is	Design	Client: Signature Ho Project: Address:	mes		10/20/2023 Anthony William e: Lot 13 Williams			Page 1 of
HDR-1	Kerto-S LVL	. 1.750" X 9.2	50" 2-Ply -	Project #	: J1023-5936 Level: Level			
	2							
					-			
		1					Г	
	•	•	•	•••			$\land$	
St.			attern off	-				M g
1 SPF E	nd Grain		:	2 SPF End Grain	]			
		5'6"		1			个	3 1/2"
1		6'			1			
lember Inf	ormation			Reactions UN	PATTERNED I	b (Uplift)		
Type: Plies:	Girder 2		loor SD	Brg Direction	Live		Snow Wir	
Moisture Cond		e e	3C/IRC 2015	1 Vertical 2 Vertical	0 0	1576 1576	1464 1464	0 0
Deflection LL:	480	5	0					
Deflection TL: Importance:	360 Normal - II	Deck: N	ot Checked					
Temperature:	Temp <= 100°F							
	1			Bearings				
				Bearing Lengt	h Dir. Cap.	React D/L lb	Total Ld. Cas	se Ld. Com
				1 - SPF 3.000" End	Vert 34%	1576 / 1464	3040 L	D+S
nalysis Res	sults			Grain				
Analysis		tion Allowed Capacity	Comb. Case	2 - SPF 3.000"	Vert 34%	1576 / 1464	3040 L	D+S
Moment	4007 ft-lb	3' 14423 ft-lb 0.278 (28%	) D+S L	End Grain				
Unbraced	4007 ft-lb	3' 10944 ft-lb 0.366 (37%						
Shear		1/4" 7943 lb 0.253 (25%	-					
	0.031 (L/2200)	3' 0.141 (L/480) 0.218 (22%	-					
	0.064 (L/1060)	3' 0.188 (L/360) 0.340 (34%	) D+S L	-				
Design Not		vement and rotation at the end b	earings Lateral support	4				
may also be	e required at the interior be	earings by the building code.	• • • •					
2 Fasten all p to exceed 6		ox nails (.128x3") at 12" o.c. Ma	kimum end distance not					
		asteners required for specified lo	ads.					
	designed to be supported nust be supported equally							
-	e laterally braced at end be	-						
	st be laterally braced at en derness ratio based on sir	-						
ID	Load Type	Location Trib Width	Side Dead 0.9	Live 1 Sno	ow 1.15 Wind	1.6 Const. 1.	.25 Comments	
1	Uniform		Top 488 PLF	0 PLF	488 PLF 0 F	PLF 0 F	PLF B2 TRUSS	
2	Uniform		Top 30 PLF	0 PLF	0 PLF 0 F	PLF 0 F	PLF WALL	
	Self Weight		7 PLF					
		chemicals	6 Ear that reads are state	nroner drainago to essuent	Manufacturer Info		Comtech, Inc.	
Notes Calculated Structured I		andling & Installation	6. For flat roots provide ponding	proper drainage to prevent	Metsä Wood	- 0- 1 <b>-</b>	<ul> <li>1001 S. Reilly Road, Se Fayetteville, NC USA</li> </ul>	uite #639
lesign criteria and esponsibility of the c	loadings shown. It is the 2. ustomer and/or the contractor to	LVL beams must not be cut or drilled Refer to manufacturer's product inform regarding installation requirements, m	nation ulti-ply		301 Merritt 7 Buildin Norwalk, CT 06851	g, 2nd Floor	28314 910-864-TRUS	
ensure the compone application, and to veri	ent suitability of the intended fy the dimensions and loads.	fastening details, beam strength values, and approvals	code		(800) 622-5850 www.metsawood.co	m/us		
Lumber 1. Dry service condition	ons, unless noted otherwise 4.	Damaged Beams must not be used Design assumes top edge is laterally restrained Provide lateral support at bearing points to	avoid				lcom	Tecu
	ed with fire retardant or corrosive	lateral displacement and rotation		d until 11/3/2024				

		ure Homes	Date:	10/20/2023	Page 2 of 8
isDesign	Project:		Input by:	Anthony Williams	
Ispesign	Address:		Job Name Project #:	: Lot 13 Williams Farms J1023-5936	
HDR-1 Kerto-S	LVL 1.750" X	0 250" 2 DIV		Level: Level	
IDK-I Kello-S		9.250 Z-Piy	- FASSED		
••	• •	•	• •	۳. 2	
				<1 1/2"	9 1
•	• •	•	• • –	<u> </u>	
				<u> </u>	
1 SPF End Grain			2 SPF End Grain		
	5'6"		1	,	3 1/2"
1	6'		1		
Multi-Ply Analysis					
Fasten all plies using 2 row	s of 10d Box nails (.128x	3") at 12" o.c Maxim	um end distance no	ot to exceed 6".	
Capacity	0.0 %				
Load Viold Limit per Feet	0.0 PLF				
Yield Limit per Foot Yield Limit per Fastener	163.7 PLF 81.9 lb.				
