



# Forming and Shoring Product Selector



## Including RedForm™ LVL and RedForm-I65™, I90™, and I90H™ Joists

- Lightweight for Fast Installation
- Resists Bowing, Twisting, and Shrinking
- Available in Long Lengths
- Uniform and Predictable
- Compatible with Standard Framing
- Works with Multiple Spans
- Resource-efficient
- Limited Product Warranty



# Welcome to RedBuilt™ Industrial

Utilizing products that were pioneered by our founders, RedBuilt lifts the industrial application to a whole new level of service. Backed by our manufacturing technologies and supported by industry-leading technical service and sales support for contractors and engineers, RedBuilt can help you increase productivity, lower costs, and work more safely.

## Efficient Forming Products

The characteristics of RedForm™ LVL and RedForm™ I-joists make them ideal for concrete forming applications. By removing many of wood's natural inconsistencies—like knots, splits and wane—during the manufacturing process, forms made from reliable engineered RedForm™ LVL and RedForm™ I-joists stand up to multiple reuses.

RedBuilt gives you access to the industry's most reliable and innovative concrete forming products. And we keep things simple: You'll work with just one service-oriented supplier who can deliver those products and provide any technical support you need.



## TABLE OF CONTENTS

Table Instructions and Assumptions	3
RedForm™ I-Joist Design Properties	4
RedForm™ LVL Design Properties and Stresses	5
Forming and Shoring Applications	6
RedForm™ LVL Post Shores	7
<b>Product Selector Tables:</b>	
RedForm™ I-Joists	8-13
RedForm™ LVL Joists	14-19
RedForm™ LVL Beams	20-21
RedForm™ LVL Studs and Double Walers	22-27
RedForm™ LVL Bridge Deck Ledger Beams	28-29
Bridge Deck Forms and Details	30-31
Bearing and Lateral Support Details	32
RedForm™ I-Joist Table Assembly	33
Product Storage and Handling	34
Formwork Inspection	35
Product Warranty	36

## Resource Efficiency

Our RedBuilt™ products are made with responsibly sourced fiber. Whether you're looking for LEED® certification or simply want to ensure efficient use of raw materials, we can help. By making better use of every tree, RedBuilt produces cost-effective, consistently available engineered wood products that reduce environmental impact. The result is a quality wood product that offers superior strength and reliable performance.



# TABLE INSTRUCTIONS AND ASSUMPTIONS

## HOW TO USE THE TABLES IN THIS GUIDE

Tables in this guide have been formatted for ease of use in the field. Be sure to refer to the correct table for your specific application. The following instructions and **Table Assumptions** will help you locate and interpret the table data.

### Table Instructions

#### STEP 1 Determine application and member type.

Refer to the colored tabs for the appropriate pages, as noted:

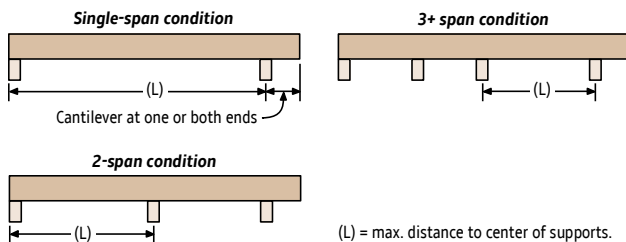
Application	Member Type	Pages
Primary support of elevated slabs	RedForm™ I-joists	8–13
	RedForm™ LVL joists	14–19
Secondary support of elevated slabs	RedForm™ LVL beams	20–21
Lateral support of walls and columns	RedForm™ LVL studs and double walers	22–27
Secondary support of bridge decks	RedForm™ LVL ledger beams	28–29

#### STEP 2 Determine the span condition.

For RedForm™ I-joists and RedForm™ LVL ledger beams, only a single-span table option is provided. For other member types, single or 2-span, and 3+ span table options are available. If the span condition is not known, use the single or 2-span tables.

#### Special Considerations:

- In multiple-span conditions where the span lengths are not identical, use the longest span when working with the tables.
- Do not use these tables for conditions where the shortest span is less than 50% of the longest span. In those cases, contact RedBUILT for application-specific analysis.
- Cantilevers are allowed on one or both ends for any member type. However, if the length of the cantilever exceeds either 25% of the adjacent span length or a maximum of 2', contact RedBUILT for application-specific analysis.



#### STEP 3 Select the appropriate table based on deflection criteria and load duration.

Information on allowed deflection is commonly included in the project contract documents. For additional guidance on recommended deflection criteria and applicable adjustments for load duration, refer to ACI 347R-14 *Guide to Formwork for Concrete* or SP-4 (14) *Formwork for Concrete—8th Edition*.

- For deflection as a ratio of span, table options include L/240, L/360 or L/400.
- For deflection as a fraction of an inch, table options include  $\frac{3}{8}$ ",  $\frac{1}{4}$ ", or  $\frac{1}{8}$ ".
- For load duration adjustment based on expected cumulative duration of design load over use-life of the member, table options of 125% and 100% are provided.

Tables are organized from least restrictive to most restrictive. In cases where there is a discrepancy or not all information is available, use the most restrictive table.

### Table Assumptions

#### Product Selector Tables assume:

- Materials are in new or like-new condition.
- In RedForm™ I-joist and RedForm™ LVL tables, an adjustment for moisture ( $C_m = 0.90$ ) to account for exterior use environment is made for moment, shear, reaction and modulus of elasticity.
- All bending members have a bearing length of  $3\frac{1}{2}$ " at all support locations for the full width of the member. **Gold shading** or an asterisk (\*) next to the provided solution indicates that  $3\frac{1}{2}$ " bearing length is **not** sufficient.
- Bending members are laterally supported at the ends (see details on page 32) and fastened to plyform sheathing every 24" maximum along the top flange.

#### Tables for elevated slabs (horizontal bending members) assume:

- Concrete of 150 pcf (accounts for normal weight concrete with typical rebar layout).
- A 5 psf load to cover self-weight of formwork materials.
- A 50 psf live load from construction activities. This load is considered for all strength parameters but is not applied when calculating deflection.
- Loads are applied uniformly for the full length of the member. For other loading conditions, consult RedBUILT for application-specific analysis.

#### Tables for walls or columns (vertical bending members) assume:

- Loads are applied uniformly for the full length of the member. For other loading conditions, consult RedBUILT for application-specific analysis.
- Lateral pressure exerted to the forms is determined by pour height and rate, concrete temperature, concrete density and concrete chemistry (amount and types of pozzaloans and admixtures); and by placement and consolidation methods. For guidance on determining appropriate lateral pressure, refer to ACI 347R-14 *Guide to Formwork for Concrete* or SP-4 (14) *Formwork for Concrete—8th Edition*.

**Where gold shading or an \* is shown in the table, consult with RedBUILT for application-specific analysis.**

### BUILD SAFELY

**Please be sure you read, understand and follow all OSHA fall protection guidelines.**

At RedBUILT, we are committed to working safely and want you to do the same. We encourage you to follow the recommendations of OSHA ([www.osha.gov](http://www.osha.gov)) in the U.S. regarding:

- Personal protective equipment (PPE) for hands, feet, head and eyes
- Fall protection
- Use of pneumatic nailers and other hand tools
- Forklift safety

Please adhere to all applicable RedBUILT product installation details.

# REDFORM™ I-JOISTS

- Lightweight for fast installation
- Durable for multiple reuse
- Available in long lengths
- Resists bowing, twisting and shrinking
- Camber available for long-span capability

Available in depths of 9½", 11⅞", 14", 16", 18", and 20".

Some sizes may not be available in your region.  
Custom sizes also available

**⚠ WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to [www.P65Warnings.ca.gov/wood](http://www.P65Warnings.ca.gov/wood).



## DESIGN PROPERTIES

### RedForm™ I-Joist Allowable Design Properties (100% DOL)

RedForm™ I-joist	Design Property	Joist Depth					
		9½"	11⅞"	14"	16"	18"	20"
I65	Moment (ft-lbs)	4,694	6,075	7,227	8,289	9,342	10,386
	Shear (lbs)	1,566	2,030	2,286	2,529	2,772	3,011
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	237	405	599	822	1,085	1,391
	Weight (plf)	3.0	3.3	3.6	3.9	4.2	4.5
	Allowable Reaction (lbs) at End Support	1,566	1,696	1,696	1,696	1,697	1,321
	Allowable Reaction (lbs) at Intermediate Support <sup>(1)</sup>	2,471	2,471	2,471	2,471	2,471	1,923
I90	Moment (ft-lbs)	6,674	8,645	10,287	11,804	13,307	14,792
	Shear (lbs)	1,566	2,030	2,286	2,529	2,772	3,011
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	329	559	822	1,121	1,472	1,877
	Weight (plf)	3.8	4.2	4.5	4.7	5.0	5.3
	Allowable Reaction (lbs) at End Support	1,566	1,696	1,696	1,696	1,697	1,321
	Allowable Reaction (lbs) at Intermediate Support <sup>(1)</sup>	3,015	3,015	3,015	3,015	3,015	2,347
I90H	Moment (ft-lbs)		9,864	11,781	13,559	15,309	17,051
	Shear (lbs)		2,070	2,340	2,592	2,844	3,101
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)		618	914	1,250	1,644	2,098
	Weight (plf)		4.6	4.9	5.2	5.4	5.7
	Allowable Reaction (lbs) at End Support		1,696	1,696	1,696	1,697	1,321
	Allowable Reaction (lbs) at Intermediate Support <sup>(1)</sup>		3,146	3,146	3,146	3,146	2,449

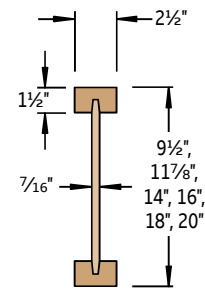
(1) For RedForm™ I-joists, reaction values are based on an assumed minimum bearing length of 3½" at supports. Increased reaction values may be achieved with web stiffeners. Contact RedBuilt Engineering for more information.

### General Notes

- Values are for new or like-new product.
- RedForm™ I-joist values have been adjusted for wet use (no ground contact or saturated use). Values shown are for 100% load duration (normal load duration). Moment, shear, and reaction values may be increased by a factor of up to 125% where short-term duration-of-load applies.
- For RedForm™ I-joists, the following formula approximates the uniform load deflection of Δ (inches):

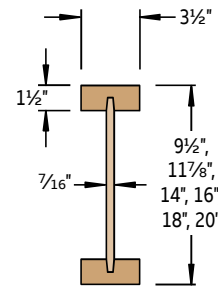
$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.26 wL^2}{d \times 10^5}$$

w = uniform load, plf  
L = span, feet  
d = Red-I™ joist depth, inches  
EI = value from table above



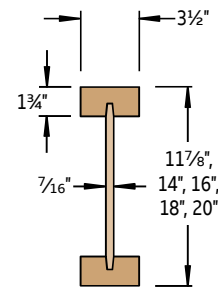
### RedForm-I65™ Joist

Top and bottom flanges of 1½" x 2½" RedLam™ LVL with ⅞" OSB web.



