

**2003 Texas Revisions
to the 2003 International Building Code**

Chapter 16
Structural Design

Revise Section 1609.1.4 to read as follows:

1609.1.4 Protection of openings. For structures located in the Inland II area as adopted by the Texas Department of Insurance, protection of exterior openings from windborne debris is not required. For structures located in the Inland I area as adopted by the Texas Department of Insurance, glazed exterior openings in the lower 60 feet (18 288 mm) in buildings shall be impact resistant or protected with an impact resistant covering. For structures located in the Seaward area as adopted by the Texas Department of Insurance in wind-borne debris regions, all exterior openings glazing in the lower 60 feet (18 288 mm) in buildings shall be assumed to be openings unless such glazing is impact resistant or protected with an impact-resistant covering. Exterior openings shall include exterior windows, exterior doors, garage doors, and skylights. Exterior opening protection for windborne debris shall meet the requirements of an approved impact-resisting standard or ASTM E 1996 and of ASTM E 1886 referenced therein as follows:

1. ~~Glazed Exterior~~ openings located within 30 feet (9144 mm) of grade shall meet the requirements of the Large Missile Test of ASTM E 1996.
2. ~~Glazed Exterior~~ openings located more than 30 feet (9144 mm) above grade shall meet the provisions of the Small Missile Test of ASTM E 1996.

The products for exterior openings shall be installed in accordance with the manufacturer's approved installation instructions for the manner in which they were tested for uniform static wind pressure resistance and for windborne debris resistance. Removable windborne debris protection shall be installed on the exterior side of the building. Removable windborne debris protection shall have installation instructions provided.

Exceptions:

1. For structures located in the Inland I area, wood structural panels with a minimum thickness of 7/16 inch (11.1 mm) and maximum panel span of 8 feet (2438 mm) are permitted for opening protection in one- and two-story buildings. Panels shall be precut so that they can be attached to the buildings framing surrounding the opening containing the product with the glazed opening. Panels shall be installed on the exterior side of the building. Panels shall be labeled or marked to identify the proper installation location on the building. Panels shall be secured to cover the glazed openings with the attachment hardware provided. Installation instructions shall be provided. Attachments shall be designed to resist the components and cladding loads determined in accordance with the provisions of Section 1609.6.1.2. Attachment in accordance with Table 1609.1.4 is permitted for buildings with a mean roof height of 33 feet (10 058 mm) or less where wind speeds (3-second gust) do not exceed 130 mph (57.2 m/s). If attachments are determined using components and cladding, then the following limitations shall apply:
 - a) Panel span and fastener spacing shall be in accordance with Table 1609.1.4.
 - b) Attachment hardware shall comply with the footnotes of Table 1609.1.4.
 - c) Attachment hardware shall be secured to the wall framing only (wood or steel wall framing, concrete, or masonry block). Attachment hardware shall not be secured to exterior coverings or brick veneer unless the entire assembly is tested in accordance with 1609.1.4.
2. ~~Buildings in Category I as defined in Table 1604.5, including production greenhouses as defined in Section 1608.3.3.~~

TABLE 1609.1.4
 WINDBORNE DEBRIS PROTECTION FASTENING SCHEDULE
 FOR WOOD STRUCTURAL PANELS USED IN THE INLAND I AREA^{a,b,c}

FASTENER TYPE	FASTENER SPACING		
	Panel span ≤ 4 foot	4 foot < panel span ≤ 6 foot	6 foot < panel span ≤ 8 foot
2-1/2" #6 Wood screws	16"	12"	9"
2-1/2" #8 Wood screws	16"	16"	12"

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 0.454 kg,
 1 mile per hour = 0.44 m/s.

- a. This table is based on a maximum wind speed (3 second gust) of 130 mph and a 33-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" from the edge of the panel.
 - c. Fasteners shall be long enough to penetrate through the exterior wall covering and a minimum of 1 1/4" into wood wall framing and a minimum of 1 1/4" into concrete block or concrete. Fasteners shall be located a minimum of 2 1/2" from the edge of the concrete block or concrete.
 - ed. Where screws are attached to masonry or masonry/stucco, they shall be attached utilizing vibration-resistant anchors having a minimum ultimate withdrawal capacity of 490 pounds.
2. For structures located in the Seaward area, wood structural panels with a minimum thickness of 15/32 inch (11.9 mm) shall be permitted for exterior opening protection in one-and two-story buildings. Panels shall be precut so that they be attached to the buildings framing surrounding the opening containing the exterior opening product. Panels shall be installed on the exterior side of the building. Panels shall be labeled or marked to identify proper installation location on the building. Panels shall be secured with the attachment hardware provided. Installation instructions shall be provided. The panels and their attachment to the structure shall meet the requirements of the Large Missile test using either an approved impact-resisting standard or ASTM E 1996 and ASTM E 1886 referenced therein. The panels shall be installed in accordance with the manner in which they were tested for uniform static wind pressure resistance and for windborne debris resistance.

Add the following new section:

SECTION 1716
CORROSION RESISTANCE

1716.1 Corrosion resistance. Metal connectors and fasteners shall be corrosion resistant in accordance with the following:

1716.1.1 Seaward areas.

- 1. Open Areas:** Metal connectors and fasteners located in open areas shall be either stainless steel and meet ASTM A167; hot-dip galvanized after fabrication and meet ASTM A123 or ASTM A153; or hot-dip galvanized or galvanized prior to fabrication and meet ASTM A653. Open areas shall include porches, exterior coverings, roof coverings, and the underside of elevated structures.
- 2. Vented or Enclosed Areas:** Metal connectors and fasteners located in vented or enclosed areas may meet the requirements of Item 1 above or shall be hot-dip galvanized or electrogalvanized in accordance with ASTM A641; mechanically deposited zinc coatings in accordance with ASTM B695; or electrodeposited zinc coatings in accordance with ASTM B633. Vented or enclosed areas shall include attics, exterior wall stud cavities, and crawl spaces. **Exception:** One-half inch diameter or greater steel bolts are not required to be corrosion resistant.
- 3. Conditioned Areas:** Metal connectors and fasteners located in conditioned areas are not required to be corrosion resistant. Conditioned areas include heated and cooled living areas.

1716.1.2 Inland I and Inland II areas.

- 1. Open Areas:** Metal connectors and fasteners located in open areas shall be either stainless steel and meet ASTM A167; hot-dip galvanized after fabrication and meet ASTM A123 or ASTM A153; hot-dip galvanized or galvanized prior to fabrication and meet ASTM A653; hot-dip galvanized or electrogalvanized in accordance with ASTM A641; mechanically deposited zinc coatings in accordance with ASTM B695; or electrodeposited zinc coatings in accordance with ASTM B633. **Exception:** One-half inch diameter or greater steel bolts are not required to be corrosion resistant. Open areas shall include porches, exterior coverings, roof coverings, and the underside of elevated structures.
- 2. Vented or Enclosed Areas:** Metal connectors and fasteners located in vented or enclosed areas may meet the requirements of Item 1 above or shall be epoxy-coated in accordance with ASTM A899. **Exception:** One-half inch diameter or greater steel bolts are not required to be corrosion resistant. Vented or enclosed areas shall include attics, exterior wall stud cavities, and crawl spaces.
- 3. Conditioned Areas:** Metal connectors and fasteners located in conditioned areas are not required to be corrosion resistant. Conditioned areas include heated and cooled living areas.

Chapter 35
Referenced Standards

Add the following standard:

ASTM		
	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959	
Standard Reference Number	Title	Referenced in code section number
<u>B 695-00</u>	<u>Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel</u>	<u>1716</u>