Yield Mode	IV				
Edge Distance Min. End Distance	1 1/2" 3"				
Load Combination					
Duration Factor	1.00				
Notes Calculated Structured Designs is responsible only structural adequacy of this component based o design criteria and loadings shown. It is	the 1. LVL beams must not be cut or drilled the 2 Refer to manufacturer's prod	ponding	ovide proper drainage to prevent	Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor	Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314
responsibility of the customer and/or the contrac ensure the component suitability of the inte application, and to verify the dimensions and loads.	or to regarding installation requirem nded fastening details, beam strength v	ents, multi-ply		Norwalk, CT 06851 (800) 622-5850	910-864-TRUS
Lumber	approvals 3. Damaged Beams must not be used 4. Design assumes top edge is laterall	restrained		www.metsawood.com/us	
<ol> <li>Dry service conditions, unless noted otherwise</li> <li>LVL not to be treated with fire retardant or con</li> </ol>	E Provide lateral support at bearing	points to avoid	valid until 11/3/2024		соттесн
Varcian 21 90 417 Doward by Struct M	atacat: 22001201 1447	5			

4		Client: Signature Home Project:	es	Date: Input by:	10/20/2023 Anthony Williams			Page 3 of 8
İS	Design	Address:		Job Nam		ns		
HDR-2	 Korto_S I V	L 1.750" X 9.250	0" 2_Plv_		Level: Level			
		L 1.750 A 5.250	5 <b>2-</b> FTy -	FASSED				
	22				7			
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							IVIV	
	College -	· · · · ·	the part of the	-	-			9 1
							V_Y_	
1 SPF E	nd Grain	5'6"		2 SPF End Grain				3 1/2"
ļ		6'		<i>,</i>	*		I	3 1/2
1		0			1			
lember Inf	formation			Reactions UN	IPATTERNED lb (L	Jplift)		
Туре:	Girder	Application: Flo	or	Brg Direction	Live De	-	iow Wind	Cons
Plies:	2	Design Method: AS		1 Vertical			386 0	
Moisture Cond Deflection LL:	480	Building Code: IBC Load Sharing: No	C/IRC 2015	2 Vertical	0 14	98 1	386 0	
Deflection TL:			Checked					
mportance:	Normal - II							
Temperature:	Temp <= 100°F							
				Bearings				
				Bearing Lengt	th Dir. Cap. Rea	act D/L lb	Total Ld. Case	Ld. Comb
				1 - SPF 3.000"	" Vert 33% 14	98 / 1386	2884 L	D+S
				_ End Grain				
nalysis Re			O-mak O-mak	2 - SPF 3.000"	" Vert 33% 14	98 / 1386	2884 L	D+S
Analysis Moment	Actual Loca 3802 ft-lb		Comb. Case	End				
Unbraced	3802 ft-lb	3' 14423 ft-lb 0.264 (26%) 3' 10944 ft-lb 0.347 (35%)		Grain				
Shear		' 1/4" 7943 lb 0.240 (24%)						
	0.029 (L/2324) 0.060 (L/1117)	3' 0.141 (L/480) 0.207 (21%) 3' 0.188 (L/360) 0.322 (32%)						
esign Not		3 0.100 (L/300) 0.322 (3270)		-1				
1 Provide sup	port to prevent lateral me	ovement and rotation at the end bea	rings. Lateral support	4				
-	-	bearings by the building code. Box nails (.128x3") at 12" o.c. Maxir	num end distance not					
to exceed 6		Dox fialis (. 12073 ) at 12 0.0. Maxii						
		fasteners required for specified load	ds.					
	ust be supported equally	d on the bottom edge only.						
	e laterally braced at end l							
	st be laterally braced at e	· ·						
8 Lateral sien	derness ratio based on s Load Type		Side Dead 0.9	Live 1 Sno	ow 1.15 Wind 1.6	Const. 1.25	Comments	
1	Uniform		op 462 PLF		462 PLF 0 PLF	0 PLF		
2	Uniform		-		0 PLF 0 PLF		WALL	
£		I	•			UFLF	VVALL	
	Self Weight		7 PLF					
N-4		chomicala	6 For first reads and '	nronor drainese te	Manufacturer Info		Comtech, Inc.	
Notes Calculated Structured		chemicals Handling & Installation	<ol> <li>For flat roofs provide ponding</li> </ol>	proper drainage to prevent	Metsä Wood		1001 S. Reilly Road, Suite # Fayetteville, NC	639
structural adequacy o design criteria and	of this component based on the loadings shown. It is the	1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product informat			301 Merritt 7 Building, 2n Norwalk, CT 06851		USA 28314 210-864-TRUS	
ensure the compone	ustomer and/or the contractor to ent suitability of the intended fy the dimensions and loads.	regarding installation requirements, multi- fastening details, beam strength values, and co	-ply		(800) 622-5850	L'	910-864-TRUS	
Lumber		approvals 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained			www.metsawood.com/us			
<ol> <li>Dry service condition</li> <li>LVL not to be treat</li> </ol>	ons, unless noted otherwise ted with fire retardant or corrosive	<ol> <li>Design assumes top edge is laterally restrained</li> <li>Provide lateral support at bearing points to av lateral displacement and rotation</li> </ol>	<sup>roid</sup> This design is vali	d until 11/3/2024			сот	есн
	Powered by iStruct™ Datase		o doorgin io Vali		1			

Version 21.80.417 Powered by iStruct<sup>™</sup> Dataset: 23091201.1447

	Client:	Signature Homes	Date:	10/20/2023	Page 4 of 8
LieDesirra	Project:		Input b		
isDesign	Address:		Job Na		
			Projec	t #: J1023-5936 Level: Level	
HDR-2 Kerto-S	LVL 1.75	0" X 9.250"	2-Ply - PASSED		
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	·	-		<1 1/2"	
				$\frac{1}{\Sigma}$	9 1
• •	•	•	• • •		
1 SPF End Grain			ے 2 SPF End Grain		,
		5'6"			3 1/2"
			Ι		5 1/2
1		6'			
Multi-Ply Analysis					
Fasten all plies using 2 row	s of 10d Box nail	s (.128x3") at 12" c	o.c Maximum end distance	not to exceed 6".	
Capacity	0.0 %				
Load Yield Limit per Foot	0.0 PLF 163.7 PLF				
Yield Limit per Fastener	81.9 lb.				
