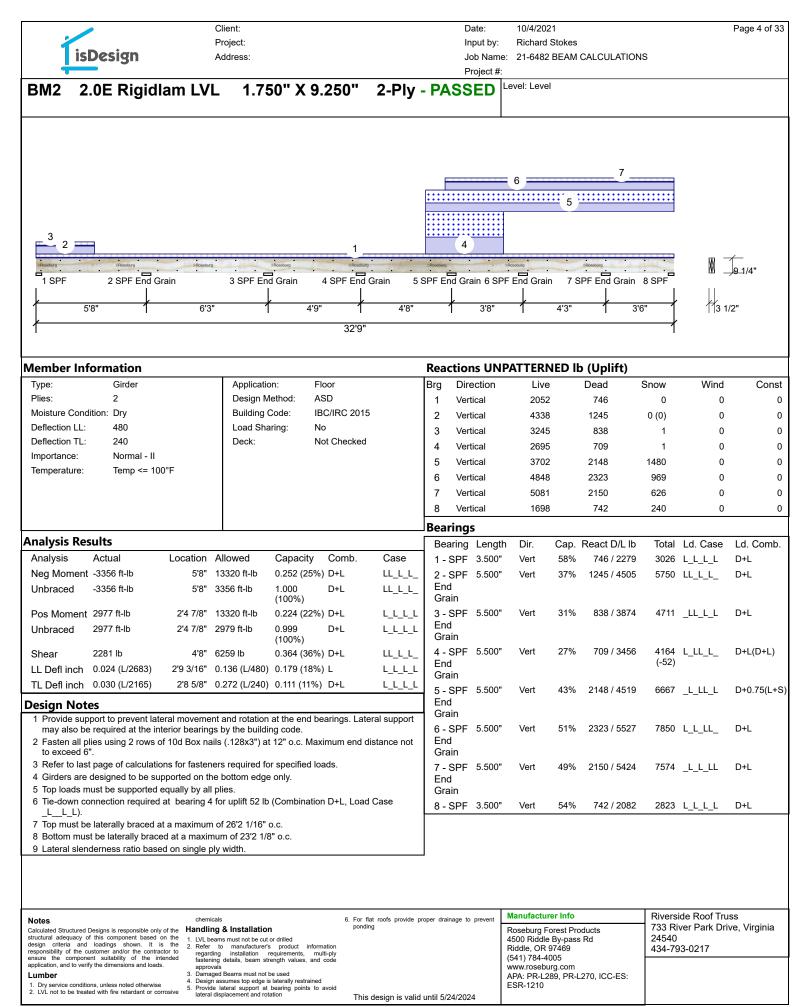
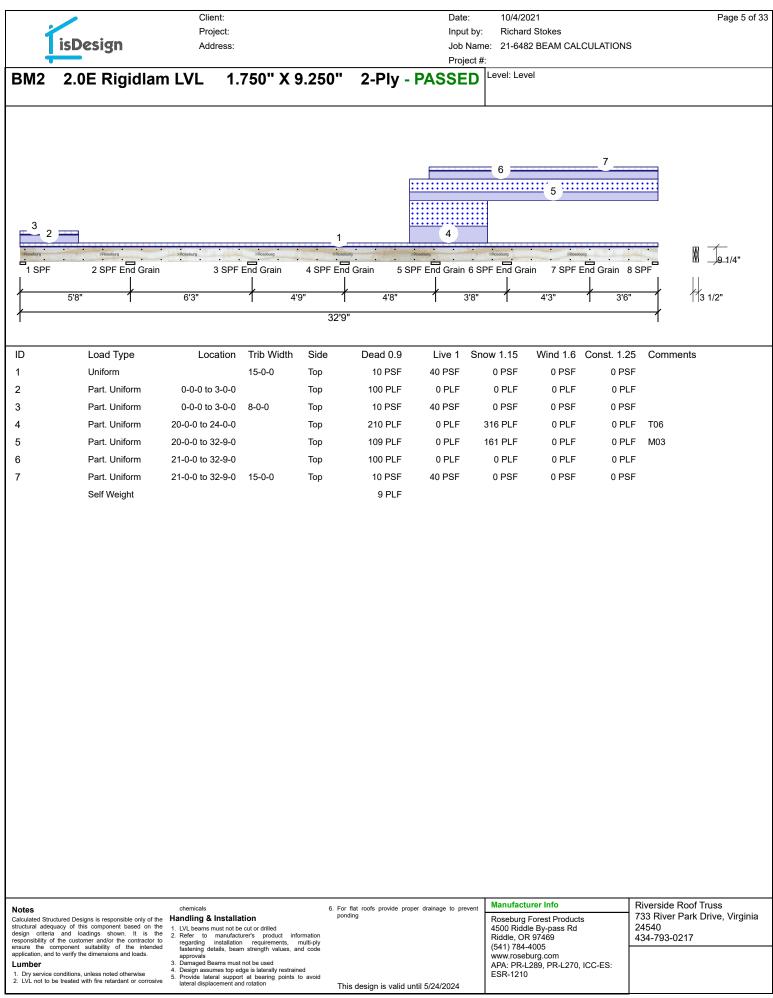


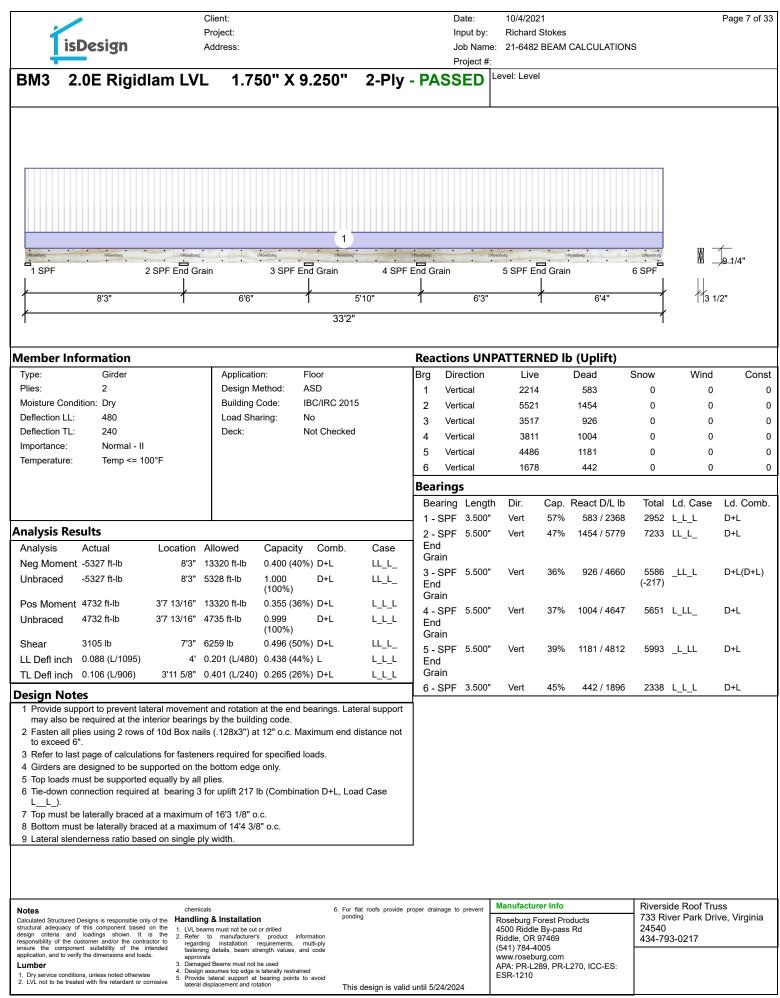
Version 21.40.338 Powered by iStruct<sup>™</sup> Dataset: 21070201.142

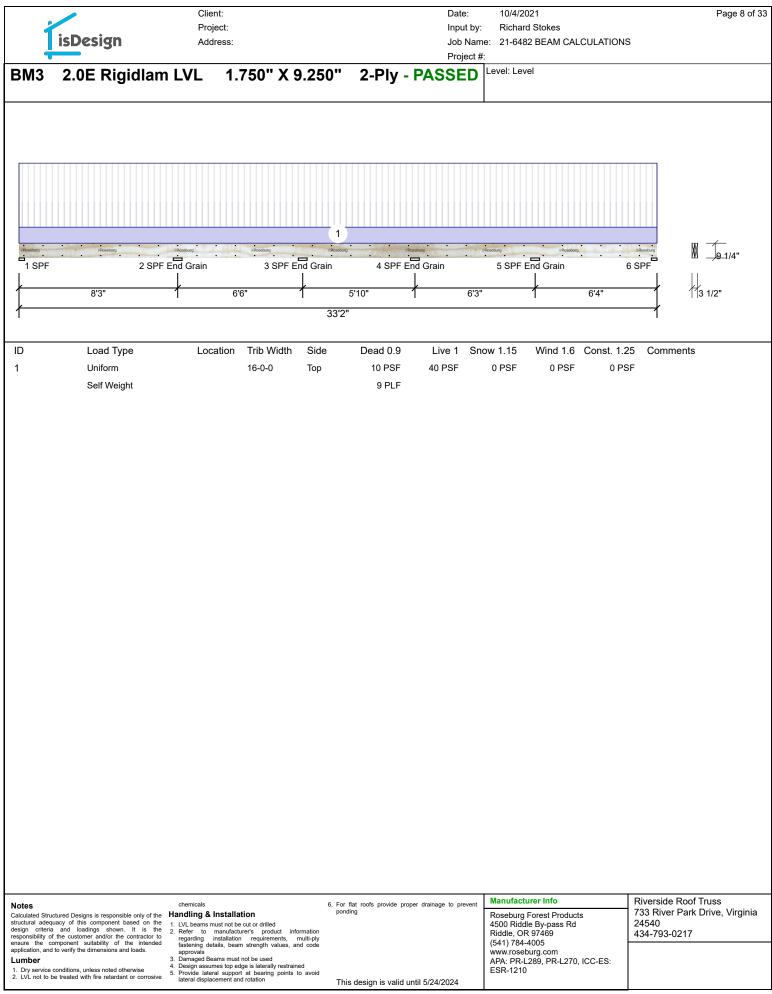
icDe	esign	Clie Proj Add			Date: Input by: Job Name	10/4/2021 Richard Stokes e: 21-6482 BEAM CALCULATION	Page 3 o
	-				Project #:		5
3M1 2.0	E Rigidlam	ו LVL	1.750" X 9.25	50" 2-Ply	PASSED	Level: Level	
							-N
· · · ·	<del></del>	· ·	· · · · · ·	· · ·		· · · · · · ·	
<u></u> 1 SPF	<u></u> 2 SPF Er	 nd Grain 3	SPF End Grain	4 SPF End Gra	 in 5	5 SPF End Grain	
ļ	6'7"	3'8	" 6		6'	6'	
<u> </u>		1 00		28'3"	0	· · ·	
ulti-Ply Anal	ysis						
sten all plies u pacity		f 10d Box	nails (.128x3") at 12'	' o.c Maximum	end distance no	ot to exceed 6".	
ad	0.0	) PLF					
ld Limit per Foot ld Limit per Faste		1.1 PLF .5 lb.					
d Mode	IV						
e Distance		1/2"					
. End Distance d Combination	3"						
ation Factor	1.0	00					
alculated Structured Design uctural adequacy of this sign criteria and load sponsibility of the custom sure the component s	ins is responsible only of the component based on the dings shown. It is the er and/or the contractor to suitability of the intended dimensions and loads.	<ol> <li>LVL beams m</li> <li>Refer to regarding i fastening det</li> </ol>	Installation ust hot be cut or drilled manufacturer's product information nstallation requirements, multi-ply ails, beam strength values, and code	<ol> <li>For flat roofs provide pr ponding</li> </ol>	oper drainage to prevent	Manufacturer Info Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005	Riverside Roof Truss 733 River Park Drive, Virgi 24540 434-793-0217
ructural adequacy of this sign criteria and load sponsibility of the custom sure the component s uplication, and to verify the umber . Dry service conditions, ur	a component based on the dings shown. It is the ner and/or the contractor to suitability of the intended dimensions and loads.	Handling & I 1. LVL beams m 2. Refer to regarding in fastening det approvals 3. Damaged Bet 4. Design assum	ust not be cut or drilled manufacturer's product information installation requirements, multi-ply	ponding	oper drainage to prevent	Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469	733 River Park Drive, Virgir 24540





