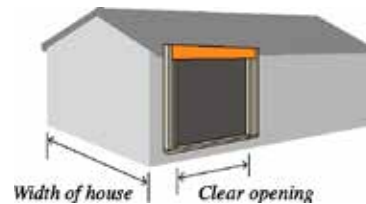


## Single-Story Headers – Live Load = 30 PSF

Roof Loading	Clear Opening (ft)	Width of House (ft)						
		20	24	26	30	32	36	40
Simple Span Snow (LDF = 1.15) 30 PSF Live 15 PSF Dead	6' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$
	9' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$
	12' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 11\frac{7}{8}$
X-Beam $F_{bx} = 2,400$ psi $E_x = 1.9^6$ psi (True) $F_{vx} = 265$ psi	16' 3"	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 18$
		$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$
	18' 3"	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 18$	–
		$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 16$

**Notes:**

- (1) Service Condition = dry.
- (2) Maximum deflection under live load =  $L/240$ . Maximum deflection under total load =  $L/180$ .
- (3) Maximum 2 foot roof overhang.
- (4) Dead loads are in addition to the weight of the beam, which is assumed to be 35 pcf.
- (5) Sufficient bearing length shall be provided for resisting applied loads.
- (6) The minimum depth is  $9\frac{1}{2}$  inches.



## Single-Story Headers – Live Load = 40 PSF

Roof Loading	Clear Opening (ft)	Width of House (ft)						
		20	24	26	30	32	36	40
Simple Span Snow (LDF = 1.15) 40 PSF Live 15 PSF Dead	6' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$
	9' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$
	12' 3"	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 14$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$
X-Beam $F_{bx} = 2,400$ psi $E_x = 1.9^6$ psi (True) $F_{vx} = 265$ psi	16' 3"	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 18$
		$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 16$
	18' 3"	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 18$	–	–	–
		$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 18$

**Notes:**

- (1) Service Condition = dry.
- (2) Maximum deflection under live load =  $L/240$ . Maximum deflection under total load =  $L/180$ .
- (3) Maximum 2 foot roof overhang.
- (4) Dead loads are in addition to the weight of the beam, which is assumed to be 35 pcf.
- (5) Sufficient bearing length shall be provided for resisting applied loads.
- (6) The minimum depth is  $9\frac{1}{2}$  inches.



## Single-Story Headers – Live Load = 70 PSF

Roof Loading	Clear Opening (ft)	Width of House (ft)						
		20	24	26	30	32	36	40
Simple Span Snow (LDF = 1.15) 70 PSF Live 15 PSF Dead	6' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 9\frac{1}{2}$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$
	9' 3"	$3\frac{1}{2} \times 9\frac{1}{2}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 11\frac{7}{8}$	$3\frac{1}{2} \times 14$
		$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 9\frac{1}{2}$	$5\frac{1}{2} \times 11\frac{7}{8}$
X-Beam $F_{bx} = 2,400$ psi $E_x = 1.9^6$ psi (True) $F_{vx} = 265$ psi	12' 3"	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 14$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 16$	$3\frac{1}{2} \times 18$	
		$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 11\frac{7}{8}$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 14$	
	16' 3"	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 18$	$3\frac{1}{2} \times 20$	$3\frac{1}{2} \times 20$	$3\frac{1}{2} \times 22$	$3\frac{1}{2} \times 22$	
		$5\frac{1}{2} \times 14$	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 18$	$5\frac{1}{2} \times 18$	
18' 3"	–	–	–	–	–	–		
	$5\frac{1}{2} \times 16$	$5\frac{1}{2} \times 18$	$5\frac{1}{2} \times 18$	–	–	–		

### Notes:

- (1) Service Condition = dry.
- (2) Maximum deflection under live load =  $L/240$ . Maximum deflection under total load =  $L/180$ .
- (3) Maximum 2 foot roof overhang.
- (4) Dead loads are in addition to the weight of the beam, which is assumed to be 35 pcf.
- (5) Sufficient bearing length shall be provided for resisting applied loads.
- (6) The minimum depth is  $9\frac{1}{2}$  inches.



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