GENERAL NOTES

DESIGN NOTES
1. Floor: 40 lbs. Live load, 15 lbs. Dead load
2. Roof: 30 lbs. Live load, 20 lbs. Dead load
3. Soil bearing capacity-2000 PSF.
4. Live loads, dead loads, wind loads, snow loads, lateral loads, seismic zoning and any specialty loading conditions will need to be confirmed before construction and adjustments to plans made accordingly. See your local building officials for verification of your specific load data, zoning restrictions and site conditions.

CONCRETE AND FOUNDATIONS
1. All slabs on grade shall be 4 inch 3000 PSI (28-day compressive strength concrete), unless noted otherwise.
2. All slabs on grade shall bear on four inch compacted granular fill with 6 by 6 10-10 welded wire mesh.
3. Interior slabs shall have 6 mil, polyethylene vapor barrier underneath.
4. Provide proper expansion joints and control joints as per local requirements.
5. Provide additional bearing points as required by floor "I" joist manufacturer, and loading transfers.
6. Foundation details may vary with local codes and conditions, verify with contractor or engineer.
7. Provide foundation access and vents as required by local codes and conditions.
8. Foundation wall and footing sizes reinforcing must conform with your local building requirements.
9. Foundation walls are not to be backfilled until house is completely framed and roof is in place.
10. Verify depth of footings with your local codes.
11. Provide termite protection as required by HUD minimum property standards.

BASEMENT
1. Basement stairs are calculated as 10 inch treads with 1 inch nosing (11 inch total) and 7.75 inch risers.
2. Water heater and air conditioner may be located in basement when using basement option.
3. Provide sump pumps as required.
4. Some soil conditions may require a 12 inch concrete retaining wall, verify with contractor or engineer.
5. Provide exterior windows and door as grade allows.
6. Provide venting as local codes and conditions dictate.

FRAMING
1. Contractor to confirm the size, spacing and species of all framing and structural members to meet your local code requirements.
2. Any structural or framing members not indicated on the plan are to be sized by the contractor.
3. Double floor joists under all partition walls, unless otherwise noted.
4. All angled walls are 45 degree angles unless noted otherwise.
5. Provide collar ties, cross-bridging and bracing as required.
6. Provide additional bearing points as required by loading transfers.
7. Framing lay-out and size may vary with local codes and conditions.
8. Roof framing plan is for general layout only, do no use for rafter count.

MISC. NOTES
1. Prefabricated fireplaces and flues are to be U.L. approved and installed per manu. specifications.
2. All materials, supplies and equipment to be installed per manu. specifications and local codes.
3. Provide type "x" firecode sheetock on garage walls and ceilings.
4. Confirm window openings for your local egress requirements and minimum light and venting.
5. The mechanical and electrical layouts are suggested only. Consult your mechanical and electrical contractors for exact specifications, locations and sizes.
6. Minor alterations to this plan can be made by the builder. Please contact our drafting department for information price quotes if major changes are required.

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED
Limited building only review
Permit holder responsible for full compliance with the code

03/17/2022

Harnett COUNTY NORTH CAROLINA

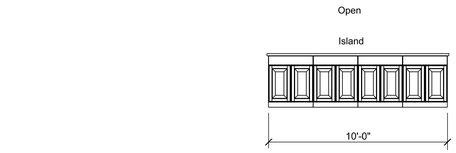
FRONT ELEVATION

REVISIONS	BY

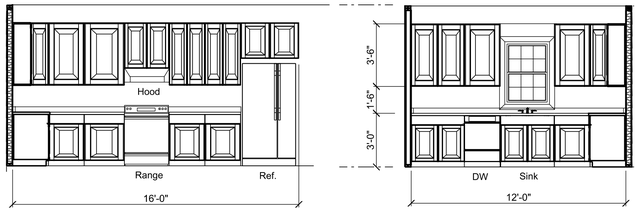
#24376 - Cedar Creek
Modified For Lassek

W.L. Martin Home Designs
for Contact Information
www.wlmartinhomes.com

Date	
Scale	1/4" = 1'-0"
Drawn	
Job	
Sheet	1
Of	8 Sheets



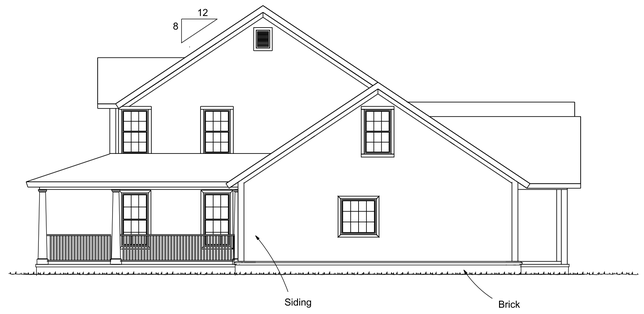
ELEVATION C 1/4" = 1'-0"



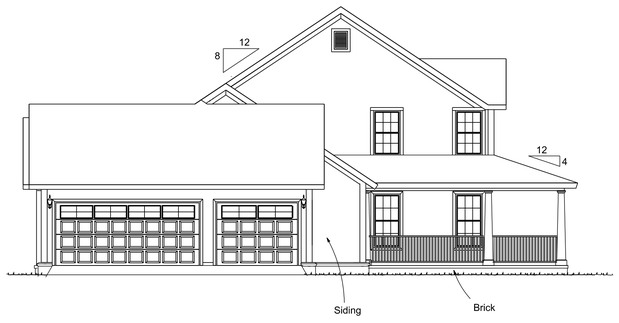
ELEVATION A 1/4" = 1'-0"

ELEVATION B 1/4" = 1'-0"

Selections to be made for Cabinet Style, Color, and Hardware



RIGHT SIDE ELEVATION 1/8" = 1'-0"



LEFT SIDE ELEVATION 1/8" = 1'-0"

REAR ELEVATION 1/8" = 1'-0"

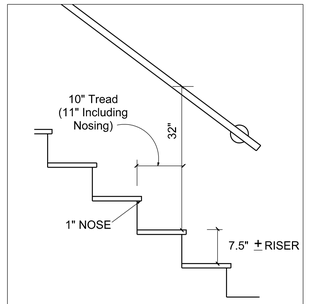
REVISIONS	BY

#24376 - Cedar Creek
Modified For Lassek

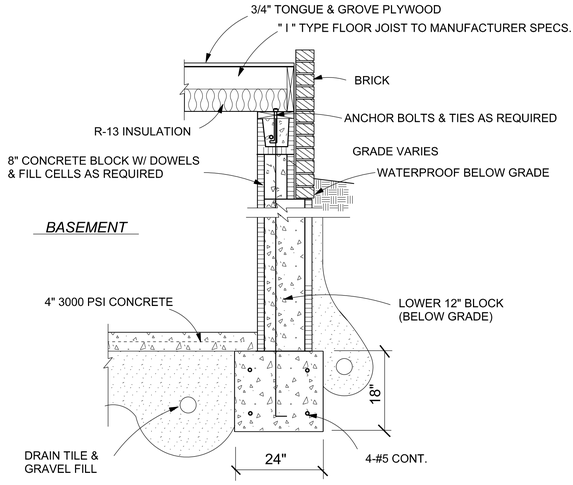
W.L. Martin Home Designs
for Contact Information
www.wlmartinhomes.com

Date	
Scale	
Drawn	Noted
Job	
Sheet	2
Of	8 Sheets

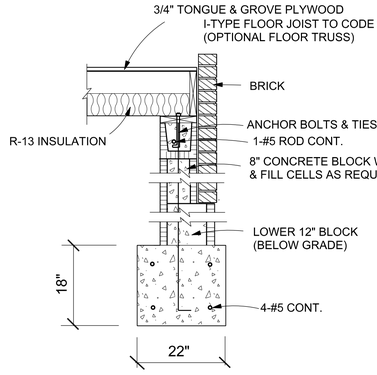
NOTE: SEE ADDITIONAL NOTES ON FRONT ELEVATION SHEET.



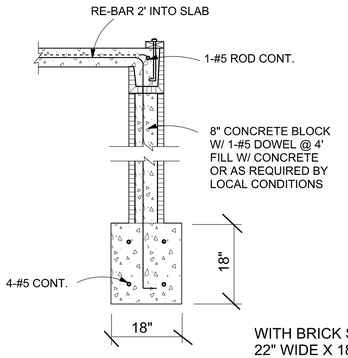
TYPICAL STAIR SECTION



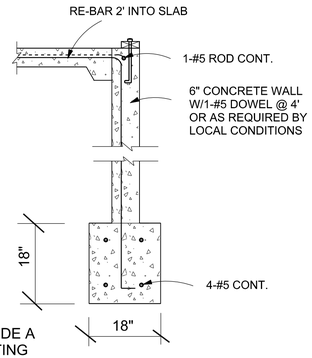
OPTIONAL BASEMENT SECTION



DETAIL - A

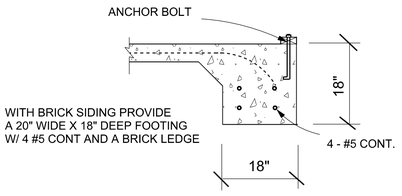


DETAIL - B



WITH BRICK SIDING PROVIDE A
22" WIDE X 18" DEEP FOOTING

DETAIL - C



DETAIL - D

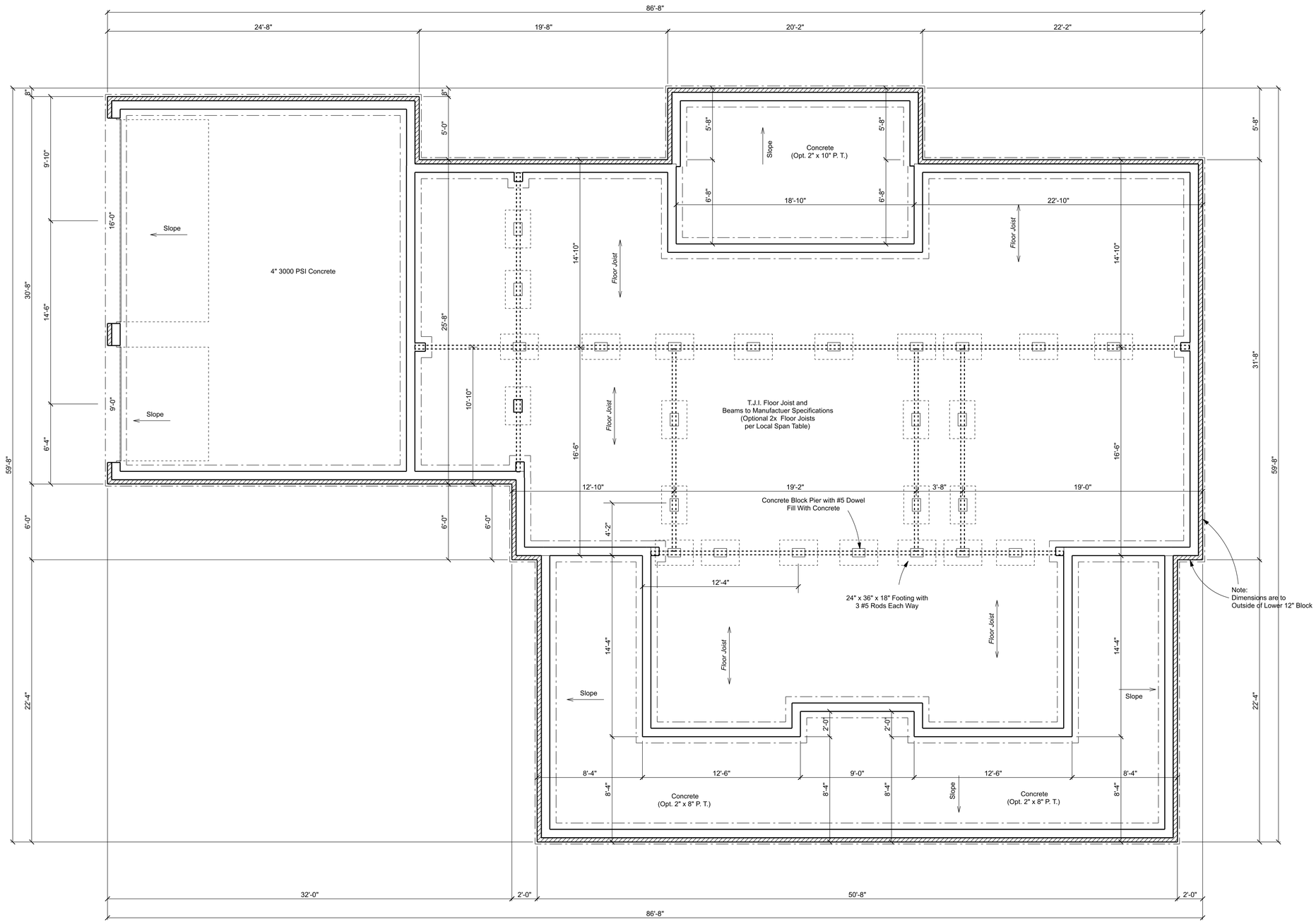
2 STORY FOUNDATION DETAILS (OPTIONS)

NOTES:
* WALLS ABOVE 4'-0" FROM FINISH GRADE MAY REQUIRE ADDITIONAL STRUCTURAL SIZING, SEE ENGINEER (FOOTING SIZE & RETAINING WALL REQ.)
* FOOTING DETAILS MAY VARY IN REQUIREMENTS, IN YOUR AREA, VERIFY WITH CONTRACTOR OR ENGINEER.
* CONCRETE FLOOR TO BE 8" MINIMUM ABOVE FINISH GRADE.
* PROVIDE COMPACTED SAND FILL AS REQUIRED UNDER FOOTINGS.

REVISIONS	BY

W.L. Martin Home Designs
for Contact Information
www.wlmartinhomes.com

Date	
Scale	
Drawn	
Job	
Sheet	6
Of	8 Sheets



Crawl Space Foundation Plan

REVISIONS	BY

#24376 - Cedar Creek
Modified For Lassek

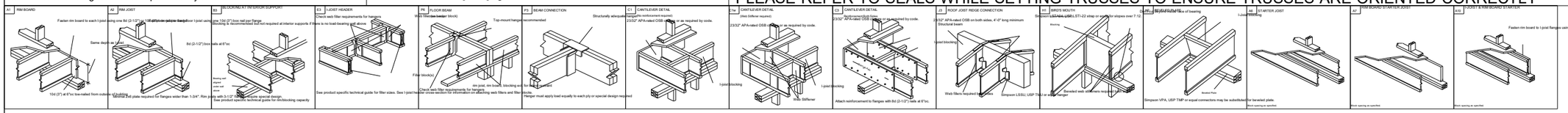
W.L. Martin Home Designs
for Contact Information
www.wlmartinhomes.com

