

SECTION 10710

EXTERIOR SHUTTERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Ornamental Fixed Shutters.
- B. Top-Hinged Shutters.
- C. Folding Shutters.
- D. Sliding Shutters.
- E. Sliding Louvered Doors.
- F. Folding Louvered Doors.
- G. Window and Door Inserts.
- H. Equipment Screens.
- I. Sunscreens.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications.
- B. Section 06100 - Rough Carpentry.

1.3 REFERENCES

- A. ASTM B 209/B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- B. ASTM B 221/B 221M - Standard Specification for Aluminum and Aluminum-Alloy Bars, Rods, Wire, Shapes, and Tubes.
- C. FS HH-I-524A - Specification for Expanded Polystyrene Insulation Board.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's descriptive literature for products specified in this section.

- C. Shop Drawings: Indicate shutter sizes, and mounting details for project conditions.
- D. Selection Samples: Two sets, representing manufacturer's full range of available finish selections.
- E. Verification Samples: Two samples, minimum surface 36 square inches each, indicating match to specified finish.
- F. Quality Assurance Submittals:
  - 1. Certificates: Contractor's certification that:
    - a. Products of this section, as provided, meet or exceed specified requirements.
    - b. Manufacturer of products of this section meets specified qualifications.
  - 2. Manufacturer's Instructions: Printed installation instructions for each specified product.
- G. Closeout Submittals:
  - 1. Operation and maintenance data: Manufacturer's printed instructions for maintaining operating hardware and finishes.
  - 2. Warranty documents: Issued and executed by manufacturer of product, in Owner's name.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum five (5) years documented experience producing products specified in this section.
- B. Regulatory Requirements: Specified products to conform to requirements of South Florida Building Code.
- C. Pre-installation Meetings:
  - 1. Convene at job site seven (7) calendar days prior to scheduled beginning of construction activities of this section to review requirements of this section.
  - 2. Require attendance by representatives of the following:
    - a. Product manufacturer, if requested by installer of this section.
    - b. Installer of this section.
    - c. Other entities directly affecting, or affected by, construction activities of this section.
  - 3. Notify Architect four (4) calendar days in advance of scheduled meeting date.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Protection:
  - 1. Store products of this section in manufacturer's unopened packaging until installation.
  - 2. Maintain dry, heated storage area for products of this section until installation of products.

#### 1.7 PROJECT/SITE CONDITIONS

- A. Existing Conditions: Obtain field measurements of existing openings and verify shop drawing dimensions before fabricating units.

#### 1.8 WARRANTY

- A. Manufacturer's Warranty: Supply manufacturer's standard warranty against defects in product workmanship and materials.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Willard Shutter Company, Inc.; 4420 N.W. 35th Ct., Miami FL 33142; Telephone 1-800-826-4530, FAX 1-305-638-8634.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.

#### 2.2 MATERIALS

- A. Aluminum Sheet: Conforming to ASTM B 209.
- B. Aluminum Extrusions and Shapes: Conforming to ASTM B 221.
- C. Expanded Polystyrene: Conforming to FS HH-I-524A.

#### 2.3 COMPONENTS

- A. Shutter Unit Type \_\_\_:
- B. Door Unit Type \_\_\_:
  - 1. Acceptable Product: Islander Decorator Shutter.
  - 2. Acceptable Product: Islander Colonial Hinged Shutter.
  - 3. Acceptable Product: Islander Bahama Shutter.

4. Acceptable Product: Islander Standard Rolling Shutter.
  5. Acceptable Product: Islander Sill Track Rolling Shutter.
  6. Acceptable Product: Islander Sliding Door.
  7. Acceptable Product: Islander Folding Door.
  8. Product Description: Fixed horizontal-louver shutter, with louver spacing 1-1/4 inches OC vertical, set into foam-filled frame at 44 degrees from horizontal.
    - a. Frame: Aluminum sheet, Alloy 3004-H36, 0.025 inch minimum sheet thickness; roll-formed to box beam profile 2-1/2 inches wide by 1-5/8 inches deep.
    - b. Intermediate Mullion: Aluminum sheet, Alloy 3004-H36, 0.025 inch minimum sheet thickness; roll-formed to box beam profile 2-1/2 inches wide by 1-5/8 inches deep.
    - c. Louver: Aluminum sheet, Alloy 3004-H36, 0.025 inch minimum sheet thickness; roll-formed to profile 1-3/4 inches wide, with converse bevelled front and rear edges.
    - d. Foam Core Material: Expanded polystyrene conforming to FS HH-I-524A.
    - e. Fasteners: Stainless steel self-tapping machine screws, or aluminum Alloy 2024-T4 pop-rivets, manufacturer's option.
    - f. Internal Reinforcement: Aluminum extrusion, Alloy 6063-T5, 0.062 inch minimum wall thickness, mill finish; formed to I-beam profile to fit inside frame.
    - g. Mounting Hardware: Factory-prepare units for specified mounting hardware.
  9. Finish: Roller-coated baked enamel, medium gloss finish, \_\_\_\_\_ color.
  10. Finish: Roller-coated baked enamel, medium gloss finish, color selected from manufacturer's full range of available colors.
  11. Finish: Custom finish, \_\_\_\_\_.
  12. Sizes: Indicated on drawings.
  13. Size: Height \_\_\_ feet \_\_\_ inches by width \_\_\_ feet \_\_\_ inches.
- C. Mounting Hardware for Shutter Type \_\_\_: Anchoring devices; types and sizes specified in shutter manufacturer's printed instructions for project conditions.
- D. Mounting Hardware for Shutter Type \_\_\_:

