

Í	isDes	ign		C F A	Client: Project: Address:						Dat Inp Job Pro	e: ut by: Name: iect #:	1/17/2023 Neal Bagg 32 LIBER	gett TY MEA	DOWS			Page 2 of 8
GDH	SP	#2	2.	000"	' X 1	2.000	••	2-Ply	- P A	SSE	D	Le	vel: Level					
												<u>.</u>						
																	_	
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	••	1 1/2	
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	<u>· · · +</u>	¥₩	
1 SPF E	End Grain														2 SPF E	nd Grain	Λ	
ł								16'10"									<i>.</i> -	3"
<u>/</u>								16'10'										
•																		
Multi_Plv	Analyc	ic																

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	202.6 PLF
Yield Limit per Fastener	101.3 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS
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2		Client: Proiect:				Da	ite: out by:	1/17/202 Neal Ba	23 aaett				Page 3 of 8
lis	Design	Address:				Jol	b Name	: 32 LIBE	RTY MEAI	DOWS			
DB1	 Kerto-S I VI	1 750	" X 18 (<u>י</u> חחר	2-Plv			_evel: Leve	I				
		- 1.750	X 10.0		2-r iy ·	- FASS							
		_2						3					
				1								m	
	and the same			Atten	· · · ·	· · · ·		-				M	4101
		All the second									• •	M	1'6"
1 SPF											2 SPF		
				23'								13	1/2"
1				23'							1		
	.												
Type:	Girder	Applic	ation:	Floor		Bra Dire	s UNI	Live		Uplift) ead	Snow	Wind	Const
Plies:	2	Desig	n Method:	ASD		1 Verti	cal	278	- -	1762	621	0	0
Moisture Con	dition: Dry	Buildi	ng Code:	IBC/IRC 2015	5	2 Verti	cal	278	: :	3241	621	0	0
Deflection LL:	480 360	Deck:	Snaring:	No Not Checked									
Importance:	Normal - II												
Temperature:	Temp <= 100°F												
						Bearings							
						Bearing	Length	Dir.	Cap. R	eact D/L lb	Total	Ld. Case	Ld. Comb.
						1 - SPF	3.500"	Vert	47%	1762 / 674	2436	L	D+0.75(L+S
Analysis Re	sults					2 - SPF	3.500"	Vert	75%	3241 / 674	3915	L	D+0.75(L+S
Analysis	Actual Lo	cation Allowed	Capacity	Comb.	Case	7							
Moment	15112 ft-lb 13	'2 7/8" 38683 ft-lb	0.391 (399	%) D	Uniform								
Unbraced	18767 ft-lb 12'	11 3/4" 18779 ft-lb	0.999	D+0.75(L+	-S) L								
Shear	2761 lb 21	'2 1/2" 12096 lb	0.228 (239	%) D	Uniform								
LL Defl inch	0.107 (L/2523) 11'6	6 1/16" 0.564 (L/4	80) 0.190 (199	, %) 0.75(L+S)	L								
TL Defl inch	0.522 (L/519) 11'11	11/16" 0.752 (L/3	60) 0.694 (699	%) D+0.75(L+	-S) L								
Design Not	tes					1							
1 Provide su	pport to prevent lateral n	novement and rotat	ion at the end l	pearings. Late	eral support	1							
2 Fasten all	plies using 3 rows of 10d	Box nails (.128x3') at 12" o.c. Ma	aximum end d	listance not								
to exceed (6". St page of calculations fo	r fasteners require	d for specified l	oade									
4 Girders are	e designed to be support	ed on the bottom e	dge only.	uaus.									
5 Top loads r	nust be supported equal	lly by all plies.											
6 Top must b 7 Bottom mu	e laterally braced at a m	end bearings.	0.C.										
8 Lateral slei	nderness ratio based on	single ply width.											
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Sno	w 1.15	Wind 1.6	Const. 1.	25 Co	mments	
1	Uniform			Near Face	54 PLF	0 PLF	:	54 PLF	0 PLF	0 P	LF PT	RUSSES	
2	Tie-In Far	0-0-0 to 23-0-0	0-7-4	Far Face	15 PSF	40 PSF	:	0 PSF	0 PSF	0 P	SF FLO		١G
2	Tie-In Near	0-0-0 to 23-0-0	0-0-0	Тор	15 PSF	40 PSF	:	0 PSF	0 PSF	0 P	SF FLO		NG
3	Part. Uniform	10-4-0 to 23-0-0		Тор	255 PLF	0 PLF	:	0 PLF	0 PLF	0 P	LF WA	LL & C1GE	
	Self Weight				14 PLF								
Notes		chemicals		6. For fl	at roofs provide n	proper drainage to	prevent	Manufactur	er Info		Comtech,	Inc.	#639
Calculated Structured	Designs is responsible only of the of this component based on the	Handling & Installa	tion	pondir	ng	,		Metsä Wood	d 7 Building (and Elecer	Fayettevil USA	le, NC	6009
design criteria and responsibility of the	loadings shown. It is the customer and/or the contractor to	 LVL peams must not be 2. Refer to manufact regarding installation 	urer's product info requirements. r	rmation nulti-ply				Norwalk, CT	06851	.nu F1001	28314 910-864-	TRUS	
ensure the compor application, and to ver	nent suitability of the intended rify the dimensions and loads.	fastening details, bea approvals	n strength values, ar	nd code				(800) 622-58 www.metsav	ชอบ wood.com/u	s			
1. Dry service condit	ions, unless noted otherwise	4. Design assumes top e 5. Provide lateral suppo	dge is laterally restrain t at bearing points t	ed o avoid								OMT	есні
 LVL not to be treat 	area with the retardant or corrosive	lateral displacement ar	d rotation	This	design is valid	l until 11/3/2024							

