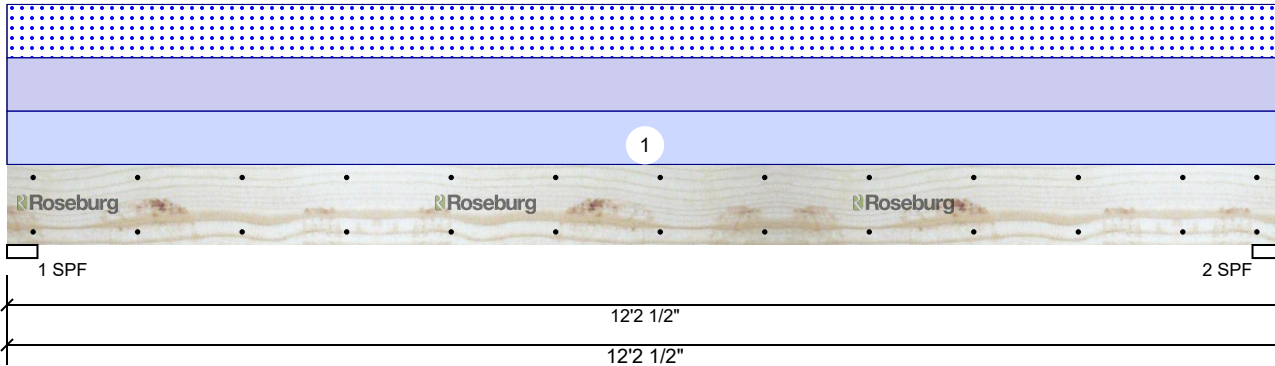


RBM2 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: ROOF



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	663	610	0	610
2	Vertical	0	663	610	0	610

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	24%	663 / 610	1273	L	D+S
2 - SPF	3.500"	Vert	24%	663 / 610	1273	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3599 ft-lb	6'1 1/4"	15318 ft-lb	0.235 (23%)	D+S	L
Unbraced	3599 ft-lb	6'1 1/4"	6494 ft-lb	0.554 (55%)	D+S	L
Shear	1058 lb	11'1 3/4"	7198 lb	0.147 (15%)	D+S	L
LL Defl inch	0.093 (L/1518)	6'1 1/4"	0.392 (L/360)	0.237 (24%)	C	L
TL Defl inch	0.194 (L/728)	6'1 1/4"	0.588 (L/240)	0.330 (33%)	D+C	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 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 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		5-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	R
	Self Weight				9 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

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

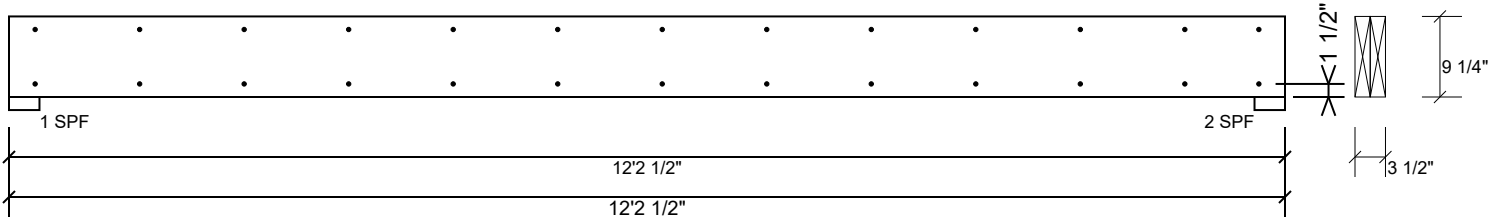
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RBM2 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: ROOF



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

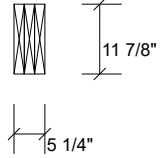
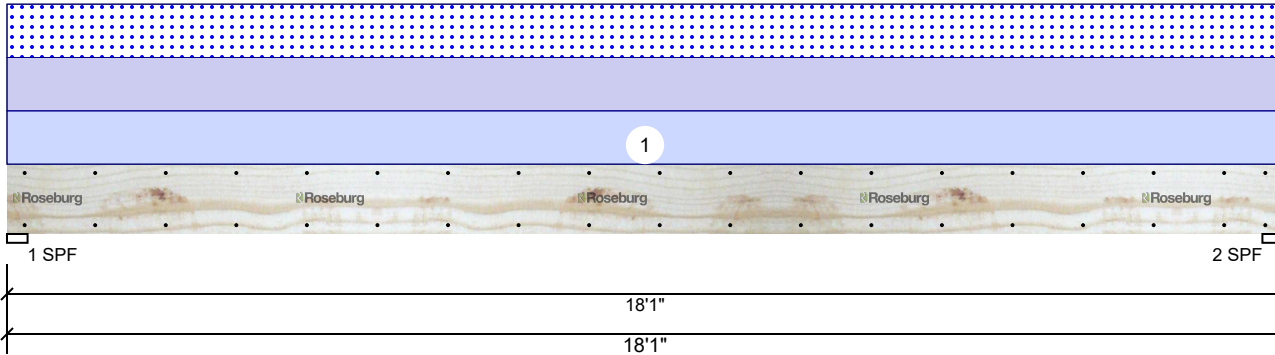
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RBM1 2.0E Rigidlam LVL 1.750" X 11.875" 3-Ply - PASSED

