



SOLIDSTART®

ENGINEERED WOOD PRODUCTS

Handling & Installation Recommendations

LP® SolidStart® I-Joists, LP SolidStart LVL & LP SolidStart LSL

Note: For specific strength and span information, please consult specific product brochures.

Important Notes

WARNING: Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

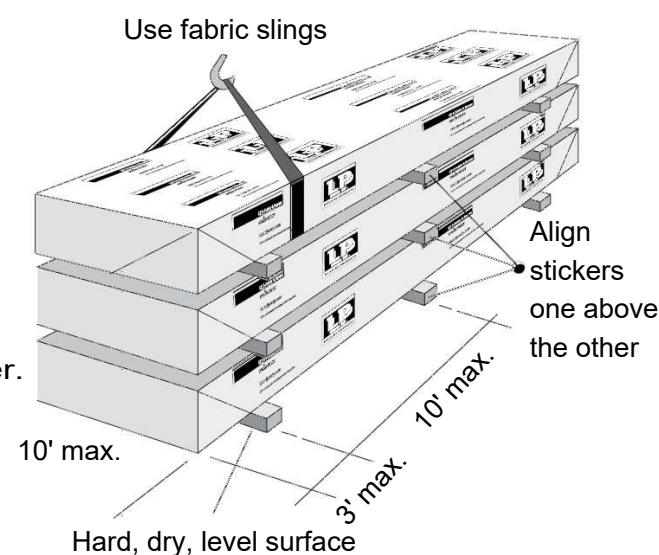
These instructions are offered as a guide to good practice in the handling, storage and installation of LP® SolidStart® I-Joists, LP SolidStart LVL & LP SolidStart LSL beams. They are, however, solely general recommendations and, in some instances, other or additional precautions may be desirable. In all cases, the procedures used should be as specified by the architect/engineer responsible for the entire building.

- This is not intended as a manual for selecting products and assumes that components and details have been specified correctly.
- Consult the LP SolidStart I-Joist, LP SolidStart LVL & LP SolidStart LSL brochures or contact your LP SolidStart products distributor for assistance.
- All rim joists, blocking, connections and temporary bracing must be installed before erectors are allowed on the structure.
- No loads other than the weight of the erectors are to be imposed on the structure before it is permanently sheathed.
- After sheathing, do not overload joists with construction materials exceeding design loads.
- LP SolidStart I-Joists, LP SolidStart LVL & LP SolidStart LSL beams must be used under dry, covered and well ventilated interior conditions in which the equivalent moisture content in lumber will not exceed 16%.

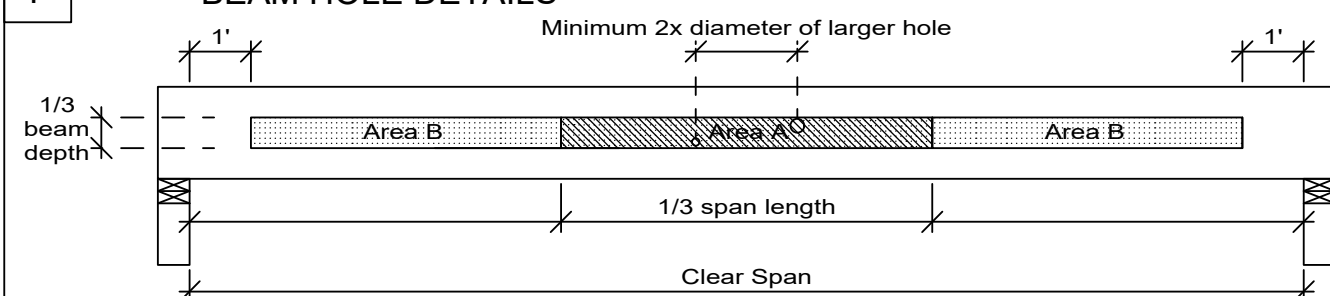
Handling & Storage

Keep LP SolidStart I-Joists, LP SolidStart LVL & LP SolidStart LSL beams dry.

- Unload products carefully by lifting. Support the bundles to reduce excessive bowing. Individual products should be handled in a manner which prevents physical damage during measuring, cutting, erection, etc. I-Joists should be handled vertically and not flatwise.
- Keep stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2 x 4 (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically.
- Product must not be stored in contact with the ground, or have prolonged exposure to the weather.
- Use forklifts and cranes carefully to avoid damaging product.
- Do not use visually damaged product. Call your local LP SolidStart Engineered Wood Products distributor for assistance when damaged products are encountered.