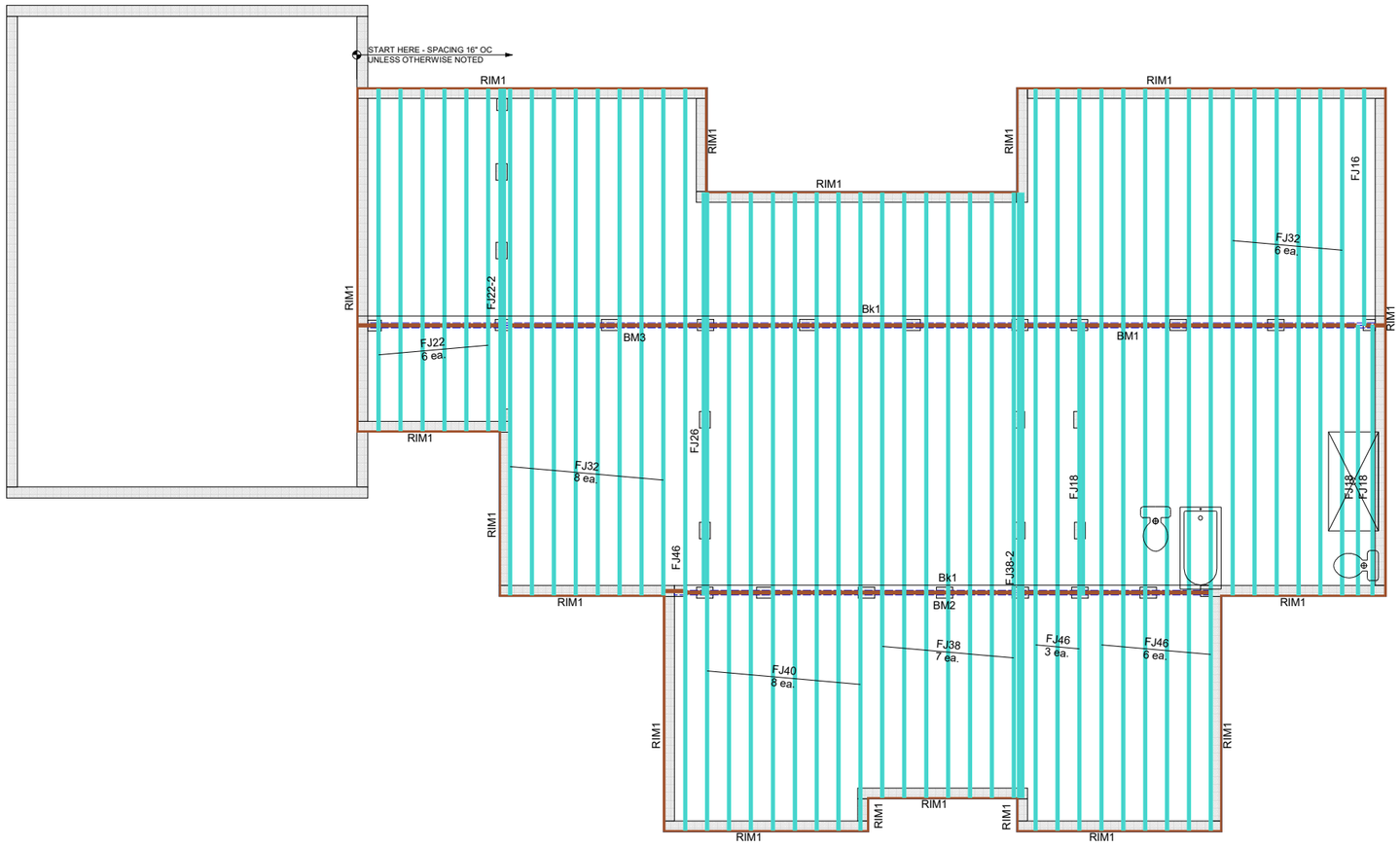
Date	
Scale	1/4" = 1'-0"
Drawn	
Job	
Sheet	8C
Of	8 Sheets

1. All bracing, blocking, beams, purlins @ 2'0" o.c., ledger, etc. provided by others.
2. Roof truss to roof truss connections provided by Riverside Roof Truss.
3. Truss to building connections provided by others.

Refer to Sealed drawings for connection detail of multiple ply trusses.

NOT ALL TRUSSES ARE SYMMETRICAL AND MAY NOT PERFORM CORRECTLY IF INSTALLED BACKWARDS. PLEASE REFER TO SEALS WHILE SETTING TRUSSES TO ENSURE TRUSSES ARE ORIENTED CORRECTLY





Products				
PlotID	Length	Product	Plies	Net Qty
FJ46	46-00-00	11 7/8" NI-40x	1	10
FJ40	40-00-00	11 7/8" NI-40x	1	8
FJ38	38-00-00	11 7/8" NI-40x	1	7
FJ38-2	38-00-00	11 7/8" NI-40x	2	2
FJ32	32-00-00	11 7/8" NI-40x	1	14
FJ26	26-00-00	11 7/8" NI-40x	1	1
FJ22	22-00-00	11 7/8" NI-40x	1	6
FJ22-2	22-00-00	11 7/8" NI-40x	2	2
FJ18	18-00-00	11 7/8" NI-40x	1	3
FJ16	16-00-00	11 7/8" NI-40x	1	1
BM2	34-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2
BM3	34-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2
BM1	30-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2
RIM1	12-00-00	1 1/8" x 11 7/8" APA Rim Board	1	20
Bk1	78-00-00	11 7/8" NI-40x	1	1

SHOP DRAWING APPROVAL

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

REVIEWED BY:_____ APPROVED BY:_____ DATE:_____

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structural integrity of the building, including supporting beams, walls, columns, and sufficient blocking in floor cavity under point loads is the responsibility of the building designer. For general guidance regarding bracing, consult 'Bracing of Wood Trusses' available from the Truss Plate Institute, 583 D'Onofrio Drive; Madison, WI 53179.

Hanger Conversion Chart

Simpson	USP
LUS26	JUS26
HUS26	THD26
HHUS26-2	THD26-2
THJA26	HJC26
THA422	MSH422

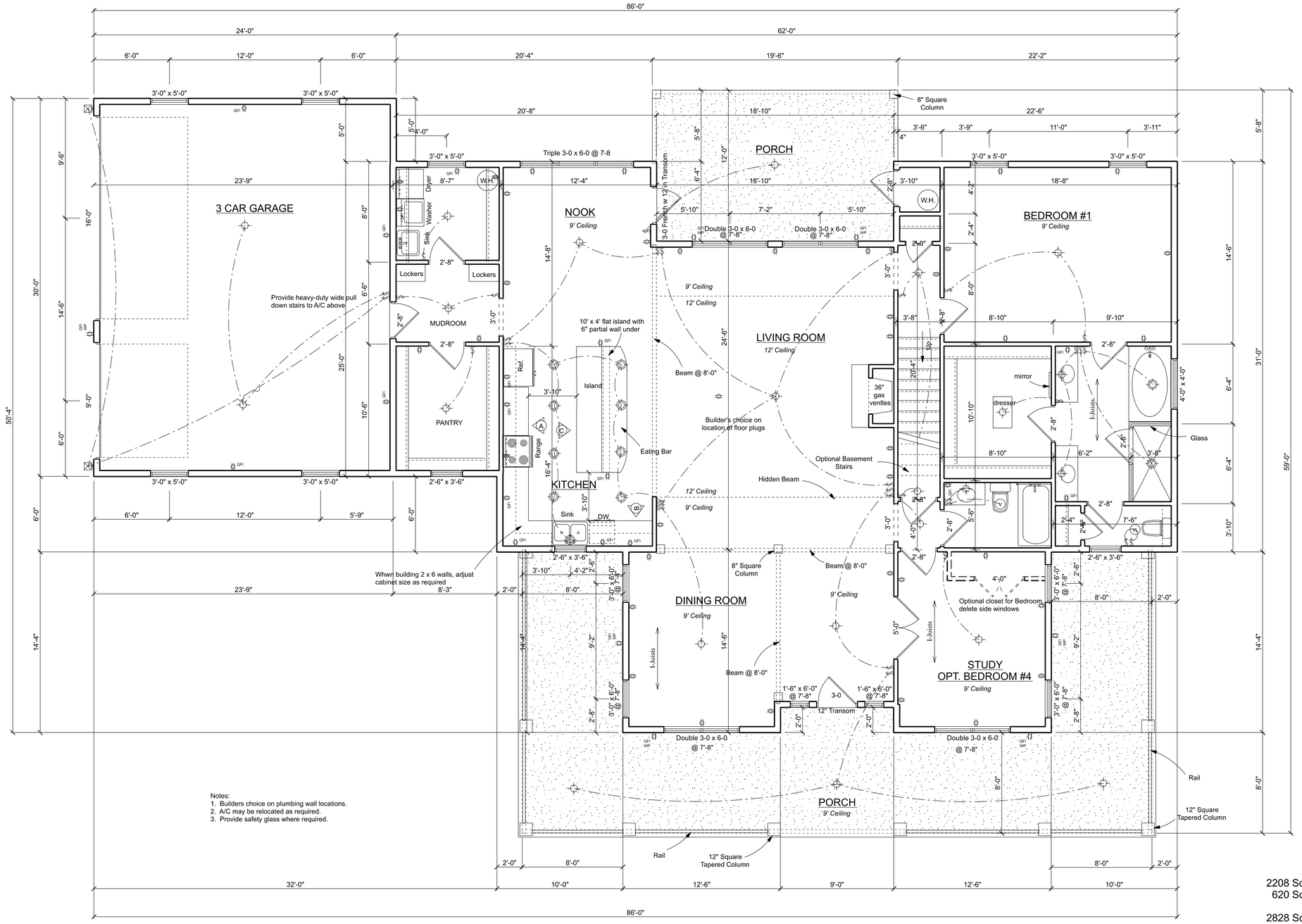
RIVERSIDE ROOF TRUSS, LLC

733 RIVER PARK DRIVE
DANVILLE, VA 24540
(434) 793-0217
FAX: (434) 799-8767

Client: PARKS BUILDING SUPPLY
Job Name: LASSEK RES. EWP FIRST FLOOR
Model:
Lot #: Subdivision:
Order #: 21-6482-B Sales Rep: C Smiley Designer: R S Date: 10/4/2021

Roof Surface Area: 0 ft² Sq. Ft.
Floor Surface Area: 3860 ft² Sq. Ft.

MiTek® SIMPSON Strong-Tie®



Notes:
1. Builders choice on plumbing wall locations.
2. A/C may be relocated as required.
3. Provide safety glass where required.

2208 Sq Ft H/C First Floor
620 Sq Ft H/C Second Floor

2828 Sq Ft H/C Total

720 Sq Ft Garage
647 Sq Ft Front Porch
246 Sq Ft Rear Porch

1st Floor Plan

* Provide 2x6 studs at exterior walls. *

REVISIONS	BY

#24376 - Cedar Creek
Modified For Lassek

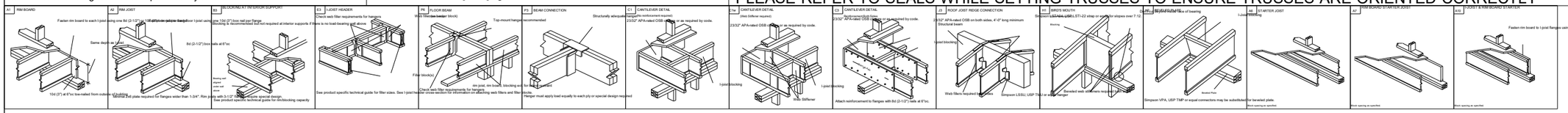
W.L. Martin Home Designs
for Contact Information
www.wlmartinhomes.com

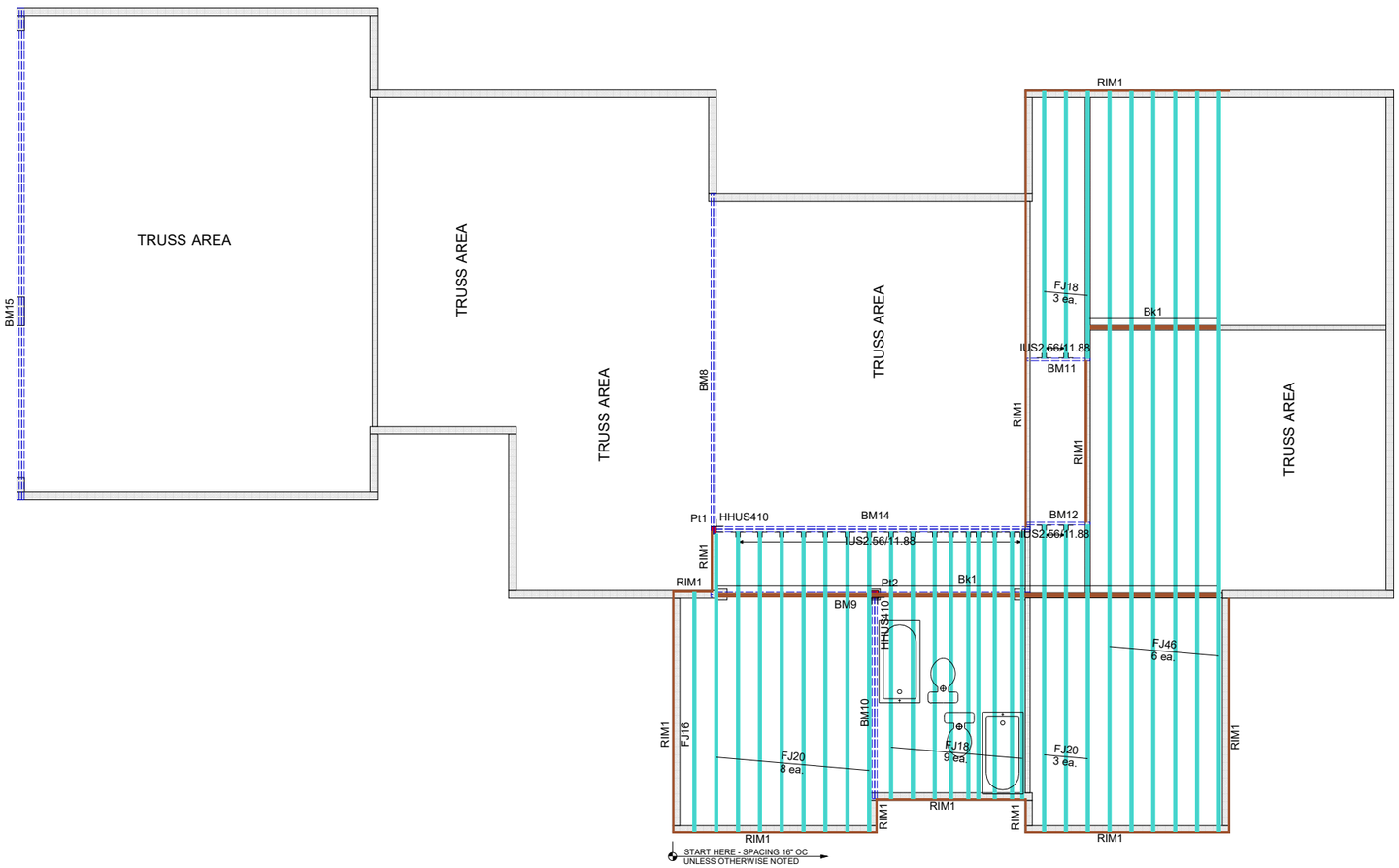
Date	
Scale	1/4" = 1'-0"
Drawn	
Job	
Sheet	3
Of	8 Sheets

1. All bracing, blocking, beams, purlins @ 2'0" o.c., ledger, etc. provided by others.
2. Roof truss to roof truss connections provided by Riverside Roof Truss.
3. Truss to building connections provided by others.

Refer to Sealed drawings for connection detail of multiple ply trusses.

NOT ALL TRUSSES ARE SYMMETRICAL AND MAY NOT PERFORM CORRECTLY IF INSTALLED BACKWARDS. PLEASE REFER TO SEALS WHILE SETTING TRUSSES TO ENSURE TRUSSES ARE ORIENTED CORRECTLY





Products				
PlotID	Length	Product	Plies	Net Qty
FJ46	46-00-00	11 7/8" NI-40x	1	6
FJ20	20-00-00	11 7/8" NI-40x	1	11
FJ18	18-00-00	11 7/8" NI-40x	1	12
FJ16	16-00-00	11 7/8" NI-40x	1	1
BM14	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	2	2
BM9	20-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	2	2
BM10	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	2	2
BM11	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	1	1
BM12	4-00-00	1 3/4" x 11 7/8" (2.0E 3100) LVL	1	1
BM15	30-00-00	1 3/4" x 16" (2.0E 3100) LVL	3	3
BM8	22-00-00	1 3/4" x 18" (2.0E 3100) LVL	2	2
RIM1	12-00-00	1 1/8" x 11 7/8" APA Rim Board	1	11
Bk1	33-00-00	11 7/8" NI-40x	1	1
Pt1	10-00-00	Glulam Column 3.5 x 5.5	1	1
Pt2	10-00-00	GluLam Column 5.5x5.5	1	1

Connector Summary		
Qty	Manuf	Product
1	Simpson	HHUS410
1	Simpson	HHUS410
4	Simpson	IUS2.56/11.88
16	Simpson	IUS2.66/11.88

SHOP DRAWING APPROVAL

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

REVIEWED BY:_____ APPROVED BY:_____ DATE:_____

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, columns, and sufficient blocking in floor cavity under point loads, is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onofrio Drive; Madison, WI 53719.