Yield Mode	IV				
Edge Distance Min. End Distance	1 1/2" 3"				
Load Combination	5				
Duration Factor	1.00				
Notes	chemicals		. For flat roofs provide proper drainage to preve ponding		Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC
Calculated Structured Designs is responsible only structural adequacy of this component based of design criteria and loadings shown. It is	on the 1. LVL beams must not	be cut or drilled	. •	Metsä Wood 301 Merritt 7 Building, 2nd Floor	USA 28314
responsibility of the customer and/or the contract ensure the component suitability of the int	ended fastening details, be	cturer's product information on requirements, multi-ply am strength values, and code		Norwalk, CT 06851 (800) 622-5850	910-864-TRUS
application, and to verify the dimensions and loads	<ul> <li>approvals</li> <li>3. Damaged Beams mu</li> </ul>	st not be used		www.metsawood.com/us	
<ol> <li>Dry service conditions, unless noted otherwise</li> <li>LVL not to be treated with fire retardant or conditional services.</li> </ol>	5 Provide lateral supp	edge is laterally restrained ort at bearing points to avoid ind rotation	This design is valid until 11/2/2021		соттесн
L			This design is valid until 11/3/2024		

les: 2 besign Method: ASD besign Method: ASD	1			lient: roject:	Signature Homes	:	Date: Input b		/illiams		Page 5 of 8
DR-3     Kerto-S LVL     1.750" X 9.250"     2-Ply - PASSED     Intel Local       2     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1     Image: Local     Image: Local     Image: Local     Image: Local       1 <t< th=""><th>IS</th><th>Design</th><th>A</th><th>ddress:</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	IS	Design	A	ddress:							
2         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1          1 <th>2 001</th> <th></th> <th></th> <th>1 750"</th> <th>V 0 250</th> <th>יום <i>ב</i> יי</th> <th>,</th> <th></th> <th>6</th> <th></th> <th></th>	2 001			1 750"	V 0 250	יום <i>ב</i> יי	,		6		
Image: Additional additexed additexed additional additional additional additional addit	лик-э	Kerto-5 I		1.750	X 9.250	2-Piy -	PASSED				
Image: Set of calculation is and calculation of the product of th		2									
Image: Set of calculation is and calculation of the product of th				· · · · · · · · · · · · · · · · · · ·							
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19FE End Grain       2.8FE End Grain					1						,
SPF End Gran       2.8PF End Gran         SP       SP         of       SP         SP		-	•		•		•••			ΝΛ	7 1
Image: Service of the service of th		and the second s								XI)	9
1       35°	•	•		12.12	•	and the second second				V V	
Set       Reactions UNPATTERNED Ib (Uplift)       get:     Gittler       get:     2       balance     Desk       Building Collegin     Building Collegin       balance     Building Collegin       uppertance     Normal - II       angest     Actual Docation Allowed     Capacity Contb       content     Sci 11/2     Vertical     0     2044     1932     0       angest     Actual Docation Allowed     Capacity Contb     Contb     Conta     1     Vertical     0     2044     1932     3976     L       angest     Actual Docation Allowed     Capacity Contb     Contb     Capacity Contb     Capacity Contb     Contb     1     -SPF 3.000 <sup>-</sup> Vert 45%     2044 / 1932     3976     L     D-5       Grain		Ind Grain					2 SPF End Grain				
Reactions UNPATTERNED Ib (Uplift)       pre:     Gittler     Application:     Floar       Design Method:     ASD       Design Method:     Conset       Design Method:     Conset       Design Method:     Sala (ASD)       Design Method:     Conset       Design Method:     Design Method:       Design Method:     D				-			1			1	3 1/2"
per:       Grider       Application:       Floor       Big       Direction       Live       Dead       Snow       Wind       Considered         lest:       2       Design Method:       ASD       Building Code:       BEC/RC 2015       0       2044       1932       0         getterton IL:       360       Deck:       Not Checked       Deck:       Not Checked       1       Ventical       0       2044       1932       0         alysis Results       Deck:       Not Checked       Deskin Method:       ASD       Deskin Method:       ASD         alysis Results       Incation       Allowed       Capacity Comb.       Capacity Comb.       Capacity Comb.       Capacity Comb.       Deskin Method:       ASD         Inbraced       5241 ft-lb       3' 14423 ft-lb       0.331 (38%) DrS       L       Deskin Method:       ASD       Deskin Method:       ASD       Deskin Method:       ASD       Deskin Method:       ASD       Deskin Method:       Deskin Method:       ASD       Deskin Method:       Deskin Method:       Deskin Method:	1			(	6'			1			
pre:       Grider       Application:       Floor       Bitg       Direction       Live       Dead       Snow       Wind       Consistence         lest:       2       Design Method:       ASD       Building Code:       BEC/RC 2015       0       2044       1932       0         getterton LL:       360       Desk:       Not Checked       Desk:       Not Checked       1       Vertical       0       2044       1932       0         alysis Results       Desk:       Not Checked       Desk:       Not Checked       Bearing Length       Dir.       Cap. Resct DII.1b       Total       Ld. Case       Ld. Comt         alysis Results       Desk:       Not Checked       Desk:       Dir.       Dir.       Dir.       Dir.       Dir.       Total       Ld. Case       Ld. Comt         Load Stand Loading       Location       Allowed       Capacity Comb       L Lest       Dir.       Di	ember Inf	formation					Reactions U	NPATTERNI	D lb (Uplift)		
belief constructions: Normal - II mapperature: Temp == 100°F Building Code: IBC/IRC 2015 Load Sharing: No Deck: Not Checked Pack: Not Checked Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearings Bearing Length Dir, Cap. React Dil. Ib Total Ld. Case Commont S41 ft-lb 3' 1494 14b 0.33' 1094 14b 0.033' 033' 05' L Loft not 040 (Urforf) 3' 0.148 (U360) 0.444 (44%) D-S L Loft not 100 (Urforf) 3' 0.148 (U362) 0.444 (44%) D-S L Set Point Set Commont and rotation of the end bearings. Lateral support Bearing 2 rows of 100 Bearings Bearing 2 rows of 100 B	Гуре:	Girder								Snow Wind	Con
effection TL:     480 effection TL:     Moto       alysis Results       alysis Actual     Location Allowed     Capacity Comb.       hard syste     Searing Length     Dir.     Cap.       Rearing Length     Dir.     Capacity       hard syste     Actual     Location Allowed     Capacity Comb.       hard syste     Status     1. SEPS     Status       horaced     5241 ft-lb     3' 10444 ft-lb     3' 10444 ft-lb       3' 1044 ft-lb     3' 10444 ft-lb     3' 10444 ft-lb     3' 1044 ft-lb       bear     2282 lb     1' 147' 7943 lb     0.331 (33%) D+S     L       Left into 1003 (U1607)     3' 0.141 (U480)     0.248 (29%) S     L       sign Notes     Provide support of prevent lateral movement and rolation at the end bearings. Lateral support graves of fold Box nals (1280') 41 12' 20. Akaitmum end distance not Refer to last goo claculations for shoulding code.       For that support of calculations of the building code.     Top Mitt Hard Hard Hard Hard Hard Hard Hard Hard	Plies: Maiatura Conc			-		RC 2015					
