VULCRAFT®

STEEL JOIST & JOIST GIRDER SYSTEMS

NUCOR®
VULCRAFT CANADA

VC2019J

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A Word About Quality

In the manufacture of open web steel joists and Joist Girders, there can be no compromise on quality. Your business depends on it. Our reputation and success depends on it. As the largest manufacturer of open web steel joists and Joist Girders in North America, a lot of buildings and a lot of people depend on Vulcraft for consistently high standards of quality demonstrated through reliable performance.

In the manufacture of open web steel joists and Joist Girders, Vulcraft uses high quality steel. Welding to exact specifications is the key to making structurally sound joists and is the most critical step in the entire process. All welds are in accordance with the welding criteria specified by the Canadian Welding Bureau, and joists and Joist Girders are manufactured to meet the loading indicated by the specifying professional. Furthermore, the Quality Assurance Supervisor and all Quality Assurance Inspectors are a part of our Engineering Department and ultimately report to the Engineering Manager.

As the leading Manufacturer of open web steel joists and Joist Girders in North America, Vulcraft's reputation depends on successfully managed Quality Assurance programs. That is why Quality is important at Vulcraft. You have our word on it.

Our Mission

WE WILL TAKE CARE OF OUR CUSTOMERS BY DELIVERING THE HIGHEST VALUE PRODUCTS, SERVICES, EXPERIENCES AND RELATIONSHIPS TO ENSURE LONG-TERM SUCCESS.

We will be the SAFEST company in the world.

We build PARTNERSHIPS based on INTEGRITY and TRUST with every teammate, partner and customer to ensure MUTUAL long-term success.

We will be the highest QUALITY, lowest COST, and most PRODUCTIVE team in the business.

We maintain unmatched FINANCIAL STRENGTH through a relentless focus on PROFITABILITY.

We are committed to the ENVIRONMENT and our LOCAL COMMUNITIES.

At Vulcraft, we are proud to be one of the oldest operating divisions of Nucor Corporation (www.nucor.com). Nucor offers steel products that range from bar grating to the heaviest hot rolled beam sections produced in North America.

Through implementation and refinement of best practices, we continue to grow as a company. Nucor's pay-for-performance policy reflects a commitment to manufacturing the highest quality products while maintaining a safety record that is the envy of the industry.

Nucor serves the agricultural, automotive, construction, energy, furniture, machinery, metal building, railroad, recreational equipment, shipbuilding, heavy truck, and trailer industries. Which is to say, we are integral to North American industry.

Nucor and its subsidiary divisions manufacture the following:

- Bars (carbon and alloy steel)
- Sheets/Flatrolled
- Open Web Steel Joists
- Steel Decks
- Cold finished steel
- Metal building systems
- Steel Grating
- Wire and wire mesh
- Conduit
- Beams
- Plates
- Joist Girders
- Fabricated concrete reinforcing steel
- Steel fasteners
- Piling
- Expanded metal
- Tube

Vulcraft (www.vulcraft.ca) is the largest producer of open web steel joist and Joist Girders in North America. Vulcraft was founded in 1946 in Florence, South Carolina as an industrial steel fabrication facility and in 1954 began exclusively manufacturing long span and short span open web steel joists. It became a member of the Steel Joist Institute in May 1959 and was purchased by Nuclear Corporation of America in September 1962. Since then Vulcraft continued to grow with facilities in Norfolk, Nebraska (1964), Fort Payne, Alabama (1967), Grapeland, Texas (1967), St. Joe, Indiana (1972), Brigham City, Utah (1981), Chemung, New York (2000), Verco Deck Phoenix, Arizona, Fontana, California, Antioch, California (2006), Nucor Detailing Center, Nebraska (2009), Vulcraft Canada, Ontario (2016) and Vulcraft Canada, Alberta (2017).

In addition to open web steel joist and Joist Girders Vulcraft manufactures the following products:

- Roof Deck
  - -1.5B, BI, BA and BIA
  - -1.5F
  - -3N, NI, NA, NIA
  - -PLN3 or N3
  - -Deep VERCOR™
  - -1.5 Cellular
  - -2.0D, DA
  - -1.5PLB and HSB-36
  - -1.5A
  - -PLN or N-24
  - -1.0 E
  - -Shallow VERCOR™
  - -3 Cellular
  - -3.5D, DA

- Non-Composite Floor Deck
  - -0.6C, CSV Conform
  - -1.0C, CSV Conform
  - -1.3C, CSV Conform
  - -2C Conform
  - -Shallow VERCOR
  - -Deep VERCOR
  - -1.5C Conform
  - -3C Conform

- Composite Floor Deck
  - -1.5VL, VLI, VLR
  - -2VLI, PLW2, W2 FORMLOK
  - -3VLI, PLN, N FORMLOK
  - -PLN3 or N3 FORMLOK
  - -1.5PLB, B FORMLOK
  - -PLW3, W3 FORMLOK

- Special Profile Open Web Steel Joists
  - -Single Pitch
  - -Double Pitch
  - -Multiple Pitch
  - -Bowstring
  - -Scissors
  - -Arch Chord

- Ecospan Composite Floor System
- Grating Fabrication
- Steel Fabrication

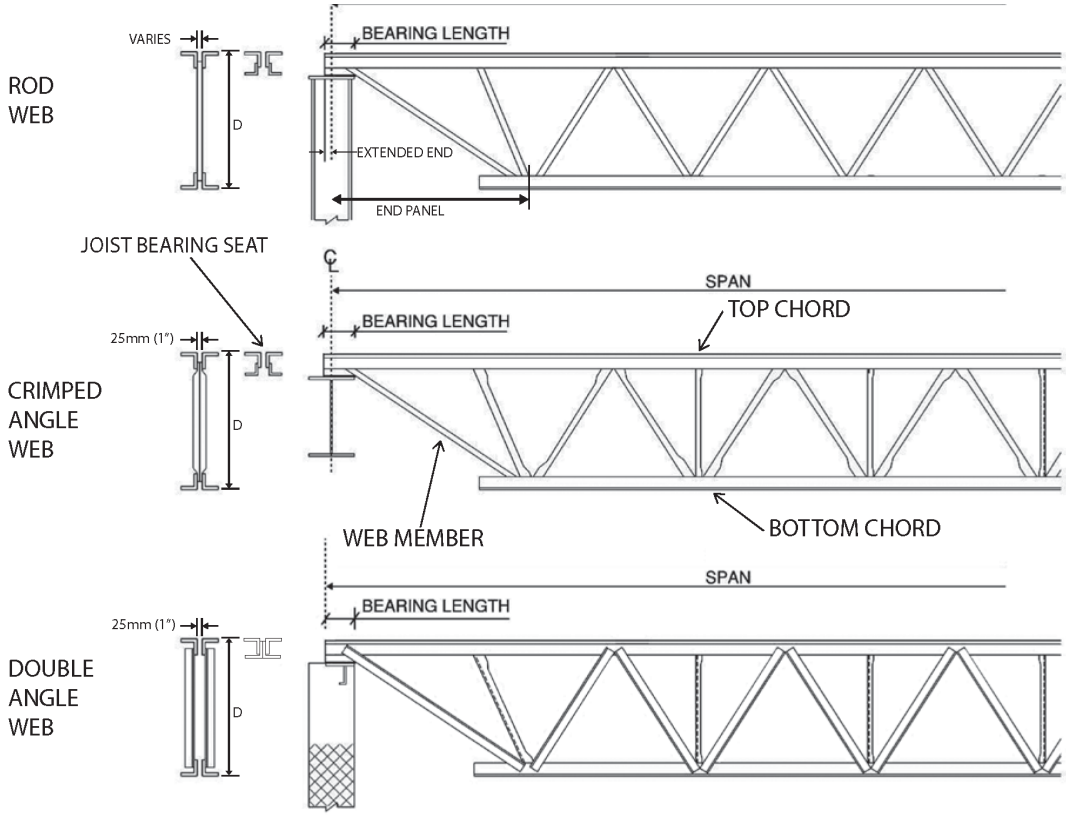
LEED Information

Nucor can provide a variety of documentation to help projects satisfy LEED credit requirements. Nucor publishes a Corporate Sustainability Report bi-annually which can be found here - https://nucor.com/environmental.

Additional LEED and/or other environmental information regarding specific Nucor Corporation products for a customer's specific order is available from facility representatives or the corporate office. A current contact list can be found here - https://nucor.com/environmental.
Additional industry information is available online through the Steel Recycling Institute at www.recycle-steel.org.

The Vulcraft open web steel joist and Joist Girder system is an effective and economical solution for floor and roof systems in industrial and commercial buildings. Capable of supporting loads over short and long spans alike, Vulcraft joist and joist girders make the erection of buildings safer, easier and inexpensive. Using material efficiently, Vulcraft systems can reduce roof and floor weights to allow columns and foundations to be lighter resulting in overall building economy.

The figure below displays typical open web steel joist and their components. Top and bottom chords consist of double angles with a gap to accommodate the webs between them. This gap varies between 13 mm (½") and 38 mm (1 ½") depending on the materials used for the web system. Web members may be comprised of rods, crimped single angles, double angles, or cold formed steel channels.



Note: Actual layout may vary

BIM

Vulcraft is pairing their proven track record of quality and service with the future of 3D modeling to give fabricators, erectors, general contractors, engineers and architects an edge over competitors in the market. Providing customers with a detailed model that can display a replica of their building, BIM leads to confidence and peace of mind for the life cycle of the project.

Vulcraft's distinct advantages include multiple platforms, including Revit®, Tekla, and SDS/2, designed web layouts, bridging, specialty joist profiles and seat profiles with slots.

NuBIM® for Revit
Our NuBIM for Revit add-in allows users to specify and model all parallel chord joists and Joist Girders available from Vulcraft as well as a number of common special profile joists, Ecospan and composite joists. Users have the ability to apply a variety of common loading conditions to all joists, as well as create load tables and diagrams. All Vulcraft and Verco deck profiles can be added to standard Revit floor and roof components through the add-in also. When your project is complete, a file can be exported containing all information related to our products, which can be sent to your Vulcraft sales rep to aid in the quoting and detailing process.

NuBIM® for Tekla
With the NuBIM for Tekla Plug-In you can now build and manage projects more effectively within Tekla Structures. Vulcraft's Joist Plug-In for Tekla Structures enables you to specify Vulcraft joists during the creation of the building model. The joist parameters from the model can then be exported directly into Vulcraft's Detailing and Design Programs.

Designed Joist
When viewing the BIM provided by Vulcraft engineers, replicas of the steel joists are laid into each aspect of the project. Simple lines and inexplicable renderings have been replaced with steel joists crafted by Vulcraft to represent the "as-built" product that will be delivered to job sites. Joists manufactured by Vulcraft can be supplied in BIM as they are actually built and put into the field. While viewing the joists in BIM, contractors and other parties have the advantage of reviewing the actual size of the member and panel layouts.

Bridging Components
To further aid the design and construction of every aspect, Vulcraft has developed a bridging component for BIM to accurately depict all structural elements. Not only does the duct work, wiring and piping have to weave around the joists, but also the bridging elements. Having these elements in place leads to decreased errors on the job site and saves valuable time and effort by specialty contractors.

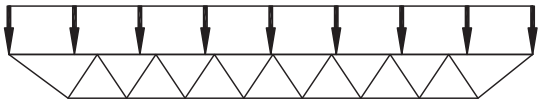
Specialty Joist Profiles
Vulcraft engineers and designers have taken joists to another level offering specialty joist profiles such as bowstrings, arches, scissor joists, double pitch, single pitch and gable joists. Eliminating guesswork around specialty profiles reduces on-site error, saving money and valuable time and effort. Utilizing these specialty joists in BIM also enhances design review with customers.

Linking Components
Vulcraft can provide a number of things in BIM to benefit individual users. However, when used with an Integrated Project Delivery (IPD) system, BIM leverages the power of modeling to facilitate collaborative decision-making. IPD brings key construction management, fabricators and product manufacturing expertise together with design professionals and the owner earlier in the process. This produces a design that is optimized for quality, aesthetics, constructibility, affordability, timeliness and seamless flow into life-cycle management.

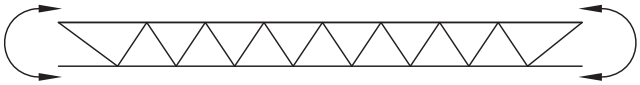
To download Vulcraft's BIM tools and for additional information on Vulcraft's BIM capabilities, please visit: http://www.vulcraft.ca/bim-technology

Load Types and Configurations

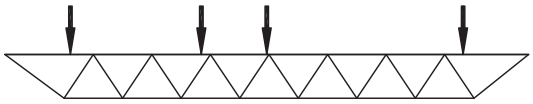
Vulcraft will design joists based on the loading requirements from CSA S16 and the loading conditions specified on the structural design documents. When specifying loads, the design professional is required to adhere to clause 16.4.1 of CSA S16 which provides a list of the required parameters for joist design. Provided loads must be classified by the design professional according to Canadian standards as dead, live, seismic, snow, or wind. Vulcraft will apply the necessary load combinations in accordance with the building code defined on the structural design documents to obtain a worst-case loading condition and size members accordingly. Unless noted otherwise on structural documents, Vulcraft will assume that the specified dead loads include the self-weight of the joists. Attention should be paid to the presence of special loading conditions such as non-uniform snow loads, rainwater ponding loads, horizontal/axial loads, axial through forces and transfer, joist seat rollover forces, end moments, net uplift, downward wind, bracing forces and mechanical equipment allowances (see figure below). Clear indication of all load types and magnitudes will lead to efficient designs and project flow.



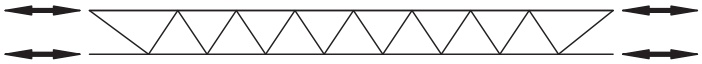
UNIFORM LOAD



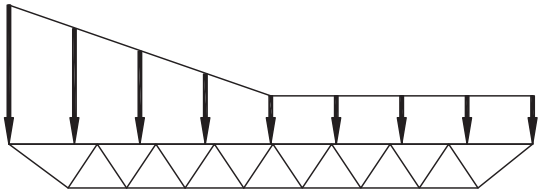
MOMENT LOADS



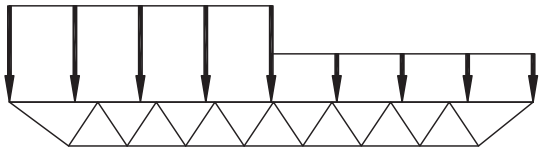
CONCENTRATED LOADS



AXIAL LOADS



SNOW DRIFT LOAD



PARTIAL UNIFORM LOADS

** If concentrated load location is not known at the time of design, (i.e. RTU locations) specify whether the load is to be applied at the top or bottom chord with the magnitude and range where load could possibly be located and Vulcraft will design the joist for that load applied at any panel point within the specified range.

Uplift

Where uplift forces due to wind are a design requirement, these forces shall be indicated on the structural design documents in terms of *factored net uplift* in kilopascals or pounds per square foot. When these forces are provided, they shall be considered in the design of joists and/or bridging. An additional line of bottom chord bridging shall be provided as per CSA S16 clause 16.5.5.2 near the first bottom chord panel points whenever uplift due to wind forces is a design consideration.

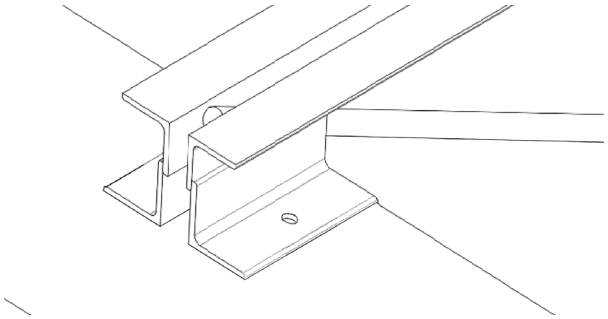
It is the responsibility of the specifying professional to determine the net uplift required for joist and Joist Girder design. While it may appear to be an easy calculation, it is up to the specifying professional to determine the amount of dead load available to resist wind uplift loading. As an example, a project has a 1.25 kPa dead load for joist design that includes a 0.50 kPa dead load for future equipment. Because this mechanical load may not be present on all joists, the design professional may determine that it is appropriate to only use a dead load D = 1.25 kPa – 0.50 kPa = 0.75 kPa in the load combinations with wind uplift loading. When specifying wind uplift loads on the structural plans, the factored net uplift is preferred, however if the gross wind uplift is specified, the design professional needs to also call out the dead load D to be used in the appropriate wind uplift combinations.

Bolted Anchorage

Joists and Joist Girders are most typically provided with bolted end connections utilizing holes in the joist shoe and the supporting material. Slotted connections are available upon request but may require welding afterwards depending on job-specific constraints. The bolt type and diameter designated by the specifying professional shall provide sufficient tensile strength to resist the provided uplift reaction. Higher strength bolts may also be required. All connections for Vulcraft-to-Vulcraft members shall include fastener hardware, whereas any connections for Vulcraft to non-Vulcraft products must have fastener hardware provided by others..

Welded Anchorage

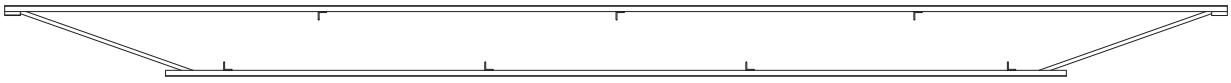
The strength of the joist bearing seat for an uplift combination is a function of both the joist seat thickness and the length of the end anchorage welds. Where appropriate, a longer end anchorage weld length aids Vulcraft in providing an economical design of the joist bearing seat. Vulcraft will provide a seat of sufficient thickness and strength to resist the specified uplift end reaction. If the bearing seats are detailed for a bolted connection, bolts must be installed.



Note: Joist Seat can be welded in lieu of bolting.

Bridging Requirements for Net Uplift

Where net uplift is a design requirement, a single line of bottom chord bridging shall be provided near the first bottom chord panel points (See CSA S16 Clause 16.5.5.2). On Joist Girders, if the ends are not strutted and extended to the column stabilizer plates, bracing shall be provided near the first bottom chord panel points. Bottom chord bridging is permitted to be spaced independently of the rows of top chord bridging. In simplified terms, this indicates that bridging need not align from top chord to bottom chord of the joist as shown below.



Primer Coating and Surface Preparation

Standard Primer

The standard primer for Vulcraft Open Web Steel Joist products, unless otherwise specified, is a shop coat of rust inhibitive primer which meets or exceeds the functional requirements of CISC/CPMA 1-73a. The method of application is by dipping the joist in a tank of grey primer or rolling the joist through a flow coating device.

CISC/CPMA 1-73a calls for a quick-drying one coat primer for use on structural steel that provides adequate protection against exposure to non-corrosive environment as found in rural, urban, or semi-industrial settings for a period not exceeding six months. This primer is intended for use on structural steel which, with the exception of a short period of time during construction, will function in interior exposures of a normally dry nature prior to application of top finish coat.

Vulcraft's standard primer color for CISC/CPMA 1-73a and 2-75 is grey and the standard minimum dry film thickness (DFT) provided is 37 micrometers (1.5 mils). Vulcraft can provide a specific minimum DFT at an additional cost if indicated in the specifications or contract drawings.

Vulcraft products receive the same primer which is formulated to meet the requirements and performance specifications of both CISC/CPMA 1-73a and CISC/ CPMA 2-75. However, CISC/CPMA 2-75 requires additional surface preparation and other application requirements which can be provided with coordination and additional costs.

Special Primer and Surface Protection

Vulcraft can offer special surface protection requirements, at an additional cost, including CISC/CPMA 2-75 primer with surface preparation following SSPC SP6 and SP7, special epoxy coatings or galvanization as per project specifications.

The standard shop primer of CISC/CPMA 1-73a or 2-75 is not recommended where a high performance, anti-corrosive surface protection is required in exposed or corrosive areas or where special environmental conditions like SSPC environmental zones 2A or above are anticipated. Special paints and coatings must be selected and specified to meet these requirements. Where food processing or extra clean atmospheres are required, the designer must consider specifying nonstandard welding and special paints.

SPAN

↓

FIRE RESISTANCE

↓

MAX/MIN JOIST DEPTH

↓

SPACING → **SEAT DEPTH**

↓

UNIFORM LOAD
-DL
-LL
-COLLATERAL DL

↓

UPLIFT LOADING

↓

CONCENTRATED LOADS
-WALL SCREENS (NO OUT OF PLANE LOADS)
-RTU'S
-BRACING LOADS

↓

ZONE LOADS
-DRIFT (SNOW)
-MOVABLE PARTITIONS

↓

OTHER LOADS
-DRAG OR COLLECTOR LOADS
-PONDING
-END MOMENTS
-VIBRATION

Open Web Steel Joists and Joist Girders in Moment Resistant Frames

When joists or Joist Girders are used as a component of a moment resistant frame, it is common practice for the contract documents to specify attachment of the bottom chord only after all the dead load has been applied to the member resulting in gravity load or continuity moments due to live, rain or snow loads only. The continuity and lateral (wind and/or seismic) moments must be provided for each end of the affected joist or Joist Girder. Vulcraft will then design the joist or Joist Girder as simply supported for the full gravity load. The end moments are then applied to the member using the appropriate load combinations. The critical forces are identified, and the members are sized accordingly.

When using open web steel joists or Joist Girders in a moment frame, it is important that consideration is given to the connection to column. As with wide flange connections, special provisions must be made to develop the required moment capacity. As can be seen in Figure 1, the use of standard seat results in an eccentric moment due to the depth of the seat. This moment must be resisted by either the bolt or the weld group connecting the joist or Joist Girder seat to the cap plate of the column.

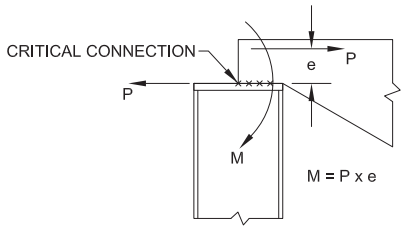


FIGURE 1

Vulcraft has conducted extensive testing of the maximum eccentric top chord force capacity of Joist Girders. Based on this testing, the maximum horizontal load for 190 mm deep girder bearing seats are presented in Table 1 below.

Table 1

Joist Girder (190 mm Seat) Top Chord Leg Size	Factored ϕP_n * (kN)
63 mm	26.7
76 mm	53.4
88 mm and Larger	66.7

*These values are based on using 19mm A325 bolts and a minimum of two 7mm fillet welds 125mm long along the sides of the seat. Vulcraft must be notified of seat forces for final seat design.

If the axial load due only to the lateral moment does not exceed the values in Table 1, a strap angle connecting Joist Girders together as shown in Figure 2 can be used to resist the continuity moments. By tying the Joist Girder ends together, the Joist Girder to cap plate connection need only resist the lateral loads **(the strap angles do not transfer lateral moments).** The design of such strap angles to resist the continuity moments is the responsibility of the specifying professional.

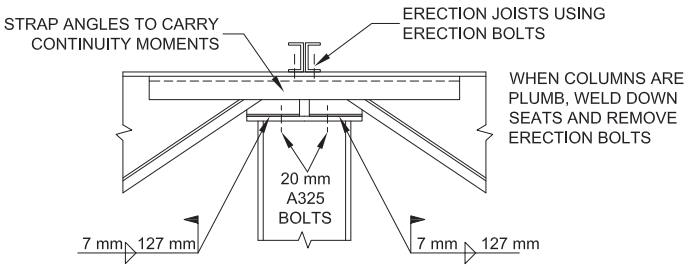


FIGURE 2

When end moments are too large for the seat to resist, it is necessary to utilize a moment plate as shown in Details A-F on page 15. The use of this simple plate virtually eliminates all eccentricity problems.

By using the following equations and Table 2, the specifying professional can determine the minimum top chord width for most Joist Girders. If the end moments are very large, the Joist Girder loads and/or spacing vary, or other special conditions exist, a more exact analysis is required. Once the chord width is known, the specifying professional can easily size the moment plate and its weld requirements to complete the connection detail.

Equation 1 (Odd Number of Joist Spaces)

Metric

$$A = \frac{P}{1906.372 * D}(N^2S - 204.216N + 204.216 - S)$$

Imperial

$$A = \frac{0.028P}{D}(N^2S - 0.67N + 0.67 - S)$$

Equation 2 (Even Number of Joist Spaces)

Metric

$$A = \frac{P}{1906.372 * D}(N^2S - 204.216N + 204.216)$$

Imperial

$$A = \frac{0.028P}{D}(N^2S - 0.67N + 0.67)$$

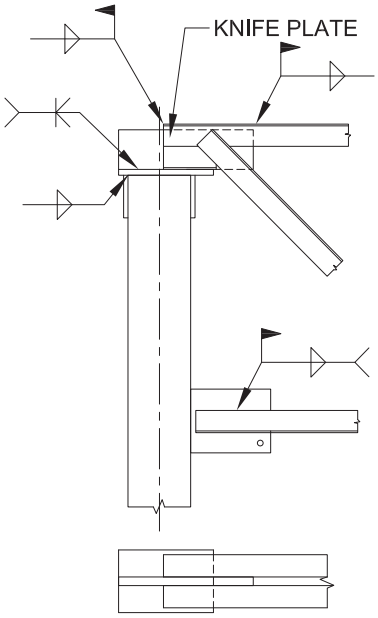
P= Unfactored panel point load (kN, kips)
N= Number of joist spaces
S= Joist spacing (mm,ft)
D= Joist Girder depth (mm,in)

Table 2

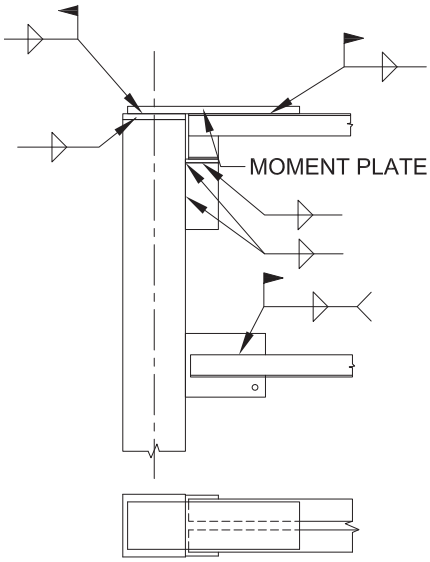
A	Minimum Top Chord Width	
0.95-1.19	150 mm	6”
1.20-1.78	180 mm	7”
1.79-2.48	200 mm	8”
2.49-3.75	230 mm	9”
3.76-4.76	280 mm	11”
4.78-8.44	330 mm	13”
Greater than 8.44	Consult Vulcraft	Consult Vulcraft

Please note that this chart is to be used only for designing moment plates. It is not intented as a general detailing aid.
*The bearing seat width may be larger than the top chord width. Contact Vulcraft if seat width is needed for determining column plate sizes

Presented below are six suggested details for a moment resistive connection involving roof Joist Girders. Similar details should be utilized for longspan joists with end moments. In all cases, the bottom chord is to be connected to the column with a vertical stabilizer plate which is to be sized to carry the required load and obtain required weld (use 150 mm x 150 mm x 19 mm plate minimum for Joist Girders).



Detail “A”



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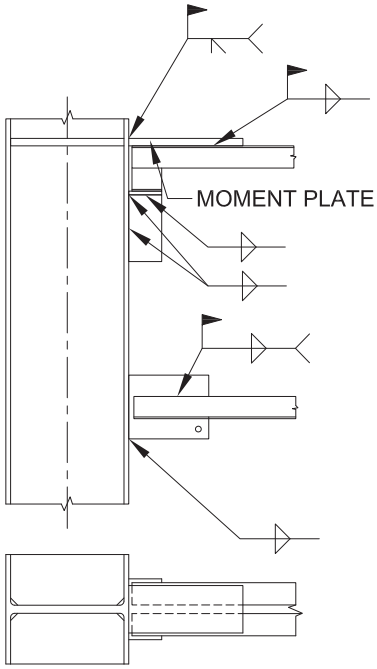
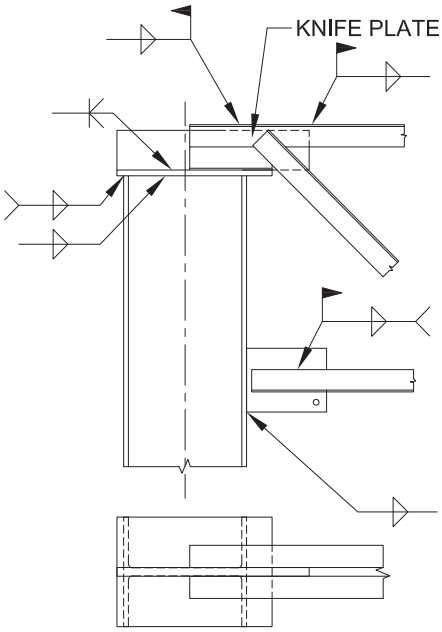


Detail “C”



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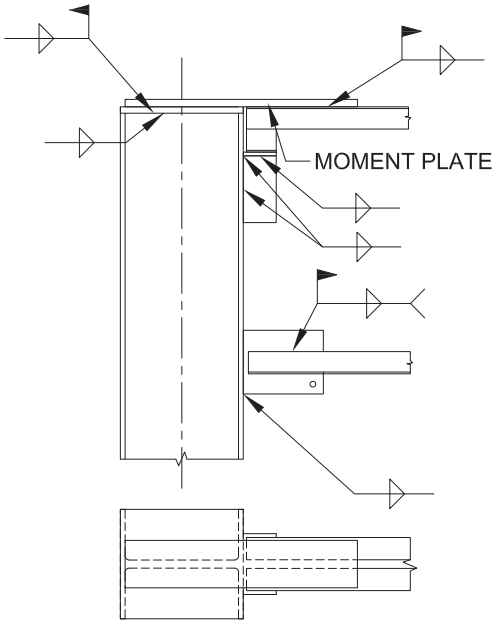
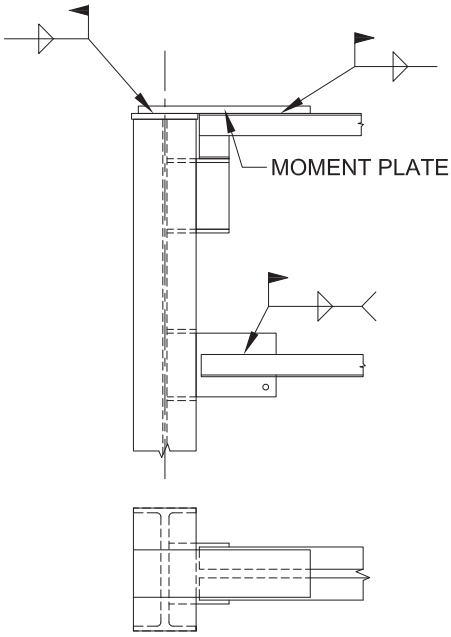


Detail “E”



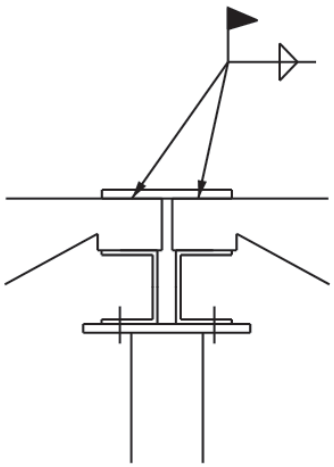
Detail “F”

Axial Loads

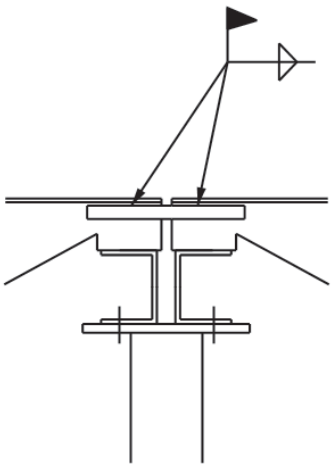
The design of open web steel joists and Joist Girders for additional axial loads shares many similarities to the design of joists and Joist Girders used in moment resistant frames. The specifying professional must clearly communicate to Vulcraft the type of load responsible for the axial load so that the appropriate load combinations can be applied.

Like open web steel joists and Joist Girders used in moment resisting frames, one of the most critical concerns is the connection of the joist or Joist Girder to the supporting structure. As shown in Figure 1 of the section on open web steel joists and Joist Girders used in moment resisting frames, an eccentric moment exists between the supporting structure and the centroid of the top chord due to the joist or Joist Girder bearing depth. Again, this moment must be resisted by the bolt or the weld group connecting the joist or Joist Girder seat to the supporting structure.

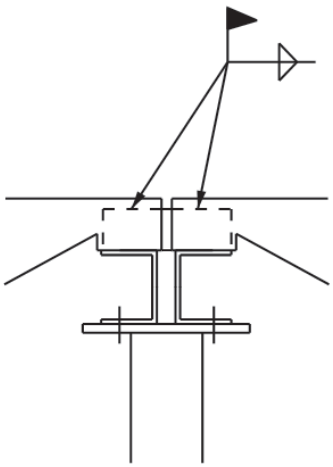
When axial loads are too large for the seat to resist, it is necessary to utilize additional straps or ties like those shown below. (Strap or tie material is not provided by Vulcraft.)



Detail “A”



Detail “B”



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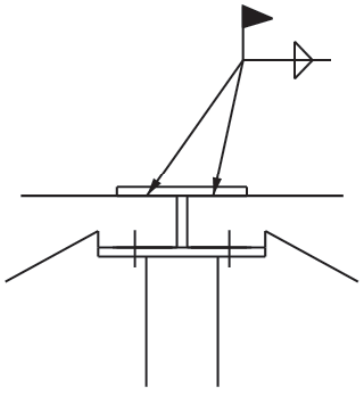
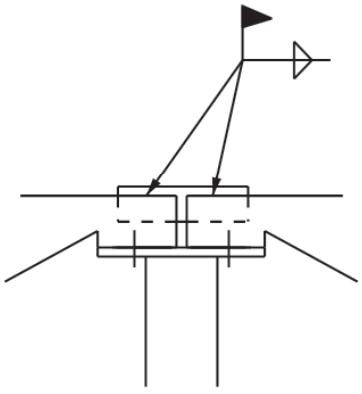
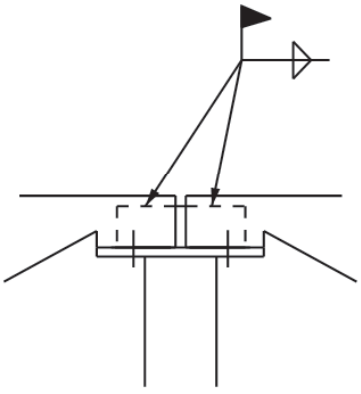


Detail “D”



Detail “E”



Detail “F”

Floor Vibration

Floor vibration due to human activity occurs, in varying degrees, in all types of building construction. Unlike steady state vibration due to machinery, which can be isolated, vibration due to human occupancy is inconsistent in both amplitude and frequency and must be controlled by proper design of the elements supporting the floor.

The Steel Joist Institute and Nucor Research and Development have been studying this phenomenon for years. Using seismic recording instruments, laboratory research continues to be performed along with gathering measurements on numerous buildings exhibiting both good and bad characteristics. AISC Design Guide 11 “Vibrations of Steel-Framed Structural Systems Due to Human Activity” Second Edition discusses, in detail, methods for calculating vibration characteristics of open web steel joist supported floors.

The clear majority of structures, including those utilizing steel joists, do not exhibit floor vibrations severe enough to be considered objectionable. However, human sensitivity to vibratory motion varies, and a satisfactory framing solution is dependent upon the sound judgement of qualified design professionals.

Floor vibration is measured in terms of acceleration, displacement amplitude and frequency. These factors are not objectionable to all people at the same level since human sensitivity and tolerance for vibration varies.

Definitions

Acceleration - is the primary measure of vibration level used in the assessment of human comfort, and is usually expressed as a percentage of the acceleration due to gravity.

Frequency - is the number of cycles per second or Hz.

Damping - is the loss of energy over time in a vibrating system and is usually presented as a percent of critical damping.

Critical Damping - is the damping required to bring a displaced system to rest without oscillation.

Observations

The following observations are recommended only as a guide to the design professional:

OPEN FLOOR AREAS are often subject to vibration issues. Modern “electronic offices” tend to have lower live loading and lower damping. Partitions, file cabinets, book stacks, heavy furnishings and even crowds of people provide additional damping and reduce vibration levels.

PARTITIONS increase damping more than any other element and often eliminate vibration issues. They are effective either above or below a floor as long as they are full height partitions connected to the floor above and below the partition. Consideration should be given to potential changes in occupancy of the floor over the life of the building.

SUPPORT FRAMING BEAMS can contribute to floor vibration. The natural frequency and amplitude of both the joists and supporting Joist Girders or hot rolled girders must be calculated. In this manner, the resulting system acceleration, displacement, and frequency can be determined.

BRIDGING of all standard types provides equal floor vibrational characteristics.

THICKER FLOOR SLABS can be an economical solution for controlling floor vibrations. The additional thickness increases floor system stiffness transverse to the joists, often improving vibration characteristics. The additional mass of the system can also reduce vibration levels.

WIDER JOIST SPACINGS improve vibrational characteristics only when combined with thicker floor slabs. The resulting increase in joist size does not contribute significantly. When used with a thicker slab, greater resistance to vibration can be achieved, and, since fewer pieces must be installed, may be more economical.

NON-COMPOSITE JOISTS are considered to be fully composite joists in vibration analyses. Human-induced loads typically cause mid-bay displacement amplitudes smaller than 0.01 in. - implying very low horizontal shears between the joists and the slab. Also, deck fasteners, including spot welds and screws, provide enough slip resistance to warrant using the composite transformed moment of inertia in vibration analyses.

LONGER FLOOR SPANS have many advantages over shorter spans both in construction and vibrational response. There are many long spanning joist supported floors that have satisfactory vibration performance.

INCREASING JOIST STIFFNESS beyond that required to meet the live load deflection limitations can be beneficial when only a small decrease in predicted acceleration is needed. Increase the stiffness of the joist or girder (whichever has the lowest frequency) until the criterion is met. When the joist and girder have the same frequency, increase the stiffness of both until the required vibration criteria is achieved.

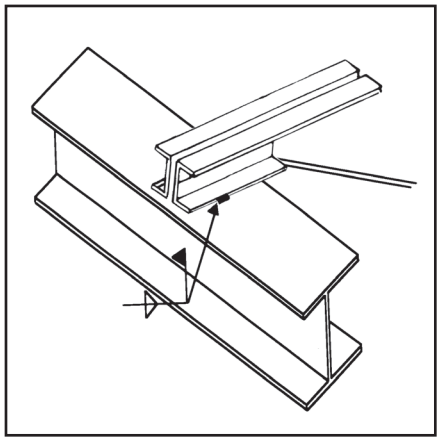
PC – based software for the evaluation of joist supported floor systems is available from:
STRUCTURAL ENGINEERS, INC
537 Wisteria Drive
Radford, VA 24141
Phone (540) 731-3330
www.floorvibe.com

Conclusions

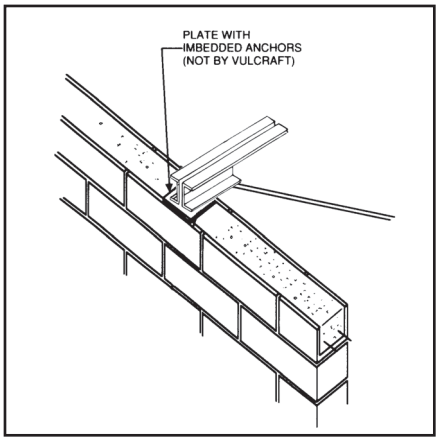
Partitions will usually eliminate vibration issues. When a floor cannot have partitions, increasing the slab thickness, increasing the joist spacing and/or increasing the joist or girder stiffness can be economical and effective ways to reduce vibrations. When vibration is a design consideration it is the responsibility of the design professional to provide, on the design documents, all requirements necessary to meet the assumptions of their analysis.

For more information refer to the Steel Joist Institute Technical Digest No. 5 “Vibration of Steel Joist-Concrete Slab Floors”, and the AISC Steel Design Guide 11 “Vibrations of Steel-Framed Structural Systems Due to Human Activity” Second Edition.

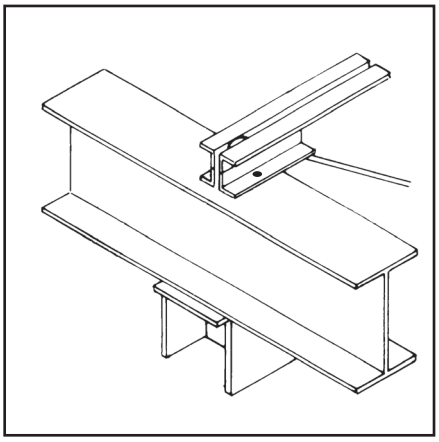
TYPICAL JOIST CONNECTIONS



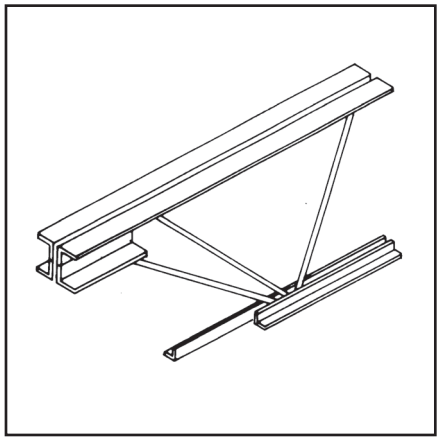
ANCHORAGE TO STEEL



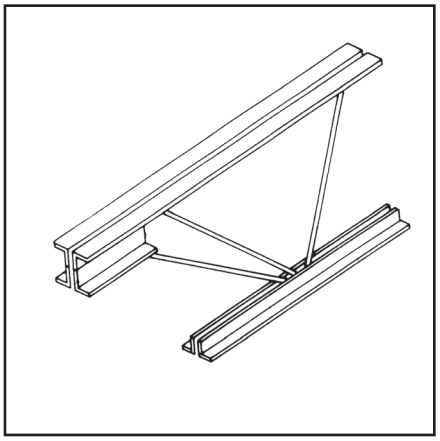
ANCHORAGE TO MASONRY



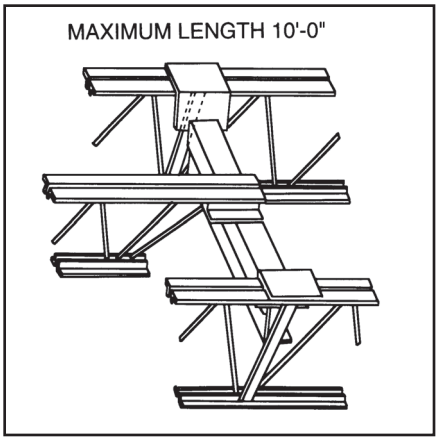
BOLTED CONNECTION



CEILING EXTENSION

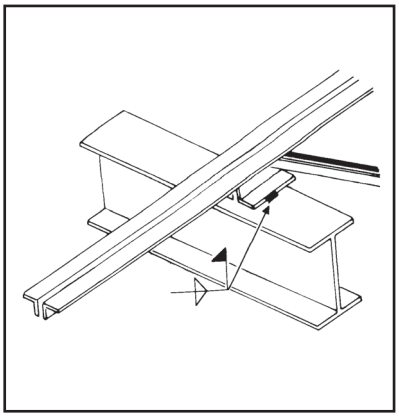


BOTTOM CHORD STRUT

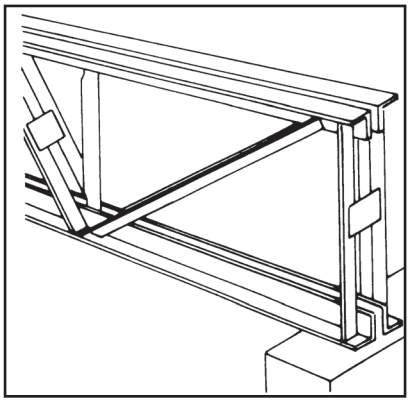


HEADERS

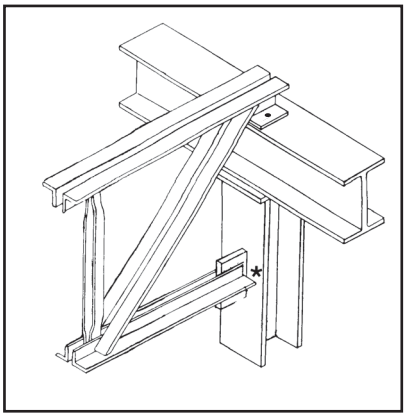
Note: If header does not bear at a Joist Panel Point add extra web in field as shown. EW or Panel Point by Vulcraft



TOP CHORD EXTENSION



SQUARE END

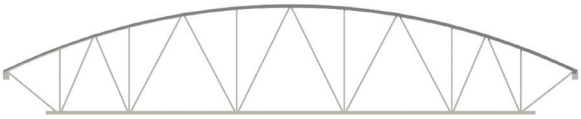


BOTTOM CHORD EXTENSION

*If bottom chord extension is to be bolted or welded the specifying professional must provide axial loads on structural drawings.

