

WIND-BORNE DEBRIS RESISTANCE- HURRICANE PRONE REGIONS

The IBC requires construction in a "Hurricane Prone Region" to be impact resistant. The standard test methods are described in ASTM E1996 and E1886. Kalwall hurricane resistant systems are approved by the State of Florida (www.floridabuilding.org) and the Texas Department of Insurance (www.tdi.state.tx.us/wind/prod/index.html) for use in high risk coastal zones.

- Missile A - (Small Missile – 2 gram steel balls)
Maximum design Wind Load 80 PSF
.070 SW exterior face sheet
- Missile C - (4' long 2 x 4)
Maximum design Wind Load 60 PSF
.052 Hi-Impact SW exterior face sheet
2 ½" wall battens
- Missile D - (8' long 2 x 4)
Maximum design Wind Load 100 PSF for 2 ¾" panels.
Maximum design Wind Load 80 PSF for 2 ¾" panel units with E-Series windows or opaque panels.
Maximum design Wind Load 80 PSF for 4" panels.
.060 White Hurricane Hi-Impact SW ext. face sheet
Extra I-beam at perimeter
2 ½" clamp channel and battens

Hurricane Prone Regions per IBC 1609.2:

- US Atlantic Coast and Gulf of Mexico
- Hawaii, Puerto Rico, Guam, US Virgin Islands, Samoa
- Pacific Coast not included

Windborne Debris Region:

Hurricane Prone Region AND

- Wind Zone 1 110 mph ≤ wind speed < 120 mph and Hawaii
- Wind Zone 2 120 mph ≤ wind speed < 130 mph and more than 1 mile from the coastline
- Wind Zone 3 130 mph ≤ wind speed ≤ 140 mph OR
120 mph ≤ wind speed ≤ 140 mph and within 1 mile of the coastline
- Wind Zone 4 wind speed > 140 mph

MISSILE IMPACT REQUIREMENTS:

Level of Protection*	Enhanced Protection (Essential Facilities)		Basic Protection		Unprotected	
	≤ (30 ft)	> (30 ft)	≤ (30 ft)	> (30 ft)	≤ (30 ft)	> (30 ft)
Wind Zone 1	D	D	C	A	None	None
Wind Zone 2	D	D	C	A	None	None
Wind Zone 3	E	D	D	A	None	None
Wind Zone 4	E	D	D	A	None	None

*Level of Protection:

- ❖ Enhanced Protection (Essential Facilities) - Buildings and other structures designated as essential facilities, including, but not limited to, hospitals; other health care facilities having emergency treatment facilities; jails and detention facilities; fire, rescue and police stations, and emergency vehicle garages; designated emergency shelters; communications centers and other facilities required for emergency response; power generating stations; other public utility facilities required in an emergency; and buildings and other structures having critical national defense functions.
- ❖ Basic Protection – All buildings and structures except those listed as essential facilities or unprotected.
- ❖ Unprotected – Buildings and other structures that represent a low hazard to human life in a windstorm including but not limited to: agricultural facilities, production greenhouses, certain temporary facilities, and storage facilities.