### RedForm-I90™ Joist

Top and bottom flanges of 1½" x 3½" RedLam™ LVL with ⅞" OSB web.



### RedForm-I90H™ Joist

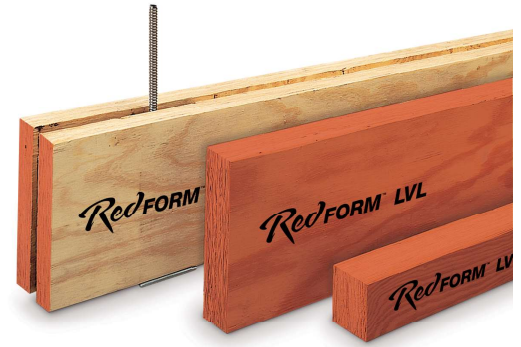
Top and bottom flanges of 1¾" x 3½" RedLam™ LVL with ⅞" OSB web.

- Support heavy loads
- Available in long lengths
- Uniform, flat and level forming surfaces
- Durable for multiple reuse

Available widths and depths are listed in the table below.

Some sizes may not be available in your region. Custom sizes also available.

**⚠ WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to: [www.P65Warnings.ca.gov/wood](http://www.P65Warnings.ca.gov/wood).



## DESIGN PROPERTIES AND STRESSES

### 2.0E RedForm™ LVL Allowable Design Properties<sup>(1)</sup> (100% DOL)

Width	Design Property	RedForm™ LVL Depth									
		3½"	5½"	6½"	7¼"	7⅞"	9¼"	11⅞"	14 <sup>(3)</sup> "	16 <sup>(3)</sup> "	18 <sup>(3)</sup> "
1½"	Moment (ft-lbs)	778	1,829	2,497	3,061	3,571	4,820	7,678	10,436		
	Shear (lbs)	898	1,411	1,667	1,860	2,020	2,373	3,046	3,591		
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	9.6	37.4	61.8	85.7	110	178	377	617		
	Weight (plf)	1.5	2.3	2.8	3.1	3.4	4.0	5.1	6.0		
1½" Plank	Moment (ft-lbs)	308	483								
	Shear (lbs)	599	941								
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	1.8	2.8								
	Weight (plf)	1.5	2.3								
1¾"	Moment (ft-lbs)	919	2,134	2,913	3,571	4,166	5,623	8,958	12,176		
	Shear (lbs)	1,047	1,646	1,945	2,170	2,357	2,768	3,554	4,190		
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	11.3	43.7	72.1	100	128	208	440	720		
	Weight (plf)	1.7	2.7	3.2	3.6	3.9	4.6	5.9	7.0		
2½"	Moment (ft-lbs)	1,313	3,048	4,162	5,101	5,952	8,034	12,797	17,394		
	Shear (lbs)	1,496	2,351	2,779	3,099	3,367	3,954	5,077	5,985		
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	16.1	62.4	103	143	183	297	628	1,029		
	Weight (plf)	2.5	3.9	4.6	5.2	5.6	6.6	8.5	10.0		
3½"	Moment (ft-lbs)	1525 <sup>(2)</sup>	4,268	5,827	7,142	8,332	11,247	17,916	24,352	31,234	38,902
	Shear (lbs)	1397 <sup>(2)</sup>	3,292	3,890	4,339	4,713	5,536	7,107	8,379	9,576	10,773
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)	22.5	87.3	144	200	256	416	879	1,441	2,150	3,062
	Weight (plf)	3.5	5.5	6.5	7.2	7.8	9.2	11.8	14.0	8.0	9.0
5¼ <sup>(3)</sup> "	Moment (ft-lbs)				10,713		16,870	26,896	36,527	46,851	58,353
	Shear (lbs)				6,509		8,304	10,665	12,569	14,364	16,160
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)				300		623	1,320	2,161	3,226	4,593
	Weight (plf)				3.6		4.6	5.9	7.0	8.0	9.0
7 <sup>(3)</sup> "	Moment (ft-lbs)				14,284		22,494	35,862	48,703	62,468	77,804
	Shear (lbs)				8,678		11,072	14,220	16,758	19,152	21,546
	El x 10 <sup>6</sup> (in. <sup>2</sup> -lbs)				400		831	1,761	2,881	4,301	6,124
	Weight (plf)				3.6		4.6	5.9	7.0	8.0	9.0

(1) For product in beam orientation, unless otherwise noted. Values shown apply to single-piece bending members such as joists and studs. For two-piece members such as double walers and ledger beams, values shown may be multiplied by 2.

(2) For plank or beam orientation.

(3) Edge easing and full color sealer not available in these sizes.

### General Notes

- Values are for new or like-new product.
- RedForm™ LVL values have been adjusted for wet use (no ground contact or saturated use). Values shown are for 100% load duration (normal load duration). Moment and shear values may be increased by a factor of up to 125% where short-term duration-of-load applies.
- For RedForm™ LVL, the following formula approximates the uniform load deflection of Δ (inches):

$$\Delta = \frac{270wL^4}{Ebd^3} + \frac{2.28wL^2}{Ebd}$$

w = uniform load, plf

L = span, feet

E = Modulus of Elasticity, psi

b = beam width, inches

d = beam depth, inches

### Beam Design Stresses

Orientation		2.0E RedLam™ LVL Beam/Joist	2.0E RedLam™ LVL Plank
Shear modulus of elasticity	G =	125,000 psi	125,000 psi
Modulus of elasticity	E =	2.0 x 10 <sup>6</sup> psi	2.0 x 10 <sup>6</sup> psi
Minimum modulus of elastic-	E <sub>min</sub> =	1.0 x 10 <sup>6</sup> psi <sup>(1)</sup>	1.0 x 10 <sup>6</sup> psi <sup>(1)</sup>
Flexural stress	F <sub>b</sub> =	2,900 psi <sup>(2)</sup>	2,845 psi <sup>(6)</sup>
Tension stress	F <sub>t</sub> =	1,660 psi <sup>(3)</sup>	1,660 psi <sup>(3)</sup>
Compression perpendicular to grain	F <sub>c⊥</sub> =	750 psi <sup>(4)</sup>	650 psi <sup>(4)</sup>
Compression parallel to grain	F <sub>c  </sub> =	2,635 psi	2,635 psi
Horizontal shear parallel to grain	F <sub>v</sub> =	285 psi	190 psi
Equivalent specific gravity	SG =	0.50 <sup>(5)</sup>	0.50 <sup>(5)</sup>

(1) E<sub>min</sub> is the reference modulus of elasticity for beam stability and column stability calculations.

(2) For 12" depth. For other depths, multiply by  $[\frac{12}{d}]^{0.136}$

(3) F<sub>t</sub> is adjusted for volume effects for a range of common conditions.

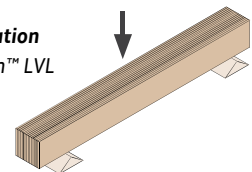
(4) F<sub>c⊥</sub> may not be increased for duration of load.

(5) For lateral connection design only.

(6) For 1 1/2" thick material, F<sub>b</sub> = 3,125 psi.

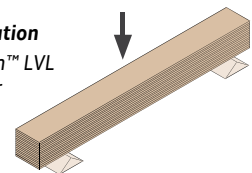
#### Beam Orientation

Load RedForm™ LVL parallel to glue lines.



#### Plank Orientation

Load RedForm™ LVL perpendicular to glue lines.

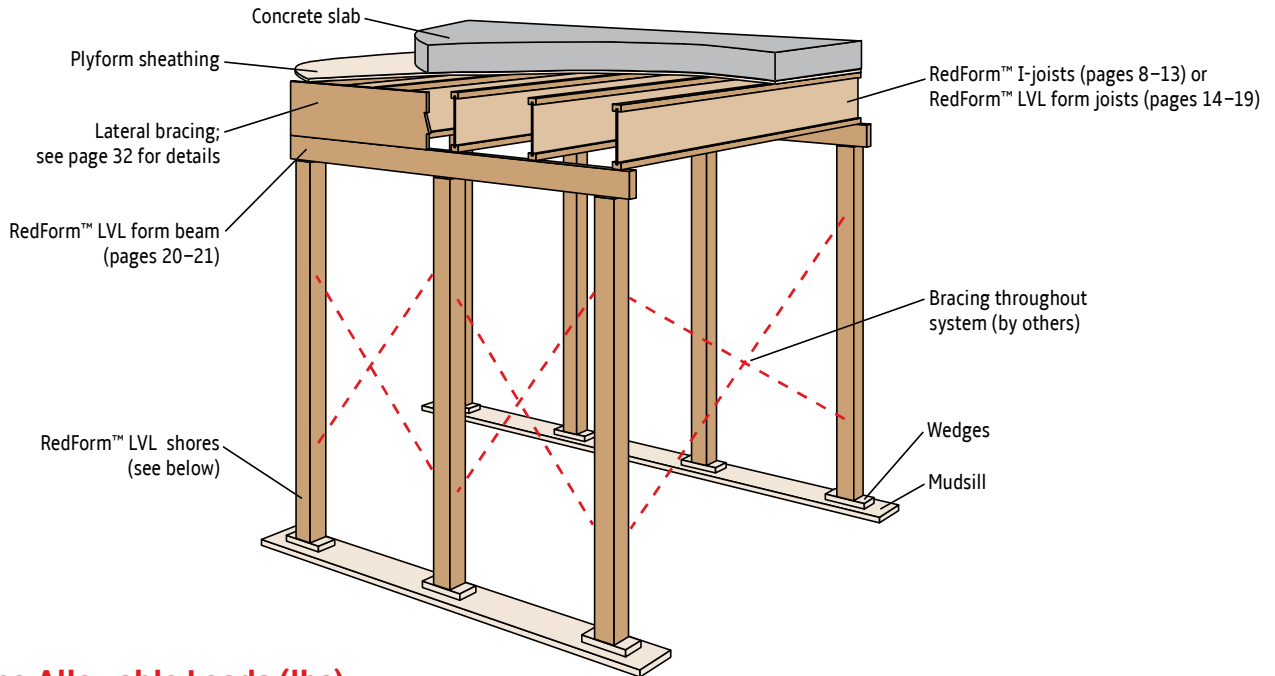


## FORMING AND SHORING APPLICATIONS

*With strength, uniformity, and reliability engineered into each piece, RedForm™ I-joists and RedForm™ LVL are ideal for use in concrete forming applications.*