Level: ROOF



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1806	1658	0	1658
2	Vertical	0	1806	1658	0	1658

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	44%	1806 / 1658	3464	L	D+S
2 - SPF	3.500"	Vert	44%	1806 / 1658	3464	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14877 ft-lb	9' 1/2"	38173 ft-lb	0.390 (39%)	D+S	L
Unbraced	14877 ft-lb	9' 1/2"	14898 ft-lb	0.999 (100%)	D+S	L
Shear	2989 lb	1'3 3/8"	13861 lb	0.216 (22%)	D+S	L
LL Defl inch	0.272 (L/779)	9' 9/16"	0.588 (L/360)	0.462 (46%)	C	L
TL Defl inch	0.568 (L/373)	9' 9/16"	0.881 (L/240)	0.644 (64%)	D+C	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 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 9'4 3/8" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 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		9-2-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	R
	Self Weight				16 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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

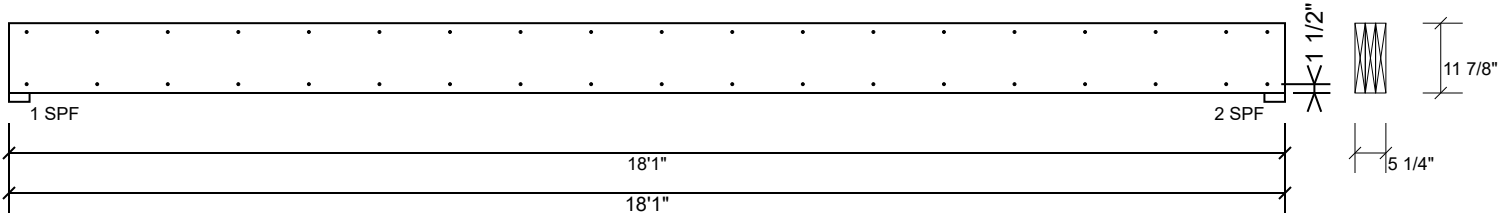
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RBM1 2.0E Rigidlam LVL 1.750" X 11.875" 3-Ply - PASSED Level: ROOF



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

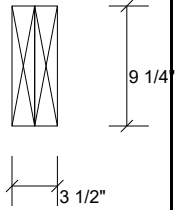
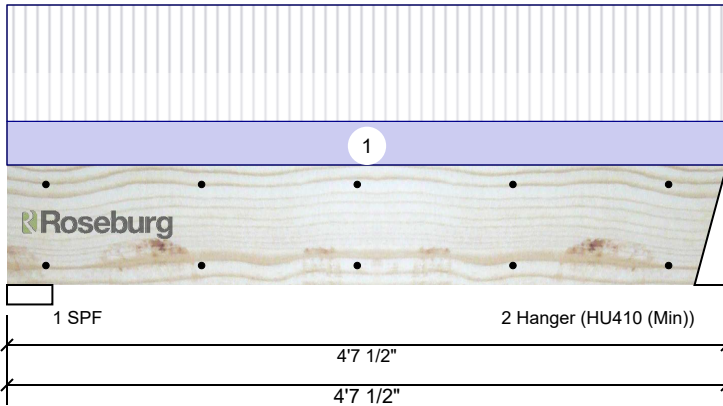
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2BM4 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: 2ND FL



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1012	400	0	0	0
2	Vertical	976	386	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	27%	400 / 1012	1412	L	D+L
2 - Hanger	2.500"	Vert	21%	386 / 976	1362	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1354 ft-lb	2'4 1/4"	13320 ft-lb	0.102 (10%)	D+L	L
Unbraced	1354 ft-lb	2'4 1/4"	11850 ft-lb	0.114 (11%)	D+L	L
Shear	781 lb	3'7 3/4"	6259 lb	0.125 (12%)	D+L	L
LL Defl inch	0.007 (L/7459)	2'4 5/16"	0.106 (L/480)	0.064 (6%)	L	L
TL Defl inch	0.010 (L/5348)	2'4 5/16"	0.142 (L/360)	0.067 (7%)	D+L	L

Design Notes

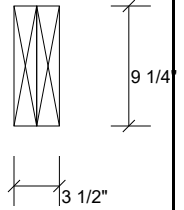
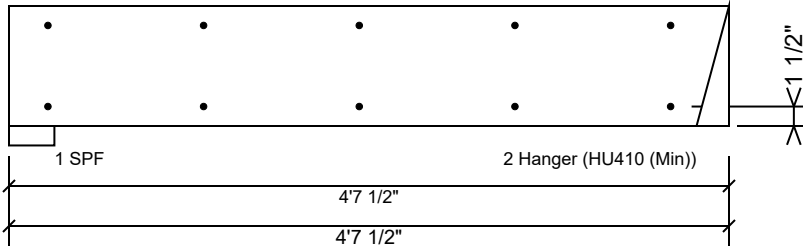
- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 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		10-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	F
	Self Weight				9 PLF					

