**SECTION 122413 - ROLLER WINDOW SHADES**

**PART I - GENERAL**

1.1 SCOPE

 A. Manually operated roller shades with single rollers.

 B .Related Requirements:

 1.Section 061000 "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.

1.2 ACTION SUBMITTALS

 A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, features,

 finishes, operating equipment, and instructions for roller shades.

 B. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to

 rollers, and their seam and batten locations.

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

1. Shadeband Material: Not less than 10 inches square. Mark interior face of material if applicable.

2. Roller Shade: Full-size operating unit, not less than 16 inches wide by 36 inches long for each type of roller shade

 indicated.

3. Installation Accessories: Full-size unit, not less than 10 inches long.

1.3 CLOSEOUT SUBMITTALS

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

 B. Warranty: For manufacturer's executed warranty documentation.

1.4 QUALITY ASSURANCE

 A. Installer Qualifications: Fabricator of products.

 B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set

 quality standards for fabrication and installation.

1.5 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.

1.6 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.

1.8 WARRANTY

 A. Special Warranty for Shade Systems: Manufacturer agrees to repair or replace shade units that are not free from defects in

 material or workmanship under normal and proper use within specified full warranty period, not prorated.

 1.Warranty Period: Five years from date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

 A. Source Limitations: Obtain roller shades from single source from single manufacturer. **Shades By Matiss/ 1148 US 22 Mountainside NJ 07092 Phone: 800-493-2040 Fax: 800-414-1042 / Website: www.shadesbymatiss.com**

2.2 **MANUALLY OPERATED SHADES WITH DOUBLE ROLLERS**

 A. Basis-of-Design Product: Subject to compliance with requirements, provide **Shades by Matiss Skyline System**

 B. 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: Manufacturer’s standard

 2. Loop Length: As indicated on Drawings

 3. Limit Stops: Provide upper and lower ball stops.

 4. Chain-Retainer Type: Chain tensioner, jamb mounted

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

 1. Provide for shadebands that weigh more than 10 LB.

 D. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate

 operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently

 lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

 2. Roller Drive-End Location: As indicated on Drawings

 3. Direction of Shadeband Roll: Regular, from back (exterior face) of roller

 4. Shadeband-to-Roller Attachment: Manufacturer's standard method

 5. Double-Roller Mounting Configuration: Side by side, or Offset, outside roller over and inside roller under as requested by

 Architect

 E. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism,

 installation accessories, and mounting location and conditions indicated.

 F. Shadebands:

 1. Shadeband Material: Light-blocking fabric Sierra Sol Mesa, color as selected by Architect from manufacturer's full range

 2. Shadeband Bottom (Hem) Bar: Exposed D30 with brush, color as selected by Architect from manufacturer's full range

 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 shadeband assembly when shade is fully open,

 but not less than 3” inches

 c. Side Channels: With light seals and designed to eliminate light gaps at sides of shades as shades are drawn down.

 1. Installation Accessories, Edge Side Channels

 2. Color As selected by Architect from manufacturer's full range

2.2 SHADEBAND MATERIALS

 A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products

 with appropriate markings of applicable testing agency.

 B. Inside Shadebands: Typically, light-filtering shadebands are installed on the inside rollers and light-blocking shadebands

 are installed on the outside rollers in double-roller configurations.

 C. Shadeband Material: Light-filtering fabric

 1. Source: Shades by Matiss 3000Net

 2. Type:  25% polyester, 75% PVC

 3. Openness factor: 10%

 4. Thickness: 0.020 in

 5. Weight: 11.36 oz/sq.yd

 6. Orientation on Shadeband: As indicated on drawings

 7. Color:  As selected by Architect from manufacturer's full range

 8. Features: Fire-retardant

 D. Shadeband Material: Light-Blocking Fabric: Opaque fabric, stain and fade resistant.

 1. Source: Shades by Matiss Sierra Sol Mesa

 2. Type:  100% polyester with acrylic foam backing (PVC free)

 3. Openness factor: Opaque

 4. Thickness: 0.022 in

 5. Weight: 9.4 oz/sq.yd

 6. Orientation on Shadeband: As indicated on drawings

 7. Color:  As selected by Architect from manufacturer's full range

 8. Features: Fire-retardant

2.3 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.

**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 Shadebands: Located so shadeband is not closer than 2 inches to interior face of glass. Allow clearances for

 window operation hardware.

 B. Roller Shade Locations:  As indicated on Drawings

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. 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**