## Typical Slab Form Assembly



## Shoring Allowable Loads (lbs)

Unbraced Length	100% Duration of Load (DOL)						125% Duration of Load (DOL)					
	RedForm™ LVL Shore Size						RedForm™ LVL Shore Size					
	3½" x 3½"	3½" x 5½"	3½" x 7"	5¼" x 5½"	5¼" x 7"	7" x 7"	3½" x 3½"	3½" x 5½"	3½" x 7"	5¼" x 5½"	5¼" x 7"	7" x 7"
4'	14,600	22,950	29,210	38,550	49,070	67,250	17,120	26,900	34,240	46,920	59,720	82,890
5'	12,620	19,830	25,240	36,280	46,180	65,060	14,270	22,420	28,540	43,440	55,290	79,490
6'	10,600	16,660	21,200	33,610	42,780	62,430	11,640	18,290	23,280	39,430	50,180	75,420
7'	8,330	13,880	17,670	30,650	39,010	59,430	9,520	14,970	19,050	35,110	44,680	70,840
8'	7,390	11,610	14,780	27,530	35,040	56,060	7,880	12,380	15,760	30,830	39,240	65,790
9'	6,520	9,820	12,500	24,490	31,170	52,390	6,600	10,380	13,210	26,940	34,290	60,450
10'	5,330	8,380	10,670	21,720	27,650	48,580	5,600	8,810	11,210	23,590	30,020	55,060
11'	4,600	7,230	9,200	19,270	24,530	44,730	4,810	7,560	9,620	20,730	26,390	49,890
12'	4,000	6,290	8,000	17,160	21,840	40,980	4,160	6,550	8,330	18,320	23,310	45,130
13'		5,520	7,020	15,340	19,520	37,490		5,720	7,280	16,280	20,720	40,870
14'		4,880	6,210	13,770	17,530	34,280		5,050	6,420	14,550	18,520	37,090
15'		4,340	5,530	12,420	15,810	31,390		4,480	5,700	13,070	16,630	33,740
16'			4,950	11,250	14,320	28,800		4,000	5,090	11,790	15,010	30,780
17'			4,450	10,230	13,020	26,480			4,580	10,690	13,610	28,180
18'				9,340	11,890	24,410			4,140	9,730	12,390	25,870
19'				8,560	10,890	22,560				8,900	11,330	23,830
20'				7,870	10,010	20,890				8,160	10,390	22,000
21'				7,250	9,230	19,400				7,510	9,560	20,370
22'				6,710	8,540	18,050				6,940	8,830	18,920
23'				6,220	7,920	16,830				6,420	8,180	17,600
24'				5,790	7,370	15,740				5,960	7,590	16,410

## General Notes

- Values are for new or like-new product.
- Table is based on:
  - One-piece column members.
  - Bracing in both directions at the column ends.
  - Effective column length is equal to the actual unbraced length.
  - Wet use (no ground contact or saturated use).
  - National Design Specification for Wood Construction® (NDS®) 2018.
- Allowable loads assume 1/6 column eccentricity in either the width or thickness direction. For other conditions, refer to the NDS®.

## Post Shore Allowable Design Stresses (Dry Use, 100% Load Duration)

	2.0E RedForm™ LVL	
Modulus of elasticity	E	= 2.0 x 10 <sup>6</sup> psi
Minimum modulus of elasticity	E <sub>min</sub>	= 1.0 x 10 <sup>6</sup> psi <sup>(1)</sup>
Flexural stress	F <sub>b</sub>	= 2,900 psi <sup>(2)</sup> (3)
Compression parallel to grain	F <sub>c  </sub>	= 2,635 psi

(1) E<sub>min</sub> is the reference modulus of elasticity for beam stability and column stability calculations.

(2) For 12" depth. For other depths, multiply by  $\left[\frac{12}{d}\right]^{0.136}$

(3) Flexural stress in plank orientation is 2,845 x  $\left[\frac{3.5}{d}\right]^{0.136}$

# REDFORM™ I-JOIST PRODUCT SELECTOR TABLES

RedForm™ I-Joists

Single-span, 125% DOL, Max. Deflection L/240 or 3/8"

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ I-Joist Depth																		
				12' Span			14' Span			16' Span			18' Span			20' Span						
				165	190	190H	165	190	190H	165	190	190H	165	190	190H	165	190	190H				
5"	12"	68	118	9½"	9½"	9½"	9½"	9½"	9½"	9½"	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	16"	14"	11⅞"
	16"	90	157	9½"	9½"	9½"	9½"	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	16"	14"	14"	18"	16"	16"	18"	16"	11⅞"
	19.2"	108	188	9½"	9½"	9½"	11⅞"	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	20"	18"	14"
6"	12"	80	130	9½"	9½"	9½"	9½"	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	14"	11⅞"	11⅞"	18"	16"	16"	18"	16"	14"
	16"	107	174	9½"	9½"	9½"	11⅞"	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	20"	18"	14"
	19.2"	128	208	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	14"	14"	11⅞"	18"	16"	16"	20"	18"	16"	20"	18"	14"	14"
7"	12"	93	143	9½"	9½"	9½"	9½"	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	16"	14"	14"	18"	16"	16"	18"	16"	14"
	16"	123	190	9½"	9½"	9½"	11⅞"	9½"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	14"	20"	18"	16"	20"	18"	14"
	19.2"	148	228	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	14"	14"	11⅞"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
8"	12"	105	155	9½"	9½"	9½"	11⅞"	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	20"	18"	14"
	16"	140	207	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	14"	14"	11⅞"	18"	16"	16"	20"	18"	16"	20"	18"	14"	14"
	19.2"	168	248	11⅞"	9½"	9½"	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
9"	12"	118	168	9½"	9½"	9½"	11⅞"	9½"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	14"	20"	18"	16"	20"	18"	14"
	16"	157	224	9½"	9½"	9½"	14"	11⅞"	11⅞"	14"	14"	11⅞"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
	19.2"	188	268	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	14"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
10"	12"	130	180	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	14"	14"	11⅞"	18"	16"	16"	20"	18"	16"	20"	18"	14"	14"
	16"	173	240	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	18"	20"	18"	16"	20"	18"	14"	14"
	19.2"	208	288	11⅞"	9½"	9½"	16"	14"	11⅞"	18"	16"	16"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
11"	12"	143	193	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	16"	16"	20"	18"	16"	20"	18"	14"	14"
	16"	190	257	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	16"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
	19.2"	228	308	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
12"	12"	155	205	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
	16"	207	274	11⅞"	9½"	9½"	16"	14"	11⅞"	18"	16"	16"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"
	19.2"	248	328	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	18"	18"	20"	18"	16"	20"	18"	16"	20"	18"	14"	14"

• Red numbers indicate cambered joist options. See page 35 for more information.

Also see Table Instructions and Assumptions on page 3.

\* Indicates additional analysis or bearing is required for this joist. Contact RedBuilt Engineering.

- Load duration of 125% (7-day cumulative load duration) is applied to moment and shear.
- Wet use adjustment of 0.9 is applied to moment, shear, stiffness and reaction.
- Net downward deflection is limited to the lesser of L/240 or 3/8".

### Table Legend

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	12' Span	
				165	190
12"	68	118	9½"	9½"	
	90	157	9½"	9½"	
19.2"	108	188	9½"	9½"	
	148	228	9½"	9½"	

9½" RedForm-165™ joists at 12" o.c.

9½" cambered RedForm-165™ joists at 12" o.c.

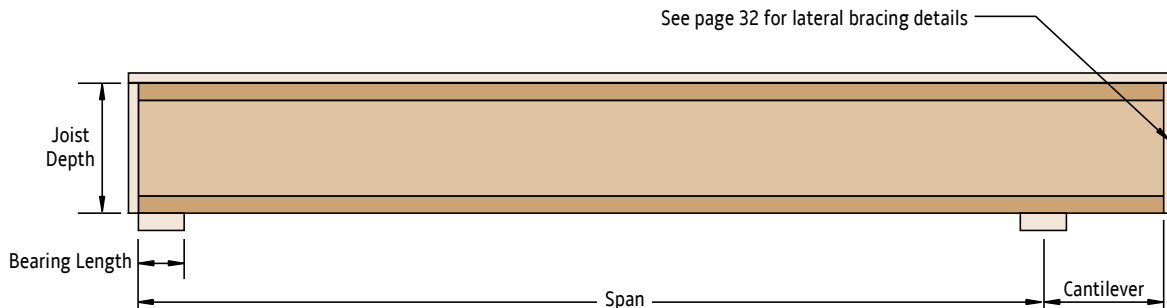


# REDFORM™ I-JOIST PRODUCT SELECTOR TABLES

## Single-span, 125% DOL, Max. Deflection L/240 or 3/8" (continued)

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ I-Joist Depth															
				22' Span			24' Span			26' Span			28' Span			30' Span			
				I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	
5"	12"	68	118	18" 14"	16" 11½"	16" 11½"	16" 14"	20" 14"	18" 14"	18" 14"	18"	16"	14"	20"	18"	16"		18"	18"
	16"	90	157	16"	18" 14"	18" 14"	18"	16"	16"	16"	18"	16"		20"*	18"*			20"*	20"*
	19.2"	108	188	18"	20" 16"	20" 14"			18"*	16"*			20"*	18"*					
6"	12"	80	130	20" 16"	18" 14"	18" 14"	18"	20" 16"	20" 14"	18"	16"	16"	20"	18"	18"			20"	18"
	16"	107	174	18"	20" 16"	20" 14"	20"	18"	16"			20"*	18"*		20"*	20"*			
	19.2"	128	208	20"*	16"*	16"*			18"*	18"*			20"*	20"*					
7"	12"	93	143	16"	20" 14"	18" 14"	18"	16"	16"	20"	18"	18"		20"	18"				20"*
	16"	123	190	18"	16"	16"			18"*	18"*			20"*	20"*					
	19.2"	148	228		18"*	18"*			20"*	20"*									
8"	12"	105	155	18"	20" 16"	20" 14"	20"	18"	16"			18"	18"		20"*	20"*			
	16"	140	207	20"*	18"*	16"*			20"*	18"*			20"*						
	19.2"	168	248		18"*	18"*			20"*										
9"	12"	118	168	18"	16"	20"	20"	18"	18"			20"*	20"*					20"*	
	16"	157	224		18"*	18"*			20"*	20"*									
	19.2"	188	268		20"*	20"*													
10"	12"	130	180	20"	16"	16"			18"*	18"*			20"*	20"*					
	16"	173	240		20"*	18"*			20"*										
	19.2"	208	288			20"*													
11"	12"	143	193	20"*	18"*	16"*			20"*	18"*			20"*						
	16"	190	257		20"*	20"*													
	19.2"	228	308			20"*													
12"	12"	155	205	20"*	18"*	18"*			20"*	20"*									
	16"	207	274		20"*	20"*													
	19.2"	248	328																

See footnotes on page 8 and Table Instructions and Assumptions on page 3.