1. Shutter manufacturer's standard mounting hardware as follows:
    - a. Side Hinges: Aluminum, AAMA anodized finish R1-201; continuous piano hinge.
    - b. Locking Bar: Aluminum extrusion, Alloy 6063-T5, AAMA anodized finish R1-201.
    - c. Hold-Open: Friction catch, nickel-plated brass.
  2. Anchoring Devices: Types and sizes specified in shutter manufacturer's printed instructions for project conditions.
- E. Mounting Hardware for Shutter Type \_\_\_:
1. Shutter manufacturer's standard mounting hardware as follows:
    - a. Header Hinge: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; shutter-mounted pivot and wall-mounted receiver, continuous full shutter width.
    - b. Adjustable Tube Support: Aluminum extrusions, Alloy 6063-T6; telescoping operation for adjustable shutter projection, maximum 44 degrees from vertical.
    - c. Fixed Support Components:
      - 1) Support Arm: Aluminum extrusion, Alloy 6063-T6; fixed length for shutter projection \_\_\_ degrees from vertical.
      - 2) Wall Bracket: Aluminum extrusion, Alloy 6063-T6; camel-back bracket pivot-connected to support arm for horizontal or vertical mounting.
      - 3) Shutter Bracket: Aluminum extrusion, Alloy 6063-T6; non-removable pivot connection to shutter for fixed shutter position.
      - 4) Shutter Bracket: Aluminum extrusion, Alloy 6063-T6; removable pivot connection to shutter to allow return of shutter to vertical position.
  2. Anchoring Devices: Types and sizes specified in shutter manufacturer's printed instructions for project conditions.
- F. Mounting Hardware for Shutter Type \_\_\_:
1. Shutter manufacturer's standard mounting hardware as follows:
    - a. Single Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted rail, continuous full indicated length.

- b. Double Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted rail, continuous full indicated length.
  - c. Roller Bracket: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; shutter-mounted, with nylon roller.
  - d. Tie-Down Bracket: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; shutter-mounted, with locking device.
  - 2. Anchoring Devices: Types and sizes specified in shutter manufacturer's printed instructions for project conditions.
- G. Mounting Hardware for Shutter Type \_\_:
- 1. Shutter manufacturer's standard mounting hardware as follows:
    - a. Single Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted rail, continuous full indicated length.
    - b. Double Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted rail, continuous full indicated length.
    - c. Roller Bracket: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; shutter-mounted, with nylon roller.
    - d. Single Sill Track: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted track, continuous full indicated length.
    - e. Double Sill Track: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted track, continuous full indicated length.
    - f. Guide Stud: Aluminum extrusion, Alloy 6063-T6, vinyl-coated; shutter-mounted for aligning bottom of shutter with sill track.
    - g. Locking Device: Flush bolt mounted at bottom of shutter.
  - 2. Anchoring Devices: Types and sizes specified in shutter manufacturer's printed instructions for project conditions.
- H. Mounting Hardware for Door Type \_\_:
- 1. Door manufacturer's standard mounting hardware as follows:

- a. Single Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted rail, continuous full indicated length.
  - b. Double Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted rail, continuous full indicated length.
  - c. Roller Bracket: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; door-mounted, with nylon roller.
  - d. Single Sill Track: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted track, continuous full indicated length.
  - e. Double Sill Track: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted track, continuous full indicated length.
  - f. Guide Stud: Aluminum extrusion, Alloy 6063-T6, vinyl-coated; door-mounted for aligning bottom of door with sill track.
  - g. Locking Device: Flush bolt mounted at bottom of door.
2. Anchoring Devices: Types and sizes specified in door manufacturer's printed instructions for project conditions.
- I. Mounting Hardware for Door Type \_\_\_:
- 1. Door manufacturer's standard mounting hardware as follows:
    - a. Side Hinges: Aluminum, AAMA anodized finish R1-201; continuous piano hinge.
    - b. Single Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted rail, continuous full indicated length.
    - c. Double Head Rail: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted rail, continuous full indicated length.
    - d. Roller Bracket: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; door-mounted, with nylon roller.
    - e. Single Sill Track: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; single wall-mounted track, continuous full indicated length.

- f. Double Sill Track: Aluminum extrusion, Alloy 6063-T6, AAMA anodized finish R1-201; double wall-mounted track, continuous full indicated length.
- g. Guide Stud: Aluminum extrusion, Alloy 6063-T6, vinyl-coated; door-mounted for aligning bottom of door with sill track.
- h. Locking Device: Flush bolt mounted at bottom of door.
- 2. Anchoring Devices: Types and sizes specified in door manufacturer's printed instructions for project conditions.
- J. Support Structure: Specified in Section 05500.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verification of Conditions:
  - 1. Openings are correct sizes in accordance with Architect-accepted shop drawings.
  - 2. Substrates are prepared to receive products of this section.
- B. Installer's Examination:
  - 1. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.
  - 2. Transmit two copies of installer's report to Architect within 24 hr. of receipt.
  - 3. Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.
  - 4. Beginning construction activities of this section indicates installer's acceptance of conditions.

### 3.2 INSTALLATION

- A. Install products specified in this section in accordance with Architect-approved shop drawings and manufacturer's printed installation instructions.

### 3.3 ADJUSTING

- A. Adjust operating hardware for correct operation of units in accordance with manufacturer's printed instructions.



### 3.4 CLEANING

- A. Clean finishes of units in accordance with manufacturer's printed instructions.

### 3.5 PROTECTION OF INSTALLED PRODUCTS

- A. Protect units from damage by subsequent construction activities until Substantial Completion; replace damaged units having damage other than minor finish damage at Contractor's expense.
- B. Repair minor finish damage to units in accordance with manufacturer's instructions; Architect will be sole judge of acceptability of repairs.

END OF SECTION