Load Bearing Framing Systems

Super Stud

Building Products, Inc.

The Structure Behind The Design

Load Bearing Framing Systems

Super Stud Building Products Technical Publications

Super Stud Building Products, Inc. is proud to introduce our series of technical publications for use as a guide to designing, specifying and installing our steel framing products.

We elected to furnish a series of technical publications in lieu of a single brochure. The load tables, specifications and installation drawings have been tailored to the specific application in question. This is offered to assist the end user who traditionally had to wade through unrelated text in an attempt to acquire pertinent information.

The available publications include:

- Load Bearing Framing Systems
- Curtainwall Framing Systems
- Curtainwall Deflection Solutions
- Drywall Framing Systems

Company Overview

Since 1973, **Super Stud Building Products, Inc.** has been a proud manufacturer of the industries most diverse offering of steel framing components and accessories for use in the construction of commercial, institutional and residential structures.

With its roots in the New York Tri-State area, **Super Stud** has successfully met the needs of some of the most demanding design professionals and contractors the building industry has to offer. Our commitment to quality products and prompt service has allowed us to expand to markets including the entire East Coast and beyond. **Our team of professionals in sales, customer service and production are committed to furnishing competitive pricing and timely deliveries for the full term of a project**.

Super Stud is instrumental in the development of cold formed steel framing systems. We offer a wide variety of standard sections to satisfy the requirements of any light structural or interior drywall application. We distinguish ourselves from our competition by furnishing a series of complementary accessories tailored to satisfy the needs of both designer and contractor. **Super Stud's** Product Development Staff subjects our system components to rigorous in-house and field testing procedures, when warranted and/or as required, to assure their load carrying capacities and compatibility for intended use.

Super Stud plays an active role in the steel framing industry. We are involved with the American Iron and Steel Institute (AISI), the Association of Walls and Ceilings International (AWCI) and the American Society for Testing and Materials (ASTM), Steel Framing Alliance (SFA).

Framing products manufactured by **Super Stud** are formed from steel coil meeting the minimum requirements of industry adopted ASTM Standards. This includes requirements for yield, ductility and protective coating. Our manufacturing facility has the latest equipment in shearing, roll forming, slitting, stamping and brake forming equipment enabling us to satisfy the most demanding production schedules without compromising quality.

Technical Services

Super Stud's Technical Support Group prides itself in offering a full complement of services that are tailored to the specific needs of the client. We are available to provide engineering and architectural support from the planning stages through final detailing for general and specific building conditions.

We can assist in providing certified structural calculations along with necessary drawings and specifications for any wall, floor, roof or truss assembly. We are also available to provide field follow-up services to assist the contractor in bringing about a successful completion of the project.

To obtain assistance, contact your local **Super Stud** Sales Representative who may be reached by calling our main office at 1-800-477-STUD (7883).

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Suggested Design Guides

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- *Braced Studs Subjected to Lateral Load* *15-20*
- *Allowable Axial Load Capacities Unbraced Studs NOT Subjected to Lateral Load* *21*
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Describes various methods of framing a curtainwall system, from infill to by-pass walls. Includes suggested construction details and installation notes.

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Structural Framing Products

General Information

Mechanical Properties, Base Steel

Unless noted otherwise herein, structural framing components manufactured by **Super Stud** are formed from steel meeting the requirements of ASTM A1003 and the following specifications:

	ASTM A1003 ($F_{y(min)}$ = 50 KSI)	ASTM A1003 ($F_{y(min)}$ = 33 KSI)
Studs	97, 68 & 54* mils	43 & 33 mils
Track & Accessories	97* & 68* mils	54*, 43 & 33 mils

Fy = Minimum Yield Point

** Fy=33KSI, 50 KSI must be specified at time of order.*

ASTM A1003, entitled Standard Specification for Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality, covers sheet steel of structural (physical) quality with zinc coating.

Galvanized Coating

Super Stud structural framing components are zinc coated (galvanized) in accordance with ASTM A653 and ASTM A1003. Super Stud can also fulfill requests for G-90 coatings which provides 50 percent more zinc protection.

Design Steel Thickness

The structural properties and load tables were prepared using the following design steel thicknesses:

20 gage: 33 mils, 0.0346 inch 18 gage: 43 mils, 0.0451 inch
16 gage: 54 mils, 0.0566 inch 14 gage: 68 mils, 0.0713 inch
12 gage: 97 mils, 0.1017 inch

In conformance with the AISI Specification and AISI-S200-07, the actual delivered base steel thickness, individual measurement, must not be less than 95 percent of the inch values listed above.

Identification

Super Stud identifications and markings conform to AISI-S200-07 and ASTM A1003 identification.

PRODUCT MATRIX

Section/Flange Width	2-1/2"	3-1/2"	3-5/8"	4"	5-1/2"	6"	7-1/4"	8"	9-1/4"	10"	11-1/2"	12"	14"	16"
SSCW / 1-1/4" FLG.			33 mils	33 mils		33 mils								
SSC / 1-3/8" FLG.	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils								
SSJ / 1-5/8" FLG.	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-97 mils	43-97 mils	43-97 mils	43-97 mils	54-97 mils	54-97 mils	54-97 mils		
SJW / 2" FLG.			43-97 mils	43-97 mils	43-97 mils	43-97 mils	43-97 mils	43-97 mils	43-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	
SSW / 2-1/2" FLG.				43-97 mils		43-97 mils		43-97 mils		54-97 mils	54-97 mils	54-97 mils	68-97 mils	68-97 mils
SSX / 3" FLG.			54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	68-97 mils	68-97 mils
SSXW / 3-1/2" FLG.						54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	54-97 mils	68-97 mils	68-97 mils
TR / 1-1/4" FLG.	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils	33-68 mils	43-68 mils	43-97 mils	54-97 mils	54-97 mils	68-97 mils	68-97 mils
TW / 2" FLG.			33-68 mils	33-68 mils		33-97 mils		43-97 mils		54-97 mils				
DT / 2-1/2" FLG.			54-97 mils	54-97 mils		54-97 mils		54-97 mils		54-97 mils				

DISCLAIMER:

All data, specifications and details contained in this publication are intended as a general guide for using Super Stud products. These products should not be used in design or construction without an independent evaluation by a qualified engineer or architect to verify the suitability of a particular product for use in a specific application. Super Stud assumes no liability for failure resulting from the use or misapplication of computations, detail drawings and specifications contained herein. This publication contains the latest information available at the time of printing. Super Stud reserves the right to make modifications and/or change materials of any of their products without prior notice or obligation. For the latest information regarding a particular manufacturer's products contact that manufacturer. Please contact Super Stud to varify product availability. The Design Professional is suggested to contact Super Stud to assure that there are no significant changes of information after the printing of this catalog.

The intent of this publication is to furnish the design professional with information allowing for the evaluation of a cold formed steel framed assembly. Due to the variable nature of a structure, this publication serves only as a suggested guide to the use of our steel framing sections and accessories. As such, the user is cautioned to thoroughly evaluate any assembly for specific performance and installation requirements.

The drawings, specifications and technical tables are furnished to assist in the evaluation of these products by a qualified structural engineer or architect in their application or installation.

Super Stud makes no recommendations or representations as to their use or application other than that the products will comply with the specifications within industry tolerances.

Super Stud assumes no liability for damages resulting from improper application or installation.

WARRANTIES AND LIMITATIONS

All products presented herein are warranted to be free from manufacturing defects in material and workmanship. Damages for the breach of this warranty and buyers sole remedy shall be the return of the goods and the repayment of the price thereof or the replacement of such non-conforming goods at the sole option of the seller. Seller specifically excludes any liability for any consequential damages as a result of the non-conformance of the goods.

The aforesaid warranty is exclusive to the direct purchaser from Super Stud and is not assignable or transferrable to any third party. This warranty is in lieu of and EXCLUDES ALL OTHER WARRANTIES NOT EXPRESSLY SET FORTH HEREIN, whether express, implied or by operation of the law. Specifically EXCLUDED ARE ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Super Stud denies any liability for damages resulting from the use of the details or specifications or improper application or installation of these products.

GOVERNING LAW

The parties hereby consent to the jurisdiction of the Superior Court of New Jersey, Middlesex County, as having sole jurisdiction over disputes arising out of this sales transaction, including, but not limited to, the non-payment for any sale made or claim of an alleged Breach of Warranty. It shall not be a defense to any action brought by the seller that the aforesaid Courts do not have jurisdiction over the purchaser.

New Jersey Law shall apply in all such actions.

The Statute of Limitations for any such action based upon an alleged breach shall be one (1) year from the date of the alleged breach and no action may be maintained if brought after the said one (1) year. The alleged breach shall be deemed to have occurred at the time of the delivery of merchandise.

Structural Framing Products

Studs (SSCW, SSC, SSJ, SJW, SSW, SSX & SSXW)

Studs serve as structural elements in the construction of exterior curtainwalls, soffits, load bearing walls and headers. They are also used in floor joist, roof rafter and truss frame assemblies.

"C" studs are defined by three basic components...the web, flange and return lip. The flange serves to stiffen the web while the return lip stabilizes the flange.

Return Lip Length

Section	Flange Width	20 Ga	18 Ga	16 Ga	14 Ga	12 Ga	10 Ga
SSCW	1-1/4"	0.250"	NA	NA	NA	NA	NA
SSC	1-3/8"	0.375"	0.375"	0.375"	0.375"	NA	NA
SSJ	1-5/8"	0.5"	0.5"	0.5"	0.5"	0.5"	0.5"
SJW	2"	NA	0.625"	0.625"	0.625"	0.625"	0.625"
SSW	2-1/2"	NA	0.625"	0.625"	0.625"	0.625"	0.625"
SSX	3"	NA	1.000"	1.000"	1.000"	1.000"	1.000"
SSXW	3-1/2"	NA	1.000"	1.000"	1.000"	1.000"	1.000"

Web Knockouts

Studs are typically furnished with punched webs to facilitate the installation of conduit, piping and bridging. The knockout sizes and locations are defined below. Members may be furnished with unpunched webs upon request.

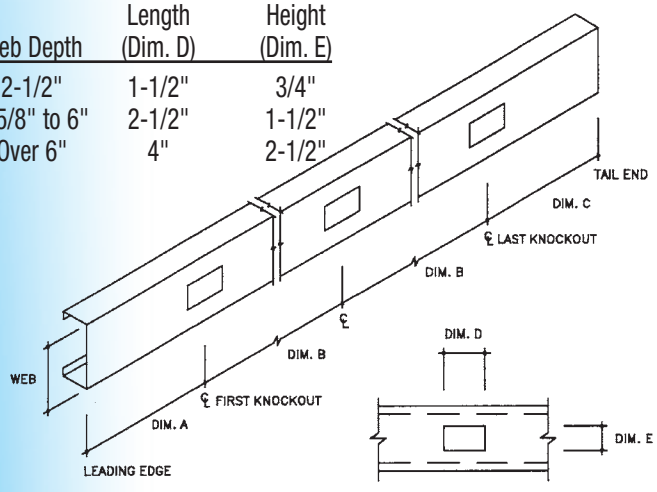
Knockout Spacing

Section	First Knockout (Dim. A)	Typical Spacing (Dim. B)	Last Knockout (Dim. C) Note 1
All sections except those listed below	24"	24"	12" min.
8" SSJ - 12" SSJ 8" SJW - 14" SJW 8" SSW - 16" SSW	48"	48"	24" min.

Note 1: 24" Min. applies to millcut sections only. Does not apply to components saw cut from stock.

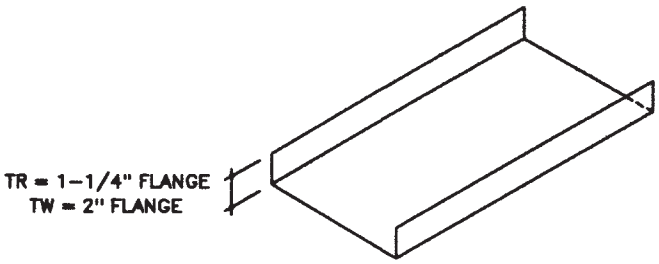
Knockout Size

Web Depth	Knockout Length (Dim. D)	Knockout Height (Dim. E)
2-1/2"	1-1/2"	3/4"
3-5/8" to 6"	2-1/2"	1-1/2"
Over 6"	4"	2-1/2"



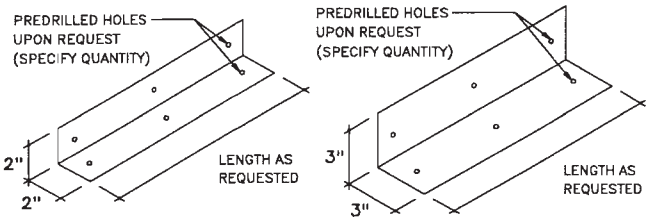
Track (TR & TW)

Track is used as an enclosure for studs in the construction of wall and joist assemblies. Track also serves as a structural component in the design of sill, head and jamb assemblies of framed openings.



Angle Clips (AC)

Thickness Offering: 33, 43, 54, 68 and 97 mils

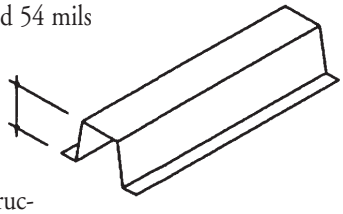


Angle Clips serve a variety of functions in the construction of a steel framing system. They may be used to make attachments between framing members or, in the case of curtainwall construction, to transfer gravity and lateral loads from a stud to the primary frame.

Angle Clips are available in standard 2" or 3" leg dimensions. Non-standard angles with varying leg dimensions are also available. Upon request, Angle Clips can be furnished pre-punched to facilitate screw attachments.

Structural Hat Channel (SHC)

Thickness Offering: 33, 43 and 54 mils



Structural Hat Channel is used to provide support for sheathing, siding and decking products in the construction of soffits, ceilings, roofs and walls. The channel is compatible for use over any of a number of different support members.

Utility Angle (UA)

Utility Angles, furnished in standard 10 foot lengths, are typically installed at corner framing conditions to provide continuous support for sheathing products.

Utility Angles are available in standard 2" or 3" leg dimensions. Non-standard angles with varying leg dimensions are also available.

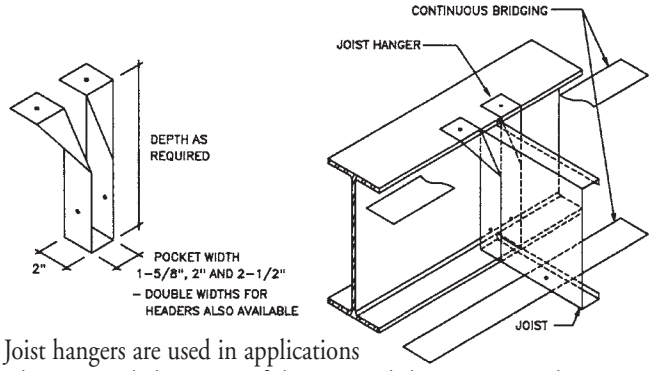
Tension Strap (TS)

Thickness Offering: 33, 43, 54, 68 and 97 mils

Tension Strap has a variety of uses some of which include wall and joist bridging, shear walls and backer plates to facilitate the installation of handrails and fixtures.

Joist Hangers (JH)

Thickness Offering: 97 mils



Joist hangers are used in applications where vertical alignment of the joist and the support steel is desired. The hanger is available in single or double widths to accommodate single joists or header assemblies.

Notes:

1. Joist web knockouts shall not occur within one foot of the Joist Hanger. The joist reaction shall not exceed the allowable capacity of the unstiffened web. (Reference Pages 29 and 30 for capacities.) A minimum joist end bearing width of two inches shall be provided.
2. The Joist Hanger shall be attached to the steel support. Acceptable fastening methods include:

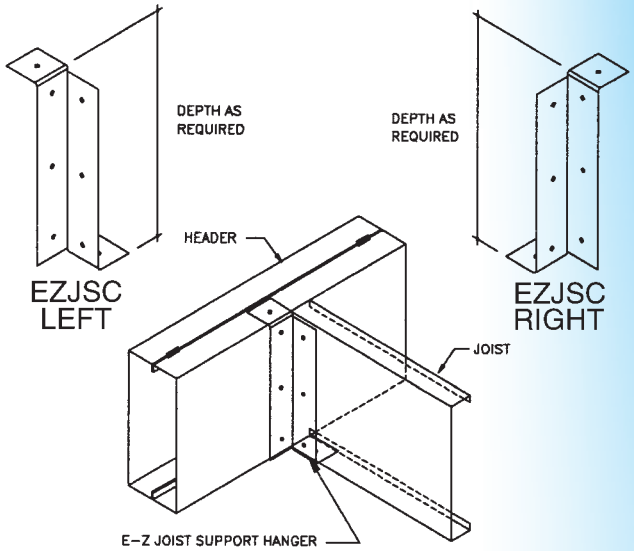
a. Two (2) 0.145" or 0.140" diameter knurl shanked powder actuated fasteners. The shank shall be of a length to assure tip penetration through the beam flange.

b. Two (2) No. 12 diameter X 24 Threads Per Inch self drilling screws. The cutting tip of the screw shall accommodate the combined thickness of the hanger and the beam flange.

c. Four (4) 1" long welds (total), two (2) each side.

3. Reference Detail M2, Page 37, for additional information.

EZ Joist Support Clip (EZJSC) (Patent Pending)



Thickness Offering: 54 and 68 mils

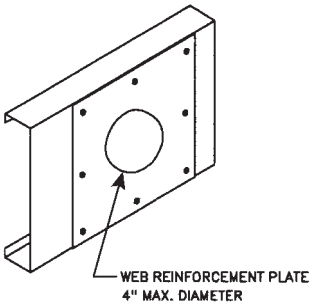
The EZ Joist Support Clip is distinguished by its return leg which positions the joist in place during installation. Simply rest the joist on the return leg and make the necessary screw attachments. It eliminates time consuming joist leveling and clamping steps required when a member is attached using traditional clip angles.

Left and right side clips are available to correspond to the desired joist web position and in depths to accommodate all "C" sections up to 12 inches in depth.

Notes:

1. A minimum of six (6) fasteners, three (3) each leg, shall be used to attach the clip to the joist and support steel. Fastener types and sizes shall be specified by the engineer/architect of record.
2. The leg of the clip projecting beneath the joist shall not be used to support joist reactions.
3. Contact Super Stud's Technical Services Department for allowable load capacities.

Web Reinforcement Plate (WRP)

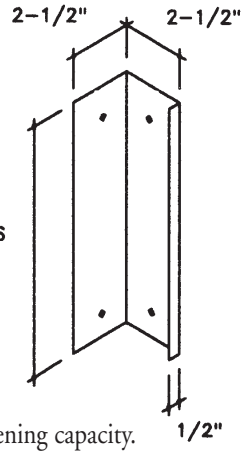


Thickness Offering: 43, 54, 68 and 97 mils

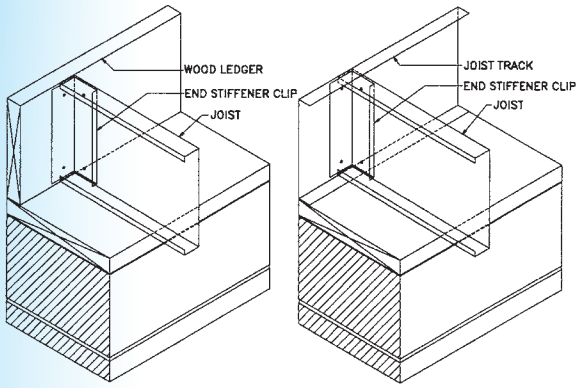
Steel plates available in a range of sizes which are used to reinforce web cut- outs exceeding the dimensions of our standard web punchout offering.

End Stiffener Clip (ESC)

Thickness Offering: 54 and 68 mils

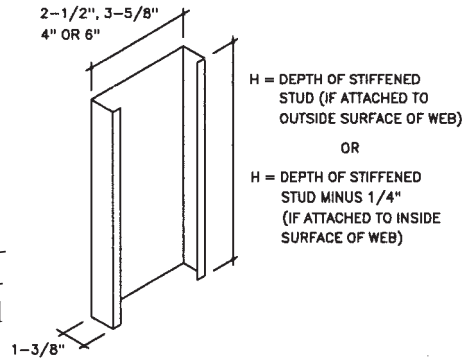


The End Stiffener provides web reinforcement while it functions as an attachment clip in the construction of a joist assembly. The clip is distinguished by its extended flange which provides ample surface area for attachment to a continuous steel track or wood ledger and its return lip which increases its stiffening capacity.

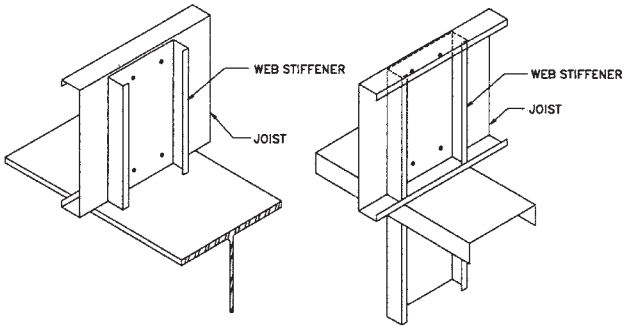


Web Stiffener (WS)

Thickness Offering: 43, 54 and 68 mils



Web Stiffeners provide web reinforcement for studs and joists at both end and intermediate support or concentrated load locations. The stiffener, placed either inside or outside the web, is manufactured on a custom order basis. Stiffeners located "inside" the web should be ordered to lengths equalling the depth of the member less 1/4" while those installed "outside" the web should match the depth of the member. The width of the stiffener should match the width of bearing above and/or below the stiffener.



Custom Manufactured Products

The use of conventional straight track to achieve a radius is a time consuming venture which requires notching, folding and re-attaching the track to the required formation.

Super Stud has the capability to manufacture Radius Track formed of two rolled and curved angles and splice plates. Eliminate the costs of segmenting track by using one continuous section curved to meet your needs.

Brake Formed Accessories

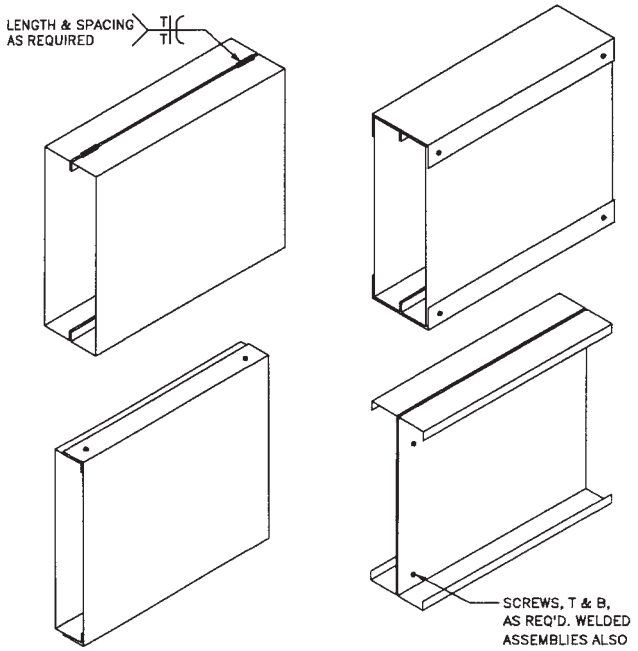
At **Super Stud**, if its made from steel, we'll find a way to shear, brake, roll or punch it to satisfy any unique framing requirement. From custom brake formed closures to radius track, our sales, customer service, production and technical representatives are available to discuss any of your framing needs.

Sheet Steel

Super Stud can furnish de-coiled Sheet Steel in widths up to 48 inches. They may be used for a variety of applications including security shields between studs and facing materials.

Boxed and "I" Shaped Assemblies

To reduce field labor, Super Stud provides factory assembled boxed and "I" shaped sections for use as posts, jambs, headers and beams. They are manufactured on a custom order basis to meet project requirements. Welded or screw attached assemblies are available.



Suggested Design Considerations

The design of the steel framing system shall be based on the requirements of the latest edition of the American Iron and Steel Institute (AISI) North American Specification for the Design of Cold Formed Steel Structural Members. In addition to the specification, the manual includes applicable commentary, load tables, design examples and references.

To obtain a copy of the Cold Formed Steel Design Manual, contact

The American Iron and Steel Institute
1140 Connecticut Ave., NW Ste. 705
Washington, D.C. 20036
202-452-7100
www.steel.org

Stress Analysis

Forward

The North American Specification contains provisions for both Allowable Strength Design (ASD) and Load and Resistance Factor Design (LRFD) methods. For the ASD approach, the sections design capacities (allowable capacities) are determined by dividing the sections nominal capacities by a predetermined safety factor. For the LRFD approach, the design capacities (resistance capacities) are determined by multiplying the sections nominal capacities by a predetermined resistance factor (phi (Φ) factor). The North American Spec no longer permits the 1/3 stress increase (or a 0.75 load combination reduction factor) for load combinations containing wind and/or seismic loads.

Bending Moment, M_{actual} (K-in) ≤ M_{allow} (K-in)

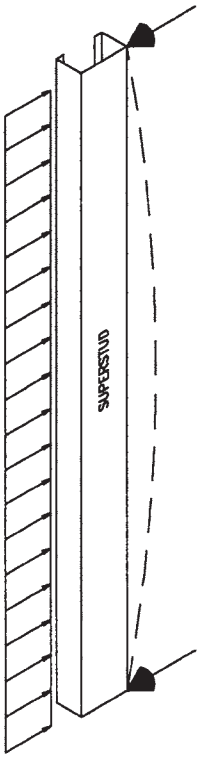
The applied bending moment shall not exceed the allowable bending moment capacity of the section under consideration.

The allowable bending moment capacities are based on ASD method.

Studs shall be braced against rotation by diaphragm rated sheathing materials applied full height to each side of the wall. The installation of mechanical bridging spaced at intervals not to exceed 5'-0" on center provides adequate rotation restraint for walls under construction before the installation of sheathing materials.

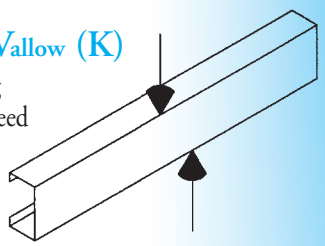
In applications where the wall is not sheathed full height or sheathed on one side only, continuous bridging spaced not to exceed 5'-0" on center shall provide rotational support. Reductions in allowable bending capacity must be investigated separately.

If sheathing products are considered as a method of bracing, they must maintain their integrity during the course of construction and the service life of the wall.

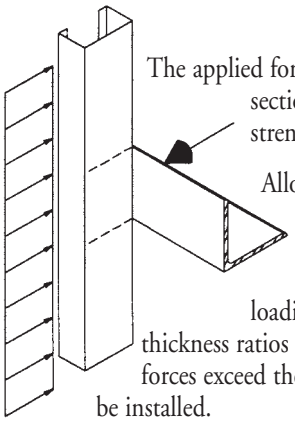


Shear, V_{actual} (K) ≤ V_{allow} (K)

The applied shear force acting through the web shall not exceed the allowable shear of the section. Shear capacities are based on ASD method.



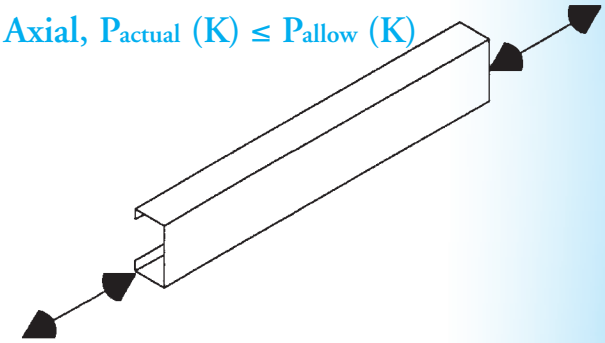
Web Crippling, P_{actual} (K) ≤ P_{allow} (K).



The applied forces acting through the web of a section shall not exceed the allowable strength of the unreinforced web.

Allowable capacities are baed on ASD method. Items to be considered include bearing width, one versus two flange loading, steel grade and depth to thickness ratios of the web. Where the applied forces exceed the allowable, a web stiffener shall be installed.

Axial, P_{actual} (K) ≤ P_{allow} (K)



Axial force is based on ASD method.

Axial loads developed through a steel framed curtainwall system are generally limited to the gravity (dead) weights of the stud framing and the collateral materials attached or suspended from it.

Attention should be given to wall installations in which provisions for primary frame deflections are not made. An infill wall built tight to the underside of a structure, for example, is subjected to axial stresses when the primary frame deflects due to live load, support settlement, etc. While the framing member may be analyzed to withstand the applied axial load, consideration should be given to the difficulty associated with seating stud ends in pre-attached tracks.

Tension forces may also occur. Examples include kickers and struts used to resist lateral negative loads acting away from the wall or element.

Combined Stresses

The design of the wall studs shall be based on the following design wind loading considerations in accordance with the AISI S211-07 (North American Standard for Cold-Formed Steel Framing – Wall Stud Design):

(a) Combined bending and axial strength based on Main Wind Force Resisting System (MWFRS) wind loads.

(b) Bending strength based on Components and Cladding (C&C) wind loads.

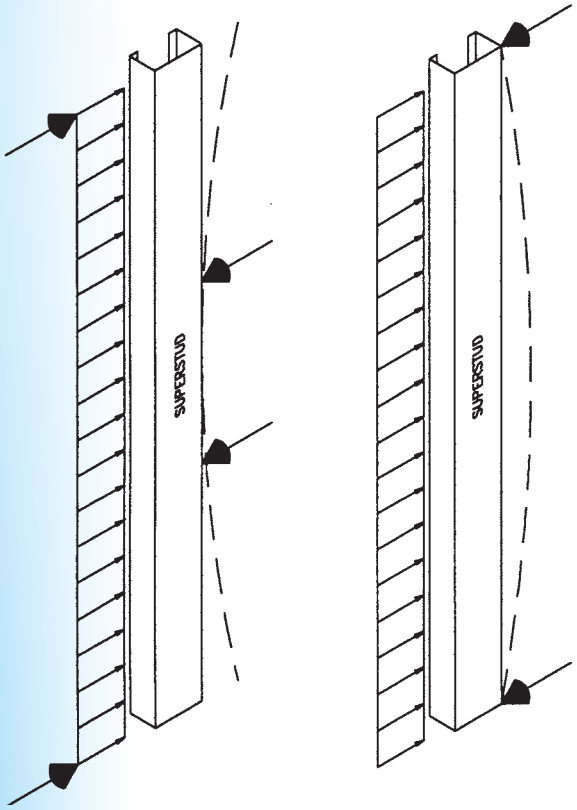
(c) Deflection limits based on 70% of Components and Cladding (C&C) wind loads with no axial loads.

Deflection

Wall Deflection

Limiting deflection of a load bearing wall is subjected to lateral load is critical to the performance of the finish system, sealants and components anchored to the framing system.

There are a number of exterior finish systems which may be used in conjunction with a steel stud wall, and as such, the allowable deflection of the framing may vary. Consult technical literature prepared by the finish system manufacturer or applicable industry standards for determination of allowable deflection limits.



A deflection analysis of the head, sill and jamb components at wall openings is also required. Door, window and louver manufacturers may be contacted for allowable movements of the support framing.

Traditionally, deflection analysis is based on the properties of the framing acting independently without contribution due to the attachment of collateral materials.

In most cases, the selection of a loading bearing wall stud is controlled by deflection analysis, particularly in applications involving rigid facing materials such as brick veneer.

The moment of inertia, Ix (in4), found in the Section Property Tables, is the critical variable used in determining the deflection of a stud subjected to lateral load. Realizing that the moment of inertia is taken about an axis that passes through the center of the area, the farther the component parts of an area are from the axis, the greater the value of moment of inertia. In general terms, increasing the depth of a section will have a greater effect on a member's ability to limit deflection than will an increase in mil thickness.

Acknowledging that the area of an element is directly related to its costs, consider the following comparison:

Stud Type	Moment of Inertia I (in^4)	Area (in^2)
358 SSJ 14 Ga (68 mils)	1.069	0.524
6 SJW 18 Ga (43 mils)	2.686	0.492

The 6" stud provides approximately 2-1/2 times the stiffness of the 3-5/8" member using an equivalent area of steel.

We note that stud selection may be governed by any of a number of design factors beyond limiting deflection such as stress, connection strength, depth limitations, etc. and as such each condition should be closely reviewed for compliance with design requirements.

Deflection of the Primary Frame

A curtainwall system should be constructed in a manner that allows for deflection of the primary building frame. **Super Stud** furnishes a series of accessories to accommodate frame deflections while they provide support for lateral wind loads.

