



### STORAGE & HANDLING

Protected from moisture and weather. Keep covered with factory wrap until time of use. Store on dry level ground using stacked support blocks 10' on-center to transfer load off the ground and to allow air circulation.

**DO NOT** store BLU joists flat. onCENTER™™, and rim board should be stacked flat.

**DO NOT** lift BLU joists by top flange with forklift.

**DO NOT** lift BLU joists flatwise.

### SAFETY PRECAUTIONS

Use safety glasses, gloves, hard hats, and other personal protective equipment when handling and installing onCENTER engineered lumber. Contact BlueLinX for MSDS information.

**DO NOT** walk on onCENTER engineered lumber that is lying flat.

**DO NOT** stack building materials on unbraced joists. Stack only over bearing walls or main beams.

**DO NOT** use damaged products.

### BRACING REQUIREMENTS

**DO NOT** allow workers to load on engineered lumber joists until properly installed and braced.

- Joists are unstable until properly attached and braced laterally. Failure to provide stability can result in serious accidents.
- Restrain joists and beams from rotation at the end supports by use of blocking, girders, a bracing, or continuous closure trim, boarding, rim joist or structural panels.
- Install all fasteners in each joint, beam, hanger, blocking, panel, a bracing, or continuous closure as it is set.
- Lateral restraint, such as a braced end wall or existing deck, must be established parallel to the first joist in a run. This can also be accomplished by a temporary or permanent deck sheathing fastened to the full length of the first 4' of joists in the run.
- Rows of members running at right angles to the joists and spaced not more than 10' on-center must extend to the established lateral restraint. Bracing should be a minimum of 1" x 4" all along the length of the joist face with a minimum of two 8d nails (10d if bracing is 2x4). Ends of bracing should overlap at least two joists.
- Ends of gables require temporary bracing on both the top and bottom flanges.
- Sheathing must be completely attached to each BLU joist before additional loads can be placed on the system.
- Joist flanges must remain straight within 1/8" of true alignment.

### INSTALLATION NOTES

- BlueLinX onCENTER products must be protected from weather and used only in covered, dry-use conditions (moisture content of engineered lumber must not be less than 16%).
- Engineered lumber must not be installed in direct contact with masonry or concrete.
- BLU joists must be supported by the bottom flange on walls or beams or in hangers. They must not be supported by the top flange, by a non-structural ridge cap, or by toe-nailing into a beam or ledger.
- For BLU joists, minimum end bearing lengths is 3x1", minimum intermediate bearing length is 3x1".
- When nailing to the side face of BLU joists, maintain spacing within the following ranges:

Single Span Spacing	Multiple Spans							
Joist Depth	12" OC	16" OC	19" OC	24" OC	12" OC	16" OC	19" OC	24" OC
BLU 40	19" 0"	19" 0"	19" 0"	19" 0"	19" 0"	19" 0"	19" 0"	19" 0"
BLU 400	11" 0"	21" 0"	19" 0"	18" 0"	16" 0"	23" 0"	20" 0"	18" 0"
11" 0"	24" 0"	22" 0"	20" 0"	18" 0"	21" 1"	22" 0"	20" 0"	18" 0"
18" 0"	28" 0"	26" 0"	24" 0"	22" 0"	24" 0"	22" 0"	20" 0"	18" 0"
11" 0"	22" 0"	20" 0"	18" 0"	16" 0"	24" 0"	22" 0"	20" 0"	18" 0"
11" 0"	25" 0"	23" 0"	22" 0"	20" 0"	28" 0"	25" 0"	24" 0"	19" 0"
18" 0"	28" 0"	26" 0"	24" 0"	22" 0"	31" 0"	28" 0"	24" 0"	19" 0"
11" 0"	24" 1"	22" 0"	21" 0"	19" 0"	27" 1"	24" 0"	23" 0"	21" 0"
11" 0"	28" 0"	25" 0"	24" 0"	22" 0"	31" 0"	28" 0"	26" 0"	23" 1"
18" 0"	31" 0"	28" 0"	26" 0"	24" 0"	34" 0"	31" 0"	29" 0"	25" 1"
11" 0"	24" 0"	21" 0"	19" 0"	16" 0"	24" 0"	22" 0"	20" 0"	18" 0"
11" 0"	25" 0"	23" 0"	21" 0"	18" 0"	25" 0"	23" 0"	21" 0"	19" 0"
18" 0"	29" 0"	27" 0"	25" 0"	23" 0"	30" 0"	27" 0"	25" 0"	21" 1"
11" 0"	28" 0"	24" 0"	22" 0"	21" 0"	28" 0"	26" 0"	24" 0"	20" 0"
18" 0"	32" 0"	29" 0"	27" 0"	25" 0"	33" 0"	31" 0"	29" 0"	25" 1"
11" 0"	28" 0"	24" 0"	22" 0"	21" 0"	28" 0"	26" 0"	24" 0"	20" 0"
18" 0"	33" 0"	30" 0"	28" 0"	26" 0"	32" 0"	29" 0"	27" 0"	23" 1"

