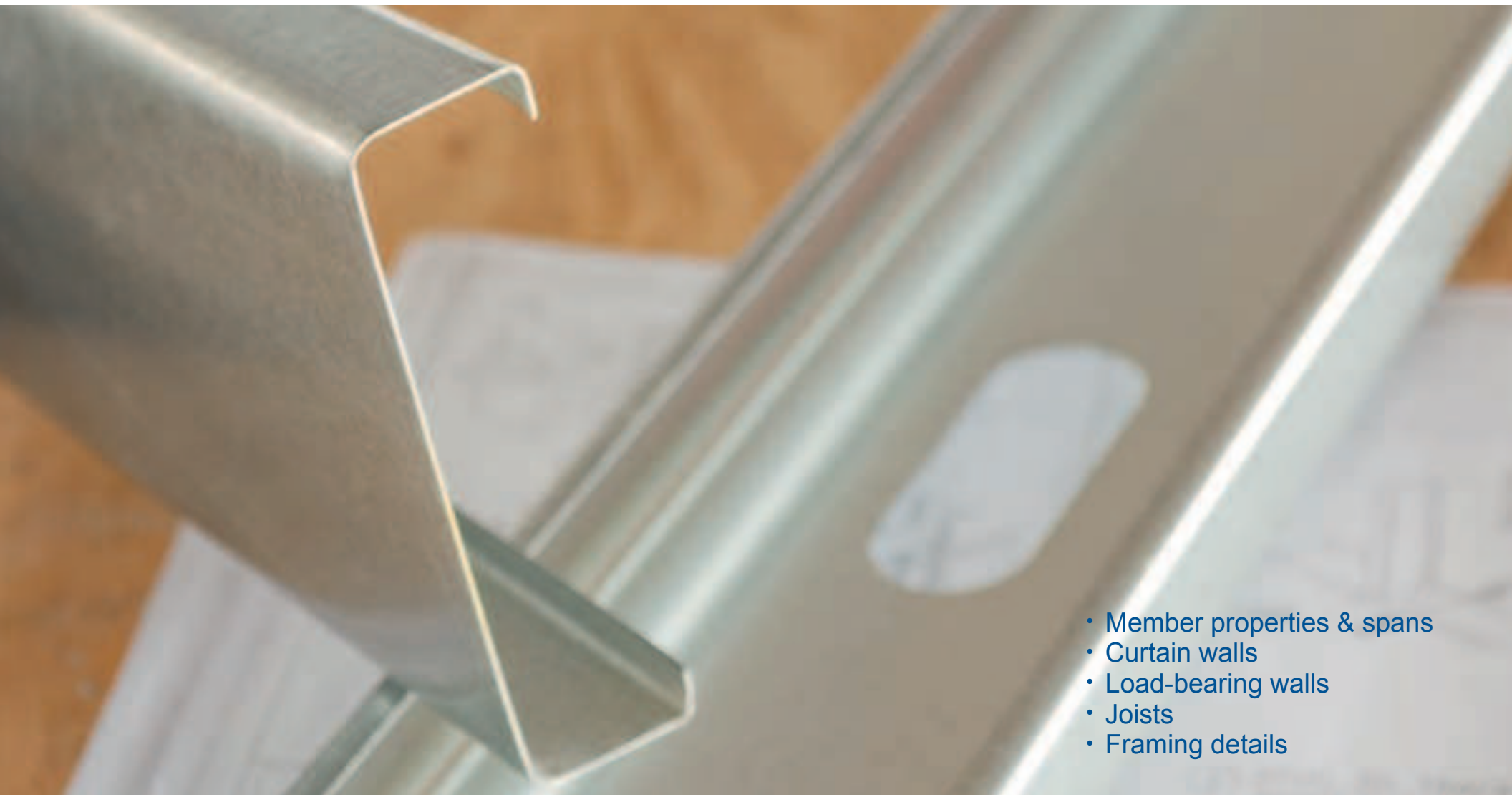


# Structural steel framing systems — technical information



- Member properties & spans
- Curtain walls
- Load-bearing walls
- Joists
- Framing details

In conformance with:

- 2001 North American Specification [NASPEC] with 2004 supplement
- International Building Code [IBC] 2006

## Stronger than steel.

We don't merely supply steel. It goes far beyond that. We supply strong, proactive solutions and forward-thinking ingenuity — anything it takes to make your job, and your life, easier.

From product innovation to agile customer service, ClarkWestern offers you all of the quality, ease and support you're looking for in a partner. Let us take the load off the way you quote, buy and work with steel.

## A steadfast resource.

Founded in 1981, ClarkWestern is one of the nation's oldest, continuously operating cold-formed steel framing manufacturers. Growth and expansion over the past few years has positioned us to serve virtually every construction market in the U.S. efficiently and cost effectively.

Our longevity in the industry translates into a wealth of experience and expertise that few in our industry can match. Even fewer can match the dedication to customer support that our employees provide each day, or the loyalty of our suppliers. We have a reputation for forthrightness and traditional values, and we're proud of that.

While some may say that a particular method of doing business will have little impact on the bottom line, we know that honesty, integrity and straightforward dialog can make the difference between a structure that stands problem free, and one that doesn't.

## Support from a complete system.

ClarkWestern has always been at the leading edge of innovation, and our product line is unsurpassed. No manufacturer provides more size, style and thickness/gauge options for structural and interior drywall framing members. No manufacturer offers our kind of accessory components. And no manufacturer provides the kind of in-depth technical support and ancillary support services that we do.



Our cold-formed steel framing members meet the testing and specification standards established by the American Society for Testing and Materials (ASTM), the American Iron and Steel Institute (AISI) and major code authorities. Our company also maintains prominent membership status in The Steel Framing Alliance, the Steel Stud Manufacturers Association, the Association of Walls and Ceilings Industries International and other trade organizations.

## ClarkWestern Design, LLC.

ClarkWestern Design provides the total range of design and engineering services, including complete shop drawings and certification stamp acceptable in all 50 states. Count on us for guidance on building code questions, for timely answers to product questions or to engineer your structural project. Technical support is free to our customers. For project engineering work, we will provide you with an estimate of cost and lead time before undertaking the project. Reach us toll-free by calling 877-832-3206. Faxes may be sent to 877-832-3208. For general technical support, call the help desk at 888-437-3244.

Need help with product selection, ordering, scheduling, delivery, or anything else? Call us at 800-543-7140, or on the West Coast at 800-365-5284.

This publication is designed to help contractors, engineers and architects find the right steel framing components for their projects. While we worked to make this the industry's most comprehensive technical support document for cold-formed steel framing, it does not cover all of our products. You will find more complete information on each member selection and non-standard products on our web site, [www.clarkwestern.com](http://www.clarkwestern.com).

Please note the introductory information for each set of tables so that you know about the additional information that is readily available from our web site.

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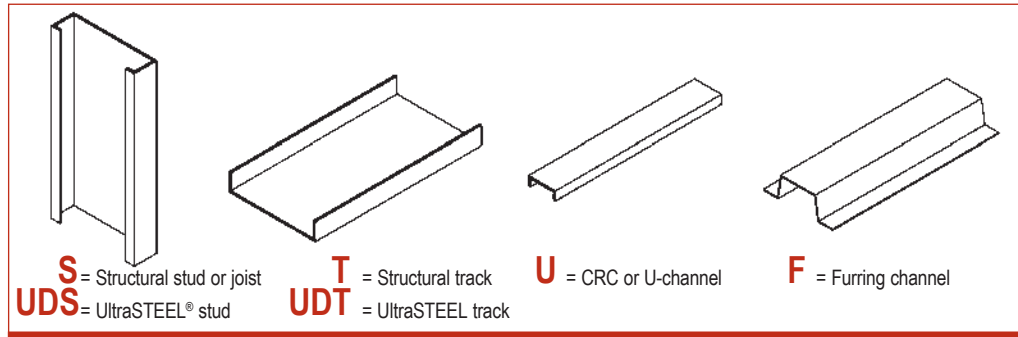
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# How to identify our products.

ClarkWestern has adopted standard nomenclature established by the Steel Stud Manufacturers Association (SSMA) for identifying each of its products. Coding of each member consists of four parts, in this order:

- A number which identifies the web depth of the member to two decimal places. 600 = 6.00," 1000 = 10.00," 550 = 5.50," 362 = 3.625," etc.
- A letter that tells you the type of member, such as S = Stud/joist, T = Track, U = U-channel, and F = Furring channel.
- A number that defines the flange dimension in inches to two decimal places. 162 = 1.625," 200 = 2.00," 125 = 1.25," etc.
- A number following a hyphen that denotes the material thickness (min. base metal thickness in mils — 1 mil = 1/1000 in.). 18 mils = .018," 27 mils = .027," etc.

## Example: 362S162-43 (33ksi) punched



**Punching**  
 Punched studs or joists will be supplied unless the customer indicates unpunched material is required at time of order.  
 All track and channels are unpunched.

**Protective Coating**  
 Structural framing G60 (G90 available)  
 Drywall framing G40 (G60 available)

**Yield Strength (Fy)**  
 33 ksi steel will be specified unless the customer indicates 50ksi at time of order.

**362 S 162 - 43 (33ksi, G60) Punched**

ClarkWestern members depths, flanges & available thickness			
Member depths	Flange widths	Mils range	Gauge range
(162) 1-5/8"	1-1/4"	18 - 30	25 - 20 GA
(250) 2-1/2"	1-1/4," 1-5/8," 2" & 2-1/2"	18 - 97	25 - 12 GA
(350) 3-1/2"	1-5/8," 2" & 2-1/2"	33 - 97	20 - 12 GA
(362) 3-5/8"	1-1/4," 1-3/8," 1-5/8," 2," 2-1/2" & 3"	18 - 118	25 - 10 GA
(400) 4"	1-1/4," 1-3/8," 1-5/8," 2," 2-1/2" & 3"	18 - 97	25 - 12 GA
(550) 5-1/2"	1-5/8," 2" & 2-1/2"	33 - 97	20 - 12 GA
(600) 6"	1-1/4," 1-3/8," 1-5/8," 2," 2-1/2," 3" & 3-1/2"	18 - 118	25 - 10 GA
(725) 7-1/4"	1-5/8," 2" & 2-1/2"	33 - 97	20 - 12 GA
(800) 8"	1-3/8," 1-5/8," 2," 2-1/2," 3" & 3-1/2"	33 - 118	20 - 10 GA
(925) 9-1/4"	1-5/8," 2" & 2-1/2"	43 - 97	18 - 12 GA
(1000) 10"	1-5/8," 2," 2-1/2," 3" & 3-1/2"	43 - 118	18 - 10 GA
(1150) 11-1/2"	1-5/8," 2" & 2-1/2"	43 - 97	18 - 12 GA
(1200) 12"	1-5/8," 2," 2-1/2," 3" & 3-1/2"	54 - 118	16 - 10 GA
(1350) 13-1/2"	1-5/8," 2," 2-1/2," 3" & 3-1/2"	54 - 118	16 - 10 GA
(1400) 14"	1-5/8," 2," 2-1/2," 3" & 3-1/2"	54 - 118	16 - 10 GA
(1600) 16"	1-5/8," 2," 2-1/2," 3" & 3-1/2"	68 - 118	16 - 10 GA

ClarkWestern return lip dimensions		
Flange width	Return lip	Member depths
125 (1-1/4")	3/16"	1-5/8" - 6"
137 (1-3/8")	3/8"	3-5/8" - 8"
162 (1-5/8")	1/2"	2-1/2" - 16"
200 (2")	5/8"	3-5/8" - 16"
250 (2-1/2")	5/8"	3-5/8" - 16"
300 (3")	5/8"	6" - 16"
350 (3-1/2")	1"	6" - 16"

Description conversion (inches)	
Code # (inches)	Code # (inches)
125 (1-1/4")	725 (7-1/4")
137 (1-3/8")	800 (8")
162 (1-5/8")	925 (9-1/4")
200 (2")	1000 (10")
250 (2-1/2")	1150 (11-1/2")
300 (3")	1200 (12")
350 (3-1/2")	1350 (13-1/2")
400 (4")	1400 (14")
550 (5-1/2")	1600 (16")
600 (6")	

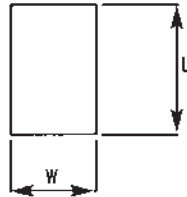
ClarkWestern thickness identification by color coding				
Member mils	Thickness gauge	Design thickness	Min thickness	Color code
18	25	0.0188"	0.0179"	None
27	22	0.0283"	0.0269"	Black
30	DW20	0.0312"	0.0296"	Pink
33	20	0.0346"	0.0329"	White
43	18	0.0451"	0.0428"	Yellow
54	16	0.0566"	0.0538"	Green
68	14	0.0713"	0.0677"	Orange
97	12	0.1017"	0.0966"	Red
118	10	0.1242"	0.1180"	Blue

ClarkWestern UltraSTEEL Drywall framing steel thickness				
Member gauge	Mils	Effective thickness	Min thickness	Color code
25 EQ	15	0.034	0.015	None
20 EQ	25	0.055	0.025	Pink
20 EQ (STR)	28	0.060	0.028	White

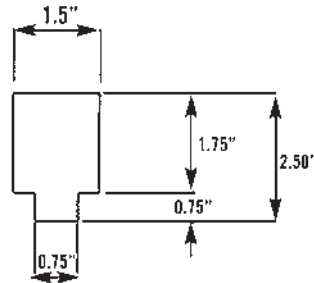
**Product availability.**  
 Most products manufactured by ClarkWestern are readily available in all markets, but there can be exceptions. Please contact your ClarkWestern Sales Representative to make sure the product you need is available in your market area.



Stud sizes	162-250
W	0.75"
L	1.75"

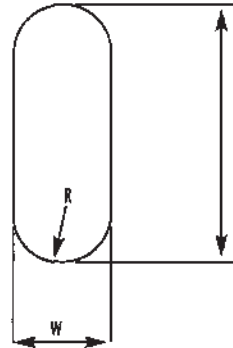


Rectangle punch

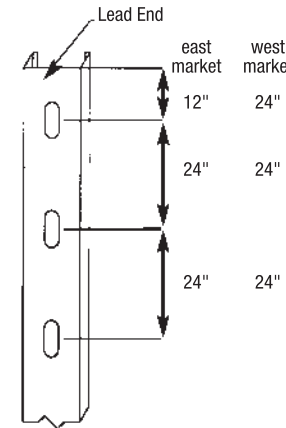


Keyhole punch

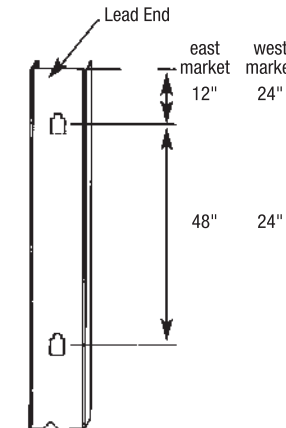
Stud sizes	250	350-1600
W	0.75"	1.5"
L	2"	4"
R	0.375"	0.75"



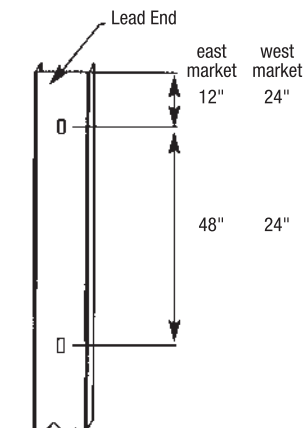
Oval punch



Structural stud punchout



Non-structural keyhole punchout



Non-structural rectangle punchout

**Structural studs**

Member depth	Punchout size
250 (2-1/2")	3/4" wide x 2" long oval
350 (3-1/2") - 1600 (16")	1-1/2" wide x 4" long oval

**Technical support.**

Technical support is the most important way we serve our present and prospective customers. After all, your experience with our products will only be a good one if you are satisfied that the material is right for the job and that it is being installed correctly. That's why we have provided four ways to make sure you can get the technical support you need.

**Web support** — [www.clarkwestern.com](http://www.clarkwestern.com) contains information on the company, its products and a wealth of other information related to the steel framing industry. This web site also provides you with more detailed information about all of the company's products, including load and limiting heights tables for member sizes and configurations not contained in this printed manual. Please visit this site to familiarize yourself with what we have to offer.

**Engineering software** — To make sure you design structures successfully, we provide engineering software FREE to customers, engineers, architects and students. This state-of-the-art and user-friendly AISIWIN software helps configure exterior curtain wall framing for wind loads, load-bearing framing for combined loads, joists for required spans and anticipated load configurations, etc. A download is available from our web site.

**ClarkWestern Design** — A full service design and engineering firm that provides certified engineering shop drawing packages. ClarkWestern Design is licensed throughout the United States and can be reached by calling 877-832-3206.

**ClarkWestern technical support** — For general technical support on products, member sizing, industry standards, framing details or information on AISIWIN software, please call technical support at 888-437-3244.

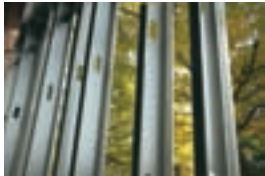
**Structural framing general notes.**

- Physical properties and load tables have been calculated in conformance with the 2001 North American Specification [NASPEC] with 2004 supplement for the Design of Cold-Formed Steel Structural Members and the International Building Code [IBC] 2006. U.S. provisions (ASD) have been used.
  - All materials delivered from ClarkWestern shall be kept dry, preferably by being stored inside a building under a roof. Where necessary to store material outside, it shall be stacked off the ground, properly supported on a level platform, and fully protected from the weather. Reference ASTM C754 section 8 and ASTM C1007 section 4.
  - Effective properties on structural framing incorporate the strength increase from the cold work of forming as applicable per NASPEC A7.2.
  - Gross properties are based on the section away from punchouts. Effective properties are based on punched sections.
  - For those steels with both 33 and 50 ksi listings, if the design is based upon 50 ksi, the 50 ksi steel needs to be specified by the end user at the time of quote and order.
  - The inside corner bend radii are based upon the standards set by SSMA for a given gauge or design thickness.
  - Where noted with a superscript "1", web height to thickness ratio exceeds 200. Web stiffeners are required at all support points and concentrated loads.
  - Where no effective properties are listed, width-to-thickness ratio limits per NASPEC B1 are exceeded. Only gross properties are available.
  - Tabulated gross properties are based on the full-unreduced cross sections of the studs, away from the web punchouts.
  - For deflection calculations, use the effective moment of inertia. Reference the NAS Commentary section C1.
  - Overall depth for track sections are equal to the nominal depth plus 2 times the design thickness plus the inside bend radius.
  - The standard protective coating for structural framing members is a G60 coating or equivalent. The standard protective coating for nonstructural framing members is a G40 coating or equivalent. Reference ASTM A1003 table 1.
  - Galvanize G90 is available by special order only and may result in additional cost and extended delivery times.
  - Nonstructural framing is not permitted in load-bearing [i.e. axial load greater than 100 lb/ft 200 lb/stud.] or exterior applications [i.e. lateral (or wind loads) more than 10 PSF.] Reference ASTM C645 section 3.2.2.
- \*\* Some building codes (e.g. Florida Building Code) do not allow such an increase in strength. In this case, please call our technical services for section properties w/o this increase.

# Physical and structural properties.

Steel framing is engineered to take advantage of the physical properties of formed steel to provide strength where needed and as needed in the construction of buildings. This section provides the basic information needed by architects and engineers to make sure the member called for in the plans will meet the criteria required by the structure.

ClarkWestern has prepared this catalog with the utmost diligence and care for accuracy and conformance to applicable industry standards. ClarkWestern intends this information to be accurate, informative and helpful as a selection guide for choosing ClarkWestern framing products. However, this information is only to be used for guidance and is not intended to replace the design, drawings, specifications and decisions of a registered or professional architect or engineer. ClarkWestern shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for loss caused by product application for other than its intended use. ClarkWestern's liability is expressly limited to materials replacement only for defective products. Claims shall be deemed waived unless they are made in writing to ClarkWestern within 30 days of the date a problem was or reasonably should have been discovered. ClarkWestern reserves the right to modify or change any information in this literature without notification.



**GREEN Benefits and Recycled Content:**  
LEED MR Credit 4 – ClarkWestern Building Systems produces light gauge framing products with a minimum recycled content of 48%, of which 32% is post-consumer, 16% pre-consumer. ClarkWestern recycles nearly 100% of our post-industrial scrap.

LEED MR Credit 5 – ClarkWestern Building Systems operates regional manufacturing plants nationwide. Most projects are within a 500 mile radius of the manufacturing location and raw material source. Please visit [www.clarkwestern.com](http://www.clarkwestern.com) for plant locations.

## Symbols and terms.

The following tables are provided to help architects and engineers design structures that withstand various forces. Those forces include vertical loads such as weight from overhead, lateral loads such as wind, other applied pressure or a combination of those. Such natural forces can result in deflection and/or twisting of cold-formed steel framing materials.

Key among these tables are the physical and structural properties tables in this next section. The tables provide typical data required to make determinations about the suitability of materials for certain intended purposes. The nature of those data are identified by commonly used engineering symbols and terms. This legend will help you to understand the symbols and terms used here.

- $I_x = \text{in.}^4$ : Moment of inertia about the X-X axis, used for DEFLECTION
- $S_x = \text{in.}^3$ : Section modulus about the X-X axis, used for STRESS & LOADS
- $R_x = \text{in.}$ : Radius of gyration about the X-X axis
- $I_y = \text{in.}^4$ : Moment of inertia about the Y-Y axis
- $R_y = \text{in.}$ : Radius of gyration about the Y-Y axis, used for AXIAL LOADS

**Wind load (lbs./sq. ft.):** Forces produced by wind, either direct wind (positive pressure), a vacuum (negative pressure) or those generated by wind whipping around the corners of a building. These forces are usually calculated according to the prevailing building code. Wind forces are referred to as transverse loads, are perpendicular to the wall and cause the wall to deflect.

**Axial load (lbs.):** A vertical force produced by overhead loads such as floors and roof. Floors and roofs contain both dead loads and live loads, which combine to make up most of the vertical loading.

**Header:** A joist or beam that spans two or more studs, accepts overhead loads from floors and roof and distributes the overhead load to the studs.

**Deflection:** The amount of movement of a system, usually greatest at the midpoint, caused by transverse loading.

- $L/120$ : Length (height) of stud, in inches, divided by 120 (short interior wall studs)
- $L/240$ : Length (height) of stud, in inches, divided by 240 (interior wall studs, exterior siding or EIFS)
- $L/360$ : Length (height) of stud, in inches, divided by 360 (exterior stucco)
- $L/600$ : Length (height) of stud, in inches, divided by 600 (exterior brick)
- $L/720$ : Length (height) of stud, in inches, divided by 720 (exterior brick)

**Limited deflection:** A design criteria which specifies the maximum allowable deflection for a system ( $L/240$ ,  $L/360$ ,  $L/600$ , etc.). Deflection modification factor = IBC 2006 table 1604.3, note f. Allows wind load to be multiplied by 0.7 for checking "component and cladding" deflection limits.

# UltraSTEEL® drywall studs & track

## ClarkWestern UltraSTEEL framing's 25-gauge EQ stud physical and structural properties

	Member designation	Base metal thickness (Inches)	Effective metal thickness (inches)	Weight (lbs/ft)	Gross section properties					Effective section properties		Allowable moment	Torsional section properties				
					Area (in <sup>2</sup> )	I <sub>x</sub> (in <sup>4</sup> )	r <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	r <sub>y</sub> (in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (in <sup>3</sup> )		M <sub>s</sub> (in-lbs)	X <sub>s</sub> (in)	J (10 <sup>-6</sup> in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	R <sub>s</sub> (in)
Studs	162 UDS	0.015	0.034	0.237	0.070	0.033	0.689	0.015	0.460	0.029	0.024	578	-1.062	0.580	0.009	1.347	0.378
	250 UDS	0.015	0.034	0.284	0.084	0.087	1.020	0.017	0.452	0.078	0.045	1,087	-0.935	0.694	0.021	1.456	0.587
	362 UDS	0.015	0.034	0.345	0.101	0.204	1.418	0.019	0.435	0.189	0.057	1,363	-0.815	0.842	0.049	1.693	0.768
	400 UDS	0.015	0.034	0.365	0.107	0.256	1.546	0.020	0.429	0.233	0.063	1,509	-0.783	0.891	0.061	1.785	0.808
	600 UDS*	0.015	0.034	0.472	0.139	0.675	2.205	0.022	0.396	0.535	0.108	2,580	-0.648	1.154	0.153	2.332	0.923

## ClarkWestern UltraSTEEL framing's track 25-gauge EQ physical and structural properties

	Member designation	Leg (in)	Mils	Base metal thickness (inches)	Effective metal thickness (inches)	Weight (lbs/ft)	Gross section properties						Effective section properties			Torsional section properties					
							Area (in <sup>2</sup> )	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	S <sub>y</sub> (in <sup>3</sup> )	R <sub>y</sub> (in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (in <sup>3</sup> )	M <sub>xe</sub> (in-lb)	X <sub>s</sub> (in)	J*1000 (in <sup>6</sup> )	C <sub>w</sub> (in <sup>6</sup> )	R <sub>s</sub> (in)	B Beta
Track	162 UDT 25EQ	1.25	15	0.015	0.035	0.219	0.064	0.032	0.038	0.702	0.011	0.013	0.412	0.020	0.017	400	-0.887	0.005	0.005	1.204	0.457
		2.00	15	0.015	0.035	0.300	0.088	0.048	0.058	0.736	0.039	0.047	0.662	0.025	0.016	389	-1.587	0.007	0.019	1.870	0.280
		3.00	15	0.015	0.035	0.407	0.120	0.069	0.083	0.759	0.115	0.139	0.980	0.027	0.017	410	-2.551	0.010	0.059	2.837	0.191
	250 UDT 25EQ	1.25	15	0.015	0.035	0.266	0.078	0.082	0.065	1.023	0.013	0.010	0.401	0.058	0.026	627	-0.776	0.007	0.014	1.345	0.668
		2.00	15	0.015	0.035	0.347	0.102	0.119	0.094	1.082	0.045	0.035	0.662	0.067	0.026	621	-1.437	0.008	0.050	1.917	0.438
		3.00	15	0.015	0.035	0.454	0.134	0.169	0.134	1.126	0.132	0.105	0.995	0.069	0.027	653	-2.371	0.011	0.153	2.807	0.287
	362 UDT 25EQ	1.25	15	0.015	0.035	0.327	0.096	0.191	0.105	1.411	0.014	0.008	0.382	0.133	0.038	920	-0.671	0.008	0.033	1.609	0.826
		2.00	15	0.015	0.035	0.407	0.120	0.270	0.148	1.501	0.050	0.028	0.649	0.144	0.039	923	-1.287	0.010	0.117	2.081	0.618
		3.00	15	0.015	0.035	0.515	0.151	0.374	0.205	1.573	0.150	0.082	0.995	0.154	0.039	939	-2.178	0.013	0.352	2.865	0.422
	400 UDT 25EQ	1.25	15	0.015	0.035	0.347	0.102	0.241	0.119	1.537	0.014	0.007	0.375	0.162	0.042	1018	-0.643	0.008	0.042	1.707	0.858
		2.00	15	0.015	0.035	0.428	0.126	0.336	0.167	1.636	0.052	0.026	0.643	0.177	0.043	1023	-1.244	0.010	0.147	2.153	0.666
		3.00	15	0.015	0.035	0.535	0.157	0.464	0.230	1.717	0.155	0.077	0.992	0.188	0.044	1053	-2.122	0.013	0.440	2.904	0.466
	600 UDT 25EQ*	1.25	15	0.015	0.035	0.454	0.134	0.636	0.211	2.182	0.016	0.005	0.343	—	—	—	-0.526	0.011	0.107	2.270	0.946
		2.00	15	0.015	0.035	0.535	0.157	0.850	0.282	2.325	0.058	0.019	0.609	—	—	—	-1.061	0.013	0.377	2.627	0.837
		3.00	15	0.015	0.035	0.643	0.189	1.136	0.377	2.452	0.176	0.058	0.966	—	—	—	-1.869	0.016	1.118	3.231	0.665

Notes: UltraSTEEL section properties were determined in accordance with AISI-NASPEC 2001. Section properties were conservatively calculated using the thickness and yield strength of the base material, prior to the UltraSTEEL framing process.

Effective properties and moment capacity did not incorporate stress increase as a result of cold work of forming. The term "Effective Thickness" was created by Underwriters Laboratory (UL®) to establish a minimum thickness measurement after the UltraSTEEL manufacturing process has occurred. Effective thickness is the measurement across the peaks of the dimples or the thickest part of the steel. The manufacturing, base steel and quality control process is verified by independent third-party UL® representatives, who make regular unannounced visits to manufacturing facilities to assure full compliance with UL® established quality control standards. Tested to ICC acceptance criteria AC86.

\* Depth over thickness ratio (h/t) is greater than 300.

# UltraSTEEL® drywall studs & track

## ClarkWestern UltraSTEEL framing's 20-gauge EQ stud physical and structural properties

	Member designation	Base metal thickness (inches)	Effective metal thickness (inches)	Weight (lbs/ft)	Gross section properties					Effective section properties		Allowable moment	Torsional section properties				
					Area (in <sup>2</sup> )	I <sub>x</sub> (in <sup>4</sup> )	r <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	r <sub>y</sub> (in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (in <sup>3</sup> )		M <sub>a</sub> (in-lbs)	X <sub>o</sub> (in)	J (10 <sup>-6</sup> in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	R <sub>o</sub> (in)
Studs	162 UDS	0.025	0.055	0.391	0.115	0.054	0.685	0.024	0.455	0.052	0.048	1,157	-1.050	2.653	0.014	1.333	0.380
	250 UDS	0.025	0.055	0.469	0.138	0.142	1.015	0.028	0.447	0.136	0.090	2,166	-0.923	3.184	0.034	1.442	0.591
	362 UDS	0.025	0.055	0.570	0.168	0.334	1.412	0.031	0.430	0.320	0.119	2,841	-0.804	3.868	0.078	1.681	0.771
	400 UDS	0.025	0.055	0.604	0.177	0.421	1.540	0.032	0.423	0.403	0.132	3,155	-0.771	4.095	0.098	1.774	0.811
	600 UDS	0.025	0.055	0.782	0.230	1.111	2.197	0.035	0.391	1.017	0.234	5,593	-0.637	5.310	0.247	2.321	0.925

## ClarkWestern UltraSTEEL framing's track 20-gauge EQ physical and structural properties

	Member designation	Leg (in)	Mils	Base metal thickness (inches)	Effective metal thickness (inches)	Weight (lbs/ft)	Gross section properties						Effective section properties			Torsional section properties						
							Area (in <sup>2</sup> )	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	S <sub>y</sub> (in <sup>3</sup> )	R <sub>y</sub> (in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (in <sup>3</sup> )	M <sub>xe</sub> (in-lb)	X <sub>o</sub> (in)	J*1000 (in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	R <sub>o</sub> (in)	B Beta	
Track	162 UDT 20EQ	1.25	25	0.025	0.055	0.365	0.107	0.053	0.064	0.705	0.018	0.022	0.410	0.040	0.035	841	-0.881	0.025	0.009	1.201	0.462	
		2.00	25	0.025	0.055	0.500	0.147	0.080	0.096	0.740	0.064	0.076	0.661	0.048	0.038	903	-1.580	0.034	0.032	1.866	0.283	
		3.00	25	0.025	0.055	0.679	0.199	0.116	0.139	0.763	0.191	0.228	0.979	0.055	0.039	945	-2.545	0.046	0.100	2.831	0.192	
	250 UDT 20EQ	1.25	25	0.025	0.055	0.444	0.130	0.137	0.108	1.026	0.021	0.016	0.399	0.106	0.065	1565	-0.770	0.030	0.023	1.344	0.671	
		2.00	25	0.025	0.055	0.578	0.170	0.200	0.157	1.086	0.074	0.058	0.660	0.128	0.069	1658	-1.431	0.039	0.084	1.914	0.441	
		3.00	25	0.025	0.055	0.757	0.222	0.284	0.223	1.130	0.220	0.172	0.994	0.150	0.067	1609	-2.364	0.051	0.256	2.803	0.288	
	362 UDT 20EQ	1.25	25	0.025	0.055	0.544	0.160	0.320	0.174	1.414	0.023	0.013	0.380	0.259	0.104	2494	-0.666	0.037	0.055	1.608	0.828	
		2.00	25	0.025	0.055	0.679	0.199	0.451	0.245	1.504	0.083	0.045	0.647	0.312	0.102	2443	-1.281	0.046	0.195	2.079	0.620	
	400 UDT 20EQ	3.00	25	0.025	0.055	0.858	0.252	0.627	0.341	1.577	0.249	0.135	0.993	0.367	0.101	2408	-2.172	0.058	0.587	2.862	0.424	
		1.25	25	0.025	0.055	0.578	0.170	0.402	0.198	1.539	0.024	0.012	0.373	0.330	0.114	2736	-0.638	0.039	0.069	1.707	0.860	
		2.00	25	0.025	0.055	0.712	0.209	0.562	0.277	1.639	0.086	0.042	0.641	0.397	0.113	2702	-1.239	0.048	0.245	2.152	0.669	
	600 UDT 20EQ	3.00	25	0.025	0.055	0.891	0.262	0.775	0.383	1.721	0.257	0.127	0.991	0.464	0.112	2675	-2.116	0.060	0.734	2.901	0.468	
		1.25	25	0.025	0.055	0.757	0.222	1.060	0.350	2.183	0.026	0.009	0.341	0.800	0.163	3900	-0.522	0.051	0.177	2.271	0.947	
		2.00	25	0.025	0.055	0.891	0.262	1.419	0.469	2.327	0.096	0.032	0.607	0.999	0.171	4093	-1.056	0.060	0.627	2.627	0.838	
			3.00	25	0.025	0.055	1.070	0.315	1.897	0.627	2.455	0.292	0.097	0.964	1.070	0.171	4103	-1.864	0.073	1.862	3.230	0.667

Notes: UltraSTEEL section properties were determined in accordance with AISI-NASPEC 2001. Section properties were conservatively calculated using the thickness and yield strength of the base material, prior to the UltraSTEEL framing process.

Effective properties and moment capacity did not incorporate stress increase as a result of cold work of forming. The term "Effective Thickness" was created by Underwriters Laboratory (UL®) to establish a minimum thickness measurement after the UltraSTEEL manufacturing process has occurred. Effective thickness is the measurement across the peaks of the dimples or the thickest part of the steel. The manufacturing, base steel and quality control process is verified by independent third-party UL® representatives, who make regular unannounced visits to manufacturing facilities to assure full compliance with UL® established quality control standards. Tested to ICC acceptance criteria AC86.

\* Depth over thickness ratio (h/t) is greater than 300.

For UltraSTEEL framing 20 STR-gauge EQ physical and structural properties, please contact Technical Services at 888-437-3244.

# Structural studs & track 2-1/2"

	Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
			Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	J <sub>x</sub> 1000 (in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	X <sub>o</sub> (in)	R <sub>o</sub> (in)	Beta
2-1/2" Studs	250S162-33	0.0346	0.223	0.76	0.235	0.188	1.027	0.087	0.624	0.235	0.180	3.55	975	0.235	0.164	4.91	1260	0.089	0.146	-1.470	1.898	0.401
	250S162-43	0.0451	0.289	0.98	0.302	0.242	1.022	0.111	0.620	0.302	0.240	5.22	1265	0.302	0.217	6.50	1917	0.196	0.184	-1.457	1.885	0.402
	250S162-54	0.0566	0.358	1.22	0.370	0.296	1.016	0.135	0.613	0.370	0.296	6.57	1553	0.370	0.284	9.42	2353	0.383	0.223	-1.443	1.868	0.403
	250S162-68	0.0713	0.443	1.51	0.450	0.360	1.007	0.162	0.605	0.450	0.360	8.21	1891	0.450	0.357	12.11	2866	0.752	0.268	-1.424	1.846	0.405
	250S200-33	0.0346	0.258	0.88	0.279	0.223	1.040	0.154	0.773	0.276	0.197	3.90	975	0.265	0.182	5.44	1260	0.103	0.302	-1.926	2.321	0.312
	250S200-43	0.0451	0.334	1.14	0.358	0.287	1.036	0.198	0.769	0.358	0.278	5.49	1265	0.358	0.252	7.56	1917	0.227	0.382	-1.914	2.308	0.312
	250S200-54	0.0566	0.415	1.41	0.440	0.352	1.030	0.241	0.763	0.440	0.352	7.65	1553	0.440	0.321	9.60	2353	0.443	0.464	-1.899	2.291	0.313
	250S200-68	0.0713	0.515	1.75	0.537	0.430	1.022	0.293	0.754	0.537	0.430	9.57	1891	0.537	0.417	13.84	2866	0.872	0.561	-1.881	2.270	0.313
	250S200-97	0.1017	0.711	2.42	0.718	0.575	1.005	0.386	0.736	0.718	0.575	13.36	2506	0.718	0.575	19.82	3798	2.452	0.735	-1.843	2.224	0.314
	250S250-43	0.0451	0.379	1.29	0.426	0.341	1.060	0.336	0.941	0.426	0.297	5.87	1265	0.411	0.265	7.95	1917	0.257	0.638	-2.404	2.791	0.258
250S250-54	0.0566	0.471	1.60	0.524	0.419	1.055	0.412	0.935	0.524	0.379	7.49	1553	0.521	0.341	10.22	2353	0.503	0.778	-2.389	2.774	0.258	
250S250-68	0.0713	0.586	1.99	0.643	0.514	1.047	0.503	0.926	0.643	0.495	10.79	1891	0.643	0.446	13.35	2866	0.993	0.944	-2.371	2.752	0.258	
250S250-97	0.1017	0.813	2.77	0.864	0.692	1.031	0.670	0.908	0.864	0.690	15.60	2506	0.864	0.663	22.31	3798	2.803	1.245	-2.332	2.707	0.258	
2-1/2" Track	250T125-33	0.0346	0.173	0.59	0.192	0.145	1.054	0.027	0.397	0.166	0.103	2.03	1024	0.157	0.096	2.87	1260	0.069	0.033	-0.760	1.358	0.687
	250T125-43	0.0451	0.225	0.77	0.250	0.188	1.055	0.035	0.395	0.231	0.147	2.91	1356	0.220	0.137	4.09	2054	0.153	0.042	-0.755	1.356	0.690
	250T125-54	0.0566	0.282	0.96	0.318	0.236	1.062	0.043	0.392	0.310	0.203	4.01	1692	0.297	0.188	5.64	2563	0.301	0.054	-0.749	1.357	0.696
	250T125-68	0.0713	0.355	1.21	0.408	0.297	1.072	0.054	0.389	0.408	0.281	5.56	2111	0.402	0.262	7.85	3199	0.602	0.069	-0.740	1.360	0.704
	250T125-97	0.1017	0.506	1.72	0.604	0.423	1.092	0.074	0.383	0.604	0.423	9.56	2954	0.604	0.423	12.67	4476	1.745	0.101	-0.724	1.365	0.719
	250T150-33	0.0346	0.190	0.65	0.221	0.167	1.079	0.045	0.485	0.179	0.107	2.11	1024	0.170	0.099	2.98	1260	0.076	0.054	-0.973	1.532	0.596
	250T150-43	0.0451	0.248	0.84	0.289	0.217	1.080	0.058	0.483	0.252	0.154	3.03	1356	0.238	0.142	4.25	2054	0.168	0.070	-0.968	1.529	0.599
	250T150-54	0.0566	0.311	1.06	0.368	0.273	1.088	0.072	0.481	0.342	0.213	4.22	1692	0.325	0.197	5.89	2563	0.332	0.089	-0.961	1.529	0.605
	250T150-68	0.0713	0.391	1.33	0.472	0.344	1.099	0.089	0.478	0.465	0.299	5.92	2111	0.445	0.276	8.27	3199	0.663	0.114	-0.953	1.531	0.613
	250T150-97	0.1017	0.557	1.90	0.701	0.491	1.121	0.124	0.471	0.701	0.491	9.69	2954	0.701	0.463	13.86	4476	1.921	0.168	-0.935	1.534	0.629
	250T200-33	0.0346	0.225	0.76	0.280	0.212	1.117	0.097	0.658	0.203	0.112	2.22	1024	0.191	0.104	3.12	1260	0.090	0.118	-1.418	1.921	0.455
	250T200-43	0.0451	0.293	1.00	0.366	0.275	1.118	0.126	0.657	0.288	0.163	3.21	1356	0.270	0.150	4.48	2054	0.198	0.153	-1.413	1.918	0.457
	250T200-54	0.0566	0.367	1.25	0.466	0.346	1.127	0.157	0.654	0.396	0.228	4.51	1692	0.371	0.209	6.25	2563	0.392	0.195	-1.405	1.917	0.462
	250T200-68	0.0713	0.462	1.57	0.600	0.437	1.139	0.196	0.652	0.548	0.324	6.41	2111	0.517	0.296	8.86	3199	0.783	0.251	-1.396	1.916	0.469
	250T200-97	0.1017	0.659	2.24	0.893	0.626	1.165	0.275	0.646	0.893	0.556	10.99	2954	0.856	0.510	15.27	4476	2.271	0.374	-1.376	1.915	0.484
	250T250-43	0.0451	0.338	1.15	0.443	0.333	1.146	0.230	0.826	0.318	0.169	3.34	1356	0.296	0.155	4.64	2054	0.229	0.283	-1.873	2.346	0.362
	250T250-54	0.0566	0.424	1.44	0.565	0.419	1.155	0.287	0.824	0.440	0.238	4.70	1692	0.410	0.217	6.50	2563	0.453	0.361	-1.865	2.343	0.366
	250T250-68	0.0713	0.534	1.82	0.728	0.530	1.168	0.360	0.821	0.616	0.341	6.74	2111	0.576	0.310	9.27	3199	0.904	0.466	-1.855	2.341	0.372
250T250-97	0.1017	0.761	2.59	1.086	0.761	1.195	0.506	0.815	1.028	0.596	11.79	2954	0.972	0.541	16.20	4476	2.622	0.696	-1.834	2.336	0.384	

For section properties table notes see page 4

- A = Cross-sectional area
- I<sub>x</sub> = Moment of inertia (x-axis)
- S<sub>x</sub> = Section modulus (x-axis)

- R<sub>x</sub> = Radius of gyration (x-axis)
- I<sub>y</sub> = Moment of inertia (y-axis)
- R<sub>y</sub> = Radius of gyration (y-axis)
- Ma = Allowable bending moment

- Va = Allowable shear force
- J = St. Venant torsion constant
- C<sub>w</sub> = Torsional warping constant
- X<sub>o</sub> = Distance from center of gravity to shear center along x-axis

- R<sub>o</sub> = Polar radius of gyration about the centroidal principal axis
- β = Beta coefficient

# Structural studs & track 3-1/2"

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties					
		Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Jx1000 (in <sup>4</sup> )	Cw (in <sup>6</sup> )	Xo (in)	Ro (in)	Beta	
3-1/2" Studs	350S162-33	0.0346	0.258	0.88	0.508	0.290	1.404	0.098	0.617	0.508	0.257	5.08	1024	0.508	0.227	6.78	1125	0.103	0.277	-1.324	2.026	0.573
	350S162-43	0.0451	0.334	1.14	0.654	0.374	1.400	0.125	0.612	0.654	0.357	7.05	1739	0.654	0.309	9.25	2141	0.227	0.350	-1.312	2.014	0.575
	350S162-54	0.0566	0.415	1.41	0.804	0.460	1.392	0.152	0.606	0.804	0.447	8.83	2253	0.804	0.426	12.74	3372	0.443	0.426	-1.298	1.998	0.578
	350S162-68	0.0713	0.515	1.75	0.985	0.563	1.383	0.184	0.597	0.985	0.551	12.56	2774	0.985	0.549	16.44	4202	0.872	0.514	-1.280	1.977	0.581
	350S200-33	0.0346	0.292	0.99	0.598	0.342	1.431	0.175	0.773	0.597	0.283	5.59	1024	0.579	0.251	7.52	1125	0.117	0.541	-1.760	2.396	0.461
	350S200-43	0.0451	0.379	1.29	0.771	0.441	1.426	0.224	0.768	0.771	0.410	8.09	1739	0.771	0.362	10.85	2141	0.257	0.687	-1.748	2.383	0.462
	350S200-54	0.0566	0.471	1.60	0.950	0.543	1.420	0.274	0.762	0.950	0.530	10.47	2253	0.950	0.470	14.07	3372	0.503	0.838	-1.733	2.367	0.464
	350S200-68	0.0713	0.586	1.99	1.167	0.667	1.411	0.333	0.754	1.167	0.655	14.58	2774	1.167	0.638	19.10	4202	0.993	1.018	-1.715	2.345	0.465
	350S200-97	0.1017	0.813	2.77	1.576	0.901	1.393	0.440	0.736	1.576	0.884	20.57	3765	1.576	0.884	30.51	5704	2.803	1.347	-1.676	2.300	0.469
	350S250-43	0.0451	0.424	1.44	0.906	0.518	1.461	0.380	0.946	0.906	0.431	8.52	1739	0.885	0.375	11.23	2141	0.288	1.151	-2.220	2.821	0.381
	350S250-54	0.0566	0.528	1.80	1.118	0.639	1.455	0.467	0.940	1.118	0.559	11.04	2253	1.113	0.494	14.78	3372	0.564	1.409	-2.205	2.804	0.382
	350S250-68	0.0713	0.657	2.24	1.376	0.787	1.447	0.570	0.931	1.376	0.739	16.10	2774	1.376	0.661	19.78	4202	1.114	1.718	-2.186	2.782	0.383
	350S250-97	0.1017	0.915	3.11	1.870	1.069	1.430	0.762	0.913	1.870	1.050	23.72	3765	1.870	0.998	33.58	5704	3.154	2.291	-2.147	2.736	0.384

3-1/2" Track	350T125-33	0.0346	0.207	0.71	0.405	0.222	1.397	0.030	0.379	0.354	0.165	3.27	1024	0.339	0.156	4.67	1077	0.083	0.070	-0.668	1.594	0.824
	350T125-43	0.0451	0.270	0.92	0.528	0.288	1.397	0.038	0.377	0.490	0.233	4.61	1739	0.469	0.219	6.55	2141	0.183	0.090	-0.663	1.592	0.826
	350T125-54	0.0566	0.339	1.15	0.668	0.361	1.404	0.048	0.375	0.651	0.317	6.26	2392	0.626	0.297	8.89	3372	0.362	0.114	-0.658	1.595	0.830
	350T125-68	0.0713	0.427	1.45	0.851	0.454	1.412	0.059	0.372	0.851	0.433	8.55	2994	0.839	0.407	12.18	4536	0.723	0.144	-0.650	1.599	0.835
	350T125-97	0.1017	0.608	2.07	1.243	0.645	1.430	0.081	0.366	1.243	0.645	14.56	4213	1.243	0.645	19.30	6383	2.096	0.209	-0.636	1.607	0.844
	350T150-33	0.0346	0.225	0.76	0.461	0.253	1.432	0.049	0.469	0.382	0.171	3.39	1024	0.364	0.162	4.84	1077	0.090	0.114	-0.866	1.738	0.752
	350T150-43	0.0451	0.293	1.00	0.601	0.328	1.433	0.064	0.467	0.531	0.243	4.80	1739	0.505	0.227	6.80	2141	0.198	0.148	-0.861	1.736	0.754
	350T150-54	0.0566	0.367	1.25	0.761	0.412	1.440	0.079	0.465	0.712	0.332	6.57	2392	0.679	0.310	9.28	3372	0.392	0.187	-0.855	1.738	0.758
	350T150-68	0.0713	0.462	1.57	0.972	0.518	1.450	0.099	0.462	0.957	0.459	9.07	2994	0.919	0.428	12.81	4536	0.783	0.238	-0.847	1.741	0.763
	350T150-97	0.1017	0.659	2.24	1.422	0.738	1.469	0.136	0.455	1.422	0.738	14.58	4213	1.422	0.701	20.98	6383	2.271	0.346	-0.831	1.748	0.774
	350T200-33	0.0346	0.259	0.88	0.574	0.315	1.487	0.108	0.647	0.428	0.181	3.57	1024	0.410	0.161	4.82	1077	0.103	0.249	-1.285	2.069	0.614
	350T200-43	0.0451	0.338	1.15	0.749	0.409	1.489	0.140	0.645	0.600	0.257	5.09	1739	0.568	0.240	7.18	2141	0.229	0.323	-1.280	2.066	0.616
	350T200-54	0.0566	0.424	1.44	0.949	0.513	1.496	0.175	0.642	0.814	0.355	7.01	2392	0.770	0.329	9.85	3372	0.453	0.409	-1.273	2.067	0.621
	350T200-68	0.0713	0.534	1.82	1.213	0.647	1.508	0.218	0.639	1.112	0.496	9.80	2994	1.054	0.458	13.71	4536	0.904	0.522	-1.264	2.069	0.626
	350T200-97	0.1017	0.761	2.59	1.780	0.923	1.530	0.305	0.633	1.779	0.831	16.41	4213	1.708	0.769	23.01	6383	2.622	0.765	-1.247	2.073	0.638
	350T250-43	0.0451	0.383	1.30	0.896	0.490	1.530	0.257	0.819	0.659	0.268	5.29	1739	0.621	0.249	7.46	2141	0.260	0.593	-1.719	2.443	0.505
	350T250-54	0.0566	0.480	1.63	1.137	0.615	1.538	0.321	0.817	0.900	0.371	7.33	2392	0.846	0.343	10.26	3372	0.513	0.752	-1.712	2.442	0.509
	350T250-68	0.0713	0.605	2.06	1.454	0.776	1.550	0.401	0.814	1.241	0.522	10.31	2994	1.168	0.479	14.35	4536	1.025	0.961	-1.703	2.443	0.514
	350T250-97	0.1017	0.862	2.93	2.139	1.109	1.575	0.563	0.808	2.027	0.889	17.56	4213	1.924	0.815	24.39	6383	2.973	1.413	-1.684	2.443	0.525
	350T300-54	0.0566	0.537	1.83	1.324	0.716	1.570	0.525	0.989	0.974	0.383	7.57	2392	0.912	0.353	10.57	3372	0.573	1.238	-2.165	2.851	0.424
350T300-68	0.0713	0.676	2.30	1.695	0.904	1.583	0.657	0.986	1.352	0.541	10.69	2994	1.265	0.495	14.83	4536	1.146	1.585	-2.155	2.850	0.428	
350T300-97	0.1017	0.964	3.28	2.497	1.295	1.610	0.926	0.980	2.242	0.931	18.40	4213	2.110	0.848	25.40	6383	3.323	2.336	-2.135	2.848	0.438	

For section properties table notes see page 4

A = Cross-sectional area

I<sub>x</sub> = Moment of inertia (x-axis)

S<sub>x</sub> = Section modulus (x-axis)

R<sub>x</sub> = Radius of gyration (x-axis)

I<sub>y</sub> = Moment of inertia (y-axis)

R<sub>y</sub> = Radius of gyration (y-axis)

Ma = Allowable bending moment

Va = Allowable shear force

J = St. Venant torsion constant

Cw = Torsional warping constant

Xo = Distance from center of gravity to shear center along x-axis

Ro = Polar radius of gyration about the centroidal principal axis

β = Beta coefficient

# Structural studs & track 3-5/8"

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties						
		Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	J <sub>x</sub> 1000 (in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	X <sub>o</sub> (in)	R <sub>o</sub> (in)	Beta		
3-5/8" Studs	362S137-33	0.0346	0.236	0.80	0.479	0.264	1.424	0.059	0.501	0.479	0.232	4.59	1024	0.479	0.198	5.92	1083	0.094	0.165	-1.003	1.813	0.694	
	362S137-43	0.0451	0.306	1.04	0.616	0.340	1.419	0.075	0.497	0.616	0.320	6.32	1739	0.616	0.292	8.73	2141	0.207	0.208	-0.991	1.801	0.697	
	362S137-54	0.0566	0.379	1.29	0.756	0.417	1.411	0.091	0.490	0.756	0.402	7.94	2341	0.756	0.381	11.42	3372	0.405	0.251	-0.978	1.785	0.700	
	362S137-68	0.0713	0.470	1.60	0.922	0.509	1.401	0.109	0.480	0.922	0.498	9.84	2884	0.922	0.493	14.77	4370	0.797	0.302	-0.959	1.764	0.704	
	362S137-97	0.1017	0.648	2.20	1.229	0.678	1.377	0.137	0.460	1.229	0.662	16.36	3922	1.229	0.662	24.10	5943	2.233	0.390	-0.922	1.720	0.713	
	362S162-33	0.0346	0.262	0.89	0.551	0.304	1.450	0.099	0.616	0.551	0.268	5.29	1024	0.551	0.236	7.05	1083	0.105	0.297	-1.308	2.048	0.592	
	362S162-43	0.0451	0.340	1.16	0.710	0.392	1.445	0.127	0.611	0.710	0.372	7.34	1739	0.710	0.321	9.62	2141	0.230	0.376	-1.297	2.036	0.594	
	362S162-54	0.0566	0.422	1.44	0.873	0.481	1.438	0.154	0.604	0.873	0.466	9.22	2341	0.873	0.444	13.28	3372	0.451	0.457	-1.283	2.020	0.597	
	362S162-68	0.0713	0.524	1.78	1.069	0.590	1.429	0.186	0.596	1.069	0.579	11.43	2884	1.069	0.574	17.18	4370	0.887	0.552	-1.264	1.998	0.600	
	362S162-97	0.1017	0.724	2.46	1.435	0.792	1.408	0.241	0.577	1.435	0.776	18.62	3922	1.435	0.776	27.52	5943	2.496	0.723	-1.226	1.954	0.606	
	362S200-33	0.0346	0.297	1.01	0.648	0.358	1.478	0.177	0.772	0.647	0.294	5.81	1024	0.628	0.261	7.82	1083	0.118	0.577	-1.741	2.411	0.478	
	362S200-43	0.0451	0.385	1.31	0.836	0.461	1.474	0.227	0.767	0.836	0.427	8.43	1739	0.836	0.377	11.29	2141	0.261	0.734	-1.729	2.398	0.480	
	362S200-54	0.0566	0.479	1.63	1.030	0.568	1.467	0.277	0.761	1.030	0.553	10.93	2341	1.030	0.490	14.66	3372	0.511	0.896	-1.715	2.382	0.482	
	362S200-68	0.0713	0.595	2.02	1.265	0.698	1.458	0.337	0.753	1.265	0.687	15.29	2884	1.265	0.666	19.95	4370	1.008	1.089	-1.696	2.360	0.484	
	362S200-97	0.1017	0.826	2.81	1.711	0.944	1.440	0.446	0.735	1.711	0.928	21.59	3922	1.711	0.928	32.03	5943	2.847	1.441	-1.658	2.315	0.487	
	362S250-43	0.0451	0.430	1.46	0.980	0.541	1.510	0.385	0.946	0.980	0.449	8.88	1739	0.958	0.390	11.69	2141	0.292	1.230	-2.199	2.830	0.396	
	362S250-54	0.0566	0.535	1.82	1.210	0.668	1.504	0.473	0.940	1.210	0.582	11.51	2341	1.205	0.514	15.40	3372	0.571	1.506	-2.184	2.813	0.397	
	362S250-68	0.0713	0.666	2.27	1.490	0.822	1.496	0.578	0.931	1.490	0.774	16.85	2884	1.490	0.689	20.63	4370	1.129	1.837	-2.165	2.791	0.398	
	362S250-97	0.1017	0.927	3.16	2.027	1.118	1.478	0.772	0.912	2.027	1.100	24.85	3922	2.027	1.046	35.17	5943	3.197	2.452	-2.126	2.746	0.400	
	362S300-54	0.0566	0.592	2.01	1.390	0.767	1.533	0.734	1.114	1.383	0.607	11.99	2341	1.312	0.529	15.83	3372	0.632	2.316	-2.659	3.265	0.337	
	362S300-68	0.0713	0.738	2.51	1.716	0.947	1.525	0.900	1.105	1.716	0.811	16.02	2884	1.684	0.716	21.44	4370	1.250	2.833	-2.640	3.243	0.337	
	362S300-97	0.1017	1.029	3.50	2.343	1.292	1.509	1.213	1.086	2.343	1.217	26.95	3922	2.320	1.150	34.42	5943	3.548	3.803	-2.600	3.196	0.338	
	3-5/8" Track	362T125-33	0.0346	0.212	0.72	0.438	0.232	1.438	0.030	0.377	0.384	0.174	3.44	1024	0.368	0.164	4.92	1039	0.085	0.076	-0.658	1.626	0.836
		362T125-43	0.0451	0.276	0.94	0.571	0.302	1.439	0.039	0.375	0.531	0.245	4.84	1739	0.508	0.230	6.89	2141	0.187	0.098	-0.654	1.625	0.838
		362T125-54	0.0566	0.346	1.18	0.723	0.378	1.445	0.048	0.373	0.705	0.332	6.57	2480	0.678	0.312	9.34	3372	0.369	0.123	-0.648	1.627	0.841
		362T125-68	0.0713	0.436	1.48	0.921	0.475	1.454	0.060	0.370	0.921	0.453	8.95	3104	0.907	0.427	12.78	4703	0.738	0.156	-0.641	1.631	0.846
		362T125-97	0.1017	0.621	2.11	1.343	0.675	1.471	0.082	0.363	1.343	0.675	15.24	4370	1.343	0.675	20.20	6622	2.140	0.226	-0.626	1.639	0.854
		362T150-33	0.0346	0.229	0.78	0.499	0.264	1.475	0.050	0.467	0.414	0.180	3.56	1024	0.395	0.170	5.09	1039	0.091	0.124	-0.854	1.767	0.766
		362T150-43	0.0451	0.298	1.02	0.650	0.343	1.476	0.064	0.465	0.574	0.255	5.04	1739	0.547	0.239	7.15	2141	0.202	0.160	-0.850	1.766	0.768
		362T150-54	0.0566	0.374	1.27	0.823	0.431	1.483	0.080	0.462	0.769	0.349	6.89	2480	0.735	0.325	9.74	3372	0.400	0.202	-0.844	1.768	0.772
		362T150-68	0.0713	0.471	1.60	1.050	0.542	1.492	0.099	0.459	1.034	0.480	9.49	3104	0.993	0.449	13.43	4703	0.799	0.257	-0.836	1.771	0.777
		362T150-97	0.1017	0.672	2.29	1.534	0.771	1.512	0.138	0.453	1.534	0.771	15.23	4370	1.534	0.733	21.94	6622	2.315	0.374	-0.820	1.778	0.787
		362T200-33	0.0346	0.264	0.90	0.619	0.328	1.532	0.110	0.645	0.464	0.190	3.76	1024	0.445	0.167	5.00	1039	0.105	0.269	-1.270	2.092	0.631
		362T200-43	0.0451	0.343	1.17	0.808	0.427	1.534	0.142	0.643	0.649	0.270	5.34	1739	0.615	0.252	7.55	2141	0.233	0.350	-1.265	2.090	0.633
		362T200-54	0.0566	0.431	1.47	1.024	0.536	1.541	0.177	0.640	0.879	0.372	7.35	2480	0.832	0.345	10.34	3372	0.460	0.442	-1.259	2.091	0.637
		362T200-68	0.0713	0.543	1.85	1.307	0.675	1.552	0.221	0.638	1.199	0.519	10.26	3104	1.138	0.480	14.37	4703	0.919	0.564	-1.250	2.093	0.643
362T200-97		0.1017	0.773	2.63	1.917	0.963	1.575	0.308	0.631	1.915	0.867	17.14	4370	1.839	0.803	24.06	6622	2.666	0.825	-1.232	2.097	0.655	
362T250-43		0.0451	0.389	1.32	0.966	0.510	1.577	0.260	0.818	0.713	0.281	5.56	1739	0.672	0.262	7.85	2141	0.263	0.641	-1.702	2.460	0.521	
362T250-54		0.0566	0.487	1.66	1.224	0.641	1.585	0.324	0.816	0.971	0.389	7.69	2480	0.914	0.360	10.77	3372	0.521	0.812	-1.695	2.460	0.525	
362T250-68		0.0713	0.614	2.09	1.565	0.808	1.597	0.406	0.813	1.337	0.546	10.79	3104	1.259	0.502	15.04	4703	1.040	1.038	-1.686	2.460	0.530	
362T250-97		0.1017	0.875	2.98	2.300	1.155	1.621	0.570	0.807	2.180	0.928	18.34	4370	2.069	0.851	25.49	6622	3.016	1.524	-1.667	2.461	0.541	
362T300-54		0.0566	0.544	1.85	1.425	0.746	1.618	0.531	0.988	1.051	0.402	7.94	2480	0.985	0.371	11.11	3372	0.581	1.337	-2.146	2.863	0.439	
362T300-68		0.0713	0.685	2.33	1.823	0.941	1.631	0.665	0.985	1.456	0.566	11.19	3104	1.364	0.519	15.55	4703	1.161	1.711	-2.136	2.862	0.443	
362T300-97	0.1017	0.977	3.32	2.682	1.348	1.657	0.937	0.979	2.409	0.972	19.21	4370	2.268	0.887	26.54	6622	3.367	2.518	-2.116	2.860	0.453		

For section properties table notes see page 4

- A = Cross-sectional area
- I<sub>x</sub> = Moment of inertia (x-axis)
- S<sub>x</sub> = Section modulus (x-axis)

- R<sub>x</sub> = Radius of gyration (x-axis)
- I<sub>y</sub> = Moment of inertia (y-axis)
- R<sub>y</sub> = Radius of gyration (y-axis)
- Ma = Allowable bending moment

- Va = Allowable shear force
- J = St. Venant torsion constant
- C<sub>w</sub> = Torsional warping constant
- X<sub>o</sub> = Distance from center of gravity to shear center along x-axis

- R<sub>o</sub> = Polar radius of gyration about the centroidal principal axis
- β = Beta coefficient

