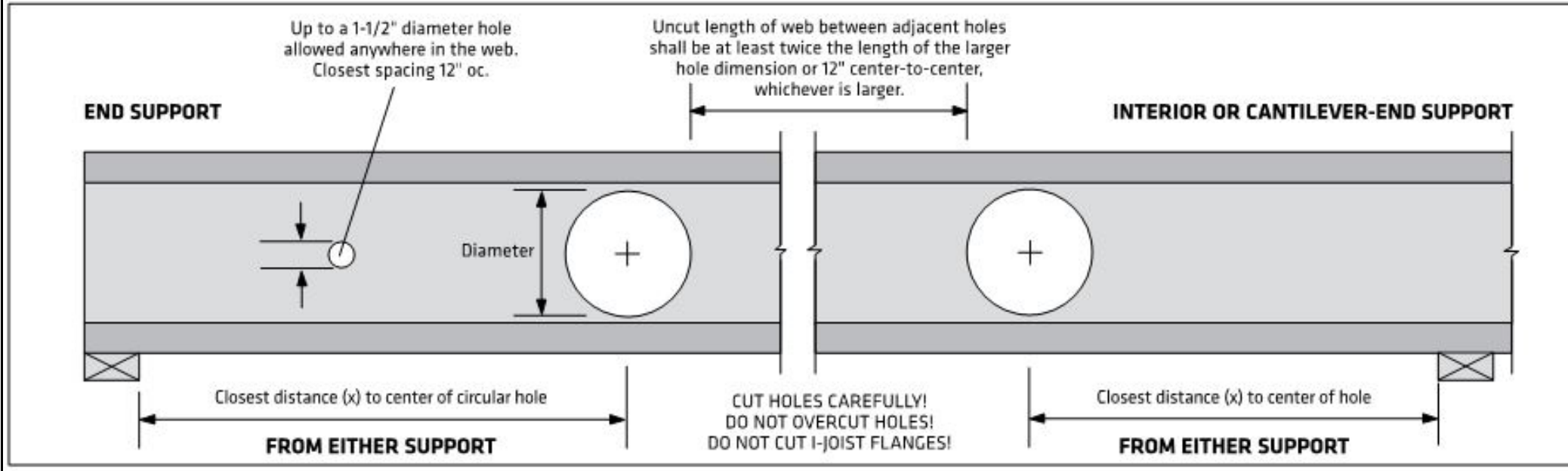


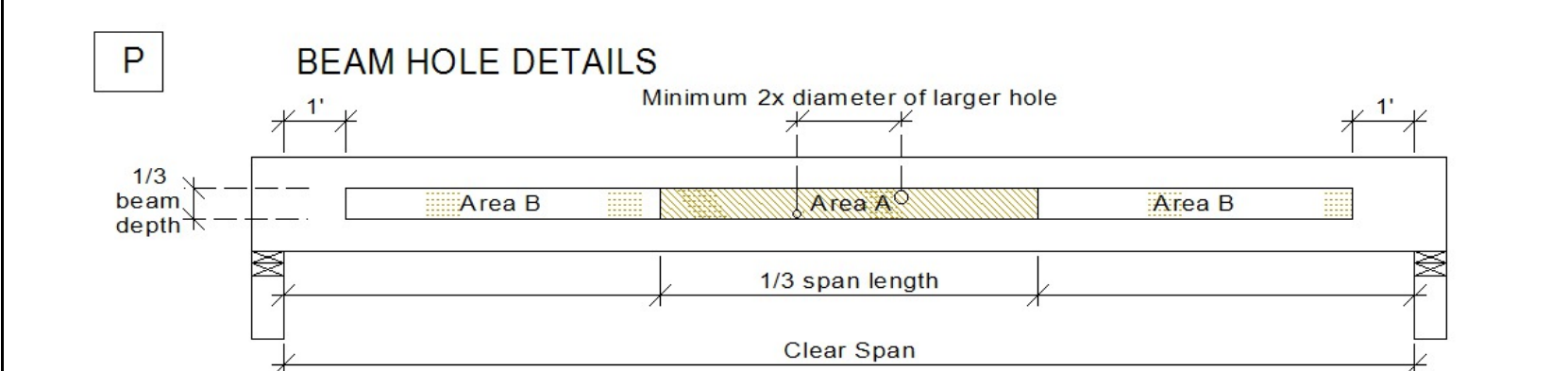
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Duluth, GA 30097
888-613-5078



- TO USE:**
- Select the required series and depth.
 - Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
 - Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
 - Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
 - 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.
 - Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support						Distance from Interior or Cantilever-End Support						
		Hole Diameter						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'-6"	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:**
- 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).
 - Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
 - 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.
 - 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" I-joists, and 8" for 11-7/8" LPI joists.
 - Holes cannot be located in the span where designated "X", without further analysis by a design professional.