Client: PARKS BUILDING SUPPLY
Job Name: LASSEK RES. EWP SECOND FLOOR
Model:
Lot #: Subdivision:
Order #: 21-6482-B
Sales Rep: C Smiley
Designer: R S
Date: 10/4/2021

Hanger Conversion Chart

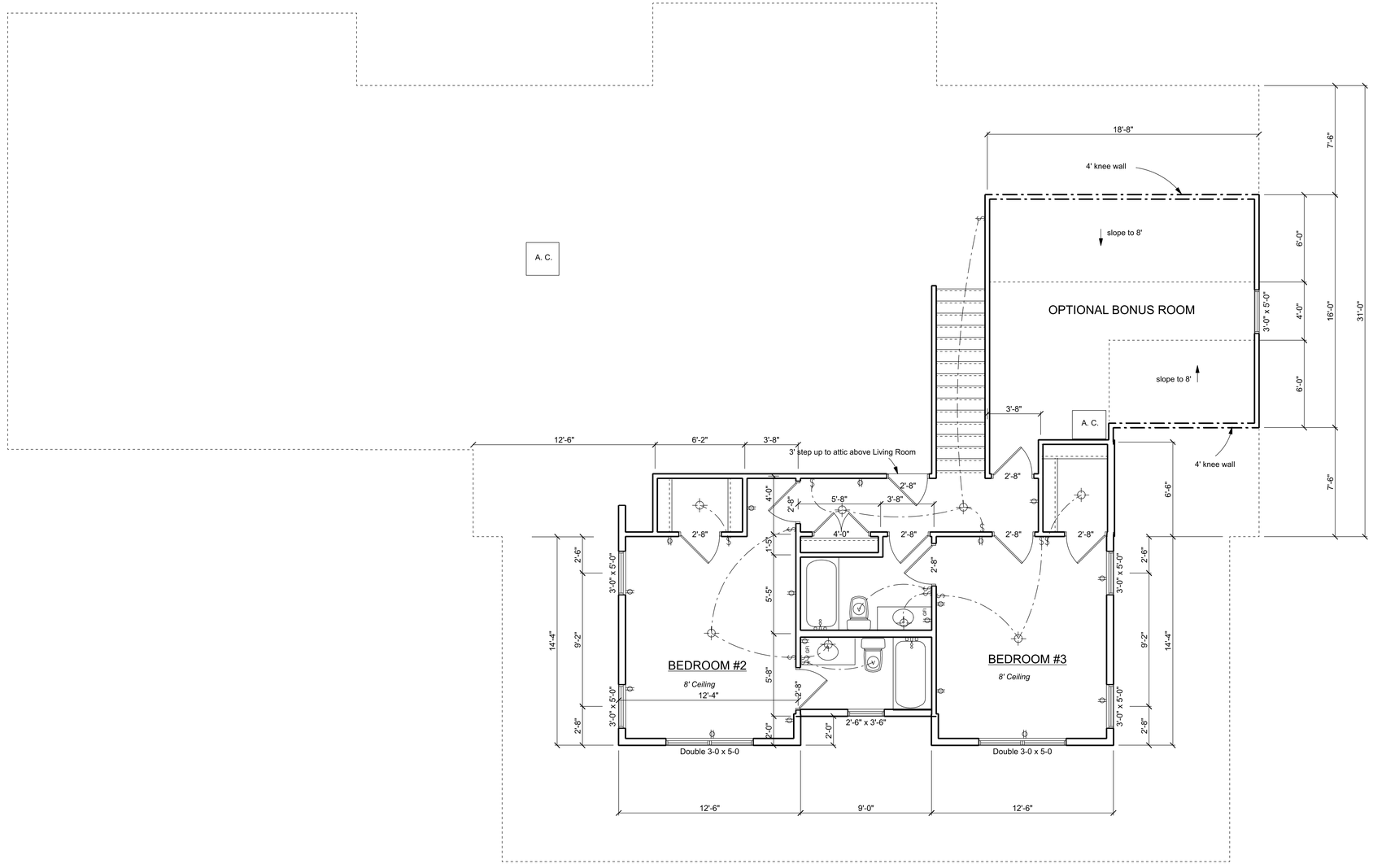
Simpson	USP
LUS26	JUS26
HUS26	THD26
HHUS26-2	THD26-2
THJA26	HJC26
THA422	MSH422

733 RIVER PARK DRIVE
DANVILLE, VA 24540
(434) 793-0217
FAX: (434) 799-8767

RIVERSIDE ROOF TRUSS, LLC

Roof Surface Area: 0 ft² Sq. Ft.
Floor Surface Area: 3860 ft² Sq. Ft.

MiTek® SIMPSON StrongTie®



2nd Floor Plan

* Provide 2x6 studs at exterior walls. *

REVISIONS	BY

#24376 - Cedar Creek
Modified For Lassek

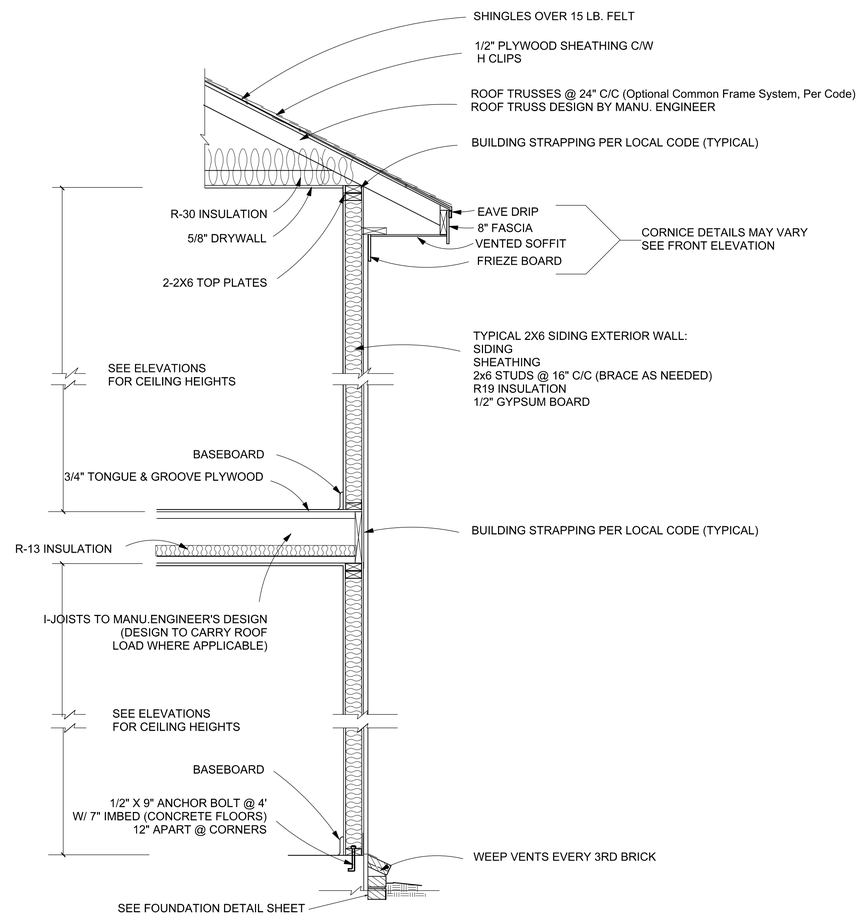
W.L. Martin Home Designs

for Contact Information

www.wlmartinhomes.com

Date	
Scale	1/4" = 1'-0"
Drawn	
Job	
Sheet	3
Of	8 Sheets

W. L. MARTIN HOME DESIGNS DOES NOT WARRANT OR GUARANTEE THE ACCURACY OF THIS SET OF PLANS. BEFORE CONSTRUCTION THE CONTRACTOR, ENGINEER, OR ARCHITECT MUST CHECK DIMENSIONS AND LOADING, AND VERIFY THAT THESE PLANS COMPLY WITH ALL BUILDING CODES IN EFFECT AT CONTRUCTION LOCATION.



TYPICAL BUILDING SECTION

2 x 6 Walls

NOTE: ALL STRUCTURAL MEMBERS MUST COMPLY W/ LOCAL BUILDING CODES.

REVISIONS	BY

W.L. Martin Home Designs
for Contact Information
www.wlmartinhomes.com

Date

Scale Noted

Drawn

Job

Sheet 5

Of 8 Sheets

1. All bracing, blocking, beams, purlins @ 2'0" o.c., ledger, etc. provided by others.
2. Roof truss to roof truss connections provided by Riverside Roof Truss.
3. Truss to building connections provided by others.

Refer to Sealed drawings for connection detail of multiple ply trusses.

NOT ALL TRUSSES ARE SYMMETRICAL AND MAY NOT PERFORM CORRECTLY IF INSTALLED BACKWARDS. PLEASE REFER TO SEALS WHILE SETTING TRUSSES TO ENSURE TRUSSES ARE ORIENTED CORRECTLY

Truss Connector Total List		
Manuf	Product	Qty
Simpson	HUS26	14

Truss Connector Total List		
Manuf	Product	Qty
Simpson	HUS26	4

Products				
PlotID	Length	Product	Plies	Net Qty
BM1	4-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	2	2

Products				
PlotID	Length	Product	Plies	Net Qty
BM3	10-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	3	3
BM1	4-00-00	1 3/4" x 9 1/4" (2.0E 3100) LVL	3	3

PLEASE VERIFY-

WILL DEPTH OF BM3 WORK(WILL IT BE IN THE WAY OF THE WINDOWS)

HEEL HEIGHTS WILL WORK (HEEL HEIGHTS HAD TO BE MORE THAN STANDARD TO GET ATTIC ROOF TRUSSES TO WORK)

OVERHANG LENGTH

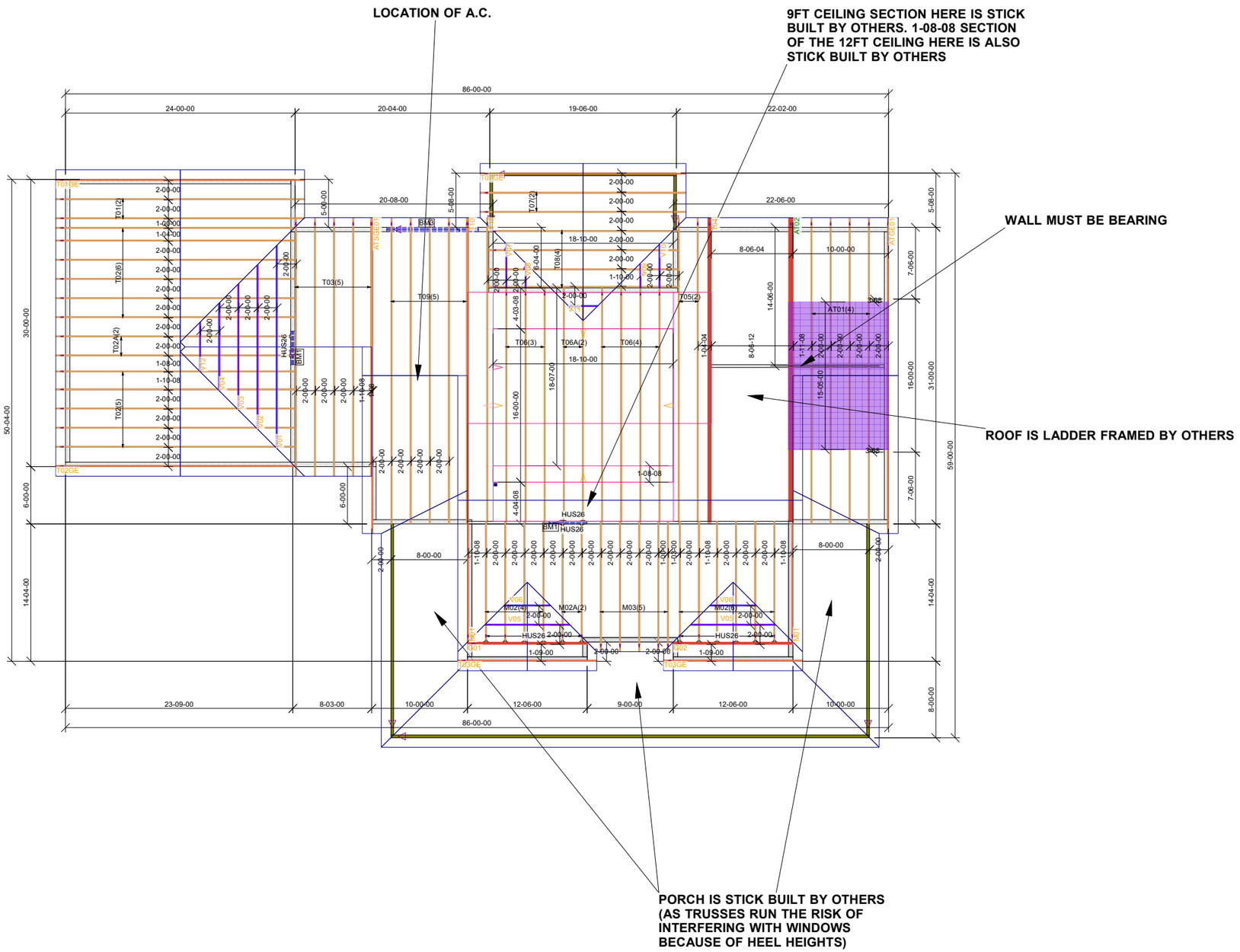
PORCH IS STICK BUILT BY OTHERS (AS TRUSSES RUN THE RISK OF INTERFERING WITH WINDOWS BECAUSE OF HEEL HEIGHTS)

TRAY CEILING DIMENSIONS ARE CORRECT

ARE LOUVERS FALSE, IF NOT WHAT ARE THEIR DIMENSIONS

LOCATION AND DIMENSIONS OF PULL DOWNSTAIRS FOR A/C ABOVE IN GARAGE AND MAIN HOUSE.

IS LOCATION OF A.C. CORRECT



=THIS SYMBOL INDICATES THE LEFT END OF TRUSS - REFER TO SEALED TRUSS DRAWINGS TO AVOID SETTING TRUSSES BACKWARDS!

SHOP DRAWING APPROVAL

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REVIEWED BY:_____ APPROVED BY:_____ DATE:_____

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss supporting structure including headers, beams, walls, columns, and sufficient blocking in floor cavity under point loads is the responsibility of the building designer. For general guidance regarding bracing, consult 'Bracing of Wood Trusses' available from the Truss Plate Institute, 583 D'Onofrio Drive; Madison, WI 53719.

Hanger Conversion Chart

USP	Simpson
JUS26	LUS26
THD26	HUS26
THD26-2	HHUS26-2
HJC26	THJA26
MSH422	THA422

Client:	-
Job Name:	POSTON-KATIE LASSEK RES PLAN
Model:	24376 ROOF
Lot #:	Subdivision:
Order #:	21-6482-A
Sales Rep:	C Smiley
Designer:	C K
Date:	11/9/2021

733 RIVER PARK DRIVE
DANVILLE, VA 24540
(434) 793-0217
FAX: (434) 799-8767

RIVERSIDE ROOF TRUSS, LLC

Roof Surface Area: 4980 ft² Sq. Ft.
Floor Surface Area: 469 ft² Sq. Ft.