# Structural studs & track 4"

	Member	Design Thickness (in)	Gross Properties						33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties					
			Area (in <sup>2</sup> )	Weight (lb/ft)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Rx (in)	Iy (in <sup>4</sup> )	Ry (in)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Jx1000 (in <sup>4</sup> )	Cw (in <sup>6</sup> )	Xo (in)	Ro (in)	Beta
4" Studs	400S137-33	0.0346	0.249	0.85	0.603	0.301	1.556	0.061	0.496	0.603	0.259	5.12	976	0.603	0.220	6.59	976	0.099	0.204	-0.965	1.897	0.741
	400S137-43	0.0451	0.323	1.10	0.776	0.388	1.551	0.078	0.491	0.776	0.359	7.09	1739	0.776	0.326	9.75	2141	0.219	0.257	-0.954	1.885	0.744
	400S137-54	0.0566	0.401	1.36	0.953	0.477	1.542	0.094	0.484	0.953	0.453	8.96	2603	0.953	0.428	12.82	3372	0.428	0.311	-0.940	1.870	0.747
	400S137-68	0.0713	0.497	1.69	1.165	0.582	1.531	0.112	0.475	1.165	0.567	11.21	3215	1.165	0.558	16.70	4871	0.842	0.375	-0.922	1.849	0.751
	400S137-97	0.1017	0.686	2.33	1.557	0.779	1.507	0.142	0.454	1.557	0.764	18.88	4394	1.557	0.764	27.81	6658	2.365	0.486	-0.885	1.806	0.760
	400S162-33	0.0346	0.275	0.94	0.692	0.346	1.586	0.103	0.611	0.692	0.299	5.91	976	0.692	0.262	7.86	976	0.110	0.363	-1.263	2.118	0.644
	400S162-43	0.0451	0.357	1.21	0.892	0.446	1.581	0.131	0.606	0.892	0.417	8.23	1739	0.892	0.359	10.75	2141	0.242	0.460	-1.252	2.106	0.647
	400S162-54	0.0566	0.443	1.51	1.098	0.549	1.574	0.159	0.600	1.098	0.526	10.39	2603	1.098	0.498	14.90	3372	0.473	0.560	-1.238	2.090	0.649
	400S162-68	0.0713	0.550	1.87	1.346	0.673	1.564	0.192	0.591	1.346	0.658	13.00	3215	1.346	0.648	19.41	4871	0.933	0.677	-1.220	2.069	0.653
	400S162-97	0.1017	0.762	2.59	1.812	0.906	1.542	0.249	0.572	1.812	0.892	21.40	4394	1.812	0.892	31.64	6658	2.628	0.889	-1.182	2.025	0.659
	400S200-33	0.0346	0.310	1.05	0.812	0.406	1.619	0.183	0.769	0.812	0.328	6.49	976	0.789	0.291	8.71	976	0.124	0.697	-1.688	2.462	0.530
	400S200-43	0.0451	0.402	1.37	1.047	0.524	1.615	0.235	0.764	1.047	0.478	9.45	1739	1.047	0.422	12.63	2141	0.272	0.886	-1.676	2.449	0.532
	400S200-54	0.0566	0.500	1.70	1.292	0.646	1.608	0.287	0.758	1.292	0.623	12.30	2603	1.292	0.549	16.43	3372	0.534	1.083	-1.662	2.433	0.534
	400S200-68	0.0713	0.622	2.12	1.589	0.795	1.599	0.349	0.750	1.589	0.780	15.40	3215	1.589	0.751	22.48	4871	1.054	1.318	-1.643	2.412	0.536
	400S200-97	0.1017	0.864	2.94	2.155	1.077	1.579	0.462	0.731	2.155	1.063	24.72	4394	2.155	1.063	36.68	6658	2.978	1.749	-1.605	2.368	0.540
	400S250-43	0.0451	0.447	1.52	1.224	0.612	1.655	0.399	0.945	1.224	0.503	9.93	1739	1.199	0.436	13.05	2141	0.303	1.486	-2.139	2.864	0.443
	400S250-54	0.0566	0.556	1.89	1.512	0.756	1.649	0.490	0.938	1.512	0.653	12.90	2603	1.506	0.576	17.24	3372	0.594	1.821	-2.124	2.848	0.444
	400S250-68	0.0713	0.693	2.36	1.864	0.932	1.640	0.599	0.929	1.864	0.883	17.45	3215	1.864	0.775	23.19	4871	1.174	2.225	-2.105	2.826	0.445
	400S250-97	0.1017	0.966	3.29	2.541	1.271	1.622	0.801	0.911	2.541	1.253	28.31	4394	2.541	1.191	40.06	6658	3.329	2.978	-2.066	2.780	0.448
	400S300-54	0.0566	0.613	2.09	1.732	0.866	1.681	0.760	1.114	1.723	0.680	13.44	2603	1.637	0.592	17.72	3372	0.655	2.802	-2.594	3.285	0.377
400S300-68	0.0713	0.764	2.60	2.139	1.070	1.673	0.933	1.105	2.139	0.914	18.06	3215	2.099	0.805	24.09	4871	1.295	3.432	-2.574	3.263	0.378	
400S300-97	0.1017	1.067	3.63	2.928	1.464	1.656	1.258	1.086	2.928	1.381	30.58	4394	2.897	1.307	39.12	6658	3.679	4.619	-2.535	3.216	0.379	
4" Track	400T125-33	0.0346	0.225	0.76	0.549	0.265	1.563	0.031	0.371	0.484	0.201	3.97	940	0.465	0.189	5.66	940	0.090	0.095	-0.630	1.725	0.867
	400T125-43	0.0451	0.293	1.00	0.716	0.344	1.563	0.040	0.369	0.666	0.282	5.57	1739	0.639	0.266	7.96	2078	0.198	0.122	-0.626	1.724	0.868
	400T125-54	0.0566	0.367	1.25	0.904	0.431	1.569	0.049	0.366	0.882	0.381	7.53	2739	0.849	0.359	10.74	3372	0.392	0.154	-0.621	1.727	0.871
	400T125-68	0.0713	0.462	1.57	1.150	0.541	1.577	0.061	0.363	1.150	0.517	10.22	3435	1.134	0.488	14.62	5205	0.783	0.194	-0.614	1.731	0.874
	400T125-97	0.1017	0.659	2.24	1.673	0.768	1.594	0.084	0.357	1.673	0.768	17.35	4842	1.673	0.768	23.00	7337	2.271	0.280	-0.600	1.740	0.881
	400T150-33	0.0346	0.242	0.82	0.622	0.300	1.603	0.051	0.460	0.519	0.208	4.12	940	0.500	0.187	5.60	940	0.097	0.155	-0.821	1.859	0.805
	400T150-43	0.0451	0.315	1.07	0.811	0.390	1.604	0.066	0.458	0.719	0.293	5.80	1739	0.687	0.276	8.26	2078	0.214	0.200	-0.817	1.857	0.807
	400T150-54	0.0566	0.396	1.35	1.025	0.489	1.610	0.082	0.456	0.960	0.399	7.89	2739	0.918	0.374	11.19	3372	0.422	0.252	-0.811	1.860	0.810
	400T150-68	0.0713	0.498	1.69	1.306	0.615	1.619	0.102	0.453	1.286	0.548	10.82	3435	1.237	0.513	15.35	5205	0.844	0.320	-0.804	1.864	0.814
	400T150-97	0.1017	0.710	2.41	1.903	0.874	1.638	0.141	0.447	1.903	0.874	17.27	4842	1.903	0.832	24.92	7337	2.447	0.463	-0.788	1.872	0.823
	400T200-33	0.0346	0.277	0.94	0.768	0.371	1.666	0.113	0.639	0.581	0.220	4.34	940	0.562	0.184	5.51	940	0.110	0.336	-1.229	2.166	0.678
	400T200-43	0.0451	0.360	1.23	1.002	0.482	1.668	0.146	0.637	0.811	0.311	6.14	1739	0.769	0.291	8.72	2078	0.244	0.436	-1.224	2.164	0.680
	400T200-54	0.0566	0.452	1.54	1.268	0.604	1.675	0.182	0.635	1.093	0.426	8.42	2739	1.037	0.397	11.88	3372	0.483	0.551	-1.217	2.165	0.684
	400T200-68	0.0713	0.569	1.94	1.617	0.761	1.685	0.227	0.632	1.485	0.591	11.68	3435	1.412	0.549	16.42	5205	0.965	0.702	-1.209	2.168	0.689
	400T200-97	0.1017	0.811	2.76	2.363	1.085	1.707	0.317	0.625	2.360	0.981	19.38	4842	2.268	0.911	27.28	7337	2.797	1.022	-1.192	2.173	0.699
	400T250-43	0.0451	0.405	1.38	1.193	0.573	1.715	0.268	0.813	0.888	0.324	6.40	1739	0.840	0.303	9.06	2078	0.275	0.799	-1.653	2.517	0.569
	400T250-54	0.0566	0.509	1.73	1.511	0.720	1.723	0.335	0.811	1.205	0.445	8.80	2739	1.137	0.413	12.38	3372	0.543	1.011	-1.646	2.517	0.572
	400T250-68	0.0713	0.641	2.18	1.928	0.907	1.735	0.418	0.808	1.652	0.622	12.28	3435	1.559	0.574	17.19	5205	1.086	1.289	-1.637	2.518	0.578
	400T250-97	0.1017	0.913	3.11	2.823	1.296	1.758	0.587	0.802	2.679	1.048	20.72	4842	2.546	0.965	28.89	7337	3.148	1.886	-1.618	2.521	0.588
	400T300-54	0.0566	0.565	1.92	1.753	0.835	1.761	0.548	0.985	1.302	0.460	9.09	2739	1.224	0.426	12.77	3372	0.604	1.662	-2.090	2.905	0.482
400T300-68	0.0713	0.712	2.42	2.239	1.054	1.774	0.686	0.982	1.797	0.645	12.74	3435	1.687	0.594	17.78	5205	1.206	2.122	-2.081	2.905	0.487	
400T300-97	0.1017	1.015	3.45	3.284	1.508	1.799	0.967	0.976	2.953	1.098	21.70	4842	2.786	1.005	30.09	7337	3.499	3.111	-2.061	2.905	0.496	

For section properties table notes see page 4

A = Cross-sectional area  
Ix = Moment of inertia (x-axis)  
Sx = Section modulus (x-axis)

Rx = Radius of gyration (x-axis)  
Iy = Moment of inertia (y-axis)  
Ry = Radius of gyration (y-axis)  
Ma = Allowable bending moment

Va = Allowable shear force  
J = St. Venant torsion constant  
Cw = Torsional warping constant  
Xo = Distance from center of gravity to shear center along x-axis

Ro = Polar radius of gyration about the centroidal principal axis  
β = Beta coefficient

# Structural studs & track 5-1/2"

	Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
			Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	J <sub>x1000</sub> (in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	X <sub>o</sub> (in)	R <sub>o</sub> (in)	Beta
5-1/2" Studs	550S162-33	0.0346	0.327	1.11	1.458	0.530	2.112	0.113	0.589	1.458	0.512	10.11	699	1.458	0.443	13.26	699	0.130	0.713	-1.114	2.459	0.795
	550S162-43	0.0451	0.424	1.44	1.883	0.685	2.107	0.145	0.584	1.883	0.681	14.79	1550	1.883	0.624	18.69	1550	0.288	0.905	-1.103	2.448	0.797
	550S162-54	0.0566	0.528	1.80	2.324	0.845	2.098	0.176	0.577	2.324	0.845	18.76	2739	2.324	0.811	26.86	3093	0.564	1.105	-1.090	2.434	0.800
	550S162-68	0.0713	0.657	2.24	2.861	1.040	2.086	0.212	0.568	2.861	1.040	23.72	4347	2.861	1.031	34.94	5350	1.114	1.342	-1.072	2.414	0.803
	550S162-97	0.1017	0.915	3.11	3.886	1.413	2.061	0.276	0.549	3.886	1.413	33.91	6282	3.886	1.413	50.13	9518	3.154	1.775	-1.037	2.372	0.809
	550S200-33	0.0346	0.362	1.23	1.694	0.616	2.164	0.204	0.751	1.678	0.559	11.05	699	1.638	0.481	14.40	699	0.144	1.326	-1.508	2.742	0.698
	550S200-43	0.0451	0.469	1.60	2.189	0.796	2.159	0.261	0.746	2.189	0.776	15.33	1550	2.189	0.717	21.45	1550	0.318	1.691	-1.496	2.731	0.700
	550S200-54	0.0566	0.585	1.99	2.706	0.984	2.152	0.320	0.739	2.706	0.984	21.41	2739	2.706	0.901	26.98	3093	0.624	2.072	-1.483	2.716	0.702
	550S200-68	0.0713	0.729	2.48	3.341	1.215	2.141	0.389	0.731	3.341	1.215	27.03	4347	3.341	1.170	38.83	5350	1.235	2.531	-1.465	2.695	0.705
	550S200-97	0.1017	1.016	3.46	4.563	1.659	2.119	0.515	0.712	4.563	1.659	38.58	6282	4.563	1.659	57.25	9518	3.504	3.384	-1.428	2.652	0.710
5-1/2" Track	550T125-33	0.0346	0.277	0.94	1.159	0.410	2.046	0.033	0.346	1.029	0.270	5.33	680	0.959	0.233	6.98	680	0.110	0.195	-0.541	2.145	0.936
	550T125-43	0.0451	0.360	1.23	1.510	0.533	2.047	0.043	0.344	1.428	0.416	8.23	1504	1.365	0.365	10.93	1504	0.244	0.252	-0.537	2.144	0.937
	550T125-54	0.0566	0.452	1.54	1.903	0.668	2.052	0.053	0.342	1.862	0.597	11.80	2739	1.811	0.535	16.01	2980	0.483	0.315	-0.532	2.147	0.939
	550T125-68	0.0713	0.569	1.94	2.412	0.839	2.058	0.066	0.339	2.412	0.807	15.95	4347	2.379	0.769	23.02	5350	0.965	0.397	-0.526	2.152	0.940
	550T125-97	0.1017	0.811	2.76	3.483	1.190	2.072	0.090	0.333	3.483	1.190	26.87	6730	3.483	1.190	35.62	10197	2.797	0.564	-0.514	2.161	0.943
5-1/2" Track	550T150-33	0.0346	0.294	1.00	1.295	0.459	2.099	0.055	0.434	1.115	0.310	6.12	680	1.091	0.252	7.55	680	0.117	0.320	-0.714	2.259	0.900
	550T150-43	0.0451	0.383	1.30	1.688	0.596	2.099	0.072	0.432	1.516	0.468	9.25	1504	1.463	0.430	12.86	1504	0.260	0.414	-0.709	2.258	0.901
	550T150-54	0.0566	0.480	1.63	2.128	0.747	2.105	0.089	0.430	2.005	0.628	12.41	2739	1.928	0.595	17.81	2980	0.513	0.519	-0.704	2.261	0.903
	550T150-68	0.0713	0.605	2.06	2.699	0.939	2.112	0.110	0.427	2.660	0.850	16.80	4347	2.569	0.804	24.07	5350	1.025	0.655	-0.698	2.265	0.905
	550T150-97	0.1017	0.862	2.93	3.904	1.333	2.128	0.153	0.421	3.904	1.333	26.35	6730	3.904	1.278	38.27	10197	2.973	0.937	-0.684	2.275	0.909
	550T200-33	0.0346	0.329	1.12	1.567	0.555	2.184	0.123	0.613	1.246	0.307	6.06	680	1.214	0.252	7.55	680	0.131	0.694	-1.088	2.516	0.813
	550T200-43	0.0451	0.428	1.46	2.043	0.722	2.185	0.160	0.611	1.690	0.495	9.79	1504	1.637	0.423	12.68	1504	0.290	0.900	-1.083	2.514	0.814
	550T200-54	0.0566	0.537	1.83	2.578	0.905	2.191	0.199	0.609	2.253	0.669	13.21	2739	2.153	0.630	18.86	2980	0.573	1.133	-1.077	2.517	0.817
	550T200-68	0.0713	0.676	2.30	3.274	1.139	2.200	0.248	0.606	3.027	0.914	18.06	4347	2.894	0.857	25.67	5350	1.146	1.434	-1.070	2.521	0.820
	550T200-97	0.1017	0.964	3.28	4.746	1.621	2.219	0.347	0.600	4.735	1.483	29.30	6730	4.566	1.391	41.64	10197	3.323	2.067	-1.055	2.529	0.826
	550T250-43	0.0451	0.473	1.61	2.399	0.848	2.252	0.295	0.790	1.841	0.516	10.20	1504	1.790	0.419	12.55	1504	0.321	1.643	-1.484	2.810	0.721
	550T250-54	0.0566	0.594	2.02	3.029	1.063	2.259	0.368	0.788	2.466	0.699	13.81	2739	2.346	0.657	19.66	2980	0.634	2.070	-1.478	2.812	0.724
	550T250-68	0.0713	0.748	2.54	3.849	1.339	2.269	0.460	0.785	3.338	0.960	18.97	4347	3.172	0.897	26.86	5350	1.267	2.627	-1.470	2.815	0.727
	550T250-97	0.1017	1.066	3.63	5.588	1.908	2.290	0.646	0.779	5.314	1.580	31.23	6730	5.073	1.470	44.01	10197	3.674	3.801	-1.453	2.822	0.735
	550T300-54	0.0566	0.650	2.21	3.479	1.221	2.313	0.606	0.965	2.654	0.723	14.28	2739	2.526	0.663	19.84	2980	0.694	3.390	-1.898	3.144	0.636
550T300-68	0.0713	0.819	2.79	4.424	1.539	2.324	0.758	0.962	3.610	0.996	19.68	4347	3.417	0.929	27.80	5350	1.388	4.307	-1.889	3.146	0.639	
550T300-97	0.1017	1.167	3.97	6.430	2.196	2.347	1.068	0.956	5.816	1.654	32.68	6730	5.516	1.531	45.83	10197	4.024	6.248	-1.871	3.150	0.647	

For section properties table notes see page 4

- A = Cross-sectional area
- I<sub>x</sub> = Moment of inertia (x-axis)
- S<sub>x</sub> = Section modulus (x-axis)

- R<sub>x</sub> = Radius of gyration (x-axis)
- I<sub>y</sub> = Moment of inertia (y-axis)
- R<sub>y</sub> = Radius of gyration (y-axis)
- Ma = Allowable bending moment

- Va = Allowable shear force
- J = St. Venant torsion constant
- C<sub>w</sub> = Torsional warping constant
- X<sub>o</sub> = Distance from center of gravity to shear center along x-axis

- R<sub>o</sub> = Polar radius of gyration about the centroidal principal axis
- β = Beta coefficient

# Structural studs & track 6"

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
		Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Jx1000 (in <sup>4</sup> )	Cw (in <sup>6</sup> )	Xo (in)	Ro (in)	Beta
600S137-33	0.0346	0.318	1.08	1.582	0.527	2.229	0.069	0.464	1.548	0.455	8.98	638	1.527	0.386	11.55	638	0.127	0.500	-0.807	2.416	0.889
600S137-43	0.0451	0.413	1.41	2.042	0.681	2.223	0.087	0.459	2.041	0.645	12.74	1416	2.012	0.579	17.33	1416	0.280	0.633	-0.796	2.406	0.890
600S137-54	0.0566	0.514	1.75	2.518	0.839	2.213	0.105	0.452	2.518	0.832	16.44	2739	2.518	0.777	23.26	2823	0.549	0.769	-0.784	2.391	0.893
600S137-68	0.0713	0.640	2.18	3.094	1.031	2.200	0.125	0.443	3.094	1.031	24.05	4347	3.094	1.030	30.84	5350	1.084	0.930	-0.768	2.371	0.895
600S137-97	0.1017	0.889	3.03	4.188	1.396	2.170	0.159	0.422	4.188	1.396	34.48	6911	4.188	1.396	50.80	10472	3.066	1.216	-0.734	2.330	0.901
600S162-33	0.0346	0.344	1.17	1.793	0.598	2.282	0.116	0.581	1.793	0.577	11.41	638	1.793	0.481	14.41	638	0.137	0.861	-1.072	2.587	0.828
600S162-43	0.0451	0.447	1.52	2.316	0.772	2.276	0.148	0.576	2.316	0.767	16.68	1416	2.316	0.705	21.12	1416	0.303	1.095	-1.062	2.577	0.830
600S162-54	0.0566	0.556	1.89	2.860	0.953	2.267	0.180	0.570	2.860	0.953	21.17	2739	2.860	0.916	30.33	2823	0.594	1.337	-1.049	2.562	0.832
600S162-68	0.0713	0.693	2.36	3.525	1.175	2.255	0.218	0.560	3.525	1.175	26.79	4347	3.525	1.164	39.47	5350	1.174	1.626	-1.032	2.543	0.835
600S162-97	0.1017	0.966	3.29	4.797	1.599	2.229	0.283	0.541	4.797	1.599	38.37	6911	4.797	1.599	56.73	10472	3.329	2.153	-0.997	2.501	0.841
600S200-33	0.0346	0.379	1.29	2.075	0.692	2.340	0.209	0.743	2.058	0.621	12.28	638	2.015	0.524	15.68	638	0.151	1.593	-1.457	2.855	0.740
600S200-43	0.0451	0.492	1.67	2.683	0.894	2.335	0.268	0.739	2.683	0.873	17.24	1416	2.683	0.807	24.17	1416	0.334	2.033	-1.446	2.844	0.742
600S200-54	0.0566	0.613	2.09	3.319	1.106	2.327	0.328	0.732	3.319	1.106	24.07	2739	3.319	1.015	30.40	2823	0.655	2.493	-1.432	2.829	0.744
600S200-68	0.0713	0.764	2.60	4.101	1.367	2.316	0.400	0.723	4.101	1.367	30.42	4347	4.101	1.317	43.71	5350	1.295	3.047	-1.415	2.809	0.746
600S200-97	0.1017	1.067	3.63	5.612	1.871	2.293	0.530	0.705	5.612	1.871	43.49	6911	5.612	1.871	64.53	10472	3.679	4.080	-1.378	2.767	0.752
600S250-43	0.0451	0.537	1.83	3.082	1.027	2.396	0.458	0.923	3.082	0.918	18.14	1416	2.976	0.818	24.50	1416	0.364	3.411	-1.874	3.179	0.652
600S250-54	0.0566	0.670	2.28	3.819	1.273	2.388	0.562	0.917	3.819	1.159	22.90	2739	3.766	1.069	32.00	2823	0.715	4.194	-1.860	3.163	0.654
600S250-68	0.0713	0.836	2.84	4.727	1.576	2.378	0.688	0.908	4.727	1.508	32.82	4347	4.723	1.386	41.49	5350	1.416	5.145	-1.842	3.142	0.656
600S250-97	0.1017	1.169	3.98	6.496	2.165	2.357	0.923	0.889	6.496	2.161	48.81	6911	6.496	2.063	69.38	10472	4.030	6.947	-1.803	3.098	0.661
600S300-54	0.0566	0.726	2.47	4.319	1.440	2.439	0.875	1.098	4.269	1.211	23.93	2739	4.014	1.106	33.13	2823	0.775	6.452	-2.299	3.527	0.575
600S300-68	0.0713	0.907	3.09	5.354	1.785	2.430	1.075	1.089	5.344	1.581	31.23	4347	5.221	1.446	43.30	5350	1.537	7.937	-2.280	3.505	0.577
600S300-97	0.1017	1.271	4.32	7.381	2.460	2.410	1.454	1.070	7.381	2.352	52.07	6911	7.280	2.247	67.28	10472	4.381	10.776	-2.241	3.461	0.581
600S350-54	0.0566	0.825	2.81	5.022	1.674	2.467	1.491	1.344	4.911	1.452	28.70	2739	4.721	1.335	39.97	2823	0.881	12.942	-3.037	4.137	0.461
600S350-68	0.0713	1.032	3.51	6.237	2.079	2.459	1.841	1.336	6.237	1.949	38.50	4347	6.166	1.771	53.01	5350	1.748	15.968	-3.018	4.115	0.462
600S350-97	0.1017	1.449	4.93	8.631	2.877	2.441	2.518	1.318	8.631	2.822	61.55	6911	8.631	2.593	77.64	10472	4.994	21.811	-2.979	4.071	0.464
600T125-33	0.0346	0.294	1.00	1.428	0.465	2.204	0.034	0.339	1.258	0.297	5.87	622	1.169	0.256	7.66	622	0.117	0.238	-0.516	2.289	0.949
600T125-43	0.0451	0.383	1.30	1.861	0.604	2.205	0.044	0.337	1.768	0.461	9.11	1377	1.670	0.402	12.05	1377	0.260	0.307	-0.513	2.288	0.950
600T125-54	0.0566	0.480	1.63	2.344	0.756	2.209	0.054	0.335	2.299	0.666	13.15	2728	2.241	0.592	17.73	2728	0.513	0.384	-0.508	2.291	0.951
600T125-68	0.0713	0.605	2.06	2.969	0.950	2.215	0.067	0.332	2.969	0.916	18.09	4347	2.934	0.858	25.69	5350	1.025	0.483	-0.503	2.296	0.952
600T125-97	0.1017	0.862	2.93	4.281	1.347	2.228	0.092	0.326	4.281	1.347	30.43	7359	4.281	1.347	40.33	10885	2.973	0.685	-0.491	2.305	0.955
600T150-33	0.0346	0.311	1.06	1.590	0.517	2.260	0.057	0.426	1.334	0.303	5.99	622	1.234	0.260	7.79	622	0.124	0.390	-0.684	2.399	0.919
600T150-43	0.0451	0.405	1.38	2.072	0.673	2.261	0.073	0.424	1.890	0.474	9.36	1377	1.775	0.411	12.31	1377	0.275	0.504	-0.680	2.398	0.920
600T150-54	0.0566	0.509	1.73	2.611	0.843	2.266	0.091	0.422	2.473	0.689	13.62	2728	2.400	0.609	18.24	2728	0.543	0.632	-0.675	2.401	0.921
600T150-68	0.0713	0.641	2.18	3.309	1.059	2.273	0.113	0.419	3.262	0.963	19.03	4347	3.162	0.891	26.68	5350	1.086	0.797	-0.669	2.406	0.923
600T150-97	0.1017	0.913	3.11	4.778	1.504	2.288	0.156	0.413	4.778	1.504	29.71	7359	4.778	1.444	43.23	10885	3.148	1.138	-0.656	2.415	0.926
600T200-33	0.0346	0.346	1.18	1.913	0.622	2.352	0.126	0.604	1.542	0.333	6.59	622	1.504	0.275	8.23	622	0.138	0.847	-1.048	2.645	0.843
600T200-43	0.0451	0.451	1.53	2.494	0.809	2.353	0.163	0.602	2.076	0.565	11.16	1377	2.025	0.460	13.76	1377	0.305	1.098	-1.044	2.643	0.844
600T200-54	0.0566	0.565	1.92	3.145	1.015	2.359	0.203	0.600	2.759	0.759	15.00	2728	2.641	0.717	21.48	2728	0.604	1.381	-1.038	2.646	0.846
600T200-68	0.0713	0.712	2.42	3.990	1.277	2.367	0.254	0.597	3.696	1.034	20.42	4347	3.540	0.973	29.12	5350	1.206	1.746	-1.031	2.650	0.849
600T200-97	0.1017	1.015	3.45	5.773	1.816	2.385	0.354	0.591	5.758	1.667	32.95	7359	5.558	1.568	46.94	10885	3.499	2.510	-1.016	2.659	0.854
600T250-43	0.0451	0.496	1.69	2.916	0.946	2.425	0.303	0.781	2.269	0.563	11.13	1377	2.210	0.457	13.67	1377	0.336	2.004	-1.436	2.925	0.759
600T250-54	0.0566	0.622	2.12	3.678	1.187	2.432	0.377	0.779	3.014	0.793	15.68	2728	2.881	0.732	21.92	2728	0.664	2.523	-1.430	2.927	0.761
600T250-68	0.0713	0.783	2.67	4.670	1.495	2.442	0.472	0.776	4.065	1.085	21.45	4347	3.871	1.017	30.46	5350	1.327	3.198	-1.422	2.930	0.764
600T250-97	0.1017	1.116	3.80	6.767	2.129	2.462	0.662	0.770	6.441	1.775	35.08	7359	6.157	1.656	49.58	10885	3.849	4.616	-1.406	2.938	0.771
600T300-54	0.0566	0.679	2.31	4.212	1.359	2.492	0.622	0.957	3.239	0.821	16.22	2728	3.108	0.722	21.61	2728	0.725	4.129	-1.842	3.243	0.677
600T300-68	0.0713	0.854	2.91	5.350	1.712	2.502	0.778	0.954	4.389	1.126	22.25	4347	4.164	1.053	31.53	5350	1.448	5.239	-1.834	3.246	0.681
600T300-97	0.1017	1.218	4.15	7.762	2.442	2.524	1.096	0.948	7.034	1.857	36.69	7359	6.681	1.724	51.62	10885	4.200	7.582	-1.816	3.251	0.688

For section properties table notes see page 4

A = Cross-sectional area

I<sub>x</sub> = Moment of inertia (x-axis)

S<sub>x</sub> = Section modulus (x-axis)

R<sub>x</sub> = Radius of gyration (x-axis)

I<sub>y</sub> = Moment of inertia (y-axis)

R<sub>y</sub> = Radius of gyration (y-axis)

Ma = Allowable bending moment

Va = Allowable shear force

J = St. Venant torsion constant

Cw = Torsional warping constant

Xo = Distance from center of gravity to shear center along x-axis

Ro = Polar radius of gyration about the centroidal principal axis

β = Beta coefficient

# Structural studs & track 8"

	Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
			Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	J <sub>x</sub> 1000 (in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	X <sub>o</sub> (in)	R <sub>o</sub> (in)	Beta
8" Studs	800S137-33'	0.0346	0.388	1.32	3.198	0.799	2.873	0.073	0.435	2.998	0.622	12.30	474	2.939	0.525	15.71	474	0.155	0.957	-0.696	2.987	0.946
	800S137-43	0.0451	0.503	1.71	4.134	1.033	2.866	0.093	0.430	4.001	0.896	17.70	1051	3.913	0.795	23.80	1051	0.341	1.214	-0.687	2.978	0.947
	800S137-54	0.0566	0.627	2.13	5.110	1.277	2.855	0.112	0.423	5.077	1.179	23.29	2091	4.974	1.083	32.42	2091	0.670	1.478	-0.676	2.964	0.948
	800S137-68	0.0713	0.782	2.66	6.303	1.576	2.839	0.134	0.414	6.303	1.541	30.45	4221	6.285	1.468	43.96	4221	1.325	1.789	-0.661	2.944	0.950
	800S137-97	0.1017	1.093	3.72	8.597	2.149	2.805	0.169	0.394	8.597	2.149	53.09	8843	8.597	2.149	64.35	10885	3.767	2.349	-0.630	2.902	0.953
	800S162-33'	0.0346	0.413	1.41	3.582	0.896	2.943	0.125	0.550	3.384	0.710	14.03	474	3.323	0.614	18.39	474	0.165	1.630	-0.936	3.137	0.911
	800S162-43	0.0451	0.537	1.83	4.633	1.158	2.937	0.160	0.546	4.500	1.019	20.14	1051	4.428	0.866	25.93	1051	0.364	2.076	-0.926	3.128	0.912
	800S162-54	0.0566	0.670	2.28	5.736	1.434	2.927	0.194	0.539	5.702	1.334	26.36	2091	5.600	1.229	36.79	2091	0.715	2.539	-0.914	3.113	0.914
	800S162-68	0.0713	0.836	2.84	7.089	1.772	2.913	0.235	0.530	7.089	1.737	34.32	4221	7.070	1.663	49.80	4221	1.416	3.093	-0.899	3.094	0.916
	800S162-97	0.1017	1.169	3.98	9.713	2.428	2.883	0.305	0.510	9.713	2.428	58.27	8843	9.713	2.428	72.70	10885	4.030	4.114	-0.866	3.053	0.919
	800S200-33'	0.0346	0.448	1.52	4.096	1.024	3.023	0.227	0.712	4.096	0.816	16.12	474	3.936	0.696	20.84	474	0.179	2.971	-1.288	3.363	0.853
	800S200-43	0.0451	0.582	1.98	5.302	1.325	3.018	0.292	0.708	5.302	1.293	25.54	1051	5.302	1.065	31.90	1051	0.395	3.797	-1.277	3.353	0.855
	800S200-54	0.0566	0.726	2.47	6.573	1.643	3.009	0.357	0.701	6.573	1.643	35.75	2091	6.573	1.499	44.87	2091	0.775	4.663	-1.265	3.338	0.856
	800S200-68	0.0713	0.907	3.09	8.140	2.035	2.996	0.435	0.692	8.140	2.035	45.29	4221	8.140	1.964	65.21	4221	1.537	5.712	-1.248	3.319	0.859
	800S200-97	0.1017	1.271	4.32	11.203	2.801	2.969	0.576	0.673	11.203	2.801	65.12	8843	11.203	2.801	96.63	10885	4.381	7.684	-1.214	3.278	0.863
	800S250-43	0.0451	0.627	2.13	6.015	1.504	3.097	0.500	0.893	6.015	1.313	25.95	1051	5.909	1.079	32.32	1051	0.425	6.374	-1.675	3.632	0.787
	800S250-54	0.0566	0.783	2.66	7.465	1.866	3.088	0.614	0.886	7.465	1.712	33.82	2091	7.378	1.525	45.66	2091	0.836	7.850	-1.661	3.617	0.789
	800S250-68	0.0713	0.978	3.33	9.261	2.315	3.077	0.752	0.877	9.261	2.220	48.33	4221	9.240	2.059	61.65	4221	1.658	9.652	-1.644	3.597	0.791
	800S250-97	0.1017	1.372	4.67	12.789	3.197	3.053	1.009	0.857	12.789	3.191	72.07	8843	12.789	3.054	102.70	10885	4.731	13.091	-1.607	3.555	0.796
	800S300-54	0.0566	0.839	2.86	8.358	2.090	3.156	0.960	1.069	8.249	1.785	35.28	2091	7.862	1.535	45.96	2091	0.896	12.076	-2.073	3.924	0.721
800S300-68	0.0713	1.050	3.57	10.382	2.595	3.145	1.179	1.060	10.351	2.321	45.86	4221	10.082	2.145	64.21	4221	1.779	14.888	-2.055	3.903	0.723	
800S300-97	0.1017	1.474	5.02	14.375	3.594	3.123	1.595	1.040	14.375	3.443	76.21	8843	14.170	3.304	98.92	10885	5.082	20.304	-2.017	3.860	0.727	
800S350-54	0.0566	0.938	3.19	9.683	2.421	3.212	1.646	1.325	9.477	2.125	41.98	2091	9.191	1.869	55.96	2091	1.002	22.897	-2.766	4.441	0.612	
800S350-68	0.0713	1.174	4.00	12.046	3.012	3.203	2.034	1.316	12.046	2.837	56.07	4221	11.909	2.596	77.73	4221	1.990	28.308	-2.748	4.421	0.614	
800S350-97	0.1017	1.652	5.62	16.737	4.184	3.183	2.784	1.298	16.737	4.101	89.43	8843	16.737	3.785	113.34	10885	5.696	38.834	-2.710	4.377	0.617	
8" Track	800T125-33'	0.0346	0.363	1.24	2.895	0.711	2.824	0.036	0.313	2.441	0.407	8.03	465	2.243	0.348	10.41	465	0.145	0.456	-0.439	2.875	0.977
	800T125-43	0.0451	0.473	1.61	3.773	0.924	2.824	0.046	0.311	3.484	0.640	12.65	1030	3.252	0.552	16.54	1030	0.321	0.589	-0.436	2.874	0.977
	800T125-54	0.0566	0.594	2.02	4.745	1.158	2.827	0.057	0.309	4.668	0.940	18.58	2039	4.426	0.824	24.66	2039	0.634	0.735	-0.432	2.877	0.977
	800T125-68	0.0713	0.748	2.54	5.998	1.454	2.833	0.070	0.306	5.998	1.356	26.80	4087	5.956	1.216	36.39	4087	1.267	0.920	-0.427	2.881	0.978
	800T125-97	0.1017	1.066	3.63	8.613	2.062	2.843	0.096	0.301	8.613	2.062	40.74	8843	8.613	2.062	61.72	10885	3.674	1.296	-0.417	2.889	0.979
	800T150-33'	0.0346	0.380	1.29	3.180	0.781	2.891	0.060	0.397	2.569	0.414	8.18	465	2.350	0.353	10.57	465	0.152	0.751	-0.588	2.977	0.961
	800T150-43	0.0451	0.496	1.69	4.144	1.015	2.891	0.077	0.395	3.689	0.655	12.95	1030	3.427	0.563	16.85	1030	0.336	0.972	-0.584	2.976	0.961
	800T150-54	0.0566	0.622	2.12	5.214	1.272	2.896	0.096	0.393	4.976	0.969	19.15	2039	4.692	0.844	25.27	2039	0.664	1.215	-0.580	2.979	0.962
	800T150-68	0.0713	0.783	2.67	6.594	1.599	2.902	0.119	0.390	6.527	1.412	27.91	4087	6.361	1.255	37.58	4087	1.327	1.526	-0.575	2.984	0.963
	800T150-97	0.1017	1.116	3.80	9.479	2.269	2.914	0.165	0.384	9.479	2.269	44.83	8843	9.479	2.192	65.62	10885	3.849	2.162	-0.564	2.993	0.965
	800T200-33'	0.0346	0.415	1.41	3.749	0.921	3.005	0.135	0.571	2.788	0.424	8.37	465	2.532	0.360	10.77	465	0.166	1.638	-0.917	3.194	0.918
	800T200-43	0.0451	0.541	1.84	4.887	1.197	3.006	0.175	0.569	4.043	0.676	13.35	1030	3.728	0.577	17.28	1030	0.367	2.124	-0.913	3.193	0.918
	800T200-54	0.0566	0.679	2.31	6.152	1.501	3.011	0.218	0.567	5.505	1.009	19.93	2039	5.149	0.871	26.09	2039	0.725	2.664	-0.908	3.196	0.919
	800T200-68	0.0713	0.854	2.91	7.786	1.888	3.019	0.272	0.564	7.306	1.490	29.45	4087	7.051	1.310	39.22	4087	1.448	3.357	-0.902	3.201	0.921
	800T200-97	0.1017	1.218	4.15	11.212	2.683	3.034	0.379	0.558	11.176	2.491	49.22	8843	10.833	2.347	70.27	10885	4.200	4.792	-0.889	3.210	0.923
	800T250-43	0.0451	0.586	1.99	5.629	1.380	3.100	0.326	0.746	4.593	0.739	14.60	1030	4.485	0.607	18.18	1030	0.397	3.877	-1.274	3.433	0.862
	800T250-54	0.0566	0.735	2.50	7.090	1.730	3.106	0.407	0.744	5.948	1.193	23.57	2039	5.816	0.959	28.71	2039	0.785	4.870	-1.268	3.436	0.864
	800T250-68	0.0713	0.926	3.15	8.978	2.177	3.114	0.509	0.741	7.917	1.648	32.57	4087	7.588	1.560	46.72	4087	1.569	6.151	-1.261	3.441	0.866
	800T250-97	0.1017	1.320	4.49	12.944	3.098	3.132	0.713	0.735	12.361	2.641	52.19	8843	11.872	2.487	74.47	10885	4.550	8.818	-1.247	3.450	0.869
	800T300-54	0.0566	0.792	2.69	8.028	1.958	3.184	0.675	0.923	6.396	1.178	23.28	2039	6.237	0.956	28.62	2039	0.845	7.960	-1.652	3.704	0.801
800T300-68	0.0713	0.997	3.39	10.171	2.466	3.194	0.844	0.920	8.497	1.709	33.76	4087	8.160	1.548	46.36	4087	1.690	10.067	-1.644	3.708	0.803	
800T300-97	0.1017	1.422	4.84	14.676	3.513	3.213	1.188	0.914	13.395	2.757	54.49	8843	12.794	2.586	77.43	10885	4.901	14.472	-1.628	3.716	0.808	

For section properties table notes see page 4

A = Cross-sectional area

I<sub>x</sub> = Moment of inertia (x-axis)

S<sub>x</sub> = Section modulus (x-axis)

R<sub>x</sub> = Radius of gyration (x-axis)

I<sub>y</sub> = Moment of inertia (y-axis)

R<sub>y</sub> = Radius of gyration (y-axis)

Ma = Allowable bending moment

Va = Allowable shear force

J = St. Vennant torsion constant

C<sub>w</sub> = Torsional warping constant

X<sub>o</sub> = Distance from center of gravity to shear center along x-axis

R<sub>o</sub> = Polar radius of gyration about the centroidal principal axis

β = Beta coefficient

# Structural studs & track 10"

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties					
		Area (in <sup>2</sup> )	Weight (lb/ft)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Rx (in)	Iy (in <sup>4</sup> )	Ry (in)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Jx1000 (in <sup>4</sup> )	Cw (in <sup>6</sup> )	Xo (in)	Ro (in)	Beta	
10" Studs	1000S162-43 <sup>1</sup>	0.0451	0.627	2.13	8.025	1.605	3.577	0.168	0.518	7.523	1.302	25.74	836	7.370	1.099	32.91	836	0.425	3.430	-0.823	3.707	0.951
	1000S162-54	0.0566	0.783	2.66	9.950	1.990	3.565	0.204	0.511	9.627	1.722	34.02	1661	9.391	1.572	47.07	1661	0.836	4.198	-0.812	3.692	0.952
	1000S162-68	0.0713	0.978	3.33	12.325	2.465	3.550	0.246	0.502	12.256	2.276	44.98	3345	11.978	2.154	64.51	3345	1.658	5.121	-0.798	3.673	0.953
	1000S162-97	0.1017	1.372	4.67	16.967	3.393	3.516	0.320	0.483	16.967	3.393	67.06	8843	16.967	3.269	97.89	9864	4.731	6.827	-0.768	3.631	0.955
	1000S162-118	0.1242	1.655	5.63	20.169	4.034	3.491	0.363	0.468	20.169	4.034	100.24	13189	20.169	4.034	120.77	16235	8.511	7.924	-0.746	3.600	0.957
	1000S200-43 <sup>1</sup>	0.0451	0.672	2.29	9.085	1.817	3.676	0.309	0.677	8.602	1.470	29.05	836	8.443	1.270	38.03	836	0.456	6.236	-1.147	3.910	0.914
	1000S200-54	0.0566	0.839	2.86	11.278	2.256	3.666	0.378	0.671	10.953	1.984	39.20	1661	10.769	1.705	51.05	1661	0.896	7.665	-1.135	3.896	0.915
	1000S200-68	0.0713	1.050	3.57	13.994	2.799	3.652	0.460	0.662	13.920	2.607	51.51	3345	13.665	2.420	72.46	3345	1.779	9.401	-1.120	3.876	0.917
	1000S200-97	0.1017	1.474	5.02	19.336	3.867	3.622	0.609	0.643	19.336	3.867	76.42	8843	19.336	3.741	112.00	9864	5.082	12.679	-1.088	3.836	0.920
	1000S200-118	0.1242	1.779	6.05	23.052	4.610	3.599	0.703	0.629	23.052	4.610	110.50	13189	23.052	4.610	138.04	16235	9.149	14.848	-1.064	3.805	0.922
	1000S250-43 <sup>1</sup>	0.0451	0.717	2.44	10.203	2.041	3.771	0.531	0.860	10.203	1.617	31.95	836	10.140	1.342	40.19	836	0.486	10.481	-1.518	4.155	0.867
	1000S250-54	0.0566	0.896	3.05	12.677	2.535	3.762	0.653	0.854	12.677	2.277	44.99	1661	12.660	1.879	56.26	1661	0.957	12.922	-1.505	4.140	0.868
	1000S250-68	0.0713	1.121	3.81	15.751	3.150	3.749	0.799	0.844	15.751	3.028	65.93	3345	15.741	2.768	82.89	3345	1.899	15.909	-1.488	4.121	0.870
	1000S250-97	0.1017	1.576	5.36	21.827	4.365	3.722	1.072	0.825	21.827	4.357	98.41	8843	21.827	4.181	140.63	9864	5.433	21.632	-1.454	4.080	0.873
	1000S250-118	0.1242	1.904	6.48	26.080	5.216	3.701	1.249	0.810	26.080	5.216	120.89	13189	26.080	5.082	174.84	16235	9.788	25.490	-1.428	4.049	0.876
	1000S300-54	0.0566	0.953	3.24	14.076	2.815	3.844	1.024	1.037	13.938	2.312	45.69	1661	13.440	1.902	56.96	1661	1.017	19.888	-1.892	4.408	0.816
	1000S300-68	0.0713	1.192	4.06	17.509	3.502	3.832	1.258	1.027	17.441	3.158	62.41	3345	17.099	2.802	83.89	3345	2.020	24.551	-1.874	4.388	0.818
	1000S300-97	0.1017	1.677	5.71	24.318	4.864	3.808	1.702	1.007	24.318	4.671	103.39	8843	23.970	4.499	134.69	9864	5.783	33.570	-1.838	4.346	0.821
1000S300-118	0.1242	2.028	6.90	29.109	5.822	3.789	1.997	0.992	29.109	5.662	128.16	13189	28.861	5.586	188.23	16235	10.427	39.725	-1.811	4.315	0.824	
1000S350-54	0.0566	1.052	3.58	16.220	3.244	3.927	1.768	1.297	15.942	2.772	54.77	1661	15.577	2.328	69.69	1661	1.123	36.575	-2.546	4.857	0.725	
1000S350-68	0.0713	1.317	4.48	20.204	4.041	3.917	2.185	1.288	20.204	3.824	75.57	3345	20.026	3.417	102.32	3345	2.232	45.277	-2.529	4.837	0.727	
1000S350-97	0.1017	1.855	6.31	28.148	5.630	3.895	2.992	1.270	28.148	5.517	120.33	8843	28.148	5.118	153.25	9864	6.397	62.280	-2.492	4.795	0.730	
1000S350-118	0.1242	2.245	7.64	33.772	6.754	3.878	3.543	1.256	33.772	6.754	150.23	13189	33.772	6.427	213.25	16235	11.544	74.030	-2.465	4.764	0.732	
10" Track	1000T125-43 <sup>1</sup>	0.0451	0.563	1.92	6.630	1.305	3.431	0.047	0.290	5.886	0.819	16.19	822	5.442	0.702	21.02	822	0.382	0.973	-0.379	3.464	0.988
	1000T125-54	0.0566	0.707	2.41	8.333	1.634	3.434	0.059	0.288	7.960	1.216	24.03	1628	7.479	1.055	31.59	1628	0.755	1.212	-0.376	3.466	0.988
	1000T125-68	0.0713	0.890	3.03	10.522	2.053	3.438	0.073	0.286	10.452	1.781	35.19	3261	10.155	1.575	47.15	3261	1.508	1.515	-0.372	3.470	0.989
	1000T125-97	0.1017	1.269	4.32	15.077	2.912	3.447	0.100	0.280	15.077	2.907	57.44	8843	15.077	2.753	82.42	9507	4.375	2.123	-0.363	3.477	0.989
	1000T125-118	0.1242	1.549	5.27	18.471	3.540	3.453	0.118	0.276	18.471	3.540	82.05	13189	18.471	3.535	105.85	16235	7.966	2.558	-0.357	3.482	0.990
	1000T150-43 <sup>1</sup>	0.0451	0.586	1.99	7.207	1.419	3.507	0.080	0.370	6.195	0.837	16.54	822	5.703	0.714	21.39	822	0.397	1.612	-0.513	3.564	0.979
	1000T150-54	0.0566	0.735	2.50	9.061	1.777	3.511	0.100	0.368	8.430	1.249	24.69	1628	7.880	1.079	32.29	1628	0.785	2.013	-0.509	3.567	0.980
	1000T150-68	0.0713	0.926	3.15	11.445	2.233	3.516	0.124	0.366	11.342	1.846	36.48	3261	10.774	1.621	48.53	3261	1.569	2.522	-0.505	3.571	0.980
	1000T150-97	0.1017	1.320	4.49	16.413	3.170	3.526	0.171	0.360	16.413	3.165	62.54	8843	16.413	2.902	86.90	9507	4.550	3.557	-0.495	3.579	0.981
	1000T150-118	0.1242	1.611	5.48	20.121	3.857	3.534	0.204	0.356	20.121	3.857	87.30	13189	20.121	3.852	115.32	16235	8.285	4.307	-0.488	3.585	0.982
	1000T200-43 <sup>1</sup>	0.0451	0.631	2.15	8.361	1.646	3.640	0.183	0.539	6.722	0.861	17.01	822	6.145	0.731	21.89	822	0.428	3.540	-0.813	3.769	0.953
	1000T200-54	0.0566	0.792	2.69	10.516	2.062	3.645	0.228	0.537	9.231	1.295	25.60	1628	8.560	1.111	33.26	1628	0.845	4.434	-0.809	3.772	0.954
	1000T200-68	0.0713	0.997	3.39	13.292	2.594	3.651	0.284	0.534	12.551	1.936	38.26	3261	11.820	1.684	50.42	3261	1.690	5.576	-0.803	3.776	0.955
	1000T200-97	0.1017	1.422	4.84	19.087	3.686	3.664	0.397	0.528	19.031	3.427	67.72	8843	18.583	3.081	92.25	9507	4.901	7.924	-0.791	3.786	0.956
	1000T200-118	0.1242	1.735	5.91	23.422	4.489	3.674	0.476	0.524	23.422	4.420	87.35	13189	23.422	4.208	125.99	16235	8.924	9.649	-0.783	3.793	0.957
	1000T250-43 <sup>1</sup>	0.0451	0.676	2.30	9.515	1.873	3.751	0.344	0.713	7.172	0.876	17.32	822	6.519	0.742	22.22	822	0.458	6.477	-1.147	3.987	0.917
	1000T250-54	0.0566	0.848	2.89	11.972	2.348	3.757	0.429	0.711	9.913	1.326	26.20	1628	9.141	1.132	33.89	1628	0.906	8.125	-1.142	3.990	0.918
	1000T250-68	0.0713	1.068	3.64	15.138	2.954	3.764	0.536	0.708	13.578	1.997	39.46	3261	12.708	1.726	51.68	3261	1.810	10.240	-1.135	3.995	0.919
1000T250-97	0.1017	1.523	5.18	21.760	4.202	3.780	0.751	0.702	20.871	3.596	71.05	8843	20.254	3.201	95.84	9507	5.252	14.617	-1.122	4.005	0.921	
1000T250-118	0.1242	1.860	6.33	26.723	5.122	3.791	0.905	0.698	26.538	4.721	93.29	13189	25.721	4.422	132.38	16235	9.562	17.858	-1.112	4.012	0.923	
1000T300-54	0.0566	0.905	3.08	13.427	2.633	3.852	0.714	0.888	11.083	1.452	28.69	1628	10.826	1.191	35.65	1628	0.966	13.289	-1.500	4.228	0.874	
1000T300-68	0.0713	1.140	3.88	16.985	3.314	3.860	0.893	0.885	14.416	2.377	46.96	3261	14.106	1.904	57.01	3261	1.931	16.771	-1.493	4.233	0.876	
1000T300-97	0.1017	1.625	5.53	24.434	4.719	3.878	1.257	0.879	22.441	3.798	75.04	8843	21.530	3.589	107.45	9507	5.602	24.009	-1.478	4.242	0.879	
1000T300-118	0.1242	1.984	6.75	30.024	5																	

# Structural studs & track 12"

Member	Design Thickness (in)	Gross Properties								33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
		Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	V <sub>a</sub> (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	V <sub>a</sub> (lb)	J <sub>x1000</sub> (in <sup>4</sup> )	C <sub>w</sub> (in <sup>6</sup> )	X <sub>o</sub> (in)	R <sub>o</sub> (in)	Beta	
12" Studs	1200S162-54'	0.0566	0.896	3.05	15.730	2.622	4.190	0.212	0.486	14.743	2.109	41.68	1377	14.298	1.914	57.31	1377	0.957	6.340	-0.732	4.281	0.971
	1200S162-68	0.0713	1.121	3.81	19.518	3.253	4.173	0.255	0.477	18.955	2.817	55.66	2771	18.390	2.645	79.19	2771	1.899	7.739	-0.719	4.261	0.972
	1200S162-97	0.1017	1.576	5.36	26.966	4.494	4.137	0.331	0.459	26.966	4.327	85.51	8147	26.735	4.091	122.49	8147	5.433	10.331	-0.691	4.219	0.973
	1200S162-118	0.1242	1.904	6.48	32.145	5.357	4.109	0.376	0.444	32.145	5.357	105.87	13189	32.145	5.168	154.74	14986	9.788	12.002	-0.670	4.187	0.974
	1200S200-54'	0.0566	0.953	3.24	17.662	2.944	4.306	0.393	0.643	16.678	2.425	47.93	1377	16.334	2.073	62.07	1377	1.017	11.550	-1.032	4.474	0.947
	1200S200-68	0.0713	1.192	4.06	21.947	3.658	4.291	0.479	0.634	21.376	3.215	63.54	2771	20.864	2.963	88.71	2771	2.020	14.176	-1.017	4.455	0.948
	1200S200-97	0.1017	1.677	5.71	30.417	5.069	4.258	0.635	0.615	30.417	4.899	96.81	8147	30.175	4.660	139.51	8147	5.783	19.150	-0.987	4.414	0.950
	1200S200-118	0.1242	2.028	6.90	36.347	6.058	4.234	0.732	0.601	36.347	6.058	119.71	13189	36.347	5.865	175.59	14986	10.427	22.451	-0.964	4.384	0.952
	1200S250-54'	0.0566	1.009	3.43	19.681	3.280	4.416	0.683	0.823	18.832	2.482	49.05	1377	18.433	2.149	64.34	1377	1.078	19.505	-1.378	4.699	0.914
	1200S250-68	0.0713	1.263	4.30	24.484	4.081	4.402	0.836	0.813	23.963	3.496	69.08	2771	23.575	3.007	90.04	2771	2.141	24.034	-1.362	4.679	0.915
	1200S250-97	0.1017	1.779	6.05	34.016	5.669	4.373	1.121	0.794	34.016	5.496	108.60	8147	33.835	5.037	150.82	8147	6.134	32.734	-1.329	4.639	0.918
	1200S250-118	0.1242	2.152	7.32	40.726	6.788	4.350	1.307	0.779	40.726	6.788	134.13	13189	40.726	6.541	195.84	14986	11.065	38.619	-1.305	4.608	0.920
1200S300-54'	0.0566	1.066	3.63	21.699	3.617	4.512	1.074	1.004	21.648	2.736	54.06	1377	21.043	2.272	68.04	1377	1.138	30.051	-1.743	4.940	0.876	
1200S300-68	0.0713	1.335	4.54	27.020	4.503	4.499	1.320	0.994	26.918	4.064	80.30	2771	26.510	3.317	99.32	2771	2.262	37.126	-1.726	4.921	0.877	
1200S300-97	0.1017	1.881	6.40	37.616	6.269	4.472	1.786	0.974	37.616	6.035	133.59	8147	37.085	5.831	174.57	8147	6.484	50.853	-1.691	4.880	0.880	
1200S300-118	0.1242	2.276	7.75	45.106	7.518	4.452	2.095	0.959	45.106	7.323	165.76	13189	44.727	7.232	243.67	14986	11.704	60.251	-1.666	4.849	0.882	
1200S350-54'	0.0566	1.165	3.96	24.860	4.143	4.620	1.866	1.266	24.610	3.295	65.12	1377	24.087	2.787	83.46	1377	1.244	54.279	-2.363	5.341	0.804	
1200S350-68	0.0713	1.460	4.97	30.996	5.166	4.608	2.306	1.257	30.996	4.908	96.98	2771	30.916	4.061	121.59	2771	2.473	67.251	-2.346	5.322	0.806	
1200S350-97	0.1017	2.059	7.01	43.269	7.211	4.584	3.159	1.239	43.269	7.071	154.22	8147	43.269	6.590	197.31	8147	7.098	92.672	-2.310	5.281	0.809	
1200S350-118	0.1242	2.494	8.48	51.992	8.665	4.566	3.741	1.225	51.992	8.665	192.74	13189	51.992	8.260	274.07	14986	12.821	110.302	-2.284	5.250	0.811	
12" Track	1200T125-54'	0.0566	0.820	2.79	13.335	2.186	4.033	0.060	0.271	12.296	1.491	29.47	1354	11.460	1.286	38.51	1354	0.876	1.820	-0.333	4.055	0.993
	1200T125-68	0.0713	1.033	3.51	16.826	2.747	4.036	0.074	0.268	16.246	2.206	43.60	2713	15.686	1.934	57.90	2713	1.750	2.270	-0.329	4.059	0.993
	1200T125-97	0.1017	1.472	5.01	24.078	3.897	4.044	0.102	0.263	24.078	3.690	72.92	7902	23.751	3.442	103.06	7902	5.076	3.171	-0.322	4.065	0.994
	1200T125-118	0.1242	1.798	6.12	29.472	4.740	4.049	0.121	0.259	29.472	4.740	93.67	13189	29.472	4.490	134.44	14434	9.243	3.812	-0.316	4.070	0.994
	1200T150-54'	0.0566	0.848	2.89	14.378	2.357	4.117	0.103	0.348	12.962	1.530	30.23	1354	12.020	1.313	39.31	1354	0.906	3.033	-0.454	4.156	0.988
	1200T150-68	0.0713	1.068	3.64	18.148	2.963	4.121	0.127	0.345	17.568	2.281	45.08	2713	16.566	1.987	59.48	2713	1.810	3.795	-0.450	4.160	0.988
	1200T150-97	0.1017	1.523	5.18	25.987	4.206	4.130	0.176	0.340	25.987	3.996	78.97	7902	25.719	3.616	108.27	7902	5.252	5.335	-0.441	4.168	0.989
	1200T150-118	0.1242	1.860	6.33	31.825	5.119	4.137	0.210	0.336	31.825	5.119	101.15	13189	31.825	4.865	145.66	14434	9.562	6.444	-0.435	4.173	0.989
	1200T200-54'	0.0566	0.905	3.08	16.464	2.699	4.265	0.236	0.510	14.078	1.582	31.26	1354	12.962	1.350	40.41	1354	0.966	6.714	-0.730	4.357	0.972
	1200T200-68	0.0713	1.140	3.88	20.791	3.395	4.271	0.294	0.508	19.277	2.383	47.09	2713	18.026	2.058	61.62	2713	1.931	8.431	-0.725	4.362	0.972
	1200T200-97	0.1017	1.625	5.53	29.805	4.824	4.283	0.410	0.502	29.805	4.298	84.93	7902	28.959	3.819	114.35	7902	5.602	11.945	-0.714	4.371	0.973
	1200T200-118	0.1242	1.984	6.75	36.530	5.876	4.291	0.492	0.498	36.530	5.794	114.50	13189	36.530	5.278	158.02	14434	10.201	14.513	-0.706	4.377	0.974
	1200T250-54'	0.0566	0.962	3.27	18.550	3.041	4.392	0.445	0.681	15.021	1.617	31.95	1354	13.756	1.374	41.14	1354	1.027	12.339	-1.039	4.565	0.948
	1200T250-68	0.0713	1.211	4.12	23.435	3.826	4.399	0.556	0.678	20.720	2.451	48.44	2713	19.255	2.106	63.04	2713	2.052	15.529	-1.033	4.569	0.949
	1200T250-97	0.1017	1.727	5.88	33.623	5.442	4.413	0.780	0.672	32.479	4.489	88.70	7902	31.310	3.954	118.37	7902	5.953	22.101	-1.021	4.579	0.950
	1200T250-118	0.1242	2.108	7.17	41.236	6.632	4.423	0.940	0.668	40.963	6.138	121.28	13189	39.954	5.519	165.24	14434	10.839	26.943	-1.013	4.586	0.951
	1200T300-54'	0.0566	1.018	3.46	20.636	3.383	4.502	0.745	0.855	15.856	1.641	32.44	1354	14.451	1.391	41.65	1354	1.087	20.211	-1.375	4.784	0.917
	1200T300-68	0.0713	1.282	4.36	26.079	4.258	4.510	0.932	0.852	21.991	2.501	49.41	2713	20.338	2.140	64.06	2713	2.173	25.471	-1.369	4.789	0.918
1200T300-97	0.1017	1.828	6.22	37.441	6.060	4.525	1.310	0.847	34.841	4.629	91.46	7902	33.377	4.051	121.30	7902	6.304	36.357	-1.355	4.799	0.920	
1200T300-118	0.1242	2.232	7.60	45.941	7.389	4.537	1.583	0.842	44.194	6.386	126.18	13189	42.885	5.695	170.51	14434	11.478	44.420	-1.346	4.806	0.922	

For section properties table notes see page 4

A = Cross-sectional area

I<sub>x</sub> = Moment of inertia (x-axis)

S<sub>x</sub> = Section modulus (x-axis)

R<sub>x</sub> = Radius of gyration (x-axis)

I<sub>y</sub> = Moment of inertia (y-axis)

R<sub>y</sub> = Radius of gyration (y-axis)