2		Clien Proje			Date: Input by:	10/4/2021 Richard Stokes	Page 6 o
1	isDesign	Addre			Job Nam	e: 21-6482 BEAM CALCULATION	IS
3M2		idlam LVL	1.750" X 9.2	50" 2 Plv	Project #	Level: Level	
			1.750 A 9.23	50 Z-PTY	PASSED		
							1/2"
	<del></del>	· · · · ·		<u></u>	· · · ·	· · · · · · · ·	
<u>.</u> 1 SPF	<u>.</u>		SPF End Grain 4 S	PF End Grain 5	SPF End Grain 6 SF	PF End Grain 7 SPF End Grain	<u>· · <del>· · · · · ·</del> /// _/9_1/4"</u>
[	5'8"	6'3"	1 4'9"	1 4'8"	1 3'8"	1 4'3" 1 3'	6" []3 1/2"
1				32'9"			
-	Analysis						
isten all pacity	plies using 2 i	rows of 10d Box r	nails (.128x3") at 12	" o.c Maximum	end distance n	ot to exceed 6".	
ad		0.0 PLF					
ld Limit pe		181.1 PLF					
ld Limit pe Id Mode	er Fastener	90.5 lb. IV					
ge Distanc	e	1 1/2"					
. End Dist		3"					
ad Combin		1.00					
ration Fact	lor	1.00					
lotes		chemicals		6. For flat roofs provide pr	oper drainage to prevent	Manufacturer Info	Riverside Roof Truss
alculated Structu	ured Designs is responsible acy of this component ba	e only of the Handling & In		ponding		Roseburg Forest Products	733 River Park Drive, Virgin 24540
esign criteria sponsibility of t	and loadings shown. the customer and/or the c	It is the 2. Refer to m contractor to regarding in	st not be cut or drilled anufacturer's product information stallation requirements, multi-ply			4500 Riddle By-pass Rd Riddle, OR 97469	434-793-0217
sure the com plication, and to	nponent suitability of th o verify the dimensions and	ne intended fastening detai I loads. approvals	is, beam strength values, and code			(541) 784-4005 www.roseburg.com	
	onditions, unless noted othe	erwise 5 Provide lateral	ns must not be used s top edge is laterally restrained support at bearing points to avoid			APA: PR-L289, PR-L270, ICC-ES: ESR-1210	
	treated with fire retardant		support at bearing points to avoid ment and rotation	This design is valid	until 5/24/2024	··· ·= ·=	
		111 D. L					





Íi	isDesign		ject: dress:			e: 21-6482 BEAM CALCULATION	S
M3	2.0E Rigi	dlam LVL	1.750" X 9.	250" 2-Ply	Project #	: Level: Level	
						I	
· · ·			<del></del>	<del></del>	. <u></u>		12 m <del>/</del> -
1 SPF	<u></u>	2 SPF End Grain	3 SPF End	Grain 4 SP	F End Grain		6 SPF
,	8'3"	ť	6'6"	5'10"	6'3"	6'4"	3 1/2"
				33'2"			1
	Analysis						
en all p	olies using 2	rows of 10d Box 0.0 %	nails (.128x3") at <sup>-</sup>	12" o.c Maximur	n end distance n	ot to exceed 6".	
Limit per	Foot	0.0 PLF 181.1 PLF					
Limit per	Fastener	90.5 lb.					
Mode Distance	e	IV 1 1/2"					
End Dista	ance	3"					
Combination Factor		1.00					
						Manufacturer Info	Riverside Roof Truss
tes ulated Structur	red Designs is responsible		Installation	<ol><li>For flat roofs provide ponding</li></ol>	proper drainage to prevent	Roseburg Forest Products	733 River Park Drive, Virg
on criteria a onsibility of the	cy of this component ba and loadings shown. he customer and/or the c	It is the 2. Refer to contractor to regarding	must not be cut or drilled manufacturer's product informa installation requirements, mult	ti-plv		4500 Riddle By-pass Rd Riddle, OR 97469	24540 434-793-0217
ication, and to	ponent suitability of th verify the dimensions and	loads. approvals	etails, beam strength values, and o eams must not be used	code		(541) 784-4005 www.roseburg.com	
nber Dry service con	nditions, unless noted othe treated with fire retardant	erwise 4. Design assu 5. Provide late	mes top edge is laterally restrained and support at bearing points to a	void		APA: PR-L289, PR-L270, ICC-ES: ESR-1210	
	a caleu with me retardant	lateral displa	acement and rotation		lid until 5/24/2024		

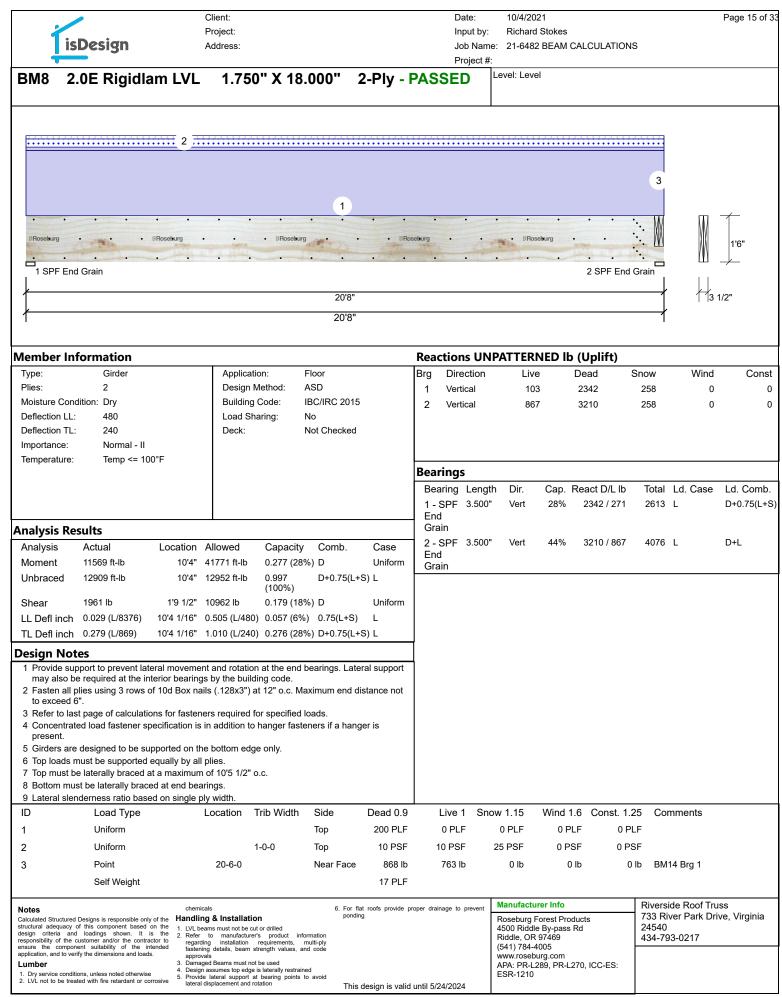
Ţ	sDesign	Client: Project: Address:			Date: Input by: Job Name Project #:		okes EAM CALCULATIC	DNS		Page 10
1FJ18-	-2 NI-40x	11.875"	2-Ply - P	ASSED		Level: Level				
		3 Normic Shustures	2	1 NORBIC BROCHAES		NORDIC	4			11 7
1 SPF	2 SPE I	End Grain		and an and a second second	3 SPF			4 SPF		-/
	20111									
1.	4'	1	6'10"		1	5'	'10"	1	1_1:	5"
1				16'8"				1		
ember Ir	nformation				Reactions UN	PATTERNE	D lb (Uplift)			
Туре:	Girder	Applicati	on: Floor		Brg Direction	Live	Dead	Snow	Wind	Co
Plies:	2	Design N			1 Vertical	560	295	0	0	
Noisture Co	,	Building		2015	2 Vertical	2469	1614	0	0	
Deflection LL Deflection TL		Load Sh Deck:	aring: No Not Che	ecked	3 Vertical	3110	1769	0	0	
mportance:	Normal - II	Book		Solitor	4 Vertical	1408	830	0	0	
emperature										
					Bearings					
					Bearing Lengt	h Dir. (	Cap. React D/L ll	o Total	Ld. Case	Ld. Cor
					1 - SPF 3.500"		39% 295 / 824		_	D+L
nalysis R	esults				2 - SPF 5.500" End	Vert	60% 1614 / 262	5 4240	LL_	D+L
Analysis		ocation Allowed	Capacity Con	nb. Case	Grain					
	nt -2655 ft-lb	10'10" 7520 ft-lb	0.353 (35%) D+L		3 - SPF 5.500"	Vert	69% 1769 / 314	5 4914	_LL	D+L
Jnbraced	-2655 ft-lb	10'10" 2657 ft-lb	0.999 D+L		4 - SPF 3.500"	Vert	84% 830 / 157	2400	L_L	D+L
	- 4 2007 <del>ft</del> llb	4410" 7500 <del>1</del> 1 lb	(100%)							
os Momer Jnbraced	nt 3027 ft-lb 3027 ft-lb	14'8" 7520 ft-lb 14'8" 6050 ft-lb	0.403 (40%) D+L 0.500 (50%) D+L	_						
Shear	2594 lb	10'10" 2960 lb	0.876 (88%) D+L	_						
	0.031 (L/2158) 13'11			L_L						
		4' 9/16" 0.280 (L/240								
esign No	otes	· · ·			1					
1 Provide si	upport to prevent lateral			s. Lateral support	4					
-	be required at the interio re designed to be suppor		-							
	lies must be fastened to	-	-							
	must be supported equa									
	e must be laterally brace ange must be laterally br	-								
D	Load Type		rib Width Side	Dead 0.9	Live 1 Sno	w 1.15 W	Vind 1.6 Const.	1.25 Coi	nments	
	Uniform	1	0-0-0 Тор	10 PSF	40 PSF	0 PSF	0 PSF 0	PSF		
2	Uniform		Тор	120 PLF	0 PLF	0 PLF	0 PLF 0	PLF		
3	Point	4-6-0	Тор	351 lb	160 lb	0 lb	0 lb	0 lb BM	12 Brg 2	
	Bearing Length	0-3-0								
ļ.	Point	14-8-0	Тор	491 lb	720 lb	0 lb	0 lb	0 lb BM	11 Brg 2	
	Bearing Length	0-3-0								
otes		Handling & Installatio	n		as specified in engineering	Manufacturer	Info		ide Roof Tru	
is the responsi	bility of the customer and/or the re the component suitability of the	e 1. Engineered wood products	must not be cut or drilled.	notes.		Nordic Structur	res les Canadiens-de-	733 Ri 24540	ver Park Dri	ve, Virgin
tended application ads.	and to verify the dimensions and	<ol> <li>Refer to the latest version construction details, hole</li> </ol>	of the installation guide for specifications, multiple-			Montréal, Suite	e 100	434-79	3-0217	
	ood Products	member connections, and 3. Provide lateral support at	bearing points to prevent			Montreal, Qué (866) 871-3418	bec, Canada H3B 2S 8	۷		
	titions unless noted otherwise	lateral displacement and	tation							
Dry service cond	ditions, unless noted otherwise vith fire-retardant or other strength cals.	<ul> <li>lateral displacement and ro - 4. For flat roof, provide pro ponding.</li> </ul>				www.nordic.ca APA PR-L2740				

isl	Design	Client: Project: Address:					it by: Name:	Richard S 21-6482 I		ALCULATION	IS		Page 11 of
1FJ22-2	2 NI-40x	11.875"	2-Ply -	PASS	ED	Proje	ect #:	evel: Level					
		2		1								Ĩ	-
NORDIC	NORE		NORDIC		NOR	IRES	CHER L	NORDI	C				11 7/8
1 SPF		2 SPF End Grain		3 SPF End (	Grain	4	4 SPF	End Grain			5 SPF		,
/	6'5"	ł	4'7"	1		4'10"		1		5'		15	
∤				20'10"									
						Desetions				(11			
<b>/lember Inf</b> Type:	Girder	Applica	tion: Flo	or		Reactions Brg Direct		Live		-	Snow	Wind	Cor
Plies:	2		Method: ASI			1 Vertica		115	-	315	0	0	001
Moisture Condi	,			/IRC 2015		2 Vertica	al	243		667	0	0	
Deflection LL:	480 240	Load S		Checked		3 Vertica	al	179		491	0	0	
Deflection TL: Importance:	240 Normal - II	Deck:	NO	Спескеа		4 Vertica		210		576	0	0	
Temperature:	Temp <= 100°F					5 Vertica	al	88		242	0	0	
·						Bearings							
						Bearing Lo	-	Dir.	Cap. R	eact D/L lb		Ld. Case	Ld. Com
						1 - SPF 3.		Vert	15%	315 / 120		L_L_	D+L
nalysis Res	sults					2 - SPF 5. End	.500"	Vert	13%	667 / 251	919	LL_L	D+L
Analysis		cation Allowed	Capacity	Comb.	Case	Grain							
Neg Moment		6'5" 7520 ft-lb	0.057 (6%)		LL_L	3 - SPF 5.	.500"	Vert	10%	491 / 205	696	_LL_	D+L
Unbraced	-427 ft-lb	6'5" 1196 ft-lb	0.357 (36%)		LL_L	End Grain							
Pos Moment	534 ft-lb 2'10	13/16" 7520 ft-lb	0.071 (7%)	D+L	 L_L_	4 - SPF 5.	.500"	Vert	11%	576 / 217	794	L_LL	D+L
Unbraced	534 ft-lb 2'10	13/16" 6373 ft-lb	0.084 (8%)	D+L	L_L_	End						-	
Shear	533 lb	6'5" 2960 lb	0.180 (18%)		LL_L	Grain			100/	0.40 / 00			D.I
LL Defl inch	0.003 3'3 (L/26375)	8 1/16" 0.155 (L/48	0) 0.018 (2%)	L	L_L_	5 - SPF 3.	.500"	Vert	12%	242 / 96	339	_L_L	D+L
TL Defl inch	, ,	11/16" 0.309 (L/24	0) 0.033 (3%)	D+L	L_L_								
Design Note						1							
may also be 2 Girders are o 3 Multiple plies 4 Top loads m 5 Top flange m	port to prevent lateral n required at the interior designed to be support s must be fastened toge uust be supported equal nust be laterally braced ge must be laterally brace	bearings by the buil ed on the bottom ed ether as per manufa ly by all plies. at bearings.	ding code. ge only.	rings. Laterai	support								
ID	Load Type	Location	Trib Width	Side [	Dead 0.9	Live 1	Snov	w 1.15	Wind 1.	6 Const. 1.	.25 Co	nments	
1	Uniform		1-0-0 T	ор	10 PSF	40 PSF		0 PSF	0 PS	F 0P	SF		
2	Uniform		т	ор	100 PLF	0 PLF		0 PLF	0 PL	F OF	۲LF		
contractor to ensure to intended application ar loads.	y of the customer and/or the he component suitability of the nd to verify the dimensions and	Handling & Installat 1. Engineered wood produ Damaged products shall 2. Refer to he latest versio construction details, h member connections, an	ts must not be cut or drill not be used. n of the installation guide ble specifications. multip	ed. notes. for	ed sheathing or a	as specified in enginee	ening	Manufacture Nordic Struct 1100 Avenue Montréal, Sui Montreal Qu	ures des Cana te 100	adiens-de- nada H3B 2S2	733 Ri 24540	ide Roof Tru ver Park Dri 93-0217	
	od Products ins, unless noted otherwise fire-retardant or other strength-	<ol> <li>Provide lateral support lateral displacement and</li> </ol>	at bearing points to prev					(866) 871-34 www.nordic.c	18	idua i 100 202			