SIMPSON Strong-Tie

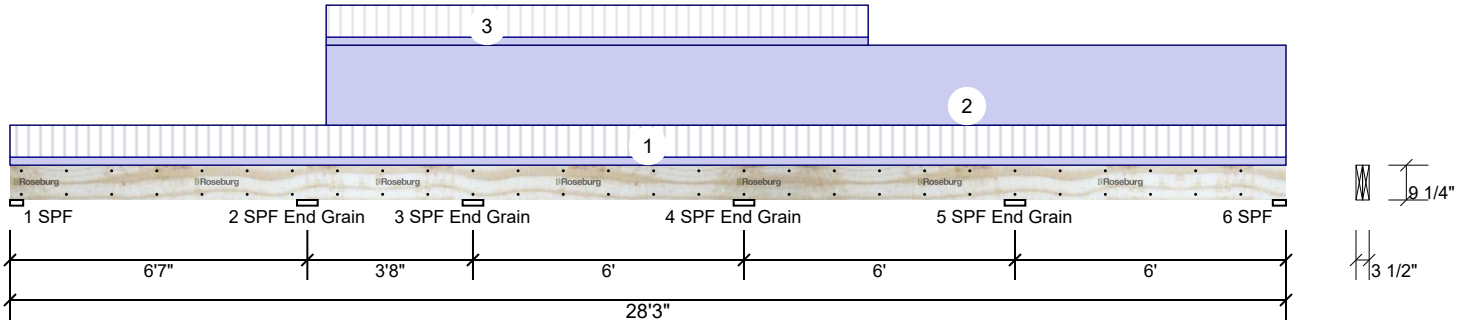
MiTek

0 ft²

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM1 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1817	476	0	0	0
2	Vertical	4364	1225	0	0	0
3	Vertical	6137	2105	0	0	0
4	Vertical	7509	2529	0	0	0
5	Vertical	4350	1804	0	0	0
6	Vertical	1583	667	0	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-5597 ft-lb	16'3"	13320 ft-lb	0.420 (42%)	D+L	L_LL_
Unbraced	-5597 ft-lb	16'3"	5606 ft-lb	0.999 (100%)	D+L	L_LL_
Pos Moment	4244 ft-lb	13'3 3/8"	13320 ft-lb	0.319 (32%)	D+L	L_L_L
Unbraced	4244 ft-lb	13'3 3/8"	4245 ft-lb	1.000 (100%)	D+L	L_L_L
Shear	3879 lb	15'3"	6259 lb	0.620 (62%)	D+L	L_LL_
LL Defl inch	0.042 (L/1734)	13'3 9/16"	0.150 (L/480)	0.277 (28%)	L	L_L_L
TL Defl inch	0.050 (L/1443)	13'3 1/4"	0.300 (L/240)	0.166 (17%)	D+L	L_L_L

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	46%	476 / 1934	2410	L_L_L	D+L
2 - SPF End Grain	5.500"	Vert	43%	1225 / 5450	6676	LL_L_	D+L
3 - SPF End Grain	5.500"	Vert	63%	2105 / 7557	9662	_LL_L	D+L
4 - SPF End Grain	5.500"	Vert	69%	2529 / 8090	10620	L_LL_	D+L
5 - SPF End Grain	5.500"	Vert	44%	1804 / 4958	6762	_L_LL	D+L
6 - SPF	3.500"	Vert	48%	667 / 1856	2523	L_L_L	D+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 18'2 9/16" o.c.
7 Bottom must be laterally braced at a maximum of 13'7 3/8" o.c.
8 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

This design is valid until 5/24/2024

Manufacturer Info

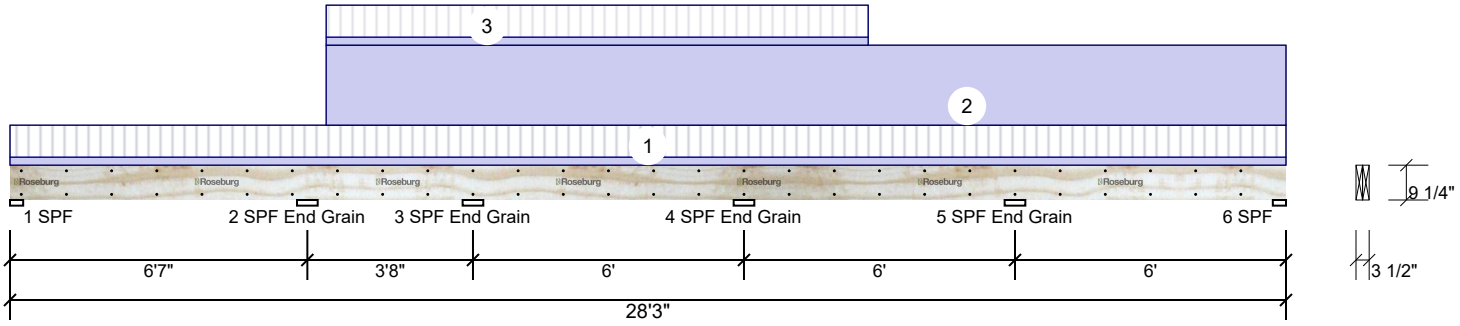
Roseburg Forest Products
4500 Riddle By-pass Rd
Riddle, OR 97469
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM1 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		16-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	7-0-0 to 28-3-0		Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	7-0-0 to 19-0-0	16-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF					

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

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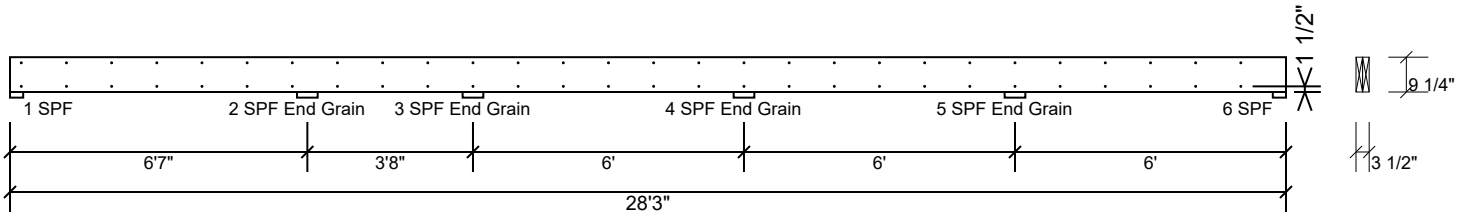
BM1 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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 5/24/2024

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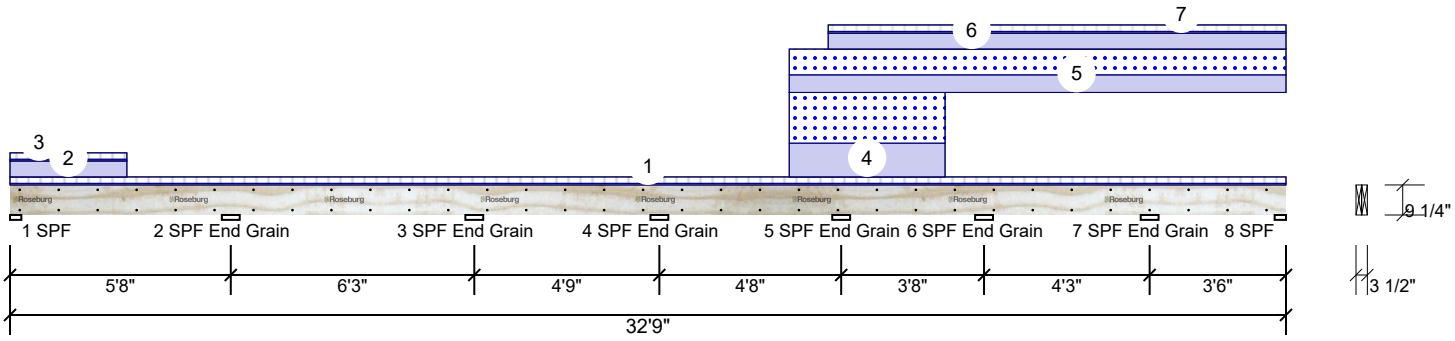
434-793-0217

BM2 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2052	746	0	0	0
2	Vertical	4338	1245	0 (0)	0	0
3	Vertical	3245	838	1	0	0
4	Vertical	2695	709	1	0	0
5	Vertical	3702	2148	1480	0	0
6	Vertical	4848	2323	969	0	0
7	Vertical	5081	2150	626	0	0
8	Vertical	1698	742	240	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3356 ft-lb	5'8"	13320 ft-lb	0.252 (25%)	D+L	LL_L_L_
Unbraced	-3356 ft-lb	5'8"	3356 ft-lb	1.000 (100%)	D+L	LL_L_L_
Pos Moment	2977 ft-lb	2'4 7/8"	13320 ft-lb	0.224 (22%)	D+L	L_L_L_L
Unbraced	2977 ft-lb	2'4 7/8"	2979 ft-lb	0.999 (100%)	D+L	L_L_L_L
Shear	2281 lb	4'8"	6259 lb	0.364 (36%)	D+L	LL_L_L_
LL Defl inch	0.024 (L/2683)	2'9 3/16"	0.136 (L/480)	0.179 (18%)	L	L_L_L_L
TL Defl inch	0.030 (L/2165)	2'8 5/8"	0.272 (L/240)	0.111 (11%)	D+L	L_L_L_L

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	58%	746 / 2279	3026	L_L_L_L	D+L
2 - SPF End Grain	5.500"	Vert	37%	1245 / 4505	5750	LL_L_L_	D+L
3 - SPF End Grain	5.500"	Vert	31%	838 / 3874	4711	_LL_L_L	D+L
4 - SPF End Grain	5.500"	Vert	27%	709 / 3456	4164 (-52)	L_LL_L_	D+L(D+L)
5 - SPF End Grain	5.500"	Vert	43%	2148 / 4519	6667	_L_LL_L	D+0.75(L+S)
6 - SPF End Grain	5.500"	Vert	51%	2323 / 5527	7850	L_L_LL_	D+L
7 - SPF End Grain	5.500"	Vert	49%	2150 / 5424	7574	_L_L_LL	D+L
8 - SPF	3.500"	Vert	54%	742 / 2082	2823	L_L_L_L	D+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 Tie-down connection required at bearing 4 for uplift 52 lb (Combination D+L, Load Case _L__L_L).
7 Top must be laterally braced at a maximum of 26'2 1/16" o.c.
8 Bottom must be laterally braced at a maximum of 23'2 1/8" 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
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 5/24/2024

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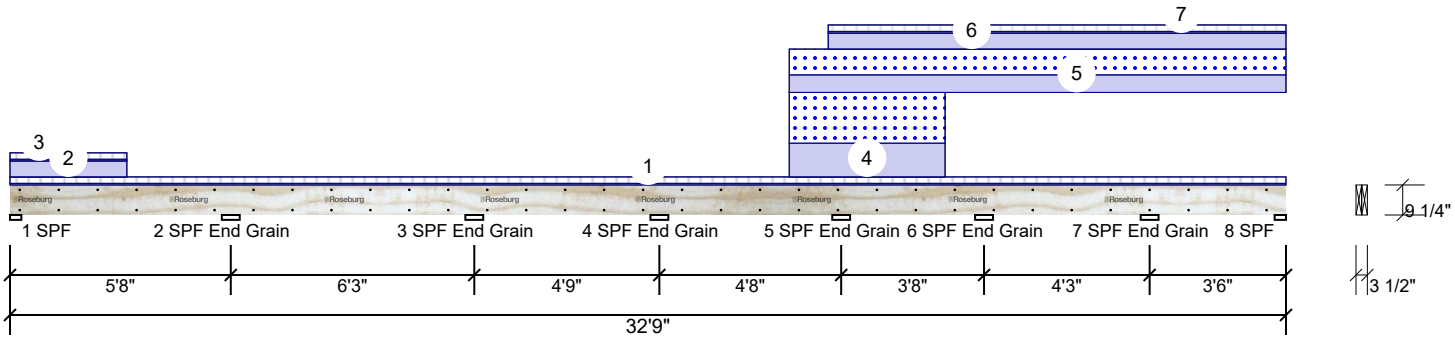
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM2 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		15-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-0-0		Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 3-0-0	8-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
4	Part. Uniform	20-0-0 to 24-0-0		Top	210 PLF	0 PLF	316 PLF	0 PLF	0 PLF	T06
5	Part. Uniform	20-0-0 to 32-9-0		Top	109 PLF	0 PLF	161 PLF	0 PLF	0 PLF	M03
6	Part. Uniform	21-0-0 to 32-9-0		Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
7	Part. Uniform	21-0-0 to 32-9-0	15-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF					

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

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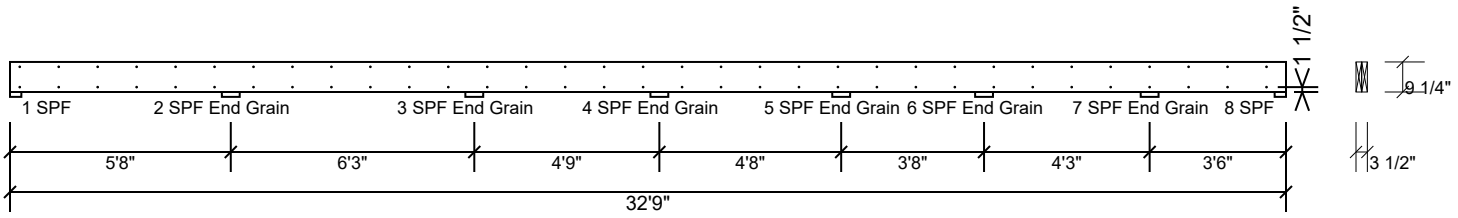
BM2 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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

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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
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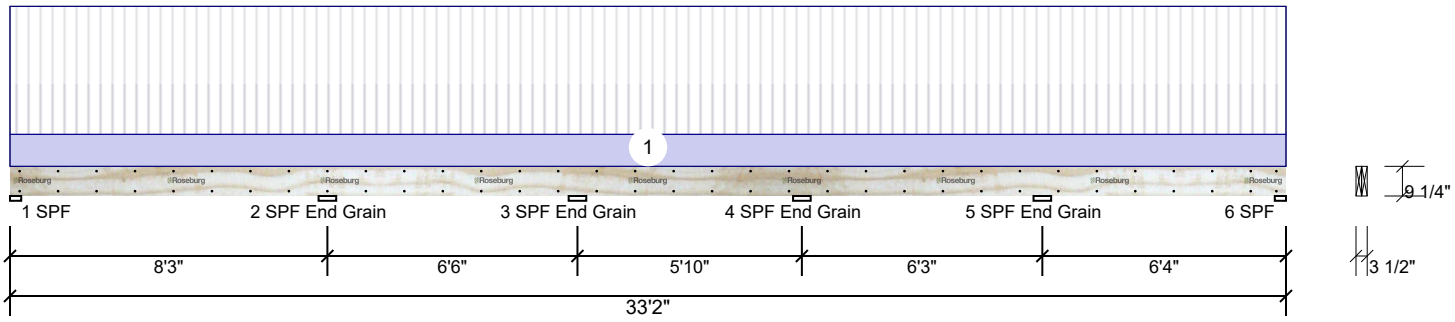
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM3 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2214	583	0	0	0
2	Vertical	5521	1454	0	0	0
3	Vertical	3517	926	0	0	0
4	Vertical	3811	1004	0	0	0
5	Vertical	4486	1181	0	0	0
6	Vertical	1678	442	0	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-5327 ft-lb	8'3"	13320 ft-lb	0.400 (40%)	D+L	LL_L_
Unbraced	-5327 ft-lb	8'3"	5328 ft-lb	1.000 (100%)	D+L	LL_L_
Pos Moment	4732 ft-lb	3'7 13/16"	13320 ft-lb	0.355 (36%)	D+L	L_L_L
Unbraced	4732 ft-lb	3'7 13/16"	4735 ft-lb	0.999 (100%)	D+L	L_L_L
Shear	3105 lb	7'3"	6259 lb	0.496 (50%)	D+L	LL_L_
LL Defl inch	0.088 (L/1095)	4'	0.201 (L/480)	0.438 (44%)	L	L_L_L
TL Defl inch	0.106 (L/906)	3'11 5/8"	0.401 (L/240)	0.265 (26%)	D+L	L_L_L

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	57%	583 / 2368	2952	L_L_L	D+L
2 - SPF End Grain	5.500"	Vert	47%	1454 / 5779	7233	LL_L_	D+L
3 - SPF End Grain	5.500"	Vert	36%	926 / 4660	5586 (-217)	_LL_L	D+L(D+L)
4 - SPF End Grain	5.500"	Vert	37%	1004 / 4647	5651	L_LL_	D+L
5 - SPF End Grain	5.500"	Vert	39%	1181 / 4812	5993	_L_LL	D+L
6 - SPF	3.500"	Vert	45%	442 / 1896	2338	L_L_L	D+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. Tie-down connection required at bearing 3 for uplift 217 lb (Combination D+L, Load Case L__L_).
7. Top must be laterally braced at a maximum of 16'3 1/8" o.c.
8. Bottom must be laterally braced at a maximum of 14'4 3/8" o.c.
9. Lateral slenderness ratio based on single ply width.