Ma = Allowable bending moment

V<sub>a</sub> = Allowable shear force

J = St. Vennant torsion constant

C<sub>w</sub> = Torsional warping constant

X<sub>o</sub> = Distance from center of gravity to shear center along x-axis

R<sub>o</sub> = Polar radius of gyration about the centroidal principal axis

β = Beta coefficient

# Structural studs & track 14"

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties					
		Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Jx1000 (in <sup>4</sup> )	Cw (in <sup>6</sup> )	Xo (in)	Ro (in)	Beta	
14" Studs	1400S162-54'	0.0566	1.009	3.43	23.302	3.329	4.805	0.218	0.464	21.103	2.496	49.32	1177	20.365	2.256	67.54	1177	1.078	8.980	-0.667	4.873	0.981
	1400S162-68	0.0713	1.263	4.30	28.952	4.136	4.787	0.262	0.456	27.357	3.357	66.33	2365	26.375	3.135	93.85	2365	2.141	10.966	-0.654	4.853	0.982
	1400S162-97	0.1017	1.779	6.05	40.115	5.731	4.748	0.340	0.437	39.965	5.248	103.71	6939	38.897	4.915	147.14	6939	6.134	14.651	-0.628	4.810	0.983
	1400S162-118	0.1242	2.152	7.32	47.928	6.847	4.719	0.385	0.423	47.928	6.659	131.59	12745	47.772	6.282	188.07	12745	11.065	17.032	-0.609	4.777	0.984
	1400S200-54'	0.0566	1.066	3.63	25.951	3.707	4.935	0.406	0.617	23.767	2.866	56.63	1177	23.199	2.440	73.05	1177	1.138	16.355	-0.946	5.062	0.965
	1400S200-68	0.0713	1.335	4.54	32.284	4.612	4.918	0.494	0.608	30.684	3.824	75.56	2365	29.797	3.505	104.93	2365	2.262	20.083	-0.932	5.043	0.966
	1400S200-97	0.1017	1.881	6.40	44.853	6.408	4.883	0.655	0.590	44.683	5.917	116.93	6939	43.616	5.580	167.07	6939	6.484	27.156	-0.904	5.001	0.967
	1400S200-118	0.1242	2.276	7.75	53.698	7.671	4.857	0.755	0.576	53.698	7.480	147.81	12745	53.520	7.096	212.47	12745	11.704	31.861	-0.883	4.970	0.968
	1400S250-54'	0.0566	1.122	3.82	28.702	4.100	5.057	0.707	0.794	26.758	2.927	57.83	1177	26.141	2.527	75.65	1177	1.198	27.675	-1.272	5.275	0.942
	1400S250-68	0.0713	1.406	4.78	35.743	5.106	5.042	0.865	0.784	34.239	4.145	81.90	2365	33.565	3.550	106.29	2365	2.383	34.118	-1.257	5.255	0.943
	1400S250-97	0.1017	1.983	6.75	49.764	7.109	5.010	1.160	0.765	49.579	6.611	130.64	6939	48.650	6.010	179.95	6939	6.835	46.520	-1.225	5.214	0.945
	1400S250-118	0.1242	2.400	8.17	59.676	8.525	4.986	1.352	0.750	59.676	8.330	164.61	12745	59.504	7.881	235.94	12745	12.342	54.927	-1.203	5.184	0.946
	1400S300-54'	0.0566	1.179	4.01	31.453	4.493	5.165	1.115	0.972	29.581	3.019	59.66	1177	27.227	2.580	77.25	1177	1.259	42.690	-1.617	5.499	0.914
	1400S300-68	0.0713	1.477	5.03	39.201	5.600	5.151	1.370	0.963	37.902	4.236	83.71	2365	36.290	3.655	109.42	2365	2.503	52.772	-1.601	5.480	0.915
	1400S300-97	0.1017	2.084	7.09	54.675	7.811	5.122	1.854	0.943	54.574	7.035	139.02	6939	53.226	6.372	190.78	6939	7.186	72.365	-1.568	5.439	0.917
	1400S300-118	0.1242	2.525	8.59	65.655	9.379	5.100	2.174	0.928	65.655	9.046	178.75	12745	65.570	8.427	252.29	12745	12.981	85.812	-1.544	5.408	0.919
	1400S350-54'	0.0566	1.278	4.35	35.830	5.119	5.295	1.947	1.234	35.659	3.823	75.54	1177	33.308	3.249	97.27	1177	1.365	76.252	-2.207	5.868	0.859
	1400S350-68	0.0713	1.602	5.45	44.707	6.387	5.283	2.406	1.226	44.707	5.700	112.64	2365	44.707	4.709	141.00	2365	2.715	94.534	-2.190	5.848	0.860
	1400S350-97	0.1017	2.262	7.70	62.507	8.930	5.257	3.296	1.207	62.507	8.762	191.08	6939	62.507	8.189	245.18	6939	7.799	130.430	-2.156	5.808	0.862
	1400S350-118	0.1242	2.742	9.33	75.200	10.743	5.237	3.903	1.193	75.200	10.743	238.95	12745	75.200	10.260	340.44	12745	14.099	155.387	-2.130	5.778	0.864
14" Track	1400T125-54'	0.0566	0.933	3.18	19.977	2.814	4.627	0.061	0.256	17.725	1.767	34.91	1160	16.407	1.517	45.42	1160	0.997	2.559	-0.299	4.643	0.996
	1400T125-68	0.0713	1.175	4.00	25.196	3.536	4.630	0.076	0.254	23.552	2.632	52.01	2322	22.620	2.293	68.64	2322	1.992	3.189	-0.296	4.646	0.996
	1400T125-97	0.1017	1.676	5.70	36.024	5.019	4.636	0.104	0.249	35.775	4.480	88.53	6761	34.588	4.134	123.76	6761	5.778	4.445	-0.289	4.652	0.996
	1400T125-118	0.1242	2.046	6.96	44.068	6.106	4.641	0.123	0.245	44.068	5.853	115.67	12344	43.752	5.453	163.27	12344	10.520	5.334	-0.284	4.656	0.996
	1400T150-54'	0.0566	0.962	3.27	21.392	3.013	4.717	0.105	0.330	18.620	1.810	35.76	1160	17.153	1.547	46.33	1160	1.027	4.280	-0.410	4.746	0.993
	1400T150-68	0.0713	1.211	4.12	26.987	3.788	4.721	0.130	0.327	25.409	2.717	53.68	2322	23.803	2.352	70.42	2322	2.052	5.349	-0.407	4.749	0.993
	1400T150-97	0.1017	1.727	5.88	38.607	5.379	4.729	0.180	0.322	38.340	4.834	95.52	6761	37.285	4.332	129.69	6761	5.953	7.503	-0.399	4.756	0.993
	1400T150-118	0.1242	2.108	7.17	47.247	6.546	4.734	0.214	0.319	47.247	6.291	124.31	12344	46.911	5.886	176.24	12344	10.839	9.048	-0.393	4.761	0.993
	1400T200-54'	0.0566	1.018	3.46	24.221	3.412	4.878	0.242	0.487	20.098	1.868	36.92	1160	18.387	1.589	47.56	1160	1.087	9.520	-0.665	4.947	0.982
	1400T200-68	0.0713	1.282	4.36	30.571	4.291	4.883	0.301	0.485	27.707	2.830	55.93	2322	25.738	2.432	72.81	2322	2.173	11.942	-0.661	4.951	0.982
	1400T200-97	0.1017	1.828	6.22	43.773	6.098	4.893	0.420	0.479	43.679	5.174	102.24	6761	41.749	4.559	136.48	6761	6.304	16.883	-0.651	4.959	0.983
	1400T200-118	0.1242	2.232	7.60	53.606	7.427	4.900	0.504	0.475	53.606	7.062	139.54	12344	53.453	6.354	190.23	12344	11.478	20.479	-0.644	4.965	0.983
	1400T250-54'	0.0566	1.075	3.66	27.051	3.811	5.017	0.458	0.653	21.342	1.907	37.68	1160	19.421	1.616	48.38	1160	1.148	17.550	-0.954	5.149	0.966
	1400T250-68	0.0713	1.354	4.61	34.154	4.794	5.023	0.573	0.650	29.615	2.906	57.42	2322	27.352	2.485	74.40	2322	2.294	22.063	-0.949	5.153	0.966
	1400T250-97	0.1017	1.930	6.57	48.939	6.818	5.036	0.803	0.645	47.449	5.386	106.42	6761	44.883	4.708	140.94	6761	6.654	31.333	-0.938	5.163	0.967
	1400T250-118	0.1242	2.356	8.02	59.964	8.308	5.044	0.967	0.641	59.734	7.438	146.99	12344	58.277	6.622	198.25	12344	12.117	38.137	-0.930	5.169	0.968
	1400T300-54'	0.0566	1.131	3.85	29.881	4.209	5.139	0.769	0.825	22.429	1.935	38.24	1160	20.324	1.635	48.96	1160	1.208	28.800	-1.271	5.358	0.944
	1400T300-68	0.0713	1.425	4.85	37.737	5.297	5.146	0.962	0.822	31.291	2.961	58.50	2322	28.775	2.523	75.54	2322	2.415	36.257	-1.265	5.363	0.944
	1400T300-97	0.1017	2.032	6.91	54.105	7.538	5.160	1.353	0.816	50.615	5.540	109.48	6761	47.633	4.815	144.17	6761	7.005	51.644	-1.252	5.373	0.946
	1400T300-118	0.1242	2.481	8.44	66.323	9.189	5.171	1.635	0.812	64.159	7.713	152.42	12344	62.201	6.816	204.06	12344	12.755	62.998	-1.243	5.380	0.947

For section properties table notes see page 4

- A = Cross-sectional area
- I<sub>x</sub> = Moment of inertia (x-axis)
- S<sub>x</sub> = Section modulus (x-axis)

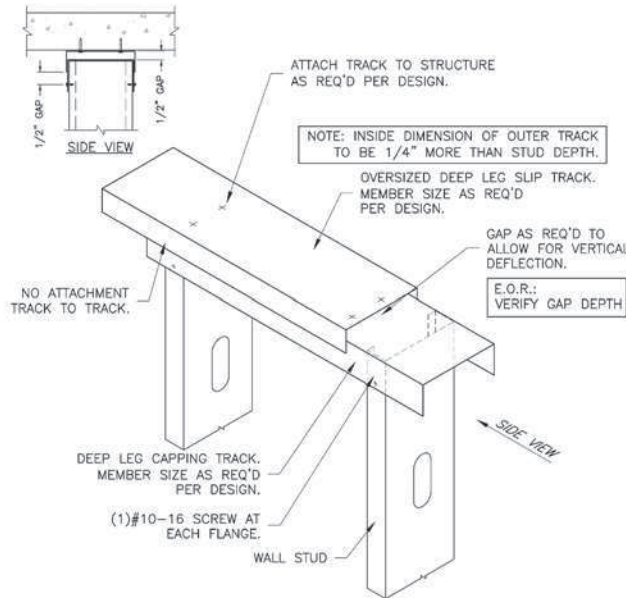
- R<sub>x</sub> = Radius of gyration (x-axis)
- I<sub>y</sub> = Moment of inertia (y-axis)
- R<sub>y</sub> = Radius of gyration (y-axis)
- Ma = Allowable bending moment

- Va = Allowable shear force
- J = St. Venant torsion constant
- Cw = Torsional warping constant
- Xo = Distance from center of gravity to shear center along x-axis

- Ro = Polar radius of gyration about the centroidal principal axis
- β = Beta coefficient

# Oversize double slip track

Member	Design Thickness (in)	Gross Properties							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties						
		Area (in <sup>2</sup> )	Weight (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	R <sub>x</sub> (in)	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	I <sub>x</sub> (in <sup>4</sup> )	S <sub>x</sub> (in <sup>3</sup> )	Ma (in-k)	Va (lb)	Jx1000 (in <sup>4</sup> )	Cw (in <sup>6</sup> )	Xo (in)	m (in)	Ro (in)	Beta	
3-5/8" System	387T200-33	0.0346	0.272	0.93	0.716	0.356	1.622	0.112	0.641	0.540	0.210	4.14	971	0.521	0.178	5.34	971	0.109	0.313	-1.242	0.743	2.141	0.663
	387T200-43	0.0451	0.355	1.21	0.935	0.463	1.623	0.145	0.639	0.754	0.297	5.87	1739	0.715	0.278	8.32	2141	0.241	0.406	-1.237	0.740	2.139	0.665
	387T200-54	0.0566	0.445	1.51	1.183	0.581	1.631	0.180	0.637	1.019	0.408	8.06	2655	0.965	0.379	11.36	3372	0.475	0.513	-1.231	0.736	2.140	0.669
	387T200-68	0.0713	0.560	1.91	1.509	0.732	1.641	0.225	0.634	1.386	0.567	11.20	3325	1.317	0.525	15.73	5037	0.950	0.654	-1.222	0.731	2.142	0.674
	387T200-97	0.1017	0.799	2.72	2.208	1.044	1.663	0.314	0.627	2.206	0.942	18.62	4685	2.119	0.875	26.19	7098	2.753	0.954	-1.205	0.720	2.147	0.685
	387T250-43	0.0451	0.400	1.36	1.114	0.552	1.669	0.265	0.815	0.827	0.309	6.11	1739	0.781	0.289	8.65	2141	0.271	0.744	-1.669	0.977	2.497	0.553
	387T250-54	0.0566	0.502	1.71	1.411	0.693	1.677	0.331	0.813	1.124	0.426	8.42	2655	1.059	0.395	11.83	3372	0.536	0.942	-1.662	0.972	2.497	0.557
	387T250-68	0.0713	0.632	2.15	1.802	0.874	1.689	0.414	0.810	1.543	0.596	11.78	3325	1.455	0.550	16.46	5037	1.070	1.202	-1.653	0.967	2.498	0.562
	387T250-97	0.1017	0.900	3.06	2.642	1.249	1.713	0.582	0.804	2.506	1.008	19.91	4685	2.380	0.927	27.74	7098	3.104	1.760	-1.634	0.956	2.500	0.573
	387T300-54	0.0566	0.558	1.90	1.640	0.805	1.714	0.542	0.986	1.215	0.440	8.70	2655	1.141	0.408	12.20	3372	0.596	1.549	-2.108	1.213	2.890	0.468
387T300-68	0.0713	0.703	2.39	2.095	1.016	1.726	0.679	0.983	1.679	0.618	12.21	3325	1.575	0.569	17.02	5037	1.191	1.979	-2.099	1.207	2.890	0.473	
387T300-97	0.1017	1.002	3.41	3.075	1.454	1.752	0.957	0.977	2.765	1.055	20.86	4685	2.606	0.965	28.89	7098	3.455	2.905	-2.079	1.196	2.889	0.482	
6" System	625T200-33	0.0346	0.355	1.21	2.102	0.657	2.435	0.128	0.600	1.705	0.347	6.85	597	1.664	0.286	8.58	597	0.141	0.930	-1.030	0.646	2.711	0.856
	625T200-43	0.0451	0.462	1.57	2.740	0.855	2.436	0.165	0.598	2.291	0.595	11.75	1321	2.239	0.478	14.30	1321	0.313	1.206	-1.025	0.643	2.709	0.857
	625T200-54	0.0566	0.579	1.97	3.454	1.071	2.442	0.206	0.596	3.037	0.806	15.94	2618	2.909	0.763	22.84	2618	0.619	1.516	-1.020	0.640	2.712	0.859
	625T200-68	0.0713	0.730	2.48	4.381	1.348	2.450	0.256	0.593	4.062	1.096	21.65	4347	3.893	1.033	30.91	5252	1.237	1.916	-1.013	0.636	2.717	0.861
	625T200-97	0.1017	1.040	3.54	6.333	1.917	2.468	0.358	0.587	6.317	1.763	34.83	7674	6.100	1.660	49.69	10885	3.586	2.751	-0.998	0.626	2.726	0.866
	625T250-43	0.0451	0.507	1.73	3.197	0.997	2.511	0.306	0.777	2.506	0.585	11.56	1321	2.442	0.475	14.23	1321	0.344	2.200	-1.413	0.867	2.985	0.776
	625T250-54	0.0566	0.636	2.16	4.032	1.251	2.518	0.382	0.775	3.313	0.843	16.65	2618	3.180	0.761	22.77	2618	0.679	2.769	-1.407	0.864	2.987	0.778
	625T250-68	0.0713	0.801	2.73	5.117	1.575	2.527	0.477	0.772	4.462	1.150	22.73	4347	4.253	1.080	32.33	5252	1.357	3.507	-1.400	0.859	2.990	0.781
	625T250-97	0.1017	1.142	3.89	7.409	2.243	2.547	0.669	0.766	7.055	1.876	37.07	7674	6.748	1.752	52.47	10885	3.937	5.058	-1.384	0.849	2.998	0.787
	625T300-54	0.0566	0.693	2.36	4.610	1.430	2.580	0.629	0.953	3.558	0.872	17.22	2618	3.427	0.751	22.49	2618	0.740	4.530	-1.816	1.094	3.296	0.697
625T300-68	0.0713	0.872	2.97	5.854	1.801	2.590	0.788	0.950	4.814	1.193	23.58	4347	4.571	1.118	33.47	5252	1.478	5.745	-1.807	1.089	3.298	0.700	
625T300-97	0.1017	1.244	4.23	8.484	2.569	2.612	1.109	0.944	7.696	1.962	38.77	7674	7.316	1.824	54.61	10885	4.287	8.306	-1.790	1.078	3.304	0.707	



Double slip track detail  
Telescoping slip track connection

For section properties table notes see page 4

A = Cross-sectional area

I<sub>x</sub> = Moment of inertia (x-axis)

S<sub>x</sub> = Section modulus (x-axis)

R<sub>x</sub> = Radius of gyration (x-axis)

I<sub>y</sub> = Moment of inertia (y-axis)

R<sub>y</sub> = Radius of gyration (y-axis)

Ma = Allowable bending moment

Va = Allowable shear force

J = St. Vennant torsion constant

Cw = Torsional warping constant

Xo = Distance from center of gravity to shear center along x-axis

Ro = Polar radius of gyration about the centroidal principal axis

β = Beta coefficient

# Interior walls with UltraSTEEL® drywall framing

ClarkWestern UltraSTEEL framing's 25-gauge EQ composite limiting heights  
(1 layer 1/2" thick gypsum wallboard)\*

Stud member	Spacing (inches)	5 psf			7.5 psf			10 psf			15 psf		
		L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162 UDS	12	12' 6"	9' 11"	8' 8"	10' 11"	8' 8"	—	9' 11"	7' 11"	—	8' 8"	—	—
	16	11' 4"	9' 0"	7' 11"	9' 11"	7' 11"	—	9' 0"	—	—	—	—	—
	24	9' 11"	7' 11"	—	8' 8"	—	—	7' 11"	—	—	—	—	—
250 UDS	12	15' 8"	12' 5"	10' 10"	13' 8"	10' 10"	9' 6"	12' 4" f	9' 11"	8' 8"	10' 1" f	8' 8"	—
	16	14' 2"	11' 3"	9' 10"	12' 5"	9' 10"	8' 7"	11' 3"	8' 11"	7' 10"	8' 11" s	7' 10"	—
	24	12' 4"	9' 10"	8' 7"	10' 9"	8' 7"	—	9' 9" f	7' 9"	—	—	—	—
362 UDS	12	20' 10"	16' 7"	14' 3"	18' 3"	14' 3"	12' 3"	16' 3" f	12' 10"	11' 0"	12' 10" f	11' 0"	9' 6"
	16	19' 1"	15' 1"	12' 10"	16' 5" f	12' 10"	11' 0"	13' 11" f	11' 6"	9' 11"	11' 0" f	9' 11"	8' 6"
	24	16' 6" f	12' 11"	11' 0"	13' 1" f	11' 0"	9' 5"	11' 2" f	9' 11"	8' 6"	8' 10"	8' 6"	—
400 UDS	12	22' 5"	17' 9"	15' 6"	19' 7"	15' 6"	13' 2"	17' 0" f	13' 10"	11' 9"	13' 4" s	11' 9"	10' 1"
	16	20' 6"	16' 3"	13' 10"	17' 0" f	13' 10"	11' 9"	14' 6"	12' 4"	10' 6"	11' 1" s	10' 6"	9' 0"
	24	17' 1" f	13' 11"	11' 9"	13' 8" f	11' 9"	10' 10"	11' 7" f	10' 6"	9' 0"	8' 11" s	8' 11" s	—
600 UDS	12	29' 10"	23' 8"	20' 9"	24' 7" f	20' 9"	18' 1"	20' 9" s	18' 10"	16' 5"	13' 10" s	13' 10" s	13' 10" s
	16	25' 7" f	21' 6"	18' 9"	20' 11" f	18' 9"	16' 5"	17' 1" s	17' 1" s	14' 8"	11' 5" s	11' 5" s	11' 5" s
	24	20' 6" f	18' 9"	16' 5"	16' 9"	16' 5"	13' 10"	13' 5" s	13' 5" s	12' 3"	9' 0" s	9' 0" s	9' 0" s

ClarkWestern UltraSTEEL framing's 20-gauge EQ composite limiting heights  
(1 layer 1/2" thick gypsum wallboard)\*

Stud member	Spacing (inches)	5 psf			7.5 psf			10 psf			15 psf		
		L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162 UDS	12	17' 4"	13' 9"	12' 0"	15' 2"	12' 0"	7' 7"	13' 9"	8' 9"	—	12' 0"	—	—
	16	12' 8"	10' 1"	8' 10"	11' 1"	8' 10"	7' 8"	10' 1"	8' 0"	—	8' 10"	—	—
	24	14' 0"	9' 0"	—	12' 3"	—	—	9' 0"	—	—	—	—	—
250 UDS	12	19' 10"	15' 9"	13' 6"	17' 4"	13' 6"	10' 8"	15' 9"	11' 5"	9' 1"	13' 6"	9' 1"	—
	16	16' 5"	13' 0"	11' 4"	14' 4"	11' 4"	9' 11"	13' 0"	10' 4"	9' 0"	9' 5" f	9' 0"	7' 10"
	24	16' 0"	11' 10"	9' 5"	14' 0"	9' 5"	7' 8"	11' 10"	8' 1"	—	9' 5"	—	—
362 UDS	12	22' 0"	17' 5"	15' 1"	19' 2"	15' 1"	12' 10"	17' 5"	13' 5"	11' 5"	15' 1"	11' 5"	9' 9"
	16	19' 4"	15' 4"	13' 5"	16' 11"	13' 5"	11' 9"	15' 4"	12' 2"	10' 8"	12' 11" f	10' 8"	9' 3"
	24	17' 8"	13' 8"	11' 7"	15' 5"	11' 7"	9' 11"	13' 8"	10' 4"	8' 10"	11' 7"	8' 10"	7' 7"
400 UDS	12	24' 3"	19' 3"	16' 9"	21' 2"	16' 9"	14' 8"	19' 3"	15' 3"	13' 2"	16' 9"	13' 2"	11' 3"
	16	21' 9"	17' 3"	15' 0"	19' 0"	15' 0"	13' 2"	17' 3"	13' 8"	11' 11"	15' 0"	11' 11"	10' 5"
	24	19' 5"	15' 5"	13' 3"	17' 0"	13' 3"	11' 1"	15' 5"	11' 8"	9' 10"	12' 10" f	9' 10"	8' 3"
600 UDS	12	30' 8"	24' 4"	21' 3"	26' 9"	21' 3"	18' 7"	24' 4"	19' 4"	16' 10"	21' 3"	16' 10"	14' 7"
	16	28' 0"	22' 3"	19' 5"	24' 6"	19' 5"	17' 0"	22' 3"	17' 8"	15' 5"	18' 9" f	15' 5"	13' 5"
	24	25' 0"	19' 10"	17' 4"	21' 10" f	17' 4"	14' 10"	18' 11" f	15' 7"	13' 2"	14' 3" s	13' 2"	11' 3"

Tested to ICC acceptance criteria AC86.

\* Composite limiting heights based on single layer gypsum board full height on each side with screws spaced 12" O.C. to framing members per ASTM C754.

Minimum yield strength = 40 ksi      f: Flexural stress controls allowable wall height      s: Shear/web crippling control allowable wall height

(For additional UltraSTEEL span charts, visit [clarkwestern.com](http://clarkwestern.com).)

ClarkWestern UltraSTEEL framing's 25-gauge EQ composite limiting heights  
(1 layer 5/8" thick gypsum wallboard)\*

Stud member	Spacing (inches)	5 psf			7.5 psf			10 psf			15 psf		
		L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162 UDS	12	13' 2"	10' 6"	9' 2"	11' 6"	9' 2"	—	10' 6"	8' 5"	—	8' 8"	—	—
	16	12' 2"	9' 8"	8' 5"	10' 8"	8' 5"	—	9' 8"	—	—	—	—	—
	24	10' 9"	8' 6"	—	9' 4"	—	—	8' 6"	—	—	—	—	—
250 UDS	12	16' 0"	13' 1"	11' 5"	14' 3"	11' 5"	9' 11"	12' 4"	10' 5"	8' 10"	10' 1"	8' 10"	—
	16	14' 11"	11' 10"	10' 4"	13' 1"	10' 4"	9' 1"	11' 4"	9' 5"	8' 3"	8' 11"	8' 3"	—
	24	13' 0"	10' 4"	8' 11"	11' 3"	8' 11"	—	9' 9"	7' 11"	—	—	—	—
362 UDS	12	21' 4"	17' 1"	14' 7"	18' 8"	14' 7"	12' 5"	16' 3"	13' 0"	11' 1"	12' 10"	11' 1"	9' 6"
	16	19' 5"	15' 4"	13' 1"	16' 6"	13' 1"	11' 2"	13' 11"	11' 9"	10' 1"	11' 0"	10' 1"	8' 8"
	24	16' 8"	13' 2"	11' 2"	13' 1"	11' 2"	9' 6"	11' 2"	10' 0"	8' 6"	8' 10"	8' 6"	—
400 UDS	12	23' 1"	18' 4"	15' 11"	19' 7"	15' 11"	13' 7"	17' 0"	14' 2"	12' 1"	13' 4"	12' 1"	10' 3"
	16	20' 10"	16' 8"	14' 3"	17' 0"	14' 3"	12' 1"	14' 6"	12' 8"	10' 10"	11' 1"	10' 10"	9' 3"
	24	17' 1"	14' 4"	12' 2"	13' 8"	12' 2"	10' 2"	11' 7"	10' 9"	9' 1"	8' 11"	8' 11"	—
600 UDS	12	30' 1"	23' 11"	20' 10"	24' 7"	20' 10"	18' 3"	20' 9"	19' 0"	16' 7"	13' 10"	13' 10"	13' 10"
	16	25' 7"	21' 8"	19' 0"	20' 11"	19' 0"	16' 7"	17' 1"	17' 1"	14' 9"	11' 5"	11' 5"	11' 5"
	24	20' 6"	19' 0"	16' 8"	16' 9"	16' 8"	14' 0"	13' 5"	13' 5"	12' 3"	9' 0"	9' 0"	9' 0"

ClarkWestern UltraSTEEL framing's 20-gauge EQ composite limiting heights  
(1 layer 5/8" thick gypsum wallboard)\*

Stud member	Spacing (inches)	5 psf			7.5 psf			10 psf			15 psf		
		L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162 UDS	12	18' 1"	14' 5"	12' 7"	15' 10"	12' 7"	7' 11"	14' 5"	9' 4"	—	12' 7"	—	—
	16	13' 7"	10' 9"	9' 5"	11' 10"	9' 5"	8' 3"	10' 9"	8' 7"	—	9' 5"	—	—
	24	15' 5"	9' 9"	—	13' 6"	—	—	9' 9"	—	—	—	—	—
250 UDS	12	21' 1"	16' 9"	14' 5"	18' 5"	14' 5"	11' 2"	16' 9"	12' 0"	9' 5"	14' 5"	9' 5"	—
	16	17' 2"	13' 8"	11' 11"	15' 0"	11' 11"	10' 5"	13' 8"	10' 10"	9' 5"	9' 6"	9' 5"	8' 3"
	24	17' 1"	12' 6"	9' 9"	14' 11"	9' 9"	7' 9"	12' 6"	8' 4"	—	9' 9"	—	—
362 UDS	12	22' 6"	17' 10"	15' 5"	19' 8"	15' 5"	13' 0"	17' 10"	13' 8"	11' 6"	15' 5"	11' 6"	9' 9"
	16	19' 8"	15' 8"	13' 8"	17' 2"	13' 8"	11' 11"	15' 8"	12' 5"	10' 10"	12' 11"	10' 10"	9' 6"
	24	18' 3"	14' 0"	11' 10"	15' 10"	11' 10"	10' 0"	14' 0"	10' 6"	8' 11"	11' 10"	8' 11"	7' 9"
400 UDS	12	24' 11"	19' 9"	17' 3"	21' 9"	17' 3"	15' 1"	19' 9"	15' 8"	13' 6"	17' 3"	13' 6"	11' 5"
	16	22' 3"	17' 8"	15' 5"	19' 5"	15' 5"	13' 6"	17' 8"	14' 0"	12' 3"	15' 5"	12' 3"	10' 8"
	24	20' 1"	15' 11"	13' 8"	17' 6"	13' 8"	11' 4"	15' 11"	11' 11"	9' 11"	12' 10"	9' 11"	8' 5"
600 UDS	12	30' 11"	24' 7"	21' 5"	27' 0"	21' 5"	18' 9"	24' 7"	19' 6"	17' 0"	21' 5"	17' 0"	14' 9"
	16	28' 4"	22' 6"	19' 8"	24' 9"	19' 8"	17' 2"	22' 6"	17' 10"	15' 7"	18' 10"	15' 7"	13' 7"
	24	25' 5"	20' 2"	17' 8"	21' 11"	17' 8"	15' 0"	18' 11"	15' 9"	13' 3"	14' 4"	13' 3"	11' 5"

## Interior walls with structural framing

### 3-5/8" Structural stud non-composite – Allowable wall heights - 5 PSF (interior)

Members	Spacing (in) o.c.	5 psf		
		L/120	L/240	L/360
362S162-33	12	24' 4"	19' 4"	16' 11"
362S162-33	16	22' 2"	17' 7"	15' 4"
362S162-33	24	18' 9"	15' 4"	13' 5"
362S200-33	12	25' 8"	20' 5"	17' 10"
362S200-33	16	23' 4"	18' 6"	16' 2"
362S200-33	24	19' 8"	16' 2"	14' 2"
362S162-43	12	26' 6"	21' 0"	18' 4"
362S162-43	16	24' 1"	19' 1"	16' 8"
362S162-43	24	21' 0"	16' 8"	14' 7"
362S200-43	12	28' 0"	22' 3"	19' 5"
362S200-43	16	25' 5"	20' 2"	17' 8"
362S200-43	24	22' 3"	17' 8"	15' 5"
362S250-43	12	29' 6"	23' 5"	20' 6"
362S250-43	16	26' 10"	21' 3"	18' 7"
362S250-43	24	23' 5"	18' 7"	16' 3"
362S162-54	12	28' 5"	22' 6"	19' 8"
362S162-54	16	25' 10"	20' 6"	17' 11"
362S162-54	24	22' 6"	17' 11"	15' 7"
362S200-54	12	30' 0"	23' 10"	20' 10"
362S200-54	16	27' 3"	21' 8"	18' 11"
362S200-54	24	23' 10"	18' 11"	16' 6"
362S250-54	12	31' 8"	25' 2"	21' 11"
362S250-54	16	28' 9"	22' 10"	19' 11"
362S250-54	24	25' 2"	19' 11"	17' 5"
362S162-68	12	30' 4"	24' 1"	21' 1"
362S162-68	16	27' 7"	21' 11"	19' 2"
362S162-68	24	24' 1"	19' 2"	16' 9"
362S200-68	12	32' 2"	25' 6"	22' 3"
362S200-68	16	29' 2"	23' 2"	20' 3"
362S200-68	24	25' 6"	20' 3"	17' 8"
362S250-68	12	33' 11"	26' 11"	23' 6"
362S250-68	16	30' 10"	24' 6"	21' 5"
362S250-68	24	26' 11"	21' 5"	18' 8"
362S162-97	12	33' 6"	26' 7"	23' 3"
362S162-97	16	30' 5"	24' 2"	21' 1"
362S162-97	24	26' 7"	21' 1"	18' 5"
362S200-97	12	35' 6"	28' 2"	24' 8"
362S200-97	16	32' 3"	25' 8"	22' 5"
362S200-97	24	28' 2"	22' 5"	19' 7"
362S250-97	12	37' 7"	29' 10"	26' 1"
362S250-97	16	34' 2"	27' 1"	23' 8"
362S250-97	24	29' 10"	23' 8"	20' 8"

These tables provide height limitations for wall framing, alone.

Values on this page apply to wide flange studs (1-5/8", 2", 2-1/2")  
and metal thicknesses (33, 43, 54, 68 and 97 mil).

Non-composite table notes:

- Limiting heights based upon a fully braced section (see note 6 below), if section is not fully braced on both flanges, please use the AISIWIN software available at [www.clarkwestern.com](http://www.clarkwestern.com), or contact our Technical Support line at 888-437-3244 for the limiting height and maximum spacing of lateral bracing for the specific condition.
- Values based on  $F_y=33$  ksi.
- Lateral loads have not been modified for strength or deflection checks.
- Reference ASTM C754 section 5.3 for the requirements of stud to track connections. Reference ASTM C754 section 5.2 for requirements of runners (track) connections to the building structure.
- Adding additional horizontal bridging will not reduce the actual deflection in the wall. To reduce the deflection of a wall stud either a heavier member is required or an intermediate structural support must be provided.
- A sufficient diaphragm, such as screw-attached gypsum board on both sides, may serve as an adequate means of bracing the stud pending the determination of the gypsum supplier or a design professional. Horizontal mechanical bridging would be required if the sheathing diaphragm is not structurally sufficient. In addition, horizontal bridging may be required during the construction phase of a tall wall in order to keep it plumb and true.

### 6" Structural stud non-composite – Allowable wall heights - 5 PSF (interior)

Members	Spacing (in) o.c.	5 psf		
		L/120	L/240	L/360
600S162-33	12	36' 1"	28' 8"	25' 0"
600S162-33	16	32' 9"	26' 0"	22' 9"
600S162-33	24	27' 7"	22' 9"	19' 10"
600S200-33	12	37' 9"	30' 0"	26' 2"
600S200-33	16	34' 4"	27' 3"	23' 10"
600S200-33	24	28' 7"	23' 10"	20' 10"
600S162-43	12	39' 4"	31' 2"	27' 3"
600S162-43	16	35' 9"	28' 4"	24' 9"
600S162-43	24	31' 2"	24' 9"	21' 8"
600S200-43	12	41' 3"	32' 9"	28' 7"
600S200-43	16	37' 6"	29' 9"	26' 0"
600S200-43	24	32' 9"	26' 0"	22' 9"
600S250-43	12	43' 3"	34' 4"	30' 0"
600S250-43	16	39' 3"	31' 2"	27' 3"
600S250-43	24	34' 4"	27' 3"	23' 10"
600S162-54	12	42' 2"	33' 6"	29' 3"
600S162-54	16	38' 4"	30' 5"	26' 7"
600S162-54	24	33' 6"	26' 7"	23' 3"
600S200-54	12	44' 4"	35' 2"	30' 9"
600S200-54	16	40' 3"	32' 0"	27' 11"
600S200-54	24	35' 2"	27' 11"	24' 5"
600S250-54	12	46' 5"	36' 10"	32' 2"
600S250-54	16	42' 2"	33' 6"	29' 3"
600S250-54	24	36' 10"	29' 3"	25' 7"
600S162-68	12	45' 3"	35' 11"	31' 4"
600S162-68	16	41' 1"	32' 7"	28' 6"
600S162-68	24	35' 11"	28' 6"	24' 11"
600S200-68	12	47' 7"	37' 9"	33' 0"
600S200-68	16	43' 2"	34' 3"	29' 11"
600S200-68	24	37' 9"	29' 11"	26' 2"
600S250-68	12	49' 10"	39' 7"	34' 7"
600S250-68	16	45' 4"	35' 11"	31' 5"
600S250-68	24	39' 7"	31' 5"	27' 5"
600S162-97	12	50' 1"	39' 9"	34' 9"
600S162-97	16	45' 6"	36' 2"	31' 7"
600S162-97	24	39' 9"	31' 7"	27' 7"
600S200-97	12	52' 10"	41' 11"	36' 7"
600S200-97	16	48' 0"	38' 1"	33' 3"
600S200-97	24	41' 11"	33' 3"	29' 1"
600S250-97	12	55' 5"	44' 0"	38' 5"
600S250-97	16	50' 4"	40' 0"	34' 11"
600S250-97	24	44' 0"	34' 11"	30' 6"

# Exterior curtain walls

IBC 2006 (ASCE 7-05)

Wind speed to wind pressure conversion table. Units listed are pounds per square foot. (calculations based on I=1.0)

Mean roof height	Condition	90 MPH Exp. B	90 MPH Exp. C	100 MPH Exp. B	100 MPH Exp. C	110 MPH Exp. B	110 MPH Exp. C	120 MPH Exp. B	120 MPH Exp. C	130 MPH Exp. B	130 MPH Exp. C	140 MPH Exp. B	140 MPH Exp. C
15	Typical Corner	14.4	17.5	17.8	21.6	21.6	26.2	25.7	31.1	30.1	36.5	35.0	42.2
15		17.8	21.5	22.0	26.6	26.6	32.2	31.6	38.3	37.1	45.0	43.0	52.1
20	Typical Corner	14.4	18.6	17.8	23.0	21.6	27.8	25.7	33.1	30.1	38.8	35.0	45.0
20		17.8	22.9	22.0	28.3	26.6	34.2	31.6	40.7	37.1	47.8	43.0	55.4
25	Typical Corner	14.4	19.5	17.8	24.1	21.6	29.1	25.7	34.7	30.1	40.7	35.0	47.2
25		17.8	24.0	22.0	29.6	26.6	35.8	31.6	42.7	37.1	50.1	43.0	58.1
30	Typical Corner	14.4	20.3	17.8	25.0	21.6	30.3	25.7	36.0	30.1	42.3	35.0	49.0
30		17.8	24.9	22.0	30.8	26.6	37.2	31.6	44.3	37.1	52.0	43.0	60.3
40	Typical Corner	15.7	21.5	19.4	26.6	23.4	32.1	27.9	38.3	32.7	44.9	38.0	52.1
40		19.3	26.5	23.8	32.7	28.8	39.6	34.3	47.1	40.3	55.3	46.7	64.1
50	Typical Corner	16.7	22.6	20.6	27.8	25.0	33.7	29.7	40.1	34.9	47.1	40.5	54.6
50		20.6	27.8	25.4	34.3	30.7	41.5	36.6	49.4	42.9	57.9	49.8	67.2
60	Typical Corner	17.6	23.4	21.7	28.9	26.3	35.0	31.3	41.7	36.7	48.9	42.6	56.7
60		21.7	28.8	26.8	35.6	32.4	43.1	38.5	51.3	45.2	60.2	52.5	69.8

## Deflection

- L/120** Length (height) of stud, in inches, divided by 120 (short interior wall studs)
- L/240** Length (height) of stud, in inches, divided by 240 (interior wall studs, exterior siding or EIFS)
- L/360** Length (height) of stud, in inches, divided by 360 (exterior stucco)
- L/600** Length (height) of stud, in inches, divided by 600 (exterior brick)
- L/720** Length (height) of stud, in inches, divided by 720 (exterior brick)

## Allowable wall heights—curtain wall framing

Exterior curtain walls must be designed to withstand the highest winds anticipated for the particular construction location. The table on this page converts wind speeds to wind loads.

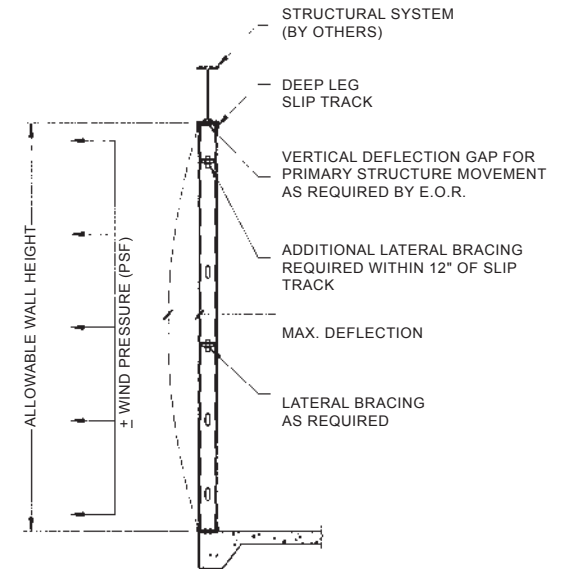
The tables on the following pages provide allowable height limitations for exterior curtain walls subjected to overhead combined axial and lateral transverse loads. Members shown vary in depth flange width and steel thickness. Select the studs that are right for your application, also taking into account the acceptable deflection level:

### Notes:

- Wind loads calculated per the ASCE 7-05 provisions allowed for within the IBC 2006 code.
- Calculations based upon an importance factor of I=1.0. Essential facilities such as hospitals, fire and police, schools will require higher design wind loads.
- Design wind pressures are based upon a 10 ft<sup>2</sup> tributary area.
- Calculations based upon a directionality factor, Kd=0.85.
- Calculations based upon roof slope <=10 degrees.
- These tables are only to provide a reference for estimating ClarkWestern members to be used to meet code requirements for non-essential commercial structures. The wind loads have been calculated using the most stringent criteria in the IBC 2006 code.

- Having the steel framing system designed by a professional engineer, in most cases, will result in use of lower wind loads than shown in these tables.
- Typical and corner zones are for zones 4 and 5 respectively per ASCE 7-05 figure 6-5A.
- Lateral loads have not been modified for strength consideration.
- Lateral loads have [or have not depending on the table] been multiplied by 0.7 for deflection determination per IBC 2006 Table 1604.3.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NASPEC A7.2.
- Limiting heights based on continuous support of each flange over the full length of the stud.
- Heights based on steel properties only [i.e. composite wall considerations not included in the deflection calculations].
- Values based on Fy=33 ksi.
- Check end reactions for web crippling.
- Adding additional horizontal bridging will not reduce the actual deflection in the wall. To reduce the deflection of a wall stud either a heavier member is required or an intermediate structural support must be provided.
- Bridging [or bracing] recommendations. Bridging of each stud flange may be accomplished by screw attaching a structurally sufficient diaphragm wall panel. Should it be determined the sheathing is not a structurally sufficient diaphragm or that an all steel solution is required or preferred, horizontal steel bridging is recommended to be installed at a spacing to not exceed 6 feet on center. The bridging recommendations listed above were prepared with the utmost diligence or consideration. The actual bridging that is ultimately provided is to be determined by the licensed engineer of record for the given project.

- For a top of wall application, which requires slip track for primary structure movement, mechanical bridging is recommended in the upper most web punchout in the stud [i.e. the punchout nearest the slip track].



### 3-5/8" Exterior curtain walls (Deflection multiplier = 1.0)

Member	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
		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
362S162-33	12	13' 5"	11' 9"	9' 11"	12' 2"	10' 8"	9' 0"	11' 4"	9' 11"	8' 4"	10' 8"	9' 4"	7' 10"	10' 0" e	8' 10"	7' 5"	9' 5" e	8' 5" e	7' 1"
362S162-33	16	12' 2"	10' 8"	9' 0"	11' 1"	9' 8"	8' 2"	10' 3" e	9' 0"	7' 7"	9' 5" e	8' 5" e	7' 1"	8' 8" e	8' 0" e	6' 9"	8' 2" e	7' 8" e	6' 6" e
362S162-33	24	10' 8"	9' 4"	7' 10"	9' 5" e	8' 5" e	7' 1"	8' 5" e	7' 10" e	6' 7" e	7' 8" e	7' 5" e	6' 3" e	7' 1" e	7' 0" e	5' 11" e	6' 8" e	6' 8" e	5' 8" e
362S200-33	12	14' 2"	12' 4"	10' 5"	12' 10"	11' 3"	9' 6"	11' 11"	10' 5"	8' 9"	11' 3" e	9' 10"	8' 3"	10' 6" e	9' 4"	7' 10"	9' 10" e	8' 11" e	7' 6"
362S200-33	16	12' 10"	11' 3"	9' 6"	11' 8"	10' 2"	8' 7"	10' 9" e	9' 6"	8' 0"	9' 10" e	8' 11" e	7' 6"	9' 1" e	8' 6" e	7' 2" e	8' 6" e	8' 1" e	6' 10" e
362S200-33	24	11' 3" e	9' 10"	8' 3"	9' 10" e	8' 11" e	7' 6"	8' 10" e	8' 3" e	7' 0" e	8' 0" e	7' 9" e	6' 7" e	7' 5" e	6' 3" e	7' 0" e	7' 0" e	7' 0" e	6' 0" e
362S162-43	12	14' 7"	12' 9"	10' 9"	13' 3"	11' 7"	9' 9"	12' 4"	10' 9"	9' 1"	11' 7"	10' 1"	8' 6"	11' 0"	9' 7"	8' 1"	10' 6"	9' 2"	7' 9"
362S162-43	16	13' 3"	11' 7"	9' 9"	12' 0"	10' 6"	8' 10"	11' 2"	9' 9"	8' 3"	10' 6"	9' 2"	7' 9"	10' 0"	8' 9"	7' 4"	9' 7"	8' 4"	7' 0"
362S162-43	24	11' 7"	10' 1"	8' 6"	10' 6"	9' 2"	7' 9"	9' 9"	9' 2"	8' 0"	9' 0"	8' 0"	6' 9"	8' 4" e	7' 7"	6' 5"	7' 10" e	7' 4" e	6' 2"
362S200-43	12	15' 5"	13' 5"	11' 4"	14' 0"	12' 3"	10' 4"	13' 0"	11' 4"	9' 7"	12' 3"	10' 8"	9' 0"	11' 7"	10' 2"	8' 7"	11' 1"	9' 8"	8' 2"
362S200-43	16	14' 0"	12' 3"	10' 4"	12' 9"	11' 1"	9' 4"	11' 10"	10' 4"	8' 8"	9' 8"	8' 2"	8' 2"	10' 7"	9' 3"	7' 9"	10' 1"	8' 10"	7' 5"
362S200-43	24	12' 3"	10' 8"	9' 0"	11' 1"	9' 8"	8' 2"	10' 4"	9' 0"	7' 7"	9' 8" e	8' 6"	7' 2"	9' 0" e	8' 1" e	6' 9"	8' 5" e	7' 8" e	6' 6"
362S250-43	12	16' 3"	14' 2"	12' 0"	14' 9"	12' 11"	10' 10"	13' 8"	12' 0"	10' 1"	12' 11"	11' 3"	9' 6"	12' 3"	10' 8"	9' 0"	11' 9"	10' 3"	8' 8"
362S250-43	16	14' 9"	12' 11"	10' 10"	13' 5"	11' 9"	9' 11"	12' 5"	10' 10"	9' 2"	11' 9"	10' 3"	8' 8"	11' 2"	9' 9"	8' 2"	10' 6" e	9' 4"	7' 10"
362S250-43	24	12' 11"	11' 3"	9' 6"	11' 9"	10' 3"	8' 8"	10' 10"	9' 6"	8' 0"	9' 11" e	8' 11"	7' 6"	9' 2" e	8' 6" e	7' 2"	8' 7" e	8' 1" e	6' 10"
362S162-54	12	15' 7"	13' 8"	11' 6"	14' 2"	12' 5"	10' 6"	13' 2"	11' 6"	9' 9"	12' 5"	10' 10"	9' 2"	11' 9"	10' 3"	8' 8"	11' 3"	9' 10"	8' 4"
362S162-54	16	14' 2"	12' 5"	10' 6"	12' 11"	11' 3"	9' 6"	12' 0"	10' 6"	8' 10"	11' 3"	9' 10"	8' 4"	10' 8"	9' 4"	7' 11"	10' 3"	8' 11"	7' 7"
362S162-54	24	12' 5"	10' 10"	9' 2"	11' 3"	9' 10"	8' 4"	10' 6"	9' 2"	7' 8"	9' 10"	8' 7"	7' 3"	9' 4"	8' 2"	6' 11"	8' 9"	7' 10"	6' 7"
362S200-54	12	16' 6"	14' 5"	12' 2"	15' 0"	13' 1"	11' 1"	13' 11"	12' 2"	10' 3"	13' 1"	11' 5"	9' 8"	12' 5"	10' 10"	9' 2"	11' 11"	10' 5"	8' 9"
362S200-54	16	15' 0"	13' 1"	11' 1"	13' 8"	11' 11"	10' 1"	12' 8"	11' 1"	9' 4"	11' 11"	10' 5"	8' 9"	11' 4"	9' 11"	8' 4"	10' 10"	9' 5"	8' 0"
362S200-54	24	13' 1"	11' 5"	9' 8"	11' 11"	10' 5"	8' 9"	11' 1"	9' 8"	8' 2"	10' 5"	9' 1"	7' 8"	9' 11"	8' 8"	7' 3"	9' 5"	8' 3"	7' 0"
362S250-54	12	17' 5"	15' 3"	12' 10"	15' 10"	13' 10"	11' 8"	14' 8"	12' 10"	10' 10"	13' 10"	12' 1"	10' 2"	13' 2"	11' 6"	9' 8"	12' 7"	11' 0"	9' 3"
362S250-54	16	15' 10"	13' 10"	11' 8"	14' 5"	12' 7"	10' 7"	13' 4"	9' 10"	8' 10"	12' 7"	11' 0"	9' 3"	11' 11"	10' 5"	8' 10"	11' 5"	10' 0"	8' 5"
362S250-54	24	13' 10"	12' 1"	10' 2"	12' 7"	11' 0"	9' 3"	11' 8"	10' 2"	8' 7"	11' 0"	9' 7"	8' 1"	10' 5"	9' 1"	7' 8"	9' 10"	8' 9"	7' 4"
362S162-68	12	16' 9"	14' 7"	12' 4"	15' 2"	13' 3"	11' 2"	14' 1"	12' 4"	10' 5"	13' 3"	11' 7"	9' 9"	12' 7"	11' 0"	9' 3"	12' 1"	10' 6"	8' 11"
362S162-68	16	15' 2"	13' 3"	11' 2"	13' 10"	12' 1"	10' 2"	12' 10"	11' 2"	9' 5"	12' 1"	10' 6"	8' 11"	11' 5"	10' 0"	8' 5"	10' 11"	9' 7"	8' 1"
362S162-68	24	13' 3"	11' 7"	9' 9"	12' 1"	10' 6"	8' 11"	11' 2"	9' 9"	8' 3"	10' 6"	9' 2"	7' 9"	10' 0"	8' 9"	7' 4"	9' 7"	8' 4"	7' 1"
362S200-68	12	17' 8"	15' 5"	13' 0"	16' 1"	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' 2"	9' 5"
362S200-68	16	16' 1"	14' 0"	11' 10"	14' 7"	12' 9"	10' 9"	13' 7"	11' 10"	10' 0"	12' 9"	11' 2"	9' 5"	12' 1"	10' 7"	8' 11"	11' 7"	10' 1"	8' 6"
362S200-68	24	14' 0"	12' 3"	10' 4"	12' 9"	11' 2"	9' 5"	11' 10"	10' 4"	8' 9"	11' 2"	9' 9"	8' 2"	10' 7"	9' 3"	7' 10"	10' 1"	8' 10"	7' 5"
362S250-68	12	18' 8"	16' 4"	13' 9"	17' 0"	14' 10"	12' 6"	15' 9"	13' 9"	11' 7"	14' 10"	12' 11"	10' 11"	14' 1"	12' 4"	10' 4"	13' 6"	11' 9"	9' 11"
362S250-68	16	17' 0"	14' 10"	12' 6"	15' 5"	13' 6"	11' 4"	14' 4"	12' 6"	10' 7"	13' 6"	11' 9"	9' 11"	12' 10"	11' 2"	9' 5"	12' 3"	10' 8"	9' 0"
362S250-68	24	14' 10"	12' 11"	10' 11"	13' 6"	11' 9"	9' 11"	12' 6"	10' 11"	9' 3"	11' 9"	10' 3"	8' 8"	11' 2"	9' 9"	8' 3"	10' 8"	9' 4"	7' 11"
362S162-97	12	18' 5"	16' 1"	13' 7"	16' 9"	14' 8"	12' 4"	15' 7"	13' 7"	11' 6"	14' 8"	12' 9"	10' 9"	13' 11"	12' 2"	10' 3"	13' 4"	11' 7"	9' 10"
362S162-97	16	16' 9"	14' 8"	12' 4"	15' 3"	13' 4"	11' 3"	14' 2"	12' 4"	10' 5"	13' 4"	11' 7"	9' 10"	12' 8"	11' 0"	9' 4"	12' 1"	10' 7"	8' 11"
362S162-97	24	14' 8"	12' 9"	10' 9"	13' 4"	11' 7"	9' 10"	12' 4"	10' 9"	9' 1"	11' 7"	10' 2"	8' 7"	11' 0"	9' 8"	8' 2"	10' 7"	9' 3"	7' 9"
362S200-97	12	19' 7"	17' 1"	14' 5"	17' 9"	15' 6"	13' 1"	16' 6"	14' 5"	12' 2"	15' 6"	13' 7"	11' 5"	14' 9"	12' 11"	10' 10"	14' 1"	12' 4"	10' 5"
362S200-97	16	17' 9"	15' 6"	13' 1"	16' 2"	14' 1"	11' 11"	15' 0"	13' 1"	11' 1"	14' 1"	12' 4"	10' 5"	13' 5"	11' 8"	9' 10"	12' 10"	11' 2"	9' 5"
362S200-97	24	15' 6"	13' 7"	11' 5"	14' 1"	12' 4"	10' 5"	13' 1"	11' 5"	9' 8"	12' 4"	10' 9"	9' 1"	11' 8"	10' 3"	8' 7"	11' 2"	9' 9"	8' 3"
362S250-97	12	20' 8"	18' 1"	15' 3"	18' 10"	16' 5"	13' 10"	17' 5"	15' 3"	12' 10"	16' 5"	14' 4"	12' 1"	15' 7"	13' 8"	11' 6"	14' 11"	13' 0"	11' 0"
362S250-97	16	18' 10"	16' 5"	13' 10"	17' 1"	14' 11"	12' 7"	15' 10"	13' 10"	11' 8"	14' 11"	13' 0"	11' 0"	14' 2"	12' 5"	10' 5"	13' 7"	11' 10"	10' 0"
362S250-97	24	16' 5"	14' 4"	12' 1"	14' 11"	13' 0"	11' 0"	13' 10"	12' 1"	10' 2"	13' 0"	11' 5"	9' 7"	12' 5"	10' 10"	9' 1"	11' 10"	10' 4"	8' 9"

\* Spans noted with an "e" require web stiffeners at end supports.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

Deflection multiplier = 1.0

See page 21 for allowable wall height table notes

Please note: 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. The tables in this section provide the traditionally accepted values where the 0.7 factor has not been applied.

# 6" Exterior curtain walls (Deflection multiplier = 1.0)

Member	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
		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
600S162-33	12	19' 10"	17' 4"	14' 8"	18' 1" e	15' 9" e	13' 4"	16' 9" e	14' 8" e	12' 4" e	15' 9" e	13' 9" e	11' 7" e	14' 9" e	13' 1" e	11' 0" e	13' 9" e	12' 6" e	10' 7" e
600S162-33	16	18' 1" e	15' 9" e	13' 4"	16' 5" e	14' 4" e	12' 1" e	15' 1" e	13' 4" e	11' 3" e	13' 9" e	12' 6" e	10' 7" e	12' 9" e	11' 11" e	10' 0" e	11' 11" e	11' 4" e	9' 7" e
600S162-33	24	15' 9" e	13' 9" e	11' 7" e	13' 9" e	12' 6" e	10' 7" e	12' 4" e	11' 7" e	9' 10" e	11' 3" e	10' 11" e	9' 3" e	10' 5" e	10' 5" e	8' 9" e	9' 9" e	9' 9" e	8' 5" e
600S200-33	12	20' 10" e	18' 2"	15' 4"	18' 11" e	16' 6" e	13' 11"	17' 6" e	15' 4" e	12' 11" e	16' 6" e	14' 5" e	12' 2" e	15' 4" e	13' 8" e	11' 7" e	14' 4" e	13' 1" e	11' 1" e
600S200-33	16	18' 11" e	16' 6" e	13' 11"	17' 2" e	15' 0" e	12' 8" e	15' 8" e	13' 11" e	11' 9" e	14' 4" e	13' 1" e	11' 1" e	13' 3" e	12' 5" e	10' 6" e	12' 5" e	11' 11" e	10' 0" e
600S200-33	24	16' 6" e	14' 5" e	12' 2" e	14' 4" e	13' 1" e	11' 1" e	12' 10" e	12' 2" e	10' 3" e	11' 8" e	11' 5" e	9' 8" e	10' 10" e	10' 10" e	9' 2" e	10' 1" e	10' 1" e	8' 9" e
600S162-43	12	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" e	14' 3"	12' 0"	15' 7" e	13' 8" e	11' 6"
600S162-43	16	19' 8"	17' 2"	14' 6"	17' 10"	15' 7"	13' 2"	16' 7" e	14' 6"	12' 3"	15' 7" e	13' 8" e	11' 6"	14' 10" e	12' 11" e	10' 11"	14' 2" e	12' 5" e	10' 5" e
600S162-43	24	17' 2"	15' 0"	12' 8"	15' 7" e	13' 8" e	11' 6"	14' 6" e	12' 8" e	10' 8" e	13' 7" e	11' 11" e	10' 0" e	12' 7" e	11' 4" e	9' 6" e	11' 9" e	10' 10" e	9' 1" e
600S200-43	12	22' 9"	19' 10"	16' 9"	20' 8"	18' 0"	15' 2"	19' 2"	16' 9"	14' 1"	18' 0" e	15' 9"	13' 3"	17' 2" e	15' 0" e	12' 7"	16' 5" e	14' 4" e	12' 1"
600S200-43	16	20' 8"	18' 0"	15' 2"	18' 9"	16' 5"	13' 10"	17' 5" e	15' 2"	12' 10"	16' 5" e	14' 4" e	12' 1"	15' 7" e	13' 7" e	11' 6" e	14' 8" e	13' 0" e	11' 0" e
600S200-43	24	18' 0" e	15' 9"	13' 3"	16' 5" e	14' 4" e	12' 1"	15' 2" e	13' 3" e	11' 2" e	13' 10" e	12' 6" e	10' 7" e	12' 10" e	11' 11" e	10' 0" e	12' 0" e	11' 4" e	9' 7" e
600S250-43	12	23' 10"	20' 9"	17' 6"	21' 7"	18' 11"	15' 11"	20' 1"	17' 6"	14' 9"	18' 11" e	16' 6"	13' 11"	17' 11" e	15' 8" e	13' 3"	17' 2" e	15' 0" e	12' 8"
600S250-43	16	21' 7"	18' 11"	15' 11"	19' 8" e	17' 2"	14' 6"	18' 3" e	15' 11" e	13' 5"	17' 2" e	15' 0" e	12' 8"	16' 1" e	14' 3" e	12' 0" e	15' 1" e	13' 7" e	11' 6" e
600S250-43	24	18' 11" e	16' 6"	13' 11"	17' 2" e	15' 0" e	12' 8"	15' 7" e	13' 11" e	11' 9" e	14' 2" e	13' 1" e	11' 1" e	13' 2" e	12' 5" e	10' 6" e	12' 4" e	11' 11" e	10' 0" e
600S162-54	12	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"
600S162-54	16	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' 2" e	13' 3"	11' 2"
600S162-54	24	18' 5"	16' 1"	13' 7"	16' 9"	14' 7"	12' 4"	15' 6"	13' 7"	11' 5"	14' 7" e	12' 9"	10' 9"	13' 11" e	12' 2" e	10' 3"	13' 3" e	11' 7" e	9' 9"
600S200-54	12	24' 5"	21' 4"	18' 0"	25' 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"
600S200-54	16	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' 8"	14' 7"	12' 4"	16' 0" e	14' 0"	11' 9"
600S200-54	24	19' 4"	16' 11"	14' 3"	17' 7"	15' 4"	13' 0"	16' 4" e	14' 3"	12' 0"	15' 4" e	13' 5" e	11' 4"	14' 7" e	12' 9" e	10' 9"	14' 0" e	12' 2" e	10' 3" e
600S250-54	12	25' 7"	22' 4"	18' 10"	23' 3"	20' 3"	17' 1"	21' 7"	18' 10"	15' 11"	20' 3"	17' 9"	14' 11"	19' 3"	16' 10"	14' 2"	18' 5"	16' 1"	13' 7"
600S250-54	16	23' 3"	20' 3"	17' 1"	21' 1"	18' 5"	15' 7"	19' 7"	17' 1"	14' 5"	18' 5"	16' 1"	13' 7"	17' 6" e	15' 4"	12' 11"	16' 9" e	14' 8"	12' 4"
600S250-54	24	20' 3"	17' 9"	14' 11"	18' 5"	16' 1"	13' 7"	17' 1" e	14' 11"	12' 7"	15' 11" e	14' 1" e	11' 10"	14' 9" e	13' 4" e	11' 3"	13' 10" e	12' 9" e	10' 9" e
600S162-68	12	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"
600S162-68	16	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' 1"	14' 11"	12' 7"	16' 4"	14' 3"	12' 0"
600S162-68	24	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"
600S200-68	12	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"
600S200-68	16	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"
600S200-68	24	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"
600S250-68	12	27' 5"	24' 0"	20' 3"	24' 11"	21' 9"	18' 4"	23' 2"	20' 3"	17' 1"	21' 9"	19' 0"	16' 1"	20' 8"	18' 1"	15' 3"	19' 9"	17' 3"	14' 7"
600S250-68	16	24' 11"	21' 9"	18' 4"	22' 8"	19' 9"	16' 8"	21' 0"	18' 4"	15' 6"	19' 9"	17' 3"	14' 7"	18' 10"	16' 5"	13' 10"	18' 0"	15' 8"	13' 3"
600S250-68	24	21' 9"	19' 0"	16' 1"	19' 9"	17' 3"	14' 7"	18' 4"	16' 1"	13' 6"	17' 3"	15' 1"	12' 9"	16' 5"	14' 4"	12' 1"	15' 8" e	13' 9"	11' 7"
600S162-97	12	27' 7"	24' 1"	20' 4"	25' 1"	21' 11"	18' 6"	23' 3"	20' 4"	17' 2"	21' 11"	19' 1"	16' 2"	20' 9"	18' 2"	15' 4"	19' 11"	17' 4"	14' 8"
600S162-97	16	25' 1"	21' 11"	18' 6"	22' 9"	19' 11"	16' 9"	21' 2"	18' 6"	15' 7"	19' 11"	17' 4"	14' 8"	18' 11"	16' 6"	13' 11"	18' 1"	15' 9"	13' 4"
600S162-97	24	21' 11"	19' 1"	16' 2"	19' 11"	17' 4"	14' 8"	18' 6"	16' 2"	13' 7"	17' 4"	15' 2"	12' 10"	16' 6"	14' 5"	12' 2"	15' 9"	13' 9"	11' 8"
600S200-97	12	29' 1"	25' 5"	21' 5"	26' 5"	23' 1"	19' 5"	24' 6"	21' 5"	18' 1"	23' 1"	20' 2"	17' 0"	21' 11"	19' 2"	16' 2"	20' 11"	18' 4"	15' 5"
600S200-97	16	26' 5"	23' 1"	19' 5"	24' 0"	20' 11"	17' 8"	22' 3"	19' 5"	16' 5"	20' 11"	18' 4"	15' 5"	19' 11"	17' 5"	14' 8"	19' 0"	16' 8"	14' 0"
600S200-97	24	23' 1"	20' 2"	17' 0"	20' 11"	18' 4"	15' 5"	19' 5"	17' 0"	14' 4"	18' 4"	16' 0"	13' 6"	17' 5"	15' 2"	12' 10"	16' 8"	14' 6"	12' 3"
600S250-97	12	30' 6"	26' 8"	22' 6"	27' 9"	24' 3"	20' 5"	25' 9"	22' 6"	18' 11"	24' 3"	21' 2"	17' 10"	23' 0"	20' 1"	16' 11"	22' 0"	19' 3"	16' 3"
600S250-97	16	27' 9"	24' 3"	20' 5"	25' 2"	22' 0"	18' 7"	23' 5"	20' 5"	17' 3"	22' 0"	19' 3"	16' 3"	20' 11"	18' 3"	15' 5"	20' 0"	17' 6"	14' 9"
600S250-97	24	24' 3"	21' 2"	17' 10"	22' 0"	19' 3"	16' 3"	20' 5"	17' 10"	15' 1"	19' 3"	16' 9"	14' 2"	18' 3"	15' 11"	13' 5"	17' 6"	15' 3"	12' 10"

\* Spans noted with an "e" require web stiffeners at end supports.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

Deflection multiplier = 1.0

See page 21 for allowable wall height table notes

Please note: 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. The tables in this section provide the traditionally accepted values where the 0.7 factor has not been applied.