Non-Standard Configurations

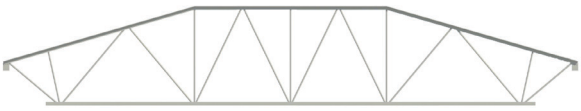
In addition to the standard configurations Vulcraft can also provide the following joist configurations:



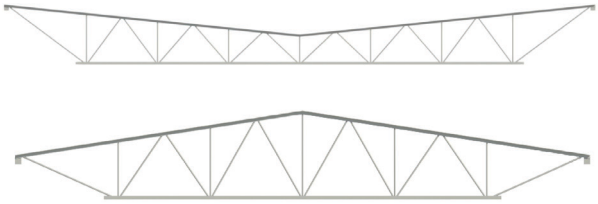
Bowstring

Arch Chord

Scissor



Multi-Pitch



Double Pitch

Single Pitch

In the fabrication of joists, a sufficient end depth must be provided. The appropriate end depth varies with the size, shape, and loading of the joist. The end depth is the distance between the top chord and the bottom chord or the projection of the bottom chord near the center line of the support. End depth requirements increase for bottom-chord-bearing joists and sloped joists. An absolute minimum end depth of 305 mm must be provided in all cases, with 457 mm minimum end depth recommended in most cases and for large joists this minimum will increase. Contact Vulcraft for minimum end depth requirements.

Note that both Scissor and Arched Chord type joists require special attention for their supports due to the horizontal deflections. These joists can be designed with either pinned end restraints at both ends or pinned on one end with a roller on the other. The pinned/pinned condition may result in significant horizontal forces being applied to the structure. Analyzing the effect of increasing the stiffness of these joists shows little change in horizontal force magnitude with significant increase in stiffness. The pinned/roller condition requires that the roller bearing condition allow for horizontal movement. In this case, increasing the joist stiffness does affect the horizontal displacement.

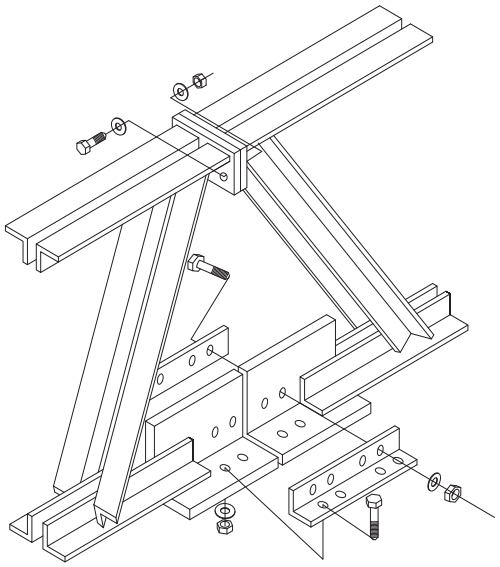
PLEASE CONTACT EITHER YOUR LOCAL DISTRICT SALES OFFICE OR THE NEAREST VULCRAFT MANUFACTURING FACILITY FOR LIMITATIONS IN DEPTH OR LENGTH.

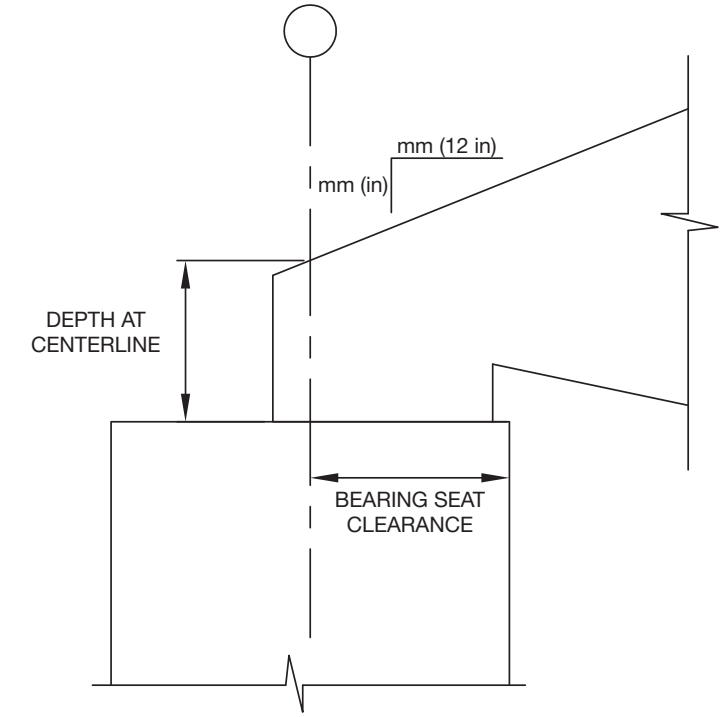
Camber

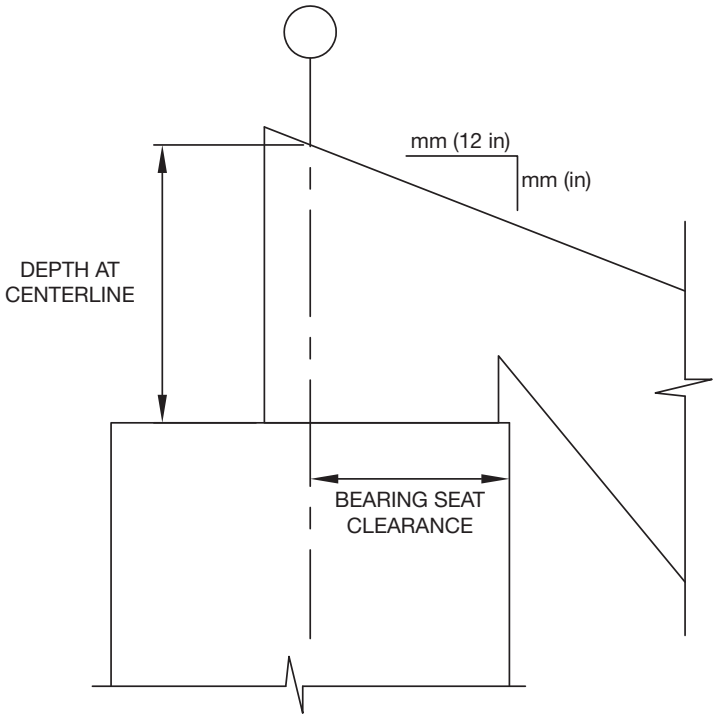
Standard Configuration:
The Camber under section 16.5.14 of CSA S-16 (0.2% of the span) will be fabricated into the joist unless the design professional specifically states on the structural drawings, the required camber. Special camber intended to offset dead load deflections is only as accurate as the dead loads provided on the structural drawings.**Requirements for less than full camber near walls or other structural elements must be clearly noted on the structural drawings.**

Non-Standard Configurations:
The design professional shall provide, on the structural drawings, the desired camber in millimeters. If the camber is not specified, Vulcraft will camber using the values for standard joist configurations based on the top chord length or possibly no camber for certain scissor, arched, bowstring or gable profiles.

Bolted Field Splices:
Joists may be supplied in two or more pieces, to be field bolted together at the jobsite, when the overall length of the joists are too long for shipping or where field conditions require a splice (ex. In existing construction where joist will be installed from underneath). It is the erector's responsibility to match joist segments as indicated on the joist erection drawings provided by Vulcraft. **Two dissimilar segments may "fit" together, but if they are not matched as indicated, then proper camber or profile will not be maintained. Vulcraft will not accept the responsibility for joists erected with mismatched segments.**







SLOPED SEAT REQUIREMENTS DIMENSIONS

SLOPED SEAT REQUIREMENTS FOR SLOPES 3% AND GREATER
OPEN WEB STEEL JOISTS

Minimum Required Depth at Centerline (mm)

Slope		Bearing Seat Clearance (mm)									
%	(in/ft)	**64**	**76**	**89**	**102**	**114**	**127**	**140**	**152**	**165**	**178**
3%	0.375	102	102	102	102	102	102	102	102	102	102
4%	0.5	102	102	102	102	102	102	102	102	102	102
8%	1	102	102	102	102	102	102	102	102	102	114
13%	1.5	102	102	102	102	102	102	102	114	114	114
17%	2	102	102	102	102	102	102	114	114	114	114
21%	2.5	102	114	114	114	114	114	127	127	127	127
25%	3	102	114	114	114	114	127	127	127	127	140
29%	3.5	114	114	127	127	127	140	140	140	140	152
33%	4	114	114	127	127	127	140	140	140	152	152
38%	4.5	114	114	127	127	127	140	140	152	152	152
42%	5	127	127	140	140	140	152	152	165	165	178
50%	6	140	140	152	152	165	165	178	178	191	191

Minimum Required Depth at Centerline (in)

Slope		Bearing Seat Clearance (in)									
%	(in/ft)	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**	**5.5**	**6**	**6.5**	**7**
3%	0.375	4	4	4	4	4	4	4	4	4	4
4%	0.5	4	4	4	4	4	4	4	4	4	4
8%	1	4	4	4	4	4	4	4	4	4	4 1/2
13%	1.5	4	4	4	4	4	4	4	4 1/2	4 1/2	4 1/2
17%	2	4	4	4	4	4	4	4 1/2	4 1/2	4 1/2	4 1/2
21%	2.5	4	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	5	5	5	5
25%	3	4	4 1/2	4 1/2	4 1/2	4 1/2	5	5	5	5	5 1/2
29%	3.5	4 1/2	4 1/2	5	5	5	5 1/2	5 1/2	5 1/2	5 1/2	6
33%	4	4 1/2	4 1/2	5	5	5	5 1/2	5 1/2	5 1/2	6	6
38%	4.5	4 1/2	4 1/2	5	5	5	5 1/2	5 1/2	6	6	6
42%	5	5	5	5 1/2	5 1/2	5 1/2	6	6	6 1/2	6 1/2	7
50%	6	5 1/2	5 1/2	6	6	6 1/2	6 1/2	7	7	7 1/2	7 1/2

Bridging

Vulcraft follows the requirements of CSA S-16 clause 16.7. Bridging provides the lateral stability of the joist during erection and shall not be considered as “bracing”. All bridging shall be installed and anchored prior to the application of construction loads on the joist. Once the decking is installed, the top chord of the joist is considered to be laterally stayed by the connection of the deck to the top chord.
Bridging rows shall be spaced such that the unbraced length of the joist top chord between bridging rows or between laterally supported ends and the first row of bridging does not exceed:

170 * r_{yy} for top chords (compression member under gravity loads)
240 * r_{yy} for bottom chords (tension member under gravity loads)

The unbraced length of bridging member shall not exceed:

300 * r_z for horizontal bridging
200 * r_x for diagonal bridging

Bridging is most commonly installed in rows as horizontal bridging spanning perpendicular to the joists and is connected at the top and bottom chords. When the joist span exceeds 13.7m (45’), diagonal bridging rows will need to be installed for erection stability purposes.

Diagonal bridging connects from the top chord of one joist to the bottom chord of the adjacent joist with either a bolted or welded connection at the intersection of the bridging members.

Clause 16.7 states the attachment of horizontal or diagonal bridging to the joist shall be by welding or mechanical means capable of resisting an axial load of at least 3 kN (670 lbs) in the attached bridging member.

When net uplift is a design requirement (bottom chord and end diagonal web become compression members) one row of horizontal bridging shall be installed near the first bottom chord panel point on each end of the joist (see Wind Uplift for further reference)

The following tables can be used to determine the general requirement for bridging based on the span and uniform loading of the open web steel joist. Please note that for some spans, depths and load combinations it may be possible to reduce the number of rows of bridging required from that shown in these tables (if interested please refer to the included load tables for a more thorough presentation of the required bridging based on these factors).

Required Rows of Bridging

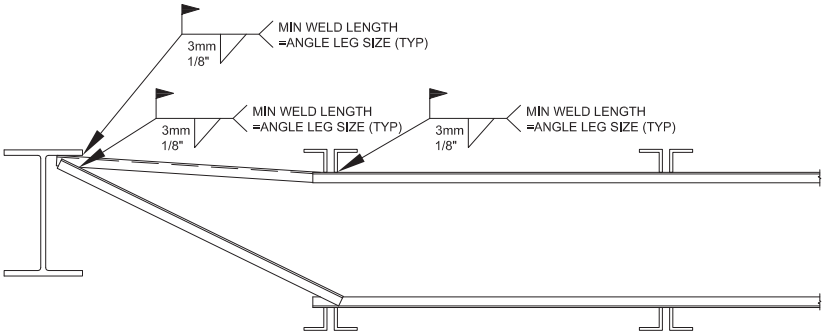
Uniform Load (kN/m) Factored Load / Service Load

OWSJ Span (m)	4.5 / 3.0	6.3 / 4.2	8.1 / 5.4	9.9 / 6.5	11.7 / 7.8	13.5 / 9.0	15.3 / 10.2	17.1 / 11.4	18.9 / 12.6	20.7 / 13.8	22.5 / 15.0	24.3 / 16.2
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1
8	2	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2	2
15	3	3	3	3	3	3	3	3	3	3	3	3
	4.5 / 3.0	**5.7** / 3.8	**6.9** / 4.6	**8.1** / 5.4	**9.3** / 6.2	**10.5** / 7.0	**11.7** / 7.8	**12.9** / 8.6	**14.1** / 9.4	**15.3** / 10.2	**16.5** / 11.0	**17.7** / 11.8
16	3	3	3	3	3	3	3	3	3	3	3	3
17	3	3	3	3	3	3	3	3	3	3	3	3
18	3	3	3	3	3	3	3	3	3	3	3	3
19	3	3	3	3	3	3	3	3	3	3	3	3
20	3	3	3	3	3	3	3	3	3	3	3	3
22	3	3	3	3	3	3	3	3	3	3	3	3
24	3	3	3	3	3	3	3	3	3	3	3	3
26	4	4	4	4	4	4	4	4	4	4	4	4
28	4	4	4	4	4	4	4	4	4	4	4	4
30	4	4	4	4	4	4	4	4	4	4	4	4
34	4	4	4	4	4	4	4	4	4	4	4	4
38	5	5	5	5	5	5	5	5	5	5	5	5
42	5	5	5	5	5	5	5	5	5	5	5	5
46	5	5	5	5	5	5	5	5	5	5	5	5

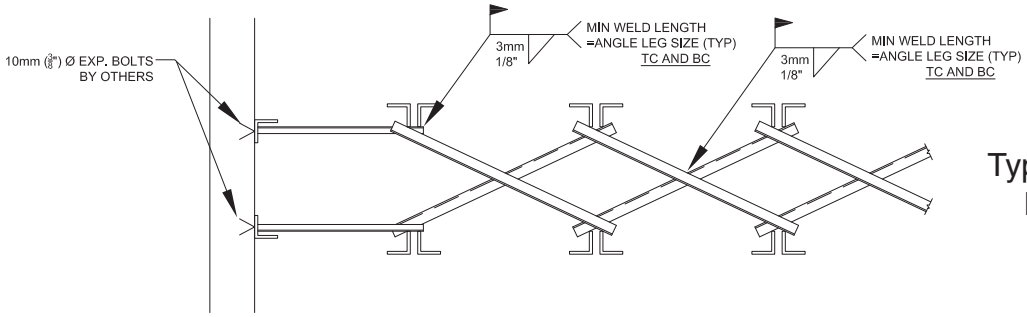
Required Rows of Bridging

Uniform Load (plf) Factored Load / Service Load

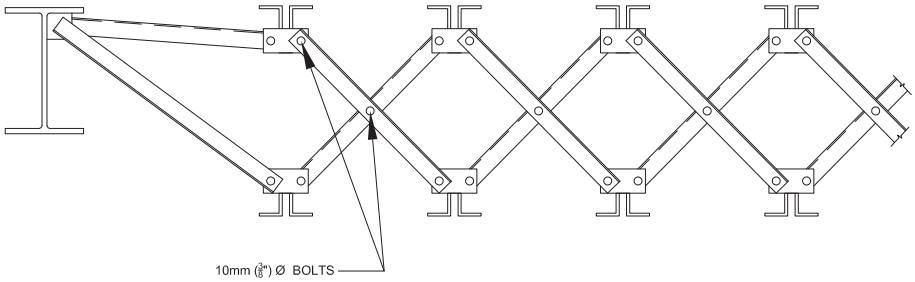
OWSJ Span (ft)	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
	200	280	360	440	520	600	680	760	840	920	1000	1080
10	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
14	1	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	1	1
24	1	1	1	1	1	1	1	1	1	1	1	1
26	2	2	2	2	2	2	2	2	2	2	2	2
28	2	2	2	2	2	2	2	2	2	2	2	2
30	2	2	2	2	2	2	2	2	2	2	2	2
32	2	2	2	2	2	2	2	2	2	2	2	2
34	2	2	2	2	2	2	2	2	2	2	2	2
36	2	2	2	2	2	2	2	2	2	2	2	2
38	2	2	2	2	2	2	2	2	2	2	2	2
40	3	3	3	3	3	3	3	3	3	3	3	3
42	3	3	3	3	3	3	3	3	3	3	3	3
44	2	2	2	2	2	2	2	2	2	2	2	2
46	2	2	2	2	2	2	2	2	2	2	2	2
48	3	3	3	3	3	3	3	3	3	3	3	3
	300	**375**	**450**	**525**	**600**	**675**	**750**	**825**	**900**	**975**	**1050**	**1125**
	200	250	300	350	400	450	500	550	600	650	700.0	750
50	3	3	3	3	3	3	3	3	3	3	3	3
52	3	3	3	3	3	3	3	3	3	3	3	3
54	3	3	3	3	3	3	3	3	3	3	3	3
56	3	3	3	3	3	3	3	3	3	3	3	3
58	3	3	3	3	3	3	3	3	3	3	3	3
60	3	3	3	3	3	3	3	3	3	3	3	3
65	3	3	3	3	3	3	3	3	3	3	3	3
70	3	3	3	3	3	3	3	3	3	3	3	3
75	3	3	3	3	3	3	3	3	3	3	3	3
80	3	3	3	3	3	3	3	3	3	3	3	3
85	4	4	4	4	4	4	4	4	4	4	4	4
90	4	4	4	4	4	4	4	4	4	4	4	4
95	4	4	4	4	4	4	4	4	4	4	4	4
100	4	4	4	4	4	4	4	4	4	4	4	4
110	4	4	4	4	4	4	4	4	4	4	4	4
120	5	5	5	5	5	5	5	5	5	5	5	5
130	5	5	5	5	5	5	5	5	5	5	5	5
140	5	5	5	5	5	5	5	5	5	5	5	5
150	5	5	5	5	5	5	5	5	5	5	5	5



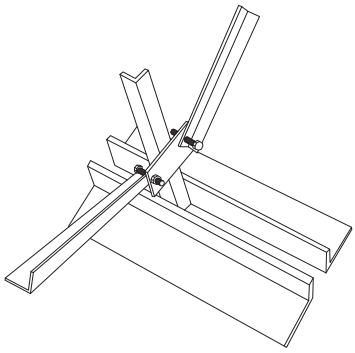
Typical Row of Welded Horizontal Bridging

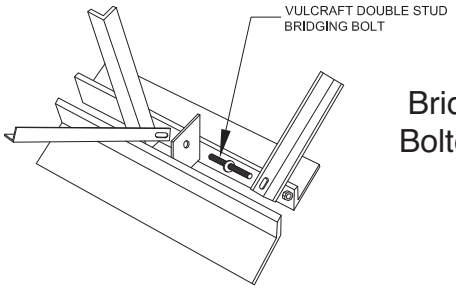


Typical Row of Welded Diagonal Bridging

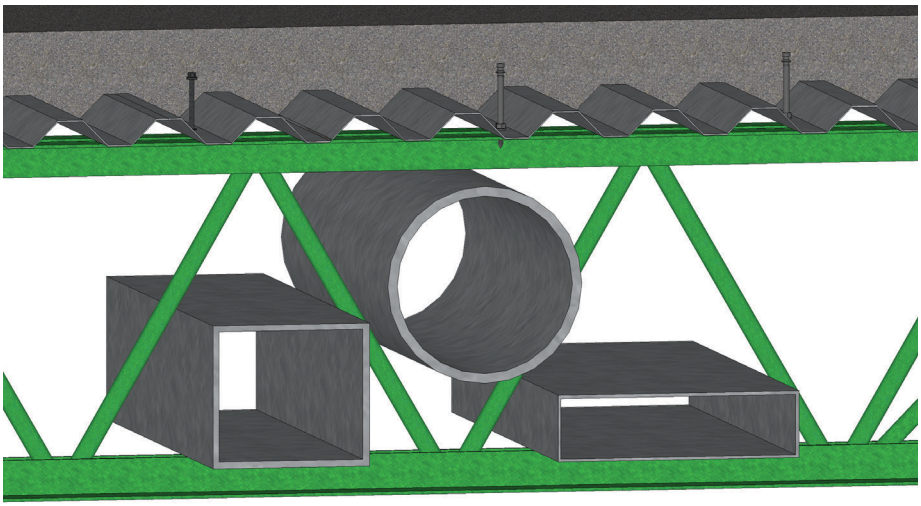


Typical Row of Bolted Diagonal Bridging





Bridging Clips for Bolted Connection



Approximate Duct Opening (mm)					Approximate Duct Opening (in)				
Joist		Duct Shapes & Allowable Sizes			Joist		Duct Shapes & Allowable Sizes		
Joist Depth	Panel Distance	Round (diameter)	Square	Rectangular	Joist Depth	Panel Distance	Round (diameter)	Square	Rectangular
255	485	150	125	150x75	10”	19”	6”	5”	6”x3”
305	485	180	150	180x100	12”	19”	7”	6”	7”x4”
355	485	205	150	230x125	14”	19”	8”	6”	9”x5”
405	610	230	180	330x125	16”	24”	9”	7”	13”x5”
455	610	255	205	330x150	18”	24”	10”	8”	13”x6”
510	610	280	230	330x150	20”	24”	11”	9”	13”x6”
560	610	305	230	205x305	22”	24”	12”	9.5”	8”x12”
610	610	330	255	205x330	24”	24”	13”	10”	8”x13”
660	610	380	305	230x455	26”	24”	15”	12”	9”x18”
710	610	405	330	230x455	28”	24”	16”	13”	9”x18”
760	610	430	355	255x455	30”	24”	17”	14”	10”x18”

Note:
Contact your local Vulcraft Sales office when the required duct size exceeds these dimensions to verify that your duct can pass through the open web steel joist.

Economic Open Web Steel Joist and Joist Girder Systems

Many factors affect the solution to the most economic Open Web Steel Joist and Joist Girder system. What follows are several items to consider when making the final design decisions for the system:

- Like most manufactured products, there is significant advantage to repetition in the manufacture of open web steel joist and Joist Girders. Repetition not only aids Vulcraft as the manufacturer, it is also a benefit to the steel erector during installation.

- In general, use the deepest system allowed by the available headroom and clearance. On a given span the deeper joists and Joist Girders will be lighter weight and less expensive. However, a lighter joist may require additional field installed bridging.

- Use wider joist spacings. A good solution is to maximize the joist spacing keeping in mind the limitations of the steel deck such as Factory Mutual. This can result in one less joist per bay for erection and the corresponding reduction in field installation of bridging.

- It is better to increase the load capacity of the joist during original construction than to have to reinforce the joists for future loading due to the change in use of the structure or future building maintenance.

- When possible, provide the locations of concentrated loads. Vulcraft can provide joists designed with flexible load locations, but these joist designs are heavier and require additional manufacturing time for member connections.

- Limit the size of welded connections to open web steel joists. Many components of these joist have thicknesses less than or equal to 3 mm (1/8”). It is better to increase the weld length than to increase the thickness of the joist members to meet weld requirements.

- Due consideration for the thin materials used in open web steel joists must be considered when selecting steel deck fastening solutions.

- In general, it is more economical to span joists in the long direction and Joist Girders in the short direction for rectangular bays.

Open Web Steel Joist Uniform Load and Depth Selection Tables

Based on CSA S16-14, Clause 16 – Open-web steel joists

F_y= 380MPa [55 ksi]

The following tables provide the approximate self-weight (Kg/m, lb/ft) for various open web steel joist depth and span conditions. This weight is the approximate self-weight of the open web joist only and does not include the weight of accessories. For each span and load combination, the self-weight indicated in **Bold** indicates the depth that will produce the minimum self-weight for said span and uniform load combination.

Also included in the table is the approximate uniform load that will produce a deflection equal to the span/360. However, in no case will this load exceed the applied service load for the span, depth and load combination. Where the $W_{L/360}$ load is less than the indicated service load, the gross moment of inertia (not adjusted for shear deformation) can be approximated by:

$I = 2.6953(W)(L^3)(10^{-5})$ (mm^4) Where: $W = W_{L/360}$ from table and L = (span -102) in mm

or

$I = 26.767(W)(L^3)(10^{-6})$ (in^4) $W = W_{L/360}$ from table and L = (span - 0.33) in feet

The final information provided in the table is a more refined bridging requirement for each open web steel joist span, load and depth combination. This bridging is based on the design of the open web steel joist and may allow fewer rows of bridging than the table provided earlier as actual bridging is more accurately determined by the depth and material sizes necessary to carry the defined loading. The information is provided as the number of rows required for horizontal (H), bolted cross bridging (X) and bolted erection stability cross bridging (EX). Erection stability cross bridging are the rows that must be installed and anchored prior to releasing the hoisting cables during joist erection. To determine the bridging requirements for an open web joist not directly indicated in the tables, look to the requirements for the joist of the same depth carrying the load just less than the load anticipated (in general, lighter open web joists of the same length will require more bridging). This bridging does not include the requirement for additional bridging at or near the first bottom chord panel points when joists must be designed for a net uplift (stress reversal in the end webs and bottom chord).

Simple linear interpolation may be used to determine the self-weight and $W_{L/360}$ values, for span, depth and load combinations not explicitly provided in these tables.