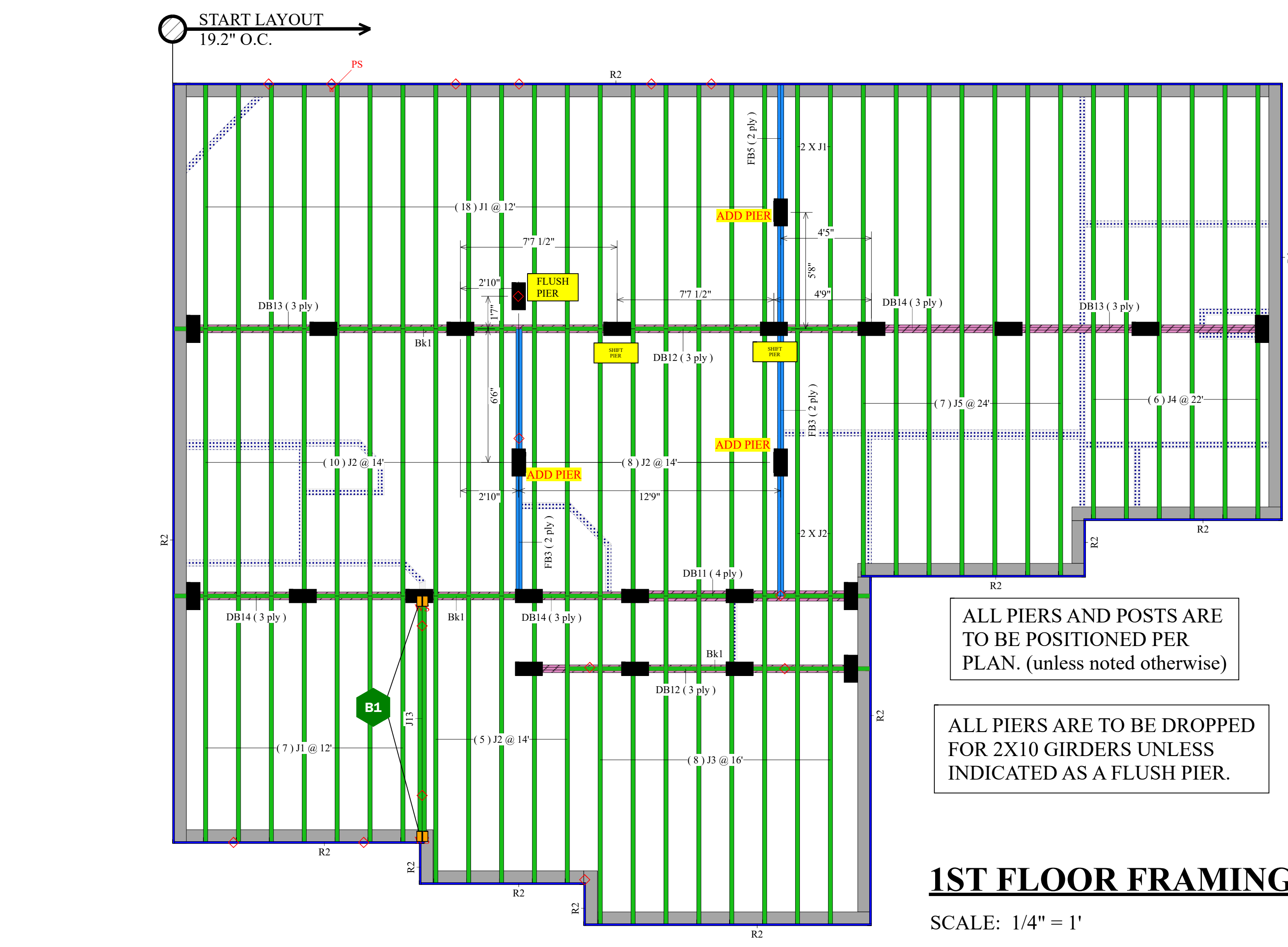
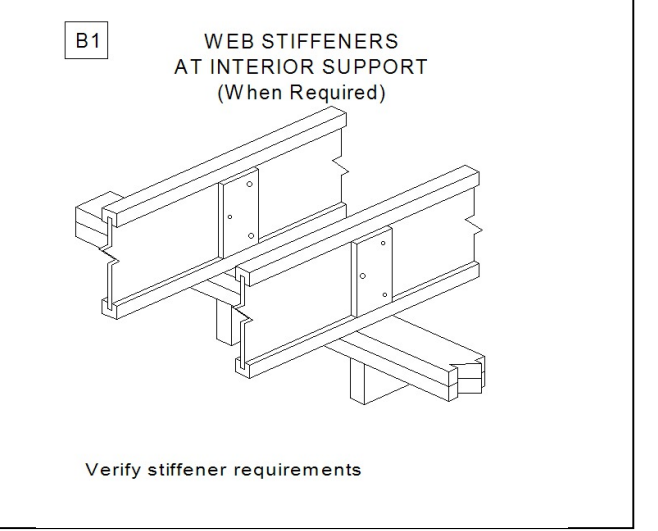
- NOTES:**
- These guidelines apply to uniformly loaded beams selected from the Quick Reference Tables or the Uniform Load Tables or designed with LP's design/specification software only. For all other applications, such as beams with concentrated loads, please contact your LP SolidStart® Engineered Wood Products distributor for assistance.
 - 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".
 - Rectangular holes are NOT allowed.
 - DO NOT drill holes in cantilevers without prior approval from the project designer.
 - Other hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your LP SolidStart Engineered Wood Products distributor.
 - 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.
 - Protect plumbing holes from moisture.