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	Client:			Date:	1/17/2023	Page 4 of 8
	Project:			Input by:	Neal Baggett	
isDesign	Address:			Job Name:	32 LIBERTY MEADOWS	
				Project #:		
DB1 Kerto-S	6 LVL 1.750" X	18.000"	2-Ply -	PASSED	evel: Level	
· · · · ·		· · · ·		· · · ·		
1 SPF		• • •	• •	• • •	••••	
		23'				1/3 1/2"
/ <u>/</u>		23	1			
1		20				ļ
Multi-Ply Analysis						
Easton all plies using 3	rows of 10d Box pails (12	8v3") at 12" o.c	Maximum	and distance not	to avcoad 6"	
Capacity	10 1 %				to exceed 0.	
Load	54.0 PLF					
Yield Limit per Foot	282.4 PLF					
Yield Limit per Fastener	94.1 lb.					
Yield Mode	IV					
Edge Distance	1 1/2"					
Min. End Distance	3"					
Load Combination	D+S					
	1.10					

Notes chemicals	6. For flat roofs provide proper drainage to prev	vent Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the responsibility of the customer and/or the contractor to ensure the component subability 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	tallation ponding to be cut or drilled urfacturer's product information llation requirements, mult-ply beam strength values, and code must not be used top edge is laterally restrained upport at bearing points to avoid and and rotation This design is valid until 11/3/2024	Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Fayetteville, NC USA 28314 910-864-TRUS

