SECTION 111904 - STEEL SECURITY SCREENS

1. GENERAL
   * + 1. SUBMITTALS
          1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
          2. Manufacturer’s installation instructions shall be provided along with product data.
          3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
          4. Shop Drawings: Show fabrication details and connections to adjacent work.
          5. Product Data: Manufacturer’s catalog sheets, specifications, and installation instructions.

USE PARAGRAPH BELOW WITH EPD REQUIREMENT WHEN PROJECT ESTIMATE IS $1M OR MORE.

* + - * 1. Submit an Environmental Product Declaration (EPD) from the manufacturer for steel frames within this specification section, if available. A statement of the contractor’s good faith effort to obtain the EPD shall be provided if not available.

Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services.*

* + - 1. QUALITY ASSURANCE
         1. Manufacturer: Furnish products of a recognized producer of steel security screens.

1. PRODUCTS
   * + 1. STEEL SECURITY SCREENS
          1. Frames: Assemblies consisting of a fixed unit and a hinged unit.

Check gage of metal with Designer. Heavier gage may be desired for large units.

Stiles and rails of the hinged unit shall be tubular in cross section and shall conceal the locking mechanism and the rod attachment. Tubular members shall be formed from channel members of not less than 12 gage steel with 12 gage cover plate on the outer side. Cover plates shall be attached with 1/4 inch steel rivets with steel mandrels, or with 1/4 inch machine screws with knock-off heads, spaced not more than 12 inches on center, and not more than 3 inches from the ends. Space between cover plates and channel members at point of rod intersection shall be 1/8 inch or less. Stiles and rails shall be mitered and welded at the corners, with welds ground smooth on exposed surfaces. Channel members shall have weep holes at both sides of all 4 corners.

Fixed unit shall be fabricated of not lighter than 12 gage steel, approved standard design with members mitered and welded at the corners, with welds ground smooth on exposed surfaces.

Joints between fixed and hinged members shall be equal on all four sides of the frames and shall not exceed 1/8 inch in width.

Hinged units shall have rubber bumpers at lock bolt housing side.

* + - * 1. Woven Rod: 3/8 inch diameter oil tempered steel rod, hardness between 38 and 42 on the Rockwell C Scale, arch or intermediate crimped. Each individual rod shall be welded at each point at which it intersects the main frame.
        2. Hinges: Concealed, electro-plated .125 inch steel, with 1/4 inch diameter loose stainless steel pins for each screen.
        3. Locking System:

Each screen shall be equipped with reinforced lock bolts that operate simultaneously from bit key lock through 1/8 x 3/8 inch rectangular or 1/4 inch diameter steel, full hard temper bars. Case shall be three pieces of .090 inch steel with .050 inch steel cover to accept 1/2 inch diameter, minimum x 1-3/8 inches long, case hardened steel bolt. Bolt shall have a minimum travel of 1/2 inch. Bolt slide cover shall be attached to main body of case by two steel shoulder type rivets. Bolt reinforcement shall be welded to main body.

Lock shall have a minimum of four tumblers.

Two or three point locking, as required, shall be actuated simultaneously by bit key in control assembly (lock case) accessible from both sides of screen through contoured key holes in stiles.

Materials: Lock tumblers shall be brass or Type 302 stainless steel; tumbler springs phosphor bronze or beryllium copper alloy, securely staked; slide bolts of case-hardened steel; lock case and cover, and all other parts, brass, electro-plated steel, or Type 302 stainless steel.

Consult with hardware specification writer for keying details.

Keying:

* + - * 1. Scribe Members: Minimum 16 gage steel, and as required to form a close fitting joint between jambs and head of the opening and the screen frame.
      1. FINISHES
         1. General: Except for galvanized or cadmium plated ferrous metal, all ferrous metal work included in this Section including scribe members shall be completely finished on all exposed and concealed surfaces, in the shop, using one of the following methods:

Method 1: The ferrous metal shall be thoroughly cleaned, zinc phosphate in a 5 stage process, one coat of baked-on epoxy primer, followed by an oven baked coat of acrylic or polyester enamel of standard color as selected.

Method 2: The ferrous metal shall be thoroughly cleaned, given a coat of rust inhibitive primer and then given 2 coats of manufacturer’s standard enamel of standard color as selected.

1. EXECUTION
   * + 1. INSTALLATION
          1. Install Work of this Section in accordance with the manufacturer’s printed instructions, except as otherwise shown or specified.
          2. Locate fastenings at head and jambs of openings not more than 3 inches from ends of each member. Space fastenings not more than 12 inches on centers between end fastenings.
       2. ADJUSTING
          1. Adjust hardware to work properly.
          2. Touch up damaged painted surfaces after installation is complete.
       3. CLEANING
          1. After installation, clean all surfaces of screens and frames of all foreign material. Comply with manufacturer’s printed recommendation for cleaning the type of finish specified.

END OF SECTION 111904