Infill walls should be constructed incorporating a Deflection Track which accommodates primary frame movements while it braces the member against lateral loads. Where walls by-pass the primary frame, **Super Stud's** Deflection Clip or Strut should be specified.

Connections

Forward

The attachment of steel framing may be accommodated by any of a number of different fastener types or methods. Connections shall be designed in accordance with the provisions of the AISI Specification supplemented with the selected manufacturer's published load values and/or industry standards.

Commonly used methods of fastening steel framing components include:

Screws

Self-drilling screws provide an efficient method of transferring shear forces between framing members or combined shear and tensile forces between framing members and structural steel elements.

Screws shall be of proper length to assure complete penetration of the cutting tip before the threads engage the steel of the joined materials. The flute on the cutting tip determines the metal thickness which can be drilled as it provides a channel for chip removal during drilling. Where screw attachments are made to framing components of different thicknesses, attachment through the thinner component to the heavier is required. Screw penetration through joined materials shall not be less than three exposed threads.

Design considerations include tension and shear capacity of the screw in addition to the bearing and pullover capacity of the base steel component.

Welds

The design of welded connections shall be performed in accordance with the American Welding Society AWS D1.3, Structural Welding Code-Sheet Steel. Provisions of this code were adopted in the AISI Specification for the Design of Cold Formed Steel Structural Members.

To obtain a copy of the code contact:

Order Department
American Welding Society
550 N.W. LeJuene Road
Miami, Florida 33126
800-443-9353
www.aws.org

Design and performance of a welded connection is based on the evaluation of the following:

- intensity and direction of loads
- weld type (fillet, groove, spot or seam)
- material grade of the base steel or filler
- welding methods and recommended practices
- treatment of welds and the surrounding steel areas to restore its weatherability

Field welds involving 20 gage materials should be avoided.

Power Actuated Fasteners to Concrete

Power actuated fasteners used for the attachment of framing to concrete shall be of adequate length to assure minimum embedment requirements. Consideration shall be given to minimum edge distance and spacing between fasteners along with the base thickness and compressive strength of the concrete.

Failure modes include pullout and shear of the fastener and pullover or bearing of the fastened material. These fasteners shall be avoided in conditions subjected to excessive tension or vibration loads.

Expansion Bolts or Adhesive Anchors to Concrete

Similar to the power actuated fastener, the performance of an expansion bolt is affected by its length of embedment, edge distance and spacing between fasteners along with base material thickness and grade of concrete.

Adhesive bolts, while more expensive than the expansion bolt, offer high load capacity and good performance under dynamic load without exerting expansion pressure on the base material.

Power Actuated Fasteners to Structural Steel

A power actuated fastener driven into steel is influenced by the thickness and tensile strength of the base steel along with fastener spacing and edge distance.

The fastener shall be adequate length to ensure tip penetration through the base steel component. Knurled shank fasteners increase its tensile capacity. Tension capacities are generally limited to the pullover strength of the fastened materials. To increase pullover capacity, steel washers may be specified.

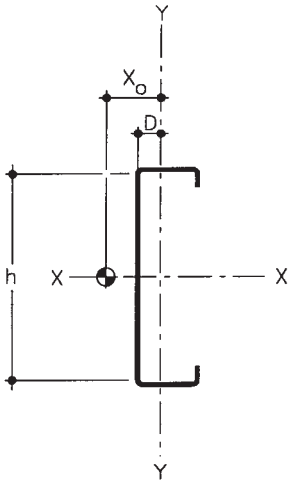
Fire Rated Assemblies

Steel framed assemblies finished with gypsum sheathing and wallboard provide up to four hour fire resistance ratings. Reference the Fire Resistance Design Manual published by the Gypsum Association or Underwriters Laboratories Fire Resistance Directory for specific information on rated wall, floor and roof assemblies.

Fire Resistance Directory
Underwriters Laboratories, Inc.
Publications Stock
333 Pfingsten Road
Northbrook, Illinois 60062
877-854-3577
www.ul.com

Fire Resistance Design Manual
Gypsum Association
6525 Belcrest Road, Suite 480
Hyattsville, MD 20782
301-277-8686
www.gypsum.com

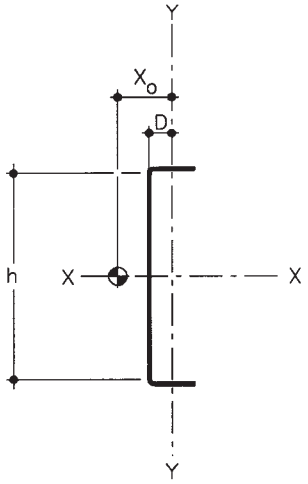
SECTION PROPERTIES



STUD

FLANGE WIDTH

COMPONENT	WIDTH
SSCW	1-1/4"
SSC	1-3/8"
SSJ	1-5/8"
SJW	2"
SSW	2-1/2"
SSX	3"
SSXW	3-1/2"



TRACK

FLANGE WIDTH = 1-1/4" (TR)

Terms and Definitions

Weight	Weight per lineal foot, Plf
Ma	Allowable bending moment of braced section, K-in
Va	Allowable shear force through an unpunched web, Kip
Area	Cross-sectional area of gross section, in2
Ix, Iy	Moment of inertia of gross section about applicable axis, in4
Sxe, Sye	Section modulus of the effective section stressed at yield about the applicable axis, in3
Rx, Ry	Radius of gyration of gross section about applicable axis, in
D	Distance from the Y axis to outside of web, In
Jx 1000	St. Venant torsional constant, in4, multiplied by 1000
Cw	Torsional warping constant, in6
Ro	Polar radius of gyration about the shear center, in
Xo	Distance from shear center to centroid along the principal axis, in
Beta	1-(Xo/Ro)2
h/t	Flat web to thickness ratio

Notes:

1. Section properties were prepared in accordance with the North American Specification for the Design of Cold Formed Steel Structural Members, 2007 addition.
2. Allowable bending moment, Ma, was calculated in accordance with AISI Section C3.1, Procedure 1, based on the initiation of yield in the effective section.
3. Bearing stiffeners are required for all components where the h/t ratio exceeds 200.
4. Sxe and Sye are based on the effective section stressed at yield. Reference AISI Section B2.
5. Ma & Va are based on steel meeting the minimum requirements of the following specifications:

	ASTM A1003 ($F_{y(min)}$= 50 KSI)	ASTM A1003 ($F_{y(min)}$= 33 KSI)
Studs	97, 68 & 54* mils	43 & 33 mils
Track & Accessories	97* & 68* mils	54*, 43 & 33 mils

Fy = Minimum Yield Point

** Fy=33KSI, 50 KSI must be specified at time of order.*

Upon request, Super Stud will fulfill requests for any of our components manufactured from steel meeting the minimum requirements of ASTM A1003, Grade B, Fy(min)=37 KSI and Grade C, Fy(min)= 40 KSI.

6. The structural properties and load tables were prepared using the following base steel thicknesses:

33 mils: 0.0346 inch 43 mils: 0.0451 inch 54 mils: 0.0566 inch
68 mils: 0.0713 inch 97 mils: 0.1017 inch

In conformance with the AISI Specification, the actual delivered base steel thickness, individual measurement, must not be less than 95 percent of the values listed above.

SECTION PROPERTIES

$2\frac{1}{2}$" - 4"

SSCW, SSC, SSJ, SJW & SSW STUDS

Section	Weight Plf	Ma K-in	Va Kip	Area in^2	Ix in^4	Sx_e in^3	Rx in	Iy in^4	Sy_e in^3	Ry in	D in	JX1000 in^4	Cw in^6	Ro in	Xo in	Beta	h/t
2-1/2SSC20	0.689	3.263	1.037	0.202	0.208	0.165	1.013	0.056	0.060	0.526	0.501	0.081	0.086	1.666	-1.213	0.470	66.642
2-1/2SSJ20	0.762	3.557	1.037	0.224	0.237	0.188	1.028	0.088	0.082	0.625	0.628	0.089	0.145	1.920	-1.497	0.392	66.642
2-1/2SSC18	0.879	4.134	1.354	0.258	0.263	0.209	1.009	0.069	0.074	0.516	0.492	0.175	0.101	1.637	-1.181	0.480	50.432
2-1/2SSJ18	0.994	4.780	1.354	0.292	0.304	0.242	1.020	0.114	0.109	0.624	0.637	0.198	0.194	1.927	-1.511	0.385	50.432
2-1/2SSC16	1.099	7.694	2.510	0.323	0.323	0.257	1.001	0.085	0.093	0.514	0.500	0.345	0.130	1.643	-1.197	0.469	39.170
2-1/2SSJ16	1.243	8.897	2.510	0.365	0.373	0.297	1.011	0.141	0.137	0.622	0.645	0.390	0.250	1.935	-1.528	0.376	39.170
2-1/2SSC14	1.312	9.097	3.057	0.386	0.382	0.304	0.996	0.092	0.096	0.489	0.469	0.653	0.125	1.574	-1.117	0.497	30.063
2-1/2SSJ14	1.509	10.724	3.057	0.443	0.450	0.358	1.008	0.162	0.154	0.605	0.625	0.751	0.262	1.885	-1.474	0.389	30.063
3-1/2SSC20	0.806	4.992	1.046	0.237	0.452	0.253	1.381	0.063	0.060	0.515	0.431	0.095	0.168	1.827	-1.080	0.651	95.543
3-1/2SSJ20	0.880	5.424	1.046	0.259	0.511	0.286	1.406	0.099	0.082	0.618	0.547	0.103	0.273	2.043	-1.348	0.565	95.543
3-1/2SSC18	1.032	6.336	1.762	0.303	0.574	0.321	1.375	0.077	0.075	0.505	0.422	0.206	0.200	1.802	-1.050	0.661	72.605
3-1/2SSJ18	1.147	7.305	1.762	0.337	0.660	0.370	1.399	0.129	0.110	0.618	0.555	0.229	0.363	2.046	-1.360	0.558	72.605
3-1/2SSC16	1.291	11.856	3.417	0.379	0.709	0.396	1.367	0.096	0.094	0.503	0.429	0.405	0.254	1.803	-1.063	0.653	56.837
3-1/2SSJ16	1.436	13.670	3.417	0.422	0.815	0.457	1.390	0.160	0.139	0.616	0.563	0.451	0.463	2.050	-1.375	0.550	56.837
3-1/2SSC14	1.554	14.037	4.483	0.457	0.841	0.469	1.356	0.104	0.099	0.476	0.401	0.774	0.258	1.744	-0.988	0.679	44.088
3-1/2SSJ14	1.752	16.502	4.483	0.515	0.985	0.551	1.383	0.184	0.157	0.597	0.543	0.872	0.503	2.004	-1.321	0.565	44.088
3-5/8SSCW20	0.777	4.843	1.008	0.228	0.454	0.245	1.410	0.048	0.048	0.456	0.360	0.091	0.130	1.743	-.916	0.723	99.156
3-5/8SSC20	0.821	5.240	1.008	0.241	0.490	0.265	1.426	0.064	0.060	0.514	0.423	0.096	0.180	1.853	-1.066	0.669	99.156
3-5/8SSJ20	0.895	5.691	1.008	0.263	0.554	0.300	1.452	0.100	0.082	0.617	0.538	0.105	0.293	2.064	-1.331	0.584	99.156
3-5/8SSC18	1.052	6.652	1.762	0.309	0.623	0.337	1.420	0.078	0.075	0.503	0.415	0.210	0.215	1.828	-1.035	0.679	75.377
3-5/8SSJ18	1.167	7.662	1.762	0.343	0.716	0.388	1.445	0.130	0.111	0.616	0.546	0.232	0.390	2.067	-1.344	0.577	75.377
3-5/8SJW18	1.311	8.715	1.762	0.385	0.837	0.455	1.474	0.227	0.163	0.768	0.728	0.261	0.726	2.418	-1.757	0.472	75.377
3-5/8SSC16	1.315	12.454	3.417	0.387	0.770	0.416	1.411	0.097	0.094	0.502	0.422	0.413	0.274	1.828	-1.049	0.671	59.046
3-5/8SSJ16	1.460	14.346	3.417	0.429	0.884	0.479	1.436	0.162	0.139	0.615	0.554	0.458	0.496	2.070	-1.358	0.570	59.046
3-5/8SJW16	1.676	16.415	3.417	0.493	1.048	0.569	1.459	0.299	0.221	0.778	0.763	0.526	1.063	2.473	-1.840	0.447	59.046
3-5/8SSC14	1.585	14.752	4.661	0.466	0.913	0.493	1.400	0.105	0.099	0.474	0.394	0.789	0.278	1.770	-0.974	0.697	45.842
3-5/8SSJ14	1.782	17.324	4.661	0.524	1.069	0.579	1.429	0.186	0.158	0.596	0.535	0.887	0.540	2.024	-1.305	0.585	45.842
3-5/8SJW14	2.055	20.770	4.661	0.604	1.277	0.694	1.454	0.351	0.259	0.762	0.744	1.023	1.175	2.427	-1.787	0.458	45.842
3-5/8SJW12	2.723	27.148	6.339	0.800	1.672	0.907	1.446	0.407	0.284	0.713	0.683	2.759	1.160	2.291	-1.628	0.495	30.644
4SSCW20	0.821	5.558	0.909	0.241	0.572	0.281	1.540	0.049	0.048	0.451	0.342	0.096	0.161	1.830	-0.880	0.769	109.994
4SSC20	0.865	6.003	0.909	0.254	0.617	0.304	1.558	0.066	0.060	0.508	0.403	0.101	0.222	1.933	-1.025	0.719	109.994
4SSJ20	0.939	6.510	0.909	0.276	0.696	0.343	1.588	0.103	0.083	0.612	0.513	0.110	0.359	2.132	-1.285	0.637	109.994
4SSC18	1.109	7.627	1.762	0.326	0.785	0.386	1.552	0.081	0.075	0.497	0.394	0.221	0.266	1.910	-0.996	0.728	83.692
4SSJ18	1.224	8.759	1.762	0.360	0.899	0.443	1.581	0.135	0.111	0.612	0.522	0.244	0.475	2.134	-1.297	0.631	83.692
4SJW18	1.368	9.940	1.762	0.402	1.049	0.518	1.615	0.235	0.164	0.765	0.698	0.273	0.877	2.468	-1.702	0.524	83.692
4SSW18	1.541	10.852	1.762	0.453	1.235	0.611	1.652	0.413	0.237	0.955	0.929	0.307	1.598	2.924	-2.215	0.426	83.692
4SSC16	1.387	14.299	3.417	0.408	0.971	0.478	1.543	0.100	0.095	0.496	0.402	0.435	0.337	1.909	-1.008	0.721	65.671
4SSJ16	1.532	16.423	3.417	0.450	1.113	0.549	1.572	0.168	0.140	0.610	0.529	0.481	0.603	2.136	-1.310	0.624	65.671
4SJW16	1.749	18.764	3.417	0.514	1.317	0.650	1.601	0.310	0.223	0.776	0.732	0.549	1.269	2.519	-1.783	0.499	65.671
4SSW16	1.977	20.506	3.417	0.581	1.552	0.766	1.634	0.548	0.326	0.971	0.975	0.621	2.396	3.004	-2.326	0.400	65.671
4SSC14	1.676	16.960	5.196	0.492	1.153	0.566	1.530	0.108	0.101	0.468	0.375	0.835	0.347	1.853	-0.935	0.746	51.101
4SSJ14	1.873	19.851	5.196	0.550	1.346	0.663	1.564	0.192	0.161	0.591	0.511	0.933	0.662	2.092	-1.258	0.639	51.101
4SJW14	2.146	23.733	5.196	0.631	1.606	0.793	1.596	0.364	0.263	0.759	0.714	1.069	1.412	2.473	-1.731	0.510	51.101
4SSW14	2.510	27.674	5.196	0.738	1.931	0.955	1.618	0.700	0.433	0.974	1.001	1.250	3.303	3.043	-2.386	0.385	51.101

Flange Width: SSCW=1-1/4", SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 10 for Notes

SECTION PROPERTIES

4" - 8"

SSCW, SSC, SSJ, SJW & SSW STUDS

Section	Weight Plf	Ma K-in	Va Kip	Area in^2	Ix in^4	Sx_e in^3	Rx in	Iy in^4	Sy_e in^3	Ry in	D in	JX1000 in^4	Cw in^6	Ro in	Xo in	Beta	h/t
4SJW12	2.853	31.051	7.102	0.838	2.103	1.037	1.584	0.421	0.292	0.709	0.655	2.890	1.427	2.342	-1.574	0.549	34.331
4SSW12	3.393	38.425	7.102	0.997	2.595	1.283	1.613	0.875	0.526	0.937	0.952	3.438	3.587	2.926	-2.255	0.406	34.331
5-1/2SSC20	1.042	9.365	0.652	0.306	1.313	0.474	2.071	0.072	0.061	0.485	0.337	0.122	0.443	2.307	-0.893	0.850	153.347
5-1/2SSJ20	1.115	10.104	0.652	0.328	1.465	0.529	2.114	0.114	0.083	0.590	0.435	0.131	0.705	2.469	-1.132	0.790	153.347
5-1/2SSC18	1.339	11.929	1.452	0.394	1.673	0.604	2.062	0.088	0.076	0.474	0.330	0.267	0.536	2.286	-0.866	0.857	116.951
5-1/2SSJ18	1.454	13.556	1.452	0.427	1.900	0.686	2.108	0.149	0.113	0.590	0.443	0.290	0.929	2.469	-1.142	0.786	116.951
5-1/2SSC16	1.676	22.448	2.902	0.493	2.078	0.750	2.054	0.110	0.096	0.473	0.337	0.526	0.678	2.282	-0.876	0.853	92.173
5-1/2SSJ16	1.821	25.510	2.902	0.535	2.360	0.852	2.100	0.185	0.142	0.589	0.450	0.571	1.174	2.467	-1.152	0.782	92.173
5-1/2SSC14	2.040	26.758	5.422	0.599	2.478	0.894	2.033	0.118	0.103	0.444	0.314	1.016	0.714	2.233	-0.809	0.869	72.139
5-1/2SSJ14	2.237	30.932	5.422	0.657	2.862	1.033	2.086	0.212	0.164	0.568	0.433	1.114	1.316	2.428	-1.103	0.794	72.139
6SSCW20	1.057	9.899	0.596	0.311	1.513	0.501	2.207	0.055	0.049	0.420	0.269	0.124	0.396	2.362	-0.729	0.905	167.798
6SSC20	1.101	10.598	0.596	0.323	1.619	0.536	2.237	0.074	0.061	0.478	0.320	0.129	0.537	2.443	-0.857	0.877	167.798
6SSJ20	1.174	11.415	0.596	0.345	1.801	0.597	2.284	0.117	0.084	0.582	0.414	0.138	0.853	2.597	-1.089	0.824	167.798
6SSC18	1.416	13.508	1.326	0.416	2.064	0.684	2.227	0.090	0.077	0.466	0.314	0.282	0.652	2.422	-0.830	0.882	128.038
6SSJ18	1.531	15.301	1.326	0.450	2.336	0.774	2.279	0.153	0.113	0.582	0.422	0.305	1.123	2.596	-1.099	0.821	128.038
6SJW18	1.675	17.174	1.326	0.492	2.686	0.891	2.336	0.269	0.167	0.739	0.575	0.334	2.013	2.855	-1.467	0.736	128.038
6SSW18	1.848	18.661	1.326	0.543	3.116	1.032	2.396	0.475	0.241	0.935	0.778	0.368	3.594	3.222	-1.941	0.637	128.038
6SSC16	1.773	25.440	2.648	0.521	2.566	0.850	2.219	0.113	0.096	0.465	0.320	0.556	0.823	2.418	-0.840	0.879	101.007
6SSJ16	1.917	28.817	2.648	0.563	2.904	0.963	2.270	0.190	0.142	0.581	0.428	0.602	1.418	2.593	-1.109	0.817	101.007
6SJW16	2.134	32.643	2.648	0.627	3.396	1.126	2.327	0.356	0.227	0.753	0.605	0.670	2.804	2.889	-1.538	0.717	101.007
6SSW16	2.362	35.484	2.648	0.694	3.947	1.305	2.384	0.632	0.332	0.954	0.821	0.741	5.132	3.280	-2.040	0.613	101.007
6SSC14	2.161	30.371	5.362	0.635	3.064	1.014	2.197	0.121	0.103	0.436	0.299	1.076	0.872	2.369	-0.774	0.893	79.151
6SSJ14	2.358	34.975	5.362	0.693	3.525	1.168	2.255	0.218	0.165	0.561	0.413	1.174	1.596	2.555	-1.061	0.828	79.151
6SJW14	2.631	41.211	5.362	0.773	4.150	1.376	2.317	0.417	0.269	0.734	0.589	1.310	3.202	2.850	-1.488	0.727	79.151
6SSW14	2.995	47.731	5.362	0.880	4.947	1.642	2.371	0.812	0.444	0.960	0.844	1.491	6.877	3.305	-2.093	0.599	79.151
6SJW12	3.545	54.215	11.030	1.042	5.462	1.811	2.290	0.481	0.309	0.679	0.537	3.592	3.466	2.740	-1.343	0.760	53.997
6SSW12	4.086	66.226	11.030	1.201	6.665	2.212	2.356	1.012	0.558	0.918	0.799	4.139	7.943	3.204	-1.967	0.623	53.997
7-1/4SSJ18	1.723	19.734	1.090	0.506	3.680	0.999	2.696	0.161	0.113	0.563	0.377	0.343	1.706	2.932	-1.006	0.882	155.754
7-1/4SJW18	1.867	22.027	1.090	0.549	4.197	1.141	2.766	0.284	0.167	0.720	0.518	0.372	3.031	3.162	-1.354	0.817	155.754
7-1/4SSJ16	2.158	37.221	2.173	0.634	4.581	1.243	2.688	0.200	0.143	0.562	0.384	0.677	2.151	2.927	-1.014	0.880	123.092
7-1/4SJW16	2.375	41.947	2.173	0.698	5.318	1.446	2.761	0.377	0.227	0.735	0.547	0.745	4.176	3.190	-1.420	0.802	123.092
7-1/4SSJ14	2.661	45.253	4.390	0.782	5.573	1.511	2.669	0.229	0.165	0.541	0.370	1.325	2.439	2.891	-0.969	0.888	96.683
7-1/4SJW14	2.934	52.973	4.390	0.862	6.508	1.769	2.747	0.441	0.269	0.715	0.532	1.461	4.808	3.153	-1.372	0.811	96.683
7-1/4SSJ12	3.588	58.558	11.030	1.054	7.224	1.956	2.617	0.240	0.172	0.477	0.326	3.635	2.556	2.789	-0.835	0.910	66.288
7-1/4SJW12	3.977	69.871	11.030	1.169	8.594	2.334	2.711	0.508	0.310	0.659	0.484	4.030	5.319	3.051	-1.234	0.836	66.288
8SSJ18	1.838	22.790	0.985	0.540	4.673	1.153	2.941	0.165	0.114	0.552	0.355	0.366	2.126	3.142	-0.958	0.907	172.384
8SJW18	1.982	25.181	0.985	0.582	5.307	1.312	3.019	0.292	0.167	0.708	0.489	0.395	3.764	3.360	-1.295	0.852	172.384
8SSW18	2.155	26.388	0.985	0.633	6.084	1.506	3.100	0.519	0.242	0.905	0.671	0.429	6.663	3.665	-1.734	0.776	172.384
8SSJ16	2.302	43.016	1.962	0.677	5.822	1.437	2.933	0.205	0.143	0.551	0.361	0.722	2.679	3.137	-0.966	0.905	136.343
8SJW16	2.519	48.314	1.962	0.740	6.729	1.663	3.015	0.387	0.227	0.723	0.517	0.790	5.162	3.385	-1.358	0.839	136.343
8SSW16	2.748	50.919	1.962	0.807	7.731	1.912	3.094	0.694	0.333	0.927	0.709	0.862	9.310	3.710	-1.824	0.758	136.343
8SSJ14	2.843	52.367	3.959	0.836	7.091	1.749	2.913	0.235	0.165	0.530	0.348	1.416	3.047	3.101	-0.921	0.912	107.202
8SJW14	3.116	60.981	3.959	0.916	8.242	2.037	3.000	0.454	0.270	0.704	0.503	1.552	5.964	3.349	-1.311	0.847	107.202
8SSW14	3.480	70.087	3.959	1.023	9.725	2.407	3.084	0.892	0.446	0.934	0.731	1.733	12.318	3.726	-1.872	0.748	107.202

Flange Width: SSCW=1-1/4", SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 10 for Notes

SECTION PROPERTIES

8" - 16"

SSJ, SJW & SSW STUDS

Section	Weight Plf	Ma K-in	Va Kip	Area in^2	Ix in^4	Sx_e in^3	Rx in	Iy in^4	Sy_e in^3	Ry in	D in	JX1000 in^4	Cw in^6	Ro in	Xo in	Beta	h/t
8SSJ12	3.848	68.023	11.030	1.131	9.223	2.272	2.856	0.246	0.173	0.466	0.307	3.898	3.218	3.000	-0.792	0.930	73.663
8SJW12	4.237	80.615	11.030	1.245	10.905	2.693	2.959	0.521	0.311	0.647	0.457	4.293	6.661	3.250	-1.178	0.869	73.663
8SSW12	4.778	97.324	11.030	1.404	13.137	3.251	3.059	1.110	0.562	0.889	0.691	4.841	14.658	3.636	-1.753	0.768	73.663
9-1/4SSJ18	2.030	25.485	0.849	0.597	6.672	1.429	3.344	0.170	0.114	0.534	0.324	0.404	2.946	3.501	-0.888	0.936	200.100
9-1/4SSW18	2.174	28.263	0.639	0.639	7.526	1.614	3.432	0.303	0.168	0.689	0.448	0.433	5.199	3.703	-1.208	0.894	200.100
9-1/4SSJ16	2.543	49.139	1.688	0.747	8.319	1.782	3.336	0.212	0.143	0.533	0.330	0.798	3.711	3.495	-0.895	0.934	158.428
9-1/4SJW16	2.760	54.733	1.688	0.811	9.551	2.048	3.432	0.403	0.228	0.705	0.474	0.866	7.090	3.726	-1.267	0.884	158.428
9-1/4SSJ14	3.147	65.089	3.403	0.925	10.151	2.174	3.313	0.243	0.166	0.512	0.318	1.567	4.237	3.459	-0.853	0.939	124.734
9-1/4SJW14	3.420	75.194	3.403	1.005	11.712	2.511	3.414	0.472	0.271	0.685	0.461	1.703	8.229	3.690	-1.223	0.890	124.734
9-1/4SSJ12	4.280	85.031	10.047	1.258	13.272	2.840	3.248	0.253	0.174	0.449	0.281	4.337	4.517	3.359	-0.730	0.953	85.954
9-1/4SJW12	4.670	99.757	10.047	1.372	15.547	3.332	3.366	0.540	0.313	0.627	0.420	4.731	9.295	3.595	-1.095	0.907	85.954
10SSJ16	2.687	52.165	1.558	0.790	10.094	2.003	3.575	0.216	0.143	0.523	0.314	0.843	4.424	3.714	-0.858	0.947	171.678
10SJW16	2.904	58.457	1.558	0.853	11.544	2.293	3.678	0.411	0.228	0.694	0.452	0.911	8.422	3.936	-1.219	0.904	171.678
10SSW16	3.133	62.108	1.558	0.921	13.131	2.611	3.777	0.740	0.334	0.896	0.626	0.983	15.084	4.219	-1.654	0.846	171.678
10SSJ14	3.329	73.245	3.138	0.978	12.329	2.446	3.550	0.247	0.166	0.502	0.303	1.658	5.060	3.677	-0.816	0.951	135.252
10SJW14	3.602	84.246	3.138	1.058	14.166	2.814	3.658	0.481	0.272	0.674	0.440	1.794	9.795	3.901	-1.176	0.909	135.252
10SSW14	3.965	96.031	3.138	1.165	16.549	3.290	3.768	0.952	0.448	0.904	0.646	1.975	19.827	4.231	-1.697	0.839	135.252
10SSJ12	4.540	95.981	9.253	1.334	16.167	3.206	3.481	0.257	0.174	0.439	0.268	4.600	5.417	3.577	-0.698	0.962	93.328
10SJW12	4.929	111.989	9.253	1.449	18.840	3.740	3.606	0.550	0.314	0.616	0.400	4.994	11.122	3.807	-1.051	0.924	93.328
10SSW12	5.470	133.419	9.253	1.607	22.419	4.456	3.735	1.182	0.566	0.858	0.610	5.542	23.993	4.146	-1.585	0.854	93.328
11-1/2SSJ16	2.976	58.517	1.350	0.875	14.323	2.477	4.047	0.222	0.144	0.504	0.286	0.934	6.066	4.154	-0.792	0.964	198.180
11-1/2SSW16	3.422	70.614	1.350	1.006	18.377	3.182	4.275	0.767	0.335	0.874	0.575	1.074	20.531	4.630	-1.548	0.888	198.180
11-1/2SSJ14	3.693	83.505	2.716	1.085	17.526	3.031	4.019	0.253	0.166	0.483	0.277	1.839	6.957	4.117	-0.753	0.967	156.290
11-1/2SSW14	4.329	109.335	2.716	1.272	23.181	4.014	4.268	0.989	0.449	0.882	0.595	2.156	26.910	4.639	-1.588	0.883	156.290
11-1/2SSJ12	5.059	119.570	7.990	1.487	23.105	3.994	3.942	0.264	0.175	0.421	0.246	5.126	7.493	4.016	-0.641	0.975	108.078
11-1/2SSW12	5.989	163.121	7.990	1.760	31.468	5.448	4.228	1.226	0.568	0.835	0.561	6.068	32.829	4.557	-1.480	0.895	108.078
12SSJ16	3.073	60.691	1.292	0.903	15.947	2.645	4.202	0.224	0.144	0.498	0.278	0.964	6.679	4.302	-0.773	0.968	207.014
12SJW16	3.289	68.622	1.292	0.967	18.067	2.998	4.323	0.429	0.229	0.666	0.403	1.032	12.644	4.512	-1.108	0.940	207.014
12SSW16	3.518	73.465	1.292	1.034	20.373	3.382	4.439	0.776	0.335	0.866	0.560	1.104	22.568	4.770	-1.516	0.899	207.014
12SSJ14	3.814	86.019	2.599	1.121	19.524	3.237	4.174	0.255	0.167	0.477	0.269	1.899	7.665	4.265	-0.734	0.970	163.303
12SJW14	4.087	103.953	2.599	1.201	22.208	3.685	4.300	0.501	0.272	0.646	0.392	2.035	14.762	4.477	-1.067	0.943	163.303
12SSW14	4.451	113.355	2.599	1.308	25.704	4.267	4.433	1.000	0.449	0.874	0.580	2.216	29.557	4.779	-1.555	0.894	163.303
12SSJ12	5.232	127.935	7.642	1.538	25.781	4.273	4.095	0.265	0.175	0.416	0.239	5.301	8.268	4.163	-0.624	0.978	112.994
12SJW12	5.621	147.361	7.642	1.652	29.674	4.922	4.238	0.572	0.315	0.588	0.357	5.695	16.927	4.383	-0.950	0.953	112.994
12SSW12	6.162	173.525	7.642	1.811	34.917	5.796	4.391	1.239	0.568	0.827	0.547	6.243	36.137	4.697	-1.449	0.905	112.994
14SJW16	3.675	79.140	1.104	1.080	26.524	3.331	4.956	0.443	0.229	0.641	0.363	1.153	17.868	5.100	-1.017	0.960	242.350
14SJW14	4.572	113.246	2.218	1.344	32.654	4.650	4.930	0.517	0.273	0.621	0.354	2.277	20.915	5.064	-0.978	0.963	191.353
14SSW14	4.936	129.723	2.218	1.451	37.477	5.339	5.083	1.038	0.450	0.846	0.526	2.458	41.626	5.349	-1.437	0.928	191.353
14SJW12	6.313	186.758	6.509	1.855	43.813	6.238	4.859	0.589	0.316	0.563	0.324	6.397	24.130	4.968	-0.868	0.970	132.660
14SSW12	6.854	217.663	6.509	2.014	51.038	7.270	5.034	1.284	0.570	0.798	0.497	6.944	51.238	5.269	-1.335	0.936	132.660
16SSW14	5.421	146.438	1.935	1.593	52.152	6.192	5.721	1.069	0.450	0.819	0.482	2.700	56.124	5.932	-1.336	0.949	219.404
16SSW12	7.546	251.869	5.669	2.218	71.191	8.879	5.666	1.321	0.571	0.772	0.456	7.646	69.405	5.851	-1.240	0.955	152.325

Flange Width: SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 10 for Notes