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	6.3	8.1	9.9	11.7	13.5	15.3	17.1	18.9	20.7	22.5	24.3
		Service Load	3.0	4.2	5.4	6.6	7.8	9.0	10.2	11.4	12.6	13.8	15.0	16.2
3	305	Self Wt (kg/m)	9.3	9.3	9.3	9.3	9.4	9.6	9.6	9.5	10.0	11.8	11.8	**11.4**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	356	Self Wt (kg/m)	**8.9**	**8.9**	**8.9**	8.9	**8.9**	**9.3**	**9.3**	**9.3**	**9.8**	11.6	**11.6**	12.0
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	406	Self Wt (kg/m)	9.2	9.2	9.2	9.2	9.2	**9.3**	9.5	9.5	10.1	**10.1**	**11.6**	11.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	457	Self Wt (kg/m)	9.1	9.1	9.1	**8.5**	9.6	9.6	9.6	11.0	11.0	11.5	**11.6**	11.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	508	Self Wt (kg/m)	9.2	9.2	9.2	9.3	10.9	11.5	11.5	11.5	13.5	13.5	13.6	14.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	559	Self Wt (kg/m)	9.8	9.8	9.4	9.4	11.0	11.0	11.6	11.6	11.7	13.6	13.6	13.8
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	610	Self Wt (kg/m)	9.5	9.5	9.5	9.7	11.2	11.2	11.7	11.7	11.7	13.7	13.7	13.7
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	660	Self Wt (kg/m)	10.1	10.1	10.1	9.9	11.3	11.3	11.8	11.8	11.8	13.9	13.9	13.9
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	711	Self Wt (kg/m)	10.2	10.2	10.5	10.0	11.5	12.0	12.0	12.0	12.0	14.0	14.0	14.0
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
4	305	Self Wt (kg/m)	9.0	9.0	9.1	9.1	9.1	9.8	11.5	11.7	11.1	11.7	11.7	14.0
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	12	13	13	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	356	Self Wt (kg/m)	**8.8**	**8.8**	**8.9**	8.9	**8.9**	9.8	**9.7**	11.4	**10.8**	**10.9**	11.4	**11.7**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	406	Self Wt (kg/m)	9.0	9.0	9.1	9.1	9.1	**9.7**	9.9	11.3	11.0	11.2	**11.2**	**11.7**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	457	Self Wt (kg/m)	9.0	9.2	9.2	**8.8**	9.6	11.0	11.2	11.2	11.5	12.3	13.3	13.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	508	Self Wt (kg/m)	9.1	9.3	9.3	9.5	9.7	11.0	11.0	11.3	11.3	12.3	13.5	13.7
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	559	Self Wt (kg/m)	9.3	9.4	9.4	9.7	9.8	10.8	11.1	**11.1**	11.5	13.2	13.2	14.4
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	610	Self Wt (kg/m)	9.4	9.6	9.6	9.9	10.2	10.7	11.3	11.2	11.7	13.0	13.0	14.5
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	660	Self Wt (kg/m)	9.5	9.7	9.7	9.9	9.9	10.7	11.5	11.8	12.0	13.0	13.0	14.3
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	711	Self Wt (kg/m)	10.0	10.0	10.4	10.4	10.1	10.7	11.4	12.0	12.1	13.1	13.3	14.5
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	6.3	8.1	9.9	11.7	13.5	15.3	17.1	18.9	20.7	22.5	24.3
		Service Load	3.0	4.2	5.4	6.6	7.8	9.0	10.2	11.4	12.6	13.8	15.0	16.2
5	305	Self Wt (kg/m)	8.8	8.9	8.9	8.9	10.2	11.5	12.6	14.0	14.8	15.2	17.1	19.5
		$W_{L/360}$ (kN/m)	3	4	5	6	6	6	7	8	9	9	11	11
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	356	Self Wt (kg/m)	8.8	**8.8**	**8.8**	**8.8**	9.5	11.4	**10.8**	11.6	13.8	14.6	15.4	15.3
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	9	9	11	12	12	13
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	406	Self Wt (kg/m)	9.0	9.1	9.1	9.2	9.9	**9.9**	11.1	**11.1**	12.0	13.9	15.5	15.8
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	12	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	457	Self Wt (kg/m)	**8.7**	**8.8**	**8.8**	8.9	9.6	11.0	11.6	11.9	12.1	13.7	14.2	15.5
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	508	Self Wt (kg/m)	8.8	8.9	8.9	9.1	9.7	11.6	11.6	11.6	**11.8**	12.4	14.1	14.9
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	559	Self Wt (kg/m)	9.0	9.1	9.1	9.2	**9.3**	11.7	11.7	11.7	**11.8**	**11.7**	**12.6**	14.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	9.5	9.6	9.6	9.8	9.5	11.2	11.7	11.9	12.2	12.4	12.8	14.8
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	9.7	9.6	9.8	9.8	9.9	11.3	11.8	12.0	12.0	12.6	13.0	**14.1**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	9.8	9.8	9.9	10.1	10.1	11.3	11.7	12.1	12.4	12.8	13.2	14.3
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
6	305	Self Wt (kg/m)	**8.8**	**8.8**	10.3	11.2	13.0	14.6	16.7	19.4	20.1	22.1	23.9	24.0
		$W_{L/360}$ (kN/m)	3	3	4	4	5	5	6	6	7	8	8	8
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	356	Self Wt (kg/m)	**8.8**	**8.8**	9.5	10.6	11.2	12.6	14.6	15.1	16.9	20.0	20.1	21.8
		$W_{L/360}$ (kN/m)	3	4	4	5	5	6	7	7	9	10	10	11
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	406	Self Wt (kg/m)	9.0	9.1	**9.1**	10.0	11.0	11.9	13.8	15.1	15.6	17.4	18.9	20.1
		$W_{L/360}$ (kN/m)	3	4	5	7	7	7	9	9	10	11	12	13
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	457	Self Wt (kg/m)	8.9	9.0	9.7	10.0	11.1	**11.6**	13.2	14.8	15.7	15.8	18.2	19.0
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	12	12	14	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	508	Self Wt (kg/m)	9.1	9.2	9.2	10.1	11.0	11.7	11.7	12.6	15.3	16.0	**16.1**	18.4
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	559	Self Wt (kg/m)	9.4	9.1	9.3	10.0	11.1	11.8	11.7	14.3	14.4	16.0	16.3	**16.6**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	9.4	9.5	9.5	9.5	10.9	11.9	**11.5**	**12.0**	**13.6**	**15.0**	16.5	16.8
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	9.6	9.6	9.4	**9.4**	**10.3**	12.0	11.8	12.2	13.8	15.4	16.8	17.1
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	9.4	9.5	9.9	10.2	10.9	13.6	13.6	16.0	16.0	16.6	18.4	18.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	6.3	8.1	9.9	11.7	13.5	15.3	17.1	18.9	20.7	22.5	24.3
		Service Load	3.0	4.2	5.4	6.6	7.8	9.0	10.2	11.4	12.6	13.8	15.0	16.2
7	356	Self Wt (kg/m)	8.8	9.5	11.2	12.5	14.7	18.2	19.7	20.7	21.8	24.2	26.9	29.6
		$W_{L/360}$ (kN/m)	3	3	3	4	4	5	6	6	7	7	8	9
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	406	Self Wt (kg/m)	**8.7**	9.4	10.3	11.7	13.1	14.8	16.7	19.3	20.1	21.7	24.3	25.6
		$W_{L/360}$ (kN/m)	3	4	4	4	6	6	7	8	8	9	10	10
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	457	Self Wt (kg/m)	9.0	9.7	11.2	11.4	13.3	14.9	15.0	17.7	18.3	20.2	24.1	23.2
		$W_{L/360}$ (kN/m)	3	4	5	5	7	8	8	10	10	10	13	13
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	508	Self Wt (kg/m)	9.1	**9.2**	**10.0**	11.5	12.0	14.3	15.0	15.8	18.2	18.9	20.4	22.2
		$W_{L/360}$ (kN/m)	3	4	5	7	7	9	9	9	12	12	13	14
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	559	Self Wt (kg/m)	9.4	9.3	10.2	**11.3**	11.7	**12.2**	15.1	15.9	**16.1**	**18.2**	20.0	**20.2**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	11	13	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	9.3	9.5	10.3	11.5	**11.5**	13.6	**13.8**	17.7	18.0	18.5	20.3	21.0
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	9.5	9.7	10.4	11.6	12.0	12.5	14.9	15.3	18.0	18.5	18.8	20.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	9.5	9.7	10.5	11.7	12.2	12.7	14.0	**15.0**	18.3	18.7	18.9	20.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	9.7	9.8	10.8	12.0	12.6	13.0	14.2	15.5	17.2	18.9	**18.4**	20.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
8	356	Self Wt (kg/m)	9.6	11.4	13.0	17.0	19.0	21.7	23.6	26.6	28.2	30.2	33.0	38.4
		$W_{L/360}$ (kN/m)	2	2	3	4	4	5	5	5	6	6	7	7
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	406	Self Wt (kg/m)	**8.9**	10.2	12.5	14.7	16.7	19.8	21.7	24.1	24.0	27.4	30.2	30.5
		$W_{L/360}$ (kN/m)	3	3	3	4	5	5	6	7	7	7	8	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	457	Self Wt (kg/m)	9.0	9.8	11.7	12.8	14.9	18.0	19.7	20.4	24.2	26.1	27.5	30.3
		$W_{L/360}$ (kN/m)	3	3	4	5	5	6	7	7	8	9	9	10
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	508	Self Wt (kg/m)	9.1	9.9	11.4	12.0	15.0	16.7	19.5	20.1	20.5	24.6	26.0	26.4
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	11	11	11
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	559	Self Wt (kg/m)	9.4	10.1	11.3	12.2	13.3	16.5	17.1	19.8	21.3	20.9	24.0	26.3
		$W_{L/360}$ (kN/m)	3	4	5	6	7	8	8	10	11	11	13	14
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	9.4	10.1	**10.2**	**11.8**	12.4	15.7	16.1	**16.2**	19.2	20.7	20.8	24.7
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	9	10	12	13	13	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	9.5	**9.6**	10.6	12.1	12.7	14.2	16.3	16.4	19.2	19.8	21.1	22.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	9.6	9.7	10.7	11.9	**12.1**	**13.6**	16.5	16.7	**17.1**	19.8	21.3	**21.5**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	9.8	10.0	10.8	12.1	12.7	13.7	**15.2**	16.9	**17.1**	**19.4**	**20.2**	21.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	6.3 / 4.2	8.1 / 5.4	9.9 / 6.6	11.7 / 7.8	13.5 / 9.0	15.3 / 10.2	17.1 / 11.4	18.9 / 12.6	20.7 / 13.8	22.5 / 15.0	24.3 / 16.2
9	406	Self Wt (kg/m)	9.5	11.6	14.7	16.8	19.0	23.4	24.6	28.2	30.2	33.0	38.3	42.2
		$W_{L/360}$ (kN/m)	2	2	3	3	4	5	5	5	6	6	7	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	457	Self Wt (kg/m)	9.7	11.7	13.1	15.5	18.4	20.2	24.1	25.7	26.6	30.1	32.8	37.3
		$W_{L/360}$ (kN/m)	2	3	3	4	5	5	6	6	7	8	8	9
		Bridg. (H/X/EX)	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	508	Self Wt (kg/m)	9.8	11.3	12.7	15.0	17.0	19.6	22.2	23.8	25.9	27.2	30.5	31.4
		$W_{L/360}$ (kN/m)	3	3	4	4	5	6	7	7	8	8	9	9
		Bridg. (H/X/EX)	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	559	Self Wt (kg/m)	9.9	**10.1**	12.0	13.5	16.0	18.4	20.5	22.3	24.2	26.2	27.8	30.3
		$W_{L/360}$ (kN/m)	3	3	5	5	6	7	7	9	9	10	10	11
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	**9.4**	10.2	11.7	13.4	15.4	17.1	20.0	21.4	22.6	24.1	26.8	28.1
		$W_{L/360}$ (kN/m)	3	4	5	6	6	7	8	9	10	11	11	12
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	9.5	10.4	11.7	12.7	15.7	**16.4**	18.0	19.6	20.8	24.1	25.0	28.6
		$W_{L/360}$ (kN/m)	3	4	5	6	8	8	9	10	11	13	13	14
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	9.7	10.4	11.7	13.0	14.2	**16.4**	**16.7**	19.8	21.4	**21.5**	25.2	**25.4**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	9	11	12	12	15	15
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	9.8	10.5	**10.9**	**12.6**	**13.5**	16.6	16.9	**17.3**	**20.2**	21.9	**22.1**	25.7
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	14	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	11.7	12.1	12.1	14.9	14.9	18.0	19.1	25.0	25.3	24.6	24.8	27.4
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
10	457	Self Wt (kg/m)	9.7	12.5	15.1	19.0	21.5	24.2	27.3	30.0	33.0	38.4	42.0	45.1
		$W_{L/360}$ (kN/m)	2	2	3	4	4	4	5	5	6	7	7	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	508	Self Wt (kg/m)	10.0	11.9	15.1	17.2	19.5	22.5	25.7	27.1	30.4	33.4	38.9	41.6
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	6	6	7	8	8	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	559	Self Wt (kg/m)	10.1	12.1	13.4	16.1	19.3	20.7	23.9	26.3	27.5	30.7	32.8	36.7
		$W_{L/360}$ (kN/m)	2	3	4	5	5	5	7	7	7	8	9	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	10.2	11.7	13.4	15.6	17.8	20.0	22.2	24.7	26.9	27.7	30.4	31.6
		$W_{L/360}$ (kN/m)	3	3	4	5	6	7	8	8	8	9	10	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	10.2	10.6	12.6	15.7	**16.5**	20.1	21.2	23.9	26.6	26.9	29.9	31.6
		$W_{L/360}$ (kN/m)	3	4	4	6	6	7	8	9	10	10	11	12
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	**9.6**	**10.5**	12.8	**14.2**	**16.5**	20.2	21.4	**21.6**	24.2	27.1	27.6	30.5
		$W_{L/360}$ (kN/m)	3	4	5	6	6	9	9	9	11	12	12	13
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	9.8	10.7	**12.5**	14.4	16.7	19.0	21.5	21.8	24.0	26.2	28.9	**29.4**
		$W_{L/360}$ (kN/m)	3	4	5	7	7	8	10	10	12	13	14	14
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	13.6	13.7	13.9	16.1	17.3	18.8	21.6	22.0	**23.1**	**25.9**	**27.0**	31.2
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	914	Self Wt (kg/m)	13.8	13.9	14.3	16.3	16.7	**18.7**	**19.8**	22.9	23.7	27.4	27.9	29.5
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	6.3 / 4.2	8.1 / 5.4	9.9 / 6.6	11.7 / 7.8	13.5 / 9.0	15.3 / 10.2	17.1 / 11.4	18.9 / 12.6	20.7 / 13.8	22.5 / 15.0	24.3 / 16.2
11	508	Self Wt (kg/m)	11.2	13.3	17.1	19.6	24.5	26.4	29.9	32.8	38.4	42.5	44.8	45.0
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	6	6	7	7	7
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	559	Self Wt (kg/m)	10.2	13.2	15.8	19.0	21.5	24.3	27.3	30.3	33.4	39.3	41.0	42.1
		$W_{L/360}$ (kN/m)	2	3	3	4	5	5	6	6	7	8	9	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	**10.1**	12.2	15.3	17.8	19.8	22.1	26.0	27.9	30.7	33.0	37.9	42.1
		$W_{L/360}$ (kN/m)	2	3	4	4	5	6	6	7	8	8	9	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	10.3	12.5	13.9	16.4	19.8	22.4	24.9	27.4	31.0	31.3	34.2	39.1
		$W_{L/360}$ (kN/m)	3	3	4	5	6	7	7	7	9	9	10	11
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	10.3	12.1	14.0	16.7	**18.7**	21.6	24.0	27.5	28.2	30.5	31.7	38.3
		$W_{L/360}$ (kN/m)	3	4	4	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	10.4	**11.4**	**13.2**	16.7	19.0	21.5	23.1	25.9	27.5	28.8	31.8	32.4
		$W_{L/360}$ (kN/m)	3	4	5	6	7	8	8	10	10	11	12	12
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	13.6	13.8	14.0	17.1	19.2	21.7	**22.4**	25.7	26.8	30.1	**30.9**	32.4
		$W_{L/360}$ (kN/m)	3	4	5	6	8	9	9	11	12	13	13	14
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	914	Self Wt (kg/m)	13.9	14.1	14.3	17.5	19.0	**20.4**	23.5	25.6	27.0	28.6	31.6	**32.2**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1016	Self Wt (kg/m)	12.4	12.8	15.2	**15.5**	20.2	20.5	24.1	**24.9**	**25.2**	**28.2**	32.1	32.3
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
12	508	Self Wt (kg/m)	11.6	15.4	19.1	24.3	26.7	29.9	34.4	42.3	42.8	51.4	57.1	57.1
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	4	5	5	6	7	7
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	559	Self Wt (kg/m)	12.0	15.1	17.3	21.5	23.7	28.2	30.4	39.0	42.8	42.2	45.1	52.0
		$W_{L/360}$ (kN/m)	2	2	3	4	4	5	5	6	7	7	7	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	610	Self Wt (kg/m)	11.6	13.4	17.5	19.8	24.0	26.7	30.0	34.1	39.6	41.0	42.8	45.3
		$W_{L/360}$ (kN/m)	2	3	3	4	5	5	6	6	7	8	8	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	**10.4**	13.6	16.0	19.9	24.1	24.5	27.3	30.8	33.4	38.0	42.9	45.2
		$W_{L/360}$ (kN/m)	2	3	3	4	6	5	6	7	8	8	9	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	**10.4**	**12.7**	15.9	18.4	20.9	23.8	27.0	30.8	31.5	34.2	39.1	43.3
		$W_{L/360}$ (kN/m)	2	3	4	5	5	6	7	8	8	9	10	11
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	10.5	12.8	**14.2**	18.6	20.4	23.7	26.3	29.0	30.4	32.1	38.5	40.0
		$W_{L/360}$ (kN/m)	3	3	4	5	6	7	8	8	9	9	11	11
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	13.5	13.6	16.7	**17.5**	20.7	**22.6**	**24.7**	27.5	30.5	32.2	36.3	39.1
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	10	11	12	13
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	914	Self Wt (kg/m)	13.8	14.1	16.3	18.8	21.7	22.8	26.1	**27.2**	**29.4**	31.3	36.8	38.7
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	12	13	15	15
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1016	Self Wt (kg/m)	12.3	13.5	16.0	18.4	**20.2**	23.6	26.2	**27.2**	29.7	**30.4**	**32.4**	**37.6**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	6.3 / 4.2	8.1 / 5.4	9.9 / 6.6	11.7 / 7.8	13.5 / 9.0	15.3 / 10.2	17.1 / 11.4	18.9 / 12.6	20.7 / 13.8	22.5 / 15.0	24.3 / 16.2
13	559	Self Wt (kg/m)	13.1	17.3	21.3	23.8	27.5	32.8	39.0	42.8	45.3	52.0	57.6	58.2
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	6	6	7	7
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	610	Self Wt (kg/m)	12.2	15.8	19.6	21.8	26.2	30.5	33.3	38.7	41.8	45.6	52.4	58.6
		$W_{L/360}$ (kN/m)	2	2	3	3	4	5	5	6	6	7	7	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	660	Self Wt (kg/m)	12.4	15.6	17.9	21.9	24.5	29.0	30.6	37.5	41.1	42.2	45.0	52.7
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	6	7	7	8	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	12.0	14.1	18.0	20.2	25.2	27.6	30.6	34.1	38.1	42.1	44.5	45.2
		$W_{L/360}$ (kN/m)	2	3	4	4	5	5	6	7	8	9	9	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	**10.7**	14.0	16.7	20.3	25.1	26.9	29.1	32.7	36.3	39.2	42.1	44.5
		$W_{L/360}$ (kN/m)	2	3	4	5	6	6	7	7	9	9	10	10
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	13.5	14.7	17.3	20.7	**21.7**	**25.6**	28.2	31.4	31.7	38.2	39.5	45.6
		$W_{L/360}$ (kN/m)	3	4	4	5	5	7	7	8	9	10	10	12
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	914	Self Wt (kg/m)	13.9	**13.9**	17.3	**19.2**	21.9	26.2	28.0	30.6	32.3	37.8	**39.1**	40.8
		$W_{L/360}$ (kN/m)	3	4	5	6	7	9	9	10	11	12	13	13
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1016	Self Wt (kg/m)	13.0	17.1	**16.5**	20.4	23.4	26.3	**26.8**	29.7	32.0	35.9	39.3	**39.4**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	13	15	15
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1219	Self Wt (kg/m)	13.7	16.4	20.1	20.9	22.1	27.4	29.7	**29.5**	**31.5**	**33.7**	39.4	39.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
14	610	Self Wt (kg/m)	13.3	17.5	21.9	26.2	30.2	32.9	42.4	41.5	51.5	57.0	57.9	62.0
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	6	7	7	7
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	660	Self Wt (kg/m)	13.5	17.8	20.0	24.9	28.5	33.3	38.7	43.0	45.2	51.7	57.5	57.9
		$W_{L/360}$ (kN/m)	2	2	3	3	4	5	5	6	6	7	8	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	711	Self Wt (kg/m)	12.6	16.3	20.1	24.9	27.2	30.9	34.2	37.9	42.6	45.4	52.7	57.9
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	6	6	7	7	8	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	762	Self Wt (kg/m)	12.7	16.0	18.7	25.1	25.0	30.8	32.8	37.0	42.6	44.9	51.2	53.1
		$W_{L/360}$ (kN/m)	2	3	3	5	5	6	6	7	8	8	9	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	13.6	16.7	20.4	21.6	25.8	28.2	31.5	34.1	39.9	43.2	46.0	51.8
		$W_{L/360}$ (kN/m)	2	3	4	4	6	6	7	7	8	9	10	11
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0
	914	Self Wt (kg/m)	13.7	17.0	19.0	21.8	26.7	27.1	31.1	32.7	36.9	39.5	42.7	47.9
		$W_{L/360}$ (kN/m)	3	4	4	5	7	7	8	9	10	11	11	13
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1016	Self Wt (kg/m)	12.7	15.1	17.7	21.3	23.4	27.3	28.9	32.0	36.7	38.5	39.9	42.8
		$W_{L/360}$ (kN/m)	3	4	5	7	7	9	9	10	12	12	13	14
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1118	Self Wt (kg/m)	**12.1**	**12.6**	**16.5**	22.2	23.8	27.5	**28.1**	**28.8**	33.3	**33.7**	**34.6**	**41.0**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	13	13	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1219	Self Wt (kg/m)	14.1	15.0	17.6	**21.1**	**23.0**	**27.0**	30.2	30.7	**32.6**	35.4	39.9	41.6
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	6.3	8.1	9.9	11.7	13.5	15.3	17.1	18.9	20.7	22.5	24.3
		Service Load	3.0	4.2	5.4	6.6	7.8	9.0	10.2	11.4	12.6	13.8	15.0	16.2
15	660	Self Wt (kg/m)	13.7	17.8	22.4	27.7	30.3	38.4	41.5	45.2	57.1	58.2	62.5	66.4
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	7	7	7	7
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0
	711	Self Wt (kg/m)	13.8	18.2	22.6	25.0	30.4	33.1	42.2	42.2	51.8	57.6	57.7	62.1
		$W_{L/360}$ (kN/m)	2	2	3	3	4	5	6	6	7	8	8	8
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0
	762	Self Wt (kg/m)	13.9	18.3	20.2	24.7	27.7	32.2	39.1	42.2	45.7	52.6	57.8	58.0
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	6	7	7	8	9	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	813	Self Wt (kg/m)	13.6	17.2	21.9	24.6	28.0	31.1	33.8	39.4	45.7	45.9	52.9	58.0
		$W_{L/360}$ (kN/m)	2	3	4	4	5	6	6	7	8	8	9	10
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	914	Self Wt (kg/m)	13.9	17.2	21.7	23.2	27.7	30.7	31.9	38.2	40.0	46.6	51.3	52.2
		$W_{L/360}$ (kN/m)	2	3	4	5	6	7	7	9	9	10	11	11
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	1016	Self Wt (kg/m)	13.1	16.5	19.5	22.8	27.1	28.6	31.7	36.9	40.2	43.0	47.1	51.6
		$W_{L/360}$ (kN/m)	3	4	5	6	7	7	8	10	11	11	12	14
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	1118	Self Wt (kg/m)	**12.1**	**13.8**	**17.0**	21.8	27.5	28.1	**28.8**	32.8	**34.5**	41.0	**41.5**	**41.5**
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	9	10	11	13	13	13
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	1219	Self Wt (kg/m)	13.8	16.2	19.9	**21.6**	**24.1**	**27.7**	30.4	**32.2**	34.6	**39.9**	42.4	43.0
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	12	14	15	15
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0
	1321	Self Wt (kg/m)	14.5	16.2	21.5	24.9	27.4	29.3	30.7	32.3	35.3	40.1	42.6	44.3
		$W_{L/360}$ (kN/m)	3	4	5	7	8	9	10	11	13	14	15	16
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	5.7 / 3.8	6.9 / 4.6	8.1 / 5.4	9.3 / 6.2	10.5 / 7.0	11.7 / 7.8	12.9 / 8.6	14.1 / 9.4	15.3 / 10.2	16.5 / 11.0	17.7 / 11.8
16	711	Self Wt (kg/m)	14.0	18.3	22.2	25.2	27.9	30.6	33.4	37.9	41.1	43.5	45.7	52.2
		$W_{L/360}$ (kN/m)	1	2	3	3	3	3	4	4	5	5	5	6
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	762	Self Wt (kg/m)	14.2	18.4	20.1	22.6	24.8	29.4	31.2	36.6	37.9	41.4	44.6	51.1
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	5	5	5	6	6
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	813	Self Wt (kg/m)	13.7	16.2	19.7	23.8	25.6	27.4	30.4	33.7	38.0	38.1	42.8	45.8
		$W_{L/360}$ (kN/m)	2	2	3	4	4	4	4	5	6	6	6	7
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	914	Self Wt (kg/m)	13.0	16.4	19.7	21.4	26.0	26.9	28.5	31.6	33.0	38.0	39.7	44.6
		$W_{L/360}$ (kN/m)	2	3	3	4	5	5	5	6	6	7	7	8
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1016	Self Wt (kg/m)	13.0	16.2	18.5	22.3	23.1	26.7	**27.4**	29.4	32.5	36.5	37.9	39.7
		$W_{L/360}$ (kN/m)	3	3	4	5	5	6	6	6	7	8	8	9
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1118	Self Wt (kg/m)	**12.5**	**13.8**	**16.3**	**18.8**	25.4	27.7	28.6	**29.1**	31.2	33.3	34.6	**35.0**
		$W_{L/360}$ (kN/m)	3	3	4	5	5	7	7	7	8	8	9	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1219	Self Wt (kg/m)	15.2	20.0	20.4	20.8	23.2	27.3	28.5	29.8	30.8	33.5	34.8	36.7
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	10	11
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1321	Self Wt (kg/m)	14.4	15.9	20.8	21.3	**21.7**	26.3	28.1	30.0	**30.4**	31.3	34.3	35.4
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1422	Self Wt (kg/m)	16.0	17.5	19.4	21.7	22.1	**26.0**	28.3	30.0	30.9	**30.8**	**33.1**	35.7
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
17	711	Self Wt (kg/m)	18.0	20.0	22.9	27.5	30.6	33.3	39.1	40.5	45.0	51.7	57.3	57.9
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	3	4	4	5	5	5
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	762	Self Wt (kg/m)	16.4	18.5	22.3	24.9	29.5	30.9	38.5	41.8	41.9	45.5	52.5	57.8
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	4	5	5	6
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	813	Self Wt (kg/m)	16.0	19.1	21.5	24.2	26.6	31.0	34.0	38.0	41.1	45.1	46.2	52.1
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	5	5	6	6	6
		Bridg. (H/X/EX)	2/0/1	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	914	Self Wt (kg/m)	15.9	18.4	21.0	25.7	26.3	29.0	30.8	34.0	37.9	40.0	45.3	46.0
		$W_{L/360}$ (kN/m)	2	2	3	4	4	4	5	5	6	6	7	7
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1016	Self Wt (kg/m)	15.1	17.5	21.0	21.8	26.9	**27.5**	29.1	31.7	36.1	39.4	40.3	44.9
		$W_{L/360}$ (kN/m)	2	3	4	4	5	5	5	6	7	7	7	8
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1118	Self Wt (kg/m)	**12.3**	**15.5**	**17.8**	23.4	25.0	27.8	**28.5**	**29.7**	32.8	34.5	37.1	40.9
		$W_{L/360}$ (kN/m)	2	3	4	5	5	6	6	6	7	7	8	9
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1219	Self Wt (kg/m)	14.1	17.3	20.8	**21.7**	**24.1**	27.6	30.0	30.1	**32.6**	35.4	**36.5**	41.1
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	7	8	9	9	10
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1321	Self Wt (kg/m)	17.4	20.3	20.6	22.0	25.9	27.6	28.9	30.6	33.0	**34.0**	36.8	**39.6**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	10	11
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1422	Self Wt (kg/m)	20.6	20.8	21.6	22.6	24.7	30.7	30.3	32.2	33.7	36.4	37.4	41.6
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	5.7 / 3.8	6.9 / 4.6	8.1 / 5.4	9.3 / 6.2	10.5 / 7.0	11.7 / 7.8	12.9 / 8.6	14.1 / 9.4	15.3 / 10.2	16.5 / 11.0	17.7 / 11.8
18	762	Self Wt (kg/m)	18.4	20.0	25.3	27.9	30.9	38.6	42.6	43.2	51.5	57.2	57.2	58.0
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	5	5	5	5
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	813	Self Wt (kg/m)	16.2	20.4	23.9	26.6	30.7	33.7	38.0	41.3	45.0	52.2	57.2	57.9
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	4	5	5	6	6
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	914	Self Wt (kg/m)	16.1	20.7	20.9	26.5	28.6	31.0	34.4	38.1	41.7	46.2	51.5	53.2
		$W_{L/360}$ (kN/m)	2	3	3	3	4	4	5	5	6	6	6	7
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1016	Self Wt (kg/m)	16.3	18.2	21.4	26.5	27.6	29.8	32.9	37.1	39.4	41.2	46.2	51.2
		$W_{L/360}$ (kN/m)	2	3	3	4	4	4	5	6	6	6	7	8
		Bridg. (H/X/EX)	2/0/1	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1118	Self Wt (kg/m)	**13.7**	**16.7**	20.9	27.3	27.7	28.6	29.9	32.5	34.1	40.6	41.2	44.3
		$W_{L/360}$ (kN/m)	2	3	4	5	5	5	5	6	6	8	8	8
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1219	Self Wt (kg/m)	15.8	20.3	**20.6**	**21.9**	**25.2**	**28.1**	**29.8**	31.8	35.0	37.2	40.1	43.2
		$W_{L/360}$ (kN/m)	3	4	4	4	5	6	6	7	7	8	9	9
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1321	Self Wt (kg/m)	15.9	20.4	21.3	22.5	26.8	28.9	30.2	32.2	34.2	35.8	40.4	42.9
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	8	8	9	10	10
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1422	Self Wt (kg/m)	17.3	20.6	24.8	25.0	26.7	28.6	31.0	**31.2**	**33.3**	**35.7**	**38.2**	**41.5**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	11
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	1524	Self Wt (kg/m)	22.2	22.5	23.2	26.9	28.9	31.8	30.8	32.9	34.3	37.6	41.0	43.6
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
19	813	Self Wt (kg/m)	19.3	22.1	26.1	29.9	33.4	38.2	42.0	45.0	52.2	57.8	58.9	62.9
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	4	5	5	5
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	914	Self Wt (kg/m)	18.4	21.3	25.8	26.6	30.7	34.1	38.4	41.9	46.2	52.6	58.3	58.7
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	5	5	6	6	6
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1016	Self Wt (kg/m)	16.5	21.4	22.5	27.2	29.3	32.3	37.5	39.3	45.1	46.9	52.0	53.8
		$W_{L/360}$ (kN/m)	2	3	3	4	4	4	5	5	6	6	7	7
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1118	Self Wt (kg/m)	**15.2**	**19.6**	23.2	27.3	**27.6**	29.7	33.4	36.4	40.4	44.3	44.6	48.7
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	6	6	7	7	8
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1219	Self Wt (kg/m)	17.0	20.7	22.3	26.3	28.7	29.9	32.0	35.0	37.8	42.7	42.7	46.6
		$W_{L/360}$ (kN/m)	3	3	4	5	5	5	6	7	7	8	8	9
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1321	Self Wt (kg/m)	17.5	21.0	**21.6**	25.5	28.1	30.1	**30.6**	32.9	36.2	40.5	42.2	**43.8**
		$W_{L/360}$ (kN/m)	3	4	4	5	6	6	7	7	8	9	9	9
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1422	Self Wt (kg/m)	17.8	25.0	21.9	**23.8**	28.1	**29.6**	30.9	**32.4**	**36.0**	**39.6**	**41.7**	43.9
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	8	9	10	10	10
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1524	Self Wt (kg/m)	21.8	27.0	27.5	31.1	29.2	32.0	32.3	34.5	37.1	40.4	43.5	45.3
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1626	Self Wt (kg/m)	22.8	23.9	26.3	28.5	31.9	32.4	34.1	36.1	39.5	41.6	43.7	45.1
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	5.7	6.9	8.1	9.3	10.5	11.7	12.9	14.1	15.3	16.5	17.7
		Service Load	3.0	3.8	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.0	11.8
20	914	Self Wt (kg/m)	19.9	24.1	26.7	30.5	34.2	38.1	41.4	45.9	52.1	58.2	58.2	62.7
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	4	5	6	6	6
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1016	Self Wt (kg/m)	18.0	21.1	27.0	28.1	32.0	37.2	39.2	44.1	47.3	52.0	53.7	58.7
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	5	6	6	7
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1118	Self Wt (kg/m)	**15.5**	21.0	24.7	27.6	**28.6**	33.3	36.3	40.8	44.4	44.7	48.7	52.3
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	6	6	6	7	7
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1219	Self Wt (kg/m)	19.4	21.3	23.9	27.4	30.1	**30.7**	34.4	37.2	41.7	45.2	47.3	50.8
		$W_{L/360}$ (kN/m)	3	3	4	4	5	5	5	6	7	7	7	8
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1321	Self Wt (kg/m)	20.5	**20.9**	**23.1**	27.8	30.0	31.1	34.4	37.4	40.7	43.0	46.2	49.0
		$W_{L/360}$ (kN/m)	3	3	4	5	5	6	6	7	7	8	9	9
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1422	Self Wt (kg/m)	20.7	21.1	25.9	27.8	30.5	31.1	34.5	36.8	38.5	42.1	**44.3**	48.2
		$W_{L/360}$ (kN/m)	3	4	5	5	6	6	7	7	8	9	9	10
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1524	Self Wt (kg/m)	22.2	23.1	26.5	**27.3**	30.3	31.6	**33.3**	**36.6**	**37.9**	**41.9**	44.5	**45.7**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	8	9	9	10	11
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1626	Self Wt (kg/m)	27.1	27.1	27.3	28.5	33.0	35.3	36.3	39.7	40.0	43.8	45.5	46.0
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1727	Self Wt (kg/m)	23.5	27.8	30.4	31.9	32.0	35.8	38.2	39.7	40.5	44.5	47.8	49.8
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
22	1118	Self Wt (kg/m)	**20.6**	23.7	28.2	30.6	34.9	39.2	42.7	47.5	51.1	55.7	61.2	61.7
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	5	6	6	6
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1219	Self Wt (kg/m)	**20.6**	23.6	27.2	**30.0**	32.8	36.7	40.2	44.5	48.2	50.4	54.9	56.8
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	5	6	6	7	7
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	1321	Self Wt (kg/m)	20.9	22.1	26.6	30.1	**30.8**	35.7	39.0	42.2	45.2	49.3	51.1	55.9
		$W_{L/360}$ (kN/m)	2	3	4	4	4	5	6	6	6	7	7	8
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1422	Self Wt (kg/m)	21.4	**22.0**	**26.4**	**30.0**	31.8	34.3	37.7	**41.4**	44.6	47.3	50.3	53.1
		$W_{L/360}$ (kN/m)	3	3	4	5	5	5	6	6	7	8	8	9
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1524	Self Wt (kg/m)	26.5	24.0	28.3	31.3	32.6	35.6	37.6	42.2	43.7	47.1	50.3	54.1
		$W_{L/360}$ (kN/m)	3	3	5	5	6	6	6	7	8	8	9	10
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1626	Self Wt (kg/m)	27.3	27.8	28.6	32.2	32.7	34.7	37.5	41.7	43.8	46.1	**48.2**	52.9
		$W_{L/360}$ (kN/m)	3	4	5	5	6	6	7	8	9	9	10	11
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1727	Self Wt (kg/m)	24.1	24.5	26.7	31.7	33.3	**34.0**	**37.2**	43.2	**43.6**	**45.8**	49.2	**51.1**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	11
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	1829	Self Wt (kg/m)	32.9	32.9	33.4	34.2	36.4	38.7	43.2	43.6	47.5	50.0	52.6	59.6
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	2032	Self Wt (kg/m)	33.5	33.7	34.6	34.9	38.1	40.2	42.8	45.2	47.7	51.0	53.4	60.4
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	5.7 / 3.8	6.9 / 4.6	8.1 / 5.4	9.3 / 6.2	10.5 / 7.0	11.7 / 7.8	12.9 / 8.6	14.1 / 9.4	15.3 / 10.2	16.5 / 11.0	17.7 / 11.8
24	1016	Self Wt (kg/m)	23.4	27.6	31.9	36.5	42.0	46.1	52.1	56.5	62.3	66.3	71.8	77.0
		$W_{L/360}$ (kN/m)	2	2	2	2	3	3	4	4	4	5	5	5
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1118	Self Wt (kg/m)	21.8	27.4	30.4	35.8	39.4	42.7	47.5	55.0	61.2	63.1	67.0	72.1
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	5	5	6	6
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	1219	Self Wt (kg/m)	21.7	**26.2**	30.1	33.4	38.6	43.1	45.9	51.3	56.3	61.8	62.2	63.9
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	4	5	5	6	6	6
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1321	Self Wt (kg/m)	**21.5**	26.8	**30.0**	33.0	36.1	40.6	44.9	48.9	53.0	57.0	62.9	64.8
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	5	6	6	7	7
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	1422	Self Wt (kg/m)	25.3	28.7	30.4	**31.4**	35.3	40.0	43.2	46.1	49.8	54.2	58.3	62.7
		$W_{L/360}$ (kN/m)	3	4	4	4	4	5	5	6	6	7	7	8
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	1524	Self Wt (kg/m)	22.9	28.3	31.7	32.1	34.7	**38.5**	**41.8**	**45.4**	48.9	52.5	57.0	62.6
		$W_{L/360}$ (kN/m)	3	4	4	4	5	5	6	6	7	8	8	9
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	1626	Self Wt (kg/m)	24.0	28.0	30.4	32.7	35.7	40.2	42.6	46.3	50.1	52.2	55.6	58.9
		$W_{L/360}$ (kN/m)	3	4	5	5	5	6	7	7	8	8	9	9
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	1727	Self Wt (kg/m)	24.5	28.1	32.2	32.8	**33.5**	40.5	43.0	45.8	**47.6**	**51.6**	**53.9**	**58.3**
		$W_{L/360}$ (kN/m)	3	4	5	5	5	7	7	8	8	9	9	11
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	1829	Self Wt (kg/m)	31.9	32.4	33.1	36.9	38.1	43.5	45.4	46.2	49.6	53.7	59.3	63.5
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
26	1118	Self Wt (kg/m)	27.1	31.7	38.5	45.0	47.8	54.2	59.0	70.2	73.8	79.0	88.0	89.2
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	4	5	5	5
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2
	1219	Self Wt (kg/m)	26.7	31.4	35.8	41.3	45.6	51.7	55.4	61.7	71.0	74.7	79.8	84.2
		$W_{L/360}$ (kN/m)	2	2	2	3	3	4	4	4	5	5	6	6
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1321	Self Wt (kg/m)	**25.4**	31.6	34.4	39.9	44.2	47.0	52.9	61.0	66.2	72.4	74.0	81.9
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	4	5	6	6	6	7
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	1422	Self Wt (kg/m)	**25.4**	**30.8**	33.9	39.6	43.4	47.6	53.5	57.7	62.4	67.8	72.8	79.4
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	5	6	6	6	7
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	1524	Self Wt (kg/m)	26.2	32.1	**33.7**	37.8	42.1	46.3	49.4	55.6	59.9	65.7	67.2	74.7
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	6	6	7	7	7
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	1626	Self Wt (kg/m)	29.6	33.5	34.2	**36.2**	**41.2**	46.0	**47.5**	**51.4**	55.8	60.6	67.0	70.2
		$W_{L/360}$ (kN/m)	3	4	4	4	5	5	6	6	7	7	8	9
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	1727	Self Wt (kg/m)	30.3	32.3	34.5	37.0	42.0	**45.3**	48.2	52.2	**55.4**	**60.2**	65.1	69.6
		$W_{L/360}$ (kN/m)	3	4	4	5	6	6	6	7	7	8	9	9
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	1829	Self Wt (kg/m)	31.3	34.1	36.0	38.7	41.5	48.4	49.5	54.4	58.8	65.8	69.4	**69.5**
		$W_{L/360}$ (kN/m)	3	4	5	5	5	7	7	7	8	9	10	10
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	2032	Self Wt (kg/m)	32.3	34.5	37.3	39.5	**41.2**	49.0	51.6	52.4	57.1	60.7	**63.8**	71.6
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	8	9	10	10	12
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2

OWSJ Span (m)	Depth (mm)	Factored Load / Service Load	Uniform Load (kN/m) 4.5 / 3.0	5.7 / 3.8	6.9 / 4.6	8.1 / 5.4	9.3 / 6.2	10.5 / 7.0	11.7 / 7.8	12.9 / 8.6	14.1 / 9.4	15.3 / 10.2	16.5 / 11.0	17.7 / 11.8
28	1219	Self Wt (kg/m)	29.9	35.3	42.0	46.8	52.2	60.5	66.6	73.1	81.5	86.9	92.2	102.9
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	5	5	5	6
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2
	1321	Self Wt (kg/m)	29.4	**32.4**	39.1	44.4	48.6	55.0	60.2	69.2	71.4	80.3	85.7	91.2
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	4	5	5	6	6
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1422	Self Wt (kg/m)	**27.2**	32.6	37.4	42.3	47.6	52.5	56.6	64.8	69.7	72.2	81.3	82.8
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	4	5	5	5	6	6
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1524	Self Wt (kg/m)	30.3	33.3	36.7	43.6	46.6	51.2	56.4	63.0	68.8	74.5	79.8	84.0
		$W_{L/360}$ (kN/m)	2	3	3	4	4	4	5	5	6	6	7	7
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1626	Self Wt (kg/m)	30.7	33.9	37.1	42.2	46.3	49.8	55.7	62.3	68.3	70.7	76.8	82.7
		$W_{L/360}$ (kN/m)	3	3	3	4	4	5	5	6	7	7	7	8
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1727	Self Wt (kg/m)	28.7	40.3	**36.0**	**41.2**	**45.6**	**48.7**	53.9	59.2	63.7	70.3	72.5	79.0
		$W_{L/360}$ (kN/m)	2	4	4	4	5	5	6	6	7	7	8	9
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1829	Self Wt (kg/m)	34.4	35.1	39.6	42.6	48.1	48.9	56.7	61.0	68.1	68.2	**70.1**	77.2
		$W_{L/360}$ (kN/m)	3	4	4	5	5	5	7	7	8	8	8	9
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	2032	Self Wt (kg/m)	35.7	36.1	38.5	44.3	48.4	50.4	53.9	58.0	61.7	69.9	70.2	73.0
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	8	8	10	10	10
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	2235	Self Wt (kg/m)	40.0	38.0	44.5	46.0	50.5	52.4	**53.5**	**56.2**	**60.0**	**64.0**	71.1	**72.8**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	8	9	10	11	12
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
30	1321	Self Wt (kg/m)	**31.5**	36.9	43.5	49.9	56.0	60.5	72.2	80.8	81.8	91.5	100.7	103.5
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	4	5	6	6
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2
	1422	Self Wt (kg/m)	32.0	35.8	42.8	47.6	53.3	61.4	67.3	74.2	83.4	83.8	93.9	99.0
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	4	5	5	6	6
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1524	Self Wt (kg/m)	32.5	35.7	41.7	45.8	50.2	57.1	64.9	67.2	77.4	81.2	88.3	92.2
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	5	6	6	7
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1626	Self Wt (kg/m)	31.8	35.0	**40.6**	45.3	48.5	56.1	61.2	67.1	72.5	79.9	84.2	90.1
		$W_{L/360}$ (kN/m)	2	3	3	3	4	4	5	5	6	6	7	7
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1727	Self Wt (kg/m)	32.3	**34.3**	41.5	**44.2**	**47.8**	53.0	60.4	68.3	71.0	76.3	84.9	85.6
		$W_{L/360}$ (kN/m)	3	3	4	4	4	5	5	6	6	7	8	8
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	1829	Self Wt (kg/m)	39.9	40.6	41.9	46.1	51.4	55.8	61.0	66.9	69.3	76.6	81.4	89.9
		$W_{L/360}$ (kN/m)	3	3	4	4	5	5	6	6	7	8	8	9
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	2032	Self Wt (kg/m)	36.9	41.8	42.3	44.3	48.1	53.8	58.4	64.8	68.8	70.9	78.8	82.7
		$W_{L/360}$ (kN/m)	3	4	4	5	5	6	7	8	8	8	9	9
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	2235	Self Wt (kg/m)	38.4	39.2	44.6	46.4	50.5	**52.4**	57.1	60.4	67.1	71.2	72.8	79.2
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	8	9	10	10	11
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	2438	Self Wt (kg/m)	40.1	44.4	44.4	47.9	51.3	53.7	**54.0**	**59.1**	**63.0**	**70.6**	**71.7**	**74.8**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	5.7	6.9	8.1	9.3	10.5	11.7	12.9	14.1	15.3	16.5	17.7
		Service Load	3.0	3.8	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.0	11.8
34	1422	Self Wt (kg/m)	34.2	42.4	51.1	57.3	65.8	75.3	79.6	89.5	98.8	100.4	112.3	118.4
		$W_{L/360}$ (kN/m)	1	2	2	2	3	3	3	4	4	4	5	5
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	1524	Self Wt (kg/m)	35.1	42.6	47.4	56.4	64.7	72.4	81.6	91.2	91.9	102.6	104.0	115.3
		$W_{L/360}$ (kN/m)	2	2	2	3	3	4	4	5	5	5	5	6
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	1626	Self Wt (kg/m)	34.7	43.2	47.1	55.4	60.6	68.6	80.1	84.3	94.3	99.7	105.0	106.8
		$W_{L/360}$ (kN/m)	2	2	3	3	3	4	4	5	5	6	6	6
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	1727	Self Wt (kg/m)	**33.8**	**41.6**	**45.9**	51.6	59.4	66.1	70.7	81.5	86.8	92.4	97.5	101.9
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	4	5	6	6	6	7
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	1829	Self Wt (kg/m)	37.1	44.2	47.9	54.8	62.3	67.4	72.0	82.0	90.9	95.3	100.8	102.9
		$W_{L/360}$ (kN/m)	2	3	3	4	4	4	5	5	6	6	7	7
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	2032	Self Wt (kg/m)	36.9	41.7	49.5	**51.2**	58.2	67.9	69.6	73.8	84.9	92.9	93.4	104.1
		$W_{L/360}$ (kN/m)	3	3	4	4	5	5	5	6	7	8	8	9
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	2235	Self Wt (kg/m)	40.3	42.3	50.0	59.3	56.5	61.2	65.8	**71.7**	76.4	85.5	88.6	97.2
		$W_{L/360}$ (kN/m)	3	3	4	5	5	6	6	7	7	8	8	9
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	2438	Self Wt (kg/m)	41.0	46.7	48.2	52.4	**54.7**	**58.9**	**64.4**	72.3	**74.6**	**78.4**	89.0	**92.2**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	6	7	8	8	9	10	10
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	2642	Self Wt (kg/m)	54.8	55.2	56.2	56.2	57.6	62.9	69.3	73.7	75.9	81.5	**86.1**	92.3
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	10	12
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
38	1626	Self Wt (kg/m)	41.5	47.1	55.0	66.0	76.3	80.4	90.3	100.8	101.7	113.1	129.0	129.0
		$W_{L/360}$ (kN/m)	2	2	2	3	3	3	4	4	4	5	6	5
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	1727	Self Wt (kg/m)	**39.5**	**46.5**	55.2	64.8	70.3	81.4	86.7	97.4	102.3	110.8	114.6	130.9
		$W_{L/360}$ (kN/m)	2	2	2	3	3	4	4	4	5	5	5	6
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	1829	Self Wt (kg/m)	42.8	46.9	56.6	64.8	69.1	79.3	87.5	97.2	97.9	109.7	115.8	121.3
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	4	5	5	6	6	6
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	2032	Self Wt (kg/m)	40.7	48.0	52.2	61.4	67.9	76.1	81.8	89.7	99.5	99.6	105.6	111.8
		$W_{L/360}$ (kN/m)	2	3	3	4	4	5	5	6	6	6	7	7
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	2235	Self Wt (kg/m)	41.2	50.1	**50.7**	58.4	67.2	**71.3**	78.2	84.5	92.5	101.8	103.3	109.4
		$W_{L/360}$ (kN/m)	2	3	3	4	5	5	6	6	7	8	8	8
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	2438	Self Wt (kg/m)	43.3	50.7	52.6	**58.3**	**62.7**	82.4	**73.7**	**81.2**	87.7	96.6	101.1	106.4
		$W_{L/360}$ (kN/m)	3	4	4	4	5	7	6	7	7	8	8	9
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3
	2642	Self Wt (kg/m)	59.6	60.0	64.7	65.2	67.4	77.1	77.1	81.8	89.1	99.0	103.4	108.9
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	7	8	9	10	10
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3
	2845	Self Wt (kg/m)	66.4	67.3	68.1	68.1	70.4	78.0	81.5	90.7	97.7	101.8	104.0	**105.7**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	11
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	3048	Self Wt (kg/m)	58.3	59.0	59.4	64.2	71.6	75.4	77.0	82.6	**87.0**	**93.1**	**99.4**	107.2
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3

