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Project  
25977

Created  
April 07, 2021

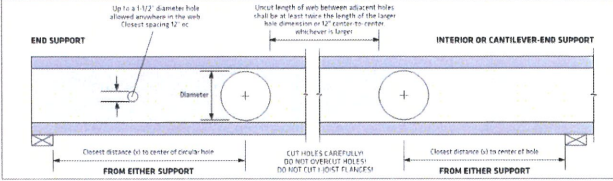
Layout Name  
202104-25977

Description  
Caviness Land  
CL2338H-4-Alexander  
Designer  
Kyle Miltzer

2nd Floor  
Design Method ASD (USA)  
Building Code IRC 2018

Category	Item	Value
Loads	Live	40
	Dead	10
	Deflection Joist	480
	TL Span L	240
Deflection Floor Girder	LL Span L	360
	TL Span L	240
	Deflection Dropped Girder	360
	LL Span L	240
Deflection Header	TL Span L	360
	LL Span L	240
Decking	OSB	23/32 APA Rated Shear

Category	Item	Value
Joist/Fastener	Web Stiffener	Nailed & Glued
	Shifter	Load from Above
Wall	3.5" Ext Wall	
	3.5" Int Wall	
	3.5" Non-Big Wall	
	5.5" Non-Big Wall	
	Wall Opening	
Beam/Girder	LP APA Rated OSB 1.125 X 14	
	LP 20 Plus 14	
	LP-VL 2900Fb-2.0E 1.75 X 9.25 (Dropped)	
	LP-VL 2900Fb-2.0E 1.75 X 9	
	LP-VL 2900Fb-2.0E 1.75 X 14	
Supported Member	LP-VL 2900Fb-2.0E 1.75 X 20	
	1.5 X 2.5 (Dropped)	



**TO USE:**

- Select the required sizes per table.
- Determine the support location to the nearest framing and support or interior support (including cantilever end support).
- Select the size corresponding to the required Clear Span. For spans between those listed use the next largest value.
- Select the joist corresponding to the required hole diameter. For diameters between those listed, use the next largest value.
- The intersection of the Clear Span row and the 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.

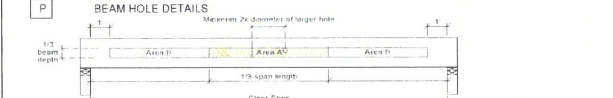
Depth	Clear Span (ft)	Distance from End Support						Distance from Interior or Cantilever-End Support					
		Hole Diameter						Hole Diameter					
		2"	4"	6"	8"	10"	12"	2"	4"	6"	8"	10"	12"
14"	14	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	-	1'-0"	1'-0"	1'-5"	2'-7"	3'-9"	-
	18	1'-0"	1'-0"	1'-0"	1'-0"	4'-6"	-	1'-0"	1'-0"	3'-11"	5'-4"	6'-9"	-
	22	1'-5"	2'-0"	4'-1"	5'-6"	7'-0"	-	4'-2"	5'-4"	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 plf Live Load and 25 plf Dead Load spaced 24" o.c.).
- Hole location is measured from the inside face of bearing to the center of a circular hole, from the joist 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 joist depth less 4". Accept the maximum hole depth is 5" for 9-1/2" LFL joists, and 6" for 11-7/8" LFL joists.
- Holes cannot be located in the span where designated "X" without further analysis by a design professional.

**NOTES:**

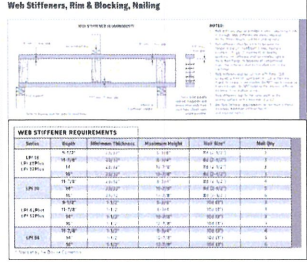
- Holes may be placed anywhere within the depth of the joist. A minimum 1/4" clear distance is required between the hole and the flanges.
- Round holes up to 1 1/2" diameter may be placed anywhere in the web.
- Reinforced "knockouts" may be neglected when locating web holes.
- Holes larger than 1-1/2" 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 17" long by 8" long rectangle or an 8" diameter round hole are available for the joist depth at that location and completely encompass the holes.
- For conditions not covered in this table use LP design software or contact your local LP Sales/Engineer Wood Products distributor for more information.