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

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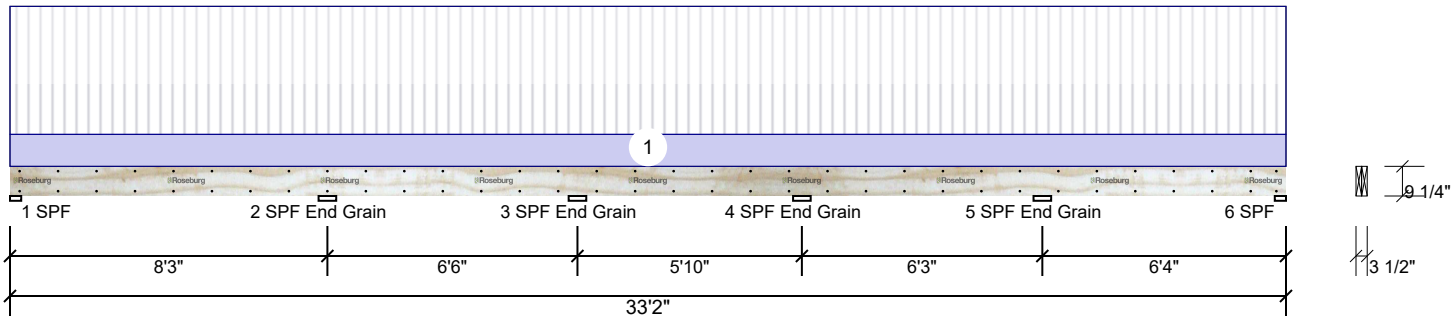
BM3 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		16-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
	Self Weight				9 PLF					

Notes

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1. LVL beams must not be cut or drilled
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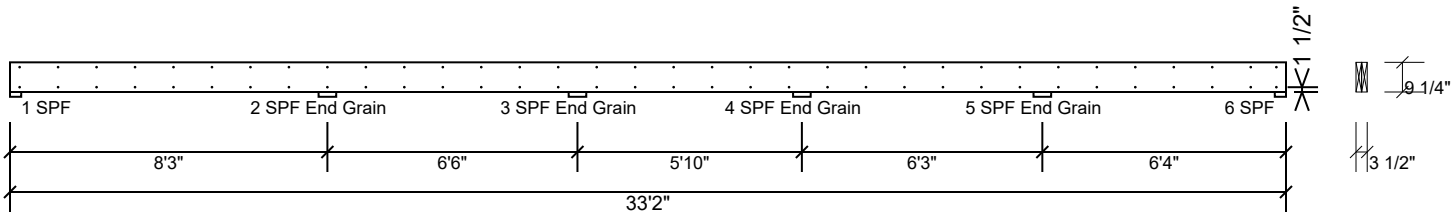
BM3 2.0E Rigidlam LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level



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 5/24/2024

Manufacturer Info

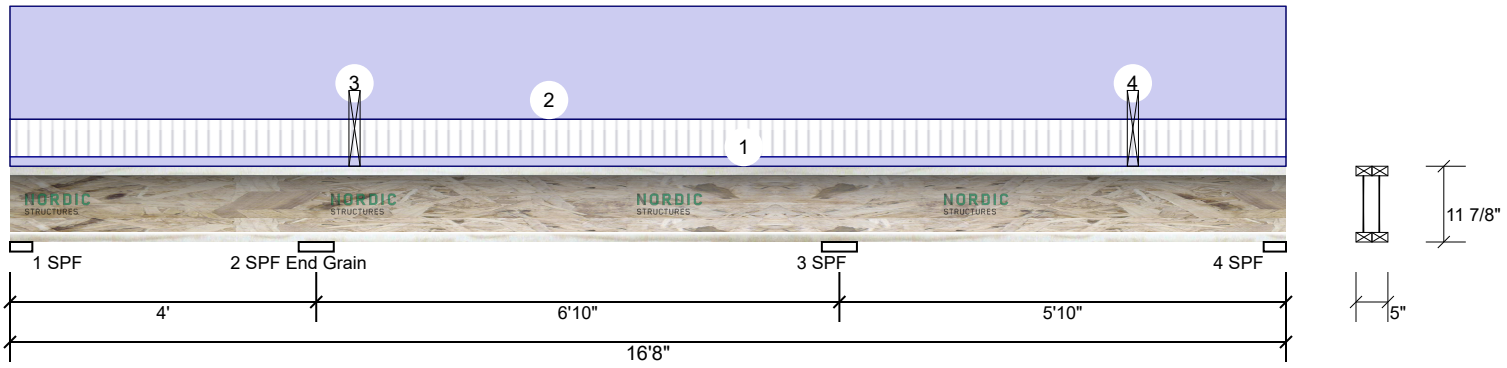
Roseburg Forest Products
4500 Riddle By-pass Rd
Riddle, OR 97469
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ18-2 NI-40x 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	560	295	0	0	0
2	Vertical	2469	1614	0	0	0
3	Vertical	3110	1769	0	0	0
4	Vertical	1408	830	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	39%	295 / 824	1119	L_L	D+L
2 - SPF End Grain	5.500"	Vert	60%	1614 / 2625	4240	LL_	D+L
3 - SPF	5.500"	Vert	69%	1769 / 3145	4914	_LL	D+L
4 - SPF	3.500"	Vert	84%	830 / 1570	2400	L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2655 ft-lb	10'10"	7520 ft-lb	0.353 (35%)	D+L	_LL
Unbraced	-2655 ft-lb	10'10"	2657 ft-lb	0.999 (100%)	D+L	_LL
Pos Moment	3027 ft-lb	14'8"	7520 ft-lb	0.403 (40%)	D+L	L_L
Unbraced	3027 ft-lb	14'8"	6050 ft-lb	0.500 (50%)	D+L	L_L
Shear	2594 lb	10'10"	2960 lb	0.876 (88%)	D+L	_LL
LL Defl inch	0.031 (L/2158)	13'11 13/16"	0.140 (L/480)	0.222 (22%)	L	L_L
TL Defl inch	0.047 (L/1420)	14' 9/16"	0.280 (L/240)	0.169 (17%)	D+L	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 flange must be laterally braced at bearings.
6. Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		10-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Point	4-6-0		Top	351 lb	160 lb	0 lb	0 lb	0 lb	BM12 Brg 2
	Bearing Length	0-3-0								
4	Point	14-8-0		Top	491 lb	720 lb	0 lb	0 lb	0 lb	BM11 Brg 2
	Bearing Length	0-3-0								

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info

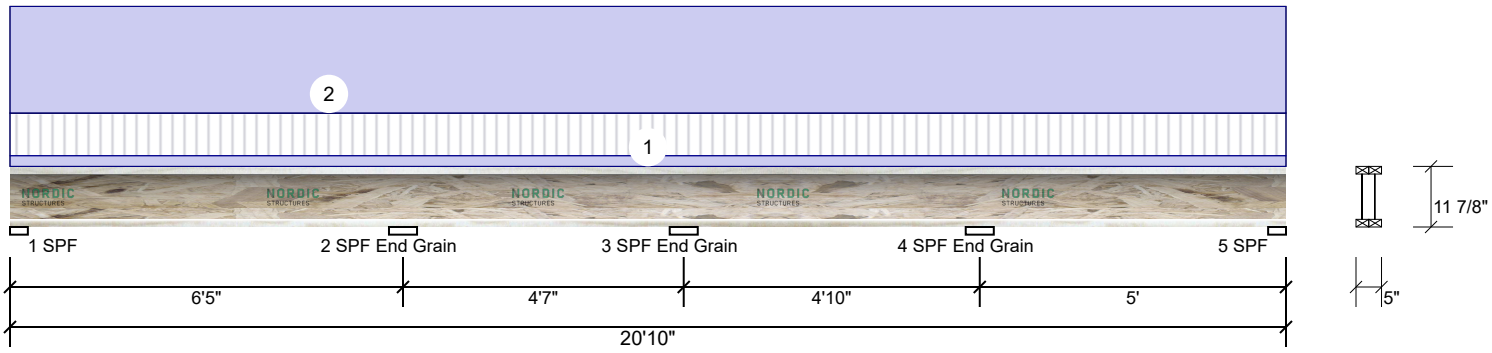
Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ22-2 NI-40x 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	115	315	0	0	0
2	Vertical	243	667	0	0	0
3	Vertical	179	491	0	0	0
4	Vertical	210	576	0	0	0
5	Vertical	88	242	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	15%	315 / 120	435	L_L_	D+L
2 - SPF End Grain	5.500"	Vert	13%	667 / 251	919	LL_L	D+L
3 - SPF End Grain	5.500"	Vert	10%	491 / 205	696	_LL_	D+L
4 - SPF End Grain	5.500"	Vert	11%	576 / 217	794	L_LL	D+L
5 - SPF	3.500"	Vert	12%	242 / 96	339	_L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-427 ft-lb	6'5"	7520 ft-lb	0.057 (6%)	D+L	LL_L
Unbraced	-427 ft-lb	6'5"	1196 ft-lb	0.357 (36%)	D+L	LL_L
Pos Moment	534 ft-lb	2'10 13/16"	7520 ft-lb	0.071 (7%)	D+L	L_L_
Unbraced	534 ft-lb	2'10 13/16"	6373 ft-lb	0.084 (8%)	D+L	L_L_
Shear	533 lb	6'5"	2960 lb	0.180 (18%)	D+L	LL_L
LL Defl inch	0.003 (L/26375)	3'3 1/16"	0.155 (L/480)	0.018 (2%)	L	L_L_
TL Defl inch	0.010 (L/7381)	3'2 11/16"	0.309 (L/240)	0.033 (3%)	D+L	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 flange must be laterally braced at bearings.
6 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info

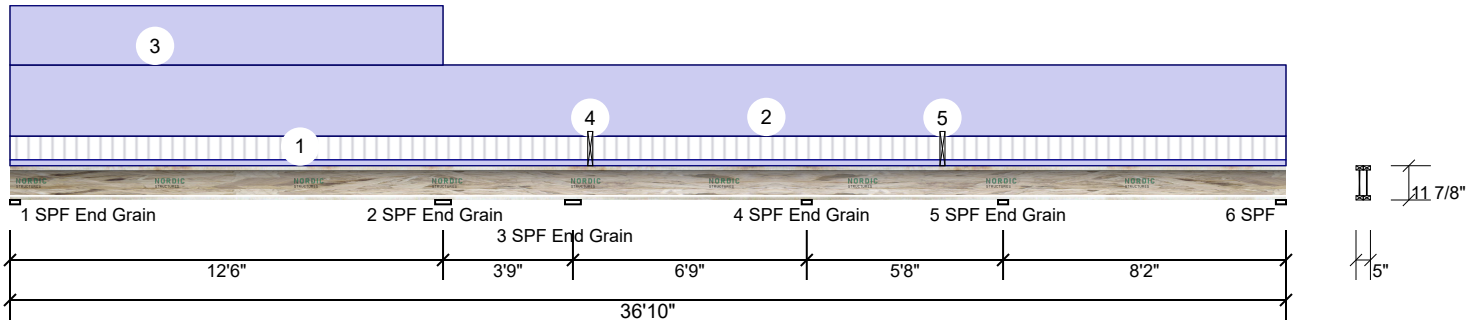
Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ38-2 NI-40x 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	214	1237	0	0	0
2	Vertical	455	2480	0	0	0
3	Vertical	235	408	0	0	0
4	Vertical	493	945	0	0	0
5	Vertical	842	1366	0	0	0
6	Vertical	113	445	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	51%	1237 / 216	1453	L__L_	D+L
2 - SPF End Grain	5.500"	Vert	42%	2480 / 487	2966	LL_L_	D+L
3 - SPF End Grain	5.500"	Vert	11%	408 / 400	808	_LL_L	D+L
4 - SPF End Grain	3.500"	Vert	25%	945 / 532	1477	__LL_	D+L
5 - SPF End Grain	3.500"	Vert	37%	1366 / 862	2228	LL_LL	D+L
6 - SPF	3.500"	Vert	21%	445 / 150	594	__L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3284 ft-lb	12'6"	7520 ft-lb	0.437 (44%)	D+L	LLL_L
Unbraced	-3284 ft-lb	12'6"	3905 ft-lb	0.841 (84%)	D+L	LLL_L
Pos Moment	3581 ft-lb	5'4 9/16"	7520 ft-lb	0.476 (48%)	D+L	L__L_
Unbraced	3581 ft-lb	5'4 9/16"	3905 ft-lb	0.917 (92%)	D+L	L__L_
Shear	1924 lb	12'6"	2960 lb	0.650 (65%)	D+L	LLL_L
LL Defl inch	0.011 (L/5992)	26'11"	0.142 (L/480)	0.080 (8%)	L	LL_L_
TL Defl inch	0.154 (L/954)	5'11 13/16"	0.614 (L/240)	0.252 (25%)	D+L	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 flange must be laterally braced at a maximum of 10'5" o.c.
6 Bottom flange must be laterally braced at a maximum of 10'5" o.c.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 12-6-0		Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
4	Point	16-9-0		Top	351 lb	160 lb	0 lb	0 lb	0 lb	BM12 Brg 2
	Bearing Length	0-3-0								

Continued on page 2...

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

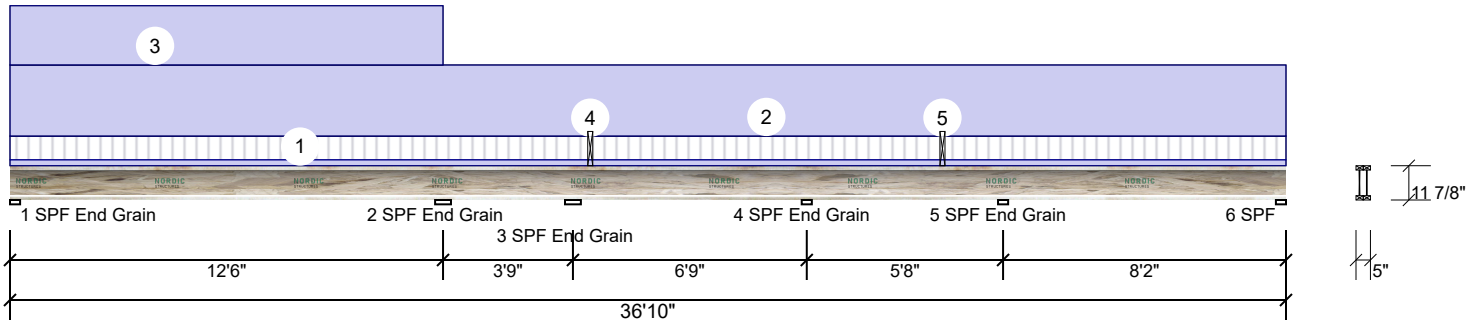
Manufacturer Info

Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

1FJ38-2 NI-40x 11.875" 2-Ply - PASSED

Level: Level



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ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
5	Point	26-11-0		Top	491 lb	720 lb	0 lb	0 lb	0 lb	BM11 Brg 2
	Bearing Length	0-3-0								