SECTION PROPERTIES

TR TRACK

Section	Weight Plf	Ma K-in	Va Kip	Area in^2	Ix in^4	Sx in^3	Rx in	Iy in^4	Sy in^3	Ry in	D in	JX1000 in^4	Cw in^6	Ro in	Xo in	Beta	h/t
2-1/2TR20	0.595	2.072	1.037	0.175	0.200	0.117	1.069	0.027	0.029	0.396	0.318	0.070	0.034	1.373	-0.764	0.690	72.061
2-1/2TR18	0.770	2.947	1.466	0.226	0.256	0.168	1.064	0.035	0.038	0.394	0.323	0.153	0.043	1.368	-0.763	0.689	54.590
2-1/2TR16	0.959	3.992	1.796	0.282	0.315	0.225	1.058	0.043	0.047	0.393	0.329	0.301	0.053	1.363	-0.764	0.686	42.482
2-1/2TR14	1.194	7.604	3.324	0.351	0.387	0.281	1.050	0.054	0.059	0.390	0.336	0.595	0.065	1.357	-0.765	0.682	32.693
3-1/2TR20	0.712	3.312	0.990	0.209	0.417	0.184	1.412	0.030	0.029	0.378	0.269	0.084	0.072	1.609	-0.672	0.826	100.962
3-1/2TR18	0.924	4.651	1.762	0.271	0.537	0.259	1.407	0.039	0.038	0.377	0.273	0.184	0.092	1.603	-0.670	0.825	76.763
3-1/2TR16	1.151	6.236	2.544	0.338	0.663	0.346	1.400	0.048	0.049	0.375	0.278	0.361	0.113	1.597	-0.670	0.824	60.150
3-1/2TR14	1.437	11.895	4.750	0.422	0.818	0.434	1.392	0.059	0.061	0.373	0.285	0.716	0.139	1.589	-0.670	0.822	46.718
3-5/8TR20	0.727	3.484	0.956	0.214	0.451	0.193	1.454	0.030	0.029	0.376	0.264	0.085	0.078	1.641	-0.662	0.837	104.575
3-5/8TR18	0.943	4.885	1.762	0.277	0.581	0.272	1.448	0.039	0.038	0.375	0.268	0.188	0.099	1.635	-0.660	0.837	79.534
3-5/8TR16	1.175	6.543	2.637	0.345	0.718	0.362	1.442	0.048	0.049	0.373	0.273	0.369	0.122	1.629	-0.660	0.836	62.359
3-5/8TR14	1.467	12.482	4.928	0.431	0.886	0.454	1.433	0.059	0.061	0.371	0.280	0.731	0.150	1.621	-0.660	0.834	48.471
4TR20	0.771	4.021	0.866	0.227	0.564	0.221	1.578	0.031	0.029	0.370	0.249	0.090	0.097	1.740	-0.634	0.867	115.413
4TR18	1.001	5.617	1.762	0.294	0.727	0.311	1.572	0.040	0.038	0.368	0.254	0.199	0.124	1.734	-0.632	0.867	87.849
4TR16	1.247	7.500	2.776	0.367	0.899	0.413	1.566	0.049	0.049	0.367	0.259	0.391	0.153	1.728	-0.632	0.866	68.984
4TR14	1.558	14.311	5.422	0.458	1.110	0.518	1.557	0.061	0.061	0.365	0.266	0.776	0.188	1.719	-0.631	0.865	53.731
5-1/2TR20	0.948	6.128	0.630	0.279	1.184	0.355	2.061	0.033	0.029	0.346	0.206	0.111	0.198	2.160	-0.544	0.937	158.766
5-1/2TR18	1.231	8.968	1.402	0.362	1.529	0.488	2.056	0.043	0.039	0.344	0.211	0.245	0.255	2.154	-0.542	0.937	121.109
5-1/2TR16	1.536	11.857	2.801	0.451	1.895	0.644	2.049	0.053	0.049	0.343	0.216	0.482	0.314	2.146	-0.541	0.937	95.486
5-1/2TR14	1.922	22.637	5.422	0.565	2.349	0.809	2.039	0.065	0.061	0.340	0.222	0.957	0.387	2.137	-0.540	0.936	74.769
6TR20	1.007	6.589	0.577	0.296	1.457	0.407	2.219	0.034	0.029	0.338	0.195	0.118	0.242	2.304	-0.519	0.949	173.217
6TR18	1.307	10.235	1.285	0.384	1.883	0.555	2.213	0.044	0.039	0.337	0.200	0.261	0.310	2.298	-0.517	0.949	132.195
6TR16	1.633	13.497	2.564	0.480	2.335	0.730	2.206	0.054	0.049	0.335	0.205	0.512	0.382	2.290	-0.516	0.949	104.320
6TR14	2.043	25.770	5.190	0.601	2.897	0.918	2.196	0.067	0.062	0.333	0.211	1.018	0.471	2.280	-0.515	0.949	81.781
7-1/4TR20	1.154	7.776	0.477	0.339	2.307	0.553	2.608	0.035	0.029	0.321	0.172	0.135	0.370	2.669	-0.467	0.969	209.344
7-1/4TR18	1.499	13.561	1.062	0.441	2.984	0.739	2.602	0.045	0.039	0.320	0.177	0.299	0.475	2.663	-0.465	0.969	159.911
7-1/4TR16	1.873	18.008	2.116	0.551	3.706	0.967	2.594	0.056	0.049	0.318	0.182	0.588	0.587	2.655	-0.464	0.969	126.405
7-1/4TR14	2.347	34.385	4.274	0.690	4.605	1.215	2.584	0.069	0.062	0.316	0.188	1.169	0.724	2.644	-0.462	0.969	99.313
8TR20	1.242	8.508	0.433	0.365	2.942	0.650	2.839	0.036	0.029	0.312	0.161	0.146	0.462	2.890	-0.441	0.977	231.020
8TR18	1.614	14.618	0.962	0.474	3.807	0.868	2.833	0.046	0.039	0.311	0.166	0.322	0.593	2.883	-0.439	0.977	176.541
8TR16	2.018	20.995	1.915	0.593	4.731	1.123	2.825	0.057	0.050	0.309	0.171	0.633	0.733	2.875	-0.438	0.977	139.655
8TR14	2.529	40.089	3.864	0.743	5.885	1.411	2.814	0.070	0.062	0.307	0.177	1.259	0.904	2.864	-0.436	0.977	109.832
9-1/4TR18	1.806	16.473	0.831	0.531	5.481	1.102	3.213	0.047	0.039	0.297	0.151	0.360	0.822	3.252	-0.402	0.985	204.257
9-1/4TR16	2.259	26.440	1.654	0.664	6.817	1.406	3.205	0.058	0.050	0.296	0.156	0.709	1.016	3.243	-0.400	0.985	161.740
9-1/4TR14	2.832	50.488	3.333	0.832	8.490	1.768	3.194	0.072	0.062	0.294	0.162	1.410	1.254	3.232	-0.398	0.985	127.363
10TR18	1.921	17.621	0.769	0.565	6.681	1.254	3.440	0.047	0.039	0.290	0.143	0.383	0.979	3.473	-0.382	0.988	220.887
10TR16	2.403	28.510	1.528	0.706	8.314	1.597	3.431	0.059	0.050	0.288	0.148	0.754	1.210	3.464	-0.380	0.988	174.991
10TR14	3.014	56.582	3.078	0.886	10.360	2.002	3.420	0.073	0.062	0.286	0.155	1.501	1.494	3.453	-0.379	0.988	137.882
10TR12	4.260	84.874	9.073	1.252	14.446	2.835	3.397	0.100	0.089	0.282	0.168	4.316	2.045	3.429	-0.375	0.988	95.172
11-1/2TR16	2.692	31.708	1.327	0.791	11.916	2.017	3.881	0.060	0.050	0.275	0.135	0.845	1.652	3.906	-0.347	0.992	201.493
11-1/2TR14	3.378	62.747	2.671	0.993	14.864	2.530	3.870	0.074	0.062	0.273	0.142	1.682	2.041	3.895	-0.345	0.992	158.920
11-1/2TR12	4.779	106.370	7.856	1.404	20.771	3.553	3.846	0.102	0.089	0.269	0.155	4.842	2.796	3.870	-0.341	0.992	109.921
12TR16	2.788	32.836	1.272	0.819	13.310	2.167	4.030	0.060	0.050	0.271	0.132	0.875	1.816	4.053	-0.337	0.993	210.327
12TR14	3.499	64.896	2.558	1.028	16.608	2.718	4.019	0.074	0.062	0.269	0.138	1.743	2.244	4.042	-0.335	0.993	165.933
12TR12	4.952	114.043	7.520	1.455	23.222	3.809	3.995	0.102	0.089	0.265	0.152	5.017	3.074	4.017	-0.331	0.993	114.838
14TR14	3.984	74.031	2.188	1.171	24.914	3.510	4.613	0.076	0.062	0.254	0.126	1.984	3.158	4.629	-0.300	0.996	193.983
14TR12	5.644	147.273	6.420	1.659	34.911	4.919	4.588	0.104	0.089	0.250	0.139	5.718	4.329	4.604	-0.296	0.996	134.503
16TR14	4.470	83.643	1.912	1.314	35.563	4.392	5.203	0.077	0.062	0.242	0.116	2.226	4.236	5.216	-0.272	0.997	222.034
16TR12	6.336	169.554	5.601	1.862	49.919	6.164	5.178	0.105	0.090	0.238	0.130	6.420	5.810	5.190	-0.268	0.997	154.169

Flange Width: TR Track = 1-1/4"

Reference Page 10 for Notes

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOADS

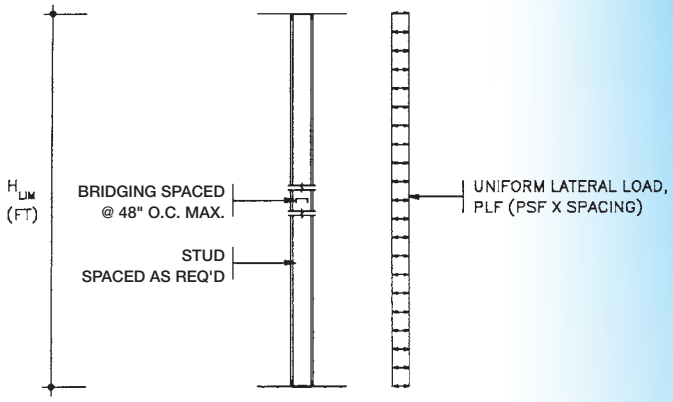
Braced Studs Subjected to Lateral Load

P_{allow}, KIPS (1,000 Lbs) Per STUD

Use:

Tables allow for the selection of an axially loaded stud in the absence or presence of bending due to lateral load. The values assume the studs are typically bridged at intervals not to exceed 48" on center with alternative labor saving values published for 9 and 10 foot high walls where a single row of bridging at mid-height of the wall would suffice.

Select a stud, based on applied lateral load, spacing and height providing an allowable axial load in excess of the applied load.



Notes:

1. The tabulated values represent the least allowable axial load of the stud in the presence of lateral load or in the absence of lateral load.
2. Values shown are limited to studs used in a simply supported application. Conditions involving cantilevers, concentrated loads, eccentricities, multiple spans, etc. should be investigated separately. The values assume the axial load is applied concentrically to the member.
3. Values are based on the installation of mechanical bridging spaced at intervals not to exceed 48" on center (columns denoted 48) with the exception of the columns entitled 9FT/MID and 10FT/MID where a single row of bridging may be installed at mid-height of the wall.
4. Stud ends shall be restrained against rotation by means of a fixed attachment to each side of continuous track.
5. Deflections due to lateral load do not exceed L/720 unless noted as follows:

a. values followed by the subscript 6 (x.xx6) do not exceed L/600

b. values followed by the subscript 3 (x.xx3) do not exceed L/360

c. values followed by the subscript 2 (x.xx2) do not exceed L/240

d. values have been omitted where deflection exceeds L/240

Lateral load deflections were calculated without regard to the composite contribution of collateral materials.

6. Contact Super Stud for axial load capacities of sections not shown herein.

Note: All tables based on Fy=50 KSI for 12, 14, 16 gage material, Fy=33 KSI for 18 & 20 gage material.

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOADS

Braced Studs Subjected to Lateral Load

P_{allow}, KIPS (1,000 Lbs) Per STUD

5 PSF

SECTION	BRIDGING SPACED 48" O.C.																BRIDGING AT MID-HEIGHT				
	8FT		9FT		10FT		11FT		12FT		14FT		16FT		18FT		SECTION	9FT		10FT	
	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"		16"	24"	16"	24"
3-1/2SSC20	1.85	1.85	1.79	1.72	1.72	1.49$_6$	1.52	1.25$_3$	1.30$_6$	1.02$_3$	.90$_3$	.61$_2$	.59$_2$				3-1/2SSC20	1.61	1.54	1.36	1.15$_6$
3-1/2SSJ20	2.19	2.19	2.11	2.11	2.02	1.86	1.87	1.59$_6$	1.61$_6$	1.32$_3$	1.14$_3$	.84$_2$	.78$_2$				3-1/2SSJ20	1.94	1.94	1.66	1.53
3-1/2SSC18	2.49	2.49	2.42	2.42	2.32	2.19	2.19	1.88$_6$	1.90	1.58$_3$	1.37$_3$	1.04$_2$	.94$_2$				3-1/2SSC18	2.19	2.19	1.86	1.73
3-1/2SSJ18	3.03	3.03	2.92	2.92	2.80	2.80	2.65	2.45	2.43	2.09$_6$	1.78$_3$	1.43$_3$	1.26$_3$	.93$_2$	.88$_2$		3-1/2SSJ18	2.70	2.70	2.34	2.34
3-1/2SSC16	3.67	3.67	3.45	3.45	3.20	3.20	2.94	2.94	2.69	2.56$_6$	2.13$_6$	1.83$_3$	1.57$_3$	1.28$_2$	1.15$_2$		3-1/2SSC16	2.98	2.98	2.48	2.48
3-1/2SSJ16	4.60	4.60	4.27	4.27	3.93	3.93	3.57	3.57	3.23	3.23	2.64$_6$	2.38$_3$	2.01$_3$	1.71$_2$	1.51$_2$		3-1/2SSJ16	3.74	3.74	3.08	3.08
3-1/2SSC14	4.41	4.41	4.13	4.13	3.83	3.83	3.52	3.52	3.21	3.19	2.64	2.32$_3$	1.97$_3$	1.65$_2$	1.47$_2$		3-1/2SSC14	3.63	3.63	3.07	3.07
3-1/2SSJ14	5.61	5.61	5.19	5.19	4.74	4.74	4.30	4.30	3.90	3.90	3.18	3.04$_3$	2.55$_3$	2.23$_3$	1.94$_3$	1.64$_2$	3-1/2SSJ14	4.56	4.56	3.79	3.79
3-5/8SSC20	1.89	1.89	1.84	1.81	1.78	1.58	1.61	1.35$_3$	1.40$_6$	1.11$_3$	.99$_3$	.69$_2$	.66$_2$				3-5/8SSC20	1.67	1.62	1.42	1.23
3-5/8SSJ20	2.24	2.24	2.17	2.17	2.09	1.97	1.98	1.70$_6$	1.73	1.43$_3$	1.25$_3$	.94$_2$	.87$_2$				3-5/8SSJ20	2.00	2.00	1.74	1.63
3-5/8SSC18	2.56	2.56	2.49	2.49	2.40	2.32	2.30	2.02	2.05	1.72$_3$	1.50$_3$	1.16$_2$	1.05$_2$	.72$_2$			3-5/8SSC18	2.26	2.26	1.94	1.84
3-5/8SSJ18	3.11	3.11	3.01	3.01	2.90	2.90	2.76	2.61	2.60	2.25$_6$	1.94$_6$	1.58$_3$	1.40$_3$	1.05$_2$	.99$_2$		3-5/8SSJ18	2.80	2.80	2.45	2.45
3-5/8SJW18	3.74	3.74	3.62	3.62	3.47	3.47	3.31	3.30	3.12	2.89	2.48$_6$	2.09$_3$	1.82$_3$	1.45$_2$	1.33$_2$		3-5/8SJW18	3.40	3.40	3.02	3.02
3-5/8SSC16	3.84	3.84	3.63	3.63	3.40	3.40	3.16	3.16	2.91	2.81$_6$	2.35$_6$	2.03$_3$	1.74$_3$	1.43$_2$	1.29$_2$		3-5/8SSC16	3.17	3.17	2.64	2.64
3-5/8SSJ16	4.81	4.81	4.51	4.51	4.17	4.17	3.83	3.83	3.50	3.50	2.87	2.62$_3$	2.22$_3$	1.90$_2$	1.67$_2$		3-5/8SSJ16	3.96	3.96	3.30	3.30
3-5/8SJW16	6.20	6.20	5.80	5.80	5.34	5.34	4.84	4.84	4.38	4.38	3.56	3.46$_6$	2.88$_6$	2.55$_3$	2.20$_3$	1.88$_2$	3-5/8SJW16	5.21	5.21	4.32	4.32
3-5/8SSC14	4.68	4.68	4.41	4.41	4.10	4.10	3.79	3.79	3.47	3.47	2.88	2.56$_3$	2.18$_3$	1.84$_2$	1.63$_3$	1.31$_2$	3-5/8SSC14	3.85	3.85	3.25	3.25
3-5/8SSJ14	5.97	5.97	5.57	5.57	5.11	5.11	4.65	4.65	4.22	4.22	3.46	3.35$_6$	2.81$_6$	2.47$_3$	2.15$_3$	1.82$_2$	3-5/8SSJ14	4.87	4.87	4.05	4.05
3-5/8SJW14	7.68	7.68	7.15	7.15	6.54	6.54	5.89	5.89	5.29	5.29	4.29	4.29	3.51	3.30$_3$	2.83$_3$	2.49$_2$	3-5/8SJW14	6.37	6.37	5.22	5.22
3-5/8SJW12	9.81	9.81	9.13	9.13	8.34	8.34	7.53	7.53	6.79	6.79	5.52	5.52	4.51	4.51$_6$	3.73$_6$	3.50$_3$	3-5/8SJW12	8.20	8.20	6.85	6.85
4SSC20	2.00	2.00	1.96	1.96	1.91	1.83	1.86	1.61	1.67	1.38$_3$	1.26$_3$	.95$_2$	.89$_2$	.60$_2$			4SSC20	1.80	1.80	1.57	1.46
4SSJ20	2.36	2.36	2.31	2.31	2.25	2.25	2.18	2.01	2.05	1.75$_6$	1.58$_3$	1.25$_3$	1.14$_3$	.81$_2$	.80$_2$		4SSJ20	2.16	2.16	1.93	1.91
4SSC18	2.71	2.71	2.66	2.66	2.60	2.60	2.52	2.39	2.43	2.10$_6$	1.90$_6$	1.52$_3$	1.39$_3$	1.02$_2$	.99$_2$		4SSC18	2.45	2.45	2.15	2.15
4SSJ18	3.29	3.29	3.22	3.22	3.13	3.13	3.03	3.03	2.91	2.71	2.42	2.03$_3$	1.82$_3$	1.43$_2$	1.33$_3$	.96$_2$	4SSJ18	3.02	3.02	2.72	2.72
4SJW18	3.96	3.96	3.86	3.86	3.75	3.75	3.62	3.62	3.47	3.42	3.05	2.64$_6$	2.34$_6$	1.92$_3$	1.74$_3$	1.34$_2$	4SJW18	3.67	3.67	3.34	3.34
4SSC16	4.25	4.25	4.09	4.09	3.89	3.89	3.66	3.66	3.42	3.42	2.94	2.63$_3$	2.30$_3$	1.94$_3$	1.74$_3$	1.39$_2$	4SSC16	3.55	3.55	3.00	3.00
4SSJ16	5.31	5.31	5.09	5.09	4.82	4.82	4.50	4.50	4.15	4.15	3.50	3.36$_6$	2.88$_6$	2.52$_3$	2.22$_3$	1.87$_2$	4SSJ16	4.53	4.53	3.80	3.80
4SJW16	6.80	6.80	6.49	6.49	6.13	6.13	5.70	5.70	5.22	5.22	4.33	4.33	3.60	3.32$_3$	2.88$_3$	2.51$_2$	4SJW16	5.95	5.95	5.02	5.02
4SSC14	5.36	5.36	5.16	5.16	4.91	4.91	4.63	4.63	4.29	4.29	3.62	3.38$_6$	2.88$_6$	2.48$_3$	2.19$_3$	1.81$_2$	4SSC14	4.40	4.40	3.56	3.56
4SSJ14	6.77	6.77	6.49	6.49	6.14	6.14	5.72	5.72	5.27	5.27	4.36	4.36	3.60	3.28$_3$	2.84$_3$	2.45$_3$	4SSJ14	5.80	5.80	4.85	4.85
4SJW14	8.60	8.60	8.21	8.21	7.75	7.75	7.21	7.21	6.59	6.59	5.40	5.40	4.42	4.32$_6$	3.66$_6$	3.29$_3$	4SJW14	7.52	7.52	6.35	6.35
4SJW12	11.37	11.37	10.81	10.81	10.14	10.14	9.37	9.37	8.51	8.51	6.96	6.96	5.71	5.71	4.73	4.60$_3$	4SJW12	9.86	9.86	8.31	8.31
5-1/2SSC20	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.07	1.79	1.77	1.42$_3$	1.43$_3$	1.04$_2$	5-1/2SSC20	1.93	1.93	1.71	1.71
5-1/2SSJ20	2.59	2.59	2.58	2.58	2.56	2.56	2.54	2.54	2.51	2.51	2.43	2.23	2.17	1.81$_3$	1.79$_3$	1.38$_3$	5-1/2SSJ20	2.47	2.47	2.30	2.30
5-1/2SSC18	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.84	2.69	2.63	2.22$_6$	2.19$_6$	1.73$_3$	5-1/2SSC18	2.60	2.60	2.29	2.29
5-1/2SSJ18	3.67	3.67	3.64	3.64	3.61	3.61	3.57	3.57	3.53	3.53	3.40	3.40	3.22	2.87	2.77	2.30$_3$	5-1/2SSJ18	3.47	3.47	3.24	3.24
5-1/2SSC16	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.48	4.48	4.08	3.98	3.61	3.17$_3$	5-1/2SSC16	3.73	3.73	3.12	3.12
5-1/2SSJ16	6.32	6.32	6.24	6.24	6.15	6.15	6.03	6.03	5.89	5.89	5.49	5.49	4.96	4.96	4.31	4.08$_6$	5-1/2SSJ16	5.75	5.75	5.08	5.08
5-1/2SSC14	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.25	5.25	4.66	4.24$_6$	5-1/2SSC14	4.38	4.38	3.67	3.67
5-1/2SSJ14	8.07	8.07	8.07	8.07	7.97	7.97	7.82	7.82	7.63	7.63	7.13	7.13	6.44	6.44	5.61	5.52	5-1/2SSJ14	7.25	7.25	6.32	6.32
6SSC20	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	1.95	1.98	1.65$_6$	1.67$_6$	1.29$_3$	6SSC20	1.91	1.91	1.68	1.68
6SSJ20	2.61	2.61	2.61	2.61	2.61	2.61	2.59	2.59	2.57	2.57	2.51	2.45	2.42	2.07$_6$	2.06	1.66$_3$	6SSJ20	2.49	2.49	2.32	2.32
6SSC18	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.52	2.52	2.07$_3$	6SSC18	2.57	2.57	2.25	2.25
6SSJ18	3.69	3.69	3.69	3.69	3.69	3.69	3.66	3.66	3.62	3.62	3.53	3.53	3.39	3.23	3.16	2.70$_6$	6SSJ18	3.48	3.48	3.25	3.25
6SJW18	4.48	4.48	4.45	4.45	4.42	4.42	4.39	4.39	4.34	4.34	4.20	4.20	4.02	4.02	3.80	3.43	6SJW18	4.32	4.32	4.12	4.12
6SSC16	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.07	3.80$_6$	6SSC16	3.65	3.65	3.07	3.07
6SSJ16	6.31	6.31	6.31	6.31	6.31	6.31	6.27	6.27	6.16	6.16	5.87	5.87	5.45	5.45	4.91	4.89	6SSJ16	5.71	5.71	5.02	5.02
6SJW16	8.28	8.28	8.18	8.18	8.07	8.07	7.92	7.92	7.75	7.75	7.31	7.31	6.75	6.75	6.07	6.07	6SJW16	7.77	7.77	7.21	7.21
6SSC14	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.23	5.05	6SSC14	4.31	4.31	3.63	3.63
6SSJ14	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.01	8.01	7.64	7.64	7.10	7.10	6.40	6.40	6SSJ14	7.20	7.20	6.24	6.24
6SJW14	10.69	10.69	10.57	10.57	10.42	10.42	10.24	10.24	10.03	10.03	9.47	9.47	8.75	8.75	7.87	7.87	6SJW14	10.03	10.03	9.31	9.31
6SJW12	15.49	15.49	15.34	15.34	15.14	15.14	14.90	14.90	14.60	14.60	13.81	13.81	12.76	12.76	11.47	11.47	6SJW12	14.53	14.53	13.49	13.49
8SSJ18	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	8SSJ18	3.40	3.40	3.14	3.14
8SJW18	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.52	4.52	4.45	4.45	4.35	4.35	8SJW18	4.42	4.42	4.24	4.24
8SSJ16	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	8SSJ16	5.42	5.42	4.65	4.65
8SJW16	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.33	8.33	8.08	8.08	7.73	7.73	8SJW16	8.03	8.03	7.51	7.51
8SSJ14	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	8SSJ14	6.81	6.81	5.77	5.77
8SJW14	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.81	10.81	10.48	10.48	10.05	10.05	8SJW14	10.31	10.31	9.60	9.60
8SSJ12	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	8SSJ12	8.44	8.44	7.11	7.11
8SJW12	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.41	15.41	14.80	14.80	8SJW12	14.54	14.54	13.31	13.31

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 15 for Notes and Definitions of Symbols

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOADS

Braced Studs Subjected to Lateral Load

Pallow, KIPS (1,000 Lbs) Per STUD

20 PSF

Load Bearing Framing Systems

SECTION	BRIDGING SPACED 48" O.C.															
	8FT		9FT		10FT		11FT		12FT		14FT		16FT		18FT	
	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"
3-1/2SSC20	1.18$_{3}$	.65$_{2}$	.84$_{3}$	.25$_{2}$	.51$_{2}$											
3-1/2SSJ20	1.58$_{3}$	1.03$_{3}$	1.20$_{3}$	.57$_{2}$	.83$_{2}$											
3-1/2SSC18	1.90$_{6}$	1.31$_{3}$	1.48$_{3}$	.81$_{2}$	1.07$_{2}$	.69$_{2}$										
3-1/2SSJ18	2.59	1.97$_{3}$	2.11$_{3}$	1.40$_{2}$	1.64$_{3}$	.88$_{2}$	1.19$_{2}$									
3-1/2SSC16	3.54	2.96$_{3}$	2.96$_{3}$	2.31$_{3}$	2.39$_{3}$	1.70$_{2}$	1.88$_{2}$	1.42$_{2}$								
3-1/2SSJ16	4.60	4.13$_{6}$	4.01$_{6}$	3.33$_{3}$	3.31$_{3}$	2.58$_{2}$	2.66$_{3}$	1.92$_{2}$	2.10$_{2}$							
3-1/2SSC14	4.41	3.83$_{6}$	3.77$_{6}$	3.06$_{3}$	3.11$_{3}$	2.35$_{2}$	2.49$_{3}$	1.71$_{2}$	1.95$_{2}$							
3-1/2SSJ14	5.61	5.39	5.16	4.43$_{3}$	4.31$_{3}$	3.53$_{3}$	3.54$_{3}$	2.74$_{2}$	2.86$_{2}$							
3-5/8SSC20	1.27$_{3}$	.75$_{3}$	.93$_{3}$	.34$_{2}$	.60$_{2}$											
3-5/8SSJ20	1.69$_{6}$	1.14$_{3}$	1.31$_{3}$	.68$_{2}$	.93$_{2}$	.59$_{2}$										
3-5/8SSC18	2.03$_{6}$	1.43$_{3}$	1.61$_{3}$	.93$_{2}$	1.20$_{3}$	.46$_{2}$	.81$_{2}$									
3-5/8SSJ18	2.73	2.12$_{3}$	2.26$_{3}$	1.56$_{3}$	1.79$_{3}$	1.02$_{2}$	1.34$_{2}$	.93$_{2}$								
3-5/8SJW18	3.54	2.90$_{6}$	3.02$_{6}$	2.28$_{3}$	2.48$_{3}$	1.67$_{2}$	1.96$_{3}$	1.10$_{2}$	1.48$_{2}$							
3-5/8SSC16	3.78	3.19$_{3}$	3.20$_{6}$	2.53$_{3}$	2.63$_{3}$	1.91$_{2}$	2.10$_{2}$	1.62$_{2}$								
3-5/8SSJ16	4.81	4.42$_{6}$	4.32$_{6}$	3.62$_{3}$	3.60$_{3}$	2.85$_{2}$	2.94$_{3}$	2.17$_{2}$	2.35$_{2}$							
3-5/8SJW16	6.20	6.12	5.80	5.14$_{3}$	4.98$_{6}$	4.16$_{3}$	4.11$_{3}$	3.27$_{2}$	3.35$_{2}$							
3-5/8SSC14	4.68	4.16$_{6}$	4.11	3.38$_{3}$	3.42$_{3}$	2.63$_{2}$	2.77$_{3}$	1.96$_{2}$	2.19$_{2}$							
3-5/8SSJ14	5.97	5.83	5.57	4.86$_{3}$	4.73$_{6}$	3.92$_{3}$	3.91$_{3}$	3.07$_{2}$	3.19$_{3}$	2.35$_{2}$						
3-5/8SJW14	7.68	7.68	7.15	6.83$_{6}$	6.51	5.64$_{3}$	5.43$_{3}$	4.54$_{3}$	4.49$_{3}$	3.60$_{2}$	3.02$_{2}$					
3-5/8SJW12	9.81	9.81	9.13	9.13	8.34	7.95$_{6}$	7.53	6.58$_{3}$	6.37$_{3}$	5.38$_{3}$	4.47$_{2}$	3.10$_{2}$				
4SSC20	1.52$_{6}$	1.01$_{3}$	1.19$_{3}$	.60$_{2}$	.86$_{3}$	.21$_{2}$	.54$_{2}$									
4SSJ20	1.97	1.44$_{3}$	1.61$_{3}$	.99$_{3}$	1.24$_{3}$	.56$_{2}$	.88$_{2}$									
4SSC18	2.35	1.78$_{6}$	1.96$_{6}$	1.29$_{3}$	1.56$_{3}$	.81$_{2}$	1.16$_{2}$	.78$_{2}$								
4SSJ18	3.10	2.52$_{6}$	2.67	1.98$_{3}$	2.22$_{3}$	1.44$_{2}$	1.77$_{3}$	.93$_{2}$	1.33$_{2}$							
4SJW18	3.96	3.37	3.49	2.77$_{3}$	2.98$_{6}$	2.17$_{3}$	2.47$_{3}$	1.58$_{2}$	1.97$_{2}$							
4SSC16	4.25	3.82	3.86	3.18$_{3}$	3.28$_{3}$	2.53$_{3}$	2.71$_{3}$	1.91$_{2}$	2.18$_{2}$							
4SSJ16	5.31	5.19	5.09	4.44$_{6}$	4.46$_{6}$	3.67$_{3}$	3.75$_{3}$	2.91$_{2}$	3.09$_{3}$	2.23$_{2}$						
4SJW16	6.80	6.80	6.49	6.15$_{6}$	6.05	5.20$_{3}$	5.18$_{3}$	4.27$_{3}$	4.33$_{3}$	3.40$_{2}$	2.92$_{2}$					
4SSC14	5.36	5.07	5.08	4.31$_{6}$	4.38$_{6}$	3.52$_{3}$	3.68$_{3}$	2.76$_{2}$	3.01$_{3}$	2.07$_{2}$	1.87$_{2}$					
4SSJ14	6.77	6.77	6.49	6.05	5.99	5.10$_{3}$	5.11$_{3}$	4.17$_{3}$	4.27$_{3}$	3.31$_{2}$	2.85$_{2}$					
4SJW14	8.60	8.60	8.21	8.21	7.75	7.12$_{6}$	6.98$_{6}$	5.97$_{3}$	5.91$_{3}$	4.88$_{3}$	4.09$_{2}$					
4SJW12	11.37	11.37	10.81	10.81	10.14	10.12	9.37	8.63$_{6}$	8.32$_{6}$	7.19$_{3}$	5.96$_{3}$	4.85$_{2}$	4.23$_{2}$			
5-1/2SSC20	2.07	1.71	1.86	1.41$_{6}$	1.63	1.08$_{3}$	1.37$_{3}$	.74$_{3}$	1.10$_{3}$	.39$_{2}$	.54$_{2}$					
5-1/2SSJ20	2.59	2.27	2.42	1.93	2.15	1.57$_{3}$	1.86$_{6}$	1.19$_{3}$	1.55$_{3}$	.80$_{2}$	.92$_{2}$					
5-1/2SSC18	2.87	2.61	2.77	2.28	2.51	1.91$_{6}$	2.22	1.52$_{3}$	1.91$_{3}$	1.11$_{3}$	1.25$_{2}$	.59$_{2}$				
5-1/2SSJ18	3.67	3.60	3.64	3.21	3.43	2.79	3.08	2.33$_{3}$	2.71$_{6}$	1.86$_{3}$	1.93$_{3}$	.94$_{2}$	1.18			
5-1/2SSC16	4.50	4.50	4.50	4.48	4.50	4.09	4.38	3.66$_{6}$	4.04$_{6}$	3.20$_{3}$	3.25$_{3}$	2.22$_{2}$	2.28$_{2}$			
5-1/2SSJ16	6.32	6.32	6.24	6.24	6.15	6.05	6.03	5.44$_{6}$	5.70	4.79$_{3}$	4.52$_{3}$	3.45$_{2}$	3.34$_{2}$			
5-1/2SSC14	5.32	5.32	5.32	5.32	5.32	5.13	5.32	4.67	5.06	4.17$_{3}$	4.22$_{3}$	3.11$_{2}$	3.27$_{2}$	2.21$_{2}$		
5-1/2SSJ14	8.07	8.07	8.07	8.07	7.97	7.97	7.82	7.51	7.63	6.72$_{6}$	6.30$_{6}$	5.07$_{3}$	4.80$_{3}$	3.51$_{2}$	3.46$_{2}$	
6SSC20	2.10	1.83	1.96	1.56	1.76	1.27$_{6}$	1.53$_{6}$	.96$_{3}$	1.29$_{3}$	.64$_{3}$	.78$_{2}$					
6SSJ20	2.61	2.43	2.58	2.14	2.34	1.82$_{6}$	2.08	1.46$_{3}$	1.80$_{6}$	1.10$_{3}$	1.21$_{3}$	.36$_{2}$	.62$_{2}$			
6SSC18	2.85	2.74	2.85	2.45	2.66	2.13	2.41	1.78$_{6}$	2.14$_{6}$	1.40$_{3}$	1.54$_{3}$	.63$_{2}$	.92$_{2}$			
6SSJ18	3.69	3.69	3.69	3.46	3.68	3.10	3.37	2.69$_{6}$	3.04	2.25$_{3}$	2.32$_{3}$	1.35$_{2}$	1.58$_{2}$			
6SJW18	4.48	4.48	4.45	4.44	4.42	4.04	4.31	3.60	3.95	3.12$_{6}$	3.14$_{3}$	2.13$_{3}$	2.31$_{3}$	1.17$_{2}$	1.53$_{2}$	
6SSC16	4.42	4.42	4.42	4.42	4.42	4.28	4.42	3.91	4.25	3.51$_{3}$	3.58$_{3}$	2.63$_{3}$	2.84$_{3}$	1.73$_{2}$	1.97$_{2}$	
6SSJ16	6.31	6.31	6.31	6.31	6.31	6.31	6.27	6.01	6.16	5.43$_{6}$	5.22$_{6}$	4.17$_{3}$	4.09$_{3}$	2.92$_{2}$	3.00$_{2}$	
6SJW16	8.28	8.28	8.18	8.18	8.07	8.07	7.92	7.92	7.75	7.42	7.03	5.92$_{3}$	5.65$_{3}$	4.42$_{2}$	4.33$_{2}$	
6SSC14	5.23	5.23	5.23	5.23	5.23	5.23	5.23	4.91	5.23	4.49$_{6}$	4.55$_{6}$	3.54$_{3}$	3.75$_{3}$	2.55$_{2}$	2.91$_{2}$	
6SSJ14	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.05	8.01	7.54	7.22	6.02$_{3}$	5.80$_{3}$	4.46$_{2}$	4.41$_{2}$	
6SJW14	10.69	10.69	10.57	10.57	10.42	10.42	10.24	10.24	10.03	10.03	9.47	8.37$_{3}$	7.90$_{3}$	6.50$_{3}$	6.21$_{3}$	4.77$_{2}$
6SJW12	15.49	15.49	15.34	15.34	15.14	15.14	14.90	14.90	14.60	14.60	13.81	13.20	12.30	10.57$_{3}$	9.87$_{3}$	8.08$_{3}$
8SSJ18	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.42	3.62	3.14	3.25	2.51$_{6}$	2.74$_{6}$	1.82$_{3}$	2.18$_{3}$	1.09$_{2}$
8SJW18	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.25	4.32	3.53	3.71	2.73$_{3}$	3.04$_{3}$	1.88$_{2}$
8SSJ16	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	5.74	5.93	4.95$_{3}$	5.26$_{3}$	4.07$_{3}$
8SJW16	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.33	8.33	8.08	7.23$_{6}$	7.25$_{6}$	5.97$_{3}$
8SSJ14	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	6.88$_{6}$	7.20$_{6}$	5.88$_{3}$
8SJW14	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.81	10.81	10.48	10.10	10.01	8.59$_{3}$
8SSJ12	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	9.78	10.11	8.64$_{6}$
8SJW12	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.41	15.41	14.80	13.86

