

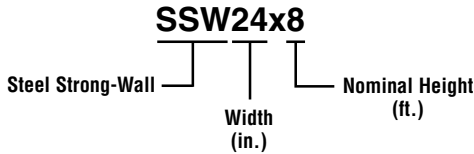
STEEL STRONG-WALL®: Standard Application on Concrete Foundations

MATERIAL: Vertical Panel—10 gauge

FINISH: Vertical Panel—Galvanized
Top and Base Plates—Simpson Strong-Tie® gray paint

CODES: ICC-ES ESR-1679;
City of L.A. RR 25625;
State of Florida FL5113

NAMING SCHEME



WALL PROFILES



SSW12

Pre-attached wood studs are 2x4 for walls 7'-10' tall, and 2x6 for walls 11'-13' tall.



SSW15



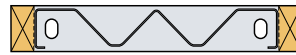
SSW15



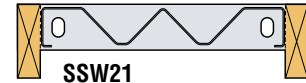
SSW18



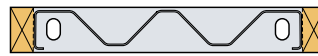
SSW18



SSW21



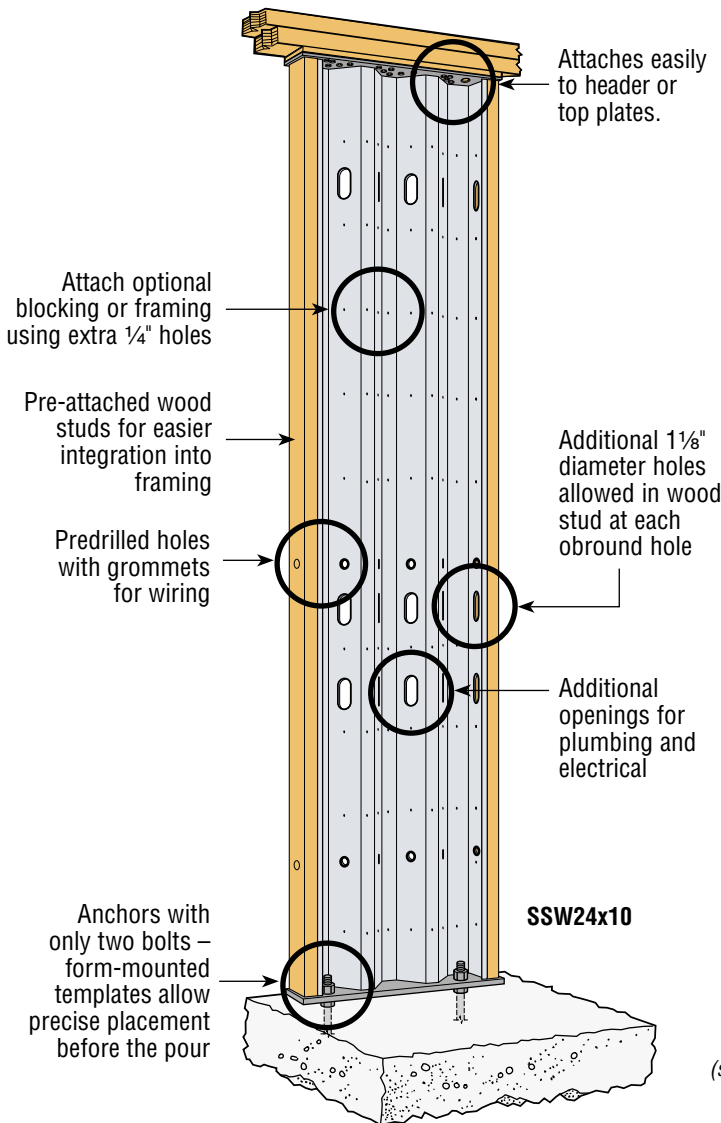
SSW21



SSW24

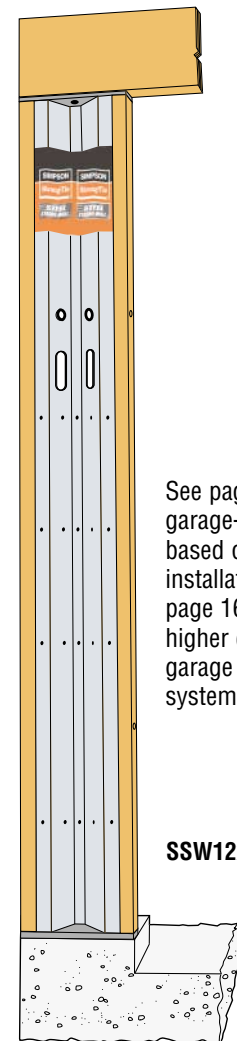


SSW24



STANDARD INSTALLATION

Patent Pending



GARAGE INSTALLATION

Foundation design
(size and reinforcement)
by Designer

STEEL STRONG-WALL®: Standard Application on Concrete Foundations

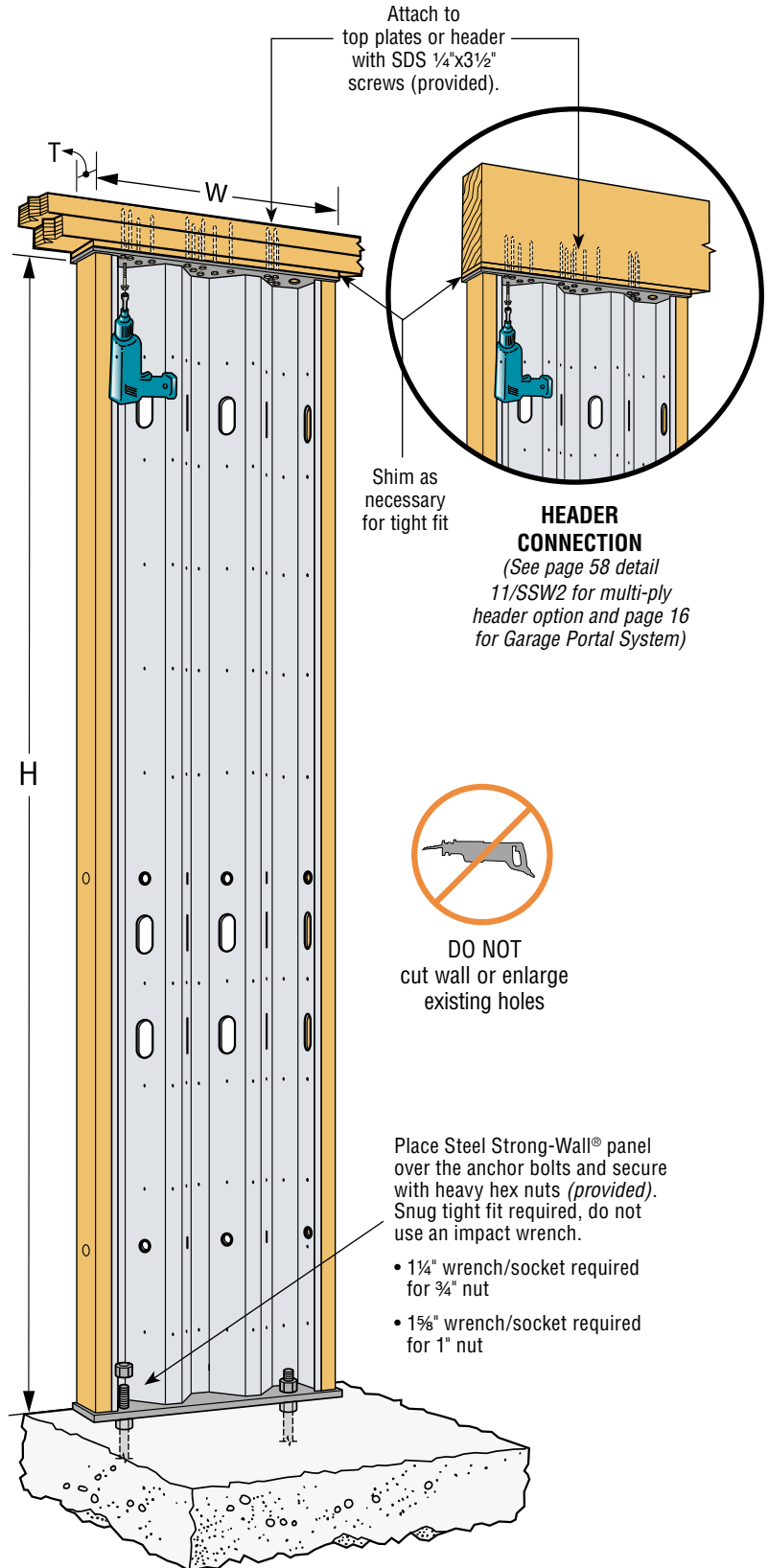
INSTALLATION INFORMATION

INSTALLATION

- Do not cut the Steel Strong-Wall® or enlarge existing holes. Doing so will compromise the performance of the wall.
- Do not use an impact wrench to tighten nuts on the anchor bolts.
