			50 KSI							
CODE	GAGE	Flange (in.)	Lip (in.)	Design Thickness (in.)	Minimum Delivered Thickness (in.)	Weight (lb./ft.)	Area (in^2)	I_x (in^4)	S_x (in^3)	R_x (in.)	I_y (in^4)	S_y (in^3)	R_y (in.)	I_x (in^4)	S_x (in^3)	M_x (in.-lb.)	I_x (in^4)	S_x (in^3)	M_x (in.-lb.)	X_o (in.)	J x 1000 (in^4)	C_w (in^6)	H_o (in.)	β BETA
CWN	20	1-3/8	3/8	0.0346	0.0329	1.047	0.320	1.597	0.532	2.234	0.070	0.065	0.466	1.597	0.513	10145				-0.820	0.128	0.496	2.425	0.886
	18	1-3/8	3/8	0.0451	0.0428	1.351	0.413	2.043	0.681	2.224	0.087	0.082	0.460	2.043	0.681	15016				-0.812	0.279	0.625	2.412	0.887
	16	1-3/8	3/8	0.0566	0.0538	1.682	0.514	2.519	0.840	2.214	0.105	0.098	0.452	2.519	0.840	18991	2.519	0.819	27587	-0.804	0.550	0.758	2.398	0.888
	14	1-3/8	3/8	0.0713	0.0677	2.091	0.639	3.094	1.031	2.200	0.125	0.117	0.443	3.094	1.031	24034	3.094	1.031	35649	-0.793	1.082	0.911	2.380	0.889
CSJ	20	1-5/8	1/2	0.0346	0.0329	1.132	0.346	1.808	0.603	2.286	0.118	0.097	0.583	1.808	0.538	11516				-1.088	0.138	0.855	2.598	0.825
	18	1-5/8	1/2	0.0451	0.0428	1.461	0.447	2.316	0.772	2.277	0.148	0.123	0.577	2.316	0.772	16764				-1.080	0.302	1.082	2.585	0.826
	16	1-5/8	1/2	0.0566	0.0538	1.821	0.557	2.862	0.954	2.268	0.181	0.149	0.570	2.862	0.954	21175	2.862	0.928	30753	-1.071	0.595	1.318	2.572	0.826
	14	1-5/8	1/2	0.0713	0.0677	2.266	0.693	3.524	1.175	2.255	0.218	0.180	0.561	3.524	1.174	26767	3.524	1.174	39811	-1.061	1.173	1.595	2.555	0.828
	12	1-5/8	1/2	0.1017	0.0966	3.174	0.970	4.841	1.614	2.234	0.287	0.237	0.544	4.841	1.613	38533	4.841	1.613	57017	-1.034	3.344	2.102	2.521	0.832
	10	1-5/8	1/2	0.1242	0.1180	3.833	1.171	5.773	1.924	2.220	0.333	0.275	0.533	5.773	1.924	47354	5.773	1.924	69858	-1.013	6.025	2.423	2.498	0.835
CSW	20	2	5/8	0.0346	0.0329	1.246	0.381	2.090	0.697	2.343	0.211	0.148	0.745	2.051	0.610	12049				-1.474	0.152	1.583	2.867	0.736
	18	2	5/8	0.0451	0.0428	1.609	0.492	2.683	0.894	2.336	0.268	0.188	0.739	2.683	0.874	17261				-1.467	0.333	2.011	2.855	0.736
	16	2	5/8	0.0566	0.0538	2.006	0.613	3.322	1.107	2.327	0.329	0.230	0.732	3.322	1.107	24082	3.322	1.004	30057	-1.459	0.656	2.462	2.842	0.737
	14	2	5/8	0.0713	0.0677	2.499	0.764	4.099	1.366	2.316	0.400	0.280	0.723	4.099	1.366	30395	4.099	1.337	44391	-1.448	1.293	2.995	2.826	0.737
	12	2	5/8	0.1017	0.0966	3.507	1.072	5.656	1.885	2.297	0.536	0.375	0.707	5.656	1.885	43625	5.656	1.885	64788	-1.421	3.694	3.995	2.792	0.741
	10	2	5/8	0.1242	0.1180	4.239	1.296	6.762	2.254	2.284	0.628	0.440	0.696	6.762	2.253	53499	6.762	2.253	79242	-1.399	6.663	4.646	2.768	0.744
CSE	20	2-1/2	5/8	0.0346	0.0329	1.359	0.415	2.399	0.800	2.403	0.359	0.206	0.930	2.267	0.636	12577				-1.905	0.166	2.650	3.204	0.647
	18	2-1/2	5/8	0.0451	0.0428	1.756	0.537	3.082	1.027	2.396	0.458	0.263	0.923	3.064	0.918	18149				-1.897	0.363	3.377	3.193	0.647
	16	2-1/2	5/8	0.0566	0.0538	2.192	0.670	3.822	1.274	2.389	0.563	0.323	0.917	3.822	1.159	22909	3.636	1.069	32018	-1.889	0.716	4.148	3.180	0.647
	14	2-1/2	5/8	0.0713	0.0677	2.733	0.835	4.726	1.575	2.379	0.688	0.395	0.908	4.726	1.522	33141	4.667	1.343	40195	-1.878	1.414	5.068	3.164	0.648
	12	2-1/2	5/8	0.1017	0.0966	3.840	1.174	6.540	2.180	2.361	0.932	0.535	0.891	6.540	2.179	49029	6.540	2.090	70069	-1.851	4.045	6.818	3.130	0.650
	10	2-1/2	5/8	0.1242	0.1180	4.646	1.420	7.834	2.611	2.349	1.100	0.631	0.880	7.834	2.610	59976	7.834	2.589	88453	-1.828	7.302	7.981	3.104	0.653
CSS	20	3	1	0.0346	0.0329	1.557	0.476	2.831	0.944	2.439	0.656	0.340	1.174	2.489	0.634	12533				-2.619	0.190	5.724	3.767	0.516
	18	3	1	0.0451	0.0428	2.014	0.616	3.644	1.215	2.433	0.841	0.435	1.169	3.436	0.997	19704				-2.613	0.417	7.317	3.756	0.516
	16	3	1	0.0566	0.0538	2.516	0.769	4.526	1.509	2.426	1.039	0.537	1.162	4.486	1.366	26999	4.308	1.262	37788	-2.605	0.822	9.020	3.745	0.516
	14	3	1	0.0713	0.0677	3.141	0.960	5.608	1.869	2.417	1.279	0.661	1.154	5.608	1.841	36376	5.597	1.701	50920	-2.596	1.625	11.072	3.730	0.516
	12	3	1	0.1017	0.0966	4.422	1.351	7.790	2.597	2.401	1.753	0.906	1.139	7.790	2.595	57233	7.790	2.564	84479	-2.570	4.658	15.030	3.697	0.517
	10	3	1	0.1242	0.1180	5.357	1.637	9.353	3.118	2.390	2.085	1.077	1.129	9.353	3.115	69959	9.353	3.115	104299	-2.547	8.420	17.708	3.671	0.519
CSX	20	3-1/2	1	0.0346	0.0329	1.670	0.511	3.139	1.046	2.480	0.939	0.423	1.356	2.661	0.652	12876				-3.085	0.204	8.130	4.184	0.456
	18	3-1/2	1	0.0451	0.0428	2.162	0.661	4.043	1.348	2.474	1.205	0.543	1.351	3.697	1.044	20634				-3.079	0.447	10.408	4.174	0.456
	16	3-1/2	1	0.0566	0.0538	2.701	0.826	5.026	1.675	2.467	1.492	0.671	1.344	4.863	1.442	28491	4.643	1.324	39634	-3.071	0.883	12.851	4.163	0.456
	14	3-1/2	1	0.0713	0.0677	3.374	1.031	6.234	2.078	2.459	1.840	0.827	1.336	6.234	1.947	38465	6.070	1.760	52689	-3.062	1.746	15.806	4.148	0.455
	12	3-1/2	1	0.1017	0.0966	4.754	1.453	8.675	2.892	2.443	2.533	1.138	1.320	8.675	2.888	62765	8.675	2.537	75972	-3.036	5.008	21.543	4.115	0.456
	10	3-1/2	1	0.1242	0.1180	5.763	1.761	10.425	3.475	2.433	3.022	1.358	1.310	10.425	3.473	76680	10.425	3.336	110054	-3.013	9.059	25.455	4.088	0.457