<p>Notes</p> <p>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.</p> <p>Lumber</p> <ol style="list-style-type: none"> 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive chemicals 	<p>Handling & Installation</p> <ol style="list-style-type: none"> 1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained 5. Provide lateral support at bearing points to avoid lateral displacement and rotation 	<p>6. For flat roofs provide proper drainage to prevent ponding</p>	<p>Manufacturer Info</p> <p>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</p>	<p>Riverside Roof Truss LLC 733 River Park Drive, VA USA 24540 434 793 0217</p>
			<p>This design is valid until 11/3/2024</p>	

2BM4 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

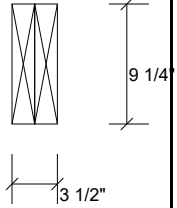
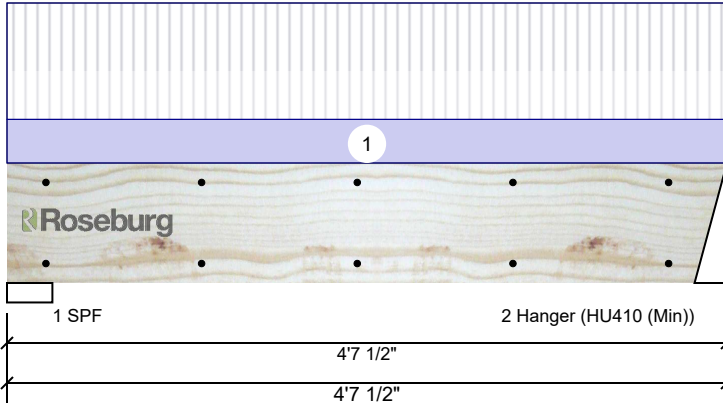
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2BM5 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: 2ND FL



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	188	91	0	0	0
2	Vertical	182	88	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	5%	91 / 188	279	L	D+L
2 - Hanger	2.500"	Vert	4%	88 / 182	269	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	268 ft-lb	2'4 1/4"	13320 ft-lb	0.020 (2%)	D+L	L
Unbraced	268 ft-lb	2'4 1/4"	11850 ft-lb	0.023 (2%)	D+L	L
Shear	160 lb	3'7 3/4"	6259 lb	0.026 (3%)	D+L	L
LL Defl inch	0.001 (L/40095)	2'4 5/16"	0.106 (L/480)	0.012 (1%)	L	L
TL Defl inch	0.002 (L/27058)	2'4 5/16"	0.142 (L/360)	0.013 (1%)	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 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

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

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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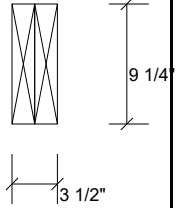
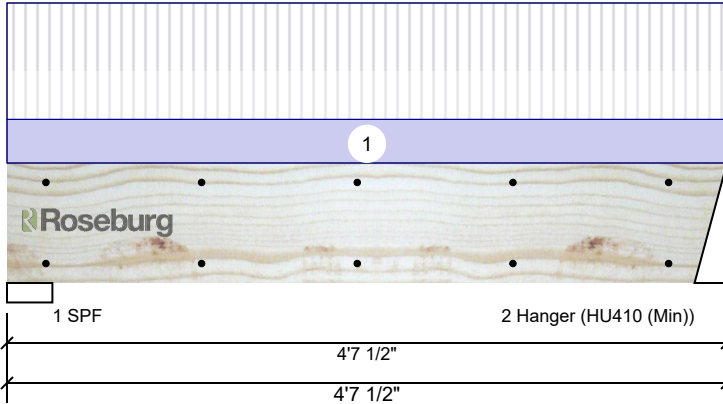
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2BM5 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: 2ND FL



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform Self Weight		2-0-0	Top	15 PSF 9 PLF	40 PSF	0 PSF	0 PSF	0 PSF	F