# REDFORM™ I-JOIST PRODUCT SELECTOR TABLES

RedForm™ I-Joists

## Single-span, 125% DOL, Max. Deflection L/360 or ¼"

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ I-Joist Depth																	
				12' Span			14' Span			16' Span			18' Span			20' Span					
				I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H			
5"	12"	68	118	9½"	9½"	9½"	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	16"	14"	14"	20"	18"	16"
	16"	90	157	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	16"	14"	11⅞"	18"	16"	16"	16"	14"	11⅞"	16"	14"	14"
	19.2"	108	188	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	18"	16"	14"	11⅞"	18"	16"	14"
6"	12"	80	130	9½"	9½"	9½"	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	14"	18"	16"	14"	16"	14"	11⅞"
	16"	107	174	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	16"	14"	11⅞"	18"	16"	14"
	19.2"	128	208	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	16"	20"	18"	18"	16"	14"	14"	18"	16"	16"
7"	12"	93	143	9½"	9½"	9½"	11⅞"	11⅞"	11⅞"	16"	14"	14"	18"	16"	16"	16"	14"	11⅞"	16"	14"	14"
	16"	123	190	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	14"	20"	18"	18"	16"	14"	14"	18"	16"	16"
	19.2"	148	228	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	16"	16"	20"	18"	18"	16"	14"	14"	20*	18*	16**
8"	12"	105	155	9½"	9½"	9½"	14"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	16"	14"	11⅞"	18"	16"	14"
	16"	140	207	11⅞"	9½"	9½"	16"	14"	11⅞"	18"	16"	16"	20"	18"	20"	20"	14"	11⅞"	20"	18"	16"
	19.2"	168	248	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	18"	18"	20"	18"	18"	16*	16*	16**	18*	18*	18**
9"	12"	118	168	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	14"	16"	14"	14"	18"	16"	14"	18"	16"	16"
	16"	157	224	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	18"	16"	16"	16"	14"	14"	20*	18*	18**
	19.2"	188	268	14"	11⅞"	11⅞"	18"	16"	14"	20"	18*	18**	20*	18*	16**	20*	18*	16**	20*	20**	20**
10"	12"	130	180	11⅞"	9½"	9½"	14"	11⅞"	11⅞"	18"	16"	16"	16"	14"	14"	18"	16"	14"	18"	16"	16"
	16"	173	240	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	18"	18"	18"	16*	16*	16**	16**	14**	20*	18**	18**
	19.2"	208	288	14"	11⅞"	11⅞"	18"	16"	16"	20*	18*	14**	20**	18**	16**	20**	18**	16**	20**	20**	20**
11"	12"	143	193	11⅞"	9½"	9½"	16"	14"	14"	18"	16"	16"	18"	16"	16"	16"	14"	14"	20"	18"	16"
	16"	190	257	14"	11⅞"	11⅞"	18"	16"	16"	20"	18"	18"	18"	16*	14*	14*	20**	18**	16**	20**	20**
	19.2"	228	308	14"	14"	11⅞"	20**	18**	16**	18**	16**	16**	20**	18**	16**	20**	18**	16**	20**	18**	18**
12"	12"	155	205	11⅞"	11⅞"	11⅞"	16"	14"	14"	20"	18"	16"	18"	16"	16"	16"	14"	14"	20"	18"	18"
	16"	207	274	14"	11⅞"	11⅞"	18"	16"	16"	20*	18*	14**	20**	18**	16**	20**	18**	16**	20**	20**	20**
	19.2"	248	328	16"	14"	14"	20**	18**	18**	20**	16**	16**	20**	18**	16**	20**	18**	16**	20**	20**	20**

• Red numbers indicate cambered joist options. See page 35 for more information.

Also see Table Instructions and Assumptions on page 3.

\* Indicates additional analysis or bearing is required for this joist. Contact RedBuilt Engineering.

- Load duration of 125% (7-day cumulative load duration) is applied to moment and shear.
- Wet use adjustment of 0.9 is applied to moment, shear, stiffness and reaction.
- Net downward deflection is limited to the lesser of L/360 or ¼".

### Table Legend

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	12' Span	
				I65	I90
12"	68	118	118	9½"	9½"
				9½"	9½"
				9½"	9½"
16"	90	157	157	9½"	9½"
				9½"	9½"
				9½"	9½"
19.2"	108	188	188	9½"	9½"
				9½"	9½"
				9½"	9½"

9½" RedForm-I65™ joists at 12" o.c.

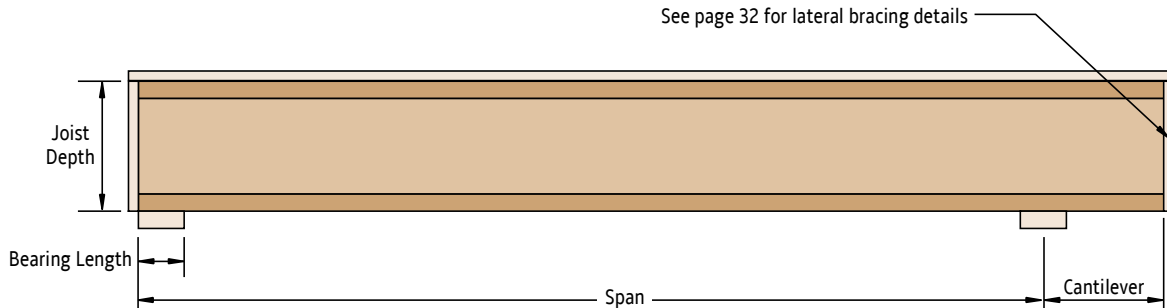
9½" cambered RedForm-I65™ joists at 12" o.c.

# REDFORM™ I-JOIST PRODUCT SELECTOR TABLES

## Single-span, 125% DOL, Max. Deflection L/360 or 1/4" (continued)

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ I-Joist Depth														
				22' Span			24' Span			26' Span			28' Span			30' Span		
				I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H
5"	12"	68	118	16"	20" 14"	20" 14"	18"	16"	14"	18"	16"	16"	20"	18"	18"		20"	18"
	16"	90	157	18"	16"	14"	20"	18"	16"		18"	18"		20"*	20"*			
	19.2"	108	188	20"	16"	16"		18"*	18"*		20"*	20"*						
6"	12"	80	130	16"	14"	20" 14"	18"	16"	16"	20"	18"	18"		20"	18"			20"
	16"	107	174	20"	16"	16"		18"	18"		20"*	20"*						
	19.2"	128	208	20"*	18"*	18"*		20"*	20"*									
7"	12"	93	143	18"	16"	16"	20"	18"	16"		20"	18"		20"	20"			
	16"	123	190	20"	18"	18"		20"*	20"*			20"*						
	19.2"	148	228		20"*	18"*			20"*									
8"	12"	105	155	18"	16"	16"	20"	18"	18"		20"	20"						
	16"	140	207		20"*	18"*			20"*									
	19.2"	168	248		20"*	20"*												
9"	12"	118	168	20"	18"	16"		20"	18"			20"*						
	16"	157	224		20"*	20"*			20"*									
	19.2"	188	268															
10"	12"	130	180	20"	18"	18"		20"*	20"*									
	16"	173	240			20"*												
	19.2"	208	288															
11"	12"	143	193		20"*	18"*			20"*									
	16"	190	257															
	19.2"	228	308															
12"	12"	155	205		20"*	20"*												
	16"	207	274															
	19.2"	248	328															

See footnotes on page 10 and Table Instructions and Assumptions on page 3.



# REDFORM™ I-JOIST PRODUCT SELECTOR TABLES

RedForm™ I-Joists

Single-span, 100% DOL, Max. Deflection L/400 or 1/8"

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ I-Joist Depth														
				12' Span			14' Span			16' Span			18' Span			20' Span		
				165	I90	I90H	165	I90	I90H	165	I90	I90H	165	I90	I90H	165	I90	I90H
5"	12"	68	118	11 7/8"	9 1/2"	9 1/2"	14"	14"	11 7/8"	18"	16"	16"	14"	20"	20"	16"	14"	14"
	16"	90	157	14"	11 7/8"	11 7/8"	18"	16"	14"	14"	11 7/8"	11 7/8"	16"	14"	14"	18"	16"	16"
	19.2"	108	188	14"	11 7/8"	11 7/8"	20"	16"	16"	16"	14"	14"	18"	16"	14"	20**	18**	16**
6"	12"	80	130	11 7/8"	11 7/8"	11 7/8"	16"	14"	14"	20"	18"	16"	16"	14"	14"	18"	16"	14"
	16"	107	174	14"	11 7/8"	11 7/8"	20"	16"	16"	20"	20"	18"	16"	14"	20**	18**	16**	
	19.2"	128	208	16"	14"	14"	18"	18"	18"	16"	14"	14"	18**	16**	16**		18**	18**
7"	12"	93	143	14"	11 7/8"	11 7/8"	18"	16"	14"	20"	18"	18"	16"	14"	14"	18"	16"	16"
	16"	123	190	16"	14"	14"	20"	18"	18"	16"	14"	14"	18**	16**	16**	20**	18**	18**
	19.2"	148	228	16"	14"	14"	20"	20"	20"	18**	16**	14**	20**	18**	18**		20**	20**
8"	12"	105	155	14"	11 7/8"	11 7/8"	18"	16"	16"	20"	20"	20"	18"	16"	14"	20"	18"	16"
	16"	140	207	16"	14"	14"	20"	20"	20"	18"	16"	14"	20**	18**	16**		20**	18**
	19.2"	168	248	18"	16"	16"	16**	14**	14**	18**	16**	16**		20**	18**			20**
9"	12"	118	168	14"	14"	11 7/8"	20"	18"	18"	16"	14"	14"	18"	16"	16"	20"	18"	18"
	16"	157	224	18"	16"	14"	16"	14"	20"	18**	16**	16**	20**	18**	18**		20**	20**
	19.2"	188	268	20"	18"	16"	18**	16**	14**	20**	18**	16**		20**	20**			
10"	12"	130	180	16"	14"	14"	14"	18"	18"	16"	14"	14"	20"	16"	16"		18**	18**
	16"	173	240	18"	16"	16"	16"	14"	14"	20**	16**	16**		20**	18**			
	19.2"	208	288	14**	14**	11 7/8**	18**	16**	16**		18**	18**			20**			
11"	12"	143	193	16"	14"	14"	16"	20"	20"	18"	16"	14"	20**	18**	16**		20**	20**
	16"	190	257	20"	18"	16"	18**	16**	14**	20**	18**	16**		20**	20**			
	19.2"	228	308	16**	14**	14**	20**	18**	16**		20**	18**						
12"	12"	155	205	18"	16"	14"	16"	14"	20"	18"	16"	16"	20**	18**	18**		20**	20**
	16"	207	274	14"	14"	11 7/8"	18**	16**	16**	20**	18**	18**		20**				
	19.2"	248	328	16**	14**	14**	20**	18**	18**		20**	20**						

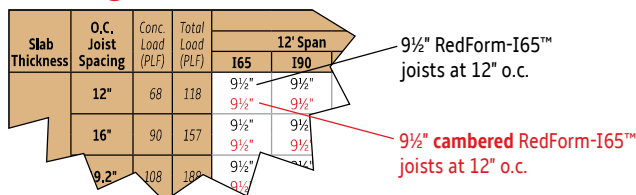
• Red numbers indicate cambered joist options. See page 35 for more information.

Also see Table Instructions and Assumptions on page 3.

\* Indicates additional analysis or bearing is required for this joist. Contact RedBuilt Engineering.

- Load duration of 100% (normal load duration) is applied to moment and shear.
- Wet use adjustment of 0.9 is applied to moment, shear, stiffness and reaction.
- Net downward deflection is limited to the lesser of L/400 or 1/8".

