

Request for
Engineering Seal



#:T20210429430

To:	Engineer:	Norm Scheel Structural Engineer
	Phone:	916.536.9585
	Email:	

From:	Name:	Reid Williams
	Phone:	

Work:	Task:	Repair and Seal
	# Designs :	3
	Extra Pages:	

Project Information			
Project Name:	21-04-1200 - 201262EW1-Lot 514 Carolina Lakes		
Project Address:	,,		
State Seal:	North Carolina	Document to Seal:	
Notes:			

Email	
Customer:	JohnTurner@uslumber.com
Additional:	Tuong.Banh@lpcorp.com

Hard Copy			
Send:	Email		
Company:	US Lumber - Corp		
Attn:	John Turner		
Address:	3312 N Berkeley Lake Rd NW		
City:	Duluth		
State:		Zip:	30096
Country:			

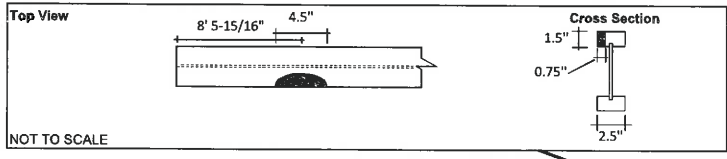
Regular Mail							
Also Mail:	No	# Copies:		Delivery Method:		Account #:	
Company:				Phone:			
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Notes:

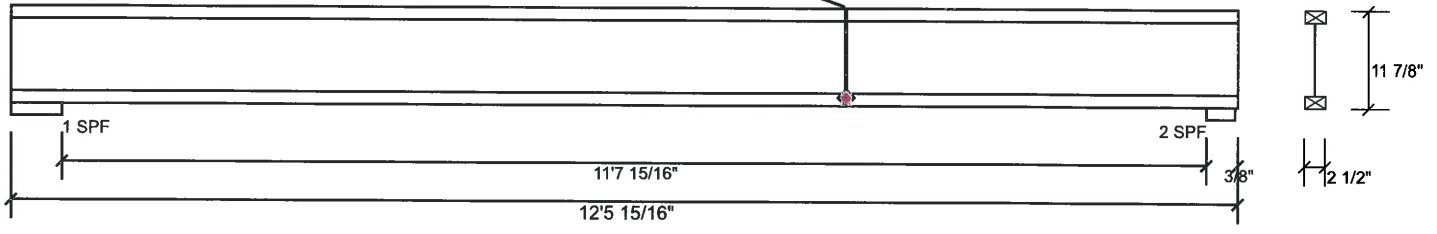
Friday, April 30, 2021

J14-i670 LPI 20Plus 11.875" - PASSED

Level: Level
 Ticket: T20210429430



No Repair Required
 This design is for the referenced project only and should not be used with any other project or design.



Member Information

Type: Joist	Application: Floor
Spacing: 19.2" o.c.	Design Method: ASD
Moisture Condition: Dry	Building Code: IRC 2018
Deflection LL: 480	Load Sharing: No
Deflection TL: 240	Deck: 23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance: Normal - II	
Temperature: Temp <= 100°F	

Reactions PATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	304	76	0	0	0
2	Vertical	295	74	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.125"	Vert	33%	76 / 304	380	L_	D+L
2 - SPF	3.500"	Vert	32%	74 / 295	369	LL	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1042 ft-lb	6'4 1/8"	3755 ft-lb	0.277 (28%)	D+L	L_
Shear	354 lb	12'2 13/16"	1485 lb	0.238 (24%)	D+L	LL
LL Defl inch	0.067 (L/2107)	6'4 1/8"	0.295 (L/480)	0.228 (23%)	L	L_
TL Defl inch	0.084 (L/1686)	6'4 1/8"	0.589 (L/240)	0.142 (14%)	D+L	L_
LL Cant	-0.000 (2L/1703)	Rt Cant	0.200 (2L/480)	0.002 (0%)	L	L_
TL Cant	-0.001 (2L/1363)	Rt Cant	0.300 (2L/240)	0.002 (0%)	D+L	L_

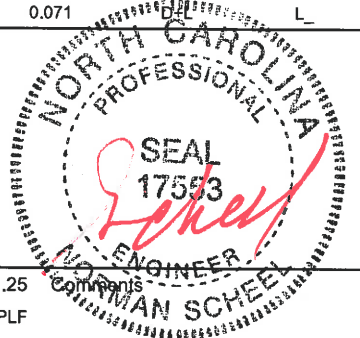
Location Analysis

Analysis Type	Location	Max Value	Ld. Comb.	Ld. Case
Pos Moment	8'5 15/16"	903 ft-lb	D+L	L_
Shear	8'5 15/16"	129 lb	D+L	LL
Down Defl	8'5 15/16"	0.071	D+L	L_

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Dead Load Deflection: Instant = 0.017", Long Term = 0.025".
- 3 Bottom flange must be laterally braced at a maximum of 10'5" o.c.