Web Stiffeners, Rim & Blocking, Nailing

WEB STIFFENER REQUIREMENTS

Series	Depth	Minimum Thickness	Maximum Height	Nail Size*	Nail Qty
LPI 18	9-1/2"	23/32"	8-3/8"	8d (2-1/2")	3
LPI 20Plus	10-7/8"	23/32"	8-3/8"	8d (2-1/2")	3
LPI 23Plus	14"	23/32"	10-7/8"	8d (2-1/2")	3
	16"	23/32"	12-7/8"	8d (2-1/2")	3
LPI 36	17-7/8"	23/32"	8-3/4"	8d (2-1/2")	4
	14"	23/32"	10-7/8"	8d (2-1/2")	5
	16"	23/32"	12-7/8"	8d (2-1/2")	6
LPI 42Plus	9-1/2"	5/16"	8-3/8"	10d (3")	3
LPI 42Plus	11-7/8"	5/16"	8-3/4"	10d (3")	3
LPI 52Plus	16"	5/16"	10-7/8"	10d (3")	3
	18"	5/16"	12-7/8"	10d (3")	3
LPI 56	11-7/8"	5/16"	8-3/4"	10d (3")	4
	14"	5/16"	10-7/8"	10d (3")	5
	16"	5/16"	12-7/8"	10d (3")	6

* Nails may be Box or Common.



ALL PIERS AND POSTS ARE TO BE POSITIONED PER PLAN. (unless noted otherwise)

ALL PIERS ARE TO BE DROPPED FOR 2X10 GIRDERS UNLESS INDICATED AS A FLUSH PIER.

1ST FLOOR FRAMING

SCALE: 1/4" = 1'



Dealer
84 Lumber-Fayetteville #2307
620 Belt Road
Fayetteville, NC 28301
(910) 867-9185

Project
CL2977 280 Forest GR Crawl
Created
March 24, 2016
Layout Name
CL2977 280 Forest GR Crawl
Description
Caviness Land
CL2977 280 Forest GR Crawl

Designer
Kyle Militzer
Revised
May 26, 2022

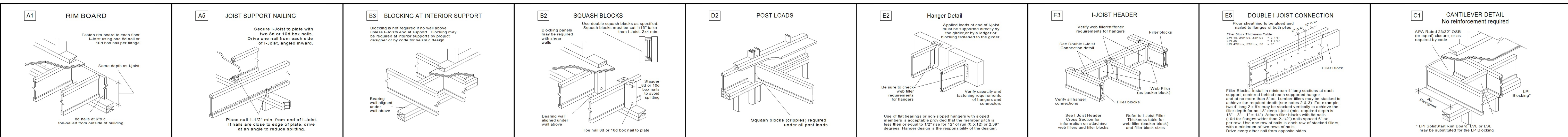
1st Floor

Design Method	ASD (USA)
Building Code	IRC 2012
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 Flush Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Dropped Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Header	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	
OSB	23/32 APA Rated Sturd-I-Floor
Fastener	Nailed & Glued