# 8" Exterior curtain walls (Deflection multiplier = 1.0)

Member	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
		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
800S162-33	12	24' 7" e	21' 5" e	18' 1" e	21' 7" e	19' 6" e	16' 5" e	19' 4" e	18' 1" e	15' 3" e	17' 8" e	17' 0" e	14' 4" e	16' 4" e	16' 2" e	13' 8" e	15' 3" e	15' 3" e	13' 1" e
800S162-33	16	21' 7" e	19' 6" e	16' 5" e	18' 9" e	17' 8" e	14' 11" e	16' 9" e	16' 5" e	13' 10" e	15' 3" e	15' 3" e	13' 1" e	14' 2" e	14' 2" e	12' 5" e	13' 3" e	13' 3" e	11' 10" e
800S162-33	24	17' 8" e	17' 0" e	14' 4" e	15' 3" e	15' 3" e	13' 1" e	13' 8" e	13' 8" e	12' 1" e	12' 6" e	12' 6" e	11' 5" e	11' 7" e	11' 7" e	10' 10" e	10' 10" e	10' 10" e	10' 4" e
800S200-33	12	26' 2" e	22' 10" e	19' 3" e	23' 2" e	20' 9" e	17' 6" e	20' 9" e	19' 3" e	16' 3" e	18' 11" e	18' 2" e	15' 4" e	17' 6" e	17' 3" e	14' 6" e	16' 5" e	16' 5" e	13' 11" e
800S200-33	16	23' 2" e	20' 9" e	17' 6" e	20' 1" e	18' 10" e	15' 11" e	17' 11" e	17' 9" e	14' 9" e	16' 5" e	16' 5" e	15' 2" e	15' 2" e	15' 2" e	13' 2" e	14' 2" e	14' 2" e	12' 8" e
800S200-33	24	18' 11" e	18' 2" e	15' 4" e	16' 5" e	16' 5" e	13' 11" e	14' 8" e	14' 8" e	12' 11" e	13' 5" e	13' 5" e	12' 2" e	12' 5" e	12' 5" e	11' 6" e	11' 7" e	11' 7" e	11' 0" e
800S162-43	12	27' 0" e	23' 7" e	19' 11" e	24' 6" e	21' 5" e	18' 1" e	22' 9" e	19' 11" e	16' 9" e	21' 2" e	18' 9" e	15' 9" e	19' 7" e	17' 9" e	15' 0" e	18' 4" e	17' 0" e	14' 4" e
800S162-43	16	24' 6" e	21' 5" e	18' 1" e	22' 3" e	19' 6" e	16' 5" e	20' 1" e	18' 1" e	15' 3" e	18' 4" e	17' 0" e	14' 4" e	17' 0" e	16' 2" e	13' 7" e	15' 10" e	15' 5" e	13' 0" e
800S162-43	24	21' 2" e	18' 9" e	15' 9" e	18' 4" e	17' 0" e	14' 4" e	16' 5" e	16' 5" e	13' 4" e	15' 0" e	14' 10" e	12' 6" e	13' 10" e	13' 10" e	11' 11" e	12' 11" e	12' 11" e	11' 5" e
800S200-43	12	28' 6" e	24' 11" e	21' 0" e	25' 11" e	22' 8" e	19' 1" e	24' 1" e	21' 0" e	17' 9" e	22' 8" e	19' 9" e	16' 8" e	21' 6" e	18' 9" e	15' 10" e	20' 7" e	18' 0" e	15' 2" e
800S200-43	16	25' 11" e	22' 8" e	19' 1" e	23' 6" e	20' 7" e	17' 4" e	21' 10" e	19' 1" e	16' 1" e	20' 7" e	18' 0" e	15' 2" e	19' 1" e	17' 1" e	14' 5" e	17' 10" e	16' 4" e	13' 9" e
800S200-43	24	22' 8" e	19' 9" e	16' 8" e	20' 7" e	18' 0" e	15' 2" e	18' 5" e	16' 8" e	14' 1" e	16' 10" e	15' 8" e	13' 3" e	15' 7" e	14' 7" e	12' 7" e	14' 3" e	14' 3" e	12' 0" e
800S250-43	12	29' 9" e	26' 0" e	21' 11" e	27' 0" e	23' 7" e	19' 11" e	25' 1" e	21' 11" e	18' 6" e	23' 7" e	20' 7" e	17' 5" e	22' 3" e	19' 7" e	16' 6" e	20' 10" e	18' 9" e	15' 10" e
800S250-43	16	27' 0" e	23' 7" e	19' 11" e	24' 7" e	21' 5" e	18' 1" e	22' 9" e	19' 11" e	16' 9" e	20' 10" e	18' 9" e	15' 10" e	19' 3" e	17' 10" e	15' 0" e	18' 0" e	17' 0" e	14' 4" e
800S250-43	24	23' 7" e	20' 7" e	17' 5" e	20' 10" e	18' 9" e	15' 10" e	18' 7" e	17' 5" e	14' 8" e	17' 0" e	16' 4" e	13' 10" e	15' 9" e	15' 7" e	13' 1" e	14' 8" e	14' 8" e	12' 6" e
800S162-54	12	29' 2" e	25' 6" e	21' 6" e	26' 6" e	23' 2" e	19' 7" e	24' 8" e	21' 6" e	18' 2" e	23' 2" e	20' 3" e	17' 1" e	22' 0" e	19' 3" e	16' 3" e	21' 0" e	18' 5" e	15' 6" e
800S162-54	16	26' 6" e	23' 2" e	19' 7" e	24' 1" e	21' 1" e	17' 9" e	22' 5" e	19' 7" e	16' 6" e	21' 0" e	18' 5" e	15' 6" e	19' 5" e	17' 6" e	14' 9" e	18' 2" e	16' 9" e	14' 1" e
800S162-54	24	23' 2" e	20' 3" e	17' 1" e	21' 0" e	18' 5" e	15' 6" e	18' 9" e	17' 1" e	14' 5" e	17' 1" e	16' 1" e	13' 7" e	15' 10" e	15' 3" e	12' 11" e	14' 10" e	14' 7" e	12' 4" e
800S200-54	12	30' 8" e	26' 9" e	22' 7" e	27' 10" e	24' 4" e	20' 6" e	25' 10" e	22' 7" e	19' 0" e	24' 4" e	21' 3" e	17' 11" e	23' 1" e	20' 2" e	17' 0" e	22' 1" e	19' 4" e	16' 3" e
800S200-54	16	27' 10" e	24' 4" e	20' 6" e	25' 3" e	22' 1" e	18' 8" e	23' 6" e	20' 6" e	17' 4" e	22' 1" e	19' 4" e	16' 3" e	21' 0" e	18' 4" e	15' 5" e	20' 1" e	17' 6" e	14' 9" e
800S200-54	24	24' 4" e	21' 3" e	17' 11" e	22' 1" e	19' 4" e	16' 3" e	20' 6" e	17' 11" e	15' 1" e	19' 4" e	16' 10" e	14' 3" e	18' 4" e	16' 0" e	13' 6" e	17' 3" e	15' 4" e	12' 11" e
800S250-54	12	31' 11" e	27' 11" e	23' 7" e	29' 0" e	25' 4" e	21' 5" e	26' 11" e	23' 7" e	19' 10" e	25' 4" e	22' 2" e	18' 8" e	24' 1" e	21' 1" e	17' 9" e	23' 1" e	20' 2" e	17' 0" e
800S250-54	16	29' 0" e	25' 4" e	21' 5" e	26' 5" e	23' 1" e	19' 5" e	24' 6" e	21' 5" e	18' 1" e	23' 1" e	20' 2" e	17' 0" e	21' 11" e	19' 1" e	16' 3" e	20' 7" e	18' 3" e	15' 5" e
800S250-54	24	25' 4" e	22' 2" e	18' 8" e	23' 1" e	20' 2" e	17' 0" e	21' 3" e	18' 8" e	15' 9" e	19' 5" e	17' 7" e	14' 10" e	17' 11" e	16' 8" e	14' 1" e	16' 9" e	16' 0" e	13' 6" e
800S162-68	12	31' 5" e	27' 5" e	23' 2" e	28' 6" e	24' 11" e	21' 0" e	26' 6" e	23' 2" e	19' 6" e	24' 11" e	21' 9" e	18' 4" e	23' 8" e	20' 8" e	17' 5" e	22' 8" e	19' 9" e	16' 8" e
800S162-68	16	28' 6" e	24' 11" e	21' 0" e	25' 11" e	22' 8" e	19' 1" e	24' 1" e	21' 0" e	17' 9" e	22' 8" e	19' 9" e	16' 8" e	21' 6" e	18' 10" e	15' 10" e	20' 7" e	18' 0" e	15' 2" e
800S162-68	24	24' 11" e	21' 9" e	18' 4" e	22' 8" e	19' 9" e	16' 8" e	21' 0" e	18' 4" e	15' 6" e	19' 6" e	17' 3" e	14' 7" e	18' 1" e	16' 5" e	13' 10" e	16' 11" e	15' 8" e	13' 3" e
800S200-68	12	32' 11" e	28' 9" e	24' 3" e	29' 11" e	26' 1" e	22' 0" e	27' 9" e	24' 3" e	20' 5" e	26' 1" e	22' 10" e	19' 3" e	24' 10" e	21' 8" e	18' 3" e	23' 9" e	20' 9" e	17' 6" e
800S200-68	16	29' 11" e	26' 1" e	22' 0" e	27' 2" e	23' 9" e	20' 0" e	25' 2" e	22' 0" e	18' 7" e	23' 9" e	20' 9" e	17' 6" e	22' 6" e	19' 8" e	16' 7" e	21' 7" e	18' 10" e	15' 11" e
800S200-68	24	26' 1" e	22' 10" e	19' 3" e	23' 9" e	20' 9" e	17' 6" e	22' 0" e	19' 3" e	16' 3" e	20' 9" e	18' 1" e	15' 3" e	19' 8" e	17' 2" e	14' 6" e	18' 10" e	16' 5" e	13' 10" e
800S250-68	12	34' 4" e	30' 0" e	25' 4" e	31' 2" e	27' 3" e	23' 0" e	29' 0" e	25' 4" e	21' 4" e	27' 3" e	23' 10" e	20' 1" e	25' 11" e	22' 7" e	19' 1" e	24' 9" e	21' 8" e	18' 3" e
800S250-68	16	31' 2" e	27' 3" e	23' 0" e	28' 4" e	24' 9" e	20' 11" e	26' 4" e	23' 0" e	19' 5" e	24' 9" e	21' 8" e	18' 3" e	23' 6" e	20' 7" e	17' 4" e	22' 6" e	19' 8" e	16' 7" e
800S250-68	24	27' 3" e	23' 10" e	20' 1" e	24' 9" e	21' 8" e	18' 3" e	23' 0" e	20' 1" e	16' 11" e	21' 8" e	18' 11" e	15' 11" e	20' 7" e	17' 11" e	15' 2" e	19' 8" e	17' 2" e	14' 6" e
800S162-97	12	34' 11" e	30' 6" e	25' 8" e	31' 8" e	27' 8" e	23' 4" e	29' 5" e	25' 8" e	21' 8" e	27' 8" e	24' 2" e	20' 5" e	26' 4" e	23' 0" e	19' 5" e	25' 2" e	22' 0" e	18' 6" e
800S162-97	16	31' 8" e	27' 8" e	23' 4" e	28' 10" e	25' 2" e	21' 3" e	26' 9" e	23' 4" e	19' 8" e	25' 2" e	22' 0" e	18' 6" e	23' 11" e	20' 10" e	17' 7" e	22' 10" e	20' 0" e	16' 10" e
800S162-97	24	27' 8" e	24' 2" e	20' 5" e	25' 2" e	22' 0" e	18' 6" e	23' 4" e	20' 5" e	17' 2" e	22' 0" e	19' 2" e	16' 2" e	20' 10" e	18' 3" e	15' 5" e	20' 0" e	17' 5" e	14' 9" e
800S200-97	12	36' 7" e	32' 0" e	26' 11" e	33' 3" e	29' 0" e	24' 6" e	30' 10" e	26' 11" e	22' 9" e	29' 0" e	25' 4" e	21' 5" e	27' 7" e	24' 1" e	20' 4" e	26' 5" e	23' 1" e	19' 5" e
800S200-97	16	33' 3" e	29' 0" e	24' 6" e	30' 2" e	26' 5" e	22' 3" e	28' 0" e	24' 6" e	20' 8" e	26' 5" e	23' 1" e	19' 5" e	25' 1" e	21' 11" e	18' 6" e	24' 0" e	20' 11" e	17' 8" e
800S200-97	24	29' 0" e	25' 4" e	21' 5" e	26' 5" e	23' 1" e	19' 5" e	24' 6" e	21' 5" e	18' 1" e	23' 1" e	20' 2" e	17' 0" e	21' 11" e	19' 1" e	16' 2" e	20' 11" e	18' 4" e	15' 5" e
800S250-97	12	38' 3" e	33' 5" e	28' 2" e	34' 9" e	30' 4" e	25' 7" e	32' 3" e	28' 2" e	23' 9" e	30' 4" e	26' 6" e	22' 4" e	28' 10" e	25' 2" e	21' 3" e	27' 7" e	24' 1" e	20' 4" e
800S250-97	16	34' 9" e	30' 4" e	25' 7" e	31' 7" e	27' 7" e	23' 3" e	29' 4" e	25' 7" e	21' 7" e	27' 7" e	24' 1" e	20' 4" e	26' 2" e	22' 11" e	19' 4" e	25' 1" e	21' 11" e	18' 5" e
800S250-97	24	30' 4" e	26' 6" e	22' 4" e	27' 7" e	24' 1" e	20' 4" e	25' 7" e	22' 4" e	18' 10" e	24' 1" e	21' 0" e	17' 9" e	22' 11" e	20' 0" e	16' 10" e	21' 11" e	19' 1" e	16' 1" e

\* Spans noted with an "e" require web stiffeners at end supports.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

Deflection multiplier = 1.0

See page 21 for allowable wall height table notes

Please note: 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. The tables in this section provide the traditionally accepted values where the 0.7 factor has not been applied.

# 10" Exterior curtain walls (Deflection multiplier = 1.0)

Member	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
		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
1000S162-43	12	32' 0" e	28' 0" e	23' 7" e	29' 1" e	25' 5" e	21' 5" e	26' 2" e	23' 7" e	19' 11" e	23' 11" e	22' 3" e	18' 9" e	22' 2" e	21' 1" e	17' 10" e	20' 9" e	20' 2" e	17' 0" e
1000S162-43	16	29' 1" e	25' 5" e	21' 5" e	25' 4" e	23' 1" e	19' 6" e	22' 8" e	21' 5" e	18' 1" e	20' 9" e	20' 2" e	17' 0" e	19' 2" e	19' 2" e	16' 2" e	17' 11" e	17' 11" e	15' 6" e
1000S162-43	24	23' 11" e	22' 3" e	18' 9" e	20' 9" e	20' 2" e	17' 0" e	18' 6" e	18' 6" e	15' 10" e	16' 11" e	16' 11" e	14' 10" e	15' 8" e	15' 8" e	14' 1" e	14' 8" e	14' 8" e	13' 6" e
1000S200-43	12	33' 6" e	29' 3" e	24' 8" e	30' 5" e	26' 7" e	22' 5" e	27' 10" e	24' 8" e	20' 10" e	25' 5" e	23' 3" e	19' 7" e	23' 6" e	22' 1" e	18' 7" e	22' 0" e	21' 1" e	17' 10" e
1000S200-43	16	30' 5" e	26' 7" e	22' 5" e	26' 11" e	24' 2" e	20' 5" e	24' 1" e	22' 5" e	18' 11" e	22' 0" e	21' 1" e	17' 10" e	20' 4" e	20' 1" e	16' 11" e	19' 1" e	19' 1" e	16' 2" e
1000S200-43	24	25' 5" e	23' 3" e	19' 7" e	22' 0" e	21' 1" e	17' 10" e	19' 8" e	19' 7" e	16' 6" e	18' 0" e	18' 0" e	15' 7" e	16' 8" e	16' 8" e	14' 9" e	15' 7" e	15' 7" e	14' 2" e
1000S250-43	12	35' 6" e	31' 0" e	26' 2" e	32' 3" e	28' 2" e	23' 9" e	29' 2" e	26' 2" e	22' 0" e	26' 8" e	24' 7" e	20' 9" e	24' 8" e	23' 4" e	19' 8" e	23' 1" e	22' 4" e	18' 10" e
1000S250-43	16	32' 3" e	28' 2" e	23' 9" e	28' 3" e	25' 7" e	21' 7" e	25' 3" e	23' 9" e	20' 0" e	23' 1" e	22' 4" e	18' 10" e	21' 4" e	21' 3" e	17' 11" e	20' 0" e	20' 0" e	17' 1" e
1000S250-43	24	26' 8" e	24' 7" e	20' 9" e	23' 1" e	22' 4" e	18' 10" e	20' 8" e	20' 8" e	17' 6" e	18' 10" e	18' 10" e	16' 6" e	17' 5" e	17' 5" e	15' 8" e	16' 4" e	16' 4" e	14' 11" e
1000S162-54	12	34' 9" e	30' 5" e	25' 8" e	31' 7" e	27' 7" e	23' 3" e	29' 4" e	25' 8" e	21' 7" e	27' 6" e	24' 1" e	20' 4" e	25' 5" e	22' 11" e	19' 4" e	23' 10" e	21' 11" e	18' 6" e
1000S162-54	16	31' 7" e	27' 7" e	23' 3" e	28' 9" e	25' 1" e	21' 2" e	26' 1" e	23' 3" e	19' 8" e	23' 10" e	21' 11" e	18' 6" e	22' 1" e	20' 10" e	17' 7" e	20' 10" e	19' 11" e	16' 9" e
1000S162-54	24	27' 6" e	24' 1" e	20' 4" e	23' 10" e	21' 11" e	18' 6" e	21' 4" e	20' 4" e	17' 2" e	19' 5" e	19' 2" e	16' 2" e	18' 0" e	18' 0" e	15' 4" e	16' 10" e	16' 10" e	14' 8" e
1000S200-54	12	36' 4" e	31' 9" e	26' 9" e	33' 0" e	28' 10" e	24' 4" e	30' 7" e	26' 9" e	22' 7" e	28' 10" e	25' 2" e	21' 3" e	27' 4" e	23' 11" e	20' 2" e	25' 7" e	22' 10" e	19' 4" e
1000S200-54	16	33' 0" e	28' 10" e	24' 4" e	30' 0" e	26' 2" e	22' 1" e	27' 10" e	24' 4" e	20' 6" e	25' 7" e	22' 10" e	19' 4" e	23' 8" e	21' 9" e	18' 4" e	22' 2" e	20' 9" e	17' 6" e
1000S200-54	24	28' 10" e	25' 2" e	21' 3" e	25' 7" e	22' 10" e	19' 4" e	22' 10" e	21' 3" e	17' 11" e	20' 10" e	20' 0" e	16' 10" e	19' 4" e	19' 0" e	16' 0" e	18' 1" e	18' 1" e	15' 4" e
1000S250-54	12	38' 1" e	33' 4" e	28' 1" e	34' 8" e	30' 3" e	25' 6" e	32' 2" e	28' 1" e	23' 8" e	30' 3" e	26' 5" e	22' 4" e	28' 9" e	25' 1" e	21' 2" e	27' 5" e	24' 0" e	20' 3" e
1000S250-54	16	34' 8" e	30' 3" e	25' 6" e	31' 6" e	27' 6" e	23' 2" e	29' 3" e	25' 6" e	21' 6" e	27' 5" e	24' 0" e	20' 3" e	25' 4" e	22' 10" e	19' 3" e	23' 9" e	21' 10" e	18' 5" e
1000S250-54	24	30' 3" e	26' 5" e	22' 4" e	27' 5" e	24' 0" e	20' 3" e	24' 6" e	22' 4" e	18' 10" e	22' 4" e	21' 0" e	17' 8" e	20' 8" e	19' 11" e	16' 10" e	19' 4" e	19' 1" e	16' 1" e
1000S162-68	12	37' 8" e	32' 11" e	27' 9" e	34' 3" e	29' 11" e	25' 3" e	31' 10" e	27' 9" e	23' 5" e	29' 11" e	26' 2" e	22' 1" e	28' 5" e	24' 10" e	20' 11" e	27' 2" e	23' 9" e	20' 0" e
1000S162-68	16	34' 3" e	29' 11" e	25' 3" e	31' 1" e	27' 2" e	22' 11" e	28' 11" e	25' 3" e	21' 3" e	27' 2" e	23' 9" e	20' 0" e	25' 4" e	22' 7" e	19' 0" e	23' 9" e	21' 7" e	18' 2" e
1000S162-68	24	29' 11" e	26' 2" e	22' 1" e	27' 2" e	23' 9" e	20' 0" e	24' 6" e	22' 1" e	18' 7" e	22' 4" e	20' 9" e	17' 6" e	20' 8" e	19' 8" e	16' 7" e	19' 4" e	18' 10" e	15' 11" e
1000S200-68	12	39' 4" e	34' 4" e	29' 0" e	35' 9" e	31' 3" e	26' 4" e	33' 2" e	29' 0" e	24' 5" e	31' 3" e	27' 3" e	23' 0" e	29' 8" e	25' 11" e	21' 10" e	28' 4" e	24' 9" e	20' 11" e
1000S200-68	16	35' 9" e	31' 3" e	26' 4" e	32' 6" e	28' 4" e	23' 11" e	30' 2" e	26' 4" e	22' 2" e	28' 4" e	24' 9" e	20' 11" e	26' 11" e	23' 6" e	19' 10" e	25' 5" e	22' 6" e	19' 0" e
1000S200-68	24	31' 3" e	27' 3" e	23' 0" e	28' 4" e	24' 9" e	20' 11" e	26' 2" e	23' 0" e	19' 5" e	23' 11" e	21' 8" e	18' 3" e	22' 2" e	20' 7" e	17' 4" e	20' 9" e	19' 8" e	16' 7" e
1000S250-68	12	41' 0" e	35' 10" e	30' 2" e	37' 3" e	32' 6" e	27' 5" e	34' 7" e	30' 2" e	25' 6" e	32' 6" e	28' 5" e	24' 0" e	30' 11" e	27' 0" e	22' 9" e	29' 7" e	25' 10" e	21' 9" e
1000S250-68	16	37' 3" e	32' 6" e	27' 5" e	33' 10" e	29' 7" e	24' 11" e	31' 5" e	27' 5" e	23' 2" e	29' 7" e	25' 10" e	21' 9" e	28' 1" e	24' 6" e	20' 8" e	26' 10" e	23' 5" e	19' 9" e
1000S250-68	24	32' 6" e	28' 5" e	24' 0" e	29' 7" e	25' 10" e	21' 9" e	27' 5" e	24' 0" e	20' 3" e	25' 10" e	22' 7" e	19' 0" e	24' 6" e	21' 5" e	18' 1" e	23' 5" e	20' 6" e	17' 3" e
1000S162-97	12	42' 0" e	36' 8" e	30' 11" e	38' 2" e	33' 4" e	28' 1" e	35' 5" e	30' 11" e	26' 1" e	33' 4" e	29' 2" e	24' 7" e	31' 8" e	27' 8" e	23' 4" e	30' 4" e	26' 6" e	22' 4" e
1000S162-97	16	38' 2" e	33' 4" e	28' 1" e	34' 8" e	30' 4" e	25' 7" e	32' 2" e	28' 1" e	23' 9" e	30' 4" e	26' 6" e	22' 4" e	28' 9" e	25' 2" e	21' 2" e	27' 6" e	24' 1" e	20' 3" e
1000S162-97	24	33' 4" e	29' 2" e	24' 7" e	30' 4" e	26' 6" e	22' 4" e	28' 1" e	24' 7" e	20' 9" e	26' 6" e	23' 1" e	19' 6" e	25' 2" e	22' 0" e	18' 6" e	23' 8" e	21' 0" e	17' 9" e
1000S200-97	12	43' 11" e	38' 4" e	32' 4" e	39' 10" e	34' 10" e	29' 5" e	37' 0" e	32' 4" e	27' 3" e	34' 10" e	30' 5" e	25' 8" e	33' 1" e	28' 11" e	24' 5" e	31' 8" e	27' 8" e	23' 4" e
1000S200-97	16	39' 10" e	34' 10" e	29' 5" e	36' 3" e	31' 8" e	26' 8" e	33' 8" e	29' 5" e	24' 9" e	31' 8" e	27' 8" e	23' 4" e	30' 1" e	26' 3" e	22' 2" e	28' 9" e	25' 1" e	21' 2" e
1000S200-97	24	34' 10" e	30' 5" e	25' 8" e	31' 8" e	27' 8" e	23' 4" e	29' 5" e	25' 8" e	21' 8" e	27' 8" e	24' 2" e	20' 4" e	26' 3" e	22' 11" e	19' 4" e	25' 1" e	21' 11" e	18' 6" e
1000S250-97	12	45' 8" e	39' 11" e	33' 8" e	41' 6" e	36' 3" e	30' 7" e	38' 6" e	33' 8" e	28' 5" e	36' 3" e	31' 8" e	26' 9" e	34' 5" e	30' 1" e	25' 5" e	32' 11" e	28' 9" e	24' 3" e
1000S250-97	16	41' 6" e	36' 3" e	30' 7" e	37' 9" e	32' 11" e	27' 9" e	35' 0" e	30' 7" e	25' 10" e	32' 11" e	28' 9" e	24' 3" e	31' 4" e	27' 4" e	23' 1" e	29' 11" e	26' 2" e	22' 1" e
1000S250-97	24	36' 3" e	31' 8" e	26' 9" e	32' 11" e	28' 9" e	24' 3" e	30' 7" e	26' 9" e	22' 6" e	28' 9" e	25' 2" e	21' 2" e	27' 4" e	23' 11" e	20' 2" e	26' 2" e	22' 10" e	19' 3" e

\* Spans noted with an "e" require web stiffeners at end supports.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

**Deflection multiplier = 1.0**

See page 21 for allowable wall height table notes

Please note: 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. The tables in this section provide the traditionally accepted values where the 0.7 factor has not been applied.

# 12" Exterior curtain walls (Deflection multiplier = 1.0)

Member	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
		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
1200S162-54	12	40' 1" e	35' 0" e	29' 6" e	36' 5" e	31' 10" e	26' 10" e	33' 4" e	29' 6" e	24' 11" e	30' 5" e	27' 10" e	23' 5" e	28' 2" e	26' 5" e	22' 3" e	26' 4" e	25' 3" e	21' 4" e
1200S162-54	16	36' 5" e	31' 10" e	26' 10" e	32' 3" e	28' 11" e	24' 5" e	28' 10" e	26' 10" e	22' 8" e	26' 4" e	25' 3" e	21' 4" e	24' 5" e	24' 0" e	20' 3" e	22' 10" e	22' 10" e	19' 4" e
1200S162-54	24	30' 5" e	27' 10" e	23' 5" e	26' 4" e	25' 3" e	21' 4" e	23' 7" e	23' 5" e	19' 9" e	21' 6" e	21' 6" e	18' 7" e	19' 11" e	17' 8" e	18' 8" e	18' 8" e	18' 8" e	16' 11" e
1200S200-54	12	41' 9" e	36' 6" e	30' 9" e	37' 11" e	33' 2" e	28' 0" e	35' 3" e	30' 9" e	26' 0" e	32' 8" e	29' 0" e	24' 5" e	30' 3" e	27' 6" e	23' 2" e	28' 3" e	26' 4" e	22' 2" e
1200S200-54	16	37' 11" e	33' 2" e	28' 0" e	34' 6" e	30' 1" e	25' 5" e	31' 0" e	28' 0" e	23' 7" e	28' 3" e	26' 4" e	22' 2" e	26' 2" e	25' 0" e	21' 1" e	24' 6" e	23' 11" e	20' 2" e
1200S200-54	24	32' 8" e	29' 0" e	24' 5" e	28' 3" e	26' 4" e	22' 2" e	25' 3" e	24' 5" e	20' 7" e	23' 0" e	21' 4" e	19' 5" e	21' 4" e	21' 4" e	18' 5" e	20' 0" e	20' 0" e	17' 7" e
1200S250-54	12	43' 6" e	38' 0" e	32' 1" e	39' 6" e	34' 6" e	29' 1" e	36' 2" e	32' 1" e	27' 0" e	33' 0" e	30' 2" e	25' 5" e	30' 7" e	28' 8" e	24' 2" e	28' 7" e	27' 5" e	23' 1" e
1200S250-54	16	39' 6" e	34' 6" e	29' 1" e	35' 0" e	31' 4" e	26' 5" e	31' 4" e	29' 1" e	24' 7" e	28' 7" e	27' 5" e	23' 1" e	26' 6" e	26' 0" e	21' 11" e	24' 9" e	24' 9" e	21' 0" e
1200S250-54	24	33' 0" e	30' 2" e	25' 5" e	28' 7" e	27' 5" e	23' 1" e	25' 7" e	25' 5" e	21' 5" e	23' 4" e	23' 4" e	20' 2" e	21' 7" e	21' 7" e	19' 2" e	20' 3" e	20' 3" e	18' 4" e
1200S162-68	12	43' 7" e	38' 1" e	32' 1" e	39' 7" e	34' 7" e	29' 2" e	36' 9" e	32' 1" e	27' 1" e	34' 7" e	30' 3" e	25' 6" e	32' 7" e	28' 9" e	24' 3" e	30' 5" e	27' 6" e	23' 2" e
1200S162-68	16	39' 7" e	34' 7" e	29' 2" e	36' 0" e	31' 5" e	26' 6" e	33' 4" e	29' 2" e	24' 7" e	30' 5" e	27' 6" e	23' 2" e	28' 2" e	26' 1" e	22' 0" e	26' 5" e	24' 11" e	21' 1" e
1200S162-68	24	34' 7" e	30' 3" e	25' 6" e	30' 5" e	27' 6" e	23' 2" e	27' 3" e	25' 6" e	21' 6" e	24' 10" e	24' 0" e	20' 3" e	23' 0" e	22' 9" e	19' 3" e	21' 6" e	21' 6" e	18' 5" e
1200S200-68	12	45' 4" e	39' 8" e	33' 5" e	41' 3" e	36' 0" e	30' 5" e	38' 3" e	33' 5" e	28' 2" e	36' 0" e	31' 6" e	26' 6" e	34' 3" e	29' 11" e	25' 2" e	32' 7" e	28' 7" e	24' 1" e
1200S200-68	16	41' 3" e	36' 0" e	30' 5" e	37' 5" e	32' 9" e	27' 7" e	34' 9" e	30' 5" e	25' 7" e	32' 7" e	28' 7" e	24' 1" e	30' 2" e	27' 2" e	22' 11" e	28' 2" e	26' 0" e	21' 11" e
1200S200-68	24	36' 0" e	31' 6" e	26' 6" e	32' 7" e	28' 7" e	24' 1" e	29' 1" e	26' 6" e	22' 5" e	26' 7" e	25' 0" e	21' 1" e	24' 7" e	23' 9" e	20' 0" e	23' 0" e	22' 8" e	19' 2" e
1200S250-68	12	47' 2" e	41' 2" e	34' 9" e	42' 10" e	37' 5" e	31' 7" e	39' 9" e	34' 9" e	29' 4" e	37' 5" e	32' 8" e	27' 7" e	35' 6" e	31' 1" e	26' 2" e	33' 11" e	29' 8" e	25' 1" e
1200S250-68	16	42' 10" e	37' 5" e	31' 7" e	38' 11" e	34' 0" e	28' 8" e	36' 1" e	31' 7" e	26' 7" e	33' 11" e	29' 8" e	25' 1" e	31' 5" e	28' 2" e	23' 9" e	29' 5" e	27' 0" e	22' 9" e
1200S250-68	24	37' 5" e	32' 8" e	27' 7" e	33' 11" e	29' 8" e	25' 1" e	30' 4" e	27' 7" e	23' 3" e	27' 8" e	25' 11" e	21' 11" e	25' 8" e	24' 8" e	20' 9" e	24' 0" e	23' 7" e	19' 11" e
1200S162-97	12	49' 0" e	42' 10" e	36' 1" e	44' 7" e	38' 11" e	32' 10" e	41' 4" e	36' 1" e	30' 6" e	38' 11" e	34' 0" e	28' 8" e	37' 0" e	32' 3" e	27' 3" e	35' 4" e	30' 11" e	26' 1" e
1200S162-97	16	44' 7" e	38' 11" e	32' 10" e	40' 6" e	35' 4" e	29' 10" e	37' 7" e	32' 10" e	27' 8" e	35' 4" e	30' 11" e	26' 1" e	33' 7" e	29' 4" e	24' 9" e	32' 1" e	28' 1" e	23' 8" e
1200S162-97	24	38' 11" e	34' 0" e	28' 8" e	35' 4" e	30' 11" e	26' 1" e	32' 10" e	28' 8" e	24' 2" e	30' 10" e	27' 0" e	22' 9" e	28' 6" e	25' 8" e	21' 7" e	26' 8" e	24' 6" e	20' 8" e
1200S200-97	12	51' 0" e	44' 7" e	37' 7" e	46' 4" e	40' 6" e	34' 2" e	43' 1" e	37' 7" e	31' 9" e	40' 6" e	35' 5" e	29' 10" e	38' 6" e	33' 7" e	28' 4" e	36' 10" e	32' 2" e	27' 1" e
1200S200-97	16	46' 4" e	40' 6" e	34' 2" e	42' 2" e	36' 10" e	31' 0" e	39' 1" e	34' 2" e	28' 10" e	36' 10" e	32' 2" e	27' 1" e	35' 0" e	30' 6" e	25' 9" e	33' 5" e	29' 3" e	24' 8" e
1200S200-97	24	40' 6" e	35' 5" e	29' 10" e	36' 10" e	32' 2" e	27' 1" e	34' 2" e	29' 10" e	25' 2" e	32' 2" e	28' 1" e	23' 8" e	30' 4" e	26' 8" e	22' 6" e	28' 5" e	25' 6" e	21' 6" e
1200S250-97	12	53' 0" e	46' 3" e	39' 0" e	48' 2" e	42' 1" e	35' 6" e	44' 8" e	39' 0" e	32' 11" e	42' 1" e	36' 9" e	31' 0" e	39' 11" e	34' 11" e	29' 5" e	38' 2" e	33' 4" e	28' 2" e
1200S250-97	16	48' 2" e	42' 1" e	35' 6" e	43' 9" e	38' 2" e	32' 3" e	40' 7" e	35' 6" e	29' 11" e	38' 2" e	33' 4" e	28' 2" e	36' 3" e	31' 8" e	26' 9" e	34' 8" e	30' 4" e	25' 7" e
1200S250-97	24	42' 1" e	36' 9" e	31' 0" e	38' 2" e	33' 4" e	28' 2" e	35' 6" e	31' 0" e	26' 2" e	33' 4" e	29' 2" e	24' 7" e	31' 8" e	27' 8" e	23' 4" e	30' 1" e	26' 6" e	22' 4" e

\* Spans noted with an "e" require web stiffeners at end supports.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

**Deflection multiplier = 1.0**

See page 21 for allowable wall height table notes

Please note: 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. The tables in this section provide the traditionally accepted values where the 0.7 factor has not been applied.

### 3-5/8" Exterior curtain walls (Deflection multiplier = 0.7)

Member	Fy (ksi)	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
			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
362S162-33	33	12	15' 1"	13' 2"	11' 1"	13' 3"	12' 0"	10' 1"	11' 11"	11' 1"	9' 5"	10' 10"	10' 6"	8' 10"	10' 0" e	9' 11" e	8' 5"	9' 5" e	9' 5" e	8' 0"
362S162-33	33	16	13' 3"	12' 0"	10' 1"	11' 6"	10' 11"	9' 2"	10' 3" e	10' 1" e	8' 6"	9' 5" e	8' 0"	8' 8" e	8' 8" e	7' 7" e	8' 2" e	8' 2" e	8' 2" e	7' 3" e
362S162-33	33	24	10' 10"	10' 6"	8' 10"	9' 5" e	9' 5" e	8' 0"	8' 5" e	8' 5" e	7' 5" e	7' 8" e	7' 8" e	7' 0" e	7' 1" e	7' 1" e	6' 8" e	6' 8" e	6' 8" e	6' 4" e
362S200-33	33	12	15' 11"	13' 11"	11' 9"	13' 11"	12' 8"	10' 8"	12' 5"	11' 9"	9' 11"	11' 4" e	11' 1" e	9' 4"	10' 6" e	10' 6" e	8' 10"	9' 10" e	9' 10" e	8' 6" e
362S200-33	33	16	13' 11"	12' 8"	10' 8"	12' 1"	11' 6"	9' 8"	10' 8" e	10' 8" e	9' 0"	9' 10" e	9' 10" e	8' 6" e	9' 1" e	8' 0" e	8' 6" e	8' 6" e	8' 6" e	7' 8" e
362S200-33	33	24	11' 4" e	11' 1" e	9' 4"	9' 10" e	9' 10" e	8' 6" e	8' 10" e	8' 10" e	7' 10" e	8' 0" e	8' 0" e	7' 5" e	7' 5" e	7' 5" e	7' 0" e	7' 0" e	7' 0" e	6' 9" e
362S162-43	33	12	16' 5"	14' 4"	12' 1"	14' 11"	13' 0"	11' 0"	13' 10"	12' 1"	10' 2"	12' 9"	11' 5"	9' 7"	11' 10"	10' 10"	9' 1"	11' 1"	10' 4"	8' 9"
362S162-43	33	16	14' 11"	13' 0"	11' 0"	13' 7"	11' 10"	10' 0"	12' 1"	11' 0"	9' 3"	11' 1"	10' 4"	8' 9"	10' 3"	9' 10"	8' 3"	9' 7"	9' 5"	7' 11"
362S162-43	33	24	12' 9"	11' 5"	9' 7"	11' 1"	10' 4"	8' 9"	9' 11"	9' 7"	8' 1"	9' 0"	9' 0"	7' 7"	8' 4" e	8' 4" e	7' 3"	7' 10" e	7' 10" e	6' 11" e
362S200-43	33	12	17' 4"	15' 2"	12' 9"	15' 9"	13' 9"	11' 7"	14' 8"	12' 9"	10' 9"	13' 8"	12' 0"	10' 2"	12' 8"	11' 5"	9' 8"	11' 10"	10' 11"	9' 3"
362S200-43	33	16	15' 9"	13' 9"	11' 7"	14' 4"	12' 6"	10' 7"	13' 0"	11' 7"	9' 10"	11' 10"	10' 11"	9' 3"	11' 0"	10' 3"	8' 9"	10' 3"	9' 11"	8' 4"
362S200-43	33	24	13' 8"	12' 0"	10' 2"	11' 10"	10' 11"	9' 3"	10' 7"	10' 2"	8' 7"	9' 8" e	9' 7" e	8' 1"	9' 0" e	9' 0" e	7' 8"	8' 5" e	8' 5" e	7' 4" e
362S250-43	33	12	18' 4"	16' 0"	13' 6"	16' 7"	14' 6"	12' 3"	15' 5"	13' 6"	11' 4"	14' 1"	12' 8"	10' 8"	13' 0"	12' 1"	10' 2"	12' 2"	11' 6"	9' 9"
362S250-43	33	16	16' 7"	14' 6"	12' 3"	14' 11"	13' 2"	11' 2"	13' 4"	12' 3"	10' 4"	12' 2"	11' 6"	9' 9"	11' 3"	10' 11"	9' 3"	10' 6" e	10' 6" e	8' 10"
362S250-43	33	24	14' 1"	12' 8"	10' 8"	12' 2"	11' 6"	9' 9"	10' 11"	10' 8"	9' 0"	9' 11" e	9' 11" e	8' 6"	9' 2" e	9' 2" e	8' 1" e	8' 7" e	8' 7" e	7' 9" e
362S162-54	33	12	17' 7"	15' 4"	13' 0"	16' 0"	14' 0"	11' 9"	14' 10"	13' 0"	10' 11"	14' 0"	12' 2"	10' 3"	13' 3"	11' 7"	9' 9"	12' 5"	11' 1"	9' 4"
362S162-54	33	16	16' 0"	14' 0"	11' 9"	14' 6"	12' 8"	10' 8"	13' 6"	11' 9"	9' 11"	12' 5"	11' 1"	9' 4"	11' 6"	10' 6"	8' 11"	10' 9"	10' 1"	8' 6"
362S162-54	33	24	14' 0"	12' 2"	10' 3"	12' 5"	11' 1"	9' 4"	11' 1"	10' 3"	8' 8"	10' 1"	9' 8"	8' 2"	9' 4"	9' 2"	7' 9"	8' 9"	8' 9"	7' 5"
362S200-54	33	12	18' 7"	16' 3"	13' 8"	16' 11"	14' 9"	12' 5"	15' 8"	13' 8"	11' 7"	14' 9"	12' 11"	10' 10"	14' 0"	12' 3"	10' 4"	13' 5"	11' 9"	9' 11"
362S200-54	33	16	16' 11"	14' 9"	12' 5"	15' 4"	13' 5"	11' 4"	14' 3"	12' 5"	10' 6"	13' 5"	11' 9"	9' 11"	12' 6"	11' 2"	9' 5"	11' 8"	10' 8"	9' 0"
362S200-54	33	24	14' 9"	12' 11"	10' 10"	13' 5"	11' 9"	9' 11"	12' 1"	10' 10"	9' 2"	11' 0"	10' 3"	8' 8"	10' 2"	9' 9"	8' 2"	9' 7"	9' 4"	7' 10"
362S250-54	33	12	19' 7"	17' 2"	14' 5"	17' 10"	15' 7"	13' 2"	16' 7"	14' 5"	12' 2"	15' 7"	13' 7"	11' 6"	14' 10"	12' 11"	10' 11"	13' 10"	12' 4"	10' 5"
362S250-54	33	16	17' 10"	15' 7"	13' 2"	16' 2"	14' 2"	11' 11"	15' 0"	13' 2"	11' 1"	13' 10"	12' 4"	10' 5"	12' 10"	11' 9"	9' 11"	12' 0"	11' 3"	9' 6"
362S250-54	33	24	15' 7"	13' 7"	11' 6"	13' 10"	12' 4"	10' 5"	12' 5"	11' 6"	9' 8"	11' 4"	10' 10"	9' 1"	10' 6"	10' 3"	8' 8"	9' 10"	9' 10"	8' 3"
362S162-68	33	12	18' 10"	16' 5"	13' 10"	17' 1"	14' 11"	12' 7"	15' 11"	13' 10"	11' 8"	14' 11"	13' 1"	11' 0"	14' 2"	12' 5"	10' 5"	13' 7"	11' 10"	10' 0"
362S162-68	33	16	17' 1"	14' 11"	12' 7"	15' 6"	13' 7"	11' 5"	14' 5"	12' 7"	10' 8"	13' 7"	11' 10"	10' 0"	12' 9"	11' 3"	9' 6"	11' 11"	10' 9"	9' 1"
362S162-68	33	24	14' 11"	13' 1"	11' 0"	13' 7"	11' 10"	10' 0"	12' 4"	11' 0"	9' 3"	11' 3"	10' 4"	8' 9"	10' 5"	9' 10"	8' 4"	9' 9"	9' 5"	7' 11"
362S200-68	33	12	19' 11"	17' 5"	14' 8"	18' 1"	15' 10"	13' 4"	16' 10"	14' 8"	12' 5"	15' 10"	11' 8"	11' 8"	15' 0"	13' 1"	11' 1"	14' 4"	12' 7"	10' 7"
362S200-68	33	16	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"
362S200-68	33	24	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' 3"	9' 11"	8' 5"
362S250-68	33	12	21' 0"	18' 4"	15' 6"	19' 1"	16' 8"	14' 1"	17' 9"	15' 6"	13' 1"	16' 8"	14' 7"	12' 4"	15' 10"	13' 10"	11' 8"	15' 2"	13' 3"	11' 2"
362S250-68	33	16	19' 1"	16' 8"	14' 1"	17' 4"	15' 2"	12' 10"	16' 1"	14' 1"	11' 11"	15' 2"	13' 3"	11' 2"	14' 5"	12' 7"	10' 7"	13' 9"	12' 0"	10' 2"
362S250-68	33	24	16' 8"	14' 7"	12' 4"	15' 2"	13' 3"	11' 2"	14' 1"	12' 4"	10' 4"	13' 3"	11' 7"	9' 9"	12' 7"	11' 0"	9' 3"	11' 10"	10' 6"	8' 10"
362S162-97	33	12	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"
362S162-97	33	16	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"
362S162-97	33	24	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' 11"	10' 5"	8' 9"
362S200-97	33	12	22' 0"	19' 3"	16' 3"	20' 0"	17' 6"	14' 9"	18' 7"	16' 3"	13' 8"	17' 6"	15' 3"	12' 11"	16' 7"	14' 6"	12' 3"	15' 11"	13' 10"	11' 8"
362S200-97	33	16	20' 0"	17' 6"	14' 9"	18' 2"	15' 11"	13' 5"	16' 11"	14' 9"	12' 5"	15' 11"	13' 10"	11' 8"	15' 1"	13' 2"	11' 1"	14' 5"	12' 7"	10' 8"
362S200-97	33	24	17' 6"	15' 3"	12' 11"	15' 11"	13' 10"	11' 8"	14' 9"	12' 11"	10' 10"	13' 10"	12' 1"	10' 3"	13' 2"	11' 6"	9' 9"	12' 7"	11' 0"	9' 3"
362S250-97	33	12	23' 4"	20' 4"	17' 2"	21' 2"	18' 6"	15' 7"	19' 8"	17' 2"	14' 6"	18' 6"	16' 2"	13' 8"	17' 7"	15' 4"	12' 11"	16' 10"	14' 8"	12' 5"
362S250-97	33	16	21' 2"	18' 6"	15' 7"	19' 3"	16' 10"	14' 2"	17' 10"	15' 7"	13' 2"	16' 10"	14' 8"	12' 5"	16' 0"	13' 11"	11' 9"	15' 3"	13' 4"	11' 3"
362S250-97	33	24	18' 6"	16' 2"	13' 8"	16' 10"	14' 8"	12' 5"	15' 7"	13' 8"	11' 6"	14' 8"	12' 10"	10' 10"	13' 11"	12' 2"	10' 3"	13' 4"	11' 8"	9' 10"

\* Spans noted with an "e" require web stiffeners at end supports.

**CAUTION:** 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. These tables are only for wall constructions where the 0.7 factor has been applied.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

Deflection multiplier = 0.7

See page 21 for allowable wall height table notes

# 6" Exterior curtain walls (Deflection multiplier = 0.7)

Member	Fy (ksi)	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
			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
600S162-33	33	12	22' 4" e	19' 6"	16' 6"	19' 6" e	17' 9" e	15' 0"	17' 5" e	16' 6" e	13' 11" e	15' 11" e	15' 6" e	13' 1" e	14' 9" e	14' 9" e	12' 5" e	13' 9" e	13' 9" e	11' 11" e
600S162-33	33	16	19' 6" e	17' 9" e	15' 0"	16' 11" e	16' 2" e	13' 7" e	15' 1" e	15' 0" e	12' 8" e	13' 9" e	13' 9" e	11' 11" e	12' 9" e	12' 9" e	11' 3" e	11' 11" e	11' 11" e	10' 10" e
600S162-33	33	24	15' 11" e	15' 6" e	13' 1" e	13' 9" e	13' 9" e	11' 11" e	12' 4" e	12' 4" e	11' 0" e	11' 3" e	10' 5" e	10' 5" e	10' 5" e	9' 10" e	9' 9" e	9' 9" e	9' 5" e	9' 5" e
600S200-33	33	12	23' 4" e	20' 6" e	17' 3"	20' 3" e	18' 7" e	15' 8" e	18' 1" e	17' 3" e	14' 7" e	16' 6" e	16' 3" e	13' 8" e	15' 4" e	15' 4" e	13' 0" e	14' 4" e	14' 4" e	12' 5" e
600S200-33	33	16	20' 3" e	18' 7" e	15' 8" e	17' 6" e	16' 11" e	14' 3" e	15' 8" e	15' 8" e	13' 3" e	14' 4" e	14' 4" e	12' 5" e	13' 3" e	13' 3" e	11' 10" e	12' 5" e	12' 5" e	11' 4" e
600S200-33	33	24	16' 6" e	16' 3" e	13' 8" e	14' 4" e	14' 4" e	12' 5" e	12' 10" e	12' 10" e	11' 7" e	11' 8" e	11' 8" e	10' 10" e	10' 10" e	10' 10" e	10' 4" e	10' 1" e	10' 1" e	9' 11" e
600S162-43	33	12	24' 4"	21' 3"	17' 11"	22' 2"	19' 4"	16' 4"	20' 7"	17' 11"	15' 2"	19' 3" e	16' 11"	14' 3"	17' 10" e	16' 1" e	13' 6"	16' 8" e	15' 4" e	12' 11"
600S162-43	33	16	22' 2"	19' 4"	16' 4"	20' 1" e	17' 7"	14' 10"	18' 3" e	16' 4" e	13' 9"	16' 8" e	15' 4" e	12' 11"	15' 5" e	14' 7" e	12' 4" e	14' 5" e	13' 11" e	11' 9" e
600S162-43	33	24	19' 3" e	16' 11"	14' 3"	16' 8" e	15' 4" e	12' 11"	14' 11" e	14' 3" e	12' 0" e	13' 7" e	13' 5" e	11' 4" e	12' 7" e	12' 7" e	10' 9" e	11' 9" e	11' 9" e	10' 3" e
600S200-43	33	12	25' 7"	22' 4"	18' 10"	23' 3"	20' 4"	17' 2"	21' 5" e	18' 10"	15' 11"	19' 7" e	17' 9" e	15' 0"	18' 1" e	16' 10" e	14' 3"	16' 11" e	16' 1" e	13' 7" e
600S200-43	33	16	23' 3"	20' 4"	17' 2"	20' 9" e	18' 5"	15' 7"	18' 7" e	17' 2" e	14' 5"	16' 11" e	16' 1" e	13' 7" e	15' 8" e	15' 4" e	12' 11" e	14' 8" e	14' 8" e	12' 4" e
600S200-43	33	24	19' 7" e	17' 9" e	15' 0"	16' 11" e	16' 1" e	13' 7" e	15' 2" e	15' 0" e	12' 7" e	13' 10" e	13' 10" e	11' 11" e	12' 10" e	12' 10" e	11' 3" e	12' 0" e	12' 0" e	10' 9" e
600S250-43	33	12	26' 10"	23' 5"	19' 9"	24' 4"	21' 3"	17' 11"	22' 0" e	19' 9"	16' 8"	20' 1" e	18' 7" e	15' 8"	18' 7" e	17' 8" e	14' 11" e	17' 5" e	16' 11" e	14' 3" e
600S250-43	33	16	24' 4"	21' 3"	17' 11"	21' 4" e	19' 4"	16' 4"	19' 1" e	17' 11" e	15' 2"	17' 5" e	16' 11" e	14' 3" e	16' 1" e	16' 0" e	13' 6" e	15' 1" e	15' 1" e	12' 11" e
600S250-43	33	24	20' 1" e	18' 7" e	15' 8"	17' 5" e	16' 11" e	14' 3" e	15' 7" e	15' 7" e	13' 3" e	14' 2" e	14' 2" e	12' 5" e	13' 2" e	13' 2" e	11' 10" e	12' 4" e	12' 4" e	11' 4" e
600S162-54	33	12	26' 2"	22' 10"	19' 3"	23' 9"	20' 9"	17' 6"	22' 1" e	19' 3"	16' 3"	20' 9"	18' 1" e	15' 3"	19' 8"	17' 3"	14' 6"	18' 9"	16' 6"	13' 11"
600S162-54	33	16	23' 9"	20' 9"	17' 6"	21' 7"	18' 10"	15' 11"	20' 0"	17' 6"	14' 9"	18' 9"	16' 6"	13' 11"	17' 5" e	15' 8"	13' 2"	16' 3" e	15' 0" e	12' 7"
600S162-54	33	24	20' 9"	18' 1"	15' 3"	18' 9"	16' 6"	13' 11"	16' 10" e	15' 3"	12' 11"	15' 4" e	14' 5" e	12' 2"	14' 2" e	13' 8" e	11' 6" e	13' 3" e	13' 1" e	11' 0" e
600S200-54	33	12	27' 6"	24' 0"	20' 3"	24' 11"	21' 10"	18' 5"	23' 2"	20' 3"	17' 1"	21' 10"	19' 1"	16' 1"	20' 9"	18' 1"	15' 3"	19' 10" e	17' 4"	14' 7"
600S200-54	33	16	24' 11"	21' 10"	18' 5"	22' 8"	19' 10"	16' 8"	21' 1"	18' 5"	15' 6"	19' 10" e	17' 4"	14' 7"	18' 7" e	16' 5"	13' 10"	17' 4" e	15' 9" e	13' 3"
600S200-54	33	24	21' 10"	19' 1"	16' 1"	19' 10" e	17' 4"	14' 7"	17' 11" e	16' 1" e	13' 7"	16' 4" e	15' 1" e	12' 9"	15' 2" e	14' 4" e	12' 1" e	14' 2" e	13' 9" e	11' 7" e
600S250-54	33	12	28' 9"	25' 2"	21' 2"	26' 2"	22' 10"	19' 3"	24' 3"	21' 2"	17' 11"	22' 7"	19' 11"	16' 10"	20' 11"	18' 11"	16' 0"	19' 6"	18' 2"	15' 4" e
600S250-54	33	16	26' 2"	22' 10"	19' 3"	23' 9"	20' 9"	17' 6"	21' 5"	19' 3"	16' 3"	19' 6"	18' 2"	15' 4"	18' 1" e	17' 3" e	14' 6"	16' 11" e	16' 6" e	13' 11"
600S250-54	33	24	22' 7"	19' 11"	16' 10"	19' 6"	18' 2"	15' 4"	17' 6" e	16' 10" e	14' 2"	15' 11" e	15' 10" e	13' 4" e	14' 9" e	14' 9" e	12' 8" e	13' 10" e	13' 10" e	12' 2" e
600S162-68	33	12	28' 0"	24' 6"	20' 8"	25' 6"	22' 3"	18' 9"	23' 8"	20' 8"	17' 5"	22' 3"	19' 5"	16' 5"	21' 2"	18' 5"	15' 7"	20' 2"	17' 8"	14' 11"
600S162-68	33	16	25' 6"	22' 3"	18' 9"	23' 2"	20' 2"	17' 1"	21' 6"	18' 9"	15' 10"	20' 2"	17' 8"	14' 11"	19' 2"	16' 9"	14' 2"	18' 4"	16' 0"	13' 6"
600S162-68	33	24	22' 3"	19' 5"	16' 5"	20' 2"	17' 8"	14' 11"	18' 9"	16' 5"	13' 10"	17' 3"	15' 5"	13' 0"	16' 0"	14' 8"	12' 4"	14' 11"	14' 0"	11' 10"
600S200-68	33	12	29' 6"	25' 9"	21' 9"	26' 9"	23' 5"	19' 9"	24' 10"	21' 9"	18' 4"	23' 5"	20' 5"	17' 3"	22' 3"	19' 5"	16' 4"	21' 3"	18' 7"	15' 8"
600S200-68	33	16	26' 9"	23' 5"	19' 9"	24' 4"	21' 3"	17' 11"	22' 7"	19' 9"	16' 8"	21' 3"	18' 7"	15' 8"	20' 2"	17' 8"	14' 11"	19' 4"	16' 10"	14' 3"
600S200-68	33	24	23' 5"	20' 5"	17' 3"	21' 3"	18' 7"	15' 8"	19' 9"	17' 3"	14' 6"	18' 5"	16' 3"	13' 8"	17' 0"	15' 5"	13' 0"	15' 11" e	14' 9"	12' 5"
600S250-68	33	12	30' 11"	27' 0"	22' 9"	28' 1"	24' 6"	20' 8"	26' 1"	22' 9"	19' 2"	24' 6"	21' 5"	18' 1"	23' 4"	20' 4"	17' 2"	22' 3"	19' 6"	16' 5"
600S250-68	33	16	28' 1"	24' 6"	20' 8"	25' 6"	22' 3"	18' 10"	23' 8"	20' 8"	17' 5"	22' 3"	19' 6"	16' 5"	21' 2"	18' 6"	15' 7"	20' 3"	17' 8"	14' 11"
600S250-68	33	24	24' 6"	21' 5"	18' 1"	22' 3"	19' 6"	16' 5"	20' 8"	18' 1"	15' 3"	19' 1"	17' 0"	14' 4"	17' 8" e	16' 2"	13' 8"	16' 6" e	15' 5" e	13' 0"
600S162-97	33	12	31' 1"	27' 2"	22' 11"	28' 3"	24' 8"	20' 9"	26' 2"	22' 11"	19' 4"	24' 8"	21' 6"	18' 2"	23' 5"	20' 5"	17' 3"	22' 5"	19' 7"	16' 6"
600S162-97	33	16	28' 3"	24' 8"	20' 9"	25' 8"	22' 5"	18' 11"	23' 10"	20' 9"	17' 6"	22' 5"	19' 7"	16' 6"	21' 3"	18' 7"	15' 8"	20' 4"	17' 9"	15' 0"
600S162-97	33	24	24' 8"	21' 6"	18' 2"	22' 5"	19' 7"	16' 6"	18' 2"	15' 4"	19' 7"	17' 1"	14' 5"	16' 3"	18' 7"	16' 3"	13' 8"	17' 9"	15' 6"	13' 1"
600S200-97	33	12	32' 9"	28' 7"	24' 1"	29' 9"	26' 0"	21' 11"	27' 7"	24' 1"	20' 4"	26' 0"	22' 8"	19' 2"	24' 8"	21' 7"	18' 2"	23' 7"	20' 7"	17' 5"
600S200-97	33	16	29' 9"	26' 0"	21' 11"	27' 0"	23' 7"	19' 11"	25' 1"	21' 11"	18' 6"	23' 7"	20' 7"	17' 5"	22' 5"	19' 7"	16' 6"	21' 5"	18' 9"	15' 10"
600S200-97	33	24	26' 0"	22' 8"	19' 2"	23' 7"	20' 7"	17' 5"	21' 11"	19' 2"	16' 2"	20' 7"	18' 0"	15' 2"	19' 7"	17' 1"	14' 5"	18' 9"	16' 4"	13' 10"
600S250-97	33	12	34' 4"	30' 0"	25' 4"	31' 3"	27' 3"	23' 0"	29' 0"	25' 4"	21' 4"	27' 3"	23' 10"	20' 1"	25' 11"	22' 8"	19' 1"	24' 9"	21' 8"	18' 3"
600S250-97	33	16	31' 3"	27' 3"	23' 0"	28' 4"	24' 9"	20' 11"	26' 4"	23' 0"	19' 5"	24' 9"	21' 8"	18' 3"	23' 6"	20' 7"	17' 4"	22' 6"	19' 8"	16' 7"
600S250-97	33	24	27' 3"	23' 10"	20' 1"	24' 9"	21' 8"	18' 3"	23' 0"	20' 1"	16' 11"	21' 8"	18' 11"	15' 11"	20' 7"	18' 0"	15' 2"	19' 8"	17' 2"	14' 6"

\* Spans noted with an "e" require web stiffeners at end supports.

**CAUTION:** 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. These tables are only for wall constructions where the 0.7 factor has been applied.