SECTION	BRIDGING AT MID-HEIGHT			
	9FT		10FT	
	16"	24"	16"	24"
3-1/2SSC20	.71$_{3}$	.15$_{2}$	.30$_{2}$	
3-1/2SSJ20	1.08$_{3}$	.49$_{2}$	.63$_{2}$	
3-1/2SSC18	1.30$_{3}$	.65$_{2}$	.75$_{2}$	
3-1/2SSJ18	1.93$_{3}$	1.26$_{2}$	1.32$_{3}$	.63$_{2}$
3-1/2SSC16	2.52$_{3}$	1.91$_{3}$	1.72$_{3}$	1.10$_{2}$
3-1/2SSJ16	3.51$_{6}$	2.89$_{3}$	2.56$_{3}$	1.94$_{2}$
3-1/2SSC14	3.26$_{6}$	2.60$_{3}$	2.33$_{3}$	1.63$_{2}$
3-1/2SSJ14	4.53	3.87$_{3}$	3.41$_{3}$	2.74$_{3}$
3-5/8SSC20	.80$_{3}$	.23$_{2}$	.37$_{2}$	
3-5/8SSJ20	1.18$_{3}$	.59$_{2}$	.73$_{2}$	
3-5/8SSC18	1.42$_{3}$	.77$_{2}$	.86$_{3}$	.19$_{2}$
3-5/8SSJ18	2.08$_{3}$	1.40$_{3}$	1.46$_{3}$	.76$_{2}$
3-5/8SJW18	2.83$_{6}$	2.12$_{3}$	2.15$_{3}$	1.41$_{2}$
3-5/8SSC16	2.74$_{6}$	2.12$_{3}$	1.90$_{3}$	1.25$_{2}$
3-5/8SSJ16	3.79$_{6}$	3.16$_{3}$	2.81$_{3}$	2.17$_{2}$
3-5/8SJW16	5.21	4.64$_{3}$	4.09$_{6}$	3.40$_{3}$
3-5/8SSC14	3.53	2.85$_{3}$	2.55$_{3}$	1.83$_{2}$
3-5/8SSJ14	4.87	4.24$_{3}$	3.72$_{6}$	3.03$_{3}$
3-5/8SJW14	6.37	6.12$_{6}$	5.22	4.56$_{3}$
3-5/8SJW12	8.20	8.20	6.85	6.57$_{6}$
4SSC20	1.04$_{3}$	.48$_{2}$	.59$_{3}$	
4SSJ20	1.48$_{3}$	.89$_{3}$	1.00$_{3}$	.38$_{2}$
4SSC18	1.75$_{6}$	1.11$_{3}$	1.17$_{3}$	.48$_{2}$
4SSJ18	2.48	1.81$_{3}$	1.86$_{3}$	1.14$_{2}$
4SJW18	3.30	2.61$_{3}$	2.64$_{6}$	1.89$_{3}$
4SSC16	3.28	2.66$_{3}$	2.38$_{3}$	1.70$_{3}$
4SSJ16	4.53	3.91$_{6}$	3.47$_{6}$	2.79$_{3}$
4SJW16	5.95	5.65$_{6}$	5.01	4.29$_{3}$
4SSC14	4.27	3.57$_{6}$	3.03$_{6}$	2.31$_{3}$
4SSJ14	5.80	5.37	4.70	3.94$_{3}$
4SJW14	7.52	7.52	6.35	5.87$_{6}$
4SJW12	9.86	9.86	8.31	8.31
5-1/2SSC20	1.65	1.22$_{6}$	1.22	.73$_{3}$
5-1/2SSJ20	2.28	1.81	1.86	1.31$_{3}$
5-1/2SSC18	2.47	2.00	1.90	1.37$_{6}$
5-1/2SSJ18	3.47	3.01	3.00	2.39
5-1/2SSC16	3.73	3.63	3.11	2.62
5-1/2SSJ16	5.75	5.75	5.08	4.85
5-1/2SSC14	4.38	4.38	3.67	3.28
5-1/2SSJ14	7.25	7.25	6.32	6.32
6SSC20	1.74	1.36	1.32	.88$_{6}$
6SSJ20	2.43	2.00	2.03	1.53$_{6}$
6SSC18	2.57	2.15	2.01	1.54
6SSJ18	3.48	3.23	3.18	2.63
6SJW18	4.32	4.29	4.12	3.71
6SSC16	3.65	3.65	3.07	2.75
6SSJ16	5.71	5.71	5.02	5.02
6SJW16	7.77	7.77	7.21	7.21
6SSC14	4.31	4.31	3.63	3.42
6SSJ14	7.20	7.20	6.24	6.24
6SJW14	10.03	10.03	9.31	9.31
6SJW12	14.53	14.53	13.49	13.49
8SSJ18	3.40	3.40	3.14	3.10
8SJW18	4.42	4.42	4.24	4.24
8SSJ16	5.42	5.42	4.65	4.65
8SJW16	8.03	8.03	7.51	7.51
8SSJ14	6.81	6.81	5.77	5.77
8SJW14	10.31	10.31	9.60	9.60
8SSJ12	8.44	8.44	7.11	7.11
8SJW12	14.54	14.54	13.31	13.31

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 15 for Notes and Definitions of Symbols

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOADS

Braced Studs Subjected to Lateral Load

P_{allow}, KIPS (1,000 Lbs) Per STUD

25 PSF

BRIDGING SPACED 48" O.C.

SECTION	8FT 16"	8FT 24"	9FT 16"	9FT 24"	10FT 16"	10FT 24"	11FT 16"	11FT 24"	12FT 16"	12FT 24"	14FT 16"	14FT 24"	16FT 16"	16FT 24"	18FT 16"	18FT 24"
3-1/2SSC20	.91$_{3}$	.29$_{2}$	.53$_{2}$													
3-1/2SSJ20	1.30$_{3}$	.64$_{2}$	.88$_{2}$	.48$_{2}$												
3-1/2SSC18	1.60$_{3}$	.89$_{2}$	1.13$_{3}$	.35$_{2}$	.69$_{2}$											
3-1/2SSJ18	2.27$_{6}$	1.53$_{3}$	1.75$_{3}$	.92$_{2}$	1.24$_{2}$											
3-1/2SSC16	3.24$_{6}$	2.55$_{3}$	2.63$_{3}$	1.86$_{2}$	2.03$_{2}$	1.50$_{2}$										
3-1/2SSJ16	4.42	3.70$_{3}$	3.66$_{3}$	2.86$_{2}$	2.93$_{3}$	2.09$_{2}$	2.27$_{2}$									
3-1/2SSC14	4.13	3.39$_{3}$	3.41$_{3}$	2.58$_{3}$	2.72$_{3}$	1.84$_{2}$	2.09$_{2}$									
3-1/2SSJ14	5.61	4.93$_{6}$	4.78$_{6}$	3.93$_{3}$	3.91$_{3}$	3.00$_{2}$	3.12$_{2}$	2.45$_{2}$								
3-5/8SSC20	1.00$_{3}$	.38$_{2}$	.62$_{2}$													
3-5/8SSJ20	1.41$_{3}$	.75$_{2}$	.99$_{2}$	.58$_{2}$												
3-5/8SSC18	1.72$_{3}$	1.02$_{3}$	1.26$_{3}$	.47$_{2}$	.82$_{2}$											
3-5/8SSJ18	2.42$_{6}$	1.69$_{3}$	1.90$_{3}$	1.07$_{2}$	1.39$_{2}$	.92$_{2}$										
3-5/8SJW18	3.21	2.45$_{3}$	2.64$_{3}$	1.77$_{3}$	2.06$_{3}$	1.11$_{2}$	1.51$_{2}$									
3-5/8SSC16	3.48$_{6}$	2.78$_{3}$	2.86$_{3}$	2.07$_{2}$	2.26$_{3}$	1.42$_{2}$	1.71$_{2}$									
3-5/8SSJ16	4.72	3.99$_{3}$	3.96$_{3}$	3.14$_{3}$	3.21$_{3}$	2.35$_{2}$	2.54$_{2}$	1.95$_{2}$								
3-5/8SJW16	6.20	5.65$_{6}$	5.51$_{6}$	4.61$_{3}$	4.56$_{3}$	3.61$_{2}$	3.68$_{3}$	2.71$_{2}$	2.92$_{2}$							
3-5/8SSC14	4.47	3.71$_{3}$	3.73$_{3}$	2.88$_{3}$	3.01$_{3}$	2.10$_{2}$	2.35$_{2}$	1.77$_{2}$								
3-5/8SSJ14	5.97	5.37$_{6}$	5.23$_{6}$	4.34$_{3}$	4.31$_{3}$	3.37$_{2}$	3.48$_{3}$	2.51$_{2}$	2.75$_{2}$							
3-5/8SJW14	7.68	7.53	7.15	6.28$_{3}$	6.06$_{6}$	5.05$_{3}$	4.97$_{3}$	3.94$_{2}$	4.03$_{2}$							
3-5/8SJW12	9.81	9.81	9.13	8.84	8.34	7.32$_{3}$	7.05$_{3}$	5.92$_{3}$	5.86$_{3}$	4.73$_{2}$	3.97$_{2}$					
4SSC20	1.26$_{3}$	.66$_{3}$	.89$_{3}$	.20$_{2}$	.52$_{2}$											
4SSJ20	1.70$_{6}$	1.07$_{3}$	1.29$_{3}$	.57$_{2}$	.89$_{2}$	.50$_{2}$										
4SSC18	2.06	1.38$_{3}$	1.62$_{3}$	.83$_{2}$	1.17$_{3}$	.30$_{2}$	.74$_{2}$									
4SSJ18	2.81	2.11$_{3}$	2.32$_{3}$	1.51$_{3}$	1.82$_{3}$	.92$_{2}$	1.33$_{2}$	.88$_{2}$								
4SJW18	3.66	2.94$_{6}$	3.12$_{6}$	2.27$_{3}$	2.56$_{3}$	1.61$_{2}$	2.01$_{3}$	.99$_{2}$	1.49$_{2}$							
4SSC16	4.10	3.41$_{3}$	3.51$_{6}$	2.70$_{3}$	2.89$_{3}$	2.01$_{2}$	2.30$_{2}$	1.75$_{2}$								
4SSJ16	5.31	4.77$_{6}$	4.78	3.95$_{3}$	4.05$_{3}$	3.12$_{2}$	3.32$_{3}$	2.35$_{2}$	2.64$_{2}$							
4SJW16	6.80	6.61	6.49	5.62$_{3}$	5.61$_{6}$	4.61$_{3}$	4.71$_{3}$	3.65$_{2}$	3.85$_{2}$							
4SSC14	5.36	4.61$_{6}$	4.69	3.77$_{3}$	3.94$_{3}$	2.93$_{3}$	3.21$_{3}$	2.15$_{2}$	2.52$_{2}$							
4SSJ14	6.77	6.49	6.44	5.50$_{3}$	5.54$_{6}$	4.50$_{3}$	4.62$_{3}$	3.53$_{2}$	3.77$_{3}$	2.66$_{2}$						
4SJW14	8.60	8.60	8.21	7.70$_{6}$	7.58	6.48$_{3}$	6.46$_{3}$	5.30$_{3}$	5.38$_{3}$	4.20$_{2}$	3.57$_{2}$					
4SJW12	11.37	11.37	10.81	10.81	10.14	9.42$_{6}$	9.16	7.88$_{3}$	7.73$_{3}$	6.43$_{3}$	5.38$_{3}$	4.11$_{2}$	3.68$_{2}$			
5-1/2SSC20	1.89	1.44	1.63	1.08$_{3}$	1.35$_{6}$	.69$_{3}$	1.05$_{3}$	.30$_{2}$	.74$_{2}$							
5-1/2SSJ20	2.46	1.99	2.17	1.59$_{6}$	1.85$_{6}$	1.16$_{3}$	1.52$_{3}$	.72$_{2}$	1.16$_{3}$	.28$_{2}$	.47$_{2}$					
5-1/2SSC18	2.81	2.32	2.52	1.92	2.21	1.48$_{3}$	1.86$_{3}$	1.02$_{3}$	1.50$_{3}$	.55$_{2}$	.76$_{2}$					
5-1/2SSJ18	3.67	3.29	3.47	2.83	3.10	2.33$_{3}$	2.70$_{6}$	1.80$_{3}$	2.28$_{3}$	1.27$_{2}$	1.42$_{2}$					
5-1/2SSC16	4.50	4.50	4.50	4.13	4.39	3.66$_{6}$	4.02	3.15$_{3}$	3.61$_{3}$	2.62$_{3}$	2.72$_{2}$					
5-1/2SSJ16	6.32	6.32	6.24	6.19	6.15	5.56	5.83	4.87$_{3}$	5.23$_{6}$	4.15$_{3}$	3.97$_{3}$	2.73$_{2}$	2.76$_{2}$			
5-1/2SSC14	5.32	5.32	5.32	5.16	5.32	4.67	5.04	4.13$_{3}$	4.61$_{6}$	3.55$_{3}$	3.65$_{3}$	2.35$_{2}$	2.62$_{2}$			
5-1/2SSJ14	8.07	8.07	8.07	8.07	7.97	7.68	7.82	6.87$_{6}$	7.23	6.00$_{3}$	5.66$_{3}$	4.25$_{2}$	4.13$_{2}$			
6SSC20	1.99	1.59	1.76	1.27$_{6}$	1.51	.92$_{3}$	1.24$_{3}$	.55$_{3}$	.96$_{3}$	.18$_{2}$	.37$_{2}$					
6SSJ20	2.60	2.18	2.36	1.83	2.08	1.44$_{3}$	1.77$_{6}$	1.02$_{3}$	1.44$_{3}$	.60$_{2}$	.77$_{2}$					
6SSC18	2.85	2.49	2.67	2.13	2.39	1.74$_{6}$	2.09	1.32$_{3}$	1.76$_{3}$	.89$_{3}$	1.07$_{2}$					
6SSJ18	3.69	3.50	3.69	3.11	3.39	2.68	3.03	2.19$_{3}$	2.64$_{6}$	1.69$_{3}$	1.82$_{3}$	.68$_{2}$	1.02$_{2}$			
6SJW18	4.48	4.48	4.45	4.08	4.34	3.61	3.95	3.09$_{6}$	3.53	2.54$_{3}$	2.62$_{3}$	1.43$_{2}$	1.72$_{2}$			
6SSC16	4.42	4.42	4.42	4.30	4.42	3.90	4.22	3.45$_{6}$	3.87$_{6}$	2.98$_{3}$	3.09$_{3}$	1.98$_{2}$	2.27$_{2}$			
6SSJ16	6.31	6.31	6.31	6.31	6.31	6.06	6.27	5.48$_{6}$	5.85	4.82$_{3}$	4.68$_{3}$	3.45$_{2}$	3.49$_{2}$			
6SJW16	8.28	8.28	8.18	8.18	8.07	8.07	7.92	7.56	7.75	6.78$_{6}$	6.46$_{3}$	5.15$_{3}$	5.01$_{3}$	3.59$_{2}$	3.67$_{2}$	
6SSC14	5.23	5.23	5.23	5.23	5.23	4.90	5.23	4.44	4.87	3.93$_{3}$	4.04$_{3}$	2.84$_{2}$	3.13$_{2}$	2.22$_{2}$		
6SSJ14	8.05	8.05	8.05	8.05	8.05	8.05	8.05	7.56	8.01	6.86$_{6}$	6.60$_{6}$	5.19$_{3}$	5.10$_{3}$	3.56$_{2}$	3.70$_{2}$	
6SJW14	10.69	10.69	10.57	10.57	10.42	10.42	10.24	10.24	10.03	9.48	8.97$_{6}$	7.51$_{3}$	7.17$_{3}$	5.56$_{2}$	5.46$_{2}$	
6SJW12	15.49	15.49	15.34	15.34	15.14	15.14	14.90	14.90	14.60	14.60	13.81	12.15$_{6}$	11.40$_{6}$	9.41$_{3}$	8.94$_{3}$	6.91$_{2}$
8SSJ18	3.62	3.62	3.62	3.62	3.62	3.39	3.62	3.08	3.41	2.74	2.88	1.98$_{3}$	2.27$_{3}$	1.16$_{2}$	1.62$_{3}$	.33$_{2}$
8SJW18	4.56	4.56	4.56	4.56	4.56	4.53	4.56	4.19	4.55	3.82	3.92	2.96$_{6}$	3.21$_{6}$	2.03$_{3}$	2.45$_{3}$	1.08$_{2}$
8SSJ16	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.01	6.10	5.19$_{6}$	5.43$_{6}$	4.25$_{3}$	4.65$_{3}$	3.24$_{2}$
8SJW16	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.33	7.76	7.76	6.45$_{3}$	6.59$_{3}$	5.09$_{3}$
8SSJ14	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.16	7.40	6.11$_{3}$	6.52$_{3}$	4.96$_{3}$
8SJW14	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.81	10.78	10.48	9.25$_{6}$	9.28$_{6}$	7.60$_{3}$
8SSJ12	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.11	10.15	8.93$_{6}$	9.36	7.61$_{3}$
8SJW12	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.41	14.87	14.71	12.64$_{3}$

0BRIDGING AT MID-HEIGHT

SECTION	9FT 16"	9FT 24"	10FT 16"	10FT 24"
3-1/2SSC20	.42$_{2}$			
3-1/2SSJ20	.78$_{2}$	.32$_{2}$		
3-1/2SSC18	.96$_{3}$	.22$_{2}$	.41$_{2}$	
3-1/2SSJ18	1.58$_{3}$	.80$_{2}$	.96$_{2}$	
3-1/2SSC16	2.21$_{3}$	1.50$_{2}$	1.40$_{2}$	
3-1/2SSJ16	3.19$_{3}$	2.46$_{2}$	2.24$_{3}$	1.52$_{2}$
3-1/2SSC14	2.92$_{3}$	2.14$_{3}$	1.97$_{3}$	1.15$_{2}$
3-1/2SSJ14	4.19$_{6}$	3.41$_{3}$	3.06$_{3}$	2.28$_{2}$
3-5/8SSC20	.50$_{2}$			
3-5/8SSJ20	.88$_{2}$	.41$_{2}$		
3-5/8SSC18	1.08$_{3}$	.33$_{2}$	.51$_{2}$	
3-5/8SSJ18	1.73$_{3}$	.94$_{2}$	1.10$_{2}$	
3-5/8SJW18	2.47$_{3}$	1.64$_{3}$	1.77$_{3}$	.91$_{2}$
3-5/8SSC16	2.42$_{3}$	1.69$_{2}$	1.56$_{3}$	.81$_{2}$
3-5/8SSJ16	3.47$_{3}$	2.72$_{3}$	2.48$_{3}$	1.72$_{2}$
3-5/8SJW16	4.98$_{6}$	4.16$_{3}$	3.74$_{3}$	2.93$_{2}$
3-5/8SSC14	3.19$_{3}$	2.38$_{3}$	2.18$_{3}$	1.33$_{2}$
3-5/8SSJ14	4.57$_{6}$	3.77$_{3}$	3.36$_{3}$	2.55$_{2}$
3-5/8SJW14	6.37	5.62$_{3}$	4.90$_{6}$	4.06$_{3}$
3-5/8SJW12	8.20	7.96	6.85	6.03$_{3}$
4SSC20	.75$_{3}$	.09$_{2}$	.28$_{2}$	
4SSJ20	1.17$_{3}$	.48$_{2}$	.68$_{2}$	
4SSC18	1.42$_{3}$	.66$_{2}$	.81$_{3}$	
4SSJ18	2.14$_{3}$	1.35$_{3}$	1.49$_{3}$	.65$_{2}$
4SJW18	2.95$_{6}$	2.13$_{3}$	2.25$_{3}$	1.37$_{2}$
4SSC16	2.96$_{6}$	2.22$_{3}$	2.03$_{3}$	1.23$_{2}$
4SSJ16	4.23	3.46$_{3}$	3.12$_{3}$	2.32$_{2}$
4SJW16	5.95	5.15$_{3}$	4.64$_{6}$	3.79$_{3}$
4SSC14	3.91	3.08$_{3}$	2.66$_{3}$	1.80$_{3}$
4SSJ14	5.72	4.86$_{3}$	4.31$_{6}$	3.42$_{3}$
4SJW14	7.52	7.05$_{6}$	6.25	5.32$_{3}$
4SJW12	9.86	9.86	8.31	7.74$_{6}$
5-1/2SSC20	1.43	.91$_{3}$	.97$_{6}$	.37$_{3}$
5-1/2SSJ20	2.04	1.47$_{6}$	1.58$_{6}$	.92$_{3}$
5-1/2SSC18	2.23	1.65	1.63	.98$_{3}$
5-1/2SSJ18	3.27	2.63	2.69	1.95$_{3}$
5-1/2SSC16	3.73	3.31	2.86	2.26$_{6}$
5-1/2SSJ16	5.75	5.62	5.08	4.40
5-1/2SSC14	4.38	4.12	3.54	2.90
5-1/2SSJ14	7.25	7.25	6.32	5.91
6SSC20	1.55	1.08$_{6}$	1.10	.57$_{3}$
6SSJ20	2.21	1.69	1.78	1.17$_{3}$
6SSC18	2.36	1.85	1.77	1.19$_{6}$
6SSJ18	3.46	2.89	2.90	2.23
6SJW18	4.32	3.93	3.99	3.29
6SSC16	3.65	3.44	2.97	2.43
6SSJ16	5.71	5.71	5.02	4.65
6SJW16	7.77	7.77	7.21	7.21
6SSC14	4.31	4.26	3.63	3.08
6SSJ14	7.20	7.20	6.24	6.16
6SJW14	10.03	10.03	9.31	9.31
6SJW12	14.53	14.53	13.49	13.49
8SSJ18	3.40	3.40	3.14	2.84
8SJW18	4.42	4.42	4.24	4.16
8SSJ16	5.42	5.42	4.65	4.65
8SJW16	8.03	8.03	7.51	7.51
8SSJ14	6.81	6.81	5.77	5.77
8SJW14	10.31	10.31	9.60	9.60
8SSJ12	8.44	8.44	7.11	7.11
8SJW12	14.54	14.54	13.31	13.31

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 15 for Notes and Definitions of Symbols