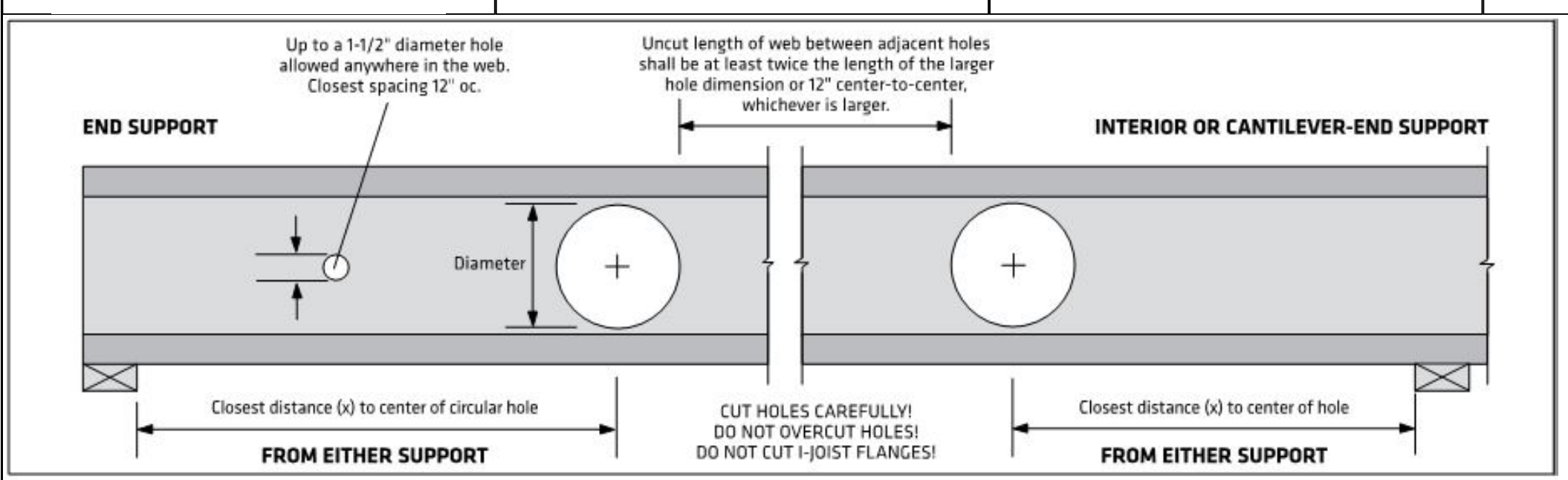
Legend

- WS Web Stiffener
- WS In Hanger Label Denotes Web Stiffener
- PS Point Load Support
- Load From Above
- Exterior Bearing Wall
- Interior Bearing Wall
- Non-Bearing Wall
- LP OSB/LSL Rim (Color Varies)
- LPI 18/20 I Joist
- LPI 32 I Joist
- LPI 42/56 I Joist
- Triforce/Open Joist (Color Varies)
- Bailey ProJoist TE Truss
- Dropped Beam
- Flush Beam
- LP SolidStart Joist (Color Varies By Product)
- Field Framed Pony Wall
- Column





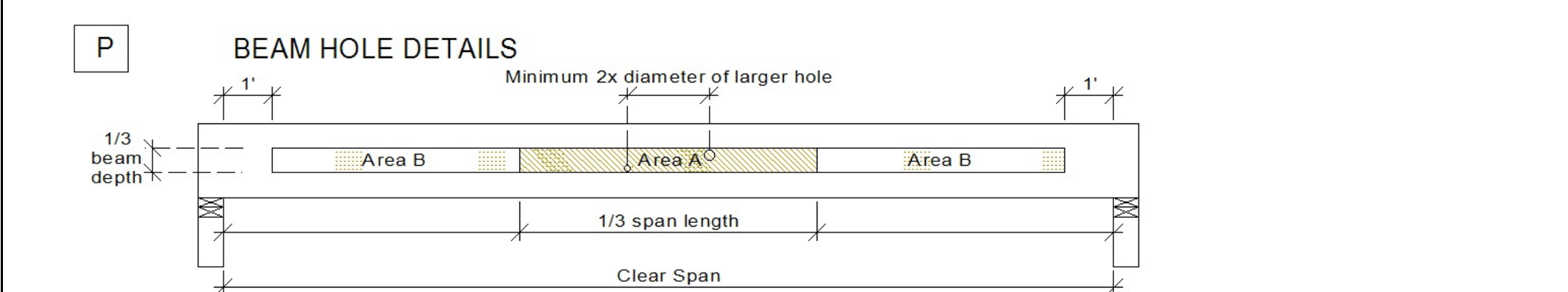
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Duluth, GA 30097
888-613-5078



