ANSI/ASCE 7-98 Snow Load Procedure - Adapted from C7.0, p. 278

(Note: In SEI/ASCE 7-02 the steps are similar, but the page numbers are different.)

Step	Find:	Use:
1	Ground snow load, p_g for geographic location.	Figure 7-1 or Table 7-1
2	Flat roof snow load, p_f. $p_f = 0.7C_eC_tI\,p_g$ *Min. p_f values for low-slope roofs:* *For mono slopes < 15˚ and* *Hip or gable slopes < 70/W +0.5*	where, C_e = exposure factor => Table 7-2, p.82, p.28 C_t = thermal factor => Table 7-3, p. 83 I = importance factor => Table 7-4, p. 83, p.4 *Where,* *$p_g \le 20$, check that $p_f \ge Ip_g$* *$p_g > 20$, check that $p_f \ge 20I$* *If not, use this p_f value.*
3	When slope > 5º, consider sloping roof snow load, p_s. $p_s = C_sp_f$	where, C_s = roof slope factor => Figure 7-2, p. 76 *When Ct = 1.0, use chart for warm roofs* *When Ct = 1.2, use chart for cold roofs* *When Ct = 1.1, take average from both charts*
4	Consider partial loading for multi-span members.	Figure 7-4, p. 78
5	Consider unbalanced snow loads, p_s *For hip or gable roofs with slope > 70˚ or slope < 70/W + 0.5, no unbalanced load required*	When half span, W ≤ 20 ft use: For θ ≤ 5º, $p_{s\text{-unbal}} = \frac{1.5p_f}{C_e}$ For θ > 5º, $p_{s\text{-unbal}} = \frac{1.5p_{s-bal}}{C_e}$ Otherwise refer to Figure 7-5, p.79
6	Consider snow drifts refer to Figure 7-8, p. 81 First calculate: snow density = $\gamma = 0.13p_g + 14 \le 30$ pcf max. Then see if drift calculation is required: if $h_c/h_b < 0.2$, no drift required. Calculate h_b from $h_b = p_f/\gamma$ This is from the standard formula for snow height where p is p_f or p_s. snow height (h) = $\frac{p}{\gamma}$ (and $p = h\gamma$) h_c = [h_b - ht diff. between the roofs] Continue on to 6a) if $h_c/h_b \ge 0.2$ Keep h_c and h_b nearby for later.	**From upper to lower roofs:** a) Determine leeward side drift height h_d (on Figure 7-9, p. 81) using l_u, the length of upper roof. b) Determine windward side drift height h_d (on Figure 7-9, p. 81) using l_l, the length of lower roof, in place of l_u. Multiply that value of h_d by 0.75. c) Calculate *w*, the drift length, using the highest h_d value from a) and b). If $h_d \le h_c$, then $w = 4h_d$ and drift height = h_d. If $h_d > h_c$, then $w = 4h_d^2/h_c$ and drift height = h_c However, *w* shall not be greater than $8h_c$ If the calculation for *w* exceeds the length of the lower roof, the drift is truncated at the edge of the lower roof, it is not reduced to zero at the edge of the roof. d) Calculate the drift load p of h_d => $p_d = h_d\gamma$
7	Consider sliding snow	
8	Consider Rain-on-Snow Surcharge Section 7.10, p. 72.	If $0 < p_g \le 20$ psf, but $p_g > 0$ and slope < ½ in 12, add 5 psf for rain on snow
9	Consider Ponding, sec. 7.11, p. 72.	If roof slope is ≤ ¼ in 12
10	Consider existing roofs, s 7.12, p.72	
11	Consider other roofs and sites.	Experimental data.
12	Consider the consequences of loads in excess of design value.	