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info

Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
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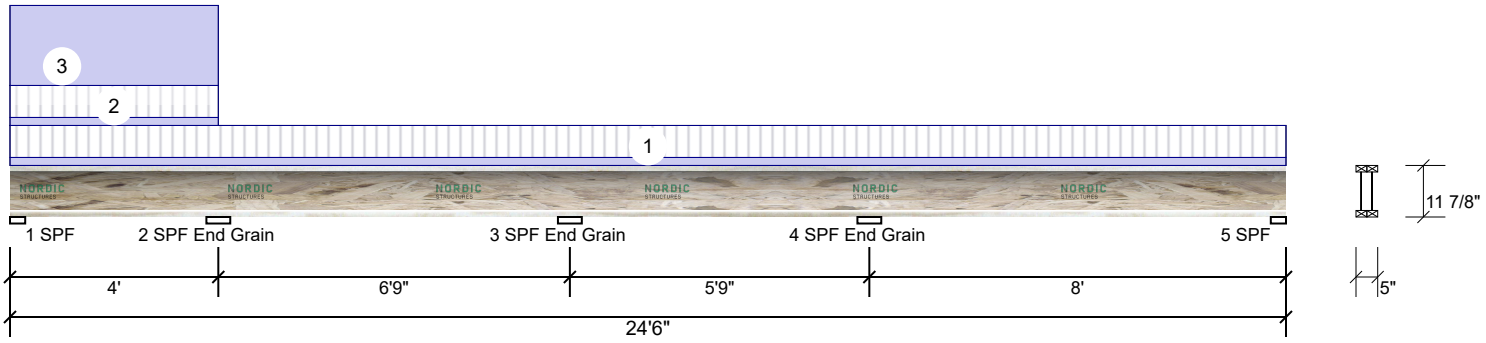
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ26-2 NI-40x 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	853	412	0	0	0
2	Vertical	1069	476	0	0	0
3	Vertical	209	43	0	0	0
4	Vertical	309	78	0	0	0
5	Vertical	140	35	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	45%	412 / 878	1291	L_L_	D+L
2 - SPF End Grain	5.500"	Vert	22%	476 / 1081	1557	LL_L	D+L
3 - SPF End Grain	5.500"	Vert	5%	43 / 275	319 (-24)	_LL_	D+L(D+L)
4 - SPF End Grain	5.500"	Vert	6%	78 / 326	405	L_LL	D+L
5 - SPF	3.500"	Vert	6%	35 / 147	182	_L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-419 ft-lb	4'	7520 ft-lb	0.056 (6%)	D+L	LL_L
Unbraced	-419 ft-lb	4'	868 ft-lb	0.482 (48%)	D+L	LL_L
Pos Moment	1003 ft-lb	1'11 13/16"	7520 ft-lb	0.133 (13%)	D+L	L_L_
Unbraced	1003 ft-lb	1'11 13/16"	5510 ft-lb	0.182 (18%)	D+L	L_L_
Shear	1337 lb	4'	2960 lb	0.452 (45%)	D+L	LL_L
LL Defl inch	0.008 (L/5410)	2'1 3/16"	0.094 (L/480)	0.089 (9%)	L	L_L_
TL Defl inch	0.012 (L/3678)	2'1 3/16"	0.189 (L/240)	0.065 (7%)	D+L	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 Tie-down connection required at bearing 3 for uplift 24 lb (Combination D+L, Load Case L__L).
6 Top flange must be laterally braced at bearings.
7 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-0-0	10-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 4-0-0		Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info

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1100 Avenue des Canadiens-de-Montréal, Suite 100
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(866) 871-3418
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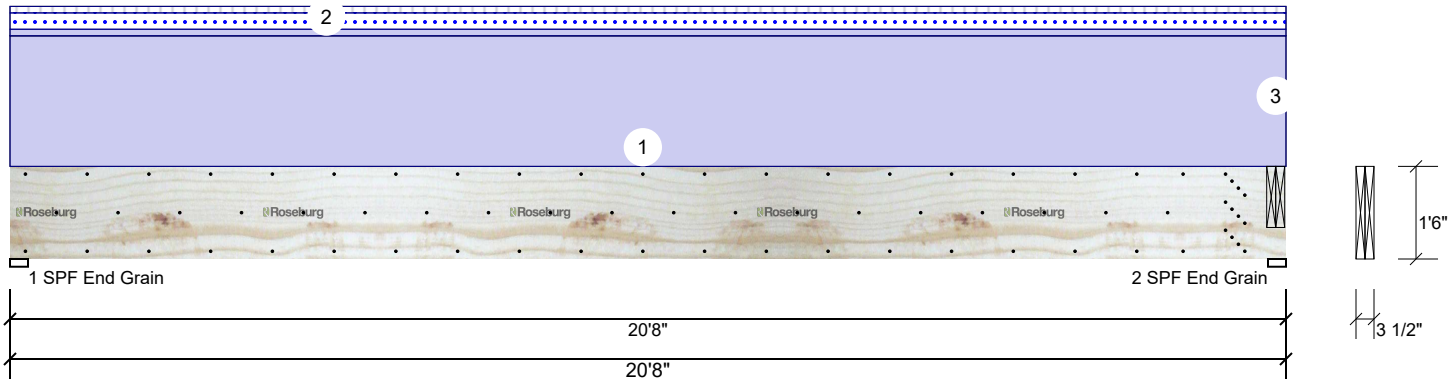
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM8 2.0E Rigidlam LVL 1.750" X 18.000" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	103	2342	258	0	0
2	Vertical	867	3210	258	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	28%	2342 / 271	2613	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	Vert	44%	3210 / 867	4076	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11569 ft-lb	10'4"	41771 ft-lb	0.277 (28%)	D	Uniform
Unbraced	12909 ft-lb	10'4"	12952 ft-lb	0.997 (100%)	D+0.75(L+S)	L
Shear	1961 lb	1'9 1/2"	10962 lb	0.179 (18%)	D	Uniform
LL Defl inch	0.029 (L/8376)	10'4 1/16"	0.505 (L/480)	0.057 (6%)	0.75(L+S)	L
TL Defl inch	0.279 (L/869)	10'4 1/16"	1.010 (L/240)	0.276 (28%)	D+0.75(L+S)	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. Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
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 a maximum of 10'5 1/2" o.c.
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			Top	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
2	Uniform		1-0-0	Top	10 PSF	10 PSF	25 PSF	0 PSF	0 PSF	
3	Point	20-6-0		Near Face	868 lb	763 lb	0 lb	0 lb	0 lb	BM14 Brg 1
	Self Weight				17 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 5/24/2024

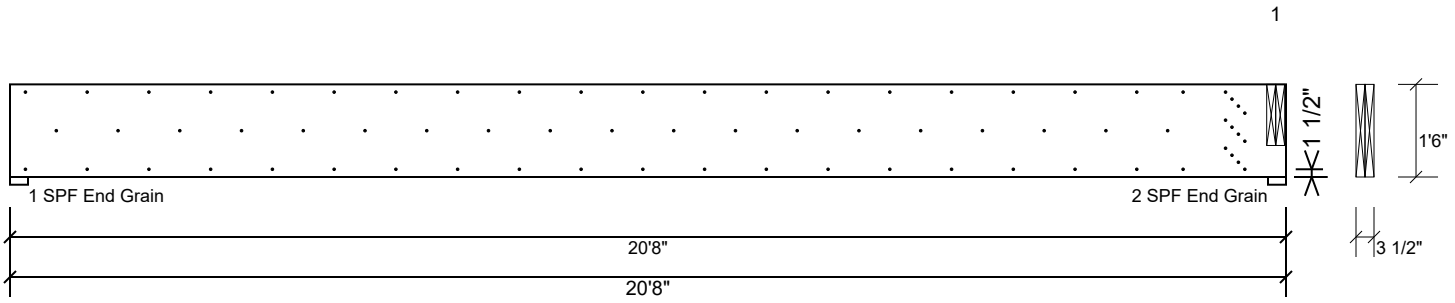
Manufacturer Info

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

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

BM8 2.0E Rigidlam LVL 1.750" X 18.000" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6".

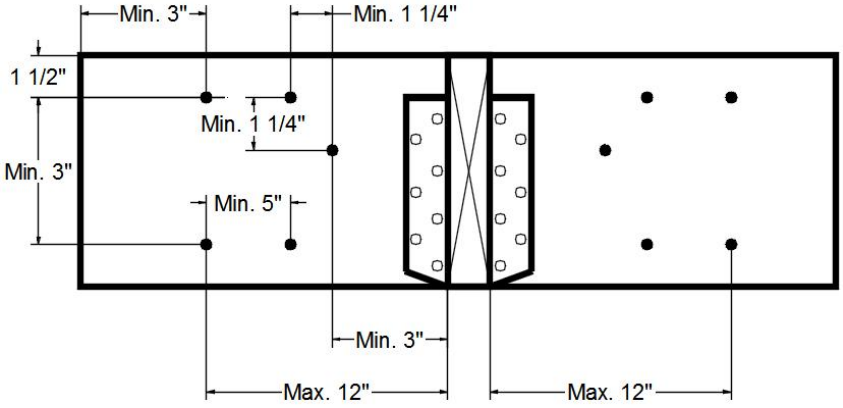
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	271.6 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 20-6-0 with a minimum of (12) – 10d Box nails (.128x3") in the pattern shown.

Capacity	75.1 %
Load	815.7lb.
Total Yield Limit	1086.3 lb.
Cg	0.9998
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Load Combination	D+L
Duration Factor	1.00

Min/Max fastener distances for Concentrated Side Loads



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 5/24/2024

Manufacturer Info

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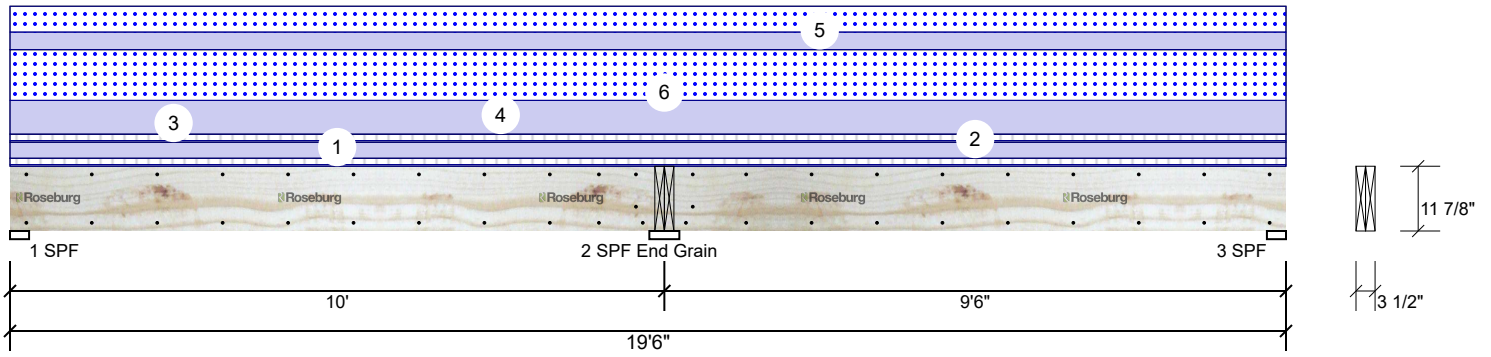
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM9 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1423	2055	1885	0	0
2	Vertical	4533	6938	5680	0	0
3	Vertical	1310	1893	1736	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	92%	2055 / 2722	4777	L_	D+0.75(L+S)
2 - SPF End Grain	5.500"	Vert	95%	6938 / 7660	14598	LL	D+0.75(L+S)
3 - SPF	3.500"	Vert	86%	1893 / 2581	4474	_L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-13031 ft-lb	10'	24470 ft-lb	0.533 (53%)	D+0.75(L+S)	LL
Unbraced	-13031 ft-lb	10'	13073 ft-lb	0.997 (100%)	D+0.75(L+S)	LL
Pos Moment	8876 ft-lb	4'1 15/16"	24470 ft-lb	0.363 (36%)	D+0.75(L+S)	L_
Unbraced	8876 ft-lb	4'1 15/16"	8894 ft-lb	0.998 (100%)	D+0.75(L+S)	L_
Shear	5553 lb	8'9 3/8"	9241 lb	0.601 (60%)	D+0.75(L+S)	LL
LL Defl inch	0.082 (L/1430)	4'8 7/8"	0.244 (L/480)	0.336 (34%)	0.75(L+S)	L_
TL Defl inch	0.130 (L/901)	4'7 5/16"	0.489 (L/240)	0.266 (27%)	D+0.75(L+S)	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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
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 a maximum of 10'8 1/2" o.c.
8 Bottom must be laterally braced at a maximum of 6'6 3/4" 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
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 5/24/2024

Manufacturer Info

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(541) 784-4005
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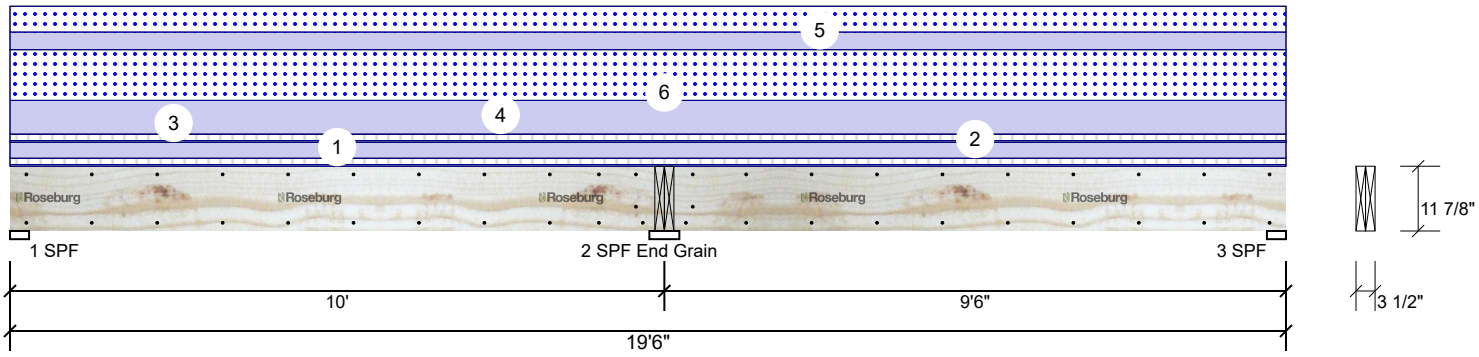
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM9 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR //
2	Uniform			Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
3	Uniform		8-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	FLOOR PERP.
4	Uniform			Top	210 PLF	0 PLF	316 PLF	0 PLF	0 PLF	T06
5	Uniform			Top	109 PLF	0 PLF	161 PLF	0 PLF	0 PLF	M03
6	Point	10-0-0		Near Face	746 lb	247 lb	0 lb	0 lb	0 lb	BM10 Brg 1
	Self Weight				11 PLF					

Notes

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Lumber

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

Handling & Installation

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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
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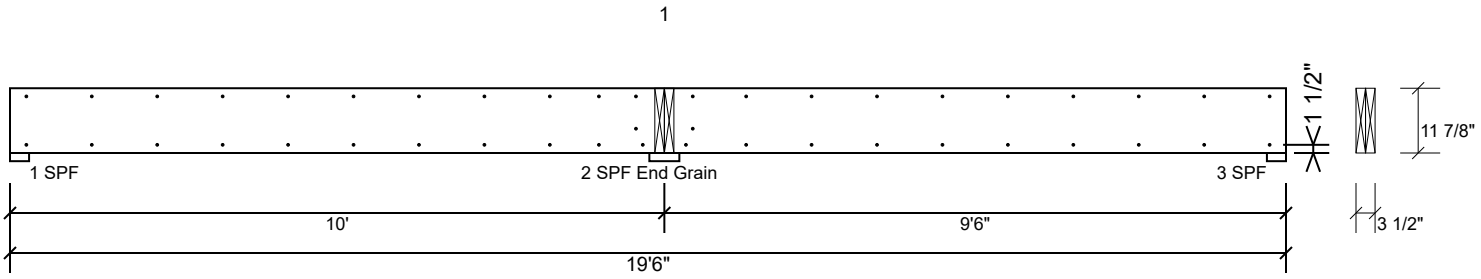
BM9 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 6".

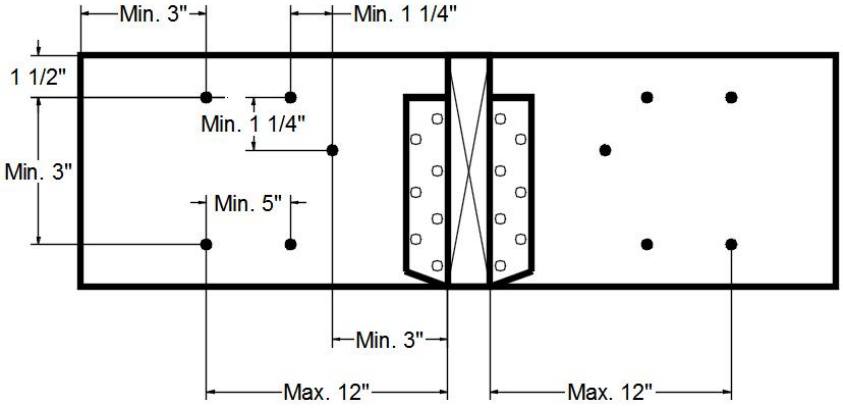
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	181.1 PLF
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 10-0-0 with a minimum of (6) – 10d Box nails (.128x3") in the pattern shown.