Experime         Property			Cli	ient:					Date	e:	10/4/20	21					Page 12
Figure 2         Desk 2           1         1.1.875"         2.PPLy - PASSED           1																	5
IFJ38-2         NI-40x         11.875"         2Ply - PASSED         Level           Image: Second Secon	İS	Design	Ac	ldress:							: 21-6482	BEAM C	ALCULAT	TIONS			
IT JOG-2       NI-HUX       ILO/3       Z-FTY - FASSED         Image: Second Se									Proje								
Image: set of the set	1FJ38-2	2 NI-40>	x 11.8	875"	2-Ply	/ - PAS	SED			Ľ	_evel: Leve	•1					
3 SPE End Grain         3 SPE End Grain         SPE         92*         1/5*           Reactions UNPATTERNED Ib (Upliff)           Reactions UNPATTERNED Ib (Upliff)           Press:         2         Application:         Floor         Bailing Code:         BC/RC 2015         Bailing Code:         Bailing Code:         BC/RC 2015         Bailing Code:         Bail		NORDIC	NORDIC	HORTIC			NORBIC		HORDLE		NORDIC		NORTI -				
128"         39"         69"         56"         92"         16"           Immove functions           Reactions UNPATTERNED Ib (Uplift)           Type:         Girder         Design Member 16:00         Big Direction         Design Member 16:00	1 SPF End	Grain	2 8	SPF End G		nd Grain	4 SPF	End C	Grain	5 \$	SPF End G	rain		6 \$	SPF	11	
Image: Information         Reactions UNPATTERNED Ib (Uplift)           Type:         2           Deficition LL:         480           Deck:         Not Checked           Bearing Length         Dir.           Capacity Frage         Capacity Combined Composition           Prevention         132 445           Deck:         Not Checked           Bearing Length         Dir.           Deck:         Not Checked           Prevention         132 445           132 447         133           Decker Trape < 100°F	/	12'6"					6'9"	+	5'	'8"			8'2"			5"	
Immediate Canaditation:         Reactions UNPATTERNED Ib (Upliff)           Pipe:         2           Pais:         2           Definition IL:         450           Parametrization         1133           Analysis Results	,			•		•		-		-	•				/	1 1-	
Type:         Circler         Application:         Floor         Bits         Plot         Design Method:         ASD           Piles:         2         Building Code:         IBC/IRC 2015         Understand Configned         1         Ventical         214         1237         0         0           Defection L1:         480         Deskin Method:         ASD         Building Code:         IBC/IRC 2015         2         Ventical         214         1237         0	1					3010									I		
Pines:         2         Design Mathad:         ASD         Part         Design Mathad:         ASD         Part         Uniform         O         O           Defined on TL:         440         Defined on TL:         240         0	lember Inf	ormation						Rea	ctions	UNF	PATTER	NED Ib	(Uplift	)			
Module Condition: Dry Deficient IL::         Building Code:         IBC/IRC 2015 Load Sharing:         No         No           Deficient IL:::         480         Deficient IL:::         180         Deficient IL:::         180         Deficient IL:::         Deficient IL:::         Deficient IL:::         Deficient IL:::         Deficient IL:::         Deficient IL::         Deficient IL:	Туре:							Brg						Sn			Co
Defined on L1:       400       Load Sharing:       No       Defined on T1:       240         Defined on T1:       240       Nommal -11       Environmania       235       408       0       0         Temporation::       Temp ← 100°F       Environmania       235       408       0       0         Bearing       Environmania       236       408       0       0       0         Bearing       Environmania       236       408       0       0       0         Analysis       Actual       Location       Allowed       Capacity Comb.       Comb.       Casa       Bearing       Environmania       1237/216       1453       L_L       D+L         Carain       Saper 5.500°       Verti all       133       445       0       0       0       Bearing       Environmania       2480 / 487       2966       L_L       D+L       End       Grain       2SPF 5.500°       Verti all       133       440       808       LL_L       D+L       End       Grain       2SPF 5.500°       Verti all       133       408 / 400       808       LL_L       D+L       End       Grain       5SPF 5.500°       Verti all       439 / 455       5.500       Verti 21%	Plies:			•				1	Vertica	al	214	ł	1237		0	0	
Decketor TL:       240 mportance:       Deck:       Not Checked       So toticular       235       408       0       0         Importance:       Normal - II       Deck:       Not Checked       44       423       1366       0       0         Importance:       Normal - II       Deck:       Not Checked       44       443       943       945       0       0         Analysis       Actual       Location       Allowed       Capacity Comb.       Case       Deck:       Personality Fig. 3500°       Vertical       443       945       0       0       Deck				-				2			45	5	2480		0	0	
importance:       Normal - II         Temperature:       Tempe < 100°F					haring:			3	Vertica	al	23	5	408		0	0	
Temperature:       Temp <= 100°F				Deck.		Not Checked										-	
Bearing Length         Dir.         Cap. React D/L Ib         Total Ld. Case         Ld. Can           Nanlysis Actual         Location Allowed Capacity Comb.         Case           Case         Dir.         Cap. React D/L Ib         Total Ld. Case         Ld. Can           Nanlysis Actual         Location Allowed Capacity Comb.         Case           Case         Case           Analysis Actual         Location Allowed Capacity Comb.         Case           Case         Case         Case         Case           Case         Case         Case         Case         Case         Case           Case         Case         Case         Case           Case         Case         Case         Case         Case         Case         Case           Case         Case         Case         Case         Case         Case         Case	Temperature:		D°F														
Bearing Length Dir. Cap. React D/L Ib       Total Ld. Case       Ld. Case         Analysis Actual       Common. Capacity Comb.         Neg Moment 3284 ft-lb       126" 7520 ft-lb       0.437 (44%) D+L       LLLL         Unbraced       3284 ft-lb       126" 7520 ft-lb       0.437 (44%) D+L       LLLL         Charact       3284 ft-lb       126" 7520 ft-lb       0.437 (44%) D+L       LLLL         Charact       3284 ft-lb       126" 7520 ft-lb       0.437 (44%) D+L       LLLL         Charact       3284 ft-lb       54 9/16" 7520 ft-lb       0.4476 (48%) D+L       LLLL         Charact       3285 ft-lb       54 9/16" 7520 ft-lb       0.4476 (48%) D+L       LLLL         Charact       3285 ft-lb       0.917 (92%) D+L       L_LL         Charact       126" 29% b       0.580 (68%) D+L       LLLL         End       Grain       4 - SPF 3.500"       Vert       1% 408 / 400       808       LL, L       D+L         End       Grain       6 - SPF 3.500"       Vert       1% 445 / 150       594       L, L       D+L         Clarker       Clarker       Septer 3.500"       Vert       21% 445 / 150       594       L, L       D+L         Stother       Ling	·							6	Vertica	al	113	3	445		0	0	
Image         Image <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>																	
nalysis Results       End         Crain       Capacity       Comb.       Case         Signin       2. SPF       5.500°       Vert       42%       2480 / 487       2966 LL_L       D+L         Unbraced       3224 ft-lb       126°       7520 ft-lb       0.437 (44%) D+L       LL_L       SPF       5.500°       Vert       42%       2480 / 487       2966 LL_L       D+L         Unbraced       3581 ft-lb       54 916°       7520 ft-lb       0.476 (48%) D+L       L_L_L       3.SPF 5.500°       Vert       408 / 400       808       LLL       D+L         Shear       1924 lb       126°       2960 lb       0.650 (65%) D+L       LL_L       SPF 5.500°       Vert       11%       408 / 400       808       LLL       D+L         LL Deflinch       0.011 (L/5992)       2811°       0.470 (42%) D+L       L_L       SPF 3.500°       Vert       37%       1366 / 862       2228       L_LL       D+L         IL Deflinch       0.011 (L/5992)       2811°       0.470 (128°)       Common       SPF 3.500°       Vert       27%       945 / 532       1477       L_L       D+L         2 Gridns are designed to be supported on the bottom edge only.       SPF 3.500°       Vert       37%									-	-	ı Dir.	Cap. R	eact D/L				Ld. Con
Grain Caracter Information Control Control Caracter Allowed Capacity Comb. Case Neg Moment 3284 ft-lb 126° 7520 ft-lb 0475 (44%) D+L LLL_L Unbraced 3284 ft-lb 126° 7520 ft-lb 0475 (44%) D+L LLL_L Caracter 122 ft-lb 126° 2960 lb 0.841 (44%) D+L LL_L LDefined 011 (U592) 261°10 01475 (46%) D+L LLL_L LL Defined 011 (U592) 261°11 01476 (46%) D+L LLL_L TL Defined 011 (U592) 261°11 01476 (14240) 0.252 (25%) D+L LL_L TL Defined 011 (U592) 261°11 01476 (14240) 0.252 (25%) D+L LL_L 2 Grain 5. SPF 3.500° Vert 25% 945/532 1477 _LL_ D+L End Grain 6. SPF 3.500° Vert 37% 1366/862 2228 LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 6. SPF 3.500° Vert 21% 445/150 594 _LL_L D+L End Grain 7. State 1.25 Comments 1 Uniform 1.0-0 Top 10.PSF 40.PSF 0.PSF 0.PSF 2 Uniform 0.0-0 to 12.6-0 Top 10.0 PLF 0.PLF 0.PLF 0.PLF 0.PLF 0.PLF 3 Part. Uniform 0.0-0 to 12.6-0 Top 10.0 PLF 0.PLF 0.PLF 0.PLF 0.PLF 0.PLF 3 Part. Uniform 0.0-0 to 12.6-0 Top 10.0 PLF 0.PLF 0.PLF 0.PLF 0.PLF 0.PLF 3 Part. Uniform 0.0-0 to 12.6-0 Top 10.0 PLF 0.PLF 0.PLF 0.PLF 0.PLF 0.PLF 4 Point 1.6-9-0 Top 351 lb 160 lb 0.lb 0.lb 0.lb 0.lb 0.lb 0.lb 0.lb										.500"	Vert	51%	1237 / 2	216	1453	LL_	D+L
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Unbraced       -3284 ft-lb       126°       3905 ft-lb       0.841 (84%) D+L       LLLL         Pos Moment       3581 ft-lb       54 9/16°       7520 ft-lb       0.917 (92%) D+L       L_LL         Unbraced       3581 ft-lb       54 9/16°       7520 ft-lb       0.917 (92%) D+L       L_LL         Bhear       126°       2980 lb       0.650 (65%) D+L       LLL         LL Defl inch       0.011 (U5992)       26°11°       0.142 (U480)       0.808 (8%) L       LLL_L         Provide support to prevent lateral movement and rotation at the end bearings. Lateral support       5 - SPF 3.500°       Vert       37%       1366 / 862       2228       LL_L       D+L         Circlars and esigned to be supported on the bottom edge only.       3 with periods       5 - SPF 3.500°       Vert       37%       1366 / 862       2228       LL_L       D+L         So graph must be laterally braced at a maximum of 105° o.c.       6       SPF 3.500°       Vert       21%       445 / 150       594       _L       D+L         1       Uniform       1-0-0       Top       100 PSF       0 PSF       0 PSF       0 PSF       0 PSF         2       Uniform       1-0-0       Top       100 PLF       0 PLF       0 PLF       0 PLF       0 PLF </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>.500"</td> <td>Vert</td> <td>42%</td> <td>2480 / 4</td> <td>487</td> <td>2966</td> <td>LL_L_</td> <td>D+L</td>										.500"	Vert	42%	2480 / 4	487	2966	LL_L_	D+L
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esign Notes       5 - SPF 3.500°       Vert       37%       1366 / 862       2228       L_LL       D+L         1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support       5 - SPF 3.500°       Vert       37%       1366 / 862       2228       L_LL       D+L         2 Gidres are designed to be supported on the bottom edge only.       3 Multiple ples must be fastened together as per manufacturer's details.       6 - SPF 3.500°       Vert       21%       445 / 150       594      LL       D+L         3 Multiple ples 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.       6 Bottom flange must be laterally braced at a maximum of 10°5° o.c.       100       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       0-0-0 to 12-6-0       Top       100 PLF       0 PLF       0 PLF       0 PLF       0 PLF         3       Part. Uniform       0-3-0       16-9-0       Top       351 lb       160 lb       0 lb       0 lb       BM12 Brg 2         Bearing																	
End Grain       End Grain <thend Grain       <thend Grain       <thend Grain</thend </thend </thend 			51115/10 0.0	514 (L/240	<i>i</i> ) 0.232 (23	/0) D+L	LL_	-		500"	Vort	37%	1366 / 5	362	2228		D+I
may also be required at the interior bearings by the building code.       2       Gradin       6 - SPF       3.500"       Vert       21%       445 / 150       594										.000	Voit	0170	10007	502	LLLU		DIE
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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         1       Uniform       1-0-0       Top       10 PSF       40 PSF       0 PSF       0 PSF       0 PSF       0 PSF         2       Uniform       0-0-0 to 12-6-0       Top       100 PLF       0 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       BM12 Brg 2         ontinued on page 2       0       StateAd sheathing or as specified in engineering to the last varion of the installation guide for construction detais, hole specifications, multiple-method explaination and to verify the dimensiona and to verify the dimensiona and to verify the dimensiona and to serify the diagenering aport at bearing points to prevent lateral alguidefines.       Povide conditions, unless noted otherwise.       Provide lateral support at bearing points to prevent lateral diaglicament and rotefallom.       Povide intervent detains.       Provide lateral support at bearing points to prevent lateral diaglicament and rotefallom.       Provide intervent detains.       Provide intervent detains.       Provide interelation oreal on the inte					5" o.c.												
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3       Part. Uniform       0-0-0 to 12-6-0       Top       100 PLF       0 PLF<	1				1-0-0	Тор											
A       Point       16-9-0       Top       351 lb       160 lb       0 lb       0 lb       BM12 Brg 2         Bearing Length       0-3-0         Intimude on page 2       Interseponsibility of the customer and/or the dimensions als.       Handling & Installation       by attached sheathing or as specified in engineering holes.       Manufacturer Info       Riverside Roof Truss         Intractor to ensure the component suitability of the dimensions als.       Handling & Installation       by attached sheathing or as specified in engineering holes.       Nordic Structures in the stallation guide for construction defails, hole specifications, multipae.       Nordica structure language products shall not be used.       By attached sheathing or as specified in engineering holes.       Nordica Structures in the stallation guide for construction defails, hole specifications, multipae.       Trus design is valid until 5/24/2024       Nordica structure language products provide proper drainage to products prevent interal displacement and rotation.       Trus design is valid until 5/24/2024       Manufacture lang       Riverside Roof Truss 7/33 River Park Drive, Virgini 2/4540         No tradition the dimensional stallation of the installation of toper drainage to produce shall not be used.       Trus design is valid until 5/24/2024       Manufacturer Info       Riverside Roof Truss 7/33 River Park Drive, Virgini 2/4540         No tradition cherwise       Or fait roof provide proper drainage to provide proper drainage to prevent increas.       Trus design is valid until 5/24/2024       T	2	Uniform				Тор	120 PLF		0 PLF		0 PLF	0 PL	F	0 PLF			
Bearing Length       0-3-0         Bearing Length       0-3-0         Intimued on page 2       Mandling & Installation       Noraic         Intractor is ensure the component suitability of the customer and/or the dimensions ads.       Handling & Installation       by attached sheathing or as specified in engineering notes.       Manufacturer Info       Riverside Roof Truss         Signeered Wood Products       . Engineered wood products shall not be used.       by attached sheathing or as specified in engineering notes.       Mordic Structures       733 River Park Drive, Virgini 2450         1. Dy service conditions, unless noted otherwise reducing chemicals.       - 0. For fait roof provide projer drainage to provent lateral displacement and rotation.       This design is valid until 5/24/2024       Manufacturer Info       Riverside Roof Truss         1. Dy service conditions, unless noted otherwise       - 0. For fait roof provide projer drainage to provent lateral displacement and rotation.       This design is valid until 5/24/2024       Montreal, Québec, Canada H3B 252       This design is valid until 5/24/2024	3	Part. Uniform	0-0-0 to	12-6-0		Тор	100 PLF		0 PLF		0 PLF	0 PL	F	0 PLF			
Initial dots       Manufacture Info       Riverside Roof Truss         is the responsibility of the customer and/or to ensure the component suitability of the dimensions and set.       1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.       by attached sheathing or as specified in engineering notes.       Nordic Structures       733 River Park Drive, Virgini 24540         1. Dry service conditions, unless noted otherwise.       0. Provide lateral support at bearing points to prevent lateral displacement and rotation.       by attached sheathing or as specified in engineering notes.       Nordic Structures       733 River Park Drive, Virgini 24540         3. Dry service conditions, unless noted otherwise.       No treatment with fire-retardant or other strength.       5. Dry service provide product shall not be used to provide proper drainage to prevent ponding.       This design is valid until 5/24/2024       Manufacturer Info       Riverside Roof Truss         733 River Park Drive, Virgini 24540       100 Avenue des Canadiens-de-Montréal, Suite 100       Montreal, Québec, Canada H3B 252       24540         8. To trait roof, provide proper drainage to prevent ponding.       Drive filteral displacement and rotation.       This design is valid until 5/24/2024       APA PR-L274C       Histope design is valid until 5/24/2024	4	Point		16-9-0		Тор	351 lb		160 lb		0 lb	01	b	0 lb	BM	12 Brg 2	
Interception       Handling & Installation       by attached sheathing or as specified in engineering       Manufacturer Info       Riverside Roof Truss         is the responsibility of the customer and/or to ensure the component suitability of the interded application and to verify the dimensions ad.       1. Engineered wood products must not be cut or drilled.       by attached sheathing or as specified in engineering       Nordic Structures       733 River Park Drive, Virgini         1. Dry service conditions, unless noted otherwise       2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.       9. Provide lateral support at bearing points to prevent lateral displacement and rotation.       8.       Nortices Construction details, hole specifications, multiple-member connections, and handling guidelines.       9. For fat roof, provide proper drainage to prevent lateral displacement and rotation.       9. This design is valid until 5/24/2024       Nortice Lateral sectomer lateral sectomer lateral displacement and rotation.       9. Arg PR-L274C       9. Arg PR-L274C	ontinued on po	0 0	ı	0-3-0													
Handling & Installation     Handling & Installation     Participace with the seponsibility of the customer and/or to ensure the component suitability of the interactor to ensure the component suitability of the interactions, and handling guidelines.     Description of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.     Nortaic Structures     733 River Park Drive, Virgini 24540       100 Avenue des Canadiens-de-Montréal, Suite 100     2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connectors, and handling guidelines.     3. Provide lateral support at bearing points to prevent lateral displacement and rotation.     4. For flat root, provide proper drainage to prevent ponding.     5. Design assumes top flange to be laterally restrained     This design is valid until 5/24/2024.     This design is valid until 5/24/2024.	shanded on pa	yu 2															
antractor to ensure the component suitability of the fatest ensure the component suitability of the latest version of the installation guide for construction details, hole specifications, multiplemember connections, and handling guidelines.       Damaged products shall not be used.       1100 Avenue des Canadiens-de-Montréal, Suite 100       24540       434-793-0217         ingineered Wood Products       . Dry service conflictions, subport at bearing points to prevent lateral displacement and rotation.       . By service conflictions, subport at bearing points to prevent lateral displacement and rotation.       . By service conflictions, service on the latest version of the installation guide for connections, and handling guidelines.       . By service conflictions, service on the latest version of the installation guide for connections, and handling guidelines.       . By service conflictions, service on the latest version of the installation guide for connections, and handling guidelines.       . By service conflictions, service on the latest version of the installation guide for connections, and handling guidelines.       . By service conflictions, service on the latest version of the installation guide for connections, and handling guidelines.       . By service conflictions, service on the latest version of the installation guide for connections, and handling guidelines.       . By service conflictions, service on the latest version of the installation guide to prevent lateral displacement and rotation.       . By service conflictions, service prevent ponding.       . By service conflictions, service on the lateral version of the installation guide to prevent lateral displacement and rotation.       . By service conflictions, service on the latest version of the latest version of the installation guide tor te	Notes	the state of the				notor	ched sheathing or	as specifi	ed in enginee	ering							
ads. construction details, hole specifications, multiple- ingineer connections, and handling guidelines. Dy service conditions, unless noted otherwise No treatment with fire-retardant or other strength reducing chemicals. construction details, hole specifications, multiple- to treatment with fire-retardant or other strength reducing chemicals. construction details, hole specifications, multiple- to treatment with fire-retardant or other strength reducing chemicals. construction details, hole specifications, multiple- to treatment with fire-retardant or other strength reducing chemicals. construction details, hole specifications, and handling guidelines. So treatment with fire-retardant or other strength so treatment with fir	contractor to ensure	the component suitability of	of the Damaged	products shall n	ot be used.	or drilled.					1100 Avenu	e des Cana	idiens-de-	2	24540		, •
10) reverse conditions, unless noted otherwise     3. Provide lateral support at bearing points to prevent     (866) 871-3418       10) reverse conditions, unless noted otherwise     1 ateral displacement and rotation.     Www.nordic.ca       1. No treatment with fire-retardant or other strength     4. For flat roof, provide proper drainage to prevent ponding.     App A PR-L274C	oads.		constructio member co	n details, hole onnections, and	e specifications, handling guideline	multiple- es.							nada H3B		134-79	3-0217	
reducing chemicals. ponding. 5. Design assumes top flange to be laterally restrained This design is valid until 5/24/2024 APA PR-L274C	<ol> <li>Dry service condition</li> </ol>	ons, unless noted otherwise	<ol> <li>Provide lat lateral disp</li> </ol>	leral support at lacement and r	t bearing points to otation.	prevent					(866) 871-3	418					
			ponding.			estrained											
					, <u>.</u>	This	design is valid	until 5/	24/2024								