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

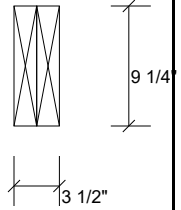
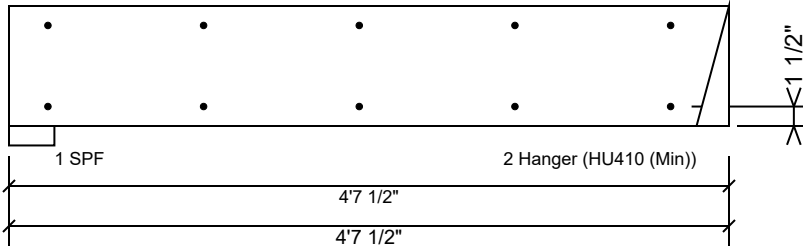
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2BM5 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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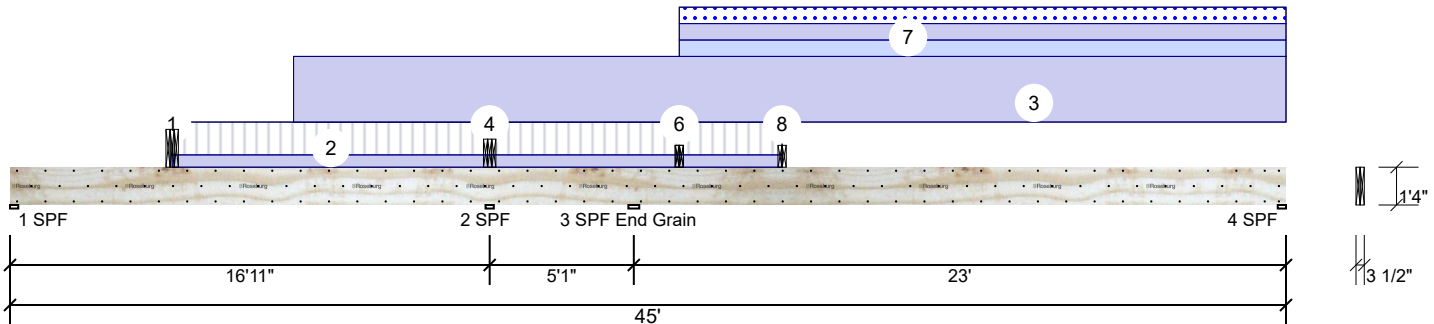
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733 River Park Drive, VA
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24540
434 793 0217



This design is valid until 11/3/2024

2BM3 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 2ND FL



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	593	679	217	0	217
2	Vertical	906	121	0 (-429)	0	0 (-429)
3	Vertical	1329	7865	4915	0	4915
4	Vertical	54	2583	1678	0	1678

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	25%	679 / 609	1288	L_L	D+0.75(L+S)
2 - SPF	3.500"	Vert	38%	121 / 1880	2002 (-633)	L_	D+C(D+0.75(L+S))
3 - SPF End Grain	4.625"	Vert	99%	7865 / 5133	12998	_LL	D+0.75(L+S)
4 - SPF	3.500"	Vert	82%	2583 / 1678	4261	L_L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-26131 ft-lb	22'	42797 ft-lb	0.611 (61%)	D+S	_L
Unbraced	-26131 ft-lb	22'	26157 ft-lb	0.999 (100%)	D+S	_L
Pos Moment	18998 ft-lb	35'7 9/16"	42797 ft-lb	0.444 (44%)	D+S	L_L
Unbraced	18998 ft-lb	35'7 9/16"	19006 ft-lb	1.000 (100%)	D+S	L_L
Shear	7550 lb	23'6 5/16"	12451 lb	0.606 (61%)	D+0.75(L+S)	_LL
LL Defl inch	0.239 (L/1141)	34'7 1/2"	0.569 (L/480)	0.421 (42%)	C	LLL
TL Defl inch	0.615 (L/444)	34'7 3/16"	0.759 (L/360)	0.810 (81%)	D+C	LLL

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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Tie-down connection required at bearing 2 for uplift 633 lb (Combination D+0.75(L+S), Load Case _L).
- 7 Top must be laterally braced at a maximum of 6'2 3/8" o.c.
- 8 Bottom must be laterally braced at a maximum of 4'4 5/16" o.c.
- 9 Lateral slenderness ratio based on single ply width.

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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

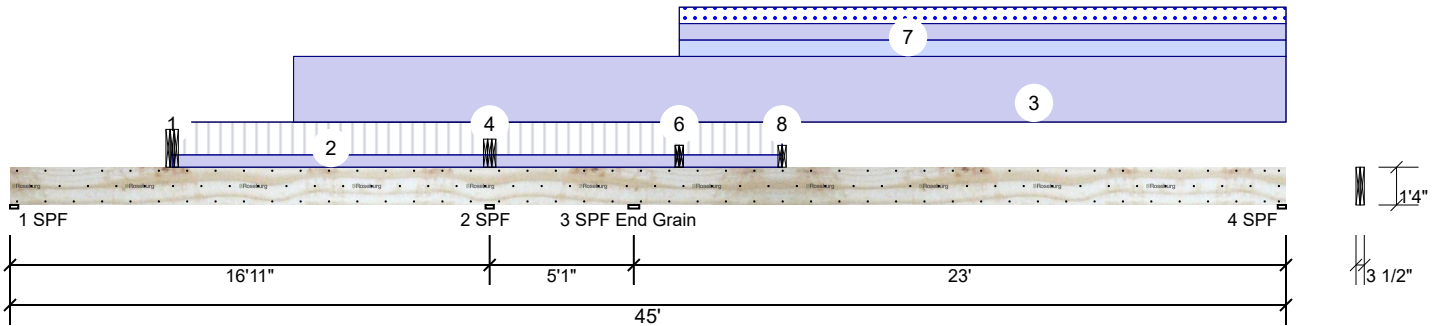
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2BM3 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 2ND FL