Capacity	91.4 %
Load	496.4lb.
Total Yield Limit	543.3 lb.
Cg	1.0000
Yield Limit per Fastener	90.5 lb.
Yield Mode	IV
Load Combination	D+L
Duration Factor	1.00

Min/Max fastener distances for Concentrated Side Loads



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
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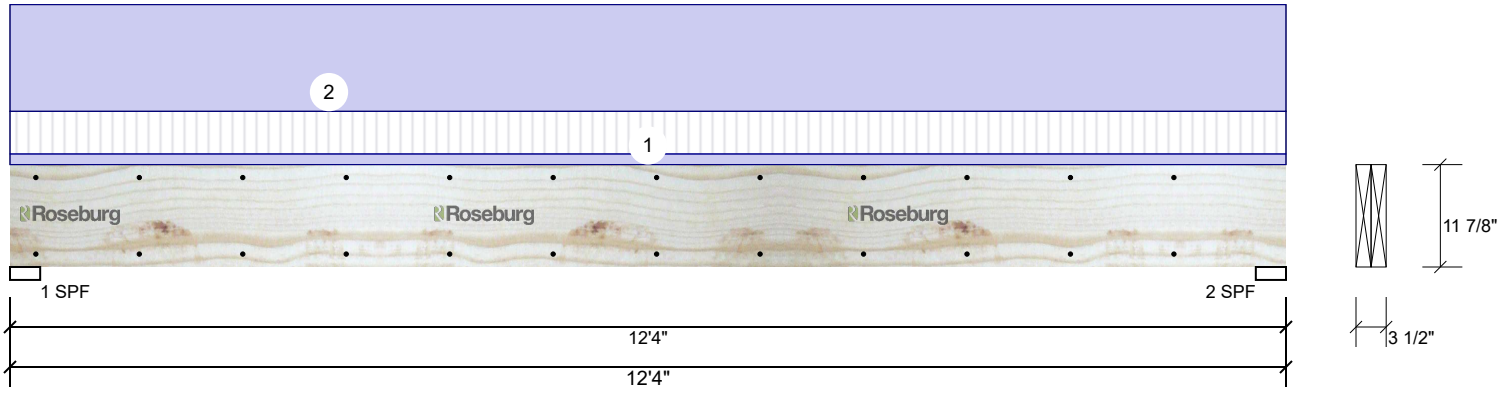
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM10 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	247	746	0	0	0
2	Vertical	247	746	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	19%	746 / 247	993	L	D+L
2 - SPF	3.500"	Vert	19%	746 / 247	993	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2837 ft-lb	6'2"	21278 ft-lb	0.133 (13%)	D+L	L
Unbraced	2837 ft-lb	6'2"	8120 ft-lb	0.349 (35%)	D+L	L
Shear	797 lb	1'3 3/8"	8035 lb	0.099 (10%)	D+L	L
LL Defl inch	0.018 (L/7778)	6'2"	0.297 (L/480)	0.062 (6%)	L	L
TL Defl inch	0.074 (L/1933)	6'2"	0.594 (L/240)	0.124 (12%)	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 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		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				11 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
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6. For flat roofs provide proper drainage to prevent ponding

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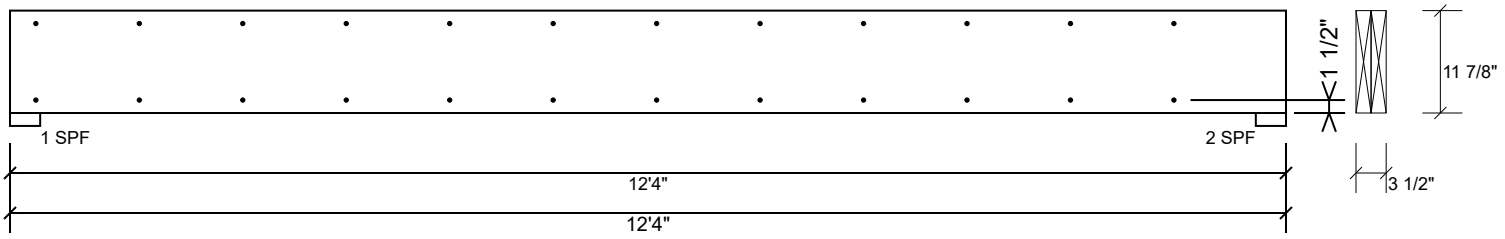
24540
434-793-0217

BM10 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



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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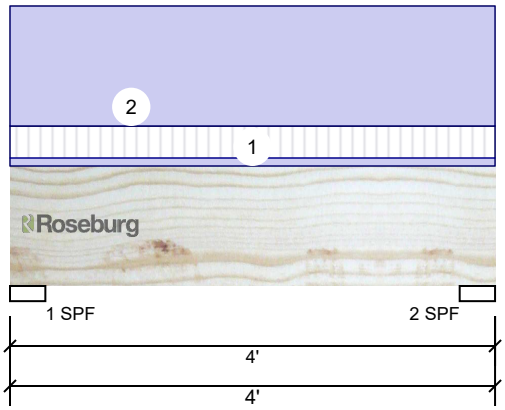
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

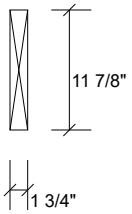
Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM11 2.0E Rigidlam LVL 1.750" X 11.875" - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	720	491	0	0	0
2	Vertical	720	491	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	47%	491 / 720	1211	L	D+L
2 - SPF	3.500"	Vert	47%	491 / 720	1211	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	949 ft-lb	2'	10639 ft-lb	0.089 (9%)	D+L	L
Unbraced	949 ft-lb	2'	9365 ft-lb	0.101 (10%)	D+L	L
Shear	441 lb	2'8 5/8"	4018 lb	0.110 (11%)	D+L	L
LL Defl inch	0.003 (L/16288)	2' 1/16"	0.089 (L/480)	0.029 (3%)	L	L
TL Defl inch	0.004 (L/9684)	2' 1/16"	0.177 (L/240)	0.025 (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 Top must be laterally braced at end bearings.
4 Bottom must be laterally braced at end bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		9-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				5 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 5/24/2024

Manufacturer Info

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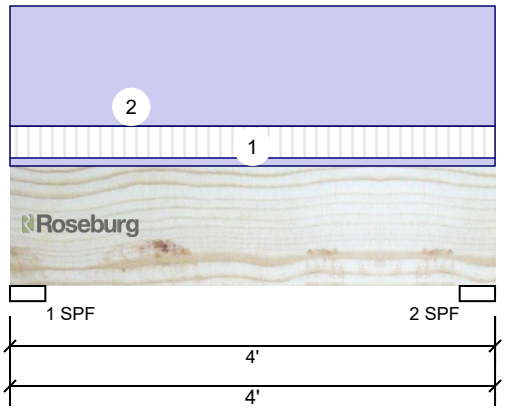
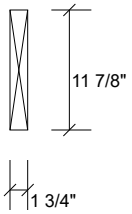
733 River Park Drive, Virginia
24540
434-793-0217

BM12 2.0E Rigidlam LVL 1.750" X 11.875" - PASSED

Level: Level





Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	160	351	0	0	0
2	Vertical	160	351	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	20%	351 / 160	511	L	D+L
2 - SPF	3.500"	Vert	20%	351 / 160	511	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	401 ft-lb	2'	10639 ft-lb	0.038 (4%)	D+L	L
Unbraced	401 ft-lb	2'	9365 ft-lb	0.043 (4%)	D+L	L
Shear	189 lb	1'3 3/8"	4018 lb	0.047 (5%)	D+L	L
LL Defl inch	0.001 (L/73295)	2' 1/16"	0.089 (L/480)	0.007 (1%)	L	L
TL Defl inch	0.002 (L/22951)	2' 1/16"	0.177 (L/240)	0.010 (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 Girders are designed to be supported on the bottom edge only.
3 Top must be laterally braced at end bearings.
4 Bottom must be laterally braced at end bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		2-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				5 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 5/24/2024

Manufacturer Info

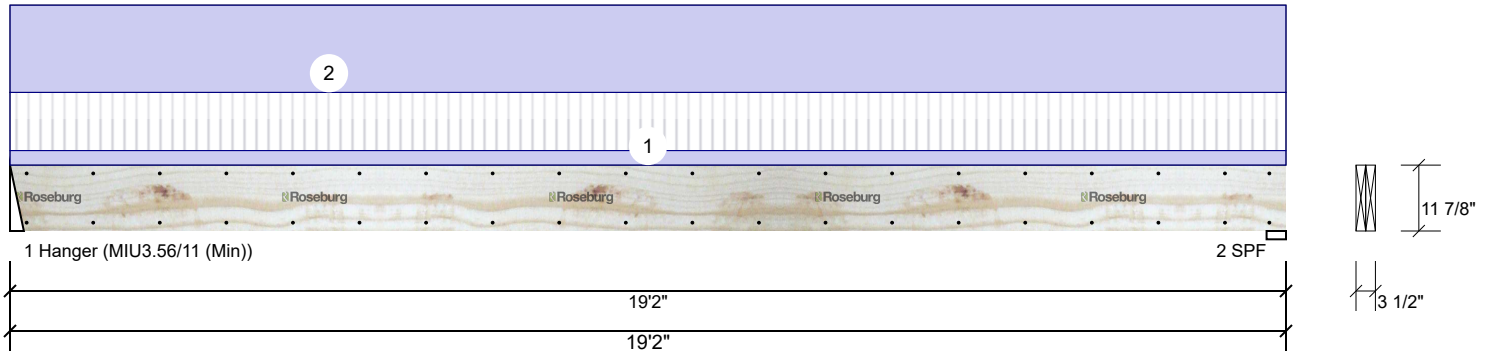
Roseburg Forest Products
4500 Riddle By-pass Rd
Riddle, OR 97469
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM14 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	763	868	0	0	0
2	Vertical	770	876	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.500"	Vert	25%	868 / 763	1631	L	D+L
2 - SPF	3.500"	Vert	32%	876 / 770	1646	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7547 ft-lb	9'6 1/2"	21278 ft-lb	0.355 (35%)	D+L	L
Unbraced	7547 ft-lb	9'6 1/2"	7550 ft-lb	1.000 (100%)	D+L	L
Shear	1437 lb	17'10 5/8"	8035 lb	0.179 (18%)	D+L	L
LL Defl inch	0.230 (L/981)	9'6 9/16"	0.470 (L/480)	0.489 (49%)	L	L
TL Defl inch	0.491 (L/459)	9'6 9/16"	0.940 (L/240)	0.523 (52%)	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 a maximum of 12'11 1/2" o.c.
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		2-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				11 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 5/24/2024

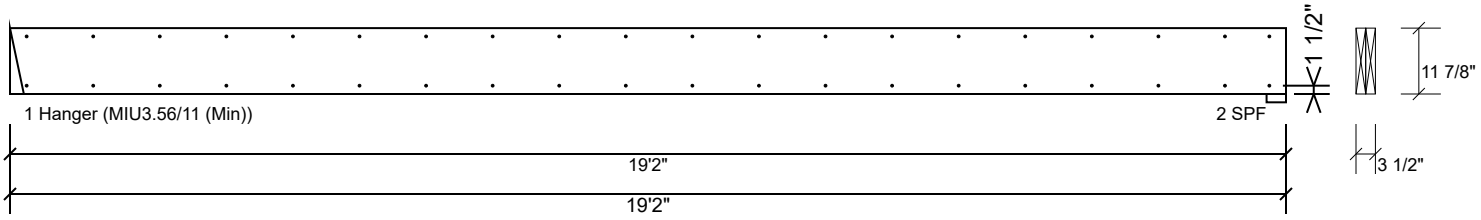
Manufacturer Info

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

Riverside Roof Truss
733 River Park Drive, Virginia 24540
434-793-0217

BM14 2.0E Rigidlam LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



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 5/24/2024

Manufacturer Info

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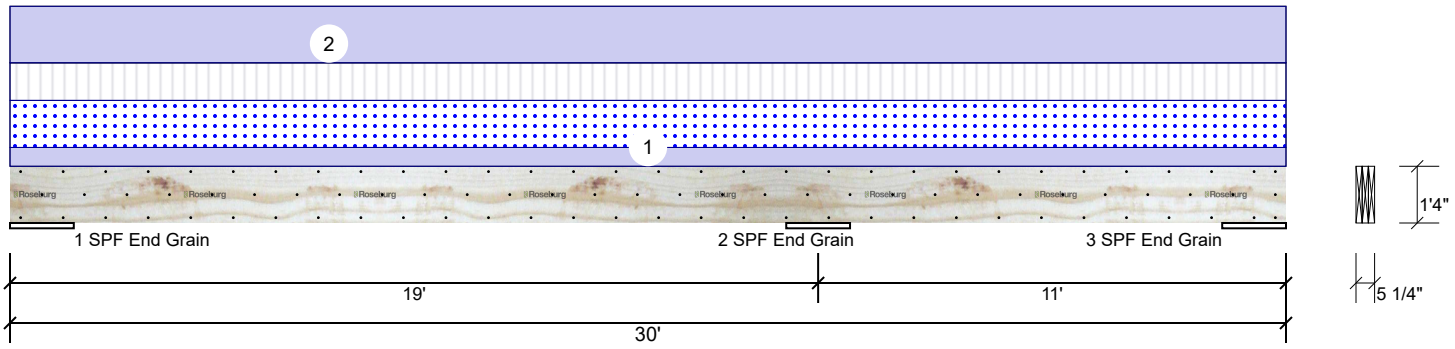
4500 Riddle By-pass Rd
Riddle, OR 97469
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM15 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2056	1475	2570	0	0
2	Vertical	4379	3141	5474	0	0
3	Vertical	765	549	956	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	18.000"	Vert	7%	1475 / 3537	5012	L_	D+0.75(L+S)
2 - SPF End Grain	18.000"	Vert	15%	3141 / 7389	10531	LL	D+0.75(L+S)
3 - SPF End Grain	18.000"	Vert	4%	549 / 2054	2603	_L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-16734 ft-lb	19'	66764 ft-lb	0.251 (25%)	D+0.75(L+S)	LL
Unbraced	-16734 ft-lb	19'	16756 ft-lb	0.999 (100%)	D+0.75(L+S)	LL
Pos Moment	15155 ft-lb	8'8 3/16"	66764 ft-lb	0.227 (23%)	D+0.75(L+S)	L_
Unbraced	15155 ft-lb	8'8 3/16"	15169 ft-lb	0.999 (100%)	D+0.75(L+S)	L_
Shear	4848 lb	16'11"	18676 lb	0.260 (26%)	D+0.75(L+S)	LL
LL Defl inch	0.145 (L/1453)	9'5 3/4"	0.439 (L/480)	0.330 (33%)	0.75(L+S)	L_
TL Defl inch	0.202 (L/1042)	9'5 3/8"	0.878 (L/240)	0.230 (23%)	D+0.75(L+S)	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 a maximum of 12'7 5/16" o.c.
7 Bottom must be laterally braced at a maximum of 11'1 7/8" o.c.
8 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