effection TL:       390 ippotance:       Normal - II       Deck:       Not Checked         alysis Results:	Deflection LL:	-		-		RC 2015	2 Vertical	0	2044	1932 0	
Appropriature:       Temp <= 100°F         alysis Results:       Bearings         nalysis Actual       Location       Allowed       Capacity Comb.       Case         Leff inch       0.404 (1/1667)       3'       0.414 (1.480)       0.283 (28%) D+S       L         Leff inch       0.030 (L/810)       3'       0.188 (L/360)       0.444 (44%) D+S       L         Leff inch       0.030 (L/810)       3'       0.188 (L/360)       0.444 (44%) D+S       L         Fooded supported       Internal based on single py the building code.       Fasina al piles supported equality brance       Easteral supported equa	Deflection TL:				•	Checked					
Bearing Length     Bearing Length     Dir.     Cap.     Rear LD/L Ib     Total     Ld. Case     Ld. Case       alysis Actual     Location     Allowed     Capacity     Comb.     Case       hand yois     Actual     Location     Allowed     Capacity     Comb.     Case       hand     5241 H-b     3     10442 H-b     0.333 (30%) D+S     L       hear     2628 lb     1' 1/4'     7943 lb     0.331 (33%) D+S     L       Loeff inch     0.400 (L/1607)     3'     0.141 (L400)     0.288 (22%) S     L       Loeff inch     0.400 (L/1607)     3'     0.141 (L400)     0.288 (22%) S     L       Loeff inch     0.400 (L/1607)     3'     0.141 (L400)     0.288 (22%) S     L       sign Notes     Issign Notes     Issign Notes     Issign Notes     Issign Notes       Provide support to prevent lateral ancomment and rotation at the end bearings. Lateral support may also be required to the subtors of subtors required or the bottor edge ont.     Issign Notes       Top nust be laterally braced at and bearings.     Lateral and information to bearings.     Leteral sinchments       Bottom must be laterally braced at and bearings.     Lateral and sinchments     Provide Sinchments       Uniform     Top     30 PLF     0 PLF     0 PLF     0 PLF     0 PLF	mportance:	Normal - II									
alysis     Results       alysis Results     I. SepF 3.000°     Vert     45% 2044 / 1932     3976 L     D+S       alysis Actual control 5241 Helb     3' 10444 Helb     0.363 (36%) D+S     L     Case     Grain     2       bear     2628 b     1' 1/4'     7943 b     0.333 (35%) D+S     L     D+S       Loeft inch     0.063 (L810)     3' 0.044 (44%) D+S     L     Case     Grain     2       Loeft inch     0.063 (L810)     3' 0.148 (L460)     0.288 (26%) S     L     L       Loeft inch     0.063 (L810)     3' 0.148 (L460)     0.288 (26%) S     L       Loeft inch     0.063 (L810)     3' 0.148 (L460)     0.288 (26%) S     L       Loeft inch     0.063 (L810)     3' 0.188 (L/360)     0.444 (44%) D+S     L       Sign Motes     Sign Motes     L     Lateral indiversity of a specified loads.     Grain       Top loads must be laterally braced at end bearings.     Lateral and specified loads.     Case of the building code.     Same Jape of a calculations for fastemers required of the building code.       Do Load Type     Location Trib Wildth     Side     Deed 0.9     Live 1     Snow 1.15     Wind 1.6     Const. 1.25     Comments       Lateral indiversity braced at end bearings.     Lateral indindiversity brace     DPLF     0 PLF	lemperature:	Temp <= 100°	Ϋ́F				<b>_</b>				
alysis Results     1 - SPF 3.000°     Vert     45%     2044 / 1932     3976     L     D+S       alysis Actual     Location     Allowed     Capacity     Comb     Case       horaced     5241 11-lb     3'     14423 11-lb     0.483 (36%) D+S     L       hear     2628 lb     1'.1/4'     7943 lb     0.331 (33%) D+S     L       LDefl inch     0.040 (L/1667)     3'     0.141 (L/480)     0.288 (29%) S     L       LDefl inch     0.040 (L/1667)     3'     0.141 (L/480)     0.288 (29%) S     L       LDefl inch     0.040 (L/1667)     3'     0.141 (L/480)     0.288 (29%) S     L       registry Actual     and grain     3'     162 (233) at 12''''''''''''''''''''''''''''''''''''											
alysis Actual     Location     Allowed     Capacity     Comb.     Case       Inhanges     Actual     Location     Allowed     Capacity     Comb.     Case       Inhanced     5241 ft-lb     3     14423 ft-lb     0.363 (36%) D+S     L       L Defl inch     0.040 (L/1667)     3     0.141 (L/480)     0.288 (29%) S     L       L Defl inch     0.083 (L/310)     3     0.148 (L/380)     0.444 (44%) D+S     L       Provide support     Trivela support     3     0.148 (L/380)     0.444 (44%) D+S     L       Provide support     10 400 km alis (12847) at 12° or. Maximum end distance not to exceed 0 <sup>1</sup> .     Refer to last page of calculations for fasteners required for specified loads.     Circle and based on single ply width.       Do Load Type     Location     Trib Width     Side     Dead 0.9     Live 1     Snow 1.15     Wind 1.6     Const. 1.25     Comments       Saft Weight     Top     644 PLF     0 PLF								-	•		
alysis Results       Grain       Grain       Capacity Comb. Case II Section       Case II Section       Capacity Comb. Case II Section       Case II Sectin       Case II Sectin <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>J0" Vert</th> <th>45% 2044 / 1932</th> <th>3976 L</th> <th>D+S</th>								J0" Vert	45% 2044 / 1932	3976 L	D+S
Indivision     Exclusion     Exclusion     Exclusion     Exclusion     End Grain       Individue     31     14323 He     0.33 (35%) D-S     L       hear     2628 lb     111/4*     7943 lb     0.33 (35%) D-S     L       LD Poli Incl.     0.040 (L/1667)     3*     0.141 (L/480)     0.248 (29%) S     L       LD Poli Incl.     0.038 (L/810)     3*     0.188 (L/260)     0.444 (44%) D+S     L       Sign Notes     Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be regulated at the interfor bearings by the building code.     End     Fasten all plies using 2 rows of 10d Box nails (128x3') at 12" o.c. Maximum end distance not to exceed 6'.       Cidres are designed to be supported on the building code.     Cidres are designed to be supported on the building code.     End       Top nusts be laterally braced at end bearings.     Lateral supported on the building code.     End     Science 4************************************	nalysis Re	sults					Grain				