	Client:			Date:	10/4/2021	Page 13 of 33
	Project:			Input by:		
isDesign	Address:				ne: 21-6482 BEAM CALCULATION	NS
				Project #		
1FJ38-2 NI-40x	11 975"				Level: Level	
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/		2	6'10"			<del>/</del>
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Continued from page 1						
ID Load Type	Location	Trib Width Side	Dead 0.9	Live 1 Sn	ow 1.15 Wind 1.6 Const. 1	.25 Comments
5 Point	26-11-0	Тор	491 lb	720 lb	0 lb 0 lb	0 lb BM11 Brg 2
	0-3-0					
Bearing Length	0-3-0					
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Notes	Handling & Installat	ion	by attached sheathing or as	specified in engineering	Manufacturer Info	Riverside Roof Truss
It is the responsibility of the customer and/or the	1. Engineered wood produc	cts must not be cut or drilled.	notes.	-	Nordic Structures	733 River Park Drive, Virginia
contractor to ensure the component suitability of the intended application and to verify the dimensions and	<ol><li>Refer to the latest version</li></ol>	n of the installation guide for			1100 Avenue des Canadiens-de- Montréal, Suite 100	24540 434-793-0217
loads. Engineered Wood Products	member connections, an	ble specifications, multiple- id handling guidelines.			Montreal, Québec, Canada H3B 2S2	
1. Dry service conditions, unless noted otherwise	lateral displacement and	at bearing points to prevent rotation.			(866) 871-3418 www.nordic.ca	
<ol><li>No treatment with fire-retardant or other strength- reducing chemicals.</li></ol>	ponding	proper drainage to prevent			APA PR-L274C	
	<ol> <li>Design assumes top flar</li> </ol>	nge to be laterally restrained	This design is valid u	ntil 5/24/2024		