		Clie	ent:			Date	:	1/17/2023					Page 5 of 8
	isDesign	Pro	ject:			Input	by:	Neal Bagg					
	ISDESIGN	Add	iress:			Job r Proie	vame:	32 LIBER		v5			
ED2	Korto S I VI	1 7	750" V 16		2 DIV	DACCE		evel: Level					
FDZ	Rento-5 LVI	_ 1./	50 A 10	.000	2-Piy -	PASSE	J						
			2										
	2		3										
		1											
•	•	•											
												WW	
	A Printer	and a second	and the second	1889 C								MA	1'4"
•	International Contention		Alteria .	•									\rightarrow
1 SPF			2	SPF									
/		6'8"		/								13	1/2"
		6'8"											
		00		I									
Mambar						Desetions		ATTEDNI		1:64)			
Type [.]	Girder		Application:	Floor		Bra Directi	on		Dear		now	Wind	Const
Plies:	2		Design Method:	ASD		1 Vertical	I	540	1558		937	0	001130
Moisture Co	ondition: Dry		Building Code:	IBC/IRC 201	5	2 Vertical	I	540	1558	3	937	0	0
Deflection L	L: 480		Load Sharing:	No									
Deflection 1	TL: 360		Deck:	Not Checked	b								
Importance	: Normal - II												
Temperatur	e. 100 P					Bearings							
						Bearing Le	ength	Dir. (Cap. Reac	D/L lb	Total	Ld. Case	Ld. Comb.
						1 - SPF 3.	500"	Vert	51% 1558	3 / 1108	2666	L	D+0.75(L+S
						2 - SPF 3.	500"	Vert	51% 1558	3 / 1108	2666	L	D+0.75(L+S
Analysis F	Results					1							
Analysis	Actual Lo	ocation Allo	wed Capac	city Comb.	Case								
Moment	3879 π-ID 3870 ft lb	3'4" 397	50 ft-lb 0.098	(10%) D+0.75(L (21%) D+0.75(L	+5) L								
Shear	1617 lb	5' 1/2" 137	39 lb 0.118 ((21%) D+0.75(L (12%) D+0.75(L	+S) L								
LL Defl inc	h 0.008 (L/9314)	3'4" 0.1	56 (L/480) 0.052	(5%) 0.75(L+S	5) L								
TL Defl ind	ch 0.019 (L/3870)	3'4" 0.20	08 (L/360) 0.093	(9%) D+0.75(L	_+S) L								
Design N	otes		. ,	. ,	,	1							
1 Provide s	support to prevent lateral	movement ar	nd rotation at the e	nd bearings. La	teral support	1							
may also	be required at the interio	r bearings by d Box pails (the building code	Maximum end	distance not								
to excee	d 6".	u Dox nails (.	120,0) at 12 0.0		distance not								
3 Refer to	last page of calculations f	or fasteners r	required for specifi	ed loads.									
5 Top load	s must be supported equa	ally by all plie:	s.										
6 Top mus	t be laterally braced at en	d bearings.											
7 Bottom n 8 Lateral s	nust be laterally braced at lenderness ratio based or	t end bearing: a single ply w	s. idth										
ID	Load Type	Loc	ation Trib Wid	th Side	Dead 0.9	Live 1	Snow	v 1.15 V	Vind 1.6 C	onst. 1.2	5 Cor	nments	
1	Uniform			Near Face	e 54 PLF	162 PLF		0 PLF	0 PLF	0 PL	F F2		
2	Uniform			Тор	120 PLF	0 PLF		0 PLF	0 PLF	0 PL	F WAL	.L	
3	Uniform			Тор	281 PLF	0 PLF	28	1 PLF	0 PLF	0 PL	F B2-A	4	
-	Self Weight				12 PLF								
	g												
								Manufacturer	Info		Comtech	inc.	
Notes Calculated Structu	red Designs is responsible only of the	chemicals Handling &	Installation	6. For pon	flat roofs provide p ding	roper drainage to prev	/ent	Metsä Wood			1001 S. Re Fayetteville	eilly Road, Suite a	#639
structural adequa design criteria	cy of this component based on the and loadings shown. It is the	1. LVL beams n 2. Refer to	nust not be cut or drilled manufacturer's product	information			3	301 Merritt 7 E Norwalk, CT 0	Building, 2nd F 6851	loor	USA 28314 910 PE4 T	RUS	
ensure the com application. and to	ponent suitability of the intended verify the dimensions and loads.	fastening de	installation requirements tails, beam strength value	s, multi-ply s, and code			(800) 622-585	0 od.com/us		310-004-1		
Lumber	nditions unloss noted attaction	 Damaged Be Design assur 	eams must not be used mes top edge is laterally re	strained			Ň						
 Dry service col LVL not to be 	treated with fire retardant or corrosive	5. Provide late lateral displa	ral support at bearing po cement and rotation	ints to avoid Thi	is design is valid	until 11/3/2024					C	отт	есн
L					.	-							