**NOTES:**

- Minimum span from one row of joists to another, joists must be fixed at 12" or 18" OC depending on joist depth. For joists 18" or deeper, intermediate spans must be supported by a wall or beam.
- Do not cut web joists longer than those shown and not exceeding maximum BLU joist length.
- Maximum bearing length: 10" end, 30" intermediate.
- For multiple spans, end spans must be at least 4x of adjacent span.
- Table below shows required fasteners spacing and number of rows. Larger spans may require additional fasteners. Larger spans may require additional fasteners. Larger spans may require additional fasteners.
- For joists other than those shown, refer to Uniform Load Tables in the onCENTER Product Guide for design information.
- For joists other than those shown, refer to Uniform Load Tables in the onCENTER Product Guide for design information.

### INSTALLATION CAUTIONS

**DO NOT** support BLU joist by top flange of walls.

**DO NOT** violate hole table rules.

**DO NOT** bore out BLU joist just face of wall. See detail F8.

**DO NOT** bore out bottom flange at high end of roof joist. See detail F2.

**DO NOT** cut or notch flanges for cutting to fit. See detail F6.

### FLOOR SPANS

#### 40 PSF Live Load + 10 PSF Dead Load (L/480)

Joist Depth	12" OC	16" OC	19" OC	24" OC
BLU 40	19" 0"	19" 0"	19" 0"	19" 0"
BLU 400	11" 0"	21" 0"	19" 0"	18" 0"
11" 0"	24" 0"	22" 0"	20" 0"	18" 0"
18" 0"	28" 0"	26" 0"	24" 0"	22" 0"
11" 0"	22" 0"	20" 0"	18" 0"	16" 0"
11" 0"	25" 0"	23" 0"	22" 0"	20" 0"
18" 0"	28" 0"	26" 0"	24" 0"	22" 0"
11" 0"	24" 1"	22" 0"	21" 0"	19" 0"
11" 0"	28" 0"	25" 0"	24" 0"	22" 0"
18" 0"	31" 0"	28" 0"	26" 0"	23" 1"
11" 0"	24" 0"	21" 0"	19" 0"	16" 0"
11" 0"	25" 0"	23" 0"	21" 0"	18" 0"
18" 0"	29" 0"	27" 0"	25" 0"	23" 0"
11" 0"	28" 0"	24" 0"	22" 0"	21" 0"
18" 0"	32" 0"	29" 0"	27" 0"	25" 1"
11" 0"	28" 0"	24" 0"	22" 0"	21" 0"
18" 0"	33" 0"	30" 0"	28" 0"	26" 0"

**NOTES:**

- Spans are maximum clear distance between supports, based on uniform loads.
- Live load deflection is limited to L/480, providing joists that are one-third other than regularly spaced. Spacing must be such that the load between the joists does not exceed deflection of 1/800, may not meet the occupant's expectations for floor performance. Refer to the onCENTER Product Guide for design information.
- Spans are based on composite action with 1/2" thick 40# Reinforced Concrete Slab. Floor joists must be supported by a wall or beam.
- For joists other than those shown, refer to Uniform Load Tables in the onCENTER Product Guide for design information.
- For joists other than those shown, refer to Uniform Load Tables in the onCENTER Product Guide for design information.