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOADS

Braced Studs Subjected to Lateral Load

P_{allow}, KIPS (1,000 Lbs) Per STUD

30 PSF

SECTION	BRIDGING SPACED 48" O.C.																BRIDGING AT MID-HEIGHT				
	8FT		9FT		10FT		11FT		12FT		14FT		16FT		18FT		SECTION	9FT		10FT	
	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"		16"	24"	16"	24"
3-1/2SSC20	.65$_{2}$	.25$_{2}$															3-1/2SSC20	.15$_{2}$			
3-1/2SSJ20	1.03$_{3}$	.28$_{2}$	.57$_{2}$														3-1/2SSJ20	.49$_{2}$			
3-1/2SSC18	1.31$_{3}$	.50$_{2}$	.81$_{2}$														3-1/2SSC18	.65$_{2}$			
3-1/2SSJ18	1.97$_{3}$	1.13$_{2}$	1.40$_{2}$	.88$_{2}$													3-1/2SSJ18	1.26$_{2}$	.63$_{2}$		
3-1/2SSC16	2.96$_{3}$	2.17$_{3}$	2.31$_{3}$	1.44$_{2}$	1.70$_{2}$												3-1/2SSC16	1.91$_{3}$	1.10$_{2}$	1.10$_{2}$	
3-1/2SSJ16	4.13$_{6}$	3.29$_{3}$	3.33$_{3}$	2.42$_{2}$	2.58$_{2}$	1.92$_{2}$											3-1/2SSJ16	2.89$_{3}$	2.06$_{2}$	1.94$_{2}$	
3-1/2SSC14	3.83$_{6}$	2.97$_{3}$	3.06$_{3}$	2.12$_{2}$	2.35$_{2}$	1.71$_{2}$											3-1/2SSC14	2.60$_{3}$	1.71$_{2}$	1.63$_{2}$	
3-1/2SSJ14	5.39	4.50$_{3}$	4.43$_{3}$	3.45$_{2}$	3.53$_{3}$	2.51$_{2}$	2.74$_{2}$										3-1/2SSJ14	3.87$_{3}$	2.98$_{2}$	2.74$_{3}$	1.84$_{2}$
3-5/8SSC20	.75$_{3}$	.34$_{2}$															3-5/8SSC20	.23$_{2}$			
3-5/8SSJ20	1.14$_{3}$	.39$_{2}$	.68$_{2}$														3-5/8SSJ20	.59$_{2}$			
3-5/8SSC18	1.43$_{3}$	.63$_{2}$	.93$_{2}$	.46$_{2}$													3-5/8SSC18	.77$_{2}$	.19$_{2}$		
3-5/8SSJ18	2.12$_{3}$	1.28$_{3}$	1.56$_{3}$	.62$_{2}$	1.02$_{2}$												3-5/8SSJ18	1.40$_{3}$	.50$_{2}$	.76$_{2}$	
3-5/8SJW18	2.90$_{6}$	2.03$_{3}$	2.28$_{3}$	1.29$_{2}$	1.67$_{2}$	1.10$_{2}$											3-5/8SJW18	2.12$_{3}$	1.18$_{2}$	1.41$_{2}$	
3-5/8SSC16	3.19$_{3}$	2.39$_{3}$	2.53$_{3}$	1.64$_{2}$	1.91$_{2}$												3-5/8SSC16	2.12$_{3}$	1.29$_{2}$	1.25$_{2}$	
3-5/8SSJ16	4.42$_{6}$	3.58$_{3}$	3.62$_{3}$	2.69$_{2}$	2.85$_{2}$	2.17$_{2}$											3-5/8SSJ16	3.16$_{3}$	2.30$_{2}$	2.17$_{2}$	
3-5/8SJW16	6.12	5.21$_{3}$	5.14$_{3}$	4.12$_{3}$	4.16$_{3}$	3.09$_{2}$	3.27$_{2}$										3-5/8SJW16	4.64$_{3}$	3.71$_{3}$	3.40$_{3}$	2.49$_{2}$
3-5/8SSC14	4.16$_{6}$	3.29$_{3}$	3.38$_{3}$	2.40$_{2}$	2.63$_{2}$	1.96$_{2}$											3-5/8SSC14	2.85$_{3}$	1.94$_{2}$	1.83$_{2}$	
3-5/8SSJ14	5.83	4.92$_{3}$	4.86$_{3}$	3.85$_{3}$	3.92$_{3}$	2.85$_{2}$	3.07$_{2}$	2.35$_{2}$									3-5/8SSJ14	4.24$_{3}$	3.32$_{3}$	3.03$_{3}$	2.10$_{2}$
3-5/8SJW14	7.68	7.06$_{6}$	6.83$_{6}$	5.75$_{3}$	5.64$_{3}$	4.49$_{2}$	4.54$_{3}$	3.38$_{2}$	3.60$_{2}$								3-5/8SJW14	6.12$_{6}$	5.14$_{3}$	4.56$_{3}$	3.59$_{2}$
3-5/8SJW12	9.81	9.81	9.13	8.28$_{6}$	7.95$_{6}$	6.72$_{3}$	6.58$_{3}$	5.31$_{2}$	5.38$_{3}$	4.12$_{2}$							3-5/8SJW12	8.20	7.45$_{6}$	6.57$_{6}$	5.51$_{3}$
4SSC20	1.01$_{3}$	.32$_{2}$	.60$_{2}$	.21$_{2}$													4SSC20	.48$_{2}$			
4SSJ20	1.44$_{3}$	.71$_{2}$	.99$_{3}$	.16$_{2}$	.56$_{2}$												4SSJ20	.89$_{3}$	.09$_{2}$	.38$_{2}$	
4SSC18	1.78$_{6}$	1.00$_{3}$	1.29$_{3}$	.40$_{2}$	.81$_{2}$												4SSC18	1.11$_{3}$	.24$_{2}$	.48$_{2}$	
4SSJ18	2.52$_{6}$	1.72$_{3}$	1.98$_{3}$	1.05$_{2}$	1.44$_{2}$	.93$_{2}$											4SSJ18	1.81$_{3}$	.91$_{2}$	1.14$_{2}$	
4SJW18	3.37	2.53$_{3}$	2.77$_{3}$	1.80$_{3}$	2.17$_{3}$	1.09$_{2}$	1.58$_{2}$										4SJW18	2.61$_{3}$	1.67$_{3}$	1.89$_{3}$	.89$_{2}$
4SSC16	3.82	3.02$_{3}$	3.18$_{3}$	2.25$_{2}$	2.53$_{3}$	1.52$_{2}$	1.91$_{2}$										4SSC16	2.66$_{3}$	1.80$_{2}$	1.70$_{3}$	.79$_{2}$
4SSJ16	5.19	4.36$_{3}$	4.44$_{6}$	3.48$_{3}$	3.67$_{3}$	2.62$_{2}$	2.91$_{2}$	2.23$_{2}$									4SSJ16	3.91$_{6}$	3.02$_{3}$	2.79$_{3}$	1.88$_{2}$
4SJW16	6.80	6.17$_{6}$	6.15$_{6}$	5.11$_{3}$	5.20$_{3}$	4.06$_{2}$	4.27$_{3}$	3.09$_{2}$	3.40$_{2}$								4SJW16	5.65$_{6}$	4.68$_{3}$	4.29$_{3}$	3.32$_{2}$
4SSC14	5.07	4.17$_{3}$	4.31$_{6}$	3.26$_{3}$	3.52$_{3}$	2.38$_{2}$	2.76$_{2}$	2.07$_{2}$									4SSC14	3.57$_{6}$	2.61$_{3}$	2.31$_{3}$	1.33$_{2}$
4SSJ14	6.77	6.03$_{6}$	6.05	4.98$_{3}$	5.10$_{3}$	3.93$_{2}$	4.17$_{3}$	2.94$_{2}$	3.31$_{2}$								4SSJ14	5.37	4.38$_{3}$	3.94$_{3}$	2.92$_{2}$
4SJW14	8.60	8.40	8.21	7.15$_{3}$	7.12$_{6}$	5.88$_{3}$	5.97$_{3}$	4.67$_{2}$	4.88$_{3}$	3.57$_{2}$							4SJW14	7.52	6.54$_{3}$	5.87$_{6}$	4.80$_{3}$
4SJW12	11.37	11.37	10.81	10.37	10.12	8.76$_{3}$	8.63$_{6}$	7.18$_{3}$	7.19$_{3}$	5.72$_{2}$	4.85$_{2}$						4SJW12	9.86	9.46	8.31	7.18$_{3}$
5-1/2SSC20	1.71	1.18$_{6}$	1.41$_{6}$	.76$_{3}$	1.08$_{3}$	.32$_{2}$	.74$_{3}$	.39$_{2}$									5-1/2SSC20	1.22$_{6}$	.60$_{3}$	.73$_{3}$	
5-1/2SSJ20	2.27	1.71	1.93	1.25$_{3}$	1.57$_{3}$	.76$_{3}$	1.19$_{3}$	.27$_{2}$	.80$_{2}$								5-1/2SSJ20	1.81	1.13$_{3}$	1.31$_{3}$	.54$_{3}$
5-1/2SSC18	2.61	2.04	2.28	1.57$_{6}$	1.91$_{6}$	1.06$_{3}$	1.52$_{3}$	.54$_{2}$	1.11$_{3}$								5-1/2SSC18	2.00	1.32$_{6}$	1.37$_{6}$	.61$_{3}$
5-1/2SSJ18	3.60	2.98	3.21	2.45$_{6}$	2.79	1.88$_{3}$	2.33$_{3}$	1.30$_{3}$	1.86$_{3}$	.72$_{2}$	.94$_{2}$						5-1/2SSJ18	3.01	2.26$_{6}$	2.39	1.52$_{3}$
5-1/2SSC16	4.50	4.26	4.48	3.78	4.09	3.24$_{3}$	3.66$_{6}$	2.66$_{3}$	3.20$_{3}$	2.06$_{2}$	2.22$_{2}$						5-1/2SSC16	3.63	2.99	2.62	1.91$_{3}$
5-1/2SSJ16	6.32	6.32	6.24	5.80	6.05	5.08$_{6}$	5.44$_{6}$	4.32$_{3}$	4.79$_{3}$	3.55$_{2}$	3.45$_{2}$						5-1/2SSJ16	5.75	5.24	4.85	3.97$_{6}$
5-1/2SSC14	5.32	5.31	5.32	4.80	5.13	4.23$_{6}$	4.67	3.61$_{3}$	4.17$_{3}$	2.96$_{3}$	3.11$_{2}$						5-1/2SSC14	4.38	3.79	3.28	2.53$_{6}$
5-1/2SSJ14	8.07	8.07	8.07	7.97	7.97	7.15	7.51	6.25$_{3}$	6.72$_{6}$	5.31$_{3}$	5.07$_{3}$	3.48$_{2}$	3.51$_{2}$				5-1/2SSJ14	7.25	7.06	6.32	5.44
6SSC20	1.83	1.36	1.56	.99$_{3}$	1.27$_{6}$	.58$_{3}$	.96$_{3}$	.16$_{2}$	.64$_{3}$								6SSC20	1.36	.81$_{3}$	.88$_{6}$	.26$_{3}$
6SSJ20	2.43	1.93	2.14	1.51$_{6}$	1.82$_{6}$	1.07$_{3}$	1.46$_{3}$	.60$_{2}$	1.10$_{3}$	.13$_{2}$	.36$_{2}$						6SSJ20	2.00	1.39$_{6}$	1.53$_{6}$	.81$_{3}$
6SSC18	2.74	2.24	2.45	1.82	2.13	1.36$_{3}$	1.78$_{6}$	.88$_{3}$	1.40$_{3}$	.39$_{2}$	.63$_{2}$						6SSC18	2.15	1.55	1.54	.85$_{3}$
6SSJ18	3.69	3.23	3.46	2.77	3.10	2.26$_{6}$	2.69$_{6}$	1.71$_{3}$	2.25$_{3}$	1.15$_{2}$	1.35$_{2}$						6SSJ18	3.23	2.55	2.63	1.84$_{6}$
6SJW18	4.48	4.23	4.44	3.73	4.04	3.18$_{6}$	3.60	2.59$_{3}$	3.12$_{6}$	1.98$_{3}$	2.13$_{3}$	.78$_{2}$	1.17$_{2}$				6SJW18	4.29	3.59	3.71	2.88$_{6}$
6SSC16	4.42	4.41	4.42	3.99	4.28	3.52$_{6}$	3.91	3.01$_{3}$	3.51$_{3}$	2.47$_{3}$	2.63$_{3}$	1.36$_{2}$	1.73$_{2}$				6SSC16	3.65	3.17	2.75	2.12$_{6}$
6SSJ16	6.31	6.31	6.31	6.20	6.31	5.63	6.01	4.97$_{3}$	5.43$_{6}$	4.24$_{3}$	4.17$_{3}$	2.77$_{2}$	2.92$_{2}$				6SSJ16	5.71	5.51	5.02	4.26
6SJW16	8.28	8.28	8.18	8.18	8.07	7.83	7.92	7.02$_{6}$	7.42	6.17$_{3}$	5.92$_{3}$	4.43$_{2}$	4.42$_{2}$				6SJW16	7.77	7.77	7.21	6.89
6SSC14	5.23	5.23	5.23	5.01	5.23	4.51	4.91	3.98$_{6}$	4.49$_{6}$	3.40$_{3}$	3.54$_{3}$	2.18$_{2}$	2.55$_{2}$				6SSC14	4.31	3.97	3.42	2.75
6SSJ14	8.05	8.05	8.05	8.05	8.05	7.70	8.05	6.99$_{6}$	7.54	6.20$_{3}$	6.02$_{3}$	4.41$_{2}$	4.46$_{2}$				6SSJ14	7.20	7.20	6.24	5.75
6SJW14	10.69	10.69	10.57	10.57	10.42	10.42	10.24	9.81	10.03	8.81$_{6}$	8.37$_{3}$	6.70$_{3}$	6.50$_{3}$	4.69$_{2}$	4.77$_{2}$		6SJW14	10.03	10.03	9.31	9.31
6SJW12	15.49	15.49	15.34	15.34	15.14	15.14	14.90	14.90	14.60	14.00	13.20	11.16$_{3}$	10.57$_{3}$	8.34$_{2}$	8.08$_{3}$	5.84$_{2}$	6SJW12	14.53	14.53	13.49	13.49
8SSJ18	3.62	3.62	3.62	3.44	3.62	3.11	3.42	2.74	3.14	2.34$_{6}$	2.51$_{6}$	1.47$_{3}$	1.82$_{3}$	.54$_{2}$	1.09$_{2}$		8SSJ18	3.40	3.18	3.10	2.57
8SJW18	4.56	4.56	4.56	4.56	4.56	4.23	4.56	3.83	4.25	3.39	3.53	2.40$_{3}$	2.73$_{3}$	1.36$_{2}$	1.88$_{2}$		8SJW18	4.42	4.42	4.24	3.87
8SSJ16	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.04	6.10	5.61	5.74	4.65$_{3}$	4.95$_{3}$	3.58$_{3}$	4.07$_{3}$	2.46$_{2}$	8SSJ16	5.42	5.42	4.65	4.65
8SJW16	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.43	8.33	7.15$_{6}$	7.23$_{6}$	5.71$_{3}$	5.97$_{3}$	4.25$_{2}$	8SJW16	8.03	8.03	7.51	7.51
8SSJ14	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.64	7.76	6.58$_{6}$	6.88$_{6}$	5.37$_{3}$	5.88$_{3}$	4.09$_{2}$	8SSJ14	6.81	6.81	5.77	5.77
8SJW14	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.81	10.11	10.10	8.43$_{3}$	8.59$_{3}$	6.66$_{3}$	8SJW14	10.31	10.31	9.60	9.60
8SSJ12	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	9.47	9.78	8.12$_{3}$	8.64$_{6}$	6.63$_{3}$	8SSJ12	8.44	8.44	7.11	7.11
8SJW12	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.41	13.88$_{6}$	13.86	11.50$_{3}$	8SJW12	14.54	14.54	13.31	13.31

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 15 for Notes and Definitions of Symbols

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOADS

Braced Studs Subjected to Lateral Load

P_{allow}, KIPS (1,000 Lbs) Per STUD

35 PSF

SECTION	BRIDGING SPACED 48" O.C.															
	8FT		9FT		10FT		11FT		12FT		14FT		16FT		18FT	
	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"	16"	24"
3-1/2SSC20	.41$_{2}$															
3-1/2SSJ20	.77$_{2}$															
3-1/2SSC18	1.03$_{3}$	.13$_{2}$	.50$_{2}$													
3-1/2SSJ18	1.68$_{3}$	.74$_{2}$	1.08$_{2}$													
3-1/2SSC16	2.69$_{3}$	1.80$_{2}$	2.01$_{2}$													
3-1/2SSJ16	3.84$_{3}$	2.91$_{2}$	3.01$_{3}$	2.00$_{2}$	2.25$_{2}$											
3-1/2SSC14	3.53$_{3}$	2.57$_{3}$	2.74$_{3}$	1.69$_{2}$	2.00$_{2}$											
3-1/2SSJ14	5.08$_{6}$	4.09$_{3}$	4.09$_{3}$	3.00$_{2}$	3.17$_{2}$	2.38$_{2}$										
3-5/8SSC20	.50$_{2}$															
3-5/8SSJ20	.88$_{3}$	.39$_{2}$														
3-5/8SSC18	1.15$_{3}$	.25$_{2}$	.62$_{2}$													
3-5/8SSJ18	1.83$_{3}$	.89$_{2}$	1.23$_{2}$	.67$_{2}$												
3-5/8SJW18	2.60$_{3}$	1.62$_{3}$	1.93$_{3}$	.83$_{2}$	1.29$_{2}$											
3-5/8SSC16	2.91$_{3}$	2.01$_{2}$	2.22$_{2}$	1.58$_{2}$												
3-5/8SSJ16	4.13$_{3}$	3.19$_{3}$	3.30$_{3}$	2.26$_{2}$	2.51$_{2}$											
3-5/8SJW16	5.80$_{6}$	4.78$_{3}$	4.78$_{3}$	3.65$_{2}$	3.79$_{2}$	2.89$_{2}$										
3-5/8SSC14	3.86$_{6}$	2.87$_{3}$	3.04$_{3}$	1.95$_{2}$	2.27$_{2}$											
3-5/8SSJ14	5.52$_{6}$	4.50$_{3}$	4.51$_{3}$	3.38$_{2}$	3.55$_{3}$	2.37$_{2}$	2.69$_{2}$									
3-5/8SJW14	7.68	6.61$_{3}$	6.46$_{3}$	5.25$_{3}$	5.24$_{3}$	3.97$_{2}$	4.13$_{2}$	3.20$_{2}$								
3-5/8SJW12	9.81	9.37	9.03	7.74$_{3}$	7.52$_{3}$	6.15$_{3}$	6.14$_{3}$	4.74$_{2}$	4.94$_{2}$							
4SSC20	.77$_{3}$	.33$_{2}$														
4SSJ20	1.19$_{3}$	.37$_{2}$	.71$_{2}$													
4SSC18	1.52$_{3}$	.63$_{2}$	.98$_{3}$	.47$_{2}$												
4SSJ18	2.25$_{3}$	1.33$_{3}$	1.66$_{3}$	.62$_{2}$	1.09$_{2}$											
4SJW18	3.08$_{6}$	2.13$_{3}$	2.44$_{3}$	1.34$_{2}$	1.79$_{2}$	1.18$_{2}$										
4SSC16	3.54$_{6}$	2.64$_{3}$	2.86$_{3}$	1.83$_{2}$	2.18$_{2}$	1.54$_{2}$										
4SSJ16	4.91	3.97$_{3}$	4.11$_{3}$	3.03$_{2}$	3.30$_{3}$	2.14$_{2}$	2.53$_{2}$									
4SJW16	6.75	5.75$_{3}$	5.79$_{6}$	4.63$_{3}$	4.80$_{3}$	3.55$_{2}$	3.85$_{2}$	2.98$_{2}$								
4SSC14	4.77	3.74$_{3}$	3.95$_{3}$	2.78$_{2}$	3.12$_{3}$	1.86$_{2}$	2.35$_{2}$									
4SSJ14	6.64	5.60$_{3}$	5.68$_{6}$	4.48$_{3}$	4.69$_{3}$	3.39$_{2}$	3.74$_{2}$	2.87$_{2}$								
4SJW14	8.60	7.95$_{6}$	7.88	6.62$_{3}$	6.69$_{3}$	5.31$_{3}$	5.52$_{3}$	4.08$_{2}$	4.42$_{2}$							
4SJW12	11.37	11.37	10.81	9.79$_{6}$	9.65$_{6}$	8.13$_{3}$	8.12$_{3}$	6.52$_{2}$	6.67$_{3}$	5.07$_{2}$	4.35$_{2}$					
5-1/2SSC20	1.53	.93$_{3}$	1.19$_{6}$	.45$_{3}$	.82$_{3}$	.44$_{2}$	.06$_{2}$									
5-1/2SSJ20	2.08	1.43$_{6}$	1.70$_{6}$	.92$_{3}$	1.29$_{3}$	.38$_{2}$	.87$_{3}$	.45$_{2}$								
5-1/2SSC18	2.42	1.76	2.04	1.22$_{3}$	1.62$_{3}$	.66$_{3}$	1.18$_{3}$	.09$_{2}$	.73$_{2}$							
5-1/2SSJ18	3.39	2.68	2.96	2.09$_{3}$	2.48$_{6}$	1.45$_{3}$	1.98$_{3}$	.81$_{2}$	1.47$_{3}$	.19$_{2}$						
5-1/2SSC16	4.50	3.99	4.24	3.43$_{6}$	3.80$_{6}$	2.83$_{3}$	3.32$_{3}$	2.19$_{2}$	2.81$_{3}$	1.54$_{2}$	1.75$_{2}$					
5-1/2SSJ16	6.32	6.13	6.24	5.41	5.72	4.62$_{3}$	5.05$_{3}$	3.80$_{3}$	4.36$_{3}$	2.97$_{2}$	2.96$_{2}$					
5-1/2SSC14	5.32	5.02	5.29	4.44	4.82	3.80$_{3}$	4.31$_{6}$	3.11$_{3}$	3.76$_{3}$	2.40$_{2}$	2.60$_{2}$					
5-1/2SSJ14	8.07	8.07	8.07	7.54	7.86	6.63$_{6}$	7.08	5.66$_{3}$	6.23$_{3}$	4.66$_{3}$	4.51$_{2}$					
6SSC20	1.67	1.13$_{6}$	1.37	.70$_{3}$	1.04$_{3}$	.25$_{3}$	.69$_{3}$	.33$_{2}$								
6SSJ20	2.26	1.68	1.93	1.21$_{3}$	1.56$_{6}$	.70$_{3}$	1.17$_{3}$	.19$_{2}$	.76$_{2}$							
6SSC18	2.57	1.99	2.24	1.51$_{6}$	1.87$_{6}$	1.00$_{3}$	1.47$_{3}$	.46$_{2}$	1.06$_{3}$	.21$_{2}$						
6SSJ18	3.60	2.96	3.23	2.44	2.82	1.86$_{3}$	2.35$_{3}$	1.25$_{3}$	1.87$_{3}$	.64$_{2}$	.90$_{2}$					
6SJW18	4.48	3.95	4.20	3.39	3.75	2.77$_{6}$	3.26$_{6}$	2.11$_{3}$	2.73$_{3}$	1.45$_{2}$	1.66$_{2}$					
6SSC16	4.42	4.17	4.40	3.69	4.02	3.16$_{3}$	3.60$_{6}$	2.59$_{3}$	3.15$_{3}$	1.99$_{2}$	2.19$_{2}$					
6SSJ16	6.31	6.31	6.31	5.84	6.21	5.20$_{6}$	5.66	4.47$_{3}$	5.02$_{3}$	3.68$_{3}$	3.68$_{2}$					
6SJW16	8.28	8.28	8.18	8.18	8.07	7.38	7.75	6.50$_{3}$	6.99$_{6}$	5.58$_{3}$	5.40$_{3}$	3.75$_{2}$	3.85$_{2}$			
6SSC14	5.23	5.19	5.23	4.69	5.03	4.13$_{6}$	4.59	3.53$_{3}$	4.11$_{3}$	2.88$_{3}$	3.07$_{3}$	1.56$_{2}$	2.00$_{2}$			
6SSJ14	8.05	8.05	8.05	7.95	8.05	7.23	7.76	6.44$_{3}$	7.08$_{6}$	5.57$_{3}$	5.46$_{3}$	3.68$_{2}$	3.85$_{2}$			
6SJW14	10.69	10.69	10.57	10.57	10.42	10.25	10.24	9.24$_{6}$	9.72	8.15$_{3}$	7.79$_{3}$	5.94$_{2}$	5.86$_{2}$			
6SJW12	15.49	15.49	15.34	15.34	15.14	15.14	14.90	14.63	14.60	13.21$_{6}$	12.49$_{6}$	10.22$_{3}$	9.79$_{3}$	7.34$_{2}$	7.29$_{2}$	
8SSJ18	3.62	3.56	3.62	3.22	3.48	2.83	3.19	2.41	2.87	1.95$_{6}$	2.16$_{3}$	.97$_{3}$	1.38$_{3}$	.58$_{2}$		
8SJW18	4.56	4.56	4.56	4.35	4.56	3.93	4.31	3.47	3.96	2.97$_{6}$	3.15$_{6}$	1.87$_{3}$	2.26$_{3}$	.72$_{2}$	1.34$_{2}$	
8SSJ16	6.10	6.10	6.10	6.10	6.10	6.10	6.10	5.70	6.10	5.21	5.37$_{6}$	4.13$_{3}$	4.48$_{3}$	2.94$_{2}$	3.51$_{2}$	
8SJW16	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	8.49	7.97	7.97	6.56$_{3}$	6.71$_{3}$	5.00$_{3}$	5.37$_{3}$	3.46$_{2}$
8SSJ14	7.76	7.76	7.76	7.76	7.76	7.76	7.76	7.74	7.76	7.21	7.36	6.00$_{3}$	6.36$_{3}$	4.67$_{3}$	5.26$_{3}$	3.27$_{2}$
8SJW14	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.95	10.81	9.46$_{6}$	9.53$_{6}$	7.64$_{3}$	7.92$_{3}$	5.78$_{2}$
8SSJ12	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	8.84	9.21	7.33$_{3}$	7.95$_{3}$	5.70$_{2}$
8SJW12	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.63	15.08	15.20	12.92$_{3}$	13.04$_{6}$	10.41$_{3}$

SECTION	BRIDGING AT MID-HEIGHT			
	9FT		10FT	
	16"	24"	16"	24"
3-1/2SSC20				
3-1/2SSJ20				
3-1/2SSC18	.36$_{2}$			
3-1/2SSJ18	.95$_{2}$			
3-1/2SSC16	1.63$_{2}$			
3-1/2SSJ16	2.60$_{3}$	1.67$_{2}$	1.65$_{2}$	
3-1/2SSC14	2.29$_{3}$	1.30$_{2}$	1.31$_{2}$	
3-1/2SSJ14	3.56$_{3}$	2.57$_{2}$	2.43$_{2}$	
3-5/8SSC20				
3-5/8SSJ20	.31$_{2}$			
3-5/8SSC18	.47$_{2}$			
3-5/8SSJ18	1.09$_{2}$	.44$_{2}$		
3-5/8SJW18	1.80$_{3}$	.74$_{2}$	1.07$_{2}$	
3-5/8SSC16	1.83$_{2}$	.95$_{2}$		
3-5/8SSJ16	2.86$_{3}$	1.91$_{2}$	1.87$_{2}$	
3-5/8SJW16	4.32$_{3}$	3.28$_{2}$	3.09$_{2}$	
3-5/8SSC14	2.54$_{3}$	1.52$_{2}$	1.49$_{2}$	
3-5/8SSJ14	3.92$_{3}$	2.89$_{2}$	2.70$_{3}$	1.67$_{2}$
3-5/8SJW14	5.78$_{3}$	4.68$_{3}$	4.22$_{3}$	3.15$_{2}$
3-5/8SJW12	8.13	6.96$_{3}$	6.20$_{3}$	5.02$_{3}$
4SSC20	.21$_{2}$			
4SSJ20	.61$_{2}$			
4SSC18	.81$_{3}$	.16$_{2}$		
4SSJ18	1.50$_{3}$	.49$_{2}$	.81$_{2}$	
4SJW18	2.29$_{3}$	1.23$_{2}$	1.54$_{2}$	
4SSC16	2.36$_{3}$	1.40$_{2}$	1.38$_{2}$	
4SSJ16	3.61$_{3}$	2.61$_{2}$	2.48$_{3}$	1.46$_{2}$
4SJW16	5.32$_{6}$	4.23$_{3}$	3.95$_{3}$	2.87$_{2}$
4SSC14	3.24$_{3}$	2.17$_{2}$	1.97$_{3}$	.87$_{2}$
4SSJ14	5.03$_{6}$	3.91$_{3}$	3.59$_{3}$	2.45$_{2}$
4SJW14	7.22	6.05$_{3}$	5.50$_{3}$	4.31$_{3}$
4SJW12	9.86	8.93$_{6}$	7.94$_{6}$	6.64$_{3}$
5-1/2SSC20	1.01$_{6}$	.30$_{3}$	.49$_{3}$	
5-1/2SSJ20	1.58$_{6}$	.81$_{3}$	1.05$_{3}$	.17$_{2}$
5-1/2SSC18	1.77	.99$_{3}$	1.11$_{3}$	.24$_{3}$
5-1/2SSJ18	2.76	1.90$_{3}$	2.09$_{6}$	1.11$_{3}$
5-1/2SSC16	3.41	2.68$_{6}$	2.38$_{6}$	1.56$_{3}$
5-1/2SSJ16	5.75	4.86	4.55	3.55$_{3}$
5-1/2SSC14	4.23	3.47	3.02	2.16$_{3}$
5-1/2SSJ14	7.25	6.66	6.06	4.99$_{6}$
6SSC20	1.17	.54$_{3}$	.67$_{3}$	
6SSJ20	1.79	1.09$_{3}$	1.29$_{6}$	.47$_{3}$
6SSC18	1.95	1.25$_{6}$	1.31$_{6}$	.52$_{3}$
6SSJ18	3.00	2.23	2.36	1.46$_{3}$
6SJW18	4.05	3.24	3.43	2.47$_{6}$
6SSC16	3.53	2.90	2.54	1.81$_{3}$
6SSJ16	5.71	5.18	4.78	3.89$_{6}$
6SJW16	7.77	7.72	7.21	6.46
6SSC14	4.31	3.69	3.19	2.42$_{6}$
6SSJ14	7.20	7.00	6.24	5.35
6SJW14	10.03	10.03	9.31	8.99
6SJW12	14.53	14.53	13.49	13.49
8SSJ18	3.40	2.96	2.92	2.31
8SJW18	4.42	4.18	4.24	3.58
8SSJ16	5.42	5.42	4.65	4.49
8SJW16	8.03	8.03	7.51	7.51
8SSJ14	6.81	6.81	5.77	5.77
8SJW14	10.31	10.31	9.60	9.60
8SSJ12	8.44	8.44	7.11	7.11
8SJW12	14.54	14.54	13.31	13.31

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 15 for Notes and Definitions of Symbols

SUGGESTED DESIGN GUIDES

ALLOWABLE AXIAL LOAD CAPACITIES

Unbraced Studs NOT Subjected to Lateral Load

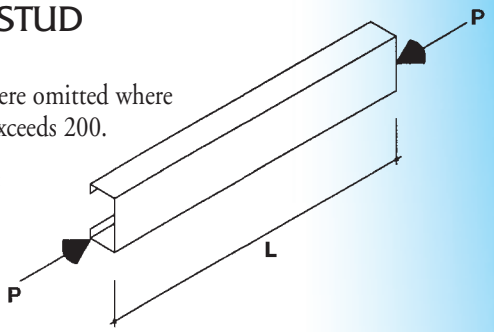
P_{ALLOW}, KIPS (1,000 LBS) PER STUD

Use:

The table is used to select an axially loaded unbraced stud not subjected to lateral load. (i.e. kickers, struts, etc.). Select a stud which provides an allowable axial load in excess of the applied load.

Notes:

1. Values shown are limited to unbraced studs subjected to con centric axial load.
2. When bending stresses are present, the stud shall satisfy the interaction requirements of AISI Section C5, Combined Axial and Bending.
3. Load values were omitted where the h/t ratio exceeds 200.
4. Flange Width: SSJ=1-5/8" SJW=2"and SSW=2-1/2".
5. Contact Super Stud for allowable axial load capacities of sections not shown herein.



	UNBRACED LENGTH (FT)																							
SECTION	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0
2-1/2SSJ20	2.96	2.92	2.84	2.74	2.61	2.44	2.22	1.96	1.67	1.39	1.18	1.02	.88	.77	.69	.62	.56	.51	.46	.43				
2-1/2SSJ18	4.22	4.15	4.02	3.85	3.64	3.38	3.08	2.75	2.37	1.97	1.67	1.43	1.25	1.11	.99	.90	.82	.75	.70	.65				
2-1/2SSJ16	8.05	7.84	7.49	7.01	6.41	5.69	4.84	3.89	3.16	2.64	2.25	1.96	1.73	1.54	1.39	1.27	1.17	1.08	1.01	.94				
2-1/2SSJ14	10.05	9.74	9.25	8.58	7.76	6.83	5.80	4.73	3.91	3.32	2.89	2.55	2.29	2.08	1.91	1.76	1.64	1.54	1.45	1.37				
3-5/8SSJ20	2.99	2.96	2.92	2.85	2.77	2.66	2.54	2.40	2.20	1.99	1.76	1.52	1.33	1.17	1.05	.94	.85	.78	.71	.65				
3-5/8SSJ18	4.29	4.24	4.17	4.06	3.92	3.75	3.55	3.33	3.08	2.81	2.51	2.20	1.93	1.71	1.52	1.36	1.23	1.12	1.03	.95				
3-5/8SJW18	4.87	4.84	4.78	4.69	4.57	4.43	4.26	4.04	3.78	3.49	3.18	2.84	2.49	2.19	1.95	1.73	1.56	1.41	1.28	1.17	1.08	1.00	.93	.87
3-5/8SSJ16	8.21	8.07	7.85	7.54	7.14	6.66	6.11	5.49	4.80	4.08	3.49	3.00	2.62	2.32	2.08	1.88	1.71	1.57	1.45	1.35				
3-5/8SJW16	9.48	9.43	9.27	9.03	8.72	8.32	7.80	7.17	6.46	5.67	4.85	4.17	3.61	3.16	2.79	2.49	2.25	2.04	1.86	1.71	1.59	1.47	1.38	1.29
3-5/8SSJ14	10.44	10.25	9.95	9.54	9.02	8.40	7.70	6.90	6.00	5.08	4.35	3.80	3.36	3.02	2.74	2.43	2.16	1.92	1.73					
3-5/8SJW14	12.53	12.35	12.06	11.65	11.13	10.51	9.79	8.98	8.03	6.99	5.93	5.09	4.44	3.92	3.50	3.16	2.87	2.63	2.43	2.26	2.11	1.98	1.86	1.76
3-5/8SJW12	18.85	18.10	17.20	16.19	15.10	13.95	12.77	11.56	10.34	9.12	7.93	6.99	6.25	5.66	5.18	4.79	4.46	4.18	3.84	3.47	3.14	2.86	2.62	
4SSJ20	3.01	2.99	2.94	2.88	2.81	2.71	2.60	2.47	2.31	2.11	1.90	1.67	1.46	1.29	1.15	1.04	.94	.86	.79	.73				
4SSJ18	4.33	4.29	4.22	4.12	3.99	3.84	3.66	3.46	3.23	2.98	2.70	2.41	2.12	1.88	1.69	1.53	1.39	1.28	1.17	1.08				
4SJW18	4.92	4.89	4.83	4.75	4.65	4.52	4.37	4.19	3.96	3.70	3.42	3.12	2.79	2.46	2.19	1.97	1.78	1.62	1.49	1.37	1.26	1.16	1.08	1.01
4SSJ16	8.30	8.18	7.97	7.69	7.33	6.89	6.39	5.82	5.18	4.49	3.85	3.35	2.96	2.64	2.37	2.13	1.94	1.77	1.59	1.43				
4SJW16	9.56	9.54	9.39	9.18	8.90	8.54	8.11	7.54	6.90	6.20	5.43	4.68	4.09	3.62	3.23	2.89	2.60	2.36	2.15	1.98	1.83	1.69	1.58	1.48
4SSJ14	10.63	10.47	10.19	9.81	9.34	8.77	8.13	7.41	6.63	5.79	4.98	4.33	3.82	3.33	2.90	2.55	2.26	2.01	1.81					
4SJW14	12.72	12.57	12.30	11.94	11.48	10.92	10.28	9.54	8.73	7.84	6.88	5.94	5.17	4.55	4.06	3.65	3.31	3.03	2.79	2.59	2.41	2.26	2.12	2.00
4SJW12	20.01	19.27	18.40	17.41	16.35	15.22	14.05	12.85	11.63	10.41	9.20	8.06	7.18	6.48	5.92	5.45	5.02	4.48	4.02	3.63	3.29	3.00	2.74	
6SSJ20	3.06	3.04	3.00	2.95	2.89	2.81	2.72	2.61	2.49	2.32	2.14	1.93	1.70	1.50	1.33	1.19	1.07	.97	.89					
6SSJ18	4.44	4.40	4.34	4.26	4.15	4.02	3.87	3.69	3.48	3.25	3.00	2.71	2.40	2.12	1.88	1.69	1.52	1.38	1.26					
6SJW18	5.02	5.00	4.96	4.91	4.84	4.75	4.65	4.53	4.39	4.22	4.02	3.81	3.58	3.33	3.06	2.78	2.51	2.29	2.10	1.93	1.79	1.66	1.55	1.44
6SSJ16	8.51	8.41	8.24	7.99	7.68	7.30	6.84	6.31	5.71	5.02	4.29	3.70	3.23	2.85	2.54	2.27	2.05	1.86	1.70					
6SJW16	9.77	9.75	9.67	9.53	9.34	9.11	8.81	8.47	8.03	7.53	6.99	6.39	5.74	5.09	4.54	4.09	3.71	3.36	3.06	2.80	2.57	2.37	2.20	2.04
6SSJ14	11.07	10.93	10.69	10.36	9.93	9.41	8.78	8.05	7.20	6.24	5.32	4.59	4.02	3.54	3.16	2.83	2.55	2.32						
6SJW14	13.17	13.06	12.88	12.63	12.31	11.92	11.46	10.94	10.36	9.71	9.01	8.25	7.40	6.51	5.78	5.17	4.66	4.22	3.84	3.52	3.23	2.98	2.76	2.56
6SJW12	21.82	21.23	20.55	19.79	18.97	18.09	17.15	16.09	14.96	13.75	12.44	11.02	9.60	8.44	7.49	6.69	5.98	5.34	4.79	4.32	3.92	3.57		
8SSJ18	4.46	4.42	4.35	4.26	4.14	4.00	3.82	3.62	3.40	3.14	2.85	2.53	2.21	1.95	1.74	1.56	1.41	1.28						
8SJW18	5.04	5.02	4.99	4.93	4.86	4.78	4.68	4.56	4.42	4.24	4.04	3.82	3.58	3.31	3.03	2.72	2.45	2.22	2.02	1.85	1.71	1.58	1.46	
8SSJ16	8.55	8.44	8.24	7.97	7.63	7.20	6.69	6.10	5.42	4.65	3.96	3.42	2.99	2.65	2.36	2.12	1.92	1.75						
8SJW16	9.81	9.80	9.72	9.57	9.38	9.14	8.84	8.49	8.03	7.51	6.92	6.28	5.56	4.89	4.34	3.88	3.50	3.17	2.89	2.65	2.44	2.26	2.09	1.95
8SSW16	10.60	10.56	10.49	10.40	10.28	10.13	9.95	9.74	9.50	9.24	8.93	8.60	8.22	7.79	7.31	6.79	6.15	5.58	5.09	4.66	4.28	3.94	3.65	3.39
8SSJ14	11.15	11.00	10.73	10.36	9.88	9.29	8.58	7.76	6.81	5.77	4.93	4.27	3.74	3.31	2.96	2.66	2.41							
8SJW14	13.26	13.15	12.97	12.71	12.38	11.98	11.50	10.95	10.31	9.60	8.81	7.93	6.97	6.14	5.46	4.90	4.42	4.01	3.66	3.36	3.09	2.86	2.65	
8SSW14	15.50	15.48	15.41	15.27	15.09	14.86	14.59	14.26	13.89	13.47	12.94	12.35	11.70	10.99	10.22	9.39	8.50	7.69	7.00	6.40	5.88	5.42	5.02	4.66
8SSJ12	18.58	17.80	16.87	15.81	14.61	13.29	11.82	10.17	8.44	7.11	6.08	5.27	4.61	4.07	3.57									
8SJW12	22.12	21.51	20.80	19.99	19.10	18.13	17.07	15.93	14.70	13.38	11.95	10.40	9.09	8.03	7.15	6.41	5.79	5.25	4.78	4.37	3.96			
8SSW12	26.96	26.45	25.87	25.22	24.52	23.77	22.96	22.09	21.16	20.18	19.14	18.05	16.90	15.68	14.40	13.01	11.71	10.61	9.67	8.85	8.13	7.50	6.94	6.45

SUGGESTED DESIGN GUIDES

ALLOWABLE UNIFORM LOAD CAPACITIES HEADERS

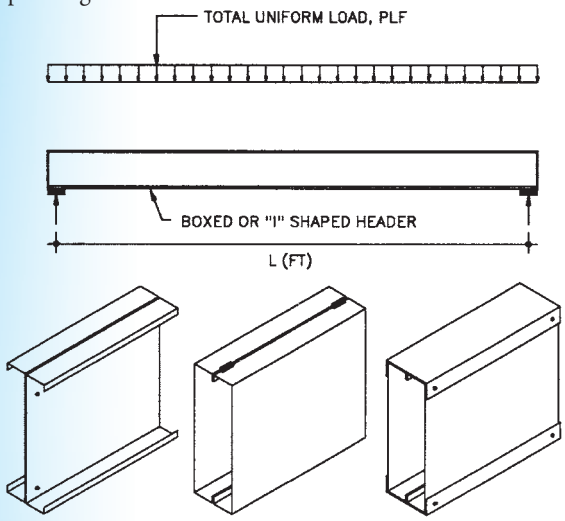
Pounds Per Lineal Foot, PLF

Use:

The tables are used to select a simply supported boxed or "I" shaped header subjected to uniform load. Select a header which provides an allowable uniform load in excess of the applied load.