OWSJ Span (m)	Depth (mm)		Uniform Load (kN/m)											
		Factored Load	4.5	5.7	6.9	8.1	9.3	10.5	11.7	12.9	14.1	15.3	16.5	17.7
		Service Load	3.0	3.8	4.6	5.4	6.2	7.0	7.8	8.6	9.4	10.2	11.0	11.8
42	1829	Self Wt (kg/m)	**46.1**	56.2	67.5	77.0	88.1	98.2	98.6	110.5	117.8	130.1	136.5	157.6
		$W_{L/360}$ (kN/m)	2	2	2	3	3	4	4	4	4	5	5	6
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	2032	Self Wt (kg/m)	47.5	52.4	65.5	69.6	81.6	90.8	99.6	101.7	113.7	120.0	127.4	138.8
		$W_{L/360}$ (kN/m)	2	2	3	3	4	4	5	5	5	6	6	7
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	2235	Self Wt (kg/m)	48.5	**51.0**	58.7	69.4	75.9	83.7	93.1	102.2	104.7	110.8	122.8	130.0
		$W_{L/360}$ (kN/m)	2	2	3	4	4	4	5	6	6	6	7	7
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	2438	Self Wt (kg/m)	48.2	75.8	**58.4**	**66.9**	85.5	88.9	87.4	96.2	**102.5**	**103.7**	114.5	117.6
		$W_{L/360}$ (kN/m)	2	4	3	4	5	5	5	6	7	7	8	8
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	2642	Self Wt (kg/m)	55.2	56.6	60.7	68.9	**74.9**	**80.3**	88.7	99.7	103.9	108.8	**110.3**	121.7
		$W_{L/360}$ (kN/m)	3	3	4	4	5	6	6	7	7	8	8	9
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	2845	Self Wt (kg/m)	57.9	59.2	61.7	69.9	77.7	88.3	**87.1**	98.8	106.7	109.2	113.6	**114.9**
		$W_{L/360}$ (kN/m)	3	4	4	5	6	7	6	8	8	8	9	9
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	3048	Self Wt (kg/m)	66.1	66.1	68.0	70.0	78.6	81.1	90.4	**94.9**	102.8	111.3	112.1	118.8
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	10	11
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	3251	Self Wt (kg/m)	88.9	88.9	89.6	90.9	95.4	97.9	100.0	103.8	107.1	109.4	114.9	120.7
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	3454	Self Wt (kg/m)	79.5	79.5	80.7	81.6	82.8	89.5	91.7	99.8	108.0	111.5	113.2	117.0
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
46	2032	Self Wt (kg/m)	**50.7**	63.3	68.5	79.5	92.7	97.8	109.6	116.6	132.9	135.7	156.8	162.0
		$W_{L/360}$ (kN/m)	2	2	2	3	3	4	4	4	5	5	6	6
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	2438	Self Wt (kg/m)	51.2	**57.6**	69.5	83.8	**83.9**	92.9	**102.4**	**105.1**	117.2	127.5	129.0	141.3
		$W_{L/360}$ (kN/m)	2	2	3	4	4	5	5	5	6	7	7	7
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	2642	Self Wt (kg/m)	57.0	61.5	**67.8**	76.5	85.0	95.2	102.9	110.1	111.5	123.3	134.7	137.5
		$W_{L/360}$ (kN/m)	3	3	3	4	4	5	6	6	6	7	8	8
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	2845	Self Wt (kg/m)	67.1	67.9	71.2	**76.1**	86.7	95.3	105.4	106.3	111.1	118.6	133.3	139.3
		$W_{L/360}$ (kN/m)	3	3	4	4	5	5	6	6	7	7	9	9
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	3048	Self Wt (kg/m)	59.7	62.1	73.0	78.3	85.7	**92.3**	102.8	108.1	**109.2**	**114.1**	127.1	136.4
		$W_{L/360}$ (kN/m)	3	4	4	5	5	6	7	7	7	8	9	10
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	3251	Self Wt (kg/m)	90.0	91.1	91.5	94.2	96.5	100.1	102.6	110.7	115.0	121.3	129.6	**135.0**
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	7	8	8	10	10	11
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	3454	Self Wt (kg/m)	97.0	98.0	98.9	99.1	100.0	100.7	104.3	107.5	114.6	119.7	**125.1**	135.8
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	8	9	10	11	12
		Bridg. (H/X/EX)	0/0/4	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4
	3658	Self Wt (kg/m)	104.3	105.3	105.8	106.8	107.1	108.5	111.3	113.2	117.4	126.8	128.5	144.0
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	3861	Self Wt (kg/m)	111.7	112.2	112.8	112.8	113.6	114.7	115.8	118.4	120.4	122.9	135.9	136.7
		$W_{L/360}$ (kN/m)	3	4	5	5	6	7	8	9	9	10	11	12
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
10	12	Self Wt (lb/ft)	6.3	6.3	6.3	6.3	6.3	**6.3**	**6.3**	**6.4**	**6.5**	7.3	**7.3**	7.7
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	14	Self Wt (lb/ft)	**6.0**	**6.0**	**6.0**	6.0	**6.0**	**6.3**	**6.3**	6.7	6.7	7.6	7.4	**7.4**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	16	Self Wt (lb/ft)	6.1	6.2	6.2	6.2	6.2	6.4	6.4	**6.4**	6.6	**6.8**	7.8	7.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	18	Self Wt (lb/ft)	6.2	6.2	6.2	**5.7**	6.5	6.6	6.6	7.7	7.7	7.7	7.8	7.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	20	Self Wt (lb/ft)	6.2	6.2	6.2	6.3	6.6	6.7	6.7	7.1	7.8	7.8	8.0	8.0
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	22	Self Wt (lb/ft)	7.1	7.1	6.6	6.4	8.1	7.9	7.9	7.9	9.2	9.2	9.2	10.0
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
12	12	Self Wt (lb/ft)	6.0	6.0	6.0	**6.0**	**6.0**	6.4	6.5	7.2	7.4	**7.4**	7.7	7.7
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	14	Self Wt (lb/ft)	6.1	6.1	6.1	6.2	6.2	6.4	**6.4**	**6.4**	**6.6**	7.5	**7.6**	**7.6**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	16	Self Wt (lb/ft)	**5.9**	**5.9**	**5.9**	**6.0**	6.1	6.5	7.3	7.3	7.6	7.6	**7.6**	**7.6**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	18	Self Wt (lb/ft)	**5.9**	6.0	6.0	**6.0**	6.1	**6.3**	7.3	7.4	7.4	**7.4**	**7.6**	8.2
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	20	Self Wt (lb/ft)	6.0	6.1	6.1	6.2	6.2	6.4	6.7	7.5	7.5	7.5	7.8	7.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
	22	Self Wt (lb/ft)	6.4	6.4	6.2	6.3	6.4	6.5	6.9	7.5	7.6	7.7	7.9	7.9
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0	0/0/0
14	12	Self Wt (lb/ft)	6.0	**6.0**	6.1	6.1	6.1	**6.4**	7.3	**7.3**	7.7	7.7	8.9	9.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	746	776	776	966	966
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	14	Self Wt (lb/ft)	**5.9**	**6.0**	**6.0**	**6.0**	**6.0**	6.5	7.2	**7.3**	7.7	7.7	8.0	9.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	16	Self Wt (lb/ft)	6.0	**6.0**	6.1	6.1	6.4	6.5	**6.7**	7.4	**7.4**	**7.5**	**7.8**	**8.2**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	6.0	6.2	6.2	6.4	7.2	7.3	7.6	7.6	7.6	9.1	8.9	8.9
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.1	6.2	6.3	6.5	7.3	7.4	7.6	7.7	7.9	9.2	9.0	9.1
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.9	7.0	6.5	6.9	8.2	7.5	7.8	8.4	8.6	9.3	9.3	9.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)	Factored Load	Uniform Load (plf)											
		Service Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
			200	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
16	12	Self Wt (lb/ft)	6.0	6.1	6.1	6.1	6.9	7.3	7.7	8.9	8.9	10.1	10.4	11.6
		$W_{L/360}$ (lb/ft)	200	280	360	437	495	495	515	641	641	680	719	826
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	14	Self Wt (lb/ft)	6.0	6.0	6.0	**6.0**	**6.0**	7.3	**7.3**	7.7	8.0	8.9	10.1	10.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	709	787	894	952	952
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	16	Self Wt (lb/ft)	**5.9**	**5.9**	**5.9**	6.4	7.2	7.2	7.7	7.7	**7.7**	9.3	9.5	10.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	6.0	6.0	6.0	6.1	6.5	7.3	7.4	**7.4**	**7.7**	8.4	9.3	9.7
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.0	6.1	6.1	6.2	6.2	7.3	7.5	7.5	7.8	**7.8**	8.6	9.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.5	6.4	6.2	6.3	6.4	**6.8**	7.6	7.6	**7.7**	8.0	8.7	**8.7**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.2	6.3	6.3	6.4	6.4	6.9	7.6	7.7	7.9	8.2	**8.2**	8.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.6	6.7	6.8	6.8	6.9	6.9	7.8	8.3	8.4	8.5	8.8	9.1
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
18	12	Self Wt (lb/ft)	6.1	6.1	6.1	6.9	7.8	8.4	9.0	10.4	11.5	11.6	13.1	13.2
		$W_{L/360}$ (lb/ft)	200	280	305	346	359	407	447	495	576	576	657	657
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	14	Self Wt (lb/ft)	**6.0**	6.1	6.1	6.6	7.4	7.7	8.2	8.9	10.1	10.6	11.5	12.9
		$W_{L/360}$ (lb/ft)	200	280	360	420	481	495	549	623	664	698	806	860
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	16	Self Wt (lb/ft)	**6.0**	**6.0**	**6.0**	6.9	**7.1**	**7.3**	7.9	**7.9**	**9.3**	10.4	10.4	**10.9**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	671	671	827	881	881	928
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	6.1	6.1	**6.0**	7.0	7.4	7.7	**7.8**	8.8	9.4	10.0	10.5	11.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.1	6.2	6.3	**6.5**	7.4	7.8	**7.8**	8.0	9.4	**9.6**	10.5	12.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.8	6.9	6.4	6.6	7.5	7.8	7.9	8.6	9.5	9.8	10.1	11.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.4	6.4	6.5	6.9	7.8	7.9	8.0	8.7	9.6	9.7	**9.9**	11.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.6	6.5	6.6	7.2	8.1	8.0	8.4	8.7	9.5	10.1	10.3	11.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.6	6.6	6.8	7.3	8.1	8.1	8.5	8.8	9.5	9.9	10.4	11.5
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
20	12	Self Wt (lb/ft)	6.1	6.1	6.9	7.8	8.9	10.2	11.7	11.8	13.0	14.6	16.1	16.1
		$W_{L/360}$ (lb/ft)	200	221	250	260	324	344	417	417	476	545	570	570
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	14	Self Wt (lb/ft)	**6.0**	**6.0**	6.4	7.3	7.6	8.5	10.0	10.3	11.4	13.0	13.2	15.1
		$W_{L/360}$ (lb/ft)	200	280	305	349	359	422	481	506	584	663	663	761
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	16	Self Wt (lb/ft)	**6.0**	6.1	**6.1**	6.8	7.7	8.0	9.0	10.1	10.5	11.6	12.7	13.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	462	486	599	638	663	781	830	884
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	**6.0**	6.1	6.5	6.8	7.5	**7.6**	8.3	10.0	10.2	10.5	12.3	12.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	589	653	760	820	820	963	1066
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.1	6.2	6.2	6.6	7.4	7.7	**7.7**	8.5	10.3	10.7	**10.9**	12.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.3	6.3	6.3	6.7	7.5	**7.6**	7.9	8.6	9.7	10.8	11.0	**11.2**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.3	6.4	6.4	**6.4**	**6.8**	7.7	7.8	**8.1**	9.4	10.1	11.2	11.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.9	6.9	6.6	6.6	7.2	8.1	8.2	8.5	9.6	10.2	11.3	11.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.6	6.7	6.7	6.7	7.3	8.3	8.2	8.3	**9.0**	**9.8**	11.5	11.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
22	12	Self Wt (lb/ft)	**6.0**	6.8	7.6	8.8	10.5	11.8	12.9	14.5	15.6	16.1	17.9	20.1
		$W_{L/360}$ (lb/ft)	165	187	195	242	294	312	356	408	426	426	470	536
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	14	Self Wt (lb/ft)	**6.0**	**6.0**	7.3	7.8	8.8	10.7	11.8	13.0	13.9	14.6	16.2	16.3
		$W_{L/360}$ (lb/ft)	200	228	261	298	338	375	437	496	496	569	599	599
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	16	Self Wt (lb/ft)	**6.0**	**6.0**	6.9	7.3	8.9	8.9	10.2	11.4	12.8	13.3	14.7	15.1
		$W_{L/360}$ (lb/ft)	200	280	345	345	448	448	496	584	621	661	760	760
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	6.1	6.2	6.7	7.6	8.0	8.9	9.9	10.3	11.9	12.5	13.6	13.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	466	577	613	613	797	797	848	848
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.2	6.3	6.7	7.5	**7.8**	8.2	10.0	10.1	10.4	12.2	12.7	13.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	584	680	760	764	896	999	1061
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.9	6.9	6.9	**6.8**	8.0	**8.0**	8.5	10.3	10.5	**10.8**	12.5	12.9
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.4	6.5	6.5	7.0	**7.8**	**8.0**	8.8	**8.8**	10.9	10.9	**12.2**	12.7
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.5	6.5	**6.4**	7.0	8.0	8.1	**8.4**	8.9	**10.2**	11.0	12.3	**12.4**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.5	6.6	6.7	7.2	8.0	8.1	8.5	9.0	10.4	11.2	12.3	12.5
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
24	12	Self Wt (lb/ft)	**6.0**	7.6	8.8	10.2	11.3	13.0	14.6	16.1	18.0	20.3	22.1	22.8
		$W_{L/360}$ (lb/ft)	127	149	186	209	240	273	313	327	361	411	445	445
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	14	Self Wt (lb/ft)	6.1	6.9	7.7	8.9	10.6	12.0	12.9	14.8	16.3	16.4	18.3	20.1
		$W_{L/360}$ (lb/ft)	175	200	206	259	316	335	380	437	459	459	507	578
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	16	Self Wt (lb/ft)	6.1	6.5	7.4	7.9	9.1	10.8	11.9	13.2	14.7	15.1	16.6	17.7
		$W_{L/360}$ (lb/ft)	200	234	265	304	344	386	448	507	583	583	612	645
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	**6.0**	6.5	7.3	7.9	9.0	10.1	10.5	12.7	13.4	13.8	16.2	17.0
		$W_{L/360}$ (lb/ft)	200	280	338	358	442	471	496	612	651	651	789	829
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.1	6.6	**6.7**	7.6	**8.0**	10.2	10.2	10.7	12.8	13.7	14.0	15.7
		$W_{L/360}$ (lb/ft)	200	280	360	423	448	586	586	620	767	814	814	989
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.3	**6.3**	6.8	7.6	**8.0**	9.4	10.4	11.0	**11.0**	13.2	13.9	14.1
		$W_{L/360}$ (lb/ft)	200	280	360	440	516	600	680	716	758	920	995	998
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.3	6.4	6.8	7.7	**8.0**	8.7	9.7	11.1	11.3	12.9	13.5	14.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.9	6.5	7.1	**7.2**	8.1	**8.5**	9.5	10.8	11.4	**11.5**	13.2	**13.7**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.6	6.7	**6.7**	7.4	8.2	8.7	**9.1**	**9.7**	11.6	11.7	**11.8**	13.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
26	14	Self Wt (lb/ft)	**6.0**	7.5	8.5	10.4	11.4	13.0	14.5	16.0	17.9	20.0	22.0	22.2
		$W_{L/360}$ (lb/ft)	137	161	190	228	263	298	342	360	389	453	493	493
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	16	Self Wt (lb/ft)	**6.0**	6.8	7.9	8.8	10.6	11.9	13.0	14.6	16.1	17.3	19.2	20.5
		$W_{L/360}$ (lb/ft)	183	208	219	270	329	351	398	457	479	506	563	608
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	6.1	6.6	7.9	8.7	10.1	11.8	12.9	13.8	15.9	16.5	17.4	18.3
		$W_{L/360}$ (lb/ft)	200	234	281	347	369	451	479	510	619	619	650	689
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.2	6.7	7.7	8.1	9.0	10.2	11.5	12.5	13.5	16.3	16.5	18.6
		$W_{L/360}$ (lb/ft)	200	280	331	351	433	460	563	601	639	776	776	813
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.8	6.9	**7.0**	8.0	9.0	10.3	10.7	12.6	12.9	13.9	16.4	16.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	561	594	734	734	782	952	952
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.4	**6.5**	**7.0**	8.1	8.4	9.4	10.9	**10.9**	13.0	13.3	14.0	15.2
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	674	711	840	882	939	981
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.5	**6.5**	7.2	8.1	**8.3**	9.2	10.9	11.2	**11.3**	13.1	14.1	14.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.5	6.6	7.2	8.1	8.4	9.0	9.8	11.3	11.4	13.0	13.5	14.4
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	6.6	6.7	7.4	**7.8**	8.4	**8.8**	**9.6**	11.5	11.6	**11.8**	**13.4**	**14.3**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
28	14	Self Wt (lb/ft)	6.9	7.8	9.8	11.3	13.0	15.6	17.3	18.9	20.1	22.1	25.5	27.7
		$W_{L/360}$ (lb/ft)	125	143	173	210	238	288	302	335	362	393	434	483
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	16	Self Wt (lb/ft)	6.4	7.6	8.8	10.5	12.4	13.1	15.9	16.1	17.9	20.1	21.9	22.2
		$W_{L/360}$ (lb/ft)	146	171	215	263	295	318	383	383	415	485	529	529
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	18	Self Wt (lb/ft)	6.5	7.0	7.9	10.0	11.4	12.9	14.0	15.9	17.5	18.2	20.0	20.7
		$W_{L/360}$ (lb/ft)	187	212	245	295	360	383	408	494	519	550	602	628
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.6	**6.7**	8.0	8.9	10.2	12.2	13.3	13.7	16.2	17.3	18.0	19.9
		$W_{L/360}$ (lb/ft)	200	233	280	346	367	450	510	510	619	649	649	755
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	**6.3**	7.0	8.0	8.3	10.4	11.2	13.1	13.5	13.9	16.1	17.4	18.1
		$W_{L/360}$ (lb/ft)	200	280	323	374	448	475	586	624	624	760	796	796
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	**6.3**	6.8	7.9	8.3	9.2	10.5	**11.0**	12.9	14.2	14.2	16.3	18.9
		$W_{L/360}$ (lb/ft)	200	280	360	411	506	538	568	704	750	750	914	956
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.8	7.0	**7.1**	**8.2**	**8.7**	10.8	**11.0**	12.2	13.6	14.1	**14.7**	16.7
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	635	760	831	886	886	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.5	7.0	7.3	8.4	8.9	**9.9**	11.4	**11.4**	13.6	**13.8**	14.9	**15.4**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	6.7	**6.7**	7.7	8.3	8.8	10.5	12.3	12.3	**13.0**	14.7	17.6	18.1
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
30	16	Self Wt (lb/ft)	6.6	7.9	10.0	11.5	12.9	15.5	16.0	18.8	20.1	22.0	25.4	27.6
		$W_{L/360}$ (lb/ft)	119	155	186	228	258	310	310	365	393	429	472	527
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	18	Self Wt (lb/ft)	6.6	7.9	8.8	10.5	12.4	13.8	15.9	17.2	18.2	20.3	21.9	25.2
		$W_{L/360}$ (lb/ft)	152	182	225	273	310	331	401	421	446	509	555	612
		Bridg. (H/X/EX)	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	6.6	7.7	8.7	10.2	11.5	13.0	14.5	16.0	17.3	18.4	20.2	21.1
		$W_{L/360}$ (lb/ft)	189	215	262	298	365	414	478	502	527	559	612	638
		Bridg. (H/X/EX)	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.8	**7.0**	8.2	9.1	10.8	12.3	13.2	15.1	16.3	17.5	18.7	20.4
		$W_{L/360}$ (lb/ft)	200	230	303	342	418	445	507	584	617	645	687	751
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	**6.4**	**7.0**	8.0	9.1	10.4	11.1	13.3	14.2	15.3	16.4	18.3	19.0
		$W_{L/360}$ (lb/ft)	200	276	313	383	436	461	571	608	701	741	776	827
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.5	**7.0**	7.9	8.6	10.6	**11.0**	12.2	13.2	14.0	16.4	16.9	19.0
		$W_{L/360}$ (lb/ft)	200	280	360	431	515	515	632	674	718	877	877	917
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	6.5	**7.0**	7.6	8.7	9.6	11.2	**11.3**	13.3	14.2	**14.3**	16.8	**17.2**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	635	760	838	838	1000	1024
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	6.7	7.2	**7.4**	**8.5**	**9.1**	11.2	11.4	**11.7**	**13.6**	14.8	**14.8**	17.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	733	840	920	967	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.3	8.3	8.4	9.2	11.0	11.8	13.2	14.1	17.0	15.3	17.3	20.2
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
32	16	Self Wt (lb/ft)	6.8	8.8	11.3	12.9	14.6	15.9	18.8	21.7	22.8	27.5	27.5	30.2
		$W_{L/360}$ (lb/ft)	111	144	187	212	244	255	300	353	353	433	433	461
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	18	Self Wt (lb/ft)	**6.6**	7.8	10.3	11.4	13.2	15.8	17.5	19.4	20.6	22.4	25.7	28.2
		$W_{L/360}$ (lb/ft)	125	164	205	240	272	329	346	387	419	456	504	561
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	20	Self Wt (lb/ft)	**6.6**	8.0	9.0	11.5	13.3	14.4	16.1	17.2	19.1	20.3	22.0	25.2
		$W_{L/360}$ (lb/ft)	155	187	231	300	340	393	413	433	485	525	573	633
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.9	7.9	8.9	10.4	11.7	13.0	14.7	16.7	17.4	19.8	20.5	22.1
		$W_{L/360}$ (lb/ft)	189	215	262	299	366	416	480	507	531	609	645	704
		Bridg. (H/X/EX)	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.8	**7.1**	**8.3**	10.4	10.9	13.0	13.8	15.5	16.2	18.0	20.1	20.7
		$W_{L/360}$ (lb/ft)	200	258	274	359	412	469	500	576	609	638	734	775
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	6.9	**7.1**	8.5	9.4	10.7	13.8	13.7	14.3	16.2	17.6	18.5	20.3
		$W_{L/360}$ (lb/ft)	200	268	324	399	424	589	576	591	721	754	754	871
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	**6.6**	7.2	8.4	**8.8**	11.2	11.5	13.9	14.2	15.7	16.4	18.3	19.8
		$W_{L/360}$ (lb/ft)	200	280	355	413	493	522	673	689	762	842	881	912
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	6.7	7.3	**8.3**	9.0	**10.0**	11.6	13.4	**14.1**	17.5	16.6	**17.3**	19.4
		$W_{L/360}$ (lb/ft)	200	280	360	434	520	569	680	747	840	920	974	1018
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.1	8.2	8.7	9.3	11.0	**11.4**	**13.1**	14.8	**15.6**	**15.9**	17.8	**19.1**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
34	18	Self Wt (lb/ft)	6.9	8.9	11.4	12.8	14.5	17.1	18.8	20.3	25.2	27.4	27.5	30.3
		$W_{L/360}$ (lb/ft)	117	154	200	226	261	288	322	349	419	467	467	498
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	20	Self Wt (lb/ft)	**6.7**	8.7	10.4	11.6	13.4	16.0	17.3	20.1	20.5	22.3	25.4	27.7
		$W_{L/360}$ (lb/ft)	129	179	213	250	283	344	364	419	437	477	527	587
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	6.9	8.2	9.1	11.7	13.1	14.8	16.2	18.1	20.3	20.8	22.6	25.7
		$W_{L/360}$ (lb/ft)	158	208	234	304	347	399	422	456	514	537	585	646
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	6.9	8.0	9.1	10.7	11.9	13.5	15.3	16.4	18.4	19.9	20.7	22.2
		$W_{L/360}$ (lb/ft)	189	214	262	322	366	416	480	507	549	619	645	706
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	7.0	**7.2**	**8.6**	10.6	12.2	13.3	14.3	16.1	17.8	19.5	20.5	21.5
		$W_{L/360}$ (lb/ft)	200	254	295	352	433	461	491	600	628	674	732	765
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	7.0	**7.2**	8.7	**9.5**	11.5	13.4	14.2	15.9	16.3	18.4	19.7	20.7
		$W_{L/360}$ (lb/ft)	200	259	313	388	473	538	574	662	701	733	788	857
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	**6.7**	7.4	8.9	9.8	11.3	13.2	14.2	**15.2**	17.0	18.4	19.3	**19.7**
		$W_{L/360}$ (lb/ft)	200	280	360	417	474	600	661	678	811	847	876	910
		Bridg. (H/X/EX)	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.1	8.4	**8.6**	10.2	**11.1**	**12.7**	14.4	15.4	**15.5**	**17.9**	18.8	20.8
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	796	920	969	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.4	9.0	8.7	10.2	11.5	12.9	**13.5**	**15.2**	16.4	18.1	**18.6**	21.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
36	18	Self Wt (lb/ft)	7.9	10.0	11.5	14.4	16.4	19.1	22.0	25.3	27.9	28.3	32.3	39.0
		$W_{L/360}$ (lb/ft)	105	138	168	220	242	271	319	352	393	393	450	531
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	20	Self Wt (lb/ft)	7.6	9.0	11.6	13.2	14.7	17.2	19.2	21.8	25.4	27.4	27.7	30.3
		$W_{L/360}$ (lb/ft)	124	161	210	238	275	303	339	401	443	494	494	527
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	22	Self Wt (lb/ft)	**6.9**	8.9	10.6	11.8	14.5	16.3	17.7	20.0	20.5	24.7	25.6	28.4
		$W_{L/360}$ (lb/ft)	133	184	226	256	336	355	384	432	451	543	543	607
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	**6.9**	8.2	10.4	12.0	13.4	14.9	16.6	18.3	20.2	21.3	24.9	26.4
		$W_{L/360}$ (lb/ft)	159	192	251	308	350	403	427	476	520	543	655	655
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	7.0	8.5	9.3	11.0	13.4	14.0	16.8	17.4	19.2	20.4	21.2	25.6
		$W_{L/360}$ (lb/ft)	188	226	279	341	413	413	505	528	566	616	643	777
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	7.0	8.0	9.5	11.0	12.6	14.0	15.4	16.6	18.3	19.4	21.3	**21.4**
		$W_{L/360}$ (lb/ft)	200	249	303	345	426	483	557	590	617	663	752	752
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	7.1	**7.7**	**8.9**	11.2	**11.7**	**13.9**	**14.8**	16.7	18.6	**19.3**	20.7	21.7
		$W_{L/360}$ (lb/ft)	200	280	304	399	459	543	571	682	712	737	825	870
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.3	8.3	**8.9**	10.9	**11.7**	**13.9**	14.9	17.2	**17.7**	19.4	**20.6**	21.7
		$W_{L/360}$ (lb/ft)	200	280	347	440	482	600	653	760	832	873	945	995
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.3	8.5	9.1	**10.7**	12.3	14.0	15.0	**16.1**	**17.7**	**19.3**	21.3	21.5
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
38	20	Self Wt (lb/ft)	8.0	10.1	11.6	14.5	16.5	18.8	20.2	25.3	27.5	27.8	30.3	38.6
		$W_{L/360}$ (lb/ft)	111	145	178	233	257	288	312	376	419	419	447	569
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	22	Self Wt (lb/ft)	7.8	8.9	11.7	13.2	14.6	17.4	19.8	22.1	25.5	27.7	28.0	30.5
		$W_{L/360}$ (lb/ft)	128	167	217	247	285	315	362	418	461	515	515	550
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	**6.9**	9.0	10.7	12.9	14.8	16.5	18.2	20.5	22.2	25.4	27.6	28.4
		$W_{L/360}$ (lb/ft)	135	187	230	279	343	362	392	461	504	556	621	621
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	7.0	8.5	10.6	12.1	13.5	15.2	17.3	18.4	20.5	22.3	25.5	26.3
		$W_{L/360}$ (lb/ft)	159	192	252	309	351	405	448	479	546	598	660	660
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	7.1	8.6	**9.4**	11.5	13.7	15.3	16.3	**17.7**	20.2	20.9	23.2	26.3
		$W_{L/360}$ (lb/ft)	185	224	277	338	410	473	501	524	612	638	700	772
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	7.1	**8.4**	9.6	11.4	12.8	**14.4**	15.9	17.9	19.7	20.8	21.9	25.8
		$W_{L/360}$ (lb/ft)	200	243	297	389	417	473	545	605	650	707	738	849
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.2	8.6	**9.4**	**10.9**	13.6	14.6	16.6	**17.7**	18.8	20.4	22.0	22.3
		$W_{L/360}$ (lb/ft)	200	280	360	387	508	540	662	707	741	803	845	846
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.2	8.8	10.4	11.1	**12.5**	14.8	**15.5**	17.8	**18.1**	20.6	21.3	24.3
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1074
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	40	Self Wt (lb/ft)	8.4	8.7	10.2	11.4	13.0	15.5	17.8	18.5	18.7	**19.0**	**20.6**	**22.2**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)	Factored Load / Service Load	Uniform Load (plf) 300 / 200	420 / 280	540 / 360	660 / 440	780 / 520	900 / 600	1020 / 680	1140 / 760	1260 / 840	1380 / 920	1500 / 1000	1620 / 1080
40	20	Self Wt (lb/ft)	7.9	10.4	13.2	14.9	18.4	20.1	22.7	27.5	27.6	34.7	38.4	38.4
		$W_{L/360}$ (lb/ft)	104	130	173	200	247	267	292	359	359	427	487	487
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0
	22	Self Wt (lb/ft)	8.2	10.2	11.8	14.6	15.9	18.8	20.4	25.3	27.4	27.7	30.3	35.0
		$W_{L/360}$ (lb/ft)	116	152	186	244	258	302	328	395	441	441	471	526
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	24	Self Wt (lb/ft)	7.8	9.2	11.9	13.4	16.2	17.7	20.1	22.1	25.3	27.7	28.7	30.4
		$W_{L/360}$ (lb/ft)	131	172	224	254	324	336	378	432	476	532	532	569
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	**7.1**	9.2	10.9	13.4	16.3	16.9	18.5	20.7	22.4	25.6	28.7	30.3
		$W_{L/360}$ (lb/ft)	136	189	232	300	384	367	410	467	512	565	631	651
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	**7.1**	8.7	10.9	12.6	16.4	15.7	17.8	20.0	20.8	22.7	26.3	29.1
		$W_{L/360}$ (lb/ft)	159	210	251	309	448	405	448	524	546	599	661	739
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	7.2	8.8	**9.7**	12.8	13.8	15.5	17.5	19.4	20.5	21.5	25.9	26.8
		$W_{L/360}$ (lb/ft)	183	221	274	357	405	467	518	557	606	632	727	766
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.2	**8.5**	10.6	**11.1**	**13.4**	15.2	**17.3**	18.4	20.5	21.6	25.4	26.1
		$W_{L/360}$ (lb/ft)	200	253	331	350	435	487	605	634	687	724	792	876
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.6	8.7	10.3	**11.1**	14.4	**14.6**	18.0	**18.2**	**19.7**	21.1	**22.1**	25.9
		$W_{L/360}$ (lb/ft)	200	280	360	421	520	577	680	760	812	879	926	1013
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	40	Self Wt (lb/ft)	8.4	9.1	10.7	12.4	13.5	15.0	17.5	18.3	19.9	**20.4**	**22.1**	**25.0**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
42	22	Self Wt (lb/ft)	8.1	10.6	13.1	14.9	17.5	20.4	22.8	27.9	28.1	32.5	38.7	39.3
		$W_{L/360}$ (lb/ft)	109	142	183	211	241	283	309	381	381	437	518	518
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0
	24	Self Wt (lb/ft)	8.2	10.4	11.9	14.8	16.4	19.2	22.0	25.4	27.4	28.4	30.2	38.7
		$W_{L/360}$ (lb/ft)	120	158	193	253	268	314	372	411	459	459	491	625
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	8.0	9.3	12.1	13.5	16.5	18.3	20.5	22.3	25.4	28.3	29.9	34.3
		$W_{L/360}$ (lb/ft)	134	175	228	259	317	343	403	442	488	544	561	628
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	7.4	9.4	11.1	13.7	16.9	17.4	18.6	20.8	22.4	26.5	28.6	30.4
		$W_{L/360}$ (lb/ft)	156	190	234	303	387	387	414	472	517	571	637	682
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	**7.3**	9.5	11.2	12.8	14.3	17.3	**17.6**	20.4	21.3	25.6	26.5	29.9
		$W_{L/360}$ (lb/ft)	158	219	270	308	349	447	447	523	545	627	661	761
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.3	**8.5**	10.8	13.4	14.2	17.2	**17.6**	20.3	20.6	25.2	25.9	26.8
		$W_{L/360}$ (lb/ft)	200	218	286	375	399	522	522	593	599	756	756	757
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.5	8.7	10.9	12.7	14.2	**15.4**	17.8	19.4	21.0	21.9	25.7	26.6
		$W_{L/360}$ (lb/ft)	200	277	360	404	498	536	668	700	759	799	874	968
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	40	Self Wt (lb/ft)	8.8	9.0	10.7	13.5	15.0	16.2	18.1	**18.8**	20.1	21.8	25.4	26.6
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	833	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	44	Self Wt (lb/ft)	**7.3**	8.6	**9.4**	**11.0**	**12.0**	17.8	19.0	19.5	**19.7**	**19.8**	**22.6**	**23.1**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
44	22	Self Wt (lb/ft)	8.9	11.7	14.5	16.5	20.2	22.0	27.4	27.8	32.3	38.4	38.5	39.1
		$W_{L/360}$ (lb/ft)	100	140	183	202	246	268	331	331	380	450	450	450
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	24	Self Wt (lb/ft)	8.9	10.7	13.3	15.8	18.2	20.4	22.8	27.5	28.0	32.4	38.4	39.0
		$W_{L/360}$ (lb/ft)	120	148	191	226	252	296	324	399	399	459	543	543
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	26	Self Wt (lb/ft)	8.4	10.9	12.1	14.9	16.4	20.0	22.3	25.7	28.0	30.3	35.1	39.3
		$W_{L/360}$ (lb/ft)	123	169	199	260	275	336	384	424	473	488	566	646
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	8.6	9.4	12.4	13.7	16.6	18.4	20.7	22.4	25.7	28.4	30.4	35.6
		$W_{L/360}$ (lb/ft)	144	178	232	263	321	348	410	449	496	554	593	663
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	8.0	9.6	12.7	13.7	17.0	17.9	20.0	21.3	24.5	26.4	29.7	30.6
		$W_{L/360}$ (lb/ft)	156	191	267	303	388	388	454	474	545	574	661	686
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.3	9.4	11.2	13.6	16.4	18.0	20.1	21.2	23.0	26.4	27.5	30.8
		$W_{L/360}$ (lb/ft)	189	234	262	326	425	454	515	542	595	657	657	787
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.5	8.9	11.2	13.9	16.4	**17.7**	**18.6**	20.6	22.4	25.4	26.9	28.4
		$W_{L/360}$ (lb/ft)	200	241	316	415	442	581	581	659	694	759	841	866
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	40	Self Wt (lb/ft)	8.7	8.8	11.2	12.6	**14.5**	18.3	18.8	19.9	21.8	24.9	26.3	27.0
		$W_{L/360}$ (lb/ft)	200	280	360	436	520	600	680	731	821	920	945	1048
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	44	Self Wt (lb/ft)	**7.2**	**8.4**	**10.7**	**11.5**	17.1	17.8	19.0	**19.4**	**19.5**	**22.3**	**22.7**	**23.4**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1053
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
46	24	Self Wt (lb/ft)	9.0	11.9	14.7	16.2	19.1	22.1	27.5	27.6	32.2	38.3	38.9	39.1
		$W_{L/360}$ (lb/ft)	105	147	192	203	239	283	349	349	401	475	475	475
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	26	Self Wt (lb/ft)	9.1	12.0	13.4	16.3	18.0	20.6	25.3	27.6	29.9	34.9	38.7	39.0
		$W_{L/360}$ (lb/ft)	124	174	197	240	260	306	370	413	426	495	564	564
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	8.5	11.0	13.4	15.4	16.9	20.2	22.3	25.5	28.7	30.6	35.4	38.8
		$W_{L/360}$ (lb/ft)	126	178	230	265	281	343	393	433	484	518	580	662
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	8.7	9.7	12.6	15.4	16.9	18.7	21.5	24.8	26.7	30.3	30.8	35.7
		$W_{L/360}$ (lb/ft)	145	179	234	306	325	352	414	476	502	578	600	672
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.5	10.7	12.2	14.3	17.4	18.3	20.7	21.8	25.5	27.1	30.8	34.8
		$W_{L/360}$ (lb/ft)	166	217	267	303	397	416	455	475	574	575	688	742
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.7	10.9	12.2	14.5	17.8	**18.2**	19.6	22.0	24.7	26.6	28.8	32.1
		$W_{L/360}$ (lb/ft)	200	276	307	386	508	508	532	607	664	736	757	881
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	40	Self Wt (lb/ft)	8.7	10.2	11.7	14.4	15.7	18.4	19.4	20.3	24.7	26.0	26.8	28.8
		$W_{L/360}$ (lb/ft)	200	280	343	440	506	600	639	665	827	827	916	944
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	44	Self Wt (lb/ft)	**8.2**	**8.4**	**11.2**	15.0	15.7	18.6	**18.9**	**19.3**	22.3	**22.5**	**23.2**	**27.3**
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	875	921	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	48	Self Wt (lb/ft)	9.5	10.1	11.9	**14.2**	**14.8**	**18.2**	19.3	20.7	**22.0**	23.5	26.8	27.5
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (plf)											
		Factored Load	300	420	540	660	780	900	1020	1140	1260	1380	1500	1620
		Service Load	**200**	**280**	**360**	**440**	**520**	**600**	**680**	**760**	**840**	**920**	**1000**	**1080**
48	24	Self Wt (lb/ft)	9.1	12.0	14.8	18.3	21.9	25.3	27.7	30.3	38.4	38.8	39.2	44.3
		$W_{L/360}$ (lb/ft)	99	129	169	210	249	275	307	328	418	418	418	472
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0
	26	Self Wt (lb/ft)	9.1	12.0	14.8	16.3	20.5	22.3	27.4	27.8	34.5	38.4	38.8	41.7
		$W_{L/360}$ (lb/ft)	109	152	200	211	269	295	364	364	435	496	496	527
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	28	Self Wt (lb/ft)	9.3	12.3	13.6	16.6	18.5	20.7	25.4	27.8	29.9	34.8	38.7	38.9
		$W_{L/360}$ (lb/ft)	127	178	202	247	268	315	381	426	439	510	582	582
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	30	Self Wt (lb/ft)	8.7	11.2	13.6	15.3	26.9	20.3	22.6	25.5	28.6	30.8	35.4	38.7
		$W_{L/360}$ (lb/ft)	127	180	233	269	492	349	399	441	493	527	591	675
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	32	Self Wt (lb/ft)	8.4	10.7	13.0	16.5	17.5	20.3	21.5	25.3	26.6	30.8	34.5	35.9
		$W_{L/360}$ (lb/ft)	146	191	250	327	349	396	417	505	505	605	652	708
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0
	36	Self Wt (lb/ft)	8.6	10.8	13.3	14.2	17.8	18.1	20.9	24.3	26.2	27.2	31.7	35.1
		$W_{L/360}$ (lb/ft)	185	243	319	340	446	446	511	584	647	647	775	836
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0
	40	Self Wt (lb/ft)	8.8	10.6	12.2	14.7	17.9	18.6	20.1	22.7	24.6	27.3	28.7	32.1
		$W_{L/360}$ (lb/ft)	200	257	318	413	520	556	585	664	727	806	830	932
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0
	44	Self Wt (lb/ft)	**8.3**	**8.9**	**10.8**	**12.3**	18.5	19.1	**19.2**	21.2	22.4	**23.3**	27.6	**27.7**
		$W_{L/360}$ (lb/ft)	200	264	346	388	520	600	678	709	770	810	956	956
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0
	48	Self Wt (lb/ft)	9.4	10.0	13.4	14.4	**15.9**	**17.2**	20.4	**20.6**	**21.8**	25.2	**27.2**	28.9
		$W_{L/360}$ (lb/ft)	200	280	360	440	520	600	680	760	840	920	1000	1080
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0

OWSJ Span (ft)	Depth (in)		Uniform Load (lb/ft)											
		Factored Load	300	375	450	525	600	675	750	825	900	975	1050	1125
		Service Load	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**	**650**	**700**	**750**
50	26	Self Wt (lb/ft)	9.4	12.2	13.5	15.1	17.0	19.1	20.3	22.3	25.5	27.6	27.8	30.4
		$W_{L/360}$ (lb/ft)	103	135	153	177	195	220	238	261	288	321	321	344
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	28	Self Wt (lb/ft)	9.4	11.1	12.4	15.2	15.9	18.9	19.4	20.6	22.4	25.7	27.9	28.1
		$W_{L/360}$ (lb/ft)	112	138	158	206	206	256	256	278	305	337	376	376
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	30	Self Wt (lb/ft)	9.5	11.2	12.5	13.9	15.5	17.5	19.2	19.9	21.3	24.6	25.4	27.9
		$W_{L/360}$ (lb/ft)	130	155	181	206	238	264	296	296	322	370	390	436
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	32	Self Wt (lb/ft)	8.5	10.8	12.2	13.6	15.0	16.4	17.6	18.6	21.2	22.8	25.2	25.8
		$W_{L/360}$ (lb/ft)	141	169	207	236	272	289	308	323	369	405	446	447
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	36	Self Wt (lb/ft)	8.5	10.6	10.9	14.2	14.2	17.3	17.8	18.0	20.6	21.5	21.5	25.5
		$W_{L/360}$ (lb/ft)	164	215	215	300	301	395	395	395	448	472	472	572
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	40	Self Wt (lb/ft)	11.6	11.8	11.1	12.4	14.4	15.4	18.0	18.5	19.2	20.2	22.3	25.0
		$W_{L/360}$ (lb/ft)	200	244	267	296	365	384	492	492	492	517	587	642
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	44	Self Wt (lb/ft)	**8.3**	**8.4**	**10.4**	**11.4**	**13.2**	15.9	18.4	18.7	**19.0**	**19.1**	**20.2**	22.0
		$W_{L/360}$ (lb/ft)	200	233	300	324	343	450	500	550	599	599	627	680
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0	1/0/0	1/0/0	1/0/0	2/0/0	1/0/0
	48	Self Wt (lb/ft)	9.3	9.8	11.7	13.4	14.0	**14.7**	**15.8**	**17.1**	19.3	19.6	20.4	**21.6**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	52	Self Wt (lb/ft)	9.7	10.2	11.9	13.5	14.6	14.9	17.7	18.4	19.7	20.8	20.7	**21.6**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
52	26	Self Wt (lb/ft)	10.8	12.1	14.7	16.7	18.5	20.4	22.3	25.7	27.7	27.7	30.4	34.9
		$W_{L/360}$ (lb/ft)	105	120	157	174	195	212	232	256	285	285	306	342
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0	3/0/0
	28	Self Wt (lb/ft)	9.4	12.3	13.5	15.1	16.5	19.3	20.7	22.5	25.7	27.7	28.1	30.4
		$W_{L/360}$ (lb/ft)	107	140	159	183	194	228	247	271	299	334	334	358
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	30	Self Wt (lb/ft)	9.5	11.3	12.8	15.0	16.8	18.7	20.8	21.8	24.7	25.5	27.9	30.0
		$W_{L/360}$ (lb/ft)	115	142	162	211	224	243	274	286	329	346	387	399
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	32	Self Wt (lb/ft)	9.3	11.0	13.0	14.0	16.2	17.6	18.6	21.0	22.8	25.2	25.7	28.8
		$W_{L/360}$ (lb/ft)	141	158	197	209	257	274	287	328	359	397	397	443
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	36	Self Wt (lb/ft)	8.8	11.1	12.2	14.1	14.6	17.6	18.3	19.2	21.0	22.3	25.7	26.4
		$W_{L/360}$ (lb/ft)	145	191	212	261	267	351	351	369	401	419	508	508
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	40	Self Wt (lb/ft)	8.7	11.0	**11.9**	14.4	15.4	15.8	18.0	**18.6**	20.1	22.0	24.7	24.8
		$W_{L/360}$ (lb/ft)	181	237	249	325	350	350	437	437	459	522	571	571
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	44	Self Wt (lb/ft)	**8.3**	**8.5**	12.1	**13.1**	15.4	15.9	18.3	**18.6**	**19.1**	**19.4**	22.0	22.4
		$W_{L/360}$ (lb/ft)	200	207	288	304	373	404	500	532	532	532	604	604
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	1/0/0	1/0/0
	48	Self Wt (lb/ft)	9.7	12.1	13.7	13.9	**14.4**	**15.6**	18.1	19.7	19.4	20.2	21.5	22.7
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	644	697	728
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	52	Self Wt (lb/ft)	9.6	10.2	**11.9**	14.2	14.5	15.7	**17.7**	19.0	20.5	20.6	**21.1**	**21.7**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0

OWSJ Span (ft)	Depth (in)	Factored Load / Service Load	Uniform Load (lb/ft) 300 / 200	375 / 250	450 / 300	525 / 350	600 / 400	675 / 450	750 / 500	825 / 550	900 / 600	975 / 650	1050 / 700	1125 / 750
54	28	Self Wt (lb/ft)	11.0	12.2	14.9	17.0	18.8	20.5	22.6	26.0	27.7	27.7	30.6	34.9
		$W_{L/360}$ (lb/ft)	106	125	163	181	203	221	242	267	298	298	319	357
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	30	Self Wt (lb/ft)	9.5	12.4	13.6	15.3	16.7	19.8	20.9	22.7	25.5	27.6	29.2	30.9
		$W_{L/360}$ (lb/ft)	110	144	163	189	200	235	255	280	309	345	356	370
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	32	Self Wt (lb/ft)	9.3	10.9	13.3	15.9	16.5	18.0	20.3	21.4	25.2	25.6	27.8	30.2
		$W_{L/360}$ (lb/ft)	126	141	187	229	229	248	280	292	354	354	396	424
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	36	Self Wt (lb/ft)	9.5	11.0	13.2	14.2	16.4	17.9	18.8	20.9	22.1	24.8	26.3	27.4
		$W_{L/360}$ (lb/ft)	161	170	224	238	292	313	328	358	374	430	453	453
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	40	Self Wt (lb/ft)	8.7	11.0	12.4	14.4	16.1	18.3	18.9	19.2	21.5	22.2	25.2	26.9
		$W_{L/360}$ (lb/ft)	161	211	235	296	304	390	390	394	446	466	537	565
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	44	Self Wt (lb/ft)	**8.5**	**9.2**	**10.9**	**12.6**	16.9	18.7	18.9	19.3	**19.4**	22.1	22.3	**23.1**
		$W_{L/360}$ (lb/ft)	185	216	243	296	333	450	475	475	475	539	539	567
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	48	Self Wt (lb/ft)	9.6	11.2	13.5	14.2	**14.8**	**16.3**	**18.5**	**19.1**	20.1	**20.9**	22.5	24.2
		$W_{L/360}$ (lb/ft)	200	250	300	350	376	443	500	550	574	598	622	681
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	52	Self Wt (lb/ft)	10.0	13.8	13.9	14.2	15.1	18.2	19.9	20.2	20.7	21.7	24.3	23.6
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	56	Self Wt (lb/ft)	11.0	12.7	14.2	14.6	15.2	17.5	18.9	20.3	20.7	21.1	**21.8**	23.3
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
56	28	Self Wt (lb/ft)	11.0	13.4	15.0	17.0	19.3	22.1	23.5	28.5	27.9	30.4	34.8	38.6
		$W_{L/360}$ (lb/ft)	98	127	146	162	182	217	217	267	267	286	320	366
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	30	Self Wt (lb/ft)	11.2	12.6	14.9	17.1	18.8	20.9	22.8	26.6	28.1	29.4	30.7	35.3
		$W_{L/360}$ (lb/ft)	110	129	169	187	211	229	251	277	309	319	331	371
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	32	Self Wt (lb/ft)	10.8	12.9	13.7	16.2	17.5	20.2	21.2	22.9	25.6	27.7	30.4	31.1
		$W_{L/360}$ (lb/ft)	120	157	167	205	214	251	262	287	317	355	380	380
		Bridg. (H/X/EX)	2/0/1	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	36	Self Wt (lb/ft)	10.8	11.6	14.3	15.1	17.5	17.9	20.6	21.7	25.1	25.8	27.0	30.4
		$W_{L/360}$ (lb/ft)	152	161	213	225	280	280	321	335	386	406	406	469
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	40	Self Wt (lb/ft)	10.3	11.3	14.1	14.3	17.9	18.5	19.3	19.7	21.9	25.0	26.7	27.2
		$W_{L/360}$ (lb/ft)	162	189	259	265	349	349	367	367	417	481	506	506
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	44	Self Wt (lb/ft)	**8.4**	**10.2**	**11.9**	**13.1**	16.7	18.6	18.8	**19.2**	**20.1**	22.1	23.2	25.0
		$W_{L/360}$ (lb/ft)	165	217	243	285	340	426	426	426	445	483	508	559
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	48	Self Wt (lb/ft)	9.5	11.7	14.0	14.3	**15.0**	**16.6**	19.3	20.3	20.4	22.2	23.9	**24.5**
		$W_{L/360}$ (lb/ft)	200	244	300	322	357	397	496	515	536	557	610	639
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	52	Self Wt (lb/ft)	11.0	13.7	13.9	14.7	15.6	18.1	**18.7**	20.3	20.6	22.2	**23.1**	24.7
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	687	748
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	56	Self Wt (lb/ft)	13.7	13.9	14.1	14.4	17.5	17.9	19.6	20.0	20.9	**21.9**	23.3	25.8
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0

OWSJ Span (ft)	Depth (in)	Factored Load / Service Load	Uniform Load (lb/ft) 300 / 200	375 / 250	450 / 300	525 / 350	600 / 400	675 / 450	750 / 500	825 / 550	900 / 600	975 / 650	1050 / 700	1125 / 750
58	30	Self Wt (lb/ft)	11.2	13.5	15.3	16.9	19.7	22.5	26.2	28.7	27.9	30.5	35.0	38.6
		$W_{L/360}$ (lb/ft)	102	132	152	161	189	226	249	278	278	298	334	381
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	32	Self Wt (lb/ft)	11.0	12.9	15.0	16.2	18.1	20.8	22.8	25.6	27.9	30.2	30.8	35.2
		$W_{L/360}$ (lb/ft)	114	141	174	184	207	236	259	285	319	342	342	383
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	36	Self Wt (lb/ft)	10.9	13.3	14.1	17.5	18.0	19.4	21.5	23.1	25.8	26.1	30.1	31.3
		$W_{L/360}$ (lb/ft)	137	180	192	252	252	265	301	331	365	365	422	438
		Bridg. (H/X/EX)	2/0/1	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	40	Self Wt (lb/ft)	11.1	12.2	14.2	15.6	18.0	18.4	19.9	22.3	24.3	26.4	27.9	30.2
		$W_{L/360}$ (lb/ft)	170	189	233	239	314	314	330	375	410	455	455	526
		Bridg. (H/X/EX)	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	44	Self Wt (lb/ft)	**8.8**	**10.6**	**12.2**	15.6	18.6	19.0	19.3	20.7	22.0	23.7	24.9	27.7
		$W_{L/360}$ (lb/ft)	149	196	219	268	383	383	383	401	435	457	503	555
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	48	Self Wt (lb/ft)	9.9	12.0	14.0	**14.5**	**16.0**	**17.8**	**19.1**	**20.2**	21.5	23.7	**24.2**	27.1
		$W_{L/360}$ (lb/ft)	200	247	284	303	357	419	446	463	501	549	575	632
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	52	Self Wt (lb/ft)	10.3	11.9	14.4	14.7	17.6	18.8	19.6	20.5	**21.2**	**22.4**	24.3	27.1
		$W_{L/360}$ (lb/ft)	200	250	300	341	400	450	500	546	551	591	647	706
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	56	Self Wt (lb/ft)	11.5	13.2	14.3	15.7	17.7	18.3	20.1	21.3	22.4	23.7	25.5	**25.0**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	60	Self Wt (lb/ft)	14.7	15.2	15.4	15.8	18.2	18.9	21.6	21.9	21.4	**22.4**	24.4	26.5
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
60	30	Self Wt (lb/ft)	12.4	13.6	17.0	18.7	20.7	22.6	26.2	28.7	30.2	34.7	38.7	38.7
		$W_{L/360}$ (lb/ft)	105	119	152	171	186	204	225	251	269	301	344	344
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1	2/0/1
	32	Self Wt (lb/ft)	11.0	13.2	16.3	17.5	19.9	22.3	25.6	27.7	27.9	30.4	35.1	38.5
		$W_{L/360}$ (lb/ft)	103	136	167	174	204	233	258	288	288	308	345	395
		Bridg. (H/X/EX)	2/0/1	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	36	Self Wt (lb/ft)	10.9	14.1	14.2	17.5	18.0	20.8	21.6	25.5	26.0	29.5	31.2	34.8
		$W_{L/360}$ (lb/ft)	124	170	173	228	228	261	272	330	330	381	395	426
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	40	Self Wt (lb/ft)	11.1	12.6	14.5	18.0	18.3	19.8	21.4	22.1	25.5	26.8	30.9	32.0
		$W_{L/360}$ (lb/ft)	154	171	215	284	284	298	325	339	390	411	475	493
		Bridg. (H/X/EX)	2/0/1	2/0/1	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	44	Self Wt (lb/ft)	**9.2**	**11.3**	**12.5**	18.3	18.6	18.9	**19.2**	21.8	22.7	24.7	27.5	27.7
		$W_{L/360}$ (lb/ft)	157	187	216	346	346	346	346	392	413	454	501	501
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	48	Self Wt (lb/ft)	10.8	13.7	14.0	**14.7**	**16.1**	**18.4**	19.8	**20.4**	21.8	24.0	27.0	**27.1**
		$W_{L/360}$ (lb/ft)	188	250	261	290	323	392	418	435	473	519	570	570
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	52	Self Wt (lb/ft)	10.8	13.5	14.3	14.9	16.4	18.8	20.4	**20.4**	21.9	23.8	25.5	27.5
		$W_{L/360}$ (lb/ft)	200	250	300	323	380	450	493	493	533	584	637	673
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	56	Self Wt (lb/ft)	11.7	13.0	14.6	16.8	17.7	19.1	19.8	20.9	**21.4**	**22.7**	**24.4**	27.4
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	579	621	680	743
		Bridg. (H/X/EX)	2/0/1	3/0/0	3/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0
	60	Self Wt (lb/ft)	15.0	15.1	15.3	18.1	19.3	21.3	20.7	21.9	23.0	25.3	25.7	28.7
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0	2/0/0

OWSJ Span (ft)	Depth (in)	Factored Load / Service Load	Uniform Load (lb/ft) 300 / 200	375 / 250	450 / 300	525 / 350	600 / 400	675 / 450	750 / 500	825 / 550	900 / 600	975 / 650	1050 / 700	1125 / 750
65	36	Self Wt (lb/ft)	13.3	14.2	17.4	19.3	21.4	23.1	25.9	27.9	31.0	35.1	38.8	39.3
		$W_{L/360}$ (lb/ft)	128	136	170	188	214	235	259	290	310	348	398	398
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	40	Self Wt (lb/ft)	13.1	14.2	18.2	18.4	19.5	22.3	25.2	26.4	29.7	32.0	35.0	36.1
		$W_{L/360}$ (lb/ft)	139	166	223	223	234	266	307	323	373	387	418	434
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	44	Self Wt (lb/ft)	**10.5**	**12.5**	18.5	18.6	**19.0**	20.2	22.4	24.5	27.6	29.9	30.1	32.8
		$W_{L/360}$ (lb/ft)	139	169	271	271	271	284	324	356	394	439	439	472
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	48	Self Wt (lb/ft)	11.7	14.0	14.9	**16.3**	19.4	20.4	22.4	24.5	25.1	27.8	29.5	30.6
		$W_{L/360}$ (lb/ft)	175	202	228	253	316	342	371	407	429	486	486	517
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	52	Self Wt (lb/ft)	13.8	14.0	15.0	18.5	19.2	**20.1**	21.3	23.2	25.3	27.4	29.0	**29.3**
		$W_{L/360}$ (lb/ft)	200	237	260	350	363	387	403	459	501	528	574	574
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	56	Self Wt (lb/ft)	14.0	14.1	**14.7**	17.9	19.7	20.2	**20.7**	**22.3**	**24.4**	**25.6**	**27.8**	29.5
		$W_{L/360}$ (lb/ft)	200	250	281	350	400	438	451	488	534	560	616	669
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	60	Self Wt (lb/ft)	15.0	15.7	17.8	18.0	19.5	21.4	21.4	22.5	24.5	**25.6**	28.3	30.0
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	539	588	616	672	731
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	64	Self Wt (lb/ft)	18.4	18.4	18.7	18.7	19.8	22.5	23.9	25.3	27.3	27.5	30.2	30.6
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	68	Self Wt (lb/ft)	15.9	19.0	18.7	20.1	21.6	22.5	24.2	24.8	26.2	27.4	29.8	30.1
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
70	40	Self Wt (lb/ft)	14.1	15.2	18.3	19.5	22.2	25.2	26.4	29.9	34.9	35.5	39.5	42.3
		$W_{L/360}$ (lb/ft)	132	139	178	187	213	245	258	298	334	347	397	422
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	44	Self Wt (lb/ft)	**11.8**	14.9	18.5	18.9	**20.1**	22.5	24.5	27.4	29.9	32.6	35.0	38.0
		$W_{L/360}$ (lb/ft)	124	165	217	217	227	259	285	315	351	378	409	444
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	48	Self Wt (lb/ft)	13.7	**14.6**	16.3	18.9	20.5	21.9	23.9	26.2	28.2	30.0	32.7	35.2
		$W_{L/360}$ (lb/ft)	161	182	203	253	273	297	326	358	389	413	453	491
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	52	Self Wt (lb/ft)	13.5	**14.6**	16.4	19.3	20.3	**21.0**	23.7	25.2	28.3	29.6	31.3	33.8
		$W_{L/360}$ (lb/ft)	173	203	239	298	310	322	367	404	445	459	506	557
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	56	Self Wt (lb/ft)	16.8	17.0	17.4	19.0	20.7	21.2	**22.4**	25.2	27.9	29.4	30.2	32.9
		$W_{L/360}$ (lb/ft)	200	249	300	335	364	375	390	448	492	553	535	590
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	60	Self Wt (lb/ft)	15.3	15.4	17.7	19.5	21.4	21.7	23.0	**24.7**	27.4	29.0	30.2	31.6
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	415	450	492	538	584	617	638
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	64	Self Wt (lb/ft)	15.7	15.8	**15.9**	**17.9**	21.9	22.1	23.4	25.5	**26.4**	**28.9**	**30.0**	31.1
		$W_{L/360}$ (lb/ft)	200	250	295	347	400	450	492	536	562	648	667	704
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	68	Self Wt (lb/ft)	16.8	18.2	18.2	19.5	22.0	22.2	23.5	26.9	27.4	29.4	30.8	**30.9**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	72	Self Wt (lb/ft)	20.9	20.9	26.2	22.7	23.2	23.6	25.6	26.7	30.2	31.3	31.4	33.0
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2

