SECTION 122413 - ROLLER WINDOW SHADES

ALL LIBRARIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Manually operated roller shades with single rollers and with double rollers.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood blocking and grounds for mounting roller shades and accessories.
2. Section 079200 "Joint Sealants" for sealing the perimeters of installation accessories for light-blocking shades with a sealant.
3. Section 092900 “Gypsum Board” for coordination with installation of shade pockets, closure, and related accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

B. Shop Drawings: Show fabrication and installation details for roller shades, including fabric band materials, their orientation to rollers, and their seam and batten locations.

1. Motor-Operated Shades: Include details of installation and diagrams for power, signal, and control wiring.

C. Samples: For each exposed product and for each color and texture specified, 10 inches (250 mm) long.

D. Samples for Verification: For each type of roller shade.

1. Fabric band Material: Not less than 10 inches (250 mm) square. Mark inside face of material if applicable.

2. Installation Accessories: Full-size unit, not less than 10 inches (250 mm) long.

E. Roller-Shade Schedule: Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Certificates: For each type of fabric band material, signed by product manufacturer.

C. Product Test Reports: For each type of fabric band material, for tests performed by manufacturer and witnessed by a qualified testing agency.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roller shades to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Roller Shades: Full-size units equal to 5 percent of quantity installed for each size, color, and fabric band material indicated, but no fewer than two units.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

1. Installer shall be qualified to install specified products by prior experience and approved by Springs Window Fashions, LLC.
2. Installer shall be responsible for acceptable installation in accordance with instructions published by Springs Window Fashion, LLC.

B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings, SL30 Manual Shade with Fascia, and Dual Manual Shade with Fascia as manufactured by SWF Contract and distributed by Springs Window Fashions, LLC, or comparable product by one of the following:

1. BTX Window Automation, Inc.
2. Draper Inc.
3. Hunter Douglas Contract.
4. MechoShade Systems, Inc.
5. Nysan Solar Control Inc.; Hunter Douglas Company.
6. Shade Techniques, LLC.
7. Silent Gliss USA, Inc.
8. SM Automatic, Inc.
9. Springs Window Fashions, LLC, SWF Contract.

B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.2 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS RS-1 and RS-2:

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: No. 10, Stainless steel.

a. Loop Length: As required to operate full height of window shade.
b. Limit Stops: Provide upper and lower ball stops.
c. Chain-Retainer Type: Locking-style chain retainer restricts the operation of the chain unless the chain retainer is properly mounted to a fixed surface such as a window frame, sill, or wall. Compliant with American National Standard for Safety of Corded Window Covering Products ANSI A100.1. Non-Locking P-Clip is not acceptable.

1) Color: White.
2) Plastic Bead Chain Color: White.

2. Spring Lift-Assist Mechanisms: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.

   a. Provide for fabric bands that weigh more than 6 lb. (2.7 kg) or for shades as recommended by manufacturer.

B. Rollers: Extruded-aluminum tubes engineered with a channel to accept fabric spline. The diameter and wall thickness to be determined by manufacturer based on fabric selection and shade size to provide minimal deflection and optimal performance.

   1. Roller Drive-End Location: Right side of inside face of shade.
   2. Direction of Fabric Band Roll: Regular, from back of roller.
   3. Fabric Band-to-Roller Attachment: Removable spline system shall consist of a co-extruded PVC spline heat-welded to the shade fabric and inserted into an engineered channel on the roller tube. The spline system allows for adjustability on-site and ease in changing fabric bands in the field.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

   1. Description: Non-fascia bracket, white powder coated.

D. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.

E. Front Fabric Bands RS-1:

   1. Fabric Band Material: Light-filtering fabric.
   2. Fabric Band Bottom (Hem) Bar: Extruded aluminum.

      a. Type: Hem bars to be extruded aluminum in weight sufficient for proper shade operation.
      b. Color and Finish: Shearweave 2360, Pearl Gray.
      c. Openness: 10%.

F. Front Fabric Bands RS-2:

   1. Fabric Band Material: Light-blocking fabric.
   2. Fabric Band Bottom (Hem) Bar: Extruded aluminum.

      a. Type: Hem bars to be extruded aluminum in weight sufficient for proper shade operation.
      b. Color and Finish: Full Black-out, Black Duplex, R6039.

G. Installation Accessories:

1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.

    a. Shape: L-shaped.
    b. Height: Manufacturer's standard height required to conceal roller and fabric band when shade is fully open, but not less than 7.5 inches (191 mm) by 2.25 inches (57 mm).
    c. Color: White powder coated.

2. Fascia End Caps: Flat aluminum plate, adhered to fascia bracket using double-sided tape.

    a. Shape: 7.3 inches (185 mm) by 7.71 inches (195 mm).
    b. Color and Finish: White powder coated.

3. Recessed Shade Pocket: Rectangular, steel enclosure including front, top, and back. Powder coat white with riveted closure mount.

    a. Size: Manufacturer's standard height required to enclose roller and fabric band when shade is fully open, but not less than 7.5 inches (191 mm) by 8 inches (203 mm).
    b. Provide pocket with acoustical ceiling tile support at lower edge.
    c. Closure Plate Width: As indicated on the Drawings.