- Maximum shim thickness between the Steel Strong-Wall and top plates or header is 7/8" using Simpson Strong-Tie® Strong-Drive® 1/4"x3 1/2" screws (SDS). For additional shim thicknesses, see detail 5/SSW2 on page 57.
- Walls with 2x4 pre-attached studs may also be used in 2x6 wall framing. Install the wall flush to one face of the framing and add furring to the opposite side.
- Walls may be installed with solid or multi-ply headers, see detail 11/SSW2 page 58 for details.

STEEL STRONG-WALL® PRODUCT DATA

Model No.	W (in)	H (in)	T (in)	Anchor Bolts		Number of Screws in Top of Wall	Total Wall Weight (lbs)
				Qty.	Dia. (in)		
SSW12x7	12	80	3 1/2	2	3/4	4	74
SSW15x7	15	80	3 1/2	2	1	6	86
SSW18x7	18	80	3 1/2	2	1	9	99
SSW21x7	21	80	3 1/2	2	1	12	117
SSW24x7	24	80	3 1/2	2	1	14	127
SSW12x7.4	12	85 1/2	3 1/2	2	3/4	4	78
SSW15x7.4	15	85 1/2	3 1/2	2	1	6	91
SSW18x7.4	18	85 1/2	3 1/2	2	1	9	104
SSW21x7.4	21	85 1/2	3 1/2	2	1	12	122
SSW24x7.4	24	85 1/2	3 1/2	2	1	14	134
SSW12x8	12	93 1/4	3 1/2	2	3/4	4	85
SSW15x8	15	93 1/4	3 1/2	2	1	6	99
SSW18x8	18	93 1/4	3 1/2	2	1	9	113
SSW21x8	21	93 1/4	3 1/2	2	1	12	132
SSW24x8	24	93 1/4	3 1/2	2	1	14	144
SSW12x9	12	105 1/4	3 1/2	2	3/4	4	94
