C27.6.2 Parapets

The effect of parapet loading on the MWFRS is specified in Section 27.4.5 of Part 1. The net pressure coefficient for the windward parapet is +1.5 and for the leeward parapet is -1.0. The combined effect of both produces a net coefficient of +2.5 applied to the windward surface to account for the cumulative effect on the MWFRS in a simple diaphragm building. This pressure coefficient compares to a net pressure coefficient of $1.3G_f$ for the tabulated horizontal wall pressure p_h at the top of the building. Assuming a lower-bound gust factor $G_f = 0.85$, the ratio of the parapet pressure to the wall pressure is $2.5/(0.85 \times 1.3)$ = 2.25. Thus, a value of 2.25 is assumed as a reasonable constant to apply to the tabulated wall pressure p_h to account for the additional parapet loading on the MWFRS.

C27.6.3 Roof Overhangs

The effect of vertical wind loading on a windward roof overhang is specified in Section 27.4.4 of Part 1. A positive pressure coefficient of +0.8 is specified. This compares to a net pressure coefficient tabulated for the windward edge zone 3 of -1.06 (derived from $0.85 \times -1.3 \times 0.8 - 0.18$). The 0.85 factor represents the gust factor G, the 0.8 multiplier accounts for the effective wind area reduction to the 1.3 value of C_p specified in Fig. 27.4-1 of Part 1, and the -0.18 is the internal pressure contribution. The ratio of coefficients is 0.8/1.06 = 0.755. Thus, a multiplier of 0.75 on the tabulated pressure for zone 3 in Table 27.6-2 is specified.

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