Allowable non-axial load-bearing wall heights  
 Strength multiplier = 1.0  
**Deflection multiplier = 0.7**  
 See page 21 for allowable wall height table notes

# 8" Exterior curtain walls (Deflection multiplier = 0.7)

Member	Fy (ksi)	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
			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
800S162-33	33	12	25' 0" e	24' 2" e	20' 4" e	21' 7" e	21' 7" e	18' 6" e	19' 4" e	19' 4" e	17' 2" e	17' 8" e	17' 8" e	16' 2" e	16' 4" e	16' 4" e	15' 4" e	15' 3" e	15' 3" e	14' 8" e
800S162-33	33	16	21' 7" e	21' 7" e	18' 6" e	18' 9" e	18' 9" e	16' 10" e	16' 9" e	16' 9" e	15' 7" e	15' 3" e	15' 3" e	14' 2" e	14' 2" e	14' 2" e	13' 11" e	13' 3" e	13' 3" e	13' 3" e
800S162-33	33	24	17' 8" e	17' 8" e	16' 2" e	15' 3" e	15' 3" e	14' 8" e	13' 8" e	13' 8" e	12' 6" e	12' 6" e	12' 6" e	11' 7" e	11' 7" e	11' 7" e	10' 10" e	10' 10" e	10' 10" e	10' 10" e
800S200-33	33	12	26' 9" e	25' 9" e	21' 8" e	23' 2" e	23' 2" e	19' 9" e	20' 9" e	20' 9" e	18' 4" e	18' 11" e	18' 11" e	17' 3" e	17' 6" e	17' 6" e	16' 4" e	16' 5" e	16' 5" e	15' 8" e
800S200-33	33	16	23' 2" e	23' 2" e	19' 9" e	20' 1" e	20' 1" e	17' 11" e	17' 11" e	17' 11" e	16' 8" e	16' 5" e	16' 5" e	15' 8" e	15' 2" e	15' 2" e	14' 10" e	14' 2" e	14' 2" e	14' 2" e
800S200-33	33	24	18' 11" e	18' 11" e	17' 3" e	16' 5" e	16' 5" e	15' 8" e	14' 8" e	14' 8" e	14' 6" e	13' 5" e	13' 5" e	13' 5" e	12' 5" e	12' 5" e	12' 5" e	11' 7" e	11' 7" e	11' 7" e
800S162-43	33	12	29' 11" e	26' 7" e	22' 5" e	25' 11" e	24' 2" e	20' 4" e	23' 2" e	22' 5" e	18' 11" e	21' 2" e	21' 1" e	17' 9" e	19' 7" e	19' 7" e	16' 11" e	18' 4" e	18' 4" e	16' 2" e
800S162-43	33	16	25' 11" e	24' 2" e	20' 4" e	22' 5" e	21' 11" e	18' 6" e	20' 1" e	20' 1" e	17' 2" e	18' 4" e	18' 4" e	16' 2" e	17' 0" e	17' 0" e	15' 4" e	15' 10" e	15' 10" e	14' 8" e
800S162-43	33	24	21' 2" e	21' 1" e	17' 9" e	18' 4" e	18' 4" e	16' 2" e	16' 5" e	16' 5" e	15' 0" e	15' 0" e	15' 0" e	14' 1" e	13' 10" e	13' 10" e	13' 5" e	12' 11" e	12' 11" e	12' 10" e
800S200-43	33	12	32' 1" e	28' 1" e	23' 8" e	29' 2" e	25' 6" e	21' 6" e	26' 1" e	23' 8" e	19' 11" e	23' 10" e	22' 3" e	18' 9" e	22' 1" e	21' 2" e	17' 10" e	20' 8" e	20' 3" e	17' 1" e
800S200-43	33	16	29' 2" e	25' 6" e	21' 6" e	25' 3" e	23' 2" e	19' 6" e	22' 7" e	21' 6" e	18' 2" e	20' 8" e	20' 3" e	17' 1" e	19' 1" e	19' 1" e	16' 2" e	17' 10" e	17' 10" e	15' 6" e
800S200-43	33	24	23' 10" e	22' 3" e	18' 9" e	20' 8" e	20' 3" e	17' 1" e	18' 5" e	18' 5" e	15' 10" e	16' 10" e	16' 10" e	14' 11" e	15' 7" e	15' 7" e	14' 2" e	14' 7" e	14' 7" e	13' 6" e
800S250-43	33	12	33' 6" e	29' 3" e	24' 8" e	29' 5" e	26' 7" e	22' 5" e	26' 4" e	24' 8" e	20' 10" e	24' 0" e	23' 3" e	19' 7" e	22' 3" e	22' 1" e	18' 7" e	20' 10" e	20' 10" e	17' 10" e
800S250-43	33	16	29' 5" e	26' 7" e	22' 5" e	25' 6" e	24' 2" e	20' 4" e	22' 9" e	22' 5" e	18' 11" e	20' 10" e	20' 10" e	17' 10" e	19' 3" e	19' 3" e	16' 11" e	18' 0" e	18' 0" e	16' 2" e
800S250-43	33	24	24' 0" e	23' 3" e	19' 7" e	20' 10" e	20' 10" e	17' 10" e	18' 7" e	18' 7" e	16' 6" e	17' 0" e	17' 0" e	15' 7" e	15' 9" e	15' 9" e	14' 9" e	14' 8" e	14' 8" e	14' 1" e
800S162-54	33	12	32' 11" e	28' 9" e	24' 3" e	29' 8" e	26' 1" e	22' 0" e	26' 6" e	24' 3" e	20' 5" e	24' 2" e	22' 1" e	19' 3" e	22' 5" e	21' 8" e	18' 3" e	21' 0" e	20' 9" e	17' 6" e
800S162-54	33	16	29' 8" e	26' 1" e	22' 0" e	25' 8" e	23' 9" e	20' 0" e	23' 0" e	22' 0" e	18' 7" e	21' 0" e	20' 9" e	17' 6" e	19' 5" e	19' 5" e	16' 7" e	18' 2" e	18' 2" e	15' 11" e
800S162-54	33	24	24' 2" e	22' 10" e	19' 3" e	21' 0" e	20' 9" e	17' 6" e	18' 9" e	18' 9" e	16' 3" e	17' 1" e	17' 1" e	15' 3" e	15' 10" e	15' 10" e	14' 6" e	14' 10" e	14' 10" e	13' 10" e
800S200-54	33	12	34' 6" e	30' 2" e	25' 5" e	31' 4" e	27' 5" e	23' 1" e	29' 1" e	25' 5" e	21' 5" e	27' 5" e	23' 11" e	20' 2" e	26' 0" e	22' 9" e	19' 2" e	24' 5" e	21' 9" e	18' 4" e
800S200-54	33	16	31' 4" e	27' 5" e	23' 1" e	28' 6" e	24' 10" e	21' 0" e	26' 5" e	23' 1" e	19' 6" e	24' 5" e	21' 9" e	18' 4" e	22' 7" e	20' 8" e	17' 5" e	21' 2" e	19' 9" e	16' 8" e
800S200-54	33	24	27' 5" e	23' 11" e	20' 2" e	24' 5" e	21' 9" e	18' 4" e	20' 2" e	21' 10" e	17' 0" e	19' 11" e	19' 0" e	16' 0" e	18' 5" e	18' 0" e	15' 2" e	17' 3" e	17' 3" e	14' 7" e
800S250-54	33	12	36' 0" e	31' 5" e	26' 6" e	32' 8" e	28' 7" e	24' 1" e	30' 0" e	26' 6" e	22' 4" e	27' 5" e	24' 11" e	21' 1" e	25' 5" e	23' 8" e	20' 0" e	23' 9" e	22' 8" e	19' 1" e
800S250-54	33	16	32' 8" e	28' 7" e	24' 1" e	29' 1" e	25' 11" e	21' 11" e	26' 0" e	24' 1" e	20' 4" e	23' 9" e	22' 8" e	19' 1" e	22' 0" e	21' 6" e	18' 2" e	20' 7" e	20' 7" e	17' 4" e
800S250-54	33	24	27' 5" e	24' 11" e	21' 1" e	23' 9" e	22' 8" e	19' 1" e	21' 3" e	21' 1" e	17' 9" e	19' 5" e	19' 5" e	16' 8" e	17' 11" e	17' 11" e	15' 10" e	16' 9" e	16' 9" e	15' 2" e
800S162-68	33	12	35' 4" e	30' 11" e	26' 1" e	32' 2" e	28' 1" e	23' 8" e	29' 10" e	26' 1" e	22' 0" e	27' 7" e	24' 6" e	20' 8" e	25' 7" e	23' 4" e	19' 8" e	23' 11" e	22' 3" e	18' 10" e
800S162-68	33	16	32' 2" e	28' 1" e	23' 8" e	29' 2" e	25' 6" e	21' 6" e	26' 2" e	23' 8" e	20' 0" e	23' 11" e	22' 3" e	18' 10" e	22' 2" e	21' 2" e	17' 10" e	20' 9" e	20' 3" e	17' 1" e
800S162-68	33	24	27' 7" e	24' 6" e	20' 8" e	23' 11" e	22' 3" e	18' 10" e	21' 5" e	20' 8" e	17' 5" e	19' 6" e	19' 6" e	16' 5" e	18' 1" e	17' 7" e	15' 7" e	16' 11" e	16' 11" e	14' 11" e
800S200-68	33	12	37' 0" e	32' 4" e	27' 4" e	33' 8" e	29' 5" e	24' 10" e	31' 3" e	27' 4" e	23' 0" e	29' 5" e	25' 8" e	21' 8" e	27' 11" e	24' 5" e	20' 7" e	26' 9" e	23' 4" e	19' 8" e
800S200-68	33	16	33' 8" e	29' 5" e	24' 10" e	30' 7" e	26' 9" e	22' 6" e	28' 5" e	24' 10" e	20' 11" e	26' 9" e	23' 4" e	19' 8" e	25' 4" e	22' 2" e	18' 8" e	23' 10" e	21' 2" e	17' 11" e
800S200-68	33	24	29' 5" e	25' 8" e	21' 8" e	26' 9" e	23' 4" e	19' 8" e	24' 7" e	21' 8" e	18' 3" e	22' 5" e	20' 5" e	17' 2" e	20' 9" e	19' 4" e	16' 4" e	19' 5" e	18' 6" e	15' 7" e
800S250-68	33	12	38' 8" e	33' 9" e	28' 6" e	35' 2" e	30' 8" e	25' 11" e	32' 7" e	28' 6" e	24' 0" e	30' 8" e	26' 10" e	22' 7" e	29' 2" e	25' 6" e	21' 6" e	27' 11" e	24' 4" e	20' 7" e
800S250-68	33	16	35' 2" e	30' 8" e	25' 11" e	31' 11" e	27' 11" e	23' 6" e	29' 8" e	25' 11" e	21' 10" e	27' 11" e	24' 4" e	20' 7" e	26' 3" e	23' 2" e	19' 6" e	24' 7" e	22' 2" e	18' 8" e
800S250-68	33	24	30' 8" e	26' 10" e	22' 7" e	27' 11" e	24' 4" e	20' 7" e	25' 5" e	22' 7" e	19' 1" e	23' 2" e	21' 3" e	17' 11" e	21' 5" e	20' 3" e	17' 1" e	20' 1" e	19' 4" e	16' 4" e
800S162-97	33	12	39' 3" e	34' 4" e	28' 11" e	35' 8" e	31' 2" e	26' 4" e	33' 2" e	28' 11" e	24' 5" e	31' 2" e	27' 3" e	23' 0" e	29' 7" e	25' 11" e	21' 10" e	28' 4" e	24' 9" e	20' 10" e
800S162-97	33	16	35' 8" e	31' 2" e	26' 4" e	32' 5" e	28' 4" e	23' 11" e	30' 1" e	26' 4" e	22' 2" e	28' 4" e	24' 9" e	20' 10" e	26' 11" e	23' 6" e	19' 10" e	25' 9" e	22' 6" e	19' 0" e
800S162-97	33	24	31' 2" e	27' 3" e	23' 0" e	28' 4" e	24' 9" e	20' 10" e	26' 4" e	23' 0" e	19' 5" e	24' 9" e	21' 7" e	18' 3" e	23' 6" e	20' 6" e	17' 4" e	22' 0" e	19' 8" e	16' 7" e
800S200-97	33	12	41' 2" e	36' 0" e	30' 4" e	37' 5" e	32' 8" e	27' 7" e	34' 9" e	30' 4" e	25' 7" e	32' 8" e	28' 7" e	24' 1" e	31' 1" e	27' 2" e	22' 11" e	29' 9" e	25' 11" e	21' 11" e
800S200-97	33	16	37' 5" e	32' 8" e	27' 7" e	34' 0" e	29' 9" e	25' 1" e	31' 7" e	27' 7" e	23' 3" e	29' 9" e	25' 11" e	21' 11" e	28' 3" e	24' 8" e	20' 10" e	27' 0" e	23' 7" e	19' 11" e
800S200-97	33	24	32' 8" e	28' 7" e	24' 1" e	29' 9" e	25' 11" e	21' 11" e	27' 7" e	24' 1" e	20' 4" e	25' 11" e	22' 8" e	19' 1" e	24' 8" e	21' 6" e	18' 2" e	23' 4" e	20' 7" e	17' 5" e
800S250-97	33	12	43' 1" e	37' 7" e	31' 9" e	39' 1" e	34' 2" e	28' 10" e	36' 4" e	31' 9" e	26' 9" e	34' 2" e	29' 10" e	25' 2" e	32' 6" e	28' 4" e	23' 11" e	31' 1" e	27' 2" e	22' 11" e
800S250-97	33	16	39' 1" e	34' 2" e	28' 10" e	35' 7" e	31' 1" e	26' 2" e	33' 0" e	28' 10" e	24' 4" e	31' 1" e	27' 2" e	22' 11" e	29' 6" e	25' 9" e	21' 9" e	28' 3" e	24' 8" e	20' 9" e
800S250-97	33	24	34' 2" e	29' 10" e	25' 2" e	31' 1" e	27' 2" e	22' 11" e	28' 10" e	25' 2" e	21' 3" e	27' 2" e	23' 8" e	20' 0" e	25' 9" e	22' 6" e	19' 0" e	24' 6" e	21' 6" e	18' 2" e

\* Spans noted with an "e" require web stiffeners at end supports.

**CAUTION:** 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. These tables are only for wall constructions where the 0.7 factor has been applied.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

Deflection multiplier = 0.7

See page 21 for allowable wall height table notes

# 10" Exterior curtain walls (Deflection multiplier = 0.7)

Member	Fy (ksi)	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
			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
1000S162-43	33	12	33' 10" e	31' 6" e	26' 7" e	29' 3" e	28' 8" e	24' 2" e	26' 2" e	26' 2" e	22' 5" e	23' 11" e	23' 11" e	21' 1" e	22' 2" e	22' 2" e	20' 1" e	20' 9" e	20' 9" e	19' 2" e
1000S162-43	33	16	29' 3" e	28' 8" e	24' 2" e	25' 4" e	25' 4" e	21' 11" e	22' 8" e	22' 8" e	20' 4" e	20' 9" e	20' 9" e	19' 2" e	19' 2" e	19' 2" e	18' 3" e	17' 11" e	17' 11" e	17' 5" e
1000S162-43	33	24	23' 11" e	23' 11" e	21' 1" e	20' 9" e	20' 9" e	19' 2" e	18' 6" e	18' 6" e	17' 10" e	16' 11" e	16' 11" e	16' 9" e	15' 8" e	15' 8" e	15' 8" e	14' 8" e	14' 8" e	14' 8" e
1000S200-43	33	12	35' 11" e	33' 0" e	27' 10" e	31' 1" e	29' 11" e	25' 3" e	27' 10" e	27' 10" e	23' 5" e	25' 5" e	25' 5" e	22' 1" e	23' 6" e	23' 6" e	21' 0" e	22' 0" e	22' 0" e	20' 1" e
1000S200-43	33	16	31' 1" e	29' 11" e	25' 3" e	26' 11" e	26' 11" e	22' 11" e	24' 1" e	24' 1" e	21' 4" e	22' 0" e	22' 0" e	20' 1" e	20' 4" e	20' 4" e	19' 1" e	19' 1" e	19' 1" e	18' 3" e
1000S200-43	33	24	25' 5" e	25' 5" e	22' 1" e	22' 0" e	22' 0" e	20' 1" e	19' 8" e	19' 8" e	18' 7" e	18' 0" e	18' 0" e	17' 6" e	16' 8" e	16' 8" e	16' 8" e	15' 7" e	15' 7" e	15' 7" e
1000S250-43	33	12	37' 8" e	34' 11" e	29' 5" e	32' 8" e	31' 8" e	26' 9" e	29' 2" e	29' 2" e	24' 10" e	26' 8" e	26' 8" e	23' 4" e	24' 8" e	24' 8" e	22' 2" e	23' 1" e	23' 1" e	21' 3" e
1000S250-43	33	16	32' 8" e	31' 8" e	26' 9" e	28' 3" e	28' 3" e	24' 3" e	25' 3" e	25' 3" e	22' 7" e	23' 1" e	23' 1" e	21' 3" e	21' 4" e	21' 4" e	20' 2" e	20' 0" e	20' 0" e	19' 3" e
1000S250-43	33	24	26' 8" e	26' 8" e	23' 4" e	23' 1" e	23' 1" e	21' 3" e	20' 8" e	20' 8" e	19' 8" e	18' 10" e	18' 10" e	18' 6" e	17' 5" e	17' 5" e	17' 5" e	16' 4" e	16' 4" e	16' 4" e
1000S162-54	33	12	38' 11" e	34' 3" e	28' 10" e	33' 8" e	31' 1" e	26' 3" e	30' 1" e	28' 10" e	24' 4" e	27' 6" e	27' 2" e	22' 11" e	25' 5" e	25' 5" e	21' 9" e	23' 10" e	23' 10" e	20' 10" e
1000S162-54	33	16	33' 8" e	31' 1" e	26' 3" e	29' 2" e	28' 3" e	23' 10" e	26' 1" e	26' 1" e	22' 1" e	23' 10" e	23' 10" e	20' 10" e	22' 1" e	22' 1" e	19' 9" e	20' 7" e	20' 7" e	18' 11" e
1000S162-54	33	24	27' 6" e	27' 2" e	22' 11" e	23' 10" e	23' 10" e	20' 10" e	21' 4" e	21' 4" e	19' 4" e	19' 5" e	19' 5" e	18' 2" e	18' 0" e	18' 0" e	17' 3" e	16' 10" e	16' 10" e	16' 6" e
1000S200-54	33	12	40' 11" e	35' 9" e	30' 2" e	36' 2" e	32' 5" e	27' 5" e	32' 4" e	30' 2" e	25' 5" e	29' 6" e	28' 4" e	23' 11" e	27' 4" e	26' 11" e	22' 9" e	25' 7" e	25' 7" e	21' 9" e
1000S200-54	33	16	36' 2" e	32' 5" e	27' 5" e	31' 4" e	29' 6" e	24' 10" e	28' 0" e	27' 5" e	23' 1" e	25' 7" e	25' 7" e	21' 9" e	23' 8" e	23' 8" e	22' 2" e	22' 2" e	22' 2" e	19' 9" e
1000S200-54	33	24	29' 6" e	28' 4" e	23' 11" e	25' 7" e	25' 7" e	21' 9" e	22' 10" e	22' 10" e	20' 2" e	20' 10" e	20' 10" e	19' 0" e	19' 4" e	19' 4" e	18' 0" e	18' 1" e	18' 1" e	17' 3" e
1000S250-54	33	12	42' 11" e	37' 6" e	31' 8" e	38' 9" e	34' 1" e	28' 9" e	34' 8" e	31' 8" e	26' 8" e	31' 7" e	29' 9" e	25' 1" e	29' 3" e	28' 3" e	23' 10" e	27' 5" e	27' 1" e	22' 10" e
1000S250-54	33	16	38' 9" e	34' 1" e	28' 9" e	33' 6" e	31' 0" e	26' 1" e	30' 0" e	28' 9" e	24' 3" e	27' 1" e	22' 10" e	22' 10" e	25' 4" e	25' 4" e	21' 8" e	23' 9" e	23' 9" e	20' 9" e
1000S250-54	33	24	31' 7" e	29' 9" e	25' 1" e	27' 5" e	27' 1" e	22' 10" e	24' 6" e	24' 6" e	21' 2" e	22' 4" e	22' 4" e	19' 11" e	20' 8" e	20' 8" e	18' 11" e	19' 4" e	19' 4" e	18' 1" e
1000S162-68	33	12	42' 5" e	37' 1" e	31' 3" e	38' 7" e	33' 8" e	28' 5" e	34' 8" e	31' 3" e	26' 5" e	31' 7" e	29' 5" e	24' 10" e	29' 3" e	28' 0" e	23' 7" e	27' 5" e	26' 9" e	22' 7" e
1000S162-68	33	16	38' 7" e	33' 8" e	28' 5" e	33' 6" e	30' 7" e	25' 10" e	30' 0" e	28' 5" e	24' 0" e	27' 5" e	22' 7" e	25' 4" e	25' 4" e	21' 5" e	23' 9" e	23' 9" e	20' 6" e	
1000S162-68	33	24	31' 7" e	29' 5" e	24' 10" e	27' 5" e	26' 9" e	22' 7" e	24' 6" e	24' 6" e	20' 11" e	22' 4" e	22' 4" e	19' 8" e	20' 8" e	20' 8" e	18' 9" e	19' 4" e	19' 4" e	17' 11" e
1000S200-68	33	12	44' 4" e	38' 8" e	32' 8" e	40' 3" e	35' 2" e	29' 8" e	37' 1" e	32' 8" e	27' 6" e	33' 10" e	30' 9" e	25' 11" e	31' 4" e	29' 2" e	24' 7" e	29' 4" e	27' 11" e	23' 6" e
1000S200-68	33	16	40' 3" e	35' 2" e	29' 8" e	35' 11" e	31' 11" e	26' 11" e	32' 1" e	29' 8" e	25' 0" e	29' 4" e	27' 11" e	23' 6" e	27' 2" e	26' 6" e	22' 4" e	25' 5" e	25' 4" e	21' 5" e
1000S200-68	33	24	33' 10" e	30' 9" e	25' 11" e	29' 4" e	27' 11" e	23' 6" e	26' 2" e	25' 11" e	21' 10" e	23' 11" e	23' 11" e	20' 7" e	22' 2" e	22' 2" e	19' 6" e	20' 9" e	20' 9" e	18' 8" e
1000S250-68	33	12	46' 2" e	40' 4" e	34' 0" e	41' 11" e	36' 8" e	30' 11" e	38' 11" e	34' 0" e	28' 8" e	36' 8" e	32' 0" e	27' 0" e	34' 10" e	30' 5" e	25' 8" e	33' 2" e	29' 1" e	24' 6" e
1000S250-68	33	16	41' 11" e	36' 8" e	30' 11" e	38' 1" e	33' 3" e	28' 1" e	35' 4" e	30' 11" e	26' 1" e	33' 2" e	29' 1" e	24' 6" e	30' 8" e	27' 7" e	23' 4" e	28' 8" e	26' 5" e	22' 3" e
1000S250-68	33	24	36' 8" e	32' 0" e	27' 0" e	33' 2" e	29' 1" e	24' 6" e	29' 8" e	27' 0" e	22' 9" e	27' 1" e	25' 5" e	25' 1" e	24' 2" e	24' 2" e	20' 4" e	23' 5" e	23' 1" e	19' 6" e
1000S162-97	33	12	47' 4" e	41' 4" e	34' 10" e	43' 0" e	37' 7" e	31' 8" e	39' 11" e	34' 10" e	29' 5" e	37' 7" e	32' 10" e	27' 8" e	35' 8" e	31' 2" e	26' 3" e	33' 5" e	29' 10" e	25' 2" e
1000S162-97	33	16	43' 0" e	37' 7" e	31' 8" e	39' 1" e	34' 1" e	28' 9" e	36' 3" e	31' 8" e	26' 9" e	33' 5" e	29' 10" e	25' 2" e	30' 11" e	28' 4" e	23' 11" e	28' 11" e	27' 1" e	22' 10" e
1000S162-97	33	24	37' 7" e	32' 10" e	27' 8" e	33' 5" e	29' 10" e	25' 2" e	29' 11" e	27' 8" e	23' 4" e	27' 4" e	26' 0" e	22' 0" e	25' 3" e	24' 9" e	20' 10" e	23' 8" e	23' 8" e	19' 11" e
1000S200-97	33	12	49' 5" e	43' 2" e	36' 5" e	44' 11" e	39' 3" e	33' 1" e	41' 8" e	36' 5" e	30' 9" e	39' 3" e	34' 3" e	28' 11" e	37' 3" e	32' 7" e	27' 5" e	35' 8" e	31' 2" e	26' 3" e
1000S200-97	33	16	44' 11" e	39' 3" e	33' 1" e	40' 10" e	35' 8" e	30' 1" e	37' 10" e	33' 1" e	27' 11" e	35' 8" e	31' 2" e	26' 3" e	33' 0" e	29' 7" e	24' 11" e	30' 11" e	28' 3" e	23' 10" e
1000S200-97	33	24	39' 3" e	34' 3" e	28' 11" e	35' 8" e	31' 2" e	26' 3" e	31' 11" e	28' 11" e	24' 5" e	29' 2" e	27' 2" e	22' 11" e	27' 0" e	25' 10" e	21' 9" e	25' 3" e	24' 9" e	20' 10" e
1000S250-97	33	12	51' 6" e	44' 11" e	37' 11" e	46' 9" e	40' 10" e	34' 5" e	43' 5" e	37' 11" e	32' 0" e	40' 10" e	35' 8" e	30' 1" e	38' 10" e	33' 11" e	28' 7" e	37' 1" e	32' 5" e	27' 4" e
1000S250-97	33	16	46' 9" e	40' 10" e	34' 5" e	42' 6" e	37' 1" e	31' 4" e	39' 5" e	34' 5" e	29' 1" e	37' 1" e	32' 5" e	27' 4" e	35' 3" e	30' 10" e	26' 0" e	33' 9" e	29' 5" e	24' 10" e
1000S250-97	33	24	40' 10" e	35' 8" e	30' 1" e	37' 1" e	32' 5" e	27' 4" e	34' 5" e	30' 1" e	25' 5" e	32' 5" e	28' 4" e	23' 11" e	30' 7" e	26' 11" e	22' 8" e	28' 8" e	25' 9" e	21' 8" e

\* Spans noted with an "e" require web stiffeners at end supports.

**CAUTION:** 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. These tables are only for wall constructions where the 0.7 factor has been applied.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

Deflection multiplier = 0.7

See page 21 for allowable wall height table notes

# 12" Exterior curtain walls (Deflection multiplier = 0.7)

Member	Fy (ksi)	Spacing (in) o.c.	15 psf			20 psf			25 psf			30 psf			35 psf			40 psf		
			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
1200S162-54	33	12	43' 0" e	39' 5" e	33' 3" e	37' 3" e	35' 10" e	30' 3" e	33' 4" e	33' 3" e	28' 1" e	30' 5" e	30' 5" e	26' 5" e	28' 2" e	28' 2" e	25' 1" e	26' 4" e	26' 4" e	24' 0" e
1200S162-54	33	16	37' 3" e	35' 10" e	30' 3" e	32' 3" e	32' 3" e	27' 6" e	28' 10" e	28' 10" e	25' 6" e	26' 4" e	26' 4" e	24' 0" e	24' 5" e	24' 5" e	22' 9" e	22' 10" e	22' 10" e	21' 10" e
1200S162-54	33	24	30' 5" e	30' 5" e	26' 5" e	26' 4" e	26' 4" e	24' 0" e	23' 7" e	23' 7" e	22' 3" e	21' 6" e	21' 6" e	20' 11" e	19' 11" e	19' 11" e	19' 11" e	18' 8" e	18' 8" e	18' 8" e
1200S200-54	33	12	46' 2" e	41' 1" e	34' 8" e	40' 0" e	37' 4" e	31' 6" e	35' 9" e	34' 8" e	29' 3" e	32' 8" e	32' 7" e	27' 6" e	30' 3" e	30' 3" e	26' 2" e	28' 3" e	28' 3" e	25' 0" e
1200S200-54	33	16	40' 0" e	37' 4" e	31' 6" e	34' 7" e	33' 11" e	28' 7" e	31' 0" e	31' 0" e	26' 7" e	28' 3" e	28' 3" e	25' 0" e	26' 2" e	26' 2" e	23' 9" e	24' 6" e	24' 6" e	22' 9" e
1200S200-54	33	24	32' 8" e	32' 7" e	27' 6" e	28' 3" e	28' 3" e	25' 0" e	25' 3" e	25' 3" e	23' 2" e	23' 1" e	23' 1" e	21' 10" e	21' 4" e	21' 4" e	20' 9" e	20' 0" e	20' 0" e	19' 10" e
1200S250-54	33	12	46' 8" e	42' 10" e	36' 1" e	40' 5" e	38' 11" e	32' 10" e	36' 2" e	36' 1" e	30' 5" e	33' 0" e	33' 0" e	28' 8" e	30' 7" e	30' 7" e	27' 3" e	28' 7" e	28' 7" e	26' 0" e
1200S250-54	33	16	40' 5" e	38' 11" e	32' 10" e	35' 0" e	35' 0" e	29' 10" e	31' 4" e	31' 4" e	27' 8" e	28' 7" e	28' 7" e	26' 0" e	26' 6" e	26' 6" e	24' 9" e	24' 9" e	24' 9" e	23' 8" e
1200S250-54	33	24	33' 0" e	33' 0" e	28' 8" e	28' 7" e	28' 7" e	26' 0" e	25' 7" e	25' 7" e	24' 2" e	23' 4" e	23' 4" e	22' 9" e	21' 7" e	21' 7" e	21' 7" e	20' 3" e	20' 3" e	20' 3" e
1200S162-68	33	12	49' 1" e	42' 11" e	36' 2" e	43' 1" e	39' 0" e	32' 10" e	38' 6" e	36' 2" e	30' 6" e	35' 2" e	34' 0" e	28' 9" e	32' 7" e	32' 4" e	27' 3" e	30' 5" e	30' 5" e	26' 1" e
1200S162-68	33	16	43' 1" e	39' 0" e	32' 10" e	37' 4" e	35' 5" e	29' 10" e	33' 4" e	32' 10" e	27' 9" e	30' 5" e	30' 5" e	26' 1" e	28' 2" e	28' 2" e	24' 9" e	26' 5" e	26' 5" e	23' 8" e
1200S162-68	33	24	35' 2" e	34' 0" e	28' 9" e	30' 5" e	30' 5" e	26' 1" e	27' 3" e	27' 3" e	24' 3" e	24' 10" e	24' 10" e	22' 9" e	23' 0" e	23' 0" e	21' 8" e	21' 6" e	21' 6" e	20' 8" e
1200S200-68	33	12	51' 1" e	44' 8" e	37' 8" e	46' 0" e	40' 7" e	34' 3" e	41' 2" e	37' 8" e	31' 9" e	37' 7" e	35' 5" e	29' 11" e	34' 9" e	33' 8" e	28' 5" e	32' 7" e	32' 7" e	27' 2" e
1200S200-68	33	16	46' 0" e	40' 7" e	34' 3" e	39' 10" e	36' 10" e	31' 1" e	35' 8" e	34' 3" e	28' 10" e	32' 7" e	32' 2" e	27' 2" e	30' 2" e	30' 2" e	25' 10" e	28' 2" e	28' 2" e	24' 8" e
1200S200-68	33	24	37' 7" e	35' 5" e	29' 11" e	32' 7" e	32' 2" e	27' 2" e	29' 1" e	29' 1" e	25' 2" e	26' 7" e	26' 7" e	23' 9" e	24' 7" e	24' 7" e	22' 6" e	23' 0" e	23' 0" e	21' 7" e
1200S250-68	33	12	53' 1" e	46' 5" e	39' 1" e	48' 0" e	42' 2" e	35' 6" e	42' 11" e	39' 1" e	33' 0" e	39' 2" e	36' 10" e	31' 1" e	36' 3" e	35' 0" e	29' 6" e	33' 11" e	33' 5" e	28' 2" e
1200S250-68	33	16	48' 0" e	42' 2" e	35' 6" e	41' 7" e	38' 3" e	32' 3" e	37' 2" e	35' 6" e	30' 0" e	33' 11" e	33' 5" e	28' 2" e	31' 5" e	31' 5" e	26' 10" e	29' 5" e	29' 5" e	25' 8" e
1200S250-68	33	24	39' 2" e	36' 10" e	31' 1" e	33' 11" e	33' 5" e	28' 2" e	30' 4" e	30' 4" e	26' 2" e	27' 8" e	27' 8" e	24' 8" e	25' 8" e	25' 8" e	23' 5" e	24' 0" e	24' 0" e	22' 5" e
1200S162-97	33	12	55' 3" e	48' 3" e	40' 8" e	50' 2" e	43' 10" e	37' 0" e	46' 7" e	40' 8" e	34' 4" e	43' 7" e	38' 3" e	32' 3" e	40' 4" e	36' 4" e	30' 8" e	37' 9" e	34' 9" e	29' 4" e
1200S162-97	33	16	50' 2" e	43' 10" e	37' 0" e	45' 7" e	39' 10" e	33' 7" e	41' 4" e	37' 0" e	31' 2" e	37' 9" e	34' 9" e	29' 4" e	34' 11" e	33' 1" e	27' 10" e	32' 8" e	31' 7" e	26' 8" e
1200S162-97	33	24	43' 7" e	38' 3" e	32' 3" e	37' 9" e	34' 9" e	29' 4" e	33' 9" e	32' 3" e	27' 3" e	30' 10" e	30' 5" e	25' 8" e	28' 6" e	28' 6" e	24' 4" e	26' 8" e	26' 8" e	23' 3" e
1200S200-97	33	12	57' 6" e	50' 3" e	42' 4" e	52' 3" e	45' 7" e	38' 6" e	48' 6" e	42' 4" e	35' 9" e	45' 7" e	39' 10" e	33' 7" e	42' 11" e	37' 10" e	31' 11" e	40' 2" e	36' 3" e	30' 6" e
1200S200-97	33	16	52' 3" e	45' 7" e	38' 6" e	47' 5" e	41' 5" e	35' 0" e	44' 0" e	38' 6" e	32' 5" e	40' 2" e	36' 3" e	30' 6" e	37' 2" e	34' 5" e	29' 0" e	34' 9" e	32' 11" e	27' 9" e
1200S200-97	33	24	45' 7" e	39' 10" e	33' 7" e	40' 2" e	36' 3" e	30' 6" e	35' 11" e	33' 7" e	28' 4" e	32' 10" e	31' 8" e	26' 8" e	30' 4" e	30' 1" e	25' 4" e	28' 5" e	28' 5" e	24' 3" e
1200S250-97	33	12	59' 8" e	52' 1" e	44' 0" e	54' 2" e	47' 4" e	39' 11" e	50' 4" e	44' 0" e	37' 1" e	47' 4" e	41' 4" e	34' 11" e	45' 0" e	39' 4" e	33' 2" e	42' 7" e	37' 7" e	31' 8" e
1200S250-97	33	16	54' 2" e	47' 4" e	39' 11" e	49' 3" e	43' 0" e	36' 3" e	45' 9" e	39' 11" e	33' 8" e	42' 7" e	37' 7" e	31' 8" e	39' 5" e	35' 8" e	30' 1" e	36' 10" e	34' 2" e	28' 10" e
1200S250-97	33	24	47' 4" e	41' 4" e	34' 11" e	42' 7" e	37' 7" e	31' 8" e	38' 1" e	34' 11" e	29' 5" e	34' 9" e	32' 10" e	27' 8" e	32' 2" e	31' 2" e	26' 4" e	30' 1" e	29' 10" e	25' 2" e

\* Spans noted with an "e" require web stiffeners at end supports.

**CAUTION:** 2006 International Building Code table 1604.3, footnote f, permits wind load to be taken as 0.7 times the "component and cladding" loads for the purpose of determining deflection limits. These tables are only for wall constructions where the 0.7 factor has been applied.

Allowable non-axial load-bearing wall heights

Strength multiplier = 1.0

**Deflection multiplier = 0.7**

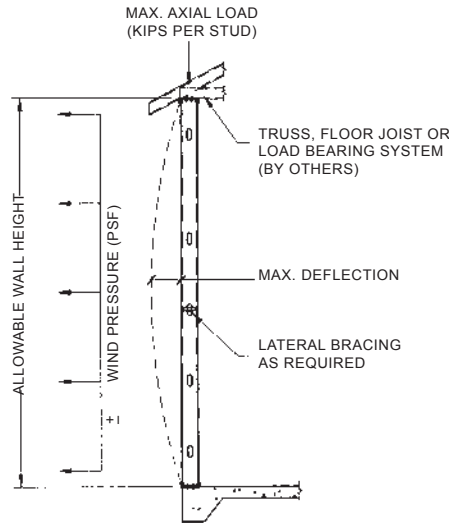
See page 21 for allowable wall height table notes

# Allowable combined axial & lateral loads

5 psf		362S162								600S162								800S162							
Stud Length	Spacing (in) o.c.	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi
8'	12	1.87	2.65	3.51	4.15	4.47	5.38	6.49	7.90	2.44	3.41	4.54	5.63	6.07	7.46	9.39	11.39	2.40	3.36	4.49	5.44	6.05	7.25	9.57	11.26
	16	1.80	2.57	3.43	4.08	4.39	5.31	6.41	7.83	2.40	3.38	4.50	5.59	6.03	7.42	9.35	11.35	2.37	3.33	4.46	5.42	6.02	7.23	9.54	11.23
	24	1.65	2.42	3.27	3.94	4.22	5.17	6.26	7.70	2.32	3.30	4.42	5.52	5.95	7.35	9.26	11.28	2.31	3.28	4.40	5.37	5.96	7.18	9.48	11.18
9'	12	1.74	2.48	3.30	3.86	4.21	4.99	6.13	7.32	2.41	3.38	4.50	5.59	6.03	7.42	9.35	11.35	2.38	3.34	4.47	5.42	6.02	7.23	9.54	11.23
	16	1.64	2.38	3.20	3.77	4.10	4.90	6.03	7.23	2.36	3.33	4.45	5.55	5.98	7.38	9.29	11.31	2.34	3.30	4.43	5.39	5.98	7.20	9.51	11.20
	24	1.46	2.19	2.99	3.60	3.89	4.72	5.84	7.06	2.26	3.24	4.36	5.46	5.87	7.29	9.18	11.21	2.27	3.23	4.36	5.32	5.91	7.14	9.44	11.13
10'	12	1.58	2.29	3.05	3.53	3.91	4.55	5.72	6.67	2.37	3.34	4.46	5.56	5.99	7.38	9.30	11.31	2.35	3.31	4.44	5.40	5.99	7.21	9.52	11.21
	16	1.47	2.17	2.93	3.42	3.77	4.44	5.60	6.57	2.30	3.28	4.40	5.50	5.92	7.33	9.23	11.25	2.30	3.26	4.39	5.35	5.95	7.17	9.47	11.16
	24	1.26	1.95	2.68	3.22	3.52	4.23	5.37	6.37	2.18	3.16	4.28	5.39	5.79	7.21	9.08	11.12	2.21	3.17	4.30	5.27	5.85	7.09	9.38	11.08
12'	12	1.25	1.87	2.50	2.79	3.23	3.60	4.80	5.29	2.22	3.19	4.33	5.39	5.87	7.28	9.17	11.19	2.28	3.24	4.37	5.33	5.92	7.15	9.45	11.14
	16	1.11	1.72	2.34	2.66	3.06	3.47	4.64	5.16	2.13	3.10	4.23	5.30	5.77	7.19	9.05	11.09	2.21	3.18	4.30	5.27	5.85	7.09	9.38	11.07
	24	0.86 <sup>7</sup>	1.44	2.04	2.42	2.75	3.22	4.33	4.92	1.95	2.93	4.04	5.13	5.57	7.01	8.82	10.89	2.08	3.04	4.17	5.15	5.71	6.96	9.25	10.94
14'	12	0.93	1.44	1.94	2.14	2.55	2.78	3.85	4.10	2.03	2.97	4.05	5.00	5.55	6.81	8.96	10.96	2.20	3.16	4.29	5.26	5.83	7.07	9.36	11.05
	16	0.78 <sup>7</sup>	1.28	1.77	2.00	2.36	2.64	3.67	3.95	1.91	2.85	3.92	4.88	5.41	6.68	8.78	10.80	2.10	3.07	4.19	5.17	5.73	6.98	9.26	10.96
	24	0.52 <sup>8</sup>	0.99 <sup>6</sup>	1.45 <sup>7</sup>	1.75 <sup>7</sup>	2.01	2.38	3.33	3.69	1.67	2.61	3.66	4.64	5.12	6.43	8.45	10.49	1.92	2.88	4.00	5.00	5.53	6.81	9.07	10.77
16'	12	0.65 <sup>7</sup>	1.06	1.45	1.63	1.93	2.14	2.98	3.18	1.80	2.69	3.70	4.49	5.10	6.15	8.26	9.89	2.10	3.06	4.18	5.16	5.72	6.96	9.25	10.93
	16	0.51 <sup>6</sup>	0.90 <sup>6</sup>	1.27 <sup>7</sup>	1.49 <sup>7</sup>	1.74	2.00	2.79	3.04	1.65	2.54	3.53	4.34	4.91	5.98	8.03	9.68	1.97	2.94	4.05	5.04	5.58	6.85	9.11	10.80
	24	0.25 <sup>3</sup>	0.62 <sup>2</sup>	0.97 <sup>6</sup>	1.25 <sup>5</sup>	1.40 <sup>6</sup>	1.74 <sup>6</sup>	2.46	2.78	1.36	2.25	3.21	4.05	4.55	5.66	7.59	9.28	1.73	2.69	3.79	4.81	5.31	6.61	8.85	10.54
18'	12	0.44 <sup>8</sup>	0.76 <sup>6</sup>	1.07 <sup>7</sup>	1.24 <sup>7</sup>	1.45	1.66	2.30	2.50	1.55	2.37	3.30	3.92	4.58	5.39	7.44	8.67	1.98	2.94	4.05	5.03	5.58	6.83	9.10	10.78
	16	0.30 <sup>3</sup>	0.61 <sup>6</sup>	0.90 <sup>6</sup>	1.11 <sup>6</sup>	1.27 <sup>7</sup>	1.52 <sup>7</sup>	2.12	2.36	1.37	2.19	3.10	3.74	4.35	5.20	7.16	8.42	1.82	2.78	3.88	4.87	5.40	6.67	8.92	10.60
	24	0.06 <sup>2</sup>	0.34 <sup>3</sup>	0.61 <sup>3</sup>	0.88 <sup>3</sup>	0.95 <sup>5</sup>	1.27 <sup>5</sup>	1.80 <sup>6</sup>	2.11 <sup>6</sup>	1.05 <sup>7</sup>	1.86	2.72	3.42	3.92	4.83	6.63	7.95	1.51	2.46	3.55	4.57	5.05	6.36	8.57	10.25
20'	12	0.29 <sup>3</sup>	0.54 <sup>5</sup>	0.79 <sup>6</sup>	0.95 <sup>5</sup>	1.09 <sup>7</sup>	1.29 <sup>7</sup>	1.79	1.98	1.29	2.04	2.88	3.34	4.02	4.62	6.56	7.42	1.81	2.76	3.86	4.82	5.40	6.66	8.91	10.57
	16	0.15 <sup>2</sup>	0.39 <sup>3</sup>	0.63 <sup>3</sup>	0.83 <sup>3</sup>	0.92 <sup>5</sup>	1.16 <sup>5</sup>	1.62 <sup>7</sup>	1.85 <sup>7</sup>	1.10	1.84	2.65	3.15	3.76	4.40	6.24	7.15	1.61	2.56	3.65	4.62	5.17	6.46	8.68	10.33
	24	0.00 <sup>2</sup>	0.15 <sup>2</sup>	0.36 <sup>3</sup>	0.61 <sup>3</sup>	0.63 <sup>3</sup>	0.92 <sup>3</sup>	1.32 <sup>5</sup>	1.61 <sup>5</sup>	0.76 <sup>5</sup>	1.48 <sup>7</sup>	2.24	2.80	3.29	4.01	5.65	6.65	1.25	2.18	3.25	4.25	4.73	6.06	8.23	9.87

## Allowable combined axial & lateral loads

Load-bearing walls must be capable of handling vertical loads even when subjected to lateral loads from wind or another force. The following tables identify the axial (vertical) load that can be supported by each member under given lateral load conditions.



## Combined axial and lateral load tables

- Lateral and axial loads have not been modified for strength interactions.
- For material thickness of -33 and -43 mils,  $F_y = 33$  ksi. For -54 mil and thicker steel, both 33 and 50 ksi values are indicated.
- The strength increase due to cold work of forming was incorporated for flexural strengths as applicable per the NASPEC A7.2.
- Allowable loads based on weak axis and torsional horizontal mechanical bracing at 48" o.c. maximum for axial load calculations and continuous support of each flange for flexural calculation.
- Allowable axial load in kips/stud (1 kip=1000 lbs.).
- Check lateral end reactions for web crippling.
- The allowable axial loads do not include the effects of the gypsum board.
- Deflection calculations are based on  $0.7 \times$  lateral load per IBC 2006, Table 1604.3
- Deflection is indicated by superscripts:

- No superscript =  $D \geq 720$
- 7 =  $720 > D \geq 600$
- 6 =  $600 > D \geq 360$
- 3 =  $360 > D \geq 240$
- 2 =  $240 > D \geq 120$
- 1 =  $D > 120$

# Allowable combined axial & lateral loads

15 psf		362S162									600S162								800S162							
Stud Length	Spacing (in) o.c.	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	
8'	12	1.44	2.20	3.03	3.74	3.98	4.96	6.04	7.50	2.21	3.19	4.31	5.42	5.82	7.25	9.13	11.17	2.23	3.19	4.32	5.29	5.87	7.10	9.40	11.10	
	16	1.23	1.99	2.81	3.55	3.74	4.76	5.82	7.31	2.10	3.08	4.19	5.32	5.70	7.15	8.99	11.06	2.14	3.11	4.23	5.21	5.78	7.03	9.32	11.02	
	24	0.85	1.59	2.37	3.17	3.29	4.38	5.40	6.93	1.87	2.87	3.97	5.12	5.46	6.94	8.73	10.83	1.96	2.94	4.06	5.06	5.60	6.88	9.15	10.86	
9'	12	1.21	1.93	2.71	3.35	3.59	4.47	5.56	6.82	2.11	3.10	4.21	5.33	5.72	7.15	9.00	11.06	2.15	3.12	4.24	5.23	5.79	7.04	9.33	11.03	
	16	0.97	1.68	2.43	3.12	3.30	4.23	5.29	6.58	1.97	2.96	4.06	5.20	5.56	7.02	8.83	10.91	2.04	3.01	4.13	5.13	5.68	6.94	9.22	10.92	
	24	0.53 <sup>6</sup>	1.21	1.92	2.68	2.76	3.77	4.78	6.13	1.68	2.68	3.77	4.94	5.25	6.75	8.49	10.62	1.82	2.79	3.91	4.94	5.45	6.75	9.01	10.72	
10'	12	0.97	1.64	2.35	2.94	3.17	3.94	5.03	6.08	2.00	2.99	4.09	5.22	5.59	7.04	8.86	10.93	2.07	3.04	4.16	5.15	5.71	6.97	9.25	10.95	
	16	0.71 <sup>7</sup>	1.36	2.04	2.67	2.84	3.66	4.71	5.81	1.82	2.81	3.90	5.06	5.39	6.87	8.64	10.74	1.93	2.90	4.02	5.03	5.56	6.85	9.11	10.82	
	24	0.23 <sup>6</sup>	0.84 <sup>6</sup>	1.47 <sup>7</sup>	2.18 <sup>7</sup>	2.23	3.15	4.12	5.30	1.47	2.47	3.54	4.73	5.00	6.53	8.21	10.37	1.66	2.64	3.75	4.79	5.28	6.61	8.84	10.56	
12'	12	0.53 <sup>6</sup>	1.08 <sup>7</sup>	1.65	2.10	2.32	2.88	3.92	4.58	1.70	2.68	3.77	4.88	5.27	6.74	8.49	10.59	1.87	2.85	3.96	4.97	5.50	6.79	9.04	10.75	
	16	0.24 <sup>3</sup>	0.76 <sup>6</sup>	1.29 <sup>6</sup>	1.81 <sup>6</sup>	1.94 <sup>7</sup>	2.58 <sup>7</sup>	3.53	4.27	1.45	2.43	3.50	4.64	4.97	6.48	8.15	10.29	1.68	2.65	3.76	4.79	5.28	6.61	8.84	10.55	
	24	0.00 <sup>2</sup>	0.20 <sup>3</sup>	0.67 <sup>6</sup>	1.29 <sup>6</sup>	1.27 <sup>6</sup>	2.03 <sup>6</sup>	2.85 <sup>7</sup>	3.70 <sup>7</sup>	1.02 <sup>2</sup>	0.98	1.96	2.99	4.17	4.41	5.98	7.15	9.73	1.29	2.26	3.36	4.44	4.87	6.25	8.44	10.17
14'	12	0.18 <sup>3</sup>	0.61 <sup>6</sup>	1.04 <sup>6</sup>	1.42 <sup>6</sup>	1.57 <sup>6</sup>	2.03 <sup>6</sup>	2.88	3.35	1.34	2.28	3.30	4.31	4.72	6.06	7.96	10.05	1.64	2.61	3.72	4.75	5.23	6.55	8.79	10.49	
	16	0.00 <sup>2</sup>	0.29 <sup>3</sup>	0.69 <sup>3</sup>	1.14 <sup>3</sup>	1.18 <sup>3</sup>	1.73 <sup>3</sup>	2.48 <sup>6</sup>	3.03 <sup>6</sup>	1.03	1.96	2.95	3.99	4.33	5.72	7.50	9.63	1.37	2.34	3.44	4.50	4.94	6.30	8.50	10.21	
	24	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.08 <sup>2</sup>	0.64 <sup>2</sup>	0.51 <sup>3</sup>	1.19 <sup>3</sup>	1.79 <sup>6</sup>	2.48 <sup>6</sup>	0.46 <sup>6</sup>	0.37 <sup>7</sup>	2.30	3.40	3.60	5.06	6.62	8.83	0.86	1.83	2.90	4.01	4.37	5.81	7.95	9.67	
16'	12	0.00 <sup>2</sup>	0.26 <sup>3</sup>	0.58 <sup>3</sup>	0.93 <sup>3</sup>	0.98 <sup>6</sup>	1.41 <sup>6</sup>	2.02 <sup>6</sup>	2.44 <sup>6</sup>	0.98 <sup>7</sup>	1.84	2.77	3.65	4.05	5.22	6.98	8.73	1.37	2.33	3.42	4.47	4.92	6.27	8.46	10.16	
	16	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.24 <sup>2</sup>	0.66 <sup>2</sup>	0.61 <sup>3</sup>	1.12 <sup>3</sup>	1.64 <sup>6</sup>	2.14 <sup>6</sup>	0.62 <sup>6</sup>	1.47 <sup>7</sup>	2.35	3.27	3.58	4.80	6.41	8.21	1.03	1.99	3.06	4.14	4.53	5.93	8.08	9.78	
	24	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.02 <sup>2</sup>	0.19 <sup>2</sup>	0.62 <sup>2</sup>	0.99 <sup>3</sup>	1.62 <sup>3</sup>	0.00 <sup>3</sup>	0.80 <sup>6</sup>	1.60 <sup>6</sup>	2.67 <sup>6</sup>	2.73 <sup>7</sup>	4.05 <sup>7</sup>	5.37	7.28	0.39 <sup>7</sup>	1.34	2.37	3.51	3.79	5.29	7.35	9.06	
18'	12	0.00 <sup>2</sup>	0.01 <sup>2</sup>	0.25 <sup>2</sup>	0.58 <sup>2</sup>	0.56 <sup>3</sup>	0.95 <sup>3</sup>	1.39 <sup>6</sup>	1.79 <sup>6</sup>	0.62 <sup>3</sup>	1.41 <sup>6</sup>	2.22	2.97	3.35	4.33	5.92	7.33	1.07	2.02	3.08	4.14	4.54	5.92	8.07	9.74	
	16	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.33 <sup>2</sup>	0.22 <sup>2</sup>	0.68 <sup>2</sup>	1.04 <sup>3</sup>	1.50 <sup>3</sup>	0.24 <sup>3</sup>	1.00 <sup>6</sup>	1.76 <sup>6</sup>	2.57 <sup>6</sup>	2.83 <sup>7</sup>	3.88 <sup>7</sup>	5.28	6.77	0.67 <sup>7</sup>	1.60	2.63	3.72	4.06	5.49	7.58	9.25	
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.22 <sup>2</sup>	0.43 <sup>2</sup>	1.02 <sup>2</sup>	0.00 <sup>2</sup>	0.28 <sup>3</sup>	0.95 <sup>6</sup>	1.85 <sup>6</sup>	1.90 <sup>6</sup>	3.07 <sup>6</sup>	4.15 <sup>7</sup>	5.77 <sup>7</sup>	0.00 <sup>6</sup>	0.82 <sup>6</sup>	1.80	2.95 <sup>7</sup>	3.15	4.68	6.64	8.32	
20'	12	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.02 <sup>2</sup>	0.33 <sup>2</sup>	0.26 <sup>2</sup>	0.63 <sup>2</sup>	0.94 <sup>3</sup>	1.31 <sup>3</sup>	0.32 <sup>3</sup>	1.00 <sup>6</sup>	1.70 <sup>6</sup>	2.34 <sup>6</sup>	2.67 <sup>7</sup>	3.49 <sup>7</sup>	4.89	6.00	0.75 <sup>7</sup>	1.66	2.68	3.72	4.11	5.50	7.59	9.22	
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.09 <sup>2</sup>	0.00 <sup>2</sup>	0.38 <sup>2</sup>	0.61 <sup>2</sup>	1.04 <sup>2</sup>	0.00 <sup>3</sup>	0.58 <sup>3</sup>	1.22 <sup>6</sup>	1.93 <sup>6</sup>	2.13 <sup>6</sup>	3.03 <sup>6</sup>	4.21 <sup>7</sup>	5.43 <sup>7</sup>	0.29 <sup>6</sup>	1.17 <sup>7</sup>	2.16	3.23	3.53	4.97	6.98	8.60	
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.05 <sup>2</sup>	0.59 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.39 <sup>3</sup>	1.21 <sup>3</sup>	1.18 <sup>3</sup>	2.22 <sup>3</sup>	3.05 <sup>6</sup>	4.43 <sup>6</sup>	0.00 <sup>3</sup>	0.29 <sup>6</sup>	1.19 <sup>6</sup>	2.34 <sup>6</sup>	2.47 <sup>7</sup>	4.01 <sup>7</sup>	5.86	7.47		
20 psf		362S162									600S162								800S162							
8'	12	1.23	1.99	2.81	3.55	3.74	4.76	5.82	7.31	2.10	3.08	4.19	5.32	5.70	7.15	8.99	11.06	2.14	3.11	4.23	5.21	5.78	7.03	9.32	11.02	
	16	0.98	1.72	2.52	3.30	3.44	4.50	5.54	7.06	1.95	2.94	4.04	5.19	5.54	7.01	8.82	10.91	2.02	2.99	4.12	5.11	5.66	6.93	9.20	10.91	
	24	0.50 <sup>7</sup>	1.21	1.97	2.82	2.86	4.01	4.99	6.57	1.65	2.66	3.74	4.92	5.22	6.74	8.47	10.61	1.79	2.77	3.89	4.91	5.42	6.73	8.98	10.70	
9'	12	0.97	1.68	2.43	3.12	3.30	4.23	5.29	6.58	1.97	2.96	4.06	5.20	5.56	7.02	8.83	10.91	2.04	3.01	4.13	5.13	5.68	6.94	9.22	10.92	
	16	0.67 <sup>7</sup>	1.36	2.09	2.82	2.94	3.92	4.94	6.28	1.77	2.77	3.87	5.03	5.35	6.84	8.60	10.72	1.89	2.87	3.99	5.00	5.52	6.82	9.08	10.79	
	24	0.13 <sup>6</sup>	0.78 <sup>6</sup>	1.45 <sup>7</sup>	2.27 <sup>7</sup>	2.26	3.34	4.29	5.71	1.40	2.41	3.48	4.69	4.94	6.49	8.15	10.34	1.60	2.58	3.69	4.74	5.22	6.56	8.79	10.51	
10'	12	0.71 <sup>7</sup>	1.36	2.04	2.67	2.84	3.66	4.71	5.81	1.82	2.81	3.90	5.06	5.39	6.87	8.64	10.74	1.93	2.90	4.02	5.03	5.56	6.85	9.11	10.82	
	16	0.38 <sup>6</sup>	1.01 <sup>6</sup>	1.65	2.34	2.43	3.32	4.31	5.46	1.58	2.58	3.66	4.84	5.13	6.64	8.35	10.50	1.75	2.72	3.84	4.87	5.37	6.69	8.93	10.64	
	24	0.00 <sup>3</sup>	0.38 <sup>6</sup>	0.96 <sup>6</sup>	1.74 <sup>6</sup>	1.69 <sup>7</sup>	2.69 <sup>7</sup>	3.58	4.82	1.13	2.14	3.19	4.41	4.62	6.20	7.79	10.01	1.39	2.37	3.48	4.55	4.99	6.37	8.57	10.30	
12'	12	0.24 <sup>3</sup>	0.76 <sup>6</sup>	1.29 <sup>6</sup>	1.81 <sup>6</sup>	1.94 <sup>7</sup>	2.58 <sup>7</sup>	3.53	4.27	1.45	2.43	3.50	4.64	4.97	6.48	8.15	10.29	1.68	2.65	3.76	4.79	5.28	6.61	8.84	10.55	
	16	0.00 <sup>3</sup>	0.38 <sup>6</sup>	0.87 <sup>6</sup>	1.45 <sup>6</sup>	1.48 <sup>6</sup>	2.20 <sup>6</sup>	3.07 <sup>7</sup>	3.88 <sup>7</sup>	1.13	2.11	3.15	4.32	4.59	6.14	7.72	9.91	1.41	2.39	3.49	4.56	5.01	6.37	8.58	10.30	
	24	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.13 <sup>3</sup>	0.84 <sup>3</sup>	0.68 <sup>3</sup>	1.55 <sup>3</sup>	2.24 <sup>6</sup>	3.20 <sup>6</sup>	0.53 <sup>6</sup>	1.51	2.50	3.72	3.87	5.49	6.90	9.18	0.91	1.89	2.97	4.09	4.46	5.91	8.05	9.79	
14'	12	0.00 <sup>2</sup>	0.29 <sup>3</sup>	0.69 <sup>3</sup>	1.14 <sup>3</sup>	1.18 <sup>3</sup>	1.73 <sup>3</sup>	2.48 <sup>6</sup>	3.03 <sup>6</sup>	1.03	1.96	2.95	3.99	4.33	5.72	7.50	9.63	1.37	2.34	3.44	4.50	4.94	6.30	8.50	10.21	
	16	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.27 <sup>3</sup>	0.79 <sup>3</sup>	0.73 <sup>3</sup>	1.36 <sup>3</sup>	2.01 <sup>6</sup>	2.66 <sup>6</sup>	0.65 <sup>6</sup>	1.56 <sup>7</sup>	2.51	3.59	3.84	5.28	6.91	9.09	1.03	2.00	3.08	4.17	4.56	5.98	8.13	9.85	
	24	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.13 <sup>3</sup>	0.00 <sup>2</sup>	0.73 <sup>2</sup>	1.19 <sup>3</sup>	2.00 <sup>3</sup>	0.00 <sup>6</sup>	0.83 <sup>6</sup>	1.70 <sup>6</sup>	2.85 <sup>6</sup>	2.92	4.46	5.81	8.09	0.37 <sup>7</sup>	1.33	2.38	3.54	3.82	5.34	7.41	9.14	
16'	12	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.24 <sup>2</sup>	0.66 <sup>2</sup>	0.61 <sup>3</sup>	1.12 <sup>3</sup>	1.64 <sup>6</sup>	2.14 <sup>6</sup>	0.62 <sup>3</sup>	1.47 <sup>7</sup>	2.35	3.27	3.58	4.80											

# Allowable combined axial & lateral loads

25 psf		362S162								600S162								800S162							
Stud Length	Spacing (in) o.c.	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi
8'	12	1.04	1.78	2.59	3.36	3.51	4.57	5.61	7.12	1.98	2.98	4.08	5.22	5.58	7.04	8.86	10.94	2.05	3.02	4.14	5.14	5.69	6.95	9.23	10.94
	16	0.73	1.46	2.24	3.05	3.14	4.25	5.26	6.81	1.80	2.80	3.89	5.06	5.38	6.87	8.64	10.76	1.91	2.88	4.00	5.01	5.54	6.83	9.09	10.80
	24	0.16 <sup>6</sup>	0.86 <sup>7</sup>	1.58	2.48	2.45	3.66	4.60	6.23	1.43	2.44	3.52	4.73	4.99	6.53	8.21	10.39	1.62	2.60	3.71	4.76	5.24	6.58	8.81	10.54
9'	12	0.74 <sup>7</sup>	1.44	2.17	2.89	3.03	3.99	5.03	6.35	1.82	2.82	3.91	5.07	5.40	6.88	8.66	10.77	1.93	2.90	4.02	5.03	5.56	6.85	9.11	10.82
	16	0.39 <sup>6</sup>	1.06 <sup>7</sup>	1.76	2.54	2.59	3.62	4.61	5.99	1.59	2.59	3.67	4.86	5.15	6.66	8.38	10.53	1.75	2.72	3.84	4.87	5.37	6.69	8.93	10.65
	24	0.00 <sup>3</sup>	0.39 <sup>6</sup>	1.02 <sup>6</sup>	1.89 <sup>6</sup>	1.80 <sup>7</sup>	2.94 <sup>7</sup>	3.83	5.30	1.13	2.15	3.20	4.44	4.64	6.23	7.82	10.05	1.38	2.37	3.48	4.55	4.99	6.37	8.58	10.31
10'	12	0.46 <sup>6</sup>	1.09 <sup>7</sup>	1.75	2.42	2.53	3.40	4.41	5.55	1.64	2.64	3.72	4.89	5.19	6.70	8.42	10.56	1.79	2.77	3.89	4.91	5.42	6.73	8.98	10.69
	16	0.08 <sup>6</sup>	0.68 <sup>6</sup>	1.30 <sup>6</sup>	2.03 <sup>6</sup>	2.05	2.99	3.93	5.13	1.36	2.36	3.42	4.62	4.87	6.42	8.07	10.25	1.57	2.55	3.66	4.71	5.18	6.53	8.75	10.47
	24	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.50 <sup>6</sup>	1.34 <sup>6</sup>	1.18 <sup>6</sup>	2.26 <sup>6</sup>	3.07 <sup>7</sup>	4.38 <sup>7</sup>	0.81	1.82	2.85	4.10	4.25	5.87	7.37	9.65	1.12	2.11	3.21	4.31	4.71	6.13	8.31	10.05
12'	12	0.00 <sup>3</sup>	0.47 <sup>6</sup>	0.97 <sup>6</sup>	1.54 <sup>6</sup>	1.59 <sup>6</sup>	2.29 <sup>6</sup>	3.18	3.98	1.21	2.19	3.24	4.40	4.69	6.22	7.83	10.01	1.48	2.46	3.56	4.62	5.08	6.43	8.64	10.36
	16	0.00 <sup>2</sup>	0.03 <sup>3</sup>	0.49 <sup>3</sup>	1.13 <sup>3</sup>	1.06 <sup>6</sup>	1.86 <sup>6</sup>	2.64 <sup>6</sup>	3.53 <sup>6</sup>	0.82 <sup>7</sup>	1.80	2.82	4.02	4.23	5.81	7.31	9.54	1.16	2.14	3.23	4.32	4.73	6.14	8.31	10.04
	24	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.43 <sup>3</sup>	0.15 <sup>3</sup>	1.11 <sup>3</sup>	1.69 <sup>6</sup>	2.74 <sup>6</sup>	0.11 <sup>6</sup>	1.08 <sup>7</sup>	2.03	3.29	3.35	5.03	6.30	8.66	0.54	1.52	2.59	3.75	4.05	5.56	7.66	9.41
14'	12	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.37 <sup>3</sup>	0.87 <sup>3</sup>	0.84 <sup>3</sup>	1.45 <sup>3</sup>	2.12 <sup>6</sup>	2.75 <sup>6</sup>	0.74 <sup>6</sup>	1.66	2.62	3.69	3.96	5.39	7.05	9.22	1.11	2.08	3.17	4.25	4.65	6.06	8.22	9.94
	16	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.48 <sup>3</sup>	0.32 <sup>3</sup>	1.04 <sup>3</sup>	1.58 <sup>3</sup>	2.31 <sup>3</sup>	0.28 <sup>6</sup>	1.19 <sup>6</sup>	2.09 <sup>7</sup>	3.21 <sup>7</sup>	3.37	4.86	6.34	8.58	0.69	1.66	2.72	3.85	4.19	5.65	7.77	9.49
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.32 <sup>2</sup>	0.65 <sup>2</sup>	1.56 <sup>2</sup>	0.00 <sup>3</sup>	0.32 <sup>6</sup>	1.13 <sup>6</sup>	2.34 <sup>6</sup>	2.29 <sup>6</sup>	3.89 <sup>6</sup>	5.04	7.39	0.00 <sup>6</sup>	0.85	1.87	3.09	3.28	4.87	6.87	8.62
16'	12	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.41 <sup>2</sup>	0.29 <sup>2</sup>	0.86 <sup>2</sup>	1.30 <sup>3</sup>	1.87 <sup>3</sup>	0.29 <sup>6</sup>	1.13 <sup>6</sup>	1.96 <sup>6</sup>	2.93 <sup>7</sup>	3.14	4.41	5.88	7.74	0.71	1.66	2.71	3.82	4.16	5.61	7.71	9.41
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.05 <sup>2</sup>	0.00 <sup>2</sup>	0.47 <sup>2</sup>	0.79 <sup>2</sup>	1.46 <sup>2</sup>	0.00 <sup>3</sup>	0.59 <sup>6</sup>	1.37 <sup>6</sup>	2.39 <sup>6</sup>	2.47 <sup>6</sup>	3.81 <sup>6</sup>	5.05	6.99	0.19 <sup>6</sup>	1.13	2.15	3.31	3.55	5.08	7.11	8.82
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.77 <sup>2</sup>	1.42 <sup>2</sup>	2.26 <sup>2</sup>	2.73 <sup>2</sup>	3.57 <sup>2</sup>	5.67 <sup>2</sup>	8.00 <sup>2</sup>	0.14 <sup>6</sup>	1.09 <sup>6</sup>	2.34 <sup>7</sup>	3.67 <sup>7</sup>	4.24	6.08	8.56	10.69
18'	12	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.10 <sup>2</sup>	0.00 <sup>2</sup>	0.44 <sup>2</sup>	0.72 <sup>2</sup>	1.25 <sup>2</sup>	0.00 <sup>3</sup>	0.63 <sup>3</sup>	1.34 <sup>6</sup>	2.19 <sup>6</sup>	2.35 <sup>6</sup>	3.46 <sup>6</sup>	4.69	6.25	0.28 <sup>6</sup>	1.20 <sup>7</sup>	2.20	3.33	3.59	5.08	7.10	8.77
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.08 <sup>2</sup>	0.25 <sup>2</sup>	0.87 <sup>2</sup>	0.00 <sup>2</sup>	0.06 <sup>3</sup>	0.70 <sup>3</sup>	1.63 <sup>3</sup>	1.62 <sup>3</sup>	2.82 <sup>3</sup>	3.80 <sup>3</sup>	5.47 <sup>3</sup>	0.00 <sup>6</sup>	0.57 <sup>6</sup>	1.53 <sup>7</sup>	2.71 <sup>7</sup>	2.86	4.42	6.35	8.02
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.23 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.65 <sup>2</sup>	0.35 <sup>3</sup>	1.72 <sup>3</sup>	2.25 <sup>3</sup>	4.10 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.29 <sup>6</sup>	1.56 <sup>6</sup>	1.51 <sup>6</sup>	3.22 <sup>6</sup>	4.94	6.62
20'	12	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.15 <sup>2</sup>	0.32 <sup>2</sup>	0.81 <sup>2</sup>	0.00 <sup>2</sup>	0.20 <sup>3</sup>	0.79 <sup>3</sup>	1.56 <sup>3</sup>	1.63 <sup>3</sup>	2.61 <sup>3</sup>	3.61 <sup>3</sup>	4.91 <sup>3</sup>	0.00 <sup>6</sup>	0.72 <sup>6</sup>	1.66 <sup>7</sup>	2.77 <sup>7</sup>	2.98	4.48	6.41	8.02
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.46 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.14 <sup>3</sup>	1.00 <sup>3</sup>	0.89 <sup>3</sup>	1.98 <sup>3</sup>	2.70 <sup>3</sup>	4.13 <sup>3</sup>	0.00 <sup>3</sup>	0.02 <sup>6</sup>	0.89 <sup>6</sup>	2.06 <sup>6</sup>	2.13 <sup>6</sup>	3.71 <sup>6</sup>	5.50	7.12
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.03 <sup>2</sup>	0.00 <sup>2</sup>	0.89 <sup>2</sup>	1.13 <sup>3</sup>	2.79 <sup>3</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.78 <sup>3</sup>	2.33 <sup>6</sup>	3.86 <sup>6</sup>	5.48 <sup>6</sup>	
30 psf		362S162								600S162								800S162							
8'	12	0.85	1.59	2.37	3.17	3.29	4.38	5.40	6.93	1.87	2.87	3.97	5.12	5.46	6.94	8.73	10.83	1.96	2.94	4.06	5.06	5.60	6.88	9.15	10.86
	16	0.50 <sup>7</sup>	1.21	1.97	2.82	2.86	4.01	4.99	6.57	1.65	2.66	3.74	4.92	5.22	6.74	8.47	10.61	1.79	2.77	3.89	4.91	5.42	6.73	8.98	10.70
	24	0.00 <sup>6</sup>	0.52 <sup>6</sup>	1.21 <sup>7</sup>	2.16 <sup>7</sup>	2.06	3.32	4.22	5.89	1.21	2.24	3.30	4.53	4.75	6.33	7.95	10.17	1.44	2.43	3.54	4.61	5.07	6.43	8.65	10.38
9'	12	0.53 <sup>6</sup>	1.21	1.92	2.68	2.76	3.77	4.78	6.13	1.68	2.68	3.77	4.94	5.25	6.75	8.49	10.62	1.82	2.79	3.91	4.94	5.45	6.75	9.01	10.72
	16	0.13 <sup>6</sup>	0.78 <sup>6</sup>	1.45 <sup>7</sup>	2.27 <sup>7</sup>	2.26	3.34	4.29	5.71	1.40	2.41	3.48	4.69	4.94	6.49	8.15	10.34	1.60	2.58	3.69	4.74	5.22	6.56	8.79	10.51
	24	0.00 <sup>3</sup>	0.02 <sup>6</sup>	0.61 <sup>6</sup>	1.54 <sup>6</sup>	1.36 <sup>6</sup>	2.57 <sup>6</sup>	3.40	4.91	0.86	1.89	2.92	4.19	4.34	5.97	7.49	9.77	1.17	2.16	3.26	4.36	4.77	6.18	8.37	10.11
10'	12	0.23 <sup>6</sup>	0.84 <sup>6</sup>	1.47 <sup>7</sup>	2.18 <sup>7</sup>	2.23	3.15	4.12	5.30	1.47	2.47	3.54	4.73	5.00	6.53	8.21	10.37	1.66	2.64	3.75	4.79	5.28	6.61	8.84	10.56
	16	0.00 <sup>3</sup>	0.38 <sup>6</sup>	0.96 <sup>6</sup>	1.74 <sup>6</sup>	1.69 <sup>7</sup>	2.69 <sup>7</sup>	3.58	4.82	1.13	2.14	3.19	4.41	4.62	6.20	7.79	10.01	1.39	2.37	3.48	4.55	4.99	6.37	8.57	10.30
	24	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.06 <sup>3</sup>	0.96 <sup>3</sup>	0.71 <sup>6</sup>	1.86 <sup>6</sup>	2.59 <sup>6</sup>	3.96 <sup>6</sup>	0.49 <sup>7</sup>	1.51	2.51	3.80	3.89	5.56	6.96	9.30	0.86	1.85	2.94	4.08	4.43	5.90	8.04	9.79
12'	12	0.00 <sup>2</sup>	0.20 <sup>3</sup>	0.67 <sup>6</sup>	1.29 <sup>6</sup>	1.27 <sup>6</sup>	2.03 <sup>6</sup>	2.85 <sup>7</sup>	3.70 <sup>7</sup>	0.98	1.96	2.99	4.17	4.41	5.98	7.51	9.73	1.29	2.26	3.36	4.44	4.87	6.25	8.44	10.17
	16	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.13 <sup>3</sup>	0.84 <sup>3</sup>	0.68 <sup>3</sup>	1.55 <sup>3</sup>	2.24 <sup>6</sup>	3.20 <sup>6</sup>	0.53 <sup>6</sup>	1.51	2.50	3.72	3.87	5.49	6.90	9.18	0.91	1.89	2.97	4.09	4.46	5.91	8.05	9.79
	24	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.05 <sup>2</sup>	0.00 <sup>2</sup>	0.71 <sup>2</sup>	1.19 <sup>3</sup>	2.32 <sup>3</sup>	0.00 <sup>6</sup>	0.67 <sup>6</sup>	1.58 <sup>7</sup>	2.88 <sup>7</sup>	2.85	4.58	5.73	8.14	0.18	1.16	2.21	3.41	3.66	5.22	7.28	9.04
14'	12	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.08 <sup>2</sup>	0.64 <sup>2</sup>	0.51 <sup>3</sup>	1.19 <sup>3</sup>	1.79 <sup>6</sup>	2.48 <sup>6</sup>	0.46 <sup>6</sup>	1.37 <sup>7</sup>	2.30	3.40	3.60	5.06	6.62	8.83	0.86	1.83	2.90	4.01	4.37	5.81	7.95	9.67
	16	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.21 <sup>2</sup>	0.00 <sup>2</sup>	0.73 <sup>2</sup>	1.19 <sup>3</sup>	2.00 <sup>3</sup>	0.00 <sup>6</sup>	0.83 <sup>6</sup>	1.70 <sup>6</sup>	2.85 <sup>6</sup>	2.92	4.46	5.81	8.09	0.37 <sup>7</sup>	1.33	2.38	3.54	3.82	5.34	7.41	9.14
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.15 <sup>2</sup>	1.16 <sup>2</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.60 <sup>6</sup>	1.85 <sup>6</sup>	1.69 <sup>6</sup>	3.35 <sup>6</sup>	4.32 <sup>7</sup>	6.74 <sup>7</sup>	0.00 <sup>6</sup>	0.38 <sup>7</sup>	1.38	2.64	2.75	4.42	6.35	8.12
16'	12	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.19 <sup>2</sup>	0.00 <sup>2</sup>	0.62 <sup>2</sup>	0.99 <sup>3</sup>	1.62 <sup>3</sup>	0.00 <sup>3</sup>	0.80 <sup>6</sup>	1.60 <sup>6</sup>	2.60 <sup>6</sup>	2.73 <sup>7</sup>	4.05 <sup>7</sup>	5.37	7.28	0.39 <sup>7</sup>	1.34	2.37	3.51	3.79			

