

Client: Charlie D Smith Construction

Project: FLUSH BEAM - above & near kitchen exterior door Address:

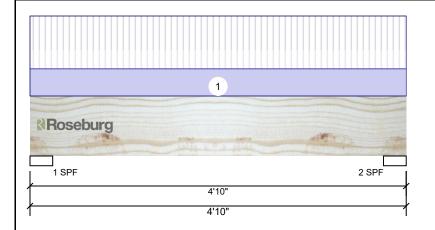
200 Gilchrist Road Cameron, N.C. 28326 Harnett County Date: 9/14/2021 Input by: RKW

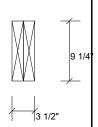
Chambers Residence

Project #: 21090009

### 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED **B3**

Level: Level





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## **Member Information**

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 240 Importance: Normal - II Temp <= 100°F Temperature:

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift) Snow Wind Brg Direction Live Dead Const 447 250 Vertical n 0 0 2 Vertical 447 250 0 0 0

# **Bearings**

Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.		
1 - SPF	3.500"	Vert	13%	250 / 447	697	L	D+L		
2 - SPF	3.500"	Vert	13%	250 / 447	697	L	D+L		

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	690 ft-lb	2'5"	13320 ft-lb	0.052 (5%)	D+L	L
Unbraced	690 ft-lb	2'5"	11751 ft-lb	0.059 (6%)	D+L	L
Shear	397 lb	1' 3/4"	6259 lb	0.063 (6%)	D+L	L
LL Defl inch	0.003 (L/15894)	2'5"	0.109 (L/480)	0.030 (3%)	L	L
TL Defl inch	0.005 (L/10191)	2'5"	0.219 (L/240)	0.024 (2%)	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 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 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			Тор	95 PLF	185 PLF	0 PLF	0 PLF	0 PLF	C.J. Load	
	Self Weight				9 PLF						

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.

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

Manufacturer Info Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Kempsville Building Material 298 Harvey Faulk Road, N.C. U.S.A 27332 919.775.1450

This design is valid until 5/24/2024