OWSJ Span (ft)	Depth (in)		Uniform Load (lb/ft)											
		Factored Load	300	375	450	525	600	675	750	825	900	975	1050	1125
		Service Load	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**	**650**	**700**	**750**
75	40	Self Wt (lb/ft)	14.4	17.3	19.7	22.1	26.2	28.6	30.2	36.0	39.7	40.4	43.4	45.8
		$W_{L/360}$ (lb/ft)	108	130	152	173	210	235	242	282	323	323	343	367
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	44	Self Wt (lb/ft)	14.5	16.7	19.3	20.5	24.2	26.6	28.7	32.0	34.2	37.7	41.2	41.5
		$W_{L/360}$ (lb/ft)	124	156	178	194	232	256	280	307	332	361	401	401
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	48	Self Wt (lb/ft)	14.3	16.1	19.0	20.5	21.9	24.8	27.1	29.9	32.5	34.7	35.6	38.3
		$W_{L/360}$ (lb/ft)	140	165	205	222	241	278	306	336	368	399	399	432
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	52	Self Wt (lb/ft)	**14.1**	15.6	18.7	**20.4**	21.3	24.2	26.5	28.4	30.3	33.0	34.3	37.4
		$W_{L/360}$ (lb/ft)	157	179	242	251	262	312	343	373	396	435	453	488
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2	0/0/2
	56	Self Wt (lb/ft)	14.2	**15.0**	**18.3**	20.9	**21.2**	**23.1**	**25.0**	**27.7**	29.6	31.0	33.3	34.9
		$W_{L/360}$ (lb/ft)	180	203	272	293	305	331	364	400	434	462	507	528
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	60	Self Wt (lb/ft)	15.6	16.2	19.4	21.4	21.5	**23.1**	25.1	27.8	30.1	31.1	33.4	35.9
		$W_{L/360}$ (lb/ft)	200	221	300	337	337	365	400	461	475	501	553	608
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	64	Self Wt (lb/ft)	18.3	18.0	19.4	21.3	21.7	24.8	27.3	28.9	**29.4**	30.7	32.5	34.3
		$W_{L/360}$ (lb/ft)	200	250	300	350	385	436	500	526	542	572	592	655
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	68	Self Wt (lb/ft)	18.8	16.7	19.9	22.1	22.3	23.5	25.7	28.8	29.9	**30.3**	**32.1**	**33.9**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	493	550	600	614	670	695
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
	72	Self Wt (lb/ft)	22.0	22.0	22.0	22.5	23.8	25.5	26.9	30.5	30.8	31.2	33.4	35.7
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2	0/0/2
80	44	Self Wt (lb/ft)	16.3	19.5	22.1	25.7	28.9	30.8	34.2	37.4	40.6	46.9	48.4	54.2
		$W_{L/360}$ (lb/ft)	108	136	159	182	211	231	253	274	297	330	345	396
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	48	Self Wt (lb/ft)	16.3	**18.7**	21.5	24.4	27.1	29.2	31.7	35.8	37.9	41.0	44.9	49.1
		$W_{L/360}$ (lb/ft)	122	151	183	199	229	252	276	303	328	356	396	414
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	52	Self Wt (lb/ft)	**16.1**	19.9	21.8	**22.8**	26.7	29.0	31.4	32.6	36.6	38.6	42.2	46.6
		$W_{L/360}$ (lb/ft)	136	192	207	216	257	283	307	326	358	388	420	468
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	56	Self Wt (lb/ft)	16.3	19.5	**21.2**	22.9	25.7	28.3	30.6	32.9	33.7	37.2	40.0	42.8
		$W_{L/360}$ (lb/ft)	151	211	232	251	299	315	347	380	380	417	452	490
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	60	Self Wt (lb/ft)	**16.1**	20.3	21.8	23.0	24.5	27.2	29.8	31.6	33.2	36.3	37.7	40.4
		$W_{L/360}$ (lb/ft)	170	249	267	278	301	345	379	412	439	481	521	540
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	64	Self Wt (lb/ft)	20.3	20.8	22.4	23.3	24.7	27.0	30.4	31.9	32.8	35.2	38.4	40.4
		$W_{L/360}$ (lb/ft)	200	250	300	317	343	376	433	446	471	520	572	617
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	68	Self Wt (lb/ft)	19.9	19.9	22.0	23.5	**23.7**	**26.3**	**29.5**	**31.4**	**32.7**	**35.0**	**37.0**	**39.6**
		$W_{L/360}$ (lb/ft)	200	250	300	350	359	406	490	506	506	552	611	648
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	72	Self Wt (lb/ft)	27.3	27.6	27.7	28.3	25.5	27.0	30.6	32.4	34.2	36.0	37.3	40.6
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	437	500	550	568	600	621	687
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	80	Self Wt (lb/ft)	26.2	26.5	27.2	29.4	30.7	33.8	38.3	38.9	39.1	42.9	43.3	47.9
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2

OWSJ Span (ft)	Depth (in)	Factored Load / Service Load	Uniform Load (lb/ft) 300 / 200	375 / 250	450 / 300	525 / 350	600 / 400	675 / 450	750 / 500	825 / 550	900 / 600	975 / 650	1050 / 700	1125 / 750
85	44	Self Wt (lb/ft)	18.0	21.3	24.0	28.2	30.6	33.5	37.7	43.2	47.3	49.8	53.2	56.1
		$W_{L/360}$ (lb/ft)	105	127	144	175	192	211	238	275	288	307	330	355
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2
	48	Self Wt (lb/ft)	17.2	20.4	**22.2**	26.4	28.7	30.8	35.0	38.4	41.5	47.8	48.1	53.7
		$W_{L/360}$ (lb/ft)	113	142	159	191	210	230	253	286	311	345	345	396
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	52	Self Wt (lb/ft)	17.1	20.3	**22.2**	25.4	28.4	31.4	34.1	37.7	41.1	44.6	47.6	49.3
		$W_{L/360}$ (lb/ft)	133	166	180	214	235	272	298	323	350	390	390	408
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2	0/0/2
	56	Self Wt (lb/ft)	**16.7**	20.3	22.4	24.4	27.6	30.0	32.1	36.3	39.0	42.1	45.7	49.1
		$W_{L/360}$ (lb/ft)	139	188	201	227	263	289	317	348	377	408	455	455
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2	0/0/2
	60	Self Wt (lb/ft)	17.3	**20.1**	23.2	23.7	27.8	29.9	32.1	34.0	37.6	40.3	43.5	45.3
		$W_{L/360}$ (lb/ft)	151	209	233	241	303	316	355	365	401	434	499	525
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	64	Self Wt (lb/ft)	20.0	21.1	22.9	**23.3**	**26.2**	**29.0**	**31.1**	**32.2**	**34.7**	37.6	40.8	44.8
		$W_{L/360}$ (lb/ft)	200	245	264	275	313	361	372	392	433	476	514	570
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	68	Self Wt (lb/ft)	20.2	21.6	23.3	23.6	26.3	**29.0**	31.6	32.7	35.3	**37.3**	**40.3**	**43.6**
		$W_{L/360}$ (lb/ft)	200	250	299	299	338	391	421	444	490	509	583	616
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	72	Self Wt (lb/ft)	21.2	22.9	24.3	25.3	27.5	31.3	32.7	33.4	36.7	39.7	44.3	46.8
		$W_{L/360}$ (lb/ft)	200	250	300	336	380	450	473	474	517	573	655	693
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/0/2
	80	Self Wt (lb/ft)	36.0	36.3	36.6	36.9	37.3	37.9	39.8	40.0	43.6	44.6	48.8	51.8
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
90	48	Self Wt (lb/ft)	19.1	21.7	26.1	29.3	31.8	35.3	40.9	45.0	49.4	54.7	55.6	62.0
		$W_{L/360}$ (lb/ft)	112	128	153	177	194	213	250	278	290	333	333	381
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2
	52	Self Wt (lb/ft)	18.4	**21.2**	23.9	28.0	30.8	34.3	37.2	40.6	44.2	47.8	53.9	54.7
		$W_{L/360}$ (lb/ft)	125	151	164	198	229	251	272	295	328	343	394	394
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	56	Self Wt (lb/ft)	**17.8**	**21.2**	**22.8**	26.5	29.5	32.1	35.4	38.4	41.2	44.8	48.5	54.7
		$W_{L/360}$ (lb/ft)	130	169	176	210	243	267	293	317	344	383	400	460
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	60	Self Wt (lb/ft)	20.0	22.7	23.2	27.2	29.6	31.8	34.4	38.3	41.6	45.6	47.1	50.9
		$W_{L/360}$ (lb/ft)	174	195	203	231	266	289	319	351	379	420	442	462
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	64	Self Wt (lb/ft)	20.2	22.6	24.6	25.9	29.8	32.2	33.7	37.4	39.5	43.2	44.4	48.2
		$W_{L/360}$ (lb/ft)	192	222	234	252	313	342	351	385	401	458	480	505
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	68	Self Wt (lb/ft)	22.4	22.8	24.0	**25.8**	30.3	**30.6**	33.3	**34.6**	39.3	41.1	45.1	45.3
		$W_{L/360}$ (lb/ft)	200	250	261	285	354	355	387	412	470	491	544	544
		Bridg. (H/X/EX)	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	72	Self Wt (lb/ft)	23.3	23.6	24.1	26.9	30.1	32.7	**32.9**	37.8	40.8	46.3	46.3	47.4
		$W_{L/360}$ (lb/ft)	200	250	283	307	387	399	399	451	498	583	583	612
		Bridg. (H/X/EX)	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	80	Self Wt (lb/ft)	24.1	24.7	25.6	27.0	**29.0**	34.1	34.2	35.3	39.5	40.5	44.9	47.6
		$W_{L/360}$ (lb/ft)	200	250	300	350	397	450	495	495	559	598	685	724
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	88	Self Wt (lb/ft)	27.0	27.3	30.1	30.1	31.2	32.9	35.5	36.3	**36.7**	**39.3**	**41.5**	**43.3**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2

OWSJ Span (ft)	Depth (in)		Uniform Load (lb/ft)											
		Factored Load	300	375	450	525	600	675	750	825	900	975	1050	1125
		Service Load	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**	**650**	**700**	**750**
95	48	Self Wt (lb/ft)	20.8	23.4	28.7	31.0	34.8	40.0	44.0	48.3	53.9	57.3	60.9	63.9
		$W_{L/360}$ (lb/ft)	105	118	150	165	181	212	236	247	283	305	324	345
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2
	52	Self Wt (lb/ft)	**20.4**	22.4	27.0	30.5	33.8	38.0	41.0	47.3	49.4	55.5	55.8	62.4
		$W_{L/360}$ (lb/ft)	119	128	161	183	213	231	251	279	292	335	335	383
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	56	Self Wt (lb/ft)	20.7	**21.4**	25.2	28.5	31.4	35.0	38.0	41.5	46.8	48.4	54.3	54.7
		$W_{L/360}$ (lb/ft)	144	150	178	196	227	249	269	309	325	340	391	391
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	60	Self Wt (lb/ft)	20.7	22.4	**24.8**	29.4	31.2	34.2	37.6	40.4	45.6	48.0	52.7	55.6
		$W_{L/360}$ (lb/ft)	154	166	187	226	246	271	298	322	376	376	419	451
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	64	Self Wt (lb/ft)	21.2	22.7	24.9	29.6	30.8	33.3	38.5	41.6	45.7	47.2	51.3	55.2
		$W_{L/360}$ (lb/ft)	175	189	205	258	266	299	341	368	408	429	449	479
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	68	Self Wt (lb/ft)	21.0	26.7	27.7	29.7	**30.5**	**32.6**	36.0	39.6	42.6	47.0	48.2	52.1
		$W_{L/360}$ (lb/ft)	191	238	258	301	301	329	351	386	441	462	486	542
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	72	Self Wt (lb/ft)	23.8	24.0	26.6	28.8	32.0	33.0	37.3	40.0	45.1	45.5	**46.6**	51.8
		$W_{L/360}$ (lb/ft)	200	240	260	283	339	339	410	423	496	496	520	582
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	80	Self Wt (lb/ft)	24.4	24.7	26.6	**28.0**	30.8	33.5	35.3	38.4	41.2	46.3	**46.6**	47.8
		$W_{L/360}$ (lb/ft)	200	250	300	323	368	420	434	475	525	615	615	646
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
	88	Self Wt (lb/ft)	26.3	26.7	29.6	30.4	33.4	34.8	**35.1**	**37.1**	**39.7**	**42.4**	**46.6**	**47.1**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	527	578	638	700	715
		Bridg. (H/X/EX)	0/2/2	0/2/2	0/2/2	0/2/2	0/2/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2	0/1/2
100	52	Self Wt (lb/ft)	**21.1**	24.7	28.7	31.4	37.5	40.3	46.8	48.3	54.7	60.6	61.1	67.8
		$W_{L/360}$ (lb/ft)	106	125	152	167	198	215	239	250	287	328	328	366
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	56	Self Wt (lb/ft)	21.7	24.1	27.3	32.0	35.3	38.3	43.8	49.4	55.3	55.8	62.1	62.7
		$W_{L/360}$ (lb/ft)	123	139	161	194	213	231	265	291	335	335	383	383
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	60	Self Wt (lb/ft)	22.0	**22.9**	**26.7**	30.8	33.6	36.8	41.0	44.9	48.4	54.3	54.5	61.8
		$W_{L/360}$ (lb/ft)	142	148	176	211	232	256	289	322	336	386	386	442
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	64	Self Wt (lb/ft)	22.9	**22.9**	26.8	30.4	32.8	37.6	40.6	44.6	45.9	50.0	55.8	60.3
		$W_{L/360}$ (lb/ft)	162	162	192	228	256	292	315	350	368	384	442	467
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	68	Self Wt (lb/ft)	21.8	23.3	27.9	**30.0**	**32.4**	**35.1**	38.6	43.4	45.8	47.5	54.5	56.9
		$W_{L/360}$ (lb/ft)	176	183	240	251	272	301	331	378	396	417	465	501
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	72	Self Wt (lb/ft)	27.0	27.3	28.1	30.9	32.5	37.1	39.7	44.9	46.1	48.1	53.4	54.8
		$W_{L/360}$ (lb/ft)	200	230	248	290	300	351	363	425	446	469	499	550
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	80	Self Wt (lb/ft)	27.1	29.1	29.4	31.9	33.3	**35.1**	38.7	42.0	45.9	46.2	48.7	52.9
		$W_{L/360}$ (lb/ft)	200	250	285	349	360	385	450	473	527	527	586	620
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	88	Self Wt (lb/ft)	26.7	27.1	29.8	31.0	34.5	**35.1**	36.8	40.3	42.0	46.4	**47.8**	49.8
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	438	452	529	547	613	641	673
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	96	Self Wt (lb/ft)	27.8	27.9	29.6	31.0	34.8	36.0	**36.2**	**38.7**	**40.2**	**43.5**	**47.8**	**49.0**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	591	650	700	750
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3

OWSJ Span (ft)	Depth (in)	Factored Load / Service Load	Uniform Load (lb/ft) 300 / 200	375 / 250	450 / 300	525 / 350	600 / 400	675 / 450	750 / 500	825 / 550	900 / 600	975 / 650	1050 / 700	1125 / 750
110	56	Self Wt (lb/ft)	**21.5**	27.1	31.3	36.1	40.0	46.1	53.2	53.8	60.1	66.1	67.6	71.6
		$W_{L/360}$ (lb/ft)	96	126	146	166	188	209	251	251	287	321	321	337
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	60	Self Wt (lb/ft)	22.7	26.8	31.0	35.5	39.8	45.3	49.4	55.4	58.9	62.2	68.5	70.2
		$W_{L/360}$ (lb/ft)	111	132	158	184	207	242	252	290	306	332	370	370
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	64	Self Wt (lb/ft)	22.7	27.2	30.7	33.3	37.0	43.8	45.3	51.8	54.3	60.7	62.1	67.9
		$W_{L/360}$ (lb/ft)	122	159	181	199	219	262	276	308	331	379	379	423
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	68	Self Wt (lb/ft)	22.8	**26.2**	30.1	**32.1**	37.1	41.7	44.3	47.8	53.7	57.6	62.3	65.4
		$W_{L/360}$ (lb/ft)	138	163	194	218	248	283	297	313	349	397	430	449
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	72	Self Wt (lb/ft)	23.8	26.9	31.4	34.7	37.2	44.7	47.4	48.6	55.3	60.9	61.3	67.8
		$W_{L/360}$ (lb/ft)	155	175	218	238	263	319	335	352	393	447	447	506
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	80	Self Wt (lb/ft)	35.9	36.3	38.8	39.4	40.6	42.0	43.7	48.5	54.6	56.7	61.6	63.6
		$W_{L/360}$ (lb/ft)	200	246	300	310	330	355	378	419	488	488	532	578
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	88	Self Wt (lb/ft)	27.1	27.5	**29.9**	33.8	41.5	38.3	41.4	44.5	48.4	**50.1**	55.0	59.8
		$W_{L/360}$ (lb/ft)	200	233	263	301	377	359	397	459	481	505	566	593
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/3	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	96	Self Wt (lb/ft)	27.2	28.8	30.7	32.9	**36.4**	**37.6**	**40.8**	**43.8**	**46.3**	50.5	**52.3**	**54.7**
		$W_{L/360}$ (lb/ft)	200	250	300	335	392	419	490	515	549	575	640	676
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	104	Self Wt (lb/ft)	37.1	37.1	37.4	38.1	38.5	39.0	43.1	46.9	48.7	52.0	54.9	57.3
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
120	60	Self Wt (lb/ft)	26.3	30.5	34.7	40.3	46.2	53.5	53.9	60.4	67.5	67.9	75.8	79.6
		$W_{L/360}$ (lb/ft)	102	122	142	167	186	223	223	255	285	285	318	339
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	64	Self Wt (lb/ft)	26.0	30.1	33.6	39.8	45.1	48.6	54.9	61.1	64.5	68.9	69.6	77.5
		$W_{L/360}$ (lb/ft)	111	132	153	182	212	222	255	292	305	326	326	364
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	68	Self Wt (lb/ft)	**24.5**	**29.5**	**32.6**	37.8	44.6	46.5	53.4	57.5	62.6	66.0	70.4	71.4
		$W_{L/360}$ (lb/ft)	115	145	167	191	229	241	269	306	331	346	370	370
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	72	Self Wt (lb/ft)	26.3	31.0	33.5	39.7	43.7	46.2	53.6	59.2	62.2	66.4	67.0	70.6
		$W_{L/360}$ (lb/ft)	129	168	183	223	245	258	302	344	358	389	389	416
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	80	Self Wt (lb/ft)	25.6	31.6	**32.6**	37.1	41.5	45.8	47.1	54.8	60.6	62.0	67.7	68.6
		$W_{L/360}$ (lb/ft)	153	208	208	252	276	305	320	375	427	427	484	484
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3
	88	Self Wt (lb/ft)	26.5	30.3	33.9	36.8	39.8	45.8	47.3	**48.6**	55.6	61.0	63.4	67.6
		$W_{L/360}$ (lb/ft)	179	211	253	276	306	354	370	389	435	480	520	542
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3
	96	Self Wt (lb/ft)	27.9	32.1	34.4	**35.9**	**39.0**	**42.7**	48.8	49.2	**50.8**	56.8	60.6	66.2
		$W_{L/360}$ (lb/ft)	200	250	293	302	330	377	443	443	465	520	545	647
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	104	Self Wt (lb/ft)	33.3	33.6	37.1	39.8	54.4	44.3	**46.8**	49.4	53.6	**55.1**	61.5	64.7
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	434	467	498	551	580	643	702
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	112	Self Wt (lb/ft)	38.4	39.3	39.5	40.9	42.9	47.9	49.6	53.2	54.8	57.1	**60.3**	**64.3**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	641	700	748
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4

OWSJ Span (ft)	Depth (in)		Uniform Load (lb/ft)											
		Factored Load	300	375	450	525	600	675	750	825	900	975	1050	1125
		Service Load	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**	**650**	**700**	**750**
130	68	Self Wt (lb/ft)	28.2	**31.8**	37.4	43.3	48.1	54.4	60.8	64.0	68.2	75.8	76.4	86.4
		$W_{L/360}$ (lb/ft)	108	132	155	180	198	227	260	272	291	325	325	376
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	72	Self Wt (lb/ft)	29.4	33.5	39.3	43.7	49.6	53.2	58.4	64.9	65.3	72.7	77.6	85.3
		$W_{L/360}$ (lb/ft)	128	144	175	193	227	237	270	306	306	346	366	395
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3	0/0/3
	80	Self Wt (lb/ft)	**28.1**	32.2	37.0	43.0	46.3	50.7	54.3	59.8	66.2	67.1	71.2	77.3
		$W_{L/360}$ (lb/ft)	131	164	198	229	251	281	295	336	381	381	407	431
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3	0/0/3
	88	Self Wt (lb/ft)	29.8	34.1	36.8	40.1	**43.9**	48.0	52.7	57.3	61.6	67.6	69.1	71.7
		$W_{L/360}$ (lb/ft)	157	199	217	248	278	306	342	377	408	463	463	495
		Bridg. (H/X/EX)	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	96	Self Wt (lb/ft)	29.3	33.0	**35.6**	**38.9**	45.3	**47.9**	**51.5**	56.1	**59.0**	65.2	67.3	**71.1**
		$W_{L/360}$ (lb/ft)	177	203	237	269	332	348	387	409	451	509	509	554
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3
	104	Self Wt (lb/ft)	34.5	37.4	38.9	40.6	45.7	51.3	58.1	57.1	60.4	65.6	71.1	71.8
		$W_{L/360}$ (lb/ft)	200	250	279	288	349	410	467	456	481	531	600	600
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3
	112	Self Wt (lb/ft)	37.0	38.8	44.3	44.9	46.2	49.7	53.8	**54.6**	59.7	**63.3**	68.1	74.0
		$W_{L/360}$ (lb/ft)	200	250	300	350	397	427	500	504	555	610	642	698
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3
	120	Self Wt (lb/ft)	45.6	45.8	46.1	46.9	47.6	50.4	56.3	56.0	60.8	65.5	**66.0**	**71.1**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	739
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3
	128	Self Wt (lb/ft)	52.4	52.8	52.8	53.2	53.8	54.8	55.9	61.0	62.3	66.7	71.6	73.1
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3
140	72	Self Wt (lb/ft)	**31.2**	37.9	43.8	50.1	59.0	65.3	65.9	69.7	77.2	82.8	90.8	96.4
		$W_{L/360}$ (lb/ft)	105	132	154	181	216	245	245	262	293	316	344	378
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	80	Self Wt (lb/ft)	31.9	35.1	41.2	46.6	53.3	60.5	63.8	67.7	72.2	76.4	84.6	88.4
		$W_{L/360}$ (lb/ft)	131	143	174	201	225	269	280	305	326	345	383	423
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3	0/0/3
	88	Self Wt (lb/ft)	33.8	**34.3**	39.5	46.6	**48.7**	56.3	62.6	65.8	69.7	73.9	78.7	82.9
		$W_{L/360}$ (lb/ft)	159	159	192	233	245	287	327	341	371	396	419	443
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3	0/0/3
	96	Self Wt (lb/ft)	34.5	35.0	**38.2**	**44.6**	56.6	**52.3**	58.1	64.0	**65.5**	**69.0**	**72.8**	81.1
		$W_{L/360}$ (lb/ft)	190	190	215	266	317	327	361	407	407	443	474	502
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/3
	104	Self Wt (lb/ft)	34.8	38.2	39.9	46.2	50.2	53.8	**56.3**	61.5	68.0	69.9	74.5	77.0
		$W_{L/360}$ (lb/ft)	182	224	239	294	328	365	385	425	480	480	522	550
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	112	Self Wt (lb/ft)	39.2	39.7	41.2	45.2	50.1	53.3	57.9	62.9	66.4	71.9	73.1	76.3
		$W_{L/360}$ (lb/ft)	200	250	268	303	342	381	425	470	494	559	559	608
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	120	Self Wt (lb/ft)	44.2	44.2	44.8	46.6	52.0	54.3	59.3	**60.9**	67.7	72.4	74.8	**75.5**
		$W_{L/360}$ (lb/ft)	200	250	300	350	393	441	485	511	562	592	643	643
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	128	Self Wt (lb/ft)	61.4	61.4	61.8	53.4	54.3	58.6	63.2	69.0	70.8	71.6	75.3	76.8
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	641	700	734
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	136	Self Wt (lb/ft)	53.2	53.7	54.3	54.4	55.4	60.0	61.2	66.5	71.3	73.3	75.8	78.2
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4

OWSJ Span (ft)	Depth (in)		Uniform Load (lb/ft)											
		Factored Load	300	375	450	525	600	675	750	825	900	975	1050	1125
		Service Load	**200**	**250**	**300**	**350**	**400**	**450**	**500**	**550**	**600**	**650**	**700**	**750**
150	80	Self Wt (lb/ft)	**32.1**	40.2	45.9	52.1	58.9	65.1	66.2	73.9	78.6	89.7	91.5	105.1
		$W_{L/360}$ (lb/ft)	106	141	163	183	218	247	247	280	296	343	348	401
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5
	88	Self Wt (lb/ft)	33.5	38.3	44.7	**47.6**	54.9	61.0	67.8	**68.1**	77.1	80.1	86.1	92.3
		$W_{L/360}$ (lb/ft)	129	156	181	199	233	266	301	301	341	360	390	424
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	96	Self Wt (lb/ft)	34.7	**37.5**	**43.0**	55.3	58.0	**57.5**	**62.7**	70.0	**70.9**	77.9	85.5	86.6
		$W_{L/360}$ (lb/ft)	154	169	205	258	289	293	331	360	360	408	467	467
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	104	Self Wt (lb/ft)	38.5	39.6	44.8	50.4	**53.1**	59.4	67.6	69.1	72.3	75.1	83.1	90.8
		$W_{L/360}$ (lb/ft)	182	194	239	254	296	329	390	390	424	447	480	550
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	112	Self Wt (lb/ft)	45.0	46.0	47.0	50.7	54.7	59.3	65.5	71.1	71.4	75.2	78.2	83.3
		$W_{L/360}$ (lb/ft)	200	243	258	310	328	361	417	454	454	494	521	559
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	120	Self Wt (lb/ft)	40.3	41.9	45.5	50.5	53.2	58.6	63.2	71.6	72.2	**73.6**	**76.7**	81.9
		$W_{L/360}$ (lb/ft)	200	250	267	319	341	397	440	523	523	523	569	600
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4
	128	Self Wt (lb/ft)	60.3	60.7	61.4	62.5	64.6	65.7	67.5	69.7	72.6	75.2	78.4	**81.3**
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	490	521	548	596	626	684
		Bridg. (H/X/EX)	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4	0/0/4
	136	Self Wt (lb/ft)	65.3	65.7	66.5	66.6	67.3	67.5	68.4	71.5	72.7	77.2	80.7	81.4
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	589	650	700	708
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/5	0/0/4	0/0/4	0/0/4
	144	Self Wt (lb/ft)	66.9	67.6	68.1	68.5	69.1	69.7	71.3	72.6	74.5	77.3	80.5	84.5
		$W_{L/360}$ (lb/ft)	200	250	300	350	400	450	500	550	600	650	700	750
		Bridg. (H/X/EX)	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4	0/0/4


JEUX DU CANADA GAMES
Gary W. Harris Canada Games Centre
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INTRODUCTION TO JOIST GIRDERS

Joist Girders are primary framing members. Their design typically assumes a simple span supporting equally spaced concentrated loads from open web steel joists. Joist Girders are designed to allow efficient use of steel in longer spans for primary framing members. The depth of the designation is determined by the nominal depth at the center of the span except for offset double pitch where the depth is defined as the depth at the ridge.

The standard configuration of a Joist Girder is like that of an open web steel joist with parallel chords, underslung ends and bottom chord extensions. The standard depth of bearing for Joist Girders is 190 mm (7 ½") at the end of the seat. Depending on the magnitude of the applied load it may be necessary to increase the bearing seat depth to 254 mm (10").

The design of joist girders follows the latest specification of CAN/CSA S-16 section 15. Vulcraft uses the simplified method of analysis where all members are pin connected, and the K factors are equal to 1.0 (Clause 15.1.1).

As stated, Joist Girders are typically designed as simple span members, but they may also be designed as part of an ordinary moment frame (OMF). It is the responsibility of the specifying professional to carry out all required frame analysis and provide all load information and required stiffness along with column connections on contract documents when Joist Girders are meant to be a part of an OMF.
The standard method of connecting Joist Girders to columns is two 19 mm (3/4") diameter A325 bolts. The bottom chords must be extended to the column during erection to provide lateral stability and prevent the Joist Girder from overturning. Caution: If a rigid connection of the bottom chord is to be made to the column or other support, it is to be made only after the application of the dead loads. The Joist Girder is then no longer simply supported, and the system must be investigated for continuous frame action by the specifying professional.

Open Web Steel Joist Girder Load and Depth Selection Tables

Based on: CSA S16-14
F_y= 380MPa [55 ksi]

Joist Girder top chords are laterally supported by positive attachment at the point of load application.

The following tables are intended to be a tool to assist the preliminary design and estimate for Joist Girders used in floor and roof construction. All of the values are approximate and are intended as a guide for the specifying professional. Vulcraft will design for the specific loads of the designation at the required span, and the self-weight may vary from the tabulated values (the tabulated values are neither design minimums or maximums). Unless otherwise noted in the structural drawings, it is assumed that the designated loads include an allowance for the self-weight of the Joist Girder.

The top of the table presents the total load applied at panel point locations (typically joist locations). The table can be used with either the maximum service load (**bold type row**) or with the maximum factored load. The first row provides the self-weight (kg/m or plf) of the Joist Girder and the second row indicates the number of bottom chord braces required for the span and depth indicated. The final piece of information is the least weight option for each load and span option which is indicated by the **bold type** self-weight.

There are many other combinations for span, number of panels, loads and Joist Girder depths that are not shown in these tables. It is not practical for these tables to present all possible combinations. In these situations, it is possible to use simple interpolation to determine approximate values.

Example: Using the Joist Girder Table

1) Joist Girder depth	1220 mm
2) Joist Girder span	15 m
3) Number of joist spaces	6
4) Load at each panel point	80 kN (service load)
Joist Girder designation	1219G6N80kN

Entering the table, we see the self-weight for this Joist Girder is 85 kg/m with a requirement of 1 bottom chord brace. Further review of the table would indicate that a Joist Girder depth of 1422 mm would provide the lightest self-weight of 76 kg/m.

Note the number of bottom chord braces does not include the additional braces required when the Joist Girder must be designed for a net uplift load condition. This load condition causes the bottom chord and end webs to go into compression which will require additional lateral bracing.

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
6	2 N @ 3	508	Self Wt (kg/m)	**25**	**25**	26	33	42	44	52	60	68	74	75	89	103	103
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	**25**	**25**	**26**	**31**	35	39	45	49	61	64	71	78	79	82
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	26	26	27	**31**	**33**	**35**	**42**	**47**	**50**	**57**	**66**	**66**	**75**	**80**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	3 N @ 2	508	Self Wt (kg/m)	**25**	30	33	44	50	62	73	79	96	110	110	114	127	134
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	26	**27**	32	38	50	52	67	70	81	88	102	113	127	128
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	28	**29**	**36**	**42**	**48**	**56**	**61**	**69**	**76**	**89**	**89**	**97**	**106**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	4 N @ 1.5	508	Self Wt (kg/m)	**25**	31	45	56	74	85	106	108	121	141	156	159	190	218
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	**25**	28	38	45	**54**	72	82	105	108	**109**	119	133	157	158
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	26	**27**	**32**	**43**	55	**61**	**75**	**76**	**88**	**109**	**113**	**112**	**123**	**136**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	5 N @ 1.2	508	Self Wt (kg/m)	**25**	36	52	71	81	103	113	128	154	157	194	215	220	222
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	26	**31**	**43**	58	75	85	109	**110**	119	133	160	167	193	224
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	27	**31**	**43**	**52**	**63**	**78**	**90**	112	**114**	**122**	**133**	**141**	**172**	**173**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	2 N @ 3.5	508	Self Wt (kg/m)	**24**	27	35	43	52	63	75	82	84	92	97	103	112	127
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	25	26	**29**	39	45	53	64	64	77	86	**86**	**86**	94	102
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	25	**25**	30	**33**	**41**	**46**	**54**	**56**	**67**	**68**	87	88	**92**	**88**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	3 N @ 2.33	508	Self Wt (kg/m)	**24**	30	36	48	61	74	86	91	101	109	122	138	142	155
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	25	**27**	**33**	45	51	62	78	78	93	99	107	113	121	126
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	25	30	**33**	**40**	**49**	**54**	**64**	**69**	**81**	**97**	**102**	**111**	**115**	**119**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	4 N @ 1.75	508	Self Wt (kg/m)	**25**	34	51	68	90	101	106	124	150	152	182	210	215	218
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	**25**	**31**	45	54	72	81	103	**100**	121	129	153	155	184	193
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	26	**31**	**37**	**50**	**65**	**74**	**86**	104	**108**	**113**	**125**	**134**	**159**	**160**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	5 N @ 1.4	508	Self Wt (kg/m)	**25**	40	61	75	100	110	125	151	176	211	214	218	272	277
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	**25**	34	52	71	81	104	**101**	122	143	156	192	214	221	222
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	26	**32**	**43**	**58**	**74**	**85**	109	**110**	**119**	**133**	**160**	**168**	**189**	**205**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	6 N @ 1.17	508	Self Wt (kg/m)	3	50	70	99	111	149	152	209	211	217	273	274		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		610	Self Wt (kg/m)	**3**	41	58	82	103	115	130	156	181	215	221	**224**	277	285
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	3	**38**	**54**	**74**	**88**	**109**	**118**	**134**	**161**	**164**	**192**	227	**228**	**230**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
8	3 N @ 2.67	508	Self Wt (kg/m)	**24**	31	42	56	71	82	88	98	111	127	135	147	162	184
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	25	**28**	36	45	61	74	84	90	98	101	114	120	137	140
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	25	30	34	44	50	62	69	78	88	95	103	110	120	122
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	26	31	**33**	**38**	**48**	**60**	**64**	**72**	**80**	**93**	**99**	**101**	**108**	**116**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	4 N @ 2	508	Self Wt (kg/m)	**25**	37	51	74	100	102	124	147	151	180	209	210	214	270
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		610	Self Wt (kg/m)	**25**	32	46	63	78	102	105	112	127	153	154	184	212	215
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	**31**	**40**	56	72	79	105	107	113	129	133	158	163	186
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	26	32	**40**	**52**	**65**	**78**	**85**	**100**	**110**	**119**	**123**	**137**	**143**	**164**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	5 N @ 1.6	508	Self Wt (kg/m)	27	45	67	98	103	122	149	173	208	210	270	270	289	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		610	Self Wt (kg/m)	**25**	36	53	75	100	99	124	151	153	188	214	219	220	277
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	34	52	71	77	104	**106**	122	130	156	**158**	199	222	222
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	26	**32**	**43**	**58**	**74**	**85**	108	**110**	**119**	**133**	160	**168**	**187**	**202**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	6 N @ 1.33	508	Self Wt (kg/m)	30	51	76	99	122	148	207	209	269	271	274			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		610	Self Wt (kg/m)	**26**	46	69	99	102	125	152	180	211	218	274	274	281	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		711	Self Wt (kg/m)	**26**	41	58	**75**	104	**107**	129	156	**161**	215	222	**224**	277	286
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	27	**38**	**54**	**75**	**87**	108	**119**	**134**	**161**	**169**	**192**	226	**229**	**229**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	3 N @ 3	610	Self Wt (kg/m)	**25**	**29**	43	56	64	83	87	97	105	111	128	136	155	163
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	**29**	39	46	60	68	84	86	89	102	114	118	131	140
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	**25**	30	35	44	56	62	69	88	**88**	**93**	105	106	118	122
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	26	31	**34**	**42**	**49**	**60**	**65**	**72**	89	96	**97**	**101**	**108**	**117**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	4 N @ 2.25	610	Self Wt (kg/m)	**25**	36	52	74	90	101	110	125	149	152	181	209	212	215
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	**32**	46	63	78	92	106	112	127	151	155	158	184	214
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	26	**32**	44	56	72	79	94	108	**113**	124	134	158	163	182
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	26	**32**	**39**	**52**	**67**	**78**	**88**	**100**	115	**118**	**124**	**138**	**157**	**164**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
9	5 N @ 1.8	610	Self Wt (kg/m)	27	43	67	87	99	115	146	149	185	210	214	271	273	288
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	36	53	74	90	103	118	139	153	180	193	219	220	250
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	26	34	49	65	77	104	**106**	117	130	157	160	195	222	223
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	26	**33**	**47**	**58**	**74**	**85**	108	**110**	**119**	**133**	**147**	**168**	**185**	**201**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	6 N @ 1.5	610	Self Wt (kg/m)	27	49	73	98	122	149	176	209	210	271	271	276		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		711	Self Wt (kg/m)	**26**	43	70	80	102	126	153	155	211	213	220	275	279	284
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	**26**	40	59	**74**	103	**107**	129	156	162	187	222	**225**	**225**	284
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	27	**38**	**54**	**74**	**87**	109	**111**	**134**	**161**	**163**	**191**	227	230	**229**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	8 N @ 1.13	610	Self Wt (kg/m)	35	68	102	123	151	208	213	273	279					
			BC Braces	1	1	1	1	1	1	1	1	1					
		711	Self Wt (kg/m)	31	56	83	104	153	157	215	219	280	302	314			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		813	Self Wt (kg/m)	30	53	79	108	118	158	169	224	**229**	**238**	288	322	330	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		914	Self Wt (kg/m)	**29**	**51**	**76**	**99**	**114**	**135**	**162**	**175**	**229**	256	**243**	**301**	**322**	**329**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	3 N @ 3.33	610	Self Wt (kg/m)	**24**	37	50	61	79	82	94	108	125	133	145	153	175	191
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**24**	**30**	43	53	65	83	83	90	105	111	128	135	148	157
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	25	**30**	**38**	50	60	**66**	84	**85**	94	102	113	126	131	139
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	25	31	39	**45**	**54**	67	**70**	86	**88**	**92**	**103**	**110**	**117**	**132**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	4 N @ 2.5	610	Self Wt (kg/m)	**25**	41	58	74	97	107	122	146	162	204	208	209	265	267
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	**25**	34	50	73	89	101	106	124	148	152	180	207	210	213
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	**25**	**32**	**45**	62	76	91	103	109	120	140	154	158	184	213
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	27	**32**	46	**57**	**71**	**77**	**93**	**105**	**103**	**115**	**130**	**156**	**156**	**157**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	5 N @ 2	610	Self Wt (kg/m)	27	51	72	98	104	134	161	183	209	216	272	277	296	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		711	Self Wt (kg/m)	**26**	45	63	86	105	119	137	150	171	218	220	225	293	300
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	**26**	36	53	75	90	103	112	128	154	178	190	216	221	**222**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	**26**	**35**	**48**	**65**	**77**	**94**	**106**	**117**	**130**	**157**	**157**	**175**	**200**	224
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
10	6 N @ 1.67	610	Self Wt (kg/m)	30	53	76	97	122	148	206	208	268	270	273			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		711	Self Wt (kg/m)	**27**	50	69	98	110	124	152	208	210	217	273	273	280	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		813	Self Wt (kg/m)	**27**	43	70	80	**103**	113	153	**155**	182	213	**221**	**222**	279	**284**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	30	**40**	**55**	**73**	104	**108**	**117**	157	**158**	**185**	222	224	**227**	285
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	8 N @ 1.25	610	Self Wt (kg/m)	37	67	101	146	203	208	269	273						
			BC Braces	1	1	1	1	1	1	1	1						
		711	Self Wt (kg/m)	34	67	103	124	152	209	214	274	279	304				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		813	Self Wt (kg/m)	**32**	55	83	**104**	129	159	215	**220**	**226**	293	308			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		914	Self Wt (kg/m)	**32**	**54**	**80**	108	**119**	**158**	**164**	225	230	**238**	**289**	**318**	**327**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
11	4 N @ 2.75	610	Self Wt (kg/m)	27	44	68	84	99	118	143	156	201	203	205	261	262	265
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		711	Self Wt (kg/m)	26	41	56	72	98	102	114	133	152	175	205	207	209	267
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	**25**	36	57	72	86	101	105	116	137	151	164	186	211	211
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	**25**	**35**	**46**	**62**	**76**	**92**	**103**	**109**	**120**	**140**	**155**	**159**	**176**	**192**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	5 N @ 2.2	610	Self Wt (kg/m)	30	56	71	94	114	144	172	206	208	264	271			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		711	Self Wt (kg/m)	30	45	71	87	102	122	146	162	207	209	240	270	274	284
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		813	Self Wt (kg/m)	27	44	59	**75**	99	106	124	151	173	188	211	**215**	246	277
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	**26**	**38**	**53**	**75**	**90**	**103**	**109**	**128**	**155**	**156**	**177**	216	**221**	**223**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	6 N @ 1.83	610	Self Wt (kg/m)	31	64	95	119	144	203	205	261	268	270				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		711	Self Wt (kg/m)	30	51	76	99	121	149	176	208	212	271	274	276		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		813	Self Wt (kg/m)	30	50	**70**	99	105	125	152	179	211	218	274	274	281	295
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	**27**	**46**	**70**	**80**	**103**	**113**	**130**	**156**	**183**	**213**	**222**	**223**	**280**	**284**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	8 N @ 1.38	610	Self Wt (kg/m)	39	75	106	145	204	262	269							
			BC Braces	1	1	1	1	1	1	1							
		711	Self Wt (kg/m)	36	67	101	123	173	208	212	273	279					
			BC Braces	1	1	1	1	1	1	1	1	1					
		813	Self Wt (kg/m)	34	68	101	113	152	181	213	220	280	**283**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		914	Self Wt (kg/m)	**32**	**56**	**82**	**107**	**130**	**156**	**187**	**219**	**226**	292	**306**	**313**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
12	4 N @ 3	813	Self Wt (kg/m)	26	41	56	72	88	98	114	133	147	164	183	207	210	240
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	**25**	39	53	68	86	101	108	118	137	151	168	174	189	214
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1016	Self Wt (kg/m)	26	**34**	46	**62**	76	92	102	110	122	140	155	166	178	192
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	26	**34**	**45**	63	**71**	**90**	**96**	**108**	**113**	**124**	**144**	**147**	**160**	**178**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	5 N @ 2.4	813	Self Wt (kg/m)	30	45	73	89	99	117	137	165	186	212	214	243	274	279
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	**27**	43	59	74	100	106	118	139	167	188	211	215	220	246
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1016	Self Wt (kg/m)	**27**	37	60	75	90	103	109	123	**143**	170	177	195	222	**224**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	**27**	**36**	**50**	**65**	**77**	**95**	**105**	**119**	**143**	**146**	**159**	**175**	**201**	225
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	6 N @ 2	813	Self Wt (kg/m)	28	52	72	99	115	149	162	209	212	273	272	277		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		914	Self Wt (kg/m)	**27**	47	70	89	**101**	125	152	167	211	215	**221**	274	280	282
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1016	Self Wt (kg/m)	**27**	46	63	80	103	114	130	156	171	213	223	**224**	277	285
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	31	**42**	**56**	**78**	104	**108**	**118**	**146**	**159**	**174**	224	226	**232**	**235**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	8 N @ 1.5	813	Self Wt (kg/m)	35	68	102	124	152	208	213	274	276					
			BC Braces	1	1	1	1	1	1	1	1	1					
		914	Self Wt (kg/m)	34	62	101	113	153	157	214	221	280	283	**309**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1016	Self Wt (kg/m)	**32**	**56**	82	**108**	130	157	186	219	**227**	292	**309**	311		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1118	Self Wt (kg/m)	36	57	**80**	**108**	**120**	**147**	**165**	**199**	229	**256**	311	**293**	**324**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
12	10 N @ 1.2	813	Self Wt (kg/m)	42	79	111	153	211	272	280							
			BC Braces	1	1	1	1	1	1	1							
		914	Self Wt (kg/m)	39	75	108	154	185	221	280	288						
			BC Braces	1	1	1	1	1	1	1	1						
		1016	Self Wt (kg/m)	37	72	**107**	130	**159**	222	**227**	284	**301**					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1118	Self Wt (kg/m)	**36**	**67**	108	**119**	**159**	**192**	231	**238**	303	**312**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
13	4 N @ 3.25	813	Self Wt (kg/m)	27	42	62	82	95	108	131	145	158	181	205	207	235	266
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		914	Self Wt (kg/m)	30	41	57	72	88	98	111	133	148	159	184	207	210	211
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1016	Self Wt (kg/m)	27	39	53	67	85	92	102	115	137	142	161	170	190	213
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	**26**	**35**	49	62	77	93	102	110	122	141	144	167	171	192
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	30	37	**47**	**58**	**68**	**82**	**92**	**104**	**111**	**122**	**142**	**145**	**154**	**176**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
13	5 N @ 2.6	813	Self Wt (kg/m)	30	46	72	88	110	134	153	183	207	210	241	270	275	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		914	Self Wt (kg/m)	30	46	67	90	100	118	136	164	170	213	215	249	286	289
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1016	Self Wt (kg/m)	28	44	62	74	90	106	119	140	159	167	189	216	221	249
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	**27**	41	60	75	91	102	109	123	144	162	176	196	223	**224**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	30	**37**	**49**	**64**	**80**	**93**	**105**	**120**	**137**	**146**	**167**	**176**	**202**	226
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	6 N @ 2.17	813	Self Wt (kg/m)	30	58	86	101	121	149	206	208	211	272	272			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		914	Self Wt (kg/m)	30	52	72	99	110	150	151	210	213	218	275	277	282	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1016	Self Wt (kg/m)	29	47	70	90	101	125	153	165	211	216	**222**	278	279	285
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	**27**	46	63	82	103	114	130	157	172	215	224	**225**	254	284
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	29	**42**	**57**	**75**	**96**	**112**	**124**	**147**	**160**	**174**	227	229	**235**	**237**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	8 N @ 1.63	813	Self Wt (kg/m)	36	72	101	145	173	208	268	273						
			BC Braces	1	1	1	1	1	1	1	1						
		914	Self Wt (kg/m)	34	68	102	124	152	182	213	274	278	301				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1016	Self Wt (kg/m)	34	63	92	109	141	158	214	220	282	283	**307**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1118	Self Wt (kg/m)	**33**	**56**	83	109	131	158	187	220	**229**	292	308	311		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1219	Self Wt (kg/m)	34	**56**	**79**	**101**	**120**	**147**	**165**	**198**	230	**255**	311	**294**	**322**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
13	10 N @ 1.3	813	Self Wt (kg/m)	49	99	123	174	210	273	281							
			BC Braces	1	1	1	1	1	1	1							
		914	Self Wt (kg/m)	41	79	111	153	212	217	280	298						
			BC Braces	1	1	1	1	1	1	1	1						
		1016	Self Wt (kg/m)	39	76	109	143	185	222	253	285						
			BC Braces	1	1	1	1	1	1	1	1						
		1118	Self Wt (kg/m)	37	73	107	130	158	223	**228**	283	305					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1219	Self Wt (kg/m)	**35**	**64**	**97**	**119**	**156**	**182**	231	**238**	**301**	**313**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
14	4 N @ 3.5	813	Self Wt (kg/m)	32	50	73	82	101	123	144	172	189	204	233	235	265	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		914	Self Wt (kg/m)	29	42	63	82	86	110	127	136	156	177	194	208	239	240
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1016	Self Wt (kg/m)	**27**	41	57	83	89	99	112	129	138	161	168	186	212	213
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	**27**	39	54	66	86	90	102	115	131	141	162	170	191	214
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	28	37	48	66	76	88	103	110	119	135	145	166	178	194
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	30	**36**	**47**	**58**	**68**	**86**	**92**	**104**	**111**	**122**	**143**	**143**	**156**	**178**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
14	5 N @ 2.8	813	Self Wt (kg/m)	31	56	81	95	113	134	158	193	207	236	267	270		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		914	Self Wt (kg/m)	**29**	47	73	89	104	128	148	166	186	211	241	244	275	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1016	Self Wt (kg/m)	30	45	66	85	97	112	135	149	165	188	211	216	247	273
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	**29**	44	62	84	91	101	119	140	159	168	190	216	222	250
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	**29**	41	54	70	83	102	109	135	144	163	177	196	224	**225**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	30	**36**	**52**	**69**	**80**	**93**	**105**	**120**	**137**	**146**	**168**	**182**	**206**	227
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	6 N @ 2.33	813	Self Wt (kg/m)	33	59	97	114	146	181	205	237	267	272				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		914	Self Wt (kg/m)	31	58	76	98	121	149	175	209	213	272	274	276		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1016	Self Wt (kg/m)	31	52	72	99	110	138	150	179	211	219	275	278	280	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1118	Self Wt (kg/m)	**29**	48	70	90	101	120	153	154	183	214	225	256	280	286
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	30	**44**	61	78	98	**111**	131	157	173	195	226	**228**	**233**	294
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	31	**44**	**57**	**75**	**91**	112	**126**	**147**	**160**	**174**	**206**	232	234	**239**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	8 N @ 1.75	813	Self Wt (kg/m)	38	75	106	146	204	207	269	273						
			BC Braces	1	1	1	1	1	1	1	1						
		914	Self Wt (kg/m)	36	68	101	123	151	208	212	274	278					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1016	Self Wt (kg/m)	34	69	103	113	153	182	213	221	285	284				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1118	Self Wt (kg/m)	33	63	92	104	131	158	214	221	**228**	293	304			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1219	Self Wt (kg/m)	**32**	**56**	**78**	**103**	125	158	179	220	229	292	308	312		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1321	Self Wt (kg/m)	35	58	79	107	**121**	**148**	**165**	**195**	231	**239**	**292**	**295**	**321**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
14	10 N @ 1.4	813	Self Wt (kg/m)	50	99	145	204	210	272								
			BC Braces	1	1	1	1	1	1								
		914	Self Wt (kg/m)	46	89	123	152	211	272	279							
			BC Braces	1	1	1	1	1	1	1							
		1016	Self Wt (kg/m)	45	90	112	153	214	221	278	296						
			BC Braces	1	1	1	1	1	1	1	1						
		1118	Self Wt (kg/m)	45	76	109	142	175	222	253	285						
			BC Braces	1	1	1	1	1	1	1	1						
		1219	Self Wt (kg/m)	37	72	103	124	159	201	**228**	284	**303**					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1321	Self Wt (kg/m)	**36**	**65**	**91**	**120**	**156**	**183**	232	**239**	304	**311**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
15	5 N @ 3	1016	Self Wt (kg/m)	**30**	52	73	89	100	129	138	161	187	212	242	246	275	281
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1118	Self Wt (kg/m)	31	46	66	86	98	112	129	139	165	188	212	216	248	250
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	**30**	43	58	77	90	101	115	141	160	169	191	217	223	251
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	**30**	44	55	70	87	102	116	136	142	164	177	197	224	227
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	31	43	53	**69**	**80**	**94**	**106**	120	138	**148**	168	179	206	229
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	31	**42**	**50**	70	81	95	107	**113**	**127**	149	**152**	**172**	**180**	**208**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	6 N @ 2.5	1016	Self Wt (kg/m)	32	58	72	97	116	149	164	209	214	246	275	278		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1118	Self Wt (kg/m)	31	53	73	100	106	139	151	180	212	220	250	279	280	286
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	**30**	47	64	85	106	120	143	155	183	215	225	256	281	294
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	**30**	46	61	79	99	111	132	158	174	195	226	**229**	**236**	294
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	31	**44**	**58**	**76**	**92**	111	127	148	**161**	177	207	231	**236**	**241**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	32	**44**	**58**	77	93	**106**	**118**	**136**	162	**167**	**184**	235	242	**241**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	8 N @ 1.88	1016	Self Wt (kg/m)	37	68	102	123	152	208	214	276	283					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1118	Self Wt (kg/m)	34	63	101	113	153	179	214	224	287	297				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1219	Self Wt (kg/m)	**33**	57	82	110	132	156	186	223	232	293	305			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1321	Self Wt (kg/m)	34	**53**	80	104	125	159	179	222	238	242	307	311	315	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1422	Self Wt (kg/m)	36	59	80	111	121	148	172	198	232	**239**	292	312	317	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1524	Self Wt (kg/m)	36	56	**79**	**103**	**120**	**140**	**163**	**185**	**211**	241	**247**	**298**	**310**	**324**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	10 N @ 1.5	1016	Self Wt (kg/m)	47	78	112	153	213	217	279							
			BC Braces	1	1	1	1	1	1	1							
		1118	Self Wt (kg/m)	45	76	109	153	191	222	280	289						
			BC Braces	1	1	1	1	1	1	1	1						
		1219	Self Wt (kg/m)	42	75	110	140	175	223	254	286	299					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1321	Self Wt (kg/m)	41	72	103	125	157	202	228	265	303					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1422	Self Wt (kg/m)	**37**	67	99	**121**	**151**	183	232	**240**	303	306				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1524	Self Wt (kg/m)	38	**66**	**96**	122	152	**165**	**211**	242	**273**	**303**	**315**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
15	12 N @ 1.25	1016	Self Wt (kg/m)	52	102	152	212	220	283								
			BC Braces	1	1	1	1	1	1								
		1118	Self Wt (kg/m)	51	103	129	185	221	281	291							
			BC Braces	1	1	1	1	1	1	1							
		1219	Self Wt (kg/m)	48	96	117	160	225	**230**	301							
			BC Braces	1	1	1	1	1	1	1							
		1321	Self Wt (kg/m)	48	84	118	159	193	235	301	**306**						
			BC Braces	1	1	1	1	1	1	1	1						
		1422	Self Wt (kg/m)	**44**	83	116	**141**	181	237	**246**	307	**315**					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1524	Self Wt (kg/m)	45	**80**	**114**	144	**170**	241	249	311	317	**325**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
16	5 N @ 3.2	1016	Self Wt (kg/m)	33	53	82	86	111	135	155	179	194	239	246	273	287	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1118	Self Wt (kg/m)	31	53	68	90	101	130	140	160	184	200	216	248	254	292
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1219	Self Wt (kg/m)	31	47	66	86	94	113	131	153	161	183	199	217	250	251
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	32	47	62	86	95	102	116	141	160	163	188	200	225	253
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	**30**	**45**	63	**70**	**88**	103	116	137	143	165	178	199	**205**	229
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	**30**	46	**58**	71	89	**99**	**106**	**125**	**140**	**148**	**167**	**189**	208	**209**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	6 N @ 2.67	1016	Self Wt (kg/m)	33	58	87	102	134	147	184	210	214	274	275			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1118	Self Wt (kg/m)	32	59	74	97	117	139	163	189	215	220	276	279	282	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1219	Self Wt (kg/m)	31	49	74	91	107	140	152	169	214	218	225	281	281	287
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	31	**48**	75	92	102	121	144	156	188	217	227	**231**	284	295
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	30	**48**	65	90	105	**112**	133	159	176	196	229	233	**237**	298
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	**29**	**48**	**64**	**80**	**99**	**112**	**128**	**151**	**160**	**175**	**209**	234	238	**241**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	8 N @ 2	1016	Self Wt (kg/m)	38	72	99	136	163	209	242	277	283					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1118	Self Wt (kg/m)	37	68	104	125	153	188	216	279	287	296				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1219	Self Wt (kg/m)	36	63	93	115	155	169	216	226	289	296	304			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1321	Self Wt (kg/m)	**34**	63	84	**110**	131	158	189	223	236	295	306	**308**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1422	Self Wt (kg/m)	35	**57**	**81**	**110**	**127**	158	181	229	240	**243**	307	311	**314**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1524	Self Wt (kg/m)	37	65	94	112	**127**	**150**	**175**	**208**	**233**	**243**	**274**	**308**	317	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
16	9 N @ 1.78	1016	Self Wt (kg/m)	44	77	110	149	208	213	277	284						
			BC Braces	1	1	1	1	1	1	1	1						
		1118	Self Wt (kg/m)	39	75	100	138	167	214	251	288						
			BC Braces	1	1	1	1	1	1	1	1						
		1219	Self Wt (kg/m)	39	70	103	128	156	217	221	290	299					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1321	Self Wt (kg/m)	45	70	100	124	156	197	224	258	292	**307**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1422	Self Wt (kg/m)	**38**	69	**98**	**121**	153	179	**212**	**239**	278	312				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1524	Self Wt (kg/m)	**38**	**68**	**98**	**121**	**152**	**169**	214	240	**250**	313	**321**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
16	12 N @ 1.33	1016	Self Wt (kg/m)	58	105	150	213	275									
			BC Braces	1	1	1	1	1									
		1118	Self Wt (kg/m)	52	104	153	213	222	282								
			BC Braces	1	1	1	1	1	1								
		1219	Self Wt (kg/m)	48	104	131	174	223	283	293							
			BC Braces	1	1	1	1	1	1	1							
		1321	Self Wt (kg/m)	48	96	118	160	227	**232**	301	307						
			BC Braces	1	1	1	1	1	1	1	1						
		1422	Self Wt (kg/m)	48	**84**	119	160	199	235	299	**306**						
			BC Braces	1	1	1	1	1	1	1	1						
		1524	Self Wt (kg/m)	**45**	**84**	**116**	**144**	**183**	238	**247**	309	**316**					
			BC Braces	1	1	1	1	1	1	1	1	1					
17	5 N @ 3.4	1118	Self Wt (kg/m)	33	54	83	85	111	129	150	180	196	213	243	245	276	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1219	Self Wt (kg/m)	33	53	67	88	100	123	137	160	180	198	213	248	250	278
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1321	Self Wt (kg/m)	33	47	67	86	94	114	131	154	161	184	200	219	251	251
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	32	47	67	86	95	103	127	136	155	164	188	201	225	254
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	32	47	59	80	92	104	121	137	143	166	189	200	206	229
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1676	Self Wt (kg/m)	**31**	**46**	**57**	**72**	**89**	**102**	**112**	**125**	**141**	**149**	**169**	**182**	**203**	**210**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	6 N @ 2.83	1118	Self Wt (kg/m)	34	59	87	103	134	148	179	211	215	274	276	279		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1219	Self Wt (kg/m)	32	59	74	99	118	140	164	190	213	221	278	280	282	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1321	Self Wt (kg/m)	**31**	49	74	91	107	139	153	170	192	219	226	282	283	289
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	32	49	69	92	103	121	144	163	174	218	228	**231**	290	298
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	32	**48**	**65**	90	106	113	145	156	175	198	230	233	266	292
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1676	Self Wt (kg/m)	33	49	67	**80**	**100**	**109**	**129**	**152**	**162**	**179**	**209**	236	**241**	**243**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
17	8 N @ 2.13	1118	Self Wt (kg/m)	38	73	103	131	163	210	215	278	286					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1219	Self Wt (kg/m)	36	69	104	121	154	183	216	252	289	296				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1321	Self Wt (kg/m)	36	64	**93**	111	143	170	219	226	292	295	304			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1422	Self Wt (kg/m)	**35**	63	94	111	132	159	188	228	236	299	306	**304**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1524	Self Wt (kg/m)	43	66	97	**109**	129	159	183	232	240	257	306	310	315	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1676	Self Wt (kg/m)	38	**60**	95	113	**128**	**151**	**175**	**188**	**234**	**241**	**276**	308	**311**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
17	10 N @ 1.7	1118	Self Wt (kg/m)	46	90	125	152	213	275	289							
			BC Braces	1	1	1	1	1	1	1							
		1219	Self Wt (kg/m)	46	90	120	153	213	250	280							
			BC Braces	1	1	1	1	1	1	1							
		1321	Self Wt (kg/m)	46	87	110	144	173	224	255	302						
			BC Braces	1	1	1	1	1	1	1	1						
		1422	Self Wt (kg/m)	47	77	108	143	177	224	231	288	303					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1524	Self Wt (kg/m)	48	79	109	128	158	205	232	267	294					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1676	Self Wt (kg/m)	**41**	**70**	**99**	**122**	**152**	**184**	**212**	**243**	**273**	**307**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
17	12 N @ 1.42	1118	Self Wt (kg/m)	59	103	151	213	276	285								
			BC Braces	1	1	1	1	1	1								
		1219	Self Wt (kg/m)	53	104	142	186	223	283								
			BC Braces	1	1	1	1	1	1								
		1321	Self Wt (kg/m)	50	96	131	175	227	291	300							
			BC Braces	1	1	1	1	1	1	1							
		1422	Self Wt (kg/m)	48	98	120	159	229	**236**	296	**304**						
			BC Braces	1	1	1	1	1	1	1	1						
		1524	Self Wt (kg/m)	49	86	120	160	195	**236**	296	305						
			BC Braces	1	1	1	1	1	1	1	1						
		1676	Self Wt (kg/m)	**46**	**85**	**117**	**145**	**173**	243	**250**	309	**317**					
			BC Braces	1	1	1	1	1	1	1	1	1					
17	15 N @ 1.13	1118	Self Wt (kg/m)	69	120	190	283	296									
			BC Braces	1	1	1	1	1									
		1219	Self Wt (kg/m)	64	115	172	226	295									
			BC Braces	1	1	1	1	1									
		1321	Self Wt (kg/m)	56	108	158	228	297	307								
			BC Braces	1	1	1	1	1	1								
		1422	Self Wt (kg/m)	56	110	161	228	**240**	308								
			BC Braces	1	1	1	1	1	1								
		1524	Self Wt (kg/m)	57	112	142	198	**240**	304	**322**							
			BC Braces	1	1	1	1	1	1	1							
		1676	Self Wt (kg/m)	**55**	**103**	**140**	**177**	248	**256**	323							
			BC Braces	1	1	1	1	1	1	1							

