

TABLE 1609.1.2
WIND-BORNE DEBRIS PROTECTION FASTENING SCHEDULE
FOR WOOD STRUCTURAL PANELS^{a, b, c, d}

FASTENER TYPE	FASTENER SPACING (inches)		
	Panel Span ≤ 4 feet	4 feet < Panel Span ≤ 6 feet	6 feet < Panel Span ≤ 8 feet
No. 8 wood-screw-based anchor with 2-inch embedment length	16	10	8
No. 10 wood-screw-based anchor with 2-inch embedment length	16	12	9
1/4-inch diameter lag-screw-based anchor with 2-inch embedment length	16	16	16

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.448 N, 1 mile per hour = 0.447 m/s.

- a. This table is based on 140 mph wind speeds and a 45-foot mean roof height.
- b. Fasteners shall be installed at opposing ends of the wood structural panel. Fasteners shall be located a minimum of 1 inch from the edge of the panel.
- c. Anchors shall penetrate through the exterior wall covering with an embedment length of 2 inches minimum into the building frame. Fasteners shall be located a minimum of 2 1/2 inches from the edge of concrete block or concrete.
- d. Where panels are attached to masonry or masonry/stucco, they shall be attached using vibration-resistant anchors having a minimum ultimate withdrawal capacity of 1,500 pounds.

1609.1.2.2. Application of ASTM E 1996. The text of Section 6.2.2 of ASTM E 1996 shall be substituted as follows:

6.2.2 Unless otherwise specified, select the wind zone based on the strength design wind speed, V_{ult} , as follows:

6.2.2.1 *Wind Zone 1*—130 mph ≤ ultimate design wind speed, V_{ult} < 140 mph.

6.2.2.2 *Wind Zone 2*—140 mph ≤ ultimate design wind speed, V_{ult} < 150 mph at greater than one mile (1.6 km) from the coastline. The coastline shall be measured from the mean high water mark.

6.2.2.3 *Wind Zone 3*—150 mph (58 m/s) ≤ ultimate design wind speed, V_{ult} ≤ 160 mph (63 m/s), or 140 mph (54 m/s) ≤ ultimate design wind speed, V_{ult} ≤ 160 mph (63 m/s) and within one mile (1.6 km) of the coastline. The coastline shall be measured from the mean high water mark.

6.2.2.4 *Wind Zone 4*— ultimate design wind speed, V_{ult} > 160 mph (63 m/s).

1609.1.2.3 Garage doors. Garage door glazed opening protection for wind-borne debris shall meet the requirements of an *approved* impact-resisting standard or ANSI/DASMA 115.

1609.2 Definitions. For the purposes of Section 1609 and as used elsewhere in this code, the following terms are defined in Chapter 2.

HURRICANE-PRONE REGIONS.

WIND-BORNE DEBRIS REGION.

WIND SPEED, V_{ult}

WIND SPEED, V_{asd}

1609.3 Basic wind speed. The ultimate design wind speed, V_{ult} , in mph, for the determination of the wind loads shall be determined by Figures 1609A, 1609B and 1609C. The ultimate design wind speed, V_{ult} for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609A. The ultimate design wind speed, V_{ult} for use in the design of Risk Category III and IV buildings and structures shall be obtained from Figure 1609B. The ultimate design wind speed, V_{ult} for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609C. The ultimate design wind speed, V_{ult} for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, V_{ult} , determined by the local jurisdiction shall be in accordance with Section 26.5.1 of ASCE 7.

In nonhurricane-prone regions, when the ultimate design wind speed, V_{ult} , is estimated from regional climatic data, the ultimate design wind speed, V_{ult} , shall be determined in accordance with Section 26.5.3 of ASCE 7.

1609.3.1 Wind speed conversion. When required, the ultimate design wind speeds of Figures 1609A, 1609B and 1609C shall be converted to nominal design wind speeds, V_{asd} , using Table 1609.3.1 or Equation 16-33.

$$V_{asd} = V_{ult} \sqrt{0.6} \tag{Equation 16-33}$$

where:

V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1.

V_{ult} = ultimate design wind speeds determined from Figures 1609A, 1609B or 1609C.

TABLE 1609.3.1
WIND SPEED CONVERSIONS^{a, b, c}

V_{ult}	100	110	120	130	140	150	160	170	180	190	200
V_{asd}	78	85	93	101	108	116	124	132	139	147	155

For SI: 1 mile per hour = 0.44 m/s.

- a. Linear interpolation is permitted.
- b. V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1.
- c. V_{ult} = ultimate design wind speeds determined from Figures 1609A, 1609B, or 1609C.