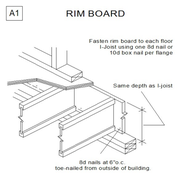
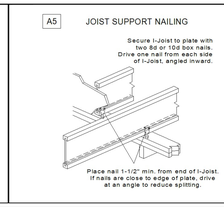
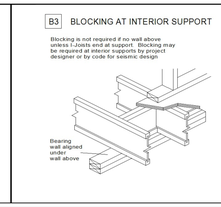
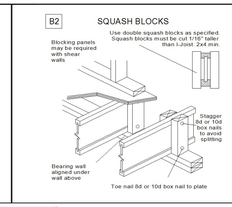
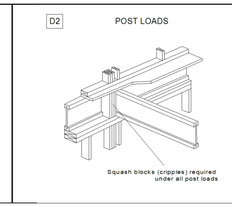
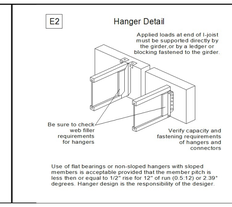


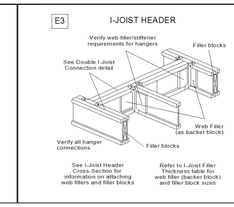


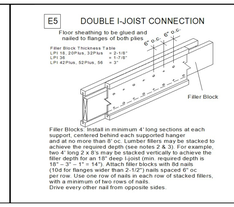


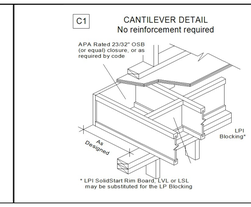


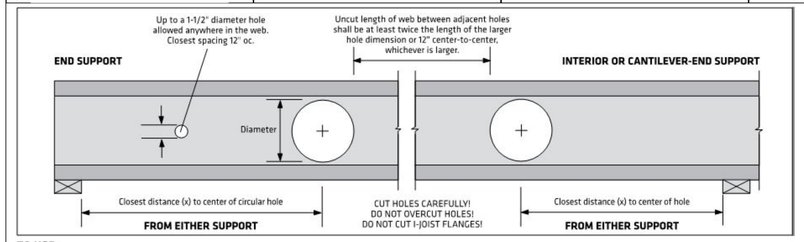












TO USE:

1. Select the required series and depth.
2. Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
3. Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
4. Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
5. The intersection of the Clear Span row and Hole Diameter column gives the minimum distance from the inside face of bearing to the center of a circular hole.
6. Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support – Hole Diameter						Distance from Interior or Cantilever-End Support – Hole Diameter					
		2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
14"	14'	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
	18'	1'-0"	1'-0"	1'-9"	3'-1"	4'-6"	-	1'-8"	2'-10"	3'-11"	5'-1"	6'-3"	-
	22'	1'-5"	2'-9"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	6'-5"	7'-7"	8'-9"	-
	26'	3'-8"	5'-0"	6'-5"	8'-0"	9'-8"	-	6'-8"	7'-10"	8'-11"	10'-1"	11'-4"	-
16"	18'	1'-0"	1'-0"	1'-4"	2'-5"	3'-7"	4'-11"	1'-6"	2'-6"	3'-6"	4'-6"	5'-6"	6'-6"
	22'	1'-4"	2'-5"	3'-6"	4'-9"	6'-1"	7'-5"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"
	26'	3'-6"	4'-8"	5'-11"	7'-2"	8'-7"	10'-1"	6'-6"	7'-6"	8'-6"	9'-6"	10'-6"	11'-9"
	30'	5'-9"	7'-0"	8'-4"	9'-9"	11'-3"	12'-10"	9'-0"	10'-0"	11'-0"	12'-0"	13'-2"	14'-8"

DESIGN ASSUMPTIONS:

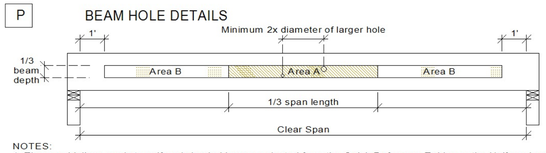
1. The hole locations listed above are valid for floor joists supporting only uniform loads. The total uniform load shall not exceed 130 plf (e.g., 40 psf Live Load and 25 psf Dead Load spaced 24" oc).
2. Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
3. Clear Span has not been verified for these joists and is shown for informational purposes only! Verify that the joist selected will work for the span and loading conditions needed before checking hole location.
4. The maximum hole depth for circular holes is the I-joist Depth less 4", except the maximum hole depth is 6" for 9-1/2" LPI joists, and 8" for 11-7/8" LPI joists.
5. Holes cannot be located in the span where designated "-", without further analysis by a design professional.

NOTES:

1. Holes may be placed anywhere within the depth of the joist. A minimum 1/4" clear distance is required between the hole and the flanges.
2. Round holes up to 1-1/2" diameter may be placed anywhere in the web.
3. Perforated "knockouts" may be neglected when locating web holes.
4. Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
5. Multiple holes shall have a clear separation along the length of the joist of at least twice the length of the larger adjacent hole, or a minimum of 12" center-to-center, whichever is greater.
6. Multiple holes may be spaced closer provided they fit within the boundary of an acceptable larger hole. Example: two 3" round holes aligned parallel to the joist length may be spaced 2" apart (clear distance) provided that a 3" high by 8" long rectangle or an 8" diameter round hole are acceptable for the joist depth at that location and completely encompass the holes.
7. For conditions not covered in this table, use LP's design software or contact your local LP® SolidStart® Engineered Wood Products distributor for more information.