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isDesign	Client: Project: Address:	Date: 1/17/2023 Input by: Neal Baggett Job Name: 32 LIBERTY MEADOWS	Page 6 of 8
FB2 Kerto-S	LVL 1.750" X 16.000	" 2-Ply - PASSED Level: Level	
· · · · · · · · · · · · · · · · · · ·	2 SPF	× 1/2"	1'4"
¢	6'8" 6'8"		3 1/2"
Multi-Ply Analysis			
Fasten all plies using 3 Capacity Load Vield Limit per Foot	rows of 10d Box nails (.128x3") at 12" 44.0 % 108.0 PLF 245.6 PLF	o.c Maximum end distance not to exceed 6".	
Yield Limit per Fastener Yield Mode Edge Distance	81.9 lb. IV 1 1/2"		
Min. End Distance Load Combination Duration Factor	3" D+L 1.00		

Notes	chemicals	6. For flat roofs provide proper drainage to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive	Handling & Installation 1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained 5. Provide lateral support at bearing points to avoid lateral displacement and rotation	ponding This design is valid until 11/3/2024	Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Fayetteville, NC USA 28314 910-864-TRUS

		С	lient:					Date:	1/17/202	23				Page 7 of 8
Tie	Decign	Pi	roject:					Input by:	Neal Ba	ggett	0.440			
	Design	A	aaress:					Job Narr	1e: 32 LIBE 4.		0005			
			750"	V 4 C 0		2 01.7			Level: Leve	1				
LB1 I	verto-5 LV	L 1.	/50	X 16.0	00	Z-Piy -	· PA	22ED						
			<u></u>		<u></u>									
	2				3									
	2													
			_ 1											
•	•	• 11	•	• and a second of	•	and the second second	•							\uparrow
													IM	
•	The state of the s				difference -	·							ΙΛΙΛ	1'4"
•							•							
1 SPF						2 SP	F							/
														4.01
		5	8'11 1/2"										3	1/2"
1		8	3'11 1/2"				1							
Member In	formation						Read	tions UN	IPATTER	NED Ib (U	Jplift)			
Туре:	Girder		Applicatio	on:	Floor		Brg	Direction	Live	e De	ad S	Snow	Wind	Const
Plies:	2		Design M	ethod:	ASD		1	Vertical	1021	18	807	873	0	0
Moisture Con	dition: Dry		Building (Code:	IBC/IRC 2015	5	2	Vertical	1021	18	807	873	0	0
Deflection LL:	480		Load Sha	ring:	No Not Ohio alta al									
Importance:	360 Normal - II		Dеск:	I										
Temperature:	Temp <= 100°F													
							Bear	rings						
							Bea	aring Leng	th Dir.	Cap. Re	act D/L lb	Total	Ld. Case	Ld. Comb.
							1 -	SPF 3.500	" Vert	62% 1	807 / 1421	3228	L	D+0.75(L+S
							2 -	SPF 3.500	" Vert	62% 1	807 / 1421	3228	L	D+0.75(L+S
	suits			0 11	0 1		7							
Analysis	Actual L	ocation A		Capacity	Comb.	Case								
Noment	5731 TT-ID	4'5 3/4" 34	4505 TT-ID	0.166 (173	%) D+L									
Shear	2224 lb	4 3 3/4 13	1947 lh	0.406 (47	%) D+0.75(L+ %) D+I	-3) L								
	0 022 (1/4718) 4	5 13/16" 0	213 (I /480)	0.100 (19)	%) 0.75(I+S)	1								
TL Defl inch	0.049 (L/2077) 4'	5 13/16" 0.	284 (L/360)	0.173 (179	%) D+0.75(L+	- 								
Decign Not			, ,	,	, (,	1							
1 Provide su	port to prevent lateral	movement	and rotation	at the end l	pearings Late	eral support	4							
may also b	e required at the interio	or bearings I	by the buildi	ng code.	oounigo: Luit	siai sappoit								
2 Fasten all to exceed 6	olies using 3 rows of 10 5"	0d Box nails	(.128x3") at	12" o.c. Ma	aximum end d	listance not								
3 Refer to las	st page of calculations	for fasteners	s required fo	r specified I	oads.									
4 Girders are	e designed to be suppo	orted on the	bottom edge	only.										
6 Top must b	e laterally braced at er	nd bearings.	les.											
7 Bottom mu	st be laterally braced a	at end bearir	ngs.											
8 Lateral slei	nderness ratio based o	on single ply	width.											
ID	Load Type	Lo	ocation T	rıb Width	Side	Dead 0.9		Live 1 Sn	ow 1.15	Wind 1.6	Const. 1.2	5 Con	nments	
1	Uniform				Near Face	76 PLF	22	28 PLF	0 PLF	0 PLF	0 PL	.F F4		
2	Uniform				Тор	120 PLF		0 PLF	0 PLF	0 PLF	0 PL	F WAL	.L	
3	Uniform				Тор	195 PLF		0 PLF	195 PLF	0 PLF	0 PL	F B4		
	Self Weight					12 PLF								
									Manufactu	er Info		Comtech, I	nc.	
Notes Calculated Structured	Designs is responsible only of the	chemicals ne Handling	& Installation	n	 For fl pondir 	lat roofs provide p ng	oroper draii	nage to prevent	Metsä Woo	4		1001 S. Re Fayetteville	illy Road, Suite # , NC	639
structural adequacy design criteria and	of this component based on the loadings shown. It is the	ne 1. LVL beam ne 2. Refer to	s must not be cut manufacturer's	or drilled product info	rmation				301 Merritt	7 Building, 2n 06851	ld Floor	USA 28314		
responsibility of the ensure the comport application, and to ver-	customer and/or the contractor the suitability of the intende if the dimensions and loads	to regarding ed fastening	installation r details, beam str	equirements, r ength values, ar	nulti-ply nd code				(800) 622-5	850		910-864-H	100	
Lumber	,	approvals 3. Damaged 4. Design as	Beams must not l sumes top edge is	e used laterally restrain	ed				www.rnetsa	woou.com/us				
 Dry service condit LVL not to be treat 	ions, unless noted otherwise ated with fire retardant or corrosiv	5. Provide la lateral dis	ateral support at placement and rot	bearing points t ation	o avoid Thi≤	design is valid	l until 11	3/2024				C	от	есн
L					1113				1					