SSW15x9	15	105 1/4	3 1/2	2	1	6	110
SSW18x9	18	105 1/4	3 1/2	2	1	9	125
SSW21x9	21	105 1/4	3 1/2	2	1	12	147
SSW24x9	24	105 1/4	3 1/2	2	1	14	160
SSW12x10	12	117 1/4	3 1/2	2	3/4	4	104
SSW15x10	15	117 1/4	3 1/2	2	1	6	121
SSW18x10	18	117 1/4	3 1/2	2	1	9	138
SSW21x10	21	117 1/4	3 1/2	2	1	12	162
SSW24x10	24	117 1/4	3 1/2	2	1	14	177
SSW15x11	15	129 1/4	5 1/2	2	1	6	148
SSW18x11	18	129 1/4	5 1/2	2	1	9	167
SSW21x11	21	129 1/4	5 1/2	2	1	12	193
SSW24x11	24	129 1/4	5 1/2	2	1	14	209
SSW15x12	15	141 1/4	5 1/2	2	1	6	160
SSW18x12	18	141 1/4	5 1/2	2	1	9	180
SSW21x12	21	141 1/4	5 1/2	2	1	12	208
SSW24x12	24	141 1/4	5 1/2	2	1	14	225
SSW18x13	18	153 1/4	5 1/2	2	1	9	194
SSW21x13	21	153 1/4	5 1/2	2	1	12	224
SSW24x13	24	153 1/4	5 1/2	2	1	14	243



Attach to top plates or header with SDS 1/4"x3 1/2" screws (provided).

Shim as necessary for tight fit

HEADER CONNECTION
(See page 58 detail 11/SSW2 for multi-ply header option and page 16 for Garage Portal System)



DO NOT cut wall or enlarge existing holes

Place Steel Strong-Wall® panel over the anchor bolts and secure with heavy hex nuts (provided). Snug tight fit required, do not use an impact wrench.