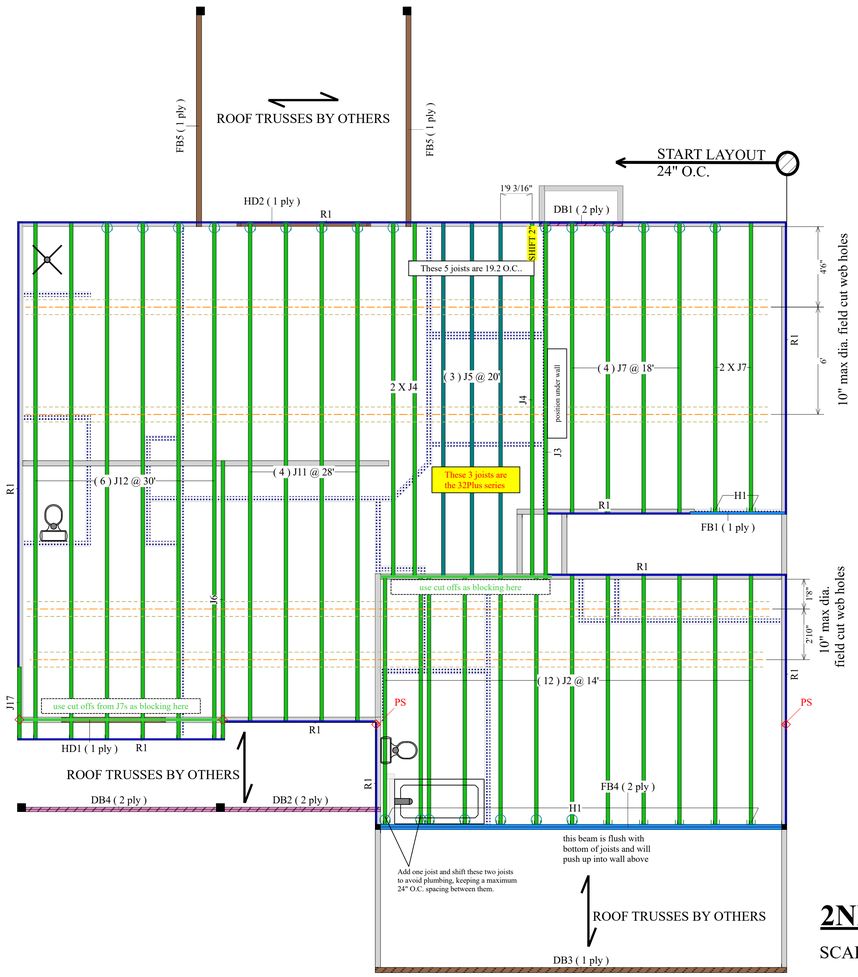
P

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.



2ND FLOOR FRAMING

SCALE: 1/4" = 1'

2nd Floor
I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J12	LPI 20Plus	2.5	14			6	30-0-0
J11	LPI 20Plus	2.5	14			4	28-0-0
J4	LPI 20Plus	2.5	14			3	20-0-0
J3	LPI 20Plus	2.5	14			1	20-0-0
J7	LPI 20Plus	2.5	14			6	18-0-0
J6	LPI 20Plus	2.5	14			1	16-0-0
J2	LPI 20Plus	2.5	14			12	14-0-0
J17	LPI 20Plus	2.5	14			1	4-0-0
J5	LPI 32Plus	2.5	14			3	20-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB5	LP-LSL 1.55E	3.5	9.25			2	14-0-0
FB1	LP-LVL 2900Fb-2.0E	1.75	14			1	6-0-0
FB4	LP-LVL 2900Fb-2.0E	1.75	20	1	2	2	24-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
HD2	LP-LSL 1.55E	3.5	9.25			1	8-0-0
HD1	LP-LSL 1.55E	3.5	9.25			1	6-0-0
DB3	LP-LSL 1.55E	3.5	11.875			1	24-0-0

Beam By Others (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB4	{2x10}			1	2	2	12-0-0
DB2	{2x10}			1	2	2	10-0-0
DB1	{2x10}			1	2	2	6-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	LP APA Rated OSB 1.125 X 14	1.125	14			13	12-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	14	IUS2.56/14 (Min)			12 10dx1 1/2	

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(910) 867-9185

Project
CL2310 CP GR CT

Created
October 01, 2014

Layout Name
CL2310 CP GR CT

Description
Caviness Land
CL2310 CP GR CT

Designer
Kyle Militzer

Revised
April 24, 2020

2nd Floor

Design Method	ASD (USA)
Building Code	IBC/IRC 2015

Floor

Loads	
Live	40
Dead	10
Deflection Joist	
LL Span L/	480
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	
Decking	OSB 23/32 APA Rated Sturd-I-Floor
Fastener	Nailed & Glued

Legend

PS	Point Load Support
	Load from Above
	3.5" Non-Brg Wall
	5.5" Non-Brg Wall
	Wall
	Partition Wall (Non-Load-Bearing)
	Wall Opening
	LP APA Rated OSB 1.125 X 14
	LPI 20Plus 14
	LPI 32Plus 14
	LP-LSL 1.55E 3.5 X 9.25 (Dropped)
	LP-LSL 1.55E 3.5 X 9.25
	LP-LSL 1.55E 3.5 X 11.875 (Dropped)
	LP-LVL 2900Fb-2.0E 1.75 X 14
	LP-LVL 2900Fb-2.0E 1.75 X 20 1.5 X 9.25 (Dropped)

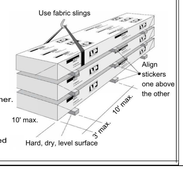
Important Notes	WARNING: Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.

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.



Calculated Structured Designs