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ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25
1	Uniform			12 PLF	48 PLF	0 PLF	0 PLF	0 PLF

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.
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Manufacturer Info

Louisiana-Pacific Corp
 414 Union Street, Suite 2000
 Nashville, TN 37219
 (888) 820-0325
 www.lpcorp.com
 APA: PR-L238, ICC-ES: ESR-1305,
 LADBS: RR-25099, Florida: FL15401

U.S. Lumber
 2160 Satellite Blvd., Suite 450, GA
 U.S.A
 30097
 888-613-5078

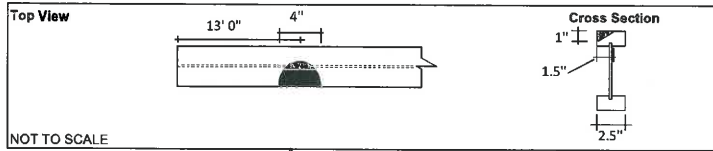


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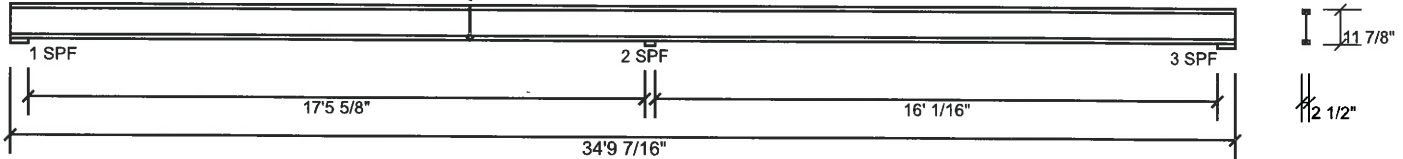
J36-i688 LPI 20Plus 11.875" - PASSED

Level: Level

Ticket: T20210429430



No Repair Required
 This design is for the referenced project only and should not be used with any other project or design.



Member Information

Type: Joist	Application: Floor
Spacing: 16" o.c.	Design Method: ASD
Moisture Condition: Dry	Building Code: IRC 2018
Deflection LL: 480	Load Sharing: No
Deflection TL: 240	Deck: 23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance: Normal - II	
Temperature: Temp <= 100°F	

Reactions PATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	532 (-32)	120	0	0	0
2	Vertical	1390	348	0	0	0
3	Vertical	488 (-53)	102	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.125"	Vert	56%	118 / 529	647	L_	D+L
2 - SPF	3.500"	Vert	75%	350 / 1402	1752	LL	D+L
3 - SPF	6.125"	Vert	50%	100 / 485	585	L_	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2987 ft-lb	18'1 1/2"	3755 ft-lb	0.795 (80%)	D+L	LL
Pos Moment	2398 ft-lb	7'11 11/16"	3755 ft-lb	0.638 (64%)	D+L	L_
Shear	920 lb	18'1 1/2"	1485 lb	0.619 (62%)	D+L	LL
LL Defl inch	0.316 (L/672)	8'10 5/16"	0.442 (L/480)	0.714 (71%)	L	L_
TL Defl inch	0.374 (L/567)	8'9 3/8"	0.884 (L/240)	0.423 (42%)	D+L	L_

Location Analysis

Analysis Type	Location	Max Value	Ld. Comb.	Ld. Case
Neg Moment	13'	-592 ft-lb	D+L	L_
Pos Moment	13'	1325 ft-lb	D+L	L_
Shear	13'	484 lb	D+L	LL
Down Defl	13'	0.274	D+L	L_
Up Defl	13'	0.039	D+L	L_

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Dead Load Deflection: Instant = 0.059", Long Term = 0.088".
- 3 Bottom flange must be laterally braced at a maximum of 4'10" o.c.

