



# Snow Load Report

## 1. Roof and Building Data

Ground Snow Load (Pg): 63.0 psf  
Roof Pitch: 3 /12  
Risk Category: II  
Eave-to-Ridge (W): 10 ft.  
Terrain Category: C  
Exposure: Partially Exposed  
Thermal Factor (Ct): 1.10  
Roof Surface: Metal  
Roof System: Rafter  
Spacing: 24 in. o/c  
Overhang: 12 in.

## 2. Design Loads

Top Chord Dead Load: 10 psf  
Bottom Chord Dead Load: 15 psf  
SF (Slope Factor) =  $1/\text{Cosine}(\Phi) = 1.03$  (Dead loads specified on a projected horizontal basis take into account the effect of the pitch via a slope factor.)  
Adj. TCDL (TCDL x SF): 10.3 psf

## 3. Design Assumptions

Code Standard: ASCE 7-10  
Number of Plies: 1 PLY  
Bottom Chord Pitch: 0 /12

## 4. Snow Load Calculations

Calculate flat roof snow load  $p_f$  using the following equation:

$$p_f = 0.7C_eC_tI_s p_g$$

where:

$p_f$  = Flat Roof Snow Load in psf  
 $C_e = 1.00$  = Exposure Factor, as determined by ASCE 7-10 Table 7-2 (Terrain Cat. C, Exp. Partially Exposed)  
 $C_t = 1.10$  = Thermal Factor, as determined by ASCE 7-10 Table 7-3  
 $I_s = 1.00$  = Importance Factor, as determined by ASCE 7-10 Table 1.5-2 (Risk Cat. II)  
 $p_g = 63.0$  psf = Ground Snow Load in psf

$$p_f = 0.7C_eC_tI_s p_g = 0.7(1.00)(1.10)(1.00)(63.0) = 48.5 \text{ psf}$$

Subject Snow Loads	Customer	Location	Job No. 2505-0020
Engr. Engr. Name	<b>STRUCTURAL ENGINEERING INC.</b> Street Address City, ST 99999 ph. (800) 000-0000 www.website.com		Rev. -
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For a roof rafter system with  $W \leq 20$  ft., the simplified unbalanced snow load is given by the third diagram of ASCE Figure 7-5.

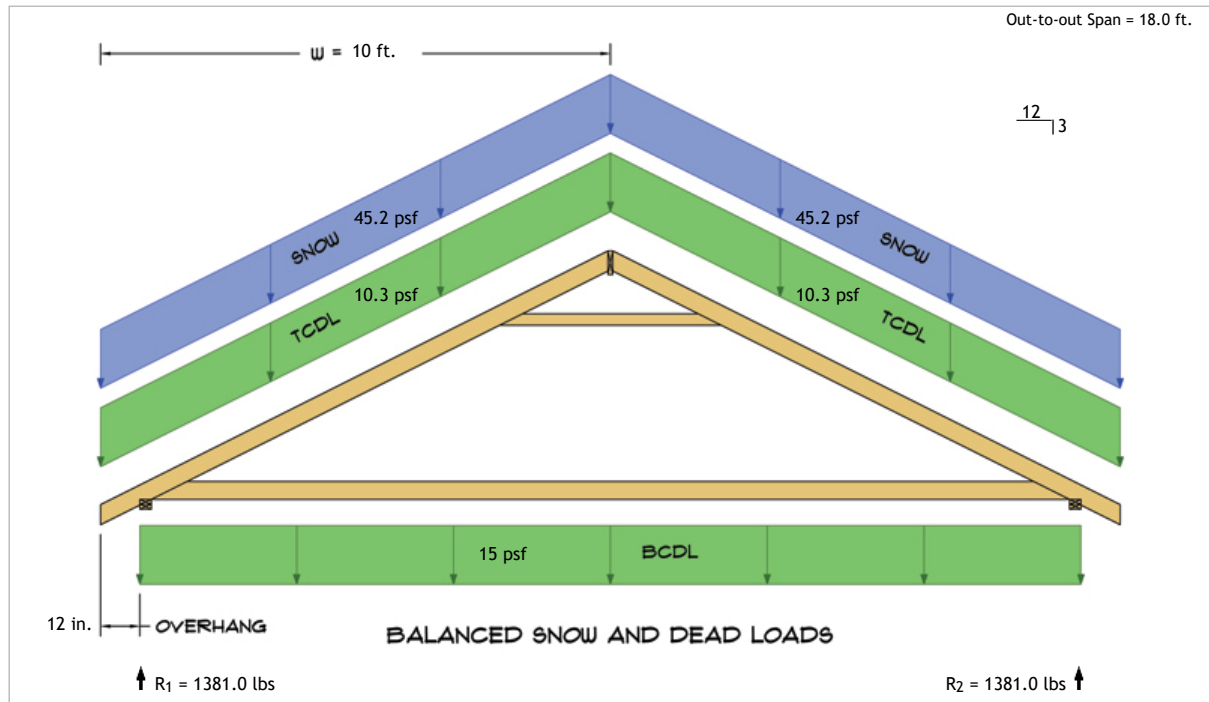
$$p_{\text{windward}} = 0.0 \text{ psf}$$

