SECTION 085656 – SECURITY WINDOW SCREENS

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes:

Screen and framing for security windows.

* + - 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. Product Data: For each type of window screen.

Include catalog sheets, specifications, and manufacturer’s installation instructions for screen units.

* + - * 1. Shop Drawings: Show fabrication details and connections to adjacent construction.
        2. Samples:

Wire Cloth: 12 x 12 inch sections.

Retain next subparagraph for large projects.

One complete aluminum protection screen unit, sized to fit one opening to receive protection screens, with hardware and specified finish. This sample will be returned and, if approved, may be used in the Work.

* + - * 1. Quality Control Submittals:

Manufacturer's Qualifications Data: Manufacturer's name, address, telephone number, and contact person.

* + - 1. QUALITY ASSURANCE
         1. Manufacturer's Qualifications: The manufacturer of protection screens shall be regularly engaged in the production of protection screens and shall be subject to the approval of the Director.
      2. DELIVERY, STORAGE, AND HANDLING
         1. Deliver protection screens in protective containers, marked with identification for location.
         2. Store and handle protection screens in a manner that will not cause damage to the finish.

1. PRODUCTS
   * + 1. MANUFACTURERS
          1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to the following:

Airtec Corporation; Aluminum Protection Screens.

Kane Manufacturing Corp; Aluminum Van-Guard Screens.

Or equal.

* + - 1. MATERIALS
         1. Aluminum:

Extruded Shapes: 6063 alloy, T5 or T6 temper.

* + - * 1. Fasteners: Type 316 stainless steel.
        2. Expansion Anchor Devices: Wedge type expansion bolt anchors; FS FF-S-325, Group II, Type 4, Class 1.
        3. Bituminous Coating: Cold-applied asphalt mastic complying with SSPC - PAINT 12, compounded for 30 mil thickness per coat.
      1. ALUMINUM PROTECTION SCREEN UNITS
         1. Frames: Assemblies consisting of a fixed unit and a hinged unit.

Fixed Unit Stiles and Rails: Sections of minimum .125 inch thickness and of greater thickness at points of stress. Fixed unit shall have a minimum weight of .548 pound per foot. Stiles and rails shall be mitered and welded and ground smooth at corners. Welding shall be continuous for the full contact surface of the joint.

Hinged Unit Stiles and Rails: Sections of minimum .125 inch thickness and of greater thickness at points of stress. Hinged unit shall have a minimum weight of .844 pound per foot and shall have a removable cover plate of minimum .060 inch thickness to cover the locking mechanism when the unit is open. Stiles and rails shall be mitered and welded at corners. Intermediate rails shall be coped and welded to the stiles at each end. Welding at intersection of stiles and rails shall be continuous for the full contact surface of the joint, and ground smooth.

Hinged units having a height of 4 feet or more shall have a horizontal intermediate rail.

* + - * 1. Wire Cloth: .028 inch diameter Type 302/304 (18/8) stainless steel wire, having a minimum tensile strength of 150,000 psi before weaving, woven 12 mesh to the inch. Cloth shall have double crimped wire crossings with a minimum crimp ratio of 45 percent and a woven wire tensile strength of not less than 800 lb per lineal inch.

Secure wire cloth by folding it over the edge of the hinged unit and holding it in place by retainer clips or by the cover plate and screws.

* + - * 1. Hardware: Equip screens with the following:

Hinges: Concealed hinges of electro-plated, .125 inch thick steel, with 1/4 inch diameter loose hard brass pins, in quantity required.

Locking System:

Mechanism consisting of connecting rods or bars, slide bolts, and key control assembly concealed in stile.

Two point or three point locking, as required, shall be actuated simultaneously by bit key in lock case approximately 7/8 inch thick, 1-1/2 inches wide, and 2-3/4 inches high, with projecting bar approximately 5-1/2 inches long.

Lock case shall be fastened to screen edge with machine screws, and projecting bar linked to connecting rods with cotter pins, for removal without disassembly of complete locking system.

Lock shall have three lever tumblers and key shall be nonremovable in the unlocked position.

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

Consult With Hardware Spec. Writer For Details.

Keying:

Key Holes: Screens shall have contoured key holes on both sides of lock stile to permit operation of locking mechanism by bit key from interior and exterior of building.

* + - * 1. Scribe Members: Members minimum .060 inch thick for each screen unit as required to form a close fitting joint between jambs and head of opening and the screen frame.
      1. GENERAL FINISH REQUIREMENTS
         1. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
      2. FINISHES

If retaining more than one finish in paragraphs below, indicate location of each on Drawings.

* + - * 1. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.
        2. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

Options in "Color" subparagraph below are examples only and may vary in color range and availability among manufacturers.

Color: [Light bronze] [Medium bronze] [Dark bronze] [Champagne] [Black] [Match **Director’s Representative** sample] [As selected by **Director’s Representative** from full range of industry colors and color densities] <Insert color>.

"Baked-Enamel or Powder-Coat Finish" paragraph below references AAMA standard for pigmented organic coating.

* + - * 1. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

Color and Gloss: [As indicated by manufacturer's designations] [Match Director’s Representative sample] [As selected by Director’s Representative from manufacturer's full range] <Insert color and gloss>.

Only a few manufacturers offer high-performance finishes; verify availability. If specific products are required, name coating manufacturers and products.

* + - * 1. High-Performance Organic Finish: Two-coat fluoropolymer finish complying with AAMA 2604 and containing not less than [**50**] [**70**] percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions [**for seacoast and severe environments**].

Color and Gloss: **[As indicated by manufacturer's designations] [Match Director’s Representative sample] [As selected by Director’s Representative from manufacturer's full range] <Insert color and gloss>.**

1. EXECUTION
   * + 1. EXAMINATION
          1. Verification of Conditions: Examine surfaces to receive aluminum protection screens for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.
       2. PREPARATION
          1. Surface Preparation: Paint aluminum surfaces in contact with masonry and incompatible metals with bituminous coating.
       3. INSTALLATION
          1. Install the Work of this Section in accordance with the manufacturer's printed instructions, except as shown or specified otherwise.
          2. Anchor screen units and scribe members securely in place, plumb, level, aligned, without warp of frames.
       4. ADJUSTING
          1. Adjust hardware for smooth operation and secure closure.
       5. CLEANING
          1. Clean aluminum surfaces promptly after installation.

END OF SECTION 085656