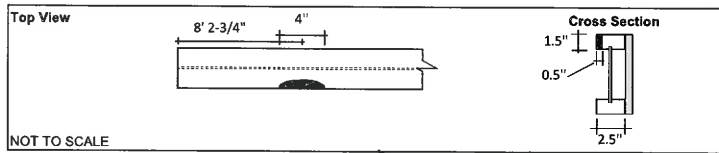
ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
	Part. Uniform	0-0-0 to 18-1-8		9 PLF	36 PLF	0 PLF	0 PLF	0 PLF	
	Part. Uniform	0-0-0 to 1-5-8		4 PLF	15 PLF	0 PLF	0 PLF	0 PLF	
	Part. Uniform	1-5-8 to 34-9-7		8 PLF	32 PLF	0 PLF	0 PLF	0 PLF	
	Part. Uniform	18-1-8 to 34-9-7		8 PLF	32 PLF	0 PLF	0 PLF	0 PLF	

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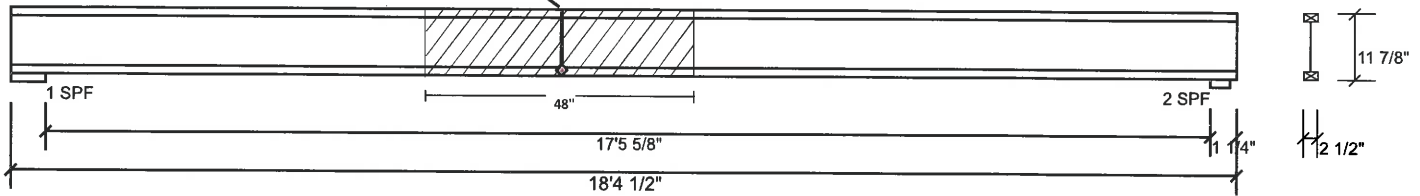
<p>Notes</p> <p>This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.</p> <p>Copyright 2020 All rights reserved by Louisiana Pacific Corp. 414 Union St Suite 2000, Nashville, TN 37219</p>	<p>Manufacturer Info</p> <p>Louisiana-Pacific Corp 414 Union Street, Suite 2000 Nashville, TN 37219 (888) 820-0325 www.lpcorp.com APA: PR-L238, ICC-ES: ESR-1305, LADBS: RR-25099, Florida: FL15401</p>	<p>U.S. Lumber 2160 Satellite Blvd., Suite 450, GA U.S.A 30097 888-613-5078</p>
	<p>This design is valid until 9/10/2022</p>	

J20-i726 LPI 20Plus 11.875" - PASSED

Level: Level
 Ticket: T20210429430



Reinforcing Side: Back Side
 1. Attach a 1-3/4"x 11.875" x 48" piece of LP-LVL (or equal) to Top and Bottom Flanges of I-Joist as shown. Glue with a liberal amount of construction adhesive and nail with 2 rows (one row per flange) of 10d (3") nails at 6" o.c.
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Member Information

Type: Joist	Application: Floor
Spacing: 16" o.c.	Design Method: ASD
Moisture Condition: Dry	Building Code: IRC 2018
Deflection LL: 480	Load Sharing: No
Deflection TL: 240	Deck: 23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance: Normal - II	
Temperature: Temp <= 100°F	

Reactions PATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	592	148	0	0	0
2	Vertical	584	146	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.125"	Vert	64%	148 / 592	740	L_	D+L
2 - SPF	3.500"	Vert	58%	146 / 584	730	LL	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3095 ft-lb	9'2 15/16"	3755 ft-lb	0.824 (82%)	D+L	L_
Shear	704 lb	18' 1/2"	1485 lb	0.474 (47%)	D+L	LL
LL Defl inch	0.397 (L/532)	9'3"	0.440 (L/480)	0.903 (90%)	L	L_
TL Defl inch	0.497 (L/425)	9'3"	0.880 (L/240)	0.564 (56%)	D+L	L_
LL Cant	-0.007 (2L/375)	Rt Cant	0.200 (2L/480)	0.033 (3%)	L	L_
TL Cant	-0.008 (2L/300)	Rt Cant	0.300 (2L/240)	0.028 (3%)	D+L	L_

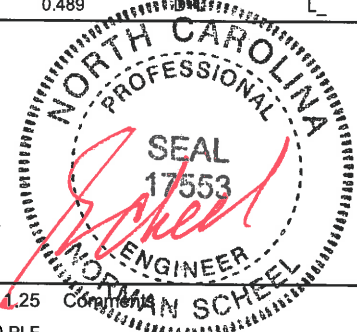
Location Analysis

Analysis Type	Location	Max Value	Ld. Comb.	Ld. Case
Pos Moment	8'2 3/4"	3054 ft-lb	D+L	L_
Shear	8'2 3/4"	81 lb	D+L	L_
Down Defl	8'2 3/4"	0.489	D+L	L_

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Dead Load Deflection: Instant = 0.099", Long Term = 0.149".
- 3 Bottom flange must be laterally braced at a maximum of 10'5" o.c.
- 4 Cantilever Upward Deflection Live Load 0.0066689 greater than recommended 0.005

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ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			16 PLF	64 PLF	0 PLF	0 PLF	0 PLF	

Notes
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