# Allowable combined axial & lateral loads

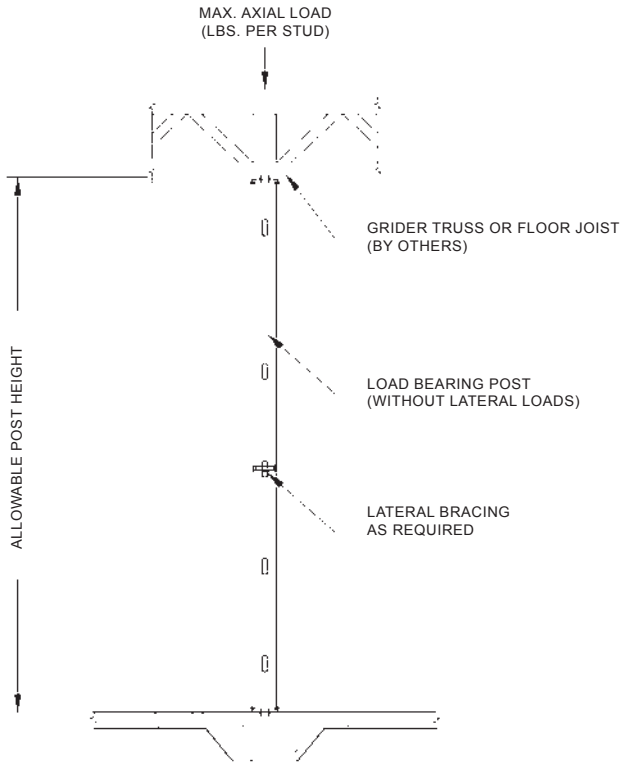
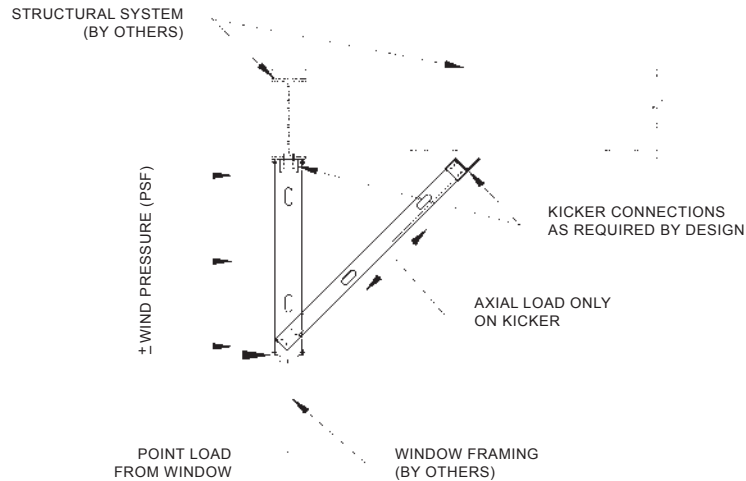
35 psf		362S162								600S162								800S162							
Stud Length	Spacing (in) o.c.	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi	-33 33 ksi	-43 33 ksi	-54 33 ksi	-54 50 ksi	-68 33 ksi	-68 50 ksi	-97 33 ksi	-97 50 ksi
8'	12	0.67 <sup>7</sup>	1.40	2.17	2.99	3.07	4.19	5.19	6.75	1.76	2.76	3.86	5.02	5.34	6.84	8.60	10.72	1.88	2.85	3.97	4.99	5.51	6.81	9.06	10.78
	16	0.27 <sup>6</sup>	0.98 <sup>7</sup>	1.71	2.59	2.58	3.77	4.73	6.34	1.50	2.51	3.59	4.79	5.06	6.60	8.29	10.47	1.67	2.65	3.77	4.81	5.30	6.63	8.87	10.59
	24	0.00 <sup>3</sup>	0.20 <sup>6</sup>	0.86 <sup>6</sup>	1.85 <sup>6</sup>	1.68 <sup>7</sup>	2.99 <sup>7</sup>	3.86	5.56	1.00	2.03	3.08	4.34	4.52	6.13	7.69	9.96	1.27	2.26	3.37	4.46	4.89	6.29	8.48	10.22
9'	12	0.33 <sup>6</sup>	0.99 <sup>7</sup>	1.68	2.47	2.51	3.55	4.53	5.92	1.54	2.55	3.63	4.81	5.09	6.62	8.32	10.48	1.71	2.69	3.80	4.84	5.33	6.66	8.90	10.62
	16	0.00 <sup>6</sup>	0.52 <sup>6</sup>	1.16 <sup>6</sup>	2.02 <sup>6</sup>	1.95 <sup>7</sup>	3.07 <sup>7</sup>	3.98	5.43	1.22	2.24	3.30	4.52	4.74	6.31	7.93	10.15	1.45	2.44	3.55	4.62	5.07	6.44	8.65	10.38
	24	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.22 <sup>6</sup>	1.20 <sup>6</sup>	0.94 <sup>6</sup>	2.21 <sup>6</sup>	2.98 <sup>7</sup>	4.55 <sup>7</sup>	0.60	1.63	2.65	3.94	4.05	5.72	7.16	9.49	0.95	1.95	3.04	4.17	4.54	6.00	8.15	9.90
10'	12	0.01 <sup>3</sup>	0.60 <sup>6</sup>	1.21 <sup>6</sup>	1.96 <sup>6</sup>	1.95 <sup>7</sup>	2.92 <sup>7</sup>	3.84	5.05	1.30	2.31	3.37	4.57	4.81	6.36	8.00	10.19	1.52	2.50	3.61	4.67	5.14	6.49	8.71	10.43
	16	0.00 <sup>3</sup>	0.10 <sup>3</sup>	0.65 <sup>6</sup>	1.47 <sup>6</sup>	1.34 <sup>6</sup>	2.40 <sup>6</sup>	3.23 <sup>7</sup>	4.52 <sup>7</sup>	0.91	1.93	2.96	4.21	4.37	5.98	7.51	9.77	1.21	2.20	3.30	4.39	4.81	6.21	8.40	10.13
	24	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.61 <sup>3</sup>	0.26 <sup>3</sup>	1.48 <sup>3</sup>	2.13 <sup>6</sup>	3.57 <sup>6</sup>	1.8 <sup>6</sup>	1.20	2.18	3.20	3.53	5.24	6.56	8.95	0.60	1.59	2.68	3.84	4.16	5.67	7.78	9.54
12'	12	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.40 <sup>3</sup>	1.06 <sup>3</sup>	0.96 <sup>6</sup>	1.78 <sup>6</sup>	2.54 <sup>6</sup>	3.45 <sup>6</sup>	0.75 <sup>7</sup>	1.73	2.74	3.94	4.14	5.73	7.20	9.45	1.09	2.07	3.17	4.27	4.66	6.08	8.25	9.98
	16	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.56 <sup>3</sup>	0.32 <sup>3</sup>	1.25 <sup>3</sup>	1.87 <sup>6</sup>	2.89 <sup>6</sup>	0.25 <sup>6</sup>	1.22	2.18	3.43	3.52	5.18	6.50	8.83	0.66	1.64	2.72	3.86	4.19	5.68	7.79	9.54
	24	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.34 <sup>2</sup>	1.71 <sup>3</sup>	1.92 <sup>3</sup>	0.00 <sup>3</sup>	0.28 <sup>6</sup>	1.14 <sup>6</sup>	2.48 <sup>6</sup>	2.37 <sup>7</sup>	4.15 <sup>7</sup>	5.17	7.65	0.00 <sup>7</sup>	0.80	1.84	3.08	3.27	4.89	6.90	8.67
14'	12	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.41 <sup>2</sup>	0.22 <sup>3</sup>	0.96 <sup>3</sup>	1.48 <sup>3</sup>	2.23 <sup>3</sup>	0.20 <sup>6</sup>	1.10 <sup>6</sup>	1.99 <sup>7</sup>	3.12 <sup>7</sup>	3.25	4.76	6.21	8.45	0.61	1.58	2.64	3.78	4.09	5.57	7.68	9.41
	16	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.45 <sup>2</sup>	0.82 <sup>3</sup>	1.70 <sup>3</sup>	0.00 <sup>3</sup>	0.49 <sup>6</sup>	1.32 <sup>6</sup>	2.50 <sup>6</sup>	2.50 <sup>7</sup>	4.07 <sup>7</sup>	5.29	7.62	0.05 <sup>6</sup>	1.01	2.04	3.24	3.46	5.03	7.05	8.80
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.79 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.10 <sup>3</sup>	1.39 <sup>3</sup>	1.12 <sup>6</sup>	2.84 <sup>6</sup>	3.63 <sup>6</sup>	6.11 <sup>6</sup>	0.00 <sup>6</sup>	0.00 <sup>6</sup>	0.90 <sup>7</sup>	2.21 <sup>7</sup>	2.24	3.97	5.84	7.62
16'	12	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.39 <sup>2</sup>	0.70 <sup>2</sup>	1.39 <sup>2</sup>	0.00 <sup>3</sup>	0.49 <sup>6</sup>	1.25 <sup>6</sup>	2.28 <sup>6</sup>	2.34 <sup>6</sup>	3.70 <sup>6</sup>	4.90	6.85	0.00 <sup>6</sup>	1.02 <sup>7</sup>	2.04	3.21	3.44	4.97	6.99	8.70
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.09 <sup>2</sup>	0.90 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.50 <sup>3</sup>	1.61 <sup>3</sup>	1.49 <sup>6</sup>	2.94 <sup>6</sup>	3.85 <sup>6</sup>	5.92 <sup>6</sup>	0.00 <sup>6</sup>	0.33 <sup>6</sup>	1.30 <sup>7</sup>	2.53 <sup>7</sup>	2.64	4.27	6.18	7.91
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.05 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.41 <sup>2</sup>	0.00 <sup>3</sup>	1.61 <sup>3</sup>	2.02 <sup>6</sup>	4.28 <sup>6</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>6</sup>	1.27 <sup>6</sup>	1.15 <sup>6</sup>	2.96 <sup>6</sup>	4.65	6.40
18'	12	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.02 <sup>1</sup>	0.17 <sup>2</sup>	0.80 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.58 <sup>3</sup>	1.53 <sup>3</sup>	1.49 <sup>6</sup>	2.71 <sup>6</sup>	3.64 <sup>6</sup>	5.32 <sup>6</sup>	0.00 <sup>6</sup>	0.45 <sup>6</sup>	1.40 <sup>7</sup>	2.59 <sup>7</sup>	2.72	4.30	6.20	7.87
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.35 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.83 <sup>2</sup>	0.59 <sup>3</sup>	1.93 <sup>3</sup>	2.54 <sup>6</sup>	4.36 <sup>6</sup>	0.00 <sup>3</sup>	0.00 <sup>6</sup>	0.53 <sup>6</sup>	1.78 <sup>6</sup>	1.77 <sup>6</sup>	3.45 <sup>6</sup>	5.21	6.89
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.58 <sup>2</sup>	0.65 <sup>3</sup>	2.70 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.33 <sup>3</sup>	0.04 <sup>6</sup>	1.90 <sup>6</sup>	3.39 <sup>6</sup>
20'	12	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.39 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.02 <sup>2</sup>	0.89 <sup>2</sup>	0.75 <sup>3</sup>	1.86 <sup>3</sup>	2.53 <sup>6</sup>	3.99 <sup>6</sup>	0.00 <sup>3</sup>	0.00 <sup>6</sup>	0.75 <sup>6</sup>	1.92 <sup>6</sup>	1.97 <sup>6</sup>	3.57 <sup>6</sup>	5.33	6.94
	16	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.21 <sup>2</sup>	0.00 <sup>2</sup>	1.09 <sup>2</sup>	1.43 <sup>3</sup>	3.04 <sup>3</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	1.02 <sup>3</sup>	0.89 <sup>6</sup>	2.59 <sup>6</sup>	4.18 <sup>6</sup>	5.80 <sup>6</sup>
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	1.44 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.87 <sup>3</sup>	2.11 <sup>6</sup>	3.75 <sup>6</sup>
40 psf		362S162								600S162								800S162							
8'	12	0.50 <sup>7</sup>	1.21	1.97	2.82	2.86	4.01	4.99	6.57	1.65	2.66	3.74	4.92	5.22	6.74	8.47	10.61	1.79	2.77	3.89	4.91	5.42	6.73	8.98	10.70
	16	0.06 <sup>6</sup>	0.75 <sup>6</sup>	1.46 <sup>7</sup>	2.37 <sup>7</sup>	2.31	3.54	4.47	6.11	1.36	2.37	3.45	4.66	4.91	6.47	8.12	10.32	1.56	2.54	3.66	4.71	5.18	6.53	8.76	10.49
	24	0.00 <sup>3</sup>	0.00 <sup>6</sup>	0.52 <sup>6</sup>	1.56 <sup>6</sup>	1.31 <sup>6</sup>	2.68 <sup>6</sup>	3.50	5.25	0.79	1.82	2.86	4.15	4.28	5.93	7.43	9.74	1.10	2.10	3.20	4.31	4.71	6.14	8.32	10.06
9'	12	0.13 <sup>6</sup>	0.78 <sup>6</sup>	1.45 <sup>7</sup>	2.27 <sup>7</sup>	2.26	3.34	4.29	5.71	1.40	2.41	3.48	4.69	4.94	6.49	8.15	10.34	1.60	2.58	3.69	4.74	5.22	6.56	8.79	10.51
	16	0.00 <sup>3</sup>	0.26 <sup>6</sup>	0.88 <sup>6</sup>	1.77 <sup>6</sup>	1.65 <sup>7</sup>	2.82 <sup>7</sup>	3.68	5.17	1.04	2.06	3.11	4.35	4.54	6.14	7.71	9.96	1.31	2.30	3.40	4.49	4.92	6.31	8.51	10.24
	24	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.00 <sup>3</sup>	0.87 <sup>3</sup>	0.54 <sup>6</sup>	1.86 <sup>6</sup>	2.58 <sup>6</sup>	4.19 <sup>6</sup>	0.35 <sup>7</sup>	1.38	2.38	3.70	3.76	5.46	6.84	9.22	0.74	1.74	2.83	3.98	4.32	5.81	7.94	9.70
10'	12	0.00 <sup>3</sup>	0.38 <sup>6</sup>	0.96 <sup>6</sup>	1.74 <sup>6</sup>	1.69 <sup>7</sup>	2.69 <sup>7</sup>	3.58	4.82	1.13	2.14	3.19	4.41	4.62	6.20	7.79	10.01	1.39	2.37	3.48	4.55	4.99	6.37	8.57	10.30
	16	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.35 <sup>6</sup>	1.21 <sup>6</sup>	1.02 <sup>6</sup>	2.12 <sup>6</sup>	2.90 <sup>7</sup>	4.24 <sup>7</sup>	0.70	1.71	2.73	4.00	4.13	5.77	7.23	9.53	1.03	2.02	3.12	4.23	4.62	6.05	8.22	9.96
	24	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>3</sup>	0.27 <sup>3</sup>	0.00 <sup>3</sup>	1.12 <sup>3</sup>	1.70 <sup>6</sup>	3.19 <sup>6</sup>	0.00 <sup>6</sup>	0.90 <sup>7</sup>	1.85	3.21	3.18	4.94	6.16	8.61	0.34	1.34	2.41	3.61	3.88	5.43	7.52	9.29
12'	12	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.13 <sup>3</sup>	0.84 <sup>3</sup>	0.68 <sup>3</sup>	1.55 <sup>3</sup>	2.24 <sup>6</sup>	3.20 <sup>6</sup>	0.53 <sup>6</sup>	1.51	2.50	3.72	3.87	5.49	6.90	9.18	0.91	1.89	2.97	4.09	4.46	5.91	8.05	9.79
	16	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.30 <sup>2</sup>	0.00 <sup>3</sup>	0.97 <sup>3</sup>	1.52 <sup>3</sup>	2.60 <sup>3</sup>	0.00 <sup>6</sup>	0.94 <sup>6</sup>	1.87 <sup>7</sup>	3.15 <sup>7</sup>	3.18	4.88	6.11	8.48	0.41	1.40	2.46	3.64	3.92	5.45	7.53	9.29
	24	0.00 <sup>1</sup>	0.00 <sup>1</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.00 <sup>2</sup>	0.26 <sup>2</sup>	1.55 <sup>2</sup>	0.00 <sup>3</sup>	0.00 <sup>6</sup>	0.72 <sup>6</sup>	2.10 <sup>6</sup>	1.90 <sup>6</sup>	3.73 <sup>6</sup>	4.63	7.17	0.00 <sup>6</sup>	0.45	1.47	2.76	2.88	4.56	6.52	8.31
14'	12																								

# Support structure load-bearing

Member	Fy (ksi)	Length (ft)										
		2	2.5	3	3.5	4	5	6	8	10	12	14
362S162-33	33	2959	2838	2686	2497	2290	1870	1473	914	626	464*	366*
362S162-43	33	4124	3910	3667	3404	3130	2578	2059	1275	892	683*	510*
362S162-54	33	5360	5085	4775	4441	4096	3386	2707	1729	1213	842*	619*
362S162-54	50	7437	6867	6244	5599	4956	3755	2748	1729	1213	842*	619*
362S162-68	33	6874	6497	6080	5642	5198	4343	3584	2276	1457*	1012*	743*
362S162-68	50	9678	8949	8159	7311	6458	4919	3705	2276	1457*	1012*	743*
362S162-97	33	9452	8973	8461	7941	7432	6270	5002	2926	1873*	1300*	955*
362S162-97	50	13582	12552	11483	10431	9435	7292	5202	2926	1873*	1300*	955*
600S162-33	33	3077	2991	2869	2730	2556	2177	1791	1131	774*	569*	439*
600S162-43	33	4367	4194	3992	3766	3522	3002	2472	1568	1078*	793*	611*
600S162-54	33	5780	5550	5281	4980	4655	3962	3257	2064	1417*	1037*	769*
600S162-54	50	7891	7494	6945	6349	5727	4479	3348	2064	1417*	1037*	769*
600S162-68	33	7721	7407	7041	6633	6192	5251	4294	2699	1814*	1259*	925*
600S162-68	50	10590	9939	9198	8397	7561	5885	4387	2699	1814*	1259*	925*
600S162-97	33	12067	11544	10936	10257	9525	7968	6389	3664	2345*	1628*	1628*
600S162-97	50	16445	15379	14169	12862	11503	8788	6457	3664	2345*	1628*	1628*
800S162-33	33	3076	2976	2842	2683	2491	2086	1683	1048	724*	537*	537*
800S162-43	33	4369	4178	3957	3711	3447	2890	2336	1469	1022*	762*	762*
800S162-54	33	5809	5554	5259	4931	4579	3838	3099	1958	1367*	1020*	1020*
800S162-54	50	7904	7421	6823	6181	5518	4214	3127	1958	1367*	1020*	1020*
800S162-68	33	7813	7466	7063	6617	6138	5132	4129	2611	1822*	1352*	1352*
800S162-68	50	10608	9892	9085	8220	7328	5577	4150	2611	1822*	1352*	1352*
800S162-97	33	12443	11863	11191	10448	9652	7983	6326	3954	2609*	1812*	1812*
800S162-97	50	16697	15521	14200	12787	11335	8484	6326	3954	2609*	1812*	1812*

### Pure axial load table notes:

1. Allowable loads are expressed in lbs.
2. Allowable axial loads do not include a 1/3 allowable stress increase.
3. Allowable axial loads are based upon punched webs. Punchout is a 4" long by 1.5" high oval.
4. Allowable axial loads are based upon concentric [i.e. no eccentricity] axial loading.
5. Where noted <sup>\*\*</sup>, the maximum slenderness ratio, KL/r exceeds 200. Reference NASPEC Commentary section C4 (F).
6. The lengths indicated are for unbraced lengths. The addition of intermediate bracing may increase the allowable axial loads.



ALLOWABLE POST HEIGHT

# Floor joist — span limitations

These tables provide the span limitations for members under given live and dead load conditions.

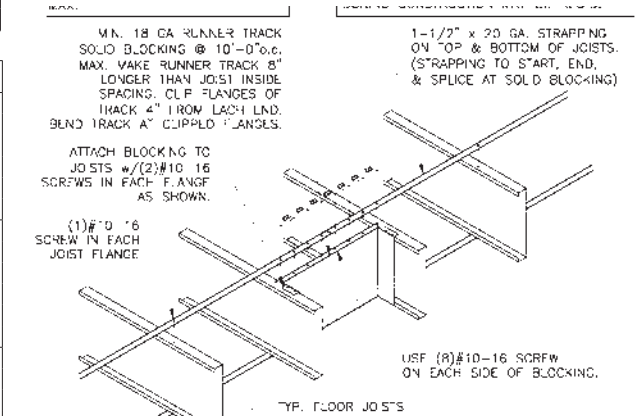
10 psf dead load and 40 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
600S162-33	33	12' 4" e	10' 8" e	8' 9" e	12' 4" i	10' 8" a	8' 1" a
600S200-33	33	12' 10" e	11' 1" e	9' 1" e	12' 10" a	10' 11" a	8' 3" a
600S162-43	33	13' 8" e	12' 5" e	10' 7" e	14' 11" i	12' 11" i	10' 7" i
600S200-43	33	14' 4" e	13' 0" e	10' 9" e	15' 2" i	13' 2" i	10' 9" a
600S250-43	33	15' 0" e	13' 6" e	11' 0" e	15' 7" i	13' 6" i	11' 0" a
600S162-54	33	14' 7" e	13' 3" e	11' 7" e	16' 5" i	14' 7" i	11' 11" i
600S162-54	50	14' 7" e	13' 3" e	11' 7" e	16' 5" i	14' 11" i	13' 0" i
600S200-54	33	15' 4" e	14' 0" e	12' 2" e	17' 3" i	15' 6" i	12' 8" i
600S200-54	50	15' 4" e	14' 0" e	12' 2" e	17' 3" i	15' 8" i	13' 8" i
600S250-54	33	16' 1" e	14' 8" e	12' 4" e	17' 6" i	15' 2" i	12' 4" i
600S250-54	50	16' 0" e	14' 7" e	12' 9" e	18' 0" i	16' 4" i	14' 3" i
600S162-68	33	15' 8" e	14' 3" e	12' 5" e	17' 7" i	16' 0" i	13' 4" i
600S162-68	50	15' 8" e	14' 3" e	12' 5" e	17' 7" i	16' 0" i	14' 0" i
600S200-68	33	16' 6" e	15' 0" e	13' 1" e	18' 6" i	16' 10" i	14' 3" i
600S200-68	50	16' 6" e	15' 0" e	13' 1" e	18' 6" i	16' 10" i	14' 8" i
600S250-68	33	17' 3" e	15' 8" e	13' 9" e	19' 5" i	17' 8" i	14' 10" i
600S250-68	50	17' 3" e	15' 8" e	13' 9" e	19' 5" i	17' 8" i	15' 5" i
600S162-97	33	17' 4" e	15' 9" e	13' 9" e	19' 6" i	17' 9" i	15' 6" i
600S162-97	50	17' 4" e	15' 9" e	13' 9" e	19' 6" i	17' 9" i	15' 6" i
600S200-97	33	18' 4" e	16' 8" e	14' 6" e	20' 7" i	18' 8" i	16' 4" i
600S200-97	50	18' 4" e	16' 8" e	14' 6" e	20' 7" i	18' 8" i	16' 4" i
600S250-97	33	19' 3" e	17' 6" e	15' 3" e	21' 7" i	19' 7" i	17' 2" i
600S250-97	50	19' 3" e	17' 6" e	15' 3" e	21' 7" i	19' 7" i	17' 2" i

10 psf dead load and 40 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
800S162-33	33	13' 8" e	11' 10" e	9' 6" e	12' 4" a	10' 0" a	7' 3" a
800S200-33	33	14' 8" e	12' 8" e	9' 6" e	12' 9" a	10' 4" a	7' 6" a
800S162-43	33	16' 5" e	14' 2" e	11' 7" e	16' 5" i	14' 2" i	11' 7" a
800S200-43	33	18' 0" e	16' 0" e	13' 1" e	18' 5" i	16' 0" a	12' 7" a
800S250-43	33	18' 7" e	16' 1" e	13' 2" e	18' 7" i	16' 1" a	12' 7" a
800S162-54	33	18' 5" e	16' 3" e	13' 3" e	18' 9" i	16' 3" i	13' 3" i
800S162-54	50	18' 3" e	16' 7" e	14' 6" e	20' 6" i	18' 8" i	15' 8" i
800S200-54	33	19' 4" e	17' 6" e	15' 4" e	21' 8" i	18' 11" i	15' 5" a
800S200-54	50	19' 4" e	17' 6" e	15' 4" e	21' 8" i	19' 8" i	17' 2" i
800S250-54	33	20' 2" e	18' 3" e	15' 0" e	21' 3" i	18' 5" i	15' 0" i
800S250-54	50	20' 1" e	18' 3" e	15' 11" e	22' 6" i	20' 5" i	17' 5" i
800S162-68	33	19' 9" e	18' 0" e	15' 2" e	21' 5" i	18' 6" i	15' 2" i
800S162-68	50	19' 9" e	18' 0" e	15' 8" e	22' 2" i	20' 2" i	17' 7" i
800S200-68	33	20' 9" e	18' 10" e	16' 5" e	23' 3" i	21' 2" i	17' 5" i
800S200-68	50	20' 9" e	18' 10" e	16' 5" e	23' 3" i	21' 2" i	18' 6" i
800S250-68	33	21' 8" e	19' 8" e	17' 2" e	24' 3" i	22' 0" i	17' 11" i
800S250-68	50	21' 7" e	19' 8" e	17' 2" e	24' 3" i	22' 1" i	19' 3" i
800S162-97	33	22' 0" e	20' 0" e	17' 5" e	24' 8" i	22' 5" i	19' 7" i
800S162-97	50	22' 0" e	20' 0" e	17' 5" e	24' 8" i	22' 5" i	19' 7" i
800S200-97	33	23' 1" e	20' 11" e	18' 4" e	25' 11" i	23' 6" i	20' 6" i
800S200-97	50	23' 1" e	20' 11" e	18' 4" e	25' 11" i	23' 6" i	20' 6" i
800S250-97	33	24' 1" e	21' 11" e	19' 1" e	27' 1" i	24' 7" i	21' 6" i
800S250-97	50	24' 1" e	21' 11" e	19' 1" e	27' 1" i	24' 7" i	21' 6" i

10 psf dead load and 40 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1000S162-43	33	18' 6" e	16' 1" e	13' 1" e	18' 6" a	15' 3" a	11' 4" a
1000S200-43	33	19' 8" e	17' 1" e	13' 11" e	19' 4" a	15' 9" a	11' 8" a
1000S250-43	33	20' 8" e	17' 10" e	14' 7" e	19' 11" a	16' 2" a	12' 0" a
1000S162-54	33	21' 4" e	18' 5" e	15' 1" e	21' 4" i	18' 5" i	15' 1" a
1000S162-54	50	21' 9" e	19' 9" e	17' 3" e	24' 5" i	21' 8" i	17' 9" i
1000S200-54	33	22' 10" e	19' 10" e	16' 2" e	22' 10" i	19' 10" i	16' 2" a
1000S200-54	50	22' 9" e	20' 8" e	18' 1" e	25' 6" i	22' 7" i	18' 5" i
1000S250-54	33	24' 0" e	21' 3" e	17' 4" e	24' 6" i	21' 3" i	17' 4" a
1000S250-54	50	24' 0" e	21' 10" e	19' 1" e	26' 11" i	23' 9" i	19' 1" i
1000S162-68	33	23' 9" e	21' 2" e	17' 4" e	24' 6" i	21' 2" i	17' 4" i
1000S162-68	50	23' 7" e	21' 5" e	18' 8" e	26' 6" i	24' 0" i	20' 9" i
1000S200-68	33	24' 9" e	22' 6" e	18' 6" e	26' 2" i	22' 8" i	18' 6" i
1000S200-68	50	24' 7" e	22' 4" e	19' 7" e	27' 8" i	25' 1" i	21' 11" i
1000S250-68	33	25' 10" e	23' 5" e	20' 6" e	29' 0" i	25' 8" i	21' 0" i
1000S250-68	50	25' 10" e	23' 5" e	20' 6" e	29' 0" i	26' 4" i	23' 0" i
1000S162-97	33	26' 6" e	24' 1" e	21' 0" e	29' 9" i	25' 11" i	21' 2" i
1000S162-97	50	26' 6" e	24' 1" e	21' 0" e	29' 9" i	27' 0" i	23' 7" i
1000S200-97	33	27' 8" e	25' 1" e	21' 11" e	31' 0" i	27' 8" i	22' 7" i
1000S200-97	50	27' 8" e	25' 1" e	21' 11" e	31' 0" i	28' 2" i	24' 8" i
1000S250-97	33	28' 9" e	26' 2" e	22' 10" e	32' 4" i	29' 4" i	25' 7" i
1000S250-97	50	28' 9" e	26' 2" e	22' 10" e	32' 4" i	29' 4" i	25' 8" i

10 psf dead load and 40 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1200S162-54	33	23' 7" e	20' 5" e	16' 8" e	23' 7" a	20' 5" a	16' 2" a
1200S162-54	50	25' 0" e	22' 9" e	19' 7" e	27' 8" a	23' 8" a	17' 9" a
1200S200-54	33	25' 3" e	21' 11" e	17' 10" e	25' 3" a	21' 11" a	16' 10" a
1200S200-54	50	26' 2" e	23' 9" e	20' 4" e	28' 9" a	24' 3" a	18' 2" a
1200S250-54	33	25' 7" e	22' 2" e	18' 1" e	25' 7" a	22' 2" a	17' 0" a
1200S250-54	50	27' 2" e	24' 9" e	20' 9" e	29' 3" a	24' 6" a	18' 4" a
1200S162-68	33	27' 3" e	23' 7" e	19' 3" e	27' 3" i	23' 7" i	19' 3" i
1200S162-68	50	27' 2" e	24' 8" e	21' 7" e	30' 6" i	27' 9" i	23' 0" i
1200S200-68	33	28' 7" e	25' 2" e	20' 7" e	29' 1" i	25' 2" i	20' 7" i
1200S200-68	50	28' 4" e	25' 9" e	22' 6" e	31' 10" i	28' 11" i	24' 4" i
1200S250-68	33	29' 8" e	26' 3" e	21' 6" e	30' 4" i	26' 3" i	21' 6" i
1200S250-68	50	29' 6" e	26' 10" e	23' 5" e	33' 2" i	30' 0" i	24' 6" i
1200S162-97	33	30' 11" e	28' 1" e	23' 11" e	33' 9" i	29' 3" i	23' 11" i
1200S162-97	50	30' 10" e	28' 0" e	24' 5" e	34' 7" i	31' 5" i	27' 5" i
1200S200-97	33	32' 2" e	29' 3" e	25' 5" e	35' 11" i	31' 1" i	25' 5" i
1200S200-97	50	32' 1" e	29' 2" e	25' 5" e	36' 0" i	32' 9" i	28' 7" i
1200S250-97	33	33' 4" e	30' 4" e	26' 6" e	37' 6" i	32' 11" i	26' 11" i
1200S250-97	50	33' 4" e	30' 3" e	26' 5" e	37' 5" i	34' 0" i	29' 8" i

10 psf dead load and 40 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1400S162-54	33	25' 8" e	22' 2" e	18' 2" e	25' 8" a	21' 3" a	15' 10" a
1400S162-54	50	28' 2" e	25' 7" e	21' 3" e	28' 6" a	23' 2" a	17' 1" a
1400S200-54	33	27' 6" e	23' 10" e	19' 5" e	27' 1" a	22' 1" a	16' 5" a
1400S200-54	50	29' 4" e	26' 8" e	22' 1" e	29' 2" a	23' 8" a	17' 5" a
1400S250-54	33	27' 9" e	24' 1" e	19' 8" e	27' 3" a	22' 3" a	16' 6" a
1400S250-54	50	30' 7" e	27' 6" e	22' 5" e	29' 6" a	23' 11" a	17' 7" a
1400S162-68	33	29' 9" e	25' 9" e	21' 0" e	29' 9" i	25' 9" i	21' 0" i
1400S162-68	50	30' 8" e	27' 10" e	24' 4" e	34' 5" i	30' 8" i	25' 0" i
1400S200-68	33	31' 9" e	27' 6" e	22' 5" e	31' 9" i	27' 6" i	22' 5" a
1400S200-68	50	31' 11" e	29' 0" e	25' 4" e	35' 10" i	32' 5" i	26' 5" i
1400S250-68	33	33' 1" e	28' 7" e	23' 4" e	33' 1" i	28' 7" i	23' 4" a
1400S250-68	50	33' 3" e	30' 2" e	26' 4" e	37' 4" i	32' 7" i	26' 7" i
1400S162-97	33	35' 3" e	32' 0" e	26' 4" e	37' 2" i	32' 2" i	26' 4" i
1400S162-97	50	34' 11" e	31' 8" e	27' 8" e	39' 2" i	35' 7" i	31' 1" i
1400S200-97	33	36' 7" e	33' 2" e	27' 11" e	39' 6" i	34' 2" i	27' 11" i
1400S200-97	50	36' 3" e	32' 11" e	28' 9" e	40' 8" i	37' 0" i	32' 4" i
1400S250-97	33	37' 10" e	34' 5" e	29' 6" e	41' 9" i	36' 2" i	29' 6" i
1400S250-97	50	37' 7" e	34' 2" e	29' 10" e	42' 3" i	38' 4" i	33' 6" i



### Joist table notes:

- Joist deflection limitations are based upon L/240 for the total load [TL] and L/360 for live load [LL].
- For two equal, continuous span conditions, alternate span live load has been considered.
- For two equal, continuous span conditions, the listed span is the distance from either end support to the center support.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
- The yield stress [33 ksi or 50 ksi] used to calculate tabulated values is

- indicated in each table. For 50 ksi material to be provided, it needs to be indicated at the time of ordering.
- Spans are based upon continuous support of the compression flange.
- Spans noted with an:
  - "e" require web stiffeners at end supports
  - "i" requires web stiffeners at interior supports
  - "a" requires web stiffeners at all three supports.
- A 3.5" bearing length was used at all support locations in the preparation of these tables.
- Web punchouts were not considered for allowable shear or web crippling considerations.

- The punchout pattern for ClarkWestern joists is a 4" long by 1.5" high oval.
- Unpunched joists are available, but must be indicated when ordering.
- Web punchouts located near a bearing location may need reinforcement.
- Joists must be restrained against rotation at all supports.
- Joist bridging opposite the sheathed flange is recommended at a maximum of 8 feet o.c. when sheathing is applied to only the compression flange.

# Floor joist — span limitations

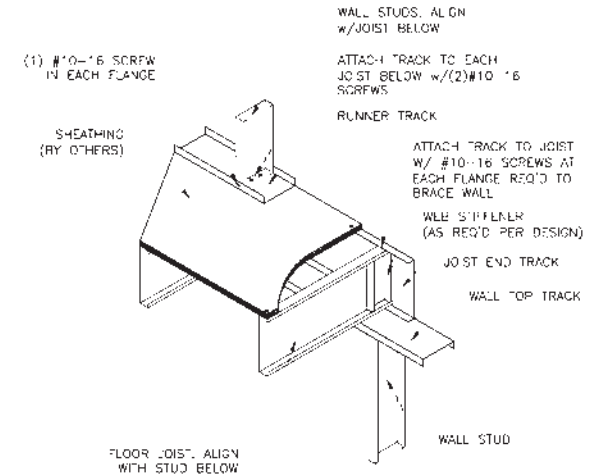
10 psf dead load and 50 psf live load			L/360 live load deflection				
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
600S162-33	33	11' 3" e	9' 9" e	8' 0" e	11' 3" a	9' 5" a	7' 1" a
600S200-33	33	11' 8" e	10' 1" e	8' 3" e	11' 8" a	9' 8" a	7' 2" a
600S162-43	33	12' 8" e	11' 6" e	9' 8" e	13' 7" i	11' 9" i	9' 8" a
600S200-43	33	13' 3" e	12' 0" e	9' 9" e	13' 10" i	12' 0" i	9' 9" a
600S250-43	33	13' 11" e	12' 4" e	10' 0" e	14' 2" i	12' 4" i	10' 0" a
600S162-54	33	13' 7" e	12' 4" e	10' 9" e	15' 3" i	13' 3" i	10' 10" i
600S162-54	50	13' 7" e	12' 4" e	10' 9" e	15' 3" i	13' 10" i	12' 1" i
600S200-54	33	14' 3" e	13' 0" e	11' 4" e	16' 0" i	14' 2" i	11' 7" i
600S200-54	50	14' 3" e	13' 0" e	11' 4" e	16' 0" i	14' 7" i	12' 9" i
600S250-54	33	14' 11" e	13' 7" e	11' 3" e	15' 11" i	13' 10" i	11' 3" i
600S250-54	50	14' 11" e	13' 6" e	11' 10" e	16' 8" i	15' 2" i	13' 3" i
600S162-68	33	14' 7" e	13' 3" e	11' 7" e	16' 4" i	14' 10" i	12' 2" i
600S162-68	50	14' 7" e	13' 3" e	11' 7" e	16' 4" i	14' 10" i	13' 0" i
600S200-68	33	15' 4" e	13' 11" e	12' 2" e	17' 2" i	15' 7" i	13' 0" i
600S200-68	50	15' 4" e	13' 11" e	12' 2" e	17' 2" i	15' 7" i	13' 8" i
600S250-68	33	16' 1" e	14' 7" e	12' 9" e	18' 0" i	16' 4" i	13' 6" i
600S250-68	50	16' 1" e	14' 7" e	12' 9" e	18' 0" i	16' 4" i	14' 4" i
600S162-97	33	16' 2" e	14' 8" e	12' 10" e	18' 1" i	16' 5" i	14' 4" i
600S162-97	50	16' 2" e	14' 8" e	12' 10" e	18' 1" i	16' 5" i	14' 4" i
600S200-97	33	17' 0" e	15' 5" e	13' 6" e	19' 1" i	17' 4" i	15' 2" i
600S200-97	50	17' 0" e	15' 5" e	13' 6" e	19' 1" i	17' 4" i	15' 2" i
600S250-97	33	17' 10" e	16' 3" e	14' 2" e	20' 0" i	18' 2" i	15' 11" i
600S250-97	50	17' 10" e	16' 3" e	14' 2" e	20' 0" i	18' 2" i	15' 11" i

10 psf dead load and 50 psf live load			L/360 live load deflection				
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
800S162-33	33	12' 6" e	10' 10" e	7' 11" e	10' 9" a	8' 8" a	6' 3" a
800S200-33	33	13' 5" e	11' 7" e	7' 11" e	11' 2" a	8' 11" a	6' 4" a
800S162-43	33	15' 0" e	12' 11" e	10' 7" e	15' 0" i	12' 11" a	10' 3" a
800S200-43	33	16' 8" e	14' 7" e	11' 11" e	16' 10" i	14' 7" a	11' 0" a
800S250-43	33	17' 0" e	14' 8" e	12' 0" e	17' 0" a	14' 8" a	11' 1" a
800S162-54	33	17' 1" e	14' 10" e	12' 1" e	17' 1" i	14' 10" i	12' 1" i
800S162-54	50	17' 0" e	15' 5" e	13' 6" e	19' 1" i	17' 4" i	14' 4" i
800S200-54	33	17' 11" e	16' 3" e	14' 1" e	19' 11" i	17' 3" i	14' 1" a
800S200-54	50	17' 11" e	16' 3" e	14' 3" e	20' 1" i	18' 3" i	15' 9" i
800S250-54	33	18' 8" e	16' 9" e	13' 8" e	19' 5" i	16' 9" i	13' 8" a
800S250-54	50	18' 7" e	16' 11" e	14' 9" e	20' 11" i	19' 0" i	15' 11" i
800S162-68	33	18' 4" e	16' 8" e	13' 10" e	19' 6" i	16' 11" i	13' 10" i
800S162-68	50	18' 4" e	16' 8" e	14' 7" e	20' 7" i	18' 9" i	16' 4" i
800S200-68	33	19' 3" e	17' 6" e	15' 3" e	21' 7" i	19' 5" i	15' 10" i
800S200-68	50	19' 3" e	17' 6" e	15' 3" e	21' 7" i	19' 7" i	17' 2" i
800S250-68	33	20' 1" e	18' 3" e	15' 11" e	22' 7" i	20' 1" i	16' 5" i
800S250-68	50	20' 1" e	18' 3" e	15' 11" e	22' 6" i	20' 6" i	17' 11" i
800S162-97	33	20' 5" e	18' 6" e	16' 2" e	22' 11" i	20' 10" i	18' 0" i
800S162-97	50	20' 5" e	18' 6" e	16' 2" e	22' 11" i	20' 10" i	18' 2" i
800S200-97	33	21' 5" e	19' 5" e	17' 0" e	24' 0" i	21' 10" i	19' 0" i
800S200-97	50	21' 5" e	19' 5" e	17' 0" e	24' 0" i	21' 10" i	19' 1" i
800S250-97	33	22' 4" e	20' 4" e	17' 9" e	25' 1" i	22' 10" i	19' 11" i
800S250-97	50	22' 4" e	20' 4" e	17' 9" e	25' 1" i	22' 10" i	19' 11" i

10 psf dead load and 50 psf live load			L/360 live load deflection				
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1000S162-43	33	16' 11" e	14' 8" e	11' 11" e	16' 5" a	13' 4" a	9' 11" a
1000S200-43	33	18' 0" e	15' 7" e	12' 8" e	17' 0" a	13' 10" a	10' 2" a
1000S250-43	33	18' 10" e	16' 4" e	13' 4" e	17' 6" a	14' 2" a	10' 5" a
1000S162-54	33	19' 5" e	16' 10" e	13' 9" e	19' 5" i	16' 10" i	13' 9" a
1000S162-54	50	20' 2" e	18' 4" e	16' 0" e	22' 8" i	19' 10" i	15' 11" i
1000S200-54	33	20' 10" e	18' 1" e	14' 9" e	23' 10" i	18' 1" i	14' 9" a
1000S200-54	50	21' 1" e	19' 2" e	16' 9" e	20' 8" i	20' 8" i	16' 4" i
1000S250-54	33	22' 4" e	19' 4" e	15' 10" e	22' 4" i	19' 4" a	15' 8" a
1000S250-54	50	22' 3" e	20' 3" e	17' 8" e	25' 0" i	21' 8" i	16' 10" i
1000S162-68	33	22' 1" e	19' 4" e	15' 10" e	22' 4" i	19' 4" i	15' 10" i
1000S162-68	50	21' 11" e	19' 11" e	17' 4" e	24' 7" i	22' 4" i	18' 11" i
1000S200-68	33	23' 0" e	20' 9" e	16' 11" e	23' 11" i	20' 9" i	16' 11" i
1000S200-68	50	22' 10" e	20' 9" e	18' 2" e	25' 8" i	23' 4" i	20' 1" i
1000S250-68	33	24' 0" e	21' 9" e	19' 0" e	26' 11" i	23' 5" i	19' 2" a
1000S250-68	50	24' 0" e	21' 9" e	19' 0" e	26' 11" i	24' 5" i	21' 4" i
1000S162-97	33	24' 7" e	22' 4" e	19' 4" e	27' 4" i	23' 8" i	19' 4" i
1000S162-97	50	24' 7" e	22' 4" e	19' 6" e	27' 7" i	25' 1" i	21' 11" i
1000S200-97	33	25' 8" e	23' 4" e	20' 4" e	28' 10" i	25' 3" i	20' 7" i
1000S200-97	50	25' 8" e	23' 4" e	20' 4" e	28' 10" i	26' 2" i	22' 10" i
1000S250-97	33	26' 9" e	24' 3" e	21' 2" e	30' 0" i	27' 3" i	23' 5" i
1000S250-97	50	26' 9" e	24' 3" e	21' 2" e	30' 0" i	27' 3" i	23' 10" i

10 psf dead load and 50 psf live load			L/360 live load deflection				
1200S162-54	33	21' 6" e	18' 8" e	15' 3" e	21' 6" a	18' 8" a	14' 3" a
1200S162-54	50	23' 2" e	21' 1" e	17' 10" e	25' 3" a	20' 10" a	15' 6" a
1200S200-54	33	23' 1" e	20' 0" e	16' 4" e	23' 1" a	19' 9" a	14' 10" a
1200S200-54	50	24' 3" e	22' 0" e	18' 7" e	26' 1" a	21' 4" a	15' 10" a
1200S250-54	33	23' 4" e	20' 3" e	16' 6" e	23' 4" a	19' 10" a	14' 11" a
1200S250-54	50	25' 3" e	22' 11" e	18' 11" e	26' 4" a	21' 6" a	16' 0" a
1200S162-68	33	24' 10" e	17' 7" e	17' 7" e	24' 10" i	21' 6" i	17' 7" i
1200S162-68	50	25' 3" e	22' 11" e	20' 0" e	28' 4" i	25' 8" i	21' 0" i
1200S200-68	33	26' 6" e	23' 0" e	18' 9" e	26' 7" i	23' 0" i	18' 9" a
1200S200-68	50	26' 4" e	23' 11" e	20' 11" e	29' 7" i	26' 10" i	22' 2" i
1200S250-68	33	27' 7" e	24' 0" e	19' 7" e	27' 8" i	24' 0" i	19' 7" a
1200S250-68	50	27' 5" e	24' 11" e	21' 9" e	30' 9" i	27' 5" i	22' 4" i
1200S162-97	33	28' 8" e	26' 1" e	21' 10" e	30' 10" i	26' 8" i	21' 10" i
1200S162-97	50	28' 7" e	26' 0" e	22' 8" e	32' 1" i	29' 2" i	25' 6" i
1200S200-97	33	29' 10" e	27' 1" e	23' 2" e	32' 10" i	28' 5" i	23' 2" i
1200S200-97	50	29' 9" e	27' 1" e	23' 8" e	33' 5" i	30' 4" i	26' 6" i
1200S250-97	33	31' 0" e	28' 2" e	24' 7" e	34' 9" i	30' 1" i	24' 7" i
1200S250-97	50	30' 11" e	28' 1" e	24' 7" e	34' 9" i	31' 7" i	27' 7" i

10 psf dead load and 50 psf live load			L/360 live load deflection				
1400S162-54	33	23' 5" e	20' 3" e	16' 7" e	22' 10" a	18' 8" a	13' 10" a
1400S162-54	50	26' 1" e	23' 9" e	19' 4" e	25' 1" a	20' 3" a	14' 10" a
1400S200-54	33	25' 1" e	21' 9" e	17' 9" e	23' 10" a	19' 4" a	14' 3" a
1400S200-54	50	27' 3" e	24' 8" e	19' 7" e	25' 7" a	20' 8" a	15' 1" a
1400S250-54	33	25' 4" e	21' 11" e	17' 11" e	24' 0" a	19' 6" a	14' 4" a
1400S250-54	50	28' 5" e	25' 1" e	19' 7" e	25' 10" a	20' 10" a	15' 3" a
1400S162-68	33	27' 2" e	23' 6" e	19' 2" e	27' 2" i	23' 6" i	19' 2" a
1400S162-68	50	28' 6" e	25' 10" e	22' 7" e	31' 11" i	28' 0" i	22' 7" i
1400S200-68	33	29' 0" e	25' 1" e	20' 6" e	29' 0" i	25' 1" i	20' 6" a
1400S200-68	50	29' 8" e	26' 11" e	23' 6" e	33' 3" i	29' 7" i	23' 4" i
1400S250-68	33	30' 2" e	26' 1" e	21' 4" e	30' 2" i	26' 1" i	21' 4" a
1400S250-68	50	30' 10" e	28' 0" e	24' 4" e	34' 4" i	29' 9" i	23' 5" i
1400S162-97	33	32' 8" e	29' 5" e	24' 0" e	33' 11" i	29' 5" i	24' 0" i
1400S162-97	50	32' 5" e	29' 5" e	25' 9" e	36' 4" i	33' 1" i	28' 7" i
1400S200-97	33	33' 11" e	30' 10" e	25' 6" e	36' 1" i	31' 3" i	26' 6" i
1400S200-97	50	33' 8" e	30' 7" e	26' 9" e	37' 9" i	34' 4" i	30' 0" i
1400S250-97	33	35' 1" e	31' 11" e	26' 11" e	38' 1" i	33' 0" i	26' 11" i
1400S250-97	50	34' 11" e	31' 9" e	27' 8" e	39' 2" i	35' 7" i	31' 1" i



**Joist table notes:**

- Joist deflection limitations are based upon L/240 for the total load [TL] and L/360 for live load [LL].
- For two equal, continuous span conditions, alternate span live load has been considered.
- For two equal, continuous span conditions, the listed span is the distance from either end support to the center support.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
- The yield stress [33 ksi or 50 ksi] used to calculate tabulated values is indicated in each table. For 50 ksi material to be provided, it needs to be indicated at the time of ordering.

- Spans are based upon continuous support of the compression flange.
- Spans noted with an:
  - "e" require web stiffeners at end supports
  - "i" requires web stiffeners at interior supports
  - "a" requires web stiffeners at all three supports.
- A 3.5" bearing length was used at all support locations in the preparation of these tables.
- Web punchouts were not considered for allowable shear or web crippling considerations.
- The punchout pattern for ClarkWestern joists is a 4" long by 1.5" high oval.
- Unpunched joists are available, but must be indicated when ordering.

- Web punchouts located near a bearing location may need reinforcement.
- Joists must be restrained against rotation at all supports.
- Joist bridging opposite the sheathed flange is recommended at a maximum of 8 feet o.c. when sheathing is applied to only the compression flange.

# Floor joist — span limitations

10 psf dead load and 75 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
600S162-33	33	9' 6" e	8' 2" e	6' 8" e	9' 0" a	7' 4" a	5' 5" a
600S200-33	33	9' 10" e	8' 6" e	6' 11" e	9' 3" a	7' 6" a	5' 6" a
600S162-43	33	11' 1" e	9' 11" e	8' 1" e	11' 5" i	9' 11" a	8' 1" a
600S200-43	33	11' 7" e	10' 1" e	8' 3" e	11' 8" i	10' 1" a	8' 3" a
600S250-43	33	11' 11" e	10' 4" e	8' 5" e	11' 11" i	10' 4" a	8' 5" a
600S162-54	33	11' 10" e	10' 9" e	9' 1" e	12' 11" i	11' 2" i	9' 1" i
600S162-54	50	11' 10" e	10' 9" e	9' 5" e	13' 4" i	12' 1" i	10' 7" i
600S200-54	33	12' 6" e	11' 4" e	9' 9" e	13' 9" i	11' 11" i	9' 9" a
600S200-54	50	12' 6" e	11' 4" e	9' 11" e	14' 0" i	12' 9" i	10' 11" i
600S250-54	33	13' 1" e	11' 7" e	9' 6" e	13' 5" i	11' 7" i	9' 6" a
600S250-54	50	13' 0" e	11' 10" e	10' 4" e	14' 7" i	13' 3" i	11' 2" i
600S162-68	33	12' 9" e	11' 7" e	10' 1" e	14' 3" i	12' 7" i	10' 3" i
600S162-68	50	12' 9" e	11' 7" e	10' 1" e	14' 3" i	13' 0" i	11' 4" i
600S200-68	33	13' 4" e	12' 2" e	10' 7" e	15' 0" i	13' 5" i	10' 11" i
600S200-68	50	13' 4" e	12' 2" e	10' 7" e	15' 0" i	13' 8" i	11' 11" i
600S250-68	33	14' 0" e	12' 9" e	11' 2" e	15' 9" i	13' 11" i	11' 4" i
600S250-68	50	14' 0" e	12' 9" e	11' 1" e	15' 9" i	14' 4" i	12' 6" i
600S162-97	33	14' 1" e	12' 10" e	11' 2" e	15' 10" i	14' 4" i	12' 3" i
600S162-97	50	14' 1" e	12' 10" e	11' 2" e	15' 10" i	14' 4" i	12' 7" i
600S200-97	33	14' 10" e	13' 6" e	11' 9" e	16' 8" i	15' 2" i	13' 1" i
600S200-97	50	14' 10" e	13' 6" e	11' 9" e	16' 8" i	15' 2" i	13' 3" i
600S250-97	33	15' 7" e	14' 2" e	12' 4" e	17' 6" i	15' 11" i	13' 10" i
600S250-97	50	15' 7" e	14' 2" e	12' 4" e	17' 6" i	15' 11" i	13' 11" i

10 psf dead load and 75 psf live load		L/360 live load deflection					
1200S162-54	33	18' 1" e	15' 8" e	12' 9" e	18' 1" a	14' 10" a	11' 1" a
1200S162-54	50	20' 3" e	18' 4" e	15' 0" e	19' 11" a	16' 2" a	11' 11" a
1200S200-54	33	19' 5" e	16' 9" e	13' 9" e	18' 11" a	15' 5" a	11' 5" a
1200S200-54	50	21' 2" e	19' 1" e	15' 7" e	20' 5" a	16' 6" a	12' 2" a
1200S250-54	33	19' 7" e	17' 0" e	13' 10" e	19' 1" a	15' 6" a	11' 6" a
1200S250-54	50	22' 1" e	19' 5" e	15' 11" e	20' 7" a	16' 8" a	12' 3" a
1200S162-68	33	20' 11" e	18' 1" e	14' 9" e	20' 11" i	18' 1" i	14' 9" a
1200S162-68	50	22' 1" e	20' 0" e	17' 6" e	24' 9" i	21' 7" i	17' 7" i
1200S200-68	33	22' 4" e	19' 4" e	15' 9" e	22' 4" i	19' 4" a	15' 9" a
1200S200-68	50	23' 0" e	20' 11" e	18' 3" e	25' 10" i	22' 10" i	18' 6" i
1200S250-68	33	23' 3" e	20' 2" e	16' 6" e	23' 3" i	20' 2" a	16' 6" a
1200S250-68	50	23' 11" e	21' 9" e	18' 9" e	26' 7" i	23' 0" i	18' 7" i
1200S162-97	33	25' 1" e	22' 5" e	18' 4" e	25' 11" i	22' 5" i	18' 4" i
1200S162-97	50	25' 0" e	22' 8" e	19' 10" e	28' 0" i	25' 6" i	21' 11" i
1200S200-97	33	26' 1" e	23' 8" e	19' 6" e	27' 7" i	23' 10" i	19' 6" i
1200S200-97	50	26' 0" e	23' 8" e	20' 8" e	29' 2" i	26' 6" i	23' 2" i
1200S250-97	33	27' 1" e	24' 7" e	20' 8" e	29' 2" i	25' 3" i	20' 8" i
1200S250-97	50	27' 0" e	24' 7" e	21' 5" e	30' 4" i	27' 7" i	24' 1" i

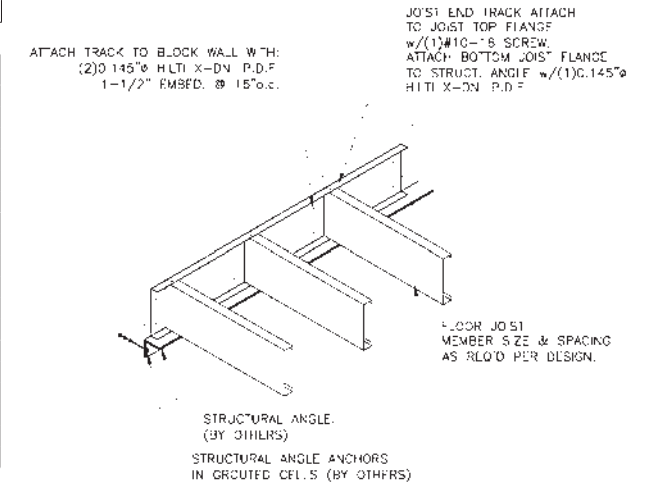
**Joist table notes:**

- Joist deflection limitations are based upon L/240 for the total load [TL] and L/360 for live load [LL].
- For two equal, continuous span conditions, alternate span live load has been considered.
- For two equal, continuous span conditions, the listed span is the distance from either end support to the center support.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
- The yield stress [33 ksi or 50 ksi] used to calculate tabulated values is indicated in each table. For 50 ksi material to be provided, it needs to be indicated at the time of ordering.