isDe	esign		Client: Project: Address:				ln Jo	ate: put by: bb Name oject #:	10/4/202 Richard \$ : 21-6482	Stokes	LCULATION	S		Page 14 of
1FJ26-2	NI-4(	0x ′	11.875"	2-Ply	<b>/ - PAS</b>	SED		I	_evel: Level					
		PRDIC	HO	3 SPF EF		DIC	NOR	18		NORDIC				
1 SPF 2		brain		3 SPF Er	d Grain		4 SPF End	Grain			:	5 SPF		
4'	1		6'9"		1	5'9"	ſ			8'		[	15	,
1					24'6"							1		
lember Infor	mation						Reaction	s UNI	PATTERN	ED lb (	Uplift)			
Туре:	Girder		Applica		Floor		Ĭ	ection	Live			Snow	Wind	Cor
Plies: Moisture Condition	2 n: Dn/		-	n Method: g Code:	ASD IBC/IRC 201	5	1 Vert		853		412	0	0	
Deflection LL:	480			-	No	5	2 Vert		1069		476	0	0	
Deflection TL:	240		Deck:	maning.	Not Checked	l	3 Vert 4 Vert		209 309		43 78	0 0	0	
Importance:	Normal -	11					5 Vert		140		35	0	0	
Temperature:	Temp <=	100°F					_							
							Bearings			<u> </u>		<b></b>		
							Bearing	-		Cap. Re 45%	eact D/L lb 412 / 878		Ld. Case	Ld. Corr D+L
							1 - SPF 2 - SPF		Vert Vert	45% 22%	412 / 878		L_L_ LL L	D+L D+L
nalysis Resul	ts						End	0.000	Vort	2270	4707 1001	1007		D.F
Analysis Ao	ctual	Locati	on Allowed	Capacity	Comb.	Case	Grain	F 500"	N/t	50/	40 / 075 0	40 ( 04)		D.I.(D.I
Neg Moment -4	19 ft-lb		4' 7520 ft-lb	0.056 (6%	,	LL_L	3 - SPF End	5.500"	Vert	5%	43 / 275 3	19 (-24)	_LL_	D+L(D+L
	19 ft-lb		4' 868 ft-lb	0.482 (48	'	LL_L	Grain							
Pos Moment 10			6" 7520 ft-lb	0.133 (13		L_L_	4 - SPF	5.500"	Vert	6%	78 / 326	405	L_LL	D+L
	03 ft-lb	1'11 13/1	16" 5510 ft-lb	0.182 (18	,	L_L_	End Grain							
Shear 13 LL Defl inch 0.0	37 lb	211 2/1	4' 2960 lb 16" 0.094 (L/48	0.452 (45	-	LL_L L_L_	5 - SPF	3.500"	Vert	6%	35 / 147	182	_L_L	D+L
TL Defl inch 0.0	· · · ·		10 0.094 (L/40 16" 0.189 (L/24	, ,	,	L_L_								
esign Notes	012 (2/0010)	2.0/	0.100 (2/2	() () () () () () () () () () () () () (	•) = =		ł							
1 Provide suppor	quired at the signed to be nust be faste t be supporte ection require t be laterally	interior bea supported o ned togethe ed equally b ed at bearin	arings by the bui on the bottom ec er as per manufa y all plies. ng 3 for uplift 24 bearings.	lding code. Ige only. acturer's detai	ls.									
	Load Type		Location	Trib Width	Side	Dead 0.9		1 Sno			Const. 1.2		mments	
1	Uniform			1-0-0	Тор	10 PSF	40 PSI		0 PSF	0 PSF				
2	Part. Unifor		0-0-0 to 4-0-0	10-0-0	Тор т	10 PSF	40 PSI		0 PSF	0 PSF				
3	Part. Unifor	m	0-0-0 to 4-0-0		Тор	100 PLF	0 PLF	=	0 PLF	0 PLF	5 0 Pl	LF		
lotes is the responsibility of ontractor to ensure the of tended application and to ads. ingineered Wood P . Dry service conditions, to	component suitabi o verify the dimen Products	and/or the 1. I lity of the I sions and 2. I 3. I	ndling & Installat Engineered wood produ Damaged products shal Refer to the latest versis construction details, h member connections, al Provide lateral support ateral displacement and	cts must not be cut of I not be used. on of the installation ole specifications, nd handling guideline at bearing points to	or drilled. notes guide for multiple- es.	ttached sheathing or s.	as specified in eng	ineering	(866) 871-34	tures des Canac ite 100 lébec, Cana 18	diens-de- ada H3B 2S2	733 Ri 24540	ide Roof Tru iver Park Dri 93-0217	
<ol> <li>Dry service conditions, c</li> <li>No treatment with fire- reducing chemicals.</li> </ol>		r strength- 4. I	For flat roof, provide ponding.	proper drainage to					www.nordic.c					
			Design assumes top fla											



		Client:		Date:	10/4/2021	Page 16 of 3
		Project:		Input by:	Richard Stokes	
İS	Design	Address:		Job Name:	21-6482 BEAM CALCULATIONS	
-				Project #:		
BM8 2.	.0E Rigidlam LVL	1.750" X 18.00	0" 2-Ply - PAS	SED Le	evel: Level	
					1	
• •	• • • •	• • • •	· · · ·	• •	· · · · · · · · · · · · · · · · · · ·	u ∭ 1
· ·				· · ·	· · · · · · · · · · · · · · · · · · ·	- - - - - - - - - - - - - - - - - - -
1 SPF End	l Grain				2 SPF End Grain	$ \vdash \blacksquare \not \rightarrow$
1			20'8"			1/2"
1			20'8"			
Multi-Ply A	nalysis					
-	-	Boy nails ( 128v3") at 12	" o.c. excent for regio	ns covered	by concentrated load fastening.	
	nd distance not to excee		o.e except for regie		by concentrated load lasterning.	
Capacity	0.0 %					
Load	0.0 PLF					

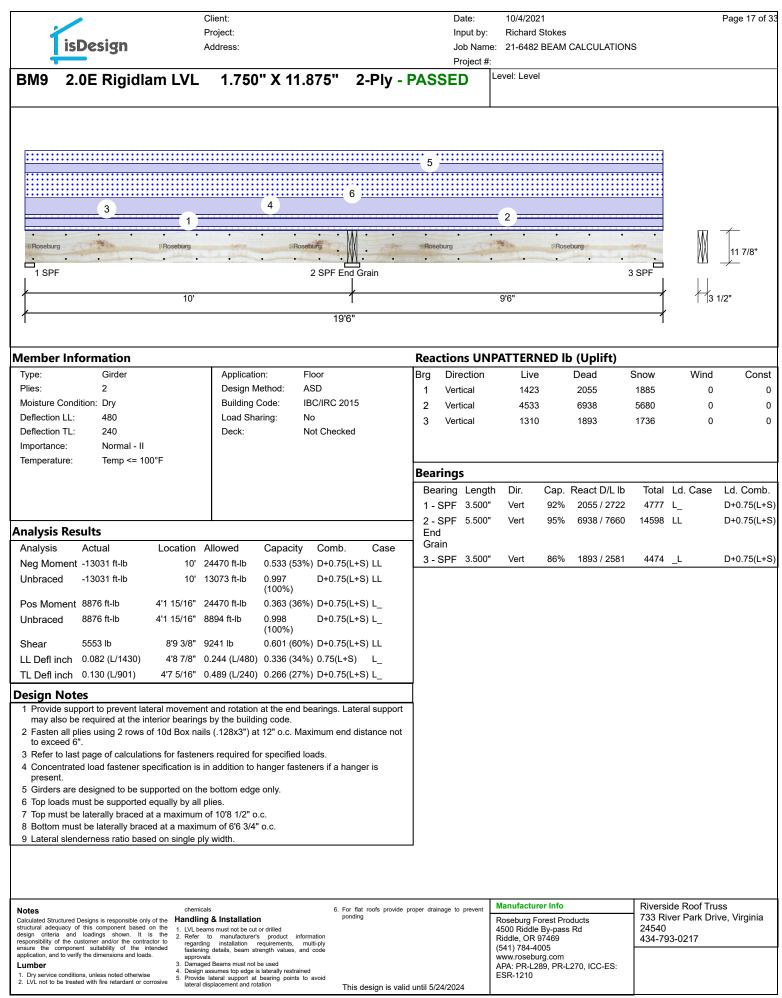
Capacity	0.0 %	
Load	0.0 PLF	
Yield Limit per Foot	271.6 PLF	
Yield Limit per Fastener	90.5 lb.	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination		
Duration Factor	1.00	

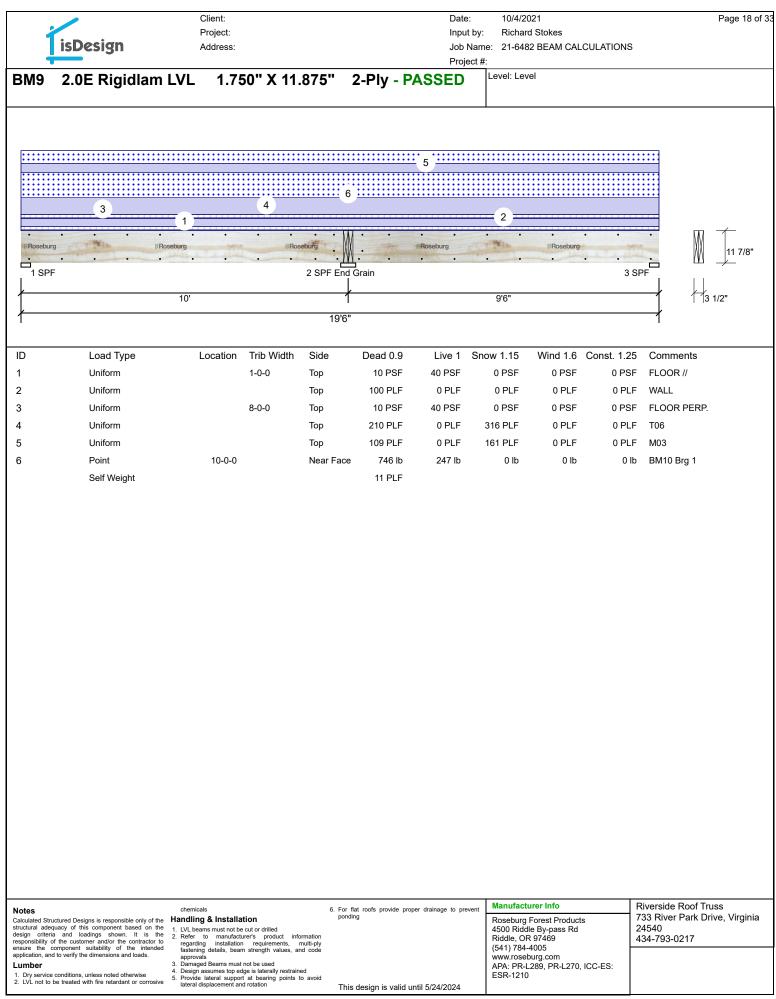
## **Concentrated Load**

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

Capacity 75.1 % Load 815.71b. Total Yield Limit 1086.3 tb. Cg 0.9998 Yield Limit per Fastener 90.5 lb. Yield Mode IV Load Combination D+L Duration Factor 1.00 Min. 3" Min. 5" Min. 5" Min. 3" Max. 12" Max. 12"		Box nails (.128x3") in the	Min/Max fastener distances f	or Concentrated Side Load	ls
Max. 12" Max. 12" Max. 12" Max. 12"	Dattern shown. Capacity Joad Total Yield Limit Cg Yield Limit per Fastener Yield Mode Load Combination	75.1 % 815.7lb. 1086.3 lb. 0.9998 90.5 lb. IV D+L	1 1/2" Min. 1 1/4" Min. 3"	Min. 1 1/4"	• • • •
Notes chemicais 6. For hat tools provide proper drainage to prevent					2"
Calculated Structured Designs is respensible and of the Handling & Installation Ponding			<ol><li>For flat roofs provide proper drainage to prevent ponding</li></ol>	Manufacturer Info	Riverside Roof Truss 733 River Park Drive, Virginia

Notes	chemicals	6. For flat roofs provide proper drainage to prevent	Manufacturer Info	Riverside Roof Truss
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. <b>Lumber</b> 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive	1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product information	ponding This design is valid until 5/24/2024	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	733 River Park Drive, Virginia 24540 434-793-0217



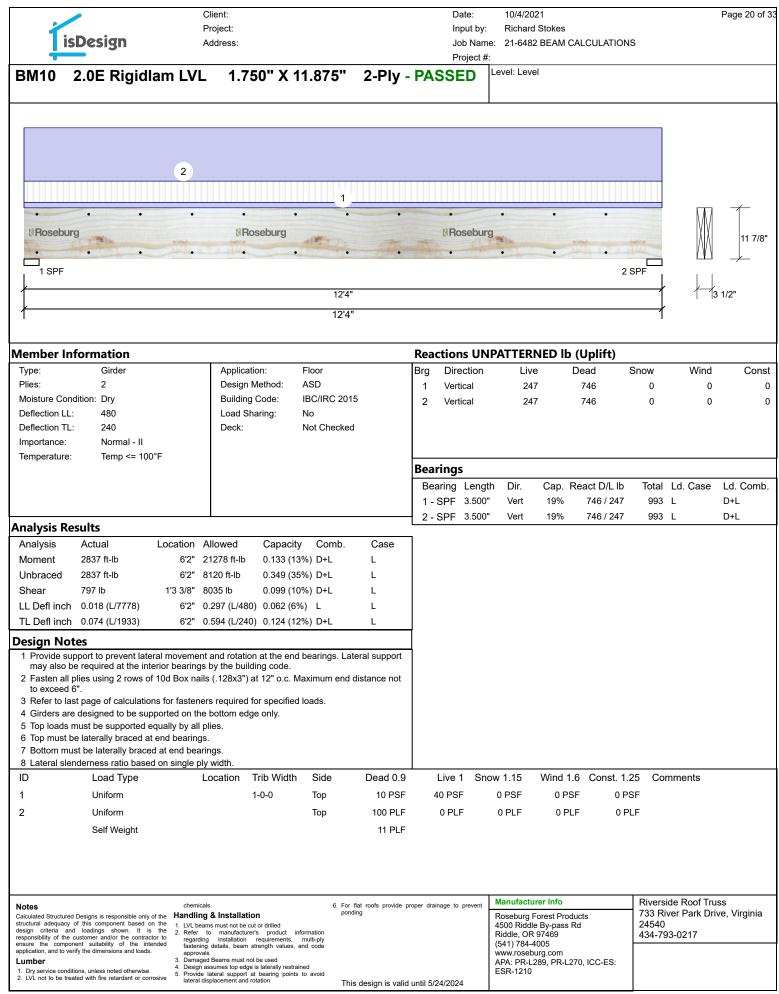


	Client:		Date	: 10/4/2021	Page 19 of 3
	Project:		Inpu	t by: Richard Stokes	
isDesign	Address:		Job	Name: 21-6482 BEAM CALCULATIONS	
			Proje	ect #:	
BM9 2.0E Rigi	dlam LVL 1.750	" X 11.875"	2-Ply - PASSED	Level: Level	
			1		
· · · ·	· · · ·	<del></del>	M · · ·		· ] [2 M ]
		<u></u>	<u>M</u> .:		<u> </u>
1 SPF		2 SPF Er	nd Grain I	3 S	PF //
↓ <i>∤</i>	10'		1	9'6"	3 1/2"
· · · · · · · · · · · · · · · · · · ·	10				10112
1		19'	5"		1
Multi-Ply Analysis					
		28x3") at 12" o.c	except for regions cov	vered by concentrated load faste	ning.
Maximum end distance					
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					
	side load at 10-0-0 with	а			
minimum of (6) – 10d E	Box nails (.128x3") in the				
pattern shown.		Min/	Max fastener distance	s for Concentrated Side Loads	
	04.4.9/				
Capacity	91.4 %		I ← Min. 3" →	_ <b>-⊢</b> Min. 1 1/4"	
Load	496.4lb.	+			
Total Yield Limit	543.3 lb.	1 1/2			
Cg	1.0000	1 1/2			• •
Yield Limit per Fastener	90.5 lb.		Min. 1 1/4"	0\/0	
Yield Mode	IV		· · · · · · · · · ·	o \/ o	
Load Combination	D+L	Min. 3	,u		
Duration Factor	1.00			0 / 0	
			Min. 5"	o / \ o	
		<u>+</u>	- <b>I</b>	0 / \ 0	• •
			I I I		
					J
				Min. 3"	

			r	1
Notes	chemicals	6. For flat roofs provide proper drainage to prevent	Manufacturer Info	Riverside Roof Truss
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. <b>Lumber</b> 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive	1. LVL beams must not be cut or drilled	ponding This design is valid until 5/24/2024	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	733 River Park Drive, Virginia 24540 434-793-0217

