

Roof Load Matrix - Total Design roof Load - Uniform, lbs					
One Way Loading - When load is carried to horizontal beams in one direction.					
Two Way Loading - When load is carried to horizontal beams in two directions					
Member	Loading	Single Structure	Double Wide Lengthwise	Doublewide Short side	4 Section
4x4 Trio	One Way	6,000	8,000	10,000	15,000
4x4 Trio	Two Way	12,000	18,000	18,000	27,000
4x4 Trio 30	Peaked (One Way)	8,000	14,000		
6x6 Trio	One Way	12,000	15,000	18,000	28,600
6x6R Trio	Two Way	24,000	33,000	33,000	49,600
6x6 30 Trio	Peaked (One Way)	15,000	25,000		

- 1 Wood members are assumed to be single-sawn lumber pieces, Spruce-Pine-Fir grade #2 minimum under dry conditions, standard loading duration, free of strength reducing chemicals and notches per CSA standard CAN/CSA-086-09, Engineering Desing of Wood and the Canadian Wood Council Design Manual 2015.
- 2 The maximum vertical load ratings are based on steel brackets per TOJA shop drawings. See latest report.
- 3 Fasteners are to be fully driven. Results and capacities assumed that the wood framing has full bearing, and members extend fully into the connectors, minimizing eccentric loading on the bracket, which can generate eccentric forces causing members to become overstressed below the member capacity.
- 4 Roof and screen loads are assumed to be uniformly distributed over the entire roof.
- 5 Provide braces at 45 degrees at each post along the perimeter of the structure unless a wall is framed in and provides lateral support.
- 6 It is generally recommended to have posts lengths less than 9ft using 4x4 posts and 10ft using 6x6 posts. Column bracing, climatic conditions load loading will dictated final designs.
- 7 This load table should be considered general. End users and designers are responsible for all considerations, designs, installation and other, including choosing the appropriate bracket, wood and fastening.
- 8 Many environments and materials, including wood preservative chemicals, finishes, salts, moisture and others, can corrode and degrade the metal connectors, fasteners and anchors, which leads to a loss in load-carrying capacity.
- 9 The installer, designer and the end-user must understand the potential damage and risks and select suitable products for the intended environment and loading conditions. Regular maintenance and periodic inspections are to be performed.



This tables must be read with to summary report and analysis described in the Engineering report by Balan Engineering dated November 22, 2023. Any discrepancies are to be brought to our attention for review.