

## SECTION 08677 - STEEL SINGLE HUNG 3/4 HOUR FIRE WINDOW

### 1.01 SUMMARY

#### A. WORK INCLUDES:

1. Steel single hung windows with 45 minute fire rating.

#### B. RELATED SECTIONS:

1. Section 08100: Hollow steel doors and frames.
2. Section 08800: Glazing.

### 1.02 REFERENCES

#### A. American National Standards Institute (ANSI) Z97.1- Safety Glazing Materials Used in Safety Performance Specifications and Methods of Test.

#### B. American Society for Testing and Materials (ASTM):

1. ASTM A366-Specification for Steel, Sheet, Carbon, Cold-rolled, Commercial Quality.
2. ASTM C1036-Specification for Flat Glass.
3. ASTM E163-Fire Tests of Window Assemblies.

#### C. National Fire Protection Agency (NFPA) NFPA 257-Fire Tests of Window Assemblies.

### 1.03 SYSTEM DESCRIPTION

#### A. DESIGN REQUIREMENTS: Provide 45 minute fire rated steel single hung windows complying with the requirements of Underwriters Laboratories File #R19270, when tested in accordance with UL 10C and UBC 7-4.

### 1.04 SUBMITTALS

#### A. PRODUCT DATA: Submit manufacturer's specifications, recommendations and standard details, including details on fabrication, finishing, glazing, accessories and other components of work.

#### B. SHOP DRAWINGS: Submit shop drawings indicating opening dimensions, framed opening tolerances, affected related work, and installation requirements of window units and components.

#### C. CERTIFICATES: Submit certification reports prepared by independent testing agency indicating that system complies with specified requirements.

### 1.05 DELIVERY, STORAGE AND HANDLING

#### A. All materials shall be unloaded and stored off the ground in a protected area designated by the general contractor, which is secured and convenient to the area of installation.

#### B. Avoid uses of plastic or canvas coverings which could trap moisture.

### 2.01 MANUFACTURER

#### A. For function and quality, the Drawings and Specifications are based on the Series 425 Steel Single Hung Window as manufactured by:

1. **Fire Windows & Doors:** 22850 Perry Street, Perris, CA 92570.  
Phone (951) 943-1780, Fax (951) 943-2894.

### 2.02 MATERIALS

#### A. Cold-rolled steel sheets: ASTM 366, commercial quality carbon steel.

#### B. Hot-rolled steel: ASTM A36, commercial quality carbon steel.

#### C. PRIMER: Manufacturer's standard rust inhibiting primer, compatible with finish painting specified in Section 09900.

#### D. GLASS: Provide labeled glass complying with the requirements of Section 08800. Each piece of glass to carry certification agency label.

#### E. FASTENERS:

1. Manufacturer's standard fasteners, compatible with steel window members, trim hardware and other components of window units.
  - I. Provide concealed fasteners wherever possible.
  - II. Provide exposed fasteners which match finish of member or hardware being fastened.

#### F. HARDWARE:

1. Manufacturer's standard chrome sweep latch at interlock.
2. Provide spring balances capable of holding sash in any open position.
3. Attach one of the spring balances to the window frame through a 165 degree fusible link so that upon release the window vent will close from any open position.

#### G. WEATHER-STRIPPING: The vent shall be fully weather-stripped with manufacturer's standard weather-stripping.

### 2.03 MANUFACTURED UNITS

#### A. Provide units containing vertical sliding sash, with interlocking stiles.

#### B. FRAME

1. 16 gauge cold rolled steel head, jambs, and sill.
2. Frame depth to be a minimum of 4 1/4".

#### C. MUNTINS: 1/8" hot rolled steel or 16 gauge cold rolled steel sheet.

#### D. CORNERS: Corners of frames and ventilators shall be coped or mitered and electrically welded; exposed welds shall be dressed smooth.

#### E. Provide gasketed side rails in the window vents to assure a smooth vertical sliding section.

#### F. GLAZING GASKETS: As required for fire resistance ratings.

### 2.04 FABRICATION

#### A. GENERAL:

1. Provide manufacturer's standard fabrication and accessories that comply with specification requirements.
2. Fabricate metal work neat in appearance and free from defects, warp or buckle.
3. Accurately form metal to required sizes and profiles.
4. Fabricate frames, concealed stiffeners, reinforcing, edge channels and other components from cold rolled steel.
5. Prepare sash for pre-glazing at factory or field glazing.
6. Identify each assembly with factory applied labels indicating fire rating, company name, address, evaluation report number, serial number and inspection agency name and logo.
7. Maximum Glass Lite Size: 2354 square inches.
8. Provide fixed and sliding panel with overlapped joints to prevent cracking and provide positive seal.
9. Anchors, attachments, and shims supplied by others.

### 2.05 FINISH

#### A. Clean, treat and prime surfaces of fabricated units.

#### B. Clean steel surfaces free of mill scale, rust, oil, grease, dirt and other foreign materials before application of factory baked powder coat finish.

### 3.01 INSTALLATION

#### A. Comply with manufacturer's specifications and recommendations for installation of window units, hardware, operators and other components of work.

#### B. Do not install until finishing of concrete, masonry, or other operations harmful to glass are complete.

#### C. Set units plumb, level and true to line without warp or rack of frames or sash.

#### D. Anchor securely in place in accordance with manufacturer's requirements to maintain fire rated barrier.

### 3.02 ADJUSTING

#### A. Adjust operating sash and hardware to provide tight fit at contact points, sill and at the interlock.

#### B. Lubricate hardware and moving parts, if necessary.

#### C. Touch-up marred or abraded surfaces to match original finish.

### 3.03 CLEANING: Clean steel and glass surfaces promptly after installation of windows.

**Fire Windows & Doors**

**22850 Perry Street  
Perris, CA 92570  
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**Dealer:**