-Max. 12"-

-Max. 12"-

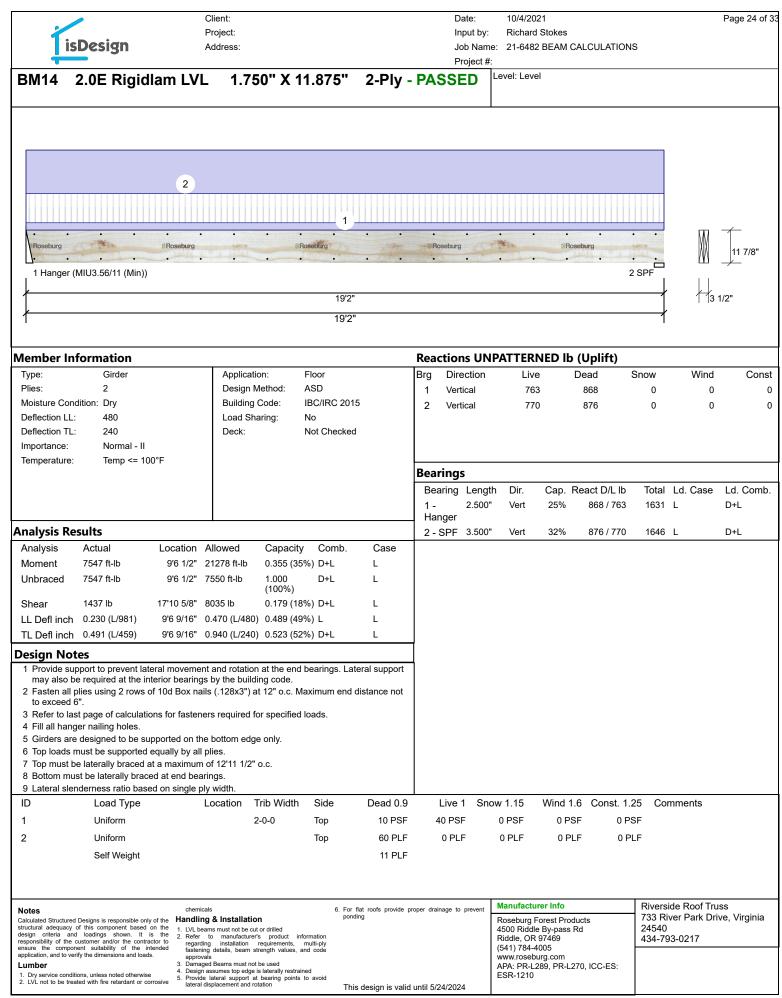


					D./	10/1/0001	<b>D</b> 01 (1
2			ent: bject:		Date: Input by	10/4/2021 r: Richard Stokes	Page 21 of 3
	isDesign		dress:			me: 21-6482 BEAM CALCULA	TIONS
					Project		
BM10	2.0E Rigid	lam LVL	1.750" X 11.87	75" 2-Ply	- PASSED	Level: Level	
•	• •	•	• •	• •	•	• • •	12
							↓ ↓ 11 7/8"
	• •	•	• •	• •	•	• • •	
1 SPF	-						
1				12'4"			1 1/2"
1				12'4"			1
-	/ Analysis						
-asten all Capacity	plies using 2 rov	vs of 10d Box	<pre>k nails (.128x3") at 12'</pre>	' o.c Maxımun	n end distance i	not to exceed 6".	
.oad		0.0 PLF					
∕ield Limit pe ∕ield Limit pe		181.1 PLF 90.5 lb.					
ield Mode		IV					
dge Distand /in. End Dist		1 1/2" 3"					
oad Combin	nation						
Duration Fac	tor	1.00					
Notes Calculated Struct	tured Designs is responsible only	chemicals v of the Handling 8	Installation	<ol> <li>For flat roofs provide ponding</li> </ol>	proper drainage to prevent	Manufacturer Info Roseburg Forest Products	Riverside Roof Truss 733 River Park Drive, Virginia
structural adequa design criteria	acy of this component based and loadings shown. It i	on the 1. LVL beams	must not be cut or drilled manufacturer's product information			4500 Riddle By-pass Rd Riddle, OR 97469	24540 434-793-0217
responsibility of t ensure the con	the customer and/or the contra mponent suitability of the in to verify the dimensions and loads	actor to regarding tended fastening d	installation requirements, multi-ply etails, beam strength values, and code			(541) 784-4005 www.roseburg.com	404-130-UZII
Lumber	onditions, unless noted otherwise	<ol> <li>Damaged E</li> <li>Design assi</li> </ol>	eams must not be used umes top edge is laterally restrained			APA: PR-L289, PR-L270, ICC-ES	S:
2. LVL not to be	onditions, unless noted otherwise treated with fire retardant or co	5. Provide lat	eral support at bearing points to avoid acement and rotation	This design is val	id until 5/24/2024	ESR-1210	
Varcian 21.40	338 Powered by iStruct™	D	142	•			

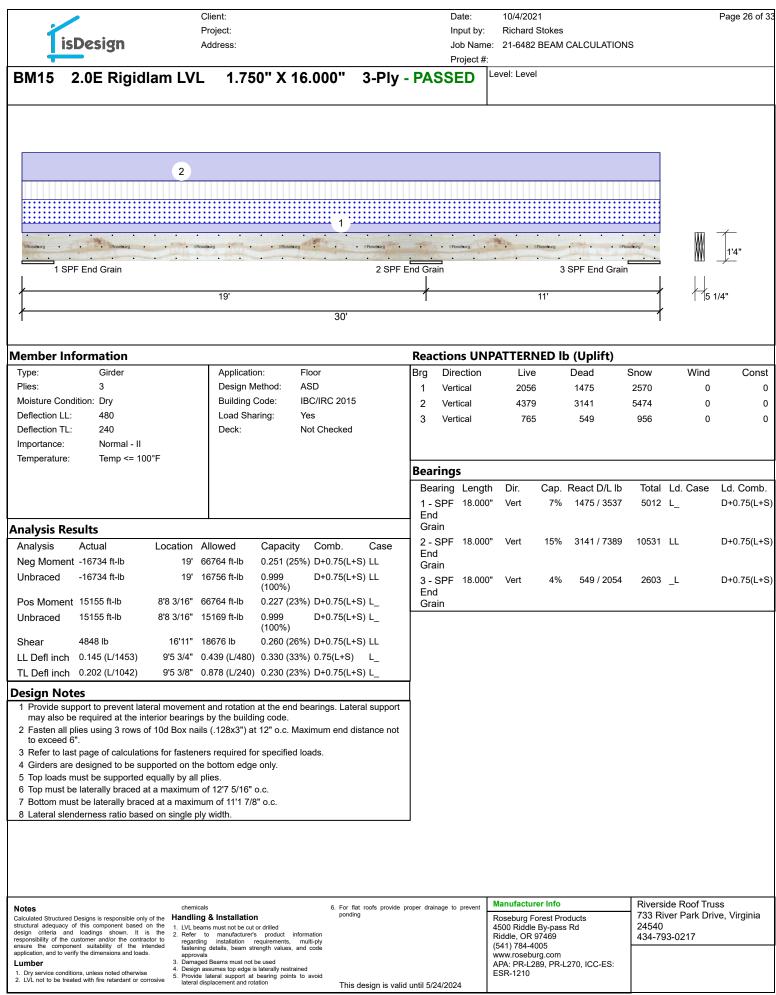
BM11       2.0E Rigidlam LVL       1.750" X 11.875" -         Image: Second Secon	Project #: PASSED	_evel: Level	11 7/8"
1       Image: Second Sec			11 7/8"
Member Information         Type:       Girder       Application:       Floor         Plies:       1       Design Method:       ASD         Moisture Condition:       Dry       Design Method:       ASD         Deflection LL:       480       Duck:       No         Deflection TL:       240       Building Code:       IBC/IRC 2015         Importance:       Normal - II       Deck:       Not Checked         Temperature:       Temp <= 100°F       Deck:       Not Checked         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'       10639 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       2' 1/16"       0.177 (L/240)       0.025 (2%)       D+L       L         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 b			1 3/4"
Type:       Girder       Application:       Floor         Plies:       1       Design Method:       ASD         Moisture Condition: Dry       Deflection LL:       480       Building Code:       IBC/IRC 2015         Deflection TL:       240       Deflection TL:       240       Deflection TL:       240         Importance:       Normal - II       Temperature:       Temp <= 100°F       Deck:       Not Checked         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       2' 1/16"       0.177 (L/240)       0.025 (2%)       D+L       L         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 laterall			
Temperature:Temp <= 100°FAnalysisActualLocationAllowedCapacityComb.CaseMoment949 ft-lb2'10639 ft-lb0.089 (9%)D+LLUnbraced949 ft-lb2'9365 ft-lb0.101 (10%)D+LLShear441 lb2'8 5/8"4018 lb0.110 (11%)D+LLLL Defl inch0.003 (L/16288)2' 1/16"0.089 (L/480)0.029 (3%)LLTL Defl inch0.004 (L/9684)2' 1/16"0.177 (L/240)0.025 (2%)D+LLDesign Note: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.1 Provide support to prevent lateral movement and rotation edge only.3 top must be laterally braced at end bearings.2Uniform9-0-0Top10 PSF2Uniform9-0-0Top10 PSF2Uniform5-0Top150 PLF	Reactions UNP Brg Direction 1 Vertical 2 Vertical	PATTERNED Ib (Uplift) Live Dead 3 720 491 720 491	Snow Wind Con 0 0 0 0
AnalysisActualLocationAllowedCapacityComb.CaseMoment949 ft-lb2'10639 ft-lb0.089 (9%)D+LLUnbraced949 ft-lb2'9365 ft-lb0.101 (10%)D+LLShear441 lb2'8 5/8"4018 lb0.101 (11%)D+LLLL Defl inch0.0032' 1/16"0.089 (L/480)0.029 (3%)LLTL Defl inch0.004 (L/9684)2' 1/16"0.177 (L/240)0.025 (2%)D+LLDesign Notes1Provide 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.2Girders are designed to be supported on the bottom edge only.3Top must be laterally braced at end bearings.4Bottom must be laterally braced at end bearings.LocationTrib WidthSideDead 0.91Uniform9-0-0Top10 PSF2Uniform9-0-0Top100 PSF	Bearings Bearing Length 1 - SPF 3.500" 2 - SPF 3.500"	Dir. Cap. React D/L lb Vert 47% 491 / 720 Vert 47% 491 / 720	Total Ld. Case Ld. Com 1211 L D+L 1211 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       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         1       Uniform       9-0-0         2       Uniform       Top			
1         Uniform         9-0-0         Top         10 PSF           2         Uniform         Top         150 PLF			
	40 PSF	w 1.15 Wind 1.6 Const. 1.2 0 PSF 0 PSF 0 PS 0 PLF 0 PLF 0 PI	SF
Notes       chemicals       6. For flat roofs provide program         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.       1. LVL beams must not be cut or drilled         2. Refer to manufacturer's product information responsibility of the customer and/or the contractor to ensure the component suitability of the intended.       2. Refer to manufacturer's product information regarding installation regularity regularity regularity regularity regarding installation regularity		Manufacturer Info Roseburg Forest Products 4500 Riddle By-pass Rd Riddle, OR 97469 (541) 784-4005	Riverside Roof Truss 733 River Park Drive, Virginia 24540 434-793-0217