P BEAM HOLE DETAILS



- NOTES:
1. These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP® SolidStart® Engineered Wood Products distributor for assistance.
 2. Round holes can be drilled anywhere in "Area A" provided that: no more than four holes are cut, with the minimum spacing described in the diagram. The maximum hole size is 1-1/2" for depths up to 9-1/4", and 2" for depths greater than 9-1/4".
 3. Rectangular holes are NOT allowed.
 4. DO NOT drill holes in cantilevers without prior approval from the project designer.
 5. Other hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your LP SolidStart Engineered Wood Products distributor.
 6. Up to three 3/4" holes may be drilled in "Area B" to accommodate wiring and/or water lines. These holes shall be at least 12" apart. The holes shall be located in the middle third of the depth, or a minimum of 3" from the bottom and top of the beam. For beams shallower than 9-1/4", locate holes at mid-depth.
 7. Protect plumbing holes from moisture.

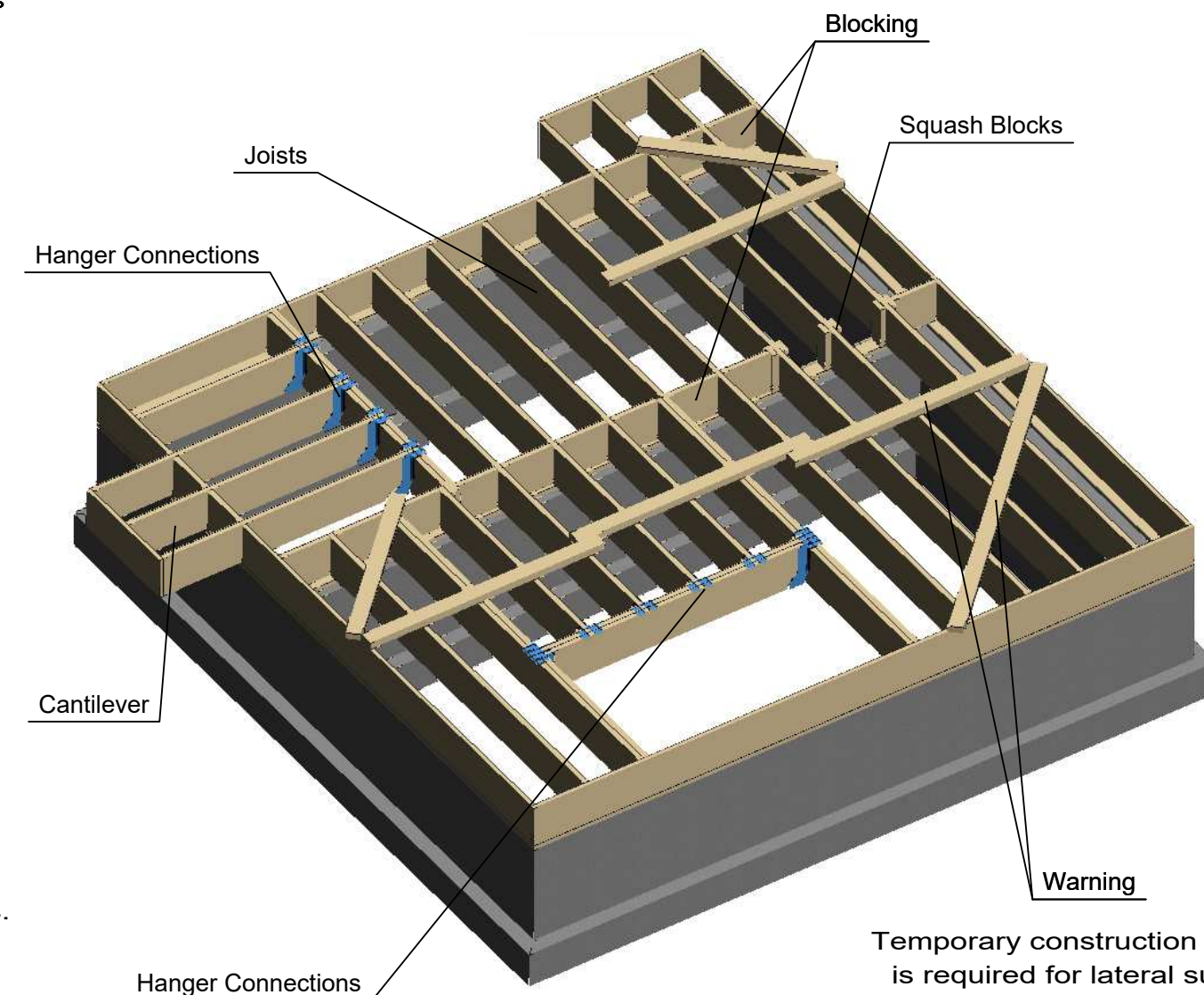
Floor Layout (typical)