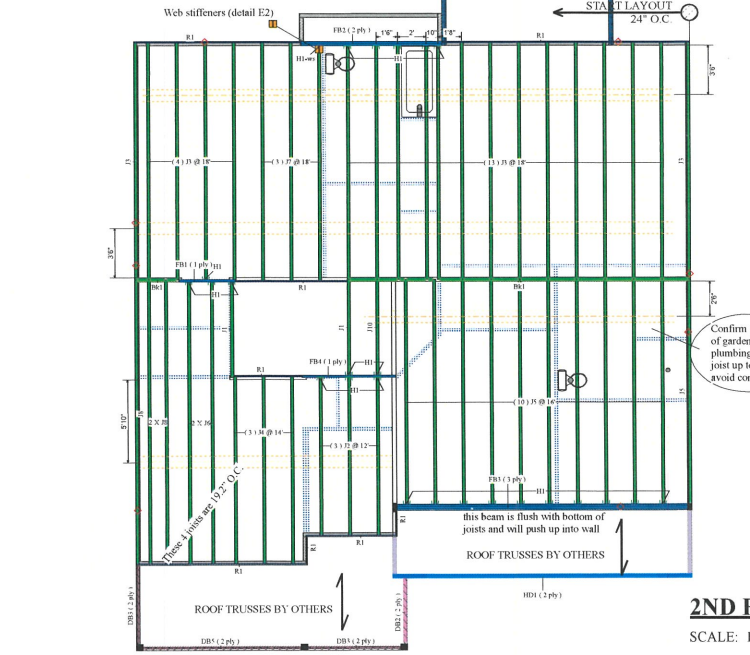
**NOTES:**

- The joist-to-joist gaps are uniformly loaded beams spanning from the Quick Reference Tables or the Uniform Load Tables developed with LPS design specifications software only. Use all other applications, such as joists with concentrated loads, please contact your local LP Sales/Engineer Wood Products distributor for assistance.
- Round holes can be drilled anywhere in Area A, provided that the hole diameter is not greater than the minimum spacing between joists. The maximum hole size is 1-1/2" for joists up to 9-1/2" and 2" for joists greater than 9-1/2".
- Use 1/2" thick plates in the hole.
- These hole sizes and configurations MAY be possible with further engineering analysis. For more information, contact your local LP Sales/Engineer Wood Products distributor.
- Use 1/2" holes. The holes may be drilled in Area B to accommodate wiring and/or water lines. These holes shall be at least 1/2" from the bottom and top of the beam. For beams, channels that 1-1/2" holes holes at mid-depth.
- Check a spanning joist from outside.

**Important Note:** We warrant LPS joists to perform as intended for the intended application, provided that the joist is installed and used in accordance with the design specifications and all applicable codes and standards. We do not warrant LPS joists for use in applications not specified in the design specifications or for use in applications where the joist is subjected to loads or conditions not specified in the design specifications. We do not warrant LPS joists for use in applications where the joist is subjected to loads or conditions not specified in the design specifications. We do not warrant LPS joists for use in applications where the joist is subjected to loads or conditions not specified in the design specifications.



Joist	Depth	Minimum Spacing	Minimum Height	Max Spacing	Min Spacing
LP 14	14"	12"	12"	12"	12"
LP 16	16"	12"	12"	12"	12"
LP 18	18"	12"	12"	12"	12"
LP 22	22"	12"	12"	12"	12"
LP 26	26"	12"	12"	12"	12"
LP 30	30"	12"	12"	12"	12"



**2ND FLOOR FRAMING**  
SCALE: 1/4" = 1'