10 psf dead load and 75 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
800S162-33	33	10' 6" e	8' 4" e	5' 7" e	8' 3" a	6' 7" a	4' 6" a
800S200-33	33	11' 2" e	8' 4" e	5' 7" e	8' 6" a	6' 8" a	4' 6" a
800S162-43	33	12' 7" e	10' 11" e	8' 11" e	12' 7" a	10' 8" a	8' 0" a
800S200-43	33	14' 2" e	12' 3" e	10' 0" e	14' 0" a	11' 6" a	8' 6" a
800S250-43	33	14' 3" e	12' 4" e	10' 1" e	14' 1" a	11' 6" a	8' 7" a
800S162-54	33	14' 5" e	12' 5" e	10' 2" e	14' 5" i	12' 5" i	10' 2" a
800S162-54	50	14' 10" e	13' 6" e	11' 9" e	16' 8" i	14' 9" i	12' 0" i
800S200-54	33	15' 8" e	14' 3" e	11' 10" e	16' 9" i	14' 6" a	11' 10" a
800S200-54	50	15' 8" e	14' 3" e	12' 5" e	17' 7" i	16' 0" i	13' 3" i
800S250-54	33	16' 3" e	14' 1" e	11' 6" e	16' 3" i	14' 1" a	11' 6" a
800S250-54	50	16' 3" e	14' 9" e	12' 11" e	18' 3" i	16' 5" i	13' 5" i
800S162-68	33	16' 1" e	14' 3" e	11' 7" e	16' 5" i	14' 3" i	11' 7" i
800S162-68	50	16' 0" e	14' 7" e	12' 9" e	18' 0" i	16' 4" i	14' 0" i
800S200-68	33	16' 10" e	15' 3" e	13' 4" e	18' 10" i	16' 4" i	13' 4" i
800S200-68	50	16' 10" e	15' 3" e	13' 4" e	18' 10" i	17' 2" i	15' 0" i
800S250-68	33	17' 6" e	15' 11" e	13' 9" e	19' 6" i	16' 10" i	13' 9" a
800S250-68	50	17' 6" e	15' 11" e	13' 11" e	19' 8" i	17' 11" i	15' 7" i
800S162-97	33	17' 10" e	16' 2" e	14' 2" e	20' 0" i	18' 2" i	15' 1" i
800S162-97	50	17' 10" e	16' 2" e	14' 2" e	20' 0" i	18' 2" i	15' 11" i
800S200-97	33	18' 8" e	17' 0" e	14' 10" e	21' 0" i	19' 1" i	16' 0" i
800S200-97	50	18' 8" e	17' 0" e	14' 10" e	21' 0" i	19' 1" i	16' 8" i
800S250-97	33	19' 6" e	17' 9" e	15' 6" e	21' 11" i	19' 11" i	16' 10" i
800S250-97	50	19' 6" e	17' 9" e	15' 6" e	21' 11" i	19' 11" i	17' 5" i

10 psf dead load and 75 psf live load		L/360 live load deflection					
1400S162-54	33	19' 8" e	17' 0" e	13' 10" e	17' 10" a	14' 5" a	10' 7" a
1400S162-54	50	22' 10" e	19' 11" e	13' 10" e	19' 4" a	15' 6" a	11' 1" a
1400S200-54	33	21' 1" e	18' 3" e	13' 10" e	18' 6" a	14' 11" a	10' 10" a
1400S200-54	50	23' 10" e	20' 9" e	13' 10" e	19' 9" a	15' 10" a	11' 1" a
1400S250-54	33	21' 4" e	18' 5" e	13' 10" e	18' 8" a	15' 0" a	10' 11" a
1400S250-54	50	24' 4" e	20' 9" e	13' 10" e	19' 11" a	15' 11" a	11' 1" a
1400S162-68	33	22' 10" e	19' 9" e	16' 2" e	22' 10" i	19' 9" a	15' 11" a
1400S162-68	50	24' 10" e	22' 7" e	19' 2" e	27' 2" i	23' 5" i	17' 8" i
1400S200-68	33	24' 4" e	21' 1" e	17' 3" e	24' 4" i	21' 1" a	16' 7" a
1400S200-68	50	25' 11" e	23' 6" e	20' 3" e	28' 8" i	24' 3" i	18' 2" i
1400S250-68	33	25' 4" e	21' 11" e	17' 11" e	25' 4" a	21' 11" a	17' 0" a
1400S250-68	50	26' 11" e	24' 6" e	20' 5" e	28' 10" i	24' 4" i	18' 3" i
1400S162-97	33	28' 6" e	24' 8" e	20' 2" e	28' 6" i	24' 8" i	20' 2" i
1400S162-97	50	28' 4" e	25' 9" e	22' 6" e	31' 9" i	28' 10" i	24' 0" i
1400S200-97	33	29' 8" e	26' 3" e	21' 5" e	30' 3" i	26' 3" i	21' 5" i
1400S200-97	50	29' 5" e	26' 9" e	23' 4" e	33' 0" i	30' 0" i	25' 7" i
1400S250-97	33	30' 8" e	27' 9" e	22' 8" e	32' 0" i	27' 9" i	22' 8" i
1400S250-97	50	30' 6" e	27' 8" e	24' 2" e	34' 3" i	31' 1" i	26' 7" i

10 psf dead load and 75 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1000S162-43	33	14' 2" e	12' 4" e	9' 10" e	12' 10" a	10' 4" a	7' 7" a
1000S200-43	33	15' 1" e	13' 1" e	9' 10" e	13' 3" a	10' 8" a	7' 9" a
1000S250-43	33	15' 10" e	13' 8" e	9' 10" e	13' 7" a	10' 11" a	7' 10" a
1000S162-54	33	16' 4" e	14' 2" e	11' 7" e	16' 4" i	14' 2" a	11' 4" a
1000S162-54	50	17' 7" e	16' 0" e	13' 7" e	19' 3" i	16' 7" i	12' 5" i
1000S200-54	33	17' 6" e	15' 2" e	12' 5" e	17' 6" a	15' 2" a	11' 10" a
1000S200-54	50	18' 5" e	16' 9" e	14' 2" e	20' 0" i	17' 0" i	12' 9" i
1000S250-54	33	18' 9" e	16' 3" e	13' 3" e	18' 9" a	16' 3" a	12' 3" a
1000S250-54	50	19' 6" e	17' 8" e	14' 10" e	21' 0" i	17' 6" i	13' 1" i
1000S162-68	33	18' 9" e	16' 3" e	13' 3" e	18' 9" i	16' 3" i	13' 3" a
1000S162-68	50	19' 1" e	17' 4" e	15' 2" e	21' 5" i	19' 6" i	15' 11" i
1000S200-68	33	20' 1" e	17' 5" e	14' 3" e	20' 1" i	17' 5" i	14' 3" a
1000S200-68	50	20' 0" e	18' 2" e	15' 10" e	22' 5" i	20' 4" i	16' 10" i
1000S250-68	33	20' 11" e	19' 0" e	16' 1" e	22' 9" i	19' 8" i	16' 1" a
1000S250-68	50	20' 11" e	19' 0" e	16' 7" e	23' 6" i	21' 4" i	18' 0" i
1000S162-97	33	21' 6" e	19' 6" e	16' 3" e	22' 11" i	19' 10" i	16' 3" i
1000S162-97	50	21' 6" e	19' 6" e	17' 0" e	24' 1" i	21' 11" i	19' 2" i
1000S200-97	33	22' 5" e	20' 4" e	17' 4" e	24' 6" i	21' 2" i	17' 4" i
1000S200-97	50	22' 5" e	20' 4" e	17' 10" e	25' 2" i	22' 10" i	20' 0" i
1000S250-97	33	23' 4" e	21' 2" e	18' 6" e	26' 3" i	23' 10" i	19' 8" i
1000S250-97	50	23' 4" e	21' 2" e	18' 6" e	26' 3" i	23' 10" i	20' 10" i



- Spans are based upon continuous support of the compression flange.
- Spans noted with an:
  - "e" require web stiffeners at end supports
  - "i" requires web stiffeners at interior supports
  - "a" requires web stiffeners at all three supports.
- A 3.5" bearing length was used at all support locations in the preparation of these tables.
- Web punchouts were not considered for allowable shear or web crippling considerations.
- The punchout pattern for ClarkWestern joists is a 4" long by 1.5" high oval.
- Unpunched joists are available, but must be indicated when ordering.

- Web punchouts located near a bearing location may need reinforcement.
- Joists must be restrained against rotation at all supports.
- Joist bridging opposite the sheathed flange is recommended at a maximum of 8 feet o.c. when sheathing is applied to only the compression flange.

# Floor joist — span limitations

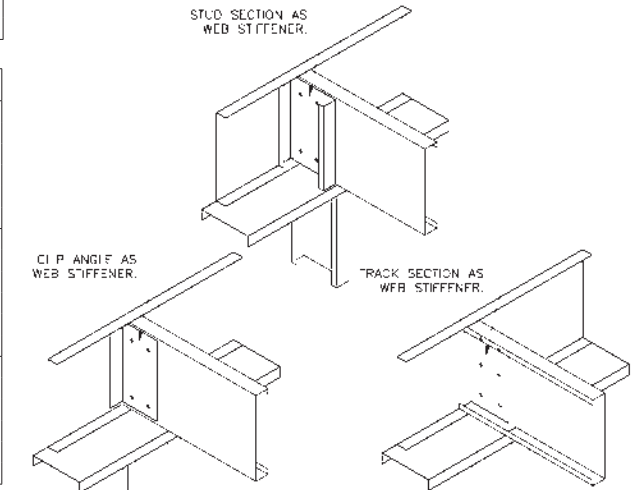
10 psf dead load and 100 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
600S162-33	33	8' 4" e	7' 2" e	5' 10" e	7' 6" a	6' 1" a	4' 5" a
600S200-33	33	8' 8" e	7' 6" e	5' 10" e	7' 8" a	6' 2" a	4' 6" a
600S162-43	33	10' 0" e	8' 8" e	7' 1" e	10' 1" a	8' 8" a	7' 1" a
600S200-43	33	10' 3" e	8' 10" e	7' 3" e	10' 3" a	8' 10" a	7' 3" a
600S250-43	33	10' 6" e	9' 1" e	7' 5" e	10' 6" a	9' 1" a	7' 4" a
600S162-54	33	10' 9" e	9' 9" e	8' 0" e	11' 4" i	9' 10" i	8' 0" a
600S162-54	50	10' 9" e	9' 9" e	8' 7" e	12' 1" i	11' 0" i	9' 7" i
600S200-54	33	11' 4" e	10' 3" e	8' 6" e	12' 1" i	10' 6" i	8' 6" a
600S200-54	50	11' 4" e	10' 3" e	9' 0" e	12' 9" i	11' 7" i	9' 7" i
600S250-54	33	11' 9" e	10' 2" e	8' 4" e	11' 9" i	10' 2" i	8' 4" a
600S250-54	50	11' 10" e	10' 9" e	9' 4" e	13' 3" i	12' 1" i	9' 10" i
600S162-68	33	11' 7" e	10' 6" e	9' 0" e	12' 9" i	11' 0" i	9' 0" i
600S162-68	50	11' 7" e	10' 6" e	9' 2" e	13' 0" i	11' 9" i	10' 4" i
600S200-68	33	12' 2" e	11' 0" e	9' 7" e	13' 7" i	11' 9" i	9' 7" i
600S200-68	50	12' 2" e	11' 0" e	9' 8" e	13' 8" i	12' 5" i	10' 10" i
600S250-68	33	12' 9" e	11' 7" e	10' 0" e	14' 1" i	12' 3" i	10' 0" i
600S250-68	50	12' 9" e	11' 7" e	10' 1" e	14' 4" i	13' 0" i	11' 3" i
600S162-97	33	12' 10" e	11' 8" e	10' 2" e	14' 4" i	13' 1" i	10' 9" i
600S162-97	50	12' 10" e	11' 8" e	10' 2" e	14' 4" i	13' 1" i	11' 5" i
600S200-97	33	13' 6" e	12' 3" e	10' 8" e	15' 2" i	13' 9" i	11' 6" i
600S200-97	50	13' 6" e	12' 3" e	10' 8" e	15' 2" i	13' 9" i	12' 0" i
600S250-97	33	14' 2" e	12' 10" e	11' 3" e	15' 11" i	14' 5" i	12' 2" i
600S250-97	50	14' 2" e	12' 10" e	11' 3" e	15' 11" i	14' 5" i	12' 7" i

10 psf dead load and 100 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
800S162-33	33	8' 7" e	6' 6" e	4' 4" e	6' 9" a	5' 2" a	3' 5" a
800S200-33	33	8' 7" e	6' 6" e	4' 4" e	6' 11" a	5' 2" a	3' 5" a
800S162-43	33	11' 1" e	9' 7" e	7' 10" e	10' 11" a	8' 11" a	6' 8" a
800S200-43	33	12' 5" e	10' 9" e	8' 10" e	11' 9" a	9' 6" a	7' 0" a
800S250-43	33	12' 6" e	10' 10" e	8' 10" e	11' 9" a	9' 7" a	7' 1" a
800S162-54	33	12' 8" e	10' 11" e	8' 11" e	12' 8" i	10' 11" a	8' 11" a
800S162-54	50	13' 6" e	12' 3" e	10' 7" e	14' 11" i	12' 11" i	10' 7" i
800S200-54	33	14' 3" e	12' 9" e	10' 5" e	14' 9" a	12' 9" a	10' 5" a
800S200-54	50	14' 3" e	12' 11" e	11' 3" e	16' 0" i	14' 3" i	11' 3" a
800S250-54	33	14' 4" e	12' 5" e	10' 1" e	14' 4" a	12' 5" a	10' 1" a
800S250-54	50	14' 9" e	13' 5" e	11' 9" e	16' 7" i	14' 5" i	11' 4" a
800S162-68	33	14' 5" e	12' 6" e	10' 2" e	14' 5" i	12' 6" i	10' 2" i
800S162-68	50	14' 7" e	13' 3" e	11' 7" e	16' 4" i	14' 10" i	12' 3" i
800S200-68	33	15' 3" e	13' 10" e	11' 9" e	16' 7" i	14' 4" i	11' 9" a
800S200-68	50	15' 3" e	13' 10" e	12' 1" e	17' 2" i	15' 7" i	13' 7" i
800S250-68	33	15' 11" e	14' 6" e	12' 1" e	17' 1" i	14' 10" i	12' 1" a
800S250-68	50	15' 11" e	14' 6" e	12' 8" e	17' 11" i	16' 3" i	13' 8" i
800S162-97	33	16' 2" e	14' 9" e	12' 10" e	18' 2" i	16' 3" i	13' 3" i
800S162-97	50	16' 2" e	14' 9" e	12' 10" e	18' 2" i	16' 6" i	14' 5" i
800S200-97	33	17' 0" e	15' 5" e	13' 6" e	19' 1" i	17' 2" i	14' 1" i
800S200-97	50	17' 0" e	15' 5" e	13' 6" e	19' 1" i	17' 4" i	15' 2" i
800S250-97	33	17' 9" e	16' 1" e	14' 1" e	19' 11" i	18' 1" i	14' 9" i
800S250-97	50	17' 9" e	16' 1" e	14' 1" e	19' 11" i	18' 1" i	15' 10" i

10 psf dead load and 100 psf live load		L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1000S162-43	33	12' 6" e	10' 10" e	7' 7" e	10' 7" a	8' 6" a	6' 1" a
1000S200-43	33	13' 3" e	11' 5" e	7' 7" e	10' 11" a	8' 9" a	6' 1" a
1000S250-43	33	13' 11" e	11' 5" e	7' 7" e	11' 2" a	8' 11" a	6' 1" a
1000S162-54	33	14' 4" e	12' 5" e	10' 2" e	14' 4" a	12' 5" a	9' 5" a
1000S162-54	50	16' 0" e	14' 7" e	11' 11" e	16' 11" i	13' 10" i	10' 4" a
1000S200-54	33	15' 5" e	13' 4" e	10' 11" e	15' 5" a	13' 1" a	9' 10" a
1000S200-54	50	16' 9" e	15' 3" e	12' 5" e	17' 4" i	14' 2" i	10' 6" a
1000S250-54	33	16' 6" e	14' 4" e	11' 8" e	16' 6" a	13' 8" a	10' 2" a
1000S250-54	50	17' 8" e	16' 0" e	13' 1" e	17' 10" i	14' 7" i	10' 9" a
1000S162-68	33	16' 6" e	14' 4" e	11' 8" e	16' 6" i	14' 4" i	11' 8" a
1000S162-68	50	17' 4" e	15' 9" e	13' 9" e	19' 6" i	17' 1" i	14' 0" i
1000S200-68	33	17' 8" e	15' 4" e	12' 6" e	17' 8" i	15' 4" i	12' 6" a
1000S200-68	50	18' 2" e	16' 6" e	14' 5" e	20' 4" i	18' 2" i	14' 10" i
1000S250-68	33	19' 0" e	17' 3" e	14' 2" e	20' 0" i	17' 4" a	14' 2" a
1000S250-68	50	19' 0" e	17' 3" e	15' 1" e	21' 4" i	19' 5" i	15' 10" a
1000S162-97	33	19' 6" e	17' 6" e	14' 3" e	20' 2" i	17' 6" i	14' 3" i
1000S162-97	50	19' 6" e	17' 9" e	15' 6" e	21' 11" i	19' 11" i	17' 3" i
1000S200-97	33	20' 4" e	18' 6" e	15' 3" e	21' 6" i	18' 8" i	15' 3" i
1000S200-97	50	20' 4" e	18' 6" e	16' 2" e	22' 10" i	20' 9" i	18' 2" i
1000S250-97	33	21' 2" e	19' 3" e	16' 10" e	23' 10" i	21' 2" i	17' 3" i
1000S250-97	50	21' 2" e	19' 3" e	16' 10" e	23' 10" i	21' 8" i	18' 11" i

10 psf dead load and 100 psf live load		L/360 live load deflection					
1200S162-54	33	15' 11" e	13' 9" e	11' 3" e	15' 2" a	12' 4" a	9' 1" a
1200S162-54	50	18' 5" e	16' 2" e	12' 6" e	16' 7" a	13' 4" a	9' 9" a
1200S200-54	33	17' 1" e	14' 9" e	12' 1" e	15' 9" a	12' 9" a	9' 5" a
1200S200-54	50	19' 3" e	16' 10" e	12' 6" e	16' 11" a	13' 7" a	9' 11" a
1200S250-54	33	17' 3" e	14' 11" e	12' 2" e	15' 10" a	12' 10" a	9' 5" a
1200S250-54	50	19' 9" e	17' 1" e	12' 6" e	17' 1" a	13' 9" a	10' 0" a
1200S162-68	33	18' 4" e	15' 11" e	13' 0" e	18' 4" i	15' 11" a	13' 0" a
1200S162-68	50	20' 0" e	18' 2" e	15' 6" e	21' 11" i	19' 0" i	14' 11" i
1200S200-68	33	19' 7" e	17' 0" e	13' 11" e	19' 7" i	17' 0" a	13' 11" a
1200S200-68	50	20' 11" e	19' 0" e	16' 5" e	23' 2" i	20' 1" i	15' 5" a
1200S250-68	33	20' 6" e	17' 9" e	14' 6" e	20' 6" a	17' 9" a	14' 4" a
1200S250-68	50	21' 9" e	19' 9" e	16' 6" e	23' 4" i	20' 3" i	15' 6" a
1200S162-97	33	22' 9" e	19' 9" e	16' 1" e	22' 9" i	19' 9" i	16' 1" i
1200S162-97	50	22' 8" e	20' 7" e	18' 0" e	25' 6" i	23' 0" i	19' 3" i
1200S200-97	33	23' 8" e	21' 0" e	17' 2" e	24' 3" i	21' 0" i	17' 2" i
1200S200-97	50	23' 8" e	21' 6" e	18' 9" e	26' 6" i	24' 1" i	20' 7" i
1200S250-97	33	24' 7" e	22' 3" e	18' 2" e	25' 8" i	22' 3" i	18' 2" i
1200S250-97	50	24' 7" e	22' 4" e	19' 6" e	27' 7" i	25' 0" i	21' 5" i

10 psf dead load and 100 psf live load		L/360 live load deflection					
1400S162-54	33	17' 3" e	15' 0" e	10' 8" e	14' 9" a	11' 10" a	8' 7" a
1400S162-54	50	20' 3" e	16' 1" e	10' 8" e	15' 11" a	12' 8" a	8' 7" a
1400S200-54	33	18' 6" e	16' 1" e	10' 8" e	15' 3" a	12' 3" a	8' 7" a
1400S200-54	50	21' 0" e	16' 1" e	10' 8" e	16' 2" a	12' 10" a	8' 7" a
1400S250-54	33	18' 9" e	16' 1" e	10' 8" e	15' 4" a	12' 3" a	8' 7" a
1400S250-54	50	21' 5" e	16' 1" e	10' 8" e	16' 4" a	12' 10" a	8' 7" a
1400S162-68	33	20' 1" e	17' 4" e	14' 2" e	20' 1" a	17' 4" a	13' 3" a
1400S162-68	50	22' 7" e	20' 6" e	16' 10" e	23' 10" i	19' 7" i	14' 7" a
1400S200-68	33	21' 5" e	18' 6" e	15' 2" e	21' 5" a	18' 4" a	13' 9" a
1400S200-68	50	23' 6" e	21' 5" e	17' 10" e	24' 9" i	20' 3" i	15' 0" a
1400S250-68	33	22' 3" e	19' 4" e	15' 9" e	22' 3" a	18' 10" a	14' 1" a
1400S250-68	50	24' 6" e	22' 0" e	17' 11" e	24' 11" i	20' 4" i	15' 1" a
1400S162-97	33	25' 1" e	21' 9" e	17' 9" e	25' 1" i	21' 9" i	17' 9" i
1400S162-97	50	25' 9" e	23' 4" e	20' 5" e	28' 10" i	25' 10" i	21' 1" i
1400S200-97	33	26' 7" e	23' 1" e	18' 10" e	26' 7" i	23' 1" i	18' 10" a
1400S200-97	50	26' 9" e	24' 3" e	21' 2" e	30' 0" i	27' 3" i	22' 6" i
1400S250-97	33	27' 11" e	24' 4" e	19' 11" e	28' 2" i	24' 4" i	19' 11" a
1400S250-97	50	27' 8" e	25' 2" e	22' 0" e	31' 1" i	28' 3" i	23' 4" i



Joist table notes:

- Joist deflection limitations are based upon L/240 for the total load [TL] and L/360 for live load [LL].
- For two equal, continuous span conditions, alternate span live load has been considered.
- For two equal, continuous span conditions, the listed span is the distance from either end support to the center support.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
- The yield stress [33 ksi or 50 ksi] used to calculate tabulated values is indicated in each table. For 50 ksi material to be provided, it needs to be indicated at the time of ordering.

- Spans are based upon continuous support of the compression flange.
- Spans noted with an:
  - "e" require web stiffeners at end supports
  - "i" requires web stiffeners at interior supports
  - "a" requires web stiffeners at all three supports.
- A 3.5" bearing length was used at all support locations in the preparation of these tables.
- Web punchouts were not considered for allowable shear or web crippling considerations.
- The punchout pattern for ClarkWestern joists is a 4" long by 1.5" high oval.
- Unpunched joists are available, but must be indicated when ordering.

- Web punchouts located near a bearing location may need reinforcement.
- Joists must be restrained against rotation at all supports.
- Joist bridging opposite the sheathed flange is recommended at a maximum of 8 feet o.c. when sheathing is applied to only the compression flange.

# Floor joist — span limitations

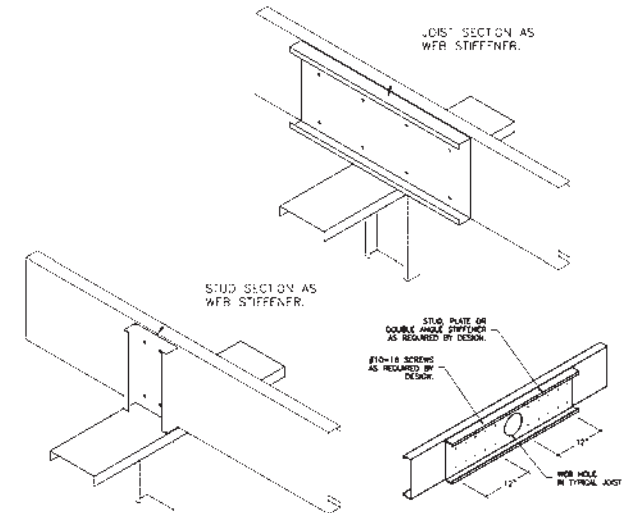
10 psf dead load and 125 psf live load			L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)			
		12	16	24	12	16	24	
600S162-33	33	7' 6" e	6' 6" e	4' 9" e	6' 6" a	5' 2" a	3' 9" a	
600S200-33	33	7' 9" e	6' 9" e	4' 9" e	6' 7" a	5' 3" a	3' 9" a	
600S162-43	33	9' 1" e	7' 10" e	6' 5" e	9' 1" a	7' 10" a	6' 2" a	
600S200-43	33	9' 3" e	8' 0" e	6' 6" e	9' 3" a	8' 0" a	6' 3" a	
600S250-43	33	9' 6" e	8' 2" e	6' 8" e	9' 6" a	8' 2" a	6' 4" a	
600S162-54	33	10' 0" e	8' 10" e	7' 3" e	10' 3" i	8' 10" i	7' 3" a	
600S162-54	50	10' 0" e	9' 1" e	7' 11" e	11' 3" i	10' 2" i	8' 8" i	
600S200-54	33	10' 6" e	9' 5" e	7' 9" e	10' 11" i	9' 5" a	7' 9" a	
600S200-54	50	10' 6" e	9' 7" e	8' 4" e	11' 10" i	10' 7" i	8' 8" i	
600S250-54	33	10' 8" e	9' 3" e	7' 6" e	10' 8" i	9' 3" a	7' 6" a	
600S250-54	50	11' 0" e	9' 11" e	8' 8" e	12' 4" i	10' 11" i	8' 11" i	
600S162-68	33	10' 9" e	9' 9" e	8' 2" e	11' 6" i	10' 0" i	8' 2" i	
600S162-68	50	10' 9" e	9' 9" e	8' 6" e	12' 0" i	10' 11" i	9' 7" i	
600S200-68	33	11' 3" e	10' 3" e	8' 8" e	12' 3" i	10' 7" i	8' 8" i	
600S200-68	50	11' 3" e	10' 3" e	8' 11" e	12' 8" i	11' 6" i	10' 1" i	
600S250-68	33	11' 10" e	10' 9" e	9' 0" e	12' 9" i	11' 0" i	9' 0" a	
600S250-68	50	11' 10" e	10' 9" e	9' 5" e	13' 3" i	12' 1" i	10' 1" i	
600S162-97	33	11' 11" e	10' 10" e	9' 5" e	13' 4" i	11' 11" i	9' 9" i	
600S162-97	50	11' 11" e	10' 10" e	9' 5" e	13' 4" i	12' 1" i	10' 7" i	
600S200-97	33	12' 6" e	11' 4" e	9' 11" e	14' 1" i	12' 8" i	10' 4" i	
600S200-97	50	12' 6" e	11' 4" e	9' 11" e	14' 1" i	12' 9" i	11' 2" i	
600S250-97	33	13' 2" e	11' 11" e	10' 5" e	14' 9" i	13' 5" i	11' 0" i	
600S250-97	50	13' 2" e	11' 11" e	10' 5" e	14' 9" i	13' 5" i	11' 9" i	

10 psf dead load and 125 psf live load			L/360 live load deflection					
1200S162-54	33	14' 4" e	12' 5" e	10' 2" e	13' 1" a	10' 7" a	7' 9" a	
1200S162-54	50	16' 10" e	14' 7" e	10' 2" e	14' 3" a	11' 5" a	8' 2" a	
1200S200-54	33	15' 5" e	13' 4" e	10' 2" e	13' 7" a	10' 11" a	8' 0" a	
1200S200-54	50	17' 6" e	15' 2" e	10' 2" e	14' 6" a	11' 7" a	8' 2" a	
1200S250-54	33	15' 7" e	13' 6" e	10' 2" e	13' 8" a	11' 0" a	8' 0" a	
1200S250-54	50	17' 10" e	15' 4" e	10' 2" e	14' 8" a	11' 8" a	8' 2" a	
1200S162-68	33	16' 7" e	14' 4" e	11' 9" e	16' 7" a	14' 4" a	11' 8" a	
1200S162-68	50	18' 7" e	16' 11" e	14' 0" e	19' 9" i	17' 2" i	12' 11" a	
1200S200-68	33	17' 9" e	15' 4" e	12' 6" e	17' 9" a	15' 4" a	12' 1" a	
1200S200-68	50	19' 5" e	17' 7" e	14' 10" e	20' 11" i	17' 9" i	13' 4" a	
1200S250-68	33	18' 6" e	16' 0" e	13' 1" e	18' 6" a	16' 0" a	12' 5" a	
1200S250-68	50	20' 2" e	18' 3" e	14' 11" e	21' 1" i	17' 10" i	13' 5" a	
1200S162-97	33	20' 7" e	17' 10" e	14' 6" e	20' 7" i	17' 10" i	14' 6" i	
1200S162-97	50	21' 1" e	19' 2" e	16' 9" e	23' 8" i	21' 4" i	17' 5" i	
1200S200-97	33	21' 10" e	18' 11" e	15' 6" e	21' 10" i	18' 11" i	15' 6" a	
1200S200-97	50	21' 11" e	19' 11" e	17' 5" e	24' 7" i	22' 4" i	18' 7" i	
1200S250-97	33	22' 10" e	20' 1" e	16' 5" e	23' 2" i	20' 1" i	16' 5" a	
1200S250-97	50	22' 9" e	20' 8" e	18' 1" e	25' 7" i	23' 3" i	19' 4" i	

10 psf dead load and 125 psf live load			L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)			
		12	16	24	12	16	24	
800S162-33	33	7' 0" e	5' 3" e	3' 6" e	5' 7" a	4' 3" a	2' 10" a	
800S200-33	33	7' 0" e	5' 3" e	3' 6" e	5' 7" a	4' 3" a	2' 10" a	
800S162-43	33	10' 0" e	8' 8" e	7' 1" e	9' 6" a	7' 8" a	5' 8" a	
800S200-43	33	11' 3" e	9' 9" e	7' 9" e	10' 1" a	8' 2" a	6' 0" a	
800S250-43	33	11' 4" e	9' 10" e	7' 9" e	10' 2" a	8' 3" a	6' 0" a	
800S162-54	33	11' 5" e	9' 11" e	8' 1" e	11' 5" a	9' 11" a	8' 1" a	
800S162-54	50	12' 6" e	11' 4" e	9' 6" e	13' 6" i	11' 8" i	9' 2" a	
800S200-54	33	13' 2" e	11' 6" e	9' 5" e	13' 3" a	11' 6" a	9' 1" a	
800S200-54	50	13' 2" e	12' 0" e	10' 6" e	14' 10" i	12' 11" i	9' 9" a	
800S250-54	33	12' 11" e	11' 2" e	9' 2" e	12' 11" a	11' 2" a	9' 0" a	
800S250-54	50	13' 9" e	12' 6" e	10' 7" e	15' 0" i	13' 0" a	9' 9" a	
800S162-68	33	13' 0" e	11' 3" e	9' 2" e	13' 0" i	11' 3" i	9' 2" a	
800S162-68	50	13' 6" e	12' 3" e	10' 9" e	15' 2" i	13' 7" i	11' 1" i	
800S200-68	33	14' 2" e	12' 11" e	10' 7" e	14' 11" i	12' 11" a	10' 7" a	
800S200-68	50	14' 2" e	12' 11" e	11' 3" e	15' 11" i	14' 5" i	12' 8" i	
800S250-68	33	14' 10" e	13' 5" e	10' 11" e	15' 5" i	13' 5" a	10' 11" a	
800S250-68	50	14' 9" e	13' 5" e	11' 9" e	16' 7" i	15' 1" i	12' 4" i	
800S162-97	33	15' 0" e	13' 8" e	11' 11" e	16' 11" i	14' 8" i	12' 0" i	
800S162-97	50	15' 0" e	13' 8" e	11' 11" e	16' 11" i	15' 4" i	13' 5" i	
800S200-97	33	15' 9" e	14' 4" e	12' 6" e	17' 8" i	15' 6" i	12' 8" i	
800S200-97	50	15' 9" e	14' 4" e	12' 6" e	17' 8" i	16' 1" i	14' 1" i	
800S250-97	33	16' 6" e	15' 0" e	13' 1" e	18' 6" i	16' 4" i	13' 4" i	
800S250-97	50	16' 6" e	15' 0" e	13' 1" e	18' 6" i	16' 10" i	14' 8" i	

10 psf dead load and 125 psf live load			L/360 live load deflection					
1400S162-54	33	15' 7" e	13' 1" e	8' 9" e	12' 8" a	10' 1" a	7' 0" a	
1400S162-54	50	17' 5" e	13' 1" e	8' 9" e	13' 6" a	10' 5" a	7' 0" a	
1400S200-54	33	16' 9" e	13' 1" e	8' 9" e	13' 0" a	10' 5" a	7' 0" a	
1400S200-54	50	17' 5" e	13' 1" e	8' 9" e	13' 9" a	10' 5" a	7' 0" a	
1400S250-54	33	16' 11" e	13' 1" e	8' 9" e	13' 1" a	10' 5" a	7' 0" a	
1400S250-54	50	17' 5" e	13' 1" e	8' 9" e	13' 10" a	10' 5" a	7' 0" a	
1400S162-68	33	18' 1" e	15' 8" e	12' 10" e	18' 1" a	15' 4" a	11' 6" a	
1400S162-68	50	21' 0" e	18' 8" e	15' 3" e	20' 9" i	16' 11" i	12' 6" a	
1400S200-68	33	19' 4" e	16' 9" e	13' 8" e	19' 4" a	15' 11" a	11' 10" a	
1400S200-68	50	21' 10" e	19' 9" e	16' 1" e	21' 6" i	17' 5" i	12' 10" a	
1400S250-68	33	20' 1" e	17' 5" e	14' 3" e	19' 11" a	16' 3" a	12' 1" a	
1400S250-68	50	22' 9" e	19' 10" e	16' 2" e	21' 7" i	17' 6" i	12' 11" a	
1400S162-97	33	22' 8" e	19' 7" e	16' 0" e	22' 8" i	19' 7" i	16' 0" a	
1400S162-97	50	23' 10" e	21' 8" e	18' 11" e	26' 10" i	23' 4" i	19' 1" i	
1400S200-97	33	24' 0" e	20' 10" e	17' 0" e	24' 0" i	20' 10" i	17' 0" a	
1400S200-97	50	24' 10" e	22' 6" e	19' 8" e	27' 10" i	24' 10" i	20' 4" i	
1400S250-97	33	25' 5" e	22' 0" e	18' 0" e	25' 5" i	22' 0" i	18' 0" a	
1400S250-97	50	25' 9" e	23' 4" e	20' 5" e	28' 10" i	25' 10" i	21' 1" i	

10 psf dead load and 125 psf live load			L/360 live load deflection					
Member	ksi	Single Span Spacing (in)			Two Equal Spans Spacing (in)			
		12	16	24	12	16	24	
1000S162-43	33	11' 3" e	9' 3" e	6' 2" e	9' 1" a	7' 3" a	4' 11" a	
1000S200-43	33	12' 0" e	9' 3" e	6' 2" e	9' 4" a	7' 5" a	4' 11" a	
1000S250-43	33	12' 5" e	9' 3" e	6' 2" e	9' 6" a	7' 5" a	4' 11" a	
1000S162-54	33	13' 0" e	11' 3" e	9' 2" e	13' 0" a	10' 11" a	8' 2" a	
1000S162-54	50	14' 10" e	13' 2" e	10' 9" e	14' 8" i	11' 11" i	8' 10" a	
1000S200-54	33	13' 11" e	12' 1" e	9' 10" e	13' 10" a	11' 4" a	8' 5" a	
1000S200-54	50	15' 7" e	13' 9" e	11' 3" e	15' 0" i	12' 3" i	9' 0" a	
1000S250-54	33	14' 11" e	12' 11" e	10' 6" e	14' 6" a	11' 10" a	8' 9" a	
1000S250-54	50	16' 5" e	14' 5" e	11' 9" e	15' 5" i	12' 6" a	9' 2" a	
1000S162-68	33	14' 11" e	12' 11" e	10' 6" e	14' 11" i	12' 11" a	10' 6" a	
1000S162-68	50	16' 1" e	14' 8" e	12' 7" e	17' 10" i	15' 5" i	12' 7" a	
1000S200-68	33	15' 11" e	13' 10" e	11' 3" e	15' 11" i	13' 10" a	11' 3" a	
1000S200-68	50	16' 10" e	15' 4" e	13' 4" e	18' 11" i	16' 5" i	13' 5" a	
1000S250-68	33	17' 8" e	15' 8" e	12' 9" e	18' 1" a	15' 8" a	12' 9" a	
1000S250-68	50	17' 8" e	16' 0" e	14' 0" e	19' 10" i	17' 6" i	14' 2" a	
1000S162-97	33	18' 1" e	15' 9" e	12' 10" e	18' 2" i	15' 9" i	12' 10" i	
1000S162-97	50	18' 1" e	16' 5" e	14' 4" e	20' 4" i	18' 6" i	15' 7" i	
1000S200-97	33	18' 11" e	16' 10" e	13' 9" e	19' 5" i	16' 10" i	13' 9" i	
1000S200-97	50	18' 11" e	17' 2" e	15' 0" e	21' 3" i	19' 3" i	16' 8" i	
1000S250-97	33	19' 8" e	17' 11" e	15' 7" e	22' 1" i	19' 1" i	15' 7" i	
1000S250-97	50	19' 8" e	17' 11" e	15' 8" e	22' 1" i	20' 1" i	17' 7" i	



Joist table notes:

- Joist deflection limitations are based upon L/240 for the total load [TL] and L/360 for live load [LL].
- For two equal, continuous span conditions, alternate span live load has been considered.
- For two equal, continuous span conditions, the listed span is the distance from either end support to the center support.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
- The yield stress [33 ksi or 50 ksi] used to calculate tabulated values is indicated in each table. For 50 ksi material to be provided, it needs to be indicated at the time of ordering.

- Spans are based upon continuous support of the compression flange.
- Spans noted with an:
  - "e" require web stiffeners at end supports
  - "i" requires web stiffeners at interior supports
  - "a" requires web stiffeners at all three supports.
- A 3.5" bearing length was used at all support locations in the preparation of these tables.
- Web punchouts were not considered for allowable shear or web crippling considerations.
- The punchout pattern for ClarkWestern joists is a 4" long by 1.5" high oval.
- Unpunched joists are available, but must be indicated when ordering.

- Web punchouts located near a bearing location may need reinforcement.
- Joists must be restrained against rotation at all supports.
- Joist bridging opposite the sheathed flange is recommended at a maximum of 8 feet o.c. when sheathing is applied to only the compression flange.

# Floor joist — span limitations

Member	ksi	10 psf dead load and 50 psf live load L/360 live load deflection					
		Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1000S300-97	33	27' 8"	25' 2"	22' 0"	31' 1" i	28' 3" i	24' 0" i
1000S300-97	50	27' 7"	25' 1"	21' 11"	30' 11"	28' 1"	24' 7" i
1000S350-97	33	29' 1"	26' 5"	23' 1"	32' 8" i	29' 8" i	25' 10" i
1000S350-97	50	29' 1"	26' 5"	23' 1"	32' 8" i	29' 8" i	25' 11" i
1000S300-118	33	29' 5"	26' 9"	23' 4"	33' 0"	30' 0" i	26' 3" i
1000S300-118	50	29' 4"	26' 8"	23' 3"	32' 11"	29' 11"	26' 2"
1000S350-118	33	30' 11"	28' 1"	24' 6"	34' 8"	31' 6" i	27' 6" i
1000S350-118	50	30' 11"	28' 1"	24' 6"	34' 8"	31' 6"	27' 6"
1200S300-97	33	32' 0"	29' 1"	25' 5"	36' 0" i	32' 8" i	27' 3" i
1200S300-97	50	31' 11"	29' 0"	25' 4"	35' 10"	32' 6" i	28' 5" i
1200S350-97	33	33' 7"	30' 6"	26' 8" e	37' 8" i	34' 3" i	29' 3" i
1200S350-97	50	33' 7"	30' 6"	26' 8"	37' 8"	34' 3" i	29' 11" i
1200S300-118	33	34' 0"	30' 11"	27' 0"	38' 3" i	34' 9" i	30' 4" i
1200S300-118	50	33' 11"	30' 10"	26' 11"	38' 1"	34' 7"	30' 3"
1200S350-118	33	35' 8"	32' 5"	28' 4"	40' 1" i	36' 5" i	31' 10" i
1200S350-118	50	35' 8"	32' 5"	28' 4"	40' 1"	36' 5"	31' 10"
1350S300-97	33	35' 3"	32' 0"	27' 2" e	38' 6" i	33' 4" i	27' 2" i
1350S300-97	50	35' 0"	31' 9"	27' 9"	39' 3" i	35' 8" i	31' 2" i
1350S350-97	33	36' 10"	33' 6"	29' 3" e	41' 5" i	37' 7" i	31' 9" i
1350S350-97	50	36' 10"	33' 6"	29' 3"	41' 5"	37' 7" i	32' 10" i
1350S300-118	33	37' 5"	34' 0"	29' 9"	42' 0" i	37' 9" i	30' 10" i
1350S300-118	50	37' 5"	34' 0"	29' 9"	42' 0"	38' 2"	33' 4" i
1350S350-118	33	39' 2"	35' 7"	31' 1"	44' 0" i	40' 0" i	34' 11" i
1350S350-118	50	39' 2"	35' 7"	31' 1"	44' 0"	40' 0"	34' 11" i
1400S300-97	33	36' 3"	32' 11"	27' 9" e	39' 4" i	34' 0" i	27' 9" i
1400S300-97	50	36' 0"	32' 8"	28' 7"	40' 5" i	36' 8" i	32' 1" i
1400S350-97	33	37' 11"	34' 6"	30' 1" e	42' 7" i	38' 8" i	32' 7" i
1400S350-97	50	37' 11"	34' 6"	30' 1"	42' 7"	38' 8" i	33' 10" i
1400S300-118	33	38' 7"	35' 1"	30' 7"	43' 4" i	38' 7" i	31' 6" i
1400S300-118	50	38' 7"	35' 0"	30' 7"	43' 3"	39' 4"	34' 4" i
1400S350-118	33	40' 4"	36' 8"	32' 0"	45' 4" i	41' 2" i	36' 0" i
1400S350-118	50	40' 4"	36' 8"	32' 0"	45' 4"	41' 2"	36' 0" i
1600S300-97	33	40' 3"	36' 7"	30' 0" e	42' 5" i	36' 9" i	30' 0" i
1600S300-97	50	39' 11"	36' 3"	31' 8"	44' 10" i	40' 8" i	35' 1" i
1600S350-97	33	42' 0"	38' 2" e	32' 9" e	46' 4" i	40' 1" i	32' 9" i
1600S350-97	50	41' 10"	38' 0"	33' 2"	46' 11" i	42' 8" i	37' 3" i
1600S300-118	33	43' 1"	39' 1"	34' 2"	48' 4" i	41' 10" i	34' 2" i
1600S300-118	50	42' 10"	38' 11"	34' 0"	48' 1"	43' 8" i	38' 2" i
1600S350-118	33	44' 11"	40' 10"	35' 8"	50' 6" i	45' 2" i	36' 10" i
1600S350-118	50	44' 9"	40' 8"	35' 6"	50' 3"	45' 8" i	39' 11" i

Member	ksi	10 psf dead load and 50 psf live load L/360 live load deflection					
		Single Span Spacing (in)			Two Equal Spans Spacing (in)		
		12	16	24	12	16	24
1000S300-97	33	20' 5"	18' 7" e	16' 0" e	22' 7" i	19' 7" i	16' 0" a
1000S300-97	50	20' 4"	18' 5"	16' 1"	22' 10" i	20' 9" i	18' 1" i
1000S350-97	33	21' 5"	19' 6" e	17' 0" e	24' 1" i	21' 1" i	17' 3" a
1000S350-97	50	21' 5"	19' 6"	17' 0"	24' 1" i	21' 1" i	19' 1" i
1000S300-118	33	21' 8"	19' 8"	17' 2" e	24' 4" i	21' 9" i	17' 9" i
1000S300-118	50	21' 7"	19' 8"	17' 2"	24' 3"	22' 1" i	19' 3" i
1000S350-118	33	22' 9"	20' 8"	18' 1" e	25' 7" i	22' 3" i	19' 3" i
1000S350-118	50	22' 9"	20' 8"	18' 1"	25' 7"	23' 3" i	20' 4" i
1200S300-97	33	23' 7" e	21' 5" e	18' 2" e	25' 8" i	22' 3" i	18' 2" a
1200S300-97	50	23' 6"	21' 4"	18' 8" e	26' 5" i	24' 0" i	20' 9" i
1200S350-97	33	24' 9" e	22' 6" e	19' 6" e	27' 7" i	23' 11" a	19' 6" a
1200S350-97	50	24' 9"	22' 6"	19' 8" e	27' 9" i	25' 3" i	22' 0" i
1200S300-118	33	25' 1"	22' 9"	19' 11" e	28' 2" i	24' 9" i	20' 3" i
1200S300-118	50	25' 0"	22' 9"	19' 10"	28' 1"	25' 6" i	22' 3" i
1200S350-118	33	26' 4"	23' 11"	20' 10" e	29' 6" i	26' 9" i	21' 10" i
1200S350-118	50	26' 4"	23' 11"	20' 10"	29' 6" i	26' 10" i	23' 5" i
1350S300-97	33	25' 8" e	22' 3" e	18' 2" e	25' 8" i	22' 3" i	18' 2" a
1350S300-97	50	25' 9"	23' 5"	20' 5" e	28' 11" i	26' 1" i	21' 3" i
1350S350-97	33	27' 2" e	24' 8" e	21' 2" e	29' 11" i	25' 11" a	21' 2" a
1350S350-97	50	27' 2"	24' 8"	21' 7" e	30' 6" i	24' 0" a	24' 0" a
1350S300-118	33	27' 7"	25' 1" e	20' 7" e	29' 1" i	25' 2" i	20' 7" i
1350S300-118	50	27' 7"	25' 1"	21' 11"	31' 0" i	28' 2" i	24' 5" i
1350S350-118	33	28' 11"	26' 3" e	22' 11" e	32' 5" i	29' 0" i	23' 8" a
1350S350-118	50	28' 11"	26' 3"	22' 11"	32' 5" i	29' 6" i	25' 9" i
1400S300-97	33	26' 2" e	22' 8" e	18' 6" e	26' 2" i	22' 8" a	18' 6" a
1400S300-97	50	26' 6"	24' 1"	21' 0" e	29' 9" i	26' 7" i	21' 8" i
1400S350-97	33	28' 0" e	25' 5" e	21' 9" e	30' 9" a	26' 7" a	21' 9" a
1400S350-97	50	28' 0"	25' 5"	22' 2" e	31' 5" i	28' 6" i	24' 7" a
1400S300-118	33	28' 5"	25' 9" e	21' 0" e	29' 9" i	25' 9" i	21' 0" i
1400S300-118	50	28' 5"	25' 10"	22' 7"	31' 11" i	29' 0" i	25' 0" i
1400S350-118	33	29' 9"	27' 0" e	23' 7" e	33' 5" i	29' 9" i	24' 3" a
1400S350-118	50	29' 9"	27' 0"	23' 7"	33' 5" i	30' 4" i	26' 6" i
1600S300-97	33	28' 4" e	24' 6" e	20' 0" e	28' 4" i	24' 6" a	20' 0" a
1600S300-97	50	29' 5"	26' 9" e	23' 4" e	33' 0" i	28' 8" i	23' 4" a
1600S350-97	33	30' 11" e	26' 9" e	21' 10" e	30' 11" a	26' 9" a	21' 10" a
1600S350-97	50	30' 10"	28' 0" e	24' 5" e	34' 7" i	30' 6" i	24' 11" a
1600S300-118	33	31' 9"	27' 11" e	22' 9" e	32' 3" i	27' 11" i	22' 9" a
1600S300-118	50	31' 7"	28' 8"	25' 1" e	35' 5" i	32' 2" i	27' 0" i
1600S350-118	33	33' 1" e	30' 1" e	24' 7" e	34' 9" i	30' 1" i	24' 7" a
1600S350-118	50	33' 0"	29' 11"	26' 2" e	37' 0" i	33' 8" i	28' 11" i

Joist table notes:

- Joist deflection limitations are based upon L/240 for the total load [TL] and L/360 for live load [LL].
- For two equal, continuous span conditions, alternate span live load has been considered.
- For two equal, continuous span conditions, the listed span is the distance from either end support to the center support.
- The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
- The yield stress [33 ksi or 50 ksi] used to calculate tabulated values is indicated in each table. For 50 ksi material to be provided, it needs to be indicated at the time of ordering.

- Spans are based upon continuous support of the compression flange.
- Spans noted with an:
  - "e" require web stiffeners at end supports
  - "i" requires web stiffeners at interior supports
  - "a" requires web stiffeners at all three supports.
- A 3.5" bearing length was used at all support locations in the preparation of these tables.
- Web punchouts were not considered for allowable shear or web crippling considerations.
- The punchout pattern for ClarkWestern joists is a 4" long by 1.5" high oval.
- Unpunched joists are available, but must be indicated when ordering.

- Web punchouts located near a bearing location may need reinforcement.
- Joists must be restrained against rotation at all supports.
- Joist bridging opposite the sheathed flange is recommended at a maximum of 8 feet o.c. when sheathing is applied to only the compression flange.

# Boxed header — allowable uniform load (lb/ft)

Member	ksi	Span ft								
		3	4	5	6	8	10	12	14	16
600S162-33	33	850.8e	638.1e	510.5e	422.5e	237.7e	152.1e	90.7e	57.1e	38.3e
600S200-33	33	850.8e	638.1e	510.5e	425.4e	255.8e	163.7e	104.1e	65.6e	43.9e
600S162-43	33	1887.6e	1390.0e	889.6e	617.8e	347.5e	202.4e	117.1e	73.8	49.4
600S200-43	33	1887.6e	1415.7e	919.6e	638.6e	359.2e	229.9e	135.7e	85.5e	57.2
600S250-43	33	1887.6e	1415.7e	967.4e	671.8e	377.9e	241.9e	155.9e	98.2e	65.8e
600S162-54	33	3135.6e	1763.8e	1128.8e	783.9e	440.9e	250.0e	144.7e	91.1	61.0
600S162-54	50	3763.8e	2527.1e	1617.4e	1123.2e	488.3e	250.0e	144.7	91.1	61.0
600S200-54	33	3566.4e	2006.1e	1283.9e	891.6e	501.5e	290.1e	167.9e	105.7	70.8
600S200-54	50	3763.8e	2532.9e	1621.1e	1125.8e	566.7e	290.1e	167.9	105.7	70.8
600S250-54	33	3392.1e	1908.1e	1221.2e	848.0e	477.0e	305.3e	193.2e	121.7e	81.5
600S250-54	50	3763.8e	2666.7e	1706.7e	1185.2e	642.9e	329.1e	190.5	120.0	80.4
600S162-68	33	3968.2e	2232.1e	1428.5e	992.0e	558.0e	308.1e	178.3	112.3	75.2
600S162-68	50	5846.8e	3288.8e	2104.9e	1426.3e	601.7e	308.1	178.3	112.3	75.2
600S200-68	33	4506.2e	2534.7e	1622.2e	1126.5e	633.7e	358.4e	207.4e	130.6	87.5
600S200-68	50	6475.4e	3642.4e	2331.1e	1618.8e	700.0e	358.4	207.4	130.6	87.5
600S250-68	33	4862.9e	2735.4e	1750.7e	1215.7e	683.9e	413.2e	239.1e	150.6	100.9
600S250-68	50	6146.9e	3457.6e	2212.9e	1536.7e	806.3e	412.8e	238.9	150.5	100.8
600S162-97	33	5685.0e	3197.8e	2046.6e	1421.2e	799.5e	419.3	242.7	152.8	102.4
600S162-97	50	8403.7e	4727.1e	3025.3e	1941.3e	819.0	419.3	242.7	152.8	102.4
600S200-97	33	6443.5e	3624.5e	2319.7e	1610.9e	906.1e	490.5e	283.9	178.8	119.8
600S200-97	50	9560.6e	5377.9e	3441.8e	2270.9e	958.0e	490.5	283.9	178.8	119.8
600S250-97	33	7230.4e	4067.1e	2603.0e	1807.6e	1016.8e	567.8e	328.6	206.9	138.6
600S250-97	50	10278.1e	5781.4e	3700.1e	2569.5e	1109.0e	567.8	328.6	206.9	138.6

Member	ksi	Span ft								
		3	4	5	6	8	10	12	14	16
800S162-33	33	632.0e	474.0e	379.2e	316.0e	237.0e	187.0e	129.9e	95.4e	72.2e
800S200-33	33	632.0e	474.0e	379.2e	316.0e	237.0e	189.6e	149.3e	109.7e	84.0e
800S162-43	33	1401.5e	1051.2e	840.9e	700.8e	419.6e	268.5e	186.5e	137.0e	96.0e
800S200-43	33	1401.5e	1051.2e	840.9e	700.8e	525.6e	340.6e	236.5e	168.9e	113.1e
800S250-43	33	1401.5e	1051.2e	840.9e	700.8e	525.6e	340.6e	240.3e	176.6e	128.4e
800S162-54	33	2788.4e	2091.3e	1405.6e	976.1e	549.1e	351.4e	244.0e	179.3e	121.7e
800S162-54	50	2788.4e	2091.3e	1673.0e	1362.6e	766.5e	489.5e	283.3e	178.4e	119.5
800S200-54	33	2788.4e	2091.3e	1673.0e	1324.1e	744.8e	476.7e	331.0e	209.4e	140.3e
800S200-54	50	2788.4e	2091.3e	1673.0e	1394.2e	934.7e	574.5e	332.5e	209.4e	140.3
800S250-54	33	2788.4e	2091.3e	1673.0e	1252.7e	704.6e	451.0e	313.2e	230.1e	159.3e
800S250-54	50	2788.4e	2091.3e	1673.0e	1394.2e	951.2e	608.8e	373.2e	235.0e	157.4e
800S162-68	33	5085.0e	2860.3e	1830.6e	1271.2e	715.1e	457.6e	317.8e	225.8e	151.3e
800S162-68	50	5627.6e	4150.2e	2656.1e	1844.5e	1037.6e	617.9e	357.6e	225.2	150.9
800S200-68	33	5627.6e	3774.0e	2415.4e	1677.3e	943.5e	603.8e	411.8e	259.3e	173.7e
800S200-68	50	5627.6e	4220.7e	3376.6e	2415.2e	1358.5e	711.5e	411.8e	259.3e	173.7
800S250-68	33	5627.6e	4027.7e	2577.7e	1790.1e	1006.9e	644.4e	447.5e	295.0e	197.6e
800S250-68	50	5627.6e	4220.7e	3288.0e	2283.3e	1284.4e	807.6e	467.4e	294.3e	197.2
800S162-97	33	8632.9e	4856.0e	3107.8e	2158.2e	1214.0e	777.0e	491.3e	309.4	207.3
800S162-97	50	10771.0e	6058.7e	3877.5e	2692.7e	1514.7e	849.0e	491.3	309.4	207.3
800S200-97	33	9647.8e	5426.9e	3473.2e	2411.9e	1356.7e	868.3e	566.7e	356.9e	239.1
800S200-97	50	14314.9e	8052.1e	5153.4e	3578.7e	1912.6e	979.3e	566.7	356.9	239.1
800S250-97	33	10676.6e	6005.6e	3843.6e	2669.1e	1501.4e	960.9e	646.9e	407.4e	272.9
800S250-97	50	14513.7e	8558.1e	5477.2e	3803.6e	2139.5e	1117.9e	646.9e	407.4	272.9

### Double member header table notes

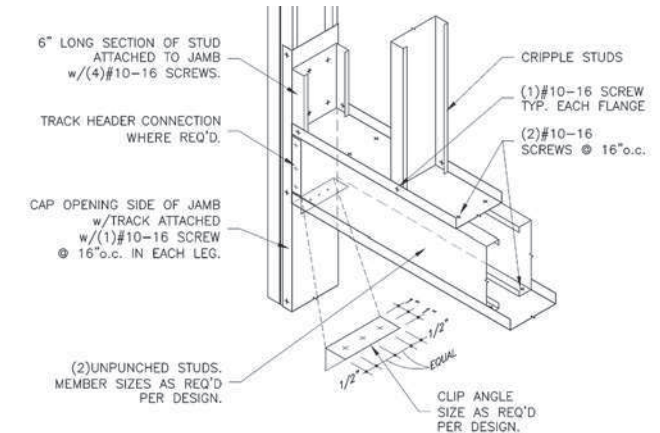
1. Deflection limit is L/360.
2. The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
3. Allowable loads have not been modified for strength or deflection calculations.
4. Allowable loads are for either boxed or back-to-back members.
5. Allowable moment, shear and web crippling are based on twice the capacity of a single member. The moment of inertia is based on twice the value of a single member.

Member	ksi	Span ft								
		3	4	5	6	8	10	12	14	16
1000S162-43	33	1114.6e	835.9e	668.7e	557.3e	418.0e	334.4e	238.3e	175.1e	134.0e
1000S200-43	33	1114.6e	835.9e	668.7e	557.3e	418.0e	334.4e	269.0e	197.6e	151.3e
1000S250-43	33	1114.6e	835.9e	668.7e	557.3e	418.0e	334.4e	278.6e	217.3e	166.4e
1000S162-54	33	2214.5e	1660.8e	1328.7e	1107.2e	708.8e	453.6e	315.0e	231.4e	177.2e
1000S162-54	50	2214.5e	1660.8e	1328.7e	1107.2e	830.4e	627.5e	435.8e	299.1e	200.4e
1000S200-54	33	2214.5e	1660.8e	1328.7e	1107.2e	816.7e	522.7e	363.0e	266.7e	204.2e
1000S200-54	50	2214.5e	1660.8e	1328.7e	1107.2e	830.4e	664.3e	472.7e	343.0e	229.8e
1000S250-54	33	2214.5e	1660.8e	1328.7e	1107.2e	830.4e	599.9e	416.6e	306.0e	234.3e
1000S250-54	50	2214.5e	1660.8e	1328.7e	1107.2e	830.4e	664.3e	520.9e	382.7e	270.2e
1000S162-68	33	4460.5e	3345.4e	2398.8e	1665.8e	937.0e	599.7e	416.5e	306.0e	234.3e
1000S162-68	50	4460.5e	3345.4e	2676.3e	2230.3e	1343.9e	860.1e	597.3e	381.6e	255.6e
1000S200-68	33	4460.5e	3345.4e	2676.3e	1907.9e	1073.2e	686.8e	477.0e	350.4e	268.3e
1000S200-68	50	4460.5e	3345.4e	2676.3e	2230.3e	1509.7e	966.2e	671.0e	435.3e	291.6e
1000S250-68	33	4460.5e	3345.4e	2676.3e	2230.3e	1373.6e	879.1e	610.5e	448.5e	336.1e
1000S250-68	50	4460.5e	3345.4e	2676.3e	2230.3e	1672.7e	1105.1e	767.5e	501.4e	335.9e
1000S162-97	33	9934.1e	5588.0e	3576.3e	2483.5e	1397.0e	894.1e	620.9e	456.2e	349.2e
1000S162-97	50	13151.6e	8157.3e	5220.7e	3625.5e	2039.3e	1305.2e	858.2e	540.5e	362.1
1000S200-97	33	11321.2e	6368.2e	4075.6e	2830.3e	1592.0e	1018.9e	707.6e	519.8e	398.0e
1000S200-97	50	13151.6e	9333.3e	5973.3e	4148.1e	2333.3e	1493.3e	978.1e	615.9e	412.6
1000S250-97	33	11791.0e	8200.4e	5248.3e	3644.6e	2050.1e	1312.1e	911.2e	669.4e	465.8e
1000S250-97	50	13151.6e	9863.7e	7500.1e	5208.4e	2929.7e	1875.0e	1104.1e	695.3e	465.8e

### Headers

Headers transfer loads to adjacent vertical members. The following tables show load capacity for headers of different lengths.

### Boxed header



6. Bearing length for web crippling = 1" minimum.
7. Where noted "e", web stiffeners are required at each support.
8. Allowable shear and web crippling have not been reduced for punchouts.
9. Members are assumed adequately braced for bending.
10. Allowable loads are for simply supported headers with uniform bending loads only.

# Back-to-back header — allowable uniform load (lb/ft)

Member	ksi	Span ft								
		3	4	5	6	8	10	12	14	16
1200S162-54	33	1836.5e	1377.4e	1101.9e	918.2e	688.7e	550.9e	385.9e	283.5e	217.1e
1200S162-54	50	1836.5e	1377.4e	1101.9e	918.2e	688.7e	550.9e	459.1e	389.9e	298.5e
1200S200-54	33	1836.5e	1377.4e	1101.9e	918.2e	688.7e	550.9e	443.8e	326.0e	249.6e
1200S200-54	50	1836.5e	1377.4e	1101.9e	918.2e	688.7e	550.9e	459.1e	393.5e	323.3e
1200S250-54	33	1836.5e	1377.4e	1101.9e	918.2e	688.7e	550.9e	454.2e	333.7e	255.5e
1200S250-54	50	1836.5e	1377.4e	1101.9e	918.2e	688.7e	550.9e	459.1e	393.5e	335.1e
1200S162-68	33	3694.3e	2770.7e	2216.6e	1847.2e	1159.5e	742.1e	515.3e	378.6e	289.9e
1200S162-68	50	3694.3e	2770.7e	2216.6e	1847.2e	1385.4e	1055.9e	733.3e	538.7e	392.4e
1200S200-68	33	3694.3e	2770.7e	2216.6e	1847.2e	1323.7e	847.2e	588.3e	432.2e	330.9e
1200S200-68	50	3694.3e	2770.7e	2216.6e	1847.2e	1385.4e	1108.3e	821.4e	603.5e	445.2e
1200S250-68	33	3694.3e	2770.7e	2216.6e	1847.2e	1385.4e	921.1e	639.6e	469.9e	359.8e
1200S250-68	50	3694.3e	2770.7e	2216.6e	1847.2e	1385.4e	1108.3e	833.7e	612.5e	468.9e
1200S162-97	33	10862.7e	7125.4e	4560.3e	3166.9e	1781.4e	1140.1e	791.7e	581.7e	445.3e
1200S162-97	50	10862.7e	8147.0e	6517.6e	4536.6e	2551.8e	1633.2e	1134.1e	833.3e	570.5e
1200S200-97	33	10862.7e	8067.3e	5163.1e	3585.5e	2016.8e	1290.8e	896.4e	658.6e	504.2e
1200S200-97	50	10862.7e	8147.0e	6517.6e	5167.2e	2906.5e	1860.2e	1291.8e	949.1e	643.9e
1200S250-97	33	10862.7e	8147.0e	5791.9e	4022.2e	2262.5e	1448.0e	1005.5e	738.8e	565.6e
1200S250-97	50	10862.7e	8147.0e	6517.6e	5431.3e	3142.1e	2010.9e	1396.5e	1026.0e	722.0e

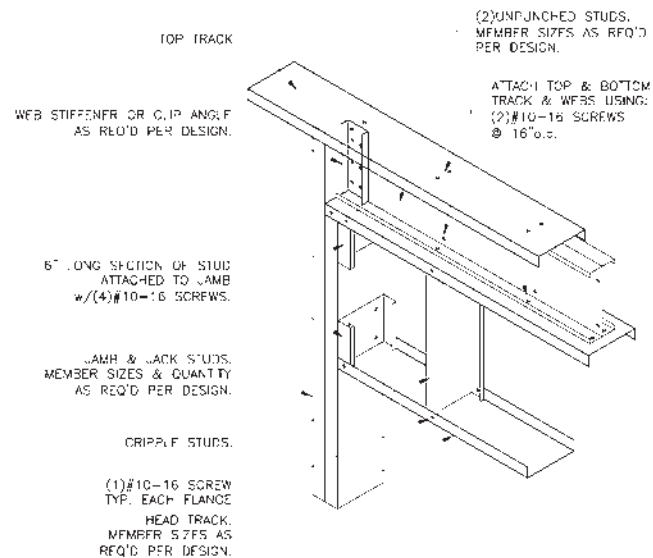
Member	ksi	Span (ft)								
		3	4	5	6	8	10	12	14	16
1400S162-54	33	1568.7e	1176.5e	941.2e	784.4e	588.3e	470.6e	392.2e	335.5e	256.9e
1400S162-54	50	1568.7e	1176.5e	941.2e	784.4e	588.3e	470.6e	392.2e	336.2e	294.1e
1400S200-54	33	1568.7e	1176.5e	941.2e	784.4e	588.3e	470.6e	392.2e	336.2e	294.1e
1400S200-54	50	1568.7e	1176.5e	941.2e	784.4e	588.3e	470.6e	392.2e	336.2e	294.1e
1400S250-54	33	1568.7e	1176.5e	941.2e	784.4e	588.3e	470.6e	392.2e	336.2e	294.1e
1400S250-54	50	1568.7e	1176.5e	941.2e	784.4e	588.3e	470.6e	392.2e	336.2e	294.1e
1400S162-68	33	3152.8e	2364.6e	1891.7e	1576.4e	1182.3e	884.4e	614.2e	451.2e	345.5e
1400S162-68	50	3152.8e	2364.6e	1891.7e	1576.4e	1182.3e	945.8e	788.2e	638.5e	488.8e
1400S200-68	33	3152.8e	2364.6e	1891.7e	1576.4e	1182.3e	945.8e	699.6e	514.0e	393.5e
1400S200-68	50	3152.8e	2364.6e	1891.7e	1576.4e	1182.3e	945.8e	788.2e	675.6e	546.5e
1400S250-68	33	3152.8e	2364.6e	1891.7e	1576.4e	1182.3e	945.8e	758.4e	557.2e	426.6e
1400S250-68	50	3152.8e	2364.6e	1891.7e	1576.4e	1182.3e	945.8e	788.2e	675.6e	553.6e
1400S162-97	33	9252.4e	6939.3e	5531.3e	3841.1e	2160.6e	1382.8e	960.3e	705.5e	540.2e
1400S162-97	50	9252.4e	6939.3e	5551.4e	4626.2e	3065.4e	1961.9e	1362.4e	1001.0e	766.4e
1400S200-97	33	9252.4e	6939.3e	5551.4e	4330.7e	2436.0e	1559.1e	1082.7e	795.4e	609.0e
1400S200-97	50	9252.4e	6939.3e	5551.4e	4626.2e	3469.6e	2227.5e	1546.9e	1136.5e	870.1e
1400S250-97	33	9252.4e	6939.3e	5551.4e	4626.2e	2721.6e	1741.9e	1209.6e	888.7e	680.4e
1400S250-97	50	9252.4e	6939.3e	5551.4e	4626.2e	3469.6e	2399.4e	1666.2e	1224.2e	937.2e

Member	ksi	Span ft								
		3	4	5	6	8	10	12	14	16
1350S162-54	33	1628.0e	1221.0e	976.8e	814.0e	610.5e	488.4e	407.0e	322.5e	246.9e
1350S162-54	50	1628.0e	1221.0e	976.8e	814.0e	610.5e	488.4e	407.0e	348.9e	305.3e
1350S200-54	33	1628.0e	1221.0e	976.8e	814.0e	610.5e	488.4e	407.0e	348.9e	283.6e
1350S200-54	50	1628.0e	1221.0e	976.8e	814.0e	610.5e	488.4e	407.0e	348.9e	305.3e
1350S250-54	33	1628.0e	1221.0e	976.8e	814.0e	610.5e	488.4e	407.0e	348.9e	289.8e
1350S250-54	50	1628.0e	1221.0e	976.8e	814.0e	610.5e	488.4e	407.0e	348.9e	305.3e
1350S162-68	33	3272.7e	2454.5e	1963.6e	1636.4e	1227.3e	848.8e	589.5e	433.1e	331.6e
1350S162-68	50	3272.7e	2454.5e	1963.6e	1636.4e	1227.3e	981.8e	818.2e	613.5e	469.7e
1350S200-68	33	3272.7e	2454.5e	1963.6e	1636.4e	1227.3e	967.4e	671.8e	493.6e	377.9e
1350S200-68	50	3272.7e	2454.5e	1963.6e	1636.4e	1227.3e	981.8e	818.2e	686.2e	525.4e
1350S250-68	33	3272.7e	2454.5e	1963.6e	1636.4e	1227.3e	981.8e	728.7e	535.4e	409.9e
1350S250-68	50	3272.7e	2454.5e	1963.6e	1636.4e	1227.3e	981.8e	818.2e	695.5e	532.5e
1350S162-97	33	9608.5e	7206.3e	5288.1e	3672.3e	2065.7e	1322.0e	918.1e	674.5e	516.4e
1350S162-97	50	9608.5e	7206.3e	5765.1e	4804.2e	2937.0e	1879.7e	1305.3e	959.0e	734.3e
1350S200-97	33	9608.5e	7206.3e	5765.1e	4144.2e	2331.1e	1491.9e	1036.0e	761.2e	582.8e
1350S200-97	50	9608.5e	7206.3e	5765.1e	4804.2e	3337.0e	2135.7e	1483.1e	1089.6e	834.3e
1350S250-97	33	9608.5e	7206.3e	5765.1e	4634.2e	2606.8e	1668.3e	1158.6e	851.2e	651.7e
1350S250-97	50	9608.5e	7206.3e	5765.1e	4804.2e	3597.3e	2302.3e	1598.8e	1174.6e	899.3e

Double member header table notes

1. Deflection limit is L/360.
2. The strength increase due to cold work of forming was incorporated for flexural strength as applicable per the NAS A7.2.
3. Allowable loads have not been modified for strength or deflection calculations.
4. Allowable loads are for either boxed or back-to-back members.
5. Allowable moment, shear and web crippling are based on twice the capacity of a single member. The moment of inertia is based on twice the value of a single member.
6. Bearing length for web crippling = 1" minimum.
7. Where noted "e", web stiffeners are required at each support.
8. Allowable shear and web crippling have not been reduced for punchouts.
9. Members are assumed adequately braced for bending.
10. Allowable loads are for simply supported headers with uniform bending loads only.