### Table Legend

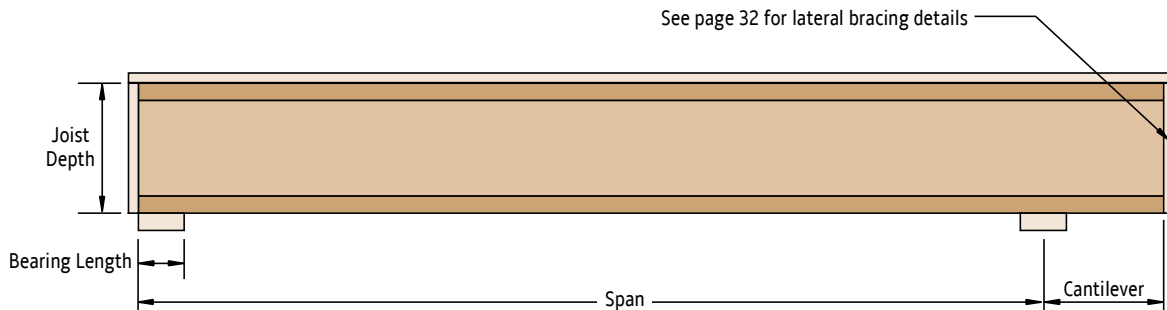


# REDFORM™ I-JOIST PRODUCT SELECTOR TABLES

## Single-span, 100% DOL, Max. Deflection L/400 or 1/8" (continued)

Slab Thickness	O.C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ I-Joist Depth															
				22' Span			24' Span			26' Span			28' Span			30' Span			
				I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	I65	I90	I90H	
5"	12"	68	118	18"	16"	14"	20"	16"	16"	20"	18"	18"		20"	18"			20**	
	16"	90	157	20**	18**	16**		20**	18**		20**	20**							
	19.2"	108	188		18**	18**		20**	20**										
6"	12"	80	130	18"	16"	16"	20"	18"	18"		20"	18"			20**				
	16"	107	174		18**	18**		20**	20**										
	19.2"	128	208		20**	20**													
7"	12"	93	143	20"	18"	16"		20**	18**				20**						
	16"	123	190		20**	20**													
	19.2"	148	228																
8"	12"	105	155		18**	18**		20**	20**										
	16"	140	207			20**													
	19.2"	168	248																
9"	12"	118	168		20**	18**			20**										
	16"	157	224																
	19.2"	188	268																
10"	12"	130	180		20**	20**													
	16"	173	240																
	19.2"	208	288																
11"	12"	143	193			20**													
	16"	190	257																
	19.2"	228	308																
12"	12"	155	205																
	16"	207	274																
	19.2"	248	328																

See footnotes on page 12 and Table Instructions and Assumptions on page 3.





# REDFORM™ LVL JOIST PRODUCT SELECTOR TABLES

## 3+ Span, 125% DOL, Max. Deflection L/240 or 3/8"

Slab Thickness	O. C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ LVL Joist Depth															
				6' Span				7' Span				8' Span				9' Span			
				Width				Width				Width				Width			
1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"				
6"	12"	80	130	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"			
	16"	107	173	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"			
	19.2"	128	208	3½"	3½"	3½"	3½"	5½"	3½"	3½"	3½"	5½"	5½"	5½"	5½"	5½"			
	24"	160	260	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	5½"	5½"			
7"	12"	93	143	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"			
	16"	123	190	3½"	3½"	3½"	3½"	5½"	3½"	3½"	3½"	5½"	5½"	5½"	5½"	5½"			
	19.2"	148	228	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	3½"	5½"	5½"			
	24"	185	285	5½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	7¼"	5½"			
8"	12"	105	155	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"			
	16"	140	207	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"			
	19.2"	168	248	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	5½"	5½"			
	24"	210	310	5½"	3½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"	5½"	5½"	7¼"	7¼"			
9"	12"	118	168	3½"	3½"	3½"	3½"	5½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"			
	16"	157	223	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"			
	19.2"	188	268	5½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	7¼"	5½"			
	24"	235	335	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"	5½"	5½"	7¼"	7¼"			
10"	12"	130	180	3½"	3½"	3½"	3½"	5½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"			
	16"	173	240	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	5½"	5½"			
	19.2"	208	288	5½"	3½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"	5½"	5½"	7¼"	7¼"			
	24"	260	360	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	7¼"	5½"	5½"	7¼"	5½"			
11"	12"	143	193	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"			
	16"	190	257	5½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	7¼"	5½"			
	19.2"	228	308	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"	5½"	5½"	7¼"	7¼"			
	24"	285	385	5½"	5½"	3½"	3½"	5½"	5½"	5½"	5½"	7¼"	5½"	5½"	7¼"	5½"			
12"	12"	155	205	3½"	3½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"			
	16"	207	273	5½"	3½"	3½"	3½"	5½"	5½"	5½"	3½"	5½"	5½"	5½"	7¼"	7¼"			
	19.2"	248	328	5½"	5½"	3½"	3½"	5½"	5½"	3½"	3½"	5½"	5½"	5½"	7¼"	7¼"			
	24"	310	410	5½"	5½"	5½"	3½"	5½"	5½"	5½"	5½"	7¼"	5½"	5½"	7¼"	7¼"			

RedForm™ LVL Joists

Slab Thickness	O. C. Joist Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ LVL Joist Depth															
				10' Span				11' Span				12' Span				14' Span			
				Width				Width				Width				Width			
1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"				
6"	12"	80	130	5½"	5½"	5½"	5½"	7¼"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	9¼"	7¼"		
	16"	107	173	5½"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"		
	19.2"	128	208	7¼"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	9¼"	7¼"	7¼"	5½"	11½"	9¼"		
	24"	160	260	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	11½"	9¼"		
7"	12"	93	143	5½"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	7¼"	7¼"	5½"	5½"	9¼"	9¼"		
	16"	123	190	7¼"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"		
	19.2"	148	228	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	7¼"	7¼"	5½"	11½"	9¼"		
	24"	185	285	7¼"	7¼"	5½"	5½"	9¼"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	7¼"	11½"	11½"		
8"	12"	105	155	5½"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"		
	16"	140	207	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	7¼"	7¼"	5½"	9¼"	9¼"		
	19.2"	168	248	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	24"	210	310	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	9¼"	9¼"	7¼"	7¼"	11½"	11½"		
9"	12"	118	168	7¼"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"		
	16"	157	223	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	5½"	11½"	9¼"		
	19.2"	188	268	7¼"	7¼"	5½"	5½"	9¼"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	24"	235	335	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
10"	12"	130	180	7¼"	5½"	5½"	5½"	7¼"	7¼"	5½"	5½"	9¼"	7¼"	7¼"	5½"	9¼"	9¼"		
	16"	173	240	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	19.2"	208	288	7¼"	7¼"	7¼"	5½"	9¼"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	24"	260	360	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
11"	12"	143	193	7¼"	7¼"	5½"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	7¼"	7¼"	5½"	11½"	9¼"		
	16"	190	257	7¼"	7¼"	5½"	5½"	9¼"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	19.2"	228	308	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	24"	285	385	9¼"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	7¼"	11½"	9¼"	9¼"	7¼"	11½"	11½"		
12"	12"	155	205	7¼"	7¼"	7¼"	5½"	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	11½"	9¼"		
	16"	207	273	7¼"	7¼"	7¼"	5½"	9¼"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	19.2"	248	328	7¼"	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	7¼"	9¼"	9¼"	7¼"	5½"	11½"	11½"		
	24"	310	410	9¼"	9¼"	7¼"	7¼"	9¼"	9¼"	7¼"	7¼"	11½"	11½"	9¼"	9¼"	14"	11½"		

- Load duration of 125% (7-day cumulative load duration) is applied to moment and shear.
- Wet use adjustment of 0.9 is applied to moment, shear, stiffness and reaction.
- Deflection is limited to the lesser of L/240 or 3/8".

\* Indicates additional analysis or bearing is required for this joist. Contact RedBuilt Engineering.

Also see Table Instructions and Assumptions on page 3.















# REDFORM™ LVL STUD PRODUCT SELECTOR TABLES

Single or 2-span, 125% DOL, Max. Deflection L/240 or ¼"

Lateral Pressure (PLF)	RedForm™ LVL Stud Depth																															
	18" Span				24" Span				30" Span				36" Span				42" Span				48" Span				54" Span				60" Span			
	Width (Beam)		Plank		Width (Beam)		Plank		Width (Beam)		Plank		Width (Beam)		Plank		Width (Beam)		Plank		Width (Beam)		Plank		Width (Beam)		Plank		Width (Beam)		Plank	
100	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"	1½"	1¾"	2½"	3½"
200	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
300	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
400	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
500	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
600	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
800	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
1,000	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
1,200	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
1,400	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
1,600	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
1,800	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
2,000	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
2,200	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
2,400	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
2,600	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
2,800	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
3,000	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
3,200	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
3,400	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
3,600	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
3,800	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
4,000	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
4,500	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
5,000	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
5,500	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	
6,000	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	3½"	

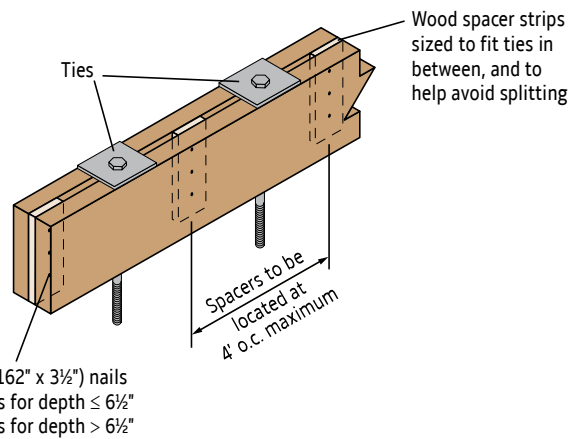
\* Indicates additional analysis or bearing is required for this member. Contact RedBuilt Engineering.

Also see Table Instructions and Assumptions on page 3.

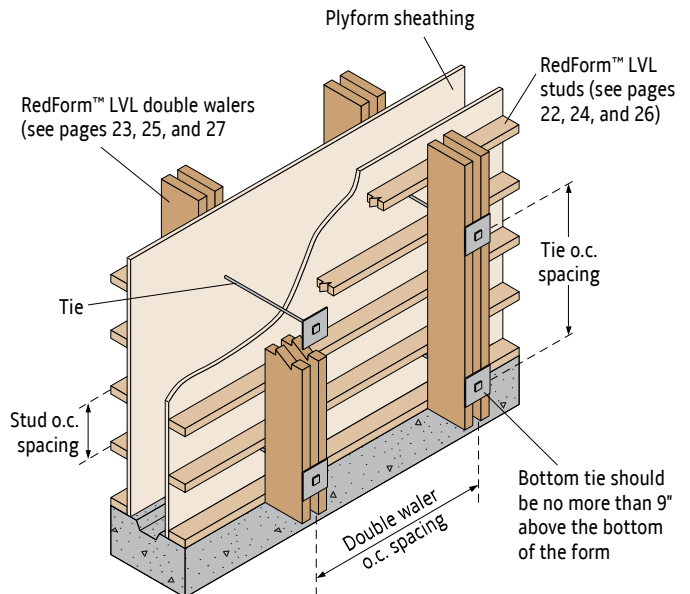
NOTE: For 3+ Span, 125% DOL, L/240 (¼") maximum deflection values, refer to RedForm™ LVL Stud L/360 Selector Table on page 24.