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
18	5 N @ 3.6	1219	Self Wt (kg/m)	34	53	84	93	107	130	151	181	197	214	248	251	287	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1321	Self Wt (kg/m)	**33**	53	68	91	100	124	132	160	181	198	215	249	250	278
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1422	Self Wt (kg/m)	**33**	53	67	89	95	109	134	153	162	184	200	220	251	252
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	**33**	48	67	87	96	110	128	136	156	186	189	203	226	254
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1676	Self Wt (kg/m)	34	**47**	62	81	93	**102**	118	136	**140**	160	189	194	209	231
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1829	Self Wt (kg/m)	37	48	**59**	**74**	**91**	103	**113**	**126**	142	**152**	**168**	**175**	**199**	**211**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	6 N @ 3	1219	Self Wt (kg/m)	**33**	59	85	98	129	148	167	211	213	249	277	280		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1321	Self Wt (kg/m)	**33**	59	86	99	113	140	161	189	214	223	252	282	283	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1422	Self Wt (kg/m)	34	56	75	92	107	134	155	173	193	221	228	254	283	289
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1524	Self Wt (kg/m)	**33**	**49**	69	92	103	122	146	166	175	220	229	260	264	292
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1676	Self Wt (kg/m)	34	50	68	90	107	114	129	**151**	170	180	209	234	**240**	269
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1829	Self Wt (kg/m)	**33**	**49**	**67**	**82**	**101**	**110**	**125**	153	**158**	**176**	**185**	**215**	243	**242**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	8 N @ 2.25	1219	Self Wt (kg/m)	39	73	103	126	152	211	215	280	286					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1321	Self Wt (kg/m)	36	70	102	121	155	181	218	228	288	296				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1422	Self Wt (kg/m)	36	65	**94**	111	144	171	222	229	265	296	303			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1524	Self Wt (kg/m)	**35**	64	95	112	133	160	191	230	236	297	306	**304**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1676	Self Wt (kg/m)	44	67	98	113	131	**152**	182	210	235	264	300	307		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1829	Self Wt (kg/m)	45	**62**	98	**109**	**129**	154	**175**	**188**	**213**	**239**	**279**	310	**312**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
18	10 N @ 1.8	1219	Self Wt (kg/m)	47	90	119	154	214	220	289							
			BC Braces	1	1	1	1	1	1	1							
		1321	Self Wt (kg/m)	47	88	116	154	192	223	281							
			BC Braces	1	1	1	1	1	1	1							
		1422	Self Wt (kg/m)	48	88	110	144	176	224	256	289						
			BC Braces	1	1	1	1	1	1	1	1						
		1524	Self Wt (kg/m)	48	80	108	144	177	227	231	288	297					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1676	Self Wt (kg/m)	46	74	110	129	160	184	234	268	298	**305**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1829	Self Wt (kg/m)	**42**	**71**	**103**	**124**	**157**	**178**	**214**	**242**	**274**	306	**316**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
18	12 N @ 1.5	1219	Self Wt (kg/m)	60	103	152	213	250	286								
			BC Braces	1	1	1	1	1	1								
		1321	Self Wt (kg/m)	53	105	142	187	224	283								
			BC Braces	1	1	1	1	1	1								
		1422	Self Wt (kg/m)	50	97	126	175	227	261	296							
			BC Braces	1	1	1	1	1	1	1							
		1524	Self Wt (kg/m)	49	98	121	159	229	235	296	307						
			BC Braces	1	1	1	1	1	1	1	1						
		1676	Self Wt (kg/m)	50	**84**	122	156	186	241	274	**306**	**317**					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1829	Self Wt (kg/m)	**47**	85	**116**	**146**	**173**	**224**	**252**	310	319					
			BC Braces	1	1	1	1	1	1	1	1	1					
18	15 N @ 1.2	1219	Self Wt (kg/m)	71	121	187	254	296									
			BC Braces	1	1	1	1	1									
		1321	Self Wt (kg/m)	65	117	174	227	295									
			BC Braces	1	1	1	1	1									
		1422	Self Wt (kg/m)	57	116	158	229	298	306								
			BC Braces	1	1	1	1	1	1								
		1524	Self Wt (kg/m)	58	111	162	230	**240**	305								
			BC Braces	1	1	1	1	1	1								
		1676	Self Wt (kg/m)	**55**	113	144	188	243	307	**322**							
			BC Braces	1	1	1	1	1	1	1							
		1829	Self Wt (kg/m)	**55**	**106**	**136**	**175**	250	**259**	325							
			BC Braces	1	1	1	1	1	1	1							
20	6 N @ 3.33	1219	Self Wt (kg/m)	38	64	91	110	136	163	208	211	242	274				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1321	Self Wt (kg/m)	38	65	86	103	129	159	186	212	244	276	278			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1422	Self Wt (kg/m)	35	61	86	100	130	139	168	189	216	249	280	281		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		1524	Self Wt (kg/m)	**34**	57	86	95	118	142	163	189	217	221	255	283	284	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		1676	Self Wt (kg/m)	**34**	56	**70**	94	**106**	136	145	167	197	220	**229**	262	285	292
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1829	Self Wt (kg/m)	37	**51**	72	**92**	109	**124**	**142**	**154**	**171**	**201**	231	**235**	**268**	**268**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	8 N @ 2.5	1219	Self Wt (kg/m)	44	83	104	148	185	210	276	281						
			BC Braces	1	1	1	1	1	1	1	1						
		1321	Self Wt (kg/m)	43	74	106	137	163	211	217	280	287					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1422	Self Wt (kg/m)	38	74	104	121	150	191	221	255	288					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1524	Self Wt (kg/m)	**37**	**65**	**94**	123	154	172	222	228	291	296				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1676	Self Wt (kg/m)	**37**	**65**	96	**112**	146	**162**	203	229	239	297	305			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1829	Self Wt (kg/m)	60	73	96	113	**140**	167	**188**	**217**	**237**	**268**	**297**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
20	9 N @ 2.22	1219	Self Wt (kg/m)	45	87	115	162	209	242	280							
			BC Braces	1	1	1	1	1	1	1							
		1321	Self Wt (kg/m)	45	85	107	152	188	218	283	288						
			BC Braces	1	1	1	1	1	1	1	1						
		1422	Self Wt (kg/m)	44	76	108	140	168	219	257	290						
			BC Braces	1	1	1	1	1	1	1	1						
		1524	Self Wt (kg/m)	**41**	76	107	130	169	222	227	292	299					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1676	Self Wt (kg/m)	46	73	108	137	169	193	227	261	293					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1829	Self Wt (kg/m)	46	**72**	**104**	**126**	**152**	**175**	**213**	**236**	**272**	**303**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
20	11 N @ 1.82	1219	Self Wt (kg/m)	54	102	149	210	248	287								
			BC Braces	1	1	1	1	1	1								
		1321	Self Wt (kg/m)	61	100	142	191	249	283								
			BC Braces	1	1	1	1	1	1								
		1422	Self Wt (kg/m)	56	94	141	174	225	289								
			BC Braces	1	1	1	1	1	1								
		1524	Self Wt (kg/m)	**50**	94	125	168	223	261	295							
			BC Braces	1	1	1	1	1	1	1							
		1676	Self Wt (kg/m)	52	94	118	**151**	204	**234**	268	309						
			BC Braces	1	1	1	1	1	1	1	1						
		1829	Self Wt (kg/m)	52	**86**	**116**	153	**187**	236	**248**	**300**	**315**					
			BC Braces	1	1	1	1	1	1	1	1	1					
20	13 N @ 1.54	1219	Self Wt (kg/m)	62	118	167	247	287									
			BC Braces	1	1	1	1	1									
		1321	Self Wt (kg/m)	63	110	171	221	289									
			BC Braces	1	1	1	1	1									
		1422	Self Wt (kg/m)	63	106	154	221	262	300								
			BC Braces	1	1	1	1	1	1								
		1524	Self Wt (kg/m)	57	109	147	200	231	292								
			BC Braces	1	1	1	1	1	1								
		1676	Self Wt (kg/m)	55	**100**	**133**	182	236	268	**308**							
			BC Braces	1	1	1	1	1	1	1							
		1829	Self Wt (kg/m)	**53**	103	134	**167**	**216**	**248**	**308**	**321**						
			BC Braces	1	1	1	1	1	1	1	1						
22	8 N @ 2.75	1321	Self Wt (kg/m)	45	84	112	148	187	213	277	279						
			BC Braces	1	1	1	1	1	1	1	1						
		1422	Self Wt (kg/m)	43	75	107	139	167	214	249	283						
			BC Braces	1	1	1	1	1	1	1	1						
		1524	Self Wt (kg/m)	44	75	102	139	162	194	221	284	291					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1676	Self Wt (kg/m)	40	70	**96**	124	156	176	224	**230**	293	298				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1829	Self Wt (kg/m)	**38**	**66**	98	**113**	152	**170**	204	231	268	299	**307**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		1981	Self Wt (kg/m)	60	77	101	121	**149**	180	**203**	237	**266**	**280**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
22	10 N @ 2.2	1321	Self Wt (kg/m)	53	102	137	186	218	283								
			BC Braces	1	1	1	1	1	1								
		1422	Self Wt (kg/m)	49	**91**	128	167	220	282	290							
			BC Braces	1	1	1	1	1	1	1							
		1524	Self Wt (kg/m)	**47**	**91**	122	154	222	229	291							
			BC Braces	1	1	1	1	1	1	1							
		1676	Self Wt (kg/m)	56	**91**	120	167	196	255	261							
			BC Braces	1	1	1	1	1	1	1							
		1829	Self Wt (kg/m)	50	93	**111**	147	181	229	261	300						
			BC Braces	1	1	1	1	1	1	1	1						
		1981	Self Wt (kg/m)	51	92	**111**	**144**	**177**	**211**	**239**	**272**	**303**					
			BC Braces	1	1	1	1	1	1	1	1	1					
22	12 N @ 1.83	1321	Self Wt (kg/m)	66	107	169	217	278									
			BC Braces	1	1	1	1	1									
		1422	Self Wt (kg/m)	63	108	164	217	280									
			BC Braces	1	1	1	1	1									
		1524	Self Wt (kg/m)	64	105	154	195	254	286								
			BC Braces	1	1	1	1	1	1								
		1676	Self Wt (kg/m)	58	**98**	146	179	230	294	299							
			BC Braces	1	1	1	1	1	1	1							
		1829	Self Wt (kg/m)	**52**	101	130	176	233	267	**298**							
			BC Braces	1	1	1	1	1	1	1							
		1981	Self Wt (kg/m)	54	99	**123**	**165**	**214**	**244**	303	**313**						
			BC Braces	1	1	1	1	1	1	1	1						
22	15 N @ 1.47	1320	Self Wt (kg/m)														
			BC Braces														
		1422	Self Wt (kg/m)	76	129	192	285										
			BC Braces	1	1	1	1										
		1524	Self Wt (kg/m)	72	124	189	229	297									
			BC Braces	1	1	1	1	1									
		1676	Self Wt (kg/m)	66	117	160	232	296									
			BC Braces	1	1	1	1	1									
		1829	Self Wt (kg/m)	66	**114**	163	234	271	**308**								
			BC Braces	1	1	1	1	1	1								
		1981	Self Wt (kg/m)	**62**	116	**158**	**204**	**246**	**308**								
			BC Braces	1	1	1	1	1	1								
24	8 N @ 3	1524	Self Wt (kg/m)	46	79	108	139	185	215	249	285						
			BC Braces	1	1	1	1	1	1	1	1						
		1676	Self Wt (kg/m)	46	71	103	140	164	195	221	284	291					
			BC Braces	1	1	1	1	1	1	1	1	1					
		1829	Self Wt (kg/m)	**42**	**70**	100	125	158	198	225	261	294	300				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		1981	Self Wt (kg/m)	43	71	**97**	**123**	152	**173**	**204**	233	270	302	**307**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		2134	Self Wt (kg/m)	82	91	104	130	162	181	207	238	**258**	**279**	310	**314**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		2286	Self Wt (kg/m)	84	90	102	126	**151**	**173**	**204**	**221**	270	286				
			BC Braces	1	1	1	1	1	1	1	1	1	1				

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
24	10 N @ 2.4	1524	Self Wt (kg/m)	49	96	139	168	221	284	291							
			BC Braces	1	1	1	1	1	1	1							
		1676	Self Wt (kg/m)	**47**	86	124	157	223	256	293							
			BC Braces	1	1	1	1	1	1	1							
		1829	Self Wt (kg/m)	54	96	133	168	208	257	289							
			BC Braces	1	1	1	1	1	1	1							
		1981	Self Wt (kg/m)	53	90	120	163	192	231	262	301						
			BC Braces	1	1	1	1	1	1	1	1						
		2134	Self Wt (kg/m)	52	85	115	**144**	179	214	267	275						
			BC Braces	1	1	1	1	1	1	1	1						
		2286	Self Wt (kg/m)	55	**84**	**109**	146	**175**	**203**	**242**	**274**	**307**					
			BC Braces	1	1	1	1	1	1	1	1	1					
24	12 N @ 2	1524	Self Wt (kg/m)	67	110	164	218	279									
			BC Braces	1	1	1	1	1									
		1676	Self Wt (kg/m)	61	106	144	197	254	287								
			BC Braces	1	1	1	1	1	1								
		1829	Self Wt (kg/m)	57	103	147	180	230	295								
			BC Braces	1	1	1	1	1	1								
		1981	Self Wt (kg/m)	**55**	100	133	177	233	270	308							
			BC Braces	1	1	1	1	1	1	1							
		2134	Self Wt (kg/m)	**55**	94	133	167	216	**247**	307	**313**						
			BC Braces	1	1	1	1	1	1	1	1						
		2286	Self Wt (kg/m)	58	**92**	**126**	**163**	**193**	251	**284**	314						
			BC Braces	1	1	1	1	1	1	1	1						
24	14 N @ 1.71	1524	Self Wt (kg/m)	69	121	190	250										
			BC Braces	1	1	1	1										
		1676	Self Wt (kg/m)	65	113	175	223	291									
			BC Braces	1	1	1	1	1									
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	60	113	154	205	272	303								
			BC Braces	1	1	1	1	1	1								
		2134	Self Wt (kg/m)	**57**	**105**	157	189	**245**	304	**314**							
			BC Braces	1	1	1	1	1	1	1							
		2286	Self Wt (kg/m)	60	106	**141**	**185**	248	**286**	320							
			BC Braces	1	1	1	1	1	1	1							
24	16 N @ 1.5	1524	Self Wt (kg/m)	76	140	218	285										
			BC Braces	1	1	1	1										
		1676	Self Wt (kg/m)	74	127	197	291										
			BC Braces	1	1	1	1										
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	67	120	168	240	305									
			BC Braces	1	1	1	1	1									
		2134	Self Wt (kg/m)	**63**	**117**	172	243	283	**320**								
			BC Braces	1	1	1	1	1	1								
		2286	Self Wt (kg/m)	**63**	122	**167**	**214**	**262**	323								
			BC Braces	1	1	1	1	1	1								

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
27	9 N @ 3	1676	Self Wt (kg/m)	51	90	131	163	214	247	284							
			BC Braces	1	1	1	1	1	1	1							
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	**49**	**82**	**108**	148	**175**	226	261	297						
			BC Braces	1	1	1	1	1	1	1	1						
		2134	Self Wt (kg/m)	83	94	127	159	180	230	261	273	**308**					
			BC Braces	1	1	1	1	1	1	1	1	1					
		2286	Self Wt (kg/m)	85	92	117	161	197	**207**	264	**271**						
			BC Braces	1	1	1	1	1	1	1	1						
		2438	Self Wt (kg/m)	86	95	119	**145**	176	209	**247**	274						
			BC Braces	1	1	1	1	1	1	1	1						
27	10 N @ 2.7	1676	Self Wt (kg/m)	**53**	98	141	192	221	285								
			BC Braces	1	1	1	1	1	1								
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	61	100	137	188	210	260								
			BC Braces	1	1	1	1	1	1								
		2134	Self Wt (kg/m)	63	98	136	165	202	261	**264**							
			BC Braces	1	1	1	1	1	1	1							
		2286	Self Wt (kg/m)	63	97	**122**	166	**198**	237	268							
			BC Braces	1	1	1	1	1	1	1							
		2438	Self Wt (kg/m)	64	**92**	124	**161**	200	**218**	271	**280**						
			BC Braces	1	1	1	1	1	1	1	1						
27	12 N @ 2.25	1676	Self Wt (kg/m)	68	117	173	219	282									
			BC Braces	1	1	1	1	1									
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	70	109	149	199	260	299								
			BC Braces	1	1	1	1	1	1								
		2134	Self Wt (kg/m)	62	105	143	183	236	273								
			BC Braces	1	1	1	1	1	1								
		2286	Self Wt (kg/m)	**60**	107	147	**179**	221	277	304							
			BC Braces	1	1	1	1	1	1	1							
		2438	Self Wt (kg/m)	**60**	**100**	**135**	182	**220**	**254**	**281**							
			BC Braces	1	1	1	1	1	1	1							
27	15 N @ 1.8	1676	Self Wt (kg/m)	75	141	219	285										
			BC Braces	1	1	1	1										
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	73	127	183	235	299									
			BC Braces	1	1	1	1	1									
		2134	Self Wt (kg/m)	71	122	179	239	303									
			BC Braces	1	1	1	1	1									
		2286	Self Wt (kg/m)	**66**	**119**	170	**218**	278	**315**								
			BC Braces	1	1	1	1	1	1								
		2438	Self Wt (kg/m)	**66**	122	**164**	223	**253**	317								
			BC Braces	1	1	1	1	1	1								

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)		Load on Each Panel Point (kN)													
			Factored Load	30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
27	18 N @ 1.5	1676	Self Wt (kg/m)	87	172	253											
			BC Braces	1	1	1											
		1831	Self Wt (kg/m)														
			BC Braces														
		1981	Self Wt (kg/m)	79	150	230	303										
			BC Braces	1	1	1	1										
		2134	Self Wt (kg/m)	81	137	210	276										
			BC Braces	1	1	1	1										
		2286	Self Wt (kg/m)	**76**	140	**195**	**253**	**323**									
			BC Braces	1	1	1	1	1									
		2438	Self Wt (kg/m)	77	**133**	199	257	325									
			BC Braces	1	1	1	1	1									
30	10 N @ 3	1981	Self Wt (kg/m)	**62**	**95**	145	175	224	287								
			BC Braces	1	1	1	1	1	1								
		2134	Self Wt (kg/m)	84	101	156	189	228	262	300							
			BC Braces	1	1	1	1	1	1	1							
		2286	Self Wt (kg/m)	85	103	139	193	214	263								
			BC Braces	1	1	1	1	1	1								
		2438	Self Wt (kg/m)	87	100	140	173	206	265								
			BC Braces	1	1	1	1	1	1								
		2591	Self Wt (kg/m)	88	101	**135**	174	**204**	244	**272**							
			BC Braces	1	1	1	1	1	1	1							
		2743	Self Wt (kg/m)	89	100	137	**169**	**204**	**226**	278							
			BC Braces	1	1	1	1	1	1	1							
30	12 N @ 2.5	1981	Self Wt (kg/m)	70	118	170	221	288									
			BC Braces	1	1	1	1	1									
		2134	Self Wt (kg/m)	**67**	109	164	210	262									
			BC Braces	1	1	1	1	1									
		2286	Self Wt (kg/m)	68	111	153	201	265	302								
			BC Braces	1	1	1	1	1	1								
		2438	Self Wt (kg/m)	**67**	107	148	198	240	**276**								
			BC Braces	1	1	1	1	1	1								
		2591	Self Wt (kg/m)	**67**	109	149	**184**	231	280	308							
			BC Braces	1	1	1	1	1	1	1							
		2743	Self Wt (kg/m)	70	**106**	**146**	188	**227**	283	**286**							
			BC Braces	1	1	1	1	1	1	1							
30	14 N @ 2.14	1981	Self Wt (kg/m)	72	134	194	257										
			BC Braces	1	1	1	1										
		2134	Self Wt (kg/m)	72	122	178	259	297									
			BC Braces	1	1	1	1	1									
		2286	Self Wt (kg/m)	71	123	175	232	299									
			BC Braces	1	1	1	1	1									
		2438	Self Wt (kg/m)	**70**	115	172	221	277									
			BC Braces	1	1	1	1	1									
		2591	Self Wt (kg/m)	72	117	160	213	280	309								
			BC Braces	1	1	1	1	1	1								
		2743	Self Wt (kg/m)	73	**114**	**157**	**195**	**254**	**285**								
			BC Braces	1	1	1	1	1	1								

Joist Girder Span (m)	Joist Spaces (m)	Girder Depth (mm)	Factored Load	Load on Each Panel Point (kN)													
				30	60	90	120	150	180	210	240	270	300	330	360	390	420
			Service Load	**20**	**40**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**
30	16 N @ 1.88	1981	Self Wt (kg/m)	83	145	222	291										
			BC Braces	1	1	1	1										
		2134	Self Wt (kg/m)	77	141	202	268										
			BC Braces	1	1	1	1										
		2286	Self Wt (kg/m)	**76**	134	187	273	307									
			BC Braces	1	1	1	1	1									
		2438	Self Wt (kg/m)	77	127	191	245	311									
			BC Braces	1	1	1	1	1									
		2591	Self Wt (kg/m)	80	**126**	188	247	**286**									
			BC Braces	1	1	1	1	1									
		2743	Self Wt (kg/m)	82	130	**180**	**229**	292	**329**								
			BC Braces	1	1	1	1	1	1								
30	18 N @ 1.67	1981	Self Wt (kg/m)	87	157	228	301										
			BC Braces	1	1	1	1										
		2134	Self Wt (kg/m)	**82**	151	232	305										
			BC Braces	1	1	1	1										
		2286	Self Wt (kg/m)	**82**	154	235	308										
			BC Braces	1	1	1	1										
		2438	Self Wt (kg/m)	83	141	220	278	**324**									
			BC Braces	1	1	1	1	1									
		2591	Self Wt (kg/m)	84	139	201	**255**	328									
			BC Braces	1	1	1	1	1									
		2743	Self Wt (kg/m)	85	**135**	**197**	261	330									
			BC Braces	1	1	1	1	1									
30	20 N @ 1.5	1981	Self Wt (kg/m)	92	179	294											
			BC Braces	1	1	1											
		2134	Self Wt (kg/m)	93	165	237	310										
			BC Braces	1	1	1	1										
		2286	Self Wt (kg/m)	**89**	167	244	313										
			BC Braces	1	1	1	1										
		2438	Self Wt (kg/m)	**89**	165	247	322										
			BC Braces	1	1	1	1										
		2591	Self Wt (kg/m)	96	170	228	330										
			BC Braces	1	1	1	1										
		2743	Self Wt (kg/m)	93	**154**	**226**	**273**	**343**									
			BC Braces	1	1	1	1	1									