Ioment       5241 ft-lb       3*       14423 ft-lb       0.433 (38%) D+S       L         Inbraced       5241 ft-lb       3*       10944 ft-lb       0.479 (48%) D+S       L         Inbraced       5221 lb       1*       1*       1*       7943 lb       0.331 (33%) D+S       L         L Defl inch       0.040 (L/1667)       3*       0.141 (L/480)       0.288 (29%) S       L         Isign Notes       Image: Status and S	Analysis	Actual	Location A	llowed	Capacity C	omb. Case		00" Vert	45% 2044 / 1932	3976 L	D+S
hear       2028 lb       1' 1/4"       7943 lb       0.331 (33%) D+S       L         L Defl inch       0.040 (L/1667)       3'       0.141 (L/480)       0.288 (29%) S       L         L Defl inch       0.083 (L/310)       3'       0.141 (L/480)       0.288 (29%) S       L         Sign Motes       Image: Control of prevent lateral movement and rotation at the end bearings. Lateral support       Top in the interior bearings by the building code.       Sign Motes         Fordise support to prevent lateral movement and rotation at the end bearings.       Lateral support       Sign Motes       Sign Motes         Cristers are designed to be supported on the bottom edge only.       Top loads must be supported equally by all piles.       Top in the interior bearings.       Lateral support       Live 1       Snow 1.15       Wind 1.6       Const. 1.25       Comments         Softmanus to laterally braced at end bearings.       Lateral support do prevent lateral braced at end bearings.       Lateral support do prevent lateral braced at end bearings.       Lateral support do prevent lateral braced at end bearings.       Lateral support do prevent lateral braced at end bearings.       Lateral brace design brace	Moment	5241 ft-lb	3' 14	4423 ft-lb	0.363 (36%) D	+S L					
L Definich 0.040 (U/1667) <u>3'</u> 0.141 (U480) 0.288 (29%) <u>S</u> L L Definich 0.083 (U/310) <u>3'</u> 0.188 (U/360) 0.444 (44%) <u>D+S</u> L sign Notes 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. Fasten all piles using 2 rows of 10d Box nails (128/37) at 12' o.c. Maximum end distance not to exceed 6'. Refer to last page of calculations for fasteners required for specified loads. Griders are designed to be supported on the bottom edge only. Top loads must be supported equally by all piles. Top must be laterally braced at end bearings. Lateral slenderness ratio based on single ply width. D Load Type Location Trib Width Side Dead 0.9 Live 1 Snow 1.15 Wind 1.6 Const. 1.25 Comments Uniform Top 644 PLF 0 PLF 0 PLF 0 PLF 0 PLF A 2 TRUSS Uniform Top 30 PLF 0 PLF 0 PLF 0 PLF 0 PLF 0 PLF VALL Self Weight 7 PLF	Unbraced				. ,						
L Definich       0.083 (L/B10)       3'       0.188 (L/360)       0.444 (44%)       D+S       L         sign Notes	Shear				. ,	+S L					
Sign Notes       Provide support to prevent lateral movement and rotation at the end bearings. Lateral support       Provide support to prevent lateral movement and rotation at the end bearings. Lateral support       Fasten all piles using 2 rows of 10d Box nails (.128x3") at 12° o.c. Maximum end distance not to exceed 6°.       Refer to last page of calculations for fasteners required for specified loads.       Girders are designed to be supported equally by all piles.       Top must be laterally braced at end bearings.       Bottom must be supported equally by dift.       D     Load Type       Load Type     Location       Uniform     Top       Get Viewight     Top       Set Weight     Top       Set Weight     7 PLF         Manufacturer Info       Manufacturer Info       Uniform     Top       Set Weight     7 PLF         Manufacturer Info       Manufacturer Info <td></td> <td>( )</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		( )									
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. Fasten all pieces using 2 rows of 10d Box nalls (128x3') at 12° o.c. Maximum end distance not to exceed 6".         Refer to last page of calculations for fasteners required for specified loads. Girders are designed to be supported on the bottom edge only. Top loads must be supported equally by all piles. Top must be laterally braced at end bearings. Lateral slenderness ratio based on single ply width.       Image: Comments to the supported equally by all piles. Top for distance of the supported equally by all piles. Top must be laterally braced at end bearings. Lateral slenderness ratio based on single ply width.       Image: Comments to the supported equally by all piles. Top for distance of the supported equally by all piles. Lateral slenderness ratio based on single ply width.       Image: Comments to the supported equally by all piles. Top for distance of the supported equally by all piles. Lateral slenderness ratio based on single ply width.       Top 644 PLF 0 PLF 644 PLF 0 PLF 0 PLF 0 PLF 0 PLF WALL       Comments 0 PLF WALL         Self Weight       Top 30 PLF 0 PLF 0 PLF 0 PLF 0 PLF 0 PLF 0 PLF WALL       Self Weight 0 PLF		( )	3' 0.	188 (L/360)	0.444 (44%) D	+S L	-				
may also be required at the interior bearings by the building code.       The stan all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 0".         Refer to last page of calculations for fasteners required for specified loads.       Girders are designed to be supported on the bottom edge only.         Top loads must be supported equally by all plies.       Top loads must be supported equally by all plies.       Section the bottom edge only.         Top loads must be laterally braced at end bearings.       Lateral slenderness ratio based on single ply width.       Section Trib Width Side Dead 0.9       Live 1       Snow 1.15       Wind 1.6       Const. 1.25       Comments         Uniform       Top       644 PLF       0 PLF       1015 S. Reit Road, Suite #833         Reference       Self Weight       7 PLF       PL       0 PLF       0 PLF       0 PLF       10 PLF <td< td=""><td></td><td></td><td>al movement</td><td>and rotation</td><td>at the end beari</td><td>nas Lateral support</td><td>4</td><td></td><td></td><td></td><td></td></td<>			al movement	and rotation	at the end beari	nas Lateral support	4				
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tes       chemicals       6. For flat roofs provide proper drainage to prevent ponding       Manufacturer Info       Contech, Inc. 1001 S, Reilly Road, Suite #639         culated Structured Designs is responsible only of the cultored andings shown. It is the component suitability of the intender lication, and to verify the dimensions and loads.       6. For flat roofs provide proper drainage to prevent ponding       Metsä Wood       Contech, Inc. 1001 S, Reilly Road, Suite #639         1. UV. beams must not be cut or drilled       1. Vu. beams must not be cut or drilled       Arefer to manufacturer's product information regarding installation, multi-ply fastening details, beam strength values, and code approvals       So 10 Merrit 7 Building, 2nd Floor Norwalk, CT 06851       USA 28314         Dry service conditions, unless noted otherwise       9. Design assumes top edge is laterally restrained       9. Design assumes top edge is laterally point to be avid       So Tomoved as and code lateral synopt at beaming points to avid       Contech, Inc. 1001 S, Reilly Road, Suite #639	2				lo			U PLF	UPLF 0	FLF VVALL	