Notes:

1. The values represent the allowable total load, in pounds per lineal foot (PLF), limited by the bending or shear capacity of the header. Additionally, deflection was limited to 1/360 of span length.



SECTION	4FT	5FT	6FT	7FT	8FT	9FT	10FT	11FT	12FT	13FT	14FT	15FT	16FT
(2)4SSJ18	730	467	324	229	154	108	79	59	45	36	29	23	19
(2)4SSJ16	1369	778	450	284	190	133	97	73	56	44	35	29	24
(2)4SSJ14	1654	941	545	343	230	161	118	88	68	54	43	35	29
(2)6SSJ18	1275	816	567	416	319	252	204	153	118	93	74	61	50
(2)6SSJ16	2401	1537	1067	740	496	348	254	191	147	116	93	75	62
(2)6SSJ14	2915	1865	1295	898	602	423	308	232	178	140	112	91	75
(2)8SSJ18	985	788	657	563	475	375	304	251	211	180	149	121	100
(2)8SSJ16	1962	1569	1308	1121	896	698	509	382	295	232	185	151	124
(2)8SSJ14	3959	2793	1940	1425	1091	850	620	466	359	282	226	184	151
(2)8SSJ12	5669	3628	2519	1851	1417	1106	806	606	467	367	294	239	197

2. The use of these tables is limited to simply supported conditions. Applications involving cantilevers, concentrated loads, eccentricities, multiple spans, impact loading, etc. should be investigated separately.

3. The compression flange of the header shall be laterally braced at intervals not to exceed 2'-0" on center.

4. Web crippling should be investigated separately. Web reinforcement is suggested at all bearing and/or concentrated load locations unless deemed unnecessary by analysis.

   Shapes having multiple un-reinforced webs (sections which provide a high degree of restraint against rotation of the web) subjected to a combination of concentrated load or reaction and bending shall be designed to meet the requirements of AISI Section C3.4. Reference Page 29 for additional information.

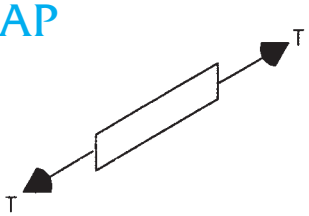
   Avoid locating a web knockout within a distance equalling 1.5 x depth of the member (h) from the edge of bearing. Should a knockout be located in this area, web reinforcement is required.

5. Contact Super Stud for allowable load capacities of sections not shown herein.

SECTION	8FT	9FT	10FT	11FT	12FT	13FT	14FT	15FT	16FT	17FT	18FT	19FT	20FT
(2)6SSJ18										42	35	30	26
(2)6SSJ16										52	44	37	32
(2)6SSJ14										63	53	45	39
(2)8SSJ18										83	70	60	51
(2)8SSJ16										104	87	74	64
(2)8SSJ14										126	106	90	77
(2)8SSJ12										164	138	118	101
(2)10SSJ16	779	692	623	567	483	402	322	261	215	180	151	129	110
(2)10SSJ14	1526	1206	977	807	624	491	393	319	263	219	185	157	135
(2)10SSJ12	2000	1580	1280	1058	818	643	515	419	345	288	242	206	177
(2)12SSJ16	646	574	517	470	431	398	369	345	316	280	239	203	174
(2)12SSJ14	1300	1142	832	625	482	379	303	247	203	169	143	121	104
(2)12SSJ12	2665	2106	1706	1410	1185	1009	821	668	550	459	386	329	282
(2)14SJW14	1109	986	887	807	739	682	634	591	555	522	466	416	357
(2)14SJW12	3255	2893	2490	2058	1729	1473	1270	1107	935	779	657	558	479

ALLOWABLE TENSILE CAPACITIES STRAP

T_{ALLOW}, KIPS (1,000 LBS) PER STRAP



Use:

The table provides the allowable capacity of strap subjected to tensile forces.

	Tallow, KIPS (1,000 LBS)
2" FS 20 Gage	1.37
3" FS 20 Gage	2.05
2" FS 18 Gage	1.78
3" FS 18 Gage	2.67
4" FS 18 Gage	3.57

	Tallow, KIPS (1,000 LBS)
2" FS 16 Gage	2.24
3" FS 16 Gage	3.36
4" FS 16 Gage	4.48
3" FS 14 Gage	6.41
4" FS 14 Gage	8.55
5" FS 14 Gage	10.69

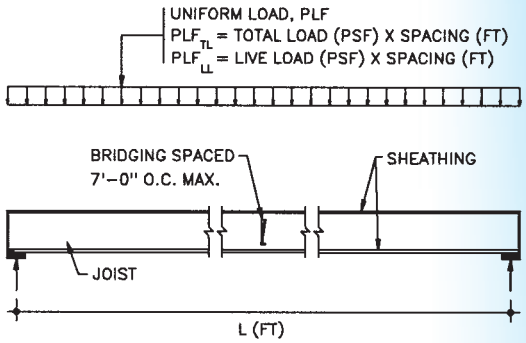
SUGGESTED DESIGN GUIDES

ALLOWABLE UNIFORM LOAD CAPACITIES JOISTS

Pounds Per Lineal Foot, PLF

Use:

The tables are used to select a simply supported joist or rafter subjected to uniform lateral loads. Select a joist, based on span and deflection limit, which provides an allowable uniform load in excess of the applied load.



Notes:

1. TL values denote the TOTAL LOAD capacity of the section expressed in pounds per lineal foot (PLF), which will not exceed stress limitations or generate deflections in excess of L/240. LL values denote the LIVE LOAD, in Pounds per Lineal Foot (PLF), which will generate a deflection equalling L/360.

   To determine LIVE LOAD deflection limits of L/480 and L/240, multiply the LL values 0.75 and 1.5 respectively. In either case, the TOTAL LOAD capacity of the joist shall not be exceeded.

2. To determine the equivalent Pound per Square Foot (PSF) load carrying capacities, divide the Pound per Lineal Foot (PLF) values by the joist spacing expressed in feet.

$$\text{Pound Per Square Foot (PSF)} = \frac{\text{Pound Per Lineal Foot (PLF)}}{\text{Joist Spacing (Feet On Center)}}$$

   For joists spaced: 12" O.C., divide values by 1.0
   16" O.C., divide values by 1.333
   24" O.C., divide values by 2.0

3. The use of these tables is limited to simply supported conditions installed to a maximum slope of 1/2" per foot. Conditions involving cantilevers, concentrated loads, eccentricities, multiple spans, impact loading, etc. should be investigated separately.

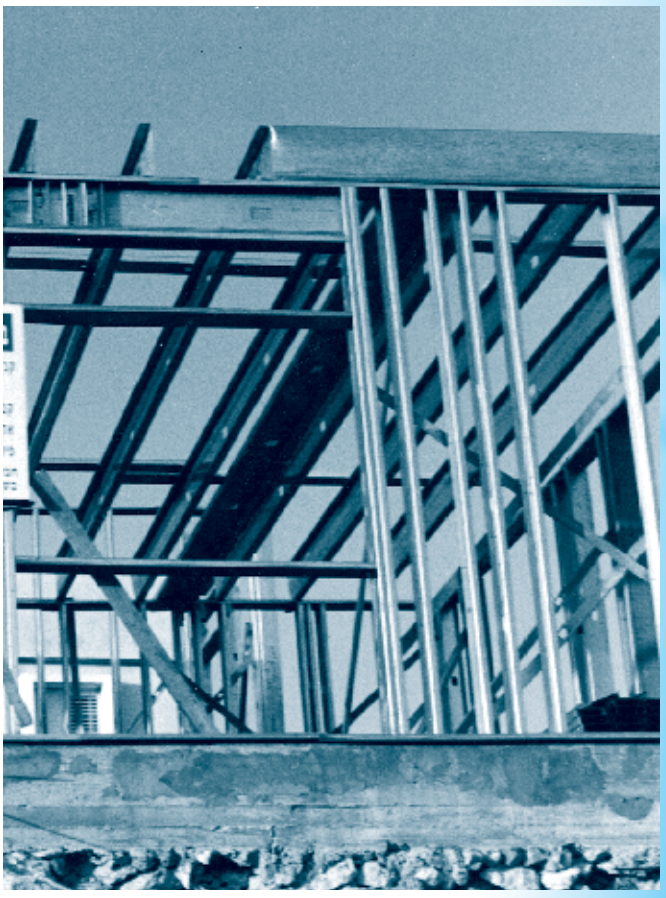
4. The compression flange of the section should be braced by means of the attachment of continuous diaphragm rated sheathing. Additionally, mechanical bridging shall be installed at intervals not to exceed 7'-0" on center.

5. Joist ends shall be restrained against rotation by means of a fixed attachment to each side of continuous track or alterative methods preventing end rotation shall be provided.

6. Deflections were calculated without regard to the composite contribution of collateral materials.

7. Web crippling per AISI Section C3.4 should be investigated separately. Web reinforcement is suggested at all bearing and/or concentrated load locations unless deemed unnecessary by analysis. Reference Pages 29 and 30 for allowable un-reinforced web capacities.

8. Contact Super Stud for allowable load capacities of sections not shown herein.



SUGGESTED DESIGN GUIDES

ALLOWABLE UNIFORM LOAD CAPACITIES JOISTS

Pounds Per Lineal Foot, PLF

SECTION		SPAN 6FT	7FT	8FT	9FT	10FT	11FT	12FT	13FT	14FT	15FT	16FT	17FT	18FT	19FT	20FT	21FT	22FT	23FT	24FT	25FT	26FT	27FT	28FT
6SSJ20	TL	199	155	119	94	76	63	53	45	39	34	29	24	20	17									
	LL	199	155	119	94	76	59	46	36	29	23	19	16	13	11									
6SSJ18	TL	283	208	159	126	102	84	71	60	52	45	37	31	26	22	19	17							
	LL	283	208	159	126	102	77	59	46	37	30	25	21	18	15	13	11							
6SJW18	TL	318	234	179	141	114	95	80	68	58	51	43	36	30	26	22	19	17						
	LL	318	234	179	141	114	88	68	53	43	35	29	24	20	17	15	13	11						
6SSW18	TL	346	254	194	154	124	103	86	74	63	55	49	42	35	30	26	22	19	17					
	LL	346	254	194	154	124	102	79	62	50	40	33	28	23	20	17	15	13	11					
6SSJ16	TL	534	392	300	237	190	143	110	87	69	56	46	39	33	28	24	21	18	16					
	LL	534	370	248	174	127	95	73	58	46	38	31	26	22	19	16	14	12	10					
6SJW16	TL	605	444	340	269	218	167	129	101	81	66	54	45	38	32	28	24	21	18	16				
	LL	605	433	290	204	148	111	86	68	54	44	36	30	25	22	19	16	14	12	11				
6SSW16	TL	657	483	370	292	237	194	150	118	94	77	63	53	44	38	32	28	24	21	19	17			
	LL	657	483	337	237	172	130	100	79	63	51	42	35	30	25	22	19	16	14	12	11			
6SSJ14	TL	648	476	364	288	231	174	134	105	84	68	56	47	40	34	29	25	22	19	17				
	LL	648	449	301	211	154	116	89	70	56	46	38	31	26	22	19	17	14	13	11				
6SJW14	TL	763	561	429	339	272	204	157	124	99	81	66	55	47	40	34	29	26	22	20	17	15		
	LL	763	529	354	249	181	136	105	83	66	54	44	37	31	26	23	20	17	15	13	12	10		
6SSW14	TL	884	649	497	393	318	244	188	148	118	96	79	66	56	47	41	35	30	27	23	21	18	16	
	LL	884	630	422	297	216	162	125	98	79	64	53	44	37	32	27	23	20	18	16	14	12	11	
6SJW12	TL	999	738	565	446	358	269	207	163	130	106	87	73	61	52	45	39	34	29	26	23	20	18	16
	LL	999	696	466	327	239	179	138	109	87	71	58	49	41	35	30	26	22	20	17	15	14	12	11
6SSW12	TL	999	901	690	545	437	328	253	199	159	129	107	89	75	64	55	47	41	36	32	28	25	22	20
	LL	999	849	569	400	291	219	169	133	106	86	71	59	50	42	36	31	27	24	21	19	17	15	13
7-1/4SSJ18	TL	363	268	206	162	132	109	91	78	67	58	51	46	41	35	30	26	23	20	17	15			
	LL	363	268	206	162	132	109	91	73	59	48	39	33	28	23	20	17	15	13	12	10			
7-1/4SJW18	TL	517	380	291	230	186	154	129	110	95	83	73	64	57	50	43	37	32	28	25	22	19	17	16
	LL	517	380	291	230	186	154	129	103	83	67	55	46	39	33	28	25	21	19	16	15	13	12	10
7-1/4SSJ16	TL	689	506	388	306	248	205	172	137	109	89	73	61	51	44	38	32	28	25	22	19	17	15	
	LL	689	506	388	275	200	150	116	91	73	59	49	41	34	29	25	22	19	16	14	13	11	10	
7-1/4SJW16	TL	724	571	437	345	280	231	194	159	127	103	85	71	60	51	44	38	33	29	25	22	20	18	16
	LL	724	571	437	319	232	175	134	106	85	69	57	47	40	34	29	25	22	19	17	15	13	12	11
7-1/4SSJ14	TL	838	616	471	372	302	249	210	166	133	108	89	74	63	53	46	39	34	30	26	23	21	19	17
	LL	838	616	471	334	244	183	141	111	89	72	59	50	42	36	30	26	23	20	18	16	14	12	11
7-1/4SJW14	TL	981	721	552	436	353	292	245	194	155	126	104	87	73	62	53	46	40	35	31	27	24	22	19
	LL	981	721	552	390	284	214	165	129	104	84	69	58	49	41	36	31	27	23	21	18	16	14	13
7-1/4SSJ12	TL	999	797	610	482	390	323	271	216	173	140	116	96	81	69	59	51	44	39	34	30	27	24	22
	LL	999	797	610	433	316	237	183	144	115	94	77	64	54	46	39	34	30	26	23	20	18	16	14
7-1/4SJW12	TL	999	951	728	575	466	385	323	256	205	167	138	115	97	82	70	61	53	46	41	36	32	29	26
	LL	999	951	728	515	376	282	217	171	137	111	92	76	64	55	47	41	35	31	27	24	21	19	17
8SSJ18	TL	328	281	237	188	152	126	106	90	78	68	59	53	47	42	38	33	29	25	22	20	17	16	
	LL	328	281	237	188	152	126	106	90	74	61	50	42	35	30	26	22	19	17	15	13	12	10	
8SJW18	TL	328	281	246	207	168	139	117	99	86	75	66	58	52	47	42	38	33	29	25	22	20	18	16
	LL	328	281	246	207	168	139	117	99	85	69	57	47	40	34	29	25	22	19	17	15	13	12	11
8SSW18	TL	328	281	246	217	176	145	122	104	90	78	69	61	54	49	44	40	36	33	29	26	23	20	18
	LL	328	281	246	217	176	145	122	104	90	78	65	54	46	39	33	29	25	22	19	17	15	14	12
8SSJ16	TL	654	560	448	354	287	237	199	170	139	113	93	78	65	56	48	41	36	31	28	24	22	19	17
	LL	654	560	448	349	254	191	147	116	93	75	62	52	44	37	32	27	24	21	18	16	14	13	12
8SJW16	TL	654	560	490	398	322	266	224	191	161	131	108	90	76	64	55	48	41	36	32	28	25	22	20
	LL	654	560	490	398	294	221	170	134	107	87	72	60	50	43	37	32	28	24	21	19	17	15	13
8SSW16	TL	654	560	490	419	339	281	236	201	173	150	124	103	87	74	63	55	48	42	37	32	29	26	23
	LL	654	560	490	419	338	254	196	154	123	100	82	69	58	49	42	36	32	28	24	22	19	17	15
8SSJ14	TL	970	712	545	431	349	289	242	207	169	138	113	95	80	68	58	50	44	38	34	30	26	24	21
	LL	970	712	545	425	310	233	179	141	113	92	76	63	53	45	39	33	29	25	22	20	18	16	14
8SJW14	TL	999	830	635	502	407	336	282	241	197	160	132	110	93	79	68	58	51	44	39	35	31	27	25
	LL	999	830	635	494	360	271	208	164	131	107	88	73	62	53	45	39	34	30	26	23	20	18	16
8SSW14	TL	999	954	730	577	467	386	324	276	232	189	156	130	109	93	80	69	60	52	46	41	36	32	29
	LL	999	954	730	577	425	319	246	193	155	126	104	87	73	62	53	46	40	35	31	27	24	22	19
8SSJ12	TL	999	925	709	560	453	375	315	268	220	179	148	123	104	88	76	65	57	50	44	39	34	31	28
	LL	999	925	709	553	403	303	233	183	147	119	98	82	69	59	50	44	38	33	29	26	23	20	18
8SJW12	TL	999	999	840	663	537	444	373	318	261	212	175	146	123	104	89	77	67	59	52	46	41	36	33
	LL	999	999	840	654	477	358	276	217	174	141	116	97	82	69	60	51	45	39	34	31	27	24	22
8SSW12	TL	999	999	999	801	649	536	451	384	314	255	210	175	148	126	108	93	81	71	62	55	49	44	39
	LL	999	999	999	788	574	431	332	261	209	170	140	117	98	84	72	62	54	47	42	37	33	29	26

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 23 for Notes

SUGGESTED DESIGN GUIDES

ALLOWABLE UNIFORM LOAD CAPACITIES JOISTS

Pounds Per Lineal Foot, PLF

SECTION		SPAN 14FT	15FT	16FT	17FT	18FT	19FT	20FT	21FT	22FT	23FT	24FT	25FT	26FT	27FT	28FT	29FT	30FT	31FT	32FT	33FT	34FT	35FT	36FT
9-1/4SSJ18	TL	97	76	66	59	52	47	42	39	35	32	29	27	25	22	20	18	16						
	LL	87	76	66	59	50	43	36	31	27	24	21	19	17	15	13	12	11						
9-1/4SJW18	TL	96	84	74	65	58	52	47	43	39	36	33	30	28	25	22	20	18	17	15				
	LL	96	84	74	65	56	48	41	36	31	27	24	21	19	17	15	13	12	11	10				
9-1/4SSJ16	TL	167	146	128	111	94	80	68	59	51	45	39	35	31	28	25	22	20	18	17	15			
	LL	133	108	89	74	62	53	45	39	34	30	26	23	21	18	17	15	13	12	11	10			
9-1/4SJW16	TL	186	162	143	126	107	91	78	68	59	51	45	40	36	32	29	26	23	21	19	17	16		
	LL	152	124	102	85	72	61	52	45	39	34	30	27	24	21	19	17	15	14	13	12	11		
9-1/4SSJ14	TL	221	193	162	135	114	97	83	72	62	55	48	43	38	34	30	27	25	22	20	19	17	16	
	LL	162	131	108	90	76	65	55	48	42	36	32	28	25	23	20	18	16	15	14	12	11	10	
9-1/4SJW14	TL	256	223	187	156	132	112	96	83	72	63	56	49	44	39	35	31	28	26	23	21	20	18	16
	LL	187	152	125	104	88	75	64	55	48	42	37	33	29	26	23	21	19	17	16	14	13	12	11
9-1/4SSJ12	TL	289	252	212	177	149	127	109	94	82	72	63	56	50	44	40	36	32	29	27	24	22	20	19
	LL	211	172	142	118	99	85	73	63	54	48	42	37	33	29	26	24	21	19	18	16	15	14	12
9-1/4SJW12	TL	339	296	249	207	175	149	127	110	96	84	74	65	58	52	46	42	38	34	31	28	26	24	22
	LL	248	201	166	138	117	99	85	73	64	56	49	43	39	35	31	28	25	23	21	19	17	16	15
10SSJ16	TL	177	155	136	120	107	96	83	71	62	54	48	42	38	34	30	27	25	22	20	18	17	15	
	LL	161	131	108	90	76	64	55	48	41	36	32	28	25	22	20	18	16	15	13	12	11	10	
10SJW16	TL	199	173	152	135	120	108	95	82	71	62	55	48	43	38	34	31	28	25	23	21	19	18	16
	LL	184	149	123	103	87	74	63	54	47	41	36	32	29	26	23	21	19	17	15	14	13	12	11
10SSW16	TL	211	184	162	143	128	115	104	93	81	71	62	55	49	44	39	35	32	29	26	24	22	20	18
	LL	209	170	140	117	98	84	72	62	54	47	42	37	33	29	26	24	21	19	18	16	15	13	12
10SSJ14	TL	249	217	191	165	139	118	101	87	76	66	58	52	46	41	37	33	30	27	25	22	21	19	17
	LL	196	160	132	110	92	79	67	58	51	44	39	34	31	27	25	22	20	18	16	15	14	13	12
10SJW14	TL	287	250	219	189	159	135	116	100	87	76	67	59	53	47	42	38	34	31	28	26	24	22	20
	LL	226	183	151	126	106	90	77	67	58	51	45	40	35	31	28	25	23	21	19	17	16	14	13
10SSW14	TL	327	285	250	221	186	158	136	117	102	89	78	69	62	55	49	44	40	36	33	30	28	25	23
	LL	264	214	177	147	124	105	90	78	68	59	52	46	41	37	33	30	27	24	22	20	18	17	16
10SSJ12	TL	326	284	250	216	182	155	132	114	100	87	77	68	60	54	48	43	39	36	32	29	27	25	23
	LL	257	209	172	144	121	103	88	76	66	58	51	45	40	36	32	29	26	24	22	20	18	16	15
10SJW12	TL	381	332	292	251	212	180	154	133	116	102	89	79	70	63	56	51	46	41	38	34	31	29	26
	LL	300	244	201	168	141	120	103	89	77	68	60	53	47	42	38	34	30	28	25	23	21	19	18
10SSW12	TL	454	395	347	299	252	214	184	159	138	121	106	94	84	75	67	60	54	49	45	41	37	34	32
	LL	357	290	239	199	168	143	122	106	92	81	71	63	56	50	45	40	36	33	30	27	25	23	21
11-1/2SSJ16	TL	193	173	152	135	120	108	98	88	81	74	68	60	53	48	43	38	35	32	29	26	24	22	20
	LL	193	173	152	127	107	91	78	68	59	51	45	40	36	32	29	26	23	21	19	17	16	15	13
11-1/2SSW16	TL	193	180	169	159	145	130	118	107	97	89	82	75	69	61	55	49	45	40	37	34	31	28	26
	LL	193	180	169	159	138	117	100	87	75	66	58	51	46	41	37	33	30	27	25	22	20	19	17
11-1/2SSJ14	TL	284	247	217	193	172	154	139	124	108	94	83	74	65	58	52	47	43	39	35	32	29	27	25
	LL	279	227	187	156	131	112	96	83	72	63	55	49	44	39	35	31	28	26	23	21	19	18	16
11-1/2SSW14	TL	372	324	285	252	225	202	182	164	143	125	110	97	86	77	69	62	56	51	46	42	39	35	33
	LL	369	300	247	206	174	148	127	109	95	83	73	65	58	51	46	42	38	34	31	28	26	24	22
11-1/2SSJ12	TL	407	354	311	276	246	221	189	164	142	124	110	97	86	77	69	62	56	51	46	42	39	35	32
	LL	368	299	247	206	173	147	126	109	95	83	73	65	57	51	46	41	37	34	31	28	26	24	22
11-1/2SSW12	TL	555	483	425	376	336	301	258	223	194	170	149	132	117	105	94	85	76	69	63	57	52	48	44
	LL	501	407	336	280	236	201	172	149	129	113	99	88	78	70	63	56	51	46	42	38	35	32	29
12SSJ16	TL	185	172	158	140	125	112	101	92	84	76	70	65	59	53	48	43	39	35	32	29	27	24	22
	LL	185	172	158	140	120	102	87	75	65	57	50	45	40	35	32	29	26	23	21	19	18	16	15
12SJW16	TL	185	172	162	152	141	127	114	104	95	86	79	73	67	60	54	49	44	40	36	33	30	28	25
	LL	185	172	162	152	135	115	99	85	74	65	57	51	45	40	36	32	29	27	24	22	20	18	17
12SSW16	TL	185	172	162	152	144	136	122	111	101	93	85	78	72	67	61	55	49	45	41	37	34	31	29
	LL	185	172	162	152	144	130	111	96	84	73	64	57	51	45	41	37	33	30	27	25	23	21	19
12SSJ14	TL	293	255	224	198	177	159	143	130	118	105	93	82	73	65	58	52	47	43	39	36	33	30	27
	LL	293	253	208	174	146	124	107	92	80	70	62	55	49	43	39	35	32	29	26	24	22	20	18
12SJW14	TL	340	296	260	230	205	184	166	151	137	120	105	93	83	74	66	60	54	49	44	41	37	34	31
	LL	340	288	237	198	166	142	121	105	91	80	70	62	55	49	44	40	36	33	30	27	25	23	21
12SSW14	TL	371	336	295	261	233	209	189	171	156	138	122	108	96	86	77	69	62	57	51	47	43	39	36
	LL	371	333	274	229	193	164	140	121	106	92	81	72	64	57	51	46	42	38	34	31	29	26	24
12SSJ12	TL	435	379	333	295	263	236	211	182	159	139	122	108	96	86	77	69	63	57	52	47	43	39	36
	LL	411	334	275	229	193	164	141	122	106	93	82	72	64	57	51	46	42	38	34	31	29	26	24
12SJW12	TL	501	437	384	340	303	272	243	210	183	160	141	124	111	99	89	80	72	65	59	54	49	45	42
	LL	473	384	317	264	222	189	162	140	122	107	94	83	74	66	59	53	48	44	40	36	33	30	28
12SSW12	TL	590	514	452	400	357	320	286	247	215	188	166	146	130	116	104	94	85	77	70	64	58	53	49
	LL	556	452	373	311	262	222	191	165	143	125	110	98	87	78	70	63	57	51	47	42	39	36	33
14SJW16	TL	158	147	138	130	123	116	110	105	100	96	92	84	78	72	67	63	59	55	52	48	44	41	37
	LL	158	147	138	130	123	116	110	105	100	95	84	74	66	59	53	48	43	39	35	32	29	27	25
14SJW14	TL	317	296	277	261	233	209	189	171	156	143	131	121	112	104	96	88	79	72	65	60	54	50	46
	LL	317	296	277	261	233	208	178	154	134	117	103	91	81	73	65	59	53	48	44	40	36	33	31
14SSW14	TL	317	296	277	261	246	233	216	196	179	163	150	138	128	119	110	101	91	82	75	68	63	57	53
	LL	317	296	277	261	246	233	205	177	154	135	118	105	93	83	75	67	61	55	50	46	42	38	35
14SJW12	TL	635	553	486	431	384	345	311	282	257	235	208	184	163	146	131	118	106	96	88	80	73	67	62
	LL	635	553	467	390	328	279	239	207	180	157	139	123	109	97	87	79	71	64	58	53	49	45	41
14SSW12	TL	740	645	567	502	448	402	363	329	300	274	242	214	190	170	152	137	124	112	102	93	85	78	72
	LL	740	645	545	454	382	325	279	241	209	183	161	143	127	113	102	91	83	75	68	62	57	52	48
16SSW14	TL	276	258	242	228	215	204	193	184	176	168	161	155	144	134	125	116	108	102	95	90	84	80	73
	LL	276	258	242	228	215	204	193	184	176	168	161	146	130	116	104	93	84	77	70	63	58	53	49
16SSW12	TL	810	746	656	581	518	465	420	381	347	317	292	269	248	230	213	191	173	157	142	130	119	109	100
	LL	810	746	656	581	518	454	389	336	292	256	225	199	177	158	142	128	115	104	95	87	79	73	67

Flange Width: SSC=1-3/8", SSJ=1-5/8", SJW=2" and SSW=2-1/2"

Reference Page 23 for Notes

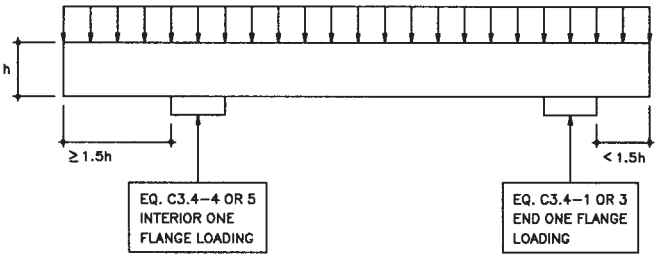
SUGGESTED DESIGN GUIDES

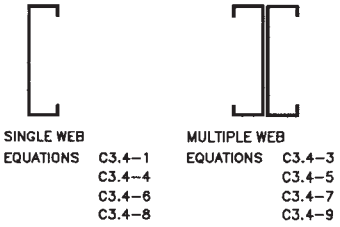
ALLOWABLE CAPACITIES

Unstiffened Web(s) Subjected to Local Forces, P_{allow}, KIPS (1,000 Lbs) Per Web(s)

Use:

The tables are used to verify the allowable capacity of an unreinforced web subjected to local forces.