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Point	5-8-10		Top	667 lb	863 lb	262 lb	0 lb	262 lb	2BM6 Brg 2
	Bearing Length	0-5-4								
2	Part. Uniform	5-8-10 to 27-2-12	1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	F
3	Part. Uniform	10-0-0 to 45-0-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	W
4	Point	16-11-0		Top	1806 lb	0 lb	1658 lb	0 lb	1658 lb	RBM1 Brg 2
	Bearing Length	0-5-4								
5	Point	23-7-4		Top	386 lb	977 lb	0 lb	0 lb	0 lb	2BM4 Brg 2
	Bearing Length	0-3-8								
6	Point	23-7-4		Top	663 lb	0 lb	610 lb	0 lb	610 lb	RBM2 Brg 2
	Bearing Length	0-3-8								
7	Part. Uniform	23-7-4 to 45-0-0	9-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	SCISSOR TRUSSES
8	Point	27-2-12		Top	88 lb	182 lb	0 lb	0 lb	0 lb	2BM5 Brg 2
	Bearing Length	0-3-8								
	Self Weight				15 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
1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation
1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

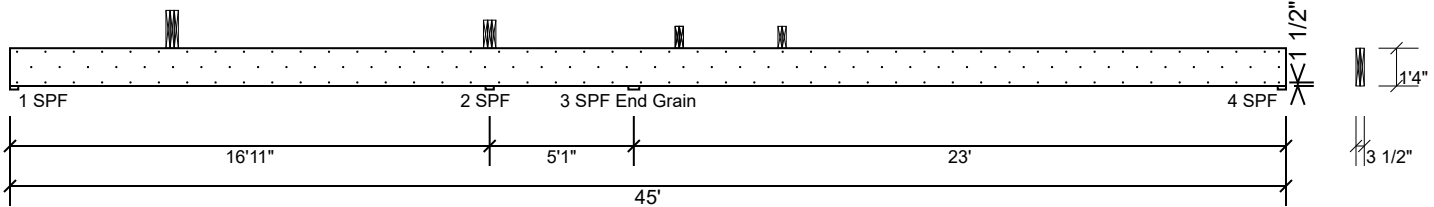
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RIVERSIDE ROOF TRUSS

2BM3 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

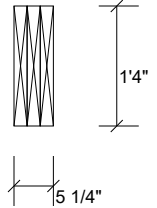
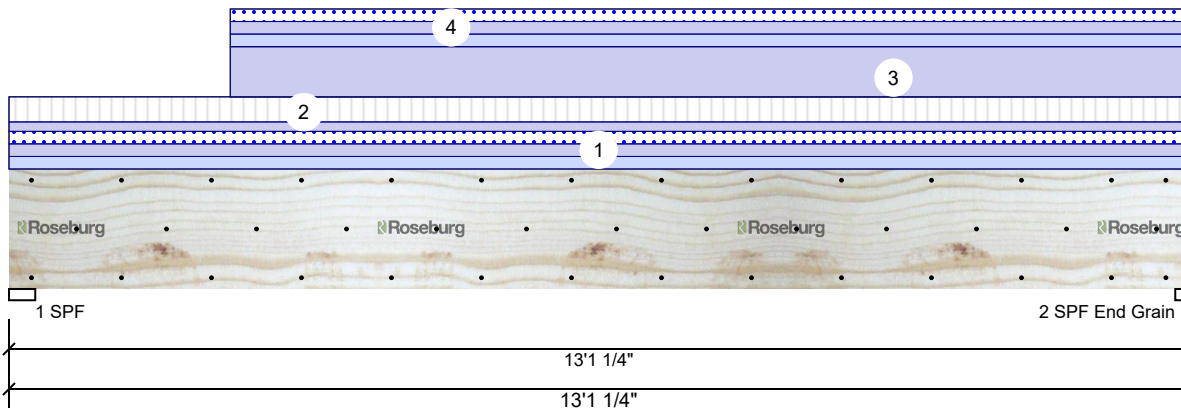
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2BM2 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	596	2043	1324	0	1324
2	Vertical	583	2604	1739	0	1739

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	45%	2043 / 1440	3483	L	D+0.75(L+S)
2 - SPF	1.750"	Vert	63%	2604 / 1742	4346	L	D+0.75(L+S)
End Grain							

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	13432 ft-lb	6'9 1/16"	66764 ft-lb	0.201 (20%)	D+0.75(L+S)	L
Unbraced	13432 ft-lb	6'9 1/16"	14990 ft-lb	0.896 (90%)	D+0.75(L+S)	L
Shear	3363 lb	11'7 1/2"	18676 lb	0.180 (18%)	D+0.75(L+S)	L
LL Defl inch	0.044 (L/3486)	6'7 15/16"	0.320 (L/480)	0.138 (14%)	0.75(L+C)	Uniform
TL Defl inch	0.110 (L/1402)	6'8"	0.426 (L/360)	0.257 (26%)	D+0.75(L+C)	Uniform

