Chapter 26
WIND LOADS: GENERAL REQUIREMENTS

26.1 PROCEDURES

26.1.1 Scope

Buildings and other structures, including the Main Wind-Force Resisting System (MWFRS) and all components and cladding (C&C) thereof, shall be designed and constructed to resist the wind loads determined in accordance with Chapters 26 through 31. The provisions of this chapter define basic wind parameters for use with other provisions contained in this standard.

26.1.2 Permitted Procedures

The design wind loads for buildings and other structures, including the MWFRS and component and cladding elements thereof, shall be determined using one of the procedures as specified in this section. An outline of the overall process for the determination of the wind loads, including section references, is provided in Fig. 26.1-1.

26.1.2.1 Main Wind-Force Resisting System (MWFRS)

Wind loads for MWFRS shall be determined using one of the following procedures:

(1) Directional Procedure for buildings of all heights as specified in Chapter 27 for buildings meeting the requirements specified therein;
(2) Envelope Procedure for low-rise buildings as specified in Chapter 28 for buildings meeting the requirements specified therein;
(3) Directional Procedure for Building Appurtenances (rooftop structures and rooftop equipment) and Other Structures (such as solid freestanding walls and solid freestanding signs, chimneys, tanks, open signs, lattice frameworks, and trussed towers) as specified in Chapter 29;
(4) Wind Tunnel Procedure for all buildings and all other structures as specified in Chapter 31.

26.1.2.2 Components and Cladding

Wind loads on components and cladding on all buildings and other structures shall be designed using one of the following procedures:

(1) Analytical Procedures provided in Parts 1 through 6, as appropriate, of Chapter 30;
(2) Wind Tunnel Procedure as specified in Chapter 31.

26.2 DEFINITIONS

The following definitions apply to the provisions of Chapters 26 through 31:

APPROVED: Acceptable to the authority having jurisdiction.

BASIC WIND SPEED, *V*: Three-second gust speed at 33 ft (10 m) above the ground in Exposure C (see Section 26.7.3) as determined in accordance with Section 26.5.1.

BUILDING, ENCLOSED: A building that does not comply with the requirements for open or partially enclosed buildings.

BUILDING ENVELOPE: Cladding, roofing, exterior walls, glazing, door assemblies, window assemblies, skylight assemblies, and other components enclosing the building.

BUILDING AND OTHER STRUCTURE, FLEXIBLE: Slender buildings and other structures that have a fundamental natural frequency less than 1 Hz.

BUILDING, LOW-RISE: Enclosed or partially enclosed buildings that comply with the following conditions:

1. Mean roof height h less than or equal to 60 ft (18 m).
2. Mean roof height h does not exceed least horizontal dimension.

BUILDING, OPEN: A building having each wall at least 80 percent open. This condition is expressed for each wall by the equation $A_o \geq 0.8\, A_g$ where

A_o = total area of openings in a wall that receives positive external pressure, in ft^2 (m^2)
A_g = the gross area of that wall in which A_o is identified, in ft^2 (m^2)

BUILDING, PARTIALLY ENCLOSED: A building that complies with both of the following conditions:

1. The 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 percent.
2. The total area of openings in a wall that receives positive external pressure exceeds 4 ft^2 (0.37 m^2)