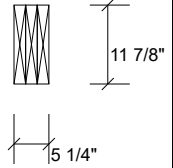
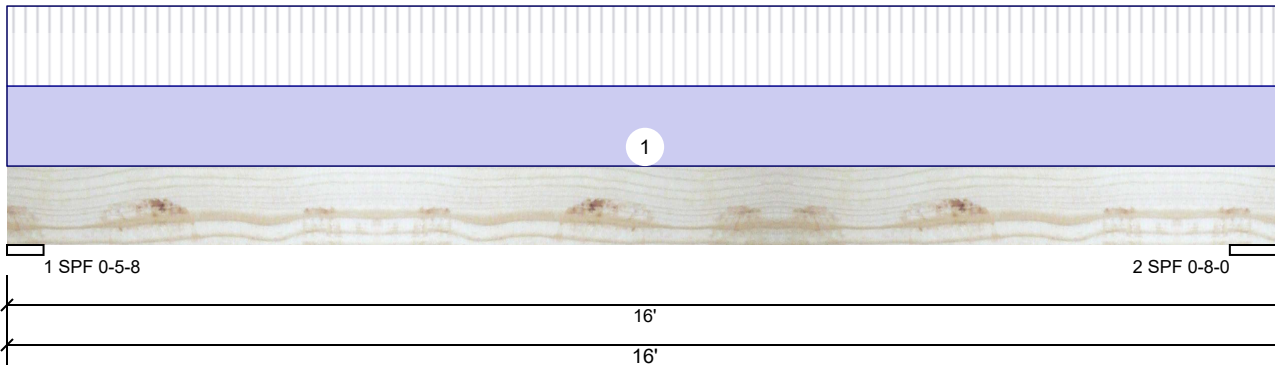


BM2-3 onCENTER 2.1E LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Level



Member Information

Type:	Girder
Plies:	3
Moisture Condition:	Dry
Deflection LL:	240
Deflection TL:	240
Importance:	Normal - II
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	12 PSF

Application:	Floor
Design Method:	ASD
Building Code:	IRC 2018
Load Sharing:	Yes
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2969	3112	0	0	0
2	Vertical	3047	3194	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	50%	3112 / 2969	6081	L	D+L
2 - SPF	8.000"	Vert	35%	3194 / 3047	6241	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	21659 ft-lb	7'10 3/4"	33194 ft-lb	0.652 (65%)	D+L	L
Unbraced	21659 ft-lb	7'10 3/4"	21659 ft-lb	1.000 (100%)	D+L	L
Shear	4983 lb	1'5 3/8"	11845 lb	0.421 (42%)	D+L	L
LL Defl inch	0.297 (L/606)	7'10 13/16"	0.750 (L/240)	0.396 (40%)	L	L
TL Defl inch	0.608 (L/296)	7'10 13/16"	0.750 (L/240)	0.811 (81%)	D+L	L

Design Notes

- 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.
- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top must be laterally braced at a maximum of 5'11 3/4" o.c.
- Bottom must be laterally braced at end bearings.
- Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	376 PLF	376 PLF	0 PLF	0 PLF	0 PLF	Roof truss load by others
	Self Weight				18 PLF					

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
- LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Manufacturer Info

BlueLinx
 1950 Spectrum Circle, Suite 300
 Marietta, GA 30067
 877-914-7770
 www.buildoncenter.com
 ICC-ES: ESR-2909, ESR-2913,
 ESR-1210

Professional Builders Supply
 3941 US Hwy. 421 North, NC
 28401
 910-386-4300