TEMPORARY BRACING

- Use at least 1x4 temporary bracing members nailed to each Joist with two 8d nails.
- Keep them parallel and no more than 8'-0" apart.
- Use long pieces, not short blocks; lap the ends to keep a continuous line of bracing.
- To prevent endwise movement of the continuous 1 x 4 lines of bracing, anchor them at the ends and at 25'-0" intervals into a stable end wall or an area braced by sheathing or diagonal bracing.
- Remember, the continuous 1 x 4 bracing is not effective unless attached to the braced area.
- Use particular care removing temporary bracing when applying sheathing. Remove the bracing as the sheathing is attached.

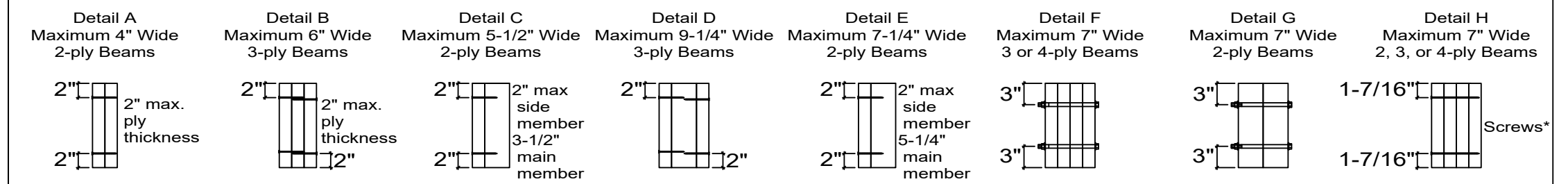
NOTES FOR FLOOR LAYOUT:

- Joists must be supported laterally at all bearings and the ends of cantilevers.
- Unless specified, bridging or mid-span blocking is not required; however, it may enhance floor performance if used properly.
- Verify capacity and fastening of hangers and connectors.
- Some wind or seismic loads may require different or additional details and connections.



Warning
Temporary construction bracing is required for lateral support before decking is completed. Failure to use bracing could result in serious injury or death.

P8 Connection Assemblies



- Notes:
1. Use 2 rows of nails for depths to 12." Use 3 rows of nails for depths greater than 12," up to 18." Use 4 rows of nails for depths greater than 18," up to 24."
 2. 16d box (3-1/2" x 0.135" □) or common (3-1/2" x 0.162" □) nails shall be used for 1-3/4" and 2" thick plies. 10d box (3" x 0.128" □) or common (3" x 0.148" □) nails shall be used for 1-1/2" thick plies. 16d sinkers (3-1/4" x 0.148" □) may be used for 1-3/4" and 2" plies provided the nails are driven alternating from each face (see note 3).
 3. For detail A or when attaching the first two plies for details B and F (optional), the nails may be driven all from one face or alternating from both faces. If the nails do not fully penetrate the second ply, then the nails shall be driven from both faces.
 4. When driving nails from each face, alternate every other nail in each row.
 5. For detail C/E, when side-loaded, the larger side-load shall be applied to the thicker ply (main member).
 6. For details F and H, it is permissible to nail the plies together before bolting or driving Simpson SDS or SDW (or equal) screws. Nail two plies together then nail one additional ply to each side.
 7. Beams wider than 5-1/2" shall be top-loaded or side-loaded from both sides to prevent rotation. Consult a professional engineer for other options.
 8. Other nail, screw or bolt configurations are possible. Contact your LP SolidStart Engineered Wood Products distributor.

*- Simpson® SDS 1/4"x6", Simpson® SDW 6-3/4" or equal. Simpson® SDW may be driven from one side.

Customer Service and Product Technical Support: 1.888.820.0325 E-mail: customer.support@lpcorp.com.

Visit our web site at: www.lpcorp.com.

LP SolidStart Material Safety Data Sheets (MSDS) may be found on our website, www.lpcorp.com.

LP SolidStart Engineered Wood Products are manufactured at different locations in the United States and Canada. Please verify availability with the LP SolidStart Engineered Wood Products distributor in your area before specifying these products.

Cal. Prop 65 Warning:

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.

