# SECTION 08510
# STEEL WINDOWS
## Prime Steel Fixed Lite (700)

*Use "Tools"/"Options"/"View"/"Hidden Text" to view hidden notes and edit.*

**** NOTE TO SPECIFIER ****

spec 700.doc 9/10/2009

**This sections is based on the products of D.V. Fyre-Tec, Inc which is located at:**
**701 Centennial Road**
**Wayne, NE 68787**
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**PART 1 GENERAL**

1.1 SECTION INCLUDES

A. Steel Windows (Fixed Lite)

1.2 RELATED SECTIONS

A. Section 08800 – Glass, Glazing, and Glazing Materials

1.3 REFERENCES

A. ASTM A 569-(1991a; R 1993) Steel, Carbon (0.15 Maximum, Percent), Hot-Rolled Sheet and Strip Commercial Quality

B. ASTM A 653-(1994) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

C. ASTM B 633-(1985; R 1994) Electrodeposited Coatings of Zinc on Iron and Steel

D. ASTM B 766-(1986; R 1993) Electrodeposited Coatings of Cadmium

E. ASTM E 283-(1991) Determining the Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors Under Specific Pressure Differences Across the Specimen

F. ASTM E 330-(1990) Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference

G. ASTM E 547-(1993) Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential

H. ASME B18.6.3- (1972; R 1991) Machine Screws and Machine Screw Nuts

I. ASME B18.6.4- (1981; R 1991) Thread Forming and Thread Cutting Tapping Screws and Metallic Drive Screws (Inch Series)

1.4 PERFORMANCE REQUIREMENTS

A. Steel windows shall conform to the voluntary specifications in AAMA/NWWDA 101/I.S.2-97 and be designed to meet the following performance requirements. Fire-rated windows shall bear the Underwriters Laboratories, Inc. label including the manufacturer's file number for the indicated rating.

1. Air Infiltration: Air infiltration shall not exceed .3 SCFM per square foot of window area at a static air pressure difference of 1.57 PSF as established by AAMA/NWWDA 101/I.S.2-97 when tested in accordance with ASTM E 283.

2. Water Resistance: When tested in accordance with ASTM E 547, there shall be no water leakage at a static air pressure difference of 9 PSF.

B. Life Safety Criteria: Windows shall conform to NFPA 101 Life Safety Code when rescue and/or second means of escape are indicated.

1.5 SUBMITALS

A. Manufacturer's descriptive data and catalog cut sheets.

B. Drawings indicating elevations of windows, rough-opening dimensions for each type and size of windows, section details, fastenings, methods of installation and anchorage, connections with other work, type of wall construction, method of glazing, types and locations of operating hardware, mullion details, weather-stripping details, screen details, and window schedules showing locations of each window type and indicting compliance with fire safety code, where required.

C. Manufacturer's preprinted installation instructions and cleaning instructions.

D. Manufacturer's standard color samples of painted finishes.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

B. Manufacturer's Qualifications: A firm with not less than 10 years experience in manufacture of similar type steel windows.

1.7 DELIVERY, STORAGE AND HANDLING

A. Delivery:

1. Manufacturer's original, unopened, undamaged containers, identification labels intact. Inspect for damage upon delivery.

2. Handle and store products according to manufacturer's recommendations.

B. Storage and Protection:

1. Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended be manufacturer

2. Store windows to prevent damage or marring of finish. Store in shipping containers under cover on building site.

1.8 PROJECT CONDITIONS

A. Verify actual openings by field measurements before fabrication, show recorded measurements on shop drawings.

B. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.9 WARRANTY

A. Manufacturer's standard warranty to be 3 years from the date of substantial completion.

**PART 2 PRODUCTS**

2.1 MANUFACTURERS

A. Series 700 Fixed Lite Windows as manufactured by D.V. Fyre-Tec, Inc.; 701 Centennial Road; Wayne, NE 68787; Tel: 1-800-377-3261; Fax; 1-402-375-4261; Web: www.fyre-tec.com; Email; fyretec@inebraska.com.