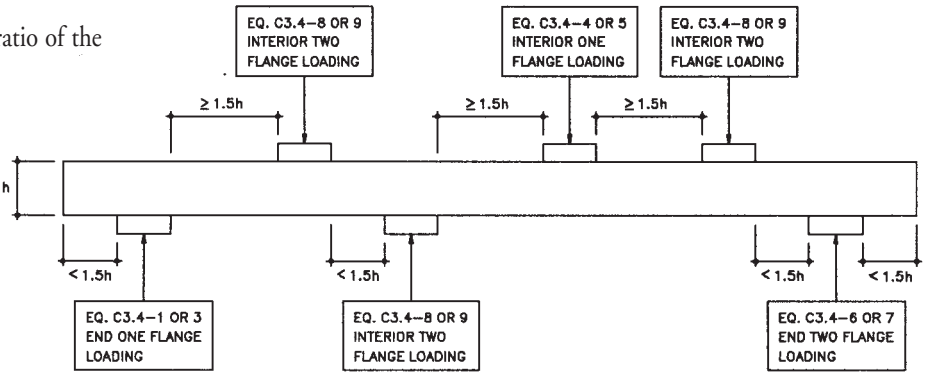




Notes:

1. Values have been omitted where the height to thickness ratio of the web, h/t, exceeds 200.

2. Values shown for equations C3.4-1, 3.4-4, 3.4-6 and 3.4-8 represent the allowable concentrated load or reaction for one solid unreinforced web. Values shown for equations C3.4-3, 3.4-5, 3.4-7 and 3.4-9 represent the allowable concentrated load or reaction for "I" shaped sections connected back to back or similar sections which provide a high degree of restraint against rotation of the web.



3. Unreinforced flat webs of sections subjected to a combination of concentrated load or reaction and bending shall be designed to meet the following requirements:

   a. For shapes having single unreinforced webs:
   $1.2(P/Pa) + (M/Ma) < 1.5$

   b. For shapes having multiple unreinforced webs (i.e. "I" sections or similar sections which provide a high degree of restraint against rotation of the web):

$$1.1(P/Pa) + (M/Ma) < 1.5$$

Where
- P = Concentrated load or reaction
- Pa = Allowable concentrated load or reaction
- M = Applied bending moment at, or immediately adjacent to, the point of application of the concentrated load or reaction
- Ma = Allowable bending moment if bending alone exists

4. Avoid locating a web knockout within a distance equalling 1.5 x depth of the member (h) from the edge of bearing. Should a knockout be located in this area, web reinforcement is required.

SECTION	3-5/8"X20GASTUD				3-5/8"X18GASTUD				3-5/8"X16GASTUD				3-5/8"X14GASTUD				3-5/8"X12GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.221	.265	.310	.354	.386	.451	.515	.579	.752	.857	.962	1.067	1.173	1.309	1.445	1.581	2.332	2.531	2.731	2.931
EQ.C3.4-4	.373	.442	.533	.624	.634	.714	.825	.951	1.323	1.461	1.596	1.813	2.072	2.250	2.427	2.609	4.145	4.403	4.662	4.921
EQ.C3.4-6	.153	.184	.214	.245	.272	.318	.363	.408	.536	.611	.686	.761	.843	.941	1.038	1.136	1.691	1.836	1.981	2.126
EQ.C3.4-8	.356	.369	.382	.394	.669	.688	.706	.724	1.490	1.523	1.556	1.589	2.457	2.501	2.545	2.588	5.215	5.280	5.345	5.411

SECTION	4"X20GASTUD				4"X18GASTUD				4"X16GASTUD				4"X14GASTUD				4"X12GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.215	.259	.302	.345	.380	.443	.506	.569	.742	.845	.949	1.052	1.161	1.295	1.429	1.564	2.315	2.513	2.712	2.910
EQ.C3.4-4	.367	.435	.524	.614	.626	.705	.815	.939	1.310	1.447	1.581	1.795	2.056	2.232	2.408	2.589	4.123	4.380	4.637	4.895
EQ.C3.4-6	.148	.177	.207	.237	.266	.310	.354	.399	.526	.600	.673	.747	.831	.928	1.024	1.120	1.675	1.819	1.963	2.106
EQ.C3.4-8	.340	.352	.365	.377	.648	.666	.684	.702	1.455	1.487	1.519	1.552	2.414	2.457	2.499	2.542	5.153	5.217	5.282	5.347

SUGGESTED DESIGN GUIDES

ALLOWABLE CAPACITIES

Unstiffened Web(s) Subjected to Local Forces, P_{allow}, KIPS (1,000 Lbs) Per Web(s)

SECTION	6"X20 GASTUD				6"X18 GASTUD				6"X16 GASTUD				6"X14 GASTUD				6"X12 GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.187	.224	.262	.299	.343	.400	.457	.514	.687	.783	.879	.974	1.094	1.221	1.348	1.475	2.225	2.416	2.607	2.797
EQ.C3.4-4	.332	.394	.475	.556	.583	.657	.759	.874	1.240	1.370	1.496	1.700	1.971	2.140	2.308	2.481	4.006	4.256	4.506	4.756
EQ.C3.4-6	.121	.145	.169	.194	.231	.270	.308	.347	.475	.541	.607	.674	.769	.858	.947	1.037	1.591	1.728	1.864	2.000
EQ.C3.4-8	.255	.265	.274	.283	.537	.552	.566	.581	1.269	1.297	1.325	1.353	2.181	2.220	2.258	2.297	4.823	4.884	4.944	5.005
EQ.C3.4-3	.867	.982	1.075	1.155	1.357	1.523	1.658	1.775	2.996	3.339	3.618	3.859	4.434	4.907	5.291	5.623	8.226	9.007	9.642	10.190
EQ.C3.4-5	1.294	1.515	1.695	1.851	2.074	2.410	2.682	2.918	3.394	3.916	4.340	4.706	5.199	5.955	6.568	7.099	10.194	11.544	12.641	13.590
EQ.C3.4-7	.445	.504	.551	.593	.797	.894	.974	1.042	1.315	1.465	1.588	1.694	2.198	2.433	2.623	2.788	4.928	5.395	5.776	6.104
EQ.C3.4-9	1.086	1.272	1.423	1.554	1.874	2.177	2.424	2.637	2.973	3.430	3.801	4.122	4.745	5.434	5.995	6.479	9.613	10.885	11.920	12.814

SECTION	8"X18 GASTUD				8"X16 GASTUD				8"X14 GASTUD				8"X12 GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.306	.357	.408	.459	.632	.720	.808	.896	1.028	1.147	1.266	1.385	2.136	2.319	2.502	2.685
EQ.C3.4-4	.540	.608	.703	.809	1.170	1.292	1.412	1.604	1.886	2.047	2.209	2.374	3.889	4.132	4.374	4.617
EQ.C3.4-6	.197	.230	.263	.295	.423	.482	.541	.600	.707	.789	.871	.953	1.507	1.636	1.765	1.895
EQ.C3.4-8	.425	.437	.449	.461	1.082	1.107	1.131	1.155	1.948	1.983	2.017	2.052	4.494	4.550	4.606	4.663
EQ.C3.4-3	1.391	1.561	1.700	1.819	3.121	3.478	3.769	4.020	4.584	5.073	5.470	5.813	8.428	9.227	9.877	10.439
EQ.C3.4-5	2.074	2.410	2.682	2.918	3.394	3.916	4.340	4.706	5.199	5.955	6.568	7.099	10.194	11.544	12.641	13.590
EQ.C3.4-7	.748	.839	.914	.978	1.253	1.396	1.513	1.613	2.118	2.344	2.527	2.686	4.806	5.262	5.632	5.953
EQ.C3.4-9	1.736	2.017	2.246	2.443	2.806	3.237	3.588	3.891	4.541	5.201	5.737	6.200	9.509	10.768	11.791	12.676

SECTION	9-1/4"X16 GASTUD				9-1/4"X14 GASTUD				9-1/4"X12 GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.597	.681	.764	.848	.987	1.101	1.215	1.330	2.080	2.258	2.436	2.614
EQ.C3.4-4	1.127	1.244	1.359	1.544	1.832	1.989	2.146	2.307	3.816	4.054	4.292	4.530
EQ.C3.4-6	.391	.445	.500	.554	.668	.745	.823	.900	1.455	1.579	1.704	1.828
EQ.C3.4-8	.966	.988	1.009	1.030	1.802	1.834	1.866	1.898	4.288	4.341	4.395	4.449

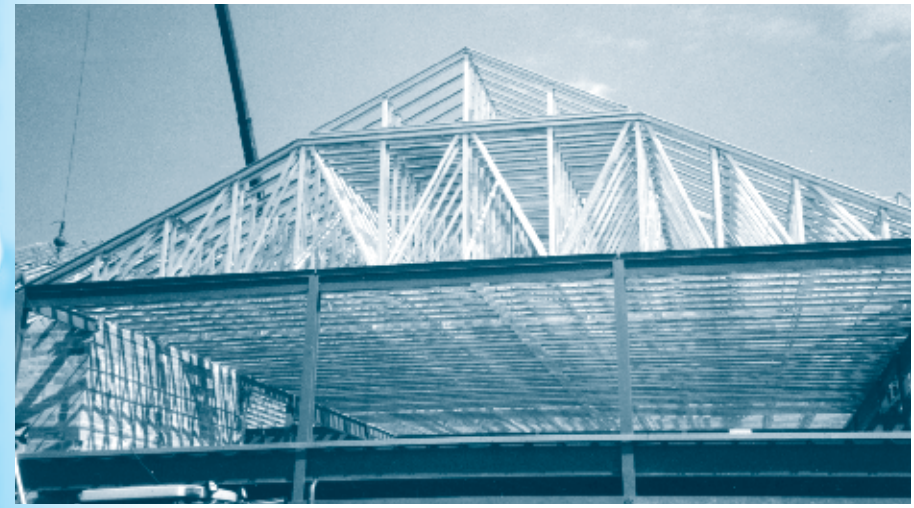
SECTION	10"X16 GASTUD				10"X14 GASTUD				10"X12 GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.577	.657	.738	.818	.962	1.073	1.185	1.296	2.046	2.221	2.397	2.572
EQ.C3.4-4	1.100	1.215	1.327	1.508	1.801	1.955	2.109	2.267	3.772	4.007	4.243	4.478
EQ.C3.4-6	.371	.423	.475	.527	.645	.719	.794	.869	1.423	1.545	1.667	1.789
EQ.C3.4-8	.896	.916	.936	.956	1.715	1.745	1.776	1.806	4.164	4.216	4.269	4.321
EQ.C3.4-3	3.169	3.532	3.827	4.082	4.734	5.239	5.649	6.003	8.629	9.448	10.113	10.689
EQ.C3.4-5	3.394	3.916	4.340	4.706	5.199	5.955	6.568	7.099	10.194	11.544	12.641	13.590
EQ.C3.4-7	1.190	1.327	1.438	1.533	2.038	2.255	2.432	2.584	4.684	5.128	5.489	5.802
EQ.C3.4-9	2.640	3.045	3.375	3.660	4.337	4.967	5.479	5.922	9.225	10.446	11.439	12.297

SECTION	11-1/4"X16 GASTUD				11-1/4"X14 GASTUD				11-1/4"X12 GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.536	.610	.685	.760	.912	1.018	1.123	1.229	1.979	2.148	2.318	2.488
EQ.C3.4-4	1.048	1.157	1.264	1.436	1.737	1.885	2.034	2.186	3.684	3.914	4.144	4.374
EQ.C3.4-6	.333	.379	.426	.472	.598	.667	.737	.806	1.360	1.476	1.593	1.709
EQ.C3.4-8	.757	.773	.790	.807	1.540	1.568	1.595	1.622	3.917	3.966	4.015	4.064

SECTION	12"X14 GASTUD				12"X12 GASTUD				14"X14 GASTUD				14"X12 GASTUD				16"X12 GASTUD			
BEARING (IN)	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5	1.5	2.5	3.5	4.5
EQ.C3.4-1	.896	.999	1.103	1.207	1.956	2.124	2.292	2.459	.829	.925	1.021	1.118	1.867	2.027	2.187	2.347	1.777	1.930	2.082	2.234
EQ.C3.4-4	1.715	1.862	2.009	2.159	3.655	3.883	4.111	4.339	1.630	1.769	1.909	2.052	3.538	3.759	3.980	4.200	3.421	3.635	3.848	4.061
EQ.C3.4-6	.582	.650	.717	.785	1.339	1.454	1.568	1.683	.520	.581	.641	.701	1.255	1.362	1.470	1.577	1.170	1.271	1.371	1.471
EQ.C3.4-8	1.482	1.508	1.535	1.561	3.835	3.883	3.931	3.979	1.249	1.271	1.294	1.316	3.505	3.549	3.593	3.637	3.175	3.215	3.255	3.295
EQ.C3.4-3	4.813	5.326	5.743	6.103	8.830	9.668	10.349	10.938	4.813	5.326	5.743	6.103	9.031	9.888	10.585	11.187	9.209	10.083	10.793	11.407
EQ.C3.4-5	5.199	5.955	6.568	7.099	10.194	11.544	12.641	13.590	5.199	5.955	6.568	7.099	10.194	11.544	12.641	13.590	10.194	11.544	12.641	13.590
EQ.C3.4-7	1.958	2.166	2.336	2.483	4.562	4.994	5.346	5.650	1.877	2.078	2.240	2.381	4.439	4.861	5.203	5.499	4.317	4.727	5.060	5.348
EQ.C3.4-9	4.133	4.733	5.221	5.643	8.941	10.124	11.086	11.918	3.929	4.500	4.963	5.365	8.656	9.802	10.734	11.539	8.372	9.480	10.381	11.160

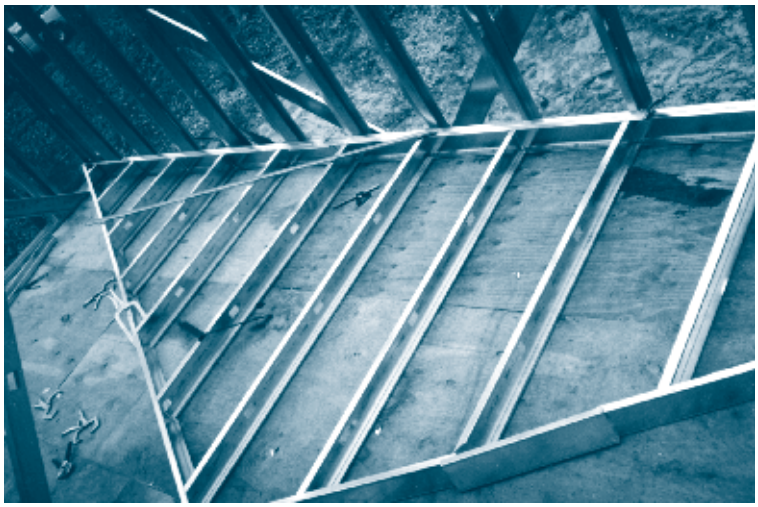
Roof Systems

Super Stud can furnish engineered roof systems. Rafters and joists that are designed & engineered for your demanding project, precut, ready to assemble, that save time and money.



Trusses

Ready to assemble custom made trusses. Our trusses are designed to have superior strength while minimizing the weight of the stud.



Pre-cut ready to assemble trusses

This system allows for material to get to your project quicker. These trusses can be assembled quickly on site & installed efficiently meeting today's difficult project deadlines.

SUGGESTED FRAMING APPLICATIONS

Forward

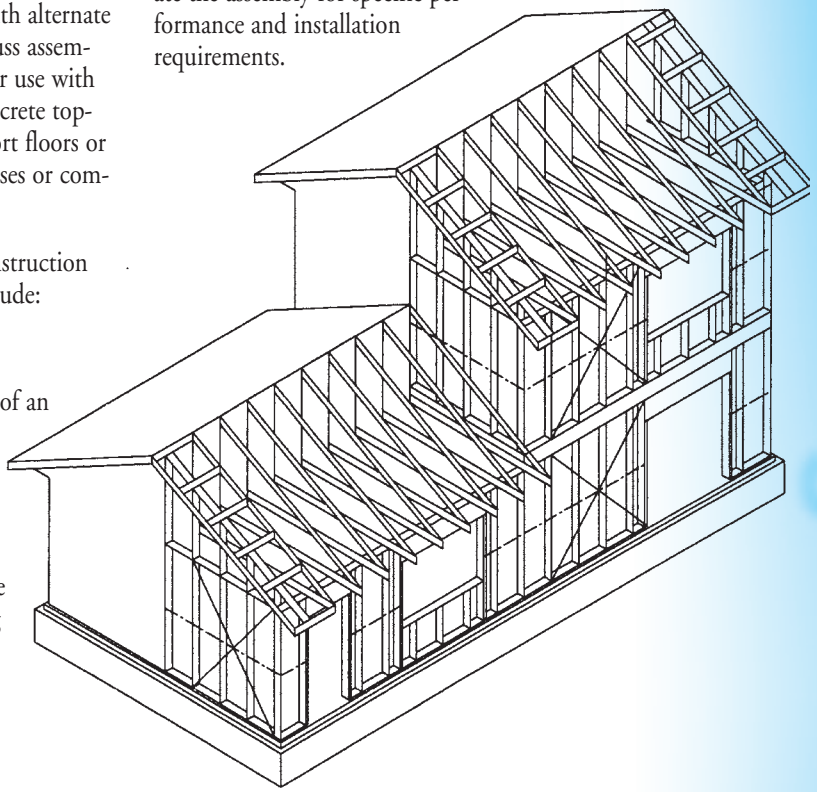
Steel framing may be used in the construction of roof, floor and wall assemblies, either collectively or in conjunction with alternate systems. Roofing applications include flat, rafter or truss assemblies. In floor construction, steel framing is suitable for use with either plywood sub-flooring or metal decking with concrete toppings. Fire rated wall assemblies may be used to support floors or roofs constructed with steel or wood joists, rafters, trusses or composite concrete decks.

Additionally, steel framing may be utilized in the reconstruction and renovation of existing buildings. Applications include:

- Flat to slope roof conversions
- Modification of interior spaces (i.e. the conversion of an interior warehouse to office or storage areas)
- Wood to steel joist replacements
- Fascia modifications to commercial centers

Steel framing may be prefabricated either at the job site or shipped to the project from remote facilities helping to reduce construction time. Pre-fabricated frames manufactured in a controlled environment are built with uniform consistency.

The framing conditions shown herein are representative of typical construction practices. The user is cautioned to thoroughly evaluate the assembly for specific performance and installation requirements.



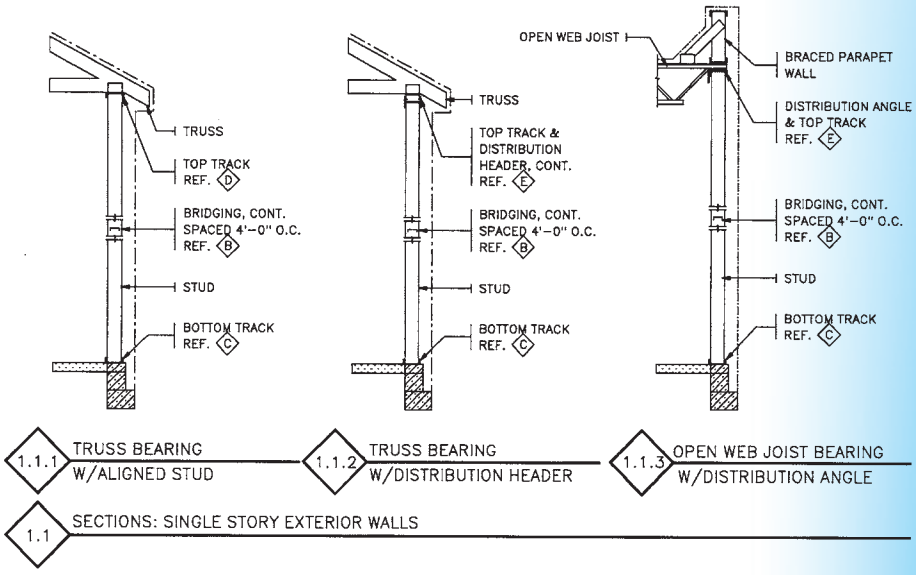
1. BEARING WALL APPLICATIONS

1.1 Single Story Exterior Walls

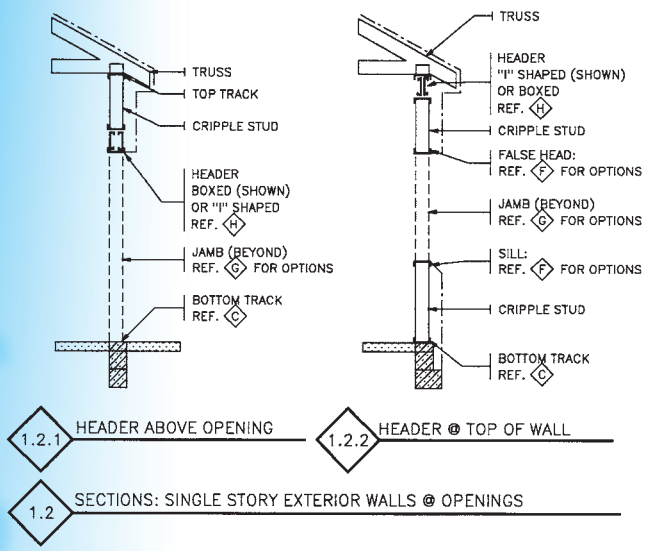
The wall functions to withstand axial stresses due to roof and floor loads acting in conjunction with bending stresses due to lateral loads. Two bearing conditions are shown. Section 1.1.1 shows the roof element aligning with the stud. Drawings 1.1.2 & 1.1.3 show the installation of a continuous distribution header at conditions of non-alignment.

The distribution header should maintain a low profile (i.e. avoid "tall" boxed headers) to alleviate overturning or rolling of the header when the wall is subjected to lateral load.

In applications involving open web steel joists, a continuous structural steel angle serves to function as a distribution header while it provides a compatible surface to allow for the welded attachment of the joist to the top of the wall.



SUGGESTED FRAMING APPLICATONS



1.2 Single Story Exterior Walls at Openings

Two acceptable methods of installing headers over wall openings are shown. Section 1.2.1 shows the header located above the opening while Section 1.2.2 locates the header at the top of the wall. Headers at the top of the wall eliminate the need to "seat" the cripple studs as the load is carried directly to the jambs.

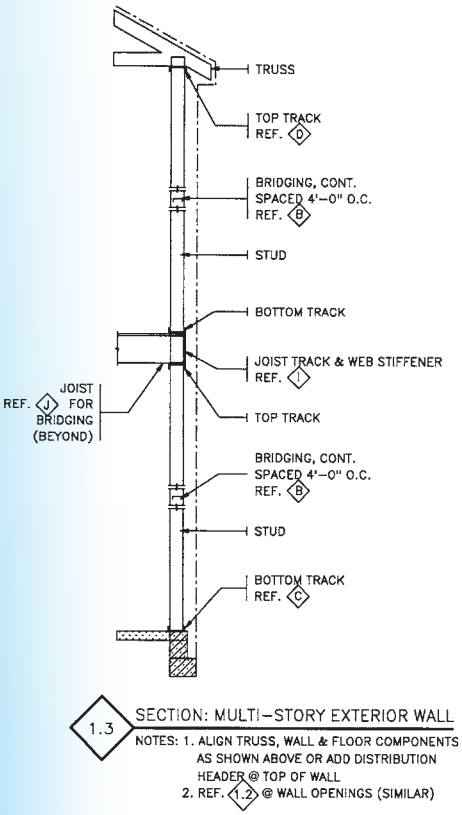
Both boxed or "I" shaped headers are acceptable and may be used interchangeably in these drawings. Boxed headers offer greater torsional restraint while the "I" shaped header is easier to insulate and offers increased resistance to web crippling.

Similar to curtainwall design, each element of the opening (head, sill and jambs) shall provide the necessary stiffness to assure the performance of the exterior wall system.

1.3 Multi-story Exterior Walls

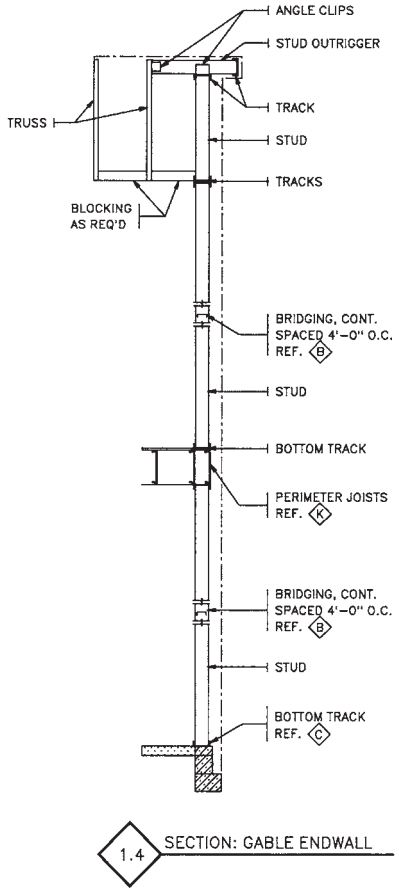
Consideration shall be given to the accumulative loads descending the assembly. The joist ends are typically reinforced to prevent web crippling.

Reference Section 1.2 for discussion of framing requirements at wall openings.



1.4 Gable End Walls

The drawing shows the installation of a separate gable infill wall above the top level wall which requires bracing to the roof assembly by means of blocking (shown) or diagonal braces within the roof cavity. As an alternate, the studs may be extended full height to follow the rake of the roof thus eliminating the break in the wall.

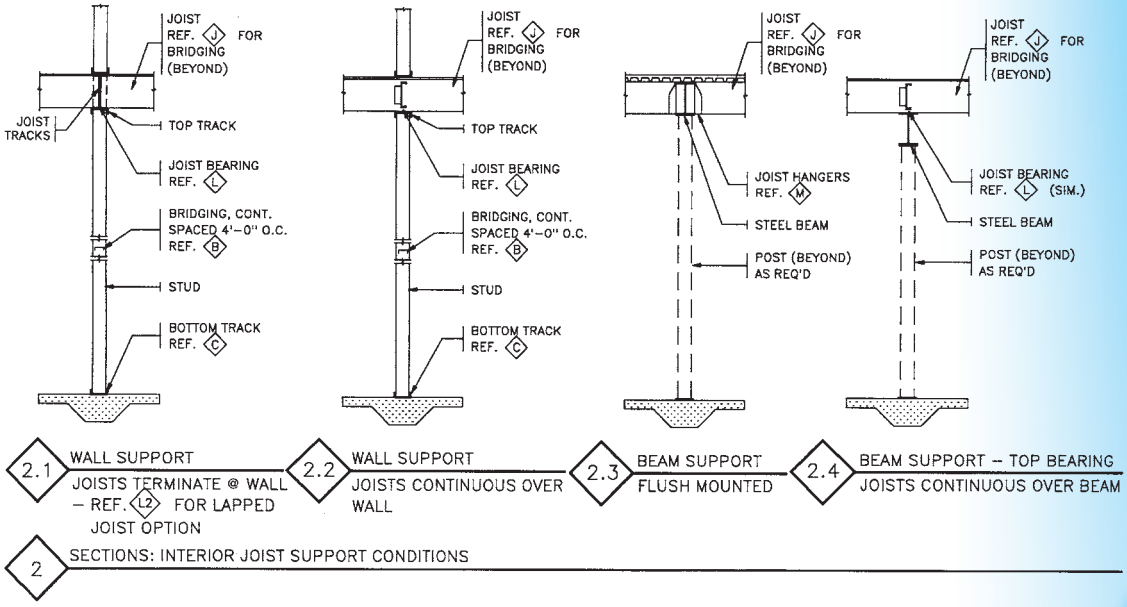


SUGGESTED FRAMING APPLICATONS

2. INTERIOR JOIST SUPPORT CONDITIONS

Options for providing intermediate joist support are shown involving stud bearing walls (Ref. 2.1 & 2.2) and steel beams (Ref. 2.3 & 2.4).

Section 2.1 shows the joists terminating at continuous tracks centered over the wall. Detail L2, Page 37, describes a lapped joist alternate. Section 2.2 highlights the installation of a continuous joist over a bearing wall.

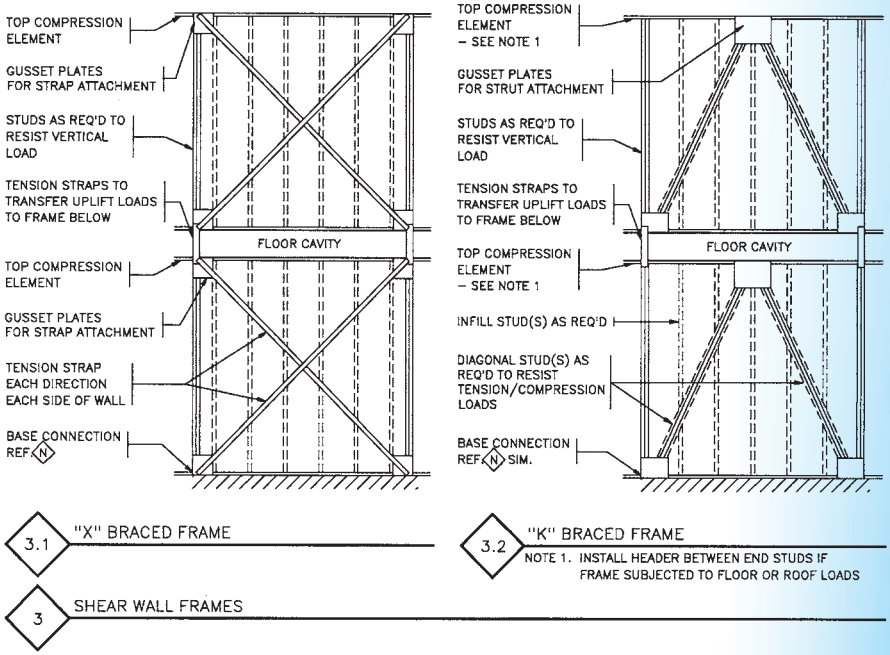


The steel beam alternatives are distinguished by a flush (Ref. 2.3) or top bearing condition (Ref. 2.4). For flush mounted installations, a Super Stud Joist Hanger should be specified.

3. Lateral Frame Stability

The design of lateral bracing for a cold formed steel structure, particularly multi-story frames, is a complex task and as such, a thorough explanation is beyond the scope of this publication. Among items to consider, however, include:

- Determination of dynamic forces due to wind or seismic action;
- Distribution of forces to roof and floor diaphragms to vertical shear walls which are ultimately anchored to the foundation;
- Relative stiffness of the frames and restriction of story drift.



Shear resistance may be provided by means of diaphragm rated structural sheathing attached to each face of a stud partition, "X" braced flat strap assemblies (Ref. 3.1) or "K" braced walls involving the use of diagonal stud components to act as compression and tension elements (Ref. 3.2).

In "X" braced assemblies, the strap thicknesses should be kept to a minimum (i.e. use wider straps of thinner materials) and preferably the straps should cross between stud spacings. These measures help maintain a low profile across the face of the wall to assure a smooth appearance of finished gypsum wall boards. Additionally, the strap should be pulled taut before final attachments are made.

The "K" braced wall, as shown, is typical of a frame found at a non-load bearing partition (i.e. the floor and roof components parallel the wall). Should the assembly serve as a bearing partition, a header should be added at the top of the wall continuous between the end studs of the frame. Additionally, the diagonals provide lateral support for the infill studs and its capacity to serve as a "wind girt" should also be reviewed.