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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 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		2-9-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	LR
2	Uniform		2-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	F
3	Part. Uniform	2-5-8 to 13-1-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	W
4	Part. Uniform	2-5-8 to 13-1-4	11-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	UR
	Self Weight				22 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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

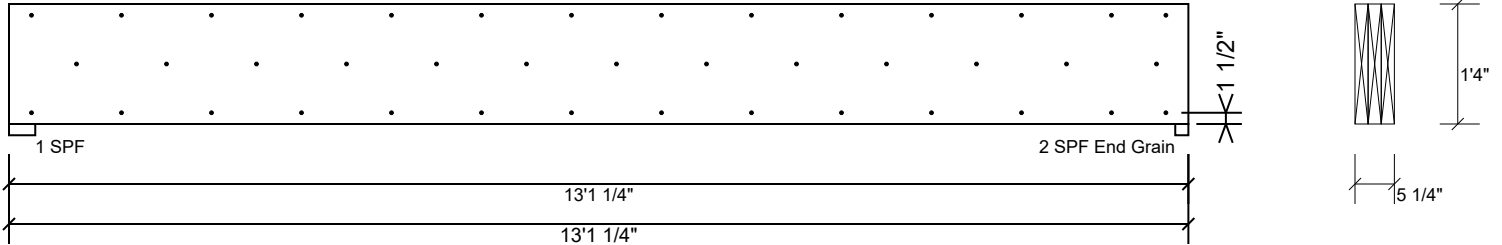
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2BM2 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

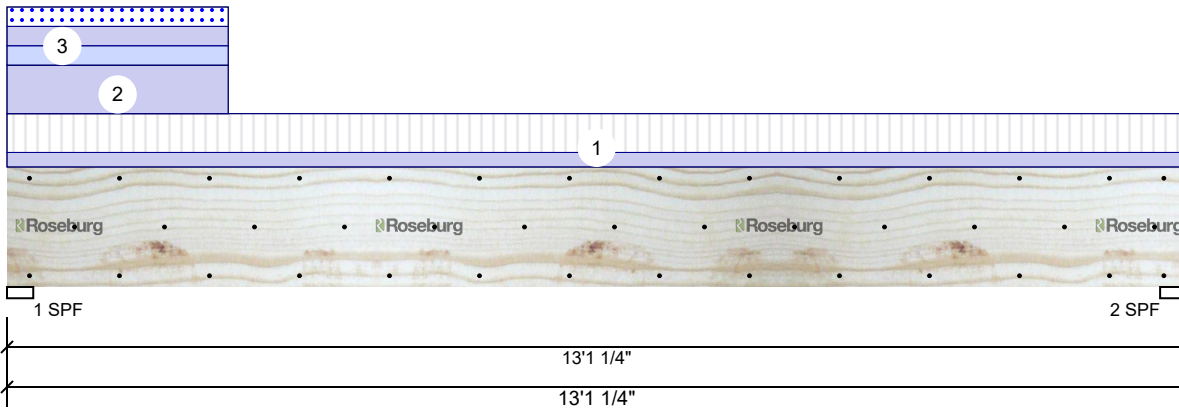
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2BM7 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2392	1566	411	0	411
2	Vertical	2392	1088	36	0	36

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	51%	1566 / 2392	3958	L	D+L
2 - SPF	3.500"	Vert	45%	1088 / 2392	3479	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10765 ft-lb	6'5 9/16"	58056 ft-lb	0.185 (19%)	D+L	L
Unbraced	10765 ft-lb	6'5 9/16"	15091 ft-lb	0.713 (71%)	D+L	L
Shear	2759 lb	1'7 1/2"	16240 lb	0.170 (17%)	D+L	L
LL Defl inch	0.059 (L/2590)	6'6 5/8"	0.316 (L/480)	0.185 (19%)	L	L
TL Defl inch	0.087 (L/1747)	6'6 5/16"	0.422 (L/360)	0.206 (21%)	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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 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		9-1-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	F
2	Part. Uniform	0-0-0 to 2-5-8		Top	50 PLF	0 PLF	0 PLF	0 PLF	0 PLF	W
3	Part. Uniform	0-0-0 to 2-5-8	9-1-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	R
	Self Weight				22 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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