## WALL AND COLUMN FORMING WITH REDFORM™ LVL

### Double Waler Assembly for Wall Applications



### Typical Wall Form Assembly



RedForm™ LVL Studs / Double Walers















# REDFORM™ LVL BRIDGE DECK LEDGER BEAM PRODUCT SELECTOR TABLES

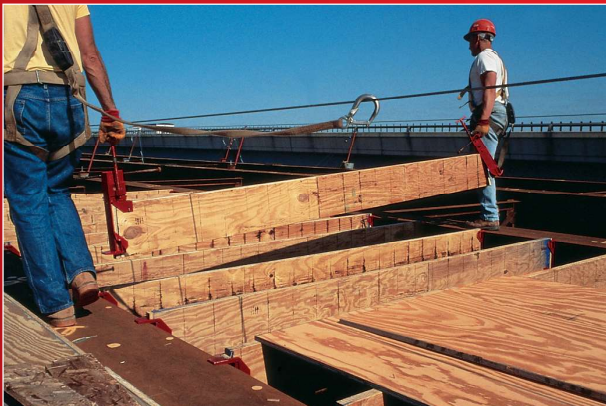
## Single Span, 100% DOL, Max. Deflection L/400 or 1/8"

Slab Thickness	Waler Spacing	Conc. Load (PLF)	Total Load (PLF)	RedForm™ LVL Ledger Beam Depth														
				6' Span			7' Span			8' Span			9' Span			10' Span		
				Width			Width			Width			Width			Width		
1½"	1¾"	2½"	1½"	1¾"	2½"	1½"	1¾"	2½"	1½"	1¾"	2½"	1½"	1¾"	2½"	1½"	1¾"	2½"	
6"	4'-0"	320	520	7¼"	5½"	5½"	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	11⅞"	11⅞"				
	5'-4"	427	693	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	11⅞"	9¼"	9¼"	11⅞"	11⅞"		14"		
	8'-0"	640	1,040	7¼"	7¼"	7¼"	9¼"	9¼"	9¼"	11⅞"	11⅞"		14"					
7"	4'-0"	370	570	7¼"	7¼"	5½"	9¼"	7¼"	7¼"	9¼"	9¼"	9¼"	11⅞"	11⅞"		14"	11⅞"	
	5'-4"	493	760	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"	11⅞"				
	8'-0"	740	1,140	9¼"	7¼"	7¼"	11⅞"	9¼"	9¼"	14"	11⅞"							
8"	4'-0"	420	620	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	11⅞"	9¼"	9¼"	11⅞"	11⅞"		14"		
	5'-4"	560	827	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"					
	8'-0"	840	1,240	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"	14"							
9"	4'-0"	470	670	7¼"	7¼"	5½"	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	11⅞"	11⅞"		14"		
	5'-4"	627	893	7¼"	7¼"	7¼"	9¼"	9¼"	9¼"	11⅞"	11⅞"	9¼"	14"					
	8'-0"	940	1,340	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"	14"							
10"	4'-0"	520	720	7¼"	7¼"	7¼"	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"	11⅞"				
	5'-4"	693	960	9¼"	7¼"	7¼"	11⅞"	9¼"	9¼"	11⅞"	11⅞"							
	8'-0"	1,040	1,440	9¼"	9¼"	9¼"	11⅞"	11⅞"		14"								
11"	4'-0"	570	770	7¼"	7¼"	7¼"	9¼"	9¼"	9¼"	11⅞"	11⅞"	9¼"	14"					
	5'-4"	760	1,027	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"	11⅞"							
	8'-0"	1,140	1,540	11⅞"	9¼"	9¼"	14"	11⅞"										
12"	4'-0"	620	820	7¼"	7¼"	7¼"	9¼"	9¼"	9¼"	11⅞"	11⅞"		14"					
	5'-4"	827	1,093	9¼"	9¼"	7¼"	11⅞"	11⅞"	9¼"	14"	14"							
	8'-0"	1,240	1,640	11⅞"	9¼"	9¼"	14"	14"										

See ledger beam assembly detail on page 30.

- Indicates a member weight range of 100–150 lbs. Member weights exceeding 150 lbs. are not shown.
- Load duration of 100% (normal load duration) is applied to moment and shear.
- Wet use adjustment of 0.9 is applied to moment, shear, stiffness and reaction.
- Deflection is limited to the lesser of L/400 or 1/8".

Also see Table Instructions and Assumptions on page 3.



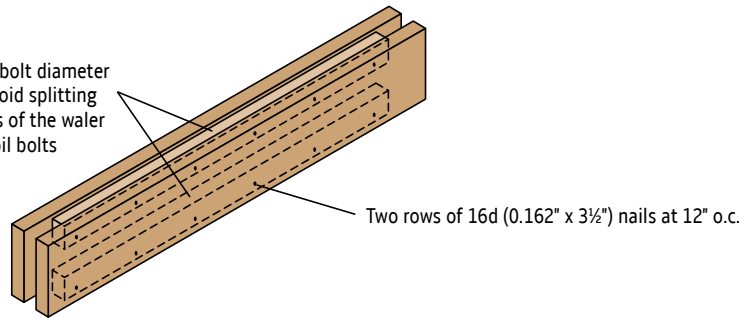
RedForm™ Ledger Beams

# BRIDGE DECK FORMS

## Ledger Beam Assembly for Bridge Deck Applications

### Wood spacer strips:

- Thickness equal to coil bolt diameter
- Width as required to avoid splitting
- Recessed from the ends of the waler to accommodate the coil bolts



## Typical Bridge Deck Formwork Systems

Refer to these formwork details for ledger beam and joist spacings and their proper orientation. The high strength of RedForm™ LVL permits wider ledger beam and/or joist spacings. Verify the adequacy of both the plywood deck and the coil bolt hangers or adjustable hangers.

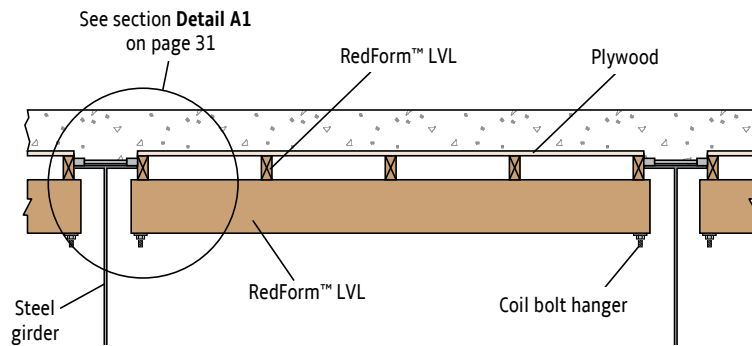
### Detail A

#### Support Members:

RedForm™ LVL joists and ledger beams

#### System:

Suspended from steel bridge girders by coil bolt hangers



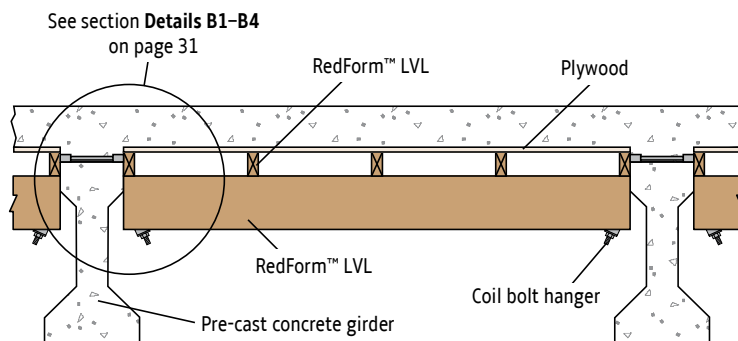
### Detail B

#### Support Members:

RedForm™ LVL joists and ledger beams

#### System:

Suspended from pre-cast concrete bridge girders by coil bolt hangers



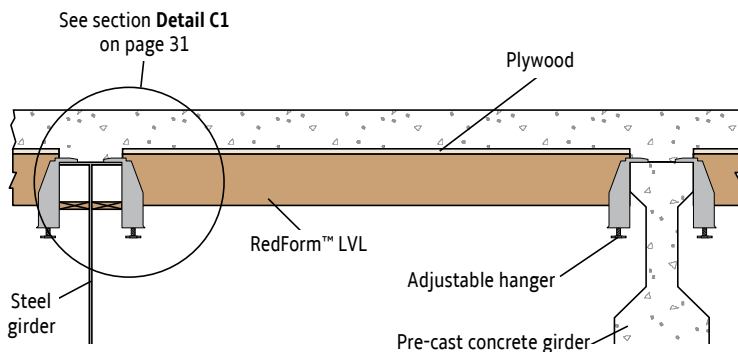
### Detail C

#### Support Members:

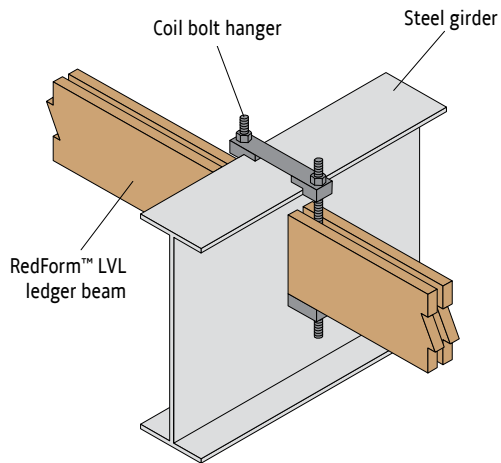
RedForm™ LVL joists

#### System:

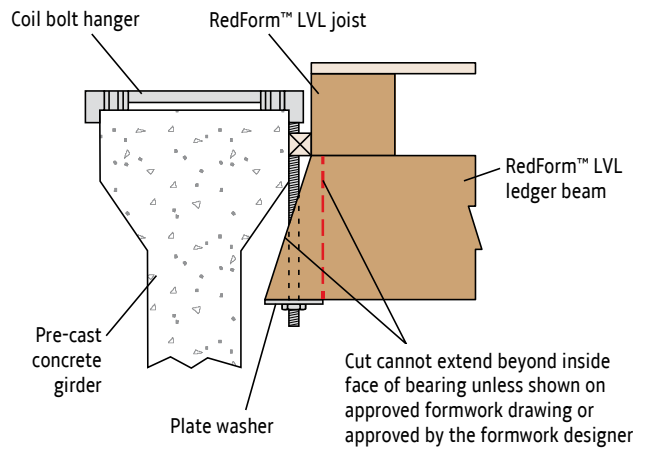
Suspended from steel or pre-cast concrete bridge girders by adjustable hangers



