

Terrain Exposure Constants
Table 26.9-1

Exposure	α	z_e (ft)	$\hat{\alpha}$	\hat{b}	$\bar{\alpha}$	\bar{b}	c	ℓ (ft)	\bar{c}	z_{min} (ft)*
B	7.0	1200	1/7	0.84	1/4.0	0.45	0.30	320	1/3.0	30
C	9.5	900	1/9.5	1.00	1/6.5	0.65	0.20	500	1/5.0	15
D	11.5	700	1/11.5	1.07	1/9.0	0.80	0.15	650	1/8.0	7

* z_{min} = minimum height used to ensure that the equivalent height \bar{z} is greater of 0.6h or z_{min} .
For buildings with $h \leq z_{min}$, \bar{z} shall be taken as z_{min} .

In metric

Exposure	α	z_e (m)	$\hat{\alpha}$	\hat{b}	$\bar{\alpha}$	\bar{b}	c	ℓ (m)	\bar{c}	z_{min} (m)*
B	7.0	365.76	1/7	0.84	1/4.0	0.45	0.30	97.54	1/3.0	9.14
C	9.5	274.32	1/9.5	1.00	1/6.5	0.65	0.20	152.4	1/5.0	4.57
D	11.5	213.36	1/11.5	1.07	1/9.0	0.80	0.15	198.12	1/8.0	2.13

* z_{min} = minimum height used to ensure that the equivalent height \bar{z} is greater of 0.6h or z_{min} .
For buildings with $h \leq z_{min}$, \bar{z} shall be taken as z_{min} .

1. Within 1 mi of the coastal mean high water line where the basic wind speed is equal to or greater than 130 mph (58 m/s), or
2. In areas where the basic wind speed is equal to or greater than 140 mph (63 m/s).

For Risk Category II buildings and other structures and Risk Category III buildings and other structures, except health care facilities, the wind-borne debris region shall be based on Fig. 26.5-1A. For Risk Category III health care facilities and Risk Category IV buildings and other structures, the wind-borne debris region shall be based on Fig. 26.5-1B. Risk Categories shall be determined in accordance with Section 1.5.

EXCEPTION: Glazing located over 60 ft (18.3 m) above the ground and over 30 ft (9.2 m) above aggregate-surfaced-roofs, including roofs with gravel or stone ballast, located within 1,500 ft (458 m) of the building shall be permitted to be unprotected.

26.10.3.2 Protection Requirements for

Glazed Openings

Glazing in buildings requiring protection shall be protected with an impact-protective system or shall be impact-resistant glazing.

Impact-protective systems and impact-resistant glazing shall be subjected to missile test and cyclic pressure differential tests in accordance with ASTM E1996 as applicable. Testing to demonstrate compliance with ASTM E1996 shall be in accordance with ASTM E1886. Impact-resistant glazing and impact-protective systems shall comply with the pass/fail criteria of Section 7 of ASTM E1996 based on the missile required by Table 3 or Table 4 of ASTM E1996.

EXCEPTION: Other testing methods and/or performance criteria are permitted to be used when approved.

Glazing and impact-protective systems in buildings and other structures classified as Risk Category IV in accordance with Section 1.5 shall comply with the "enhanced protection" requirements of Table 3 of ASTM E1996. Glazing and impact-protective systems

in all other structures shall comply with the "basic protection" requirements of Table 3 of ASTM E1996.

User Note: The wind zones that are specified in ASTM E1996 for use in determining the applicable missile size for the impact test, have to be adjusted for use with the wind speed maps of ASCE 7-10 and the corresponding wind borne debris regions, see Section C26.10.3.2.

26.10.4 Multiple Classifications

If a building by definition complies with both the "open" and "partially enclosed" definitions, it shall be classified as an "open" building. A building that does not comply with either the "open" or "partially enclosed" definitions shall be classified as an "enclosed" building.

26.11 INTERNAL PRESSURE COEFFICIENT

26.11.1 Internal Pressure Coefficients

Internal pressure coefficients, (G_{pi}), shall be determined from Table 26.11-1 based on building enclosure classifications determined from Section 26.10.

26.11.1.1 Reduction Factor for Large Volume Buildings, R_i

For a partially enclosed building containing a single, unpartitioned large volume, the internal pressure coefficient, (G_{pi}), shall be multiplied by the following reduction factor, R_i :

$R_i = 1.0$ or

$$R_i = 0.5 \left(1 + \frac{1}{\sqrt{1 + \frac{V_i}{22,800 A_{og}}}} \right) < 1.0 \quad (26.11-1)$$

where

A_{og} = total area of openings in the building envelope (walls and roof, in ft²)

V_i = unpartitioned internal volume, in ft³