4. Installation Accessories Color and Finish: White powder coated.

2.3 MANUALLY OPERATED SHADES WITH DOUBLE ROLLERS RS-3:

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: No. 10, Stainless steel.

    a. Loop Length: As required to operate full height of window shade.
    b. Limit Stops: Provide upper and lower ball stops.
    c. Chain-Retainer Type: Locking-style chain retainer restricts the operation of the chain unless the chain retainer is properly mounted to a fixed surface such as a window frame, sill, or wall. Compliant with American National Standard for Safety of Corded Window Covering Products ANSI A100.1. Non-Locking P-Clip is not acceptable.

        1) Color: White.

    d. Plastic Bead Chain Color: White.

2. Spring Lift-Assist Mechanisms: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.

    a. Provide for fabric bands that weigh more than 6 lb. (2.7 kg) or for shades as recommended by manufacturer.

B. Rollers: Extruded-aluminum tubes engineered with a channel to accept fabric spline. The diameter and wall thickness to be determined by manufacturer based on fabric selection and shade size to provide minimal deflection and optimal performance.

1. Double-Roller Mounting Configuration: Offset, outside roller over and inside roller under.
2. Inside Roller:

   a. Drive-End Location: Right side of inside face of shade.
   b. Direction of Fabric Band Roll: Regular, from back of roller.

3. Outside Roller:

   a. Drive-End Location: Right side of inside face of shade.
   b. Direction of Fabric Band Roll: Regular, from back of roller.

4. Fabric Band-to-Roller Attachment: Removable spline system shall consist of a co-extruded PVC spline heat-welded to the shade fabric and inserted into an engineered channel on the roller tube. The spline system allows for adjustability on-site and ease in changing fabric bands in the field.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller mounting configuration, roller assemblies, operating mechanisms, installation accessories, and installation locations and conditions indicated.

1. Description: Non-fascia bracket, white powder coated.

D. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.

E. Front Fabric Bands:

1. Fabric Band Material: Light-filtering fabric.
2. Fabric Band Bottom (Hem) Bar: Extruded aluminum.

   a. Type: Hem bars to be extruded aluminum in weight sufficient for proper shade operation.
   b. Color and Finish: Shearweave 2360, Pearl Gray.
   c. Openness: 10%.

F. Back Fabric Bands:

1. Fabric Band Material: Light-blocking fabric.
2. Fabric Band Bottom (Hem) Bar: Extruded aluminum.

   a. Type: Hem bars to be extruded aluminum in weight sufficient for proper shade operation.
   b. Color and Finish: Full Black-Out, Black Duplex, R6039.

G. Installation Accessories:

1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.

    a. Shape: L-shaped.
    b. Height: Manufacturer's standard height required to conceal roller and fabric band when shade is fully open, but not less than 7.5 inches (191 mm) by 2.25 inches (57 mm).
    c. Color: White powder coated.

2. Fascia End Caps: Flat aluminum plate, adhered to fascia bracket using double-sided tape.

    a. Shape: 7.3 inches (185 mm) by 7.71 inches (195 mm).
    b. Color and Finish: White powder coated.

3. Recessed Shade Pocket: Rectangular, steel enclosure covering front, top, and back. Powder coated white with riveted closure mount.

    a. Height: Manufacturer's standard height required to enclose roller and fabric band when shade is fully open, but not less than 7.5 inches (191 mm) by 8 inches (203 mm).
    b. Provide pocket acoustical ceiling tile. Support at lower edge.
    c. Closure Plate Width: As indicated on the Drawings.

4. Installation Accessories Color and Finish: White Powder Coated.

2.4 SHADEBAND MATERIALS

A. Fabric Band Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light-Filtering Fabric: Shearweave 2360, Woven fabric, stain and fade resistant.

    1. Source: Phifer.
    2. Type: PVC-coated fiberglass with metalized backing.
    3. Weave: Basketweave.
    4. Roll Width: Per varying window sizes.
    5. Orientation on Fabric Band: Vertical.
    6. Openness Factor: 10 percent.
    7. Color: Pearl Gray.

C. Room-Darkening Blackout Fabric, Light-Blocking Fabric: Opaque fabric, stain and fade resistant.

    1. Source: Springs Window Fashions – SWF Contract Nightfall.
    2. Type: 3 Ply vinyl with 1 ply fiberglass.
    3. Roll Width: Per varying window sizes.
    4. Orientation on Fabric Band: Vertical.
    5. Features: Washable.
    6. Color: Full Black-out, Black Duplex, R6039.

2.5 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg. F (23 deg. C):

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch (6 mm) per side or 1/2-inch (13-mm) total, plus or minus 1/8 inch (3.1 mm). Length equal to head-to-sill or -floor dimension of opening in which shade is installed less 1/4 inch (6 mm), plus or minus 1/8 inch (3.1 mm).
2. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

C. Fabric Band Fabrication: Fabricate fabric bands without battens or seams to extent possible except as follows:

1. Railroaded Materials: Railroad material where material roll width is less than the required width of fabric band and where indicated. Provide battens and seams as required by railroaded material to produce fabric bands with full roll-width panel(s) plus, if required, one partial roll-width panel located at top of fabric band.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER-SHADE INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.

1. Opaque Fabric bands: Located so fabric band is not closer than 2 inches (51 mm) to interior face of glass. Allow clearances for window operation hardware.

3.3 ADJUSTING

A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

A. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain motor-operated roller shades.

END OF SECTION 122413