6" Track

TSB	20	1-1/4" LEG	0.0346	0.0329	0.956	0.292	1.393	0.459	2.183	0.034	0.032	0.340	1.239	0.326	6435				-0.524	0.117	0.231	2.271	0.947
	18	1-1/4" LEG	0.0451	0.0428	1.242	0.379	1.808	0.594	2.183	0.043	0.041	0.338	1.688	0.505	9970				-0.522	0.257	0.298	2.270	0.947
	16	1-1/4" LEG	0.0566	0.0538	1.557	0.476	2.267	0.742	2.183	0.054	0.052	0.336	2.206	0.671	13257				-0.520	0.509	0.371	2.269	0.948
	14	1-1/4" LEG	0.0713	0.0677	1.953	0.597	2.843	0.926	2.182	0.067	0.064	0.334	2.843	0.891	17611				-0.517	1.011	0.461	2.267	0.948
	12	1-1/4" LEG	0.1017	0.0966	2.778	0.849	4.050	1.306	2.184	0.092	0.089	0.328	4.050	1.305	29367				-0.509	2.926	0.643	2.267	0.950
	10	1-1/4" LEG	0.1242	0.1180	3.389	1.036	4.955	1.586	2.187	0.109	0.107	0.324	4.955	1.585	36426				-0.501	5.327	0.773	2.267	0.951

NOTE: Reference typical notes on page 4.