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
20	2 N @ 10	20	Self Wt (lb/ft)	**17**	18	22	28	32	40	44	50	57	60	58	69	76	78
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	**17**	21	24	29	32	38	41	47	59	62	62	65	70
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	**17**	**18**	**22**	**24**	**25**	**31**	**33**	**39**	**44**	**46**	**50**	**54**	**56**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	3 N @ 6.67	20	Self Wt (lb/ft)	**17**	**18**	25	32	43	49	53	64	74	69	76	85	98	106
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	21	24	29	35	39	47	54	58	69	75	99	81	87
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	19	**21**	**27**	**30**	**38**	**41**	**46**	**51**	**60**	**67**	**71**	**80**	**81**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	4 N @ 5	20	Self Wt (lb/ft)	**17**	21	34	46	48	68	71	77	87	103	105	121	146	148
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	**19**	27	36	48	**50**	70	73	**73**	88	90	106	108	133
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	**19**	**24**	**32**	**37**	**50**	**51**	**57**	**73**	**76**	**82**	**91**	**92**	**114**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	5 N @ 4	20	Self Wt (lb/ft)	**17**	26	36	48	69	72	86	103	106	143	148	148	185	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	18	24	33	49	55	73	**73**	80	90	110	113	141	151	153
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	18	**23**	**29**	**38**	**51**	**59**	75	**77**	**82**	**94**	**96**	**116**	**117**	**136**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	2 N @ 11	20	Self Wt (lb/ft)	**17**	18	**21**	29	32	39	48	49	59	60	63	70	70	79
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	**17**	**21**	**24**	30	33	41	**42**	50	**51**	**61**	**61**	70	67
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	18	22	**24**	**29**	**32**	**38**	44	**47**	55	62	62	**65**	**62**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	3 N @ 7.33	20	Self Wt (lb/ft)	**17**	20	26	35	42	50	61	68	73	80	85	94	102	111
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	**18**	**23**	30	38	43	53	54	63	73	75	**77**	83	97
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	18	**18**	**23**	**27**	**34**	**39**	**45**	**52**	**58**	**68**	**68**	**77**	**81**	**83**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	4 N @ 5.5	20	Self Wt (lb/ft)	**17**	24	34	46	54	69	75	85	102	102	142	143	145	148
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	**20**	29	**36**	48	55	70	**72**	79	87	105	105	122	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	**20**	**27**	**36**	**40**	**51**	**58**	**72**	**73**	**80**	**90**	**91**	**107**	**109**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	5 N @ 4.4	20	Self Wt (lb/ft)	**17**	27	45	54	69	79	101	103	128	144	147	183	187	200
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	25	35	48	56	72	77	87	105	108	136	149	150	**151**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	18	**22**	**33**	**41**	**51**	**57**	**74**	**78**	**86**	**100**	**113**	**114**	**133**	154
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
22	6 N @ 3.67	20	Self Wt (lb/ft)	**18**	34	48	69	84	102	120	142	147	184	188	190		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		24	Self Wt (lb/ft)	**18**	30	49	57	72	**78**	105	107	126	150	**151**	189	194	208
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	21	**28**	**37**	**52**	**60**	81	**83**	**93**	**110**	**130**	152	**154**	**168**	**172**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	3 N @ 8.33	20	Self Wt (lb/ft)	**17**	21	29	39	49	59	67	71	78	92	99	106	110	124
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	20	27	32	41	50	58	62	66	73	80	93	95	104
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	21	**23**	30	**35**	**43**	52	60	63	73	**71**	76	83	92
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	19	**19**	24	**29**	39	44	**48**	**56**	**57**	**65**	**71**	**70**	**79**	**81**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	4 N @ 6.25	20	Self Wt (lb/ft)	**17**	26	42	53	68	74	84	100	118	140	142	143	180	185
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		24	Self Wt (lb/ft)	**17**	23	35	48	55	70	71	86	102	104	107	143	146	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	22	30	41	51	57	72	74	80	90	107	115	117	128
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**17**	**20**	**28**	**36**	**41**	**50**	**58**	**72**	**73**	**80**	**90**	**91**	**107**	**109**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	5 N @ 5	20	Self Wt (lb/ft)	18	34	45	67	73	91	101	140	141	144	182	194	199	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		24	Self Wt (lb/ft)	18	27	42	51	69	75	86	103	124	144	148	148	187	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	24	35	48	57	72	75	88	105	108	135	150	150	**151**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	18	**23**	**33**	**44**	**51**	**63**	**74**	**78**	**86**	**100**	**114**	**115**	**130**	153
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	6 N @ 4.17	20	Self Wt (lb/ft)	19	36	53	73	98	117	140	141	182	183				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		24	Self Wt (lb/ft)	21	34	48	70	75	102	104	142	144	148	185	190	193	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		28	Self Wt (lb/ft)	**18**	**28**	48	57	73	**79**	89	107	126	150	152	157	193	196
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	21	29	**37**	**52**	**60**	80	**83**	**93**	**110**	**122**	**138**	**155**	**166**	**171**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	8 N @ 3.13	20	Self Wt (lb/ft)	26	47	73	100	140	143	182	185						
			BC Braces	1	1	1	1	1	1	1	1						
		24	Self Wt (lb/ft)	23	47	73	84	105	147	152	193	204	218				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		28	Self Wt (lb/ft)	21	37	58	**75**	90	109	130	154	179	195	218	226		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		32	Self Wt (lb/ft)	**20**	**36**	**52**	**75**	**79**	**94**	**112**	**141**	**163**	**173**	**215**	**219**	**224**	**231**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)												
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
25	8 N @ 3.13	20	Self Wt (lb/ft)	26	47	73	100	140	143	182	185						
			BC Braces	1	1	1	1	1	1	1	1						
		24	Self Wt (lb/ft)	23	47	73	84	105	147	152	193	204	218				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		28	Self Wt (lb/ft)	21	37	58	**75**	90	109	130	154	179	195	218	226		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		32	Self Wt (lb/ft)	**20**	**36**	**52**	**75**	**79**	**94**	**112**	**141**	**163**	**173**	**215**	**219**	**224**	**231**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	3 N @ 9.33	24	Self Wt (lb/ft)	**17**	21	30	39	44	57	60	67	75	87	92	101	107	111
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	**20**	27	31	42	50	59	62	68	70	78	89	95	97
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**17**	21	**24**	**30**	**40**	**43**	**53**	**60**	**64**	**67**	**72**	**77**	**82**	**93**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	4 N @ 7	24	Self Wt (lb/ft)	18	25	37	47	67	69	75	99	102	119	141	143	145	184
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	18	23	32	47	51	69	**70**	76	86	103	105	121	142	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**17**	**22**	**28**	**37**	**48**	**55**	71	**72**	**77**	**88**	**89**	**106**	**107**	**129**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	5 N @ 5.6	24	Self Wt (lb/ft)	**18**	31	45	61	66	83	101	121	141	144	147	183	186	197
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**18**	27	40	51	69	**72**	86	104	105	127	148	149	**149**	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**18**	**24**	**36**	**49**	**57**	**72**	**75**	**84**	**97**	**107**	**124**	**135**	151	**151**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	6 N @ 4.67	24	Self Wt (lb/ft)	19	34	52	69	83	102	120	141	146	183	186			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		28	Self Wt (lb/ft)	**18**	32	48	69	**71**	86	104	123	144	**149**	185	188	**191**	203
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**18**	**28**	**40**	**57**	72	**79**	**89**	**107**	**113**	150	**152**	**152**	194	**197**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	8 N @ 3.5	24	Self Wt (lb/ft)	24	47	69	85	120	143	183	186						
			BC Braces	1	1	1	1	1	1	1	1						
		28	Self Wt (lb/ft)	22	47	69	77	104	124	146	**152**	199	**211**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		32	Self Wt (lb/ft)	**21**	**38**	**58**	**74**	**90**	**109**	**132**	154	**160**	213	**215**	**222**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
30	3 N @ 10	24	Self Wt (lb/ft)	**17**	23	31	39	55	58	65	75	85	91	92	106	120	124
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	**21**	29	36	44	56	58	60	68	77	88	93	96	107
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**17**	**21**	27	31	42	46	59	**59**	**61**	71	78	81	91	97
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	18	**21**	**24**	**30**	**39**	**43**	**47**	60	63	**65**	**72**	**73**	**82**	**85**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
30	4 N @ 7.5	24	Self Wt (lb/ft)	**17**	29	41	51	67	74	84	100	110	139	142	144	180	185
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	25	37	47	62	70	72	85	102	104	123	143	145	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	18	**22**	**33**	44	53	63	72	**76**	83	90	106	114	126	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	18	**22**	**33**	**38**	**51**	**55**	**67**	77	**79**	**83**	**92**	**109**	**112**	**119**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	5 N @ 6	24	Self Wt (lb/ft)	19	34	48	67	73	90	100	124	141	144	182	183	195	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		28	Self Wt (lb/ft)	**18**	30	41	54	68	75	93	103	122	144	147	148	187	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**18**	25	37	48	63	**71**	77	87	105	122	131	150	**150**	**152**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**18**	**24**	**33**	**45**	**55**	72	**73**	**80**	**90**	**107**	**108**	**134**	152	153
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	6 N @ 5	24	Self Wt (lb/ft)	**20**	37	53	66	98	102	140	143	182	182	186			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		28	Self Wt (lb/ft)	21	34	47	69	75	102	104	142	143	148	185	189	201	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		32	Self Wt (lb/ft)	21	30	48	56	**72**	78	105	**106**	125	150	**152**	189	193	**195**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	21	**28**	**38**	**51**	73	**74**	**90**	109	**114**	**128**	153	**155**	**159**	197
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	8 N @ 3.75	24	Self Wt (lb/ft)	26	47	69	100	139	142	183	187						
			BC Braces	1	1	1	1	1	1	1	1						
		28	Self Wt (lb/ft)	23	47	70	85	104	143	146	188	204					
			BC Braces	1	1	1	1	1	1	1	1	1					
		32	Self Wt (lb/ft)	22	41	60	78	94	114	156	159	209	214	220			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		36	Self Wt (lb/ft)	**21**	**36**	**56**	**74**	**83**	**109**	**114**	**154**	**161**	**163**	**203**	**220**	**224**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
32	3 N @ 10.67	24	Self Wt (lb/ft)	**17**	25	35	42	55	56	65	74	85	98	103	118	129	138
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	**17**	23	29	39	44	56	**57**	66	75	86	91	100	107	121
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**17**	**21**	**27**	35	44	51	**57**	61	69	73	78	89	94	105
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**17**	**21**	**27**	**31**	**40**	**46**	58	**59**	**63**	**70**	**71**	**81**	**91**	**92**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	4 N @ 8	24	Self Wt (lb/ft)	20	30	45	52	70	74	99	101	118	141	141	180	181	195
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		28	Self Wt (lb/ft)	20	26	36	50	61	69	75	84	102	103	141	143	145	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**18**	25	35	42	52	69	**70**	77	86	103	**104**	121	143	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**18**	**22**	**32**	**39**	**48**	**55**	71	**72**	**77**	**88**	105	**105**	**106**	**129**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
32	5 N @ 6.4	24	Self Wt (lb/ft)	20	34	48	66	77	98	108	139	141	181	185	193		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		28	Self Wt (lb/ft)	**18**	31	45	60	67	79	101	119	126	144	147	184	186	195
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**18**	26	40	51	69	**72**	82	96	105	126	148	149	**150**	189
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**18**	**24**	**37**	**49**	**63**	**72**	**75**	**83**	**98**	**107**	**118**	**135**	151	**150**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	6 N @ 5.33	24	Self Wt (lb/ft)	21	44	66	72	98	118	140	180	182	184				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		28	Self Wt (lb/ft)	19	34	52	69	83	102	120	142	146	184	186	189		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		32	Self Wt (lb/ft)	**18**	32	48	69	**71**	86	104	123	144	**149**	**150**	189	**193**	201
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	21	**29**	**45**	**57**	72	**79**	**89**	**107**	**125**	150	152	**153**	194	**197**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
32	8 N @ 4	24	Self Wt (lb/ft)	26	51	72	100	139	178	183							
			BC Braces	1	1	1	1	1	1	1							
		28	Self Wt (lb/ft)	24	47	69	85	103	143	146	187	190					
			BC Braces	1	1	1	1	1	1	1	1	1					
		32	Self Wt (lb/ft)	23	43	69	77	104	124	146	**152**	198	**209**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		36	Self Wt (lb/ft)	**22**	**39**	**58**	**74**	**91**	**108**	**130**	154	**172**	212	**214**	**220**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
35	4 N @ 8.75	24	Self Wt (lb/ft)	18	30	46	65	68	88	97	120	137	139	176	178	179	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		28	Self Wt (lb/ft)	18	29	40	56	67	70	89	99	110	138	140	141	180	180
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		32	Self Wt (lb/ft)	**17**	28	41	51	61	69	75	85	102	**104**	122	142	144	**146**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**17**	**24**	**34**	**44**	**53**	**64**	**69**	**77**	**87**	105	**106**	**119**	**131**	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	5 N @ 7	24	Self Wt (lb/ft)	21	39	58	69	89	107	137	139	159	180	184			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		28	Self Wt (lb/ft)	20	34	49	66	71	90	100	124	141	143	182	185	194	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		32	Self Wt (lb/ft)	**18**	30	42	60	69	79	93	102	125	144	148	166	187	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**18**	**26**	**41**	**51**	**63**	**73**	**82**	**96**	**104**	**121**	**131**	**150**	**150**	**171**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35	6 N @ 5.83	24	Self Wt (lb/ft)	23	44	65	80	98	138	139	180	181					
			BC Braces	1	1	1	1	1	1	1	1	1					
		28	Self Wt (lb/ft)	21	40	59	70	83	101	140	143	183	185	186			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		32	Self Wt (lb/ft)	21	34	50	69	75	102	**104**	142	145	**149**	185	**189**	199	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		36	Self Wt (lb/ft)	**18**	**32**	**48**	**63**	**72**	**86**	105	**106**	**144**	150	**150**	**189**	**192**	**200**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
35	7 N @ 5	24	Self Wt (lb/ft)	25	50	71	97	137	139	180	182						
			BC Braces	1	1	1	1	1	1	1	1						
		28	Self Wt (lb/ft)	24	45	67	82	101	139	141	183	184					
			BC Braces	1	1	1	1	1	1	1	1	1					
		32	Self Wt (lb/ft)	22	41	60	72	94	**104**	142	148	185	189	208			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		36	Self Wt (lb/ft)	**21**	**35**	**53**	**70**	**82**	105	**116**	**146**	**151**	**171**	**193**	**197**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
35	8 N @ 4.38	24	Self Wt (lb/ft)	30	64	81	115	139	177	182							
			BC Braces	1	1	1	1	1	1	1							
		28	Self Wt (lb/ft)	26	50	69	99	119	142	183	185						
			BC Braces	1	1	1	1	1	1	1	1						
		32	Self Wt (lb/ft)	24	47	70	85	104	143	**145**	188	**189**					
			BC Braces	1	1	1	1	1	1	1	1	1					
		36	Self Wt (lb/ft)	**23**	**39**	**57**	**78**	**89**	**114**	147	**159**	196	**206**	**212**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
38	4 N @ 9.5	32	Self Wt (lb/ft)	18	28	40	56	67	70	78	92	111	124	140	142	143	181
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**17**	27	41	50	62	67	73	81	94	104	118	128	145	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	18	24	34	44	53	63	70	76	83	97	106	120	126	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	19	**23**	**30**	**37**	**45**	**51**	**69**	**73**	**77**	**84**	**97**	**106**	**107**	**128**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	5 N @ 7.6	32	Self Wt (lb/ft)	20	32	49	60	71	90	101	116	141	143	164	184	186	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		36	Self Wt (lb/ft)	**18**	31	42	57	69	73	93	103	118	128	148	149	168	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	19	29	41	51	63	72	82	95	104	119	132	150	**151**	172
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	**25**	**36**	**44**	**53**	**69**	**75**	**84**	**98**	**106**	**121**	**136**	152	**152**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	6 N @ 6.33	32	Self Wt (lb/ft)	**21**	35	52	69	83	102	120	141	146	183	187	190		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		36	Self Wt (lb/ft)	**21**	34	51	70	75	86	104	122	143	149	185	189	192	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		40	Self Wt (lb/ft)	**21**	32	48	63	72	83	105	**106**	125	150	**151**	190	193	**194**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	22	**28**	**41**	**53**	**70**	**76**	**89**	108	**110**	**127**	153	**159**	**159**	196
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	7 N @ 5.43	32	Self Wt (lb/ft)	22	45	67	79	101	118	142	165	184	189				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		36	Self Wt (lb/ft)	**21**	36	54	68	86	104	128	146	**149**	188	191			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		40	Self Wt (lb/ft)	22	36	53	71	**78**	106	**108**	146	151	**154**	193	**209**	**210**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		44	Self Wt (lb/ft)	22	**33**	**48**	**63**	79	**91**	109	**127**	153	**154**	**162**	210	214	**215**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
38	8 N @ 4.75	32	Self Wt (lb/ft)	25	47	69	84	119	142	184	187	204					
			BC Braces	1	1	1	1	1	1	1	1	1					
		36	Self Wt (lb/ft)	24	47	70	77	104	124	146	189	190	208				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		40	Self Wt (lb/ft)	**22**	40	57	78	90	114	147	158	197	208	210			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		44	Self Wt (lb/ft)	24	**39**	**56**	**71**	**87**	**108**	**124**	**154**	**161**	**196**	**198**	**219**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
40	4 N @ 10	32	Self Wt (lb/ft)	**18**	30	43	56	65	76	91	100	109	124	141	143	162	181
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**18**	28	41	50	61	68	79	92	101	113	127	142	144	145
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	**18**	27	38	46	59	70	74	82	94	105	116	125	146	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	**24**	**30**	**40**	**51**	**61**	**67**	**75**	**82**	**95**	**105**	**104**	**119**	**130**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	4 N @ 10	32	Self Wt (lb/ft)	**18**	30	43	56	65	76	91	100	109	124	141	143	162	181
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	**18**	28	41	50	61	68	79	92	101	113	127	142	144	145
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	**18**	27	38	46	59	70	74	82	94	105	116	125	146	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	**24**	**30**	**40**	**51**	**61**	**67**	**75**	**82**	**95**	**105**	**104**	**119**	**130**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	5 N @ 8	32	Self Wt (lb/ft)	21	35	50	68	76	91	108	126	145	146	186	196	199	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		36	Self Wt (lb/ft)	19	31	49	60	67	80	94	107	126	142	148	166	187	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	19	31	41	51	69	73	82	**96**	114	128	146	**150**	169	171
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	**25**	**36**	**47**	**61**	**69**	**79**	**96**	**106**	**117**	**120**	**150**	**152**	**153**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	6 N @ 6.67	32	Self Wt (lb/ft)	21	40	59	70	90	100	140	143	183	185	186			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		36	Self Wt (lb/ft)	20	36	50	69	79	102	112	142	147	**149**	187	189	197	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		40	Self Wt (lb/ft)	**18**	32	48	70	73	87	105	123	144	150	**151**	189	**193**	205
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	21	**28**	**41**	**55**	**70**	**79**	**89**	**107**	**125**	151	152	**160**	**193**	**202**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40	8 N @ 5	32	Self Wt (lb/ft)	26	50	66	99	119	142	183	185						
			BC Braces	1	1	1	1	1	1	1	1						
		36	Self Wt (lb/ft)	24	48	70	85	104	143	147	188	190					
			BC Braces	1	1	1	1	1	1	1	1	1					
		40	Self Wt (lb/ft)	**23**	43	69	**77**	105	124	147	**152**	196	**208**	**210**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		44	Self Wt (lb/ft)	25	**41**	**63**	**77**	**91**	**110**	**133**	155	**160**	209	212	**218**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
40	10 N @ 4	32	Self Wt (lb/ft)	34	68	84	119	144	186								
			BC Braces	1	1	1	1	1	1								
		36	Self Wt (lb/ft)	31	60	82	105	147	169	194							
			BC Braces	1	1	1	1	1	1	1							
		40	Self Wt (lb/ft)	30	**52**	77	105	127	**151**	190	**202**						
			BC Braces	1	1	1	1	1	1	1	1						
		44	Self Wt (lb/ft)	**25**	53	**71**	**90**	**111**	154	**160**	204	**210**					
			BC Braces	1	1	1	1	1	1	1	1	1					
42	4 N @ 10.5	32	Self Wt (lb/ft)	19	31	47	58	66	77	91	105	123	139	141	160	180	181
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		36	Self Wt (lb/ft)	19	29	41	56	61	71	79	92	106	113	141	142	144	163
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	19	27	41	50	62	68	78	88	95	110	114	128	145	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	25	34	**42**	51	62	71	79	91	98	112	117	131	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	20	**24**	**33**	**42**	**49**	**58**	**67**	**74**	**82**	**88**	**98**	**104**	**119**	**130**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	5 N @ 8.4	32	Self Wt (lb/ft)	21	39	56	66	78	92	111	139	142	163	182	194		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		36	Self Wt (lb/ft)	21	32	48	60	71	86	100	110	126	142	165	184	186	196
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	20	31	42	57	67	77	94	102	117	128	146	149	169	189
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	**27**	**36**	50	61	70	83	95	105	118	132	150	**151**	171
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	20	**27**	**36**	**49**	**59**	**66**	**75**	**84**	**98**	**107**	**118**	**138**	154	**152**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	6 N @ 7	32	Self Wt (lb/ft)	22	40	66	73	98	118	140	142	183	184				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		36	Self Wt (lb/ft)	21	35	52	69	83	102	120	141	147	185	187	190		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		40	Self Wt (lb/ft)	20	36	50	70	75	94	104	123	143	150	188	189	192	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		44	Self Wt (lb/ft)	**19**	**30**	44	61	**69**	83	105	**106**	125	151	**152**	188	192	**202**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	22	31	**42**	**57**	**69**	**79**	**90**	107	**117**	**127**	153	**159**	**160**	203
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	7 N @ 6	32	Self Wt (lb/ft)	24	48	67	90	108	139	141	183	186					
			BC Braces	1	1	1	1	1	1	1	1	1					
		36	Self Wt (lb/ft)	23	41	67	79	101	119	142	147	185	188				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		40	Self Wt (lb/ft)	22	41	61	68	86	104	128	147	**150**	188	191			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		44	Self Wt (lb/ft)	**21**	**34**	51	69	82	106	117	146	152	**154**	197	**206**	**209**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		48	Self Wt (lb/ft)	22	35	**49**	**62**	**79**	**90**	**109**	**127**	153	**154**	**162**	207	211	**212**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
42	8 N @ 5.25	32	Self Wt (lb/ft)	26	51	72	101	139	141	183	186						
			BC Braces	1	1	1	1	1	1	1	1						
		36	Self Wt (lb/ft)	25	48	69	85	104	142	148	188	190					
			BC Braces	1	1	1	1	1	1	1	1	1					
		40	Self Wt (lb/ft)	**23**	47	70	77	104	124	146	**152**	190	**207**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		44	Self Wt (lb/ft)	**23**	**40**	**55**	**76**	**90**	113	148	**152**	197	**207**	211			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		48	Self Wt (lb/ft)	24	42	58	80	91	**109**	**133**	155	**170**	209	**198**	**217**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
42	10 N @ 4.2	32	Self Wt (lb/ft)	34	68	99	140	144	186								
			BC Braces	1	1	1	1	1	1								
		36	Self Wt (lb/ft)	31	60	86	114	147	187	193							
			BC Braces	1	1	1	1	1	1	1							
		40	Self Wt (lb/ft)	30	54	77	104	148	**151**	191							
			BC Braces	1	1	1	1	1	1	1							
		44	Self Wt (lb/ft)	28	53	77	98	119	152	177	**195**						
			BC Braces	1	1	1	1	1	1	1	1						
		48	Self Wt (lb/ft)	**26**	**49**	**70**	**91**	**107**	154	**160**	203	**210**					
			BC Braces	1	1	1	1	1	1	1	1	1					
45	4 N @ 11.25	32	Self Wt (lb/ft)	**19**	35	54	56	73	89	102	108	137	140	158	179	180	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		36	Self Wt (lb/ft)	**19**	31	43	57	66	75	90	104	110	124	141	161	162	181
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		40	Self Wt (lb/ft)	**19**	29	44	57	59	68	79	93	108	114	126	143	144	164
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**19**	27	35	45	58	69	78	89	95	109	115	129	145	146
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	20	**25**	36	45	56	62	72	80	90	96	104	119	128	147
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		52	Self Wt (lb/ft)	20	26	**33**	**43**	**49**	**58**	**71**	**72**	**81**	**92**	**97**	**105**	**120**	**123**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45	5 N @ 9	32	Self Wt (lb/ft)	21	38	58	69	89	103	123	139	159	180	182			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		36	Self Wt (lb/ft)	21	39	50	67	76	91	107	126	145	166	168	194		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		40	Self Wt (lb/ft)	21	32	49	61	68	79	93	115	126	142	145	167	187	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		44	Self Wt (lb/ft)	**18**	**29**	39	56	68	77	94	103	116	128	146	150	169	189
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	20	30	38	50	62	**70**	83	96	105	117	132	151	**152**	172
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		52	Self Wt (lb/ft)	20	**29**	**37**	**49**	**58**	**70**	**76**	**85**	**99**	**113**	**123**	**139**	155	**154**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
45	6 N @ 7.5	32	Self Wt (lb/ft)	25	48	67	82	108	138	141	180	185					
			BC Braces	1	1	1	1	1	1	1	1	1					
		36	Self Wt (lb/ft)	22	41	59	71	91	108	140	143	184	183	186			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		40	Self Wt (lb/ft)	21	36	51	69	80	102	112	142	147	185	187	191		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		44	Self Wt (lb/ft)	**20**	32	46	68	73	86	105	123	144	152	173	190	198	205
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	21	32	45	59	74	83	106	**107**	126	152	**154**	**157**	198	203
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		52	Self Wt (lb/ft)	22	**31**	**44**	**54**	**69**	**77**	**90**	108	**117**	**128**	156	160	**161**	**202**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45	7 N @ 6.43	32	Self Wt (lb/ft)	25	48	68	98	122	140	181	183						
			BC Braces	1	1	1	1	1	1	1	1						
		36	Self Wt (lb/ft)	24	45	67	83	100	139	142	183	186					
			BC Braces	1	1	1	1	1	1	1	1	1					
		40	Self Wt (lb/ft)	24	42	60	75	94	111	142	148	187	187				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		44	Self Wt (lb/ft)	**22**	36	53	69	87	105	124	147	**152**	194	202	**206**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		48	Self Wt (lb/ft)	**22**	35	53	68	**78**	97	**109**	133	**152**	**157**	198	**206**	**208**	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		52	Self Wt (lb/ft)	**22**	**33**	**49**	**62**	**78**	**91**	110	**123**	157	160	**165**	208	211	**212**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45	8 N @ 5.63	32	Self Wt (lb/ft)	30	57	81	99	139	178	183							
			BC Braces	1	1	1	1	1	1	1							
		36	Self Wt (lb/ft)	26	50	71	100	119	142	183	186						
			BC Braces	1	1	1	1	1	1	1	1						
		40	Self Wt (lb/ft)	25	47	70	85	104	143	147	188	191					
			BC Braces	1	1	1	1	1	1	1	1	1					
		44	Self Wt (lb/ft)	**23**	41	68	78	105	124	147	**153**	195	207				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		48	Self Wt (lb/ft)	24	**38**	**57**	**74**	90	112	135	154	163	208	210			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		52	Self Wt (lb/ft)	24	42	58	77	**88**	**109**	**122**	154	**161**	**178**	**199**	**217**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
45	10 N @ 4.5	32	Self Wt (lb/ft)	35	67	99	139	179	187								
			BC Braces	1	1	1	1	1	1								
		36	Self Wt (lb/ft)	35	68	84	119	144	187								
			BC Braces	1	1	1	1	1	1								
		40	Self Wt (lb/ft)	31	61	81	114	148	187	194							
			BC Braces	1	1	1	1	1	1	1							
		44	Self Wt (lb/ft)	30	51	78	104	132	151	190	201						
			BC Braces	1	1	1	1	1	1	1	1						
		48	Self Wt (lb/ft)	28	52	77	98	119	152	177	203	210					
			BC Braces	1	1	1	1	1	1	1	1	1					
		52	Self Wt (lb/ft)	**27**	**48**	**73**	**88**	**107**	**140**	**160**	**184**	**208**					
			BC Braces	1	1	1	1	1	1	1	1	1					

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
48	5 N @ 9.6	36	Self Wt (lb/ft)	22	38	56	65	86	99	120	139	142	162	183			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		40	Self Wt (lb/ft)	22	38	49	59	75	91	106	121	141	143	165	185	186	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		44	Self Wt (lb/ft)	**18**	32	44	59	68	79	93	107	122	143	146	167	187	188
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	20	31	44	54	68	77	90	96	109	129	147	150	170	172
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		52	Self Wt (lb/ft)	21	30	42	53	63	**70**	**80**	96	106	119	134	151	**153**	173
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		56	Self Wt (lb/ft)	21	**29**	**38**	**49**	**58**	**70**	**80**	**93**	**100**	**113**	**120**	**139**	155	**154**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
48	6 N @ 8	36	Self Wt (lb/ft)	24	48	67	78	100	124	141	162	184					
			BC Braces	1	1	1	1	1	1	1	1	1					
		40	Self Wt (lb/ft)	22	40	60	71	91	101	125	142	147	185	187			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		44	Self Wt (lb/ft)	**21**	35	49	67	80	102	111	143	146	150	188	190	198	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		48	Self Wt (lb/ft)	**21**	33	49	66	73	87	105	116	145	152	**154**	190	198	**201**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		52	Self Wt (lb/ft)	**21**	32	46	60	74	84	99	**107**	125	153	**154**	**160**	199	202
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		56	Self Wt (lb/ft)	22	**31**	**43**	**54**	**69**	**77**	**90**	108	**118**	**129**	158	161	**162**	202
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
48	8 N @ 6	36	Self Wt (lb/ft)	29	51	73	100	139	142	183	187						
			BC Braces	1	1	1	1	1	1	1	1						
		40	Self Wt (lb/ft)	26	50	70	92	120	142	184	192	199					
			BC Braces	1	1	1	1	1	1	1	1	1					
		44	Self Wt (lb/ft)	**23**	43	68	86	105	143	148	192	199	205				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		48	Self Wt (lb/ft)	**23**	**41**	63	78	105	116	148	**153**	198	206	**210**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		52	Self Wt (lb/ft)	25	45	61	79	98	120	138	155	162	195	211			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		56	Self Wt (lb/ft)	25	43	**59**	**77**	**88**	**108**	**124**	155	**161**	**178**	**210**	**218**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
48	9 N @ 5.33	36	Self Wt (lb/ft)	31	66	83	117	140	183	189							
			BC Braces	1	1	1	1	1	1	1							
		40	Self Wt (lb/ft)	30	53	76	103	141	145	187							
			BC Braces	1	1	1	1	1	1	1							
		44	Self Wt (lb/ft)	**25**	50	72	96	123	147	171	202						
			BC Braces	1	1	1	1	1	1	1	1						
		48	Self Wt (lb/ft)	28	51	71	95	118	150	**153**	195	207					
			BC Braces	1	1	1	1	1	1	1	1	1					
		52	Self Wt (lb/ft)	28	51	71	87	110	140	163	186	209	222				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		56	Self Wt (lb/ft)	27	**48**	**69**	**83**	**105**	**128**	160	**170**	**195**	**217**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
48	10 N @ 4.8	36	Self Wt (lb/ft)	34	68	100	140	143	186								
			BC Braces	1	1	1	1	1	1								
		40	Self Wt (lb/ft)	32	68	85	122	145	187	200							
			BC Braces	1	1	1	1	1	1	1							
		44	Self Wt (lb/ft)	29	59	81	104	146	169	202							
			BC Braces	1	1	1	1	1	1	1							
		48	Self Wt (lb/ft)	29	53	77	104	130	151	190	201						
			BC Braces	1	1	1	1	1	1	1	1						
		52	Self Wt (lb/ft)	30	52	74	100	119	154	**160**	203	208					
			BC Braces	1	1	1	1	1	1	1	1	1					
		56	Self Wt (lb/ft)	**28**	**51**	**73**	**89**	**108**	**140**	161	**184**	**206**					
			BC Braces	1	1	1	1	1	1	1	1	1					
50	5 N @ 10	40	Self Wt (lb/ft)	22	39	58	67	78	94	107	126	144	165	166	194		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		44	Self Wt (lb/ft)	**19**	32	44	59	70	87	93	111	127	143	166	167	187	184
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		48	Self Wt (lb/ft)	21	31	44	58	68	78	94	107	114	133	146	169	170	189
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		52	Self Wt (lb/ft)	20	31	44	53	65	73	91	96	111	126	134	151	171	172
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		56	Self Wt (lb/ft)	21	31	42	49	63	70	81	**94**	**100**	**112**	129	139	158	173
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		60	Self Wt (lb/ft)	21	**30**	**38**	**48**	**58**	**67**	**76**	**94**	**100**	114	**114**	**138**	**141**	**157**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
50	6 N @ 8.33	40	Self Wt (lb/ft)	23	41	60	71	91	108	140	142	184	185	187			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		44	Self Wt (lb/ft)	**20**	35	49	67	80	103	112	143	148	186	188	191		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		48	Self Wt (lb/ft)	22	34	49	66	76	95	104	125	148	152	188	190	199	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		52	Self Wt (lb/ft)	21	33	48	60	74	83	106	117	131	153	**156**	192	198	**202**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		56	Self Wt (lb/ft)	22	32	45	60	**69**	84	99	**106**	119	154	**156**	**160**	201	**202**
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		60	Self Wt (lb/ft)	22	**31**	**44**	**55**	**69**	**77**	**87**	109	**112**	**131**	160	163	**164**	**202**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
50	8 N @ 6.25	40	Self Wt (lb/ft)	27	50	71	100	119	143	184	190						
			BC Braces	1	1	1	1	1	1	1	1						
		44	Self Wt (lb/ft)	**24**	46	68	86	104	143	148	193	199					
			BC Braces	1	1	1	1	1	1	1	1	1					
		48	Self Wt (lb/ft)	**24**	42	63	83	105	124	148	**156**	197	206				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		52	Self Wt (lb/ft)	**24**	**41**	60	79	98	111	149	159	200	206	209			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		56	Self Wt (lb/ft)	28	45	61	80	98	**109**	133	**156**	164	196	210			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		60	Self Wt (lb/ft)	27	42	**59**	**77**	**88**	**109**	**123**	**156**	**162**	**183**	**207**	**210**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)	Factored Load / Service Load	Load on Each Panel Point (kip) 7.5 / 5	15 / 10	22.5 / 15	30 / 20	37.5 / 25	45 / 30	52.5 / 35	60 / 40	67.5 / 45	75 / 50	82.5 / 55	90 / 60	97.5 / 65	105 / 70
50	10 N @ 5	40	Self Wt (lb/ft)	35	68	85	119	144	187								
			BC Braces	1	1	1	1	1	1								
		44	Self Wt (lb/ft)	32	59	81	114	148	187	194							
			BC Braces	1	1	1	1	1	1	1							
		48	Self Wt (lb/ft)	**30**	58	77	104	132	151	191							
			BC Braces	1	1	1	1	1	1	1							
		52	Self Wt (lb/ft)	**30**	52	77	98	119	152	177	195						
			BC Braces	1	1	1	1	1	1	1	1						
		56	Self Wt (lb/ft)	31	53	76	92	119	155	161	203	208					
			BC Braces	1	1	1	1	1	1	1	1	1					
		60	Self Wt (lb/ft)	**30**	**51**	**74**	**89**	**109**	**133**	**159**	**183**	**203**	**211**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
50	12 N @ 4.17	40	Self Wt (lb/ft)	41	72	103	145	187									
			BC Braces	1	1	1	1	1									
		44	Self Wt (lb/ft)	36	69	103	144	188	195								
			BC Braces	1	1	1	1	1	1								
		48	Self Wt (lb/ft)	35	65	89	126	154	198	205							
			BC Braces	1	1	1	1	1	1	1							
		52	Self Wt (lb/ft)	33	63	86	**110**	155	197	205							
			BC Braces	1	1	1	1	1	1	1							
		56	Self Wt (lb/ft)	32	60	84	**110**	157	**165**	**204**	**212**						
			BC Braces	1	1	1	1	1	1	1	1						
		60	Self Wt (lb/ft)	**31**	**58**	**82**	116	**135**	168	208	**212**						
			BC Braces	1	1	1	1	1	1	1	1						
55	5 N @ 11	44	Self Wt (lb/ft)	**21**	38	55	67	85	94	108	133	144	166	167	195		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		48	Self Wt (lb/ft)	23	35	49	63	76	88	103	121	133	144	167	168	188	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		52	Self Wt (lb/ft)	22	33	45	60	68	84	95	108	124	134	148	169	170	190
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		56	Self Wt (lb/ft)	22	**32**	45	57	65	78	92	104	111	127	135	152	169	173
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		60	Self Wt (lb/ft)	22	**32**	45	53	66	74	91	98	111	126	135	**139**	154	173
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		66	Self Wt (lb/ft)	**21**	**32**	**41**	**49**	**64**	**72**	**85**	**95**	**101**	**115**	**115**	141	**142**	**158**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
55	6 N @ 9.17	44	Self Wt (lb/ft)	24	40	58	71	91	110	141	143	185	186	188			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		48	Self Wt (lb/ft)	23	38	54	72	84	102	123	143	149	188	189	192		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
		52	Self Wt (lb/ft)	23	35	49	69	81	96	113	129	148	153	189	191	199	
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	
		56	Self Wt (lb/ft)	**22**	**33**	50	63	74	96	104	117	146	154	**156**	192	201	**201**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		60	Self Wt (lb/ft)	23	**33**	50	61	72	86	101	114	127	155	157	179	199	202
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		66	Self Wt (lb/ft)	23	**33**	**46**	**58**	**69**	**78**	**90**	**110**	**121**	**132**	160	**164**	**165**	202
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
55	8 N @ 6.88	44	Self Wt (lb/ft)	**25**	47	71	101	120	144	186	191						
			BC Braces	1	1	1	1	1	1	1	1						
		48	Self Wt (lb/ft)	26	49	66	86	113	144	150	194	199					
			BC Braces	1	1	1	1	1	1	1	1	1					
		52	Self Wt (lb/ft)	**25**	45	66	83	105	126	149	178	198	205				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
		56	Self Wt (lb/ft)	**25**	**42**	**60**	**78**	99	120	153	159	201	206	**207**			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		60	Self Wt (lb/ft)	30	47	66	80	99	118	139	157	177	201	211			
			BC Braces	1	1	1	1	1	1	1	1	1	1	1			
		66	Self Wt (lb/ft)	27	43	61	**78**	**90**	**110**	**124**	**143**	**162**	**186**	**207**	**211**		
			BC Braces	1	1	1	1	1	1	1	1	1	1	1	1		
55	9 N @ 6.11	44	Self Wt (lb/ft)	29	58	80	103	142	168	193							
			BC Braces	1	1	1	1	1	1	1							
		48	Self Wt (lb/ft)	29	51	72	104	128	148	193	200						
			BC Braces	1	1	1	1	1	1	1	1						
		52	Self Wt (lb/ft)	32	54	75	98	120	149	177	201	207					
			BC Braces	1	1	1	1	1	1	1	1	1					
		56	Self Wt (lb/ft)	31	**50**	73	96	116	137	156	196	205					
			BC Braces	1	1	1	1	1	1	1	1	1					
		60	Self Wt (lb/ft)	30	51	74	87	**108**	139	157	180	203					
			BC Braces	1	1	1	1	1	1	1	1	1					
		66	Self Wt (lb/ft)	**28**	**50**	**70**	**84**	109	**125**	**147**	**166**	**192**	**216**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
55	11 N @ 5	44	Self Wt (lb/ft)	36	72	102	144	186	193								
			BC Braces	1	1	1	1	1	1								
		48	Self Wt (lb/ft)	36	67	96	131	158	201								
			BC Braces	1	1	1	1	1	1								
		52	Self Wt (lb/ft)	35	61	89	120	154	200	205							
			BC Braces	1	1	1	1	1	1	1							
		56	Self Wt (lb/ft)	**33**	62	86	110	157	164	208							
			BC Braces	1	1	1	1	1	1	1							
		60	Self Wt (lb/ft)	34	**57**	82	112	141	166	202	**212**						
			BC Braces	1	1	1	1	1	1	1	1						
		66	Self Wt (lb/ft)	**33**	**57**	**80**	**107**	**127**	**163**	**170**	213	**219**					
			BC Braces	1	1	1	1	1	1	1	1	1					
55	12 N @ 4.58	44	Self Wt (lb/ft)	41	72	103	146	188									
			BC Braces	1	1	1	1	1									
		48	Self Wt (lb/ft)	37	70	104	144	189	194								
			BC Braces	1	1	1	1	1	1								
		52	Self Wt (lb/ft)	35	68	97	127	154	199								
			BC Braces	1	1	1	1	1	1								
		56	Self Wt (lb/ft)	35	63	91	120	155	197	**203**							
			BC Braces	1	1	1	1	1	1	1							
		60	Self Wt (lb/ft)	**33**	64	84	**110**	157	**165**	205	**212**						
			BC Braces	1	1	1	1	1	1	1	1						
		66	Self Wt (lb/ft)	**33**	**59**	**83**	112	**138**	168	208	213						
			BC Braces	1	1	1	1	1	1	1	1						

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
60	6 N @ 10	48	Self Wt (lb/ft)	25	44	60	76	92	111	141	143	167	186				
			BC Braces	2	1	1	1	1	1	1	1	1	1				
		52	Self Wt (lb/ft)	24	40	56	72	92	106	127	144	150	188	189			
			BC Braces	2	1	1	1	1	1	1	1	1	1	1			
		56	Self Wt (lb/ft)	**23**	37	55	69	81	96	116	130	149	171	190	191		
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1		
		60	Self Wt (lb/ft)	**23**	35	**50**	69	81	97	111	117	148	154	175	192	200	
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	
		66	Self Wt (lb/ft)	25	**34**	**50**	65	**73**	87	101	114	135	155	**157**	179	199	202
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
		72	Self Wt (lb/ft)	24	35	**50**	**59**	74	**83**	**99**	**111**	**121**	**141**	162	**165**	**183**	**184**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
60	8 N @ 7.5	48	Self Wt (lb/ft)	28	50	71	101	126	144	188	193						
			BC Braces	1	1	1	1	1	1	1	1						
		52	Self Wt (lb/ft)	27	49	73	94	113	145	153	192	199					
			BC Braces	2	1	1	1	1	1	1	1	1					
		56	Self Wt (lb/ft)	26	45	67	83	106	132	152	177	200	204				
			BC Braces	2	1	1	1	1	1	1	1	1	1				
		60	Self Wt (lb/ft)	**25**	**44**	**64**	80	107	120	154	160	200	205				
			BC Braces	2	1	1	1	1	1	1	1	1	1				
		66	Self Wt (lb/ft)	31	48	70	85	102	**118**	141	158	178	200	**207**			
			BC Braces	2	1	1	1	1	1	1	1	1	1	1			
		72	Self Wt (lb/ft)	31	47	68	**79**	**98**	119	**126**	**146**	**166**	**186**	208	**215**		
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1		
60	10 N @ 6	48	Self Wt (lb/ft)	33	61	94	121	147	193								
			BC Braces	1	1	1	1	1	1								
		52	Self Wt (lb/ft)	35	61	93	115	149	188								
			BC Braces	1	1	1	1	1	1								
		56	Self Wt (lb/ft)	33	62	82	112	148	169	193							
			BC Braces	1	1	1	1	1	1	1							
		60	Self Wt (lb/ft)	33	58	82	106	132	153	192	204						
			BC Braces	2	1	1	1	1	1	1	1						
		66	Self Wt (lb/ft)	33	54	**75**	101	120	156	180	198						
			BC Braces	2	1	1	1	1	1	1	1						
		72	Self Wt (lb/ft)	**32**	**53**	78	**92**	**111**	**142**	**162**	**184**	**206**					
			BC Braces	2	1	1	1	1	1	1	1	1					
60	12 N @ 5	48	Self Wt (lb/ft)	40	71	114	147	187									
			BC Braces	1	1	1	1	1									
		52	Self Wt (lb/ft)	38	73	105	145	189	194								
			BC Braces	1	1	1	1	1	1								
		56	Self Wt (lb/ft)	35	68	97	131	155	198								
			BC Braces	1	1	1	1	1	1								
		60	Self Wt (lb/ft)	35	69	91	120	155	195	205							
			BC Braces	1	1	1	1	1	1	1							
		66	Self Wt (lb/ft)	**34**	64	90	**111**	158	**165**	205	**212**						
			BC Braces	1	1	1	1	1	1	1	1						
		72	Self Wt (lb/ft)	**34**	**60**	**85**	113	**139**	169	**190**	214						
			BC Braces	1	1	1	1	1	1	1	1						

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
60	15 N @ 4	48	Self Wt (lb/ft)	49	94	146	195										
			BC Braces	1	1	1	1										
		52	Self Wt (lb/ft)	46	88	133	196										
			BC Braces	1	1	1	1										
		56	Self Wt (lb/ft)	43	81	121	158	203									
			BC Braces	1	1	1	1	1									
		60	Self Wt (lb/ft)	42	80	113	159	202									
			BC Braces	1	1	1	1	1									
		66	Self Wt (lb/ft)	**41**	75	113	161	186	214								
			BC Braces	1	1	1	1	1	1								
		72	Self Wt (lb/ft)	42	**74**	**103**	**139**	**171**	**213**	**221**							
			BC Braces	1	1	1	1	1	1	1							
65	6 N @ 10.83	52	Self Wt (lb/ft)	26	44	62	76	93	112	141	144	167	187				
			BC Braces	2	1	1	1	1	1	1	1	1	1				
		56	Self Wt (lb/ft)	25	44	60	72	93	108	127	145	168	188	189			
			BC Braces	2	1	1	1	1	1	1	1	1	1	1			
		60	Self Wt (lb/ft)	**24**	39	54	70	89	97	116	135	149	172	190	192		
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1		
		66	Self Wt (lb/ft)	**24**	38	54	67	82	98	112	128	148	**155**	176	193	200	
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	
		72	Self Wt (lb/ft)	26	**36**	**50**	**65**	**74**	**95**	**101**	**116**	**135**	156	**158**	**180**	**199**	**204**
			BC Braces	2	1	1	1	1	1	1	1	1	1	1	1	1	1
65	8 N @ 8.13	52	Self Wt (lb/ft)	30	54	72	102	127	145	188	193						
			BC Braces	1	1	1	1	1	1	1	1						
		56	Self Wt (lb/ft)	28	50	73	94	113	146	171	193	200					
			BC Braces	2	1	1	1	1	1	1	1	1					
		60	Self Wt (lb/ft)	**26**	48	68	**83**	105	133	152	196	198					
			BC Braces	2	1	1	1	1	1	1	1	1					
		66	Self Wt (lb/ft)	**26**	**45**	**64**	84	**101**	122	154	160	200	206				
			BC Braces	2	1	1	1	1	1	1	1	1	1				
		72	Self Wt (lb/ft)	41	50	71	86	104	**121**	**142**	**159**	**178**	**200**				
			BC Braces	1	1	1	1	1	1	1	1	1	1				
65	10 N @ 6.5	52	Self Wt (lb/ft)	35	65	93	121	150	193								
			BC Braces	1	1	1	1	1	1								
		56	Self Wt (lb/ft)	36	65	93	116	149	189								
			BC Braces	1	1	1	1	1	1								
		60	Self Wt (lb/ft)	**34**	62	89	113	148	172	193							
			BC Braces	1	1	1	1	1	1	1							
		66	Self Wt (lb/ft)	**34**	58	83	**101**	132	**154**	**178**	**200**						
			BC Braces	2	1	1	1	1	1	1	1						
		72	Self Wt (lb/ft)	**34**	**57**	**76**	102	**121**	158	180	201						
			BC Braces	2	1	1	1	1	1	1	1						

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
65	11 N @ 5.91	52	Self Wt (lb/ft)	42	73	103	145	188									
			BC Braces	1	1	1	1	1									
		56	Self Wt (lb/ft)	38	70	97	131	170	192								
			BC Braces	1	1	1	1	1	1								
		60	Self Wt (lb/ft)	37	64	98	120	156	196								
			BC Braces	1	1	1	1	1	1								
		66	Self Wt (lb/ft)	**36**	66	88	120	158	179	207							
			BC Braces	1	1	1	1	1	1	1							
		72	Self Wt (lb/ft)	**36**	**63**	**84**	**108**	**144**	**163**	**184**	**213**						
			BC Braces	2	1	1	1	1	1	1	1						
65	13 N @ 5	52	Self Wt (lb/ft)	44	81	124	174	197									
			BC Braces	1	1	1	1	1									
		56	Self Wt (lb/ft)	42	76	118	152	198									
			BC Braces	1	1	1	1	1									
		60	Self Wt (lb/ft)	42	77	106	153	196									
			BC Braces	1	1	1	1	1									
		66	Self Wt (lb/ft)	**39**	72	102	139	**161**	**202**								
			BC Braces	1	1	1	1	1	1								
		72	Self Wt (lb/ft)	**39**	**66**	**93**	**127**	162	204	**215**							
			BC Braces	1	1	1	1	1	1	1							
70	7 N @ 10	56	Self Wt (lb/ft)	28	50	67	92	108	132	164	188						
			BC Braces	2	1	1	1	1	1	1	1						
		60	Self Wt (lb/ft)	28	47	67	89	107	128	145	169	191					
			BC Braces	2	1	1	1	1	1	1	1	1					
		66	Self Wt (lb/ft)	30	46	62	81	97	112	136	153	173	193				
			BC Braces	2	2	1	1	1	1	1	1	1	1				
		72	Self Wt (lb/ft)	**27**	**42**	61	**73**	95	113	131	151	176	**180**	199			
			BC Braces	2	2	1	1	1	1	1	1	1	1	1			
		78	Self Wt (lb/ft)	29	**42**	**58**	**73**	**85**	**104**	**118**	**139**	**157**	**180**	**185**	**207**		
			BC Braces	2	2	1	1	1	1	1	1	1	1	1	1		
70	9 N @ 7.78	56	Self Wt (lb/ft)	32	57	81	111	144	171	193							
			BC Braces	2	1	1	1	1	1	1							
		60	Self Wt (lb/ft)	**31**	**56**	82	103	132	151	194							
			BC Braces	2	1	1	1	1	1	1							
		66	Self Wt (lb/ft)	35	60	81	110	121	153	179	203						
			BC Braces	2	1	1	1	1	1	1	1						
		72	Self Wt (lb/ft)	35	**56**	**75**	**97**	**118**	143	178	**180**						
			BC Braces	2	1	1	1	1	1	1	1						
		78	Self Wt (lb/ft)	35	57	76	98	120	**139**	**161**	184	**207**					
			BC Braces	2	1	1	1	1	1	1	1	1					
70	10 N @ 7	56	Self Wt (lb/ft)	35	65	94	121	151	193								
			BC Braces	2	1	1	1	1	1								
		60	Self Wt (lb/ft)	38	65	96	117	153	195	203							
			BC Braces	2	1	1	1	1	1	1							
		66	Self Wt (lb/ft)	35	63	90	113	149	170	193							
			BC Braces	2	1	1	1	1	1	1							
		72	Self Wt (lb/ft)	**34**	63	83	110	133	**158**	**178**							
			BC Braces	2	1	1	1	1	1	1							
		78	Self Wt (lb/ft)	35	**61**	**78**	**103**	**122**	**158**	181	**202**						
			BC Braces	2	1	1	1	1	1	1	1						

