

SECTION 08 56 66
SECURITY AND PROTECTION WINDOW SCREENS

PART 1 - GENERAL**1.1 DESCRIPTION**

Security and protection screens consist of a sub-frame, main frame with wire cloth and support assembly, security lock and bolt, hinges and all fittings and anchors required.

1.2 RELATED WORK

- A. Section 08 51 13, ALUMINUM WINDOWS.
- B. Color of finish paint: Section 09 06 00, SCHEDULE FOR FINISHES.
- C. Preparation and finish of frames: Section 09 91 00, PAINTING.

1.3 MANUFACTURERS QUALIFICATIONS

- A. Approval by COR is required of products of proposed manufacturer or supplier, and will be based upon submission by Contractor of certification.
- B. Contractor certifies that the manufacturer regularly and presently manufactures security and protection screens as one of his principal products.
- C. Contractor certifies that the manufacturer's product submitted has been in satisfactory and efficient operation on three installations similar or equivalent to this project for three years. Submit list of installations. List shall include name of project and owner and location of project.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples: One completely finished security screen and one completely finished protection screen as specified. Upon approval, screen may be installed on the job.
- C. Shop Drawings: Complete details (1/2 full scale), showing details of construction and anchorage, relation to details of the windows and clearances required and window operators.
- D. Manufacturer's Certificates:
 - 1. Indicating manufacturer's qualification specified.
 - 2. Indicating wire screen cloth meets the requirements specified.
- E. Manufacturer's Literature and Data:
 - 1. Security Screen.
 - 2. Protection Screen.

1.5 PROJECT CONDITIONS

Field Measurements: Field measure openings before ordering. Be responsible for proper fit of field measured products.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Material:
A653/A653M-10.....Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.

PART 2 - PRODUCTS

2.1 WIRE CLOTH

Stainless steel wire cloth woven from 0.7 mm (0.028-inch) diameter Type 304 stainless steel wire, woven 12 mesh, double crimped.

2.2 SHEET STEEL

ASTM A653/A653M

2.3 FABRICATION

- A. Make screens units without muntins and design to be mounted flush with trim, frame or wall face.
- B. Fabricate scribe members from 1.5 mm (0.0598-inch) thick sheet steel and install at head and jambs of openings.
- C. Frames: Weld corners of fixed and hinged frames continuously. Outside reinforcements or projections will not be permitted. Dress welds smooth so as to be inconspicuous. Round exposed edges and corners.
- D. Drill and tap fixed frames for adjustment against scribe members.
- E. Reinforce frames lighter than 2.5 mm (0.105-inch) thick steel at locks and hinges with steel plates not less than 5 mm (3/16-inch) thick.

2.4 SECURITY WINDOW SCREENS

- A. Security Window Screens: Kane Manufacturing Corporation Model S-VAN-O or approved equal.
- B. Main Frame:
 - 1. The main frame shall be of box channel design and formed of 12-gauge steel. The corners of the main frame shall be notched for self-aligning and welded on both sides. Braces shall be furnished when required.
 - 2. Concealment plates of 12-gauge steel shall be applied to the back of the main frame to conceal the locking mechanism and retain the wire cloth. The concealment plates shall be attached to the main frame along the inner and outer edges using tamper-resistant screws. Inner

screws shall penetrate the concealment plate, wire cloth, and main frame approximately 4 inches on center.

- C. Sub-Frame: The sub-frame shall be formed of 12-gauge steel on all sides. The corners of the sub-frame shall be notched for self-aligning and welded on both sides to provide a rigid frame within which the main frame operates.
- D. Infill Attachment: The wire cloth shall be folded 90 degrees on the edges and held securely in place by means of a removable concealment plate of not less than 12-gauge steel and tamper-resistant screws. Tamper-resistant screws shall penetrate the concealment plate and main frame along the outer edge. The inner tamper-resistant screws shall penetrate the infill, concealment plate, and the main frame approximately 4 inches on center.
- E. Hardware: Each screen shall come fully assembled and tested from the factory and include:
 - 1. Locks and Releases: Each screen shall have a concealed actuating ball bearing, 1/2 inch diameter, casehardened steel bolts. The bolts shall operate simultaneously from one key station with a special Bitt key.
 - 2. Hinges: Each screen shall be provided with two or more concealed 13-gauge, electroplated steel hinges with 1/4 inch diameter hardened, loose stainless steel pins and integral compression guards. Hinges shall be spaced at a maximum of 24 inches on center.
 - 3. Scribes: 16-gauge 3/4 inch by 1 inch steel scribes shall be supplied at the head and jambs as required.
- F. Finish: All interior and exterior surfaces of the main frame, sub-frame, and concealment plates shall be finished to meet the following:
 - 1. Hot-dipped galvanized or galvanized finish which shall be thoroughly cleaned in a 5-step bonderizing process.
 - 2. Finish surfaces shall receive an electrostatically applied thermoplastic, polyester powder coating baked to a hard mar-resistant finish. Coating shall meet or exceed AAMA 2603.
 - 3. Color: Finish color of main frame, sub-frame, and concealment plates shall match the window frame color or as directed by the COR.
- G. Infill Color: The infill screen shall be coated such that the color of the upper portion corresponding to the window jump-in panel shall match the color of the exterior of the jump-in panel and the color of the remaining lower portion shall be black or as directed by the COR.

2.5 PROTECTION SCREENS

- A. Protection Screens: Kane Manufacturing Corporation Model APROZ or approved equal.
- B. Main Frame:

1. The main frame shall be not less than 1 inch by 1-1/2 inches wide, "L" shape and extruded from 6063-T6 aluminum alloy. Weight shall be not less than 0.422 lbs/ft, with a nominal thickness of 0.075 inches. The corners of the main frame shall be mitered, fitted with an internal tension coupling assembly and fastened. The screen frame shall have an integral groove for the retention of a combination cushioning strip/insect shield.
 2. A removable concealment plate, extruded from 6063-T6 aluminum alloy shall be attached to the main frame using tamper-resistant screws. Weight shall not be less than 0.068 lbs/ft with nominal thickness of 0.050 inches.
- C. Infill Attachment: The wire cloth shall be hemmed 180 degrees and retained by a removable concealment plate and tamper-resistant screws. Tamper resistant screws shall penetrate the concealment plate, infill screen, and main frame approximately 4 inches on center.
- D. Finish: The main frame, concealment plate, and infill screen shall be thoroughly cleaned in a 5-step bonderizing process. An electrostatically applied thermoplastic, polyester powder coating (2.5 mil minimum thickness) shall be applied and baked to a hard mar-resistant finish. Coating shall meet or exceed AAMA 2603. Finish color of the main frame shall match the window frame or as directed by the COR. Finish color of the concealment plates and infill screen shall be black or as directed by the COR.

PART 3 - EXECUTION

3.1 INSPECTION

Verify that openings fit allowable tolerances, are plumb, level, provide solid anchoring surface, and comply with approved shop drawings.

3.2 INSTALLATION

- A. Install in accordance with approved shop drawings and specifications.
- B. Plumb and align faces in a single plane and erect screens square and true, adequately anchored to structure.
- C. After completion of installation, screens shall be adjusted, in working order, and clean.
- D. A minimum of 5 security screen Bitt keys shall be provided to VA at the completion of installation.

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