

Main Wind Force Resisting System – Part 1			0.25 ≤ h/L ≤ 1.0	
Figure 27.4-7	Net Pressure Coefficient, C _N		Free Roofs	
Open Buildings			θ ≤ 45°, γ = 90°, 270°	

Monoslope

Pitched

Trough

Horizontal Distance from Windward Edge	Roof Angle θ	Load Case	Clear Wind Flow	Obstructed Wind Flow
			C _N	C _N
≤ h	All Shapes	A	-0.8	-1.2
	θ ≤ 45°	B	0.8	0.5
> h, ≤ 2h	All Shapes	A	-0.6	-0.9
	θ ≤ 45°	B	0.5	0.5
> 2h	All Shapes	A	-0.3	-0.6
	θ ≤ 45°	B	0.3	0.3

Notes:

- C_N denotes net pressures (contributions from top and bottom surfaces).
- Clear wind flow denotes relatively unobstructed wind flow with blockage less than or equal to 50%. Obstructed wind flow denotes objects below roof inhibiting wind flow (>50% blockage).
- Plus and minus signs signify pressures acting towards and away from the top roof surface, respectively.
- All load cases shown for each roof angle shall be investigated.
- For monoslope roofs with theta less than 5 degrees, C_N values shown apply also for cases where gamma = 0 degrees and 0.05 less than or equal to h/L less than or equal to 0.25. See Figure 27.4-4 for other h/L values.
- Notation:
 - L : horizontal dimension of roof, measured in the along wind direction, ft. (m)
 - h : mean roof height, ft. (m). See Figures 27.4-4, 27.4-5 or 27.4-6 for a graphical depiction of this dimension.
 - γ : direction of wind, degrees
 - θ : angle of plane of roof from horizontal, degrees