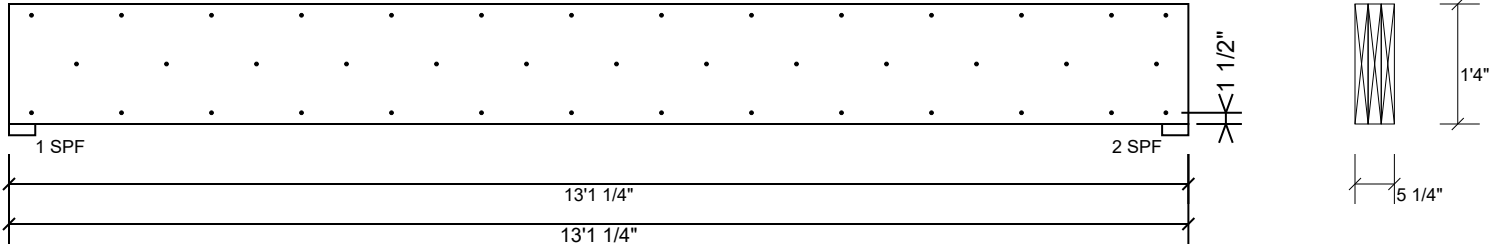
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2BM7 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

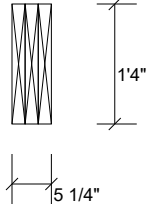
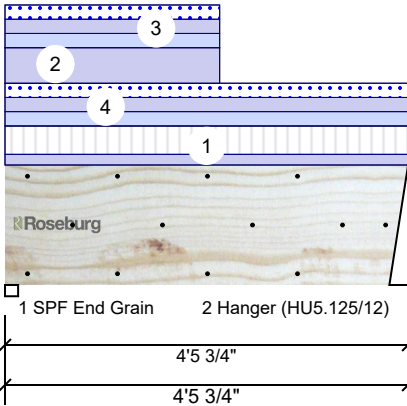
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2BM6 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



Member Information

Type:	Girder
Plies:	3
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	20 PSF
Snow:	30 PSF
Construction:	30 PSF

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	Yes
Deck:	Not Checked

Reactions UNPATTERNED I_b (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	839	961	509	0	509
2	Vertical	863	667	262	0	262

Bearings

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	1.750"	Vert	29%	961 / 1011	1972	L	D+0.75(L+S)
2 - Hanger	2.500"	Vert	16%	667 / 863	1530	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1716 ft-lb	2' 7/8"	58056 ft-lb	0.030 (3%)	D+L	L
Unbraced	1821 ft-lb	2' 1/8"	40322 ft-lb	0.045 (5%)	D+0.75(L+S)	L
Shear	635 lb	2'11 1/4"	16240 lb	0.039 (4%)	D+L	L
LL Defl inch	0.001 (L/59309)	2'2 1/8"	0.106 (L/480)	0.008 (1%)	0.75(L+C)	Uniform
TL Defl inch	0.002 (L/31408)	2'2"	0.142 (L/360)	0.011 (1%)	D+0.75(L+C)	Uniform

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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

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

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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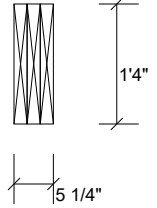
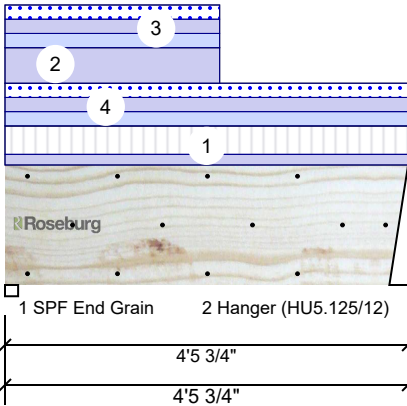
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24540
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This design is valid until 11/3/2024

2BM6 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		9-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	F
2	Part. Uniform	0-0-0 to 2-4-10		Top	50 PLF	0 PLF	0 PLF	0 PLF	0 PLF	W
3	Part. Uniform	0-0-0 to 2-4-10	11-0-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	UR
4	Uniform		2-9-0	Top	20 PSF	0 PSF	20 PSF	0 PSF	20 PSF	LR
	Self Weight				22 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
1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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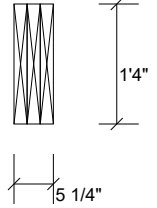
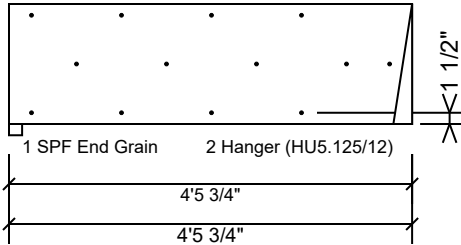
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2BM6 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

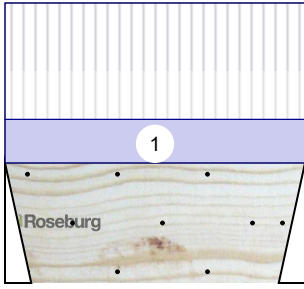
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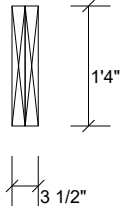