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Version 21.80.417 Powered by iStruct<sup>™</sup> Dataset: 23091201.1447

Address: Job Name: Lot 13 Williams Farms Project #: J1023-5936 HDR-3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED Level: Level Level: Level		Client: Project:	Signature Homes	Date	e: it by:	10/20/2023 Anthony Williams	Page 6 of 8
HDR-3       Kerto-S LVL       1.750" X 9.250"       2.Pily - PASSED       Lord	isDesign			Job	Name:	Lot 13 Williams Farms	
Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Normal Network     Normal Network       Normal Network     Normal Network     Normal Network     Normal Network     Nor							
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New Press and Pulses sing 2 rows of 10d Box nails (128/3") at 12" o.c. Maximum end distance not to exceed 6".       Image: Control of Co							
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Set		•	•	•	•	<u> </u>	9 1/
Set						<del></del>	
Multi - Py Anapise       Esten all plies using 2 rows of 10d Box nails (128/3") at 12" o.c., Maximum end distance not to exceed 6".       Capadi 0     0.0 %       Viel duning F foot     06.37 FUF       Viel duning F foot     05.37 FUF       Viel duning F foot     05.37 FUF       Viel duning F foot     05.7 FUF       Viel duning F foot     00       State all processing     0       Duning F foot     00	1 SPF End Grain		5'6"	2 SPF End Grain	}		3 1/2"
Nutle     Participation       Easter all plies using 2 rows of 10d Box nails (128x3°) at 12° o.c. Maximum end distance not to exceed 6°.       Cogady     0.0 PLF       Vied Lint por Fostor     0.3 PLF       Vied Lint por Fostor     0.1 PLF       Gapo burno     112°       Dire all box     100					<u>'</u>		3 1/2
Next			0		1		
Next	Multi-Ply Analysis						
Lead       0.0 PLF         Weld Limit per Fastener       81.9 PL,         Weld Michae       N         Lead Combination       102         Duration Factor       1.02		s of 10d Box nails (	.128x3") at 12" o.	c Maximum end distand	ce not	to exceed 6".	
Yead Lunip per Tools     163 7 PL/F       Yead Lunip per Tools     13 9 B.       Yead Wad Lunip per Tools     13 9 B.       Yead Mode     N       Selegi Debtance     1 (27)       Wint Mode     N       Duration Factor     100         Selegi Debtance     1 (27)       Duration Factor     100         Selegi Debtance     1 (27)       Duration Factor     1 (27)         Selegi Debtance     1 (27)         Duration Factor     1 (27)         Selegi Debtance     1 (27)         Selegi Debtance     1 (27)         Duration Factor     1 (27)         Selegi Debtance	Capacity Load						
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	Yield Limit per Fastener Vield Mode						
Load Combination         Dara Idoo Fractor       100	Edge Distance						
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Notes         Centrals         Centrals <t< td=""><td></td><td>1.00</td><td></td><td></td><td></td><td></td><td></td></t<>		1.00					
Notes     Chemicals     c. For flat roots provide proper dramage to prevent       Calculated Structured Designs is responsible only of the structural adequacy of this component based on the responsibility of the customer and/or the contractor ensure the component suitability of the customer and/or the contractor ensure the component suitability of the customer and/or the contractor ensure the component suitability of the intended     Handling & Installation     Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850     Metsä Wood       1. Urb previce conditions, unless noted otherwise 2. Uvi not be treated with fire retardant or correstwoil     3. Damaged Beams must not be used 4. Design assumes top degis laterally restrained 5. Provide lateral support at beaming points to avoid     Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us     90-864-TRUS							
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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.       2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals.       Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us       910-864-TRUS         1. Dry service conditions, unless noted otherwise 2. Ivit not be treated with fire retardant or corrests.       3. Damaged Beams must not be used 4. Design assumes top degle is laterally restrained 5. Provide, lateral support at bearing points to avoid       Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us       910-864-TRUS	Calculated Structured Designs is responsible only structural adequacy of this component based of	of the Handling & Installati	on ut or drilled		N 3	01 Merritt 7 Building, 2nd Floor	Fayetteville, NC USA
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Dryservice obtainables, unless noteed onlinkings     5. Provide lateral support at bearing points to avoid     Comtech	Lumber	<ul> <li>approvals</li> <li>3. Damaged Beams must no</li> <li>4. Design assumes top edge</li> </ul>	ot be used e is laterally restrained		w	/ww.metsawood.com/us	
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Solution Control Top Solution (Control Top			Client: Signatur Project:	e Homes	Date: Input by:	10/20/2023 Anthony Williams			Page 7 of 8	
CDH-18         Kerto-S LVL         1.750" X 14.000"         2-Ply - PASSED           Serie Looid         Serie Looid         Serie Looid         Serie Looid           Serie Looid         Decise         No         Decise         Serie Looid           Serie Looid         Decise Minice Looid         Serie Looid         Serie Looid         Serie Looid           Serie Looid         Decise Minice Looid         No         Decise Minice Looid         Serie Looid           Serie Looid         Serie Looid         Serie Looid         Serie Looid         Serie Looid           Serie Looid         Decise Minice Looid         Serie Looid         Serie Looid         Serie Looid	15	Design	Address:				arms			
Image: State Construction       Construction <thconstruction< th="">       Construction<th>GDH-18</th><th>Kerto-S LVL</th><th>. 1.750" X 14</th><th>1.000" 2-Ply</th><th>,</th><th></th><th></th><th></th><th></th></thconstruction<>	GDH-18	Kerto-S LVL	. 1.750" X 14	1.000" 2-Ply	,					
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18'10'       Reactions UNPATTERNED Ib (Uplift)       Type:     2       Piles:     2       Deficition IL:     400       Momont 12310 hb     95'1 1374 hb       95'1 1374 hb     95'1 1374 hb <td>1 SPF End</td> <td>l Grain</td> <td></td> <td></td> <td></td> <td></td> <td>2 SPF End G</td> <td>rain</td> <td>_<u></u></td>	1 SPF End	l Grain					2 SPF End G	rain	_ <u></u>	