- 1 1/4" wrench/socket required for 3/4" nut
- 1 5/8" wrench/socket required for 1" nut

STEEL STRONG-WALL®: Standard Application on Concrete Foundations

2006 INTERNATIONAL BUILDING CODE®

SSW Model	Allowable Axial Load (lbs)	Seismic ²			Wind		
		Allowable ASD Shear Load V (lbs)	Drift at Allowable Shear (in.)	Max Uplift at Allowable Shear ⁵ (lbs)	Allowable ASD Shear Load V (lbs)	Drift at Allowable Shear (in.)	Max Uplift at Allowable Shear ⁵ (lbs)
SSW12x7	1000	955	0.36	9840	1215	0.46	13620
	4000	955	0.36	9840	1095	0.42	11765
	7500	890	0.34	9010	890	0.34	9010
SSW15x7	1000	1855	0.36	15655	1860	0.36	15715
	4000	1665	0.33	13550	1665	0.33	13550
	7500	1445	0.28	11340	1445	0.28	11340
SSW18x7	1000	2905	0.34	19660	3480	0.41	25805
	4000	2905	0.34	19660	3250	0.38	23135
	7500	2905	0.34	19660	2980	0.35	20370
SSW21x7	1000	4200	0.32	23755	4440	0.34	25710
	4000	4200	0.32	23755	4440	0.34	25710
	7500	4200	0.32	23755	4310	0.33	24635
SSW24x7	1000	5495	0.29	26270	5730	0.31	27835
	4000	5495	0.29	26270	5730	0.31	27835
	7500	5495	0.29	26270	5730	0.31	27835
SSW12x7.4	1000	870	0.39	9515	1105	0.49	13070
	4000	870	0.39	9515	970	0.43	10940
	7500	750	0.33	7940	750	0.33	7940
SSW15x7.4	1000	1685	0.39	15035	1700	0.39	15215
	4000	1500	0.34	12905	1500	0.34	12905
	7500	1270	0.29	10510	1270	0.29	10510
SSW18x7.4	1000	2700	0.37	19475	3255	0.44	25790
	4000	2700	0.37	19475	3040	0.42	23125
	7500	2700	0.37	19475	2790	0.38	20390
SSW21x7.4	1000	3890	0.35	23420	4230	0.38	26405
	4000	3890	0.35	23420	4230	0.38	26405
	7500	3890	0.35	23420	4035	0.36	24655
SSW24x7.4	1000	5330	0.34	27610	5450	0.34	28485
	4000	5330	0.34	27610	5450	0.34	28485
	7500	5330	0.34	27610	5450	0.34	28485
SSW12x8	1000	775	0.42	9180	985	0.53	12560
	4000	775	0.42	9180	865	0.47	10550
	7500	665	0.36	7630	665	0.36	7630
SSW15x8	1000	1505	0.42	14515	1530	0.43	14835
	4000	1345	0.37	12545	1345	0.37	12545
	7500	1135	0.32	10190	1135	0.32	10190
SSW18x8	1000	2480	0.41	19525	2985	0.50	25795
	4000	2480	0.41	19525	2790	0.47	23160
	7500	2480	0.41	19525	2560	0.43	20410
SSW21x8	1000	3560	0.39	23360	3960	0.43	27240
	4000	3560	0.39	23360	3960	0.43	27240
	7500	3560	0.39	23360	3700	0.41	24660
SSW24x8	1000	4865	0.37	27435	5105	0.39	29370
	4000	4865	0.37	27435	5105	0.39	29370
	7500	4865	0.37	27435	5055	0.39	28960
SSW12x9	1000	660	0.47	8745	840	0.60	11915
	4000	660	0.47	8745	705	0.50	9485
	7500	505	0.36	6380	505	0.36	6380
SSW15x9	1000	1315	0.45	14250	1315	0.47	14250
	4000	1130	0.38	11740	1130	0.40	11740
	7500	925	0.31	9235	925	0.33	9235
SSW18x9	1000	2145	0.47	18890	2645	0.58	25800
	4000	2145	0.47	18890	2470	0.54	23130
	7500	2145	0.47	18890	2265	0.50	20370
SSW21x9	1000	3145	0.46	23265	3590	0.52	28215
	4000	3145	0.46	23265	3530	0.51	27490
	7500	3145	0.46	23265	3280	0.47	24680
SSW24x9	1000	4285	0.44	27210	4605	0.47	30150
	4000	4285	0.44	27210	4605	0.47	30150
	7500	4285	0.44	27210	4480	0.46	28970

See footnotes on page 13.