2BM1 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 2ND FL



1 Hanger (IUS3.56/11.88 (Min))
2 Hanger (IUS3.56/11.88 (Min))
3'4"
3'4"



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	400	175	0	0	0
2	Vertical	400	175	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.500"	Vert	11%	175 / 400	575	L	D+L
2 - Hanger	3.500"	Vert	11%	175 / 400	575	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	421 ft-lb	1'8"	37215 ft-lb	0.011 (1%)	D+L	L
Unbraced	421 ft-lb	1'8"	31741 ft-lb	0.013 (1%)	D+L	L
Shear	77 lb	1'6"	10827 lb	0.007 (1%)	D+L	L
LL Defl inch	0.000 (L/173986)	1'8"	0.078 (L/480)	0.003 (0%)	L	L
TL Defl inch	0.000 (L/121112)	1'8"	0.104 (L/360)	0.003 (0%)	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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

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

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

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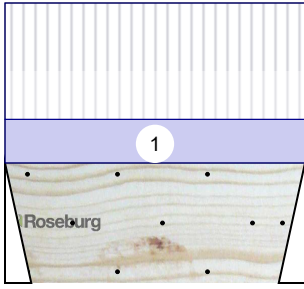
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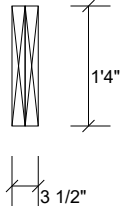
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2BM1 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 2ND FL



1 Hanger (IUS3.56/11.88 (Min))
2 Hanger (IUS3.56/11.88 (Min))
3'4"
3'4"



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform Self Weight		6-0-0	Top	15 PSF 15 PLF	40 PSF	0 PSF	0 PSF	0 PSF	F

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

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2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

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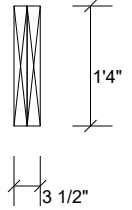
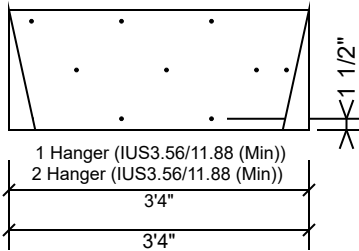
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2BM1 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 2ND FL



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. 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 11/3/2024

Manufacturer Info

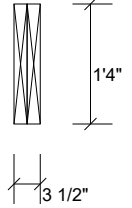
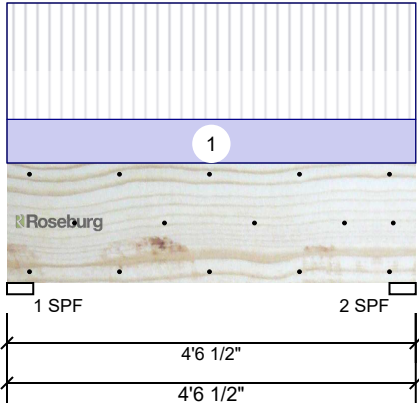
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1BM3 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 1ST FL



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	20 PSF		
Snow:	30 PSF		
Construction:	30 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	273	136	0	0	0
2	Vertical	273	136	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	8%	136 / 273	408	L	D+L
2 - SPF	3.500"	Vert	8%	136 / 273	408	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	375 ft-lb	2'3 1/4"	37215 ft-lb	0.010 (1%)	D+L	L
Unbraced	375 ft-lb	2'3 1/4"	26855 ft-lb	0.014 (1%)	D+L	L
Shear	136 lb	1'7 1/2"	10827 lb	0.013 (1%)	D+L	L
LL Defl inch	0.000 (L/155974)	2'3 5/16"	0.102 (L/480)	0.003 (0%)	L	L
TL Defl inch	0.000 (L/104111)	2'3 5/16"	0.136 (L/360)	0.003 (0%)	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 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at end bearings.
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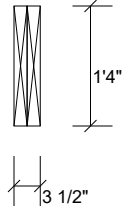
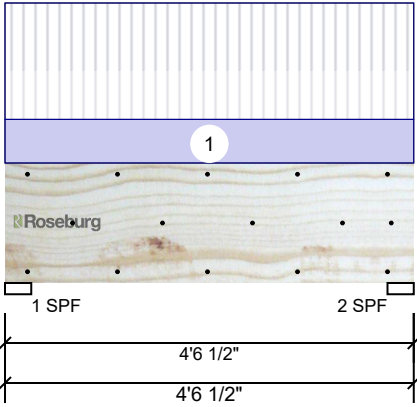
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1BM3 2.0E Rigidlam LVL 1.750" X 16.000" 2-Ply - PASSED

Level: 1ST FL



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform Self Weight		3-0-0	Top	15 PSF 15 PLF	40 PSF	0 PSF	0 PSF	0 PSF	F

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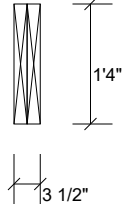
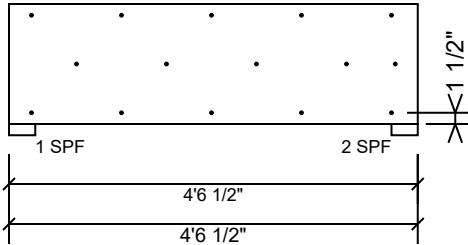
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Level: 1ST FL



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

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