Ambase       Calculation       Place       Calculation       Place       Description       Live       Deck       Show       Wind       Column         Deflection L1       400       Deck       Deck       Deck       Deck       Deck       Deck       Total       Live       Deck       377       2564       377       0         Deflection L1       300       Deck       Not Checked       Deck       Total       Ld Case       Ld	<u></u>								1/2"	
Type:         Gitter         Application         Floor         Bit         Design Method:         ASD           Moisture Condition: Dry         Defection LL:         480         Deck:         Not Obe-kield         377         2504         377         0           Importance:         Normal - II         Temperature:         Tempe = 100°F         Deck:         Not Obe-kield         Begring Length         Dir.         Cap. React D/L Ib         Total         Ld. Case         Ld. Comment:         Point State	1			18'10"				1		
Piles:       2       Design Method: ASD       arr       377       204       377       0         Deficition Dry:       380       Deficition Code:       ISO/IRC 2015       Load Sharing:       No       Decis:       Not Checked         Importance:       Temperature:       Temperature:       Temperature:       Temperature:       No       Decis:       Not Checked       1       Vertical       377       2504       377       0         Importance:       Normal - II       Temperature:       Temperature:       No       Decis:       Not Checked       1       Vertical       377       2504       377       0         Imalysis Results:       Actual       Location       Allowed       Capacity Comb.       Case	lember Inf	ormation			Reactions UN	PATTERNED Ib	(Uplift)			
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Images is results       1 - SPE 3.500° Vert 30% 2504 / 565 3069 L D-0.751         Analysis Actual Location Allowed Capacity Comb. Case Moment 12910 R-lb 975 26999 R-lb 0.478 (48%) D+L L Unbraced 13754 R-lb 975 13784 R-lb 0.998 D-0.75(L+5) L (100%)       2 - SPE 3.500° Vert 30% 2504 / 565 3069 L D-0.751         Unbraced 13754 R-lb 975 127 10453 lb 0.234 (23%) D+L L L       1 - SPE 3.500° Vert 30% 2504 / 565 3069 L D-0.751         Shear 2447 lb 112 10453 lb 0.234 (23%) D+L L       1 - SPE 3.500° Vert 30% 2504 / 565 3069 L D-0.751         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.       - See analysis and the interior bearings by the building code.         9 Forkers are designed to be supported equality by all plas.       - See and allower are designed to be supported equality by all plas.       - See analysis and the interior bearings. Lateral support         1 Uniform Top 55 PLF 40 PLF 0 PLF 0 PLF 0 PLF 0 PLF R + F       - See and the interior bearings.       - See and the optic	iomporataro.				Bearings					
Index of the set of the se					Bearing Lengt	h Dir. Cap.	React D/L lb	Total Ld. Case	Ld. Com	
Grain         Grain         Analysis       Actual       Location       Allowed Capacity Comb.       Case         Moment       12910 Rub       95°       26999 Rub       0.478 (48%) D+L       L         Unbraced       13754 Rub       0.980       D+0.75(L+S) L       L         Shear       2447 lb       15 12°       10453 lb       0.234 (23%) D+L       L         LL Def linch       0.102 (L/2160)       95 11/16°       0.459 (1480)       0.222 (22%) 0.75(L+S) L       D         Provide support       95° 11/16°       0.459 (1480)       0.222 (22%) 0.75(L+S) L       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D       D <thd< th="">       D       <thd< th=""> <thd< t<="" td=""><td></td><td></td><td></td><td></td><td></td><td>Vert 30%</td><td>2504 / 565</td><td>3069 L</td><td>D+0.75(L</td></thd<></thd<></thd<>						Vert 30%	2504 / 565	3069 L	D+0.75(L	
Analysis       Actual       Location       Allowed       Capacity       Comb.       Case         Moment       12910 ft-lb       95°       29999 ft-lb       0.478 (48%) D+L       L         Unbraced       13754 ft-lb       95°       13794 ft-lb       0.98 D       D+0.75(L+S) L         (100%)       (100%)       0.485 (U380)       0.224 (23%) D+L       L         LL Defl inch       0.102 (U2160)       951 /1f°       0.612 (U380)       0.905 (91%) D+0.75(L+S) L         Design Notes       1       0.612 (U380)       0.905 (91%) D+0.75(L+S) L         Provide support to prevent lateral movement and rotation at the end bearings. Lateral support       0.612 (U380)       0.905 (91%) D+0.75(L+S) L         Vide support to prevent lateral movement and rotation at the end bearings.       Lateral support       All the bottom edge only.         5 Top loads must be supported on the bottom edge only.       5 Top loads must be supported at a maximum of 75 91/8° t.c.       Post must be laterally braced at an aximum of 75 91/8° t.c.         1       Uniform       Top       55 PLF       40 PLF       40 PLF       0 PLF	nalysis Re	sults								
Moment       12910 fields       95'       26999 fields       0.478 (49%) D+L       L         Unbraced       13754 fr.lb       95'       13784 fr.lb       998       D+C, 75(L+S) L       (100%)         Shear       2447 lb       15'       12'       10453 lb       0.234 (23%) D+L       L         LL Defl inch       0.102 (U/2160)       95'       116''       0.459 (L480)       0.923 (23%) D+L       L         TL Defl inch       0.555 (L/398)       95'       116''       0.459 (L480)       0.923 (23%) D+C       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.       4         2       3 Refer to last page of calculations for fasteners required for specified loads.       4       Grain         4       Grain       Top bads must be supported equally by all pies.       5       Top bads must be supported at an maximum of 75 9/16'' o.c.         7       Bottom must be laterally braced at an beatime.       Location Trib Width       Side       Dead 0.9       Live 1       Snow 1.15       Wind 1.6       Const. 1.25       Comments         1       Uniform       Top       55 PLF       40 PLF       0 PLF       0 PLF       NPLF       NPLF       Manufacturer			ion Allowed Capad	city Comb. Case		Vert 30%	2504 / 565	3069 L	D+0.75(L	
Shear       2447 lb       15 1/2"       0433 lb       0.234 (23%) D+L       L         LL Defl Inch       0.102 (L/2160)       95 1/16"       0.459 (L/480)       0.222 (22%) 0.75(L+S) L         TL Defl Inch       0.555 (L/398)       95 1/16"       0.612 (L/360)       0.905 (91%) D+0.75(L+S) L         Design Notes         1       Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.         2       Refer to last page of calculations for fasteners required for specified loads.         4 Girders are designed to be supported on the bottom edge only.       5 Top loads must be supported equally by al piles.         6 Top must be laterally braced at an bearings.       2 Lateral siendemess ratio based on single phy width.         ID       Load Type       Location         1       Uniform       Top       55 PLF       40 PLF       0 PLF       Null       Science from the starent growthe prove damage to prever         1       Uniform       Top       200 PLF       0 PLF       0 PLF       0 PLF       0 PLF       Null       Science from the starent growthe prove damage to prever         2       Uniform <td< td=""><td>Moment</td><td>12910 ft-lb</td><td>9'5" 26999 ft-lb 0.478</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Moment	12910 ft-lb	9'5" 26999 ft-lb 0.478							