## Back-to-back header

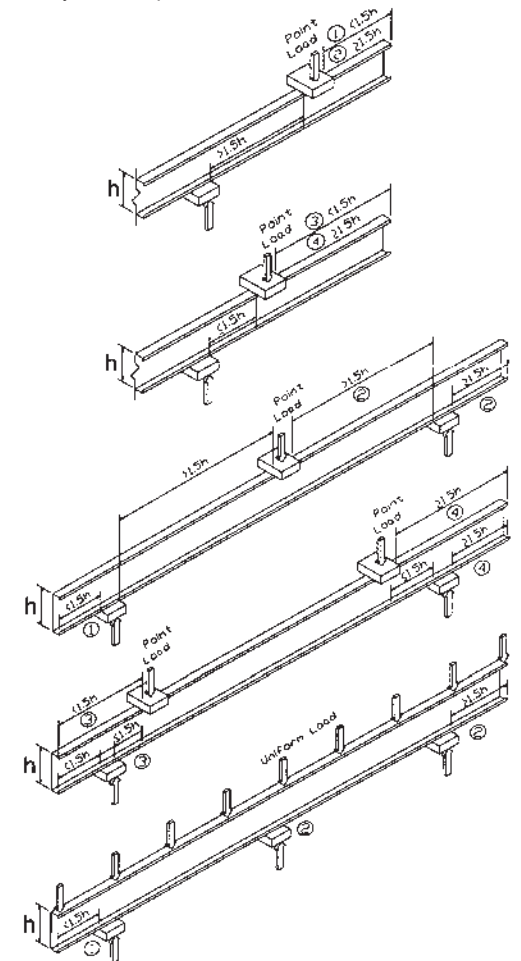


# Web crippling — single members

Web size & thickness	Design thickness (in.)	ksi	Condition 1 Bearing length (in.)				Condition 2 Bearing length (in.)				Condition 3 Bearing length (in.)				Condition 4 Bearing length (in.)			
			1"	1.625"	3.5"	6"	1"	1.625"	3.5"	6"	1"	1.625"	3.5"	6"	1"	1.625"	3.5"	6"
362Sxxx-33	0.0346	33	165	195	259	322	323	362	444	525	129	142	173	202	381	412	480	547
362Sxxx-43	0.0451	33	277	324	427	526	570	632	767	898	236	260	311	360	675	726	836	943
362Sxxx-54	0.0566	33	419	487	636	780	877	967	1160	1348	388	424	501	577	1079	1154	1316	1473
362Sxxx-58	0.0566	50	634	738	963	1182	1329	1465	1758	2043	588	642	760	874	1635	1748	1994	2232
362Sxxx-64	0.0713	33	635	734	948	1157	1349	1477	1753	2022	635	689	806	920	1728	1837	2074	2305
362Sxxx-68	0.0713	50	962	1112	1437	1752	2044	2237	2657	3064	961	1043	1221	1393	2618	2783	3143	3492
362Sxxx-97	0.1017	33	1206	1379	1755	2120	2626	2846	3323	3787	1333	1434	1651	1862	3547	3742	4166	4578
362Sxxx-97	0.1017	50	1827	2089	2659	3212	3978	4312	5035	5738	2020	2172	2501	2821	5374	5670	6313	6936
600Sxxx-33	0.0346	33	153	180	240	297	313	350	430	507	93	103	125	146	329	357	416	473
600Sxxx-43	0.0451	33	259	303	400	493	553	614	745	872	185	204	243	282	600	645	743	838
600Sxxx-54	0.0566	33	395	460	600	736	855	942	1131	1314	318	348	411	473	975	1043	1189	1331
600Sxxx-54	0.0566	50	599	697	909	1116	1295	1427	1713	1991	482	527	623	716	1478	1580	1802	2017
600Sxxx-68	0.0713	33	604	698	902	1100	1318	1443	1713	1976	539	584	684	781	1583	1684	1901	2113
600Sxxx-68	0.0713	50	914	1057	1366	1666	1998	2186	2596	2994	816	886	1036	1183	2399	2551	2881	3201
600Sxxx-97	0.1017	33	1157	1323	1684	2034	2575	2791	3260	3714	1175	1264	1455	1641	3306	3489	3884	4267
600Sxxx-97	0.1017	50	1752	2004	2551	3081	3902	4229	4939	5628	1781	1915	2205	2487	5010	5286	5885	6466
800Sxxx-43	0.0451	33	247	289	381	470	542	601	730	854	150	165	197	228	548	589	678	765
800Sxxx-54	0.0566	33	379	441	576	706	839	925	1110	1290	270	295	349	402	904	966	1102	1234
800Sxxx-54	0.0566	50	575	669	872	1070	1272	1401	1682	1955	409	447	529	608	1370	1464	1670	1869
800Sxxx-68	0.0713	33	582	673	870	1061	1297	1420	1686	1944	473	513	600	685	1485	1579	1783	1981
800Sxxx-68	0.0713	50	882	1019	1318	1607	1966	2151	2555	2946	716	777	910	1038	2250	2392	2701	3001
800Sxxx-97	0.1017	33	1123	1285	1635	1975	2541	2754	3216	3665	1068	1148	1322	1491	3142	3316	3691	4056
800Sxxx-97	0.1017	50	1702	1946	2477	2992	3850	4173	4873	5553	1618	1739	2003	2259	4761	5024	5593	6145
1000Sxxx-54	0.0566	33	365	425	554	680	826	910	1092	1269	228	249	295	339	841	899	1026	1148
1000Sxxx-54	0.0566	50	553	644	840	1031	1251	1379	1655	1923	346	378	447	514	1275	1363	1554	1740
1000Sxxx-68	0.0713	33	563	651	842	1027	1279	1400	1662	1917	415	451	527	602	1398	1487	1679	1865
1000Sxxx-68	0.0713	50	854	987	1275	1555	1938	2121	2518	2904	629	683	799	912	2119	2253	2544	2826
1000Sxxx-97	0.1017	33	1094	1251	1592	1923	2511	2722	3178	3622	974	1047	1206	1360	2999	3165	3523	3871
1000Sxxx-97	0.1017	50	1657	1896	2412	2914	3805	4124	4815	5487	1476	1586	1827	2060	4545	4795	5338	5866
1200Sxxx-68	0.0713	33	547	632	816	996	1262	1382	1640	1892	363	394	462	527	1320	1404	1585	1762
1200Sxxx-68	0.0713	50	828	957	1237	1509	1913	2093	2485	2866	551	598	699	798	2001	2127	2402	2669
1200Sxxx-97	0.1017	33	1068	1221	1554	1877	2484	2692	3144	3583	889	956	1101	1242	2871	3029	3372	3705
1200Sxxx-97	0.1017	50	1618	1850	2355	2844	3764	4079	4764	5428	1348	1449	1668	1882	4350	4589	5109	5614
1350Sxxx-68	0.0713	33	535	618	799	975	1251	1369	1625	1874	327	355	416	475	1266	1346	1520	1689
1350Sxxx-68	0.0713	50	810	937	1211	1477	1895	2074	2463	2840	496	538	630	719	1919	2040	2304	2560
1350Sxxx-97	0.1017	33	1049	1200	1527	1845	2465	2672	3120	3556	831	893	1029	1160	2782	2935	3267	3590
1350Sxxx-97	0.1017	50	1590	1818	2314	2796	3736	4049	4728	5387	1259	1353	1558	1758	4214	4447	4950	5440
1400Sxxx-68	0.0713	33	531	614	793	968	1247	1365	1621	1869	316	343	401	458	1249	1328	1500	1666
1400Sxxx-68	0.0713	50	805	930	1202	1466	1889	2068	2455	2831	479	519	608	694	1892	2012	2272	2525
1400Sxxx-97	0.1017	33	1043	1193	1519	1835	2459	2666	3113	3547	812	873	1005	1134	2753	2905	3234	3553
1400Sxxx-97	0.1017	50	1581	1808	2301	2780	3726	4039	4716	5374	1230	1323	1523	1718	4171	4401	4900	5384

## Web crippling

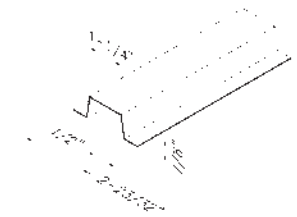
This table identifies the loads that can be handled by the joist web under four different conditions without web stiffeners. Web crippling can occur at member ends or at interior load points along the member. A point is considered to be an interior point if it is within the ends of the member by a distance that is 1.5 times the web depth (h) or more. Web crippling also can occur either with point loading on one flange of the member or on both flanges. The following illustrations identify the four possible conditions.



# Physical & structural properties — furring and channel

## Physical & structural properties for hat furring channels

Member	Fy (ksi)	Design thickness (in)	Area (in <sup>2</sup> )	Weight (lb/ft)	Gross Properties				Effective Properties			
					Ix (in <sup>4</sup> )	Rx (in)	Iy (in <sup>4</sup> )	Ry (in)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Ma (Ft-lb)	Va (lb)
087F125-18	33	0.0188	0.070	0.239	0.009	0.356	0.035	0.710	0.0086	0.0160	26.41	315.3
087F125-27	33	0.0283	0.105	0.356	0.013	0.353	0.053	0.710	0.0131	0.0272	44.78	467.9
087F125-30	33	0.0312	0.115	0.391	0.014	0.353	0.058	0.710	0.0143	0.0307	50.47	513.7
087F125-33	33	0.0346	0.127	0.432	0.016	0.351	0.064	0.710	0.0157	0.0337	55.43	566.7
087F125-43	33	0.0451	0.162	0.550	0.020	0.348	0.082	0.711	0.0196	0.0420	69.17	684.6
087F125-54	33	0.0566	0.197	0.669	0.023	0.345	0.099	0.711	0.0234	0.0501	82.45	762.5
150F125-18	33	0.0188	0.094	0.320	0.031	0.575	0.047	0.705	0.0299	0.0344	56.59	604.4
150F125-27	33	0.0283	0.140	0.477	0.046	0.572	0.070	0.705	0.0459	0.0569	93.74	903.1
150F125-30	33	0.0312	0.154	0.525	0.050	0.571	0.077	0.705	0.0503	0.0639	105.25	993.4
150F125-33	33	0.0346	0.171	0.581	0.055	0.570	0.085	0.705	0.0554	0.0704	115.92	1098.8
150F125-43	33	0.0451	0.219	0.745	0.070	0.565	0.109	0.705	0.0699	0.0888	146.25	1378.1
150F125-54	33	0.0566	0.269	0.914	0.084	0.561	0.134	0.705	0.0844	0.1071	176.36	1632.8



7/8" DRYWALL FURRING CHANNEL  
087F125



1-1/2" DRYWALL HAT CHANNEL  
150F125

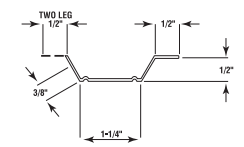
- Notes:
- Properties based on the 2001 NASPEC, including the 2004 Supplement.
  - Design thickness used for determination of properties. Minimum delivered thickness must be no less than 95% of design thickness.
  - For deflection calculations, use effective Ixx. Effective Ixx is based on Procedure 1 of the NASPEC.
  - Effective properties are given as the minimum value for positive or negative bending.

## Physical & structural properties for cold-rolled channel, resilient furring & Z furring

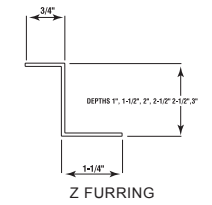
Section	Fy (ksi)	Design thickness (in)	Area (in <sup>2</sup> )	Weight (lb/ft)	Gross properties				Effective properties		
					Ix (in <sup>4</sup> )	Rx (in)	Iy (in <sup>4</sup> )	Ry (in)	Ix (in <sup>4</sup> )	Sx (in <sup>3</sup> )	Ma (Ft-lb)
075U50-54	33	0.0566	0.0867	0.2950	0.0072	0.2876	0.0021	0.1545	0.0072	0.0191	38
150U50-54	33	0.0566	0.1292	0.4396	0.0387	0.5475	0.0027	0.1430	0.0387	0.0516	102
One Leg RFC-18	33	0.0188	0.0504	0.1715	0.0019	0.1964	0.0215	0.6534	—	—	—
Two Leg RFC-18	33	0.0188	0.0643	0.2188	0.0029	0.2137	0.0427	0.8153	—	—	—
100Z Furring-18	33	0.0188	0.0550	0.1872	0.0100	0.4260	0.0130	0.4970	—	—	—
100Z Furring-30	33	0.0312	0.0887	0.3018	0.0154	0.4167	0.0210	0.4868	—	—	—
150Z Furring-18	33	0.0188	0.0640	0.2178	0.0250	0.6210	0.0140	0.4700	—	—	—
150Z Furring-30	33	0.0312	0.1043	0.3549	0.0385	0.6072	0.0214	0.4532	—	—	—
200Z Furring-18	33	0.0188	0.0730	0.2484	0.0480	0.8080	0.0150	0.4500	—	—	—
200Z Furring-30	33	0.0312	0.1199	0.4080	0.0745	0.7880	0.0217	0.4256	—	—	—
250Z Furring-18	33	0.0188	0.0830	0.2824	0.0810	0.9890	0.0160	0.4330	—	—	—
250Z Furring-30	33	0.0312	0.1355	0.4611	0.1254	0.9620	0.0220	0.4024	—	—	—
300Z Furring-18	33	0.0188	0.0920	0.3131	0.1250	1.1670	0.0160	0.4190	—	—	—
300Z Furring-30	33	0.0312	0.1511	0.5142	0.1933	1.1308	0.0221	0.3827	—	—	—



COLD-ROLLED CHANNEL  
75U50 & 150U50



ONE LEG RESILIENT FURRING CHANNEL (SHOWN)  
TWO LEG ALSO AVAILABLE



Z FURRING

- Refer to the Gypsum Association's "Fire Resistance Design Manual" (GA-600) for assemblies using Resilient Furring Channels.

# Hat furring channels

Simple span – Allowable uniform load (lb/ft)													
Member	Span (ft)												
	1.33	2	3	4	5	6	7	8	9	10	12	14	
<b>L/120 Deflection Limit</b>													
087F125-18	119.4	52.8	23.5	13.2	8.5	5.2	3.3	2.2	1.5	1.1	0.6	0.4	
087F125-27	202.5	89.6	39.8	22.4	13.7	7.9	5.0	3.3	2.4	1.7	1.0	0.6	
087F125-30	228.3	100.9	44.9	25.2	15.0	8.7	5.5	3.7	2.6	1.9	1.1	0.7	
087F125-33	250.7	110.9	49.3	27.7	16.5	9.5	6.0	4.0	2.8	2.1	1.2	0.7	
087F125-43	312.8	138.3	61.5	34.6	20.5	11.9	7.5	5.0	3.5	2.6	1.5	0.9	
087F125-54	372.9	164.9	73.3	41.2	24.5	14.2	8.9	6.0	4.2	3.1	1.8	1.1	
150F125-18	122.7	81.6	50.3	28.3	18.1	12.6	9.2	7.1	5.4	3.9	2.3	1.4	
150F125-27	317.4	187.5	83.3	46.9	30.0	20.8	15.3	11.7	8.3	6.0	3.5	2.2	
150F125-30	392.8	210.5	93.6	52.6	33.7	23.4	17.2	12.9	9.0	6.6	3.8	2.4	
150F125-33	490.1	231.8	103.0	58.0	37.1	25.8	18.9	14.2	10.0	7.3	4.2	2.6	
150F125-43	661.4	292.5	130.0	73.1	46.8	32.5	23.9	17.9	12.6	9.2	5.3	3.3	
150F125-54	797.6	352.7	156.8	88.2	56.4	39.2	28.8	21.6	15.2	11.1	6.4	4.0	
<b>L/180 Deflection Limit</b>													
087F125-18	119.4	52.8	23.5	11.7	6.0	3.5	2.2	1.5	1.0	0.7	0.4	0.3	
087F125-27	202.5	89.6	39.8	17.9	9.1	5.3	3.3	2.2	1.6	1.1	0.7	0.4	
087F125-30	228.3	100.9	44.9	19.5	10.0	5.8	3.6	2.4	1.7	1.2	0.7	0.5	
087F125-33	250.7	110.9	49.3	21.4	11.0	6.3	4.0	2.7	1.9	1.4	0.8	0.5	
087F125-43	312.8	138.3	61.5	26.8	13.7	7.9	5.0	3.3	2.3	1.7	1.0	0.6	
087F125-54	372.9	164.9	73.3	31.9	16.3	9.5	6.0	4.0	2.8	2.0	1.2	0.7	
150F125-18	122.7	81.6	50.3	28.3	18.1	12.1	7.6	5.1	3.6	2.6	1.5	1.0	
150F125-27	317.4	187.5	83.3	46.9	30.0	18.6	11.7	7.8	5.5	4.0	2.3	1.5	
150F125-30	392.8	210.5	93.6	52.6	33.7	20.4	12.8	8.6	6.0	4.4	2.5	1.6	
150F125-33	490.1	231.8	103.0	58.0	37.1	22.4	14.1	9.5	6.6	4.8	2.8	1.8	
150F125-43	661.4	292.5	130.0	73.1	46.8	28.3	17.8	11.9	8.4	6.1	3.5	2.2	
150F125-54	797.6	352.7	156.8	88.2	56.4	34.2	21.5	14.4	10.1	7.4	4.3	2.7	
<b>L/240 Deflection Limit</b>													
087F125-18	119.4	52.8	20.8	8.8	4.5	2.6	1.6	1.1	0.8	0.6	0.3	0.2	
087F125-27	202.5	89.6	31.7	13.4	6.9	4.0	2.5	1.7	1.2	0.9	0.5	0.3	
087F125-30	228.3	100.9	34.7	14.6	7.5	4.3	2.7	1.8	1.3	0.9	0.5	0.3	
087F125-33	250.7	110.9	38.1	16.1	8.2	4.8	3.0	2.0	1.4	1.0	0.6	0.4	
087F125-43	312.8	138.3	47.6	20.1	10.3	5.9	3.7	2.5	1.8	1.3	0.7	0.5	
087F125-54	372.9	164.9	56.8	23.9	12.3	7.1	4.5	3.0	2.1	1.5	0.9	0.6	
150F125-18	122.7	81.6	50.3	28.3	15.7	9.1	5.7	3.8	2.7	2.0	1.1	0.7	
150F125-27	317.4	187.5	83.3	46.9	24.1	13.9	8.8	5.9	4.1	3.0	1.7	1.1	
150F125-30	392.8	210.5	93.6	51.5	26.4	15.3	9.6	6.4	4.5	3.3	1.9	1.2	
150F125-33	490.1	231.8	103.0	56.8	29.1	16.8	10.6	7.1	5.0	3.6	2.1	1.3	
150F125-43	661.4	292.5	130.0	71.6	36.7	21.2	13.4	9.0	6.3	4.6	2.7	1.7	
150F125-54	797.6	352.7	156.8	86.5	44.3	25.6	16.1	10.8	7.6	5.5	3.2	2.0	
<b>L/360 Deflection Limit</b>													
087F125-18	119.4	46.7	13.8	5.8	3.0	1.7	1.1	0.7	0.5	0.4	0.2	0.1	
087F125-27	202.5	71.4	21.2	8.9	4.6	2.6	1.7	1.1	0.8	0.6	0.3	0.2	
087F125-30	228.3	78.1	23.1	9.8	5.0	2.9	1.8	1.2	0.9	0.6	0.4	0.2	
087F125-33	250.7	85.7	25.4	10.7	5.5	3.2	2.0	1.3	0.9	0.7	0.4	0.2	
087F125-43	312.8	107.0	31.7	13.4	6.8	4.0	2.5	1.7	1.2	0.9	0.5	0.3	
087F125-54	372.9	127.7	37.8	16.0	8.2	4.7	3.0	2.0	1.4	1.0	0.6	0.4	
150F125-18	122.7	81.6	48.5	20.4	10.5	6.1	3.8	2.6	1.8	1.3	0.8	0.5	
150F125-27	317.4	187.5	74.3	31.3	16.0	9.3	5.8	3.9	2.8	2.0	1.2	0.7	
150F125-30	392.8	210.5	81.4	34.4	17.6	10.2	6.4	4.3	3.0	2.2	1.3	0.8	
150F125-33	490.1	231.8	89.7	37.8	19.4	11.2	7.1	4.7	3.3	2.4	1.4	0.9	
150F125-43	661.4	292.5	113.2	47.8	24.5	14.2	8.9	6.0	4.2	3.1	1.8	1.1	
150F125-54	797.6	352.7	136.6	57.6	29.5	17.1	10.8	7.2	5.1	3.7	2.1	1.3	

Notes: 1. Allowable uniform loads are taken as the minimum value based on:  
a. Moment b. Shear c. Web crippling (1" end bearing) d. Listed deflection

Two equal continuous spans – Allowable uniform load (lb/ft)													
Member	Span (ft)												
	1.33	2	3	4	5	6	7	8	9	10	12	14	
<b>L/120 Deflection Limit</b>													
087F125-18	89.8	46.3	23.1	13.1	8.4	5.9	4.3	3.3	2.6	2.1	1.5	1.0	
087F125-27	172.8	86.5	39.3	22.2	14.3	9.9	7.3	5.6	4.4	3.6	2.4	1.5	
087F125-30	200.1	98.0	44.3	25.0	16.1	11.2	8.2	6.3	5.0	4.0	2.6	1.6	
087F125-33	228.1	107.7	48.6	27.5	17.7	12.3	9.0	6.9	5.5	4.4	2.9	1.8	
087F125-43	292.4	134.1	60.6	34.3	22.0	15.3	11.3	8.6	6.8	5.5	3.6	2.3	
087F125-54	345.4	159.2	72.1	40.9	26.2	18.2	13.4	10.3	8.1	6.6	4.3	2.7	
150F125-18	115.3	67.8	36.8	23.2	16.1	11.8	9.0	7.1	5.6	4.5	3.1	2.3	
150F125-27	250.4	135.6	70.8	43.6	29.6	20.8	15.3	11.7	9.2	7.5	5.2	3.8	
150F125-30	295.2	158.4	82.0	50.3	33.5	23.3	17.1	13.1	10.4	8.4	5.8	4.3	
150F125-33	345.8	183.3	93.8	57.1	36.9	25.7	18.9	14.5	11.4	9.3	6.4	4.7	
150F125-43	500.5	257.6	128.0	72.5	46.5	32.4	23.8	18.2	14.4	11.7	8.1	6.0	
150F125-54	667.7	335.7	154.3	87.4	56.1	39.0	28.7	22.0	17.4	14.1	9.8	7.2	
<b>L/180 Deflection Limit</b>													
087F125-18	89.8	46.3	23.1	13.1	8.4	5.9	4.3	3.3	2.5	1.8	1.0	0.7	
087F125-27	172.8	86.5	39.3	22.2	14.3	9.9	7.3	5.4	3.8	2.8	1.6	1.0	
087F125-30	200.1	98.0	44.3	25.0	16.1	11.2	8.2	5.9	4.1	3.0	1.7	1.1	
087F125-33	228.1	107.7	48.6	27.5	17.7	12.3	9.0	6.5	4.5	3.3	1.9	1.2	
087F125-43	292.4	134.1	60.6	34.3	22.0	15.3	11.3	8.1	5.7	4.1	2.4	1.5	
087F125-54	345.4	159.2	72.1	40.9	26.2	18.2	13.4	9.6	6.8	4.9	2.8	1.8	
150F125-18	115.3	67.8	36.8	23.2	16.1	11.8	9.0	7.1	5.6	4.5	3.1	2.3	
150F125-27	250.4	135.6	70.8	43.6	29.6	20.8	15.3	11.7	9.2	7.5	5.2	3.5	
150F125-30	295.2	158.4	82.0	50.3	33.5	23.3	17.1	13.1	10.4	8.4	5.8	3.9	
150F125-33	345.8	183.3	93.8	57.1	36.9	25.7	18.9	14.5	11.4	9.3	6.4	4.3	
150F125-43	500.5	257.6	128.0	72.5	46.5	32.4	23.8	18.2	14.4	11.7	8.1	5.4	
150F125-54	667.7	335.7	154.3	87.4	56.1	39.0	28.7	22.0	17.4	14.1	9.8	6.5	
<b>L/240 Deflection Limit</b>													
087F125-18	89.8	46.3	23.1	13.1	8.4	5.9	3.9	2.6	1.9	1.4	0.8	0.5	
087F125-27	172.8	86.5	39.3	22.2	14.3	9.6	6.0	4.0	2.8	2.1	1.2	0.8	
087F125-30	200.1	98.0	44.3	25.0	16.1	10.4	6.6	4.4	3.1	2.3	1.3	0.8	
087F125-33	228.1	107.7	48.6	27.5	17.7	11.5	7.2	4.8	3.4	2.5	1.4	0.9	
087F125-43	292.4	134.1	60.6	34.3	22.0	14.3	9.0	6.0	4.2	3.1	1.8	1.1	
087F125-54	345.4	159.2	72.1	40.9	26.2	17.1	10.8	7.2	5.1	3.7	2.1	1.3	
150F125-18	115.3	67.8	36.8	23.2	16.1	11.8	9.0	7.1	5.6	4.5	2.7	1.7	
150F125-27	250.4	135.6	70.8	43.6	29.6	20.8	15.3	11.7	9.2	7.2	4.2	2.6	
150F125-30	295.2	158.4	82.0	50.3	33.5	23.3	17.1	13.1	10.4	7.9	4.6	2.9	
150F125-33	345.8	183.3	93.8	57.1	36.9	25.7	18.9	14.5	11.4	8.8	5.1	3.2	
150F125-43	500.5	257.6	128.0	72.5	46.5	32.4	23.8	18.2	14.4	11.0	6.4	4.0	
150F125-54	667.7	335.7	154.3	87.4	56.1	39.0	28.7	22.0	17.4	13.3	7.7	4.9	
<b>L/360 Deflection Limit</b>													
087F125-18	89.8	46.3	23.1	13.1	7.2	4.2	2.6	1.8	1.2	0.9	0.5	0.3	
087F125-27	172.8	86.5	39.3	21.5	11.0	6.4	4.0	2.7	1.9	1.4	0.8	0.5	
087F125-30	200.1	98.0	44.3	23.5	12.0	7.0	4.4	2.9	2.1	1.5	0.9	0.5	
087F125-33	228.1	107.7	48.6	25.8	13.2	7.6	4.8	3.2	2.3	1.7	1.0	0.6	
087F125-43	292.4	134.1	60.6	32.2	16.5	9.5	6.0	4.0					

# Allowable loads

## Fastener design criteria

The following information is provided to assure that framing components you select can be fastened correctly. Your selection of fasteners or welds will depend on the members selected and the load requirements you anticipate.

### AISI calculated allowable loads for screw connection

Material thickness mils	Design thickness in	Material strength		#8-18 HWH screw dia.=0.16"		#10-16 HWH screw dia.=0.190"		#12-14 HWH screw dia.=0.21"		1/4"-14 HWH screw dia.=0.240"	
		Fy (ksi)	Fu (ksi)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)
33	0.0346	33	45	162	71	177	84	186	93	199	106
43	0.0451	33	45	241	92	263	109	277	121	296	138
54	0.0566	33	45	333	115	370	137	389	152	416	173
	0.0566	50	65	333	167	467	198	562	219	600	250
68	0.0713	33	45	n/a	n/a	467	173	550	191	588	218
	0.0713	50	65	n/a	n/a	467	249	625	276	849	315
97	0.1017	33	45	n/a	n/a	467	246	625	272	863	311
	0.1017	50	65	n/a	n/a	467	356	625	393	863	450
118	0.1242	33	45	n/a	n/a	n/a	n/a	625	333	863	380
	0.1242	50	65	n/a	n/a	n/a	n/a	625	480	863	549

### AISI allowable loads for welded connections (lbs.)

Material thickness (mils)	Design thickness (in)	Material strength		Fillet weld		Groove weld	
		Fy (ksi)	Fu (ksi)	Long. (lbs)	Trans. (lbs)	Trans. (lbs)	Long. (lbs)
<b>1 inch total weld</b>							
43	0.0451	33	45	619	864	663	544
	0.0451	50	65	895	1247	958	785
54	0.0566	33	45	822	1084	832	682
	0.0566	50	65	1188	1566	1202	985
68	0.0713	33	45	1082	1365	1048	859
	0.0713	50	65	1563	1972	1514	1241
97	0.1017	33	45	1480	1480	1480	1480
	0.1017	50	65	1480	1480	1480	1480
118	0.1242	33	45	1808	1808	1808	1808
	0.1242	50	65	1808	1808	1808	1808
<b>2 inch total weld</b>							
43	0.0451	33	45	998	1727	1326	1087
	0.0451	50	65	1442	2495	1915	1570
54	0.0566	33	45	1253	2168	1664	1364
	0.0566	50	65	1809	3131	2404	1971
68	0.0713	33	45	1578	2731	2096	1719
	0.0713	50	65	2279	3944	3028	2483
97	0.1017	33	45	2961	2961	2961	2961
	0.1017	50	65	2961	2961	2961	2961
118	0.1242	33	45	3616	3616	3616	3616
	0.1242	50	65	3616	3616	3616	3616

### Weld table notes:

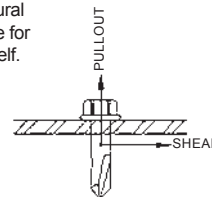
- All values were calculated using the 2001 AISI specification w/2004 supplement.
- Fxx values were based off of  $F_{xx} \geq 70$ ksi and that  $F_{xx} > F_u$  from the 2001 AISI specification code.
- Values are based on AISI Specification Section E2.
- Values include a factor of safety that varies per AISI code.

### Minimum required allowable load for screws

Material thickness (mils)	Design thickness in lbs	#12-24 HWH screw dia.=0.21"		#1/4-28 HWH screw dia.=0.24"	
		Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)
Steel	0.1875	725	1042	957	1100
	0.25	725	1063	957	1425

### Screw table notes:

- All values were calculated using the 2001 AISI specification w/2004 supplement.
- Shear values were based on the tilting and bearing modes of failure Eq. E4.3.1-1, E.4.3.1-2.
- Minimum spacing of screws is determined by E4.1 stating spacing shall not be less than 3d.
- Edge distance is determined by E4.2 stating that edge distance shall not be less than 3d.
- Allowable loads are based on a safety factor of 3.0.
- E4.3.2 states that the bearing strength  $< P_{ns} = t^*e*F_u$ .
- For the screws into structural steel, the shear values are for the failure of the screw itself. Look at bearing of clip to determine minimum value of shear.
- Bearing or pullover values do not control in the above cases.



### Hilti anchors (PDF in steel) allowable loads (lbs.)

Material thickness (mils)	Yield strength Fy (ksi)	Hilti X-EDNI (dia.=0.145")				Hilti X-DNI (dia.=0.145")				Hilti X-DS (dia.=0.177")			
		3/16"		1/4"		3/16"		1/4"		3/16"		1/4"	
		Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension
33	33	203	234	203	234	203	234	203	234	248	234	248	234
43	33	265	304	265	304	265	304	265	304	323	304	323	304
54	33	332	382	332	382	332	360	332	382	406	382	406	382
	50	425	455	480	552	480	360	480	510	586	390	586	552
68	33	419	455	419	481	419	360	419	481	511	390	511	481
	50	425	455	605	695	490	360	590	510	738	390	625	620
97	33	425	455	597	686	490	360	590	510	729	390	625	620
	50	425	455	620	800	490	360	590	510	795	390	625	620
118	33	425	455	620	800	490	360	590	510	795	390	625	620
	50	425	455	620	800	490	360	590	510	795	390	625	620

### Hilti anchors (PDF in concrete) allowable loads (lbs.) Hilti X-DNI (dia. = 0.145")

Material thickness (mils)	Yield strength Fy (ksi)	Min. embedment 3/4"						Min. embedment 1"					
		2000 psi		3000 psi		4000 psi		2000 psi		3000 psi		4000 psi	
		Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension
33	33	95	70	110	90	125	110	140	90	160	120	185	155
43	33	95	70	110	90	125	110	140	90	160	120	185	155
54	33	95	70	110	90	125	110	140	90	160	120	185	155
	50	95	70	110	90	125	110	140	90	160	120	185	155
68	33	95	70	110	90	125	110	140	90	160	120	185	155
	50	95	70	110	90	125	110	140	90	160	120	185	155
97	33	95	70	110	90	125	110	140	90	160	120	185	155
	50	95	70	110	90	125	110	140	90	160	120	185	155
118	33	95	70	110	90	125	110	140	90	160	120	185	155
	50	95	70	110	90	125	110	140	90	160	120	185	155

### Hilti anchors (PDF in concrete) allowable loads (lbs.) Hilti X-DNI (dia. = 0.145")

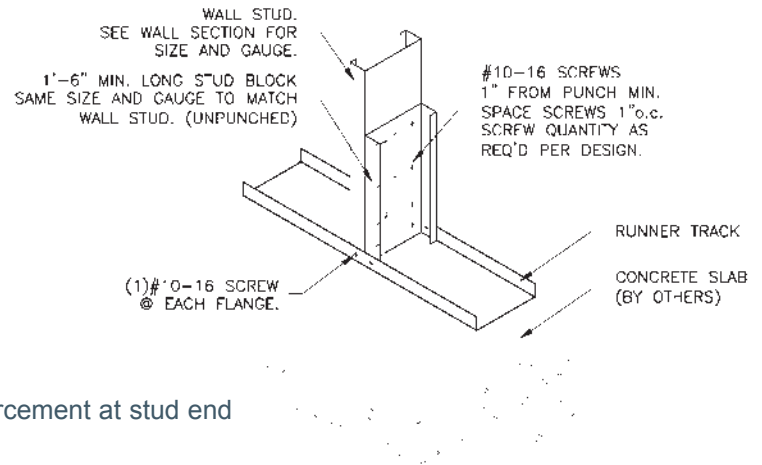
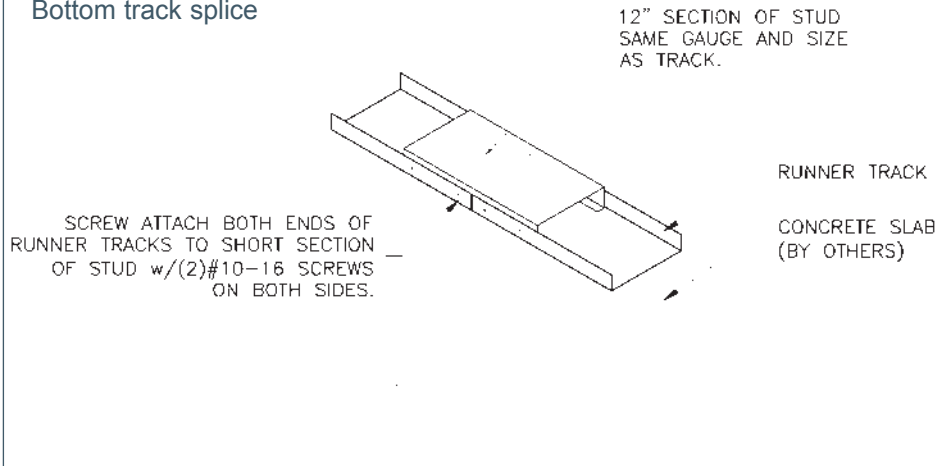
Material thickness (mils)	Yield strength Fy (ksi)	Min. embedment 1-1/2"						Material	Min. edge distance	Min. spacing	Min. material thickness
		2000 psi		3000 psi		4000 psi					
		Shear	Tension	Shear	Tension	Shear	Tension	Steel	1/4"	1"	1/8"
33	33	203	165	203	190	203	215	Concrete	2"	3"	3 x Embedment
43	33	230	165	265	190	265	215				
54	33	230	165	280	190	332	215				
	50	230	165	280	190	335	215				
68	33	230	165	280	190	335	215				
	50	230	165	280	190	335	215				
97	33	230	165	280	190	335	215				
	50	230	165	280	190	335	215				
118	33	230	165	280	190	335	215				
	50	230	165	280	190	335	215				

### Hilti table notes:

- All values were calculated using the 2001 AISI specification w/2004 supplement.
- Shear values were based on the tilting and bearing modes of failure Eq. E4.3.1-1, E.4.3.1-2.
- Allowable loads are based on a safety factor of 3.0.
- E4.3.2 states that the bearing strength  $< P_{ns} = t^*e*F_u$ .

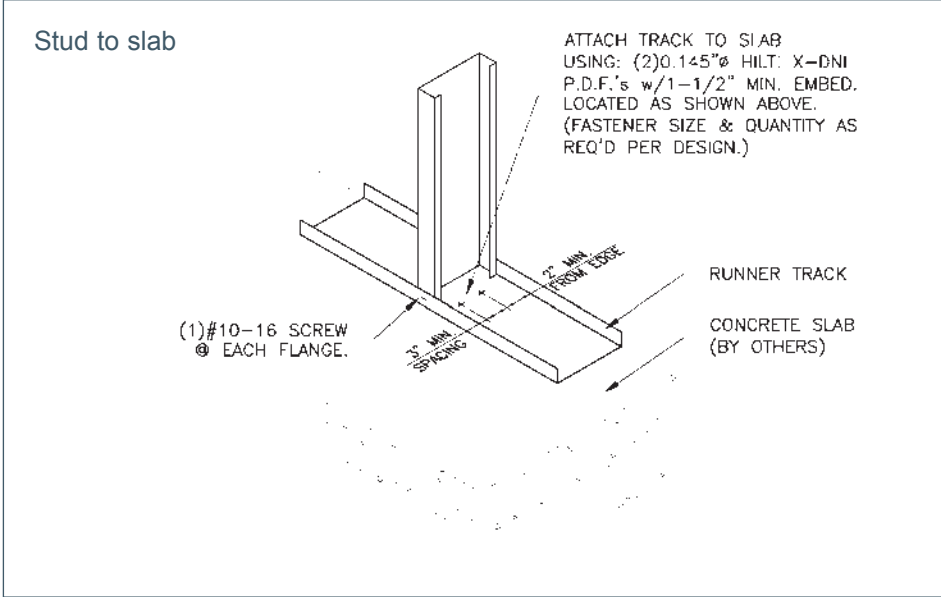
# Typical details

## Bottom track splice

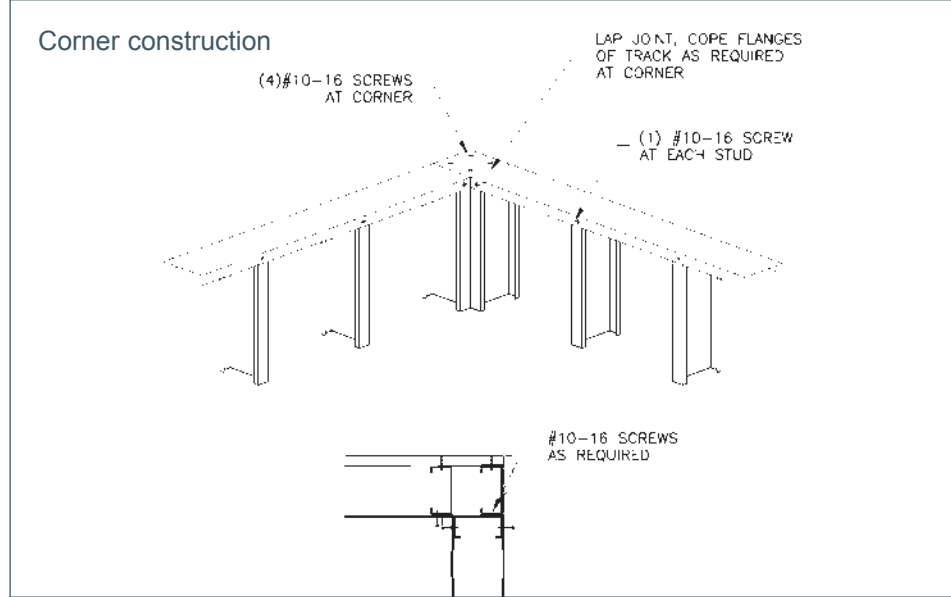


Reinforcement at stud end

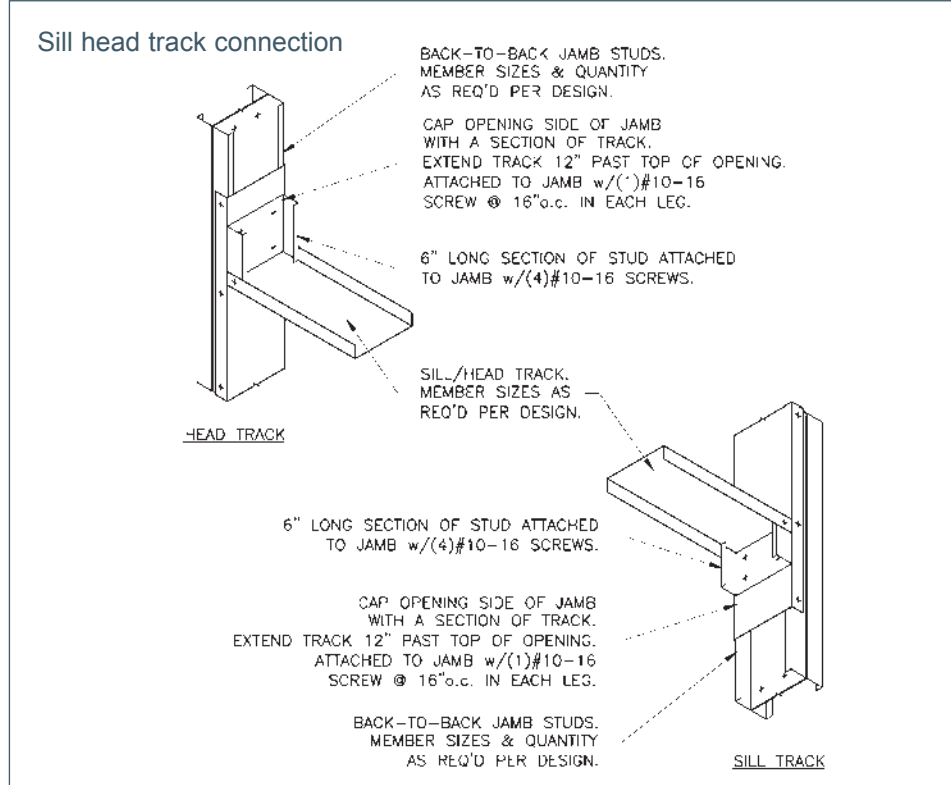
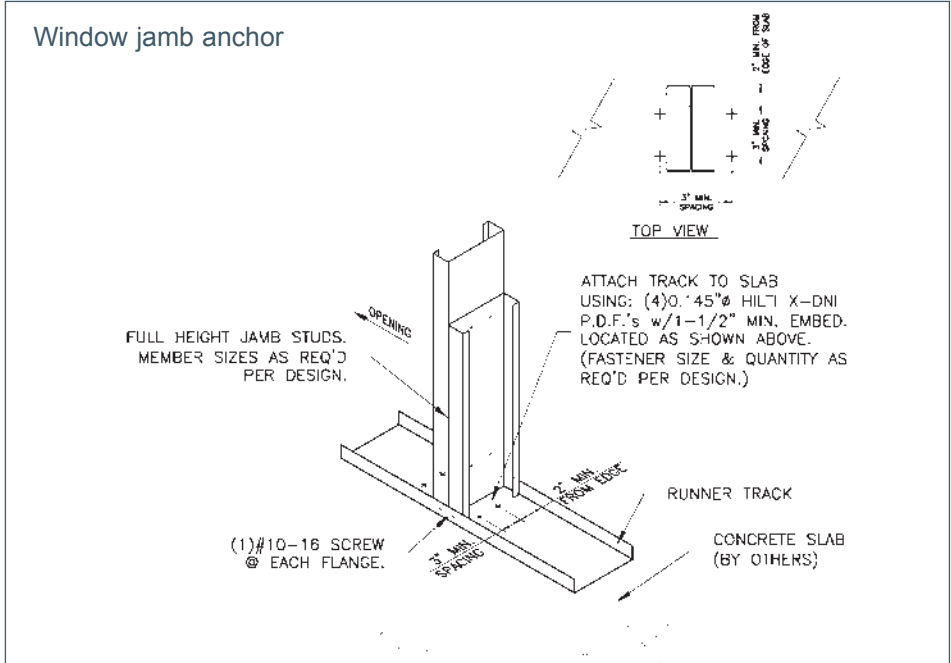
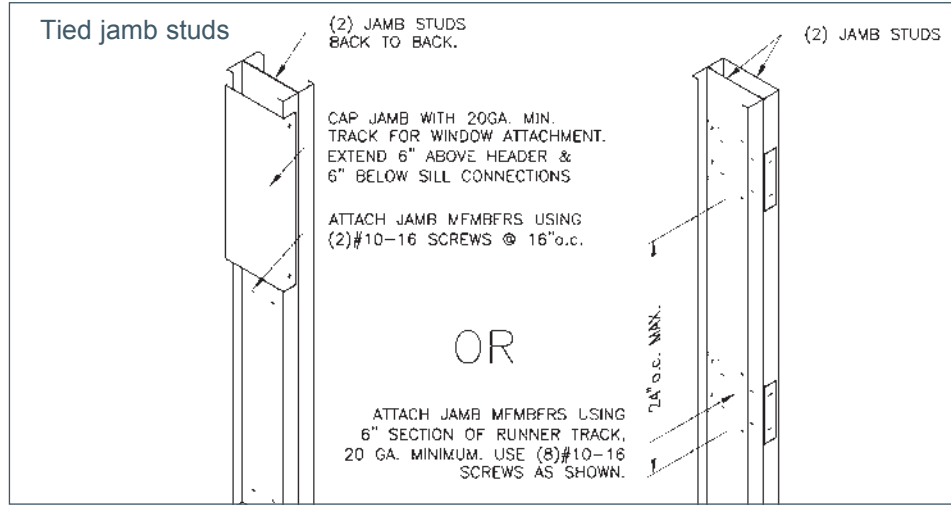
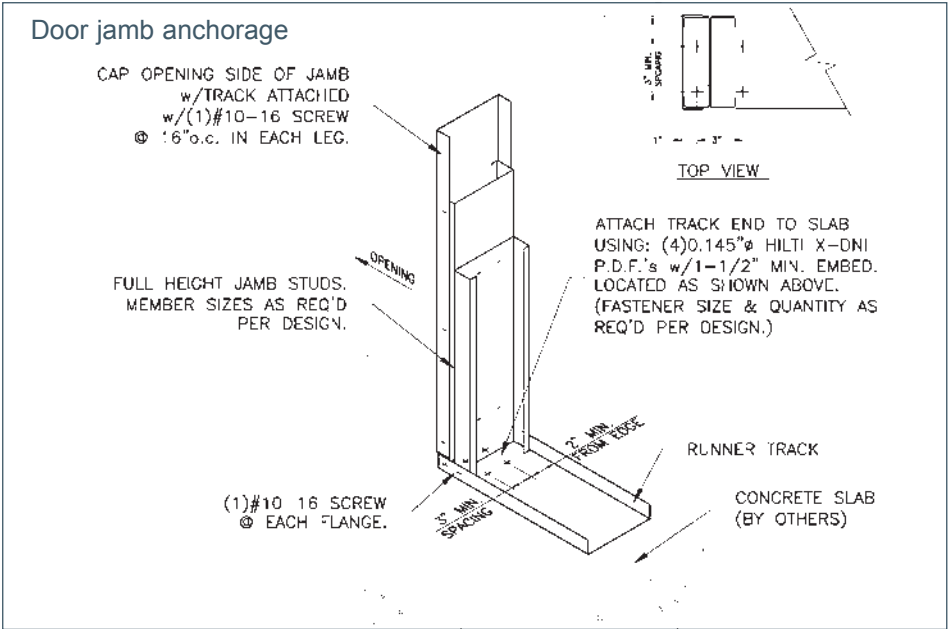
## Stud to slab



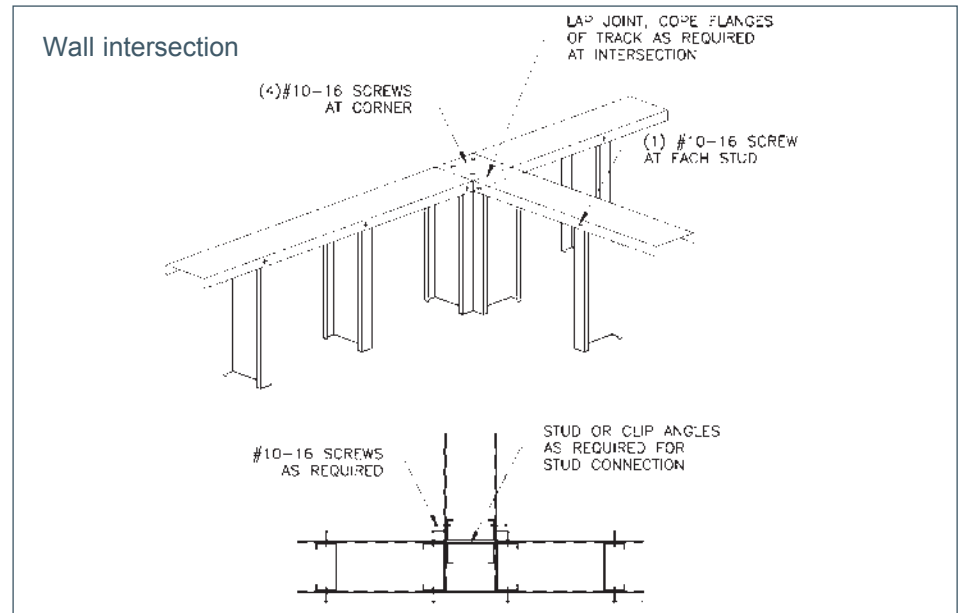
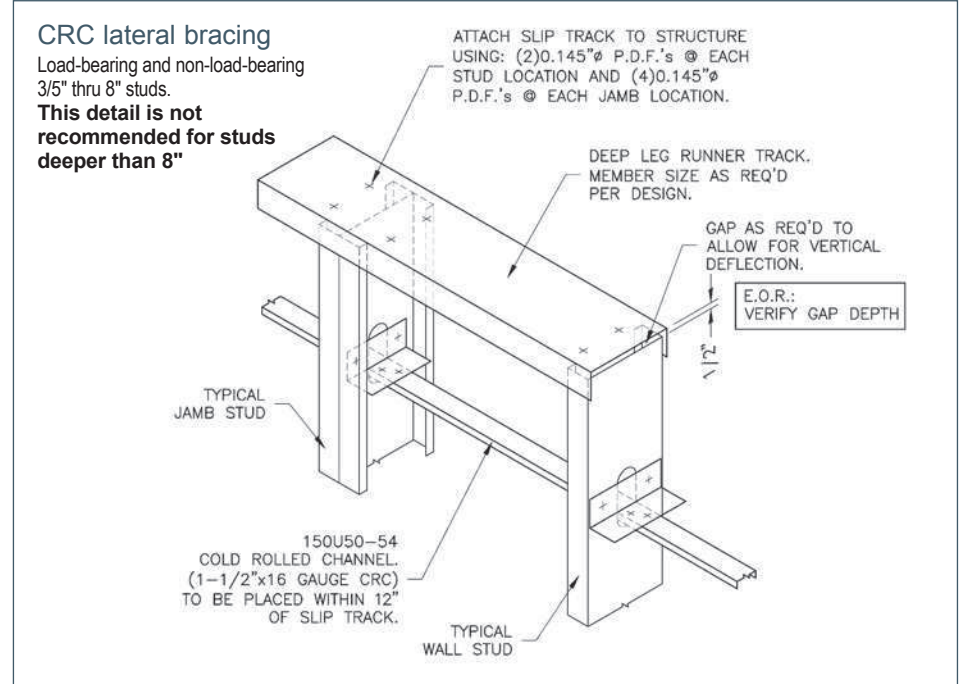
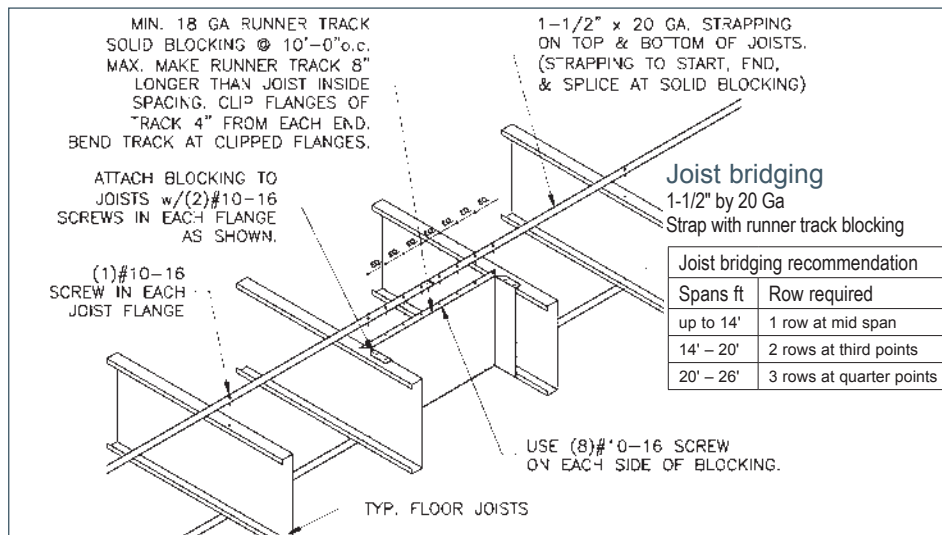
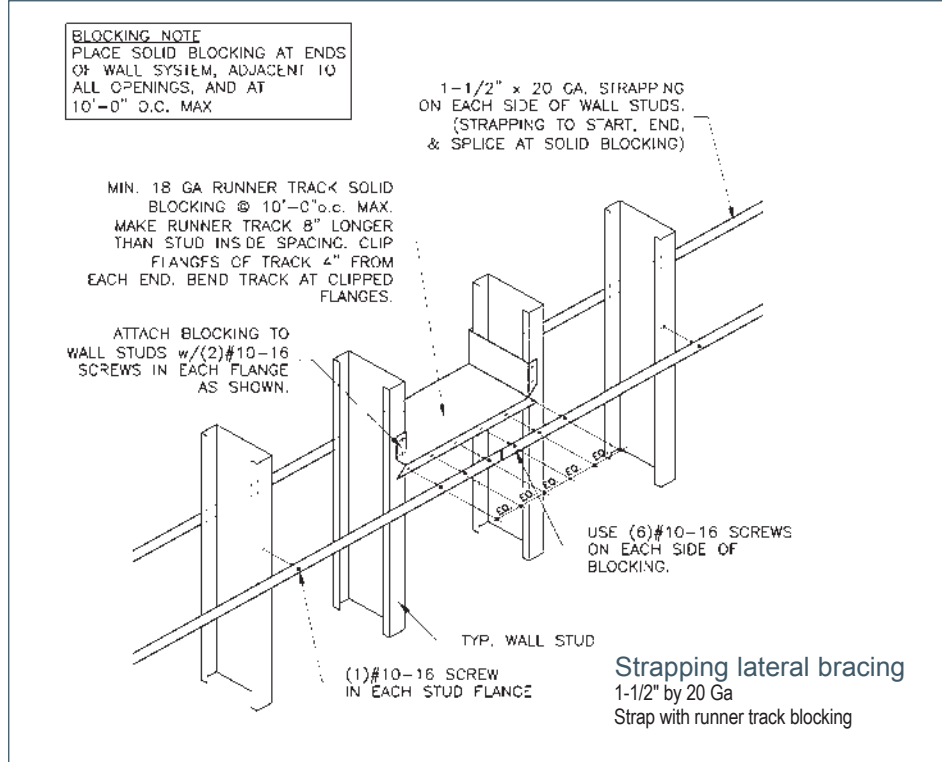
## Corner construction



# Typical details



# Typical details



# ClarkWestern material certification—Code approvals and performance

## Structural framing standards

**AISI** "North American Specification for the Design of Cold-Formed Steel Structural Members, 2001 with 2004 supplement"

ASTM C955 Load-bearing steel framing

ASTM C1007 Installation

ASTM A1003 Material specification for steel sheet requirements

## Protective coating standards

ASTM A924 Metallic-coated hot-dip process

ASTM A653 Zinc-coated hot-dip process

ASTM A463 Aluminum-coated hot-dip process

ASTM A591 Zinc-coated, light coating mass applications

ASTM A792 55% aluminum-zinc alloy-coated hot-dip process

ASTM A875 Zinc-5% aluminum alloy-coated hot-dip process

Additional code approvals ICC-ES ER-4943P

ClarkWestern Building Systems is a member of the Steel Stud Manufacturer's Association (SSMA).

\* ClarkWestern UltraSTEEL framing meets or exceeds all the requirements of SSMA except minimum decimal standards because language in SSMA does not account for, or address effective thickness as a result of manufacturing technology.

\*\* UL® and UL® Design are service marks of Underwriters Laboratories, Inc.

ClarkWestern or its affiliates shall not be responsible for incidental or consequential damages, directly or indirectly sustained, nor for loss caused by application of our products for other than their intended uses. Our liability is limited to replacement of defective products. Claims shall be deemed waived unless they are made to us in writing within thirty (30) days of the date a problem was or reasonably should have been discovered.

## Interior drywall framing with UltraSTEEL® standards

**AISI** "North American Specification for the Design of Cold-Formed Steel Structural Members, 2001"

ASTM C645 Non-structural steel framing members

ASTM C754 Installation

ASTM E119 Fire tests

ASTM E72 Strength tests

ASTM E90 Airborne sound transmission

## UL® Underwriters Laboratories Testing Standard

UL® 263 "Fire Tests of Building Construction and Materials"\*\*\*

## UL® Underwriters Laboratories ClarkWestern UltraSTEEL framing classification

Wall Design No. V450, V438 and U419 in the UL® Fire Resistance Directory

Steel Framing Members Fire Resistance Classification

See UL® Fire Resistance Directory

## SSMA (Steel Stud Manufacturers Association)\*

## Additional code approvals

ICC - ES ESR 1977

Architectural Testing, Inc. CCRR-0109

NYC MEA 300-05-M

## Independent product certification

Sound ratings - Riverbank Acoustical Laboratories

Fire testing - Underwriters Laboratories Inc.

Structural testing - Progressive Engineers Inc.

Structural analysis - Construction Technologies Laboratory

## Metal lath & accessories

ASTM C847 Metal lath

ASTM C841 Installation of interior lathing & furring

ASTM C1063 Installation of lathing & furring

ASTM A653 Zinc-coated hot-dip process

ASTM C1047 Accessories standards – control joints

ASTM A924 Metallic-coated hot-dip process

UUB790A APB type 1, grade D, style 2

CE 240.01 Furring (metal) lathing and plastering

ML/SFA-920 Guide specs for metal lathing & furring



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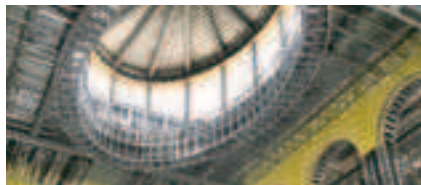
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