The shear wall may develop uplift forces between descending floors and at its base connection to the foundation. Reducing the angle of incidence of the diagonals components will help to decrease uplift forces. Where possible, diagonals should terminate at load bearing post or jamb locations thus taking advantage of counteracting dead loads.

SUGGESTED FRAMING APPLICATONS

4. Roof Framing

Steel framing is compatible for use in virtually any short to mid-span roofing application involving varying degrees of pitch and support conditions.

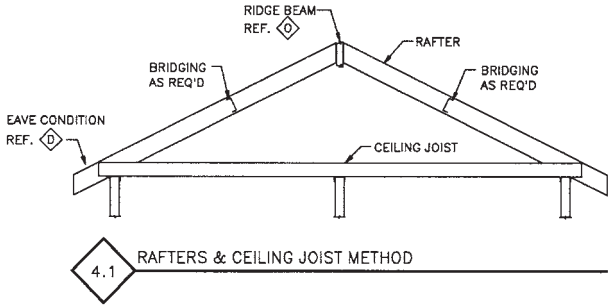
Pitched roofs are generally defined by one of two methods: Common Rafters and Ceiling Joists (Ref. 4.1) and Trusses (Ref. 4.2). Flat or low pitched roofs parallel the design and installation requirements of floor joists (Ref. Section 2.).

4.1 Rafter and Ceiling Joist Method

This method of roof construction is known by most carpenters familiar with conventional wood framing.

The rafters terminate at common ridge and hip and valley collectors, which in addition to the perimeter walls, support the rafter. The collectors may be constructed using light gage steel framing sections fabricated into boxed assemblies or structural steel tube or beam shapes.

The ceiling joists act as a collar tie between the exterior walls while they serve as joists for an attic or floor.



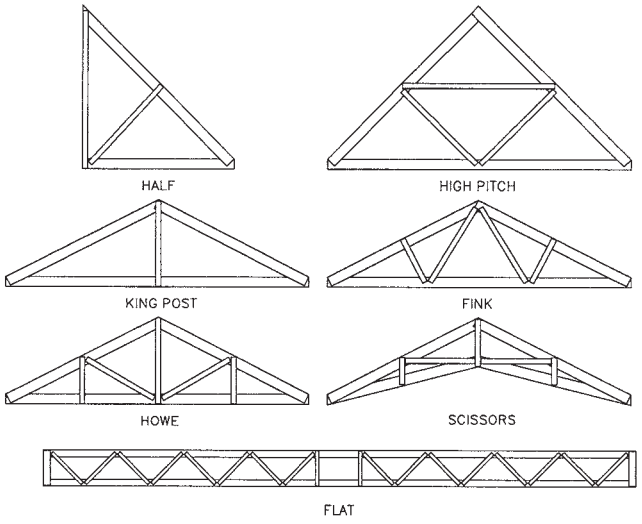
4.1 RAFTERS & CEILING JOIST METHOD

4.2 Trussed Frame Construction

Compared to rafter and joist construction, prefabricated trusses save materials and reduce on-site labor costs. They are capable of spanning greater distances thus reducing or eliminating interior support locations and increasing space design flexibility.

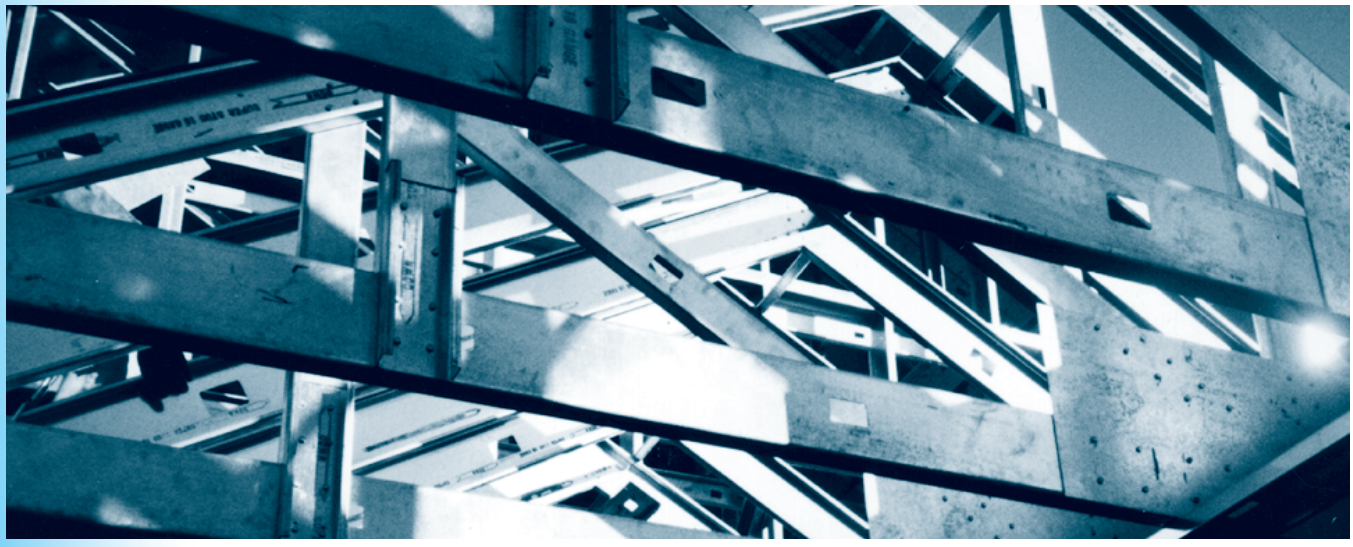
The design of a truss frame shall consider roof live or snow loads, component dead weights and wind. The slope of the roof need also be considered. Generally, the shallower the slope, the greater the stresses thus requiring increased member sizes, connections, etc.

Truss spacing should also be considered. In applications involving the direct attachment of plywood sheathing, spacing is typically limited to 24 inches on center maximum. Installations involving seamed metals, on the other hand, may allow truss spacings ranging between 4 to 8 feet on center depending on the type and size of the sub-purlin used.



4.2 TRUSS FRAMES

Super Stud has the capability to furnish prefabricated trusses custom manufactured to meet specific project requirements. Contact your local Super Stud sales representative at 718-545-7500 for additional information.

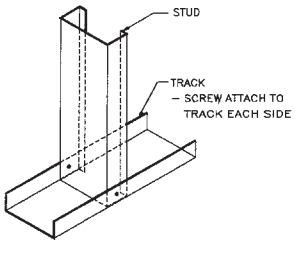


SUGGESTED CONNECTION DETAILS

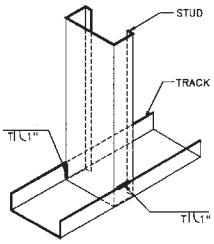
Forward

The framing connections shown herein are representative of typical construction practices. The user is cautioned to thoroughly evaluate the detail for specific performance and installation requirements.

The details primarily show screw attachments between framing components. Welds, sized and spaced as required, may be substituted for screws.



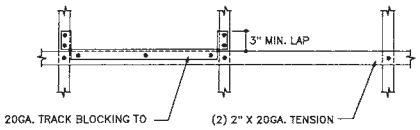
A1 SCREW ATTACHED

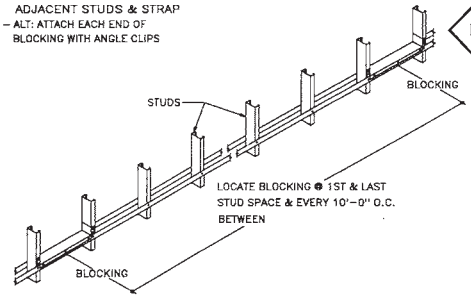


A2 WELDED

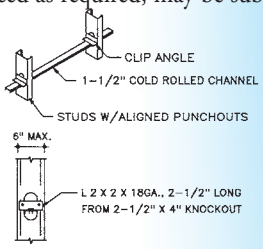
A CONNECTION: TRACK TO STUD

NOTE: @ MULTIPLE STUD ASSEMBLIES (POSTS,JAMBS,ETC.), CONNECTION APPLIES TO EACH STUD

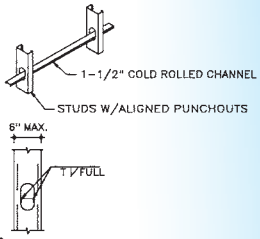




B1 FLAT STRAPS & BLOCKING



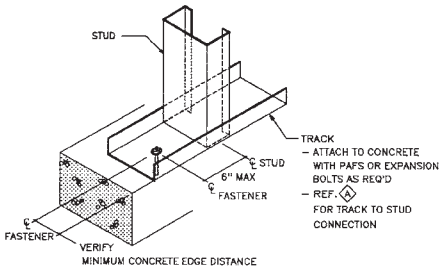
B2 CHANNEL THROUGH ALIGNED KNOCKOUTS – SCREW ATTACHED



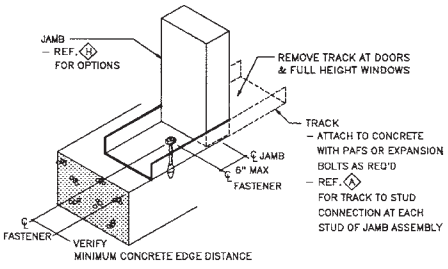
B3 CHANNEL THROUGH ALIGNED KNOCKOUTS – WELDED

B WALL BRIDGING ALTERNATIVES

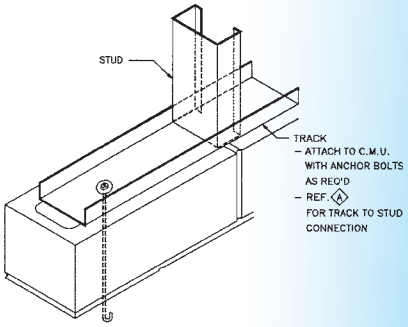
NOTE: LOCATE BRIDGING ROWS @ 5'–0" O.C. INTERVALS OR AS REQ'D BY DESIGN



C1 CONNECTION: @ SINGLE STUD

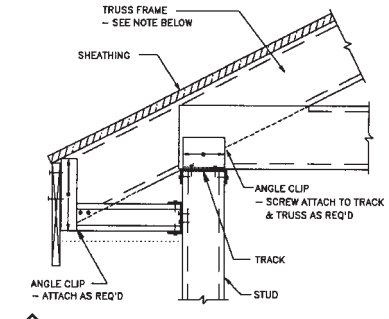


C2 CONNECTION: @ JAMB



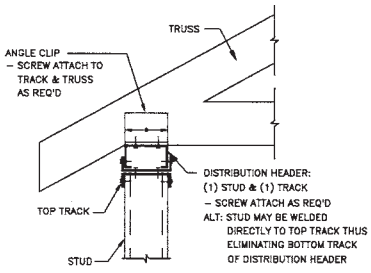
C3 CONNECTION: TRACK TO CORE–FILLED C.M.U.

C CONNECTION: TRACK TO CONCRETE & C.M.U.

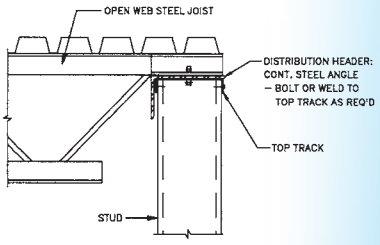


D ROOF FRAMING @ EXTERIOR BEARING WALL

NOTE: ALIGN TRUSS WITH STUD OR ADD DISTRIBUTION HEADER AT TOP OF WALL



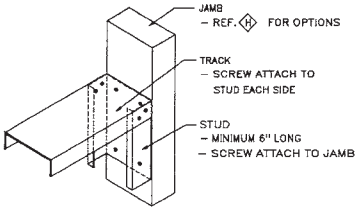
E1 (1) STUD & (1) TRACK



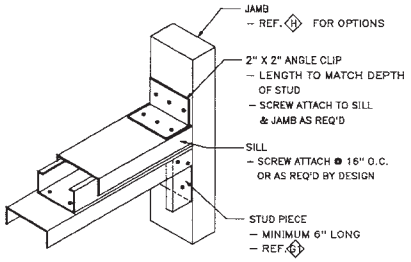
E2 STEEL ANGLE

E DISTRIBUTION HEADER OPTIONS

SUGGESTED CONNECTION DETAILS

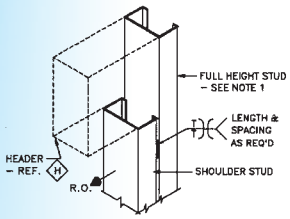


G1 SILL CONSTRUCTION
(1) TRACK

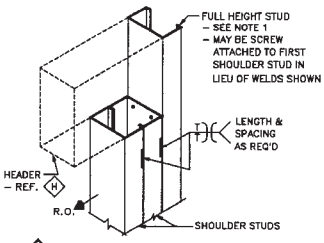


G2 SILL CONSTRUCTION
(1) STUD & (2) TRACKS

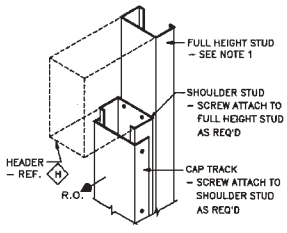
G SILL ASSEMBLIES

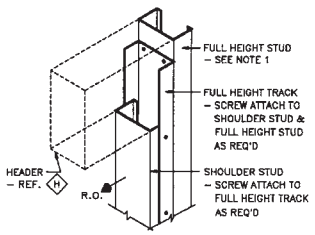


G1 (2) STUDS



G2 (3) STUDS

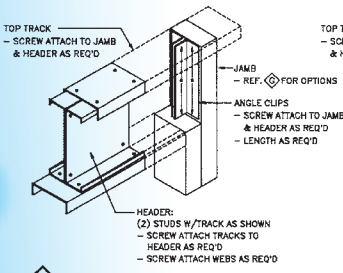




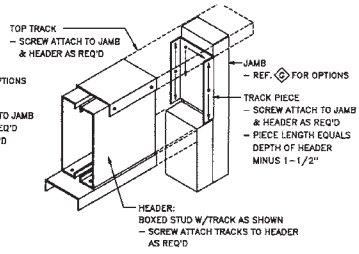
G3 (2) STUDS & (1) TRACK

G JAMB ASSEMBLIES

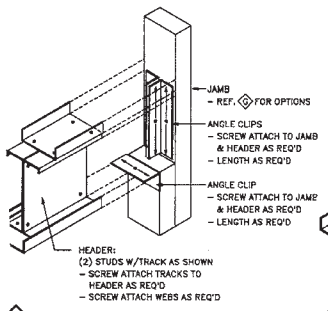
NOTE 1. EXTEND FULL HEIGHT STUD TO TOP OF WALL IF HEADER IS LOCATED DIRECTLY ABOVE OPENING (I.E. DROPPED HEADER). ADDITIONAL FULL HEIGHT STUDS MAY BE REQUIRED TO MEET STRESS AND/OR DEFLECTION REQUIREMENTS.



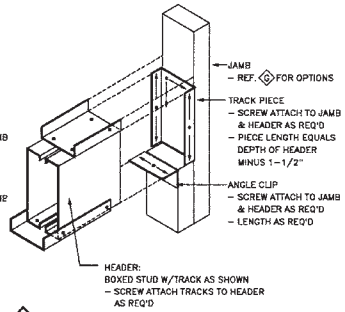
H1 "I" SHAPED HEADER @ TOP OF WALL



H2 BOXED HEADER @ TOP OF WALL

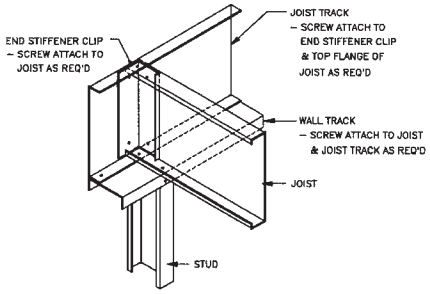


H3 "I" SHAPED HEADER ABOVE OPENING



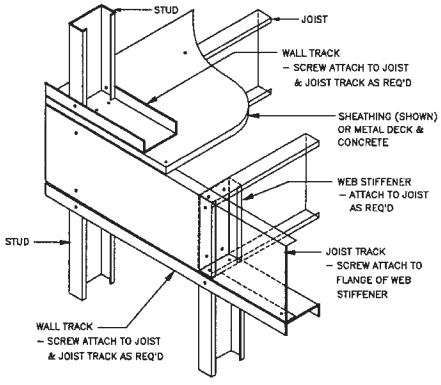
H4 BOXED HEADER ABOVE OPENING

H HEADER ASSEMBLIES



I1 WITH END STIFFENER CLIP

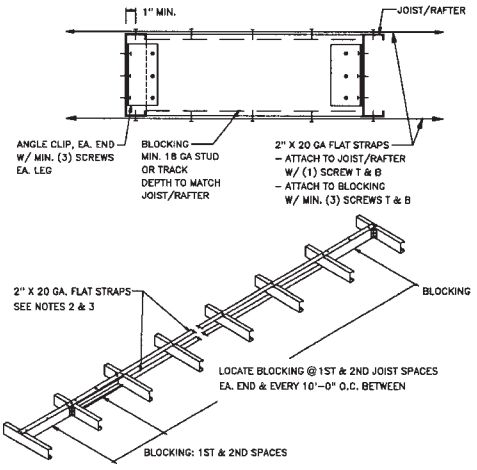
NOTE: ALIGN JOIST & STUD AS SHOWN. WHERE OFFSET IS ANTICIPATED, JOIST TRACK, SIZED AS REQUIRED, MAY BE USED TO TRANSFER JOIST REACTION



I2 WITH WEB STIFFENER

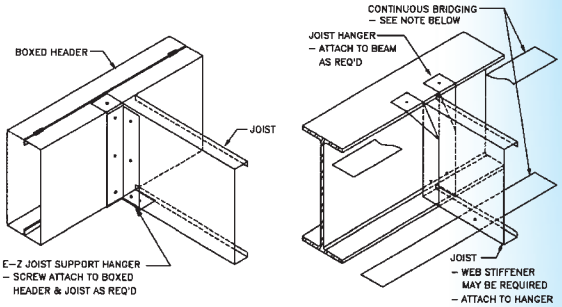
I JOIST END BEARING CONDITIONS

SUGGESTED CONNECTION DETAILS



J JOIST OR RAFTER BRIDGING: FLAT STRAPS & BLOCKING

NOTES: 1. LOCATE BRIDGING ROWS @ 7'–0" O.C. INTERVALS OR AS REQ'D BY DESIGN
2. ATTACHMENT OF METAL DECK OR SHEATHING BEFORE LOADING ELIMINATES TOP STRAP
3. REPLACE BOTTOM STRAP WITH 1–1/2" CHANNEL IF CEILING BOARD IS NOT DIRECTLY ATTACHED TO JOIST OR RAFTER

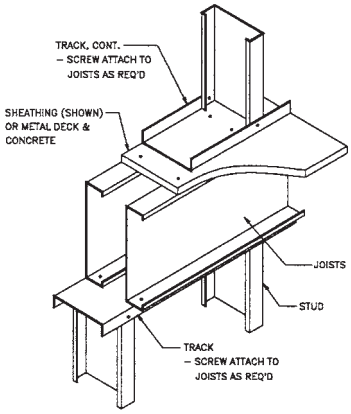


M1 EZ JOIST SUPPORT HANGER – TO BOXED HEADER

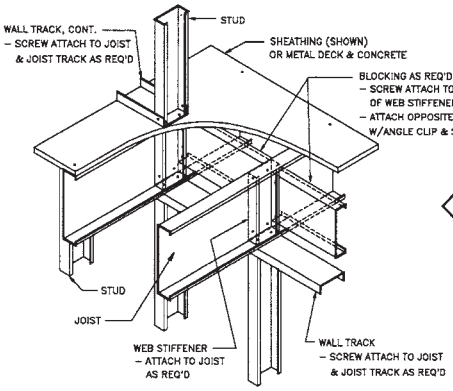
M2 JOIST HANGER TO STEEL BEAM

NOTE: INSTALL CONTINUOUS BRIDGING BETWEEN JOISTS. USE FLAT STRAP & BLOCKING (REF. DTL J) OR BLOCKING ONLY IN ALTERNATING JOIST SPACES. BRIDGING MAY BE ELIMINATED IF BOTTOM OF ASSEMBLY IS LATERALLY BRACED TO BEAM.

M JOIST HANGER ALTERNATIVES

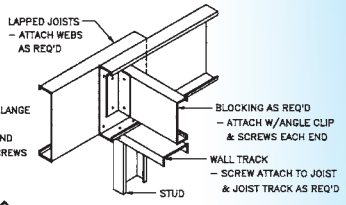


K JOISTS @ SIDE WALL



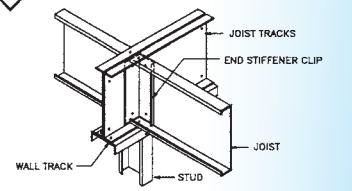
L1 CONTINUOUS JOISTS

NOTE: ALIGN JOIST & STUD AS SHOWN.



L2 LAPPED JOISTS

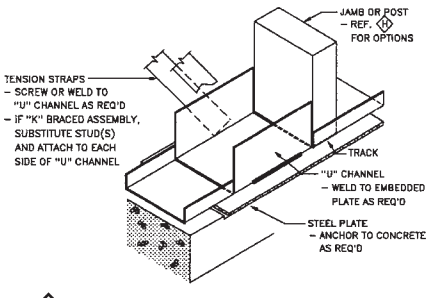
NOTE: ALIGN JOIST & STUD AS SHOWN.



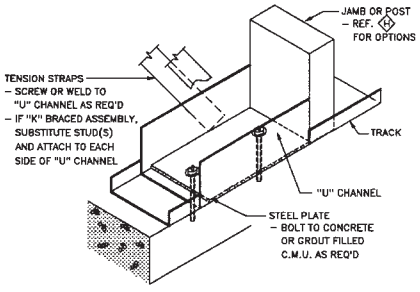
L3 ABUTTING JOISTS

NOTE: ALIGN JOIST AND STUD AS SHOWN. WHERE OFFSET IS ANTICIPATED, JOIST TRACK, SIZED AS REQUIRED, MAY BE USED TO TRANSFER JOIST REACTION.

L JOISTS OVER INTERIOR WALL

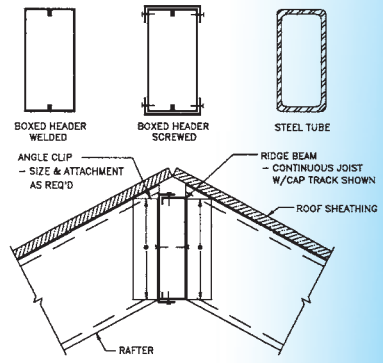


N1 WITH EMBEDDED STEEL PLATE



N2 WITH BOLTED STEEL PLATE

N SHEAR WALL BASE CONNECTIONS



O RAFTERS TO RIDGE BEAM

(4) BEAM ALTERNATIVES SHOWN

GUIDE SPECIFICATION FOR A LOAD BEARING FRAMING SYSTEM

This information serves as a general guide to specifying a steel framed load bearing system. Italicized comments, where shown, serve as a commentary to the item it follows.

DIVISION 5

SECTION 05400-COLD FORMED STEEL FRAMING

1.0 GENERAL

1.01 Description of Work

Furnish all labor, materials and equipment as required to complete the installation of the cold formed steel framing system as described in the contract drawings and this specification.

1.02 Related Work

(List applicable specification sections for work which requires coordination with the steel framing system.)

1.03 Quality Assurance

1. Quality Control

   a. Framing Identification

      Each structural "C" stud component shall be identified with a factory applied marking denoting the manufacturer's name, mils and grade of steel. Studs manufactured from 33 KSI material shall be color coded with blue markings. Studs manufactured from 50 KSI steel shall be color coded red. The framing contractor is responsible for notifying the manufacturer in writing of this requirement.

   b. Inspections

      (Furnish requirements for shop and field inspections. Items to be considered include:

      - Qualifications of inspection agency;
      - Who bears the cost of the inspections;
      - Intervals between inspections, etc.)

   c. Qualifications

      (Furnish qualification requirements of the framing contractor. Items to consider include:

      - Provide documentation of past experience in the construction of steel framing systems similar in scope to the application shown on the contract documents;
      - Qualification of welding procedures in accordance with requirements of the current edition of the American Welding Society (AWS) "Specification for Welding Sheet Steel in Structures", D1.3).

   d. Pre-Installation Conference

2. Standards

   The design and installation of the steel framing system shall adhere to the minimum requirements of the current edition of the following specifications:

   a. American Iron and Steel Institute (AISI) "North American Specification for the Design of Cold Formed Steel Structural Members";

   b. American Welding Society (AWS) "Specification for Welding Sheet Steel in Structures", D1.3;

   c. American Society of Testing Materials (ASTM) Specifications:

      C-955 "Standard Specification for Load Bearing (Transverse and Axial) Steel Studs, Runner (Track) and Bracing and Bridging, for Screw Application of Gypsum Wallboard and Metal Plaster Bases";

      C-1007 "Standard Specification for the Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories".

   d. American Iron and Steel Institute (AISI) S200 and American Society of Testing Materials (ASTM) A1003.

1.04 Submittals

Prior to commencement of work, the contractor shall submit the following items for the approval of the Owner's Architect and Engineer of Record:

1. Drawings

   For field assembled (stick-built) installations, the contractor shall provide drawings addressing the construction of each unique framing condition and connection. The drawings shall include descriptions, locations and spacings of each framing component and fastener.

   For prefabricated applications, also include frame drawings depicting shape, dimensions, components, locations and construction sequence.

2. Structural Calculations

   Submit calculations for review which shall include development of loading requirements and structural analysis of each unique framing and connection condition.

   (The calculation requirement may be omitted if the Owner's Engineer performs the framing analysis. If calculations are

required, it is beneficial if the A/E establishes minimum design requirements including:

- Governing design code(s);
- Basic wind speed, exposure and importance classifications and seismic requirements;
- Floor and roof minimum live load requirements;
- Roof snow load requirement with provisions for drifting and sliding snow as dictated by code;
- Deflection limitations;
- Requirements for professional certification.)

3. Literature

   Submit current technical literature prepared by the framing manufacturer. The structural properties and load tables shall be prepared in accordance with the contents of the current AISI's "North American Specification for the Design of Cold Formed Steel Structural Members".

4. Certifications

   Submit statements prepared by the framing manufacturer certifying conformance with the minimum requirements of Section 2.0.

2.0 PRODUCTS

2.1 Acceptable Manufacturer

The cold formed steel framing products shall be furnished by SUPER STUD BUILDING PRODUCTS, INC., Edison, New Jersey or approved equal.

2.2 Materials

The steel framing products shall be manufactured from steel meeting the minimum requirements of the following specifications:

1. Mechanical Properties, Base Steel

   Structural framing components shall be formed from steel meeting the minimum requirements of the following specifications:

	ASTM A1003 ($Fy_{(min)}$ = 50 KSI)	ASTM A1003 ($Fy_{(min)}$ = 33 KSI)
Studs	97, 68 & 54* mils	43 & 33 mils
Track & Accessories	97* & 68* mils	54*, 43 & 33 mils

Fy = Minimum Yield Point

** Fy=33KSI, 50 KSI must be specified at time of order.*

2. Galvanized Coating

   The steel framing products shall be zinc coated (galvanized) in accordance with ASTM A525, G-60.

   (While a G-60 coating is our standard offering, Super Stud can also fulfill requests G-90 coatings which provides 50 percent more zinc protection.)

3.0 EXECUTION

3.1 General

1. Prefabricated wall and floor panels shall be square, with components attached in a manner as to prevent racking and to minimize distortion while lifting.
2. Cutting of steel framing members shall be by saw, shear or plasma-cutting equipment. Conventional oxyacetylene torch cutting is not permitted.
3. Storage and Handling

   The steel framing components shall be stored on a flat plane, off ground and protected by impervious covering or shelter.

4. Sheathing boards shall be installed in accordance with most stringent requirement of the written specifications of the sheathing manufacturer or the current ASTM Specification addressing the same.
5. Temporary bracing shall be provided and remain in place until work is completely stabilized.
6. All framing components shall be plumbed, aligned and leveled.
7. Back blocking for wall mounted fixtures shall be designed and anchored to resist the applied loads.
8. Insulation equal to that specified elsewhere shall be furnished at multiple boxed members inaccessible to the insulation contractor.

3.2 Installation-Walls

1. Stud ends shall be square cut. Axially loaded single and multiple studs and header members shall be seated in the tracks to assure transfer of load. The maximum gap between the track web and end of the studs shall not exceed 1/8 inch.
2. Uniform and level bearing support shall be provided for the wall tracks. If not provided, install full size shims below bottom track at stud locations as needed or set bottom track in high-strength grout.
3. Studs shall be positioned to assure vertical alignment from level to level for the height of the building. Wall track shall not be used to transfer loads.
4. Vertical alignment shall be maintained at joist/truss and stud intersections or a load distribution member shall be provided to accommodate the offset loading condition.

   In multi-level construction at conditions where the joists are not positioned to align with the bearing studs, a stub column consisting of members of equal size to the stud wall above shall be installed in the joist cavity.

5. Installation of shear wall assemblies must be completed before the attachment of sheathing products and floor and/or roof components. Diagonal flat straps shall be furnished de-coiled from the manufacturer.

GUIDE SPECIFICATION

6. Mechanical bridging shall be installed prior to the attachment of sheathing materials and loading. Bridging rows shall be spaced in accordance with the manufacturer's recommendations or as dictated by structural analysis.

7. Splicing of framing, other than the continuous track at the top and bottom of the wall, is not permitted.

   Where track ends abut between stud, joist and/or rafter spacings, a piece of stud shall be placed in the adjoining tracks and fastened to the flanges, both sides, each end. Where track ends abut at studs, joists or rafters, attach each end to the member, both sides.

8. Multiple framing components required at posts or jambs, sills and head conditions of framed openings, shall be assembled with intermittent connections between the members.

3.3 Installation-Roof and Floor Joists

1. Do not overload the roof or floor system during construction. Place heavy loads, materials, equipment, etc. directly over structural supports, bearing walls or as dictated by structural analysis.

2. End blocking shall be provided where joist ends are not otherwise restrained from rotation.

3. Provide additional floor joists under parallel non-load bearing partitions where the partition length exceeds 1/2 the joist span unless otherwise verified by structural analysis.

4. Web stiffeners shall be provided at support locations and at points of concentrated loads unless specifically shown otherwise herein.

5. Web knockouts shall not be located within distance equalling 1.5 times the depth of the member (h) from edge of bearing. Where this provision is unavoidable, web reinforcement shall be provided.

6. Joist bridging shall be provided where indicated on the contract documents or approved shop and erection drawings.

7. Maintain a minimum 1-3/4" bearing at joist ends.

8. Where joists are flush mounted to support beams, furnish clip angles or hangers rated for the joist reaction with an applicable factor of safety. Where hangers are provided, install blocking as required to prevent joist rotation.

3.4 Connections

1. General

   a. Fasteners shall be designed and installed in accordance with the manufacturer's written instructions or industry accepted standards.

   b. Concrete fasteners shall be installed after the design compressive strength of the concrete is obtained.

2. Fasteners Types

   a. Framing Screws

      Screw penetration through joined materials shall not be less than three exposed threads. Where screw attachments are made to framing components of different thicknesses, attachment through the thinner component to the heavier is required. Select screws with an adequate cutting tip to accommodate the total thickness to be drilled. Drilling must be completed before the threads engage the material.

   b. Welds

      Welded connections shall be performed in accordance with the current edition of the AWS D1.3 Specification for Welding Sheet Steel in Structures. Consult AWS Publication WZC, Welding Zinc Coated Steels, discussing arc welding procedures and safe practices.

      Minimum weld throat thicknesses must match or exceed the base metal thickness of the thinnest connected part unless noted otherwise.

      Welds shall be cleaned and painted with rust inhibiting galvanizing paint.

      (Field welds involving 20 gage materials should be avoided.)

   c. Powder Actuated Fasteners (PAF)

      To Steel: PAF's used for the attachment of the framing system to hot rolled steel components shall possess knurled shanks. Full tip penetration through the steel component is required. A 3/4 inch minimum edge distance shall be maintained.

      To Concrete: PAF's used for the attachment of the framing system to concrete shall be of adequate length to assure minimum embedment requirements. Unless noted otherwise, a 3 inch minimum edge distance shall be maintained. Multiple fasteners shall not be spaced less than 4 inches apart.

   d. Expansion Bolts or Adhesive Anchors to Concrete

      Anchors shall be installed in accordance with the manufacturers current printed instructions.

Load Bearing Framing Systems

Super Stud Building Products, Inc.

2960 Woodbridge Avenue • Edison, NJ 08837
Tel: 732-662-6200 • Fax: 732-548-6043
www.buysuperstud.com