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TL Deflinch       0.555 (L/398)       95 1/16*       0.612 (L/360)       0.905 (91%)       D+0.75(L+S) L         Design Notes	Shear	2447 lb 1'5 1	•							
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         2       Faster all piles using 3 rows of 10d Box nails (.128X3") at 12" o.c. Maximum end distance not to exceed 6".       3         3       Refer to last page of calculations for fasteners required for specified loads.       4         4       Girders are designed to be supported equally by all piles.       5         1       Top loads must be supported equally by all piles.       5         2       Detaterally braced at a maximum of 75 9/16" o.c.       7         7       Bottom must be laterally braced at an aximum of 75 9/16" o.c.       7         7       Bottom must be laterally braced at an extrem of the bottom edge only.       5         1       Uniform       Top       55 PLF       40 PLF       0 PLF <t< td=""><td>LL Defl inch</td><td>0.102 (L/2160) 9'5 1/</td><td>16" 0.459 (L/480) 0.222</td><td>22%) 0.75(L+S) L</td><td></td><td></td><td></td><td></td><td></td></t<>	LL Defl inch	0.102 (L/2160) 9'5 1/	16" 0.459 (L/480) 0.222	22%) 0.75(L+S) L						
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Notes       Chemicals       6. Point at tools provide proper orlange to prover       Metsä Wood       101 5. Relity Road, Suite #639         Jaculated Structural Designs is responsibile only of the second and/or the contractor to esponsibility of the customer and/or the contractor to seponsibility of the intended policition, unless noted otherwise       1. UV beams must not be used       1. DV beams must not be used       1. D										
Notes       Chemicals       6. Point at tools provide proper drainage to prover       Metsä Wood       1015. Relity Road, Suite #639         Calculated Structured Designs is responsibile only of the score and/or the contractor to ensure the component suitability of the interded poly to the interded poly to the dimensions and loading. Shown. It is the sponsibility of the interded poly to the interded poly to the interded poly to the interded with the relative time interded poly of the interded <b>1.</b> VL beams must not be cut or drilled <b>2.</b> Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals <b>Norwalk</b> , CT 06851         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850         (800) 622-5850										
Laculated Structured Designs is responsible only of the functional design stresponsible only of the functional design criteria and loadings shown. It is the seponsibility of the customer and/or the contractor to responsibility of the customer and/or the contractor to responsibility of the dimensions and loads. Lumber 1. Dry service conditions, unless noted otherwise 2. Uvan of the tracket with fire relardant or corrosive 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained 5. Uvan of the tracket with fire relardant or corrosive 5. Provide lateral support at beaming points to avoid		Destant to 100 110			de proper drainage to prevent			1001 S. Reilly Road, Suite	¥639	
responsibility of the customer and/or the contractor to nesure the component suitability of the intended application, and to verify the dimensions and loads. Lumber 1. Dry service conditions, unless noted otherwise 2. UV not to be treated with fire relardant or corrosive 5. Provide lateral support at bearing points to avoid	tructural adequacy c lesign criteria and	I f this component based on the 1. loadings shown. It is the 2	LVL beams must not be cut or drilled			301 Merritt 7 Building	, 2110 F1001	USA 28314		
Lumber 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained 4. Design assumes top edge is laterally restrained 4. Design assumes top edge is laterally restrained 4. Devide lateral support at bearing points to avoid	esponsibility of the c ensure the component	ustomer and/or the contractor to ent suitability of the intended	regarding installation requirements fastening details, beam strength value	, multi-ply		(800) 622-5850	F	910-864-TRUS		
1. Dry service conductors, unless noted onerwise 5. Provide lateral support at bearing points to avoid COMTECH	umber	3.	Damaged Beams must not be used	strained		www.metsawood.com	n/us			
This design is valid until 11/3/2024	<ol> <li>Dry service condition</li> <li>LVL not to be treat</li> </ol>	ons, unless noted otherwise	Provide lateral support at bearing po lateral displacement and rotation	nts to avoid	alid until 11/3/2024			COMT	есн	

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isDesign	Client: Signature Hom Project: Address:	es	Date:10/20/2023Input by:Anthony WilliamsJob Name:Lot 13 Williams FarmsProject #:J1023-5936	Page 8 of 8
GDH-18 Kerto-S	LVL 1.750" X 14.00	0" 2-Ply - PASS		
	· · · · · ·	· · · · ·	· · · · · · ·	
· · · · ·	· · · · ·	· · · · ·	· · · · · ·	
1 SPF End Grain			2 SPF Er	d Grain
1		18'3"		1 1/2"
1		18'10"		1
Multi-Ply Analysis				
	s of 10d Box nails (.128x3") at 1	l2" o.c Maximum end di	stance not to exceed 6".	
Capacity Load	0.0 % 0.0 PLF			
Yield Limit per Foot	245.6 PLF			
Yield Limit per Fastener Yield Mode	81.9 lb. IV			
Edge Distance	1 1/2"			
Min. End Distance Load Combination	3"			
Duration Factor	1.00			
			Manufactures Inf-	Comtech, Inc.
Notes Calculated Structured Designs is responsible only o	chemicals f the Handling & Installation	<ol> <li>For flat roofs provide proper drainage ponding</li> </ol>	e to prevent Manufacturer Info Metsä Wood	1001 S. Reilly Road, Suite #639 Fayetteville, NC
structural adequacy of this component based on design criteria and loadings shown. It is	the 1. LVL beams must not be cut or drilled the 2. Refer to manufacturer's product information	tion	301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851	USA 28314
responsibility of the customer and/or the contractor ensure the component suitability of the inter application, and to verify the dimensions and loads.	or to regarding installation requirements, multi nded fastening details, beam strength values, and c	-ply	(800) 622-5850	910-864-TRUS
Lumber	approvals 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained		www.metsawood.com/us	
<ol> <li>Dry service conditions, unless noted otherwise</li> <li>LVL not to be treated with fire retardant or corror</li> </ol>	5 Provide lateral support at bearing points to a	<sup>void</sup> This design is valid until 11/3/	2024	соттесн