	Canadia Wood Council	n					Conseil canadien du bois			
Connection	n.des			Wo	odWorks®	Connection	s 2020 (Update 4)	Mar. 31, 2025 13:40:33		
One Wooden Side Member Bolted at Angle to Two Main Members										
<pre>Connection Data: Main (x2): Glulam-EX Spruce-Pine 20f-EX wet service, dry fab 80 x 342 mm Treatment Factor: Connection 1.00, Effective shear 1.00 Member extends indefinitely, and end assumed to be free. Side: Timber D.Fir-L SS wet service, dry fab 140 x 342 mm Treatment Factor: Connection 1.00, Net tension 1.00 Protrudes 100 mm past the edge of main member, end assumed to be free Side member is sloped 150.0 degrees with respect to the main member.</pre>										
Factored Loads: Along side member: 25.00 kN standard duration in tension.										
Connector Design: Fasteners: Bolt diameter: 1/2" (12.70 mm) 2 rows of 2 Bolts = 4 Bolts Row Spacing: 38 mm Bolt spacing in row: 76 mm										
Design Mair H Side H H H Yie H Yie	Results Parallel Facto Embed Row s Britt Perpendi Facto Embed Britt Factored Embedmer Factored Embedmer Scow shea Group te Brittle Iding ref Factored Factored	to Gra bred loa dment st chear re- cle resi cular t bred loa dment st cting re- tice resi d load: t strer st strer st strer resistance d load: g resist	CSA 086 nin: d: rength esistance: co Grain d: rength esistance d: rength: stance: ngth par ngth: stance: resistance tance: ce: cance:	par: par: perp: ce: f thef f thef ince: P( l l l l l	Pf = fP = PRr = Pr = Qf = QSr = QSr = CSR = 14 Pf = 21 Rr = 35 Rr = 5 Rr = 4 Pr = 4 Nr = 35	-21.65 19.21 M 40.54 40.54 12.50 8.45 M 23.90 25.00 9.76 M 34.53 5.00 kN .39 MPa .33 MPa 4.49 kN 3.77 kN 9.82 kN 9.82 kN 9.82 kN 5.00 kN 0.57 kN	<pre>kN IPa kN (12.4.4.4) kN Ratio: 0.53 (12.4.4.2(b)) kN IPa kN Ratio: 0.52 (12.4.4.2(c)) kN at 30.0 degrees IPa (12.4.4.3.3.1) kN Ratio: 0.72 (12.4.4.2(d)) (12.4.4.6.1) (12.4.4.6.1) (12.4.4.4) (12.4.4.5) Ratio: 0.50 (12.4.4.2(b)) at 30.0 degrees Ratio: 0.82 (12.4.4.2(a),3)</pre>	) , 12.4.4.7) )		
When the moisture content of the wood is expected to be less than 10% at time of fabrication, minimum spacings and/or end and edge distances should be increased and holes should be predrilled to avoid splitting.										
Suggested Design Only, Designer Must Ensure that the Design is Appropriate for Intended Use										
Additional Data: Adjustment factors:										
Γ	Main: KD 1.00	KSF 0.67	KT 1.00	KSt -	KZt -	Kls 0.65	KSv 0.87			

Side: KD KSF KT KSt KZt Kls KSv

		Canadian Wood Council							Conseil canadien du bois			
Connection.des WoodWorks® Connections 2020 (Update 4)								Page 2				
		1.00	0.67	1.00	1.00	0.90	1.00	1.00				
	Unit	latera	l yield	ling res	istanc	e (12.4	.4.3.2)	(kN):				
	ā	a	b	C	:	d	е		f	g		
	0	9.92	-	12	.74	4.78	-		-	5.59		