- TO USE:**
- Select the required series and depth.
 - Determine the support condition for the nearest bearing: end support or interior support (including cantilever-end supports).
 - Select the row corresponding to the required Clear Span. For spans between those listed, use the next largest value.
 - Select the column corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
 - 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.
 - Double check the distance to the other support, using the appropriate support condition.

Depth	Clear Span (ft)	Distance from End Support						Distance from Interior or Cantilever-End Support					
		Hole Diameter						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:**
- 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).
 - Hole location is measured from the inside face of bearing to the center of a circular hole, from the closest support.
 - 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.
 - 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.
 - Holes cannot be located in the span where designated "X", without further analysis by a design professional.
- NOTES:**
- 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.
 - Round holes up to 1-1/2" diameter may be placed anywhere in the web.
 - Perforated "knockouts" may be neglected when locating web holes.
 - Holes larger than 1-1/2" are not permitted in cantilevers without special engineering.
 - 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.
 - 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.
 - 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.



- NOTES:**
- 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.
 - 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".
 - Rectangular holes are NOT allowed.
 - DO NOT drill holes in cantilevers without prior approval from the project designer.
 - Other hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your LP SolidStart Engineered Wood Products distributor.
 - 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.
 - Protect plumbing holes from moisture.

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 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.

2nd Floor Beam By Others

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB5	[2x10]			1	2	2	14-0-0
DB3	[2x10]			1	2	2	10-0-0
HD2	[2x10]			1	2	2	10-0-0
DB2	[2x10]			1	2	2	8-0-0
DB1	[2x10]			1	2	2	4-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	1	HUS1.81/10			30 16d	10 16d
H2	2	IUS2.56/14 (Min)			12 10dx1 1/2	

2nd Floor I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J11	LPI 20 Plus	2.5	14			1	18-0-0
J4	LPI 20 Plus	2.5	14			26	18-0-0
J7	LPI 20 Plus	2.5	14			6	14-0-0
J3	LPI 20 Plus	2.5	14			6	14-0-0
J9	LPI 20 Plus	2.5	14			2	6-0-0
J6	LPI 20 Plus	2.5	14			1	6-0-0
FB2	LPI 20 Plus	2.5	14			1	6-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
FB1	LP-LVL 2900Fb-2.0E	1.75	11.875			1	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
DB7	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	18-0-0
DB6	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	12-0-0
HD3	LP-LVL 2900Fb-2.0E	1.75	9.25	1	2	2	8-0-0
HD4	LP-LVL 2900Fb-2.0E	1.75	16	1	2	2	22-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	LP APA Rated OSB 1.125 X 14	1.125	14			16	12-0-0



Legend

- WS - Web Stiffener
- WS - In Hanger Label Denotes Web Stiffener
- PS - Point Load Support
- Load From Above
- Exterior Bearing Wall
- Interior Bearing Wall
- Non-Bearing Wall
- LP OSB/LSL Rim (Color Varies)
- LPI 18/20 I Joist
- LPI 32 I Joist
- LPI 42/56 I Joist
- Triforce/Open Joist (Color Varies)
- Bailey ProJoist TE Truss
- Dropped Beam (Color Varies By Product)
- Flush Beam (Color Varies By Product)
- Field Framed Pony Wall
- Column