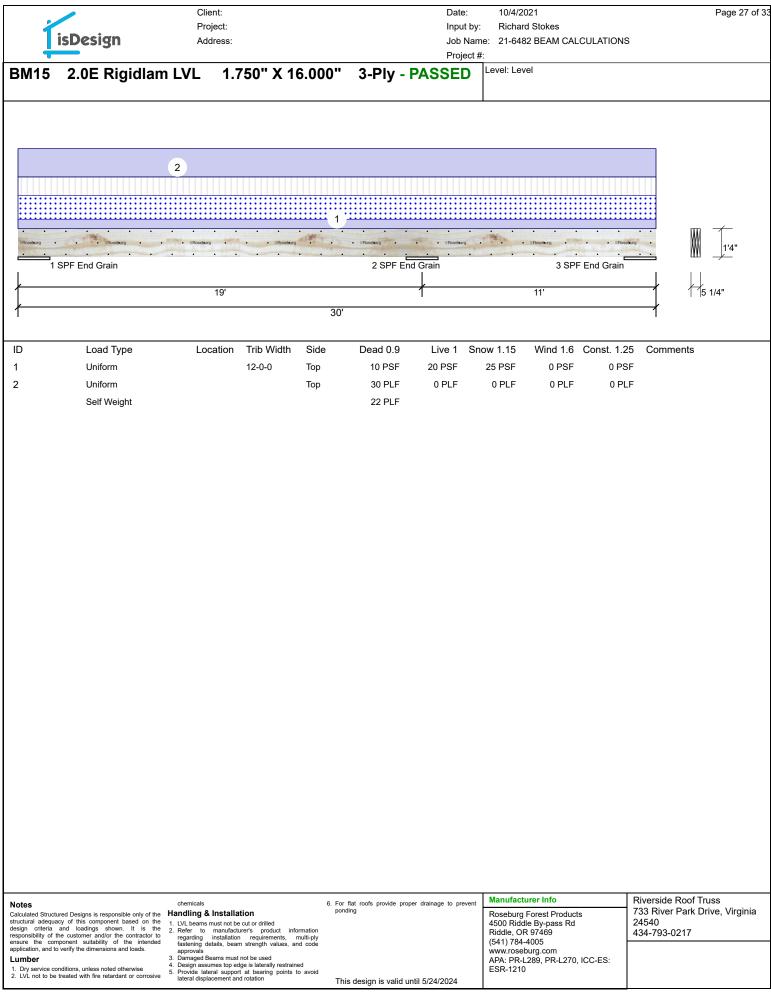
Design		Project:					Inpu	ut by:	Richard	Stokes		ONS		Page 23
							Proj	ect #:			RECOLATI			
2.0E Rig	jidlam	LVL	1.750	" X 11.	875" -	• <b>P</b> /	SS	ED	evel: Level					
2 1 1 1		2 SPF												11 7/8"
														5/4
formation						Doo	rtiana		ATTEDA		(			
Girder 1 dition: Dry 480 240		Design M Building C	ethod: A Code: IE ring: N	SD SC/IRC 2015 o		Brg 1 2	Direc Vertica	tion al	Live	I		0	0	1
	D°F					Bea 1 -	aring L SPF 3	8.500"	Vert	20%	351 / 16	60 5	11 L	D+L
sults		-				2-	SPF 3	8.500"	Vert	20%	351 / 16	50 5	11 L	D+L
Actual 401 ft-lb 401 ft-lb 189 lb 0.001 (L/73295) 0.002	2' 2' 1'3 3/8" 2' 1/16"	10639 ft-lb 9365 ft-lb 4018 lb 0.089 (L/480)	0.043 (4%) 0.047 (5%) 0.007 (1%)	D+L D+L L	Case L L L L									
<b>ES</b> poort to prevent late e required at the inf designed to be su	erior bearings	s by the buildir e bottom edge	ng code.	earings. Later	al support									
st be laterally brace	ed at end bear	rings.	rih Width	Side	Dead 0.0		live 1	Sport	v 1 15	Wind 1	6 Const	1 25	Commente	
Load Type Uniform					10 PSF								Comments	
Uniform Self Weight				Тор	150 PLF 5 PLF		0 PLF		0 PLF	0 PL	F (	0 PLF		
of this component based of I loadings shown. It is	of the Handlin on the 1. LVL bea the 2. Refer ctor to regardin	g & Installation ams must not be cut o to manufacturer's	or drilled product inform	ponding nation Ilti-ply		roper drai	nage to pr		Roseburg Fo 4500 Riddle	orest Prod By-pass F 97469		733 245	River Park D 40	
	2 1 1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Classical and LVL         2       1         1         2 SPF         4'       4'         Some time to the second	Project:         Address:         2.0E Rigidlam LVL       1.750         Image: state s	Project:       Address:         2.OE Rigidlam LVL       1.7550" X 11.         Image: State of the s	Project: Address:         2.0E Rigidlam LVL       1.750" X 11.875"         2.0E Rigidlam LVL       1.750" X 11.875"         2.0E Rigidlam LVL       1.750" X 11.875"         2.0E       2.9F         4'       2.0F         4'       2.9F         4'       2.0F         Building Cold:       BC/IRC 2015         Load Sharing:       Not         Deck:       Not Checked         Differed 1       2.956571b       0.038 (4%)       D-L       L         0.001       2.116*       0.177 (L/240       0.047 (5%)       D-L       L         0.002       2.116*       0.177 (L/240       0.047 (5%)       D-L       L         0.002       2.116*       0.177 (L/240       0.047 (5%)       <	Project: Address:         2.0E Rigidiam LVL       1.750" X 11.875" - PA         Image: State of the state of	Project:         Address:         Mathematication           2.0.C. Rigidlam LVL         1.750" X 11.875" - PASS           2.0.C. Rigidlam LVL         2.5F"           4         -           2.0.C. Rigidlam LVL         Secondaria           1.0.C. Rigidlam LVL         1.750" X 11.875" - PASS           2.0.C. Rigidlam LVL         2.5F"           4         -           2.0.C. Rigidlam LVL         2.5F           4.0.C. Rigidlam LVL         2.5F           2.0.C. Rigidlam LVL         2.5F           2.0.C. Rigidlam LVL         Actional Secondaria           1.0.C. Rigidlam LVL         Actional Secondaria           1.0.0.0.1         2.5F           2.0.0.1         1.0.0.0.1           1.0.0.1         2.0.0.1           1.0.0.1         2.0.0.1           1.0.0.1         2.0.0.1           1.0.0.1         2.0.0.1           1.0.0.1         2.0.0.1	Priget:       Address:       Input by:       Dot Mark         Priget:       Address:       Priget:       Prigt:       Priget:       Prige:	Project:       Address:       Addres:       Addres:       Addres:       Ad	Project Address       Project Markets       Project Address       Project Markets       Project Markets	Project: Pro	Priget:       Marrow:       During the stand Bulkes:         Open tri       Distance:       Character Info         C.DE Rigidiam LVL       1.750" X 11.875" - PASSED       Caracter Info         Commentation       Caracter Info       Caracter Info         Commentation       Caracter Info       Description         Commentation       Caracter Info       Description         Commentation       Description       Description       Description         Substance:       Prime Info       Description       Description       Description         Substance:       Not Description       Description       Description       Description       Description         Substance:       Not Description       Description       Description       Description       Description       Description         Substance:       Not Description       Description       Description       Description       Description       Description       Description         Substance:       Not Description       Description       Description       Description       Description       Description         Substance:       Description       Application:       Prime Distance       Description       Description       Description         Substance:       Description	Project. Address:       Project. By Burders:       Project. By Burders:       Project. By Burders:       Project. By Burders:         2.0E Rigicilar LVL       1.750" X 11.875" - PASSED       Lavet Lavet         2       2       2       2         2       2       2       2         4       -       -       -         2       -       -       -         4       -       -       -         4       -       -       -         4       -       -       -         4       -       -       -         5       0       -       -       -         5       0       -       -       -       -         4       -       -       -       -       -         5       0       -       -       -       -       -         5       0       -       -       -       -       -       -         6       0       -       1       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -

Version 21.40.338 Powered by iStruct<sup>™</sup> Dataset: 21070201.142



2		Clie Pro	nt: ject:		Date: Input by	10/4/2021 : Richard Stokes	Page 25 of 3
li	isDesign		Iress:		Job Nan	ne: 21-6482 BEAM CALCULATION	IS
BM14	2.0E Rigidla	m LVL	1.750" X 11.87	5" 2-Ply	Project #	#: Level: Level	
							5.
\		• •	• • •	• • •	• •		···
1 Hanger	r (MIU3.56/11 (Min))	•••		<u> </u>	•••	<u> </u>	
				19'2"			3 1/2"
1				19'2"			1
Multi-Ply	-						
asten all p apacity		of 10d Box <sup>0.0 %</sup>	nails (.128x3") at 12"	o.c Maximum	n end distance r	not to exceed 6".	
oad eld Limit per		0.0 PLF 181.1 PLF					
eld Limit per eld Mode	Fastener	90.5 lb.					
eid Mode dge Distance		IV 1 1/2"					
in. End Dista		3"					
oad Combina uration Facto		1.00					
Notes		chemicals		<ol> <li>For flat roofs provide ponding</li> </ol>	proper drainage to prevent	Manufacturer Info	Riverside Roof Truss 733 River Park Drive, Virginia
structural adequad	red Designs is responsible only of the component based on the compon	ne 1. LVL beams n	nust not be cut or drilled	ponung		Roseburg Forest Products 4500 Riddle By-pass Rd	24540
responsibility of th	and loadings shown. It is the customer and/or the contractor ponent suitability of the intender	to regarding	manufacturer's product information installation requirements. multi-ply			Riddle, OR 97469 (541) 784-4005	434-793-0217
application, and to	verify the dimensions and loads.	approvals 3. Damaged Be	tails, beam strength values, and code			(341) 764-4005 www.roseburg.com APA: PR-L289, PR-L270, ICC-ES:	
1. Dry service cor	nditions, unless noted otherwise treated with fire retardant or corrosi	<ol> <li>Design assurements</li> <li>Provide later</li> </ol>	mes top edge is laterally restrained ral support at bearing points to avoid			APA: PR-L289, PR-L270, ICC-ES: ESR-1210	
2. LVL HUL TO DE L	a cated with the relatuant or corrosi	lateral displa	cement and rotation	This design is vali	d until 5/24/2024		





	Clie Pro	ent: ject:		Date: Input by:	10/4/2021 Richard Stokes	Page 28 of
isDesign		lress:			e: 21-6482 BEAM CALCULATION	IS
		4 75011 V 40 00		Project #	: Level: Level	
BM15 2.0E Rig	idlam LVL	1.750" X 16.00	0" 3-Ply - PA	33ED		
						1 1 
						· · · · · · · · · · · · · · · · · · ·
1 SPF End Grain	• • • •	<u></u>	2 SPF End Gr	ain	3 SPF End Grair	
/		19'			11'	5 1/4"
·			30'			
1						•
Iulti-Ply Analysis						
isten all plies using 3 r	ows of 10d Box	nails (.128x3") at 12"	o.c Nail from both	sides. Max	kimum end distance not to	exceed
·						
pacity ad	0.0 % 0.0 PLF					
ld Limit per Foot	271.6 PLF					
ld Limit per Fastener	90.5 lb.					
ld Mode ge Distance	IV 1 1/2"					
n. End Distance	3"					
ad Combination	0					
ration Factor	1.00					
lotes	chemicals		6. For flat roofs provide proper dra ponding	ainage to prevent	Manufacturer Info	Riverside Roof Truss 733 River Park Drive, Virginia
alculated Structured Designs is responsible ructural adequacy of this component bas	sed on the 1. LVL beams r	nust not be cut or drilled			Roseburg Forest Products 4500 Riddle By-pass Rd	24540
esign criteria and loadings shown. esponsibility of the customer and/or the consure the component suitability of the	It is the 2. Refer to ontractor to regarding	manufacturer's product information installation requirements, multi-ply			Riddle, OR 97469 (541) 784-4005	434-793-0217
pplication, and to verify the dimensions and	loads. approvals	earns must not be used			www.roseburg.com	
.umber I. Dry service conditions, unless noted other	wise 5 Provide late	eams must not be used mes top edge is laterally restrained ral support at bearing points to avoid			APA: PR-L289, PR-L270, ICC-ES: ESR-1210	
2. LVL not to be treated with fire retardant of	or corrosive lateral displa	cement and rotation	This design is valid until 5	21/2021		1