B. Architect approved equal.

2.2 STEEL WINDOW TYPES

A. Fixed Lite steel windows shall be designed for inside field glazing, and for glass types scheduled on drawings or otherwise specified. Units shall be complete with glass and glazing provisions to meet requirements of paragraph WINDOW PERFORMANCE. Glazing material shall be compatible with steel, and shall not require painting.

2.3 MATERIALS

A. Steel Frames and Inserts

1. Steel frames shall be fabricated from roll-formed galvanized lock-forming quality steel per ASTM A 653.

2. Frame corners shall mitered and welded. Integral muntins where required shall be galvanized roll-formed material fitted and welded.

B. Installation Kits

**** NOTE ** Delete one of the following two paragraphs.**

1. Provide attachable fin installation kits for all windows.

2. Provide subframe installation kits for all windows.

C. Formed Component Parts

1. Formed component parts shall be hot-rolled sheet steel conforming to ASTM A 569, commercial quality with a minimum of 0.15 percent carbon.

2. Sheet steel shall be zinc coated (galvanized) by the hot-dip process in accordance with ASTM A 653 or ASTM A 924.

D. Screws and Bolts

1. Screws and bolts shall conform to ASTM B 766, ASME B18.6.3 and ASME B18.6.4.

E. Fasteners

1. Fastening devices shall be window manufacturer's design made from non-magnetic stainless steel, cadmium-plated steel, zinc-plated steel, nickel/chrome-plated steel or magnetic stainless steel.

F. Window Anchors

1. Anchors for installing windows shall be stainless steel or hot-dip zinc coated steel conforming to ASTM A 123.

G. Glass and Glazing

1. As specified in Section 08800.

2.4 FABRICATION

A. Fabricate windows in accordance with approved shop drawings.

B. Frame sections shall be one piece sections with corners mitered, welded and dressed smooth.

C. Required muntins shall be securely welded to the frame members and at all intersections.

D. All windows shall be designed for inside glazing.

E. All windows shall be factory glazed

2.5 FINISHES

**** NOTE ** Delete two of the following three paragraphs.**

A. Prime Coat

1. Steel windows, fins, mullions, cover plates and associated parts shall be cleaned, pre-treated with iron phosphate and factory painted manufacturer's standard primer coat in a dry film thickness of not less than 0.025 mm (1.0 mil).

B. Finish Coat – Manufacturer's Standard Color

1. Steel windows, fins, mullions, cover plates and associated parts shall be cleaned, pre-treated with iron phosphate and factory powder coated and cured with a manufacturer's standard color in a dry film thickness of not less than 0.050 mm (2.0 mil).

C. Finish Coat – Specified Color Match

1. Steel windows, fins, mullions, cover plates and associated parts shall be cleaned, pre-treated with iron phosphate and factory coated with baked alkyd enamel with a manufacturer's standard color in a dry film thickness of not less than 0.050 mm (2.0 mil).

**PART 3 EXECUTION**

3.1 EXAMINATION

A. Window openings shall conform to details and dimensions shown on the approved shop drawings.

B. Notify the Architect immediately of conditions that may adversely affect the window installation. Correct conditions prior to installing windows

3.2 INSTALLATION

A. Steel windows shall be installed in accordance with approved shop drawings and manufacturer's approved recommendations.

B. Steel surfaces in close proximity with masonry, concrete, wood, and dissimilar metals other than stainless steel, zinc, cadmium, or small areas of white bronze shall be protected from direct contact.

C. Verify that weep features at the bottom of the sills are opened at least 1/8" x 1". Failure to do so may lead to premature finish failures.

D. The completed window installation shall be watertight.

3.3 ADJUSTING AND CLEANING

A. Steel window finish and glass shall be cleaned on interior and exterior sides in accordance with window manufacturer's recommendation. Alkaline, abrasive or brick wash agents shall not be used.

B. Operable sash shall be adjusted per manufacturer's instruction to provide minimal operating force.

3.4 PROTECTION

A. Protect installed products and finished surfaces from damage during construction.

B. Touch-up any abraded surface of the window finish with air dry paint furnished by the window manufacturer.

-- END OF SECTION --