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isDesign	Client: Project: Address:			Date: Input by: Job Name:	1/17/2023 Neal Baggett 32 LIBERTY MEADOWS	Page 8 of 8
FB1 Kerto-S	LVL 1.750	" X 16.000"	2-Ply -	Project #: PASSED	evel: Level	
	· · ·	· · ·	· · ·	" □		1'4"
	8'11 1/2		2 01	\rightarrow		3 1/2"
 	8'11 1/2	n		\rightarrow		
Multi-Ply Analysis						
Fasten all plies using 3 i Capacity Load Yield Limit per Foot Yield Limit per Fastener Yield Mode	rows of 10d Box nail: 61.9 % 152.0 PLF 245.6 PLF 81.9 lb. IV	s <u>(.128x3")</u> at 12" o	.c Maximum	end distance not	to exceed 6".	
Edge Distance Min. End Distance Load Combination Duration Eactor	1 1/2" 3" D+L 1 00					
	1.00					

Notes	chemicals	6. For flat roofs provide proper drainage to prevent	Manufacturer Info	Comtech, Inc. 1001 S. Reilly Road, Suite #639
Calculated Structured Designs is responsible only of the H structural adequacy of this component based on the design criteria and loadings shown. It is the 2 responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumbor 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive	Handling & Installation 1. U/L 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	ponding This design is valid until 11/3/2024	Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us	Fayetteville, NC USA 28314 910-864-TRUS