This design is valid until 5/24/2024

Manufacturer Info

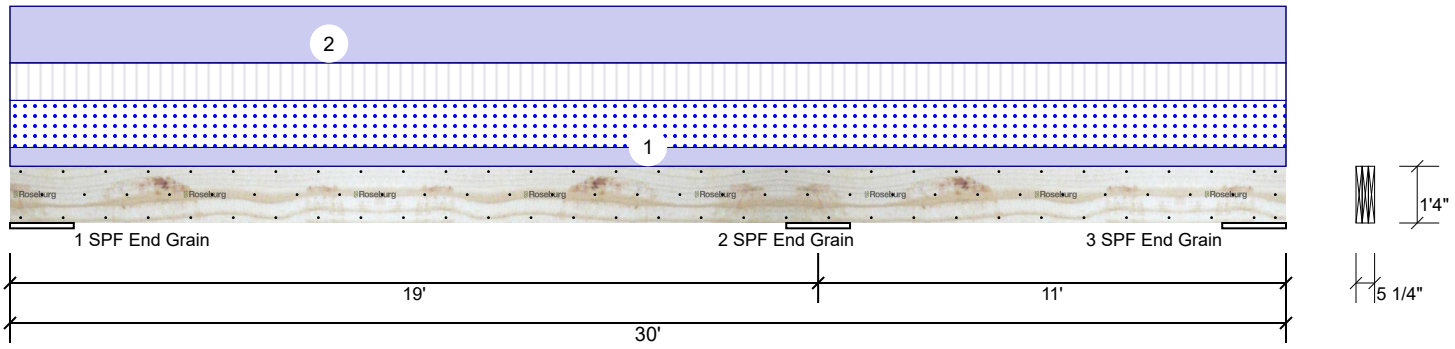
Roseburg Forest Products
4500 Riddle By-pass Rd
Riddle, OR 97469
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia 24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

BM15 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		12-0-0	Top	10 PSF	20 PSF	25 PSF	0 PSF	0 PSF	
2	Uniform			Top	30 PLF	0 PLF	0 PLF	0 PLF	0 PLF	
	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 5/24/2024

Manufacturer Info

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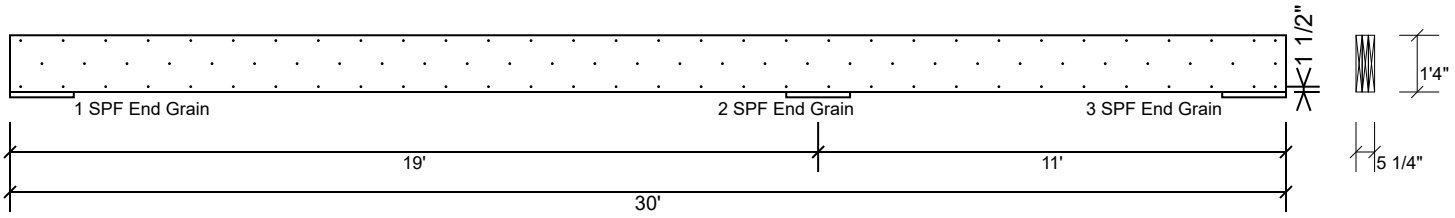
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

BM15 2.0E Rigidlam LVL 1.750" X 16.000" 3-Ply - PASSED

Level: Level



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 5/24/2024

Manufacturer Info

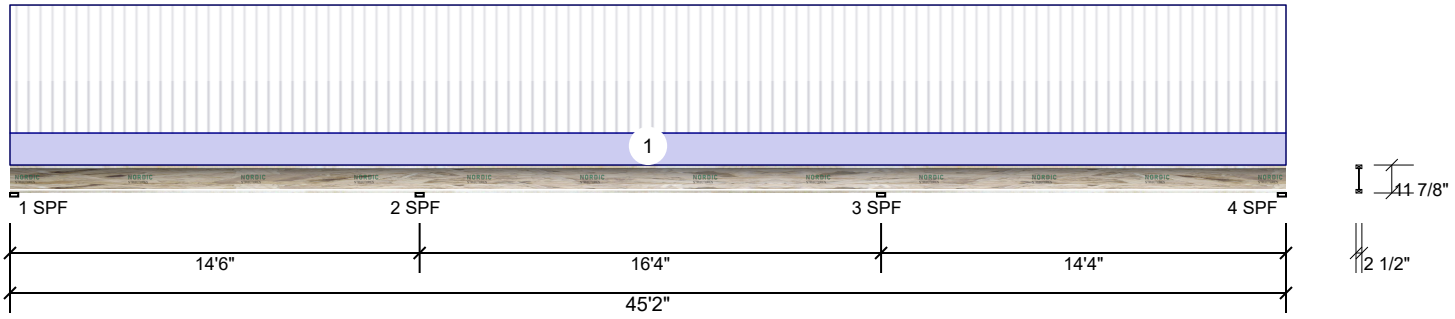
Roseburg Forest Products
4500 Riddle By-pass Rd
Riddle, OR 97469
(541) 784-4005
www.roseburg.com
APA: PR-L289, PR-L270, ICC-ES: ESR-1210

Riverside Roof Truss
733 River Park Drive, Virginia 24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ46 NI-40x 11.875" - PASSED

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
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 UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	307	77	0	0	0
2	Vertical	903	226	0	0	0
3	Vertical	896	224	0	0	0
4	Vertical	303	76	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	30%	77 / 358	435	L_L	D+L
2 - SPF	3.500"	Vert	40%	226 / 961	1187	LL_	D+L
3 - SPF	3.500"	Vert	39%	224 / 956	1180	_LL	D+L
4 - SPF	3.500"	Vert	30%	76 / 355	431	L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1686 ft-lb	14'6"	3760 ft-lb	0.448 (45%)	D+L	LL_
Unbraced	-1686 ft-lb	14'6"	1703 ft-lb	0.990 (99%)	D+L	LL_
Pos Moment	1319 ft-lb	6'6 1/4"	3760 ft-lb	0.351 (35%)	D+L	L_L
Shear	594 lb	14'6"	1480 lb	0.401 (40%)	D+L	LL_
LL Defl inch	0.124 (L/1583)	22'7 15/16"	0.408 (L/480)	0.303 (30%)	L	_L_
TL Defl inch	0.126 (L/1356)	7' 3/4"	0.714 (L/240)	0.177 (18%)	D+L	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 Bottom flange must be laterally braced at a maximum of 5'8" o.c.

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	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info

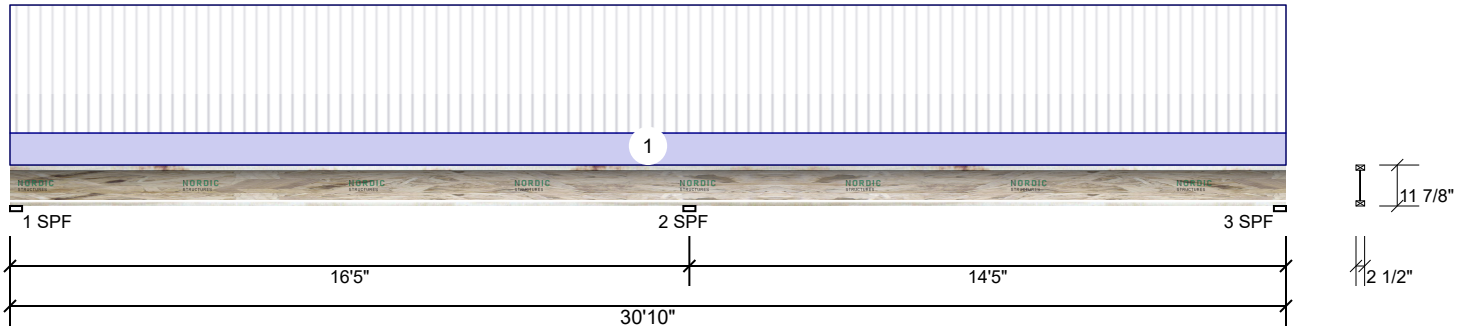
Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ32 NI-40x 11.875" - PASSED

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
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 UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	352	88	0	0	0
2	Vertical	1006	251	0	0	0
3	Vertical	286	72	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	33%	88 / 389	477	L_	D+L
2 - SPF	3.500"	Vert	42%	252 / 1007	1259	LL	D+L
3 - SPF	3.500"	Vert	29%	71 / 348	420	_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1866 ft-lb	16'5"	3760 ft-lb	0.496 (50%)	D+L	LL
Unbraced	-1866 ft-lb	16'5"	1887 ft-lb	0.989 (99%)	D+L	LL
Pos Moment	1597 ft-lb	7'1 13/16"	3760 ft-lb	0.425 (42%)	D+L	L_
Shear	655 lb	16'5"	1480 lb	0.442 (44%)	D+L	LL
LL Defl inch	0.156 (L/1248)	7'11 3/16"	0.405 (L/480)	0.385 (38%)	L	L_
TL Defl inch	0.185 (L/1048)	7'10 3/8"	0.809 (L/240)	0.229 (23%)	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 Bottom flange must be laterally braced at a maximum of 5'4" o.c.

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	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

Manufacturer Info

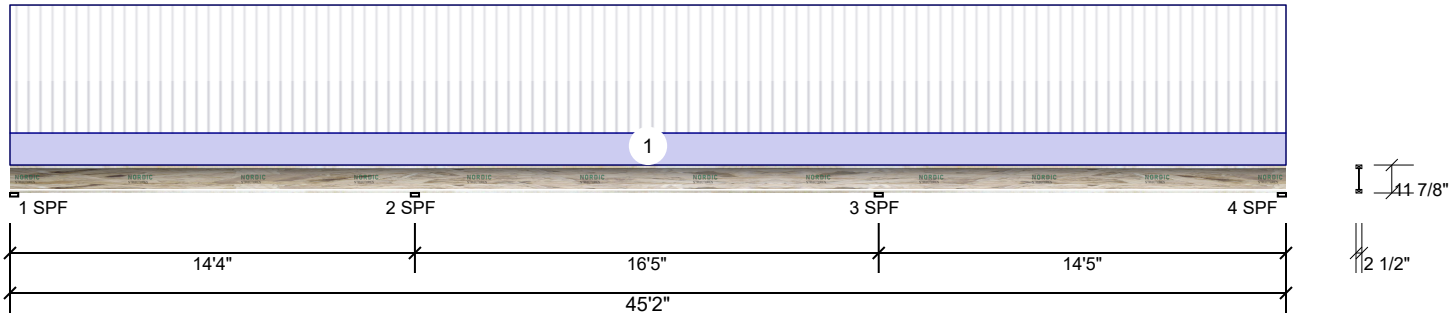
Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

2FJ46 NI-40x 11.875" - PASSED

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance:	Normal - II	Ceiling:	Gypsum 1/2"
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	302	76	0	0	0
2	Vertical	900	225	0	0	0
3	Vertical	903	226	0	0	0
4	Vertical	304	76	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	30%	75 / 355	430	L_L	D+L
2 - SPF	3.500"	Vert	39%	225 / 958	1183	LL_	D+L
3 - SPF	3.500"	Vert	40%	226 / 961	1187	_LL	D+L
4 - SPF	3.500"	Vert	30%	76 / 356	432	L_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1686 ft-lb	30'9"	3760 ft-lb	0.448 (45%)	D+L	_LL
Pos Moment	1305 ft-lb	38'8 3/16"	3760 ft-lb	0.347 (35%)	D+L	L_L
Shear	595 lb	30'9"	1480 lb	0.402 (40%)	D+L	_LL
LL Defl inch	0.126 (L/1566)	22'6 9/16"	0.410 (L/480)	0.306 (31%)	L	_L_
TL Defl inch	0.124 (L/1376)	38'1 3/4"	0.709 (L/240)	0.174 (17%)	D+L	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.

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	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

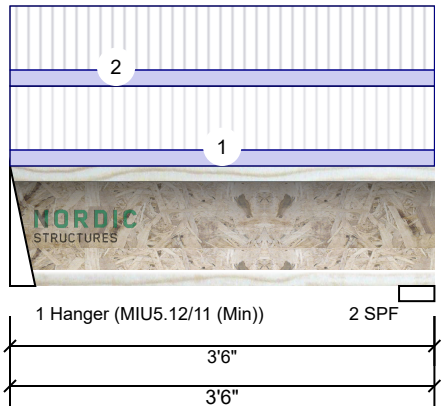
Manufacturer Info

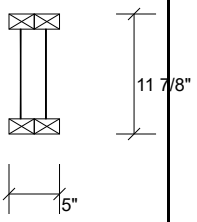
Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

1FJ4-2 NI-40x 11.875" 2-Ply - PASSED

Level: Level





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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	273	68	0	0	0
2	Vertical	287	72	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.500"	Vert	13%	68 / 273	342	L	D+L
2 - SPF	3.500"	Vert	12%	72 / 287	358	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	244 ft-lb	1'8 1/2"	7520 ft-lb	0.032 (3%)	D+L	L
Unbraced	244 ft-lb	1'8 1/2"	7286 ft-lb	0.034 (3%)	D+L	L
Shear	313 lb	1 3/4"	2960 lb	0.106 (11%)	D+L	L
LL Defl inch	0.002 (L/18942)	1'8 1/2"	0.078 (L/480)	0.025 (3%)	L	L
TL Defl inch	0.002 (L/15154)	1'8 1/2"	0.156 (L/240)	0.016 (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 Fill all hanger nailing holes.
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top flange must be laterally braced at bearings.
7 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform		3-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

This design is valid until 5/24/2024

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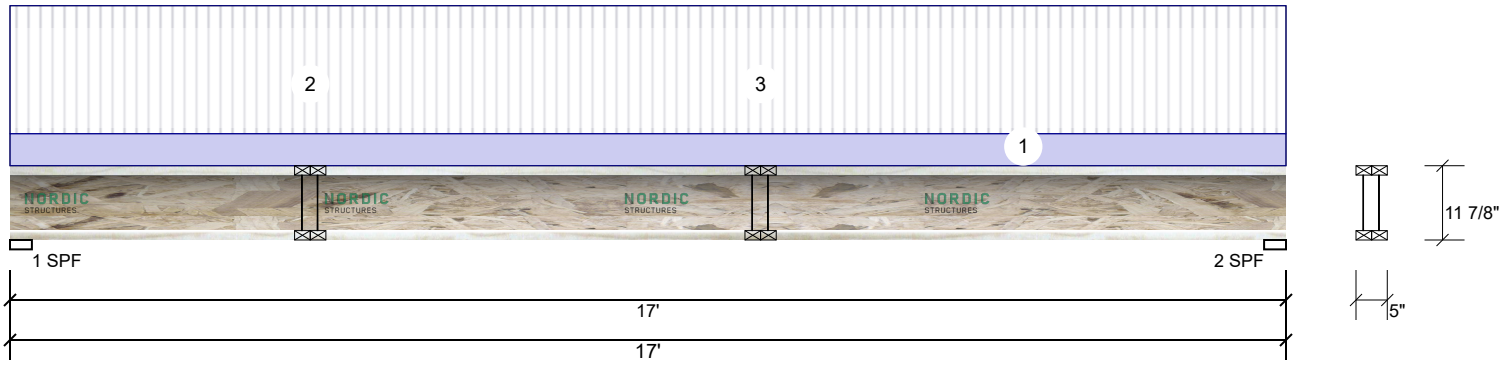
APA PR-L274C

Riverside Roof Truss
733 River Park Drive, Virginia
24540
434-793-0217

Client:		Date:	10/4/2021
Project:		Input by:	Richard Stokes
Address:		Job Name:	21-6482 BEAM CALCULATIONS
		Project #:	

1FJ18-2B NI-40x 11.875" 2-Ply - PASSED

Level: Level



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:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	668	167	0	0	0
2	Vertical	572	143	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	29%	167 / 668	835	L	D+L
2 - SPF	3.500"	Vert	25%	143 / 572	715	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3615 ft-lb	9'10 1/2"	7520 ft-lb	0.481 (48%)	D+L	L
Unbraced	3615 ft-lb	9'10 1/2"	3905 ft-lb	0.926 (93%)	D+L	L
Shear	824 lb	2 3/4"	2960 lb	0.278 (28%)	D+L	L
LL Defl inch	0.211 (L/940)	8'6 1/4"	0.414 (L/480)	0.511 (51%)	L	L
TL Defl inch	0.264 (L/752)	8'6 1/4"	0.827 (L/240)	0.319 (32%)	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 flange must be laterally braced at a maximum of 10'5" o.c.
6 Bottom flange must be laterally braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-0-0	Top	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Point	4-0-0		Near Face	68 lb	273 lb	0 lb	0 lb	0 lb	1FJ4-2 Brg 1
3	Point	10-0-0		Near Face	72 lb	287 lb	0 lb	0 lb	0 lb	1FJ4-2 Brg 2

Notes

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.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
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