STEEL STRONG-WALL®: Standard Application on Concrete Foundations

2006 INTERNATIONAL BUILDING CODE® (cont.)

SSW Model	Allowable Axial Load (lbs)	Seismic ²			Wind		
		Allowable ASD Shear Load V (lbs)	Drift at Allowable Shear (in.)	Max Uplift at Allowable Shear ⁵ (lbs)	Allowable ASD Shear Load V (lbs)	Drift at Allowable Shear (in.)	Max Uplift at Allowable Shear ⁵ (lbs)
SSW12x10	1000	570	0.52	8345	725	0.67	11300
	4000	570	0.52	8345	570	0.52	8345
	7500	360	0.33	4930	360	0.33	4930
SSW15x10	1000	1110	0.53	13150	1145	0.54	13690
	4000	960	0.45	10975	960	0.45	10975
	7500	715	0.34	7775	715	0.34	7775
SSW18x10	1000	1860	0.53	18030	2360	0.67	25545
	4000	1860	0.53	18030	2215	0.63	23095
	7500	1860	0.53	18030	2035	0.57	20395
SSW21x10	1000	3045	0.50	25905	3265	0.56	28795
	4000	3045	0.50	25905	3170	0.54	27510
	7500	2780	0.45	22780	2780	0.47	22780
SSW24x10	1000	3835	0.50	27100	4205	0.55	30920
	4000	3835	0.50	27100	4205	0.55	30920
	7500	3790	0.49	26660	3790	0.49	26660
SSW15x11	1000	975	0.58	12625	1015	0.60	13285
	4000	815	0.48	10135	815	0.48	10135
	7500	550	0.33	6470	550	0.33	6470
SSW18x11	1000	1635	0.58	17295	2075	0.73	24280
	4000	1635	0.58	17295	2010	0.71	23110
	7500	1635	0.58	17295	1730	0.61	18645
SSW21x11	1000	2485	0.58	22325	2990	0.70	29230
	4000	2485	0.58	22325	2785	0.65	26220
	7500	2305	0.54	20205	2305	0.54	20205
SSW24x11	1000	3475	0.57	27055	3845	0.63	31285
	4000	3475	0.57	27055	3710	0.60	29680
	7500	3205	0.52	24260	3205	0.52	24260
SSW15x12	1000	815	0.63	11280	905	0.70	12855
	4000	690	0.53	9245	690	0.53	9245
	7500	390	0.30	4905	390	0.30	4905
SSW18x12	1000	1450	0.63	16605	1845	0.80	23220
	4000	1450	0.63	16605	1815	0.79	22650
	7500	1435	0.62	16380	1435	0.62	16380
SSW21x12	1000	2210	0.63	21485	2755	0.79	29555
	4000	2210	0.63	21485	2420	0.69	24335
	7500	1900	0.54	17690	1900	0.54	17690
SSW24x12	1000	3150	0.63	26710	3540	0.71	31575
	4000	3150	0.63	26710	3250	0.65	27890
	7500	2705	0.54	21855	2705	0.54	21855
SSW18x13	1000	1335	0.68	16580	1695	0.87	23105
	4000	1335	0.68	16580	1580	0.81	20830
	7500	1180	0.60	14195	1180	0.60	14195
SSW21x13	1000	1985	0.68	20765	2520	0.87	29200
	4000	1985	0.68	20765	2110	0.73	22530
	7500	1555	0.53	15300	1555	0.53	15300
SSW24x13	1000	2830	0.68	25795	3275	0.79	31755
	4000	2830	0.68	25795	2860	0.69	26165
	7500	2280	0.55	19545	2280	0.55	19545