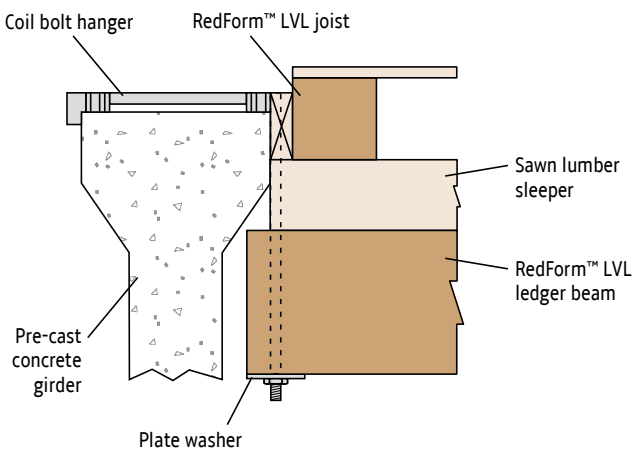
## Detail A1



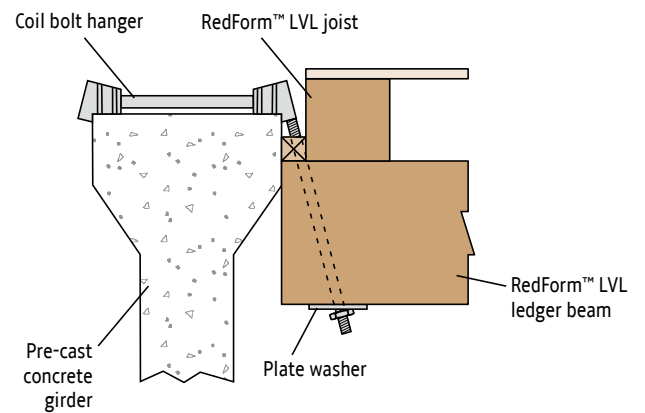
## Detail B1



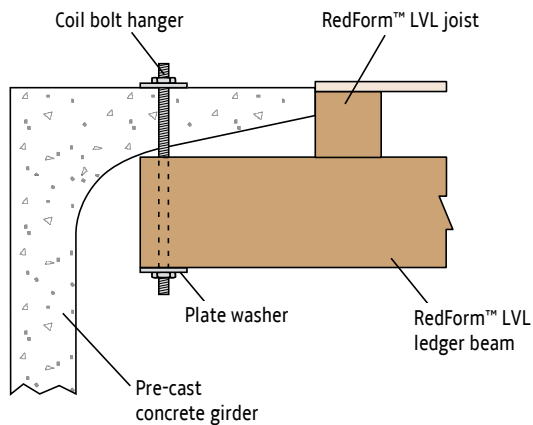
## Detail B2



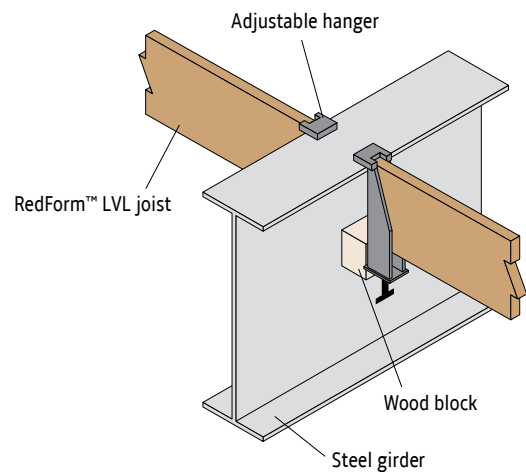
## Detail B3



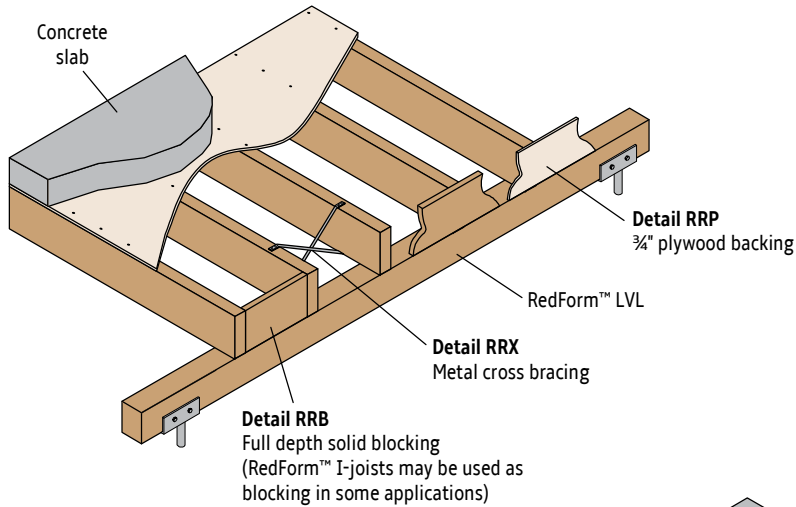
## Detail B4



## Detail C1

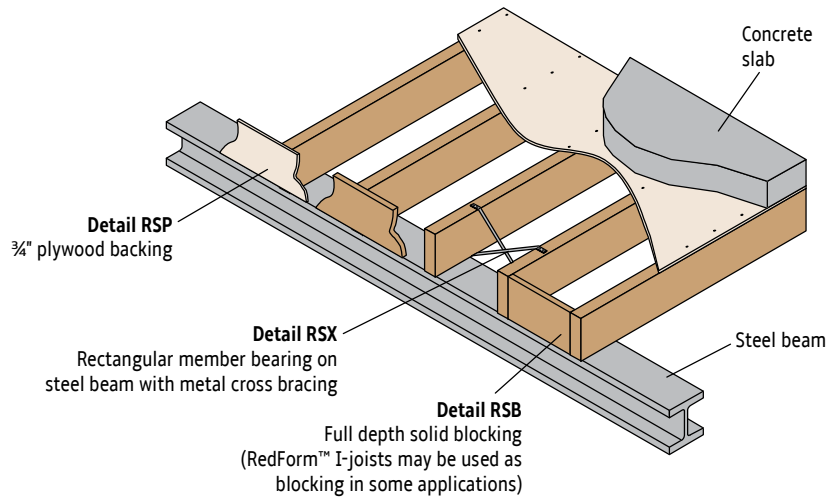


# BEARING AND LATERAL SUPPORT DETAILS



**RedForm™ LVL and RedForm™ I-joists must be laterally supported at the ends. The details shown illustrate acceptable lateral support options.**

**RedForm™ LVL shown as main carrying members for clarity purposes. Details for RedForm™ I-joists are similar.**



## Minimum Lateral Restraint Requirements

### For Joists

- Depth to width ratio  $\leq 2$  to 1; none required.
- $2$  to  $1 \leq$  depth to width ratio  $< 4$  to 1; all points of bearing (e.g., solid blocking).
- Depth to width ratio  $\geq 4$  to 1; 24" on-center along the loaded edge of the member (typically provided by attachment to plywood sheathing with minimum 8d nails).

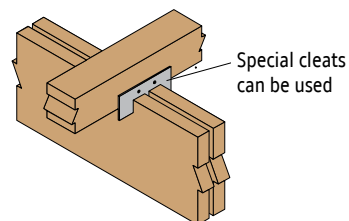
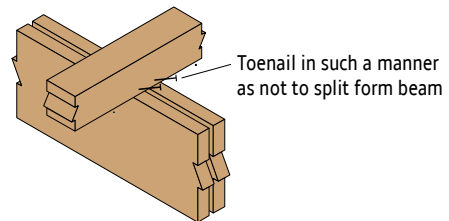
### For Ledger Beams

- Both points of bearing and at mid-span.

### General Requirements

- Lateral restraint requirements for a particular project may be more stringent than what is listed here. Consult the formwork drawings for project-specific requirements and means of providing lateral restraint.

## Lateral Restraint of RedForm™ LVL Ledger Beams



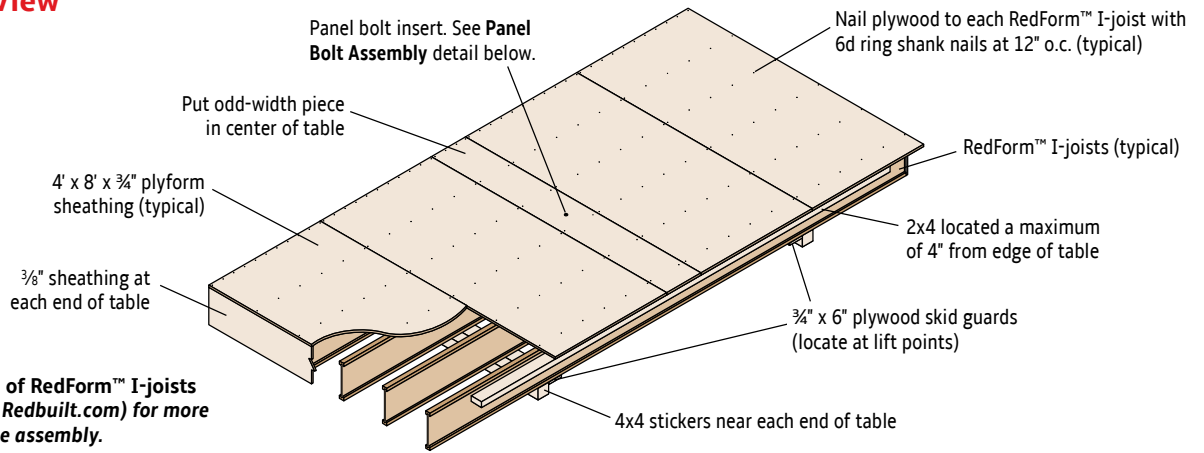
## WARNING

**Formwork is unstable until braced laterally as required to prevent buckling or roll-over.**



# REDFORM™ I-JOIST TABLE ASSEMBLY

## Assembled View



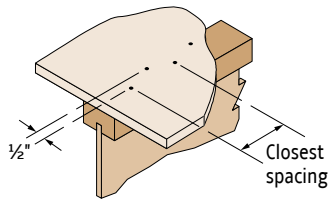
Refer to Proper Use of RedForm™ I-joists (available online at [Redbuilt.com](http://Redbuilt.com)) for more information on table assembly.

## Nailing Sheathing to RedForm™ I-Joist Flange<sup>(1)</sup>

Nail Type	Nail Size	Closest O.C. Spacing Per Row <sup>(2)</sup>
8d <sup>(2)</sup>	Box	0.113" x 2½"
	Common	0.131" x 2½"
10d	Box	0.128" x 3"
	Common	0.148" x 3"
12d	Box	0.128" x 3¼"
	Common	0.148" x 3¼"
16d	Box	0.135" x 3½"
	Sinker	0.148" x 3¼"
	Common	0.162" x 3½"

- (1) Sheathing must be nailed along the full length of the top flange on the RedForm™ I-joist with a maximum nail spacing of 24" on-center.
- (2) 14-gauge staples may be a direct substitute for 8d (2½") nails if a minimum penetration of 1" into the flange is maintained.
- (3) If more than one row of nails is used, the rows must be offset at least ½" and staggered.

