



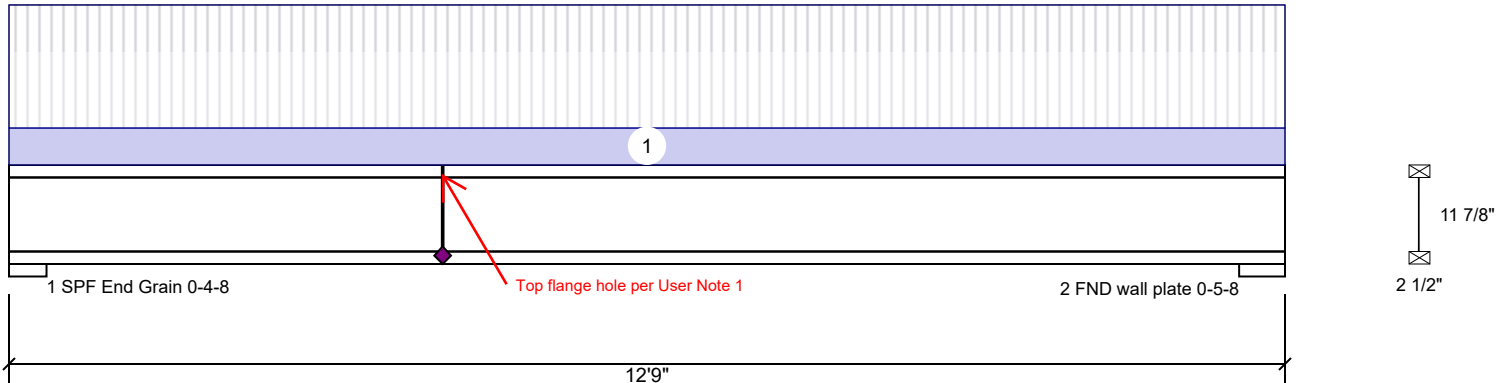
Client: New Homes Inc.
Project: Smithfield - French Country - FE / LH
Address: 394 Duncans Creek
Lillington, NC
Harnett County

Date: 5/22/2025
Input by: Hampton Horrocks
Job Name: 158 Duncans Creek
Project #: J1124-6344

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FJ13 BLI 40 11.875" - No Repair Required
See User Note 1

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2018
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	23/32 APA Rated SheathingOSB Nailed and Glued
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	2 PSF		
Snow:	10 PSF		
Wind:	10 PSF		
Construction:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	338	101	0	0	0
2	Vertical	342	103	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	Vert	31%	101 / 338	439	L	D+L
2 - FND wall plate	5.500"	Vert	31%	103 / 342	445	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1257 ft-lb	6'4"	3545 ft-lb	35%	D+L	L
Shear	413 lb	4 1/2"	1480 lb	28%	D+L	L
LL Defl inch	0.077 (L/1865)	6'4"	0.301 (L/480)	26%	L	L
TL Defl inch	0.101 (L/1435)	6'4"	0.602 (L/240)	17%	D+L	L

Location Analysis

Analysis Type	Location	Max Value	Ld. Comb.	Ld. Case
Pos Moment	4'4"	1118 ft-lb	D+L	L
Shear	4'4"	139 lb	D+L	L
Down Defl	4'4"	0.088	D+L	L

Design Notes

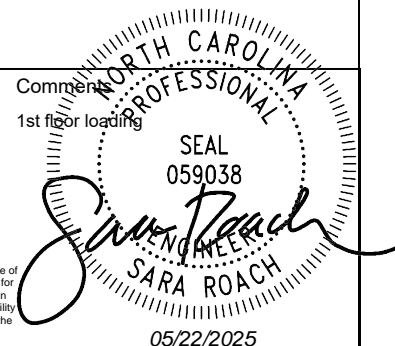
- Bearing 2: FND wall plate; fcp = 0 psi (user input)
- Provide support to prevent lateral movement and rotation at the end bearings.
- Bottom flange must be laterally braced at bearings.