1. Allowable shear loads and anchor uplifts are applicable to installation on concrete with minimum $f'_c = 2500$ psi using the ASD basic (Section 1605.3.1) or the alternative basic (Section 1605.3.2) load combinations. Load values include evaluation of bearing stresses on the foundation and do not require further evaluation by the Designer.
2. For seismic designs based on the 2006 IBC using $R = 6.5$. For other codes, use the seismic coefficients corresponding to light-frame bearing walls with wood structural panels or sheet steel panels.
3. Allowable shear, drift, and uplift values may be interpolated for intermediate height or axial loads.
4. High-strength anchor bolts are required for anchor tension (uplift) forces exceeding the allowable load for standard-strength bolts tabulated on pages 32-33. See pages 32-37 for SSWAB anchor bolt information and anchorage solutions.
5. Tabulated anchor tension (uplift) loads assume no resisting axial load. For anchor tension loads at design shear values and including the effect of axial load, refer to the Strong-Wall Selector™ software or use the equations on page 15. Drifts at lower design shear may be linearly reduced.
6. See page 14 for allowable out-of-plane loads and axial capacities.

STEEL STRONG-WALL®: Standard Application on Concrete Foundations

ALLOWABLE OUT-OF-PLANE LOADS (PSF) FOR SINGLE-STORY WALLS ON CONCRETE FOUNDATIONS

Model Width	Axial Load (lbs)	Nominal Height of Panel (feet)					
		8	9	10	11	12	13
12" wide	1000	200	140	105	NA	NA	NA
	4000	150	105	70	NA	NA	NA
	7500	90	55	25	NA	NA	NA
15" wide	1000	165	130	100	80	70	NA
	4000	130	95	70	50	40	NA
	7500	95	65	45	30	15	NA
18" wide	7500	310	215	160	120	90	70
21" wide	7500	260	185	135	100	70	50
24" wide	7500	275	195	135	105	80	65

1. Loads shown are at ASD level in pounds per square foot (psf) of wall with no further increase in load allowed.
2. Axial load denotes maximum gravity load permitted on entire panel acting in combination with the out-of-plane load.
3. Load considers a deflection limit of $h/240$.
4. Values are applicable to either the ASD Basic or Alternate Basic load combinations.
5. Allowable out-of-plane loads for the 12- and 15-inch walls may be linearly interpolated between the axial loads shown.
6. See page 31 for S/SSW models for Cold-Formed Steel Construction.
7. Table loads apply only to single-story walls on concrete foundations.

AXIAL CAPACITIES FOR SINGLE-STORY WALLS ON CONCRETE FOUNDATIONS

Model Width	Compression Capacity with No Lateral Loads (lbs)							
	Nominal Height of Panel (feet)							
	7	7.4	8	9	10	11	12	13
12" wide	20200	19000	17200	14500	11800	NA	NA	NA
15" wide	25300	24200	22600	20000	17400	14900	12600	NA
18" wide	42500	40400	37500	32900	28400	24100	20200	17200
21" wide	43700	41100	37500	32000	26700	22000	18400	15700
24" wide	51600	48800	44800	38700	32900	27400	22900	19500

1. Compression capacity is lesser of wall buckling capacity or 2500 psi concrete bearing limit.
2. Compression capacity of wall assumes no lateral loads present.
See allowable in-plane or out-of-plane load tables for combined lateral and axial loading conditions.
3. Values are applicable to either the ASD Basic or Alternate Basic load combinations.
4. See page 31 for S/SSW models for Cold-Formed Steel Construction.
5. Table loads apply only to single-story walls on concrete foundations.

ALLOWABLE TENSION (UPLIFT) LOADS FOR STEEL STRONG-WALL® WOOD JAMB STUD

Model Width	Tension (Uplift) Capacity per Jamb Stud (lbs)							
	Nominal Height of Panel (feet)							
	7	7.4	8	9	10	11	12	13
12" wide	1535	1535	1845	2150	2500	NA	NA	NA
15" wide	1845	2150	2460	2500	2500	3070	3685	NA
18" wide	1845	1845	2150	2500	2500	3380	3685	3980
21" wide	1845	1845	2150	2500	2500	3070	3685	3980
24" wide	1845	1845	2150	2500	2500	3070	3685	3980

1. Allowable tension (uplift) load is based on capacity of the lesser of the connection between the stud and the steel panel or stud tension capacity. The capacity of the SSW wall anchor bolt and anchorage to the foundation must be adequate to transfer the additional tension (uplift). NA = not applicable.
2. Loads include a 1.60 load duration increase for wood subjected to wind or earthquake.
Reductions for other load durations must be taken according to the applicable code.