2nd Floor

Design Method	ASD (USA)
Building Code	IRC 2012

Floor

Loads	
Live	40
Dead	10

Deflection Joist

LL Span L/	
TL Span L/	480
LL Cant 2L/	240
TL Cant 2L/	360

Deflection Flush Girder

LL Span L/	
TL Span L/	360
LL Cant 2L/	240
TL Cant 2L/	360

Deflection Dropped Girder

LL Span L/	
TL Span L/	360
LL Cant 2L/	240
TL Cant 2L/	360

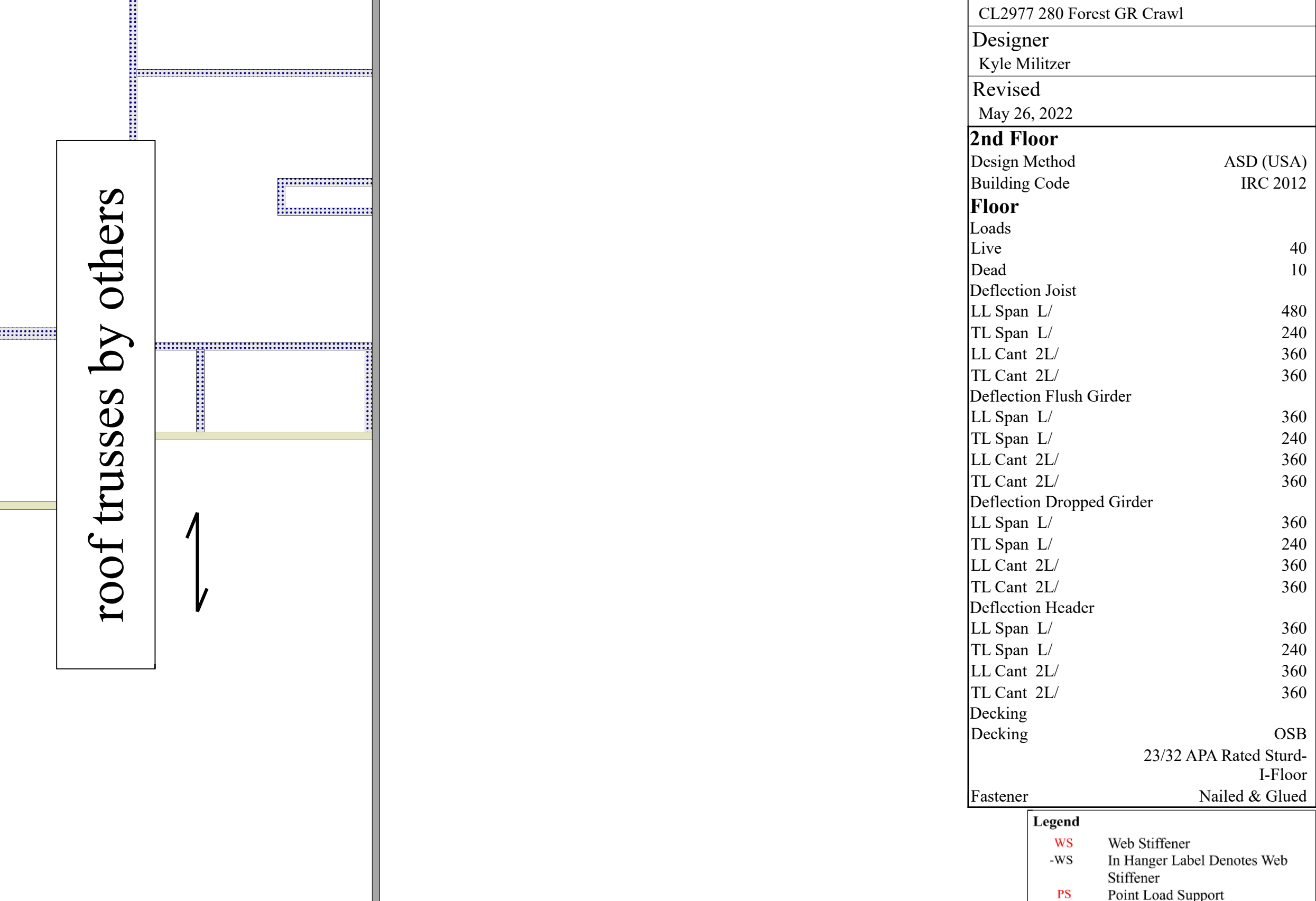
Deflection Header

LL Span L/	
TL Span L/	360
LL Cant 2L/	240
TL Cant 2L/	360

Decking

OSB	
23/32 APA Rated Sturd-I-Floor	

Fastener Nailed & Glued



2ND FLOOR FRAMING

SCALE: 1/4" = 1'