User Notes

- Location Analysis represents a vertical hole through one leg of top flange. The web was not disturbed. This design based on scaling of provided photograph. No definitive cross-section dimensions of joist flange hole were provided. No repair required.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	12 PSF	40 PSF	0 PSF	0 PSF	0 PSF	1st floor loading

A seal on this document indicates acceptance of professional engineering responsibility solely for the individual component based on the design criteria shown on this sheet only. The suitability & use of this component for any structure is the responsibility of the Building Designer.



Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

- Dry service conditions, unless noted otherwise
- Joist not to be treated with fire retardant or corrosive chemicals

chemicals

Handling & Installation

- Joist flanges must not be cut or drilled
- Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
- Damaged Joists must not be used
- Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 9/3/2027

Manufacturer Info

BlueLinX
1950 Spectrum Circle, Suite 300
Marietta, GA 30067
877-914-7770
www.buildoncenter.com
ICC-ES: ESR-1262, ESR-1290

Professional Builders Supply
3941 US Highway 421 North, NC
USA
28401
910-386-4300



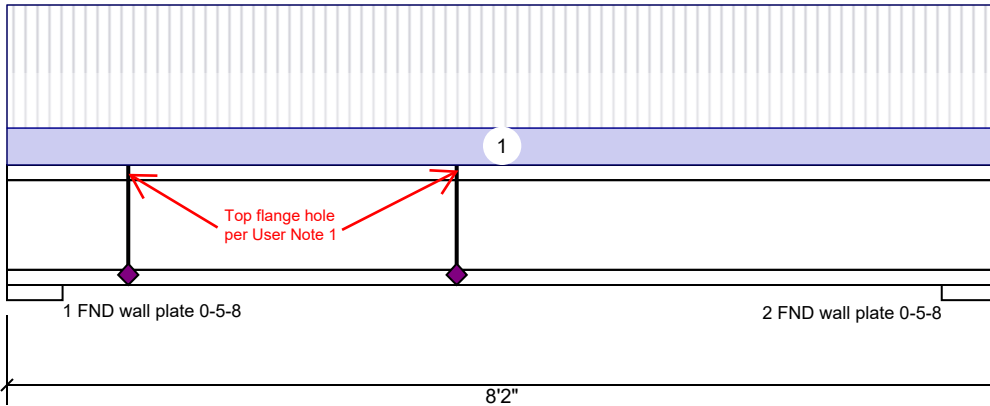
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FJ9 BLI 40 11.875" - - No Repair Required
See User Note 1

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2018
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	23/32 APA Rated Sheathing OSB Nailed and Glued
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	2 PSF		
Snow:	10 PSF		
Wind:	10 PSF		
Construction:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	218	65	0	0	0
2	Vertical	218	65	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - FND wall plate	5.500"	Vert	20%	65 / 218	283	L	D+L
2 - FND wall plate	5.500"	Vert	20%	65 / 218	283	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	471 ft-lb	4'1"	3545 ft-lb	13%	D+L	L
Shear	251 lb	7'8 1/2"	1480 lb	17%	D+L	L
LL Defl inch	0.014 (L/6137)	4'1 1/16"	0.184 (L/480)	8%	L	L
TL Defl inch	0.019 (L/4720)	4'1 1/16"	0.369 (L/240)	5%	D+L	L

Location Analysis

Analysis Type	Location	Max Value	Ld. Comb.	Ld. Case
Pos Moment	1'	142 ft-lb	D+L	L
Shear	1'	214 lb	D+L	L
Down Defl	1'	0.005	D+L	L
Pos Moment	3'8 1/2"	467 ft-lb	D+L	L
Shear	3'8 1/2"	26 lb	D+L	L
Down Defl	3'8 1/2"	0.019	D+L	L

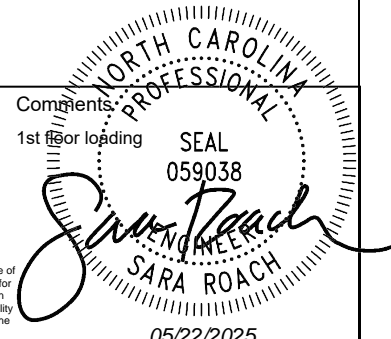
Design Notes

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User Notes

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