

20. INSTITUTIONAL BUILDING (IB)

General Description

- Examples are hospitals, courthouses, university buildings, state and federal buildings, jails
- Range in height from 1 – 10 stories
- Roofing materials include fully adhered and mechanically fastened single-ply membranes, polyurethane foam, copper clad domes
- Structure is normally reinforced concrete
- Walls are masonry with cut stone or precast panels – very ornate
- Balcones, porches and porticos with heavy façade
- Relatively small windows

Table 20

DOD*	Damage description	EXP	LB	UB
1	No visible damage	72	59	88
2	Damage to penthouse roof and walls; loss of rooftop HVAC equipment	86	72	109
3	Loss of roof covering (<20%)	92	75	111
4	Façade components ripped from structure	95	78	115
5	Broken windows or glass doors	114	95	136
6	Uplift of lightweight roof deck and insulation; significant loss of roofing material (>20%)	118	97	140
7	Uplift of metal deck with concrete fill slab	131	110	152
8	Uplift of pre-cast concrete roof slabs	142	119	163
9	Curtain walls and other wall cladding damaged	146	118	170
10	Collapse of top story exterior walls	148	127	172
11	Significant structural deformation or collapse of structure	210	178	268

* DOD is degree of damage

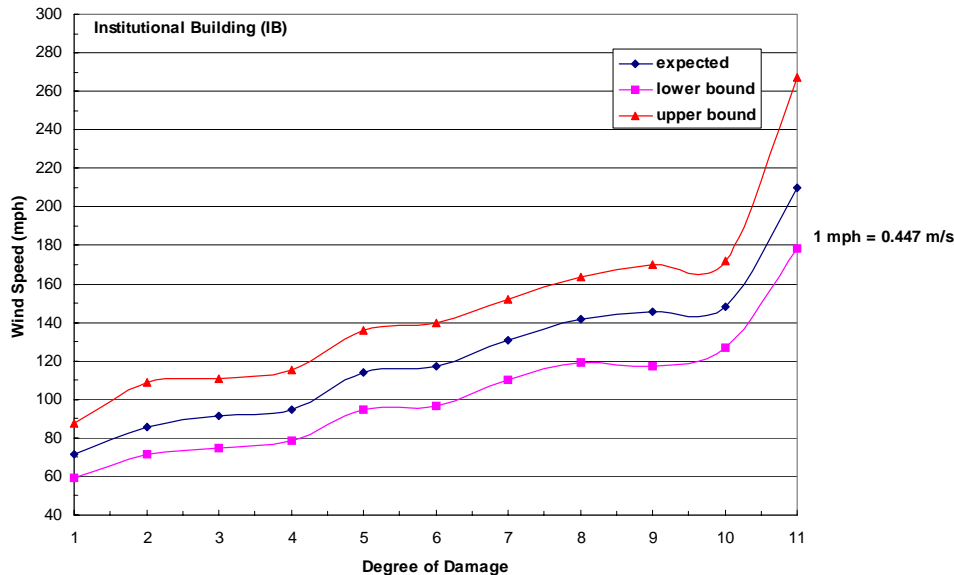


Figure 20. Wind Speed vs. Degree of Damage