### onCENTER FRAMING SYSTEMS

### F1 ATTACHMENT AT END BEARINGS

### F2 BLOODING PANEL EXTERIOR

### F3 BLU RIM JOIST / onCENTER JOIST

### F4 SQUARE BLOCKS AT WALLS

### F5 onCENTER RIM BOARD CLOSURE

### F6 DECK ATTACHMENT TO RIM BOARD

### F7 BLOODING PANEL USED FOR BRACING

### F8 BEVEL END JOIST

### F9 BLOODING PANEL INTERIOR

### F10 SQUARE BLOCKS AT INTERIOR BEARING

### F11 DOUBLE JOIST CONSTRUCTION WITH FILLER

### F12 FLOOR OPENING, RAKE MOUNT HANGERS

### F13 FLOOR OPENING, FACE MOUNT HANGERS

### F14 STAR STRINGER JOINT CONNECTION

### F15 JOIST TO BEAM CONNECTION

### F16 JOIST TO BEAM CONNECTION, STEP DOWN

### F17 JOIST TO DROPPED BEAM CONNECTION, STEP DOWN

### F18 BEARING STIFFENERS

### F19 SQUARE BLOCKS AT CONCENTRATED LOADS

### F20 WEB STIFFENERS

### F21 FLOOR PERFORMANCE ENHANCERS

### C1 CANTILEVER, REINFORCED

### C2 CANTILEVER, REINFORCED

### C3 CANTILEVER, REINFORCED

### C4 CANTILEVER, REINFORCED

### C5 CANTILEVER, DROPPED

### F1 JOIST SPACING BELOW FINISHING WALL

### F2 JOIST SPACING BELOW PLUMBING FIXTURES

### R1 UPPER END BEARING ON WALL

### R2 INTERMEDIATE BEARING

### R3 JOISTS ON BEVELLED PLATE

### R4 BRESMOUTH CUT

### R7 ROOF OPENING, FACE MOUNT HANGERS

### R8 BEVELLED END JOIST

### R9 OVERHANG PARALLEL TO JOIST

### R10 OVERHANG PERPENDICULAR TO JOIST

### R11 ROOF OPENING WITH PERMITTED VENTILATION

### HOLES

### ALLOWABLE HOLE LOCATION FOR BLU 40 (Simple or Multiple Span)

### ALLOWABLE HOLE LOCATION FOR BLU 40, 90, 90, 700, and 900 (Simple or Multiple Span)

### onCENTER LVL BEARING DETAILS

### B1 BEARING ON WALL

### B2 BEARING ON CONCRETE WALL

### B3 BEAM-TO-BEAM CONNECTION

### B4 BEARING ON COLUMN

### B5 BEAM-TO-COLUMN LATERAL BRACE

### B6 BEARING FOR DOOR OR WINDOW HEADER

### B7 HIGH END HIP BEARING

### B8 LOW END HIP BEARING

### B9 NOTCHING / SEAT CUT

### MULTIPLE-PLY LVL FASTENING GENERAL NOTES

1. These minimum requirements are adequate only when all loads are evenly applied to the top surface of all plies. Loads are applied to the side faces of the beams, use designer's specifications.

2. Table below shows required fasteners spacing and number of rows. End distances and edge distances must comply with diagram on the left. For other fastening patterns, maximum and minimum apply to all rows.

3. Fastening requirements for depths less than 7/8" require special consideration. Contact BlueLinX.

4. All fasteners must have full embedment of the shank, but must not be over-driven, over-tightened, or over-tensioned.

5. Bolt hole diameter must be 1/8" to 1/4" larger than the bolt diameter. Bolt size to meet ASTM A307 or A325 grades. Start bolt end threads through the full thickness of the member and at least 1" beyond. Use required hole size at the head and tail.

6. Carriage bolts (1" diameter) are acceptable to use in the 10" tall fasteners. Carriage bolts must be driven to the face of the LVL. Beams such that the top of the beams are even with the exterior face of the outer ply of the LVL.

7. Spacing closer than indicated may be acceptable, but require consultation. Please contact BlueLinX.

8. SDS and SDS structural screws are produced by Simpson Strong-Tie Company, Inc. SDS structural screws are produced by United Steel Products Company. Truss SDS structural screws are produced by FastenBrace-CMG, Inc. Install screw per the specific manufacturer's guidelines.

Fastener Type	Lvl. Depth	3" Min	3" Min	3" Min	4" Min	1" Min	2" Min
10d Nails	7 1/2" x 4" x 1/4"	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc
10d Nails	7 1/2" x 4" x 1/4"	4 rows @ 12" oc	4 rows @ 12" oc	4 rows @ 12" oc	4 rows @ 12" oc	4 rows @ 12" oc	4 rows @ 12" oc
10d Nails	7 1/2" x 4" x 1/4"	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc
3/8" x 3" Screws	6 1/4"	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc	3 rows @ 12" oc
3/8" x 3" Screws	6 1/4"	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc
3/8" x 3" Screws	6 1/4"	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc
3/8" x 3" Screws	6 1/4"	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc	2 rows @ 12" oc

**NOTES:**

- Use a SDS, SDS, or Truss SDS.
- 1/8" gap shown. Spacing indicated may be repeated on each face, with fasteners on back face offset one-half the indicated spacing of front face.

### ALLOWABLE HORIZONTAL HOLES IN onCENTER LVL

The size of BlueLinX® Engineered Lumber Products shall be subject to BlueLinX® standard terms of sale located at [www.blueinx.com/terms/salesandconditions.doc](http://www.blueinx.com/terms/salesandconditions.doc). BlueLinX® reserves the right to revise the information located in BlueLinX® standard terms of sale in this document without notice.

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**Allowable Hole Sizes:**

Beam Depth	Maximum Round Hole Diameter
4 1/2"	1 1/2"
6 1/2"	1 3/4"
9 1/2"	2"

**NOTES:**

- Must not be located within the Hollowed End Zone.
- Rectangular holes not allowed.
- Never more than 3 holes allowed per span.
- Table applies to multiple spans unless uniformly loaded beams only. Not for other applications.
- To avoid problems with roof drains, consider hole location, clearance, and effects of beam deflection.

**DO NOT** cut, notch, or drill onCENTER LVL except as shown in this guide.

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