$$p_{\text{leeward}} = I_s p_g = (1.00)(63.0) = 63.0 \text{ psf}$$

On warm roofs apply a distributed  $2p_f$  snow load on all overhanging portions as per ASCE 7-10 section 7.4.5.

No other loads except dead loads shall be present on the roof when this uniformly distributed load is applied.

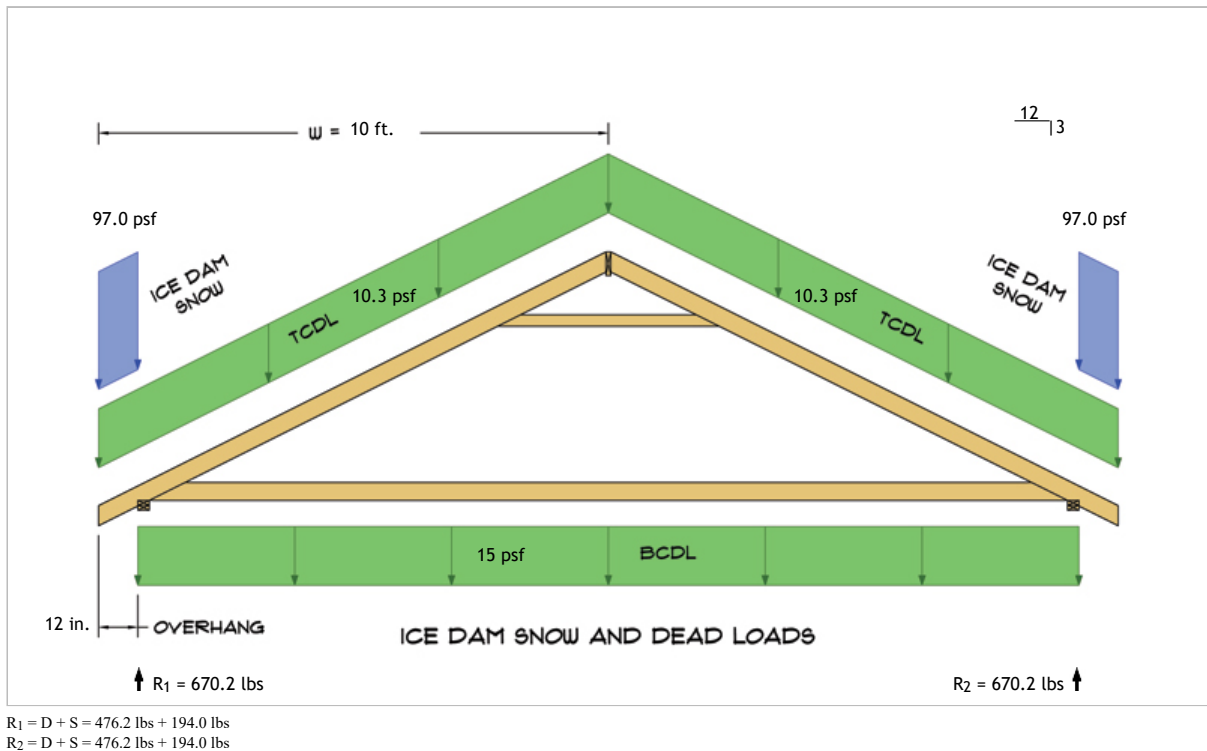
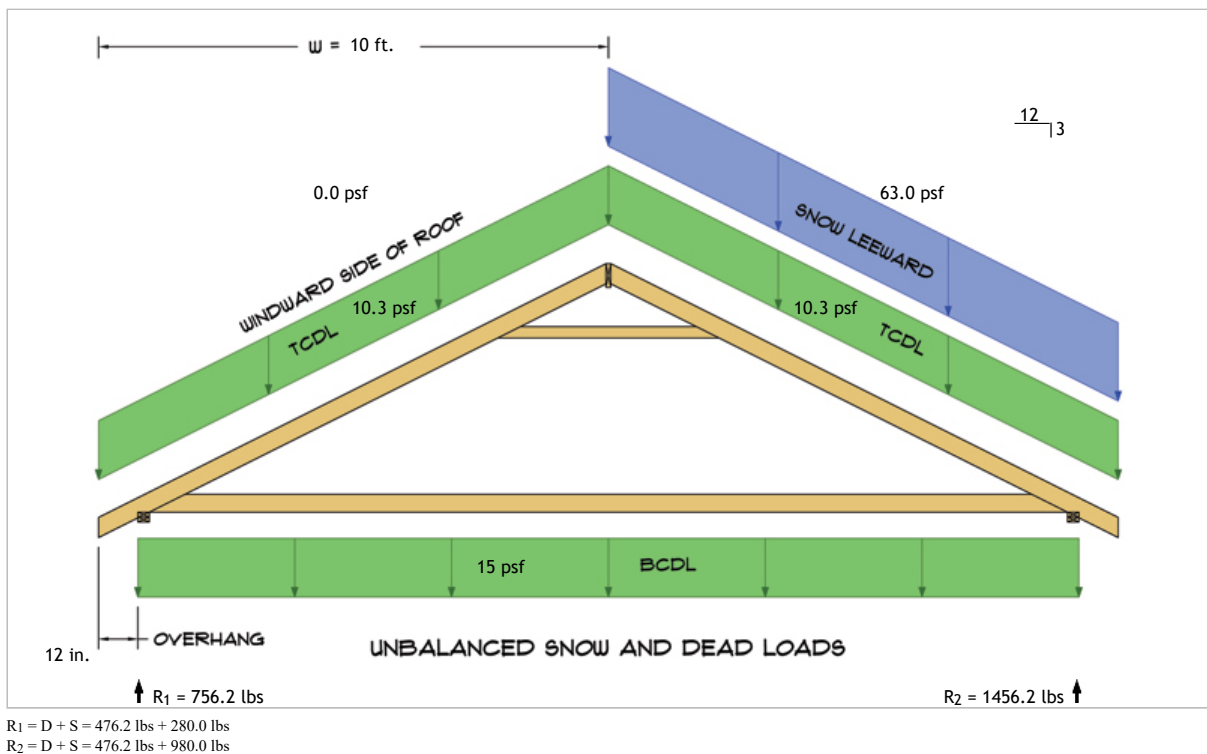
$$2p_f = (2)(48.5) = 97.0 \text{ psf}$$



$$R_1 = D + S = 476.2 \text{ lbs} + 904.9 \text{ lbs}$$

$$R_2 = D + S = 476.2 \text{ lbs} + 904.9 \text{ lbs}$$

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