





## Wind load calculation explanation sheet

(The descriptions below are a brief overview. For more detailed information see ASCE standards)

### Building Classifications:

- I: Buildings which represent low hazard to human life in the event of the structure's failure such as storage and agricultural.
- II: All buildings not listed below.
- III: Buildings that represent a substantial hazard to human life in the event of a failure, including but not limited to schools, large daycare facilities, and buildings where 300 people or more congregate in one area.
- IV: Essential facilities such as hospitals, government facilities, public utility stations (water, power, phone, etc...), and emergency shelters.

### Exposure Categories:

- Exposure B: Urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger.
- Exposure C: Open terrain with scattered obstructions having heights generally less than 30 ft. This category includes flat open country, grasslands, and all water surfaces in hurricane prone regions.
- Exposure D: Within 600' from Flat, unobstructed areas and water surfaces. This category includes large bodies of water, smooth mud flats, salt flats, and unbroken ice with wind flowing over open area for a distance of at least 5,000'. Shorelines in exposure D include inland waterways, the great lakes, and coastal areas of California, Oregon, Washington and Alaska.  
NOTE: If using ASCE7-10, exposure D now includes the east coast shoreline.

### Type of Building:

- Open Building: Building having each wall at least 80% open.
- Partially Enclosed: Building meeting both of the following:
  - 1. Total area of openings in a wall that receives positive external pressure exceeds the sum of the areas of openings in the balance of the building envelope (walls and roof) by more than 10%.
  - 2. The total area of openings in a wall that receives positive external pressure exceeds 4ft<sup>2</sup> or 1% of the area of that wall, whichever is smaller, and the percentage of openings in the balance of the building envelope does not exceed 20%
- Enclosed building: A building which does not comply with the requirements for open or partially enclosed buildings.

### Type of Parapet:

- None: No parapet
- Open Parapet: Building having each wall at least 80% open
- Partially Enclosed: Meets both of the following:
  - 1. Total area of openings in a wall that receives positive external pressure exceeds the sum of the areas of openings in the balance of the building envelope (walls and roof) by more than 10%.
  - 2. The total area of openings in a wall that receives positive external pressure exceeds 4ft<sup>2</sup> or 1% of the area of that wall, whichever is smaller, and the percentage of openings in the balance of the building envelope does not exceed 20%
- Enclosed Parapet: A building which does not comply with the requirements for open or partially enclosed parapet.