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
70	11 N @ 6.36	56	Self Wt (lb/ft)	42	73	110	146	188									
			BC Braces	2	1	1	1	1									
		60	Self Wt (lb/ft)	40	70	97	132	170	193								
			BC Braces	2	1	1	1	1	1								
		66	Self Wt (lb/ft)	38	69	98	121	156	197								
			BC Braces	2	1	1	1	1	1								
		72	Self Wt (lb/ft)	**36**	67	**89**	120	159	180	207							
			BC Braces	2	1	1	1	1	1	1							
		78	Self Wt (lb/ft)	37	**63**	**89**	**109**	**145**	**163**	**186**	**215**						
			BC Braces	2	1	1	1	1	1	1	1						
70	12 N @ 5.83	56	Self Wt (lb/ft)	42	72	114	148	189									
			BC Braces	1	1	1	1	1									
		60	Self Wt (lb/ft)	41	73	105	146	190									
			BC Braces	2	1	1	1	1									
		66	Self Wt (lb/ft)	38	72	99	133	**155**	197								
			BC Braces	2	1	1	1	1	1								
		72	Self Wt (lb/ft)	**37**	67	93	122	157	198	**206**							
			BC Braces	2	1	1	1	1	1	1							
		78	Self Wt (lb/ft)	**37**	**66**	**91**	**113**	162	**167**	**206**							
			BC Braces	2	1	1	1	1	1	1							
70	14 N @ 5	56	Self Wt (lb/ft)	48	86	143	187										
			BC Braces	1	1	1	1										
		60	Self Wt (lb/ft)	47	82	125	171	196									
			BC Braces	1	1	1	1	1									
		66	Self Wt (lb/ft)	43	78	119	154	198									
			BC Braces	2	1	1	1	1									
		72	Self Wt (lb/ft)	**41**	75	109	158	183	**206**								
			BC Braces	2	1	1	1	1	1								
		78	Self Wt (lb/ft)	42	**74**	**106**	**137**	**166**	209								
			BC Braces	2	1	1	1	1	1								
75	8 N @ 9.38	56	Self Wt (lb/ft)	31	59	79	106	143	164	189							
			BC Braces	2	1	1	1	1	1	1							
		60	Self Wt (lb/ft)	31	54	78	101	129	147	190	195						
			BC Braces	2	2	1	1	1	1	1	1						
		66	Self Wt (lb/ft)	31	51	72	97	116	149	173	195	201					
			BC Braces	2	2	1	1	1	1	1	1	1					
		72	Self Wt (lb/ft)	**30**	**49**	73	86	107	135	**154**	180	202					
			BC Braces	2	2	1	1	1	1	1	1	1					
		78	Self Wt (lb/ft)	**30**	**49**	**67**	**85**	**106**	**124**	157	**164**	**185**	**210**				
			BC Braces	2	2	1	1	1	1	1	1	1	1				
75	10 N @ 7.5	56	Self Wt (lb/ft)	37	68	102	145	169	194								
			BC Braces	2	1	1	1	1	1								
		60	Self Wt (lb/ft)	**35**	66	96	131	152	196								
			BC Braces	2	1	1	1	1	1								
		66	Self Wt (lb/ft)	39	66	94	126	152	173								
			BC Braces	2	1	1	1	1	1								
		72	Self Wt (lb/ft)	37	67	92	115	142	175	195							
			BC Braces	2	1	1	1	1	1	1							
		78	Self Wt (lb/ft)	36	**64**	**85**	**112**	**135**	**159**	**184**							
			BC Braces	2	2	1	1	1	1	1							

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
75	12 N @ 6.25	56	Self Wt (lb/ft)	47	81	128	169	191									
			BC Braces	2	1	1	1	1									
		60	Self Wt (lb/ft)	46	77	116	149	192									
			BC Braces	2	1	1	1	1									
		66	Self Wt (lb/ft)	43	72	107	148	175									
			BC Braces	2	1	1	1	1									
		72	Self Wt (lb/ft)	41	74	101	135	**157**	199								
			BC Braces	2	1	1	1	1	1								
		78	Self Wt (lb/ft)	**39**	**69**	**99**	**125**	161	**184**	**208**							
			BC Braces	2	1	1	1	1	1	1							
75	15 N @ 5	56	Self Wt (lb/ft)	55	101	149	196										
			BC Braces	2	1	1	1										
		60	Self Wt (lb/ft)	51	96	149	194										
			BC Braces	2	1	1	1										
		66	Self Wt (lb/ft)	51	87	135	176										
			BC Braces	2	1	1	1										
		72	Self Wt (lb/ft)	47	**82**	124	**162**	**204**									
			BC Braces	2	1	1	1	1									
		78	Self Wt (lb/ft)	**46**	83	**114**	164	206									
			BC Braces	2	1	1	1	1									
80	8 N @ 10	60	Self Wt (lb/ft)	**31**	59	80	107	144	164	189							
			BC Braces	2	1	1	1	1	1	1							
		66	Self Wt (lb/ft)	32	55	78	96	130	147	172	196						
			BC Braces	2	2	1	1	1	1	1	1						
		72	Self Wt (lb/ft)	33	55	72	98	118	151	175	198	203					
			BC Braces	2	2	1	1	1	1	1	1	1					
		78	Self Wt (lb/ft)	32	**50**	73	96	114	136	155	182	203					
			BC Braces	2	2	1	1	1	1	1	1	1					
		84	Self Wt (lb/ft)	34	51	**69**	**87**	**106**	**124**	159	**165**	**186**	**208**				
			BC Braces	2	2	1	1	1	1	1	1	1	1				
		90	Self Wt (lb/ft)	57	62	74	95	114	134	**148**	181	190					
			BC Braces	2	2	1	1	1	1	1	1	1					
80	10 N @ 8	60	Self Wt (lb/ft)	38	69	103	146	169	194								
			BC Braces	2	1	1	1	1	1								
		66	Self Wt (lb/ft)	**36**	67	96	125	153	196								
			BC Braces	2	1	1	1	1	1								
		72	Self Wt (lb/ft)	42	68	95	127	151	174								
			BC Braces	2	1	1	1	1	1								
		78	Self Wt (lb/ft)	39	66	93	116	142	176	196							
			BC Braces	2	2	1	1	1	1	1							
		84	Self Wt (lb/ft)	38	67	86	113	137	179	185							
			BC Braces	2	2	1	1	1	1	1							
		90	Self Wt (lb/ft)	38	**64**	**84**	**105**	**133**	**148**	**184**	**207**						
			BC Braces	2	2	1	1	1	1	1	1						

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
80	12 N @ 6.67	60	Self Wt (lb/ft)	47	82	128	169										
			BC Braces	2	1	1	1										
		66	Self Wt (lb/ft)	46	79	117	149	192									
			BC Braces	2	1	1	1	1									
		72	Self Wt (lb/ft)	44	74	108	149	176	201								
			BC Braces	2	1	1	1	1	1								
		78	Self Wt (lb/ft)	44	75	103	136	159	200								
			BC Braces	2	1	1	1	1	1								
		84	Self Wt (lb/ft)	40	**70**	100	125	162	**186**	**209**							
			BC Braces	2	1	1	1	1	1	1							
		90	Self Wt (lb/ft)	**39**	71	**94**	**124**	**150**	191	210							
			BC Braces	2	1	1	1	1	1	1							
80	14 N @ 5.71	60	Self Wt (lb/ft)	53	93	145	189										
			BC Braces	2	1	1	1										
		66	Self Wt (lb/ft)	49	84	131	172										
			BC Braces	2	1	1	1										
		72	Self Wt (lb/ft)	48	83	122	155	199									
			BC Braces	2	1	1	1	1									
		78	Self Wt (lb/ft)	46	80	119	160	202									
			BC Braces	2	1	1	1	1									
		84	Self Wt (lb/ft)	43	**78**	113	**147**	187	**209**								
			BC Braces	2	1	1	1	1	1								
		90	Self Wt (lb/ft)	**42**	79	**109**	**147**	**169**	212								
			BC Braces	2	1	1	1	1	1								
80	16 N @ 5	60	Self Wt (lb/ft)	58	101	149											
			BC Braces	1	1	1											
		66	Self Wt (lb/ft)	53	99	151	197										
			BC Braces	2	1	1	1										
		72	Self Wt (lb/ft)	52	92	153	201										
			BC Braces	2	1	1	1										
		78	Self Wt (lb/ft)	**49**	89	136	**165**	**209**									
			BC Braces	2	1	1	1	1									
		84	Self Wt (lb/ft)	**49**	**86**	127	168	210									
			BC Braces	2	1	1	1	1									
		90	Self Wt (lb/ft)	**49**	88	**119**	171	215	**224**								
			BC Braces	2	1	1	1	1	1								
90	9 N @ 10	72	Self Wt (lb/ft)	**41**	65	92	116	148	174								
			BC Braces	2	2	1	1	1	1								
		78	Self Wt (lb/ft)	**41**	63	**82**	112	140	174	199							
			BC Braces	2	2	2	1	1	1	1							
		84	Self Wt (lb/ft)	43	**62**	83	**103**	**135**	**158**	**182**	**205**						
			BC Braces	2	2	2	1	1	1	1	1						
		90	Self Wt (lb/ft)	58	68	89	115	138	177	**182**							
			BC Braces	2	2	2	1	1	1	1							
		96	Self Wt (lb/ft)	59	67	92	112	137	165	183							
			BC Braces	2	2	2	1	1	1	1							

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
90	11 N @ 8.18	72	Self Wt (lb/ft)	47	80	115	149	174									
			BC Braces	2	2	1	1	1									
		78	Self Wt (lb/ft)	**46**	78	111	141	176									
			BC Braces	2	2	1	1	1									
		84	Self Wt (lb/ft)	**46**	**71**	111	132	177	200								
			BC Braces	2	2	1	1	1	1								
		90	Self Wt (lb/ft)	**46**	73	101	136	162	**187**								
			BC Braces	2	2	1	1	1	1								
		96	Self Wt (lb/ft)	**46**	72	**100**	**126**	**153**	188	**209**							
			BC Braces	2	2	2	1	1	1	1							
90	12 N @ 7.5	72	Self Wt (lb/ft)	47	81	118	171	195									
			BC Braces	2	2	1	1	1									
		78	Self Wt (lb/ft)	47	81	115	149	195									
			BC Braces	2	2	1	1	1									
		84	Self Wt (lb/ft)	**46**	75	112	142	179									
			BC Braces	2	2	1	1	1									
		90	Self Wt (lb/ft)	47	75	106	139	180	203								
			BC Braces	2	2	1	1	1	1								
		96	Self Wt (lb/ft)	**46**	**74**	**102**	**129**	**166**	**189**								
			BC Braces	2	2	1	1	1	1								
90	15 N @ 6	72	Self Wt (lb/ft)	55	99	152	195										
			BC Braces	2	1	1	1										
		78	Self Wt (lb/ft)	**52**	100	137	197										
			BC Braces	2	1	1	1										
		84	Self Wt (lb/ft)	53	90	139	183	**208**									
			BC Braces	2	1	1	1	1									
		90	Self Wt (lb/ft)	**52**	88	128	**165**	210									
			BC Braces	2	2	1	1	1									
		96	Self Wt (lb/ft)	53	**86**	**125**	167	211									
			BC Braces	2	2	1	1	1									
90	18 N @ 5	72	Self Wt (lb/ft)	61	119	176											
			BC Braces	2	1	1											
		78	Self Wt (lb/ft)	62	108	158	204										
			BC Braces	2	1	1	1										
		84	Self Wt (lb/ft)	**59**	107	159	208										
			BC Braces	2	1	1	1										
		90	Self Wt (lb/ft)	**59**	109	162	210										
			BC Braces	2	1	1	1										
		96	Self Wt (lb/ft)	60	**99**	**154**	**194**	**223**									
			BC Braces	2	1	1	1	1									
100	10 N @ 10	78	Self Wt (lb/ft)	**51**	71	99	140	172	199								
			BC Braces	3	2	2	1	1	1								
		84	Self Wt (lb/ft)	52	74	100	134	156	200								
			BC Braces	3	2	2	2	1	1								
		96	Self Wt (lb/ft)	59	72	107	132	163	**180**								
			BC Braces	2	2	2	2	1	1								
		102	Self Wt (lb/ft)	60	71	104	133	151	182								
			BC Braces	2	2	2	2	1	1								
		108	Self Wt (lb/ft)	61	**70**	**98**	**118**	**142**	183								
			BC Braces	2	2	2	2	2	1								

Joist Girder Span (ft)	Joist Spaces (ft)	Girder Depth (in)		Load on Each Panel Point (kip)													
			Factored Load	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105
			Service Load	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
100	12 N @ 8.33	78	Self Wt (lb/ft)	**55**	91	127	173										
			BC Braces	2	2	2	1										
		84	Self Wt (lb/ft)	**55**	90	115	172	197									
			BC Braces	3	2	2	1	1									
		96	Self Wt (lb/ft)	**55**	77	114	147	183									
			BC Braces	3	2	2	1	1									
		102	Self Wt (lb/ft)	56	**76**	107	**140**	185	205								
			BC Braces	3	2	2	2	1	1								
		108	Self Wt (lb/ft)	**55**	78	**104**	142	**169**	**192**								
			BC Braces	3	2	2	2	1	1								
100	14 N @ 7.14	78	Self Wt (lb/ft)	57	98	147	194										
			BC Braces	2	2	1	1										
		84	Self Wt (lb/ft)	57	93	140	177										
			BC Braces	2	2	1	1										
		96	Self Wt (lb/ft)	**56**	88	122	164	206									
			BC Braces	3	2	2	1	1									
		102	Self Wt (lb/ft)	57	**81**	124	165	**190**									
			BC Braces	3	2	2	1	1									
		108	Self Wt (lb/ft)	57	82	**120**	**153**	193									
			BC Braces	3	2	2	1	1									
100	16 N @ 6.25	78	Self Wt (lb/ft)	63	113	152											
			BC Braces	2	2	1											
		84	Self Wt (lb/ft)	**62**	102	154	202										
			BC Braces	2	2	1	1										
		96	Self Wt (lb/ft)	**62**	93	143	189										
			BC Braces	2	2	1	1										
		102	Self Wt (lb/ft)	**62**	94	**132**	**172**	**214**									
			BC Braces	2	2	2	1	1									
		108	Self Wt (lb/ft)	63	**89**	134	175	218									
			BC Braces	2	2	2	1	1									
100	18 N @ 5.56	78	Self Wt (lb/ft)	**64**	120	196											
			BC Braces	2	2	1											
		84	Self Wt (lb/ft)	65	117	179											
			BC Braces	2	2	1											
		96	Self Wt (lb/ft)	66	109	163	213										
			BC Braces	2	2	1	1										
		102	Self Wt (lb/ft)	68	110	**153**	212										
			BC Braces	2	2	1	1										
		108	Self Wt (lb/ft)	67	**102**	156	**198**	**225**									
			BC Braces	2	2	1	1	1									
100	20 N @ 5	78	Self Wt (lb/ft)	**69**	136	201											
			BC Braces	2	1	1											
		84	Self Wt (lb/ft)	71	123	202											
			BC Braces	2	2	1											
		96	Self Wt (lb/ft)	72	118	**172**	**218**										
			BC Braces	2	2	1	1										
		102	Self Wt (lb/ft)	71	**114**	174	223										
			BC Braces	2	2	1	1										
		108	Self Wt (lb/ft)	71	124	179	227										
			BC Braces	2	2	1	1										

Fire Resistive Ratings with Steel Joists

The Underwriters Laboratory Canada (ULC) Fire Resistance Directory lists many assemblies and their fire resistance ratings. The specifying professional can choose numerous Floor-Ceiling and Roof-Ceiling assemblies that include open web steel joists and Joist Girders. As a convenience, a select number of assemblies are listed in the following table. This table is a guide only, and the Specifying Professional must refer to the current Fire Resistance Directory for complete design requirements.

Where a Fire Resistance Assembly is being utilized, **The Specifying Professional shall indicate the assembly number being used on the structural contract drawings.** In addition, the Specifying Professional shall consider the following as applicable:

- Open web steel joists specified on the structural contract drawings shall not be less than the minimum size for that assembly. The assembly may also require a minimum bridging size that may be larger than required for the open web steel joists and joist spacing.
- Some assemblies stipulate minimum size materials or cross-sectional areas for individual open web steel joist and Joist Girder components.
- Some fire resistive designs are specified with a Load Restricted Factor. When using fire resistive designs with a Load Restricted Factor, the factored resistance of the structural members or components should be reduced by multiplying the factored resistance by the Load Restricted Factor specified in the design.
- Some assemblies limit the spacing of the joists for certain types and gauges of metal decking – refer to the individual assembly for this information.
- Where fire protective materials are to be directly applied to the open web steel joists and Joist Girders, it is often desired to have the joists furnished as uncoated. The specifying professional should indicate on the structural contract drawings if the open web steel joists and Joist Girders are to be primed or not.

Maximum Restrained Assemby Rating	ULC Design Number	Protection Material	Maximum Joist Spacing	Minimum Joist Size	Deck Material Description	Construction Type
3	**F816**	Sprayed Fibre	2285 mm	200 mm x 13 kg/m	38 mm x 0.76 mm	Floor/Ceiling
3	**I533**	Gypsum Board	1220 mm	255 mm x 7.3 kg/m	25 mm x 0.61 mm	Floor/Ceiling
2	**F817**	Sprayed Fibre	N/L	305 mm x 16 kg/m	38 mm x 0.91mm	Floor/Ceiling
2	**I005**	Concealed Grid	610 mm	250 mm x 7 kg/m	38 mm x 0.76 mm	Floor/Ceiling
2	**I520**	Gypsum Board	610 mm	250 mm x 6 kg/m	38 mm x 0.76 mm	Floor/Ceiling
1 1/2	**I223**	Exposed Grid	610 mm	200 mm x 6 kg/m	38 mm x 0.76 mm	Floor/Ceiling
1 1/2	**R221**	Exposed Grid	1220 mm	250mm x 6 kg/m	25 mm x 0.61 mm	Roof
1 1/2	**R700**	Cementitious	1370 mm	355 mm x 8.9 kg/m	38 mm x 0.76 mm	Roof
1 1/2	**R702**	Cementitious	N/L	355 mm x 13.4 kg/m	38 mm x 0.76 mm	Roof
1 1/2	**R801**	Sprayed Fibre	N/L	12 kg/m	38 mm x 0.76 mm	Roof
1	**F818**	Sprayed Fibre	N/L	250 mm x 9 kg/m	38 mm x 0.76 mm	Floor/Ceiling
1	**R217**	Exposed Grid	1200 mm	250 mm x 8.3 kg/m	25 mm x 0.61 mm	Roof
1	**R220**	Exposed Grid	1830 mm	200 mm x 6 kg/m	38 mm x 0.76 mm	Roof
1	**R703**	Cementitious	1370 mm	355 mm x 13.5 kg/m	38 mm x 0.76 mm	Roof
1	**R802**	Sprayed Fibre	1980 mm	200 mm x 12 kg/m	38 mm x 0.76 mm	Roof
1	**R804**	Sprayed Fibre	N/L	200 mm x 12 kg/m	38 mm x 0.76 mm	Roof
1	**R805**	Sprayed Fibre	1830 mm	200 mm x 11 kg/m	38 mm x 0.76 mm	Roof
1	**R807**	Sprayed Fibre	1700 mm	250 mm x 10 kg/m	38 mm x 0.76 mm	Roof

The Ecospan® Composite Floor System by Nucor Vulcraft/Verco Group is an innovative, effective, and economical method of providing all steel structural components for elevated floor construction while incorporating the benefits of lighter weight composite design.

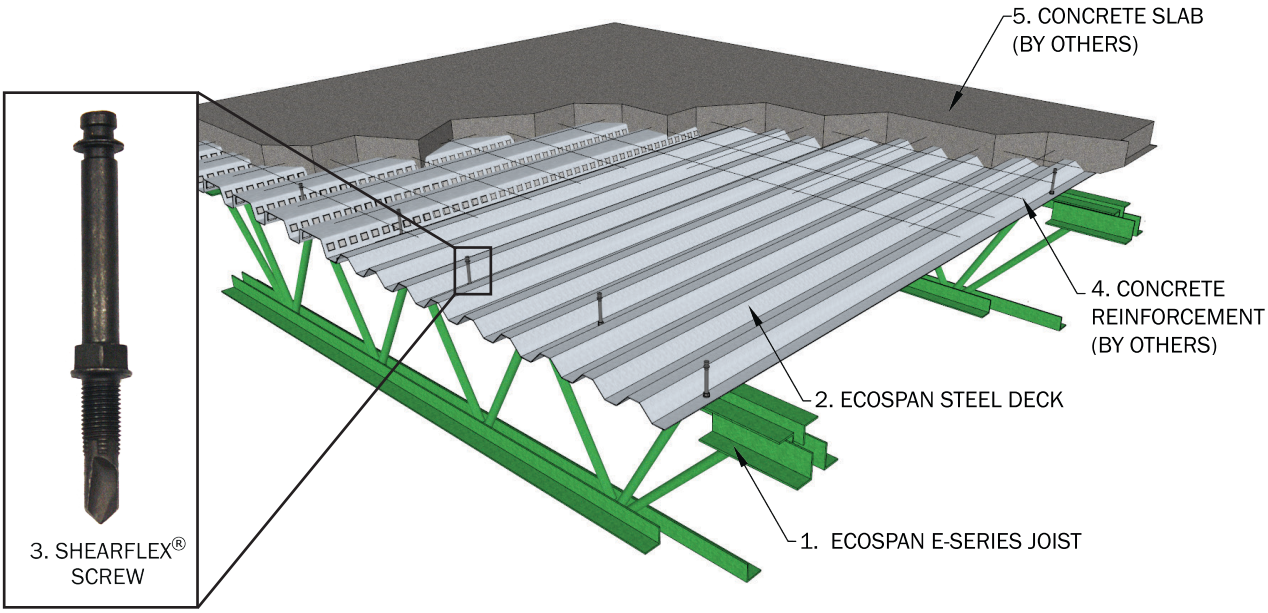


Figure 1-1: The Ecospan® Composite Floor System

Product Description

1. Joists: The Ecospan® Composite Floor System uses E-Series Vulcraft joists ranging from 250 mm (10") to 750 mm (30") deep and a maximum length of approximately 15200 mm (50'). Joists are typically spaced between 1200 mm (4') o.c. and 1800 mm (6') o.c. The span is the distance from centreline to centreline of the supporting members. (For requirements outside this range please contact your Ecospan® Representative) The design of the Ecospan® Composite Floor System joists are greatly affected by their spacing. The spacing is the distance to the adjacent joist or to the edge of the slab at exterior joists or joists next to slab openings.

2. Decking: Ecospan® utilizes multi-span sheets of steel decking. Generally, conform deck with a depth of 25 mm (1") or 33 mm (1 -5/16") will be utilized for residential applications. 38 mm (1.5") composite steel deck may be used for commercial applications or wider joist spaces.

3. Shearflex® Screws: This screw is a self-drilling and self-tapping screw, ranging from 64 mm (2-1/2") to 76 mm (3") in length (not including the threaded section). Screws are installed using the Vulcraft provided Shearset® Tool.

4. Concrete Slab Reinforcement (by Others): Slab reinforcement shall be the responsibility of the design professional. Rebar or welded wire fabric is suggested for form deck applications while distributed fibres may be an acceptable alternate for projects utilizing composite decks. Refer to CAN/CSA-A23.3-14 Standard Composite Steel Floor Deck paragraph 2.4.B.6 for applicable dosage rates for distributed fibres.

5. Concrete slab (by Others): The concrete topping slab (specified by the Design Professional) is typically 64 mm (2 -1/2") normal weight concrete having a minimum 28 day ultimate compressive strength (f'c) of 20 MPa (3000 psi), though thicker slabs may be designed for heavier duty uses or serviceability concerns. Light weight concrete may also be specified with the Ecospan® Composite Floor System.

Consider the Advantages

- The Ecospan® Composite Floor System is an effective and economical solution for constructing residential and commercial floor systems.
- Erection is safe, easy, and cost effective. There are no short deck sheets, plywood forms, or shoring; sub-trades can normally continue construction the day after the concrete is placed.
- Floor to floor heights can often be decreased due to the inherent ability to pass mechanical ducts, piping, conduit, etc. through the open web design.
- High strength to weight ratio of composite steel joists allows for greater spans and spacing with lighter members.
- Weight savings due to composite joist design reduces building weight and allows foundation and wall costs to be reduced.
- Constructed with non-combustible materials, achieving multiple ULC & UL listings with gypsum board, acoustical ceilings, or spray applied fire resistant materials.
- With the addition of a gypsum board ceiling, the Ecospan® Composite Floor System has a Sound Transmission Classification (STC) of 57, and meets or exceeds Impact Insulation Classification (IIC) requirements of the National Building Code of Canada (NBC) for residential and commercial construction with commonly used sound attenuation materials.

Incorporating Ecospan® into a Project

The Ecospan® Composite Floor System can be utilized for most commercial or residential projects. Ecospan® joists (E-series) are individually designed for the span, spacing and loading specified on the Contract Documents.

In order for designers and engineers to quickly and efficiently detail and engineer each project with minimal shop drawing review time, some basic design criteria will be needed from the design professional.

1. Design Loads
   Unfactored loads that should be specified are as follows:
   a. Non-composite dead load: Includes concrete, joists, deck, and bridging
   b. Construction live load: Indicates the required loading due to work crews and construction equipment before and during the placement of concrete (Ref. ASCE 37-14)
   c. Composite dead load: Includes non-moving partitions, mechanical, electrical, fireproofing, floor covering, and ceiling
   d. Composite live load: The design live load, including moving partitions, as specified.

2. Camber
   E-series joists are typically designed to be cambered for 100% of the non-composite dead load. The design professional may indicate any additional camber requirements.

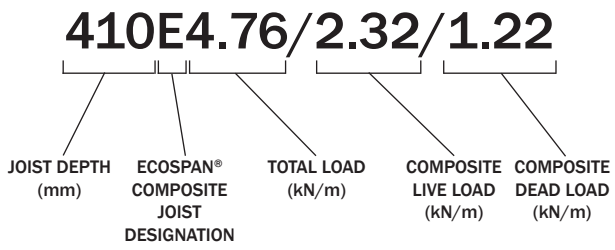
3. Deflection
   The design professional shall indicate the maximum allowable live load deflection for each Ecospan® composite joist. In the absence of a specified live load or total load deflection limit, a L/360 live load deflection limit is assumed.

4. Vibration
   Calculations for the predicted floor vibration of the Ecospan® Composite Floor System shall be completed by the design professional. Based on this analysis, the design professional can indicate the moment of inertia of the chords required to meet the floor performance requirements.

5. Additional Considerations
   When specifying the Ecospan® Composite Floor System, the design professional should consider the following items:
   a. Parallel top and bottom chords are required
   b. Maximum steel floor deck depth is 38 mm
   c. Slab thickness above top flute of the deck must be a minimum of 65 mm for fire rated assemblies
   d. Maintain a constant concrete thickness along the entire joist span

E-series Joist Designation

The image below illustrates the format used to designate an E-Series joist. Loading numbers are shown in kilonewtons per meter (kN/m). Total load is the summation of the un-factored live load, non-composite dead load and composite dead load.



Ecospan Load Tables

The following tables are intended as a guide for specifying professionals. The Ecospan® joist depths addressed in the tables range from 250 mm - 1830 mm. For each span and designation load, depths indicated in the chart are either the shallowest possible (Minimum) or that which creates the most economical joist (Most Economic). Floor dead loads (Non-Composite Dead Load for Ecospan® Selection) for each joist designation are estimated as shown and include weight of concrete slab, steel deck, joist and bridging. Bridging indicates the number of rows of horizontal (H) bridging and the number of rows of erection stability (EX) bridging required for the corresponding joist. EX bridging is defined as the cross bridging that must be installed on the joist prior to releasing the lifting device. The total rows of bridging required can be determined by adding the required horizontal and EX bridging together.

The following tables are not intended to provide the full capability of the The Ecospan® Composite Floor System. When considering the use of The Ecospan® Composite Floor System, the specifying professional should visit www.ecospan-usa.com for more information and contact details for sales and technical representatives.

Specification Data		Deck: Vulcraft 1.0C Concrete: f'_c = 20 MPa Slab: 65 mm Above Deck (90 mm Total Depth) Live Load 1.9 kPa Partition Live Load 0.0 kPa				Joist Spacing: 1220 mm (4'-0") O.C. ShearFlex Fastener: 65 mm (2 -1/2") (See IAPMO ER 0366) Live Load 1.9 kPa Partition Live Load 1.0 kPa			
Span (mm)		NW Concrete (2400 kg/m³) 2.0 kPa (Includes joist self weight)		LW Concrete (1750 kg/m³) 1.6 kPa (Includes joist self weight)		NW Concrete (2400 kg/m³) 2.0 kPa (Includes joist self weight)		LW Concrete (1750 kg/m³) 1.6 kPa (Includes joist self weight)	
		Designation (Depth) E4.76/2.32/0.88		Designation (Depth) E4.27/2.32/0.88		Designation (Depth) E5.98/2.32/1.22		Designation (Depth) E5.49/2.32/1.22	
		Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic
6100	Depth (mm)	254	254	254	254	254	305	254	305
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
6710	Depth (mm)	254	356	254	356	254	406	254	356
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
7320	Depth (mm)	254	406	254	356	254	406	254	457
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
7920	Depth (mm)	305	508	305	457	305	508	305	508
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	1 / 0	2 / 0	2 / 0
8530	Depth (mm)	305	508	305	508	356	559	305	508
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	1 / 0	2 / 0	2 / 0
9140	Depth (mm)	305	610	305	559	356	610	305	610
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
9750	Depth (mm)	356	660	356	660	406	660	356	660
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
10360	Depth (mm)	406	660	356	660	406	711	406	660
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
10970	Depth (mm)	406	711	406	711	406	711	406	711
	Bridging (H/EX)	2 / 0	2 / 0	1 / 1	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
11580	Depth (mm)	406	762	406	762	406	711	406	660
	Bridging (H/EX)	2 / 0	2 / 0	1 / 1	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
12190	Depth (mm)	406	762	406	762	406	762	406	762
	Bridging (H/EX)	2 / 0	2 / 0	1 / 1	2 / 0	2 / 0	2 / 0	1 / 1	2 / 0
12800	Depth (mm)	457	762	457	762	457	762	457	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 1	2 / 0
13410	Depth (mm)	457	762	457	762	457	762	457	762
	Bridging (H/EX)	2 / 0	2 / 1	2 / 1	2 / 1	2 / 0	2 / 0	3 / 0	2 / 1
14020	Depth (mm)	508	762	508	762	508	762	508	762
	Bridging (H/EX)	2 / 0	2 / 1	2 / 0	2 / 1	2 / 0	2 / 1	2 / 1	2 / 1
14630	Depth (mm)	508	762	508	762	508	762	508	762
	Bridging (H/EX)	2 / 0	2 / 1	1 / 1	2 / 1	2 / 0	2 / 1	2 / 1	2 / 1
15240	Depth (mm)	508	762	508	762	559	762	508	762
	Bridging (H/EX)	2 / 0	2 / 1	2 / 1	2 / 1	2 / 0	2 / 1	2 / 0	2 / 1

Specification Data		Deck: Vulcraft 1.5VL or Verco 1.5B FORMLOK™ Concrete: f'_c = 20 MPa Slab: 90 mm Above Deck (130 mm Total Depth) Live Load 2.4 kPa Partition Live Load 1.0 kPa				Joist Spacing: 51525 mm (5'-0") O.C. ShearFlex Fastener: 75 mm (3") (See IAPMO ER 0366) Live Load 3.6 kPa Partition Live Load 0.0 kPa			
Span (mm)		NW Concrete (2400 kg/m³) 2.7 kPa (Includes joist self weight)		LW Concrete (1750 kg/m³) 2.1 kPa (Includes joist self weight)		NW Concrete (2400 kg/m³) 2.7 kPa (Includes joist self weight)		LW Concrete (1750 kg/m³) 2.1 kPa (Includes joist self weight)	
		Designation (Depth) E9.3/3.66/1.53		Designation (Depth) E8.39/5.49/1.53		Designation (Depth) E9.61/5.49/1.53		Designation (Depth) E8.69/5.49/1.53	
		Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic
6100	Depth (mm)	254	305	254	305	254	356	254	305
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
6710	Depth (mm)	254	406	254	406	254	457	254	406
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
7320	Depth (mm)	254	508	254	508	305	406	305	406
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
7920	Depth (mm)	305	559	305	559	305	559	305	559
	Bridging (H/EX)	2 / 0	1 / 0	2 / 0	1 / 0	1 / 0	1 / 0	2 / 0	1 / 0
8530	Depth (mm)	356	559	356	559	406	559	406	559
	Bridging (H/EX)	2 / 0	1 / 0	2 / 0	1 / 0	2 / 0	1 / 0	2 / 0	1 / 0
9140	Depth (mm)	356	610	356	610	406	660	406	660
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
9750	Depth (mm)	406	660	406	660	406	660	406	660
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
10360	Depth (mm)	406	711	406	711	406	711	406	711
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
10970	Depth (mm)	406	711	406	711	406	711	406	711
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
11580	Depth (mm)	406	711	406	711	406	762	406	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
12190	Depth (mm)	406	762	406	762	406	711	406	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
12800	Depth (mm)	457	711	457	762	457	711	457	711
	Bridging (H/EX)	2 / 0	2 / 0	3 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
13410	Depth (mm)	457	762	457	762	457	762	457	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
14020	Depth (mm)	508	762	508	762	508	762	508	762
	Bridging (H/EX)	2 / 0	3 / 0	2 / 0	3 / 0	2 / 0	2 / 0	2 / 0	2 / 0
14630	Depth (mm)	508	762	508	762	508	762	508	762
	Bridging (H/EX)	2 / 0	2 / 1	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 0
15240	Depth (mm)	508	762	508	762	508	762	508	762
	Bridging (H/EX)	2 / 1	2 / 0	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 0

Specification Data		Deck: Vulcraft 1.5VL or Verco 1.5B FORMLOK™ Concrete: f'_c = 20 MPa Slab: 90 mm Above Deck (130 mm Total Depth) Live Load 4.8 kPa Partition Live Load 0.0 kPa		Joist Spacing: 1520 mm (5'-0") O.C. ShearFlex Fastener: 75 mm (3") (See IAPMO ER 0366)	
Span (mm)		NW Concrete (2400 kg/m³) 2.7 kPa (Includes joist self weight)		LW Concrete (1750 kg/m³) 2.1 kPa (Includes joist self weight)	
		Designation (Depth) E11.4/7.3/1.52		Designation (Depth) E10.49/7.3/1.52	
		Minimum	Most Economic	Minimum	Most Economic
6100	Depth (mm)	254	559	254	457
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
6710	Depth (mm)	305	508	254	457
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
7320	Depth (mm)	356	508	305	508
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
7920	Depth (mm)	406	660	356	660
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
8530	Depth (mm)	406	660	406	660
	Bridging (H/EX)	2 / 0	1 / 0	2 / 0	1 / 0
9140	Depth (mm)	406	711	406	711
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
9750	Depth (mm)	406	711	406	660
	Bridging (H/EX)	1 / 0	2 / 0	2 / 0	2 / 0
10360	Depth (mm)	406	711	406	711
	Bridging (H/EX)	1 / 0	2 / 0	2 / 0	2 / 0
10970	Depth (mm)	457	711	406	711
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
11580	Depth (mm)	508	711	457	711
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
12190	Depth (mm)	508	660	457	660
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
12800	Depth (mm)	508	762	457	711
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
13410	Depth (mm)	559	762	508	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
14020	Depth (mm)	559	762	508	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
14630	Depth (mm)	610	762	559	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
15240	Depth (mm)	610	762	559	762
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0

Specification Data		Deck: Vulcraft 1.0C Concrete: f'_c = 3.0ksi Slab: 2 -1/2" Above Deck (3 -1/2" Total Depth)				Joist Spacing: 4'-0" O.C. ShearFlex Fastener: 2 -1/2" (IAPMO ER 0366)			
		Live Load 40 psf Partition Live Load 0 psf				Live Load 40 psf Partition Live Load 15 psf			
Span (ft)		NW Concrete (145 pcf) 42 psf (Includes joist self weight)		LW Concrete (110 pcf) 33 psf (Includes joist self weight)		NW Concrete (145 pcf) 42 psf (Includes joist self weight)		LW Concrete (110 pcf) 33 psf (Includes joist self weight)	
		Designation (Depth) E388/160/60		Designation (Depth) E352/160/60		Designation (Depth) E448/220/60		Designation (Depth) E412/220/60	
		Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic
20	Depth (in)	10	10	10	10	10	12	10	12
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
22	Depth (in)	10	14	10	14	10	16	10	14
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
24	Depth (in)	10	16	10	14	10	16	10	18
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
26	Depth (in)	12	20	12	18	12	20	12	20
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	1 / 0	2 / 0	2 / 0
28	Depth (in)	12	20	12	20	12	22	12	20
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	1 / 0	2 / 0	2 / 0
30	Depth (in)	12	24	12	22	12	24	12	24
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
32	Depth (in)	14	26	14	26	14	26	14	26
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
34	Depth (in)	14	26	14	26	14	28	14	26
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
36	Depth (in)	16	28	16	28	16	28	16	28
	Bridging (H/EX)	2 / 0	2 / 0	1 / 1	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
38	Depth (in)	16	30	16	30	16	28	16	28
	Bridging (H/EX)	2 / 0	2 / 0	1 / 1	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
40	Depth (in)	16	30	16	30	16	30	16	30
	Bridging (H/EX)	2 / 0	2 / 0	1 / 1	2 / 0	2 / 0	2 / 0	1 / 1	2 / 0
42	Depth (in)	18	30	18	30	18	30	18	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 1	2 / 0
44	Depth (in)	18	30	18	30	18	30	18	30
	Bridging (H/EX)	2 / 0	2 / 1	2 / 1	2 / 1	2 / 0	2 / 0	3 / 0	2 / 1
46	Depth (in)	20	30	20	30	20	30	20	30
	Bridging (H/EX)	2 / 0	2 / 1	2 / 0	2 / 1	2 / 0	2 / 1	2 / 1	2 / 1
48	Depth (in)	20	30	20	30	20	30	20	30
	Bridging (H/EX)	2 / 0	2 / 1	1 / 1	2 / 1	2 / 0	2 / 1	2 / 1	2 / 1
50	Depth (in)	20	30	20	30	20	30	20	30
	Bridging (H/EX)	2 / 0	2 / 1	2 / 1	2 / 1	2 / 0	2 / 1	2 / 0	2 / 1

Specification Data		Deck: Vulcraft 1.5VL or Verco 1.5B FORMLOK™				Joist Spacing: 5'-0" O.C.			
		Concrete: f'_c = 3.0ksi				ShearFlex Fastener: 3" (IAPMO ER 0366)			
		Slab: 3 -1/2" Above Deck (5" Total Depth)							
		Live Load 50 psf				Live Load 80 psf			
		Partition Live Load 15 psf				Partition Live Load 0 psf			
Span (ft)		NW Concrete (145 pcf) 55 psf (Includes joist self weight)		LW Concrete (110 pcf) 43 psf (Includes joist self weight)		NW Concrete (145 pcf) 55 psf (Includes joist self weight)		LW Concrete (110 pcf) 43 psf (Includes joist self weight)	
		Designation (Depth) E675/325/75		Designation (Depth) E615/325/75		Designation (Depth) E750/400/75		Designation (Depth) E690/400/75	
		Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic	Minimum	Most Economic
20	Depth (in)	10	12	10	12	10	14	10	12
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
22	Depth (in)	10	16	10	16	10	18	10	18
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
24	Depth (in)	10	20	10	20	10	16	10	22
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0	1 / 0
26	Depth (in)	12	22	12	22	12	22	12	24
	Bridging (H/EX)	2 / 0	1 / 0	2 / 0	1 / 0	1 / 0	1 / 0	2 / 0	1 / 0
28	Depth (in)	12	22	12	22	12	24	12	24
	Bridging (H/EX)	2 / 0	1 / 0	2 / 0	1 / 0	2 / 0	1 / 0	2 / 0	1 / 0
30	Depth (in)	12	22	12	24	12	26	12	26
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
32	Depth (in)	14	26	14	26	14	28	14	28
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
34	Depth (in)	14	28	14	28	16	28	16	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
36	Depth (in)	16	28	16	28	16	28	16	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
38	Depth (in)	16	28	16	28	16	30	16	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
40	Depth (in)	16	30	16	30	16	30	16	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
42	Depth (in)	18	28	18	30	18	30	18	30
	Bridging (H/EX)	2 / 0	2 / 0	3 / 0	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
44	Depth (in)	18	30	18	30	18	30	18	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 0	2 / 0
46	Depth (in)	20	30	20	30	20	30	20	30
	Bridging (H/EX)	2 / 0	3 / 0	2 / 0	3 / 0	2 / 0	2 / 0	2 / 0	2 / 0
48	Depth (in)	20	30	20	30	20	30	20	30
	Bridging (H/EX)	2 / 0	2 / 1	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 0
50	Depth (in)	20	30	20	30	20	30	20	30
	Bridging (H/EX)	2 / 1	2 / 0	2 / 0	2 / 1	2 / 0	2 / 0	2 / 0	2 / 0

Specification Data		Deck: Vulcraft 1.5VL or Verco 1.5B FORMLOK™ Joist Spacing: 5'-0" O.C. Concrete: f'_c = 3.0ksi ShearFlex Fastener: 3" (IAPMO ER 0366) Slab: 3 -1/2" Above Deck (5" Total Depth) Live Load 100 psf Partition Live Load 0 psf			
Span (ft)		NW Concrete (145 pcf) 55 psf (Includes joist self weight)		LW Concrete (110 pcf) 43 psf (Includes joist self weight)	
		Designation (Depth) E850/500/75		Designation (Depth) E790/500/75	
		Minimum	Most Economic	Minimum	Most Economic
20	Depth (in)	10	16	10	16
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
22	Depth (in)	10	18	10	18
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
24	Depth (in)	10	18	10	28
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
26	Depth (in)	12	22	12	24
	Bridging (H/EX)	1 / 0	1 / 0	1 / 0	1 / 0
28	Depth (in)	12	26	12	26
	Bridging (H/EX)	2 / 0	1 / 0	2 / 0	1 / 0
30	Depth (in)	16	26	14	26
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
32	Depth (in)	16	28	16	28
	Bridging (H/EX)	1 / 0	2 / 0	2 / 0	2 / 0
34	Depth (in)	16	28	16	28
	Bridging (H/EX)	1 / 0	2 / 0	2 / 0	2 / 0
36	Depth (in)	16	28	16	28
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
38	Depth (in)	18	28	16	28
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
40	Depth (in)	18	30	18	28
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
42	Depth (in)	20	30	18	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
44	Depth (in)	20	30	20	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
46	Depth (in)	22	30	20	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
48	Depth (in)	22	30	22	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0
50	Depth (in)	24	30	22	30
	Bridging (H/EX)	2 / 0	2 / 0	2 / 0	2 / 0

NOTES

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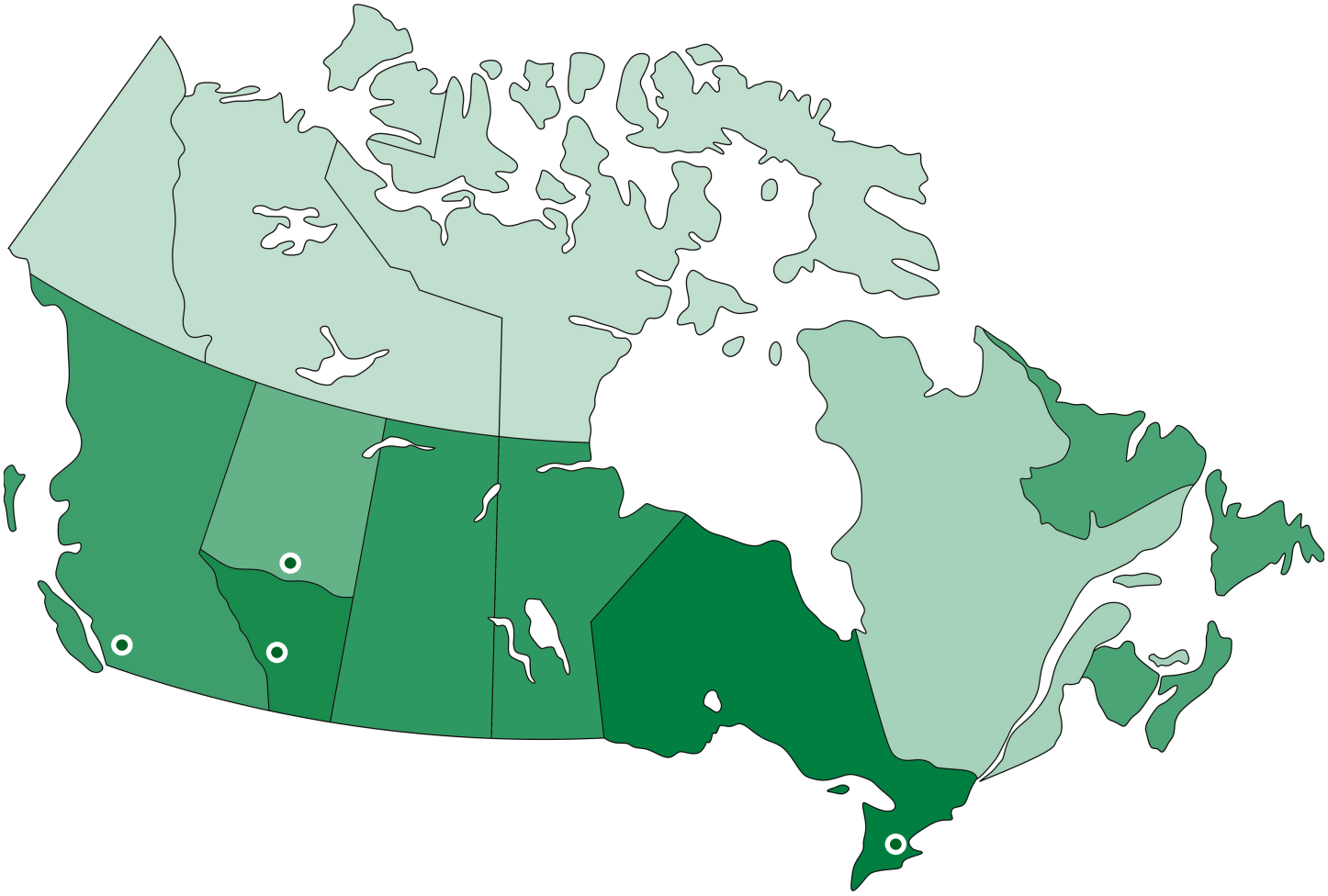

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