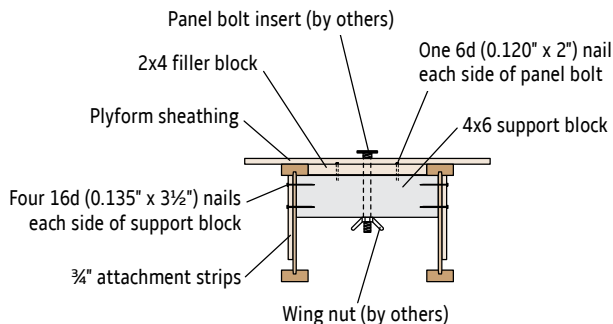
## Nailing to Top of Flange



**IMPORTANT: Nailing closer than specified may cause the flange to split.**

Nailing pattern to be per plans and specifications. Nail spacing must not be closer than the criteria listed above.

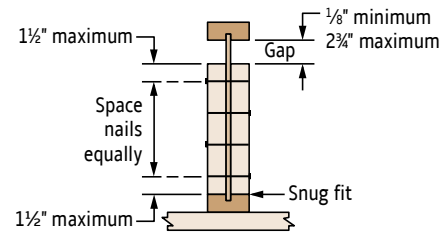
## Panel Bolt Assembly



## Nail Quantities for Web Stiffener Attachment

RedForm™ I-joist Depth	I65		I90, I90H	
	8d (0.113" x 2½") Nails		16d (0.135" x 3½") Nails	
	End or Intermediate	End	End	Intermediate
11⅞"	3	3	3	3
14"	5	3	3	3
16"	6	4	4	4
18"	7	4	4	4
20"	8	5	5	5

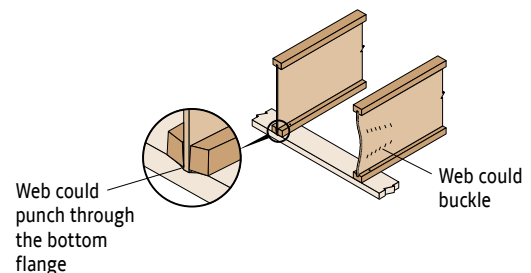
## Web Stiffener Attachment



## General Notes:

- For I65 joists, use 1" x 2½" sheathing (with face grain vertical) that meets the requirements of PS1 or PS2.
- For I90 and I90H joists, use 2x4 material of construction grade or better.
- Web stiffeners are always required at bearing on joists 20" deep or deeper.
- Web stiffener requirements will vary based on joist series and depth. See plan details for requirements specific to the joists being used on the project.

**IMPORTANT: Whenever web stiffeners are required, they must be properly installed or the problems shown below may occur.**



# PRODUCT STORAGE AND HANDLING

The proper storage and handling of wood form beams and RedForm™ I-joists can prevent unnecessary damage and help ensure performance. Strength and stiffness properties are affected by moisture content; therefore, it is important to stack form beams and RedForm™ I-joists off the ground and provide adequate ventilation.

## Storage Recommendations

- Bundles should be assembled neatly and contain pieces of similar lengths. Product extending beyond ends of bundles could be snagged and damaged.
- Support product bundles on stickers spaced no more than 8' on-center to provide air circulation and easy access for forklifts.
- Stickers between bundles should align with support blocks on the ground to prevent bowed or damaged form beams and RedForm™ I-joists.
- Stack form beams and RedForm™ I-joists neatly and sticker bundles properly.
- Keep form beams and RedForm™ I-joists dry when they are in storage.

## Storing Wet Form Beams and RedForm™ I-Joists

When storing wet form beams and RedForm™ I-joists, help prevent decay and damage by improving air circulation within the stack:

- Separate **each layer** with stickers
- Space the stickers no more than 8' on-center and line them up vertically.
- Align bands with the stickers to prevent bowing and damage.

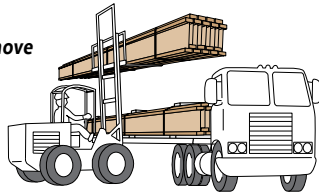
## Protect Products from Weather

Certain geographical regions experience extreme weather conditions. In those areas, decay may be more likely to occur and the following precautions should be followed:

- Store form beams and RedForm™ I-joists in a level, well-drained location.
- Protect form beams and RedForm™ I-joists from weather by placing them under a roof or under a material that will shed water but is porous enough to allow moisture to escape.

## Transportation and Handling

Use a forklift to remove RedForm™ LVL and RedForm™ I-joists from truck.



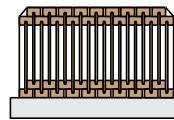
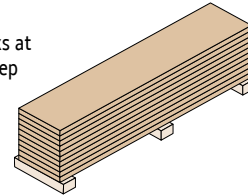
**DO NOT** lift RedForm™ I-joists by the top flange.



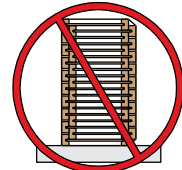
**DO NOT** lift RedForm™ I-joists when in flat orientation.

## Stacking and Storing

Use support blocks at 8' on-center to keep products out of mud and water



**Store and handle joists in vertical orientation. Leave joists banded together until ready to install.**

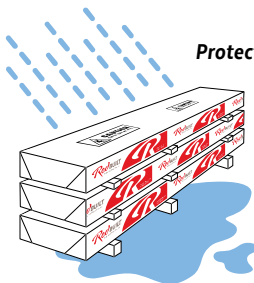


**DO NOT** store joists flat.

## Protection from Weather

Protect products from sun and water

**CAUTION:** Wrap is slippery when wet or icy



Align stickers directly above support blocks

Use support blocks at 8' on-center to keep products out of mud and water



**WARNING:** **DO NOT** stack building materials on unshathed joists. Stack only over beams or walls.



**WARNING:** **DO NOT** walk on joists until braced. Injury may result.

## WARNING

**Joists are unstable until braced laterally**

Bracing Includes:

- Blocking
- Hangers
- Rim Board
- Sheathing
- Rim Joist
- Strut Lines

## WARNING NOTES

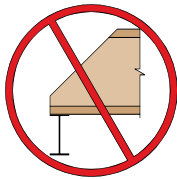
Lack of proper bracing during construction can result in serious accidents. Observe the following guidelines:

1. All blocking, hangers and rim boards at the end supports of the RedForm™ I-joists must be completely installed and properly nailed.
2. Sheathing must be totally attached to each RedForm™ I-joist before additional loads can be placed on the system.
3. The flanges must remain straight within a tolerance of 1/2" from the true alignment.

## RedForm™ I-Joists

Proper inspection of RedForm™ I-joists used in concrete forming or scaffolding applications should include—but not be limited to—looking for these common types of damage:

- Flange separating from web
- Web knifing through flange
- Holes in webs
- Split in flange
- Discoloration
- Soft spots in web or flange
- Mold/fungus
- Taper cuts extending beyond inside face of support
- Notched flange
- Saw kerf in flange
- Buckling of web
- Torn wood fiber in the flange



**DO NOT** bevel the end of a RedForm™ I-joist beyond inside face of support.

## Inspecting Camber in RedForm™ I-Joists

Some RedForm™ I-joists are manufactured with camber. Cambered RedForm™ I-joists are stamped “BOTTOM” on the underside of the bottom flange.

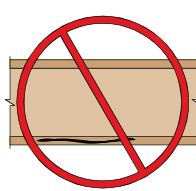
The table at the right shows the amount of initial camber typically found in a new joist. But this initial camber will be reduced after repeated use of the joist. It is important to occasionally inspect used RedForm™ I-joists to ensure that the remaining camber is adequate for satisfactory performance.

To check the camber on a joist, run a string lengthwise across the bottom flange, from end to end, and measure the distance from the string to the bottom of the joist at the centerline. RedForm™ I-joists that have reduced camber will deflect more than the amount indicated in RedBuilt™ load tables and software.

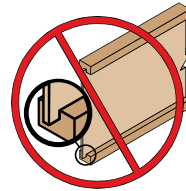
## Initial Camber

Length	Camber
16'	5/32"
18'	7/32"
20'	1/4"
22'	5/16"
24'	3/8"
26'	7/16"
28'	1/2"
30'	19/32"

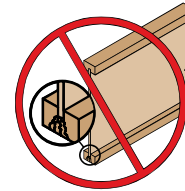
RedForm™ I-joists should be cut back or removed from service if any of the follow conditions occur:



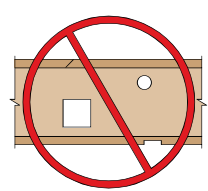
Splits develop in the flange.



The flange has separated from the web.



The web is knifing into the flange.



Holes in the web, or notches or saw kerfs in the flange.

## RedForm™ LVL

Do not cut, notch, or drill form beams except as shown on the formwork drawings.

Inspect all form beams for damage before using them. Damaged form beams must be removed and replaced immediately. Failure to remove and replace damaged form beams may result in collapse of the formwork, serious injury, or death. Proper inspection of RedForm™ LVL should include looking for:

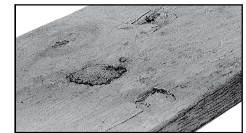
- Damage due to overloading (e.g. crushed bearing areas, stress cracks)
- Damage caused by dropping, forklifts, or other improper handling
- Improper saw cuts, drill holes, or notches
- Signs of decay or insect damage



Saw Cuts



Face Break



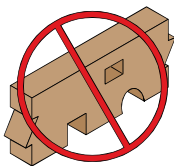
Dent



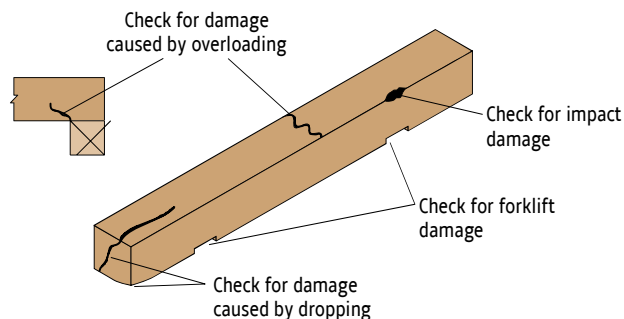
End Split



Narrow Face Split



**DO NOT** cut, notch or drill holes in RedForm™ LVL form beams.





## SERVICE AND SUPPORT YOU CAN COUNT ON.

RedBuilt is committed to creating superior structural solutions. How? By offering efficient structural building products supported by a broad range of services.

- Our team of RedBuilt representatives—one of the industry's largest—isn't afraid to get its hands dirty. We can help with technical information, installation questions or code compliance.
- At RedBuilt, our goal is to help you build solid and durable structures by providing high-quality commercial building products and unparalleled technical and field support.
- Call us with a problem that you believe may be caused by our products, and our representative will contact you within one business day to evaluate the problem and help solve it—**GUARANTEED**.



### CONTACT US

**1.866.859.6757**

**redbuilt.com**

**200 E. Mallard Drive, Boise, ID 83706**

**P.O. Box 60, Boise, ID 83707**