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Certified Chain of Custody
Promoting Sustainable Forestry
www.sfi-program.org
SFI-00003

BV-SFICOC-US09000262

P1 TOP LOADED BEAM-NAILED CONNECTION
(See Connection Assemblies for more details)

Minimum nail sizes:
1-3/4" and 2" plies:
16d box (3-1/2"x 0.135")

1-1/2" plies: 10d box (3"x 0.128")

Two rows for depths up to 12"
Three rows for depths up to 18"

Framing is applied to top of the beam so that each ply carries an equal load

P2 TOP LOADED BEAM-BOLTED CONNECTION
(See Connection Assemblies for more details)

Framing is applied to top of the beam so that each ply carries an equal load

Nails are permissible but NOT required. See notes for Connection Assemblies.

1/2" diameter ASTM grade A-307 (or better) bolts. Use washers on both faces.

A1 RIM BOARD

Fasten rim board to each floor Joist using one 8d nail or 10d box nail 1" from the top and bottom surface

8d nails at 6" o.c. toe-nailed from outside of building.

A4 SOLID BLOCKING AT EXTERIOR WALL

LP LSL, LP LVL or LP Rim Board may be used as Blocking

8d nails at 6" o.c. toe-nailed from outside of building.

A5 JOIST SUPPORT NAILING

Secure Joist to plate with three (3) 8d or 10d box nails. Toe nail two nails from on one side the third from the other side.

Place nail 1-1/2" min. from end of Joist. If nails are close to edge of plate, drive at an angle to reduce splitting.

B3 BEAM CONNECTION

Structurally adequate hanger

Hanger shall apply load equally to each ply or special design required

P4 STEEL AND WOOD COLUMN

Framing details such as joists and sheathing shall be provided to prevent beam from twisting or rotating at support

Simpson® PC or CC, USP® PCM or CC or equal post or column cap

Provide specified bearing length "L"

Simpson® CCO, USP® CCS or equal column cap

P5 A7v SOLID RIM AS STARTER JOIST

8d nails at 6" o.c. toe-nailed from outside of building.

Provide blocking for lateral support as required. LP LSL, LP LVL or LP Rim Board may be used as Starter Joist

B3c JOIST END OVER INTERIOR SUPPORT

LP LSL, LP LVL or LP Rim Board may be used as Blocking

Blocking is required when Joists end at support

lapping

butting

B3i BLOCKING AT INTERIOR SUPPORT

Blocking is not required if no wall above unless Joists end at support. Blocking may be required at interior supports by project designer or by code for seismic design

Bearing wall aligned under wall above

LP LSL, LP LVL or LP Rim Board may be used as Blocking

P6 Side Loaded Beam

Verify hanger, stiffener, and filler requirements.

Prevent the beam from rotating by using rim or blocking

Refer to Connection Assemblies for Multi-Ply connection information. Side loads are not recommended for beams over 5-1/2" wide unless loads are equally applied to both faces.

B7 CONCRETE WALL

NOTE: Protect wood from contact with concrete as required by code

Simpson® GLB, USP® LBS or equal seat

B4i JOIST NAILING AT INTERIOR SUPPORT

Secure Joist to plate with three (3) 8d or 10d box nails. Toe nail two nails from on one side the third from the other side.

B9 Clear Span Bracing- Strapping (when called for by joist design/layout)

Attach Strapping to Joists with (2) 8d nails per joist

1x4 Strapping, lapped

Nail Strapping and Decking to Blocking with (3) 8d nails

Tie Strapping to Wall or Solid Blocking every 25' max.

B9b Clear Span Bracing- Blocking (when called for by joist design/layout)

(2) 16d nails per end, top and bottom, or (4) 8d or 10d box nails per end when toe nailing, 2-top and 2-bottom.

Q1 Window / Door Header

Provide restraint at supports to ensure lateral stability

Rim Board

Verify unbraced length when designing dropped headers

Provide specified or prescriptive bearing length

Q2 WINDOW / DOOR HEADER

Continuous plate

Provide specified or prescriptive bearing length

C1i Load Bearing Cantilever Detail

APA-Rated 23/32" OSB (or equal) closure, or as required by code

As Designed

LP Blocking*

* LP LSL, LP LVL or LP Rim Board may be used as Blocking

D2 POST LOADS

Squash blocks (cripples) required under all post loads

R9 DON'T bore holes or notch unless reviewed by a design professional.

Exception: Small holes may be drilled in accordance with the Beam Hole Details.