

19. HIGH-RISE BUILDING: GREATER THAN 20 STORIES (HROB)

General Description

- Generally consist of rectangular shapes but can have curved or triangle footprints
- Roofs are generally flat but may have a more complex roof shape as part of esthetic statement
- Roofing material single-ply membrane fully adhered, polyurethane foam roof, metal or copper clad roof covering
- Penthouse is steel framing with metal panels
- Exterior cladding is glass or metal curtain walls, precast concrete panels with windows
- First floor often has very large glass lites that are susceptible to debris impact
- Atriums with overhead glazing or tall window walls
- Examples are hotels, office buildings, and condominiums

Table 19

DOD*	Damage description	EXP	LB	UB
1	No visible damage	70	58	86
2	Damage to penthouse roof and/or walls; loss of rooftop HVAC equipment	86	69	107
3	Loss of roof covering (<20%)	93	75	111
4	Broken curtain wall panel anchors	101	83	120
5	Broken glass in curtain walls; glass in entryways; significant damage to building interior	104	87	122
6	Uplift of roof decking; significant loss of roofing material (>20%)	129	110	157
7	Damage to parapet wall or coping	143	115	165
8	Uplift or collapse of roof structure	145	123	172
9	Failure of exterior walls at top story	159	123	183
10	Significant structural deformation or collapse of building	228	190	290

* DOD is degree of damage

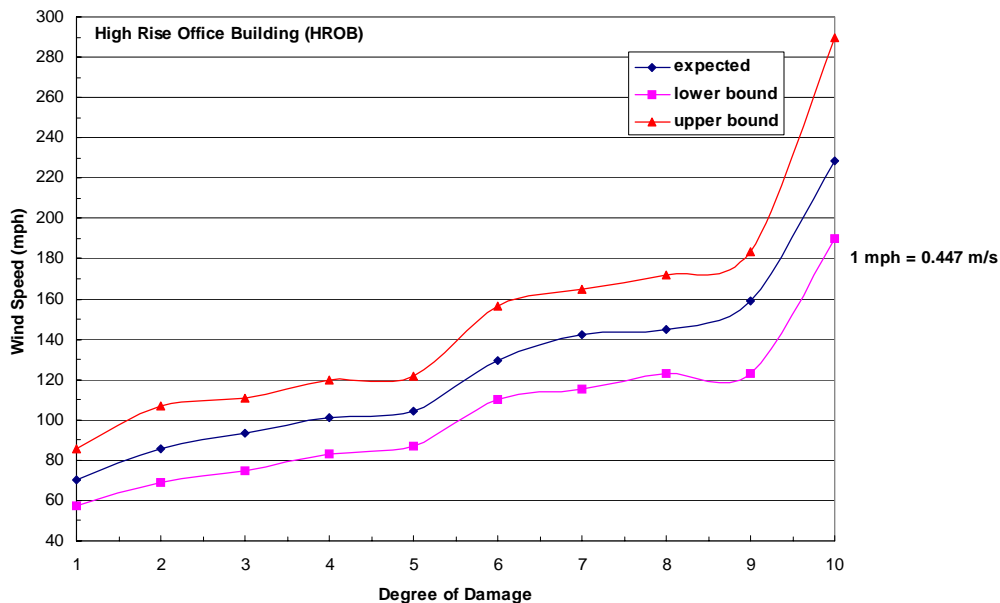


Figure 19. Wind Speed vs. Degree of Damage