This design is valid until 5/24/2024

	•		Client:			[	Date:	10/4/2021				Page 29 of
- In	Design		roject:				nput by:	Richard Sto		0.10		
	Design	A	ddress:				lob Name: Project #:	21-6482 BE	AM CALCULATI	ONS		
1FJ46	NI-40x	11 07	5" - PA					evel: Level				
IFJ40	INI-4UX	11.07	<b>J - FA</b>	53ED								
HORDIC	HORDIC	RDIC	NORDIC	NORDIC	1	NORDIC	NORDIC	NORDIC	NORDIC	NORDIC	īī	<u></u>
1 SPF			2 SPF			3 5	SPF			4 SPF	±∕	<u></u> 41 7/8" 2"
/							,				Ø	
	14'6"				16'4"				14'4"		2 1/2	2"
1				4	15'2"					1		
/lember Inf	ormation					Reactio	ns UNP	ATTERNE	D lb (Uplift)			
Туре:	Joist		Application:	Floor			rection	Live	Dead	Snow	Wind	Con
Spacing:	16" o.c.		Design Meth	od: ASD		1 Ver	rtical	307	77	0	0	
Moisture Cond			Building Cod		2015	2 Ver	rtical	903	226	0	0	
Deflection LL:	480		Load Sharing	-		3 Ver	rtical	896	224	0	0	
Deflection TL:	240 Normal - II		Deck:		PA Rated Sturd- SB Nailed and	4 Ver	rtical	303	76	0	0	
Importance: Temperature:	Temp <= 1			Glued								
remperature.	Temp <= 1	001				Bearing	IS					
							Length	Dir. C	ap. React D/L	lb Total	Ld. Case	Ld. Com
						1 - SPF	-		0% 77/35		L_L	D+L
						2 - SPF	3.500"	Vert 4	0% 226/96	51 1187	LL_	D+L
Analysis Res						3 - SPF	3.500"	Vert 3	9% 224 / 95	56 1180	_LL	D+L
Analysis	Actual	Location A		apacity Com		4 - SPF	3.500"	Vert 3	0% 76/35	55 431	L_L	D+L
Neg Moment				448 (45%) D+L	LL_							
Unbraced	-1686 ft-lb	14'6" 1		990 (99%) D+L	LL_							
Pos Moment		6'6 1/4" 3		351 (35%) D+L	L_L							
Shear	594 lb	14'6" 1-	.408 (L/480) 0.	401 (40%) D+L	LL_							
	0.124 (L/1583) 0.126 (L/1356)		.714 (L/240) 0.	( )	_L_ L_L							
		1 3/4 0	./ 14 (L/240) 0.	177 (10%) DTE	L_L	-						
Design Note 1 Provide sup	port to prevent la	iteral movement	and rotation at	he end bearings	s. Lateral support	4						
	e required at the in ge must be latera											
ID	Load Type	L	ocation Trib	Width Dea	ad 0.9 Live	e 1 Snow	1.15 \	Wind 1.6 C	onst. 1.25 Co	omments		
1	Uniform		1-4-(	) 1(	0 PSF 40 P	SF 0	PSF	0 PSF	0 PSF			
								Monufacture	nto	Di		
Notes	v of the customer		& Installation	not be out or drilled	by attached sheathing o notes.	r as specified in er	igineering	Manufacturer			ide Roof Tru ver Park Dri	
contractor to ensure 1	y of the customer and the component suitability nd to verify the dimension	y of the Damaged	ed wood products must d products shall not be u the latest version of the	sed.					es Canadiens-de-	24540		.,
loads. Engineered Woo		construct member of	ion details, hole spec connections, and handli	rifications, multiple- ng guidelines.				Montréal, Suite Montreal, Québ	ec, Canada H3B 2		93-0217	
1. Dry service conditio	ons, unless noted otherwis	3. Provide la se lateral dis	ateral support at bearing splacement and rotation	g points to prevent				(866) 871-3418 www.nordic.ca				
<ol><li>No treatment with reducing chemicals</li></ol>	fire-retardant or other s	ponding.	roof, provide proper of ssumes top flange to be					APA PR-L274C				
					This design is vali	d until 5/24/202	24					
	Powered by iStructI											

	Client:		Date:	10/4/2021		Page 30 of
	Project:		Input by:			. age ee ei
isDesign	Address:		Job Nam	e: 21-6482 BEAM CALCULATION	S	
			Project #			
1FJ32 NI-40x	11.875" - PASSE	D		Level: Level		
I SPF         I         Specific         Joist         Spacing:       16" o.c.	16'5"	L 1 2 SPF 	Brg Direction 1 Vertical	14'5" PATTERNED Ib (Uplift) Live Dead 352 88	Snow Wind	0
Moisture Condition: Dry	-	BC/IRC 2015	2 Vertical	1006 251		0
Deflection LL: 480	Ŭ	No	3 Vertical	286 72	0	0
Deflection TL: 240		23/32 APA Rated Sturd- -FloorOSB Nailed and				
Importance: Normal - II		Glued				
Temperature: Temp <= 100°F			Bearings			
			Bearing Lengt	h Dir. Cap. React D/L lb	Total Ld. Case	e Ld. Com
			1 - SPF 3.500'		477 L_	D+L
			2 - SPF 3.500		1259 LL	D+L
Analysis Results			3 - SPF 3.500		420 _L	D+L
Neg Moment         -1866 ft-lb           Unbraced         -1866 ft-lb           Pos Moment         1597 ft-lb         7'           Shear         655 lb           LL Defl inch         0.156 (L/1248)         7	Allowed         Capacity           16'5"         3760 ft-lb         0.496 (50%           16'5"         1887 ft-lb         0.989 (99%           11 13/16"         3760 ft-lb         0.425 (42%           16'5"         1480 lb         0.424 (44%)           '11 3/16"         0.405 (L/480)         0.385 (38%)           '11 3/16"         0.809 (L/240)         0.229 (23%)	%) D+L LL %) D+L LL %) D+L L_ %) D+L LL %) L L_				
. ,		.,				
Design Notes 1 Provide support to prevent latera may also be required at the interi 2 Better flore must be laterally.	or bearings by the building code.	pearings. Lateral support				
2 Bottom flange must be laterally b ID Load Type	Location Trib Width	Dead 0.9 Liv	 e 1 Snow 1.15	Wind 1.6 Const. 1.25 Com	nents	
1 Uniform	1-4-0	10 PSF 40 F		0 PSF 0 PSF	liento	
	1-4-0	10 - 3 - 40 -	0-0-			
Neter		by attack of the off.	or op opposition in an diversity	Manufacturer Info	Riverside Roof T	russ
Notes It is the responsibility of the customer and/or the	Handling & Installation 1. Engineered wood products must not be cut o	notes	or as specified in engineering	Nordic Structures	733 River Park D	
contractor to ensure the component suitability of the intended application and to verify the dimensions and	<ul> <li>Damaged products shall not be used.</li> <li>Refer to the latest version of the installation g</li> </ul>	uide for		1100 Avenue des Canadiens-de- Montréal, Suite 100	24540	
loads. Engineered Wood Products	construction details, hole specifications, r member connections, and handling guidelines	nultiple- 3.		Montreal, Québec, Canada H3B 2S2	434-793-0217	
Dry service conditions, unless noted otherwise     No treatment with fire-retardant or other strengt	<ol> <li>Provide lateral support at bearing points to lateral displacement and rotation.</li> <li>h- 4. For flat roof, provide proper drainage to</li> </ol>			(866) 871-3418 www.nordic.ca		
<ol> <li>No treatment with me-retardant of other strengt reducing chemicals.</li> </ol>	<ol> <li>4. For flat root, provide proper drainage to ponding.</li> <li>5. Design assumes top flange to be laterally re:</li> </ol>	strained		APA PR-L274C		
		This design is val	id until 5/24/2024			
ersion 21.40.338 Powered by iStruct™ Dat						

	•	Client:			Date:	10/4/2021			F	Page 31 of
Tiel	Design	Project:			Input by:	Richard Stoke		0		
	Design	Address:			Job Name Project #:		M CALCULATION	5		
2FJ46	NI-40x	11.875" - P	ASSED			Level: Level				
21 0 70		11.070 - 17	AUGED							
			1						Ŧ -{	
1 SPF	NORDIC	2 SPF	RDIC	NORDIC	3 SPF	NORDIC	NORDIC	4 SPF	I Ja	- 7/8"
1 3FF								4 3 7 7	11	
/	14'4"		16'5"		1	14	-'5"	/	2 1/2"	
<u>/</u>			45'2'	1	· · · · · · · · · · · · · · · · · · ·					
Nember Inf					Reactions UN	PATTERNED	lb (Uplift)			
Туре:	Joist	Applicatio			Brg Direction	Live		Snow	Wind	Con
Spacing:	16" o.c.	Design M		F	1 Vertical	302	76	0	0	
Moisture Cond Deflection LL:	480	Building ( Load Sha		5	2 Vertical	900	225	0	0	
Deflection TL:	240	Deck:	23/32 APA R	ated Sturd-	3 Vertical	903	226	0	0	
Importance:	Normal - II	Deok.	I-FloorOSB		4 Vertical	304	76	0	0	
Temperature:	Temp <= 100°l	F	Glued							
I		Ceiling:	Gypsum 1/2		Bearings					
					Bearing Length	h Dir. Cap	. React D/L lb	Total Ld.	Case	Ld. Com
					1 - SPF 3.500"	Vert 309		430 L_L		D+L
					2 - SPF 3.500"	Vert 399		1183 LL		D+L
Analysis Res	sults				3 - SPF 3.500"	Vert 409		- 1187 LL		D+L
Analysis	Actual	Location Allowed	Capacity Comb.	Case	4 - SPF 3.500"	Vert 309				D+L
Neg Moment	-1686 ft-lb	30'9" 3760 ft-lb	0.448 (45%) D+L	_LL						
Pos Moment	1305 ft-lb 3	88'8 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) 2	2'6 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 Note	es									
		al movement and rotation ior bearings by the buildi		teral support						
ID	Load Type	Location T	rib Width Dead 0.	9 Live	1 Snow 1.15	Wind 1.6 Con	ist. 1.25 Comn	nents		
1	Uniform	1	-4-0 10 PS	F 40 P	SF 0 PSF	0 PSF	0 PSF			
contractor to ensure t intended application a loads.	the component suitability of nd to verify the dimensions a	<ol> <li>Refer to the latest version o construction details, hole</li> </ol>	note must not be cut or drilled. be used. f the installation guide for specifications, multiple-		r as specified in engineering	Manufacturer Infe Nordic Structures 1100 Avenue des Montréal, Suite 10 Montréal, Ouébec	Canadiens-de- 10	Riverside F 733 River F 24540 434-793-02	Park Drive	
	ns, unless noted otherwise fire-retardant or other streng	member connections, and h 3. Provide lateral support at t lateral displacement and rot th- 4. For flat roof, provide proj ponding. 5. Design assumes top flange	pearing points to prevent ation. per drainage to prevent to be laterally restrained	s desian is valia	l until 5/24/2024	Montreal, Québec (866) 871-3418 www.nordic.ca APA PR-L274C	, Canada H3B 2S2			
		taset: 21070201.142								

	•		ent:				Da		10/4/202 Richard					Page 32 of
Tiel	Design		oject: Idroaci					ut by:	Richard			10		
		Ad	ldress:					o Name oject #:	: 21-6482	BEAM CA	LCULATION	15		
		44.07			0050		FIC		_evel: Leve	1				
1FJ4-2	NI-40x	11.87	'5'' 2-Pl	у - РА	199ED									
2	21													
1 Hanger (	(MIU5.12/11 (Min)) 3'6"	2 SPI												- 11 3
													I	<b>[</b> 5"
I	3'6"		I											
lember Info	ormation					Doc	ction	c	PATTERN		(Indi:f+)			
Type:	Girder	I	Application:	Floor		Brg	Direc		-ATTERI Live			Snow	Wind	Cons
Plies:	2		Design Method:	ASD		1	Vertic		273		68	0	0	Cons
Moisture Condi			Building Code:	IBC/IRC	2015	2	Vertic		287		72	0	0	
Deflection LL:	480		Load Sharing:	No										
Deflection TL:	240		Deck:	Not Che	ecked									
mportance:	Normal - II													
emperature:	Temp <= 100°F					D -	<b>ni</b> m a.c.							
							rings		<b>D</b>	0 -				
						Be	aring	Length 2.500"	ı Dir. Vert	Cap. Ro 13%	eact D/L lb 68 / 273	Total 342	Ld. Case	Ld. Comb D+L
							inger	2.300	veil	1370	00/2/3	34Z	L	DTL
nalysis Res	sults					2 -	SPF	3.500"	Vert	12%	72 / 287	358	L	D+L
Analysis	Actual Loo	cation All	lowed Capa	icity Con	nb. Case									
Moment	244 ft-lb 1	'8 1/2" 75	20 ft-lb 0.032	(3%) D+L	L									
Unbraced	244 ft-lb 1	'8 1/2" 72	86 ft-lb 0.034	(3%) D+L	L									
Shear	313 lb	1 3/4" 29	60 lb 0.106	(11%) D+L	L									
LL Defl inch	0.002 1 (L/18942)	'8 1/2" 0.0	078 (L/480) 0.025	(3%) L	L									
TL Defl inch	· /	'8 1/2" 0.1	156 (L/240) 0.016	(2%) D+L	L									
esign Note	es					]								
	port to prevent lateral m				s. Lateral support	٦.								
	required at the interior er nailing holes.	bearings b	y the pulluing code	5.										
3 Girders are o	designed to be support													
	s must be fastened toge oust be supported equal	-		etails.										
-	nust be laterally braced													
	ge must be laterally bra	•												
ID	Load Type	Lo	cation Trib Wie	dth Side	Dead 0.9		Live 1	Sno	w 1.15	Wind 1.6	6 Const. 1.	.25 Com	ments	
1	Uniform		1-0-0	Тор	10 PSF		40 PSF		0 PSF	0 PSF	0 P	SF		
2	Uniform		3-0-0	Тор	10 PSF		40 PSF		0 PSF	0 PSF	- 0 P	SF		
ontractor to ensure the	y of the customer and/or the he component suitability of the nd to verify the dimensions and vd Products	<ol> <li>Engineered Damaged p</li> <li>Refer to the construction member co</li> </ol>	& Installation Wood products must not b roducts shall not be used. Latest version of the instal meetions, and handling gue eral sunnot at bearing not	ation guide for ons, multiple- idelines.	by attached sheathing onotes.	r as speci	fied in engin			ctures e des Cana uite 100 uébec, Can	diens-de- ada H3B 2S2		le Roof Tru: er Park Driv 3-0217	
<ol> <li>Dry service condition</li> </ol>	ns, unless noted otherwise fire-retardant or other strength-	lateral displ 4. For flat ro ponding.	eral support at bearing po lacement and rotation. iof, provide proper draina sumes top flange to be late	ge to prevent	This design is vali	d until 5	/24/2024		(866) 871-3 www.nordic APA PR-L27	са				
sion 21.40.338 P	Powered by iStruct™ Datas	et: 21070201	142									CSD	DDAW	

